

1. SITE DEVELOPMENT

- A. GRADE AND DEVELOP SITE SUCH THAT ALL PRIMARY BUILDING ENTRANCES ARE ACCESSIBLE TO THE PHYSICALLY DISABLED FROM THE PUBLIC WAY AND DISABLED PARKING PROVIDED.
- B. ONE ACCESSIBLE ROUTE SHALL CONNECT ACCESSIBLE BUILDINGS, FACILITIES AND SPACES ON THE SAME SITE. WHERE MORE THAN ONE ROUTE IS PROVIDED, ALL ROUTES SHALL BE ACCESSIBLE.
- C. IF AN ACCESSIBLE ROUTE HAS A CHANGE IN LEVEL GREATER THAN 1/2", THEN A CURB RAMP, RAMP, ELEVATOR, OR PLATFORM LIFT SHALL BE PROVIDED.
- D. ALL WALKS, HALLS, CORRIDORS, AISLES, AND OTHER SPACES THAT ARE PART OF AN ACCESSIBLE ROUTE SHALL PROVIDE A MINIMUM CLEAR WIDTH OF 48 INCHES AND A CLEAR HEIGHT OF 80 INCHES.

2. WALKS AND SIDEWALKS

- A. WALKS AND SIDEWALKS SUBJECT TO THESE REGULATIONS SHALL HAVE A CONTINUOUS COMMON SURFACE, NOT INTERRUPTED BY STEPS OR BY ABRUPT CHANGES IN LEVEL EXCEEDING 1/2", AND SHALL BE A MINIMUM OF 48 INCHES IN WIDTH.
- B. ALL SIDEWALKS SHALL BE STABLE, FIRM AND SLIP RESISTANT.
- C. SURFACE CROSS SLOPES SHALL NOT EXCEED 1/4% (CBC 11B-403.3).
- D. WALKS, SIDEWALKS AND PEDESTRIAN WAYS SHALL BE FREE OF GRATINGS WHENEVER POSSIBLE. GRATINGS LOCATED IN THE SURFACE OF ANY OF THESE AREAS, GRID OPENINGS IN THE GRATING SHALL BE LIMITED TO 1/2" IN THE DIRECTION OF TRAFFIC FLOW.
- E. ABRUPT CHANGES IN LEVEL ALONG ANY ACCESSIBLE ROUTE SHALL NOT EXCEED 1/2" WHEN CHANGES DO OCCUR. THEY SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 1:2 EXCEPT THAT LEVELS NOT EXCEEDING 1/4" MAY BE VERTICAL.
- F. WHEN CHANGES IN LEVELS GREATER THAN 1/2" ARE NECESSARY THEY SHALL COMPLY WITH THE REQUIREMENTS FOR CURB RAMPS OR RAMPS AS REQUIRED.
- G. WALKS SHALL BE PROVIDED WITH A LEVEL AREA NOT LESS THAN 60" SQUARE AT A DOOR OR GATE THAT SWINGS TOWARD THE WALK, AND NOT LESS THAN 48" WIDE BY 44" DEEP AT A DOOR OR GATE THAT SWINGS AWAY FROM THE WALK. SUCH WALKS SHALL EXTEND 24" TO THE SIDE OF THE STRIKE EDGE OF A DOOR OR GATE THAT SWINGS TOWARD THE WALK.
- H. WHEN THE SLOPE IN THE DIRECTION OF TRAVEL OF ANY WALK EXCEEDS 5%, IT MUST COMPLY WITH THE PROVISIONS FOR PEDESTRIAN RAMPS (PER CBC 11B-405).

- I. ALL WALKS WITH CONTINUOUS GRADIENTS SHALL HAVE LEVEL AREAS AT LEAST 5 FEET IN LENGTH AT INTERVALS NOT EXCEEDING 400 FEET.

3. ENTRANCES AND DOORWAYS

- A. PRIMARY ENTRANCES TO BUILDINGS AND FACILITIES SHALL BE MADE ACCESSIBLE.
- B. ACCESSIBLE ENTRANCES SHALL BE IDENTIFIED WITH AT LEAST ONE "ISA" SIGN AND WITH ADDITIONAL DIRECTIONAL SIGNS AS REQUIRED VISIBLE FROM APPROACHING PEDESTRIAN WAYS.
- C. LATCHING AND LOCKING DOORS THAT ARE HAND ACTIVATED AND ARE IN THE PATH OF TRAVEL, SHALL BE OPERABLE WITH A SINGLE EFFORT BY LEVER TYPE HARDWARE, PANIC BARS, PUSH-PULL ACTIVATING BARS OR OTHER HARDWARE DESIGNED TO PROVIDE PASSAGE WITHOUT REQUIRING THE ABILITY TO GRASP THE OPENING HARDWARE.
- D. HAND ACTIVATED DOOR HARDWARE SHALL BE CENTERED BETWEEN 34" AND 44" ABOVE THE FLOOR (CBC 11B-404.2.7).
- E. THE FLOOR OR LANDING ON EACH SIDE OF AN ENTRANCE OR PASSAGE DOOR SHALL BE LEVEL AND CLEAR. THE LEVEL AND CLEAR AREA SHALL BE A MINIMUM 60" SQUARE IN THE DIRECTION OF THE DOOR SWING AND A MINIMUM 44" SQUARE OPPOSITE THE DIRECTION OF DOOR SWING (48" IF THE DOOR HAS BOTH LATCH AND CLOSER). THE SQUARES SHALL BE MEASURED AT RIGHT ANGLES TO THE PLANE OF THE DOOR IN ITS CLOSED POSITION. SEE NOTE I BELOW FOR STRIKE SIDE REQUIREMENTS.
- F. THE WIDTH OF THE LEVEL AND CLEAR AREA ON THE SIDE TO WHICH THE DOOR SWINGS SHALL EXTEND 24" PAST THE STRIKE EDGE OF THE DOOR FOR EXTERIOR DOORS AND 18" PAST THE STRIKE EDGE FOR INTERIOR DOORS AND THE PRIMARY ENTRANCE TO THE DWELLING UNIT.
- G. THE FLOOR OR LANDING SHALL BE NOT MORE THAN 1/2" LOWER THAN THE THRESHOLD OF THE DOORWAY. CHANGE IN LEVEL BETWEEN 1/4" AND 1/2" SHALL BE BEVELED NO GREATER THAN 1:2.
- H. THE BOTTOM 10 INCHES OF ALL DOORS EXCEPT SLIDING AND POCKET DOORS SHALL HAVE A SMOOTH UNINTERRUPTED SURFACE TO ALLOW THE DOOR TO BE OPENED BY A WHEELCHAIR FOOTREST WITHOUT CREATING A TRAP OR HAZARDOUS CONDITION.

- I. MAXIMUM EFFORT TO OPERATE DOORS SHALL NOT EXCEED 5 LBS FOR EXTERIOR DOORS AND 5 LBS FOR INTERIOR DOORS. SUCH PULL OR PUSH EFFORT SHALL BE APPLIED AT RIGHT ANGLES TO HINGED DOORS AND AT THE CENTER PLANE OF SLIDING OR FOLDING DOORS. COMPENSATING DEVICES OR AUTOMATIC DOOR OPERATORS MAY BE UTILIZED TO MEET THE ABOVE STANDARDS. THE AUTHORITY HAVING JURISDICTION MAY INCREASE THE MAXIMUM EFFORT TO OPERATE FIRE DOORS TO ACHIEVE POSITIVE LATCHING, BUT NOT TO EXCEED 15 LBS MAX.
- J. EXIT DOORS MUST OPEN FROM THE INSIDE WITHOUT A KEY, OR ANY SPECIAL KNOWLEDGE OR EFFORT. EXIT DOORS FROM BUILDINGS OR ROOMS SERVING TO OR FEWER OCCUPANTS MAY HAVE A NIGHT LATCH, DEADBOLT OR SECURITY CHAIN, AS LONG AS THE DOORS CAN STILL BE OPENED FROM THE INSIDE WITHOUT A KEY, SPECIAL KNOWLEDGE OR EFFORT. IN ADDITION, THESE DEVICES ARE NOT MOUNTED MORE THAN 48" ABOVE THE FLOOR. MANUALLY OPERATED EDGE BOLTS, SURFACE MOUNTED FLUSH BOLTS AND SURFACE BOLTS ARE PROHIBITED. WHEN EXIT DOORS ARE USED IN PAIRS AND AUTOMATIC FLUSH BOLTS ARE USED, THE DOOR LEAF WITH THE FLUSH BOLT MUST HAVE NO DOORKNOB OR SURFACE MOUNTED HARDWARE. THE UNLATCHING OF ANY LEAF MUST NOT REQUIRE MORE THAN ONE OPERATION.

- K. EVERY REQUIRED EXIT MUST BE LARGE ENOUGH TO PERMIT A DOOR AT LEAST 3'-0" WIDE BY 6'-8" HIGH. EXIT DOORS SHALL OPEN AT LEAST 90 DEGREES AND PROVIDE A CLEAR WIDTH OF AT LEAST 32".

- L. THRESHOLDS AT ALL EXTERIOR DOORS SHALL BE NO HIGHER THAN 1/2". SUCH THRESHOLDS SHALL BE BEVELED NO GREATER THAN 1:2.

- M. THE FLOOR LANDING IMMEDIATELY OUTSIDE THE ENTRY MAY BE SLOPED UP TO 1/8" PER FOOT IN THE DIRECTION AWAY FROM THE PRIMARY ENTRANCE FOR DRAINAGE.

- N. THE SPACE BETWEEN TWO CONSECUTIVE DOOR OPENINGS IN A VESTIBULE, SERVING OTHER THAN A REQUIRED EXIT STAIRWAY, MUST HAVE AT LEAST 48" OF CLEAR SPACE FROM ANY DOOR OPENING INTO THE VESTIBULE WHEN THE DOOR IS OPEN 90 DEGREES FROM ITS CLOSED POSITION. DOORS IN SERIES MUST SWING IN THE SAME DIRECTION OR AWAY FROM THE SPACE BETWEEN THE DOORS.

- D. THE CENTER OF FIRE ALARM INITIATING DEVICES (BOXES) SHALL BE LOCATED 48" ABOVE THE LEVEL OF THE FLOOR, WORKING PLATFORM, GROUND SURFACE OR SIDEWALK.

- E. IF EMERGENCY WARNING SYSTEMS ARE REQUIRED THEY SHALL ACTIVATE A MEANS OF WARNING THE HEARING IMPAIRED, FLASHING VISUAL WARNING SHALL HAVE A FREQUENCY OF NOT MORE THAN 60 FLASHES PER MINUTE.

ACCESSIBILITY NOTES

4. STAIRWAYS

- A. STAIRWAYS SHALL HAVE HANDRAILS ON EACH SIDE. STAIRWAYS SHALL HAVE INTERMEDIATE HANDRAILS WHERE REQUIRED SUCH THAT ALL PORTIONS OF THE STAIRWAY WIDTH REQUIRED FOR EGRESS CAPACITY ARE WITHIN 30 INCHES OF A HANDRAIL. INTERMEDIATE HANDRAILS SHALL BE SPACED AT EQUAL INTERVALS WITHIN THE WIDTH OF THE STAIRWAY AND BE CONTINUOUS FOR THE ENTIRE LENGTH.
- B. HANDRAILS MUST BE 34 TO 38 INCHES ABOVE THE NOSING OF THE TREADS AND MUST EXTEND IN THE DIRECTION OF THE STAIR RUN FOR AT LEAST 12" BEYOND THE TOP NOSING AND 12" PLUS THE TREAD WIDTH BEYOND THE BOTTOM NOSING.
- C. ENDS SHALL BE RETURNED OR SHALL TERMINATE IN A NEWEL POST OR SAFETY TERMINAL.
- D. HANDRAILS PROJECTING FROM A WALL SHALL HAVE A SPACE OF NOT LESS THAN 1-1/2 INCH BETWEEN THE WALL AND THE HANDRAIL.

- E. THE HANDGRIP PORTION OF HANDRAILS SHALL BE NOT LESS THAN 1-1/4 INCHES NOR MORE THAN 1-1/2 INCHES IN CROSS-SECTIONAL DIMENSION OR THE SHAPE SHALL PROVIDE AN EQUIVALENT GRIPPING SURFACE AND SHALL HAVE A SMOOTH SURFACE WITH NO SHARP OR ABRASIVE CORNERS AND ALL EDGES MUST HAVE A MINIMUM 1/8" RADIUS.

- F. THE UPPER APPROACH AND THE LOWER TREAD OF EACH INTERIOR STAIR SHALL BE MARKED BY A STRIP OF CLEARLY CONTRASTING COLOR THE FULL WIDTH OF THE TREAD AT LEAST 2-INCHES WIDE PLACED PARALLEL TO AND NOT MORE THAN 1-INCH FROM THE NOSE OF THE STEP OR LANDING TO ALERT THE VISUALLY IMPAIRED. THE STRIP SHALL BE OF A MATERIAL THAT IS AT LEAST AS SLIP RESISTANT AS THE OTHER TREADS OF THE STAIR.

- G. WHERE STAIRWAYS OCCUR OUTSIDE A BUILDING, THE UPPER APPROACH AND ALL TREADS SHALL BE MARKED BY A STRIP OF CLEARLY CONTRASTING COLOR AT LEAST 2 INCHES WIDE AND PLACED PARALLEL TO AND NOT MORE THAN 1-INCH FROM THE NOSE OF THE STEP OR LANDING TO ALERT THE VISUALLY IMPAIRED. THE STRIP SHALL BE OF A MATERIAL THAT IS AT LEAST AS SLIP RESISTANT AS THE OTHER TREADS OF THE STAIR. A PAINTED STRIP SHALL BE ACCEPTABLE.

- H. ALL TREAD SURFACES SHALL BE SLIP RESISTANT.

- I. TREADS SHALL HAVE A SMOOTH, ROUNDED OR CHAMFERED EXPOSED EDGES, AND NO ABRUPT EDGES AT THE NOSING (LOWER FOOT EDGE).

- J. NOSING SHALL NOT PROJECT MORE THAN 1-1/4 INCH PAST THE FACE OF THE RISER BELOW.

- K. STAIR RISERS SHALL BE SOLID PER CBC 11B-504.

5. SANITARY FACILITIES

- A. WHEELCHAIR ACCESSIBLE WATER CLOSET COMPARTMENTS SHALL BE EQUIPPED WITH A DOOR THAT HAS AN AUTOMATIC CLOSING DEVICE, AND SHALL HAVE A CLEAR UNOBSTRUCTED OPENING WIDTH OF 32-INCHES WHEN LOCATED AT THE END AND 34-INCHES WHEN LOCATED AT THE SIDE WITH THE DOOR POSITION AT AN ANGLE OF 90 DEGREES FROM ITS CLOSED POSITION.
- B. TOILET FLUSH CONTROLS SHALL BE OPERABLE WITH ONE HAND, AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. CONTROLS FOR FLUSH VALVES SHALL BE MOUNTED ON THE WIDE SIDE OF THE TOILET AREAS, NO MORE THAN 44-INCHES ABOVE THE FLOOR. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 POUNDS PER FOOT.
- C. WHERE URINALS ARE PROVIDED AT LEAST ONE WITH A RIM PROJECTING A MINIMUM OF 14-INCHES FROM THE WALL AND AT A MAXIMUM OF 17-INCHES ABOVE THE FLOOR SHALL BE PROVIDED.

- D. URINAL FLUSH CONTROLS SHALL BE OPERABLE WITH ONE HAND, AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST AND SHALL BE MOUNTED NO MORE THAN 44" ABOVE THE FLOOR. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 POUNDS PER FOOT.

- E. HOT WATER AND DRAIN PIPES UNDER LAVATORIES SHALL BE INSULATED OR OTHERWISE COVERED.

- F. FAUCET CONTROLS AND OPERATING MECHANISMS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 POUNDS PER FOOT. LEVER OPERATED, PUSH TYPE AND ELECTRONICALLY CONTROLLED MECHANISMS ARE EXAMPLES OF ACCEPTABLE DESIGNS. SELF-CLOSING VALVES ARE ALLOWED IF THE FAUCET REMAINS OPEN FOR AT LEAST 10 SECONDS.

- G. MIRRORS SHALL BE MOUNTED WITH THE BOTTOM GLASS EDGE NOT MORE THAN 40-INCHES ABOVE THE FLOOR.

- H. LOCATE TOWEL, SANITARY NAPKIN, AND WASTE RECEPTACLES WITH ALL OPERABLE PARTS NOT MORE THAN 40 INCHES FROM THE FLOOR.

- I. TOILET TISSUE DISPENSERS SHALL BE LOCATED ON THE WALL OR PARTITION WITHIN 7" TO 9" TO CENTER FROM THE BOTTOM EDGE OF THE TOILET SEAT, MOUNTED BELOW THE GRAB BAR, AT A MINIMUM HEIGHT OF 19 INCHES, AND 36 INCHES MAXIMUM TO THE FAR EDGE FROM THE REAR WALL. DISPENSERS SHALL PERMIT CONTINUOUS FLOW AND NOT CONTROL DELIVERY (CBC 11B-404.7).

- J. GRAB BARS, TUB AND SHOWER SEATS, FASTENERS AND MOUNTING DEVICES SHALL BE DESIGNED FOR 250 LB. PER CBC 1607A.8.2.

- K. GRAB BARS:
 - 1. THE DIAMETER OR WIDTH OF THE GRIPPING SURFACE OF A GRAB BAR SHALL BE 1-1/4" TO 1-1/2" OR THE SHAPE SHALL PROVIDE AN EQUIVALENT GRIPPING SURFACE.
 - 2. IF THE GRAB BARS ARE MOUNTED ADJACENT TO A WALL, THE SPACE BETWEEN THE WALL AND THE GRAB BARS SHALL BE 1-1/2".
 - 3. A GRAB BAR AND ANY WALL OR OTHER SURFACE ADJACENT SHALL BE FREE OF ANY SHARP OR ABRASIVE ELEMENTS.
 - 4. GRAB BARS SHALL NOT ROTATE WITHIN THEIR FITTINGS.
 - 5. EDGES SHALL HAVE A MINIMUM RADIUS OF 1/8".

6. SWITCHES CONTROLS AND ELECTRICAL OUTLETS

- A. RECEPTACLE OUTLETS SHALL BE 15" MIN ABOVE THE FINISHED FLOOR TO THE BOTTOM OF THE BOX PER CBC 11B-308.1.2.

- B. SWITCHES SHALL BE 48" MAX. ABOVE THE FINISHED FLOOR TO THE TOP OF THE BOX (11B-308.1.1).

- C. IF REACH IS OVER AN OBSTRUCTION (FOR EXAMPLE, A BASE CABINET) BETWEEN 20" AND 25" IN DEPTH, THE MAXIMUM HEIGHT IS REDUCED TO 44" FOR FORWARD APPROACH, OR 46" FOR SIDE APPROACH PROVIDED THE OBSTRUCTION IS NO MORE THAN 24" IN DEPTH. THE OBSTRUCTION MAY NOT EXTEND MORE THAN 25" FROM THE WALL BENEATH THE CONTROL.

- D. THE CENTER OF FIRE ALARM INITIATING DEVICES (BOXES) SHALL BE LOCATED 48" ABOVE THE LEVEL OF THE FLOOR, WORKING PLATFORM, GROUND SURFACE OR SIDEWALK.

- E. IF EMERGENCY WARNING SYSTEMS ARE REQUIRED THEY SHALL ACTIVATE A MEANS OF WARNING THE HEARING IMPAIRED, FLASHING VISUAL WARNING SHALL HAVE A FREQUENCY OF NOT MORE THAN 60 FLASHES PER MINUTE.

- 1. THESE DOCUMENTS AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, ARE THE PROPERTY OF SVA ARCHITECTS, AND ARE NOT TO BE USED, IN WHOLE OR IN PART FOR ANOTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF SVA ARCHITECTS.

- 2. THE WORK SHOWN ON THESE DRAWINGS AS EXISTING CONDITIONS WAS PREPARED FROM INFORMATION FURNISHED BY THE OWNER, WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, SVA ARCHITECTS INC. IS NOT RESPONSIBLE FOR THE ACCURACY OR ADEQUACY OF ANY WORK SHOWN AS EXISTING NOR IS SVA ARCHITECTS INC. RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THESE DRAWINGS AS A RESULT.

- 3. EACH BIDDER SHALL POSSESS AT THE TIME OF BID A CLASS B OR THE APPROPRIATE CLASS C CONTRACTOR'S LICENSE PURSUANT TO PUBLIC CONTRACT CODE SECTION 3300 AND BUSINESS AND PROFESSIONS CODE SECTION 7028.15. THE SUCCESSFUL BIDDER MUST MAINTAIN THE LICENSE THROUGHOUT THE DURATION OF THIS CONTRACT.

- 4. FIRE SAFETY DURING CONSTRUCTION AND THE DURATION OF THIS CONTRACT:
 - A. GENERAL: FIRE SAFETY DURING CONSTRUCTION SHALL COMPLY WITH 2019 CALIFORNIA FIRE CODE TITLE 24, PART 9 CHAPTER 33.

- 6. ACCESS ROADS: FIRE DEPARTMENT ACCESS ROADS SHALL BE ESTABLISHED AND MAINTAINED IN ACCORDANCE WITH SECTION 1410.

- C. WATER SUPPLY: WATER MAINS AND HYDRANTS SHALL BE OPERATIONAL IN ACCORDANCE WITH SECTION 1412.

- D. BUILDING ACCESS: ACCESS TO BUILDINGS FOR THE PURPOSE OF FIREFIGHTING SHALL BE PROVIDED. CONSTRUCTION MATERIAL SHALL NOT BLOCK ACCESS TO BUILDINGS, HYDRANTS OR FIRE APPLIANCES.

- E. ALTERATIONS OF BUILDINGS: SHALL COMPLY WITH APPLICABLE PROVISIONS OF SECTIONS 1405, 1411, 1413, AND 1415.

- F. FIRE WATCH: MAINTAIN FIRE WATCH WHEN REQUIRED BY THE BUILDING OFFICIAL AND WHEN EXISTING FIRE PROTECTION SYSTEMS ARE SHUT DOWN FOR ALTERATIONS. FIRE WATCH SHALL REMAIN IN EFFECT UNTIL EXISTING FIRE PROTECTION SYSTEMS ARE RETURNED TO SERVICE OR ALL MISCELLANEOUS EQUIPMENT.

- 5. PENETRATIONS TO FIRE RATED MATERIALS OR ASSEMBLIES 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.

- 6. STATEMENT (TITLE 24, PART 6): NONRESIDENTIAL ENERGY STANDARDS. COMPLIANCE: THE DESIGN INDICES WITH THE REQUIREMENTS OF THE ENERGY CONSERVATION STANDARDS OF TITLE 24, PART 6, CALIFORNIA CODE OF REGULATIONS, THE PROPOSED BUILDING(S) WILL BE IN COMPLIANCE WITH THE ENERGY CONSERVATION STANDARDS PROVIDED THAT (S) ARE BUILT ACCORDING TO THESE DRAWINGS AND SPECIFICATIONS AND PROVIDED ANY FUTURE IMPROVEMENTS ARE COMPLETED ACCORDING TO THE REQUIREMENTS OF TITLE 24, PART 6, CALIFORNIA CODE OF REGULATIONS. THESE PLANS AND SPECIFICATIONS HAVE BEEN PREPARED TO INCLUDE ALL SIGNIFICANT ENERGY CONSERVATION FEATURES REQUIRED FOR COMPLIANCE WITH THE STANDARDS. BUILDING AREAS THAT ARE UNCONDITIONED AND/OR NOT SUBJECT TO THE STANDARDS ARE INDICATED ON THE PLANS.

- 3. INSPECTION AND TESTING LABORATORY MUST BE IN THE EMPLOY OF THE OWNER, NOT THE CONTRACTOR.

- 34. MINIMUM HEADROOM CLEARANCE AT STAIRS SHALL BE 6'-8" MEASURED VERTICALLY FROM A PLANE PARALLEL AND TANGENT TO THE TREAD NOSING TO THE SOFFIT ABOVE AT ALL POINTS.

- 35. ALL EXIT DOORS SHALL BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE. LOCKING DEVICES SHALL BE OF AN APPROVED TYPE.

- 36. EXIT SIGNS SHALL HAVE 6" MINIMUM HEIGHT LETTERS AND SHALL CONFORM TO SECTION 1013 OF THE CALIFORNIA BUILDING CODE.

- 37. FURNISH AND INSTALL ACCESS DOORS, FIRE DAMPERS, ETC. IN CEILING AND WALL CONSTRUCTION LOCATED AS REQUIRED BY INSTALLATION OF MECHANICAL PLUMBING, AND ELECTRICAL WORK AND AS APPROVED BY THE ARCHITECT. PROVIDE RATED ASSEMBLIES IN RATED WALLS AND CEILINGS AND SHALL BE APPROVED BY BUILDING INSPECTOR PRIOR TO INSTALLATION.

- 38. FURNISH AND INSTALL EMERGENCY LIGHTING AS SPECIFIED AND INDICATED BUT IN NO CASE SHALL THE LIGHT VALUE BE LESS THAN ONE FOOT CANDLE AT FLOOR LEVEL IN ALL EXIT CORRIDORS AND STAIR SHAFTS (CBC SECTION 1008).

- 39. THERE SHALL BE NO TRENCHES OR EXCAVATIONS 5' OR MORE IN DEPTH INTO WHICH A PERSON IS CONSIDERED TO FALL UNLESS A PERMIT IS OBTAINED FROM THE STATE OF CALIFORNIA DIVISION OF INDUSTRIAL SAFETY PRIOR TO THE ISSUANCE OF A BUILDING PERMIT.

- 41. GLASS DOORS, ADJACENT PANELS AND ALL GLAZED OPENINGS WITHIN 18" OF THE ADJACENT FLOOR SHALL BE GLASS APPROVED FOR IMPACT HAZARD.

- 42. ALL LIGHT GAUGE METAL STUDS AND BRACING SHALL COMPLY WITH 2016 CALIFORNIA BUILDING CODE.

- 43. INSTALLATION OF SHORING, UNDERPINNING, AND/OR SLOT CUTTING EXCAVATIONS SHALL BE PERFORMED UNDER THE CONTINUOUS INSPECTION AND APPROVAL OF THE GEOTECHNICAL ENGINEER.

- 44. ALL CONSTRUCTION SHALL PERFORMED IN ACCORDANCE WITH THE STATE CONSTRUCTION SAFETY ORDERS ENFORCED BY THE STATE DIVISION OF INDUSTRIAL SAFETY.

- 45. DIMENSIONS AND CONDITIONS AT THE JOB SITE SHALL BE VERIFIED BY ALL CONTRACTORS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO EXAMINE THE EXISTING CONDITIONS PRIOR TO SUBMITTING BIDS TO THE OWNER SINCE PROPOSALS MUST TAKE INTO CONSIDERATION ALL SUCH CONDITIONS THAT MAY AFFECT THE WORK. DISCREPANCIES IN THE DRAWINGS OR BETWEEN THE DRAWINGS AND ACTUAL FIELD CONDITION SHALL BE REPORTED TO THE ARCHITECT. REVISED DRAWINGS OR INSTRUCTIONS SHALL BE ISSUED BY THE OWNER PRIOR TO THE INSTALLATION OF ANY WORK.

- 46. CONTRACTORS SHALL PROVIDE AND INSTALL ALL CONCRETE HOUSEKEEPING PADS FOR MECHANICAL AND ELECTRICAL EQUIPMENT, AS REQUIRED.

- 47. ALL GYPSUM WALL BOARD TO BE 5/8" THICK TYPE 'X' UNLESS OTHERWISE NOTED OR REQUIRED FOR SPECIFIC WALL CONSTRUCTION.

- 48. THERMAL INSULATION SHALL BE PROVIDED PER TYPICAL ASSEMBLIES NOTED ON DRAWINGS. REFER TO SPECS FOR PRODUCT INFORMATION.

- 49. PROVIDE TEMPERED GLASS AT LOCATIONS REQUIRED BY CBC SECTION 2406 AND BY OTHER APPLICABLE CODE.

- 50. ROOF DRAINS DISCHARGING WATER MUST BE CONDUCTED UNDER THE SIDEWALK.

- 51. DOORS SHALL NOT PROJECT MORE THAN 7 INCHES INTO THE REQUIRED CORRIDOR WIDTH WHEN FULLY OPENED OR MORE THAN ONE HALF INTO THE REQUIRED WIDTH WHEN IN ANY POSITION. (CBC SECTION 1005.7.1)

- 52. PUBLIC HALLWAYS AND EXIT COURT PASSAGEWAYS TO HAVE 7'-0" CLEAR HEIGHT TO LOWEST PROJECTION. (CBC SECTION 1005.3)

- 53. OCCUPANCY LOAD SIGNS SHALL BE POSTED IN EACH CLASSROOM, ASSEMBLY ROOM, OR SIMILAR PURPOSE ROOM, HAVING AN OCCUPANT LOAD OF 50 OR MORE.

- 54. DUCT PENETRATIONS THROUGH PROTECTIVE ELEMENTS OF FIRE RATED CORRIDOR WALLS SHALL BE PROTECTED WITH A COMBINATION FIRE SMOKE DAMPERS PER CBC SECTION 714.

- 55. NO CHANGES ARE TO BE MADE ON THESE PLANS WITHOUT THE KNOWLEDGE OR CONSENT OF THE ARCHITECT/ENGINEER WHOSE SIGNATURE APPEARS HEREON.

- 56. THESE DRAWINGS DO NOT CONTAIN THE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.

- 57. 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 WHETHER SHOWN HEREON OR NOT AND TO PROTECT THEM FROM DAMAGE. THE ARCHITECT IS NOT RESPONSIBLE FOR THE LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES WHETHER OR NOT SHOWN OR DETAILED AND INSTALLED BY ANY OTHER CONTRACT. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT 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.

- 58. THE PROJECT APPLICANT SHALL COMPLY WITH THE REQUIREMENTS OF THE ENGINEERING DIVISION FOR ALL PUBLIC IMPROVEMENTS.

- 16. ALL SYMBOLS AND ABBREVIATIONS USED ON THE DRAWINGS ARE CONSIDERED TO BE CONSTRUCTION STANDARDS. IF THE CONTRACTOR HAS QUESTIONS REGARDING ABBREVIATIONS OR THEIR EXACT MEANING, THE ARCHITECT SHALL BE NOTIFIED FOR CLARIFICATION.

- 17. DETAILS MARKED "TYPICAL" SHALL APPLY IN ALL SIMILAR CASES UNLESS SPECIFICALLY INDICATED OTHERWISE.

GENERAL NOTES

- 18. ALL RUBBISH AND DEBRIS RESULTING FROM DEMOLITION AND/OR NEW WORK SHALL BE DISPOSED OF OFF-SITE AND SHALL NOT BE ALLOWED TO ACCUMULATE.
- 19. SUBMIT SHOP DRAWINGS IN ACCORDANCE WITH SECTION 01 30 00 OF SPECIFICATIONS AND AS REQUIRED BY INDIVIDUAL SPECIFICATION SECTIONS.
- 20. NO SUBSTITUTIONS WILL BE ALLOWED WITHOUT PRIOR WRITTEN APPROVAL. REQUEST FOR SUBSTITUTION SHALL BE IN ACCORDANCE WITH SECTION 01 60 00 OF SPECIFICATIONS.
- 21. ALL METAL FRAMING MEMBERS SHALL BE SO ARRANGED AND SPACED AS TO PERMIT INSTALLATION OF PIPE CONDUITS AND DUCT-WORK WITH A MINIMUM OF CUTTING. SHAFT WALLS SHALL BE PROVIDED WITH NECESSARY FRAMES, BRACING, AND SEALANT AROUND THE OPENING.
- 22. OFFSET STUDS WHERE REQUIRED SO THAT FINISH WALL SURFACE WILL BE FLUSH.
- 24. DOORS IN RATED WALLS SHALL CONSIST OF SELF-CLOSING, SELF-LATCHING ASSEMBLIES WITH SMOKE AND DRAFT SEALS AT HEAD AND JAMBS. DOOR ASSEMBLY RATINGS SHALL BE AS INDICATED ON DOOR AND ACTIVATED BY SMOKE DETECTORS.
- 25. INSTALL METAL CORNER BEADS AT ALL EXPOSED GYPSUM BOARD EDGES INSTALL CASING BEADS WHEREVER GYPSUM BOARD, PLASTER, ETC. ABUTS DISSIMILAR FINISH MATERIAL AND PROVIDE SEALANT AS REQUIRED.

- 26. GYPSUM BOARD SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE AT ALL COLUMNS AND EXTERIOR PERIMETER WALLS UNLESS OTHERWISE NOTED. WELD FURRING CHANNELS TO STEEL COLUMN PRIOR TO FIRE PROOFING WHEN REQUIRED.

- 27. CONTRACTOR SHALL PROVIDE AND INSTALL ALL STIFFENERS, BRACING, BACK-UP PLATES, AND SUPPORTING BRACKETS REQUIRED FOR THE INSTALLATION OF ALL CASEWORK, STAIR RAILINGS, TOILET ROOM ACCESSORIES AND PARTITIONS, AND OF ALL WALL MOUNTED OR SUSPENDED MECHANICAL, ELECTRICAL, OR MISCELLANEOUS EQUIPMENT.

- 28. ALL GLAZING SHALL COMPLY WITH THE CONSUMER PRODUCT SAFETY COMMISSION REQUIREMENTS (C.P.S.C.), CFC, AND CBC.

- 29. CONTACT BETWEEN DISSIMILAR METAL SHALL BE PROTECTED.

- 30. ALL DOOR SIZES SHOWN ON DOOR SCHEDULE ARE OPENING SIZES. ALLOWANCE FOR THRESHOLDS, ETC. SHALL BE TAKEN OFF DOOR. ALL DOORS AND FRAME SHALL BE REINFORCED WHERE REQUIRED FOR CLOSERS, STOPS, AND HARDWARE.

- 31. ROOFING SYSTEM SHALL BEAR U.L. LISTING AS A CLASS "A" SYSTEM. ALL MANUFACTURED MATERIALS USED SHALL BEAR THE APPROPRIATE U.L. LABEL.

- 32. ALL WOOD TRIM, SPACER, FILLER, ETC., THROUGHOUT JOB SHOULD BE FIRE TREATED.

- 33. INSPECTION AND TESTING LABORATORY MUST BE IN THE EMPLOY OF THE OWNER, NOT THE CONTRACTOR.

- 34. MINIMUM HEADROOM CLEARANCE AT STAIRS SHALL BE 6'-8" MEASURED VERTICALLY FROM A PLANE PARALLEL AND TANGENT TO THE TREAD NOSING TO THE SOFFIT ABOVE AT ALL POINTS.

- 35. ALL EXIT DOORS SHALL BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE. LOCKING DEVICES SHALL BE OF AN APPROVED TYPE.

- 36. EXIT SIGNS SHALL HAVE 6" MINIMUM HEIGHT LETTERS AND SHALL CONFORM TO SECTION 1013 OF THE CALIFORNIA BUILDING CODE.

- 37. FURNISH AND INSTALL ACCESS DOORS, FIRE DAMPERS, ETC. IN CEILING AND WALL CONSTRUCTION LOCATED AS REQUIRED BY INSTALLATION OF MECHANICAL PLUMBING, AND ELECTRICAL WORK AND AS APPROVED BY THE ARCHITECT. PROVIDE RATED ASSEMBLIES IN RATED WALLS AND CEILINGS AND SHALL BE APPROVED BY BUILDING INSPECTOR PRIOR TO INSTALLATION.

- 38. FURNISH AND INSTALL EMERGENCY LIGHTING AS SPECIFIED AND INDICATED BUT IN NO CASE SHALL THE LIGHT VALUE BE LESS THAN ONE FOOT CANDLE AT FLOOR LEVEL IN ALL EXIT CORRIDORS AND STAIR SHAFTS (CBC SECTION 1008).

- 39. THERE SHALL BE NO TRENCHES OR EXCAVATIONS 5' OR MORE IN DEPTH INTO WHICH A PERSON IS CONSIDERED TO FALL UNLESS A PERMIT IS OBTAINED FROM THE STATE OF CALIFORNIA DIVISION OF INDUSTRIAL SAFETY PRIOR TO THE ISSUANCE OF A BUILDING PERMIT.

- 40. THE CONSTRUCTION OR DEMOLITION OF ANY BUILDING, STRUCTURE, SCAFFOLDING OR FALSEWORK MORE THAN 3 STORIES OR 36' IN HEIGHT REQUIRES A PERMIT FROM THE STATE OF CALIFORNIA DIVISION OF INDUSTRIAL SAFETY PRIOR TO THE ISSUANCE OF A BUILDING PERMIT.

- 41. GLASS DOORS, ADJACENT PANELS AND ALL GLAZED OPENINGS WITHIN 18" OF THE ADJACENT FLOOR SHALL BE GLASS APPROVED FOR IMPACT HAZARD.

- 42. ALL LIGHT GAUGE METAL STUDS AND BRACING SHALL COMPLY WITH 2016 CALIFORNIA BUILDING CODE.

- 43. INSTALLATION OF SHORING, UNDERPINNING, AND/OR SLOT CUTTING EXCAVATIONS SHALL BE PERFORMED UNDER THE CONTINUOUS INSPECTION AND APPROVAL OF THE GEOTECHNICAL ENGINEER.

- 44. ALL CONSTRUCTION SHALL PERFORMED IN ACCORDANCE WITH THE STATE CONSTRUCTION SAFETY ORDERS ENFORCED BY THE

ABBREVIATIONS

4S/DP ADA A.F.F. A.F.C. AWG AMP, A A.I.C. or AIC	4" SQUARE BY 2-1/8" DEEP BOX GFP ABOVE FINISH FLOOR ABOVE FINISH GRADE AMERICAN WIRE GAUGE AMPERE AMPERES INTERRUPTING CAPACITY (SYMMETRICAL) AVAILABLE FAULT CURRENT AMP FRAME, AMP TRIP AUTHORITY HAVING JURISDICTION AMP SWITCH, AMP FUSE AUTOMATIC TRANSFER SWITCH AVERAGE BJ BUILDING DISTRIBUTION FRAME BR BLDG CBC CEC CIRC., CKT. CB CSFD C C.O. CONN CPT CLCB CLF CT (D) DAS DIA DISC DIST D.P.C.S. E.C. EMT ENT EWC E.P.O. E-O-L EF EGC or EIG (E) EP (ER) FT or 'F FA or F.A. GRD	GFCI GFP GE or GEC HACR H.W., D.L. HID HP HPS IN. or "N IG IBC I.D.C.S. IDT JBOX K KCALH KVA KW KWH LCL L.F., L.F. LTG., LTS LPS MAX. MBJ MDF MOCP MOCB MLO M.C. M MM MV MH MIN. MCA MCC MCM MCP MFR MFD MW NATS NEC NEMA NC	GROUND FAULT CIRCUIT INTERRUPTER GROUND FAULT PROTECTION GROUNDING ELECTRODE CONDUCTOR HEATING AIR CONDITIONING REFRIGERATION HAND-OFF-AUTO HEATING, VENTILATING AND AIR CONDITIONING HEIGHT, WIDTH, DEPTH, LENGTH HIGH INTENSITY DISCHARGE HORSEPOWER HIGH PRESSURE SODIUM INCHES ISOLATED GROUND INTERNATIONAL BUILDING CODE INTEGRATED DIMMING CONTROL PANEL INTERMEDIATE DISTRIBUTION FRAME JUNCTION BOX DEGREE KELVIN THOUSAND CIRCULAR MILS KILOVOLT AMPERES KILOWATT KILOWATT HOUR LONG CONTINUOUS LOAD LINEAR FEET LIGHTING LOW PRESSURE SODIUM MAXIMUM MAIN BONDING JUMPER MAIN DISTRIBUTION FRAME MAXIMUM OVERCURRENT PROTECTION MAIN CIRCUIT BREAKER MAIN LUGS ONLY MECHANICAL CONTRACTOR METER METER MAIN MERCURY VAPOR METAL HALIDE MINIMUM MINIMUM CIRCUIT AMPS MOTOR CONTROL CENTER THOUSAND CIRCULAR MILS MOTOR CIRCUIT PROTECTOR MANUFACTURER MOUNTED MICROWAVE NON AUTOMATIC DISCONNECT NATIONAL ELECTRICAL CODE NATIONAL ELECTRICAL CODE NATIONAL ELECTRICAL CODE NEMA MANUFACTURER'S ASSOCIATION NORMALLY CLOSED	NO NON-FUSED NOT IN CONTRACT NOT TO SCALE NIGHT LIGHT NUMBER OWNER FURNISHED CONTRACTOR INSTALLED PERCENT IMPEDANCE PHASE PHOTOCELL PLUMBING CONTRACTOR POLE POLY VINYL CHLORIDE POWER DISTRIBUTION UNIT OVER 600 VOLTS FURNISH, INSTALL AND CONNECT POTENTIAL TRANSFORMER PUBLIC ADDRESS DENOTES RELOCATED DEVICE LOCATION RECEPTACLE REFRIGERATOR RIGID GALVANIZED STEEL ROOT MEAN SQUARE SHORT CIRCUIT CURRENT SHORT CIRCUIT CURRENT RATING STRUCTURED CABLING SYSTEM SMOKE FIRE DAMPER 600 VOLTS AND LESS SHEET METAL AND AIR COND. CONTRACTOR'S NAT'L ASSOC. SQUARE SUPPLY SIDE BONDING JUMPER SYSTEM BONDING JUMPER TIMERCLOCK TELEPHONE AND DATA TELEVISION TELEVISION TRANSIENT VOLTAGE SURGE SUPPRESSION TYPICAL UNDERGROUND PULL SECTION UNLESS OTHERWISE NOTED UNINTERRUPTIBLE POWER SYSTEM VARIABLE AIR VOLUME VOLTS VOLT AMPERES VOLTAGE DROP WEATHERPROOF WIRE TRANSFORMER
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FIRE ALARM SYSTEM SYMBOLS

SEE FIRE ALARM OR CENTRAL MONITORING SYSTEM DRAWINGS FOR FIRE ALARM SYMBOLS.

SIGNAL SYSTEM SYMBOLS

	WALL MOUNTED CLOCK FIELD VERIFY MOUNTING HEIGHT PRIOR TO INSTALLATION, BATTERY POWERED, OFC
	SURFACE WALL MOUNTED SPEAKER, "V" INDICATES VOLUME CONTROL.
	SURFACE MOUNTED SPEAKER, "V" INDICATES VOLUME CONTROL.
	FLUSH WALL MOUNTED SPEAKER, "V" INDICATES VOLUME CONTROL.
	CEILING FLUSH MOUNTED SPEAKER, "V" INDICATES VOLUME CONTROL.

TELEPHONE/DATA SYMBOLS

	TELEPHONE OUTLET BOX, WALL MOUNTED. STUB A 1' C.O. UP 6" ABOVE THE ACCESSIBLE CEILING AND PROVIDE A BUSHING. 4S/DP MINIMUM WITH SINGLE GANG RING.
	DATA OUTLET BOX, WALL MOUNTED. STUB A 1' C.O. UP 6-INCHES ABOVE THE ACCESSIBLE CEILING AND PROVIDE A BUSHING. 4S/DP MINIMUM WITH SINGLE GANG RING.
	COMBINATION TELEPHONE AND DATA OUTLET BOX, WALL MOUNTED. STUB A 1' C.O. UP 6-INCHES ABOVE THE ACCESSIBLE CEILING AND PROVIDE A BUSHING. 4S/DP MINIMUM WITH SINGLE GANG RING.
	TELEPHONE OUTLET BOX, FLUSH MOUNTED IN CEILING. MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
	DATA OUTLET BOX FLUSH MOUNTED IN CEILING. MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
	COMBINATION TELEPHONE AND DATA OUTLET BOX FLUSH MOUNTED IN CEILING. MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
	TELEPHONE OUTLET BOX, WALL MOUNTED 6-INCHES ABOVE COUNTER OR SPLASH. STUB A 1' C.O. UP 6-INCHES ABOVE THE ACCESSIBLE CEILING AND PROVIDE A BUSHING. 4S/DP MINIMUM WITH SINGLE GANG RING.
	DATA OUTLET BOX, WALL MOUNTED 6-INCHES ABOVE COUNTER OR SPLASH. STUB A 1' C.O. UP 6-INCHES ABOVE THE ACCESSIBLE CEILING AND PROVIDE A BUSHING. 4S/DP MINIMUM WITH SINGLE GANG RING.
	COMBINATION TELEPHONE AND DATA OUTLET BOX, WALL MOUNTED 6-INCHES ABOVE COUNTER OR SPLASH. STUB A 1' C.O. UP 6-INCHES ABOVE THE ACCESSIBLE CEILING AND PROVIDE A BUSHING. 4S/DP MINIMUM WITH SINGLE GANG RING.
	COMBINATION TELEPHONE AND DATA OUTLET, WALL MOUNTED AT 18-INCHES A.F.F. FOR FLEXIBLE CONNECTION TO FURNITURE SYSTEM. PROVIDE THE FOLLOWING:
	- IN A NON-RATED INSULATED WALL, OR NON-RATED UNINSULATED WALL, PROVIDE 2-GANG MUO RING OR CADDY #RBS SERIES BOX MOUNTING BRACKET (EQUAL BY B-LINE OR RAYCO) WITH (2) 1-1/2' C.O. WITH PULL STRING TO ACCESSIBLE CEILING PROVIDE 1-1/2' BUSHINGS AT CONDUIT ENDS. REFER TO ARCHITECTURAL PLANS FOR WALL CONSTRUCTION/TYPE AND CEILING CONDITIONS.
	- IN A RATED WALL, PROVIDE (1) 4S/DP BOX WITH (2) 1-1/4' C.O. AND (1) 4S/DP BOX WITH (1) 1-1/4' C.O. WITH PULL STRINGS IN EACH CONDUIT TO ACCESSIBLE CEILING. PROVIDE 1-1/4' BUSHINGS AT CONDUIT ENDS. UTILIZE CADDY #RBS SERIES BOX MOUNTING BRACKET TO MAINTAIN BOX ALIGNMENT (EQUAL BY B-LINE OR RAYCO). UTILIZE FIRESTOPPING SYSTEM PADS RATED FOR USE ON THE INSIDE OR OUTSIDE OF THE BOX (STI OR EQUAL) AS REQUIRED TO MAINTAIN RATING OF WALL OR MEMBRANE. REFER TO ARCHITECTURAL PLANS FOR WALL CONSTRUCTION/TYPE AND CEILING CONDITIONS.

	CONCEALED TELEPHONE/DATA CONDUIT RUN, 1-INCH CONDUIT ONLY (MIN), SEE TABLE FOR CONDUIT SIZE VARIATIONS.
	FLUSH MOUNTED LOCKABLE TERMINAL CABINET WITH TERMINAL STRIPS AS REQUIRED.
	SURFACE MOUNTED, LOCKABLE TERMINAL CABINET WITH TERMINAL STRIPS AS REQUIRED.
	TELEPHONE TERMINAL BACKBOARD SIZED AS NOTED. REFER TO SYSTEM GROUND DETAIL.

MEP COMPONENT ANCHORAGE NOTE:

ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA-APPROVED CONSTRUCTION DOCUMENTS. 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.

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. 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.
3. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE 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 DUCTWORK, PIPING, AND CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS.

- A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVING A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
- 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 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 SECTIONS 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 BRACING SYSTEM ARE AS NOTED BELOW. WHEN 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 JOBSITE 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).

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|--------------------|--|
| MP □ MD □ PP □ E □ | OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS. |
| MP □ MD □ PP □ E □ | OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL (OPM) #0052-13 & #0043-13. |

LIGHTING SYMBOLS

SEE LIGHTING FIXTURE SYMBOLS DEPICTED WITH CAPITAL LETTER(S) ADJACENT TO RESPECTIVE SYMBOL(S) INDICATE(S) LIGHT FIXTURE MOUNTING BASE DETAIL(S). SEE LIGHTING FIXTURE SCHEDULE FOR FIXTURE SYMBOL INFORMATION.

	LIGHTING FIXTURE CALL OUT, NUMBER(S) AND/OR UPPER CASE LETTER(S) (I.E. "11" INDICATES FIXTURE TYPE (REFER TO LIGHTING FIXTURE SCHEDULE), LOWER CASE LETTER (I.E. "A") ADJACENT TO FIXTURE TYPE INDICATES BALLAST OPTION (SEE GENERAL LIGHTING FIXTURE SCHEDULE NOTES).
	INDICATES FINAL CONNECTION TO A LIGHTING FIXTURE, NUMBER OF CONDUCTORS AS REQUIRED.

LIGHTING CONTROL SYMBOLS

SEE THE DISTRIBUTED LIGHTING CONTROL (DLC) SPECIFICATIONS AND SEQUENCE OF OPERATIONS (SOO) FOR MORE INFORMATION.

	LOW VOLTAGE WIRING INTERCONNECTING DLCs COMPONENTS AS REQUIRED. SEE DLCs SPECIFICATIONS FOR MORE INFORMATION.
	WALL MOUNTED DIMMER. SEE SINGLE POLE SWITCH SYMBOL FOR RELATED SUBSCRIPTS. QUANTITY OF ADJACENT LOWER CASE LETTERS INDICATES QUANTITY OF DIMMERS REQUIRED. PROVIDE DIMMER TYPE TO MATCH INDICATED BALLAST TYPE AND CONTROL REQUIREMENTS.
	WALL MOUNTED STAND ALONE OCCUPANCY SENSOR.
	WALL MOUNTED SYSTEM-BASED OCCUPANCY SENSOR.
	1-WAY DIRECTIONAL CEILING MOUNTED, SYSTEM-BASED OCCUPANCY SENSOR.
	2-WAY DIRECTIONAL CEILING MOUNTED, SYSTEM-BASED OCCUPANCY SENSOR.
	LOW VOLTAGE MOMENTARY SWITCHES, WALL MOUNTED, FOR MANUAL ON/OFF SWITCHING, DIMMING, AND OVERRIDE CONTROL OF LIGHTING.
	AUTOMATIC SWITCHING/STEP-DIMMING DAYLIGHTING CONTROLLER USED TO SWITCH OFF LIGHTS WHEN SUFFICIENT NATURAL LIGHT IS PRESENT. REFER TO THE DLCs SOO FOR TARGET ILLUMINATION VALUE.
	AUTOMATIC CONTINUOUS DIMMING DAYLIGHTING CONTROLLER USED TO DIM LIGHTS WHEN SUFFICIENT NATURAL LIGHT IS PRESENT. REFER TO THE DLCs SOO FOR TARGET ILLUMINATION VALUE.

LIGHTING CONTROL SYMBOL SUPERSCRIPIT & SUBSCRIPT KEY:

1. "Y" INDICATES THAT SWITCH LEG "Y" TO BE CONFIGURED PER THE SOO. ADJACENT LOWER CASE LETTERS INDICATES QUANTITY OF SWITCHLEGS TO BE CONTROLLED. EXACT CONTROL FUNCTION IS DETERMINED BY THE BALLAST/DRIVER/FIXTURE TYPE.
2. ADJACENT UPPER CASE LETTER(S) INDICATE THE FOLLOWING:
AV INDICATES CONNECTION TO AV CONTROL SYSTEM.
DM INDICATES DUAL MODE CONTROL AT CORRIDORS, STAIRWELLS AND WAREHOUSE AISLEWAYS
H INDICATES CONNECTION TO HVAC SYSTEM CONTROLS VIA CONTROLLED DRY-CONTACT CLOSURE.
K INDICATES LOCKING SWITCH FOR THE SUBSEQUENT LOWER CASE LETTER
P INDICATES CONNECTION TO MOVEABLE PARTITION INTERFACE, SENSOR AND STATUS INDICATOR.
V INDICATES VANDAL RESISTANT SWITCH.
3. ADJACENT LOWER CASE LETTER(S) INDICATE SWITCH LEG(S) CONTROLLED EXCEPT WHERE "DM" INDICATES DUAL MODE CONTROL SWITCH.
4. ADJACENT "+, + + AND "" INDICATES PORTION OF SWITCHLEG CONTROLLED BY SENSOR WHERE "+ INDICATES PRIMARY SIDELIT DAYLIT ZONE, "+ + INDICATES SECONDARY SIDELIT DAYLIT ZONE, AND "" INDICATES SKYLIT DAYLIT ZONE.

MISCELLANEOUS SYSTEM SYMBOLS

	INVERTER CONTROL PANEL. SEE INVERTER SPECIFICATIONS.
	INVERTER ANNUNCIATOR PANEL. SEE INVERTER SPECIFICATIONS.
	GENERATOR ANNUNCIATOR PANEL. SEE GENERATOR SYSTEM SPECIFICATIONS FOR MORE INFORMATION.
	INTEGRATED DIMMING CONTROL STATION (IDCS) PANEL, WALL MOUNTED. SEE IDCS SYSTEM SPECIFICATIONS FOR MORE INFORMATION.
	DIMMING PANEL CONTROL STATION (DPCS) PANEL, WALL MOUNTED. SEE DPCS SYSTEM SPECIFICATIONS FOR MORE INFORMATION.
	LIGHTING CONTROL SYSTEM LOCAL SWITCH, WALL MOUNTED. SEE LIGHTING CONTROL SYSTEM SPECIFICATIONS FOR MORE INFORMATION.
	LIGHTING CONTROL SYSTEM OVERRIDE SWITCH, WALL MOUNTED. SEE LIGHTING CONTROL SYSTEM SPECIFICATIONS FOR MORE INFORMATION.
	LIGHTING CONTROL SYSTEM REMOTE STATION SWITCH, WALL MOUNTED. SEE LIGHTING CONTROL SYSTEM SPECIFICATIONS FOR MORE INFORMATION.
	IDCS/DPCS SYSTEM RESET STATION SWITCH, WALL MOUNTED. SEE IDCS SYSTEM AND/OR DPCS SYSTEM SPECIFICATIONS FOR MORE INFORMATION.
	IDCS/DPCS SYSTEM PARTITION STATION SWITCH, WALL MOUNTED. SEE IDCS SYSTEM AND/OR DPCS SYSTEM SPECIFICATIONS FOR MORE INFORMATION.

BRANCH CIRCUIT SYMBOLS

	HOME RUN TO PANEL. LETTER DESIGNATES PANEL, NUMBERS INDICATE CIRCUITS, HASH MARKS INDICATE NUMBER OF CONDUCTORS IN CONDUIT RUN, 1/2 AWG MINIMUM UNLESS OTHERWISE NOTED.
	HOME RUN TO PANEL. LETTER DESIGNATES PANEL, NUMBERS INDICATE CIRCUITS WITH SEPARATE NEUTRALS. "N" INDICATES SEPARATE NEUTRALS.
	HOME RUN TO PANEL. LETTER DESIGNATES PANEL, NUMBERS INDICATE CIRCUITS, "*" INDICATES SEPARATE #10 NEUTRAL THROUGHOUT BRANCH CIRCUIT. "HASH MARK *" INDICATES AN ISOLATED GROUND CONDUCTOR.
	CONCEALED CONDUIT OR BRANCH CIRCUIT UNLESS OTHERWISE NOTED. 1/2" CONDUIT MINIMUM, (2) #12 AWG CONDUCTORS MINIMUM.
	CONDUIT OR BRANCH CIRCUIT CONCEALED BELOW GRADE, 3/4" CONDUIT MINIMUM WITH (2) #12 AWG CONDUCTORS MINIMUM AND A CODE SIZED EQUIPMENT GROUND.
	SURFACE-MOUNTED CONDUIT OR BRANCH CIRCUIT UNLESS OTHERWISE NOTED. 1/2" CONDUIT MINIMUM, (2) #12 AWG CONDUCTORS MINIMUM.
	TANDEM WIRING CONNECTION.
	CONDUIT STUB OUT, CAP, MARK AND RECORD ON AS-BUILT DRAWINGS.
	CONDUIT CONTINUATION.
	FLEXIBLE CONNECTION AS REQUIRED, NUMBER OF CONDUCTORS AS REQUIRED. VERIFY CONNECTION REQUIREMENTS WITH MANUFACTURER PRIOR TO ROUGH-IN.
	CONDUIT/BRANCH CIRCUIT/FEEDER CONTINUATION DOWN WALL TO FLOOR ABOVE.
	CONDUIT/BRANCH CIRCUIT/FEEDER CONTINUATION UP WALL TO FLOOR ABOVE.

FLOOR BOX / SPECIALTY WALL BOX / PEDESTAL BOX SYMBOLS

	SINGLE SERVICE IN FLOOR BOX. PROVIDE DEVICES PER PLAN. SEE FLOOR BOX DETAILS AND SPECIFICATIONS FOR MORE INFORMATION.
	TWO SERVICE IN FLOOR BOX. PROVIDE DEVICES PER PLAN. SEE FLOOR BOX DETAILS AND SPECIFICATIONS FOR MORE INFORMATION.
	THREE SERVICE IN FLOOR BOX. PROVIDE DEVICES PER PLAN. SEE FLOOR BOX DETAILS AND SPECIFICATIONS FOR MORE INFORMATION.
	FOUR SERVICE IN FLOOR BOX. PROVIDE DEVICES PER PLAN. SEE FLOOR BOX DETAILS AND SPECIFICATIONS FOR MORE INFORMATION.
	SIX SERVICE IN FLOOR BOX. PROVIDE DEVICES PER PLAN. SEE FLOOR BOX DETAILS AND SPECIFICATIONS FOR MORE INFORMATION.
	7-GANG AV FLOOR BOX. PROVIDE DEVICES PER PLAN. SEE FLOOR BOX DETAILS AND SPECIFICATIONS FOR MORE INFORMATION.

RECESSED, ADJUSTABLE DEPTH, FLAT PANEL TV/DISPLAY WALL BOX WITH FLUSH GROMMETED COVER PANEL (CHIEF #PAC25F) AND MINIMUM OF (1) 1-1/4" C.O. FROM TOP-MOUNTED L.V. CONDUIT ENTRY BOX TO ACCESSIBLE CEILING. SEE PLANS FOR ANY ADDITIONAL CONDUIT REQUIREMENTS. PROVIDE ADDITIONAL L.V. AND LINE VOLTAGE CONDUIT ENTRY BOXES AS REQUIRED TO ACCOMPLISH WALL BOX CONFIGURATION DEPICTED ON PLANS. FLUSH GROMMETED COVER SHALL BE WHITE, BLACK OR CUSTOM COLOR PER ARCHITECT, WHEN FIELD CONDITIONS PROHIBIT. INSTALLATION OF THIS DEVICE (SUCH AS WALL STUD/CAVITY DEPTH OF LESS THAN 2" ETC), CONFIRM VIA WRITTEN RFI THE INSTALLATION OF A TRADITIONAL POWER AND DATA RECEPTACLE INSTALLATION ALONG SIDE CCTV JUNCTION BOX CONSISTING OF 2-GANG DEEP JUNCTION BOX-2-GANG RING WITH 1-1/4" C.O. TO ACCESSIBLE CEILING IN ADDITION TO ANY OTHER CONDUIT REQUIREMENTS DEPICTED ON PLANS. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR MOUNTING HEIGHT.

	SINGLE OR DUAL SERVICE RECESSED EXTERIOR WALL, TYPE "WP-A", PROVIDE DEVICES PER PLAN. EACH LV OR UNUSED COMPARTMENT SHALL BE EQUIPPED WITH A 1' C.O. TO THE NEAREST ACCESSIBLE CEILING SPACE U.O.N. SEE EXTERIOR DETAILS AND SPECIFICATIONS FOR MORE INFORMATION.
	SINGLE OR DUAL SERVICE EXTERIOR PEDESTAL, TYPE "WP-C", PROVIDE DEVICES PER PLAN. SEE EXTERIOR DETAILS AND SPECIFICATIONS FOR MORE INFORMATION. ARROW DENOTES DEVICE DOOR LOCATION.

ANNOTATIONS

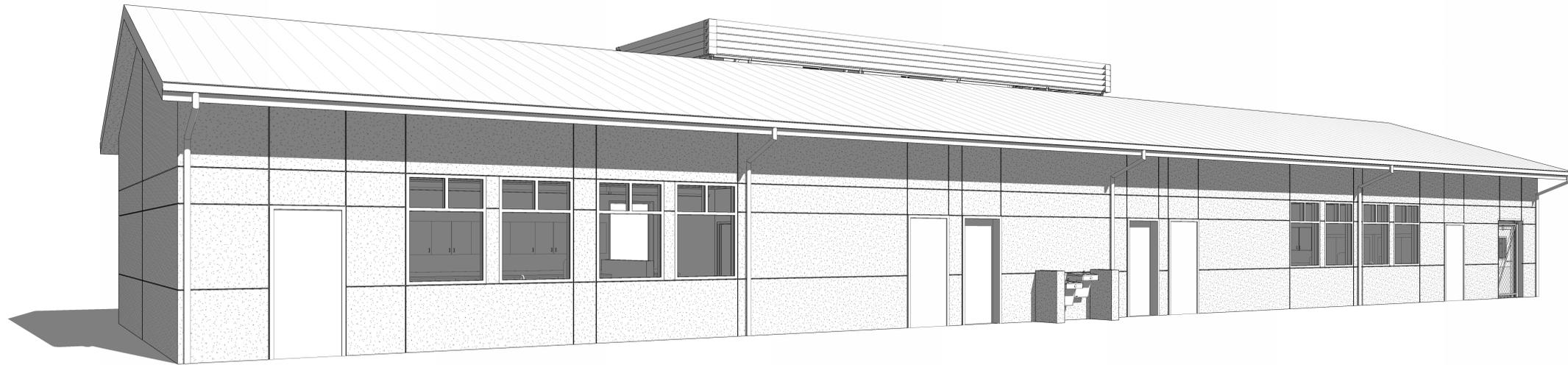
	PANEL CALLOUT, "A" INDICATES PANELBOARD OR EQUIPMENT DESIGNATION.
	MECHANICAL EQUIPMENT CALLOUT, "AC" INDICATES UNIT TYPE AND "2" INDICATES UNIT NUMBER. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION AND ELECTRICAL REQUIREMENTS.
	DETAIL CALLOUT, "3" INDICATES DETAIL NUMBER "E-1" INDICATES SHEET NUMBER.
	PLAN NOTE REFERENCE. REFER TO NOTES ON SHEET, OR AS DIRECTED.
	REVISION REFERENCE.
	WYE CONFIGURATION
	DELTA CONFIGURATION
	GROUND

POWER SYMBOLS

ALL RECEPTACLE OUTLETS SHOWN WITH A DIAGONAL SLASH SHALL BE CONTROLLED BY OCCUPANCY SENSOR OR LIGHTING CONTROL PANEL. SEE DISTRIBUTED LIGHTING CONTROLS FOR ADDITIONAL REQUIREMENTS. WHERE DOUBLE DUPLEX RECEPTACLE OUTLETS ARE INDICATED AS CONTROLLED, ONLY A SINGLE DUPLEX RECEPTACLE OUTLET (NON-IG, NON-GFCI TYPE) SHALL BE CONTROLLED. WITHIN ANY CONTROLLED DUPLEX RECEPTACLE OUTLET, ONLY ONE RECEPTACLE SHALL BE CONTROLLED. NOTE THAT FOR FLOOR BOXES OR POKE-THRU DEVICES, THE ASSOCIATED CONTROL RELAY MAY NEED TO BE LOCATED WITHIN THE ELECTRICAL ROOM WHERE THE CONTROLLED CIRCUIT ORIGINATES.

	OCCUPANCY SENSOR/LIGHTING CONTROL SYSTEM CONTROLLED RECEPTACLE RELAY, WHERE LETTER DESIGNATION "A" REPRESENTS OCCUPANCY SENSOR/LIGHTING CONTROL SYSTEM CONTROL ZONE. SEE THE DISTRIBUTED LIGHTING CONTROL SPECIFICATION FOR MORE INFORMATION.
	DUPLEX RECEPTACLE, WALL MOUNTED.
	DOUBLE DUPLEX RECEPTACLE, WALL MOUNTED.
	DUPLEX, GFCI RECEPTACLE, WALL MOUNTED. WP INDICATES WEATHERPROOF, A, B OR C INDICATES THE TYPE OF COVER. REFER TO THE GENERAL PRODUCT SPECIFICATIONS.
	DOUBLE DUPLEX, WALL MOUNTED, WITH (1) GFCI RECEPTACLE AND (1) DUPLEX RECEPTACLE CONNECTED ON LOAD SIDE OF GFCI. WP INDICATES WEATHERPROOF, A, B OR C INDICATES THE TYPE OF COVER. REFER TO THE GENERAL PRODUCT SPECIFICATIONS.
	DUPLEX RECEPTACLE, ONE HALF SWITCHED, WALL MOUNTED.
	DUPLEX, ISOLATED GROUND RECEPTACLE, WALL MOUNTED.
	COMBINATION DOUBLE DUPLEX: ONE ISOLATED GROUND DUPLEX RECEPTACLE AND ONE DUPLEX RECEPTACLE, WALL MOUNTED.
	COMBINATION DOUBLE DUPLEX: TWO ISOLATED GROUND RECEPTACLES, WALL MOUNTED.
	SIMPLEX RECEPTACLE, WALL MOUNTED. REFER TO PLAN NOTES.
	DUPLEX RECEPTACLE FLUSH IN CEILING. MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
	DOUBLE DUPLEX RECEPTACLE FLUSH IN CEILING. MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
	DUPLEX RECEPTACLE, ONE HALF SWITCHED, FLUSH IN CEILING. MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
	DUPLEX, ISOLATED GROUND RECEPTACLE, FLUSH IN CEILING. MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
	COMBINATION DOUBLE DUPLEX: ONE ISOLATED GROUND DUPLEX RECEPTACLE AND ONE DUPLEX RECEPTACLE, MOUNTED FLUSH IN CEILING. MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
	COMBINATION DOUBLE DUPLEX: TWO ISOLATED GROUND RECEPTACLES, MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
	SIMPLEX RECEPTACLE FLUSH IN CEILING. MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
	SPECIAL RECEPTACLE FLUSH IN CEILING. MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.
	DUPLEX RECEPTACLE, WALL MOUNTED AT 6-INCHES ABOVE COUNTER OR SPLASH. WP INDICATES WEATHERPROOF, A, B OR C INDICATES THE TYPE OF COVER. REFER TO THE GENERAL PRODUCT SPECIFICATIONS.
	DOUBLE DUPLEX, WALL MOUNTED 6-INCHES ABOVE COUNTER OR SPLASH, WITH (1) GFCI RECEPTACLE AND (1) DUPLEX RECEPTACLE CONNECTED ON LOAD SIDE OF GFCI. WP INDICATES WEATHERPROOF, A, B OR C INDICATES THE TYPE OF COVER. REFER TO THE GENERAL PRODUCT SPECIFICATIONS.
	DUPLEX RECEPTACLE, BOTTOM HALF SWITCHED, WALL MOUNTED AT 6-INCHES ABOVE COUNTER OR SPLASH.
	DUPLEX, ISOLATED GROUND RECEPTACLE, WALL MOUNTED AT 6-INCHES ABOVE COUNTER OR SPL

LODI UNIFIED SCHOOL DISTRICT
AGRICULTURAL SCIENCE BLDG
 BEAR CREEK HIGH SCHOOL
 10555 THORTON RD
 STOCKTON, CA 95209
INCREMENT 2

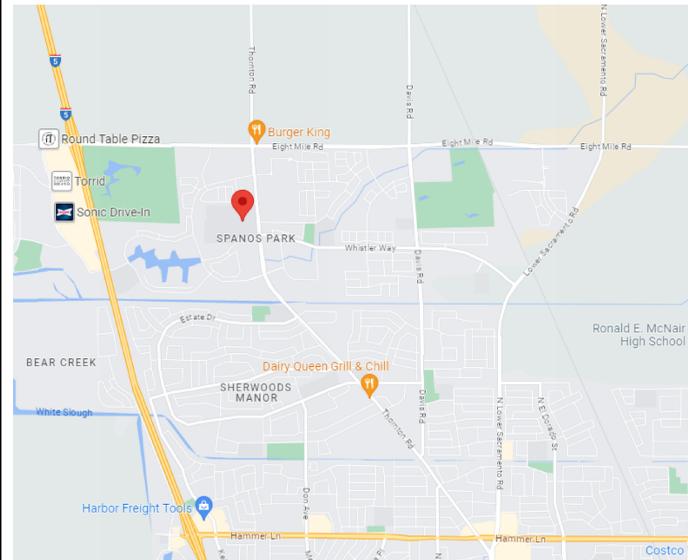


AGRICULTURAL SCIENCE BLDG
BEAR CREEK HIGH SCHOOL
 10555 THORTON RD
 STOCKTON, CA 95209
INCREMENT 2

CAMPUS MAP



LOCATION MAP



PROJECT SUMMARY

INCREMENT 1:
 SCOPE OF WORK INCLUDES:
 • SITE WORK REQUIRED FOR NEW 2-CLASSROOM AGRICULTURAL SCIENCE BUILDING AND RELATED SITE IMPROVEMENTS

INCREMENT 2:
 SCOPE INCLUDES CONSTRUCTION OF A SINGLE-STORY, STEEL-FRAMED CAFETERIA BUILDING, INCLUDING CONSISTING OF (2) AGRICULTURAL SCIENCE CLASSROOMS, A SHARED WORKROOM, AND RESTROOMS.

PROJECT TEAM

ARCHITECT:
 CHARLES L. BEAVERS, AIA
 BROKAW DESIGN
 P.O. BOX 3103
 ROHNERT PARK, CA 94927
 (415) 880-5043
 CHARLES.BEAVERS@BROKAWDESIGN.COM

STRUCTURAL ENGINEER:
 DAVID LAYNE
 INNOVATIVE STRUCTURAL ENGINEERING, INC.
 29970 TECHNOLOGY DRIVE
 SUITE 108
 MURRIETA, CA 92563
 (951) 800-0032
 DAVID@ISEENGINEERS.COM

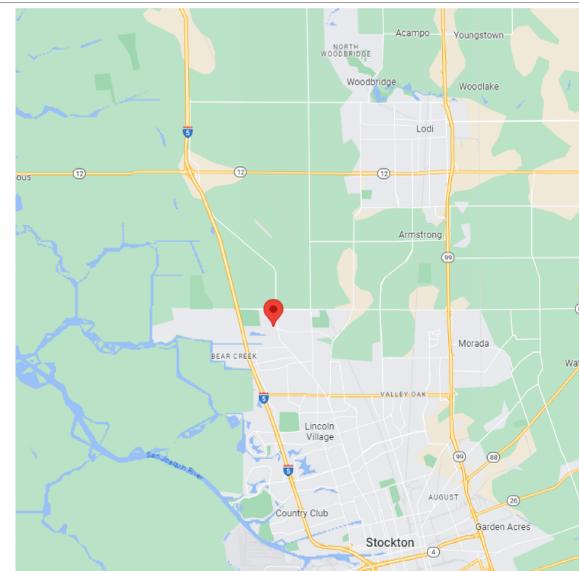
ELECTRICAL ENGINEER:
 COURTNEY CHUENYANE
 BROKAW DESIGN
 P.O. BOX 3103
 ROHNERT PARK, CA 94927
 (707) 799-8822
 COURTNEY.CHUENYANE@BROKAWDESIGN.COM

MECHANICAL ENGINEER:
 BRAD MANNING
 TEP ENGINEERING, INC.
 880 SECOND STREET
 SANTA ROSA, CA 95404
 (707) 538-0400
 BRAD@TEP.NET

TITLE 24 SERVICES:
 KHOELIN MEISINGER
 GUTTMANN & BLAEVOET CONSULTING ENGINEERS
 2351 POWELL STREET
 SAN FRANCISCO, CA 94113
 (415) 655-4000
 KMEISINGER@GB-ENG.COM

FIRE SPRINKLER DESIGN:
 DUMOR FIRE SYSTEMS
 17119 PLACER HILLS ROAD
 MEADOW VISTA, CA 95722
 (530) 878-9055

VICINITY MAP



Autodesk Docs\Bear_Creek_Ag_Science_Bldg\Bear_Creek_Ag_Science_Central.rvt

ISSUE	DATE	DESCRIPTION

DIA APPLICATION # 02-120677
 DRAWN BY: DSP
 DESIGNER: CLB
 PLOT DATE: 11-10-2023

SHEET TITLE
COVER

SHEET #
A001

STANDARD ABBREVIATIONS

A.B.	ANCHOR BOLTS	R.	RISER
ACOUS.	ACOUSTICAL	RAD.	RADIUS
ADM.	ADMINISTRATIVE	REINF.	REINFORCEMENT
ALS.	ASSISTIVE LISTENING SYSTEM	REQD.	REQUIRED
ALT.	ALTERNATE	RES.	RESILIENT
ALUM.	ALUMINUM	R.O.	ROUGH OPENING
APPROX.	APPROXIMATE	R.S.	ROUGH SAWN
ARCH.	ARCHITECTURAL	ROWD.	REDWOOD
		R.W.L.	RAIN WATER LEADER
BLDG.	BUILDING	SA	SUSPENDED ACOUSTICAL
BLK.	BLOCKING	SCD	SEE CIVIL DRAWINGS
BM.	BEAM	SH.	SHEET
B.N.	BOUNDARY NAIL	S.H.	SINGLE HUNG
BOT.	BOTTOM	SLDR.	SLIDER
BRD.	BOARD	SMD	SEE MECHANICAL DRAWINGS
BTR.	BETTER	S.O.G.	SLAB ON GRADE
		SPEC(S)	SPECIFICATION(S)
CAB.	CABINET	S.S.	STAINLESS STEEL
CAC.	CALIFORNIA ADMIN. ADMINISTRATIVE CODE	S.S.D	SEE STRUCTURAL DRAWINGS
CAT.	CATWALK	S.P.	STANDARD STEEL PIPE
CEM.	CEMENT PLASTER	STRUC.	STRUCTURAL
CER.	CERAMIC	SYMM.	SYMMETRICAL
C.J.	CONSTRUCTION JOINT		
CLG.	CLEAR	T.	TREAD
CLR.	CLEAR	T.A.B.	TOP AND BOTTOM
C.O.	(GSA) CONTRACTING OFFICER	T.&G.	TONGUE AND GROOVE
COL.	COLUMN	T.C.	TOP OF CURB
CONC.	CONCRETE	TEL.	TELEPHONE
CONN.	CONNECTION	TERR.	TERRAZZO
CONT.	CONTINUOUS	T.O.C.	TOP OF CONCRETE
CONTR.	CONTRACTOR	T.O.P.	TOP OF PLATE LINE
C.M.U.	CONCRETE MASONRY UNIT	T.O.S.	TOP OF STEEL
CSPE	CHLOROSULFONATED POLYETHYLENE ("HYPLON")	T.O.SF.	TOP OF SUBFLOOR
		T.O.W.	TOP OF WALL
		T.P.	TOP OF PAVEMENT
DBL.	DOUBLE	TR.	TRANSVERSE
DET.	DETAIL	TR.	TREATED
D.F.	DOUGLAS FIR	TYP.	TYPICAL
DIAG.	DIAGONAL	U.O.N.	UNLESS OTHERWISE NOTED
DIA.	DIAMETER		
DIM.	DIMENSION		
DN.	DOWN		
DP.	DEEP	VERT.	VERTICAL
DR.	DOOR	VG.	VERTICAL GRAIN
D.S.	DOWNSPOUT		
DSA	DIVISION OF THE STATE ARCHITECT	W.	WIDE
		WASH.	WASHER
		W/C	WATER CLOSET
EA.	EACH	WD.	WOOD
E.F.	EACH FACE	W/O	WITHOUT
E.J.	EXPANSION JOINT	W.O.	WHERE OCCURS
ELEV.	ELEVATION	WP.	WATERPROOF
ELEC.	ELECTRICAL	WPF.	WEATHERPROOF
EMT	ELEC. METALLIC TUBING		
ENL.	EDGE NAIL	X	CROSS
E.O.	EQUAL		
E.Q.P.T.	EQUIPMENT		
E.S.	EACH SIDE		
E.W.	EACH WAY		
EXIST.	EXISTING		
EXP.	EXPANSION		
EXT.	EXTERIOR		
FDN.	FOUNDATION		
FIN.	FINISH		
FIN. FL.	FINISH FLOOR		
F.J.	FLOOR JOIST		
FLOOR.	FLOOR		
F.L.	FLUORESCENT		
F.N.	FIELD NAIL		
F.O.C.	FACE OF CONCRETE		
F.O.F.	FACE OF FINISH		
F.O.M.	FACE OF MASONRY		
F.O.S.	FACE OF STUD		
FRNG.	FRAMING		
FT.	FOOT/FEET		
GA.	GALVE		
GAL.	GALLON		
GALV.	GALVANIZED		
GSS	GALVANIZED SHEET STEEL		
GLB	GLUE LAMINATED BEAM		
GRD.	GRADE		
GSA	GENERAL SERVICES ADMINISTRATION		
G.S.M.	GALVANIZED SHEET METAL		
GYP. BD.	GYP. BOARD		
H.D.	HOLD-DOWN		
HMA	HAZARDOUS MATERIALS ABATEMENT		
HORIZ.	HORIZONTAL		
H.S.B.	HIGH STRENGTH BOLTS		
HT.	HEIGHT		
HDR.	HEADER		
IN.	INCHES		
I.D.	INSIDE DIAMETER		
INSUL.	INSULATION		
ISA	INTERNATIONAL SYMBOL OF ACCESS		
JT.	JOINT		
JST.	JOIST		
LVT	LAMINATE VINYL TILE		
MAX.	MAXIMUM		
M.B.	MACHINE BOLTS		
MECH.	MECHANICAL		
MET.	METAL		
MEZZ.	MEZZANINE		
MFR.	MANUFACTURER		
MIN.	MINIMUM		
N/A.	NOT APPLICABLE		
N.I.C.	NOT IN CONTRACT		
NOM.	NOMINAL		
N.T.S.	NOT TO SCALE		
O.C.	ON CENTER		
O.H.	OPPOSITE HAND		
OLA	OFFICE OF LOCAL ASSISTANCE		
OPP.	OPPOSITE		
PERIM.	PERIMETER		
PSB	PUBLIC BUILDINGS SERVICE		
P.C.C.	PRECAST CONCRETE		
PL.	PLATE		
P.L.	PROPERTY LINE		
P.LAM.	PLASTIC LAMINATE		
PLYWD.	PLYWOOD		
P.N.	PLATE NAIL		
P.S.F.	POUNDS PER SQUARE FOOT		
P.S.I.	POUNDS PER SQUARE INCH		
P.T.	PRESSURE TREATED		
PT.	POINT		

GENERAL NOTES

- DO NOT SCALE THE DRAWINGS. EVERY ATTEMPT HAS BEEN MADE TO SHOW ITEMS TO SCALE, BUT NO GUARANTEE IS IMPLIED. ALWAYS INFORM THE ARCHITECT OF MISSING, INCOMPLETE, OR IMPROPER DIMENSIONS ON THE PLANS, OR WHEN EXISTING CONDITIONS DO NOT MATCH WHAT IS SHOWN ON THE PLANS. VERIFY CRITICAL DIMENSIONS.
- IF PROVIDED, SEE ELECTRICAL, CIVIL AND PLUMBING DRAWINGS FOR RELATED WORK AND EQUIPMENT. WHERE ELECTRICAL ITEMS ARE SHOWN, AND NO DIMENSIONS OR OTHER FORMS OF LOCATION INFORMATION ARE PROVIDED, THE ARCHITECTURAL DRAWING SHALL GOVERN WITH RESPECT TO LOCATION.
- THERE WILL BE NO SUBSTITUTION FOR SPECIFIED ITEMS WITHOUT PRIOR WRITTEN APPROVAL, UNLESS OTHERWISE NOTED IN THESE PLANS. REQUESTS FOR SUBSTITUTIONS SHALL BE MADE IN WRITING TO THE ARCHITECT AND APPROVED BY THE ARCHITECT BEFORE ORDERING OR INSTALLING THE SUBSTITUTED ITEMS.
- DIMENSIONS NOTED "OLEAF" OR "OLR" MUST BE PRECISELY MAINTAINED. DO NOT SCALE DRAWINGS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR CLARIFICATION PRIOR TO DEMOLITION, FABRICATION OR CONSTRUCTION. DIMENSIONS ARE NOT ADJUSTABLE WITHOUT WRITTEN APPROVAL FROM THE ARCHITECT, OR UNLESS NOTED OTHERWISE (I.E. "I" ON PLANS)
- DIMENSIONS NOTED "V.I.F." OR "VERIFY" SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF FABRICATION OR CONSTRUCTION. VERIFY ALL ROUGH OPENING DIMENSIONS, FOR FABRICATED ITEMS, WITH THE MANUFACTURER PRIOR TO CONSTRUCTION.
- THE FLOOR LEVEL IS ESTABLISHED AT +0'-0" AND SHALL BE USED AS THE REFERENCE FOR ALL OTHER LEVELS.
- PROVIDE REQUIRED BLOCKING AND BRACING FOR ALL WALL MOUNTED FIXTURES, ACCESSORIES AND EQUIPMENT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL LEFTOVER MATERIALS, DEBRIS, TOOLS AND EQUIPMENT INVOLVED IN THEIR OPERATIONS AT THE CONCLUSION OF THE WORK. LEAVE ALL AREAS CLEAN AND IN PERFECT CONDITION.
- THE ARCHITECT AND THE ARCHITECT'S CONSULTANTS SHALL HAVE NO RESPONSIBILITY FOR THE DISCOVERY, PRESENCE, HANDLING, REMOVAL OR DISPOSAL OF OR EXPOSURE OF PERSONS TO ASBESTOS, HAZARDOUS OR TOXIC SUBSTANCES IN ANY FORM AT THE PROJECT SITE. PROFESSIONAL SERVICES RELATED OR IN ANY WAY CONNECTED WITH THE INVESTIGATION, DETECTION, ABATEMENT, REPLACEMENT, USE, SPECIFICATION, OR REMOVAL OF PRODUCTS, MATERIALS OR PROCESSES CONTAINING ASBESTOS, HAZARDOUS OR TOXIC MATERIALS ARE BEYOND THE SCOPE OF THE CONTRACT.
- THE INTENT OF THESE DRAWINGS IS THAT THE WORK SHALL BE IN ACCORDANCE WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS, SHOULD ANY EXISTING CONDITIONS, SUCH AS DETERIORATION OR NONCOMPLIANT CONSTRUCTION, BE DISCOVERED WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS, WHEREIN THE FINISHED WORK SHALL NOT COMPLY WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS, CONTRACTOR SHALL NOTIFY ARCHITECT IMMEDIATELY AND WAIT FOR INSTRUCTION BEFORE PROCEEDING WITH WORK.
- CONTRACTOR TO PROVIDE TEMPORARY BARRIERS AROUND CONSTRUCTION AREAS TO PROTECT PEDESTRIANS ON SITE. ALL EXITS AND EXIT PATHS, FIRE LANES AND ACCESSIBLE PARKING STALLS SHALL REMAIN CLEAR AND UNOBSTRUCTED, FREE OF DEBRIS AND CONSTRUCTION MATERIAL.
- PROJECT IS NOT LOCATED IN A FIRE ZONE PER CA FHSZ MAP.
- SAFETY DURING DEMOLITION AND CONSTRUCTION MUST COMPLY WITH CFC CHAPTER 33

APPLICABLE CODES AND STANDARDS

2019 CALIFORNIA ADMINISTRATIVE CODE - TITLE 24 C.C.R.	NFPA 13 STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS (CA AMENDED) 2016 EDITION
2019 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 C.C.R. (2015 INTERNATIONAL BUILDING CODE VOLUMES 1-2 AND 2019 CALIFORNIA AMENDMENTS)	NFPA 14 STANDARD FOR THE INSTALLATION OF STANDPIPE AND HOSE SYSTEMS 2016 EDITION
2019 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R. (2014 NATIONAL ELECTRICAL CODE AND 2019 CALIFORNIA AMENDMENTS)	NFPA 17 STANDARD FOR DRY CHEMICAL EXTINGUISHER SYSTEMS 2016 EDITION
2019 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 C.C.R. (2015 UNIFORM MECHANICAL CODE AND 2019 CALIFORNIA AMENDMENTS)	NFPA 72 NATIONAL FIRE ALARM AND SIGNALING CODE (CA AMENDED) 2016 EDITION
2019 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R. (2015 UNIFORM PLUMBING CODE AND 2019 CALIFORNIA AMENDMENTS)	NFPA 80 STANDARD FOR FIRE DOORS AND OTHER OPENING PROTECTIVES 2016 EDITION
2019 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 C.C.R.	UL 464 AUDIBLE SIGNALING DEVICES FOR FIRE ALARM AND SIGNALING SYSTEMS 2003 EDITION
2019 CALIFORNIA FIRE CODE, PART 9, TITLE 24 C.C.R. (2014 INTERNATIONAL FIRE CODE AND 2019 CALIFORNIA AMENDMENTS)	UL 1971 STANDARD FOR SIGNALING DEVICES FOR THE HEARING IMPAIRED 2005 EDITION
2019 CALIFORNIA GREEN BUILDING STANDARDS CODE, PART 11, TITLE 24 C.C.R.	UL 521 HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS 1999 EDITION
2019 CALIFORNIA REFERENCED STANDARDS, PART 12, TITLE 24 C.C.R. TITLE 19 C.C.R., PUBLIC SAFETY, STATE FIRE MARSHALL REGULATIONS	2010 ADA STANDARDS FOR ACCESSIBLE DESIGN

ADMINISTRATIVE REQUIREMENTS

- A COPY OF THE CALIFORNIA BUILDING CODE PART 1-6 AND 9 SHALL BE KEPT ON SITE AND MAINTAIN COMPLIANCE AT ALL TIMES.
- CHANGES TO THE APPROVED DRAWINGS OR SPECIFICATIONS SHALL BE MADE BY ADDENDA OR CONSTRUCTION CHANGE DOCUMENTS (CCD) APPROVED BY THE DIVISION OF THE STATE ARCHITECT, AS REQUIRED BY THE SECTIONS 4-338 OF CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 1 (CAC 4-338)
- ALL TESTS TO CONFORM TO THE REQUIREMENTS OF SECTION 4-335.
- TESTS OF MATERIALS AND TESTING LABORATORY SHALL BE IN ACCORDANCE WITH SECTION 4-335. A DSA ACCEPTED TESTING LABORATORY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT THE REQUIRED TESTS AND SPECIAL INSPECTIONS FOR THE PROJECT.
- PROJECT INSPECTOR SHALL BE APPROVED BY DSA AND EMPLOYED BY THE DISTRICT IN ACCORDANCE WITH SECTION 4-342. THE SCOPE OF THE PROJECT REQUIRES A CLASS 1 INSPECTOR.
- PROJECT INSPECTOR SHALL BE APPROVED BY DSA AND EMPLOYED BY THE DISTRICT. INSPECTOR SHALL BE IN ACCORDANCE WITH SECTION 4-333(b). THE DUTY OF THE INSPECTOR SHALL BE IN ACCORDANCE WITH SECTION 4-342.
- SUPERVISION OF CONSTRUCTION BY DSA SHALL BE IN ACCORDANCE WITH 4-334.
- CONTRACTOR, INSPECTOR, ARCHITECT, AND ENGINEERS SHALL SUBMIT CERTIFIED REPORTS (FORM SSS-5) IN ACCORDANCE WITH SECTION 4-336 AND 4-343.
- THE ARCHITECT AND THE STRUCTURAL ENGINEERS SHALL PERFORM THEIR DUTIES IN ACCORDANCE WITH SECTION 4-333(a) AND 4-341.
- THE CONTRACTOR SHALL PERFORM THEIR DUTIES IN ACCORDANCE WITH SECTION 4-343.
- THE INTENT OF THE DRAWINGS AND SPECIFICATIONS IS THE CONSTRUCTION OF A SCHOOL BUILDING IN ACCORDANCE WITH TITLE 24, C.C.R. SHOULD ANY CONDITIONS DEVELOP NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH SAID C.C.R. A CONSTRUCTION CHANGE DOCUMENT ORDER DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK.
- DSA IS NOT SUBJECT TO ARBITRATION.
- DIVISION OF THE STATE ARCHITECT (DSA) APPROVAL OF THIS APPLICATION DOES NOT INCLUDE FUTURE OR N.I.C. ITEMS.
- COMPLIANCE WITH CFC CHAPTER 33 (FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION) AND CBC CHAPTER 33 (SAFETY DURING CONSTRUCTION) WILL BE ENFORCED.
- GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.
- FABRICATION AND INSTALLATION OF DEFERRED SUBMITTAL ITEMS SHALL NOT BE STARTED UNTIL CONTRACTOR'S DRAWINGS, SPECIFICATIONS, AND ENGINEERING CALCULATIONS FOR THE ACTUAL SYSTEMS TO BE INSTALLED HAVE BEEN ACCEPTED AND SIGNED BY THE ARCHITECT OR STRUCTURAL ENGINEER AND APPROVED BY DSA.
- PRODUCT SUBSTITUTIONS THAT AFFECT DSA REGULATED ITEMS SHALL BE APPROVED BY DSA PRIOR TO FABRICATION AND INSTALLATION.
- CCDs MUST BE SIGNED BY THE ARCHITECT OF RECORD, STRUCTURAL ENGINEER (WHERE APPLICABLE) DELEGATED PROFESSIONAL ENGINEER (WHEN APPLICABLE) AND APPROVED BY DSA PRIOR TO COMPLETION OF WORK.

GOVERNING AGENCIES

DIVISION OF THE STATE ARCHITECT STRUCTURAL SAFETY SECTION (DSASSS) 1515 CLAY ST #1201 OAKLAND, CA 94612 (510) 622-3101	DIVISION OF THE STATE ARCHITECT ACCESS COMPLIANCE (DSAAC) 1515 CLAY ST #1201 OAKLAND, CA 94612 (510) 622-3101	DIVISION OF THE STATE ARCHITECT FIRE AND LIFE SAFETY SECTION (DSAFSL) 1515 CLAY ST #1201 OAKLAND, CA 94612 (510) 622-3101
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SYMBOL LEGEND

&	AND	SECTION REFERENCE
@	AT	ARCHITECTURE INC 2
CL	CENTER LINE	A001 COVER
Ø	DIAMETER OR ROUND LINE	A002 DRAWING INDEX & PROJECT INFO
(E)	EXISTING	A004 EGRESS PLAN
⊥	PERPENDICULAR	A201A ANNOTATED FLOOR PLAN
#	POUND OR NUMBER	A201B DIMENSIONED FLOOR PLAN
PL	PLATE	A231 REFLECTED CEILING PLAN
(N)	NEW	A241 ROOF PLAN
WP	WORK POINT	A301 EXTERIOR ELEVATIONS
⊥	NOMINAL FLOOR LEVEL OR MATCH LINE	A401 BUILDING SECTIONS
○	COLUMN GRID	A501 INTERIOR ELEVATIONS
11	WALL TAG	A601 WALL ASSEMBLIES
#	DOOR SYMBOL	A611 SCHEDULES
11	WINDOW SYMBOL	A671 ROOF DETAILS - METAL
?	KEY NOTE SYMBOL	A671A STANDARD DETAILS CEM PLASTER FINISH
ROOM LABEL	ROOM LABEL	A672 DOOR & WINDOW DETAILS
ROOM NAME	ROOM NAME	A674 DOWNSPOUT / RAIN WATER LEADER DETAILS
ROOM NUMBER	ROOM NUMBER	A681 SIGNAGE DETAILS
AREA	AREA	A681A ACCESSIBLE FIXTURE DETAILS
WIC	WOODWORK INSTITUTE	A682 CABINET ATTACHMENT DETAILS
000	CABINET DESIGNATION	A683 T-BAR CEILING DETAILS
8888888	HEIGHT	
	DEPTH	
	WIDTH	

STATEMENT OF GENERAL COMPLIANCE

APPLICATION NO. 02-120677 FILE NO. L-11111

THESE DRAWINGS FOR THE ITEMS LISTED BELOW HAVE BEEN PREPARED BY OTHER DESIGN PROFESSIONALS OR CONSULTANTS WHO ARE LICENSED AND/OR AUTHORIZED TO PREPARE SUCH DRAWINGS IN THIS STATE. THESE DOCUMENTS HAVE BEEN EXAMINED BY ME FOR DESIGN INTENT AND HAVE BEEN FOUND TO MEET THE APPROPRIATE REQUIREMENTS OF TITLE 24, CALIFORNIA CODE OF REGULATIONS AND THE PROJECT SPECIFICATIONS PREPARED BY ME AND HAVE BEEN COORDINATED WITH MY PLANS AND SPECIFICATIONS. THE ITEMS LISTED BELOW ARE ACCEPTABLE FOR INCORPORATION INTO THE CONSTRUCTION OF THIS PROJECT FOR WHICH I AM THE INDIVIDUAL DESIGNATED TO BE IN GENERAL RESPONSIBLE CHARGE (OR FOR WHICH I HAVE BEEN DELEGATED RESPONSIBILITY FOR THIS PORTION OF THE WORK). THE STATEMENT OF GENERAL COMPLIANCE SHALL NOT BE CONSTRUED AS RELIEVING ME OF MY RIGHTS, DUTIES, AND RESPONSIBILITIES UNDER THE STATEMENT OF GENERAL COMPLIANCE. CONFORMANCE SHALL NOT BE CONSTRUED AS RELIEVING ME OF MY RIGHTS, DUTIES AND RESPONSIBILITIES UNDER SECTION 17932 AND 61139 OF THE EDUCATION CODE AND SECTIONS 4334*, OF TITLE 24, PART 1, (TITLE 24 PART 1, SECTION 4-317 (b))

I FIND THAT:

- ALL DRAWINGS PREPARED BY STRUCTURAL, CIVIL, LANDSCAPE, MECHANICAL, PLUMBING, AND ELECTRICAL ENGINEERS DRAWINGS
- IS/ARE IN GENERAL CONFORMANCE WITH THE PROJECT DESIGN AND
- HAS/HAVE BEEN COORDINATED WITH THE PROJECT PLANS AND SPECIFICATIONS

CHARLES BEAVERS 11/10/2023
SIGNATURE OF ARCHITECT DATE

NAME: CHARLES BEAVERS
LICENSE NUMBER: 9601 EXPIRATION: 4/30/2025

EMERGENCY RESPONDER RADIO COVERAGE

NEW BUILDINGS SHALL BE PROVIDED WITH EMERGENCY RESPONDER RADIO COVERAGE IN ACCORDANCE WITH THE CALIFORNIA FIRE CODE 510. THE PROJECT ARCHITECT (AOR) SHALL CONTACT THE LOCAL FIRE DEPARTMENT AND/OR EMERGENCY COMMUNICATIONS AUTHORITY TO OBTAIN DESIGN, EQUIPMENT SPECIFICATIONS, TESTING AND ACCEPTANCE CRITERIA. PLANS AND REQUESTED DOCUMENTATION SHALL BE SUBMITTED TO THE LOCAL AUTHORITY HAVING JURISDICTION FOR REVIEW AND APPROVAL. UPON COMPLETION, COPIES OF THE APPROVED PLANS, EQUIPMENT DATA SHEETS, TESTING AND ACCEPTANCE DOCUMENTATION SHALL BE PROVIDED TO THE SCHOOL DISTRICT.

A001	COVER
A002	DRAWING INDEX & PROJECT INFO
A004	EGRESS PLAN
A201A	ANNOTATED FLOOR PLAN
A201B	DIMENSIONED FLOOR PLAN
A231	REFLECTED CEILING PLAN
A241	ROOF PLAN
A301	EXTERIOR ELEVATIONS
A401	BUILDING SECTIONS
A501	INTERIOR ELEVATIONS
A601	WALL ASSEMBLIES
A611	SCHEDULES
A671	ROOF DETAILS - METAL
AD841	INTERIOR / EXTERIOR DETAILS
AD701	STANDARD DETAILS CEM PLASTER FINISH
AD721	DOOR & WINDOW DETAILS
AD742	DOWNSPOUT / RAIN WATER LEADER DETAILS
AD801	SIGNAGE DETAILS
AD811	ACCESSIBLE FIXTURE DETAILS
AD821	CABINET ATTACHMENT DETAILS
AD831	T-BAR CEILING DETAILS
	STRUCTURAL
S001	STRUCTURAL COVER SHEET
S002	STRUCTURAL GENERAL NOTES
S101	FOUNDATION PLAN
S301	ROOF FRAMING PLAN
SD401	CONVENTIONAL FOUNDATION DETAILS
SD402	CONVENTIONAL FOUNDATION DETAILS
SD611	STUD WALL FRAMING DETAILS
SD612	SHEAR WALL FRAMING DETAILS
SD613	MISCELLANEOUS WALL FRAMING DETAILS
SD721	ROOF FRAMING DETAILS
SD723	ROOF FRAMING DETAILS
	MECHANICAL
M001	MECHANICAL TITLE SHEET
M201	MECHANICAL FLOOR PLAN
M202	MECHANICAL ROOF PLAN
M501	MECHANICAL DETAILS
M503	MECHANICAL DETAILS
M504	MECHANICAL DETAILS
M701	MECHANICAL SPECIFICATIONS
	PLUMBING
P001	PLUMBING TITLE SHEET
P201	PLUMBING FLOOR PLAN LOWER
P202	PLUMBING FLOOR PLAN UPPER
P203	PLUMBING ROOF PLAN
P501	PLUMBING DETAILS
P502	PLUMBING DETAILS
P503	PLUMBING DETAILS
P504	PLUMBING DETAILS
P505	PLUMBING DETAILS
P508	PLUMBING DETAILS
P701	PLUMBING SPECIFICATIONS
	ELECTRICAL
E001	ELECTRICAL LEGEND AND ABBREVIATIONS
E002	ELECTRICAL SHEET SPECIFICATIONS
E111	ELECTRICAL PLAN
E112	ELECTRICAL ROOF PLAN
E121	LIGHTING PLAN
E122	LIGHTING PHOTOMETRIC PLAN
E511	DETAILS - ELECTRICAL
E512	DETAILS - ELECTRICAL
E521	DETAILS - LIGHTING
E522	DETAILS - LIGHTING
E531	DETAILS - LOW VOLTAGE
E601	DIAGRAMS - SITE ELECTRICAL
E701	SCHEDULES
	FIRE PROTECTION
FP1.00	FIRE PROTECTION PLAN
FP1.01	FIRE PROTECTION PLAN
	ENERGY COMPLIANCE
EC-1	ENERGY COMPLIANCE
EC-2	ENERGY COMPLIANCE
EC-3	ENERGY COMPLIANCE
EC-4	ENERGY COMPLIANCE
	TOTAL SHEET COUNT: 70 PAGES



AGRICULTURAL SCIENCE BLDG

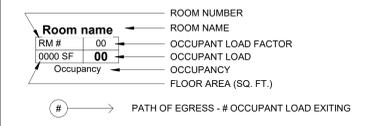
BEAR CREEK HIGH SCHOOL

10555 THORTON RD
STOCKTON, CA 95209

INCREMENT 2

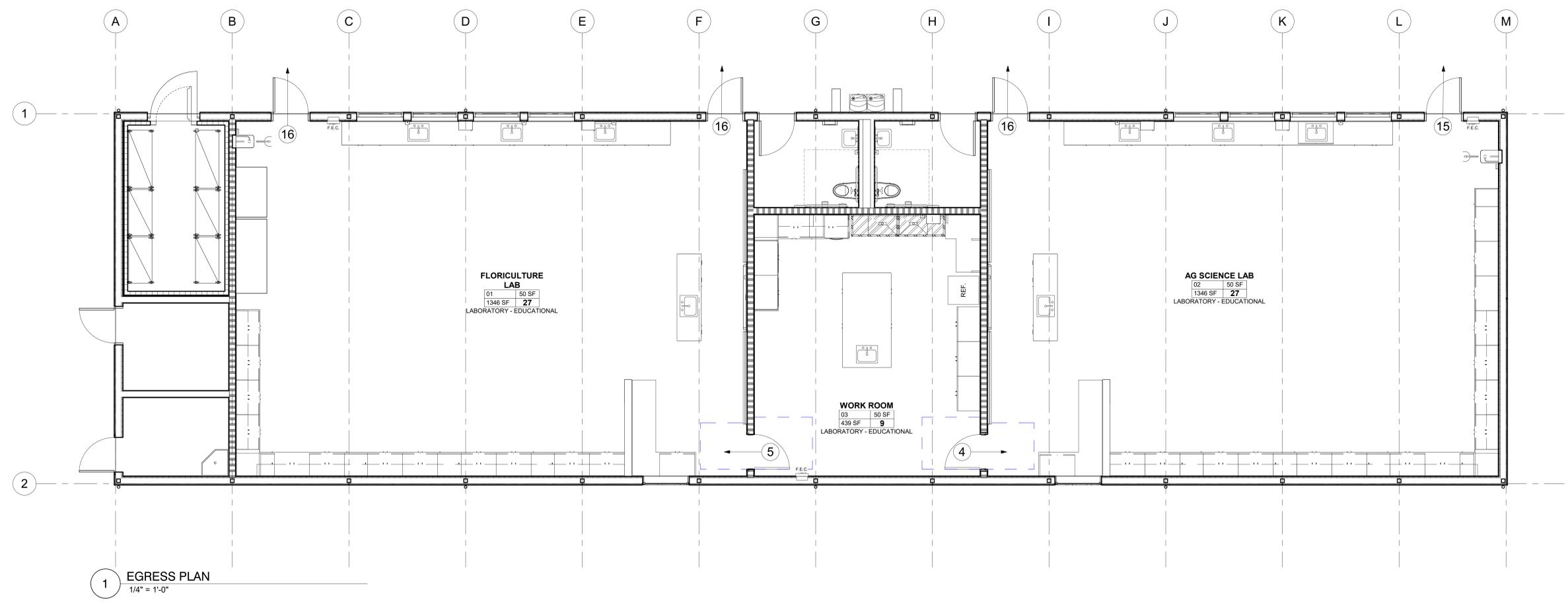
ISSUE	DATE	DESCRIPTION

EGRESS LEGEND



OCCUPANT LOAD CHART PER CBC TABLE 1004.5

#	ROOM NAME	AREA	FUNCTION OF SPACE	LOAD FACTOR	NO. OF OCCUPANTS
01	FLORICULTURE LAB	1346 SF	LABORATORY - EDUCATIONAL	50 SF	27
02	AG SCIENCE LAB	1346 SF	LABORATORY - EDUCATIONAL	50 SF	27
03	WORK ROOM	439 SF	LABORATORY - EDUCATIONAL	50 SF	9
04	STAFF RR	67 SF	UNOCCUPIED		
05	STUDENT RR	68 SF	UNOCCUPIED		
06	ELEC/IDF	69 SF	UNOCCUPIED		
07	CUSTODIAL	62 SF	UNOCCUPIED		
08	WALK-IN REFRIGERATOR	121 SF	UNOCCUPIED		
TOTALS		3518 SF			64



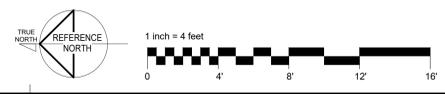
AGRICULTURAL SCIENCE BLDG
BEAR CREEK HIGH SCHOOL
 10555 THORTON RD
 STOCKTON, CA 95209
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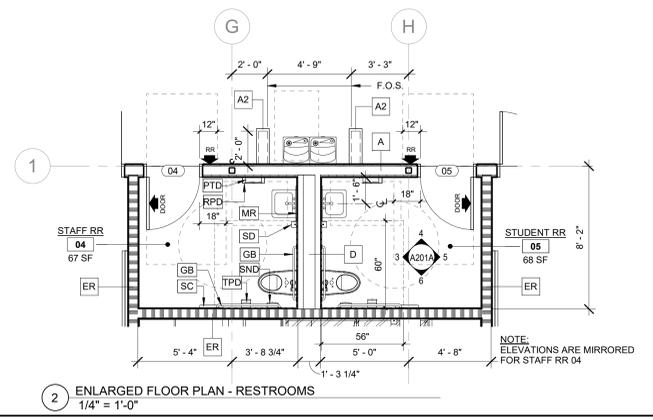
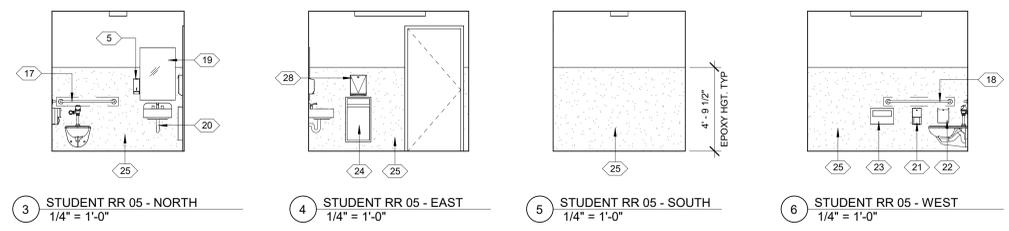
ISSUE	DATE	DESCRIPTION

PROJECT NUMBER: 02-120677
 DRAWN BY: DSP
 DESIGNER: CLB
 PLOT DATE: 11-10-2023

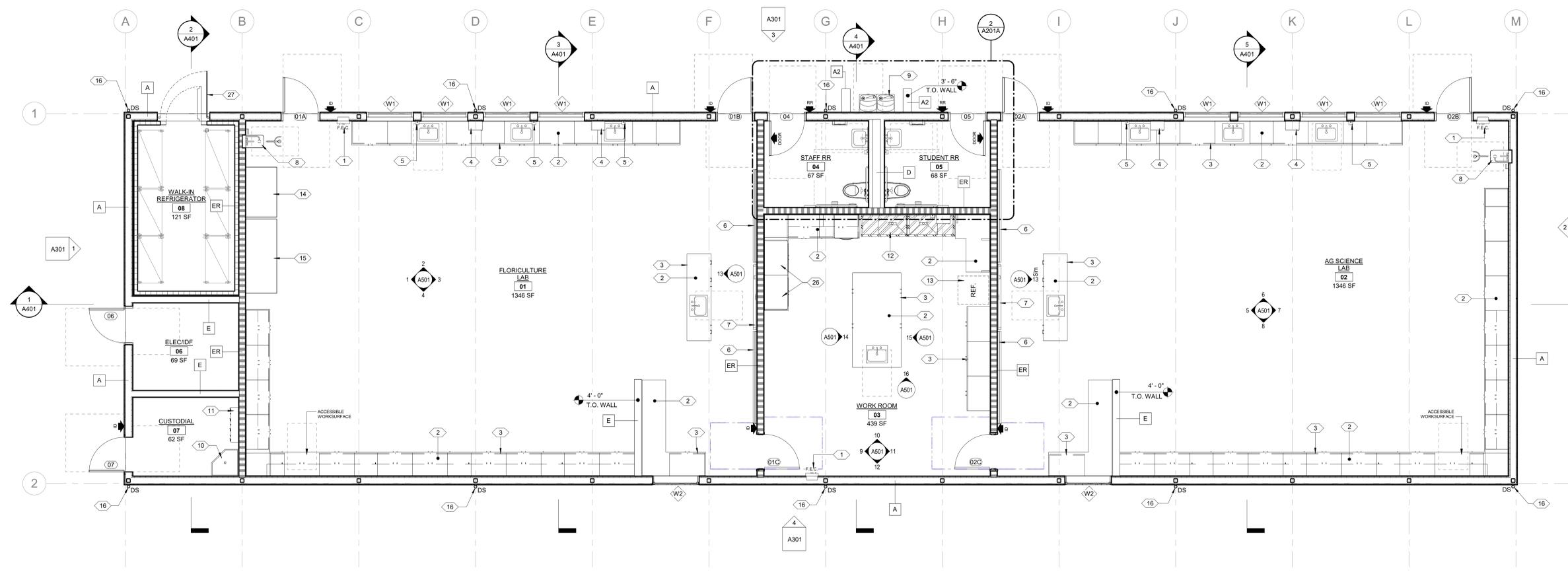
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SHEET #: **A004**

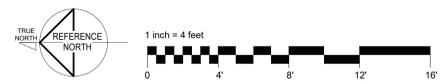




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1 ANNOTATED FLOOR PLAN
 1/4" = 1'-0"



GENERAL NOTES - FLOOR PLANS

A. STRUCTURAL, MECHANICAL, ELECTRICAL AND PLUMBING ITEMS INDICATED ON THIS SHEET ARE FOR REFERENCE ONLY. REFER TO RESPECTIVE DISCIPLINE DRAWINGS FOR CONSTRUCTION DRAWING INFORMATION.

B. REFER TO ENLARGED FLOOR PLAN OF RESTROOM (A203) FOR COMPLETE RESTROOM CONSTRUCTION DOCUMENTATION INFORMATION.

C. CASEWORK INDICATED ON THIS SHEET IS FOR GENERAL INFORMATION ONLY. SEE INTERIOR ELEVATIONS AND CASEWORK DETAILS FOR COMPLETE CONSTRUCTION DOCUMENTATION.

D. REFER TO SHEET A611 - DOOR SCHEDULE FOR DOOR TYPES AND DIMENSIONS.

E. REFER TO SHEET A611 - WINDOW SCHEDULE FOR WINDOW TYPES AND DIMENSIONS.

F. REFER TO SHEET A611 - FINISH SCHEDULE FOR INTERIOR FINISHES.

G. SEE SHEET AD801 FOR SIGNAGE DETAILS. PROVIDE ALS AVAILABILITY SIGNAGE IN EACH CLASSROOM.

H. REFER TO EXTERIOR ELEVATIONS & MECHANICAL DRAWINGS FOR MECHANICAL LOUVER LOCATIONS.

I. REFER TO INTERIOR ELEVATIONS FOR LOCATIONS OF WINDOW ROLLER SHADES. FOR MOUNTING SEE: H44D701.

J. ALL EXTERIOR WALLS ARE CONSTRUCTED ON CONC. CURBS. SEE AD701 & STRUCTURAL PLANS/DETAILS.

K. ALL HORIZONTAL WALL LOCATIONS ARE DIMENSIONED TO FACE OF STUD, TYP. UNLESS OTHERWISE NOTED.
 a. 'CLEAR' DIMENSIONS ARE DIMENSIONED TO FACE OF FINISH.
 b. CASEWORK MEASURED TO FACE OF FINISH, V.I.F.

LEGEND

WALL TYPE, REFER TO WALL TYPE SCHEDULE & REFER TO A601 FOR ADDITIONAL INFORMATION, FIRE RATING LISTING, AND SOUND RATING WHERE APPLICABLE, TYP.

STUD WALL

1-HR FIRE RATED STUD WALL (FIRE BARRIER)

F.E.C.
 F.E.C.
 SEMI-RECESSED FIRE EXTINGUISHER CABINET, TYPE 2-A
 NON RATED WALLS: SEE 11/AD841

NOTE: WHEN LOCATED ON BOTH SIDES OF WALL, STAGGER 1-STUD BY MIN.

TACTILE SIGNAGE LOCATION
 SEE SHEET AD801 & SEE NOTE G ABOVE

3/AD801
 4/AD801
 5/AD801
 18/AD801

MEN: 15/AD801
 WOMEN: 20/AD801
 ALL-GENDER: 10/AD801

MEN: 14/AD801
 WOMEN: 19/AD801
 ALL-GENDER: 9/AD801

ACCESSORY TAGS:

GB GRAB BAR (11/AD811)
 MR MIRROR UNIT (<20LBS)
 SC SEAT-COVER DISPENSER
 SD SOAP DISPENSER
 SND SANITARY NAPKIN DISPOSAL
 TPD SURFACE MOUNTED TOILET PAPER DISPENSER
 RPD RECESSED PAPER DISPOSAL

WALL TYPE SCHEDULE

WALL TYPE	STUD WIDTH	WALL DETAIL	INSULATION THICKNESS	INTERIOR / EXTERIOR	FIRE RATING
A	6"	A/A601	R-21	EXTERIOR	---
AR	6"	AR/A601	R-21	EXTERIOR	1-HR
A2	6"	A2/A601	---	EXTERIOR	---
D	3-4/8"	DA/601	FULL DEPTH	INTERIOR	---
E	6"	EA/601	FULL DEPTH	INTERIOR	---
ER	6"	ERA/601	FULL DEPTH	INTERIOR	1-HR

KEYNOTES

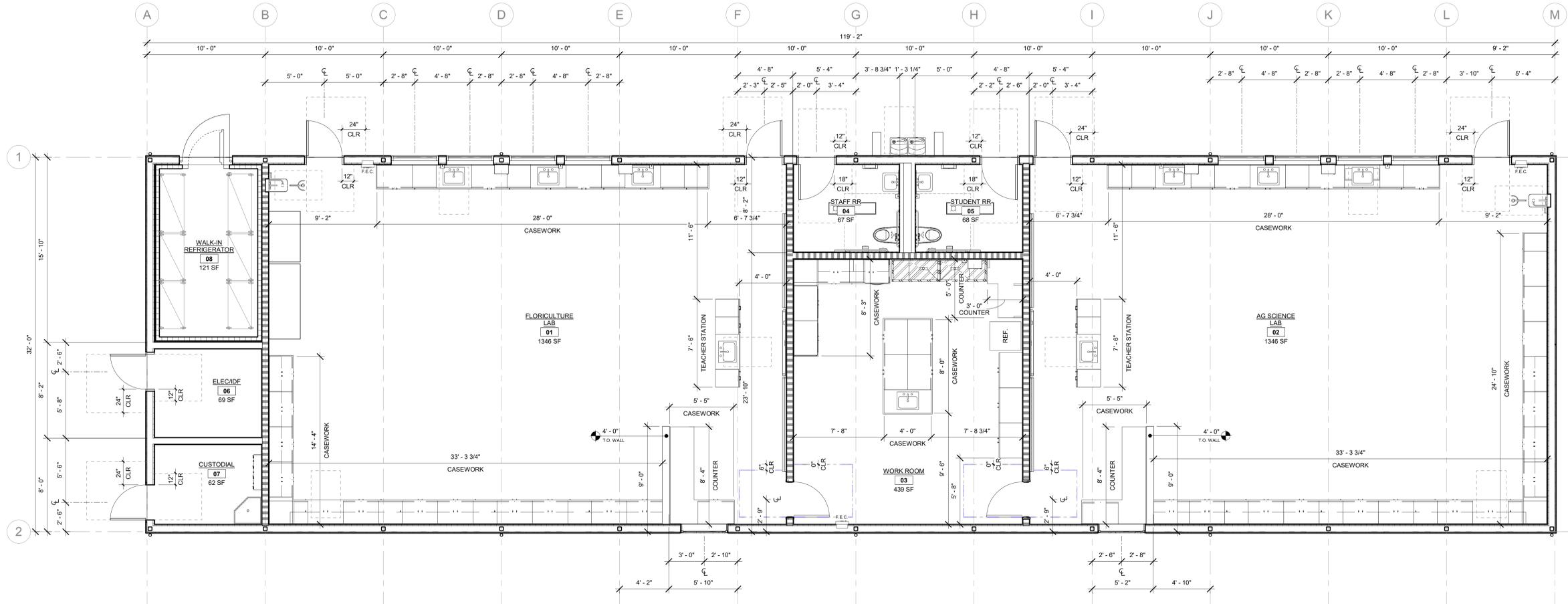
1 SEMI-RECESSED FIRE EXTINGUISHER CABINET, SEE 7/AD841	13 REFRIGERATOR, OFOI
2 SOLID PHENOLIC COUNTERTOP, SEE -/-	14 SWING DOOR FLORAL COOLER - 2-DOOR
3 PLASTIC LAMINATE CASEWORK, SEE 9/AD821	15 SWING DOOR FLORAL COOLER - 3-DOOR
4 PAPER TOWEL (ROLL) DISPENSER	16 DOWNSPOUT, SCHEDULE 40 PIPE, SEE AD742
5 LIQUID-SOAP DISPENSER	17 GRAB BAR, 36"
6 12X4 MARKER BOARD, SEE 5/AD821	18 GRAB BAR, 48"
7 75" INTERACTIVE DISPLAY, O.F.C.I., SEE 1/AD841 FOR MOUNTING BACKING (MAX 150LB.)	19 24x36 FRAMELESS MIRROR UNIT, SEE 13/AD811 FOR MOUNTING
8 WALL MOUNTED EMERGENCY EYE-WASH/SHOWER STATION, SEE 29/AD811	20 INSULATE PIPING BELOW LAVATORY/SINK
9 HI-LOW DRINKING FOUNTAIN, SEE 20/AD811	21 TOILET TISSUE (ROLL) DISPENSER
10 MOP SINK	22 SANITARY-NAPKIN DISPOSAL UNIT
11 CUSTODIAL MOP AND BROOM HOLDER	23 SEAT-COVER DISPENSER
12 2-COMPARTMENT STAINLESS STEEL SINK W/ DRAIN BOARDS, S.P.D.	24 RECESSED PAPER TOWEL WASTE RECEPTACLE
	25 EPOXY WALL COATING OVER CEMENTITIOUS BACKER BOARD
	26 (2) 36"WX34"X24"D CHEMICAL STORAGE CABINETS
	27 LOCKABLE CHAIN LINK GATE (3'-9"W X 6'-10"H) W/ PRIVACY SLATES, LOCATE WITHIN OPENING
	28 PAPER TOWEL (FOLDED) DISPENSER, SEE 8/AD811 FOR MOUNTING HEIGHT

ISSUE	DATE	DESCRIPTION

PROJECT NUMBER: 02-120677
 DRAWN BY: DSP
 DESIGNER: CLB
 PLOT DATE: 11-10-2023

SHEET TITLE:
ANNOTATED FLOOR PLAN

SHEET #:
A201A



1 DIMENSIONED FLOOR PLAN
 1/4" = 1'-0"

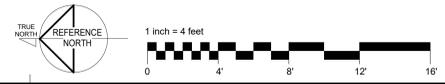
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BEAR CREEK HIGH SCHOOL
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INCREMENT 2

ISSUE	DATE	DESCRIPTION

PROJECT NUMBER: 02-120677
 DRAWN BY: DSP
 DESIGNER: CLB
 PLOT DATE: 11-10-2023

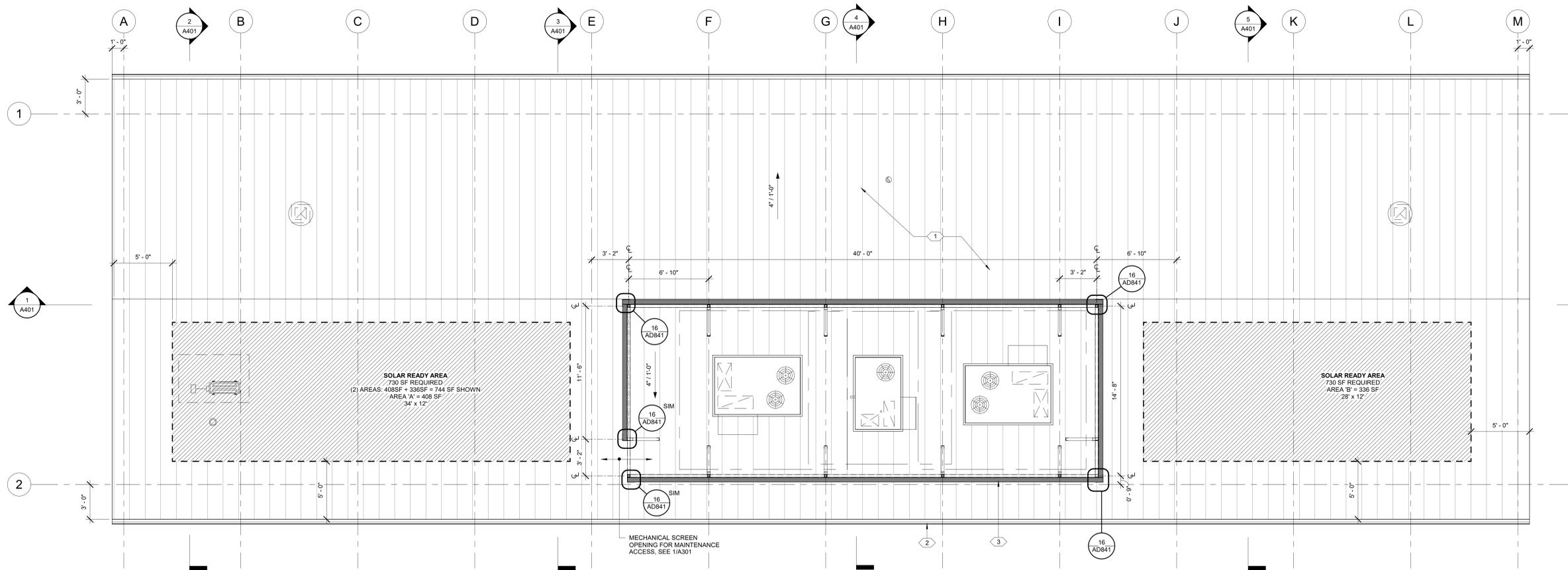
SHEET TITLE:
DIMENSIONED FLOOR PLAN

SHEET #:
A201B





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INCREMENT 2



1 ROOF PLAN
 1/4" = 1'-0"

GENERAL NOTES - ROOF PLAN

- A. ROOF CONSTRUCTION TYPE:**
 - a. STANDING SEAM ROOFING, RIGID INSULATION, ROOF SHEATHING, STEEL JOIST/BEAM STRUCTURE, BATT INSULATION - SEE SHEET AD711
 - CLASSIFICATION: CLASS 'A'**
 - B. REFER TO STRUCTURAL, MECHANICAL, PLUMBING, ELECTRICAL AND FIRE PROTECTION DRAWINGS FOR EXTENT OF WORK THESE DISCIPLINES.**
 - C. ALL EXPOSED SHEET METAL SHALL BE PRIMED AND FIELD PAINTED.**
 - D. ALL GUTTERS SHALL BE METAL, AND PAINTED TO MATCH FASCIA.**
 - E. ROOFTOP EQUIPMENT AND/OR ASSOCIATED ROOF CURBS SHOWN IN SECTION(S) ARE APPROXIMATE.**
 - F. R.W.L. = RAIN WATER LEADER, ALL RAIN WATER LEADERS SHALL BE 3" DIA. SCHEDULE 40 STEEL PIPE, AND PAINTED TO MATCH ADJACENT SURFACE. CENTER ON GRIDLINE WHERE SHOWN, TYP. U.N.O.**
 - a. SEE DETAIL 1/AD742 FOR BUILDING MOUNTED RWL
 - b. SEE DETAIL 3/AD742 FOR SHADE STRUCTURE MOUNTED RWL
 - G. SIZE OF MECHANICAL EQUIPMENT PADS ARE FOR REFERENCE ONLY. THE CONTRACTOR SHALL VERIFY REQUIRED PAD DIMENSION WITH EQUIPMENT MANUFACTURER.**
- REQUIRED SOLAR READY AREA = 728 sf**
 (PER 2016-NRCC-SRA-02-E-MinimumSolarZoneAreaWorksheet)
- PROVIDED:**
 NORTH AREA - 408 sf
 SOUTH AREA - 336 sf
 TOTAL - 744 sf
- SOLAR READY LOAD: 3 PSF, PER STRUCT 5001



KEYNOTES

- 1** STANDING-SEAM METAL ROOF PANEL, SEE SHEET AD711
- 2** METAL GUTTER TO MATCH METAL ROOF, SEE 5/AD742
- 3** STEEL MECH. SCREEN W/ HORIZONTAL LOUVERS, SEE SD723 FOR CONSTRUCTION

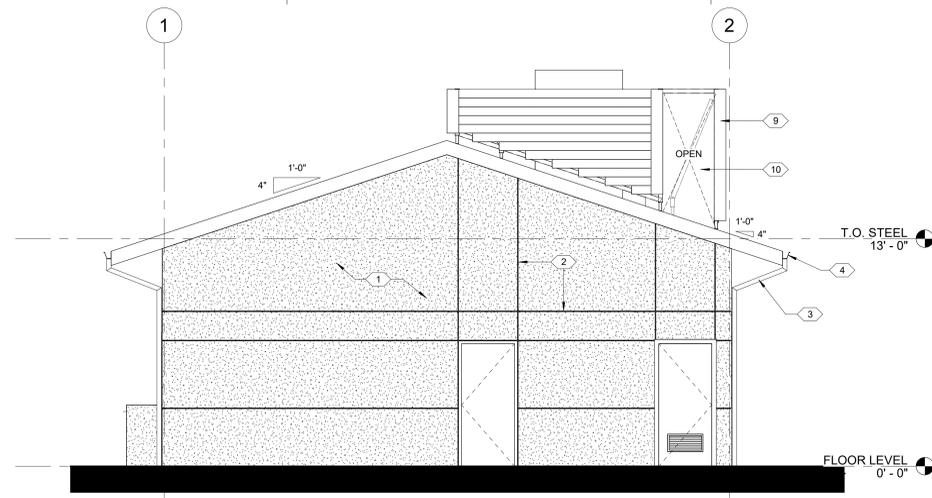


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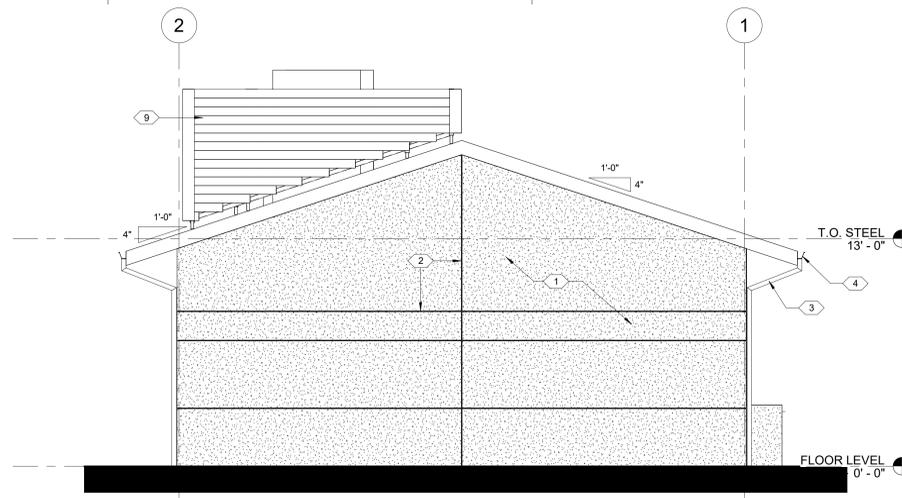
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 DRAWN BY: DSP
 DESIGNER: CLB
 PLOT DATE: 11-10-2023

SHEET TITLE:
ROOF PLAN

SHEET #:
A241

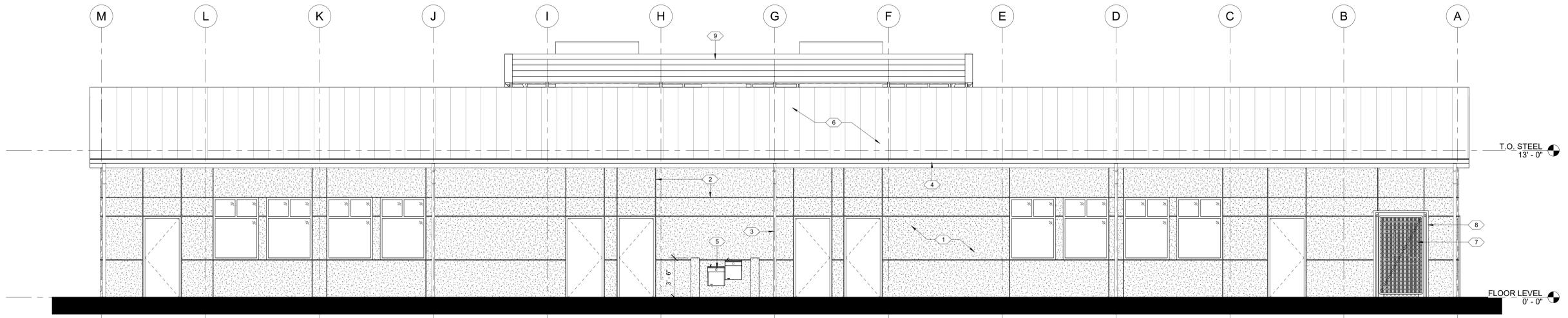


1 BUILDING ELEVATION - NORTH
1/4" = 1'-0"

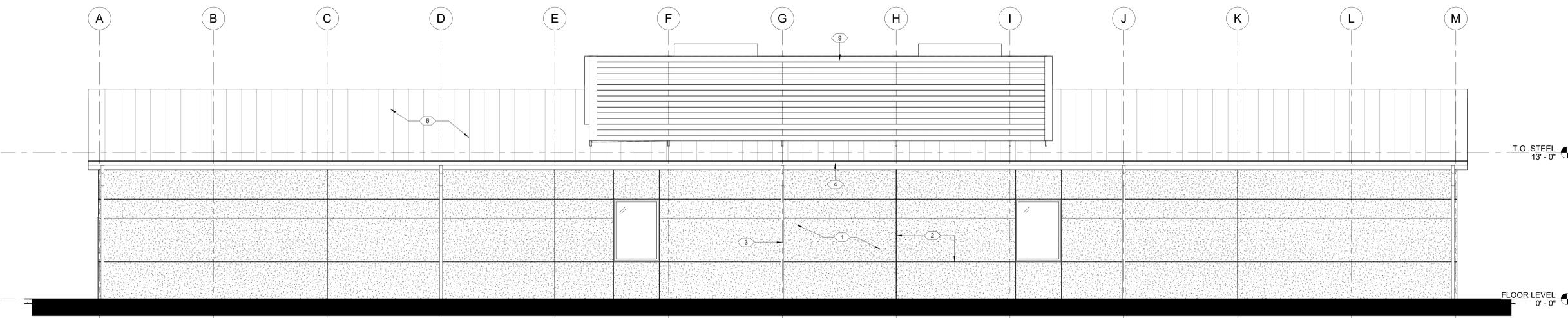


2 BUILDING ELEVATION - SOUTH
1/4" = 1'-0"

- KEYNOTES
- 1 3-COAT CEMENT PLASTER, 7/8", SEE 9/AD701
 - 2 CONTROL JOINT, SEE 9/AD701
 - 3 DOWNSPOUT, SCHEDULE 40 PIPE, SEE AD742
 - 4 METAL GUTTER TO MATCH METAL ROOF, SEE 5/AD742
 - 5 HI-LOW DRINKING FOUNTAIN, SEE 20/AD811
 - 6 STANDING-SEAM METAL ROOF PANEL, SEE SHEET AD711
 - 7 LOCKABLE CHAIN LINK GATE (3'-9"W X 6'-10"H) W/ PRIVACY SLATES, LOCATE WITHIN OPENING
 - 8 2" STAINLESS STEEL OPENING SURROUND @ COOLER OPENING
 - 9 STEEL MECH. SCREEN W/ HORIZONTAL LOUVERS, SEE SD723 FOR CONSTRUCTION
 - 10 OPENING @ MECH. SCREEN TO ALLOW MAINTENANCE ACCESS, SEE ROOF PLAN



3 BUILDING ELEVATION - EAST
1/4" = 1'-0"



4 BUILDING ELEVATION - WEST
1/4" = 1'-0"

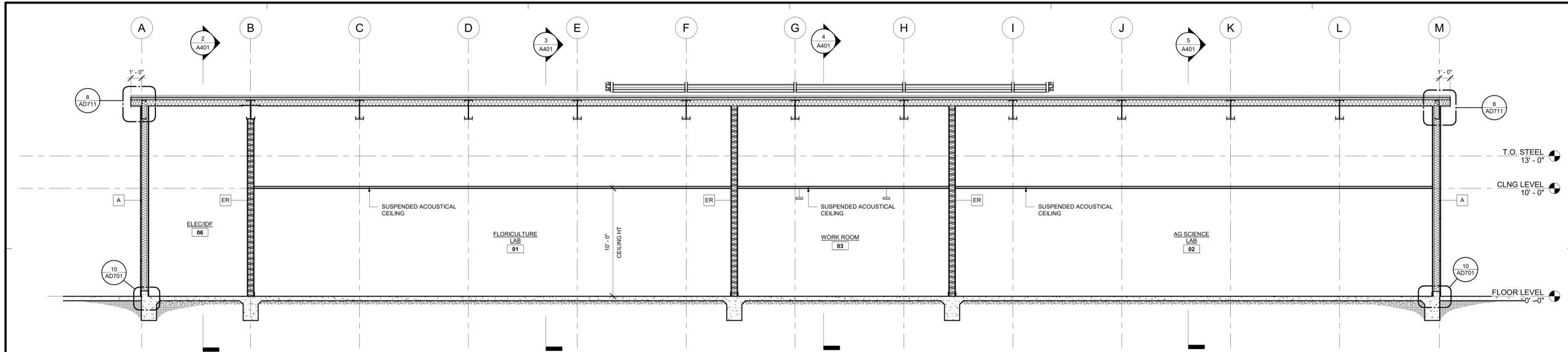
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ISSUE	DATE	DESCRIPTION

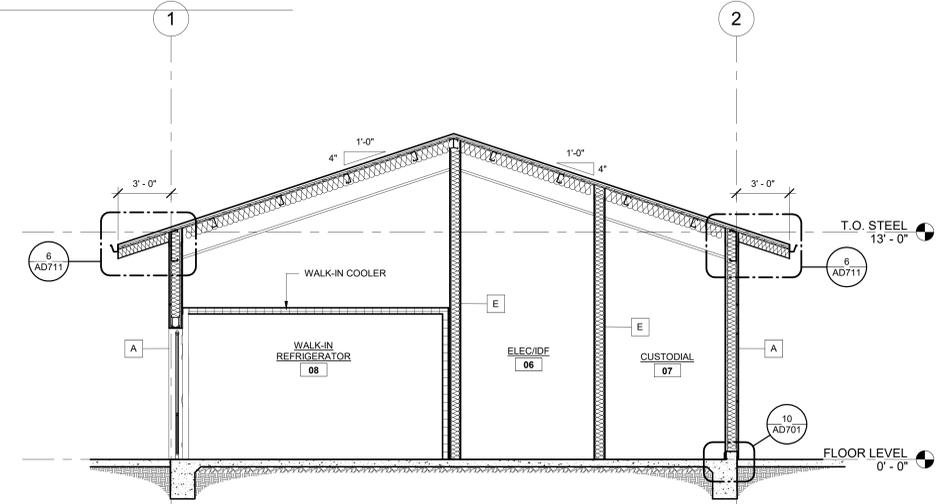
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 DRAWN BY: DSP
 DESIGNER: CLB
 PLOT DATE: 11-10-2023

SHEET TITLE
EXTERIOR ELEVATIONS

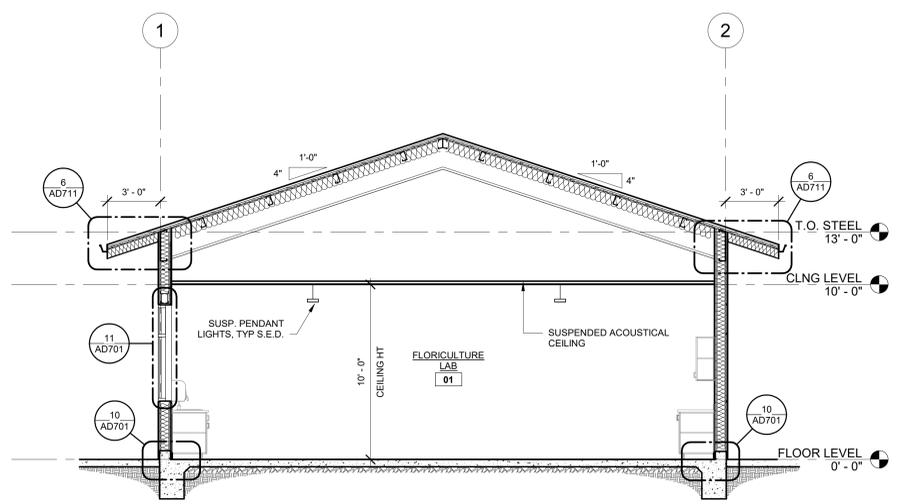
SHEET #
A301



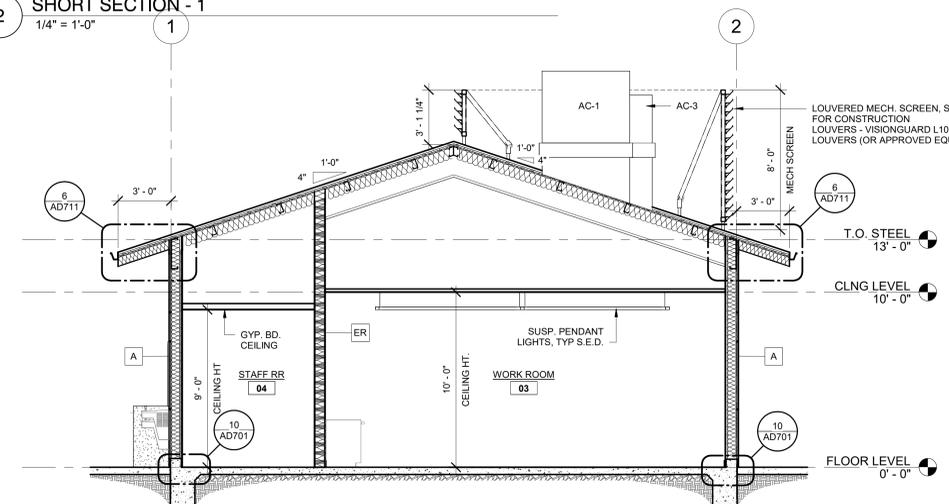
1 LONG SECTION
1/4" = 1'-0"



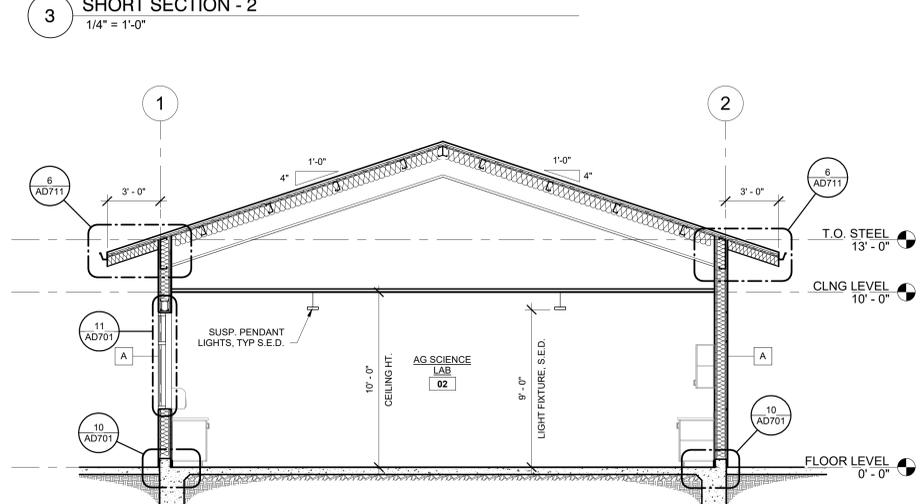
2 SHORT SECTION - 1
1/4" = 1'-0"



3 SHORT SECTION - 2
1/4" = 1'-0"



4 SHORT SECTION - 3
1/4" = 1'-0"



5 SHORT SECTION - 4
1/4" = 1'-0"

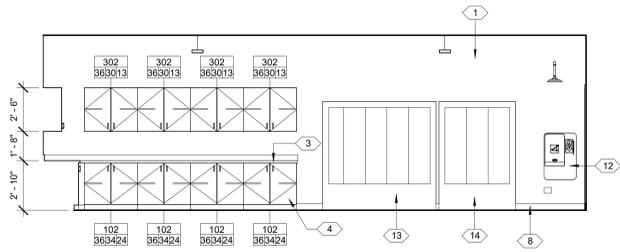
ISSUE	DATE	DESCRIPTION

PROJECT NUMBER:	02-120677
DRAWN BY:	DSP
DESIGNER:	CLB
PLOT DATE:	11-10-2023

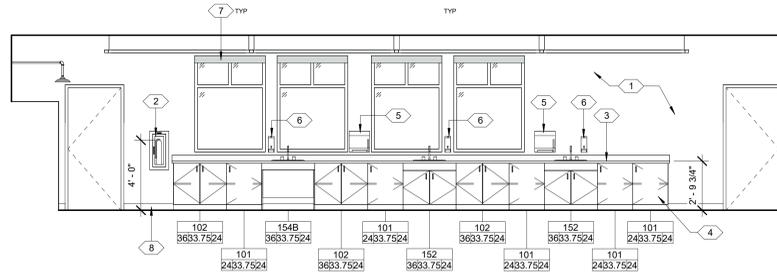
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BUILDING SECTIONS

SHEET #
A401

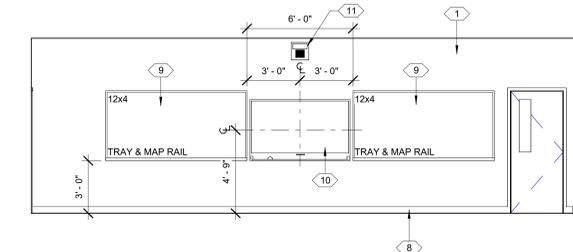
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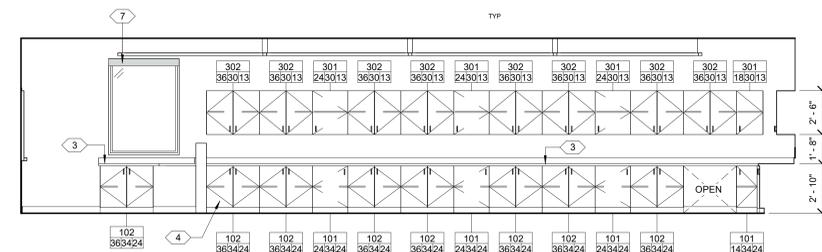
1 FLORICULTURE LAB 01 - NORTH
1/4" = 1'-0"



2 FLORICULTURE LAB 01 - EAST
1/4" = 1'-0"



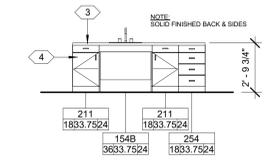
3 FLORICULTURE LAB 01 - SOUTH
1/4" = 1'-0"



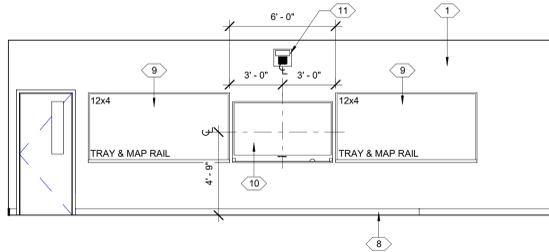
4 FLORICULTURE LAB 01 - WEST
1/4" = 1'-0"

KEYNOTES

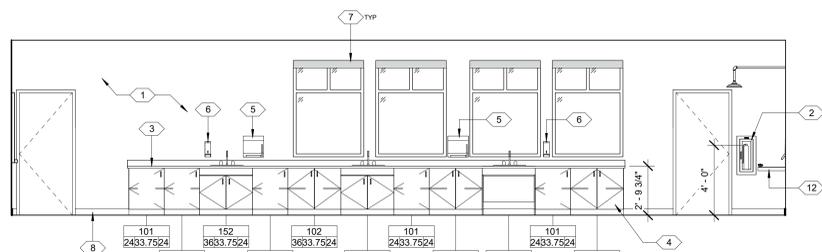
- 1 PAINT FINISH
- 2 SEMI-RECESSED FIRE EXTINGUISHER CABINET, SEE 7/AD841
- 3 SOLID PHENOLIC COUNTERTOP, SEE J--
- 4 PLASTIC LAMINATE CASEWORK, SEE 9/AD821
- 5 PAPER TOWEL (ROLL) DISPENSER
- 6 LIQUID-SOAP DISPENSER
- 7 POWER OPERATED FABRIC ROLLER WINDOW SHADE - WINDOW OPENING MOUNTED, SEE 14/AD701
- 8 RESILIENT BASE
- 9 12X4 MARKER BOARD, SEE 5/AD821
- 10 75" INTERACTIVE DISPLAY, O.F.C.I., SEE 1/AD841 FOR MOUNTING BACKING (MAX 150LB.)
- 11 SPEAKER/INTERCOM & CLOCK ASSEMBLY, S.E.D.
- 12 WALL MOUNTED EMERGENCY EYE-WASH/SHOWER STATION, SEE 29/AD811
- 13 SWING DOOR FLORAL COOLER - 3-DOOR
- 14 SWING DOOR FLORAL COOLER - 2-DOOR
- 15 REFRIGERATOR, OFOI
- 16 (2) 36"WX34"HX24"D CHEMICAL STORAGE CABINETS
- 17 DISHWASHER, S.P.D.



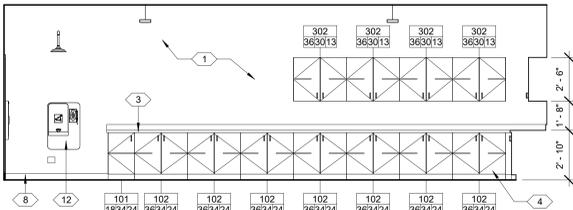
13 TEACHER STATION
1/4" = 1'-0"



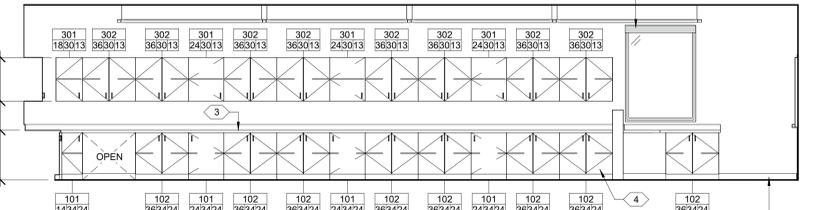
5 AG SCIENCE 02 - NORTH
1/4" = 1'-0"



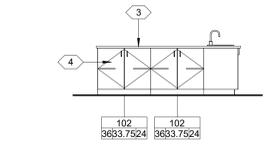
6 AG SCIENCE 02 - EAST
1/4" = 1'-0"



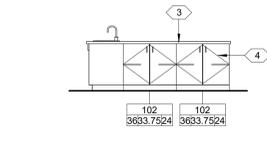
7 AG SCIENCE 02 - SOUTH
1/4" = 1'-0"



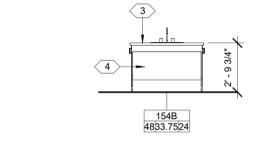
8 AG SCIENCE 02 - WEST
1/4" = 1'-0"



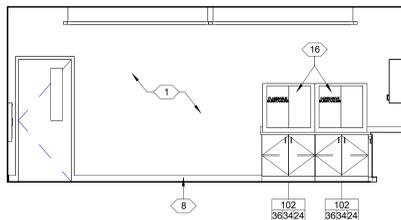
14 WORK ROOM ISLAND - NORTH
1/4" = 1'-0"



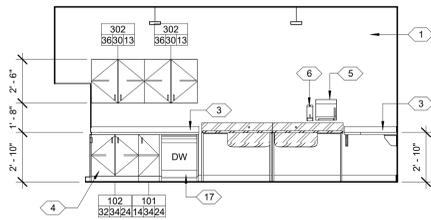
15 WORK ROOM ISLAND - SOUTH
1/4" = 1'-0"



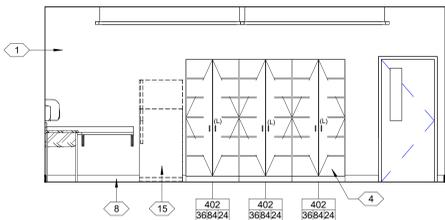
16 WORK ROOM ISLAND - WEST
1/4" = 1'-0"



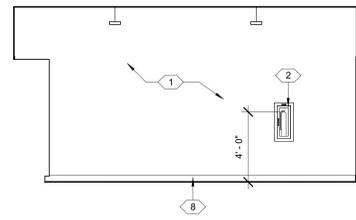
9 WORK ROOM 03 - NORTH
1/4" = 1'-0"



10 WORK ROOM 03 - EAST
1/4" = 1'-0"



11 WORK ROOM 03 - SOUTH
1/4" = 1'-0"



12 WORK ROOM 03 - WEST
1/4" = 1'-0"



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 BEAR CREEK HIGH SCHOOL
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 STOCKTON, CA 95209
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ISSUE	DATE	DESCRIPTION

PROJECT NUMBER: 02-120677
 DRAWN BY: DSP
 DESIGNER: CLB
 PLOT DATE: 11-10-2023

SHEET TITLE:
 INTERIOR ELEVATIONS

SHEET #:
A501

Autodesk Docs\Bear Creek Ag Science Bldg\Bear Creek Ag Science_Central.rvt

Autodesk Docs: Bear Creek Ag Science Bldg/Bear Creek Ag Science_Central.rvt

INTERIOR WALL ASSEMBLIES

FR 6" ONE SIDED 1-HR FIRE-RATED INTERIOR WALL

2 LAYERS 5/8" TYPE "X" GYPSUM BOARD
FULL DEPTH BATT INSULATION
GA FILE NO. WP 1297

ADD RATED WALL LABELING REQUIREMENTS (PLACED ABOVE CEILING) PER CBC 703.7
SEE 30AD841 FOR TOP OF WALL DETAIL

2-LAYERS 5/8" TYPE "X" GYP. BD.
SETTING COMPOUND PER GA WP 1297 BELOW ALL THIRD LAYER OF TYPE "X" GYP BD
R-19 BATT INSULATION
6" METAL FRAMING
NOT APPLICABLE

GA FILE NO. WP 1297

BASE LAYER 5/8" PROPRIETARY TYPE X GYPSUM WALLBOARD APPLIED PARALLEL TO ONE SIDE OF 3-5/8" 18 MIL STEEL STUDS 24" O.C. WITH 1" TYPE S SCREWS 24" O.C. SETTING COMPOUND APPLIED TO SURFACE OF BASE LAYER WITH A 1/4" x 1/4" NOTCHED TROWEL. FACE LAYER 5/8" PROPRIETARY TYPE X GYPSUM WALLBOARD APPLIED PARALLEL TO STUDS WITH 1-5/8" TYPE S SCREWS 24" O.C. AND FACE LAYER APPLIED AS DESCRIBED ABOVE WITH 2-1/4" TYPE S SCREWS.
VERTICAL JOINTS STAGGERED 24" BETWEEN LAYERS.

G 6" INTERIOR WALLS W/ RIGID INSULATION

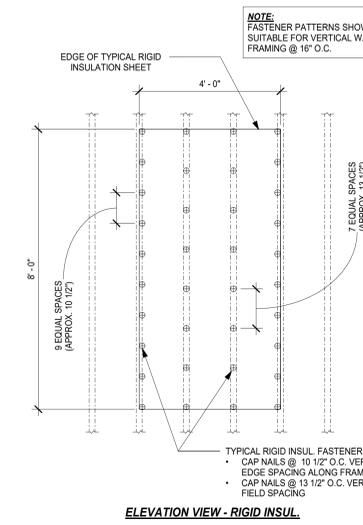
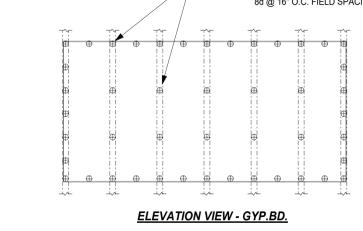
5/8" GYPSUM BOARD
FULL DEPTH BATT INSULATION
R-6.5 - 1" RIGID INSULATION BOARD @ INTERIOR
5/8" GYPSUM BOARD

5/8" GYP. BD. (G1 - GYP BD 1-SIDE ONLY)
1" RIGID INSUL.
R-19 BATT INSULATION. OMIT AT PARTIAL HEIGHT WALLS
6" METAL FRAMING
NOT APPLICABLE

INTERIOR INTERIOR

FASTENER INFORMATION @ FINISHES (NON-RATED ASSEMBLIES)

- EXTERIOR**
CEMENT PLASTER LATH: ACCORDING TO ASTM C1063
EXTERIOR SHEATHING: SEE STRUCTURAL, SD612
- INTERIOR**
RIGID INSULATION:
NO. 8 1-5/8" DRYWALL SCREW WITH FENDER WASHER
EDGE - 12" O.C. MAX
FIELD - 15" O.C. MAX
- GYPSUM BOARD:
NO. 8 2-1/4" DRYWALL SCREW
EDGE - 8" O.C. MAX
FIELD - 16" O.C. MAX
- TYPICAL DRYWALL FASTENERS:
8d @ 8" O.C. EDGE SPACING
8d @ 16" O.C. FIELD SPACING



2 WALL FASTENER REQUIREMENTS
1/2" = 1'-0"

INTERIOR WALL ASSEMBLIES

CR 3-5/8" INTERIOR WALLS (CR = 1-HR RATED)

C: 5/8" GYPSUM BOARD CR: 5/8" TYPE "X" GYP BD
FULL DEPTH BATT INSULATION
G: 5/8" GYPSUM BOARD CR: 5/8" TYPE "X" GYP BD

CR WALLS: ADD RATED WALL LABELING REQUIREMENTS (PLACED ABOVE CEILING) PER CBC 703.7
SEE 30AD841 FOR TOP OF WALL DETAIL

C: 5/8" GYP. BD.
CR: 5/8" TYPE "X" GYP. BD. (C1 - GYP BD 1-SIDE ONLY)
FULL DEPTH BATT INSULATION
3 5/8" METAL FRAMING
NOT APPLICABLE

GA FILE NO. WP 1072

ONE LAYER 5/8" TYPE "X" GYPSUM WALLBOARD OR GYPSUM VENEER BASE APPLIED PARALLEL OR AT RIGHT ANGLES TO EACH SIDE OF 3-5/8" MIN STEEL STUDS 24" O.C. WITH 1" TYPE "S" DRYWALL SCREWS 8" O.C. AT VERTICAL JOINTS AND 12" O.C. AT FLOOR AND CEILING RUNNERS AND INTERMEDIATE STUDS.
JOINTS STAGGERED 24" ON EACH SIDE AND ON OPPOSITE SIDES. SOUND TESTED WITH 3-1/2" GLASS FIBER FRICTION FIT IN STUD SPACE.

D PLUMBING WALL (3-5/8" METAL STUDS)

5/8" GYPSUM BOARD
FULL DEPTH BATT INSULATION
8" CAVITY
FULL DEPTH BATT INSULATION
5/8" GYPSUM BOARD

5/8" GYP. BD.
R-11 BATT INSULATION
3 5/8" METAL FRAMING
8"
NOT APPLICABLE

INTERIOR INTERIOR

OPTIONS:
• CERAMIC TILE O/ CEMENTITIOUS BACKER BOARD
• FRP O/ WATER RESISTANT GYP BD

ER 6" INTERIOR WALLS (ER = 1-HR RATED)

E: 5/8" GYPSUM BOARD ER: 5/8" TYPE "X" GYP BD
FULL DEPTH BATT INSULATION
E: 5/8" GYPSUM BOARD ER: 5/8" TYPE "X" GYP BD

ER: ADD RATED WALL LABELING REQUIREMENTS (PLACED ABOVE CEILING) PER CBC 703.7
SEE 30AD841 FOR TOP OF WALL DETAIL

E: 5/8" GYP. BD.
ER: 5/8" TYPE "X" GYP. BD. (E1 - GYP BD 1-SIDE ONLY)
R-19 BATT INSULATION
6" METAL FRAMING
NOT APPLICABLE

INTERIOR INTERIOR

OPTIONS:
• CERAMIC TILE O/ CEMENTITIOUS BACKER BOARD
• FRP O/ WATER RESISTANT GYP BD

OMIT AT PARTIAL HEIGHT WALLS
OPTIONAL TACKBOARD W/O

GA FILE NO. WP 1072

ONE LAYER 5/8" TYPE "X" GYPSUM WALLBOARD OR GYPSUM VENEER BASE APPLIED PARALLEL OR AT RIGHT ANGLES TO EACH SIDE OF 3-5/8" MIN STEEL STUDS 24" O.C. WITH 1" TYPE "S" DRYWALL SCREWS 8" O.C. AT VERTICAL JOINTS AND 12" O.C. AT FLOOR AND CEILING RUNNERS AND INTERMEDIATE STUDS.
JOINTS STAGGERED 24" ON EACH SIDE AND ON OPPOSITE SIDES. SOUND TESTED WITH 3-1/2" GLASS FIBER FRICTION FIT IN STUD SPACE.

EXTERIOR WALL ASSEMBLIES

A/AR 6" EXTERIOR WALLS - STUCCO (AR = 1-HR RATED)

7/8" CEMENT PLASTER W/ SELF FURRING LATH
BUILDING PAPER - 2 LAYERS
EXT. SHEATHING
R-21 CAVITY
R-6.5 - 1" RIGID INSULATION BOARD @ INTERIOR
A: 5/8" GYPSUM BOARD AR: 5/8" TYPE "X" GYP BD

TOP OF WALL DETAILS:
• METAL ROOF - SEE 18AD701
• MEMBRANE ROOF (PARAPET) - SEE 14AD712

NOTE: ADD RATED WALL LABELING REQUIREMENTS (PLACED ABOVE CEILING) PER CBC 703.7

5/8" TYPE "X" GYP. BD.
AR: SEE DETAIL BELOW FOR NAILING REQUIREMENTS
1" RIGID INSUL.
R-21 BATT INSULATION
6" METAL FRAMING
NOT APPLICABLE

EXTERIOR SHEATHING. SEE SHEATHING NOTE A
BUILDING PAPER - 2 LAYERS
7/8" PLASTER & SELF-FURRING LATH

GA FILE NO. WP 1072

3-5/8" NO. 16 GAGE NONCOMBUSTIBLE STUDS 16" ON CENTER WITH 7/8" CEMENT PLASTER (MEASURED FROM FACE OF STUDS) ON THE EXTERIOR SURFACE WITH INTERIOR SURFACE TREATMENT AS REQUIRED FOR INTERIOR, NONCOMBUSTIBLE STUD PARTITIONS IN TABLE 721.1(2). PLASTER MIX 1:4 FOR SCRATCH AND 1:5 FOR BROWN COAT. BY VOLUME. CEMENT TO SAND.
INTERIOR TREATMENT (PER 13-1.1): 5/8" TYP "X" GYPSUM BOARD APPLIED VERTICALLY W/ 1" LONG NO. 6 DRYWALL SCREWS TO EACH STUD. SCREWS ARE 8" ON CENTER ALONG THE PERIMETER AND 12" ON CENTER ON THE INTERMEDIATE STUD.

A2 6" EXTERIOR WALLS - STUCCO 2-SIDES

7/8" CEMENT PLASTER W/ SELF FURRING LATH
BUILDING PAPER - 2 LAYERS
EXT. SHEATHING

EXTERIOR SHEATHING. SEE SHEATHING NOTE A
BUILDING PAPER - 2 LAYERS
7/8" PLASTER & SELF-FURRING LATH
6" METAL FRAMING
NOT APPLICABLE

EXTERIOR EXTERIOR

B 6" EXTERIOR WALLS - METAL SIDING

METAL SIDING
BUILDING PAPER - 2 LAYERS
EXT. SHEATHING
R-21 CAVITY
R-6.5 - 1" RIGID INSULATION BOARD @ INTERIOR
5/8" GYPSUM BOARD

5/8" GYP. BD.
1" RIGID INSUL.
R-21 BATT INSULATION
6" METAL FRAMING
NOT APPLICABLE

OPTIONAL TACKBOARD W/O
WALL SHEATHING, S.S.D.
BUILDING PAPER - 2 LAYERS
METAL SIDING. SEE A702 FOR TYP DETAILS

INTERIOR EXTERIOR

SHEATHING NOTES

SEE S101-S106 FOR LOCATION OF SHEAR WALLS

A. EXTERIOR
1. SHEAR WALLS - 1/2" FIBERBOARD SHEATHING PER SD612
2. NON-SHEAR - 1/2" GLASS-MAT GYPSUM SHEATHING

B. INTERIOR
1. SHEAR WALLS - 1/2" FIBERBOARD SHEATHING PER SD612 W/ GYP BD FINISH AS NOTED
a. WHERE SHEAR WALL IS NOT ENTIRE LENGTH OF WALL, FINISH REST OF WALL W/ 1/2" GYP TO PROVIDE FLUSH SURFACE FOR INT. GYP BD FINISH

C. GYPSUM BOARD & RIGID INSULATION FASTENING
1. SEE LEFT SIDE OF THIS SHEET

ISSUE	DATE	DESCRIPTION

PROJECT NUMBER: 02-120677
DRAWN BY: DSP
DESIGNER: CLB
PLOT DATE: 11-10-2023

SHEET TITLE: WALL ASSEMBLIES

SHEET #: A601

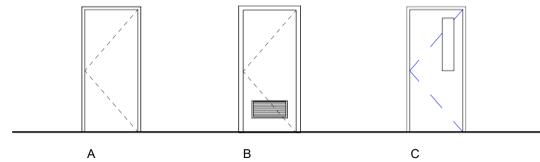


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ROOM FINISH SCHEDULE													
NUMBER	ROOM NAME	AREA	FLOOR	BASE	WAINSCOT		WALL		CEILING			REMARKS	
			FLOOR MATERIAL	MATERIAL	HEIGHT	MATERIAL	HEIGHT	MATERIAL	FINISH	MATERIAL	HEIGHT		FINISH
01	FLORICULTURE LAB	1346 SF	VCT	RESILIENT	4"	---	---	GYP BD	PAINT	ACOUSTICAL PANEL	10' - 0"	---	
02	AG SCIENCE LAB	1346 SF	VCT	RESILIENT	4"	---	---	GYP BD	PAINT	ACOUSTICAL PANEL	10' - 0"	---	
03	WORK ROOM	439 SF	VCT	RESILIENT	4"	---	---	GYP BD	PAINT	ACOUSTICAL PANEL	10' - 0"	---	
04	STAFF RR	67 SF	EPOXY	---	---	EPOXY	4' - 9 1/2"	GYP BD	PAINT	GYP BD	9' - 0"	PAINT	
05	STUDENT RR	68 SF	EPOXY	---	---	EPOXY	4' - 9 1/2"	GYP BD	PAINT	GYP BD	9' - 0"	PAINT	
06	ELEC/DF	69 SF	SEALED CONCRETE	RESILIENT	4"	---	---	GYP BD	PAINT	OPEN TO STRUCTURE	---	---	
07	CUSTODIAL	62 SF	SEALED CONCRETE	RESILIENT	4"	FRP	7' - 0"	GYP BD	PAINT	OPEN TO STRUCTURE	---	---	
08	WALK-IN REFRIGERATOR	121 SF	EPOXY	---	---	---	---	PRE-MANUFACTURED	---	PRE-MANUFACTURED	---	---	PRE-MANUFACTURED WALK-IN COOLER TO BE ASSEMBLED WITHIN THE ROOM

DOOR SCHEDULE															
Mark	TYPE	WIDTH	HEIGHT	THICKNESS	MATERIAL	FINISH	GLASS	FRAME				FIRE RATING	STC RATING	HARDWARE SET	REMARKS
								MAT.	FIN.	HEAD	JAMB				
01A	A	3' - 0"	7' - 0"	1 3/4"	HOLLOW METAL	PAINT	--	HOLLOW METAL	PAINT	17/AD701	17/AD701	---	---	01	
01B	A	3' - 0"	7' - 0"	1 3/4"	HOLLOW METAL	PAINT	--	HOLLOW METAL	PAINT	17/AD701	17/AD701	---	---	01	
01C	C	3' - 0"	7' - 0"	1 3/4"	SOLID CORE WOOD	TRANSPARENT	TEMPERED	HOLLOW METAL	PAINT	3/AD721	3/AD721	45 MIN	---	05	
02A	A	3' - 0"	7' - 0"	1 3/4"	HOLLOW METAL	PAINT	--	HOLLOW METAL	PAINT	17/AD701	17/AD701	---	---	01	
02B	A	3' - 0"	7' - 0"	1 3/4"	HOLLOW METAL	PAINT	--	HOLLOW METAL	PAINT	17/AD701	17/AD701	---	---	01	
02C	C	3' - 0"	7' - 0"	1 3/4"	SOLID CORE WOOD	TRANSPARENT	TEMPERED	HOLLOW METAL	PAINT	3/AD721	3/AD721	45 MIN	---	05	
04	A	3' - 0"	7' - 0"	1 3/4"	HOLLOW METAL	PAINT	--	HOLLOW METAL	PAINT	17/AD701	17/AD701	---	---	02	
05	A	3' - 0"	7' - 0"	1 3/4"	HOLLOW METAL	PAINT	--	HOLLOW METAL	PAINT	17/AD701	17/AD701	---	---	03	
06	A	3' - 0"	7' - 0"	1 3/4"	HOLLOW METAL	PAINT	--	HOLLOW METAL	PAINT	17/AD701	17/AD701	---	---	04	
07	B	3' - 0"	7' - 0"	1 3/4"	HOLLOW METAL	PAINT	--	HOLLOW METAL	PAINT	17/AD701	17/AD701	---	---	04	24x12 LOUVER PER MECH

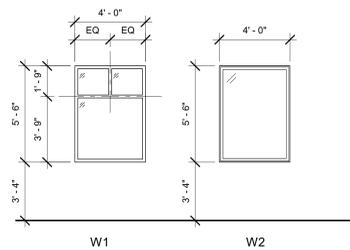
DOOR TYPES:



WINDOW SCHEDULE															
TYPE MARK	COUNT	WINDOW TYPE	SIZE		SILL HEIGHT	HEAD HEIGHT	SASH & FRAME			DETAILS			FIRE RATING	SHADES	REMARKS
			WIDTH	HEIGHT			MATERIAL	FINISH	GLAZING	HEAD	JAMB	SILL			
W1	8	FIXED	4' - 0"	5' - 6"	3' - 4"	8' - 10"	ALUM.	FACTORY	INSULATING	11/AD701	11/AD701 SIM	11/AD701	---	ROLLER	
W2	2	FIXED	4' - 0"	5' - 6"	3' - 4"	8' - 10"	ALUM.	FACTORY	INSULATING	11/AD701	11/AD701 SIM	11/AD701	---	ROLLER	

Grand total: 10

WINDOW TYPES:



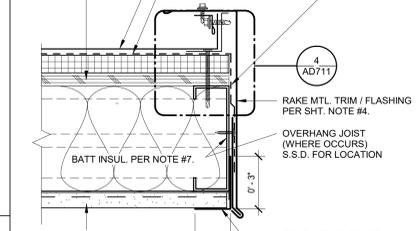
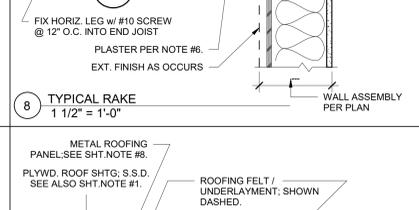
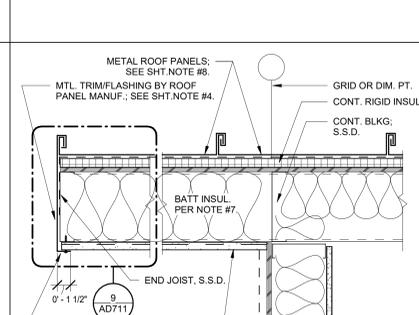
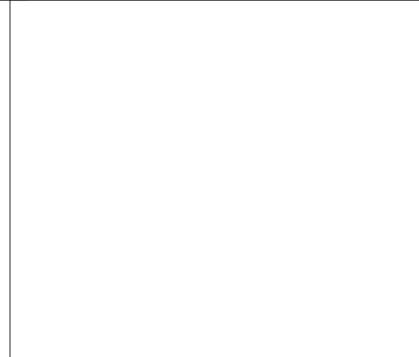
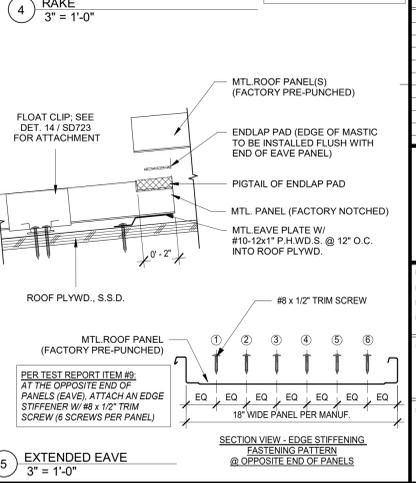
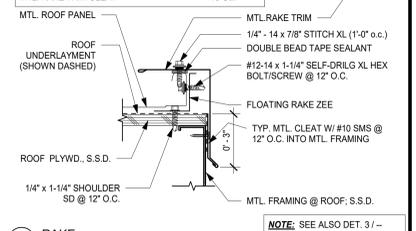
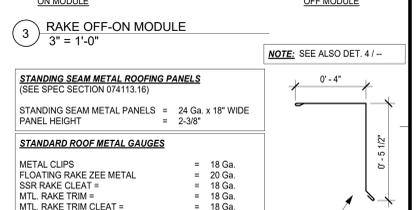
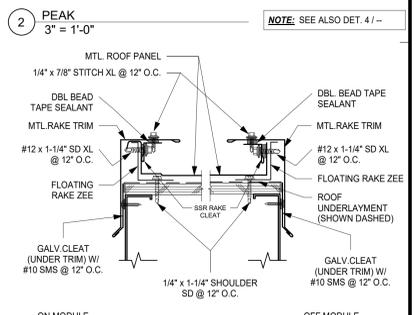
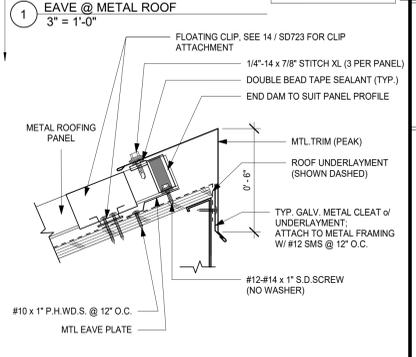
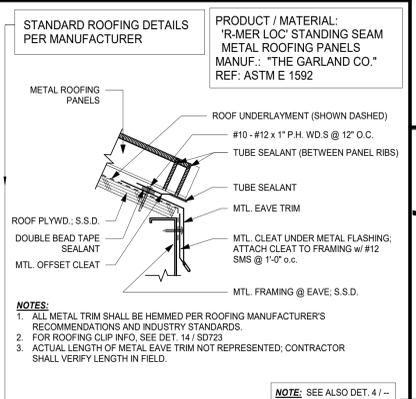
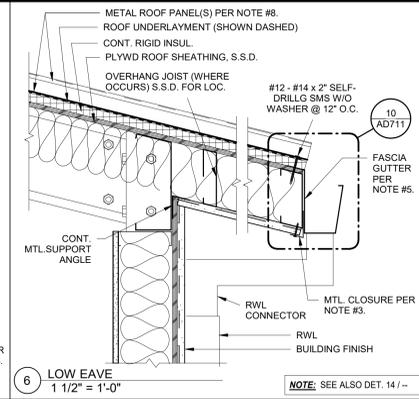
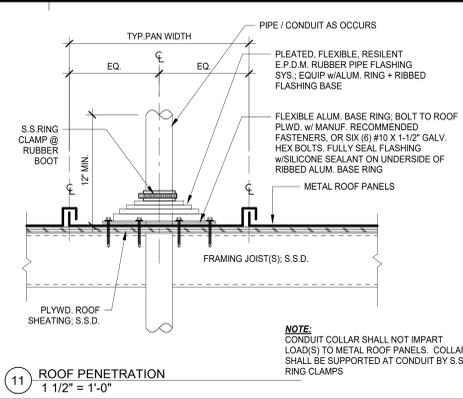
ISSUE	DATE	DESCRIPTION

PROJECT NUMBER: 02-120677
 DRAWN BY: DSP
 DESIGNER: CLB
 PLOT DATE: 11-10-2023

SHEET TITLE: **SCHEDULES**

SHEET #: **A611**

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DETAIL NOTES for SHEET AD711

APPLICABLE TO METAL ROOF PANEL & RIGID INSULATION ROOF BOARD DETAILS.

REF.#	NOTE TEXT
1.	STRUCTURAL ROOF PLYWOOD; SEE STRUCT. DRAWINGS. BUILDING TYPE IS "V-B", SO FIRE-RETARDANT TYPE IS NOT NECESSARY.
2.	ROOF PANEL ATTACHMENT TO ROOF PLYWOOD SHALL BE VIA "R-MER" SPAN STANDARD ALUMINUM CLIP SYSTEM.
3.	GALV. METAL CLOSURE(S); A. THICKNESS = .0064 in. B. FINISH = SHALL MATCH ROOF PANELS. C. ATTACHMENT = FASTEN INTO EAVE JOIST WITH #8 X 1-1/4" L.S.M.S. @ 12" O.C.
4.	GALV. METAL FLASHING AND/OR TRIM; MATERIAL AND FINISH SHALL MATCH ROOF PANELS. (SEE MANUF. DETAILS #1 THRU 5 THIS SHEET.)
5.	GALV. METAL GUTTER; MATERIAL AND FINISH SHALL MATCH ROOF PANELS.
6.	7/8" PLASTER of METAL LATH AT ALL EAVE SOFFITS; MATCH COLOR & FINISH AT BUILDING. ATTACH LATH WITH 1-1/2" SDS LATHE HEAD FURRING SCREWS & 6" O.C. @ EA. JOIST & 6" O.C. @ TOP & BOTTOM OF SOFFIT ALLOWING FOR 1/4" KEYING INTO LATH AT EACH SUPPORT
7.	COMPLETELY FILL CAVITY BETWEEN EAVE JOISTS WITH BATT INSULATION.
8.	METAL ROOF PANELS: STANDING SEAM TYPE. SEE MANUF. DETAILS #1 THRU 5 THIS SHEET. end of sheet notes



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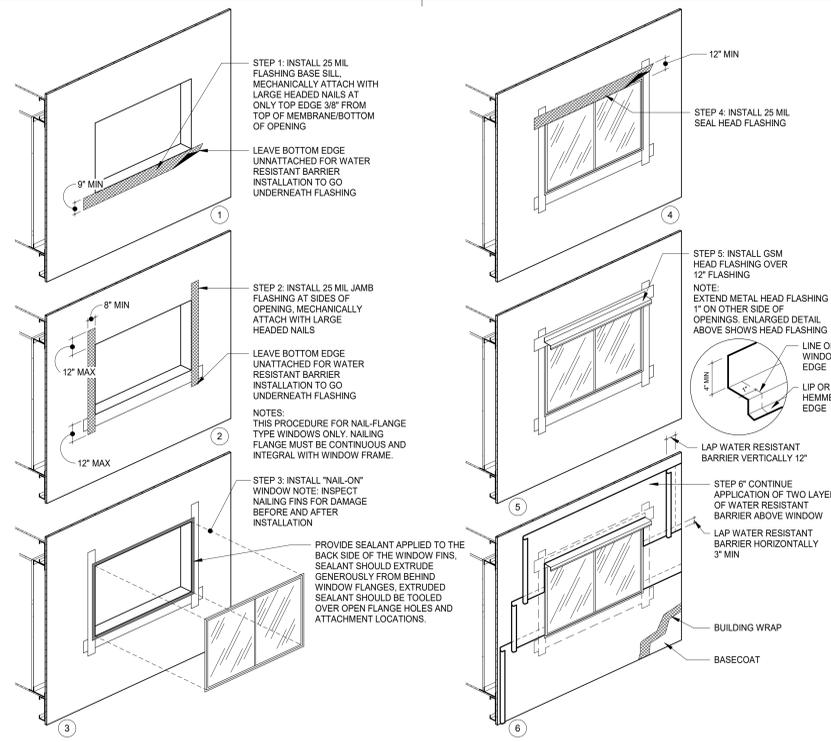
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 DRAWN BY: DSP
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 PLOT DATE: 11-10-2023

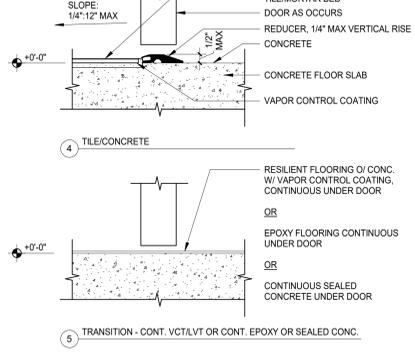
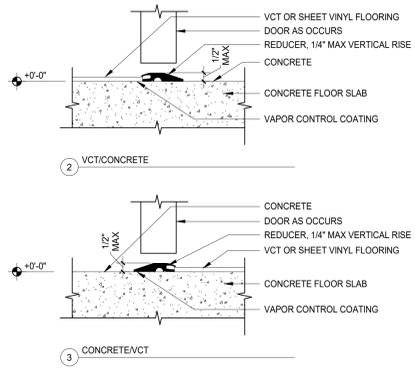
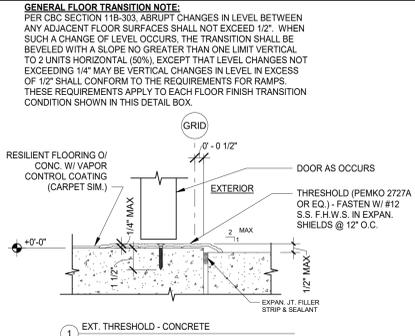
SHEET TITLE: **ROOF DETAILS - METAL**

SHEET #: **AD711**

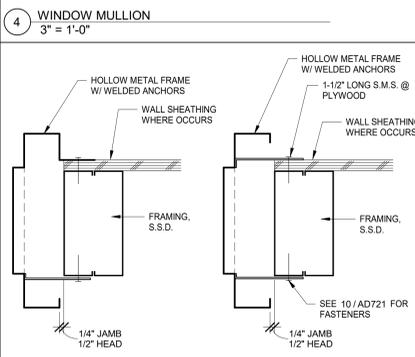
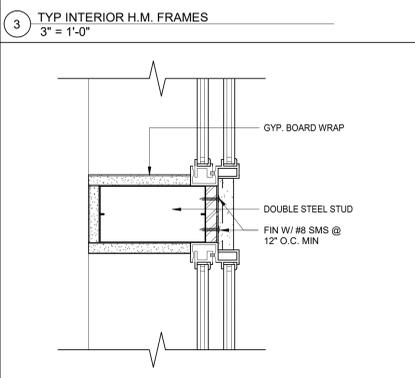
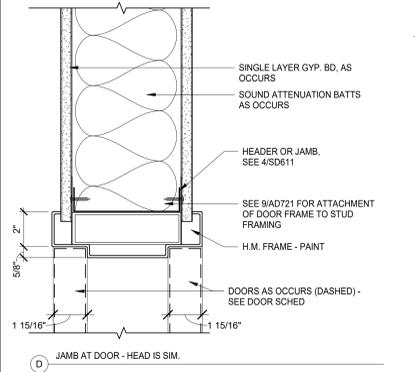
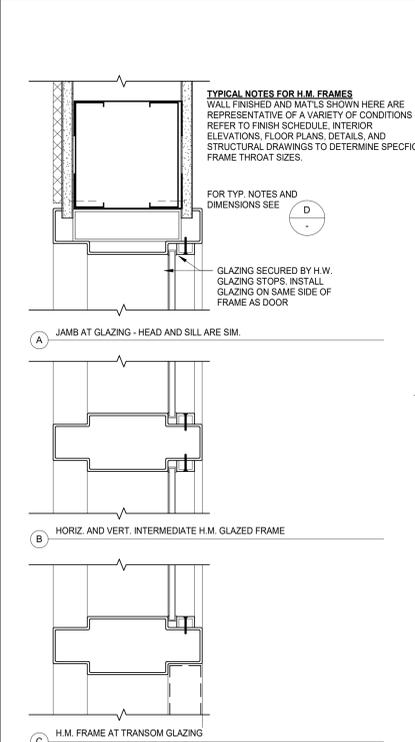
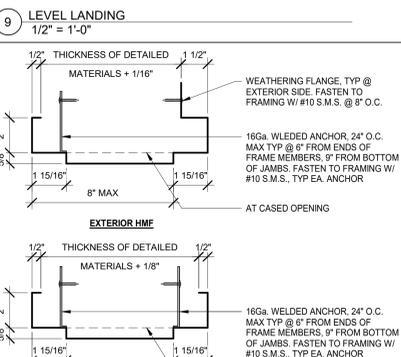
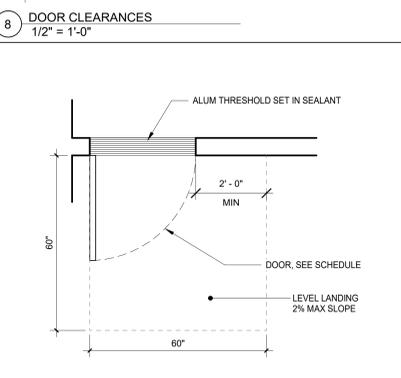
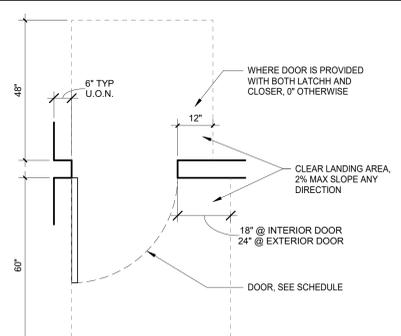
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12 WINDOW FLASHING DETAILS
1/2" = 1'-0"



15 THRESHOLDS
3" = 1'-0"



5 FRAMING @ DOOR FRAME
3" = 1'-0"



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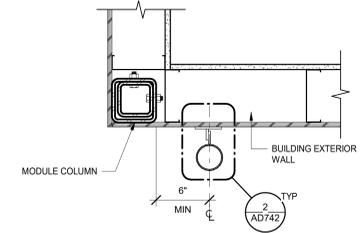
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DRAWN BY: DSP
DESIGNER: CLB
PLOT DATE: 11-10-2023

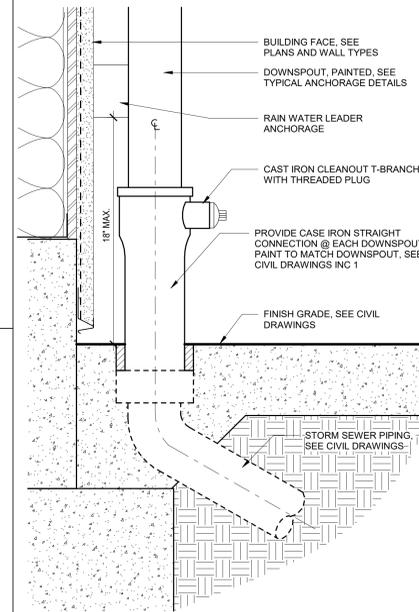
SHEET TITLE: **DOOR & WINDOW DETAILS**

SHEET #: **AD721**

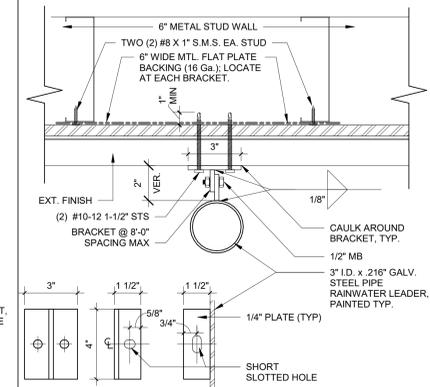
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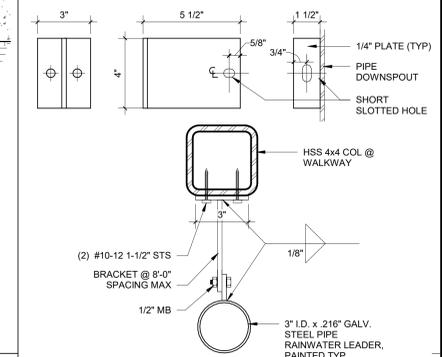
1 DOWNSPOUT ATTACHMENT - ROUND
1 1/2" = 1'-0"



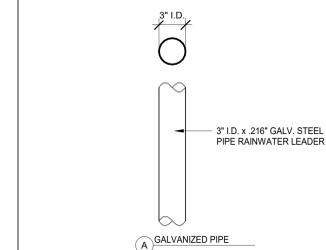
2 DOWNSPOUT TERMINATION
3" = 1'-0"



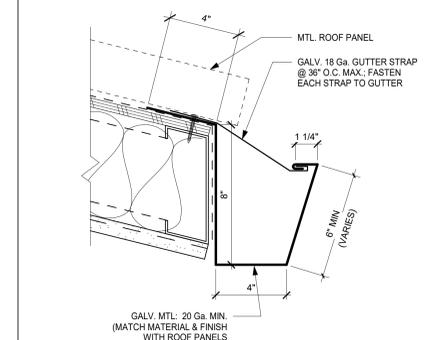
3 DOWNSPOUT ATTACHMENT
3" = 1'-0"



4 DOWNSPOUT ATTACHMENT - WALKWAY COLUMNS
3" = 1'-0"



5 DOWNSPOUT/RWL PROFILES
1 1/2" = 1'-0"



6 TYPICAL GUTTER
3" = 1'-0"

ISSUE	DATE	DESCRIPTION

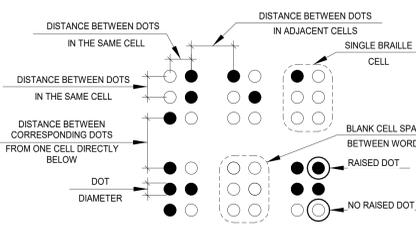
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 DRAWN BY: DSP
 DESIGNER: CLB
 PLOT DATE: 11-10-2023

SHEET TITLE:
**DOWNSPOUT / RAIN
 WATER LEADER DETAILS**

SHEET #:
AD742

MEASUREMENT RANGE	MINIMUM IN INCHES MAXIMUM IN INCHES
DOT BASE DIAMETER	0.059 (1.5 MM) TO 0.063 (1.6 MM)
DISTANCE BETWEEN TWO DOTS IN THE SAME CELL ¹	0.100 (2.5 MM)
DISTANCE BETWEEN CORRESPONDING DOTS IN ADJACENT CELLS ¹	0.300 (7.6 MM)
DOT HEIGHT	0.025 (0.6 MM) TO 0.037 (0.9 MM)
DISTANCE BETWEEN CORRESPONDING DOTS FROM ONE CELL DIRECTLY BELOW ¹	0.395 (10 MM) TO 0.400 (10.2 MM)

1. MEASURED CENTER TO CENTER



11B-703.5.1 FINISH AND CONTRAST. CHARACTERS, SYMBOLS AND THEIR BACKGROUND SHALL HAVE A NON-GLARE FINISH. CHARACTERS AND SYMBOLS SHALL CONTRAST 70% WITH THEIR BACKGROUND, EITHER LIGHT CHARACTERS ON A DARK BACKGROUND OR DARK CHARACTERS ON A LIGHT BACKGROUND.

11B-703.2.4 PROPORTIONS. CHARACTERS ON SIGNS SHALL BE IN A FONT WHERE THE UPPER CASE 'O' IS 80% MIN AND 100% MAX OF THE HEIGHT OF THE UPPER CASE 'I'.

11B-703.2.5 CHARACTER HEIGHT. CHARACTER HEIGHT SHALL BE MEASURED VERTICALLY FROM THE BASELINE OF THE CHARACTER AND SHALL BE 5/8" MIN & 2" MAX BASED ON THE HEIGHT OF THE UPPER CASE 'I'.

11B-703.2.6 RAISED CHARACTERS AND PICTORIAL SYMBOL SIGNS. WHEN RAISED CHARACTERS ARE REQUIRED OR WHEN PICTORIAL SYMBOLS (PICTOGRAMS) ARE USED ON SUCH SIGNS, THEY SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

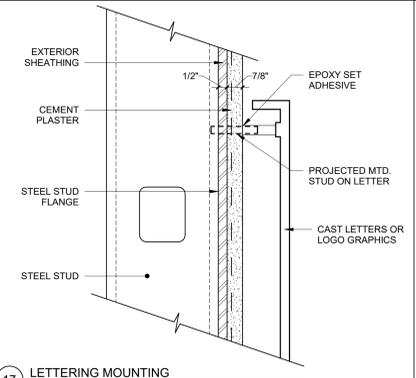
- CHARACTER TYPE. CHARACTER ON SIGNS SHALL BE RAISED 1/32" MINIMUM AND SHALL BE SAN SERIF UPPERCASE CHARACTERS ACCOMPANIED BY CA. CONTRACTED GRADE 2 BRAILLE COMPLYING WITH 11B-703.3.1.
- CHARACTER SIZE. RAISED CHARACTERS SHALL BE A MINIMUM OF 5/8" AND A MAXIMUM OF 2 INCHES HIGH.
- PICTORIAL SYMBOL SIGNS (PICTOGRAMS). PICTORIAL SYMBOL SIGNS (PICTOGRAMS) SHALL BE ACCOMPANIED BY THE VERBAL DESCRIPTION PLACED DIRECTLY BELOW THE PICTOGRAM. THE OUTSIDE DIMENSION OF THE PICTOGRAM FIELD SHALL BE A MINIMUM OF 6 INCHES IN HEIGHT.

2022 CBC 11B-703.1.1.2. SIGNS AND IDENTIFICATION DEVICES SHALL BE FIELD INSPECTED.

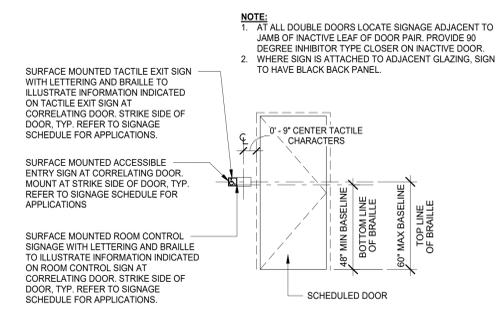
Signs and identification devices shall be field inspected after installation and approved by the enforcing agency prior to the issuance of a final certificate of occupancy per Chapter 1, Division II, Section 111, or final approval where no certificate of occupancy is issued. The inspection shall include, but not be limited to, verification that Braille dots and cells are properly spaced and the size, proportion and type of raised characters are in compliance with these regulations.

1 SIGNAGE NOTES
3" = 1'-0"

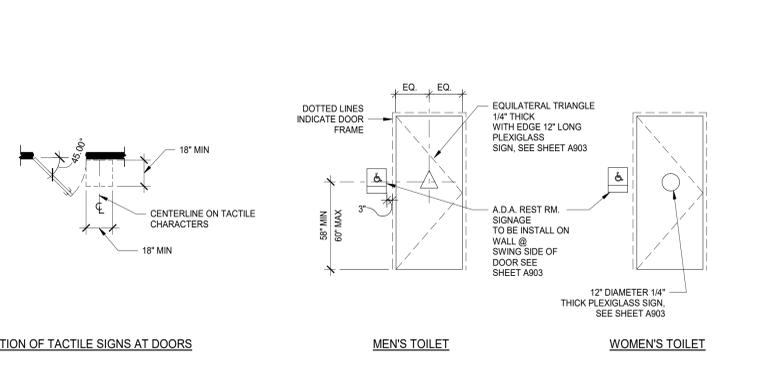
11 BRAILLE GUIDELINES
12" = 1'-0"



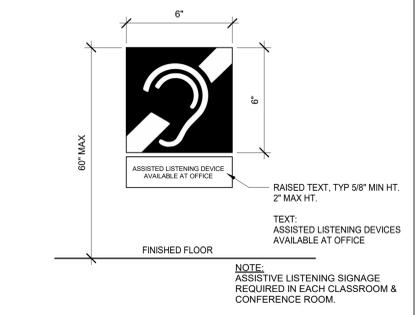
17 LETTERING MOUNTING
3" = 1'-0"



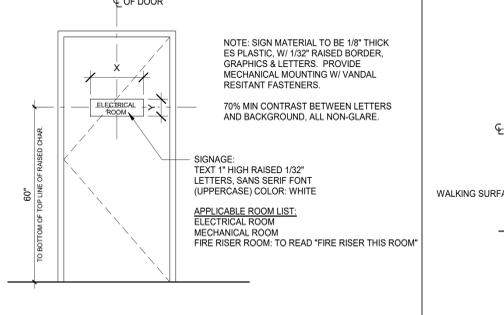
12 SIGNAGE - SIGNAGE MOUNTING DETAIL
1/4" = 1'-0"



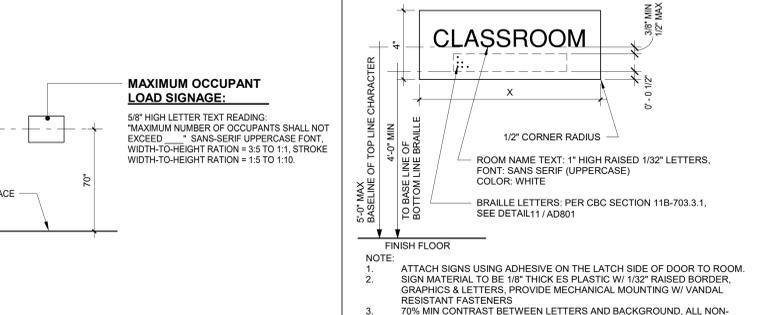
LOCATION OF TACTILE SIGNS AT DOORS
MEN'S TOILET
WOMEN'S TOILET



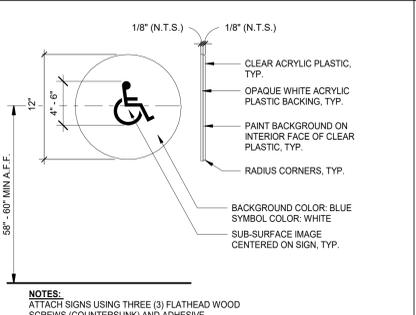
18 ASSISTED LISTENING SIGNAGE
3" = 1'-0"



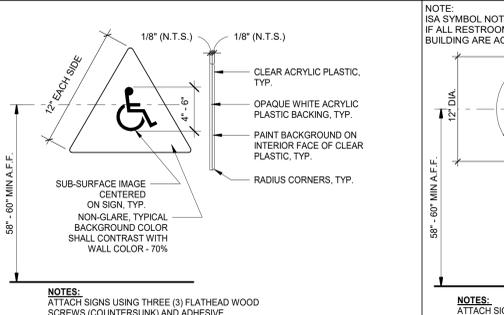
13 MISC ROOM SIGNAGE
1/4" = 1'-0"



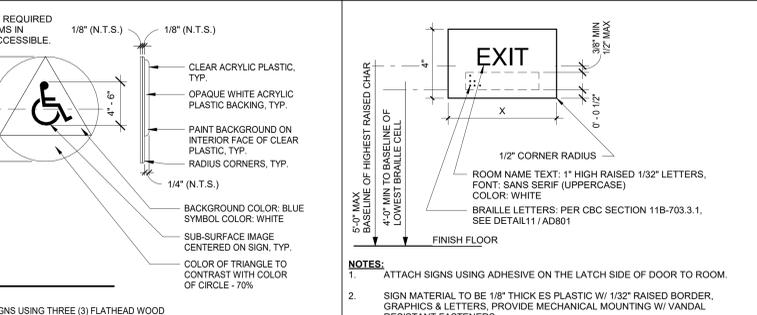
8 MAXIMUM OCCUPANT LOAD SIGNAGE
1/4" = 1'-0"



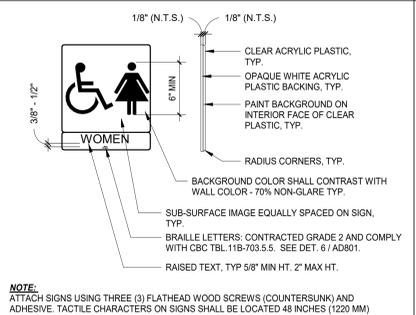
19 WOMEN'S TOILET DOOR SIGNAGE
1 1/2" = 1'-0"



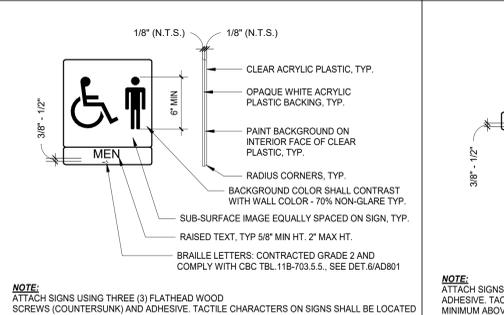
14 MEN'S TOILET DOOR SIGNAGE
1 1/2" = 1'-0"



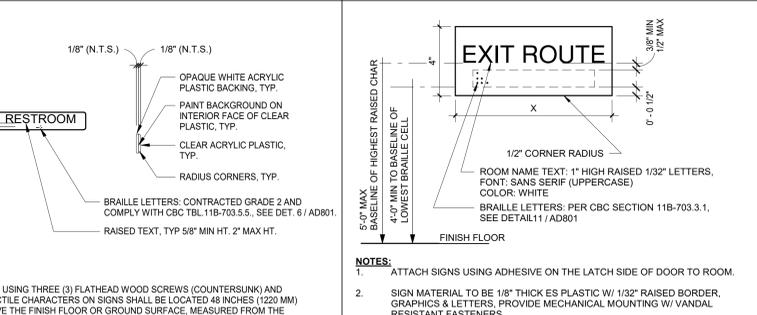
9 ALL-GENDER TOILET DOOR SIGNAGE
1 1/2" = 1'-0"



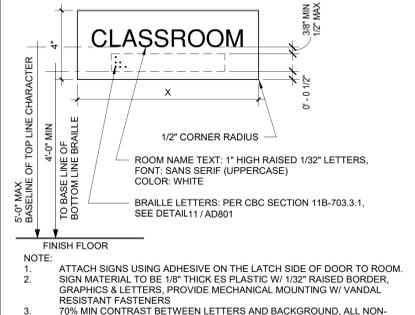
20 WOMEN'S TOILET WALL SIGNAGE
1 1/2" = 1'-0"



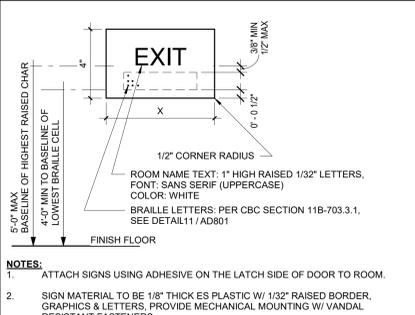
15 MEN'S TOILET WALL SIGNAGE
1 1/2" = 1'-0"



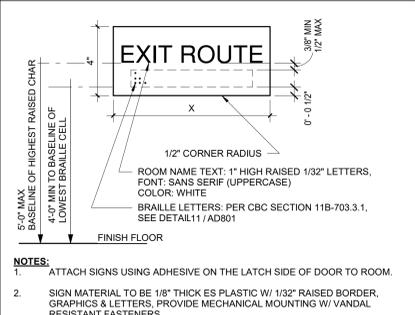
10 ALL-GENDER TOILET WALL SIGNAGE
1 1/2" = 1'-0"



3 ACCESSIBLE ROOM ID SIGN
3" = 1'-0"

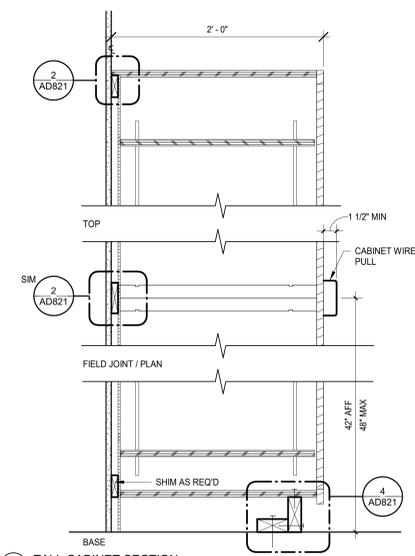


4 EXIT SIGN
3" = 1'-0"



5 EXIT ROUTE SIGN
3" = 1'-0"

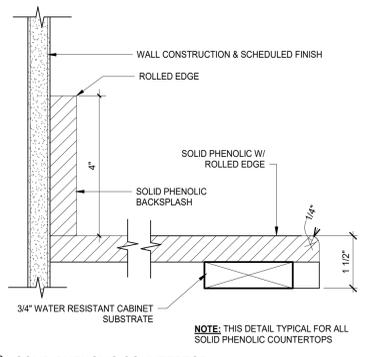
Autodesk Docs://Bear_Creek_Ag_Science_Bldg/Bear_Creek_Ag_Science_Central.rvt



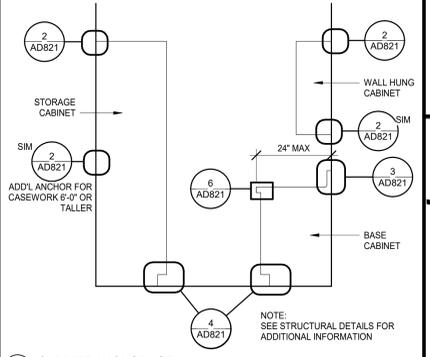
17 TALL CABINET SECTION
1 1/2" = 1'-0"

REQUIREMENTS FOR FASTENERS

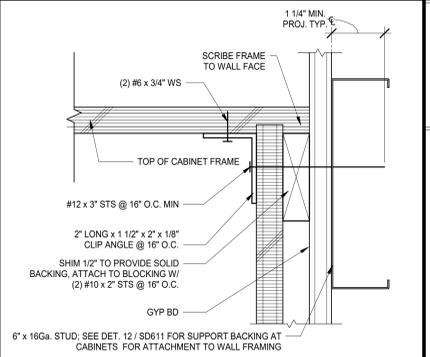
- ALL FASTENERS THRU PRESSURE-TREATED WOOD THAT IS IN CONTACT WITH CONCRETE FLOOR(S) SHALL BE STAINLESS STEEL (S.S.) TYPE.
- SEE DET. 12 / SD611 FOR SUPPORT BACKING AT CABINETS WITH ATTACHMENT TO WALL FRAMING.



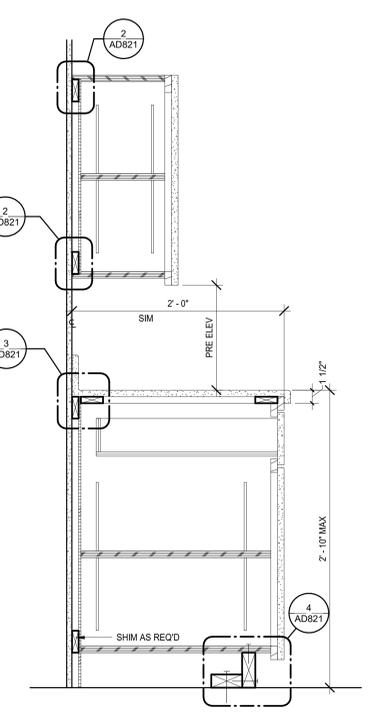
6 SOLID PHENOLIC COUNTERTOP
6" = 1'-0"



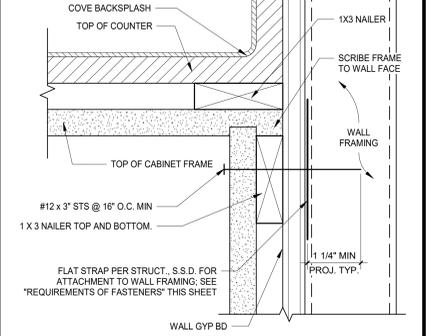
1 CABINET ANCHORAGE
1/2" = 1'-0"



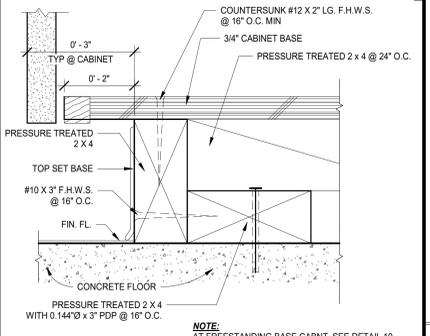
2 WALL CABINET ANCHOR
6" = 1'-0"



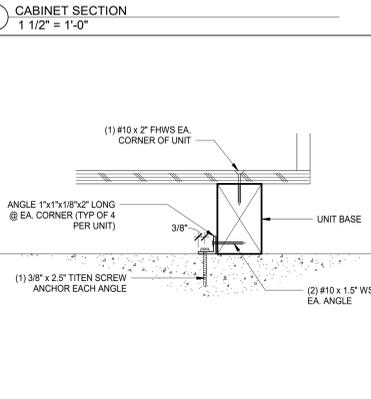
9 CABINET SECTION
1 1/2" = 1'-0"



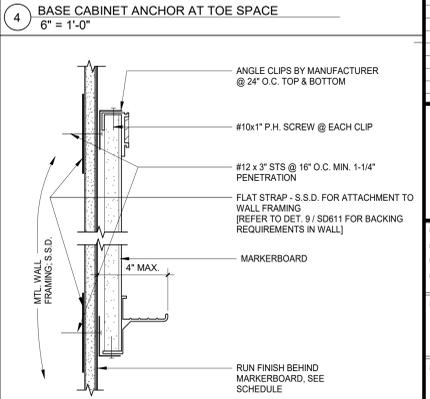
3 BASE CABINET TO WALL ANCHORAGE
6" = 1'-0"



4 BASE CABINET ANCHOR AT TOE SPACE
6" = 1'-0"



10 FREE STANDING CABINET/SHELVING ANCH'G
3" = 1'-0"



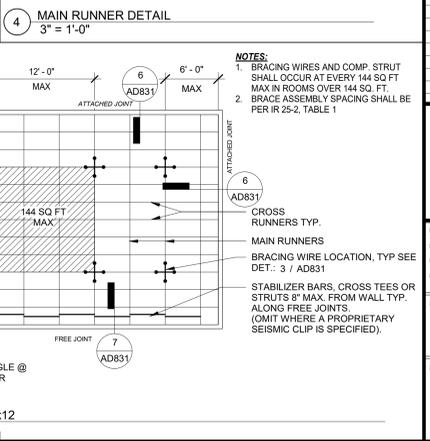
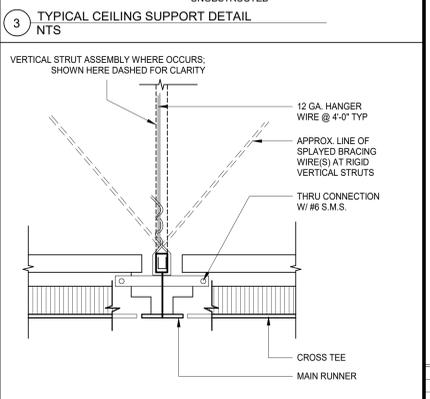
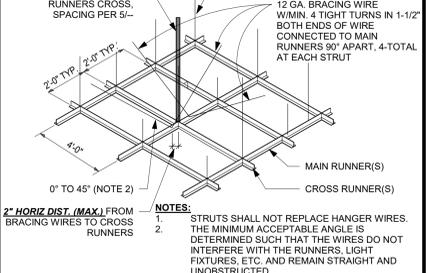
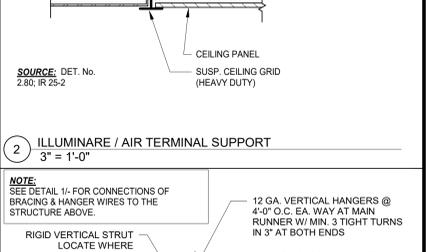
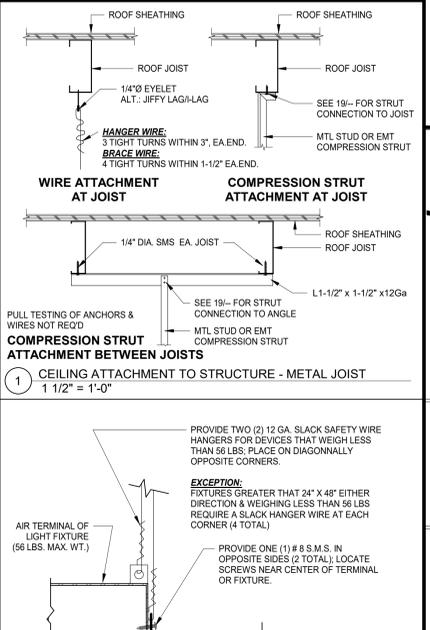
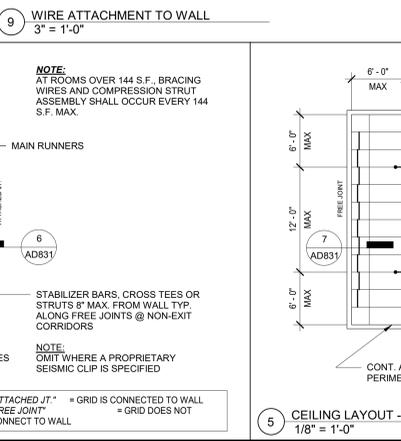
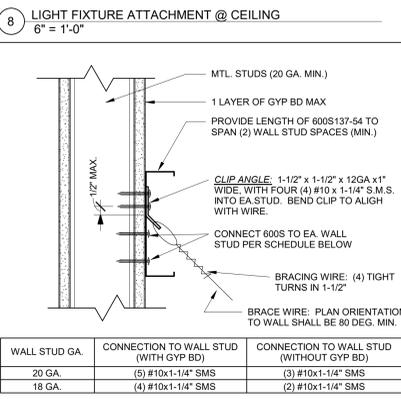
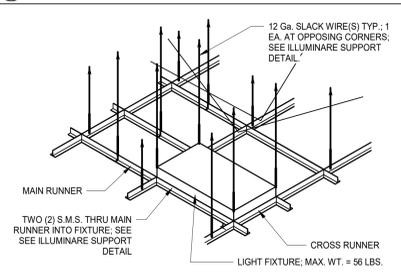
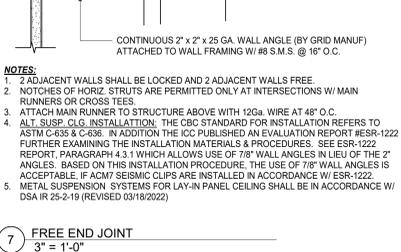
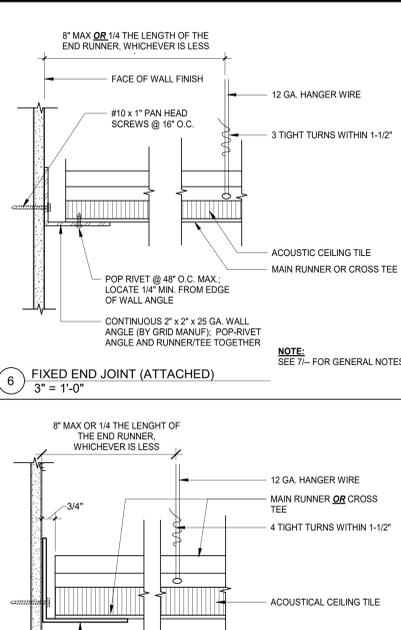
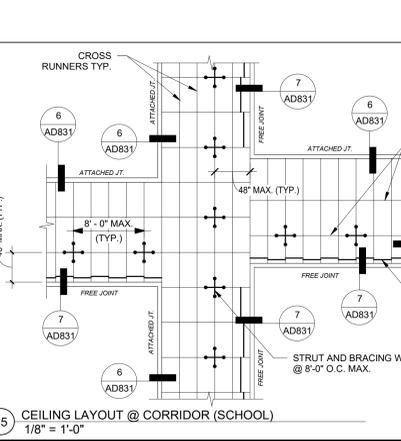
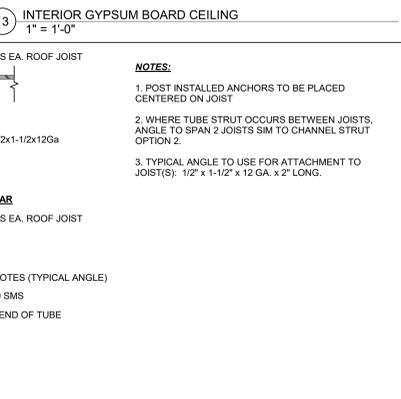
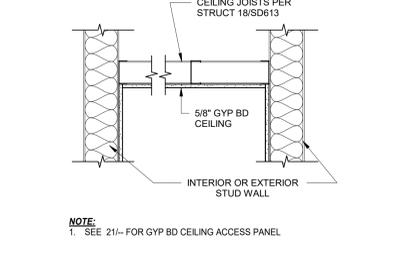
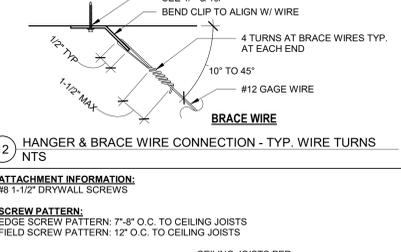
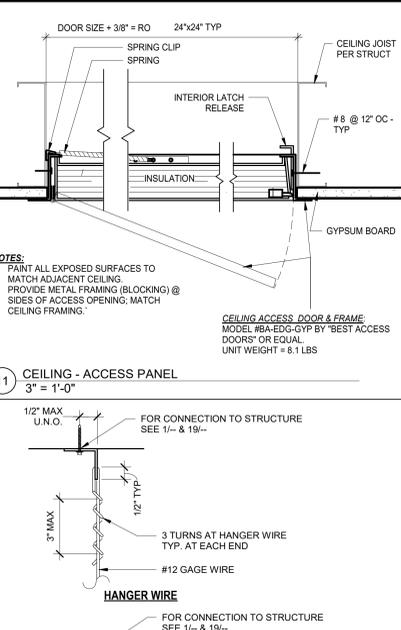
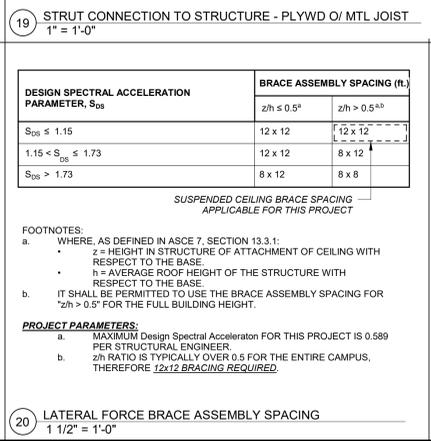
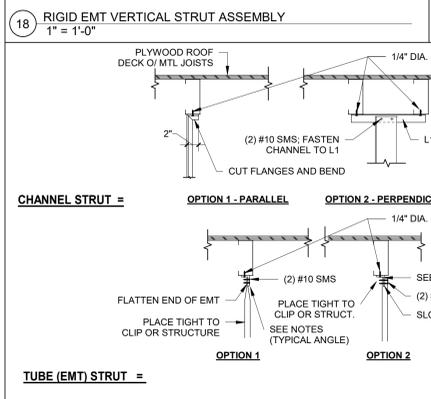
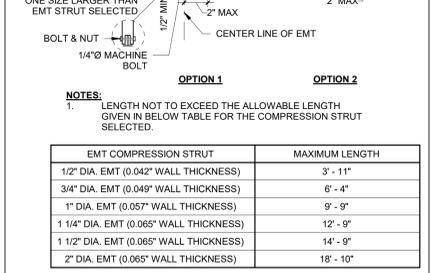
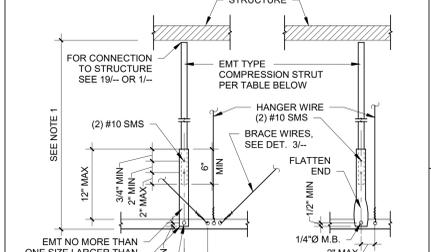
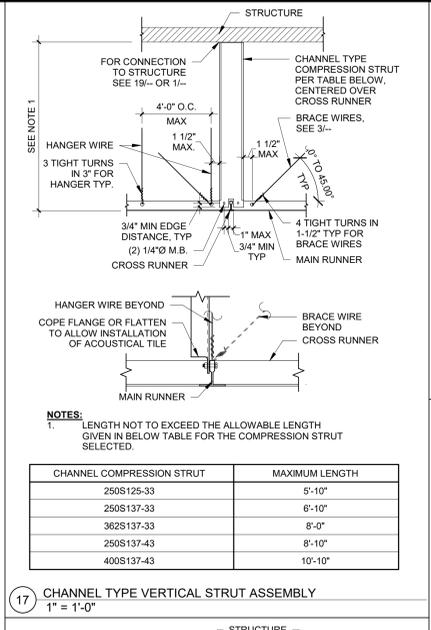
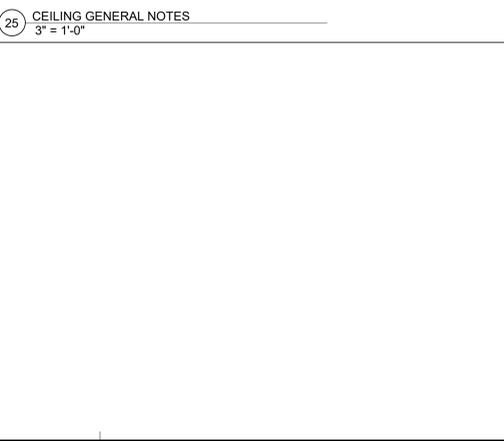
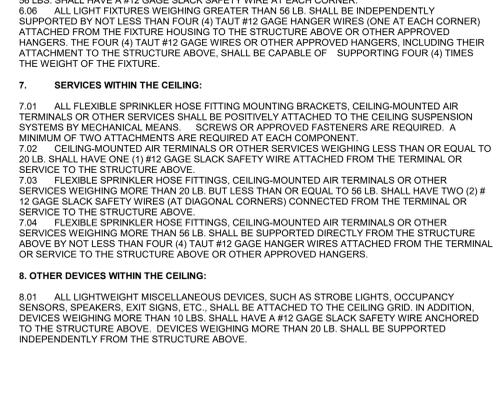
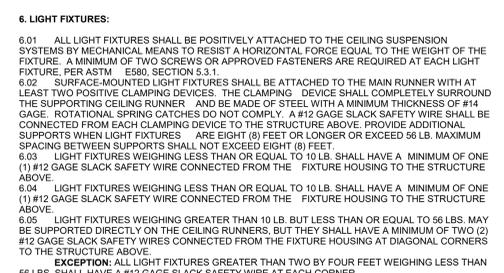
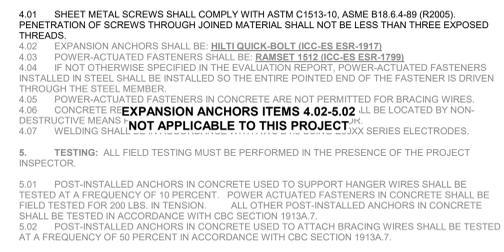
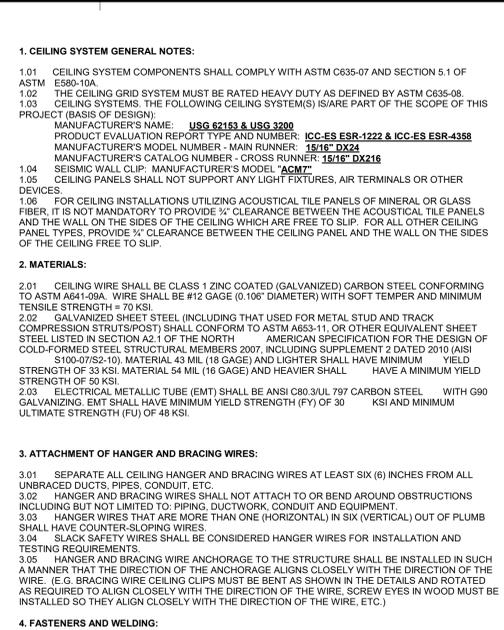
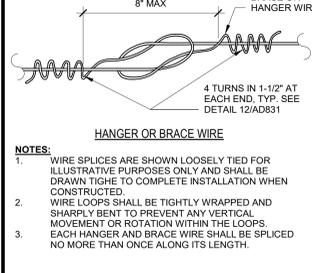
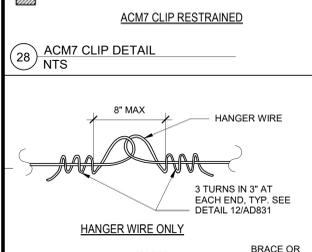
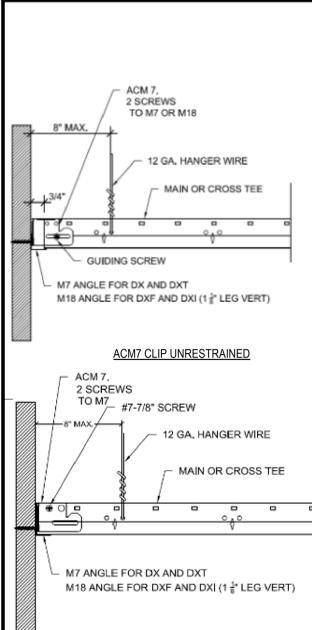
5 MARKERBOARD ANCHORAGE
3" = 1'-0"

ISSUE	DATE	DESCRIPTION

PROJECT NUMBER:	02-120677
DRAWN BY:	DSP
DESIGNER:	CLB
PLOT DATE:	11-10-2023

SHEET TITLE:
CABINET ATTACHMENT DETAILS

SHEET #:
AD821



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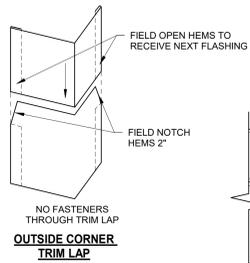
PROFESSIONAL ARCHITECT
 CHARLES L. BROKAW
 No. C. 6501
 State of California
 REN. 4-30-25

AGRICULTURAL SCIENCE BLDG
 BEAR CREEK HIGH SCHOOL
 10555 THORTON RD
 STOCKTON, CA 95209
 INCREMENT 2

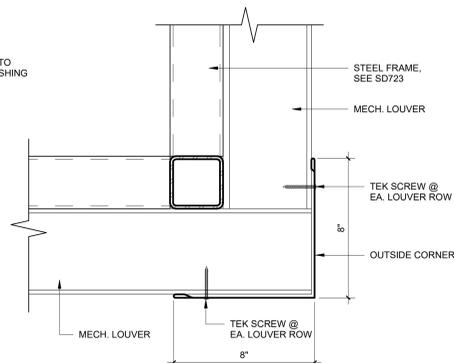
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 DRAWN BY: DSP
 DESIGNER: CLB
 PLOT DATE: 11-10-2023

SHEET TITLE: T-BAR CEILING DETAILS

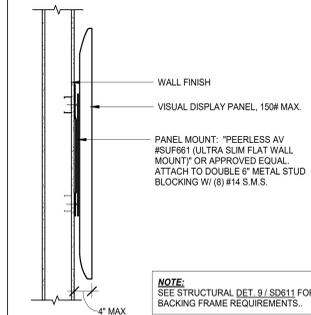
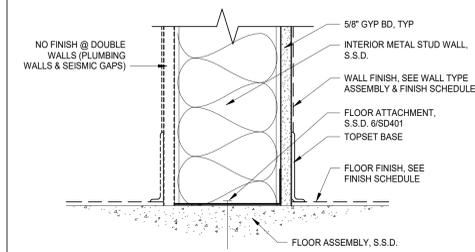
SHEET # AD831



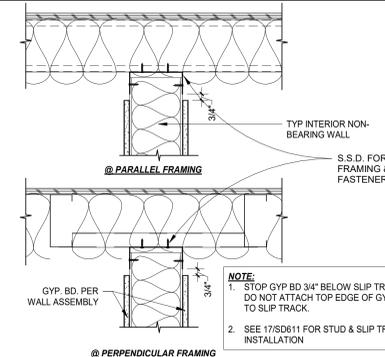
16 MECH SCREEN - CORNER
3" = 1'-0"



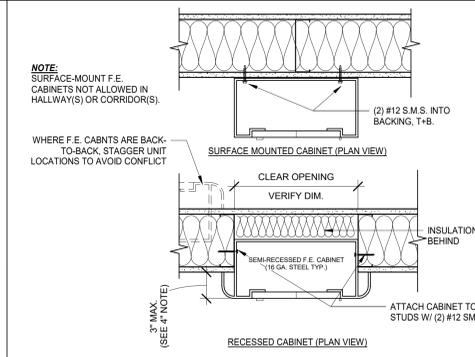
8 TYPICAL INTERIOR WALL BASE
3" = 1'-0"



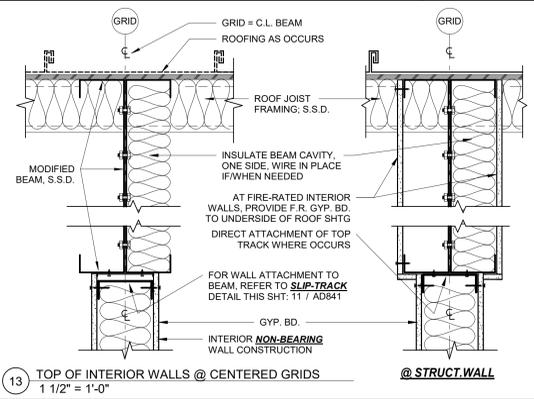
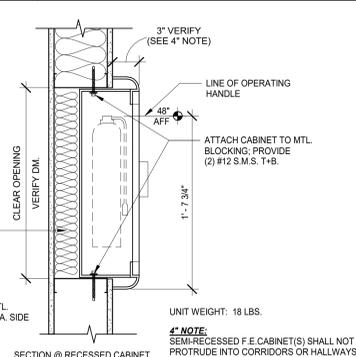
1 VISUAL DISPLAY UNIT PANEL MOUNT
3/4" = 1'-0"



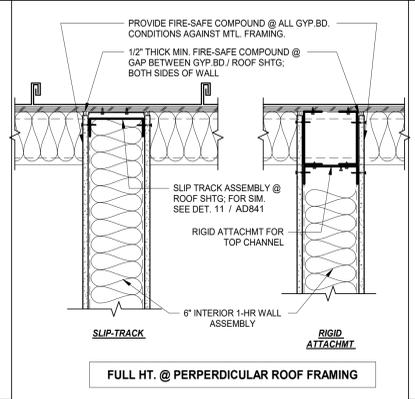
11 TOP OF WALL - INTERIOR NON-BEARING
1 1/2" = 1'-0"



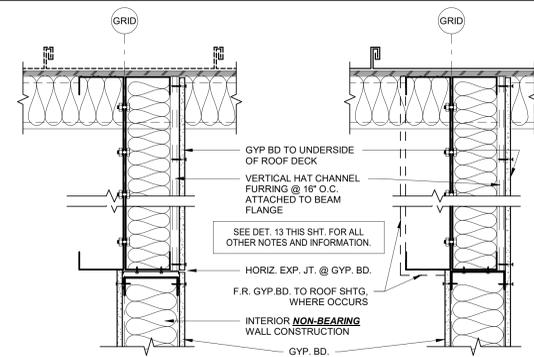
7 FIRE EXTINGUISHER CABINET @ NON-RATED WALL
1 1/2" = 1'-0"



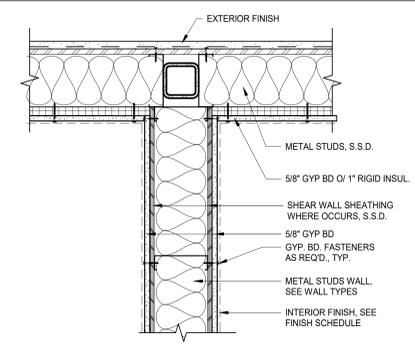
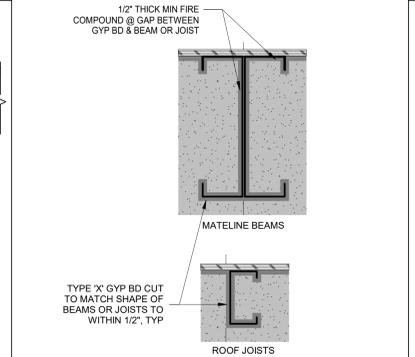
13 TOP OF INTERIOR WALLS @ CENTERED GRIDS
1 1/2" = 1'-0"



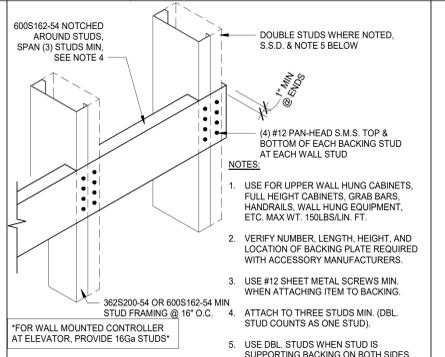
9 TOP OF WALL - INTERIOR FIRE RATED WALL
1 1/2" = 1'-0"



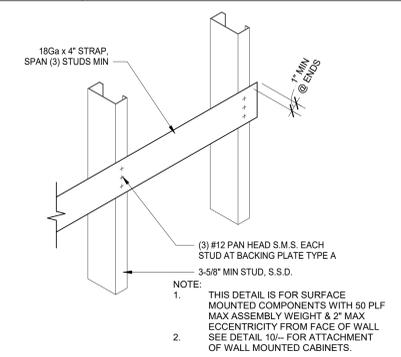
14 TOP OF INTERIOR WALLS @ OFF-CENTER GRIDS
1 1/2" = 1'-0"



15 INTERIOR PARTITION JUNCTION W/ EXTERIOR WALL
1 1/2" = 1'-0"



10 TYPICAL WALL BACKING 150LBS/LIN FT. - TYPE B
1 1/2" = 1'-0"



5 TYPICAL WALL BACKING 50LBS/LIN FT. - TYPE A
1 1/2" = 1'-0"

ISSUE	DATE	DESCRIPTION

PROJECT NUMBER:	02-120677
DRAWN BY:	DSP
DESIGNER:	CLB
PLOT DATE:	11-10-2023

SHEET TITLE:
INTERIOR / EXTERIOR DETAILS

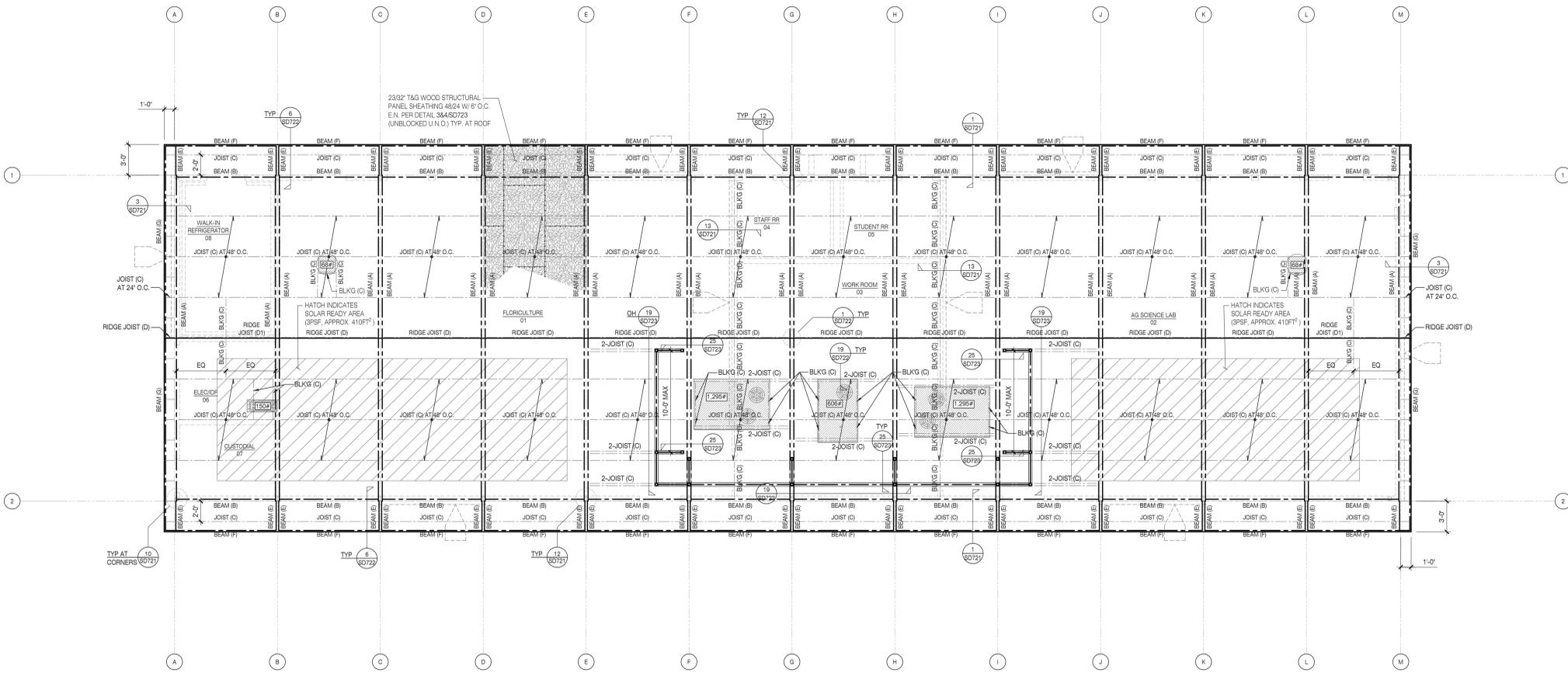
SHEET #:
AD841

ROOF FRAMING NOTES	ROOF FRAMING LEGEND	STRUCTURAL OBSERVATION REQUIREMENTS
<p>1. REFER TO STRUCTURAL GENERAL NOTE SHEET (8002) AND DETAILS (SD SERIES) FOR INFORMATION NOT SHOWN ON THE MAIN FRAMING PLANS.</p> <p>2. FRAMER TO COORDINATE JOIST SPACING WITH M.E.P. DESIGNS. FRAMER TO REVIEW MECH. AND ELECTRIC PLANS BEFORE FINAL PLACEMENT OF JOISTS, WHERE JOIST INTERFERES W/ FUTURE INSTALLATION OF M.E.P. INSTALLATION, CONTACT STRUCTURAL ENGINEER.</p> <p>3. ALL BEAMS, HEADERS, AND JOISTS TO BE CONTINUOUS U.N.O. PER PLAN.</p>	<p>INDICATES LIGHT GAUGE METAL STUD WALL BELOW</p> <p>INDICATES ROOF BEAMS PER DETAIL 8&SD721 AS INDICATED PER PLAN. SEE DETAILS ON SHEET SD721 FOR COLUMN TOP ASSEMBLIES.</p> <p>INDICATES HSS COLUMN BELOW ROOF MODULES. SEE FOUNDATION PLAN FOR COLUMN SIZE. SEE DETAILS ON SHEET SD721 FOR COLUMN TOP ASSEMBLIES.</p> <p>IDENTIFIES DETAIL CUT LOCATION. REFER TO DETAIL NUMBER & STRUCTURAL SHEET NUMBER FOR MORE INFORMATION.</p> <p>IDENTIFIES LOCATION OF WOOD SHEATHED COLD FORM STEEL SHEAR WALL BELOW. SEE FOUNDATION PLANS FOR SHEAR WALL DESIGNATION AND ADDITIONAL SHEAR WALL INFORMATION.</p> <p>INDICATES BLOKED ROOF MODULE EXTENTS & SPACING PER DETAILS 9 & 4&SD723 (APPLIES TO FULL WIDTH & LENGTH OF EA. MODULE INDICATED)</p>	<p>STRUCTURAL OBSERVATIONS ARE REQUIRED BY THE ENGINEER OF RECORD. ISE SHOULD BE NOTIFIED TO PERFORM STRUCTURAL OBSERVATIONS AT THE FOLLOWING STAGES OF CONSTRUCTION:</p> <ol style="list-style-type: none"> PRIOR TO POUR OF CONCRETE TO OBSERVE REINFORCING & EMBEDS PRIOR TO COVERING ANY COMPLETED STRUCTURAL MEMBER <p>SEE SHEET 8002 FOR ADDITION INFORMATION REGARDING STRUCTURAL OBSERVATIONS</p>

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ISE STRUCTURAL ENGINEERS

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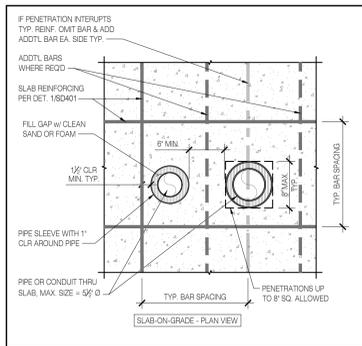


ROOF FRAMING PLAN SCALE : 3/16" = 1'-0"
 DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS. ALL CONSTRUCTION DIMENSIONS SHOULD BE VERIFIED WITH THE ARCHITECTURAL SET OF PLANS

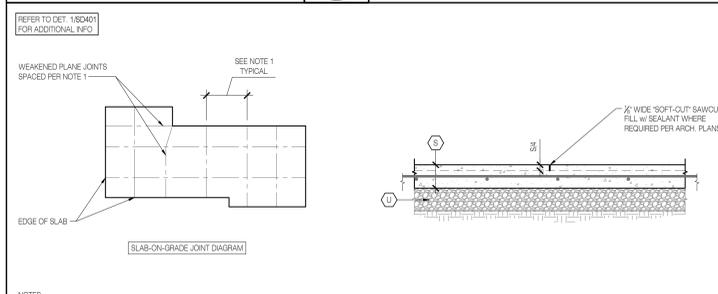
AGRICULTURAL SCIENCE BLDG
BEAR CREEK HIGH SCHOOL
 10555 THORTON RD
 STOCKTON, CA 95209
INCREMENT 2

ISSUE	DATE	DESCRIPTION
ISE PROJECT NUMBER	23-7600.0040	
DRAWN BY	DBL	
DESIGNER	DBL	
PLOT DATE	11/6/2023	
SHEET TITLE	ROOF FRAMING PLAN	
SHEET #	S301	

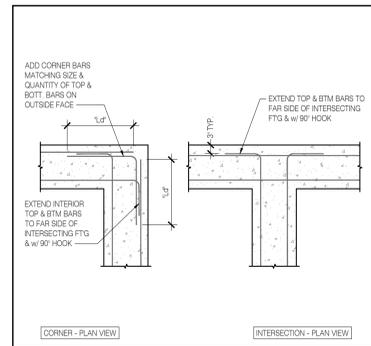
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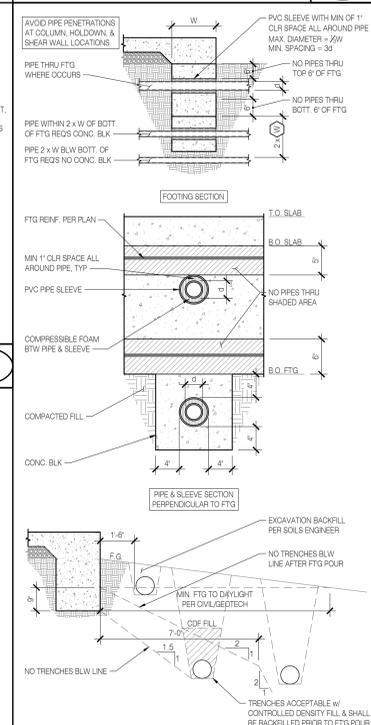
PENETRATIONS THRU SLAB-ON-GRADE
SCALE: N.T.S.



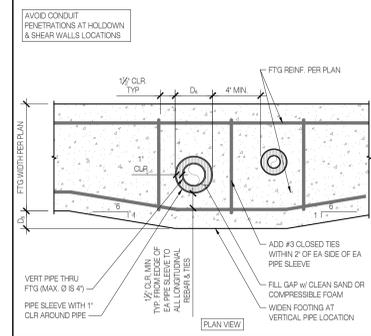
WEAKENED PLANE JOINTS IN SLAB-ON-GRADE
SCALE: N.T.S.



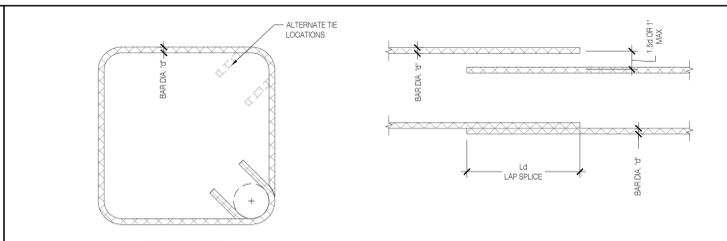
TYPICAL REBAR LAYOUT AT FOOTING INTERSECTIONS & CORNERS
SCALE: N.T.S.



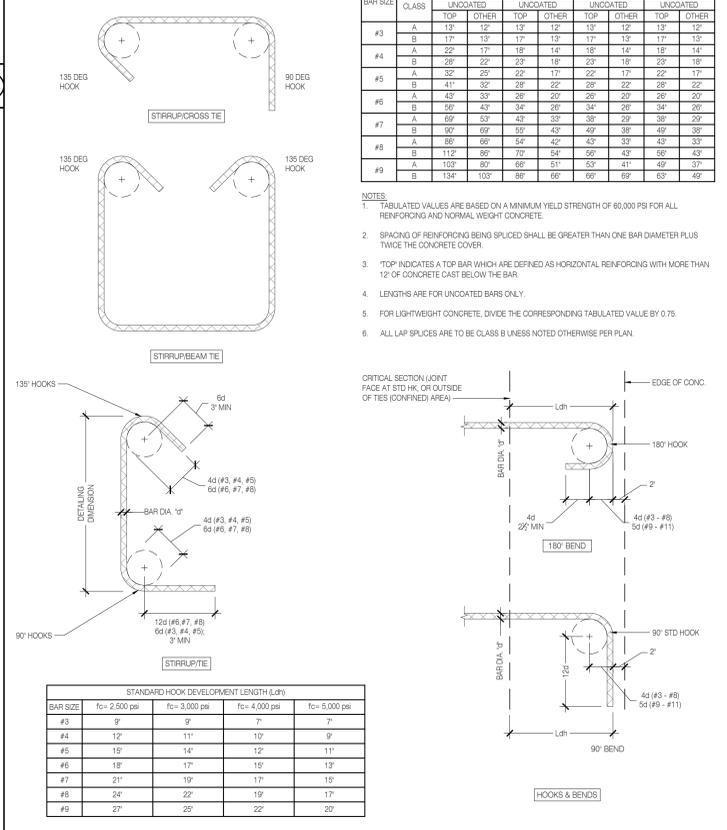
FOOTING TRENCH & HORIZONTAL PIPES THRU FOOTING
SCALE: N.T.S.



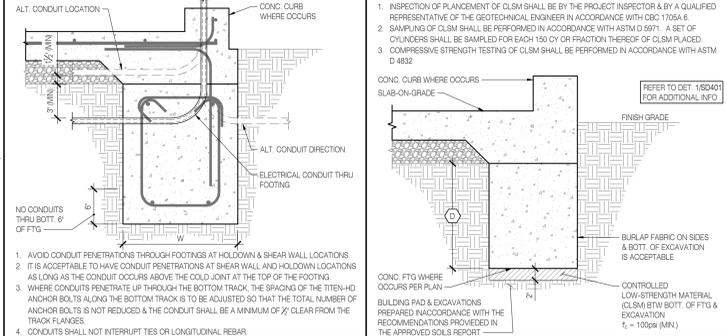
VERTICAL PIPE THRU FOOTING
SCALE: N.T.S.



ELECTRICAL CONDUIT THRU FOOTING
SCALE: N.T.S.



OPTIONAL FOOTING WINTERIZATION
SCALE: N.T.S.

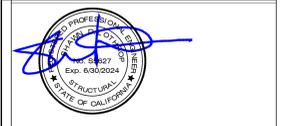


TYPICAL REINFORCING BAR DETAILS
SCALE: N.T.S.

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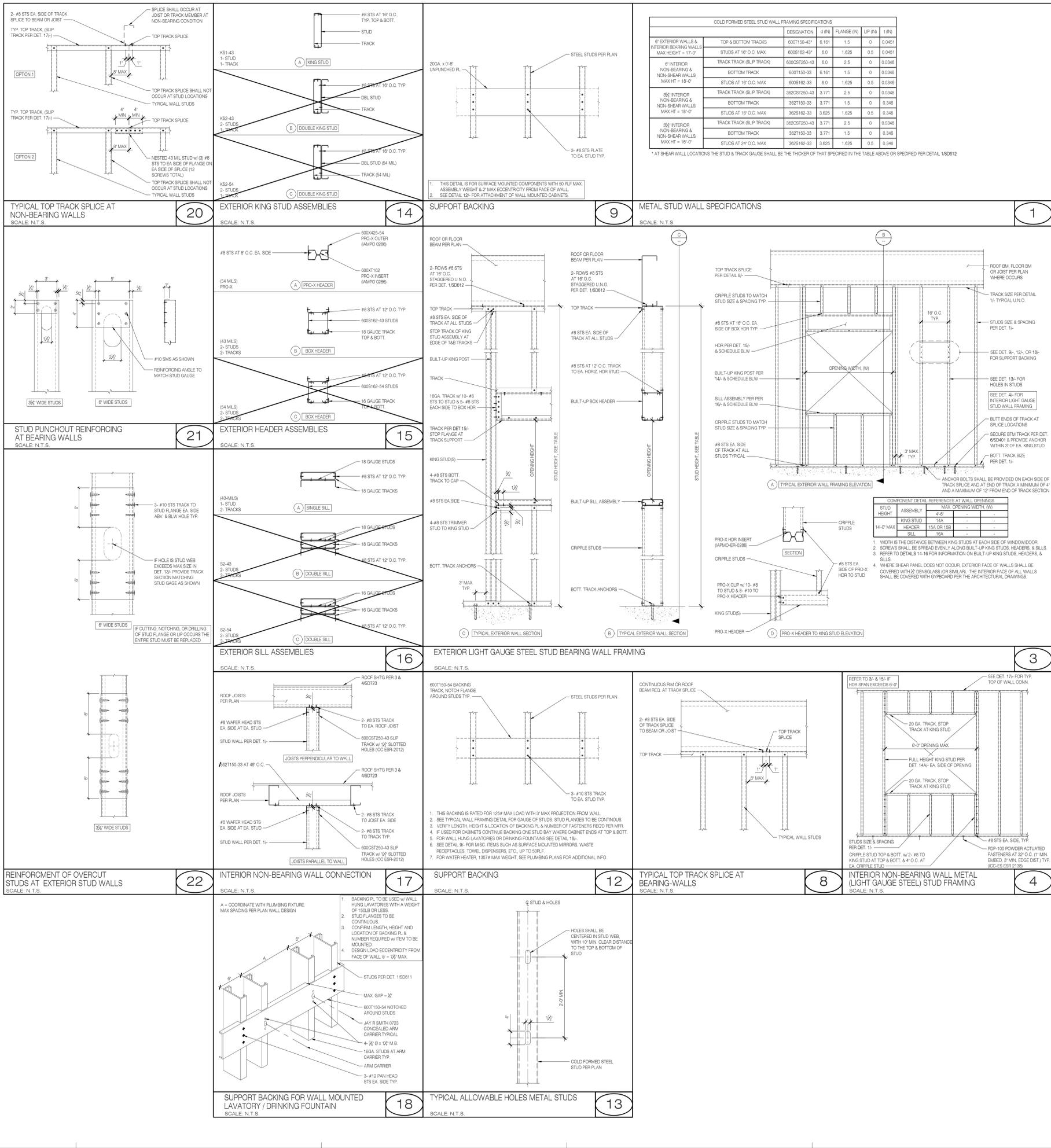
AGRICULTURAL SCIENCE BLDG
BEAR CREEK HIGH SCHOOL
10555 THORTON RD
STOCKTON, CA 95209
INCREMENT 2

ISSUE: DATE: DESCRIPTION:

ISE PROJECT NUMBER: 23-7600.0040
DRAWN BY: DBL
DESIGNER: DBL
PLOT DATE: 11/6/2023

SHEET TITLE: CONVENTIONAL FOUNDATION DETAILS
SHEET #: SD402

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COLD FORMED STEEL STUD WALL FRAMING SPECIFICATIONS

	DESIGNATION	Ø (IN)	FLANGE (IN)	LP (IN)	1 (IN)	
6' EXTERIOR WALLS & INTERIOR BEARING WALLS MAX HEIGHT = 17'-0"	TOP & BOTTOM TRACKS	600T150-43	6.181	1.5	0	0.0461
	STUDS AT 16" O.C. MAX	600S162-43	6.0	1.625	0.5	0.0401
8' INTERIOR NON-BEARING & NON-SHEAR WALLS MAX HT = 18'-0"	TRACK TRACK (SLIP TRACK)	600CST250-43	6.0	2.5	0	0.0346
	BOTTOM TRACK	600T150-33	6.181	1.5	0	0.0346
3/4" INTERIOR NON-BEARING & NON-SHEAR WALLS MAX HT = 18'-0"	TRACK TRACK (SLIP TRACK)	362CST250-43	3.771	2.5	0	0.346
	STUDS AT 16" O.C. MAX	362S162-33	3.625	1.625	0.5	0.346
3/4" INTERIOR NON-BEARING & NON-SHEAR WALLS MAX HT = 16'-0"	TRACK TRACK (SLIP TRACK)	362T150-33	3.771	2.5	0	0.346
	BOTTOM TRACK	362T150-33	3.771	1.5	0	0.346
	STUDS AT 24" O.C. MAX	362S162-33	3.625	1.625	0.5	0.346

* AT SHEAR WALL LOCATIONS THE STUD & TRACK GAUGE SHALL BE THE THICKER OF THAT SPECIFIED IN THE TABLE ABOVE OR SPECIFIED PER DETAIL 180612



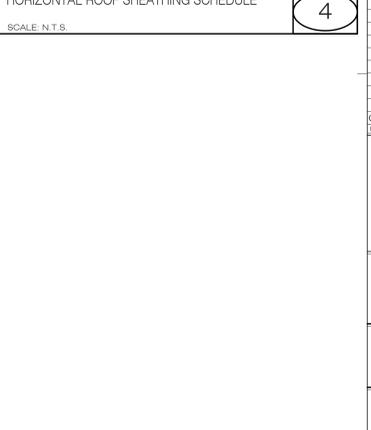
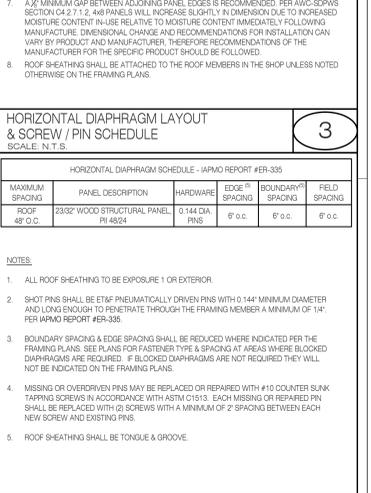
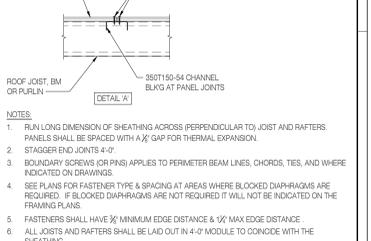
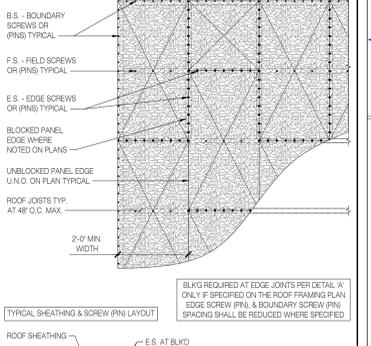
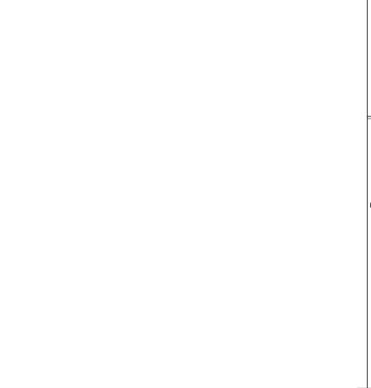
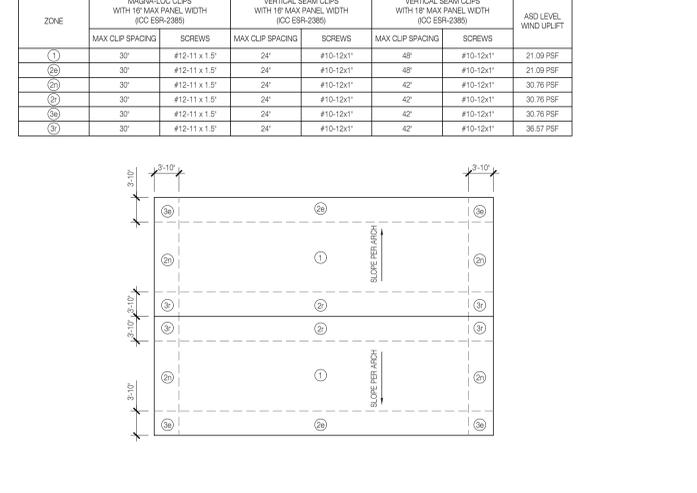
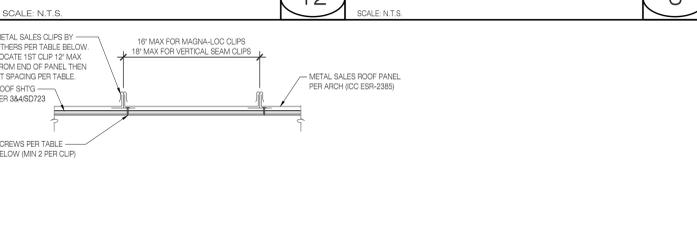
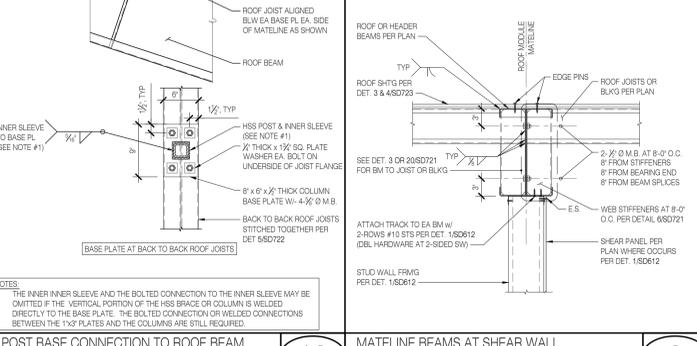
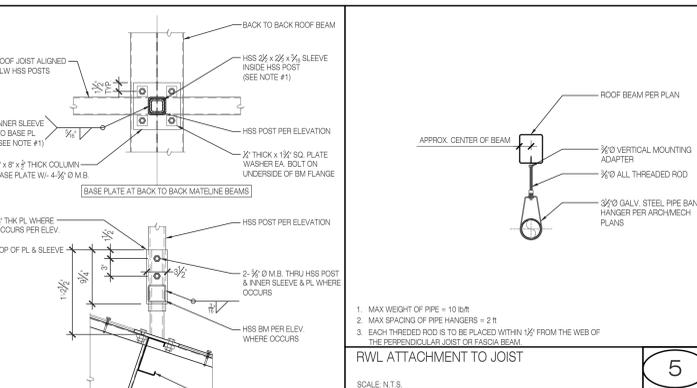
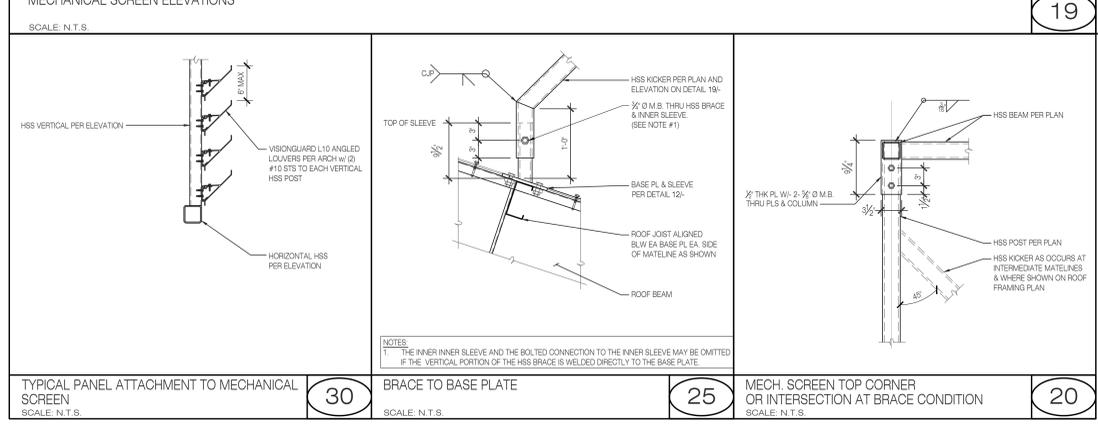
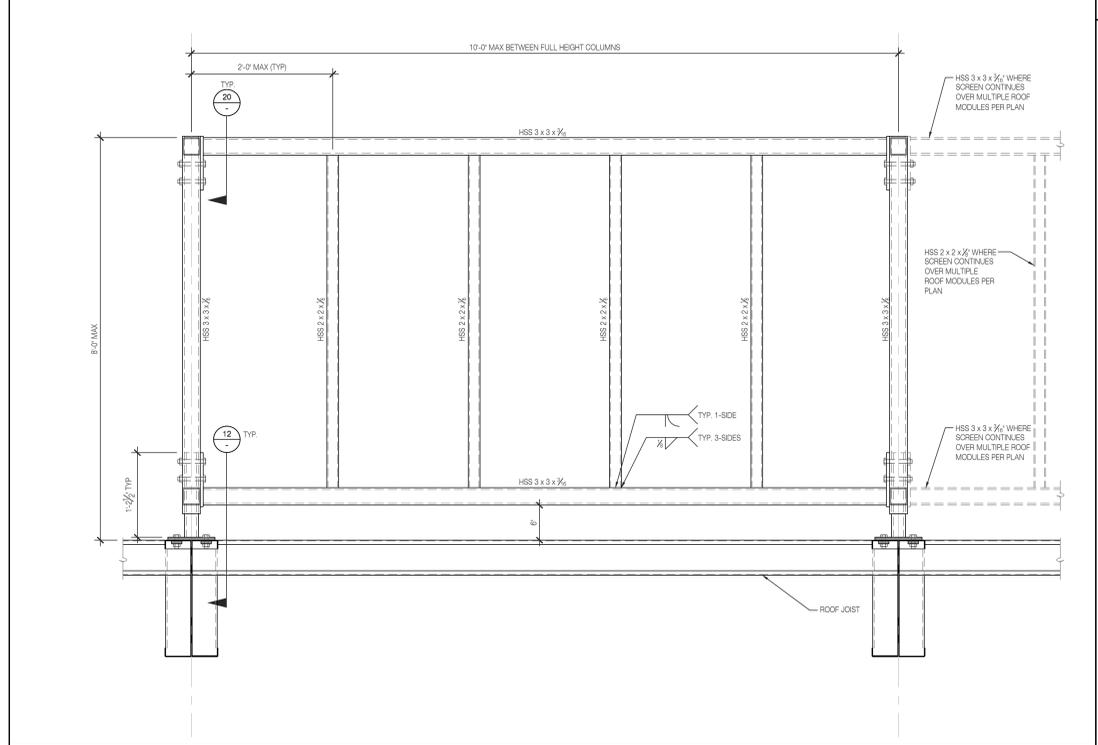
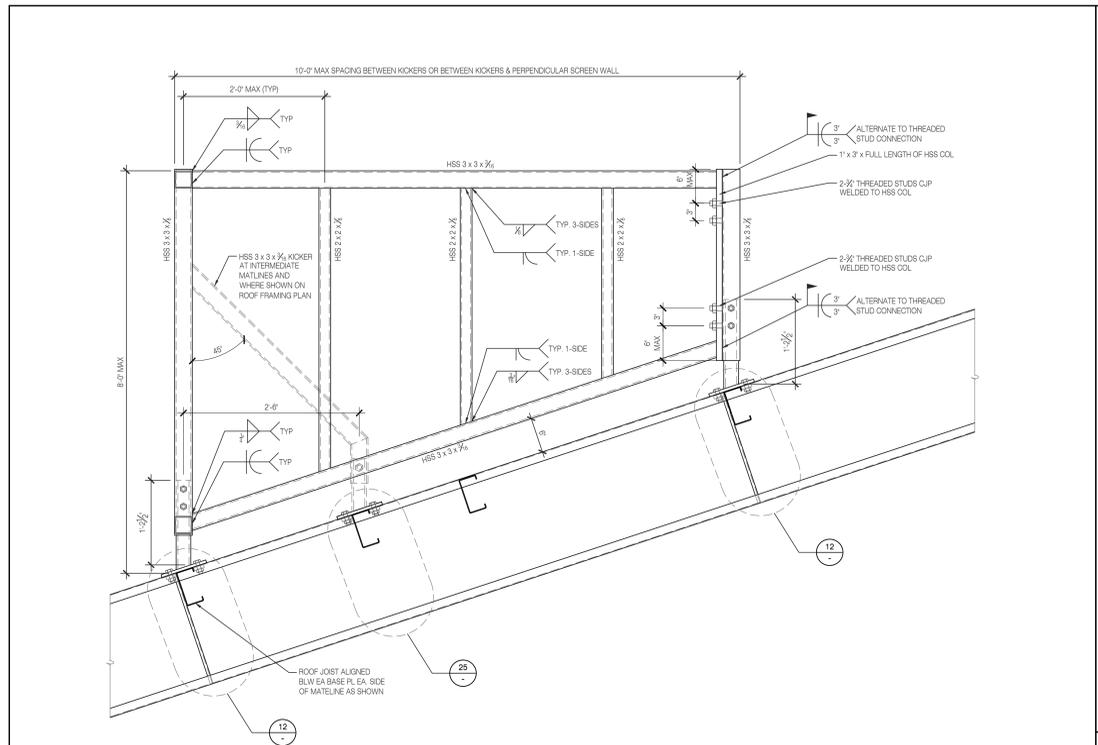
ISSUE	DATE	DESCRIPTION

ISE PROJECT NUMBER: 23-7600.0040
 DRAWN BY: DBL
 DESIGNER: DBL
 PLOT DATE: 11/6/2023

SHEET TITLE:
STUD WALL FRAMING DETAILS

SHEET #:
SD611

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BEAR CREEK HIGH SCHOOL
 10555 THORTON RD
 STOCKTON, CA 95209

INCREMENT 2

CCD 01 02/03/22 WELDED CONNECTIONS AT STUDS

ISSUE DATE DESCRIPTION

ISE PROJECT NUMBER: 23-7600.0040
 DRAWN BY: DBL
 DESIGNER: DBL
 PLOT DATE: 11/6/2023

SHEET TITLE:
ROOF FRAMING DETAILS

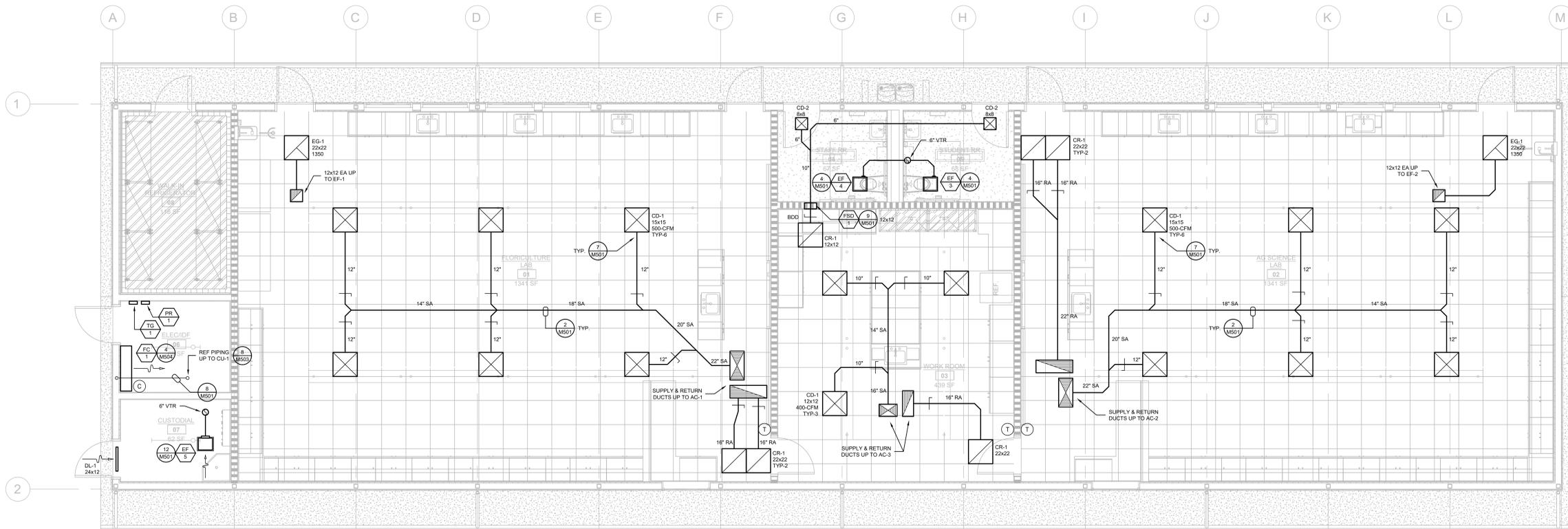
SHEET #:
SD723

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LEGEND

▬ 1-HR FIRE RATED STUD WALL (FIRE BARRIER), SAD.



MECHANICAL FLOOR PLAN

SCALE: 1/4" = 1'-0"



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 10555 THORTON RD
 STOCKTON, CA 95209
INCREMENT 2

ISSUE	DATE	DESCRIPTION

PROJECT NUMBER: TEP #4037
 DRAWN BY: JY
 DESIGNER: BM
 PLOT DATE: 11/06/2023

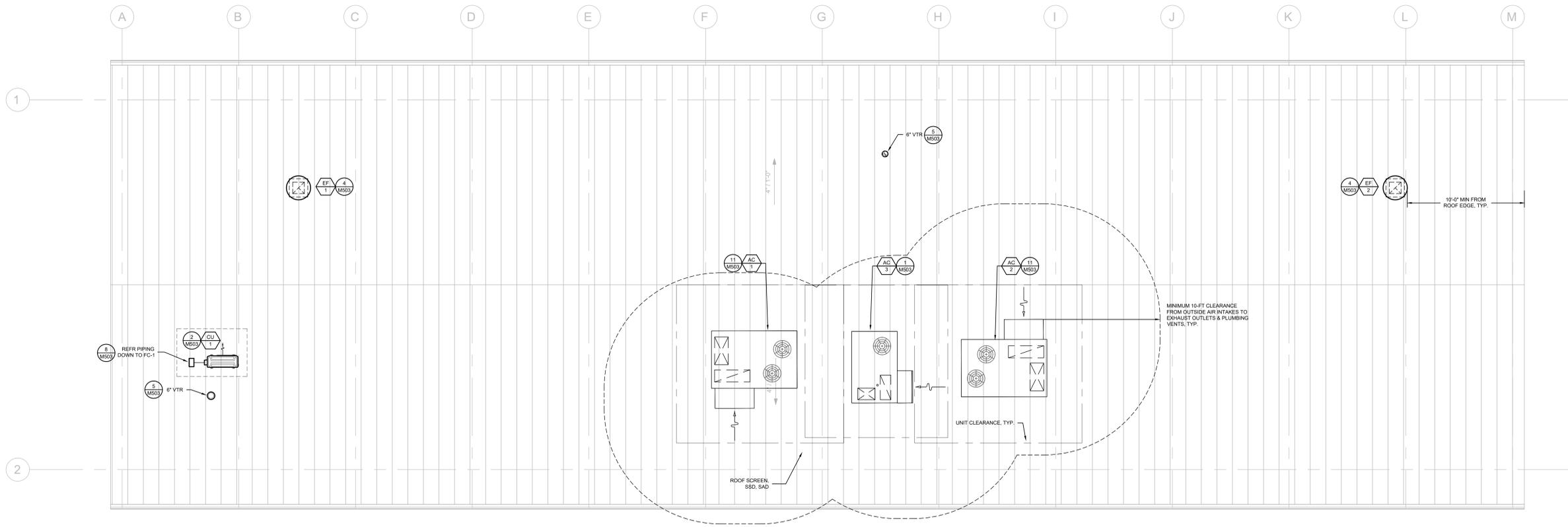
SHEET TITLE: **MECHANICAL FLOOR PLAN**

SHEET #

M201



AGRICULTURAL SCIENCE BLDG
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 10555 THORTON RD
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INCREMENT 2



MECHANICAL ROOF PLAN
 SCALE: 1/4" = 1'-0"

ISSUE	DATE	DESCRIPTION

PROJECT NUMBER: TEP #4037
 DRAWN BY: JY
 DESIGNER: BM
 PLOT DATE: 11/06/2023

SHEET TITLE: **MECHANICAL ROOF PLAN**

SHEET # **M202**

FOR: 1008-IC08A-CBC
PART NO: 1008-IC08A-CBC

DIM A	DIM B	DIM C	DIM D	DIM E	DIM F	DIM G	DIM H
31.1815"	47.3137"	14.1815"	32.1815"	18.0525"	40.1257"	31.3717"	15.0525"

ALL WORK SHALL CONFORM TO THE STANDARD OF BEST INTERNATIONAL BUILDING CODE & 2022 CALIFORNIA MECHANICAL CODE.

SECOND DESIGN CENTER: 1/2" MIN. 2 SECOND GUST WIND

MINIMUM CURB HEIGHT: 18" MIN. 2 SECOND GUST WIND

ATTACHMENT TO STRUCTURAL CONCRETE: 1/2" MIN. 2 SECOND GUST WIND

ATTACHMENT TO STRUCTURAL STEEL: 1/2" MIN. 2 SECOND GUST WIND

ATTACHMENT TO ROOF: 1/2" MIN. 2 SECOND GUST WIND

PROJECT: IBC 2021/ CBC 2022 DATE: 8.21.2023
ENGINEER: BJ DISTRIBUTOR:
DRAWING NUMBER: 1008CA PAGE 1 OF 4

FOR: 1008-IC08A-CBC
PART NO: 1008-IC08A-CBC

HOLD DOWN DETAIL

CURB	WIND	WIND	WIND	WIND	WIND	WIND	WIND
1008	1008-1008-12	12 GA	1.0	1.0	1.0	1.0	1.0
3012	3012-1008-12	12 GA	1.0	1.0	1.0	1.0	1.0
4028	4028-1008-12	12 GA	1.0	1.0	1.0	1.0	1.0
4042	4042-1008-12	12 GA	1.0	1.0	1.0	1.0	1.0
4045	4045-1008-12	12 GA	1.0	1.0	1.0	1.0	1.0
4050	4050-1008-12	12 GA	1.0	1.0	1.0	1.0	1.0

CLIP LOCATION DETAIL

CURB	WIND	WIND	WIND	WIND	WIND	WIND	WIND
1008	1008-1008-12	12 GA	1.0	1.0	1.0	1.0	1.0
3012	3012-1008-12	12 GA	1.0	1.0	1.0	1.0	1.0
4028	4028-1008-12	12 GA	1.0	1.0	1.0	1.0	1.0
4042	4042-1008-12	12 GA	1.0	1.0	1.0	1.0	1.0
4045	4045-1008-12	12 GA	1.0	1.0	1.0	1.0	1.0
4050	4050-1008-12	12 GA	1.0	1.0	1.0	1.0	1.0

PROJECT: IBC 2021/ CBC 2022 DATE: 8.21.2023
ENGINEER: BJ DISTRIBUTOR:
DRAWING NUMBER: PAGE 2 OF 4

FOR: 1008-IC08A-CBC
PART NO: 1008-IC08A-CBC

TABLE 3 ALLOWABLE CURB AND UNIT DIMENSION AND WEIGHT

RELATED CURBS	WIND	WIND	WIND	WIND	WIND	WIND	WIND
1008	1008-1008-12	12 GA	1.0	1.0	1.0	1.0	1.0
3012	3012-1008-12	12 GA	1.0	1.0	1.0	1.0	1.0
4028	4028-1008-12	12 GA	1.0	1.0	1.0	1.0	1.0
4034	4034-1008-12	12 GA	1.0	1.0	1.0	1.0	1.0
4050	4050-1008-12	12 GA	1.0	1.0	1.0	1.0	1.0

PROJECT: IBC 2021/ CBC 2022 DATE: 8.21.2023
ENGINEER: BJ DISTRIBUTOR:
DRAWING NUMBER: PAGE 3 OF 4

FOR: 1008-IC08A-CBC
PART NO: 1008-IC08A-CBC

TABLE 3 ALLOWABLE CURB AND UNIT DIMENSION AND WEIGHT

RELATED CURBS	WIND	WIND	WIND	WIND	WIND	WIND	WIND
6042	6042-1008-12	12 GA	1.0	1.0	1.0	1.0	1.0
6042S	6042S-1008-12	12 GA	1.0	1.0	1.0	1.0	1.0

TABLE 4 TABULATED CURB AND ANCHORAGE INFORMATION PER VARYING HEIGHT

HEIGHT	0' < H < 18"	18' < H < 22'	22' < H < 30'	30' < H < 36'
A. CURB THICKNESS	14 GA	14 GA	12 GA	12 GA
B. EXP. ANCHOR	4	4	4	4
C. EXP. ANCHOR	4	4	4	4
D. WELD	1/2"	1/2"	1/2"	1/2"
E. SCREWS	36	36	36	36
F. SCREWS	24	24	24	24
G. DISTANCE	MAX 0.75"	MAX 0.75"	MAX 0.75"	MAX 0.75"
H. CLIP SLS	10 GA 2.5" DEEP X 1" FLANGES			
I. CLIP SLS	10 GA 2.5" DEEP X 1" FLANGES			
J. NO. OF ISOLATORS	18 (6 ON EACH LONG SIDE & 3 ON EACH SHORT SIDE) FOR 1008-1008-12	18 (6 ON EACH LONG SIDE & 3 ON EACH SHORT SIDE) FOR 1008-1008-12	18 (6 ON EACH LONG SIDE & 3 ON EACH SHORT SIDE) FOR 1008-1008-12	18 (6 ON EACH LONG SIDE & 3 ON EACH SHORT SIDE) FOR 1008-1008-12
K. NO. OF STIFFENERS	14 (4 ON EACH LONG SIDE & 3 ON EACH SHORT SIDE) FOR 4034 & 4050.	14 (4 ON EACH LONG SIDE & 3 ON EACH SHORT SIDE) FOR 4034 & 4050.	14 (4 ON EACH LONG SIDE & 3 ON EACH SHORT SIDE) FOR 4034 & 4050.	14 (4 ON EACH LONG SIDE & 3 ON EACH SHORT SIDE) FOR 4034 & 4050.

PROJECT: IBC 2021/ CBC 2022 DATE: 8.21.2023
ENGINEER: BJ DISTRIBUTOR:
DRAWING NUMBER: PAGE 4 OF 4

ISOLATION CURB CONSTRUCTION & ATTACHMENT TO AC UNIT

NTS

5

FOR: 1005-CB08W-CBC
PART NO: 1005-CB

DIM A	DIM B	DIM C	DIM D	DIM E	DIM F	DIM G	DIM H
31.1815"	47.3137"	14.1815"	32.1815"	18.0525"	40.1257"	31.3717"	15.0525"

ALL WORK SHALL CONFORM TO THE STANDARD OF BEST INTERNATIONAL BUILDING CODE & 2022 CALIFORNIA MECHANICAL CODE.

SECOND DESIGN CENTER: 1/2" MIN. 2 SECOND GUST WIND

MINIMUM CURB HEIGHT: 18" MIN. 2 SECOND GUST WIND

ATTACHMENT TO STRUCTURAL CONCRETE: 1/2" MIN. 2 SECOND GUST WIND

ATTACHMENT TO STRUCTURAL STEEL: 1/2" MIN. 2 SECOND GUST WIND

ATTACHMENT TO ROOF: 1/2" MIN. 2 SECOND GUST WIND

PROJECT: IBC 2021/ CBC 2022 DATE: 08.23.23
ENGINEER: BJ DISTRIBUTOR:
DRAWING NUMBER: PAGE 1 OF 3

FOR: 1005-CB08W-CBC
PART NO: 1005-CB

HOLD DOWN DETAIL

CURB	WIND	WIND	WIND	WIND	WIND	WIND	WIND
1005/6059	1005-1008-12	12 GA	1.0	1.0	1.0	1.0	1.0
3003	3003-1008-12	12 GA	1.0	1.0	1.0	1.0	1.0
4027	4027-1008-12	12 GA	1.0	1.0	1.0	1.0	1.0
6037	6037-1008-12	12 GA	1.0	1.0	1.0	1.0	1.0
6047	6047-1008-12	12 GA	1.0	1.0	1.0	1.0	1.0

CLIP LOCATION DETAIL

CURB	WIND	WIND	WIND	WIND	WIND	WIND	WIND
1005/6059	1005-1008-12	12 GA	1.0	1.0	1.0	1.0	1.0
3003	3003-1008-12	12 GA	1.0	1.0	1.0	1.0	1.0
4027	4027-1008-12	12 GA	1.0	1.0	1.0	1.0	1.0
6037	6037-1008-12	12 GA	1.0	1.0	1.0	1.0	1.0
6047	6047-1008-12	12 GA	1.0	1.0	1.0	1.0	1.0

PROJECT: IBC 2021/ CBC 2022 DATE: 08.23.23
ENGINEER: BJ DISTRIBUTOR:
DRAWING NUMBER: PAGE 2 OF 3

FOR: 1005-CB08W-CBC
PART NO: 1005-CB

TABLE 3 ALLOWABLE CURB AND UNIT DIMENSION AND WEIGHT

RELATED CURBS	WIND	WIND	WIND	WIND	WIND	WIND	WIND
1005	1005-1008-12	12 GA	1.0	1.0	1.0	1.0	1.0
3003	3003-1008-12	12 GA	1.0	1.0	1.0	1.0	1.0
4027	4027-1008-12	12 GA	1.0	1.0	1.0	1.0	1.0
4047	4047-1008-12	12 GA	1.0	1.0	1.0	1.0	1.0
6037	6037-1008-12	12 GA	1.0	1.0	1.0	1.0	1.0
6059	6059-1008-12	12 GA	1.0	1.0	1.0	1.0	1.0

TABLE 4 TABULATED CURB AND ANCHORAGE INFORMATION PER VARYING HEIGHT

HEIGHT	0' < H < 18"	18' < H < 22'	22' < H < 30'	30' < H < 36'
A. CURB THICKNESS	14 GA	14 GA	12 GA	12 GA
B. EXP. ANCHOR	4	4	4	4
C. EXP. ANCHOR	4	4	4	4
D. WELD	1/2"	1/2"	1/2"	1/2"
E. SCREWS	36	36	36	36
F. SCREWS	24	24	24	24
G. DISTANCE	MAX 0.75"	MAX 0.75"	MAX 0.75"	MAX 0.75"
H. CLIP SLS	10 GA 2.5" DEEP X 1" FLANGES			
I. CLIP SLS	10 GA 2.5" DEEP X 1" FLANGES			
J. NO. OF ISOLATORS	18 (6 ON EACH LONG SIDE & 3 ON EACH SHORT SIDE) FOR 1005-1008-12	18 (6 ON EACH LONG SIDE & 3 ON EACH SHORT SIDE) FOR 1005-1008-12	18 (6 ON EACH LONG SIDE & 3 ON EACH SHORT SIDE) FOR 1005-1008-12	18 (6 ON EACH LONG SIDE & 3 ON EACH SHORT SIDE) FOR 1005-1008-12
K. NO. OF STIFFENERS	N/A	N/A	N/A	N/A

PROJECT: IBC 2021/ CBC 2022 DATE: 08.23.23
ENGINEER: BJ DISTRIBUTOR:
DRAWING NUMBER: PAGE 3 OF 3

AC-3 CURB CONSTRUCTION & ATTACHMENT TO UNIT

NTS

6

NOT USED

NTS

1

NOT USED

NTS

2

NOT USED

NTS

3

WALL MOUNTED FAN COIL

NTS

4

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BEAR CREEK HIGH SCHOOL
10555 THORTON RD.
STOCKTON, CA 95209
INCREMENT 2

PROJECT NUMBER: TEP #4037
DRAWN BY: JM
DESIGNER: BM
PLOT DATE: 11/06/2023

SHEET TITLE: MECHANICAL DETAILS

SHEET # M504

REFRIGERANT PIPING SUPPORT PER BMS01

SECURE TO BACKING WITH (EXH)10-ST'S AT TOP & (EXH)10-ST'S AT BOTTOM

MOUNT 6" BELOW CEILING (MAX 50 LBS)

CONDENSATE PUMP

CONDENSATE DRAIN PIPING, SPD

MINIMUM 12" CLEAR BELOW FAN COIL

6"x1-1/2"x12 GA DEEP LEG TRACK NOTCH AT STUDS. FASTEN FLUSH TO STUDS W/14" #10x34" SELF-DRILLING SCREWS PER STUD. ALL BACKING PLATES TO SPAN MIN OF 3 STUDS

PLUMBING SYMBOLS		
SYMBOL	ABBREVIATION	DESCRIPTION
---	W	WASTE PIPE ABOVE GRADE
---	W, SS	WASTE PIPE BELOW GRADE
-----	V	VENT PIPE
-----	CW	COLD WATER PIPE
---	HW	HOT WATER PIPE
---	HWR	HOT WATER RETURN PIPE
---	G	GAS PIPE
---	TW	TEMPERED HOT WATER PIPE
+		PIPE DEMOLITION
---	F	FILTERED WATER PIPE
+		GATE VALVE
+		GLOBE VALVE
+		BALL VALVE
+		CHECK VALVE
+		BALANCING VALVE
+	PRV	PRESSURE REDUCING VALVE
+	TV	TEMPERING VALVE
+		UNION
+		PRESSURE GAUGE AND NEEDLE VALVE
+		PUMP
+		THERMOMETER
+	CO	CLEANOUT
+	FOG	FLOOR CLEANOUT
+	COTG	CLEANOUT TO GRADE
+	HB	HOSE BIBB
+		PIPE UP
+		PIPE DOWN
+		PIPE CONNECTION
+	FD	FLOOR DRAIN
+		AQUASTAT
+	TS	TIME SWITCH
+	PT	PRESSURE AND TEMPERATURE RELIEF VALVE
+	POC	POINT OF CONNECTION
+	WHA	WATER HAMMER ARRESTOR
+	AFB	ABOVE FINISHED FLOOR
+	AFG	ABOVE FINISHED GRADE
+	AW	ACID WASTE
+	BFF	BELOW FINISHED FLOOR
+	CD	CONDENSATE DRAIN
+	CTE	CONNECT TO EXISTING
+	DFU	DRAIN FIXTURE UNITS
+	DWV	DRAIN, WASTE AND VENT
+	DN	DOWN
+	DWG	DRAWING
+	(E)	EXISTING
+	IE	INVERT ELEVATION
+	IS	IN JOIST SPACE
+	NTS	NOT TO SCALE
+	OD	OVERFLOW DRAIN
+	(RE)	RELOCATE EXISTING
+	SD	STORM DRAIN
+	SS	SANITARY SEWER
+	STS	SELF TAPPING SCREW
+	TP	TRAP PRIMER
+	TW	TEMPERED WATER
+	TYT	TYPICAL
+	VIF	VERIFY IN FIELD
+	VTR	VENT THROUGH ROOF
+	WHA	WATER HAMMER ARRESTOR
+	WCO	WALL CLEANOUT
+	SAD	SEE ARCHITECTURAL DRAWINGS
+	SCD	SEE CIVIL DRAWINGS
+	SED	SEE ELECTRICAL DRAWINGS
+	SFD	SEE FOOD SERVICE DRAWINGS
+	SHD	SEE RADIANT HEATING DRAWINGS
+	SMD	SEE MECHANICAL DRAWINGS
+	SPO	SEE PLUMBING DRAWINGS
+	SRD	SEE REFRIGERATION DRAWINGS
+	SSD	SEE STRUCTURAL DRAWINGS
+	WSFU	WATER SUPPLY FIXTURE UNITS

PLUMBING EQUIPMENT SCHEDULE	
BP-1	DUAL CHECK BACKFLOW PREVENTER MODEL: WILKINS #MODEL 700 OR EQUAL DESCRIPTION: DUAL CHECK, ASSE 1024 APPROVED.
DF-1	DRINKING FOUNTAIN - ACCESSIBLE (DUAL HEIGHT) MODEL: HAW'S #117L WITH 1920 DESCRIPTION: 14 GAUGE STAINLESS STEEL DUAL HEIGHT ONE PIECE FOUNTAIN WITH PUSH BUTTON VALVES, STAINLESS STEEL BACK PANEL, CHROME PLATED BRASS BRUSLER HEADS WITH MODEL #6717 MOUNTING PLATE, MOUNTED AT ACCESSIBLE HEIGHT (SAD). ACCESSORIES: BOTTLE FILLER MODEL #1920, STAINLESS STEEL, PUSH-BUTTON ACTIVATED VALVE, STAINLESS STEEL BACK PANEL MODEL #BP32, MOUNTING PLATE MODEL #6703, BOTTLE FILLER STAND #BTL1107, BOTTLE FILLER PUSH-BUTTON MOUNTED AT ACCESSIBLE HEIGHT (SAD). WEIGHT: 36-LBS NOTES: INSTALL MANUFACTURER RECOMMENDED WALL CARRIER, ACCESSIBLE WHEN MOUNTED AT APPROVED HEIGHT, CONFIRM ACCESSIBILITY REQUIREMENTS WITH ARCHITECTURAL DRAWINGS.
ES-1, ES-2	EMERGENCY DRENCH SHOWER WITH EYE/FACE WASH MODEL: HAW'S #6356WCD DESCRIPTION: RECESSED BARRIER-FREE EYE/FACE WASH AND SHOWER SAFETY STATION FOR 1 AND 2 HOUR FIRE RATED WALL CONSTRUCTION, CEILING EXPOSED SHOWER HEAD, DAYLIGHT DRAIN PAN, WITH GREATER THAN FIVE THERMOSTATIC MIXING VALVE AND 20-GPM FLOW CONTROLLED SHOWER HEAD, ANSI Z358.1 STANDARD LISTED COMBINATION SHOWERHEAD & EYE/FACE WASH, ADA COMPLIANT BARRIER-FREE SAFETY STATION, 1-1/4" SCHEDULE 40 HOT DIPPED GALVANIZED STEEL, 1-1/4" SUPPLY. WEIGHT: 48-LBS ACCESSORIES: ANSI SHOWER & EYEWASH TEST KIT #9011 NOTES: PROVIDE THERMOSTATIC MIXING VALVE PER ANSI Z358.1 REQUIREMENTS. SEE T-1-3 SPECIFICATION FOR TEMPERED WATER.
ET-1	EXPANSION TANK MODEL: AMTROL "THERM-X-TROL" #ST-12C-DD. DESCRIPTION: 6.4 GAL ASME BLADDER EXPANSION TANK WITH 3/2 GAL ACCEPTANCE, FACTORY PRECHARGED TO 55 PSIG (FIELD ADJUST TO LINE PRESSURE), ASME RATED TO 150 PSIG AT 200F, 12" DIAMETER X 18" TALL, FOR POTABLE WATER SERVICE. WEIGHT: 45 LBS (OPERATING)
ETP-1	ELECTRONIC TRAP PRIMER (1-4 DRAINS) MODEL: PPP #MPB-500-115V DESCRIPTION: ELECTRONIC TRAP PRIMER SEAL ELECTRICAL: 115V, 1-PH NOTES: PROVIDE SHUTOFF VALVE AND ACCESS PANEL.
FD-1	FLOOR DRAIN MODEL: JR SMITH 2005-B-P050-SS DESCRIPTION: CAST IRON BODY WITH FLASHING COLLAR, ADJUSTABLE HEAD AND 6" SQUARE STAINLESS STEEL TOP, TRAP PRIMER CONNECTION ADAPTER
FD-2	FLOOR DRAIN MODEL: JR SMITH 2005-B-P050-SS DESCRIPTION: CAST IRON BODY WITH FLASHING COLLAR, ADJUSTABLE HEAD AND 6" SQUARE STAINLESS STEEL TOP, TRAP PRIMER CONNECTION ADAPTER, SEDIMENT BUCKET.
GR-1	LINE GAS REGULATOR, NATURAL GAS MODEL: PIETRO FIORENTINI MODEL #310520PD, W/OVERPRESSURE PROTECTION. DESCRIPTION: NATURAL GAS, GAS PRESSURE REGULATOR VALVE, 5-PSI INLET PRESSURE, 7" W.C. OUTLET PRESSURE, OVERPRESSURE PROTECTION, OUTDOOR OR INDOOR WITH INTEGRAL VENT LIMITER, FILTER, IF MOUNTING THE REGULATOR IN THE VERTICAL POSITION, YOU MUST USE THE 90 DEGREE EXTERNAL VENT LIMITER ADAPTER TO ENSURE THE VENT LIMITER FACES UP. REGULATOR MUST BE LISTED ANSI Z21.80/CSA 6.22 PER CPC 1208.9 NOTES: VERIFY AND MATCH SITE GAS PIPING SIZE, CONFIRM SITE GAS PRESSURE IN FIELD PRIOR TO ORDERING.
HB-1	HOSE BIBB MODEL: WOODFORD #B7SP18R, 3/4" DESCRIPTION: NON-REMOVABLE VACUUM BREAKER, ROUGH BRASS FINISH, FLUSH MOUNTED LOCKING BOX, LOOSE KEY OPERATION.
HB-2	HOSE BIBB (ROOF) MODEL: WOODFORD #SRHMS, 3/4" FOR EXTERIOR DESCRIPTION: ROOF HYDRANT, DUAL CHECK BACKFLOW PREVENTER AND DRAIN, ASSE 1027 APPROVED, WOODFORD ROOFTOP MOUNTING SYSTEM #RHMS, CAST IRON DRAIN SUPPORT, CAST IRON UNDERSEAT FLANGE, WELL SEAL, EPDM BOOT COVER, 2" SHIM IF NEEDED ON PITCHED ROOF. NOTES: NO DRAIN REQUIRED.
L-1	LAVATORY (WALL-HUNG, STUDENT, HOT & COLD WATER, ACCESSIBLE) MODEL: AMERICAN STANDARD "LUCERNE" 0355.012 FAUCET: MOEN #8886 CHROME, 4" CENTERS, DECK MOUNT, TWO HANDLE METERING FAUCET, 0.5-GPM (0.5-GPM, 15-SECONDS, 0.125-GPC) DESCRIPTION: WHITE VITREOUS CHINA, SINGLE HOLE, CHROME GRID STRAINER, CONCEALED ARM CARRIER, MOUNTED AT ACCESSIBLE HEIGHT (SAD). WEIGHT: 35-LBS.
L-2	LAVATORY (WALL-HUNG, STAFF, HOT & COLD WATER, ACCESSIBLE) MODEL: AMERICAN STANDARD "LUCERNE" 0355.012 FAUCET: MOEN #8886 CHROME, 4" CENTERS, DECK MOUNT, TWO HANDLE METERING FAUCET, 0.5-GPM (0.5-GPM, 15-SECONDS, 0.125-GPC) DESCRIPTION: WHITE VITREOUS CHINA, SINGLE HOLE, CHROME GRID STRAINER, CONCEALED ARM CARRIER, MOUNTED AT ACCESSIBLE HEIGHT (SAD). WEIGHT: 35-LBS.
LB-1	LAB BASIN ACID NEUTRALIZATION TANK MODEL: STRIEM-SCHIER PRODUCTS #LB-50 C24-H DESCRIPTION: 37" X 28" X 28" DEEP, 57 GALLON, HIGH DENSITY POLYETHYLENE WITH HIGHWAY RATED BOLTED COMPOSITE COVER ENGRAVED "ACID NEUTRALIZATION TANK", 3" INLET, 3" OUTLET, 2" VENT CONNECTION, HIGHWAY RATED BOLTED COMPOSITE COVER NOTES: CONFIRM INVERT ELEVATION & PROVIDE RISERS AS NEEDED. PROVIDE HIGH WATER TABLE 30" STAINLESS ANCHOR KIT IF REQUIRED BY FIELD CONDITIONS, 90% CALCIUM CARBONATE LIMESTONE, WHEN INSTALLED IN TRAFFIC AREA PROVIDE TRAFFIC RATED BOLTED MANHOLE COVER
MS-1	MOP SINK MODEL: AMERICAN STANDARD "FLORWELL" #7741.000 ENAMELED CAST IRON, CORNER SERVICE SINK WITH 3" DRAIN FAUCET: CHICAGO 897-CP WITH VACUUM BREAKER AND WALL BRACE.
P-1	HOT WATER RECIRCULATION PUMP MODEL: GRUNDFOS UPS 15-35 SUCLC CAPACITY: 2 GPM AT 3 FT TDH, SET AT SPEED 1. DESCRIPTION: 3-SPEED, ALL STAINLESS STEEL CONSTRUCTION, INTEGRAL CHECK VALVE, 99597 AQUASTAT, 599398 DIGITAL TIMER, 6" CORD WITH PLUG, 1-1/4" UNION CONNECTION. ELECTRICAL: 115-VOLT, .08-HP, 0.55-A (SPEED 1)
S-1	SCIENCE CLASSROOM SINK - (HOT & COLD WATER) MODEL: ELKAY "LUSTERTONE" #LR2219 DESCRIPTION: 22" X 19-1/2" X 7-5/8" SELF-RIMMING BOWL, BOTTOM PADS ONLY, WITH FAUCET LEDGE AND 8" CENTERS FOR DECK MOUNT FAUCET, DRAIN AND REMOVABLE STRAINER. FAUCET: CHICAGO FAUCETS #786-QN8VBVE7FCOP, DECK MOUNTED, 8" FIXED CENTERS, 0.74-GPM SERRATED NOZZLE, 1.5-GPM LAMINAR FLOW INSERT, 4" VANDAL PROOF WRISTBLADE HANDLES, ATMOSPHERIC VACUUM BREAKER, 1.8 GPM MAX. NOTES: CONFIRM CABINETRY DIMENSIONS PRIOR TO ORDERING SINK. ORDER SINK WITH PUNCHING HOLES TO MATCH REQUIRED OPENINGS, CONFIRM ACCESSIBILITY REQUIREMENTS (SAD).
S-2	SCIENCE CLASSROOM SINK - ACCESSIBLE (HOT & COLD WATER) MODEL: ELKAY "LUSTERTONE" #LR2219 DESCRIPTION: 22" X 19-1/2" X 5-1/2" SELF-RIMMING BOWL, BOTTOM PADS ONLY, WITH FAUCET LEDGE AND 8" CENTERS FOR DECK MOUNT FAUCET, DRAIN AND REMOVABLE STRAINER. FAUCET: CHICAGO FAUCETS #786-QN8VBVE7FCOP, DECK MOUNTED, 8" FIXED CENTERS, 0.74-GPM SERRATED NOZZLE, 1.5-GPM LAMINAR FLOW INSERT, 4" VANDAL PROOF WRISTBLADE HANDLES, ATMOSPHERIC VACUUM BREAKER, 1.8 GPM MAX. NOTES: CONFIRM CABINETRY DIMENSIONS PRIOR TO ORDERING SINK. ORDER SINK WITH PUNCHING HOLES TO MATCH REQUIRED OPENINGS, CONFIRM ACCESSIBILITY REQUIREMENTS (SAD).

S-3	SCIENCE WORK ROOM SINK - ACCESSIBLE (HOT & COLD WATER) MODEL: ELKAY "LUSTERTONE" #LR2219 DESCRIPTION: 22" X 19-1/2" X 5-1/2" SELF-RIMMING BOWL, BOTTOM PADS ONLY, WITH FAUCET LEDGE AND 8" CENTERS FOR DECK MOUNT FAUCET, DRAIN AND REMOVABLE STRAINER. FAUCET: CHICAGO FAUCETS #786-QN8VBVE7FCOP, DECK MOUNTED, 8" FIXED CENTERS, 0.74-GPM SERRATED NOZZLE, 1.5-GPM LAMINAR FLOW INSERT, 4" VANDAL PROOF WRISTBLADE HANDLES, ATMOSPHERIC VACUUM BREAKER, 1.8 GPM MAX. NOTES: CONFIRM CABINETRY DIMENSIONS PRIOR TO ORDERING SINK. ORDER SINK WITH PUNCHING HOLES TO MATCH REQUIRED OPENINGS, CONFIRM ACCESSIBILITY REQUIREMENTS (SAD).
S-4	SCIENCE WORK ROOM SINK - 2-COMPARTMENT (HOT & COLD WATER) MODEL: REGENCY #609222323240 DESCRIPTION: 22X24X12" DEEP BOWL, 16-GAUGE, 304-STAINLESS STEEL, TWO-COMPARTMENT, 10" BACKSPASH, ONE FAUCETS, 8" CENTERS FOR HOT & COLD WATER CONNECTION CENTERED. FAUCETS: CHICAGO FAUCETS #510-0813L15KCBAC, WALL MOUNTED, 8" BODY, 1.0-GPM PRE-RINSE FITTING WITH 1.8-GPM MAX 613-A ADAPT-FAUCET, PROVIDE WITH CHICAGO FAUCETS #837-FRUKC & #837-FLKJCP PADDLE HANDLES, TYP. VERIFY W/ ARCHITECT.
TV-1	TEMPERING VALVE (DOMESTIC WATER MIXING VALVE) MODEL: LEONARD #TM-5208-L-F-D DESCRIPTION: LEAD FREE, ADJUSTABLE HIGH TEMPERATURE LIMIT STOP, INLET CHECK VALVE, WALL SUPPORT, OUTLET BALL VALVE, 3/4" INLETS, 1" OUTLET, PIPED ASSEMBLY, SET AT 120F, ASSE 1017.
TV-2	TEMPERING VALVE (UNDER LAVATORY) MODEL: LEONARD #270-L-F DESCRIPTION: LEAD FREE, BRONZE BODY WITH INTEGRAL CHECK VALVES AND ADJUSTMENT CAP WITH LOCKING FEATURE, SET AT 108F, ASSE 1017, 1070 CERTIFIED.
TV-3	TEMPERING VALVE (EMERGENCY EYEWASH/SHOWER) MODEL: HAW'S #9201E DESCRIPTION: EMERGENCY SHOWER THERMOSTATIC MIXING VALVE, LEAD FREE, POSITIVE SHUT-OFF IN THE EVENT OF COLD SUPPLY LINE OR THERMOSTAT FAILURE, INTERNAL BYPASS TO ALLOW COLD FLOW IN THE EVENT OF LOSS OR INTERRUPTION OF HOT WATER SUPPLY, SURFACE MOUNTED ENCLOSURE, 1.0-GPM MIN FLOW, 31.0-GPM MAX, ASSE 1071, ANSI Z358.1 LISTED. ACCESSORIES: RECESSED ENCLOSURE #920REC, TEMPERATURE GAUGE #0002582321, SET AT 85F. NOTE: PIPE ASSEMBLY WITH INLET AND OUTLET SHUT-OFF.
VB-1	WATER VALVE BOX MODEL: LSP SPECIALTY PRODUCTS #0BFS-8110-LL FEATURES: FIRE RESISTANT PVC BOX WITH 1/4 TURN SHUT OFF VALVE, WATER HAMMER ARRESTOR.
WC-1	WATER CLOSET (WALL-MOUNTED, ACCESSIBLE) MODEL: AMERICAN STANDARD "AFWALL" 3351.101 VALVE: SLOAN ROYAL 111-1.28, DIAPHRAGM TYPE, CHROME PLATED, 1.28-GPF DESCRIPTION: WALL MOUNTED VITREOUS CHINA FIXTURE WITH 1-1/2" TOP SPUD, LONG ENDED BOWL WITH BEMIS 1955SSCT BLACK OPEN FRONT SEAT, CHROME PLATED, 1.28-GPF, FLUSH VALVE. NOTES: INSTALL MANUFACTURER RECOMMENDED WALL CARRIER, ACCESSIBLE WHEN MOUNTED AT APPROVED HEIGHT (SAD). WEIGHT: 52-LBS
WH-1	HOT WATER HEATER, HIGH EFFICIENCY, NATURAL GAS MODEL: STATE #SUF 100 150N(A) DESCRIPTION: NATURAL GAS FIRED, POWER VENTED CAPACITY: 100 GALLONS; 297 GPH RECOVERY @ 60 F RISE INPUT: 150 MBH NATURAL GAS, 98% THERMAL EFFICIENCY ELECTRICAL: 120 VOLTS, 3 AMP ACCESSORIES: CONDENSATE NEUTRALIZATION KIT, CONCENTRIC ROOF VENT NOTES: SET TO 140F WEIGHT: 1,100 LBS (OPERATING)

FIXTURE CONNECTION SCHEDULE						
SYMBOL	DESCRIPTION	PIPE SIZE IN INCHES				
		W	V	HW	CW	TW
DF-1	DRINKING FOUNTAIN	1-1/2	1-1/2	-	-	1/2
ES-1, 2	EMERGENCY SHOWER	-	-	-	-	1-1/4
FD-1	FLOOR DRAIN	2	1-1/2	-	-	-
FD-2	FLOOR DRAIN	3	2	-	-	-
HB-1	HOSE BIBB	-	-	-	-	3/4
HB-2	HOSE BIBB	-	-	-	-	3/4
L-1	LAVATORY	1-1/2	1-1/2	1/2	1/2	1/2
L-2	LAVATORY	1-1/2	1-1/2	1/2	1/2	1/2
LB-1	LAB BASIN	3	2	-	-	-
MS-1	SINK, MOP	3	2	3/4	3/4	-
S-1	SINK, CLASSROOM	2	1-1/2	1/2	1/2	1/2
S-2	SINK, CLASSROOM	2	1-1/2	1/2	1/2	1/2
S-3	SINK, WORK ROOM	2	1-1/2	1/2	1/2	1/2
S-4	SINK, WORK ROOM 2-COMP	2	1-1/2	1/2	1/2	1/2
VB-1	VALVE BOX	-	-	-	-	1/2
WC-1	WATER CLOSET (FV)	3	2	-	-	1-1/4
WH-1	WATER HEATER (TANK)	-	-	3/4	3/4	-

CALGreen COMPLIANCE NOTES	
1.	COMPLY WITH PROVISIONS OF THE 2022 CALIFORNIA GREEN BUILDING CODE (CGBC), BELOW ARE REQUIREMENTS DIRECTLY RELATED TO MECHANICAL SYSTEMS. SEE ARCHITECTURAL PLANS AND SPECIFICATION FOR FURTHER REQUIREMENTS INCLUDING ANY VOLUNTARY MEASURES, COORDINATE ALL REQUIREMENTS WITH GENERAL CONTRACTOR.
2.	PLUMBING FIXTURES SHALL MEET THE MAXIMUM FLOW RATE VALUES IN 2022 CGBC SECTION 5.303.3. (SEE SCHEDULES).
3.	PLUMBING FIXTURES AND FITTINGS INCLUDING WATER CLOSETS, URINALS, FAUCETS, AND SHOWER HEADS SHALL COMPLY WITH REQUIREMENTS OF 2022 CGBC SECTION 5.303.3.
4.	ALL PLUMBING FIXTURES AND FITTINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE CALIFORNIA PLUMBING CODE AND SHALL MEET THE APPLICABLE STANDARDS OF TABLE 1701.1 OF THE CPC PER 2022 CGBC SECTION 5.303.6.
5.	COMPLY WITH ALL PROVISIONS OF 2022 CGBC SECTION 5.498 - CONSTRUCTION WASTE REDUCTION DISPOSAL AND RECYCLING. SEE ARCHITECTURAL PLANS AND SPECIFICATION FOR REQUIREMENTS, COORDINATED ALL REQUIREMENTS WITH GENERAL CONTRACTOR.
6.	PROVIDE TESTING AND ADJUSTING FOR SYSTEMS IN ADDITIONS, ALTERATIONS AND BUILDINGS UNDER 10,000 SQUARE FEET PER 2022 CGBC SECTION 5.410.4.
7.	PROVIDE OPERATION AND MAINTENANCE MANUALS PER MECHANICAL SPECIFICATIONS AND 2022 CGBC SECTION 5.410.4.5.
8.	ALL FINISH MATERIALS INCLUDING ADHESIVES, SEALANTS, CAULKS, PAINTS, AND COATINGS SHALL COMPLY WITH 2022 CGBC SECTION 5.504.4.
9.	WHEN REQUIRED BY THE ENFORCING AGENCY THE OWNER OR OWNERS AGENT SHALL EMPLOY SPECIAL INSPECTORS TO PROVIDE INSPECTION OR OTHER DUTIES TO SUBSTANTIATE COMPLIANCE WITH THE CGBC PER 2022 CGBC SECTION 702.2

WATER PIPE SIZING CALCULATIONS						
PROJECT NAME:	BEAR CREEK HS					
PROJECT NUMBER:	4037.00					
DATE:	10/20/23					
AVAILABLE WATER PRESSURE CALCULATIONS PER CPC TABLE A 103.1						
TOTAL FIXTURE UNITS:					39	
COLD WATER DEMAND FLOW RATE (GPM):					45	
HOT WATER FIXTURE UNITS:					16	
HOT WATER DEMAND FLOW RATE (GPM):					12	
WATER MAIN PRESSURE (PSIG):					50	
PRESSURE DROP THRU MTRU METER (PSIG)					0	
PRESSURE REDUCING VALVE - PRESSURE (IF REQUIRED)					0	
PRESSURE DROP THRU BACKFLOW PREVENTER (PSIG)					0	
ELEVATION PRESSURE DROP (PSIG)					1.7	
PRESSURE DROP THROUGH WATER TREATMENT (PSIG)					0	
RESIDUAL PRESSURE REQUIRED AT LAST OUTLET (PSIG)					25	
NET PRESSURE AVAILABLE (PSIG)					23	
PRESSURE BOOSTER PUMP (IF REQUIRED) (PSIG)					0	
STATIC HEIGHT OF HIGHEST FIXTURE ABOVE MAIN (FT)					4	
TOTAL DEVELOPED LENGTH OF LONGEST PIPE RUN (FT)					450	
MAXIMUM PIPE FRICTION LOSS (PSI) PER 100 FT OF PIPE					5.2	
COLD WATER PIPE SIZE SCHEDULE (@ MAX. ALLOWABLE PD/100 FT)						
NOMINAL PIPE SIZE	MAX. GPM	VEL. (F/TS)	FIXTURE UNITS MAX. FV	MAX. FT	PRESS. DROP (PSI) /100 FT	NOMINAL PIPE SIZE
1/2	2.3	3.2	---	3	4.97	1/2
3/4	6.1	4.0	---	7	5.11	3/4
1	12.3	4.8	---	16	5.11	1
1 1/4	21.5	5.5	---	32	5.16	1 1/4
1 1/2	33.9	6.1	16	60	5.15	1 1/2
2	70.4	7.3	108	225	5.17	2
CW BRANCH & HOT WATER PIPE SIZE SCHEDULE (@ MAX. ALLOWABLE PD/100 FT)						
NOMINAL PIPE SIZE	MAX. GPM	VEL. (F/TS)	FIXTURE UNITS MAX. FV	MAX. FT	PRESS. DROP (PSI) /100 FT	NOMINAL PIPE SIZE
1/2	2.3	3.2	---	3	4.97	1/2
3/4	6.1	4.0	---	7	5.11	3/4
1	12.3	4.8	---	16	5.11	1
1 1/4	19.6	5.0	---	28	4.34	1 1/4
1 1/2	27.7	5.0	10	46	3.55	1 1/2
2	48.2	5.0	44	119	2.57	2
NOTES:						
1. MAXIMUM CW BRANCH & HW VELOCITY						
2. MAXIMUM COLD WATER VELOCITY (ft/s):						
					5.0	
					8.0	

PLUMBING GENERAL NOTES	
1.	ALL PIPES, FITTINGS, FIXTURES AND ALL OTHER END-USE DEVICES INTENDED TO CONVEY OR DISPENSE WATER FOR HUMAN CONSUMPTION OR COOKING SHALL BE LEAD FREE IN COMPLIANCE WITH CALIFORNIA AB1953, PRIOR TO CONSTRUCTION, SUBMIT TO THE ENGINEER A STATEMENT INDICATING ALL PRODUCTS SUPPLIED ARE IN COMPLIANCE WITH THE LAW.
2.	REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF PLUMBING FIXTURES, FIXTURE MOUNTING HEIGHTS AND FLOOR DRAIN LOCATIONS.
3.	PLUMBING FIXTURES AND INSTALLATIONS THAT SERVING PUBLIC BUILDINGS SHALL COMPLY WITH CBC SECTION 116-215 & 116-603 "ACCESSIBILITY TO PUBLIC BUILDINGS, BATHING AND TOILET FACILITIES" SEE ARCHITECTURAL DRAWINGS FOR INSTALLATION DETAILS.
4.	ACCESSIBLE PLUMBING FIXTURES SHALL COMPLY WITH ALL REQUIREMENTS OF CBC SECTION 116-601.
5.	ALL PIPING SHALL BE CONCEALED UNLESS SPECIFICALLY INDICATED OTHERWISE.
6.	REFER TO ARCHITECTURAL PLANS FOR THE PLUMBING DEMAND WORK, CAP ALL UNUSED PIPING.
7.	PHYSICALLY VERIFY ELEVATION OF SEWER CONNECTION AND EXACT LOCATION BEFORE STARTING ANY WORK.
8.	WHERE PIPES PASS THROUGH FIRE RATED CONSTRUCTION AND AT SHAFT FLOOR PENETRATIONS PROVIDE FIRE STOPPING PER CBC CHAPTER 7, SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF FIRE RATED ASSEMBLIES.
9.	INSULATION, COVERINGS OR INSULATION FINISHING, SHALL BE OF MATERIAL SUITABLE FOR OPERATING TEMPERATURE OF SYSTEM AND SHALL HAVE A FLAME-SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE DEVELOPED INDEX OF NOT MORE THAN 45 (FIVE SEVEN ACCORDANCE CAN 902.2 AND NFPA 90A).
10.	INSTALLATION INSTRUCTIONS FOR ALL EQUIPMENT SHALL BE MADE AVAILABLE TO THE BUILDING INSPECTOR AT THE TIME OF INSPECTION.
11.	WHERE CEILING SPACES ARE USED AS A RETURN AIR PLenum, MATERIALS SHALL BE NONCOMBUSTIBLE OR SHALL HAVE A FLAME SPREAD INDEX NOT GREATER THAN TWENTY-FIVE (25) AND A SMOKE DEVELOPMENT INDEX NOT GREATER THAN FIFTY (50) ACCORDANCE CAN 902.2 AND NFPA 90A.
12.	PROVIDE 1/8 GAUGE STAINLESS STEEL PROTECTIVE COVER ON PIPING, WHERE PIPING IS LOCATED IN AN AREA WHERE IT MAY BE SUBJECT TO DAMAGE PER CPC 312.
13.	INSTALL ALL FLOOR SINKS FLUSH WITH FINISHED FLOOR UNLESS OTHERWISE NOTED, INDIRECT WASTE RECEPTACLES SHALL BE LOCATED WHERE THEY ARE READILY VISIBLE FOR INSPECTION & CLEANING PER CPC 804.1.
14.	PROVIDE CONDENSATE DRAINS FOR ALL MECHANICAL UNITS, SMD.
15.	REFER TO SPECIFICATION SECTION 22 00 00 ON DRAWING P701 FOR ADDITIONAL REQUIREMENTS.
16.	BELOW GRADE METALLIC PIPE AND FITTINGS SHALL BE ENCASED IN TUBES OF POLYETHYLENE, NOT LESS THAN 8 MILS IN THICKNESS, REVIEW GEOTECHNICAL REPORT FOR ADDITIONAL REQUIREMENTS.
17.	SUBSTITUTION FOR PIPE MATERIAL SPECIFICATION ON SHEET P701 - SANITARY WASTE AND VENT (DWV). ALL PIPE AND FITTINGS SHALL BE NO-HUB CAST IRON (NHCI) TO ASTM A74, BY CHARLOTTE PIPE OR APPROVED EQUAL. A. BELOW GRADE: COUPLING TO BE HUSKY SD4000 (4 OR 6 CLAMPS, DEPENDING ON SIZE) OR APPROVED EQUAL. ALL PIPING IN TRENCH SHALL HAVE 4" BED OF SALT FREE RIVER SAND OR SALT FREE, WASHED PEA GRAVEL, BACKFILL TO 1" ABOVE PIPE WITH SALT FREE RIVER SAND OR SALT FREE, WASHED PEA GRAVEL, ALLOW NO CONTACT BETWEEN PIPE AND FITTINGS AND NATIVE SOILS. PROTECT CAST IRON WITH IMPORTED BACKFILL ENVELOPE OR (POLYWRAP) POLYETHYLENE ENCASEMENT BY NORTH TOWN CO. OR EQUAL. B. ABOVE GRADE, INSIDE STRUCTURE: COUPLINGS TO BE MISSION SERIES OR APPROVED EQUAL NO-HUB. C. FOR WASTE AND VENT PIPING IN AREAS OF TIGHT CONSTRUCTION, HARD DRAWN COPPER DWV TUBE MAY BE USED.
18.	SUB

GENERAL NOTES

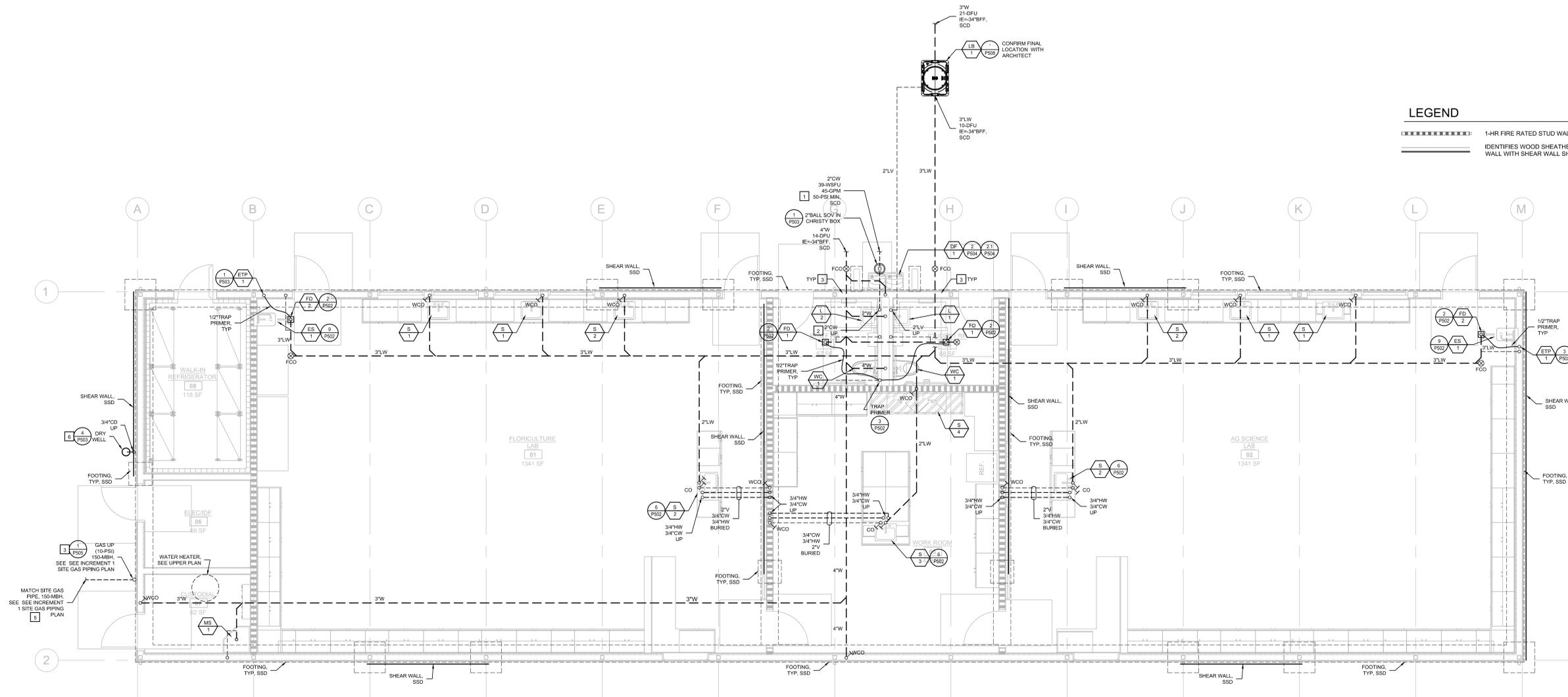
- A. WHERE FIXTURES ARE ON WALL ABOVE FOOTINGS, ROUTE PIPING ABOVE FOOTING AND INTO WALL.
- B. CONFIRM ALL SITE UTILITY POINT OF CONNECTION LOCATIONS AND INVERTS.
- C. CONFIRM INVERT ELEVATIONS OF ALL PIPING PASSING THROUGH FOOTINGS.
- D. ALL HORIZONTAL WASTE PIPING AND HORIZONTAL RAINWATER PIPING IS TO BE AT A 2% SLOPE UNLESS OTHERWISE NOTED ON THE PLANS.

SHEET NOTES

- 1 CONFIRM SITE WATER PRESSURE IN FIELD, NOTIFY ENGINEER OF ANY CHANGES.
- 2 COORDINATE RISER WITH POUR OF FOOTINGS.
- 3 SLEEVE PIPING THROUGH FOOTING, SSD.
- 4 DRYWELL SHALL BE 18" CLEAR OF ALL FOUNDATION ELEMENTS. SEE DETAIL 4/P503, TYP.
- 5 CONFIRM SITE GAS PRESSURE AND METER LOCATION IN FIELD. NOTIFY ENGINEER OF ANY CHANGES.

LEGEND

- 1-HR FIRE RATED STUD WALL (FIRE BARRIER), SAD.
- ===== IDENTIFIES WOOD SHEATHED COLD FORM STEEL WALL WITH SHEAR WALL SHEATHING, SSD.



PLUMBING FLOOR PLAN - LOWER

SCALE: 1/4" = 1'-0"



JL MODULAR
BrokawDesign
 WWW.BROKAWDESIGN.COM

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BEAR CREEK HIGH SCHOOL
 10555 THORTON RD
 STOCKTON, CA 95209
INCREMENT 2

ISSUE	DATE	DESCRIPTION

PROJECT NUMBER: TEP #4037
 DRAWN BY: SS
 DESIGNER: BM
 PLOT DATE: 11/06/2023

SHEET TITLE: **PLUMBING FLOOR PLAN LOWER**

SHEET #:

P201

GENERAL NOTES

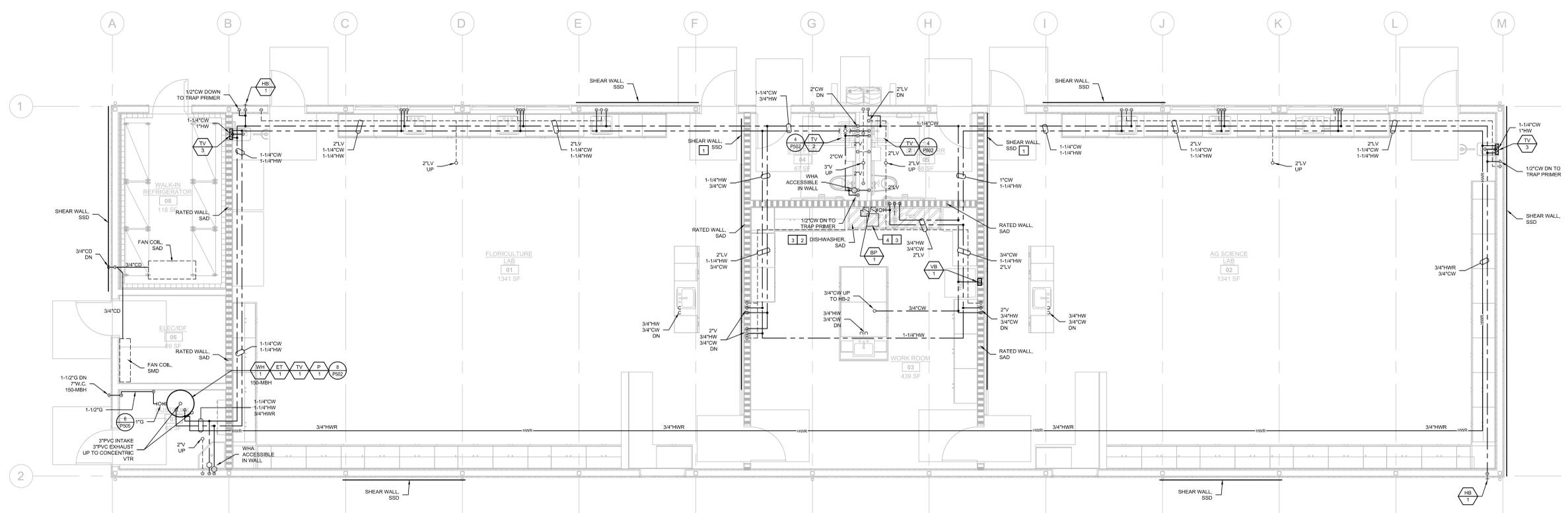
- A. ALL OVERHEAD PIPING HUNG WITHIN 12" OR LESS FROM STRUCTURE, FOR ENTIRE RUN OF PIPE.

SHEET NOTES

- 1. SHEAR WALL PENETRATION, SEE DETAIL 3/SD612 FOR PENETRATION REQUIREMENTS & PENETRATION MINIMUM DISTANCE FROM END OF SHEAR WALL.
- 2. CONNECT DISHWASHER TO HW & DRAIN THRU AIR GAP FITTING AT SINK, PROVIDE SPEARS SCHEDULE 40 CPVC CORROSIVE WASTE TAILPIECE, P-TRAP & FITTINGS AT SINK, SEE DETAIL 9/PS02.
- 3. CONFIRM FINAL PLUMBING CONNECTIONS WITH MANUFACTURER INSTALLATION INSTRUCTIONS.
- 4. WATER TREATMENT (BY OTHERS), CONFIRM FIXTURE SELECTION WITH DISTRICT.

LEGEND

- 1-HR FIRE RATED STUD WALL (FIRE BARRIER), SAD.
- IDENTIFIES WOOD SHEATHED COLD FORM STEEL WALL WITH SHEAR WALL SHEATHING, SSD.



PLUMBING FLOOR PLAN - UPPER

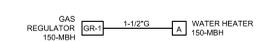
SCALE: 1/4" = 1'-0"

MINIMUM NATURAL GAS PIPE SIZING SCHEDULE per 2022 CALIF PLUMBING CODE Table 1215.2 (1)

Maximum Delivery Capacity of Cubic Feet of Gas Per Hour of IPS Pipe Carrying Natural Gas of 0.60 Specific Gravity based on Pressure Drop of 0.5 Inch Water Column

Project name: Bear Creek HS AG Science Building

Pipe Section	From	To	Gas Flow rate (MBH)	Main (Meter to remote outlet)			Branch		
				Measured distance remote outlet to meter (Feet)	Length (Feet) per Table	Minimum Pipe Size per Table	Measured distance outlet to meter (Feet)	Length (Feet) per Table	Minimum Pipe Size per Table
A	GR-1	150	100	100	1				



GAS PIPING DIAGRAM

NTS

JL MODULAR
BrokawDesign
 WWW.BROKAWDESIGN.COM

TEP ENGINEERING
 980 Second Street
 Santa Rosa, CA 95404-4810
 707.538.0400 office
 707.538.0406 fax



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BEAR CREEK HIGH SCHOOL
 10555 THORTON RD
 STOCKTON, CA 95209

INCREMENT 2

ISSUE	DATE	DESCRIPTION

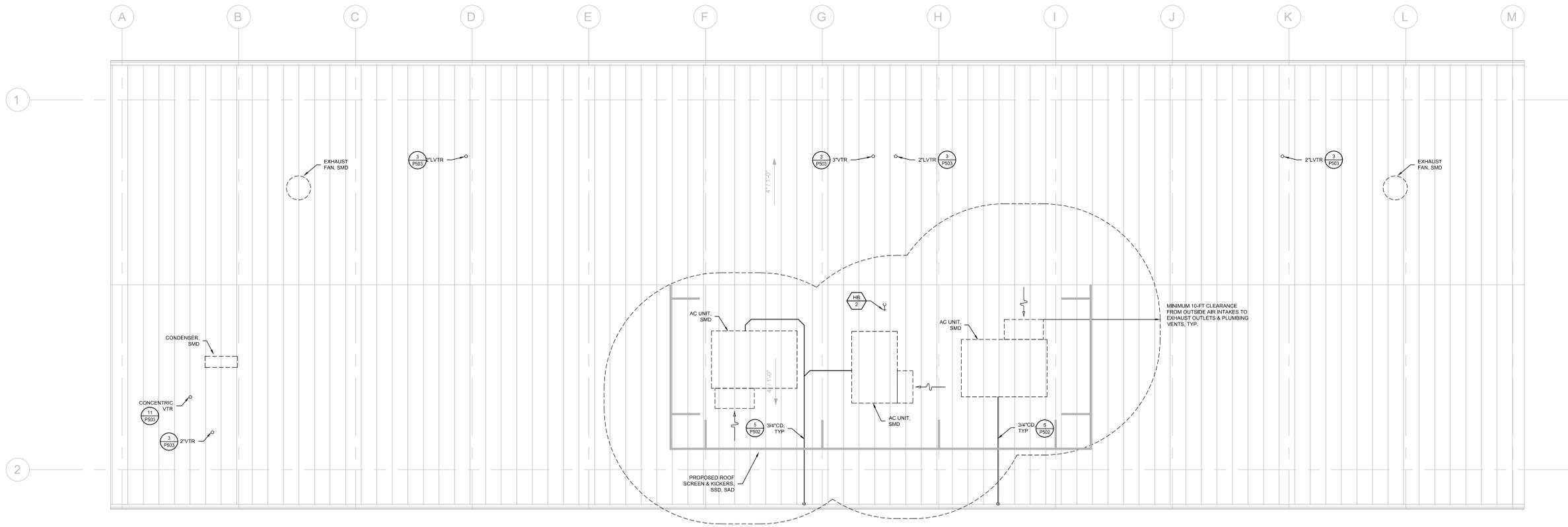
PROJECT NUMBER: TEP #4037
 DRAWN BY: SS
 DESIGNER: BM
 PLOT DATE: 11/06/2023

SHEET TITLE: **PLUMBING FLOOR PLAN UPPER**

SHEET #: **P202**



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INCREMENT 2



PLUMBING ROOF PLAN

SCALE: 1/4" = 1'-0"



ISSUE	DATE	DESCRIPTION

PROJECT NUMBER: TEP #4037
 DRAWN BY: SS
 DESIGNER: BM
 PLOT DATE: 11/06/2023

SHEET TITLE: **PLUMBING ROOF PLAN**

SHEET #: **P203**

1. GENERAL

1.1 SCOPE

- A. The work in this section includes, but is not limited to, providing all plumbing work as shown and noted in the plumbing Drawings and Specifications, including the following items:
1. Plumbing fixtures, equipment and piping.
2. Sanitary waste and vent system to five feet from the building.
3. Domestic hot and cold water distribution to five feet from the building.
4. Service water heating and distribution.
5. Cleaning, sterilization and testing for water systems.
6. Condensate drains from mechanical equipment.
7. Pipe hangers and supports.
8. Pipe insulation.
9. Piping markers and equipment nameplates.
10. Energy code testing, adjusting and reporting
B. Work of other sections, includes the following:
1. Site piping and utilities beyond five feet from the building.
2. Fire protection systems.
3. Waste water treatment and disposal systems.
4. Water supply system including tanks and pumps.
5. Low voltage wiring and disconnect switches. The Electrical Contractor will provide all line voltage wiring & control, disconnect switches & magnetic starters (except those furnished under this Section as a part of equipment).

1.2 CODES AND STANDARDS

- A. All work and materials shall be in full accordance with the latest adopted edition of the following documents:
1. 2022 California Building Code (CBC)
2. 2022 California Plumbing Code (CPC)
3. 2022 California Mechanical Code (CMC)
4. 2022 California Electrical Code (CEC)
5. 2022 California Fire Code (CFC)
6. 2022 California Energy Code (Title 24)
7. 2022 California Green Building Code (CALGreen)
8. Americans with Disabilities Act (ADA)
9. Sheetmetal Contractors and Air Conditioning Contractors' National Association (SMACNA) Seismic Restraint Manual.
10. National Fire Protection Association (NFPA)
11. Local codes and ordinances
B. Accessible plumbing fixtures shall comply with all of the accessibility requirements of CBC Chapters 11A and 11B and Federal ADA requirements.

- C. Whenever this Specification calls for material, workmanship, arrangement or construction of higher quality and/or capacity than that required by governing codes, higher quality and/or capacity takes precedence.
D. All potable water system components, devices, materials, or equipment containing a weighted average of greater than 0.25 percent lead are prohibited, and shall be certified in accordance with the current editions of the Safe Drinking Water Act (SDWA), NSF 61, NSF 372 & California ADE155. Endpoint devices used to dispense water for drinking shall meet the requirements of NSF 61 & California AB1953.

1.3 SUBMITTALS

- A. Provide complete product submittals and shop drawings in electronic format (PDF), prior to commencing work and prior to ordering any piece of product in a single product submittal package. Pieced-together product submittals may be rejected. Clearly identify/mark each submittal in detail. Note what differences, if any, exist between the submitted item and the specified item. Failure to identify the differences will be considered cause for disapproval. If differences are not identified and/or not discovered during the submittal review process, Contractor remains responsible for providing equipment and materials that meet the Specifications and Drawings. Items, other than those specified, will not be allowed unless they are approved in writing via the submittal process. Include cut sheets and drawings for the following items in the submittal:
1. All plumbing components, including pipe hangers, pipe supports & appurtenances that are a part of the plumbing contract documents.
2. Drawings for installation details that differ from the details in the contract documents.

- B. "No Exception Taken" constitutes that review is for general conformance with the design concept expressed in the Contract Documents for the limited purpose of checking for conformance with information given. Any action is subject to the requirements of the Contract Documents. Contractor is responsible for the dimensions and quantity and will confirm and coordinate at the job site, fabrication processes and techniques of construction, coordination of the work with that of all other trades, and the satisfactory performance of the work.
C. All details shown on the Drawings are schematic in nature; the Contractor is responsible for determining actual installation requirements. Contractor shall include in his bid all materials and appurtenances for a complete and operable installation. Provide coordination drawings for the proposed installation when coordination with other trades is required.

1.4 SUBSTITUTIONS OF MATERIALS AND EQUIPMENT

- A. The named materials and equipment are considered the basis for design; however equal materials and equipment may be submitted to the Architect and Engineer for review. The decision of the Owner and Engineer shall be final and shall govern as to what materials and equipment may be substituted, but the burden of proof as to the quality, performance and space requirements of any proposed substitution shall rest with the Contractor.

1.5 WARRANTY

- A. The Contractor shall provide a one-year warranty for the work of this Section. During this period the Contractor shall provide all labor and materials necessary to repair or replace defective systems. The warranty period shall begin at the date of final acceptance.
B. Additional Warranty conditions: Where applicable, provide additional warranty time period and/or conditions in accordance with the General Conditions, Section of the project Specifications manual.

1.6 GENERAL

- A. The locations, sizes, capacities and types of all piping, equipment and appurtenances shown on the Drawings as existing are approximate and may not have been independently verified. The Contractor shall determine the exact locations, sizes, capacities and types of existing piping, equipment and appurtenances. If necessary use electronic pipe locating devices to locate existing piping below grade. The Contractor shall include in his bid allowances for minor modifications to pipe routing necessitated by actual field conditions.
B. The Contractor shall verify all building dimensions with Architectural Drawings and all site dimensions with Civil Drawings prior to submitting a bid. The submission of a bid or proposal will be construed as evidence that the Contractor has familiarized himself with the Drawings and building site. Claims made subsequent to the proposal for materials and/or labor due to difficulties encountered will not be recognized unless these difficulties could not have been foreseen, even though proper examination had been made.
C. In these Drawings and Specifications "Expose" defines plumbing systems that are visible, such as in equipment rooms, vaulted building spaces, on roofs and where not concealed. "Conceal" refers to plumbing systems that are not normally visible, such as above ceilings and in shafts/walls.

2. PRODUCTS

2.1 PIPE

- A. Sanitary drain, waste and vent (DWV) pipe and fittings: SUBSTITUTION - See Plumbing General Notes drawing P001 for specification.
B. Domestic water piping:
1. Above grade inside building pipe: Hard draw Type "L", ASTM B88 with color markings per CBC.
2. Fittings: Wrot solder joint fittings by NIBCO, MUELLER or approved equal. Cast copper alloy, lead free and in accordance with ASME B16.18 and NSF 610. Soldered with CANFIELD "100% watercast" lead free solder.
3. Trap primers: SUBSTITUTION - See Plumbing General Notes drawing P001 for specification.
4. All water (and hydronic) pipe and fittings at water heaters, boilers and water tanks to be copper, brass or stainless steel. No ferrous pipe or fittings shall be used.
C. Condensate drainage piping: SUBSTITUTION - See Plumbing General Notes drawing P001 for specification.

2.2 PIPING SPECIALTIES

- A. Trap primers: Precision Plumbing Products Inc., "Prime Rise" trap primer valve with distribution unit where required or Zum Z-1022 San-Gard. Trap primers concealed in walls shall have Elmcor DW-SS wall access panel, or approved equal, minimum 10" x 10".
B. Water hammer arrestors: Zum "Shoktief" or Watts Series SS, sizes as shown on Drawings.
C. PEX supports (up to 1-1/4" O.D.): HOLDRITE series 266-269 silicone clamps with SB2 & SB3 supports, polypropylene construction, FR UL94-V2 and IAPMO listed.
D. Pipe hangers: Tolo, Uni-Strut, Super-Strut or B-Line with zinc electroplated finish. Provide with cushioned clamps inserts. Piping supports shall be full lined J-pipe hangers. Use beam clamps at hangers from steel beams. All miscellaneous steel, bolts, rods, nuts and washers shall be cadmium electroplated finish. Use materials that are consistent throughout each space.
E. Roof flashings: At TPO roof flashings to be by roofing contractor. At built up roofs provide 4 pound lead, 12" high by 12" base and stainless steel draw band. At shingle roofs, provide 24 gauge galvanized steel metal jack with neoprene top seal by Dalsec or equivalent.

- F. Pipe Seals: Pipes passing through walls and floors underground provide Link-Seal modular seal assembly WS series, color Black or approved equal by MetraSeal. At fire rated assemblies, provide MetraSeal 120 or approved equal.
G. Firestopping Sealant: 3M Fire Barrier CP25WB + Caulk, Al PEX tubing, Wrebo Aquapex Firestop sealant listed and tested to ASTM E-814.
2.3 VALVES & STRAINERS
A. Use full line size ported valves, types and models as follows:
1. Ball Valves: 4 inch and smaller: UL 208 listed, AGACCA/ULFM approved, bronze body with standard perforated hand chrome plated brass ball, lever handle, lead free Apollo Valve 70L-F-100 or 70L-F-200 series for water systems, unless otherwise noted or approved equivalent by Nibco, Jomar or Milwaukee. Provide extended handle shaft where pipes are insulated.
2. Gate Valves: 2 inch and smaller: Bronze and lead free, Milwaukee Valve UP105 or UP115 or equivalent by Apollo Valves, Nibco or Jomar.
3. Fuel Gas Valves: 1 inch and smaller: Jomar T-205 or equivalent by Apollo Valves, Nibco or Jomar, 1-1/4 inch to 4 inch: Full port, Jomar T-100NE or equivalent by Apollo Valves, Nibco or Jomar. Gas shutoff at main to building: brass body painted gray, full port, full line size ball valve, locking wing cap, ISO-9002 approved, Jomar 175LWN or equivalent by Apollo Valves, Nibco or Jomar.

- B. Pressure and Temperature Relief Valves:
1. Water heaters with less than 100 MBH input: Watts LF100XL, lead free.
2. Water heaters with 100 MBH or higher input: Watts LF4DXL, lead free.
3. Pressure relief valves on hot water storage tanks: Watts type LF174A, lead free, set at 125 psi.
C. Check Valves:
1. Silent Check Valves:
a. 2 inch and smaller: Bronze and lead free, Milwaukee Valve UP548T or UP1548T or equivalent by Apollo Valves, Nibco or Jomar.
b. 2-1/2 inch and larger: Cast iron water style, lead free, stainless steel trim, class 125 Milwaukee 1400 Series or equivalent by Apollo Valves, Nibco or Jomar.

2.4 CLEANOUTS

- A. General:
1. Floor cleanout, non-traffic areas: Zum no. ZN-1400 with membrane flange and bronze plug.
2. Floor cleanout, traffic areas: Zum no. ZN-1400-HD with membrane flange and bronze plug.
3. Grade cleanouts: Zum no. Z-1440 with membrane flange, ABS threaded plug. Provide Christy F08 utility box and lid in non-traffic areas & G05 with cast iron lid in traffic areas.
4. Wall cleanouts: Zum Z-1446, Cast iron tee with plug, chrome plated cover.
B. Finishes: All exposed parts of floor cleanouts in finished areas shall be scribed nickel bronze.

2.5 INSULATION

- A. Pipe insulation thickness shall be per California Mechanical Code and California Energy Code (Section 120.3) or as indicated below, whichever is greater. Pipe insulation thickness indicated below, based on a minimum insulation K-value of 0.24. Service Water Heating Systems. At all recirculating sections, electric trace tape, and first eight feet of hot and cold outlet piping for nonrecirculating storage systems, and all hot water piping on residential systems.
1. Fluid Range 105-140 F:
A. Nominal pipe diameter: less than 1 inch, provide 1.0 inches of insulation wall thickness.
B. Nominal pipe diameter: 1 inch to less than 2 inch, provide 1.5 inches of insulation wall thickness.
C. Nominal pipe diameter: 2 inch and larger, provide 2.0 inches of insulation wall thickness.
B. Above grade, inside building: Armacell AP Armaflex, thickness per CEC Title 24. Covering to be continuous with all seams and joints glued tightly. All fitting shall be cleanly mitered with proper cutting tool. Cover all exposed outdoor piping with continuous PVC jackets, Profo "Lo Smoke" or equal, including all fittings and valves. Insulation shall have a flame spread rating not to exceed 29, a smoke density rating not to exceed 450, and a smoke-developed rating not to exceed 50.
C. Pipe insulations shields: At all hanger or support locations of insulated piping provide Armacell Armaflex EcoLight, or approved equal.
D. Lavatory and sink traps: Manufactured insulators with smooth, white, PVC outer covering, complying with ADA and state accessibility requirements. Truxton Lev Guard 2 or Plumorex Pro-Extreme series. Also insulate the hot water supply valve and pipe. There shall be no sharp or abrasive surfaces under sinks or lavatories.
C. Service water heating: Provide insulation thickness per Title 24 energy standards for all recirculation sections and the first eight feet on non-recirculation systems.

2.6 ADHESIVES, SEALANTS, CAULKS, PAINTS AND COATING

- A. All products shall comply with the VOC limits requirements in California Green Building Code (CALGreen). If a non-comforming product is found in these bid documents, notify the Engineer immediately for an alternate product.
2.7 ACCESS PLATES AND DOORS
A. Wall cleanouts: Zum #ZANB-1460-7 nickel bronze with polished stainless steel cover or #Z1460-8 stainless steel with bronze cleanout plug (cast iron) or plastic cleanout plug (at PVC or ABS).
B. Access doors:
1. Tile or wood surfaces: ELMODOR RDW-SS, 16 gauge, type 304 brushed stainless steel construction, or approved equal. Minimum size 10"X10".
2. Access doors at dry wall surfaces: ELMODOR RDW-B 16 gauge galvanized steel construction with prime finish, or approved equal. Minimum size 10"X10".
3. Fire rated ceiling or wall: ELMODOR FRC or FR series or approved equal.

2.8 FIXTURES AND EQUIPMENT

- A. Provide fixtures and equipment of the manufacturer and model numbers shown on the Drawings, complete with all required carriers, stops, supplies, trim, and other items necessary for proper operation.
B. Fixture tailpieces and traps for lavatories and sinks shall be KEENEY 17-gauge brass tubing or semi-cast brass with heavy duty chrome plated finish.
C. Sink, lavatory, and tank toilet supply stop valves and supply kits: BRASSCRAFT KTS 1/4 turn ball valves, chrome plated brass finish, lock shield with loose key, stainless steel or chrome plated copper supply tubing.
D. All equipment, fixtures and fittings shall conform to California Energy Commission Certification per CEC subchapter 2, for energy usage and water usage compliance. See equipment schedules for specific ratings.

2.9 SIGNAGE, PIPE MARKERS, AND EQUIPMENT NAMEPLATES

- A. QUALITY ASSURANCE: Meet ANSI A13.1 2015 Scheme for identification of piping systems.
B. Piping Markers: Provide Seton Ops-Code or approved equal by MSI, self-adhesive pipe markers for all piping. Pipe markers shall include direction of fluid flow arrows, color coded field and lettering in height in accordance with OSHA and ASME (ANSI) Standard A13.1-2015. At a minimum, pipes shall be marked with service and direction at both sides of wall penetration, and every 20 feet but not less than once per room, and shall be visible from the floor level.
C. EQUIPMENT NAMEPLATES: Provide Seton custom engraved acrylic (plastic), Black with white border and lettering, 3" wide by 11" high with minimum 1/4" lettering, attached with two small screws. Provide a label at each piece of major equipment for equipment identification.

2.10 OTHER MATERIALS

- A. Other materials not specified, but required for a complete installation, shall be as selected by the Contractor subject to acceptance by the Engineer.

3. EXECUTION

- 3.1 GENERAL
A. Verify that the work of this Section may be completed in accordance with all pertinent codes and regulations, the Construction Documents, approved Submittals, and the manufacturer's recommendations. In the event of discrepancy, immediately notify the Engineer. Do not proceed in areas of discrepancy until all discrepancies have been resolved.
B. Install all equipment per manufacturer's instructions and recommendations.
C. Install all equipment level. Install all equipment in accordance with manufacturer's installation instructions, where plans or details differ from manufacturer's instructions, contact Engineer for clarification before proceeding with installation.
D. See Structural Drawings for details of underground piping beneath and through building footings.
E. Do not cut into or reduce the size of any load-carrying member without the prior approval of the Architect.
F. Anchor piping subject to expansion or contraction in a manner permitting strains to be evenly distributed. Provide offsets and expansion compensation devices as required to prevent undue stress on the piping and building components. Allow for pipe expansion of 1 inch per 100 feet.
G. Piping shall be securely held in place by hangers, supports & brackets in accordance with CA Plumbing Code Section 313.0. All hangers shall be designed to support the pipe, including fluid and insulation. Provide hangers and supports at intervals per CPC table 313.3.

- H. Pipe Supports: All materials shall be new and manufactured for the specific purpose of supporting systems, equipment, pipes and accessories.
I. All overhead primary pipe supports shall meet the following minimum standards: ANSISMS SP-58: Materials, Design, Manufacture, Selection, Application, and Installation; ANSISMS SP-69: Selection & Application; ANSISMS SP-89: Fabrication & Installation Practices.
J. Provide Link-Seals for protection against water penetration where underground pipes pass through finished floors, ceilings or walls. Provide chrome plated brass split escutcheons where pipes pass through finished floors, ceilings or walls.
K. Where piping passes through foundations, footings or bearing walls, provide PVC pipe sleeves two sizes larger than the pipe passing through the structure. Caulk the annular space between the pipes or provide Link-Seals at foundation walls. Provide chrome plated brass split escutcheons where pipes pass through finished floors, ceilings, or walls.
L. Make allowances for building and support structure movement.
M. Provide 1/2" minimum separation between piping and building construction.
N. Place a hanger within 12 inches of each horizontal elbow.
O. Piping shall not be in contact with hangers or building members.
P. Do not support piping from other pipes, ductwork or other equipment that is not building structure.
Q. All steel piping and appurtenances exposed to weather shall be galvanized or zinc plated.
R. Isolate all dissimilar metals with dielectric unions and dielectric flanges, except that brass or bronze valves do not need to be isolated from steel pipe.
S. Provide means of preventing dissimilar metal contact such as plastic coated hangers, copper colored epoxy paint, or non-adhesive isolation tape - B-Line Iso-pipe.
T. Paint any PVC piping and fittings when exposed to direct sunlight with light colored, water based latex paint which compatible with PVC.
U. Where threaded piping connects between plastic and metal materials, provide metal female connector. Do not provide a metal male connection at these types of transitions.
V. All wetted materials for valves and appurtenances shall be the same material of the piping, unless noted otherwise.
W. All valves and appurtenances shall be full line size.
X. Provide accessible shutoff valves at all fixtures, equipment, and appliances. Provide access doors where valves are installed behind or above non-removable construction. Install all below-grade valves in concrete valve boxes. Install boxes flush with the finished grade. Install water hammer arrestors, valves, air vents and other appurtenances in accessible locations, or provide access doors.
Y. Provide unions at 2-1/2" and smaller equipment connections. Provide flanges at larger equipment connections.
AA. Provide straight pipe with a minimum length of six times the pipe diameter upstream of pumps.
BB. Provide UL listed fire stopping, installed per manufacturer's recommendations, where pipes pass through fire rated construction.
CC. All horizontal waste piping and horizontal rainwater piping is to be at a 2% slope unless otherwise noted on the Drawings.
DD. Seal all vapor barriers and insulation jacketing watertight, per manufacturer's instructions. Use approved materials to seal ends of insulation watertight.
EE. Ends of insulation shall be tightly butted together and held in place with bands at a max of 24" on centers.
FF. Insulate all piping components, including but not limited to flexible connectors/expansion joints, valves, pumps, fittings and appurtenances.
GG. Test plugs must be installed to clear insulation.
HH. Valve handles shall be installed to clear insulation/jacket by 3/4" (minimum).
II. Finish insulation neatly at pipe supports.
JJ. Provide pre-molded fitting covers for all pumps, fittings, valves and appurtenances. Fitting covers must be easily removable for access to equipment and valves.
KK. All insulation jacketing tape and band seals to be placed in such a way as to be hidden when viewed from the most traveled locations. Insulation located outdoors where exposed to weather, must be installed with the jacket seams on bottom of piping. All banding and support shields are to be installed with equal spacing and in a uniform manner. Applications of caulking at any joints are to be kept at an absolute minimum.
LL. Insulate and jacket cold water piping, outside the building, where exposed to exterior ambient conditions, for freeze protection.
MM. At accessible flush valve pipe descents, to avoid conflict with the grab bars, adjust cold water rough-in elevation to verify that the top of the flush valve clears the bottom of the grab bar while maintaining the 6" minimum critical level mark on the vacuum breaker, verify with manufacturer.
NN. All piping in trenches shall have bedding from 6 inches below pipe to 4 inches above pipe. Bedding material to be 1/4 inch min. fill sand by Canyon Rock Company or approved equivalent. Bedding must be clean and compacted so as to protect and uniformly support the pipe enclosure. Provide backfill above bedding. Backfill material specification is provided by Owner. Prior to construction - verify backfill material specification with General Contractor. Bedding and backfill materials must not contain boulders, cinder fill, construction debris or materials that will damage or break the piping or cause corrosive action. Provide bedding material submittal for review and approval.
OO. Review Geotechnical report for additional backfill requirements.

3.2 REQUIREMENTS FOR ACCEPTANCE

- A. Make arrangements with the Engineer and the Building Inspector to observe the Work prior to covering or enclosing the work.
B. Clean and flush all piping systems and equipment to remove all contaminants.
C. Sterilize all domestic hot and cold water piping with chlorine solution for a minimum of 24 hours. The residual chlorine concentration shall not be less than 50 PPM. Thoroughly flush the piping systems after the sterilization is completed. Coordinate times of sterilization with the Owner. Provide warning signs during sterilization to prevent system use during sterilization. Provide documentation that indicates when the sterilization was completed.
D. Testing, Adjusting and Reporting: Operate all equipment that is a part of this Division and report the following:
1. Pumps: motor amp, pump rotation direction, differential pressure.
2. Water heaters: Hot water supply temperature.
E. Test, adjust and balance all pumps and pumping systems and hydronic piping systems in accordance with AABC National Standards for Field Measurements and Instrumentation. Testing shall be done by an AABC licensed TAB Contractor or independent certified NEBB Certified which is not affiliated with a Mechanical Contractor, design Engineer or equipment manufacturer. Provide test reports for approval. The test reports shall include, but not be limited to the following information:
1. Operating and nameplate data for all pumps and pumping equipment; including motor speed and motor amps.
2. Water flow rates and pressures at all pumps, water heaters and through all control valves.
3. Water flow rates and pressures at all pumps, water heaters and through all control valves.

- F. Test the plumbing systems as outlined below. Isolate all equipment, instruments, and gauges that are not rated for test pressure. If the piping fails the test, repair faulty sections and retest. Provide documentation that all piping systems passed pressure test, indicate day of test and ambient temperature. Piping must be pressure tested and inspected prior to being installed.
1. DWV systems: Test with a 10 foot water head for a minimum of one hour.
2. Water lines: Test with water at 100 PSIG for 24 hours.
G. An "as-built" red lined drawing set shall be kept on site and updated daily. These "as-built" shall include the full scope of the design documents and specifications in this section of work. For underground systems include piping depth/invert elevations and exact dimension to grid lines for underground mains. Submit "As-built" to General Contractor and Owner.
H. Provide operation and maintenance manuals on all equipment include equipment warranties certificates.

- I. Instruct the Owner on how to operate and maintain all systems and equipment that are a part of this Division.
END OF SECTION



AGRICULTURAL SCIENCE BLDG

BEAR CREEK HIGH SCHOOL

10655 THORTON RD STOCKTON, CA 95209

INCREMENT 2

Table with 3 columns: ISSUE, DATE, DESCRIPTION

Table with 3 columns: PROJECT NUMBER, DRAWN BY, DESIGNER, PLOT DATE

SHEET TITLE: PLUMBING SPECIFICATIONS

SHEET #: P701

APPLICABLE CODES & STANDARDS REFERENCES

PARTIAL LIST OF APPLICABLE CODES AS OF January 1, 2023*
 2022 California Administrative Code (CAC), Part 1, Title 24 CCR
 2022 California Building Code (CBC), Part 2, Title 24 CCR
 (2021 International Building Code, Vol. 1 & 2, and 2022 California amendments)
 2022 California Electrical Code (CEC), Part 3, Title 24 CCR
 (2020 National Electrical Code and 2021 California Amendments)
 2022 California Mechanical Code (CMC), Part 4, Title 24 CCR
 (2021 International Mechanical Code and 2022 California amendments)
 2022 California Plumbing Code (CPC), Part 5, Title 24 CCR
 (2021 International Plumbing Code and 2022 California amendments)
 2022 California Energy Code (CEC), Part 6, Title 24 CCR
 2022 California Fire Code (CFC), Part 9, Title 24 CCR
 (2021 International Fire Code and 2022 California Amendments)
 2022 California Existing Building Code (CEBC), Part 10, Title 24 CCR
 (2021 International Existing Building Code and 2022 California Amendments)
 2022 California Green Building Standards Code (CALGreen), Part 11, Title 24 CCR
 2022 California Referenced Standards Code, Part 12, Title 24 CCR
 Title 19 CCR, Public Safety, State Fire Marshal Regulations
 2016 ASME A17.1/CSA B44-13 Safety Code for Elevators and Escalators (per 2022 CBC Part 2 Ch 35)
 Note: Cal/OSHA Elevator Unit enforces CCR Title 8 and uses the 2004 ASME A17.1 by adoption

PARTIAL LIST OF APPLICABLE STANDARDS
 NFPA 13 - Standard for the Installation of Sprinkler Systems (CA amended)..... 2022 Edition
 NFPA 14 - Standard for the Installation of Standpipe and Hose Systems (CA amended)..... 2019 Edition
 NFPA 17 - Standard for Dry Chemical Extinguishing Systems..... 2017 Edition
 NFPA 17A - Standard for Wet Chemical Extinguishing Systems..... 2017 Edition
 NFPA 20 - Standard for the Installation of Stationary Pumps for Fire Protection..... 2016 Edition
 NFPA 22 - Standard for Water Tanks for Private Fire Protection..... 2013 Edition
 NFPA 24 - Standard for the Installation of Private Fire Service Mains and Their Appurtenances (CA amended)..... 2019 Edition
 NFPA 72 - National Fire Alarm and Signaling Code (CA amended)..... 2022 Edition
 NFPA 80 - Standard for Fire Doors and Other Opening Protectives..... 2016 Edition
 NFPA 2001 - Standard on Clean Agent Fire Extinguishing Systems (CA amended)..... 2018 Edition
 UL 300 - Standard for Fire Testing of Fire Extinguishing Systems for Protection of Commercial Cooking Equipment..... 2005 (R2010)
 UL 464 - Audible Signaling Devices for Fire Alarm and Signaling Systems, Including Accessories..... 2003 Edition
 UL 521 - Standard for Heat Detectors for Fire Protective Signaling Systems..... 1999 Edition
 UL 1971 - Standard for Signaling Devices for the Hearing Impaired..... 2002 (R2010)
 ICC 300 - Standard for Bleachers, Folding and Telescopic Seating, and Grandstands..... 2017 Edition

For a complete list of applicable NFPA standards refer to 2022 CBC (SFM) Chapter 35 and California Fire Code Chapter 80.
 See California Building Code Chapter 35 for State of California amendments to the NFPA Standards.

*All parts of the 2022 California Building Code become effective January 1, 2023 except the effective date for the use of the 2022 Building Energy Efficiency Standards (Title 24, Part 1, Chapter 10) is January 8, 2023 and the effective date for the use of the California Administrative Code (Title 24, Part 1, Chapter 4) is March 5, 2022.

ANCHORAGE & BRACING NOTES

M/E/P Component Anchorage Note
 All mechanical, plumbing, and electrical components shall be anchored and installed per the details on the DSA approved construction documents. 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 Chapter 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 or more 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 ductwork, piping, and conduit. Flexible connections must allow movement in both transverse and longitudinal directions:

- 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 the component.
- 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 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. When 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 jobsite 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 Systems (E):

- MP MD PP E - Option 1: Detailed on the approved drawings with project specific notes and details.
 MP MD PP E - Option 2: Shall comply with the applicable OSHPD Pre-Approval (OPMR) # _____.

ELECTRICAL DEVICES

- JUNCTION BOX - WALL MOUNTED -18" A.F.F. U.O.N.
- JUNCTION BOX - FLOOR MOUNTED
- JUNCTION BOX - CEILING MOUNTED
- POWER OUTLET, DUPLEX - WALL MOUNTED -18" A.F.F. U.O.N.
- POWER OUTLET, DEDICATED DUPLEX - WALL MOUNTED -18" A.F.F. U.O.N.
- POWER OUTLET, SWITCHED DUPLEX - 18" A.F.F. U.O.N.
- POWER OUTLET, FOURPLEX - WALL MOUNTED - 18" A.F.F. U.O.N.
- POWER OUTLET, DEDICATED FOURPLEX - WALL MOUNTED - 18" A.F.F. U.O.N.
- POWER OUTLET, SIMPLEX - WALL MOUNTED -18" A.F.F. U.O.N.
- POWER OUTLET, DUPLEX - FLOOR MOUNTED, FLUSH LID U.O.N.
- POWER OUTLET, DEDICATED DUPLEX - FLOOR MOUNTED, FLUSH LID U.O.N.
- POWER OUTLET, FOURPLEX - FLOOR MOUNTED, FLUSH LID U.O.N.
- POWER OUTLET, DEDICATED FOURPLEX - FLOOR MOUNTED, FLUSH LID U.O.N.
- POWER OUTLET, DUPLEX - CEILING MOUNTED
- POWER OUTLET, DEDICATED DUPLEX - CEILING MOUNTED
- POWER OUTLET, FOURPLEX - CEILING MOUNTED
- POWER OUTLET, DEDICATED FOURPLEX - CEILING MOUNTED

CONTROLS

- SWITCH, SINGLE CONTROL - WALL MOUNTED -42" A.F.F. U.O.N.
- SWITCH, 3-WAY CONTROL - WALL MOUNTED -42" A.F.F. U.O.N.
- SWITCH, 4 WAY CONTROL - WALL MOUNTED -42" A.F.F. U.O.N.
- SWITCH, MOTOR RATED - NOTED MOUNTING
- SWITCH, DIMMER CONTROL - WALL MOUNTED -42" A.F.F. U.O.N.
- SWITCH, DIMMER WITH VACANCY CONTROL - WALL MOUNTED -42" A.F.F. U.O.N.
- SWITCH, VACANCY CONTROL - SINGLE POLE - WALL MTD -42" A.F.F. U.O.N.
- SWITCH, VACANCY CONTROL - DUAL POLE - WALL MOUNTED -42" A.F.F. U.O.N. (FAN CONTROL SHALL BE PROVIDED WITH TIME DELAY)
- LV SWITCH, UP TO FOUR ZONES, EACH WITH ON/OFF AND DIMMER CONTROL - WALL MOUNTED -42" A.F.F. U.O.N.
- LV SCENE SWITCH - WALL MOUNTED -42" A.F.F. U.O.N. (NUMBER OF SCENE BUTTONS AS INDICATED)
- LV MASTER CONTROL - WALL MOUNTED -42" A.F.F. U.O.N.
- LV VACANCY SENSOR CONTROL - CEILING MOUNTED
- LV OCCUPANCY SENSOR CONTROL - CEILING MOUNTED
- LV DAYLIGHTING SENSOR CONTROL - DUAL ZONE - CEILING MOUNTED

LOW VOLTAGE

- CEILING SPEAKER: PROVIDE BACKBOX AND 3/4" CONDUIT STUBBED INTO ACCESSIBLE SPACE ABOVE CEILING. VERIFY MOUNTING HEIGHT AND BACKBOX REQUIREMENTS WITH LOW VOLTAGE DRAWINGS BY TK/SC COLLABORATIVE.
- WALL MOUNTED SPEAKER: PROVIDE BACKBOX AND 3/4" CONDUIT STUBBED INTO ACCESSIBLE SPACE ABOVE CEILING. VERIFY MOUNTING HEIGHT AND BACKBOX REQUIREMENTS WITH LOW VOLTAGE DRAWINGS BY TK/SC COLLABORATIVE.
- WP EXTERIOR SPEAKER -18" A.F.F. U.O.N., 3/4" CONDUIT STUBBED INTO ACCESSIBLE SPACE ABOVE CEILING
- WALL MOUNTED, BATTERY POWERED CLOCK (OFC). VERIFY MOUNTING HEIGHT WITH THE AOR PRIOR TO INSTALLATION.
- DATA OUTLET - WALL MOUNTED -18" A.F.F. (OR HEIGHT AS NOTED)
- VOICE/DATA OUTLET - WALL MOUNTED -18" A.F.F. (OR HEIGHT AS NOTED)
- VOICE OUTLET - WALL MOUNTED -18" A.F.F. (OR HEIGHT AS NOTED)
- DATA OUTLET - FLOOR MOUNTED
- VOICE OUTLET - FLOOR MOUNTED
- VOICE/DATA OUTLET - FLOOR MOUNTED
- DATA OUTLET - CEILING MOUNTED
- WAP DATA OUTLET - CEILING MOUNTED FOR WIRELESS ACCESS POINT.
- 4-GANG IN-WALL AV CONNECTION ENCLOSURE (HUBBELL #NSAV124M) WITH (1) RECEPTACLE POWER KIT MOUNTED AT +60" AT FLAT PANEL LOCATION. PROVIDE 1" CONDUIT TO ACCESSIBLE CEILING SPACE

CIRCUITING

- CIRCUIT - CONCEALED
- CIRCUIT - EXPOSED
- CIRCUIT - UNDER FLOOR, GROUND OR SLAB
- CIRCUIT - HOME RUN
- CIRCUIT - STUB OUT
- CIRCUIT - STUB DOWN
- CIRCUIT - STUB UP
- CIRCUIT - COMPLETE CONNECTION

EQUIPMENT

- DISCONNECT, NON-FUSED
- DISCONNECT, WITH FUSE
- STARTER, NON-FUSED
- STARTER, WITH FUSE
- DIVISION 15 FAN
- STARTER, WITH CIRCUIT BREAKER
- PANELBOARD FLUSH
- PANELBOARD SURFACE
- ENCLOSURE FLUSH
- ENCLOSURE SURFACE
- DISTRIBUTION BOARD
- METER SECTION
- MOTOR
- MTTB
- SITE PULL BOX / VAULT

MISCELLANEOUS

- DEMO KEYED NOTE TAG
- ELECTRICAL EQUIPMENT TAG
- KEYED NOTE TAG
- MECHANICAL EQUIPMENT TAG
- REVISION DELTA
- EQUIPMENT MANUFACTURER'S IDENTIFICATION NUMBER
- DETAIL REFERENCE
- DETAIL REFERENCE
- PLAN NORTH ARROW

LIGHT FIXTURES

- LIGHT FIXTURE, 1 x 4 - PENDANT MOUNTED
- LIGHT FIXTURE, 1 x 8 - PENDANT MOUNTED
- LIGHT FIXTURE, 1 x 4 - RECESSED MOUNTED
- LIGHT FIXTURE, 1 x 8 - RECESSED MOUNTED
- LIGHT FIXTURE, 1 x 4 - SURFACE MOUNTED
- LIGHT FIXTURE, 1 x 8 - SURFACE MOUNTED
- LIGHT FIXTURE, 2 x 2 - RECESSED MOUNTED
- LIGHT FIXTURE, 2 x 4 - RECESSED MOUNTED
- LIGHT FIXTURE, 2 x 2 - SURFACE MOUNTED
- LIGHT FIXTURE, 2 x 4 - SURFACE MOUNTED
- LIGHT FIXTURE, 4' STRIP - SURFACE MOUNTED
- LIGHT FIXTURE, 8' STRIP - SURFACE MOUNTED
- LIGHT FIXTURE, EXIT WITH EGRESS - WALL/CEILING MOUNTED
- LIGHT FIXTURE, EGRESS - WALL MOUNTED
- LIGHT FIXTURE, EXIT DOUBLE FACE - CEILING MOUNTED
- LIGHT FIXTURE, EXIT DOUBLE FACE - WALL MOUNTED
- LIGHT FIXTURE, EXIT SINGLE FACE - CEILING MOUNTED
- LIGHT FIXTURE, EXIT SINGLE FACE - WALL MOUNTED
- LIGHT FIXTURE - PENDANT MOUNTED
- LIGHT FIXTURE - RECESSED MOUNTED
- LIGHT FIXTURE, WALL WASH - RECESSED MOUNTED
- LIGHT FIXTURE - SURFACE MOUNTED
- LIGHT FIXTURE - WALL MOUNTED
- LIGHT FIXTURE - POLE MOUNTED
- LIGHT FIXTURE, NO ARM - POLE MOUNTED OR BOLLARD

SECURITY

- SECURITY MOTION SENSOR -18" AFF TO TOP OF SINGLE GANG BOX, 3/4" CONDUIT STUBBED TO ACCESSIBLE SPACE ABOVE CEILING
- INTRUSION ALARM KEYPAD -44" TO TOP OF SINGLE GANG BOX, 3/4" CONDUIT STUBBED TO ACCESSIBLE SPACE ABOVE CEILING
- SINGLE GANG BOX FOR SECURITY CAMERA, 3/4" CONDUIT TO ACCESSIBLE SPACE ABOVE CEILING, MOUNT HIGH ON WALL, VERIFY BOX LOCATIONS AND HEIGHTS WITH DISTRICT PRIOR TO ROUGH-IN
- SECURITY DOOR CONTACT: 1/2" CONDUIT FROM DOOR FRAME STUBBED TO ACCESSIBLE SPACE ABOVE CEILING

DIAGRAMS

- ATS
- PANEL 1LA
- CIRCUIT BREAKER
- FUSE
- UTILITY FUSE
- GROUND ROD
- METER
- METER CT
- TRANSFORMER

MISCELLANEOUS

- DEMO KEYED NOTE TAG
- ELECTRICAL EQUIPMENT TAG
- KEYED NOTE TAG
- MECHANICAL EQUIPMENT TAG
- REVISION DELTA
- EQUIPMENT MANUFACTURER'S IDENTIFICATION NUMBER
- DETAIL REFERENCE
- DETAIL REFERENCE
- PLAN NORTH ARROW

ADA REQUIREMENTS

- A. ALL HEIGHTS CALLED OUT ON PLANS ARE TO CENTERLINE OF DEVICE, U.O.N.
- B. FOLLOW ALL ADA REQUIREMENTS FOR DEVICE MOUNTING:
 - MAX UNOBSTRUCTED FORWARD REACH 48-INCHES TO TOP OF DEVICE.
 - MIN UNOBSTRUCTED FORWARD REACH 15-INCHES TO BOTTOM OF DEVICE.
 - MAX OBSTRUCTED FORWARD REACH 44-INCHES TO TOP OF DEVICE.
 - MAX OBSTRUCTED SIDE REACH 46-INCHES TO TOP OF DEVICE.

ELECTRICAL SHEET INDEX

- E001 ELECTRICAL LEGEND AND ABBREVIATIONS
- E002 ELECTRICAL SHEET SPECIFICATIONS
- E111 ELECTRICAL PLAN
- E112 ELECTRICAL ROOF PLAN
- E121 LIGHTING PLAN
- E122 LIGHTING PHOTOMETRIC PLAN
- E511 DETAILS - ELECTRICAL
- E512 DETAILS - ELECTRICAL
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- E601 DIAGRAMS - SITE ELECTRICAL
- E701 SCHEDULES

ABBREVIATIONS

A	AMPERES	IMC	INTERMEDIATE METAL CONDUIT
AC	ALTERNATING CURRENT	JB	JUNCTION BOX
AF	AMP FRAME	KV	KILO VOLT
AFD	ADJUSTABLE FREQUENCY DRIVE	KVA	KILO VOLT-AMP
A.F.F.	ABOVE FINISHED FLOOR	KW	KILO WATT
AFG	ABOVE FINISHED GRADE	KWH	KILO WATT-HOUR
AHJ	AUTHORITY HAVING JURISDICTION	LPS	LOW PRESSURE SODIUM
AHU	AIR HANDLING UNIT	LTG	LOW VOLTAGE LIGHTING
AIC	AMPS INTERRUPTING CAPACITY	LV	LOW VOLTAGE
AL	ALUMINUM	MAX	MAXIMUM
ANN	ANNUNCIATOR	MC	METAL-CLAD
APPROX	APPROXIMATE	MCC	MOTOR CONTROL CENTER
ARF	ABOVE RAISED FLOOR	MCP	MOTOR CIRCUIT PROTECTOR
ATS	AUTOMATIC TRANSFER SWITCH	MFR, MFOR	MANUFACTURER
AWG	AMERICAN WIRE GAUGE	MH	METAL HALIDE
BAT	BATTERY	MIN	MINIMUM
BFG	BELOW FINISH GRADE	MLO	MAIN LUGS ONLY
CATV	CABLE TELEVISION	MDP	MAIN DISTRIBUTION BOARD
CL	CENTERLINE	MSB	MAIN SWITCHBOARD
CND	CONDUIT	MTD	MOUNTED
CB	CIRCUIT BREAKER	MTS	MANUAL TRANSFER SWITCH
CCTV	CLOSED CIRCUIT TELEVISION	MV	MEDIUM VOLTAGE
CKT	CIRCUIT	NI	NEW
CO	CONDUIT ONLY	N	NEUTRAL
COMM	COMMUNICATIONS	N/A	NOT APPLICABLE
CONST	CONSTRUCTION	NC	NORMALLY CLOSED
CONT	CONTINUED	NIC	NOT IN CONTRACT
CP	CONTROL PANEL	NL	NIGHT LIGHT
CPT	CONTROL POWER TRANSFORMER	NO	NORMALLY OPEN
CT	CURRENT TRANSFORMER	NTS	NOT TO SCALE
CU	COPPER	ON	ON CENTER
DC	DIRECT CURRENT	PNL	PANEL
DWG	DRAWING	PT	POTENTIAL TRANSFORMER
(E)	EXISTING	PVC	POLYVINYL CHLORIDE
EA	EACH	PULL	PULL BOX, ELECTRICAL
EF	EXHAUST FAN	R	RADIUS
EGU	ENGINE GENERATOR UNIT	RECEPT	RECEPTACLE, OUTLET
EM	EMERGENCY LIGHT W/BATTERY BACKUP	REQD	REQUIRED
EMT	ELECTRICAL METALLIC CONDUIT	RSS, RSG	RIGID GALVANIZED STEEL CONDUIT
ENT	ELECTRICAL NON-METALLIC CONDUIT	RTU	REMOTE TERMINAL UNIT
EP	EXPLOSION PROOF	SD	STORM DRAIN
EQ	EQUAL	SP	SPACE SPARE
EQUIV	EQUIVALENT	SS	STAINLESS STEEL
EWC	ELECTRIC WATER COOLER	STD	STANDARDS, APPLICABLE
(F)	FUTURE	SW	SWITCH
FA	FIRE ALARM	SWBD	SWITCHBOARD
FACP	FIRE ALARM CONTROL PANEL	SWGR	SWITCHGEAR
FAN	FAN COIL	T	THERMOSTAT
FDR	FEEDER	TP	TAMPER PROOF
FLUOR	FLUORESCENT	TV	TELEVISION
FU	FUSE	TYS	TRANSIENT VOLT. SURGE SUPPRESSOR
G, GND	GROUND	TYP	TYPICAL
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	UF	UNDER FLOOR
GFI	GROUND FAULT INTERRUPTER	UG	UNDER GROUND
GFR	GROUND FAULT RELAY	U.O.N.	UNLESS OTHERWISE NOTED
HID	HIGH INTENSITY DISCHARGE	UPS	UNINTERRUPTABLE POWER SUPPLY
HO	CONTROL SWITCH, "HAND - OFF"	V	VOLT
HOA	CONTROL SWITCH, "HAND - OFF- AUTO"	VA	VOLT-AMP
HOR	CONTROL SWITCH, "HAND - OFF- REMOTE"	VFD	VARIABLE FREQUENCY DRIVE
HP	HORSE POWER	W/	WITH
HPS	HIGH PRESSURE SODIUM	WO	WITHOUT
HV	HIGH VOLTAGE	WH	WATER HEATER
HVAC	HEATING, VENTILATION & AIR-COND.	WHM	WATT-HOUR METER
IC	INTERRUPTING CAPACITY	WP	WEATHER PROOF
IG	ISOLATED GROUND	XFMR	TRANSFORMER



AGRICULTURAL SCIENCE BLDG
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 STOCKTON, CA 95209
INCREMENT 2

ISSUE	DATE	DESCRIPTION

PROJECT NUMBER: ----
 DRAWN BY: Author
 DESIGNER: Designer
 PLOT DATE: 11-06-23

SHEET TITLE:
ELECTRICAL LEGEND AND ABBREVIATIONS

SHEET #
E001

ELECTRICAL SPECIFICATIONS 26 00 00

WIRING NOTES

- IF MORE THEN 3 CURRENT CARRYING CONDUCTORS ARE INSTALLED PER RACEWAY. CONTRACTOR SHALL DEMONSTRATE COMPLIANCE WITH NEC TABLE 310.15(B) (3) (a).
 - MAX (9) #12 AWG FOR 20A CIRCUITS.
 - MAX (8) #10 AWG FOR 30A CIRCUITS.
 - MAX (6) #8 AWG FOR 40A CIRCUITS.
- FOR BRANCH CIRCUITS DO NOT EXCEED NEC CONDUIT FILL REQUIREMENTS. PROVIDE MAX:
 - MAX (9) #12 AWG THHN PER 3/4" EMT CONDUIT
 - MAX (6) #10 AWG THHN PER 3/4" EMT CONDUIT.
 - MAX (4) #8 AWG THHN PER 3/4" EMT CONDUIT.
 - MAX (3) #6 AWG THHN PER 3/4" EMT CONDUIT.
 - MAX (2) #4 AWG THHN PER 3/4" EMT CONDUIT.
 - MAX (3) #4 AWG THHN PER 1" EMT CONDUIT.
 - MAX (2) #2 AWG THHN PER 1" EMT CONDUIT.
- FOR 20A CIRCUITS PROVIDE MINIMUM:
 - UP TO 75FT - #12 AWG
 - 75FT TO 150FT - #10 AWG
 - 150FT TO 250FT - #8 AWG
- ADHERE TO VOLTAGE DROP LIMITS AS SHOWN BELOW:

SUMMARY OF VOLTAGE DROP LIMITS

CIRCUIT VOLTS (V)	2% VOLTAGE DROP (V)	3% VOLTAGE DROP (V)	TOTAL LOSS (V)
120	2.4	3.6	6.0
208	4.2	6.2	10.4
240	4.8	7.2	12.0
277	5.5	8.3	13.9
480	9.6	14.4	24.0

VOLTAGE DROP FOR COMMON COPPER WIRE GAUGES AND CURRENT LOADS

WIRE	CIRCUIT AMPS	MAXIMUM FEEDER LENGTH					MAXIMUM BRANCH CIRCUIT LENGTH				
		120	208	240	277	480	120	208	240	277	480
14	12	39	67	78	90	156	58	101	117	135	233
12	16	46	80	93	107	185	69	120	139	160	278
10	24	48	83	96	111	192	72	125	144	166	288
8	32	57	99	115	132	229	86	149	172	199	344
6	40	73	127	146	169	293	110	190	220	253	439
4	52	89	154	173	206	356	134	232	267	309	535
2	72	103	178	206	237	412	154	267	309	356	617
0	96	123	212	245	283	490	184	319	368	424	735
00	108	137	238	274	317	549	206	357	412	475	823
0000	144	163	283	327	377	654	245	425	490	566	980
250 (kcmil)	164	170	294	340	392	679	255	441	509	588	1019
300	184	181	314	362	414	725	272	471	543	627	1067
350	200	195	338	390	450	779	292	506	584	675	1189
500	248	224	388	448	517	896	336	582	672	776	1344

ELECTRICAL

- 1.01- RELATED DOCUMENTS
 - The General Conditions, Supplementary Conditions and Division 1 apply to the electrical work.
- 1.02- WORK INCLUDED
 - Work included in this section: All materials, labor, equipment, services, and incidentals necessary to install the Electrical Work as shown on the drawings and as specified hereafter, including, but not limited to the following:
 - Electric service as indicated on the drawings.
 - Telephone service provisions as detailed on the drawings.
 - Cable TV service provisions as detailed on the drawings.
 - Distribution system, including main switchboard, panelboards, and feeders.
 - Branch circuit wiring, wiring devices and connections to all equipment requiring electrical service.
 - Lighting fixtures with hangers, anchors and supports. Lighting Controls.
 - Electrical equipment grounding system.
 - Telecommunication boxes, outlets, raceways and cabletrays.
 - Mechanical equipment power and control connections as stated in the mechanical and electrical specifications and as shown on the mechanical and electrical drawings.
 - Fire alarm system shall be Design Build by a Fire Alarm contractor.
 - Security and access control.
 - Raceways, outlet boxes and power connections for security and access control system. Coordinate all requirements with Owner.
 - Sleeves, inserts and blocking in cast concrete as required for work in this section.
 - All required incidental work, such as excavating and backfilling, roof flashing, and testing.
 - Any other electrical work as might reasonably be implied as required, even though not specifically mentioned herein or shown on the drawings.

- 1.03- INCORPORATED DOCUMENTS
 - Requirements of the general conditions, supplementary conditions, and division 1 sections apply to all work in this section, unless modified herein.
 - Published specifications, standard tests or recommended methods of trade, industry or government organizations apply to work of this section where cited by abbreviations noted below, unless modified herein.

1. NATIONAL ELECTRICAL CODE, LATEST EDITION, (NEC).
2. NEMA STANDARDS
3. UNDERWRITERS' LABORATORIES, INC. (UL).
4. LOCAL UTILITY COMPANY REGULATIONS.
5. NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

- 1.04- CONDITIONS AT SITE:
 - Visit to site is required of all bidders prior to submission of bid. All will be held to have familiarized themselves with all discernible conditions and no extra payment will be allowed for work required because of these conditions, whether specifically mentioned or not.

- 1.05- QUALITY ASSURANCE
 - Conformance
 - All work shall conform to the applicable requirements of Article 1.03 above.
 - The Contractor shall notify the Architect, prior to submission of bid, about any part of the design which fails to comply with above-mentioned requirements.
 - If after contract is awarded, no minor changes and additions are required by aforementioned authorities, even though such work is not shown on drawings or covered in specifications, they shall be included at Contractor's expense.
 - Coordination:
 - The Contractor shall become familiar with the conditions at the job site, and with the drawings and specifications as shown on the installation of the electrical work to conform with the existing conditions and that shown and specified so as to provide the best possible assembly of the combined work of all trades.
 - The Contractor shall work out in advance all "tight" conditions, involving all trades and if found necessary, supplementary drawings shall be prepared by this Contractor, for the Architect's approval, before work proceeds in these areas. No additional costs will be incurred for work which must be relocated due to conflicts with the work of other trades.

- 1.06- SUBMITTALS
 - Contract Data:
 - Comply with the General Provisions of the Contract.
 - Within 15 days after award of the Contract, submit:
 - Complete material list of all items proposed to be furnished and installed under this Section, including but not limited to the following items: Circuit breakers, lighting fixtures, conduit, devices, enclosures, etc.
 - Manufacturer's specifications and other data required to demonstrate compliance with the specified requirements.
 - Electric non-metallic tubing may be used from data/info outlet to above non plenum ceiling only, otherwise it is unacceptable.
 - Between light fixtures / light switches (not for homerun)
 - Between general 20A receptacles within walls (not for homerun)
 - Cable must be the same size as the IMC or EMT conduit to which it is connected. Both the flexible metal conduit and it's fittings are to be listed for grounding. A green grounding conductor shall be installed. All connections are to be of a NEMA approved type.
 - Electric non-metallic tubing may be used from data/info outlet to above non plenum ceiling only, otherwise it is unacceptable.
 - Locations subject to Corrosive Atmosphere: Provide PVC coated, galvanized rigid steel or intermediate steel conduit. Provide PVC coated cast or sheet metal boxes.
 - Hazardous Locations (Per NEC Article 500): Galvanized rigid steel conduit. Cast iron boxes with threaded hubs for conduit entry. Conduit seals.
 - Field Tests: Performance tests as specified for specific equipment.
 - When series rated circuit breakers are used, provide a letter from the manufacturer of the equipment confirming that U.L. series rating exists for all protective devices. State the available fault current from the Utility Company and indicate that the overcurrent devices exceed the available fault current at the respective point of protection.

- 1.07- MATERIALS
 - Materials of the same type or classification, used for the same purpose, shall be the product of the same manufacturer.

- 1.08- ACCEPTABLE MANUFACTURERS
 - Materials shall be of make mentioned elsewhere in this specification. All materials shall be the best of their several kinds, perfectly new and approved by the Underwriters' Laboratories.
 - Where material, equipment, apparatus or other products are specified by manufacturer, brand name, type or catalog number, such designation is to establish standards of desired quality, style and utility and shall be the basis of the bid. Materials so specified shall be furnished under the contract unless changed by written approval of the Owner's Representative. Where two or more designations are listed, choice shall be optional with this Contractor, but this Contractor must submit his choice for final approval.

- 1.09- DELIVERY, STORAGE AND HANDLING
 - Protection: Use all means necessary to protect the materials of this Section before, during, and after installation and to protect the work and materials of all trades.
 - Delivery and Storage: Deliver all materials to the job site in their original containers with all labels intact and legible at time of use. Store in strict accordance with approved manufacturers' recommendations.
 - Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.
 - This Contractor shall personally, or through an authorized representative, check all materials upon receipt for conformance with approved shop drawings and/or plans and specifications.

- 1.10- SCHEDULING/SEQUENCING
 - Place orders for all equipment in time to prevent any delay in construction schedule or completion of project. If any materials or equipment are not ordered in time, additional charges made by equipment manufacturers to complete their equipment in time to meet the construction schedule, together with

any special handling charges, shall be borne by this Contractor.

- 1.11- REQUIREMENTS
 - The contract drawings indicate the extent and general arrangements of the conduit wiring systems, etc. If any departures from the contract drawings are deemed necessary by the Contractor, details of such departures and the reasons therefor shall be submitted as soon as practicable, and within 10 days after award of the electrical contract.
 - UNLESS MATERIAL LIST AND DATA IS RECEIVED AS COMPLETE AND ALL INCLUSIVE SUBMITTAL WITHIN THE STIPULATED TIME ALL ITEMS SHALL BE PROVIDED AS SPECIFIED-WITH NO DEVIATIONS PERMITTED.
 - Where not accessible on the drawings:
 - C Any and all additional costs incurred by the substitution of electrical material or equipment, or installation thereof, whether architectural, structural, plumbing, mechanical or electrical, shall be borne by the Contractor under this section.

- 1.12- IDENTIFICATION
 - Switchboards, feeder circuit breakers in switchboards, panels, disconnect switches, motor starters and motor disconnect switches, cabinets, and other apparatus used for the operation of, or control of circuits, appliances or equipment, shall be properly identified by means of engraved laminated plastic descriptive nameplates mounted on apparatus using stainless steel screws. Nameplates shall have white letters with black background and be submitted to the Architect for approval. Careholders in any form are not acceptable.
 - Each branch circuit of panelboards to have a permanently fixed number with directory, mounted under ceiling on inside of cabinet door, showing circuit numbers, room number feed and typewritten description of equipment supplied by breakers.
 - Each Panelboard, Switchboard and Motor Control Center shall be provided with an Arc-Flash warning label per NEC requirements.

PART 2 - PRODUCTS:

- 2.01- GENERAL
 - Materials shall be new, packed in original containers, installed and turned over to the Owner free of defects.
 - Materials shall bear Underwriters' Laboratory label.
 - Furnish equipment and materials for any one system by same manufacturer.

2.02- MATERIALS

- Conduit
 - Conduit shall be delivered to the site of construction in the original bundles. Each length shall bear the label of the National Board of Fire Underwriters. All conduit subjected to rough usage while on the job, before installation, shall be removed from the premises upon request.
 - Raceway and boxes located as indicated on drawings and at other locations required for splices, taps, wire pulling, equipment connections, and compliance with regulatory requirements. Raceway and boxes are shown in approximate locations unless dimensioned. Provide raceway to complete wiring systems.
 - Rigid Steel: Hot dipped galvanized, used exposed and in concrete slab, with completely watertight fittings.
 - Schedule 40" PVC shall be provided with code size minimum bare No. 12 ground wire with conductors in accordance with NEC 250-64.
 - All rigid steel conduit, couplings and elbows in soil or under membrane to be 1/2 tube wrapped with Scotch #50 tape and threaded ends coated with red lead prior to installation of couplings.
 - Use flexible conduit for all motor connections; Flexible metal type provide with code size (minimum length of ground wire is all flexible conduit).
 - Conduit Bends - Long Radius.
 - Provide conduit seals at all concrete slab penetrations.
 - Contractor shall seal any existing concrete slab before core drilling.
 - Flexible Conduit: Hot dipped galvanized rigid steel or intermediate steel conduit. Cast iron boxes with threaded hubs for conduit entry. Conduit seals.
- Installation:
 - Outdoor Locations:
 - Above Grade: Provide rigid steel conduit. Provide cast metal outlet, pull, and junction boxes.
 - In Soil: Provide Sched 40 or 80 PVC with Sched 80 PVC elbows (in maninairgh moisture environments) or Rigid Steel elbows wrapped.
 - In Concrete: Provide hot dipped galvanized rigid steel or Sched 40 PVC Conduit.
 - Watertight and corrosion resistant fittings, couplings, boxes, etc.
 - Indoor Locations:
 - Electric non-metallic tubing may be used from data/info outlet to above non plenum ceiling only, otherwise it is unacceptable.
 - Locations subject to Corrosive Atmosphere: Provide PVC coated, galvanized rigid steel or intermediate steel conduit. Provide PVC coated cast or sheet metal boxes.
 - Hazardous Locations (Per NEC Article 500): Galvanized rigid steel conduit. Cast iron boxes with threaded hubs for conduit entry. Conduit seals.
- Conduit Fittings:
 - Fittings for rigid steel and flexible type conduit shall be of a type as required, malleable iron or steel, galvanized or sherardized.
- Outlet Boxes and Junction Boxes:
 - Galvanized one piece steel knockout type, unless otherwise noted, sizes as required for conditions at each outlet or as noted, not smaller than 2 inches wide by 4 inches high, ganged where multiple switch locations are indicated.
 - Outlet boxes located on exterior to be flush type (unless notes otherwise) with Weatherproof extra duty In-Use cover with lockable covers for receptacles.
 - All connectors from conduit to junction or outlet boxes shall have integral insulated throats.
 - Flush Service Floor Boxes: Multi-gang, cast iron, watertight, with corrosion resistant finish, exterior leveling screws, removable partitions, adjustable before and after concrete pour, with gasketed cover, meeting U.L. 514. Coordinate with Owner's Representative and provide brass or black carpet plate (per owners preference) when required.
 - Outlet boxes for telephone and cable TV outlets shall be 4" square minimum with single gang plaster rings.
- Power Wire and Cable:
 - Copper 90% conductivity. Solid copper for conductors smaller than No. 8 AWG. Stranded copper for conductors No. 8 AWG and larger. No conductors smaller than No. 12 AWG, except as noted.
 - Insulation type: #12 to #1 AWG: THHN for wet locations and THHN for dry locations. #10 through #40 AWG: XHHW (65 Mils), 250MCM and larger: XHHW (65 Mils).
 - Conductors No. 8 and larger and as otherwise noted on drawings shall be stranded.
 - Connections to devices from "through, feed" branch circuit conductors to be made with pigtail, with no interruption of the branch circuit conductors.
 - Neutral conductor identified by white outer covering band, with different trades of "EZ" numbering tags used where more than one neutral conductor is contained in a single unit.
 - Neatly arrange and "marin" wired in panels and other equipment with "T and B Ty-rap" or approved equal plastic type strapping.
 - Label each wire of each electrical system in each pull box, junction box, outlet box, terminal cabinet, and panelboard in which it appears with "EZ" numbering tags.
 - All wire and cable shall bear the Underwriters' Label, brought to the job in unbroken packages; wire color coded as follows:

Voltage	Phasing	A Phase	B Phase	C Phase	Neutral
120/240	1p3w	Black	Red	White	White
120/208	3p 4w	Black	Red	Blue	White
208	3w	Black	Red	Blue	Blue

277/480 3p 4w Brown Orange Yellow White

- 277/480 3p 4w Brown Orange Yellow White
- 480 3w Orange Yellow
- Telecommunication Wiring/ Receptacles:
 - Category 6 UTP cable. Unshielded, 4 twisted-pair, 24 AWG Copper, Category 6
 - Indoor Fiber Optic backbone cable: 12 strand, 62.5/125 mm, multi-mode, riser type, NEC rated OFNR/IT4, color coded, spaced 900 mm buffer coating
 - Telephone single port: Leviton 40644-DQW or equal.
 - For indoor TV outlets: single gang with cable TV jack.
 - Route in cable tray or on J-hooks (max 8ft on center where above accessible ceiling) or conduit (where not accessible).
- Receptacles: Leviton Decora style or equal, 125 volts, specification grade, conventional style, white color, unless otherwise noted:
 - 15A 3PG 125 volt duplex TP - Leviton 15325-W or equal
 - 15A 3PG 125 volt duplex TP with USB - Leviton 17632-W
 - 20A 3PG 125 volt duplex TP - Leviton 17825-W or equal
 - 20A 3PG 125 volt duplex TP with USB - Leviton 17832-W
 - 15A 3PG 125 volt duplex AFCI TP - Leviton AFTR1-W or equal
 - 20A 3PG 125 volt duplex AFCI TP - Leviton AFTR2-W or equal
 - 20A 3PG 125 volt duplex GFCI/AFCI TP - Leviton AGTR2-W or equal
 - 20A 3PG 125 volt duplex GFCI TP - Leviton GFWT2-W or equal
 - 15A 3PG 125 volt duplex TP Pop-up floor box - Leviton PPRTR (verly color)
 - 15A 3PG 125 volt duplex TP with USB Pop-up floor box - Leviton PFSU1 (verly color)
 - 20A 3PG 125 volt duplex TP Pop-up floor box - Leviton PPRTR (verly color)
 - 20A 3PG 125 volt duplex TP with USB Pop-up floor box - Leviton PFSU2 (verly color)
 - 20A 3PG 125 volt isolated ground receptacle: 3 wire, orange, color 11 G.
 - Special appliances receptacles: Match NEMA configuration of equipment plug.
- Plates: Leviton white, or equal, except as noted:
 - For indoor flush outlet boxes: Decora Style
 - Single gang: Leviton 80301-SW (snap) or equal
 - Double gang: Leviton 80309-SW (snap) or equal
 - Plates for surface mounted outlets: galvanized steel unless otherwise noted.
 - Exterior Locations - Weatherproof extra duty In-Use cover - Leviton 5980-ULC or equal.
- Motor Disconnect Switches and Safety Switches: Heavy Duty Type, cover interlocked with operating handle so that cover cannot be opened with switch in closed position and switch cannot be closed with cover in open position, 240 or 480 volt rating, as required or as noted on drawings, in Nema 1 enclosure indoors, 3R enclosure outdoors, or as otherwise noted. All motor circuit fuses shall be dual element type.
- Lugs and Connectors: Thomas and Betts "lock-ite", for No. 4 and larger wire; "Scotchlock" with insulator for No. 6 and smaller wire.
- Splice Insulation: "Scotch" electrical tape with vinyl plastic backing or rubber tape with protective friction tape for motor work.
- Grounding:
 - Provide and install grounding system as noted on the Drawings.
 - Provide and install a grounding electrode system on all separate building, except those with only 1 circuit feeding building: NEC 250.32 (A).
 - Grounding electrode conductor: bare stranded copper type, #40 minimum per NEC Table 250.66.
 - Install grounding wires in rigid conduit. Provide physical protection of grounding electrode and bonding conductors in accordance with NEC 250-64.
 - Grounding conductors shall be in conduit and installed in accordance with NEC 250-64.
 - All grounding electrode conductor connections "thermite" or "cad_weld" welded.
 - Use approved pressure type solderless connector or use fusion welding for all connections to and bonding of grounding electrode system. All connections shall be visible, readily accessible for testing purposes.
 - Terminate grounding conductors at equipment with ground bushing, with ground wire connected through bushing.
 - Provide No. 12 stranded (green) THHN conductor from outlet box to ground screw of every receptacle except isolated ground receptacles.
 - Ground all isolated sections of metallic raceways.
 - Provide #12 minimum stranded (green) THHN conductor sized per NEC, or as noted, connected continuously throughout branch circuit for all circuits, bonded to panel ground bus, and to all electrical devices and equipment enclosures.
 - Provide an unspliced grounding electrode conductor to the grounding electrode system
 - Where the transformer supplying the service is located outside the building, at least one additional grounding connection shall be made from the grounded service conductor to a grounded electrode at the transformer.
 - Use approved pressure type solderless connector or use fusion welding for all connections to and bonding of grounding electrode system.
 - Grounding conductor for the grounding electrode and service equipment. Minimum #40.
 - After installation, test system, using the three-point fall of potential method only. Record results and submit to Architect for approval. If resistance to ground exceeds three (3) ohms, install additional grounding conductors to the grounding electrode system. Provide additional grounding until resistance is less than three (3) ohms.
 - Connect a bonding jumper to the building interior metal piping, exposed interior structural steel, interior metal gas piping, and other interior metal wiring in accordance with nec 250-68, establish flexible connections to accessible locations and provide bonding jumper across removable or electrically non-continuous joints.
 - Connect grounding electrode system to metallic water service entry metallic cold water pipe (if available) with nonferrous clamp and 1-4 B.C. in conduit. Connection shall be accessible for inspection.
 - Grounding Electrode System shall be as follows:
 - The grounding electrode system shall consist of a ur ground (if feasible), all available building metal structure, all available metal underground water piping, and ground rods (made electrodes) or ground ring (if ur ground is not available, in existing building or if resistance needs to be lowered), bond the electrodes together in accordance with NEC 250-50.
 - User Ground: Provide a concrete encased (user) grounding electrode per NEC 250-52(3) consisting of at least 3" of bare copper conductor min #40 awg (or sized per nec table 250.66) encased in concrete, conductor located 2-inch min from bottom, concrete foundation shall be in direct contact with the earth. This urf ground ring shall be of the same size and continuous with the grounding electrode conductor as indicated. Embed in foundation with a loop at approximate center, brought out at top of foundation adjacent to building service equipment for connection to service equipment and for bonding to other parts of the grounding system.
 - Ground Ring: Provide a ground ring encircling the building per NEC 250-52(4) consisting of at least 4" of bare copper conductor min #40 awg, the ground ring shall be bored at a depth not less than 30 inches below the earth's surface.
 - Ground Rod: Furnish and install two "Copperweld" 3/4" x 10'-0" ground rods a minimum of 10'-0" apart. Install ground rods in accessible boxes with covers. Furnish and install 2-#40 bare copper cables between ground rods and main switchboard ground bus. Provide an additional ground rod if resistance of ground rod exceeds 25 ohms. Ground rod spaced a minimum of 6-foot apart in accordance with NEC 250-56.

- All connections between bus bars shall be of a bolted type using Belleville washers. Clamps will not be accepted. All bus bars shall be accurately formed, and all holes shall be made in a manner which will permit bus bars and connections to be fitted into place without being forced.
- The design of all current-carrying devices or parts of the switchboard shall conform to the standard specified in the related sections of Underwriters' Laboratories, Inc. (UL) No. UL 891 and National Electric Manufacturers Association (NEMA) Standard PB_2, except as these characteristics may be modified herein.
- Bus bars, connection bars and wiring on the back of the switchboard shall be arranged so that maximum accessibility is provided for cable connections from the front.
- Amperes ratings for rectangular bus bars shall be in accordance with the temperature rise standard of National Electric Manufacturer's Association (NEMA) and the Underwriters' Laboratories, Inc. (UL)
- The enclosure shall be chemically cleaned by parkering, bonding or phosphorizing as a unit after all welding has been completed. The enclosure shall then be painted with a rust, resisting primer coat of paint and shall be finished with a coat of light gray, baked enamel.
- Each section shall be busfed for the full connected load of that section. Extend bussing to spare circuit breaker "Spaces." Drill buses for future circuit breakers, and provide breaker connector hardware as required.
- Provide copper bus bars and connections with silver, plated contact surfaces.
- The contact surfaces and studs of all devices to which bus connections are made shall also have silver-plated surfaces.
- Local ground bus, with a cross-section equal to at least 25 percent of the capacity of the main bus rating, in the back of the switchboard and extend bus throughout the length of the switchboard assembly. Ground each housing of the assembly directly to this bus.
- Rigidly support all bus and connection bars and current transformers.
- Fill all nuts and connections with locking devices to prevent loosening.
- Provide load connections with solderless lugs. Factory install all devices shown on Drawings as specified herein.
- Provide half-inch copper braided pigtail at side of switchboard enclosure for termination of signal system ground cables. Pigtail to be located on side of distribution cabinet.
- Provide ground fault protection on services over 1,000A or where noted on the plans. Protection shall consist of a current sensor, relay device, and the appropriately sized main overcurrent protection device.
- Provide a bonding strap from the equipment ground bus to the neutral bus unless serving a separate building with a metallic path between buildings (NEC 20.32 (A)).
- Provide a transient voltage surge protector, integral to or adjacent to the main switchboard when indicated on the plans or where otherwise noted on the plans. Provide surge protection on all new dwelling unit services.
- Multiple disconnects are present, each shall be in a dedicated compartment.

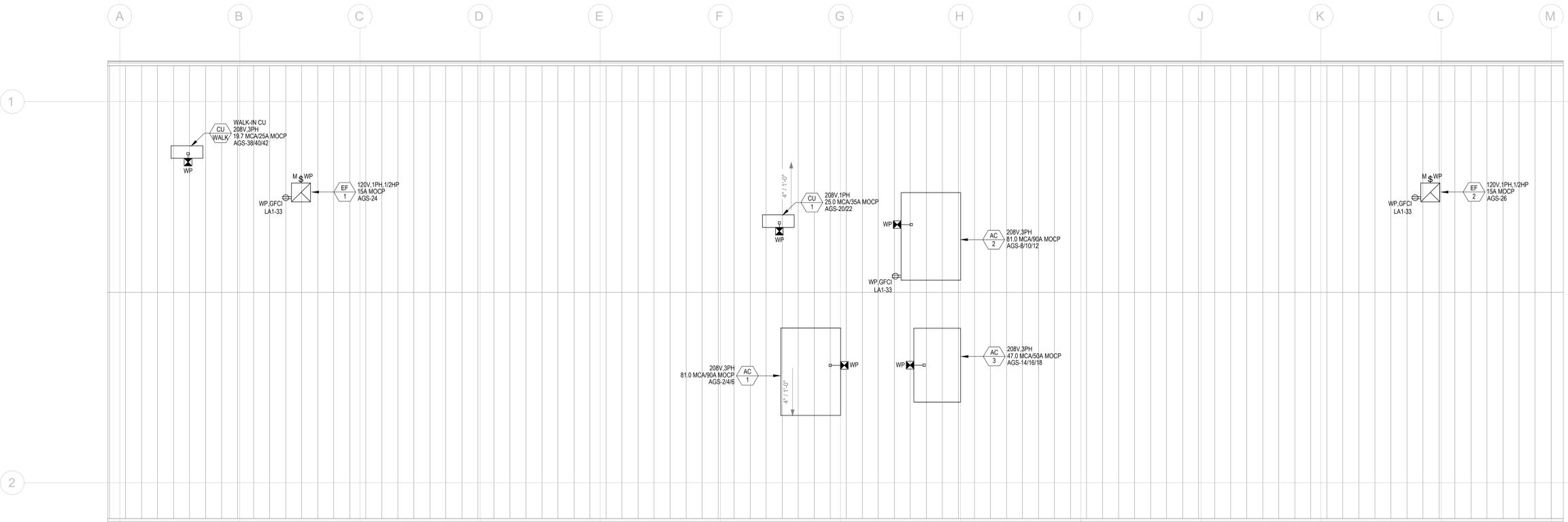
- Panelboards:
 - Surface or flush mounted, with branch circuits as shown on drawings.
 - Finish on metal: Painted with color galvanized steel sheet with welded full flange and pieces, stretcher, leveled steel trim, backpan and door.
 - Bussing of copper with silver-plated contact surfaces.
 - Trims on surface, mounted cabinets secured with nickel-plated screws with cup washers, bottom of all trims to have lugs for fastening on cabinet face.
 - Panel shall be 20 inches minimum in width, provided with approved gutter space, barriers and adjustable supports. Doors mounted with concealed hinges provided with combination spring latch and lock. Doors and trims and surface mounted cabinets primed and finished with one coat based on gray enamel.
 - Breakers on same phase to be aligned horizontally. Each panel provided with 5 handle locks.
 - Each branch circuit of panelboards to have a permanently fixed number with one word directory, if more than one current carrying conductors are installed in one conduit, conductor size shall be increased as required per Note 6 to Table 310_16 of the NEC.
 - Drawings indicate the location of all light switches. Where fixtures in a room are controlled by more than one switch, the same lower case letter is drawn adjacent a switch and each fixture controlled by that switch. Where no lower case letter is adjacent to a switch, all fixtures in the room are controlled by that switch. Provide and install conduit and wire from fixture to switch and between fixtures as required to accomplish switching shown. Do not use branch circuit wiring for light fixtures through switch boxes.
 - Control wiring is generally not shown on the plans. Contractor shall refer to control diagrams and provide and install all wiring and raceways required to make all interconnections.
 - All branch circuit wiring No. 12 or larger as noted, all control wiring No. 14 or larger.
 - Dimensions, together with locations of doors, partitions, etc., are to be taken from the Architectural Drawings, verified at site by this Contractor.
 - Maintain "as-constructed" Record Drawings at all times, showing the exact location of concealed conduits and feeders installed under this contract, and actual numbering of each circuit. Upon completion of work and before acceptance can be considered, this Contractor must forward to the Owner's Representative corrected Record Drawings in Autocad format indicating the electrical work as installed.
- General:
 - Circuit breakers shall be LVPC or molded case rated for 480 or 240 volts, multiple or single pole and amperage ratings as shown on the drawings, bolt on, manually / electrically operated with "break" arc chutes.
 - Enclosure breakers shall be rated to interrupt the smallest short circuit current min 65,000 amps RMS or as noted on the drawings. Main breakers shall always be in there own compartment.
 - Distribution circuit breakers shall be rated for the amps interrupting capacity noted on the drawings
 - UL series rated breakers shall be used for the amps interrupting capacity or U.L. series rated with the distribution and main circuit breakers. General Electric Type TED or equal, minimum 22,000 A.I.C for 120/208 volt, type TED or equal, min 42,000 A.I.C for 277/480 volt until an AIC calculation has been finalized.
 - Where mechanical equipment is U.L. listed for overcurrent protection with fuses or HACR type circuit breakers, provide fuses where a fuse switch is shown. Where the overcurrent protection is a circuit breaker provide HACR, (HACR means Heating, Air-Conditioning and Refrigeration) type.
 - Double type "SWO" circuit breakers where the circuit breaker is going to be used as a switching device in a panelboard.
 - Provide GFCI rated circuit breakers in all locations within 6-foot of water.
- Starters:
 - Magnetic starters shall be rated in accordance with latest published NEMA standards for size and horsepower rating, Westinghouse A-200 series or equal. Provide with overload sensor in each phase, hand-off-auto switch, red "run" pilot light, in Indoor NEMA 1, Outdoor NEMA 4X, or NEMA 3R enclosure as shown. Coil shall be rated 120 VAC. Starters shall be across-the-line non-reversing unless otherwise noted.
 - Contacts: Across-the-line magnetic starters shall be equipped with double break silver alloy contacts. All contacts shall be replaceable without removing power wiring or removing starter from panel. The starter must have straight-through wiring.
 - Coils: Coils shall be of molded construction. All coils shall be replaceable from the front without removing the starter from the panel.
- Overload Relays and Thermal Units: Overload relays shall be the melting
- Motor Connections:
 - Install motor circuits complete for all motors by other trades as shown on drawings.
 - Furnish and install all disconnect switches, outlet boxes, starters, time-switches etc., where noted.
 - All motor and temperature control low voltage wiring shall be installed and connected by Division 15 Section of specifications, unless otherwise indicated on electrical and mechanical drawings.
- Motor / Equipment Switches: Rated 20 amp, 277 volt, quiet type, white color, specification grade, unless otherwise noted:
 - Single Pole - toggle or rocker switch
 - Wall mounted Occupancy Sensors - Dual Technology
- Lighting Controls: Provide full room controls to provide the control requirements shown. Manufacturer shall have min 10yrs in manufacturing of similar products. All accessory items such as switches, light fixtures etc shall be specifically designed and approved by the manufacturer to function together. Manufacturer's include Wattstopper, Leviton, Lutron or equal. Provide detailed wiring diagrams, device layout locations, and devices controlled for approval.
- Lighting Fixtures:
 - As listed in fixture schedule, and on drawings as indicated by type letter, completely lamped with new lamps, properly operating at time of acceptance of electrical work. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

- ENERGY STAR certified.
- California Title 24 compliant.
- UL Listing: Listed for damp location.
- Recessed luminaires shall comply with NEMA LE 4.

- Lamps:
 - Unless otherwise noted, lamps described on the Drawings and in these Specifications, are ANSI nomenclature; lamps shall be manufactured by Osram/Sylvania, North America, Philips, or approved equal.
 - All incandescent lamps and tungsten halogen lamps shall be 125-130 volt rated extended life or 2,000 hour life whenever such ratings are available.
 - 18 fluorescent lamps shall be 3500K-4100K color temperature, energy saving type double end.
 - Contact fluorescent lamps shall be 3500K-4100K color temperature, twin-tube and double twin tube (as required for each fixture), as manufactured by North American Philips, approved equal.
 - LED lamps shall be 3500K-4100K color temperature. All LED shall be 0-10V dimming unless specifically stated otherwise. If contractor finds a fixture is not available with 0-10V dimming and the contractor shall alert the GC prior to Bid.
 - CRI of minimum 80. CCT
 - Rated lamp life of 35,000

SHEET NOTES - ROOF ELECTRICAL

- A. ALL ROOF CONDUITS SHALL BE MOUNTED ON COOPER DURA-BLOK OR EQUAL AT MAX 10FT ON CENTER.
- B. ALL ROOF MOUNTED CONDUITS SHALL BE IMC OR RGS WITH WATERTIGHT FITTINGS.
- C. ALL ELECTRICAL ROOF PENETRATIONS SHALL BE PROVIDED COMPLETE, COORDINATED WITH ALL OTHER DISCIPLINES AND WATER TIGHT. REFER TO THE ARCHITECTURAL DRAWING AND SPECIFICATIONS FOR REQUIREMENTS.
- D. VERIFY EXACT LOCATIONS OF DIVISION 23 EQUIPMENT WITH THE DIVISION 23 CONTRACTOR PRIOR TO ROUGH-IN.
- E. LOCATIONS OF DIVISION 23 EQUIPMENT IS DIAGRAMMATIC. THE DIVISION 26 CONTRACTOR SHALL VERIFY AND COORDINATE EXACT LOCATIONS WITH ALL OTHER DISCIPLINES PRIOR TO COMMENCING ANY WORK.
- F. ALL EXTERIOR MOUNTED DEVICES SHALL BE PROVIDED WITH WP OR NEMA 3R RATING.
- G. PROVIDE HUB TYPE FITTINGS ON EXTERIOR CONDUITS.
- H. ALL EMPTY BOXES SHALL BE PROVIDED WITH BLANK WP STAINLESS STEEL COVER PLATES.
- I. ALL ELECTRICAL CONSTRUCTION SHALL BE COORDINATED AND MAINTAIN WALL AND CEILING RATING INDICATED ON THE ARCHITECTURAL DOCUMENTS.



1 ELECTRICAL ROOF PLAN

SCALE: 1/4" = 1'-0"



AGRICULTURAL SCIENCE BLDG
BEAR CREEK HIGH SCHOOL
 10555 THORTON RD
 STOCKTON, CA 95209
INCREMENT 2

TABLE	DATE	DESCRIPTION

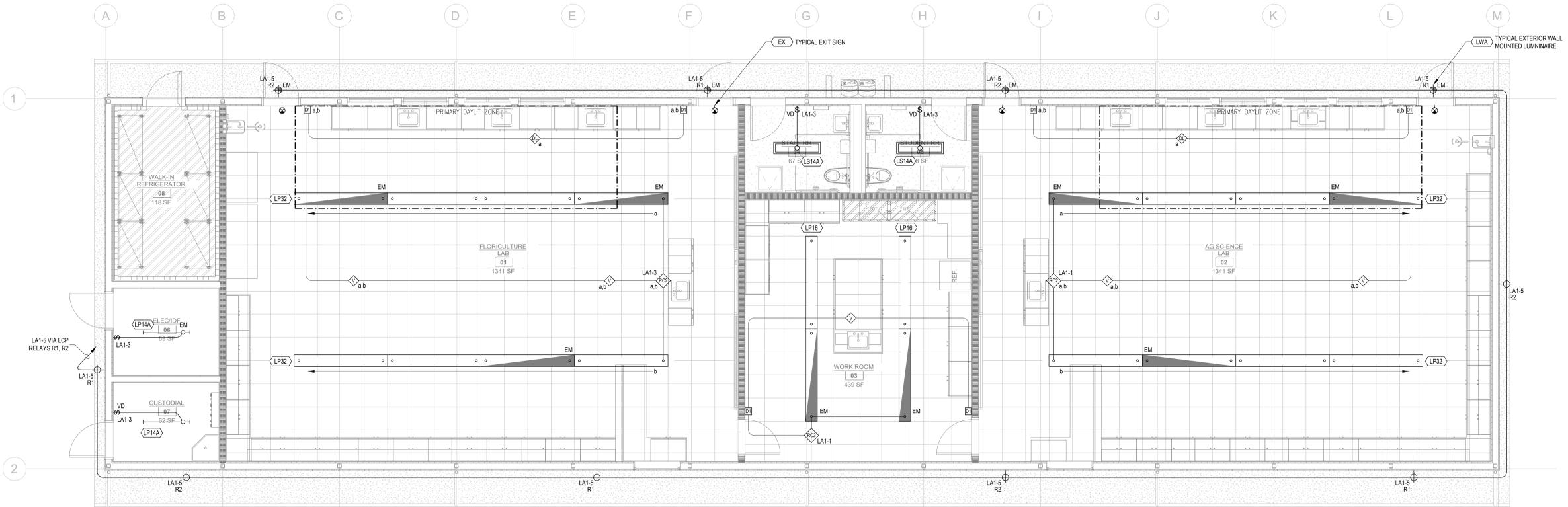
PROJECT NUMBER: ----
 DRAWN BY: Author
 DESIGNER: Designer
 PLOT DATE: 11-06-23

SHEET TITLE:
ELECTRICAL ROOF PLAN

SHEET #:
E112

SHEET NOTES - LIGHTING

- A. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR COORDINATED CEILING INFORMATION. VERIFY THE CEILING TYPES IN ALL SPACES WITH THE ARCHITECTURAL DRAWINGS AND COORDINATE WITH THE LIGHT FIXTURES TO BE INSTALLED. MINOR ADJUSTMENTS IN LOCATION MAY BE REQUIRED BY THE CONTRACTOR AND PROVIDED AT NO ADDITIONAL COST TO THE OWNER AS DIRECTED BY THE OWNER'S REPRESENTATIVE. COORDINATE INSTALLATION OF ALL LIGHT FIXTURES WITH MECHANICAL SYSTEMS AND FIRE SPRINKLER HEADS AND PIPING PRIOR TO THE INSTALLATION OF ANY SYSTEMS.
- B. THE FIXTURE SHALL BE PROVIDED WITH ALL NECESSARY HARDWARE, CLIPS, TRIM, ETC. FOR A COMPLETE AND "FINISHED" INSTALLATION. PROVIDE ALL NECESSARY BLOCKING.
- C. LUMINAIRES RECESSED INTO INSULATED CEILINGS SHALL BE RATED FOR INSULATION CONTACT ("IC-RATED").
- D. ALL LIGHTING CONSTRUCTION SHALL BE COORDINATED TO MAINTAIN WALL AND CEILING RATINGS INDICATED ON THE ARCHITECTURAL DOCUMENTS.
- E. ALL LOW VOLTAGE (0-50 volt) LIGHTING CONTROL WIRING SHALL BE INSTALLED IN CONDUIT.
- F. CENTER ALL EXIT SIGNS IN DOORWAYS WITH BOTTOM OF SIGN AT +2' ABOVE DOOR FRAME U.O.A.
- G. PROVIDE COMMON FACE PLATE FOR ALL SWITCHES IN GANGED GROUPS. INDIVIDUAL FACE PLATES FOR GROUPS OF SWITCHES WILL NOT BE ACCEPTED.
- H. VERIFY ROUGH-IN LOCATIONS OF ALL DEVICES WITH THE OWNER'S REPRESENTATIVE. DO NOT PULL ANY CONDUCTORS OR CABLE UNTIL THE DEVICE LOCATIONS HAVE BEEN REVIEWED AND ACCEPTED.
- I. BATTERY BALLAST FIXTURE AS INDICATED WITH "EM" DESIGNATION SHALL BE CONNECTED FOR SWITCHED OPERATION TO PROVIDE EGRESS ILLUMINATION DURING POWER OUTAGE. PROVIDE SWITCHED AND UN-SWITCHED HOT CIRCUIT TO FIXTURE AS RECOMMENDED BY THE BALLAST MANUFACTURER. PROVIDE REMOTE TEST SWITCH FOR FIXTURES WITH BATTERY BALLAST(S).
- J. PROVIDE SWITCHED LED MAINTENANCE LIGHT IN ALL ACCESSIBLE ATTICS, BASEMENTS, AND CRAWL SPACES. PROVIDE WITH SWITCH LOCATED AT ACCESSIBLE ENTRY LOCATION.
- K. EXTERIOR LIGHTING MOUNTED UNDER 24FT AND OVER 40W SHALL BE CONTROLLED BY A MOTION SENSOR AND SHALL REDUCE LIGHTING TO 50% WHEN UNOCCUPIED.
- L. ALL EXTERIOR LIGHTING SHALL BE SET TO DUSK TO DAWN WITH PHOTOCONTROL OR ASTRONOMICAL TIMELOCK.
- M. ALL EXTERIOR LIGHTING RATED OVER 6200LUMENS SHALL MEET OR EXCEED BUG RATINGS.
- N. CONTRACTOR MAY REDUCE WIRING THAT IS OVERSIZED DUE TO VOLTAGE DROP DOWN WHEN WITHIN 10-FT OF FIXTURE / DEVICE.
- O. VERIFY MOUNTING HEIGHTS OF BUILDING FIXTURES WITH ARCHITECTURAL PLANS.



1 LIGHTING PLAN - 1
SCALE: 1/4" = 1'-0"
0 4' 8' 16'

JL MODULAR
BrokawDesign
WWW.BROKAWDESIGN.COM

REGISTERED PROFESSIONAL ENGINEER
CONCRETE & CHEMISTRY
No. E19225
Exp. 12-31-23
ELECTRICAL
STATE OF CALIFORNIA
11-06-23

AGRICULTURAL SCIENCE BLDG
BEAR CREEK HIGH SCHOOL
10555 THORTON RD
STOCKTON, CA 95209
INCREMENT 2

ISSUE	DATE	DESCRIPTION

PROJECT NUMBER: ----
DRAWN BY: Author
DESIGNER: Designer
PLOT DATE: 11-06-23

SHEET TITLE: **LIGHTING PLAN**

SHEET # **E121**



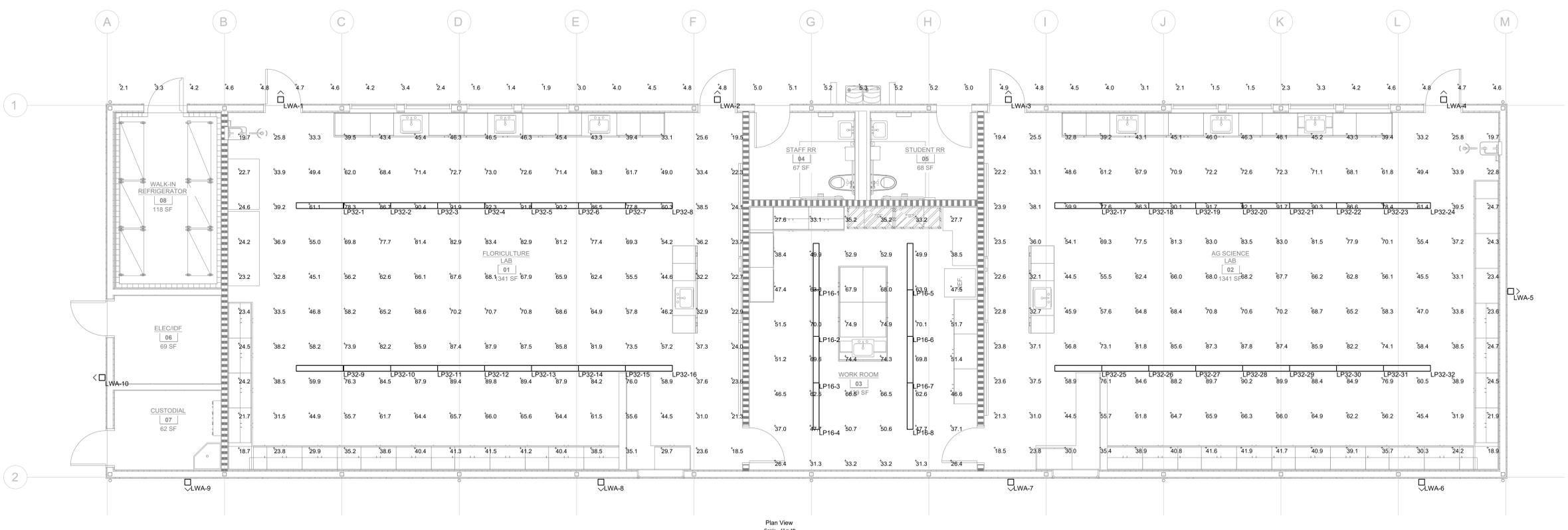
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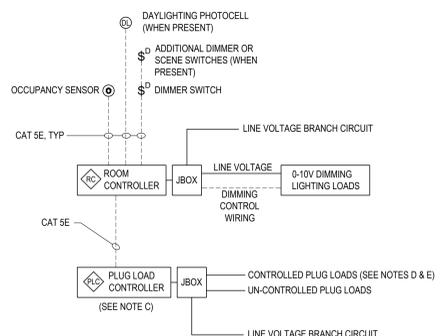
SHEET TITLE:
LIGHTING PHOTOMETRIC PLAN

SHEET #:
E122



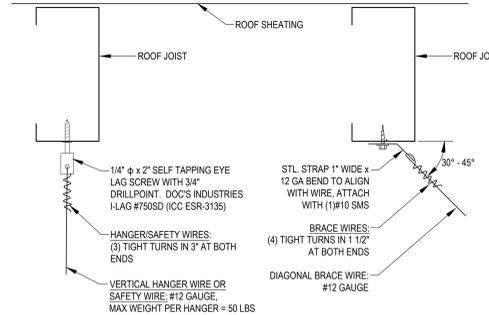
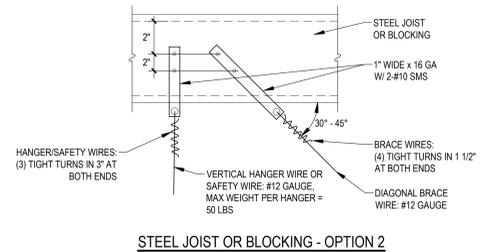
Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
⏏	LP16	8	NULITE LIGHTING	TV_73-11-835-48-P	FABRICATED WHITE PAINTED METAL LUMINAIRE FRAME, OPPOSING EXTRUDED SIDES OF FRAME PARALLEL WITH THE 0-DEGREE PLANE AND THE LENGTH OF THE FRAME EACH CONTAIN: FABRICATED WHITE PAINTED METAL DIFFUSER RETAINING BRACKETS, FABRICATED WHITE PAINTED METAL CIRCUIT BOARD MOUNTING STRIP, 2 WHITE CIRCUIT BOARDS EACH WITH 72 LEADS, CLEAR FLAT PLASTIC MICRO-DOT PATTERN DIFFUSER, DIFFUSER PATTERN SIDE UP.	TWO HUNDRED EIGHTY-EIGHT (LEDs), AIMED AT THE HORIZON. INPUT AND LED OUTPUT LEADS CONNECTED FOR THIS TEST. CLIENT STATES DRIVER PROGRAMMED FOR 900mA OUTPUT (120VAC, 60Hz) TO THE DRIVER. A 13' POWER CORD EXTENDS FROM THE DRIVER TO THE LED ASSEMBLY.	288	TV_73-11-835-48-P-IES	14	0.9	32
⏏	LP32	32	NULITE LIGHTING	TV_73-15-835-48-P	FABRICATED WHITE PAINTED METAL LUMINAIRE FRAME, OPPOSING EXTRUDED SIDES OF FRAME PARALLEL WITH THE 0-DEGREE PLANE AND THE LENGTH OF THE FRAME EACH CONTAIN: FABRICATED WHITE PAINTED METAL DIFFUSER RETAINING BRACKETS, FABRICATED WHITE PAINTED METAL CIRCUIT BOARD MOUNTING STRIP, 2 WHITE CIRCUIT BOARDS EACH WITH 72 LEADS, CLEAR FLAT PLASTIC MICRO-DOT PATTERN DIFFUSER, DIFFUSER PATTERN SIDE UP.	TWO HUNDRED EIGHTY-EIGHT (LEDs), AIMED AT THE HORIZON. INPUT AND LED OUTPUT LEADS CONNECTED FOR THIS TEST. CLIENT STATES DRIVER PROGRAMMED FOR 1200mA OUTPUT (120VAC, 60Hz) TO THE DRIVER. A 13' POWER CORD EXTENDS FROM THE DRIVER TO THE LED ASSEMBLY.	288	TV_73-15-835-48-P-IES	20	0.9	44.8
⏏	LWA	10	COOPER LIGHTING SOLUTIONS - MCGRAW-HILL (FORMERLY EATON)	IST-GA1A-780-U-T4FT	IMPACT ELITE LED TRIANGLE LUMINAIRE (1) 70 CRI, 4000K, 350mA LIGHTSQUARE WITH 16 LEADS AND TYPE IV FORWARD THROW OPTICS Beam, Roadway, Sidewalk, Site, Street, Substation, Security, Corrosion Resistant, Vandal Resistant, Wet Location ABSOLUTE PHOTOMETRY IS BASED ON CALIBRATION FACTORS CREATED USING LAB LUMEN STANDARDS IN GONIPHOTOMETER WITH TEST DISTANCE OF 28.75 FEET		16	IST-GA1A-780-U-T4FT #8	173	0.9	20.1

- DETAIL LEGEND**
- LMRC DIGITAL UNIVERSAL DIMMING ROOM CONTROLLER, PROVIDE WITH NUMBER OF RELAYS AS REQUIRED BY SWITCHING SCHEME
 - LMRL DIGITAL PLUG LOAD ROOM CONTROLLER
 - LMDC DIGITAL DUAL TECHNOLOGY CEILING OCCUPANCY SENSOR
 - LMDM DIGITAL DIMMING WALL SWITCH
 - LMLS DIGITAL PHOTOSENSOR FOR DAYLIGHTING CONTROL

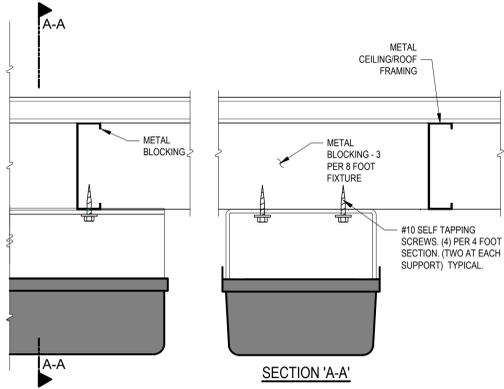


- DETAIL NOTES**
- A. BASED ON WATTSTOPPER LMRC SYSTEM - NO NETWORKING. MAY SUBMIT EQUAL FOR REVIEW AND POSSIBLE ACCEPTANCE.
 - B. MOUNT ROOM/PLUG CONTROLLERS IN ACCESSIBLE LOCATIONS. PROVIDE ACCESS HATCHES WHERE REQUIRED FOR ACCESSIBILITY.
 - C. PROVIDE PLUG CONTROLLERS FOR EACH PRIVATE OFFICE, OPEN OFFICE AREA, RECEPTION LOBBY, CONFERENCE ROOM, KITCHENETTE IN OFFICE SPACES, AND COPY ROOM.
 - D. FOR QUAD RECEPTACLES WITH ONE STRAP BEING CONTROLLED. PROVIDE ONE STANDARD DUPLEX, AND ONE DUPLEX LABELLED BY THE MANUFACTURER AS CONTROLLED (LEVITON 5362-2P OR EQUAL). NEC 406.3(E).
 - E. FOR DUPLEX RECEPTACLE WITH SPLIT STRAP FOR CONTROLLED AND UNCONTROLLED OUTLETS. PROVIDE DUPLEX WITH ONE RECEPTACLE LABELLED BY THE MANUFACTURER AS CONTROLLED (LEVITON 5362-1P OR EQUAL). NEC 406.3(E).

1 TYPICAL ROOM LTG. CONTROLS
NOT TO SCALE

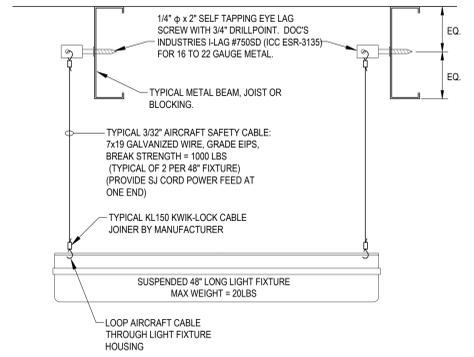


2 HANGER & BRACE WIRE DETAIL
NOT TO SCALE



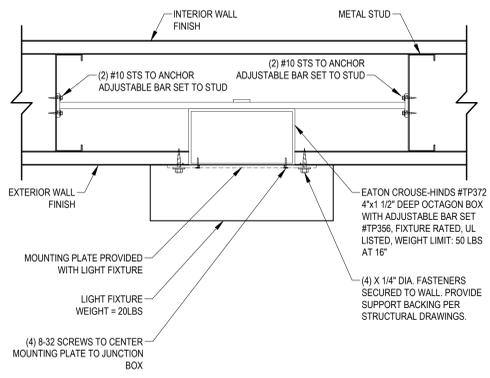
NOTES: 1. THIS DETAIL IS APPLICABLE TO FIXTURES THAT WEIGH 30 LBS OR LESS AND ARE RIGIDLY ATTACHED TO THE SUPPORTING STRUCTURE.

3 SURFACE FIXTURE METAL STUD MOUNTING
NOT TO SCALE



NOTES:
 1. LIGHT FIXTURE SHALL BE ABLE TO SWING 45° FREE WITHOUT CONTACT TO STRUCTURE OR OTHER OBJECTS.
 2. PROVIDE POWER/CONTROL CHORD TO ONE END OF LUMINAIRE.

4 SUSPENDED LIGHT FIXTURE
NOT TO SCALE



5 EXTERIOR WALL LIGHT FIXTURE MOUNTING
NOT TO SCALE

JL MODULAR
BrokawDesign
 WWW.BROKAWDESIGN.COM

PROFESSIONAL ENGINEER
 JOHN W. BROKAW
 No. E19225
 Exp. 12-31-23
 ELECTRICAL
 STATE OF CALIFORNIA
 11-06-23

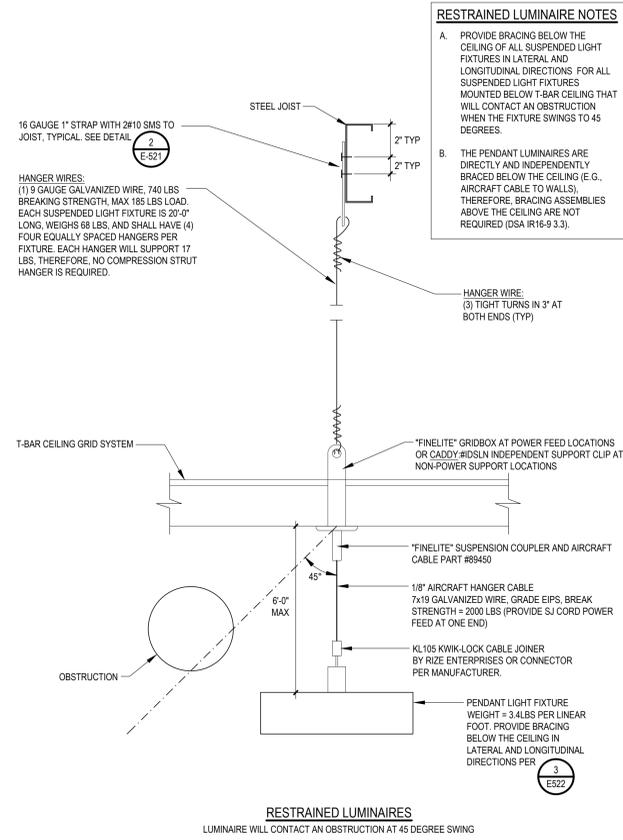
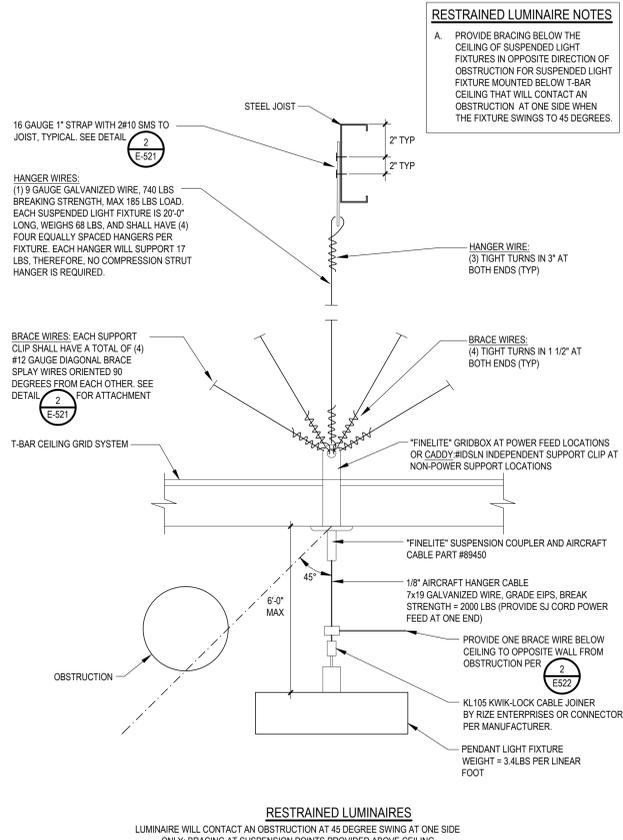
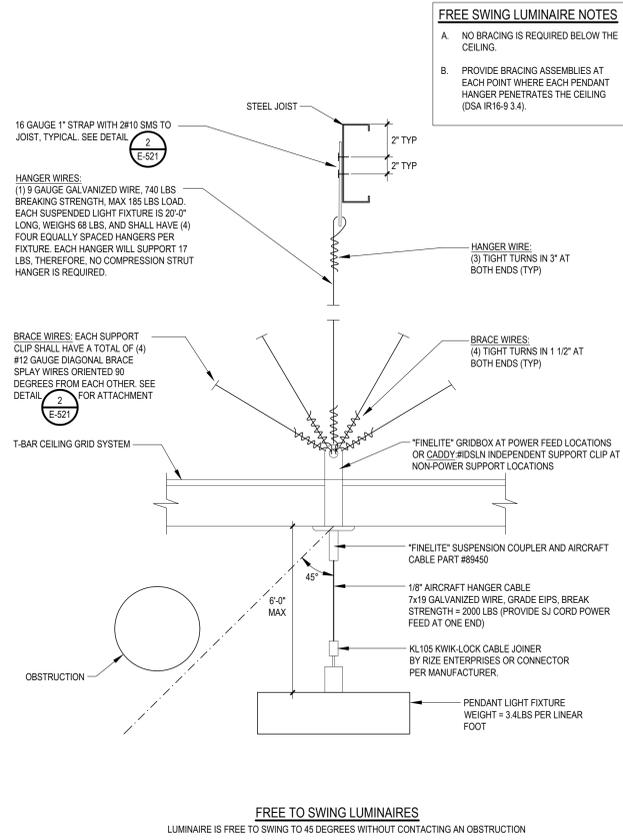
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 STOCKTON, CA 95209
INCREMENT 2

TABLE	DATE	DESCRIPTION

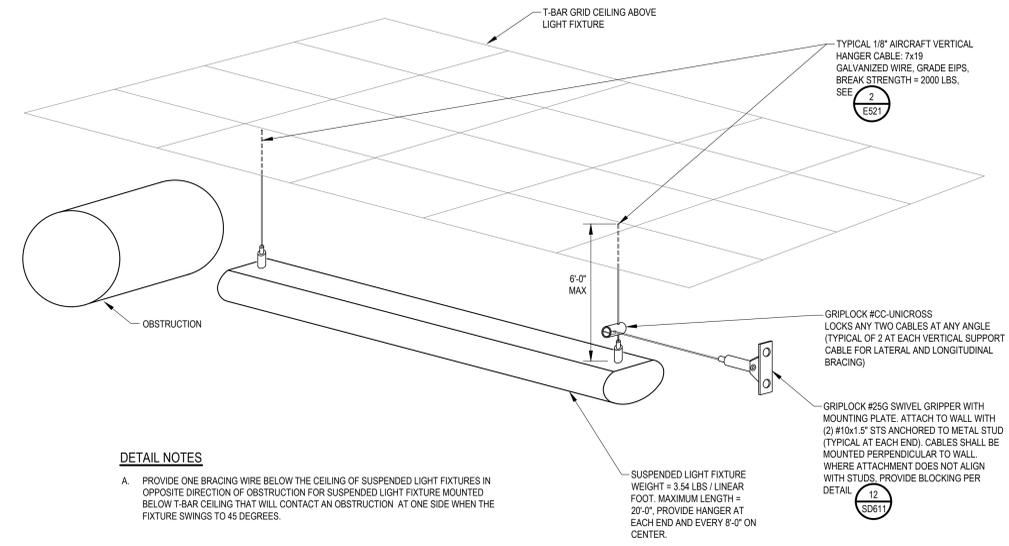
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 DRAWN BY: Author
 DESIGNER: Designer
 PLOT DATE: 11-06-23

SHEET TITLE:
DETAILS - LIGHTING

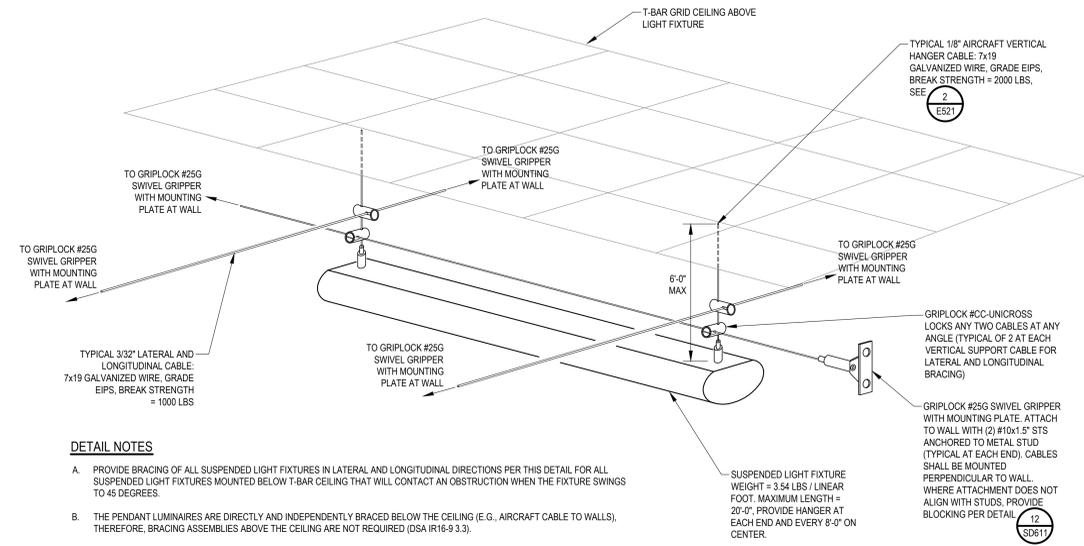
SHEET #:
E521



1 SUSPENDED LIGHT FIXTURE MOUNTING DETAIL - GRID MTG
 NOT TO SCALE



2 SUSPENDED LIGHT FIXTURE BRACING DETAIL
 NOT TO SCALE



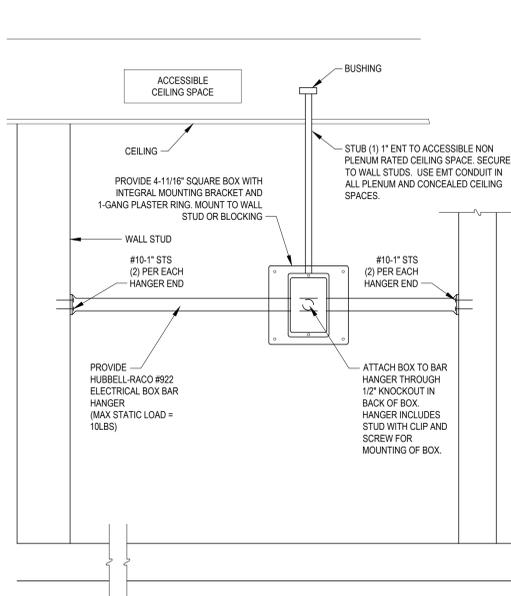
3 SUSPENDED LIGHT FIXTURE BRACING DETAIL
 NOT TO SCALE

TABLE	DATE	DESCRIPTION

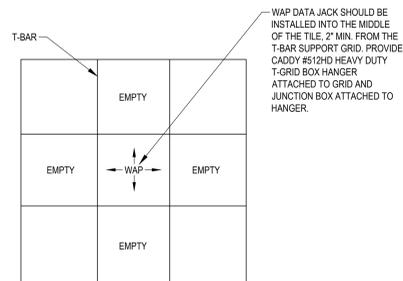
PROJECT NUMBER: ----
 DRAWN BY: Author
 DESIGNER: Designer
 PLOT DATE: 11-06-23

SHEET TITLE: DETAILS - LIGHTING

SHEET #: E522

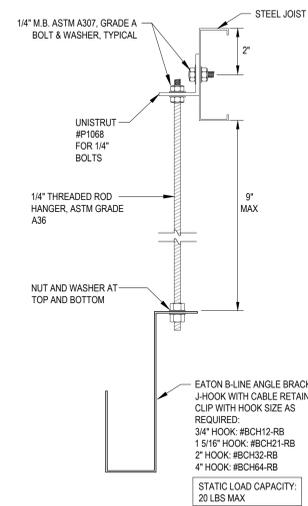


1 VOICE/DATA BOX ROUGH-IN
NOT TO SCALE



- DETAIL NOTES**
1. WAP LOCATIONS SHALL BE PLACED AS CLOSE TO THE CENTER OF THE ROOM AS POSSIBLE.
 2. THE TILES SHOULD BE FREE FROM ANY LIGHTING AND HVAC EQUIPMENT/FUSERS, AND NEIGHBORING FULL SIDE TILES SHOULD BE FREE FROM EQUIPMENT.
 3. WIRELESS ACCESS POINT DEVICE WEIGHT = LESS THAN 2 LBS.

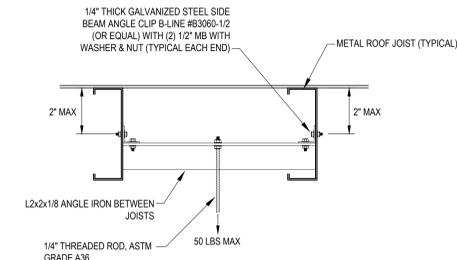
2 WAP MOUNTING AT CEILING TILES
NOT TO SCALE



NOTE: J-HOOKS TO BE PROVIDED ON 5'-4\"/>

SEE DETAIL ⁴/_{ES31} FOR CONNECTION TO BLOCKING WHEN RODS DO NOT ALIGN WITH ROOF JOISTS

3 LOW VOLTAGE CABLE J-HOOK
NOT TO SCALE



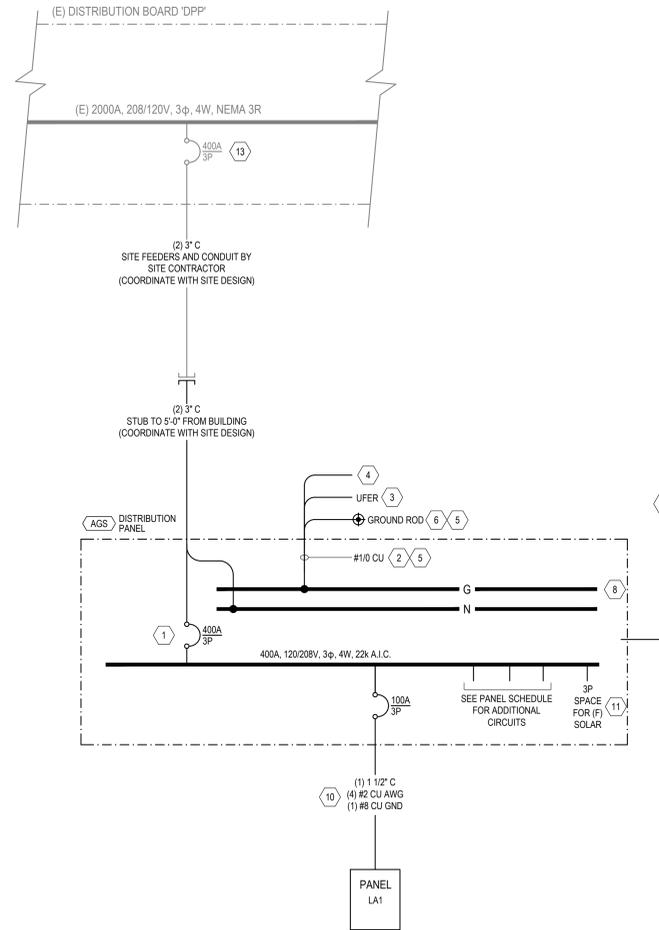
4 ROD ATTACHMENT BETWEEN JOISTS
NOT TO SCALE

NO.	DATE	DESCRIPTION

PROJECT NUMBER: ----
DRAWN BY: Author
DESIGNER: Designer
PLOT DATE: 11-06-23

SHEET TITLE:
DETAILS - LOW VOLTAGE

SHEET #:
E531



SINGLE LINE GENERAL NOTES

- A. ALL ELECTRICAL EQUIPMENT SUCH AS SWITCHBOARDS, PANELBOARDS, METER SOCKETS AND MOTOR CONTROL CENTERS SHALL BE PROVIDED WITH A PERMANENTLY AFFIXED ARC FLASH WARNING LABELS PER CEC 110.16 AND 110.21 REQUIREMENTS. LABEL SHALL AT MINIMUM STATE "WARNING: ARC FLASH AND SHOCK HAZARD APPROPRIATE PPE REQUIRED".
1. LABEL MAIN CIRCUIT BREAKER AS "MAIN BUILDING DISCONNECT"
 2. PROVIDE AN UNSPLICED GROUNDING ELECTRODE CONDUCTOR TO THE GROUNDING ELECTRODE SYSTEM. THE GROUNDING ELECTRODE SYSTEM FOR THIS PROJECT SHALL CONSIST OF A UFER GROUND AS DESCRIBED BELOW. THE BUILDING METAL STRUCTURE, ALL AVAILABLE METAL UNDERGROUND WATER PIPING, AND GROUND RODS (MADE ELECTRODES) IF REQUIRED. BOND THE ELECTRODES TOGETHER IN ACCORDANCE WITH NEC 250-50.
 3. PROVIDE A CONCRETE ENCASED (UFER) GROUNDING ELECTRODE PER NEC 250-53(3) CONSISTING OF AT LEAST 20' OF BARE COPPER CONDUCTOR MIN #4 AWG ENCASED IN CONCRETE, CONDUCTOR LOCATED 2-INCH MIN FROM BOTTOM. CONCRETE FOUNDATION SHALL BE IN DIRECT CONTACT WITH THE EARTH. THIS UFER GROUND SHALL BE OF THE SAME SIZE AND CONTINUOUS WITH THE GROUNDING ELECTRODE CONDUCTOR AS INDICATED.
 4. PROVIDE A BONDING JUMPER TO THE BUILDING INTERIOR METAL WATER PIPING, EXPOSED INTERIOR STRUCTURAL STEEL, INTERIOR METAL GAS PIPING, AND OTHER INTERIOR METAL PIPING IN ACCORDANCE WITH NEC 250-68. ESTABLISH THE CONNECTIONS AT ACCESSIBLE LOCATIONS AND PROVIDE BONDING JUMPERS ACROSS REMOVABLE OR ELECTRICALLY NON-CONTINUOUS JOINTS.
 5. PROVIDE PHYSICAL PROTECTION FOR GROUNDING ELECTRODE AND BONDING CONDUCTORS IN ACCORDANCE WITH NEC 250-64. GROUNDING CONDUCTORS INSTALLED IN ELECTRICAL/TELECOM ROOMS MAY BE RUN LOOSE AS PERMITTED BY NEC 250-64(b). GROUNDING CONDUCTORS IN ALL OTHER LOCATIONS SHALL BE IN CONDUIT INSTALLED IN ACCORDANCE WITH NEC 250-64(e) AND IDENTIFIED.
 6. PROVIDE GROUND ROD AND CONCRETE WELL WITH STEEL LID LABELED "GROUND". RESISTANCE OF GROUND ROD SHALL NOT EXCEED 0-25 OHMS. IF A SINGLE ROD EXCEEDS 25 OHMS, PROVIDE ADDITIONAL GROUND ROD(S) SPACED A MINIMUM OF 6-FEET APART IN ACCORDANCE WITH NEC 250-56.
 7. NOT USED.
 8. GROUND BUS SHALL BE CONTINUOUS AND 100% RATED THROUGHOUT.
 9. NOT USED.
 10. THE CONTRACTOR SHALL PERFORM ELECTRICAL DISTRIBUTION SYSTEM TESTING PRIOR TO ENERGIZING ANY FEEDERS.
 11. PROVIDE SOLAR LINE SIDE TAP OR RESERVED SPACE TO ALLOW FOR THE INSTALLATION OF A DOUBLE-POLE CIRCUIT BREAKER FOR A FUTURE SOLAR ELECTRIC INSTALLATION. THE RESERVED SPACE SHALL BE PERMANENTLY MARKED AS "FOR FUTURE SOLAR ELECTRIC" AND BE LOCATED AT THE OPPOSITE END OF THE BUS FROM UTILITY CONNECTION.
 12. PROVIDE (2) 2" CONDUITS WITH PULL STRING FROM SOLAR CONNECTION TO SOLAR EQUIPMENT AREA AND TO FUTURE SOLAR LOCATION TO SERVE AS PATHWAY FOR FUTURE SOLAR ELECTRIC INSTALLATION.
 13. CIRCUIT BREAKER PROVIDED SITE CONTRACTOR. COORDINATE REQUIREMENTS.

1 SINGLE LINE DIAGRAM - POWER
NOT TO SCALE

DISTRIBUTION PANEL 'AGS' NEC DEMAND LOAD CALCULATION								
	LOAD (KVA)							
	LIGHTING	RECEPTACLE	MOTOR	HVAC	COOKING	EV	WATER	OTHER
TOTAL	2.0	14.9		89.7			0.4	4.6
MULTIPLIER	125%	FIRST 10 KVA @100%	LARGEST @ 125%	100%	65%	125%	100%	100%
		REMAINING KVA @50%	REMAINING @ 100%					
TOTAL	2.5	12.5		89.7			0.4	4.6
SERVICE PHASE: 3				TOTAL DEMAND LOAD (KVA): 109.7				
SERVICE VOLTAGE: 208				TOTAL DEMAND LOAD (A): 304.8				



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INCREMENT 2

ISSUE	DATE	DESCRIPTION

PROJECT NUMBER: ----
 DRAWN BY: Author
 DESIGNER: Designer
 PLOT DATE: 11-06-23

SHEET TITLE:
DIAGRAMS - ELECTRICAL

SHEET #:
E601

LIGHTING CONTROL PANEL LCP							
RELAY	CIRCUIT	DESCRIPTION	ZONE SWITCH	CHANNEL AUTOMATION SCHEDULE			
				* SCENARIO	SCENARIO TIMES	BLINK	TIME DELAY
R1	LA1-5	EXTERIOR BLDG	NONE	6	On-Dusk/Off-Dawn	No	No
R2	LA1-5	EXTERIOR BLDG	NONE	7	On-Dusk/Off-Schedule	No	No
R3		SPARE					
R4		SPARE					
R5		SPARE					
R6		SPARE					
R7		SPARE					
R8		SPARE					

Notes:
1. Provide panel with astronomic timeclock.
2. Provide panel by Wattstopper.
3. Panel shall be networkable and compatible with campus EMS system.

* SCENARIO LISTINGS:
(1) - MANUAL ON / SCHEDULE OFF
(2) - SCHEDULED ON / OFF
(3) - MANUAL ON / ASTRO SWITCH OFF
(4) - PHOTO CELL ON / OFF
(5) - PHOTO CELL AND SCHEDULE ON / OFF
(6) - ASTRONOMICAL CLOCK ON / OFF
(7) - ASTRONOMICAL CLOCK ON AND SCHEDULE OFF
(8) - MOTION SENSOR ON DURING OFF HOURS / TIMED DELAY OFF

LIGHTING FIXTURE SCHEDULE										
TAG	DESCRIPTION	MANUFACTURER	MODEL NUMBER	LAMP	FIXTURE INPUT WATTS	MOUNTING	WEIGHT	MOUNTING DETAIL	NOTES	
EX	THERMOPLASTIC EXT SIGN WITH LED LAMPS. EMERGENCY BATTERY PACK. GREEN LETTERS AND WHITE HOUSING. PROVIDE WITH 90 MINUTE EMERGENCY BATTERY PACK.	SURE-LITES	LPX7-SD (OR EQUAL BY EVENLITE)	LED	2	WALL	3 LBS			
LP14A	4' LED STRIP LIGHT. FROSTED ACRYLIC LENS. PAINTED AFTER FABRICATION. 0-10V DIMMING. HIGH REFLECTIVE BAKED WHITE ENAMEL FINISH	METALLUX	48NLED-LD5-22SL-LN-UNV-L835-CD1 (OR EQUAL BY DAY-BRITE)	LED	16	SUSPENDED AT +8'-0" AFF	5 LBS	4 ES21		PROVIDE #EL14W 90-MINUTE EMERGENCY BATTERY PACK WHERE "EM" IS SHOWN ADJACENT TO FIXTURE ON LIGHTING PLAN.
LP16	16'-0" LED SUSPENDED DIRECT/INDIRECT LUMINAIRE. WHITE FINISH. CLEAR TOP COVER. FROSTED SMOOTH LENS. 80 CRI, 3500K COLOR. 0-10V DIMMING DRIVER	NULITE	TVS-73-10-L35-U-D-1-1-WH-T9-W-048-16'-0"-DG	LED	8.0W/LF (128W TOTAL)	SUSPENDED WITH BOTTOM AT +9'-0" AFF	3.5 LBS/LF (56 LBS TOTAL)	1 ES22		PROVIDE #B15 90-MINUTE EMERGENCY BATTERY PACK WHERE "EM" IS SHOWN ADJACENT TO FIXTURE ON LIGHTING PLAN.
LP32	32'-0" LED SUSPENDED DIRECT/INDIRECT LUMINAIRE. WHITE FINISH. CLEAR TOP COVER. FROSTED SMOOTH LENS. 80 CRI, 3500K COLOR. 0-10V DIMMING DRIVER	NULITE	TVS-73-15-L35-U-D-1-1-WH-T9-W-048-32'-0"-DG	LED	11.2W/LF (359W TOTAL)	SUSPENDED WITH BOTTOM AT +9'-0" AFF	3.5 LBS/LF (112 LBS TOTAL)	1 ES22		PROVIDE #B15 90-MINUTE EMERGENCY BATTERY PACK WHERE "EM" IS SHOWN ADJACENT TO FIXTURE ON LIGHTING PLAN.
LS14A	4' LED VANDAL RESISTANT WRAPAROUND. CLEAR RIBBED LENS. EXTRUDED ALUMINUM RAILS. DIE-CAS END CAPS	FAILSAFE	HVL8-4-LD4-1-STD-35-UNV-C-EEDD-1-S (OR EQUAL BY DAY-BRITE)	LED	32	SURFACE	6 LBS	3 ES21		
LWA	SURFACE MOUNTED LED SOURCE. DIE-CAST ALUMINUM HOUSING. FULL CUT-OFF. MEDIUM THROW. WET LOCATION IP66 RATED. VERIFY FINISH COLOR WITH ARCHITECT PRIOR TO ORDERING.	MCGRAW-EDISON	IST-SA1-A-740-U-14FT-[FINISH]	LED	20.1	WALL AT +8'-1" AFG	20 LBS	5 ES21		PROVIDE #CPB-CEC 90-MINUTE EMERGENCY BATTERY PACK WHERE "EM" IS SHOWN ADJACENT TO FIXTURE ON LIGHTING PLAN.

PANEL SCHEDULE																	
PANEL NAME: AGS		VOLTAGE: 208		NEMA RATING: 1		NOTES: SURFACE MOUNTED											
MAINS RATING: 400 (A)		PHASE: 3		AIC RATING: 22KAIC		LOCATION: ELECTRIC ROOM											
BUS RATING: 400 (A)		WIRE: 4															
CKT NO	PHASE	NEUT WIRE	USE	DESCRIPTION	BKR SIZE	BKR OPTS	BKR KVA	PHASE	BKR KVA	BKR OPTS	BKR SIZE	DESCRIPTION	USE	NEUT WIRE	PHASE WIRE	CKT NO	
1			P	SEE SINGLE LINE DIAGRAM			9.08	A	9.72					H		2	
2			P	PANEL AGS	1003		7.41	B	9.72	HACR	903	AC-1		H		4	
5			P				6.29	C	9.72					H		6	
7				SPACE			A	9.72						H		8	
9				SPACE			B	9.72	HACR	903	AC-2			H		10	
11				SPACE			C	9.72						H		12	
13				SPACE			A	5.64						H		14	
15				SPACE			B	5.64	HACR	503	AC-3			H		16	
17				SPACE			C	5.64						H		18	
19				SPACE			A	2.60	HACR	352	CU-1			H		20	
21				SPACE			B	2.60						H		22	
23				SPACE			C	0.96			15/1	EF-1	H	12	12	24	
25				SPACE			A	0.96			15/1	EF-2	H	12	12	26	
27				SPACE			B	0.05			15/1	EF-3, EF-4, EF-5	H	12	12	28	
29				SPACE			C	0.05			15/1	TG-1/RK-1	H	12	12	30	
31				SPACE			A	0.18			20/1	FIRE SMOKE DAMPERS	O	12	12	32	
33				SPACE			B	0.38			20/1	WALK-IN FAN COIL	H	12	12	34	
35				SPACE			C				20/1	SPARE				36	
37							A	2.30					H		10	38	
39							B	2.30			25/3	WALK-IN CU	H		10	40	
41				(F) PV SYSTEM			C	2.30					H		10	42	

LOADS:
PHASE A: 39.2 (KVA)
PHASE B: 37.8 (KVA)
PHASE C: 34.7 (KVA)
TOTAL: 111.7 (CONNECTED KVA)
310.3 (CONNECTED A)

USE LEGEND:
"H" HVAC
"L" LIGHTING
"M" MOTOR
"O" OTHER
"R" RECEPTACLE
"PP" PANEL
"C" COOKING
"E" EV LOADS
"W" WATER HEATER

LOAD TYPE:
"GF-CI" GROUND FAULT CIRCUIT INTERRUPTER
"HACR" HEATING/AIR CONDITIONING RATED
"LO" LOCK-ON DEVICE
"PA" PADLOCK ATTACHMENT
"ST" SHUNT TRIP
"HT" HANDLE TIE
"FA" DEDICATED CIRCUIT FOR FIRE ALARM. RED HANDLE, MARKED "FIRE ALARM CIRCUIT". LOCK-ON DEVICE. PERMANENTLY IDENTIFY CIRCUIT AT FIRE ALARM EQUIPMENT.

BREAKER OPTIONS:
"GF-CI" GROUND FAULT CIRCUIT INTERRUPTER
"HACR" HEATING/AIR CONDITIONING RATED
"LO" LOCK-ON DEVICE
"PA" PADLOCK ATTACHMENT
"ST" SHUNT TRIP
"HT" HANDLE TIE
"FA" DEDICATED CIRCUIT FOR FIRE ALARM. RED HANDLE, MARKED "FIRE ALARM CIRCUIT". LOCK-ON DEVICE. PERMANENTLY IDENTIFY CIRCUIT AT FIRE ALARM EQUIPMENT.

NOTES:
1. PANELBOARD SHALL BE CAPABLE OF ACCEPTING BRANCH CIRCUIT MONITORING CTs IN THE FUTURE FOR MONITORING OF SEPARATE LOAD TYPES. SUBMITTAL SHALL CLEARLY INDICATE THAT PANELBOARD IS WIDE ENOUGH TO ACCEPT FUTURE CTs.

NEC DEMAND LOAD	CONN KVA	DEMAND FACTOR	DEMAND KVA
TYPE "M": MOTOR LOADS (LARGEST MOTOR)		125%	
TYPE "M": MOTOR LOADS (REMAINING)		100%	
TYPE "L": LIGHTING LOADS		125%	
TYPE "R": RECEPTACLES (FIRST 10KVA)		100%	
TYPE "R": RECEPTACLES (OVER 10KVA)		50%	
TYPE "H": HVAC LOADS	89.74	100%	89.74
TYPE "PP": PANEL LOADS	21.78	100%	21.78
TYPE "C": COOKING LOADS		65%	
TYPE "E": EV LOADS		125%	
TYPE "W": WATER HEATING LOADS		100%	
TYPE "O": OTHER LOADS	0.18	100%	0.18
	DEMAND KVA:		111.71
	DEMAND AMPS:		310.3

PANEL SCHEDULE																	
PANEL NAME: LA1		VOLTAGE: 208		NEMA RATING: 1		NOTES: SURFACE MOUNTED											
MAINS RATING: MLO (A)		PHASE: 3		AIC RATING: 22KAIC		LOCATION: ELECTRIC ROOM											
BUS RATING: 100 (A)		WIRE: 4															
CKT NO	PHASE	NEUT WIRE	USE	DESCRIPTION	BKR SIZE	BKR OPTS	BKR KVA	PHASE	BKR KVA	BKR OPTS	BKR SIZE	DESCRIPTION	USE	NEUT WIRE	PHASE WIRE	CKT NO	
1			L	INTERIOR LTG	20/1		0.97	A	0.36							2	
3			L	INTERIOR LTG	20/1		0.93	B	0.36							4	
5			L	EXTERIOR LTG	20/1		0.20	C	0.36							6	
7				SPACE			A	0.36								8	
9			O	FIRE ALARM EQUIP	20/1	FA	1.00	B	0.36							10	
11			O	FIRE ALARM EQUIP	20/1	FA	1.00	C	0.36							12	
13			R	IDF	20/1		1.00	A	0.36							14	
15			O	SECURITY	20/1		0.18	B	0.36							16	
17			O	LCP	20/1		0.18	C	0.36							18	
19			R	ELEC RM	20/1		0.18	A	0.36							20	
21			R	ELEC RM CLUST	20/1		0.54	B	0.36							22	
23			R	WORK ROOM-REFRIG	20/1		0.80	C	0.54							24	
25			R	WORK ROOM	20/1		0.36	A	1.08							26	
27			R	WORK ROOM	20/1		0.36	B	0.36							28	
29			O	R/R VALVES	20/1		0.05	C	0.36							30	
31			W	WH-1P-1	20/1		0.43	A	0.36							32	
33			R	ROOF	20/1		0.54	B	0.36							34	
35			O	FUME HOOD	20/1		1.00	C	0.36							36	
37			O	FUME HOOD	20/1		1.00	A	0.36							38	
39			R	FLORAL COOLER	20/1		1.02	B	0.36							40	
41			R	FLORAL COOLER	20/1		1.40	C	0.36							42	
43				SPACE	20/1		A	0.36								44	
45				SPACE	20/1		B	0.36								46	
47				SPACE	20/1		C	0.36								48	
49				SPACE	20/1		A	0.54								50	
51				SPACE	20/1		B	1.08								52	
53				SPACE	20/1		C									54	

LOADS:
PHASE A: 8.1 (KVA)
PHASE B: 8.4 (KVA)
PHASE C: 7.7 (KVA)
TOTAL: 24.2 (CONNECTED KVA)
67.2 (CONNECTED A)

USE LEGEND:
"H" HVAC
"L" LIGHTING
"M" MOTOR
"O" OTHER
"R" RECEPTACLE
"PP" PANEL
"C" COOKING
"E" EV LOADS
"W" WATER HEATER

LOAD TYPE:
"GF-CI" GROUND FAULT CIRCUIT INTERRUPTER
"HACR" HEATING/AIR CONDITIONING RATED
"LO" LOCK-ON DEVICE
"PA" PADLOCK ATTACHMENT
"ST" SHUNT TRIP
"HT" HANDLE TIE
"FA" DEDICATED CIRCUIT FOR FIRE ALARM. RED HANDLE, MARKED "FIRE ALARM CIRCUIT". LOCK-ON DEVICE. PERMANENTLY IDENTIFY CIRCUIT AT FIRE ALARM EQUIPMENT.

BREAKER OPTIONS:
"GF-CI" GROUND FAULT CIRCUIT INTERRUPTER
"HACR" HEATING/AIR CONDITIONING RATED
"LO" LOCK-ON DEVICE
"PA" PADLOCK ATTACHMENT
"ST" SHUNT TRIP
"HT" HANDLE TIE
"FA" DEDICATED CIRCUIT FOR FIRE ALARM. RED HANDLE, MARKED "FIRE ALARM CIRCUIT". LOCK-ON DEVICE. PERMANENTLY IDENTIFY CIRCUIT AT FIRE ALARM EQUIPMENT.

NOTES:
1. PANELBOARD SHALL BE CAPABLE OF ACCEPTING BRANCH CIRCUIT MONITORING CTs IN THE FUTURE FOR MONITORING OF SEPARATE LOAD TYPES. SUBMITTAL SHALL CLEARLY INDICATE THAT PANELBOARD IS WIDE ENOUGH TO ACCEPT FUTURE CTs.

NEC DEMAND LOAD	CONN KVA	DEMAND FACTOR	DEMAND KVA
TYPE "M": MOTOR LOADS (LARGEST MOTOR)		125%	
TYPE "M": MOTOR LOADS (REMAINING)		100%	
TYPE "L": LIGHTING LOADS	2.01	125%	2.51
TYPE "R": RECEPTACLES (FIRST 10KVA)	10.00	100%	10.00
TYPE "R": RECEPTACLES (OVER 10KVA)	7.36	50%	3.68
TYPE "H": HVAC LOADS		100%	
TYPE "PP": PANEL LOADS		100%	
TYPE "C": COOKING LOADS		65%	
TYPE "E": EV LOADS		125%	
TYPE "W": WATER HEATING LOADS	0.43	100%	0.43
TYPE "O": OTHER LOADS	4.41	100%	4.41
	DEMAND KVA:		21.02
	DEMAND AMPS:		58.4



AGRICULTURAL SCIENCE BLDG
BEAR CREEK HIGH SCHOOL
 10555 THORTON RD
 STOCKTON, CA 95209
INCREMENT 2

ISSUE	DATE	DESCRIPTION

PROJECT NUMBER: ----
DRAWN BY: Author
DESIGNER: Designer
PLOT DATE: 11-06-23

SHEET TITLE: **SCHEDULES**

SHEET #: **E701**

PROJECT SUMMARY

THIS PROJECT INCLUDES THE INSTALLATION OF (1) WET SPRINKLER SYSTEM THROUGHOUT A NEW ONE-STORY 3,884FT² NEW SCIENCE EDUCATION BUILDING.

THE SPRINKLER SYSTEM WILL BE FED FROM THE NEW SYSTEM RISER LOCATED INSIDE THE BUILDING ALONG THE NE WALL. THIS SYSTEM PROVIDES PROTECTION TO THE ENTIRETY OF BUILDING. THE ENTIRE STRUCTURE, USED AS A SCHOOL EDUCATION BUILDING, IS OF STEEL C-CHANNEL AND LIGHT GAGE **GENERAL NOTES:**

CRITERIA:

- SYSTEM IS DESIGNED TO NFPA 13 (2022 EDITION).
- ALL SYSTEM PIPING SHALL BE HYDROSTATICALLY TESTED AT 200 PSI FOR 2 HOURS.
- ALL TESTS SHALL BE WITNESSED BY LOCAL FIRE DEPARTMENT.
- ALL CONTROL VALVES SHALL HAVE TAMPER SWITCHES.
- ALL FLOW AND TAMPER SWITCHES TO BE LOCALLY AND CENTRALLY MONITORED.
- ALL HANGERS FOR THIS SYSTEM SHALL BE PER MINIMUM REQUIREMENTS OF NFPA 13, CHAPTER 9
- THE BUILDING SHALL BE ABLE TO SUPPORT THE SPRINKLER PIPING. THIS IS THE RESPONSIBILITY OF THE OWNER AND/OR THEIR STRUCTURAL REPRESENTATIVES.
- THE OWNER SHALL BE RESPONSIBLE FOR MAINTAINING HEAT ABOVE 40°F TO PREVENT THE FREEZING OF SPRINKLER PIPING.
- ALL PAINTING OF PIPE SHALL BE BY OTHERS.
- ALL WIRING SHALL BE BY OTHERS.
- THIS SPRINKLER SYSTEM SHALL BE PROPERLY INSPECTED, TESTED, AND MAINTAINED IN ACCORDANCE WITH NFPA 25 TO PROVIDE AT LEAST THE SAME LEVEL OF PERFORMANCE AND PROTECTION AS IT WAS DESIGNED. THE OWNER SHALL BE RESPONSIBLE FOR MAINTAINING THE SYSTEM AND KEEPING THE SYSTEM IN GOOD OPERATING CONDITION.
- ALL ROOMS NOTED AS "CLASSROOM ARE LIGHT HAZARD" AND "CUSTODIAN, MECH, STORAGE, ELEC, SPRK RISER, AND JANITORS" ARE ORDINARY HAZARD GRP I.
- ALL VALVES IN THE RISER ROOM MUST BE ACCESSIBLE PER NFPA 13.

MATERIALS:

- ALL SYSTEM COMPONENTS AND HARDWARE SHALL BE IN COMPLIANCE WITH NFPA 13
- ALL EQUIPMENT FOR THIS SYSTEM SHALL BE U.L. LISTED.
- ALL GROOVED PIPE SHALL BE SCH 10 PIPING USED WITH WELDED OUTLETS AND FIRELOCK SHORT RADIUS GROOVED FITTINGS.
- ALL THREADED PIPING TO BE U.L. THREADED SCH 40 WITH DUCTILE IRON SCREWED FITTINGS.
- PROVIDE (1) SPARE SPRINKLER HEAD CABINET WITH (12) HEADS AND (1) HEAD WRENCH.

INSTALLATION:

- SPRINKLER HEADS ARE TO BE LOCATED IN THE CENTER POINT OF CEILING TILES.
- NO INSTALLATION OR FABRICATION TO BEGIN WITHOUT APPROVED SHOP DRAWINGS.
- AFF ELEVATIONS ARE TAKEN FROM TOP OF FINISHED FLOOR (0'-0")
- FIRE DEPARTMENT VALVES AND DRAINS SHALL BE READILY ACCESSIBLE AT ALL TIMES. PROVIDE 36" CLEARANCE.
- APPROVED FIRE CAULK WILL BE APPLIED 1/2" THICK ON EACH SIDE OF FIRE RATED WALL ASSEMBLIES.
- ALL PIPE PENETRATING EXTERIOR WALLS TO BE GALVANIZED. ANNULAR SPACE TO BE SEALED AT EACH SIDE OF WALL.
- INSPECTOR'S TEST CONNECTION SHALL BE INSTALLED PER NFPA 13.
- LOCATION OF FIRE DEPARTMENT CONNECTION SHALL BE PER NFPA 13.

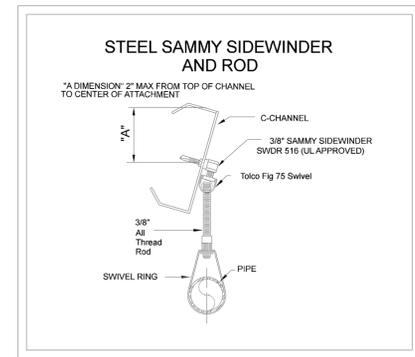
PARTIAL LIST OF APPLICABLE STANDARDS:

2019 BUILDING CODE (FOR SFM) REFERENCED STANDARDS CHAPTER 35

NFPA 13	AUTOMATIC SPRINKLER SYSTEM	2016 EDITION
NFPA 17	DRY CHEMICAL EXTINGUISHING SYSTEMS	2017 EDITION
NFPA 17A	WET CHEMICAL SYSTEMS	2017 EDITION
NFPA 72	NATIONAL FIRE ALARM CODE	2016 EDITION
NFPA 80	FIRE DOORS AND OTHER OPENING PROTECTIVES	2016 EDITION
NFPA 2001	CLEAN AGENT FIRE EXTINGUISHING SYSTEMS	2015 EDITION
UL 464	AUDIBLE SIGNAL APPLIANCES	2003 EDITION
UL 521	HEAT DETECTORS FOR FIRE PROTECTION SIGNAL SYSTEMS	1999 EDITION

HANGER TO BE USED ONLY IF MAIN IS DOESNT CHANSE PURLIN FROM PLANNED LOCATION TRAP SCHEDULE (PER NFPA 13, TABLES 9.1.1.7.1 (a,b))

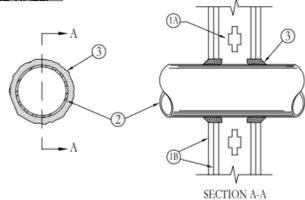
PIPE SIZE	STRUCT SPAN	TRAPEZE SIZE/SCHEDULE
3"	4'	1 1/2" SCH 40



HANGER -1

Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature	
●	Tyco	TY3231	TY-FRB	44	5.6	Pendent	1/2	Quick	White	200 °F	
●	Tyco	TY3235	DS-1	1	5.6	Pendent	1	Quick	White	200 °F	
○	Tyco	TY3131	TY-FRB	2	5.6	Upright	1/2	Quick	Brass	200 °F	
				Total = 47							

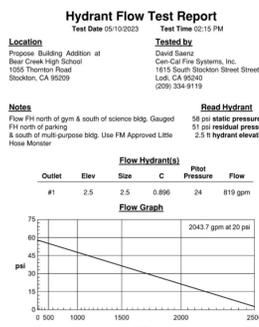
NO ANNULAR SPACE REQUIRED WHEN PASSING THROUGH FRANGIBLE WALLS. 2" PIPE CLEARANCE REQUIRED WHEN PASSING THROUGH FRANGIBLE WALL.



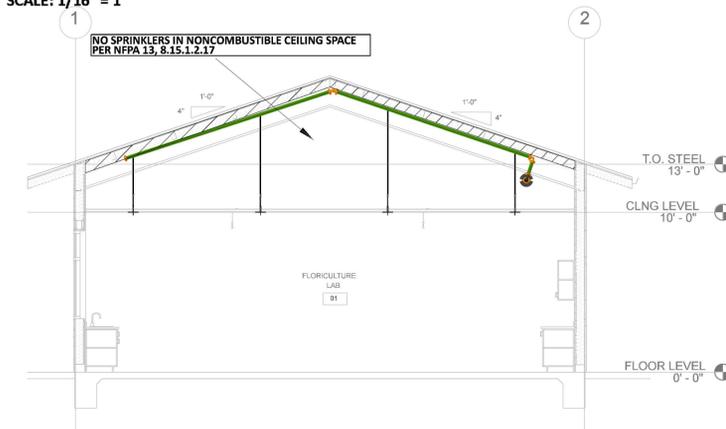
ROOF DECK INSULATION DETAIL NO SCALE

System No. W-L-1001
 Date: June 13, 2002
 F Ratings - 1, 2, and 4 (See Items 2 and 3)
 T Ratings - 0, 1, 2, 3, and 4 (See Items 3 and 4)
 L Rating - 0 (See Item 3)
 L Rating - 0 (See Item 3)
 L Rating - 0 (See Item 3)

Notes:
 1. Steel Pipe - Non 24 in. (610 mm) diam (or smaller) Schedule 40 (or heavier) steel pipe, non 12 in. (305 mm) diam (or smaller) or Class 50 (or heavier) ductile iron pressure pipe.
 2. Copper Tubing - Non 4 in. (102 mm) diam (or smaller) Type L (or heavier) copper tubing.
 3. Cast Iron - Non 4 in. (102 mm) diam (or smaller) ductile iron pressure pipe.
 4. Through Penetrating Product - Flexible Metal Piping. The following types of steel flexible metal gas piping may be used:
 1. Non 2 in. (51 mm) diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.
 2. Non 1 in. (25 mm) diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.
 3. Non 1 in. (25 mm) diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.
 4. BENDIC CO
 5. WARD MFG INC



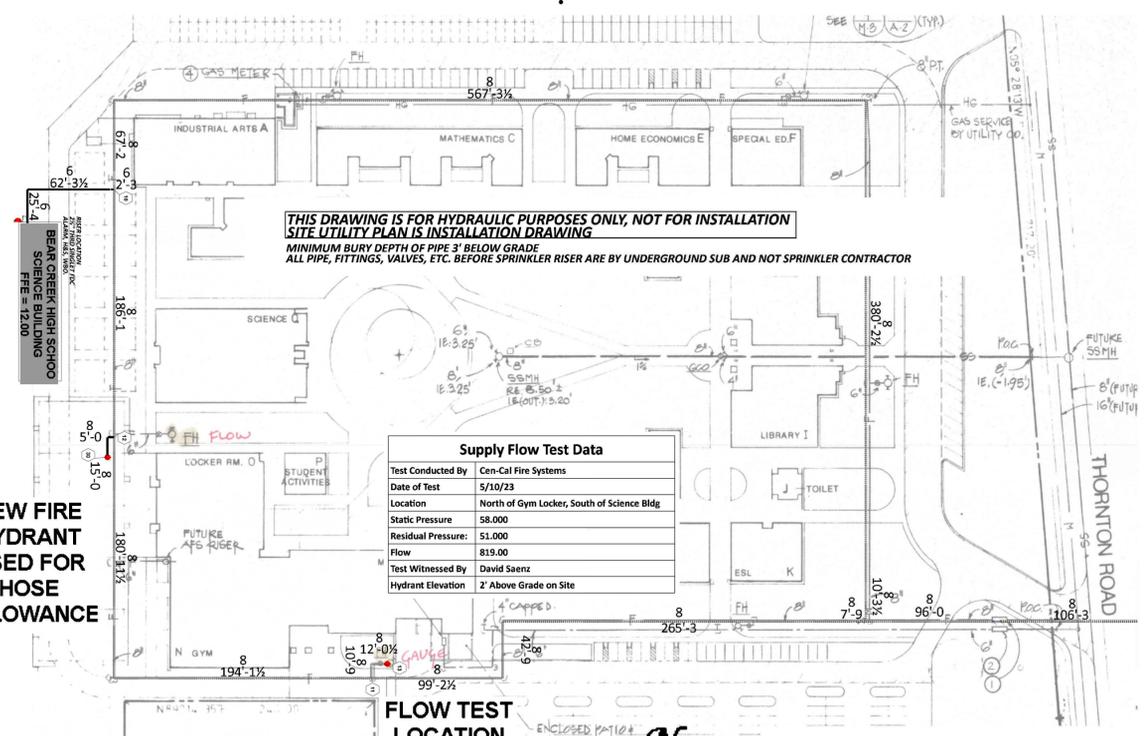
LONGITUDINAL CROSS SECTION SCALE: 1/16" = 1'



LATERAL CROSS SECTION SCALE: 3/16" = 1'



NEW FIRE HYDRANT USED FOR HOSE ALLOWANCE

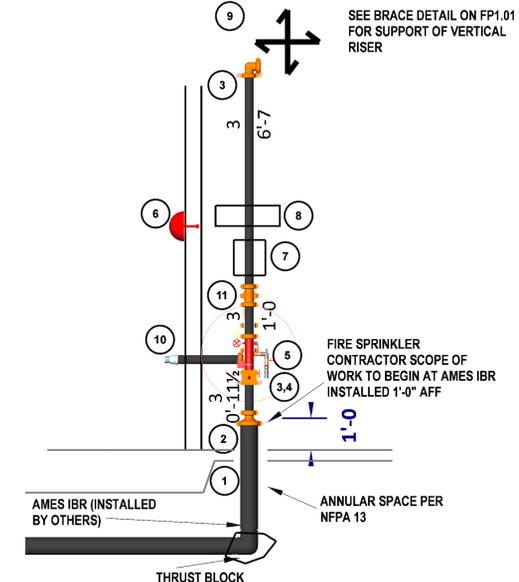


Supply Flow Test Data	
Test Conducted By	Ken-Cal Fire Systems
Date of Test	5/10/23
Location	North of Gym Locker, South of Science Bldg
Static Pressure	58.000
Residual Pressure	51.000
Flow	819.00
Test Witnessed By	David Saenz
Hydrant Elevation	2' Above Grade on Site

RISER KEYNOTES:

- 1 - NEW 6" FIRE WATER UNDERGROUND
- 2 - 6X3" GROOVED CONCENTRIC REDUCER
- 3 - 3" FLEX COUPLING
- 4 - 3" GRVD BUTTERFLY VALVE WITH TAMPERS (WIRED BY OTHERS)
- 5 - 3" TYCO COMMERCIAL RISER MANIFOLD W/ TEST/DRAIN (5.6K), PSI GAUGE, PRESSURE RELIEF VALVE, AND FLOW SWITCH.
- 6 - 120V HORNISTROBE
- 7 - HYDRAULIC INFORMATION LABELS
- 8 - SPARE SPRINKLER HEAD CABINET
- 9 - LAT-1 / LONG-1 TO BE INSTALLED WITHIN 2'-0" OF VERTICAL RISER
- 10 - 3" X 1/2" ROUGH BRASS FDC
- 11 - 3" GROOVED CHECK VALVE

"PIPE TEST/DRAIN & BALL DRIP TO EXTERIOR"
 "ALL WIRING BY ALARM CONTRACTOR OR ELECTRICIAN"



RISER DETAIL SCALE: 3/8" = 1'-0"

WATER TEST INFORMATION	PIPE TYPES AND FITTING TYPES	MAXIMUM DISTANCE BETWEEN HANGERS	SYMBOLS / ABBREVIATIONS																					
Static Pressure (PSI): 58 Residual Pressure (PSI): 51	<input checked="" type="checkbox"/> FOREIGN <input type="checkbox"/> DOMESTIC ALL SYSTEM COMPONENTS AND HARDWARE SHALL BE IN COMPLIANCE WITH NFPA 13 ALL EQUIPMENT FOR THIS SYSTEM SHALL BE U.L. LISTED LINE PIPING: BLACK STEEL SCH 40 GROOVED, 40 THREADED MAIN PIPING: BLACK STEEL SCH 10 ROLL GROOVED THREADED FITTINGS: BLACK DUCTILE IRON SCREWED FITTINGS GROOVED FITTINGS: FIRELOCK, SHORT RADIUS GROOVED (LNO)	NOMINAL PIPE SIZE (in.) <table border="1"> <tr> <td>0 1/2"</td> <td>1"</td> <td>1 1/2"</td> <td>2"</td> <td>2 1/2"</td> <td>3"</td> <td>4"</td> </tr> <tr> <td>N/A</td> <td>12-0</td> <td>12-0</td> <td>15-0</td> <td>15-0</td> <td>15-0</td> <td>15-0</td> </tr> <tr> <td>N/A</td> <td>12-0</td> <td>12-0</td> <td>15-0</td> <td>15-0</td> <td>15-0</td> <td>15-0</td> </tr> </table> 3/8" - 4" PIPE HANGERS CONSIST OF 3/8" ALL-THREAD ROD, HANGER RING AND ATTACHMENT AS SHOWN IN HANGER DETAIL	0 1/2"	1"	1 1/2"	2"	2 1/2"	3"	4"	N/A	12-0	12-0	15-0	15-0	15-0	15-0	N/A	12-0	12-0	15-0	15-0	15-0	15-0	--- EXISTING SPRINKLER PIPE --- SPRINKLER MAIN - GROOVED --- BRANCH LINE - GROOVED --- BRANCH LINE - THREADED ○ HYDRAULIC REFERENCE POINT * -0" TS (DENOTES CL OF PIPE ABOVE FINISH FLOOR) * -0" FF (DENOTES CL OF PIPING BELOW DECK) ○ HANGER LOCATION
0 1/2"	1"	1 1/2"	2"	2 1/2"	3"	4"																		
N/A	12-0	12-0	15-0	15-0	15-0	15-0																		
N/A	12-0	12-0	15-0	15-0	15-0	15-0																		

NOTE: IT IS THE OWNER'S RESPONSIBILITY TO PROVIDE ADEQUATE HEAT THROUGHOUT WET PIPE SPRINKLER SYSTEMS AND IN ENCLOSURES FOR DRY PIPE, DELUGE AND OTHER TYPES OF VALVES CONTROLLING WATER SUPPLIES TO THE SPRINKLER SYSTEMS.

FP1.00

AGRICULTURAL SCIENCE BLDG
 BEAR CREEK HIGH SCHOOL
 10555 THORTON RD.
 STOCKTON, CA 95209

DUMOR FIRE SYSTEMS
 17119 PLACER HILLS RD
 MEADOW VISTA, CA 95722
 PHONE: (530)878-9055

SCALE: AS NOTED

FIRE PROTECTION PLAN

AS NOTED

JL MODULAR
 70 STONY POINT ROAD, SUITE D
 SANTA ROSA, CA 95401
 PHONE: 707.527.5788
 FAX: 707.542.7718

DUMOR FIRE SYSTEMS performed the design of this fire sprinkler system. California law states that this design is only valid if the same C-36 licensed contractor who designed the system performs the installation. DSA project approval will become invalid if a different contractor installs any portion of the fire sprinkler system (including the riser). If another contractor will install any portion of the fire sprinkler system, responsibility for the entire fire sprinkler system (including the riser) must be accepted by a California registered mechanical engineer or fire protection engineer. Acceptance of responsibility is indicated by signing and stamping all fire sprinkler drawings. Signed and stamped drawings must be submitted to DSA and approved prior to proceeding with construction. Note that these requirements may apply if the building is subsequently relocated to a new location in the future.

DRAWN BY: BS PLOT DATE: 11.04.2023
 CHECKED BY: JH

OSHPD

Agricultural Science Bldg.
 10555 Thornton Rd, Stockton, CA 95209, USA
 Latitude, Longitude: 38.0507907, -121.2530916

Design Code Reference Document: 10/23/2023, 1:52:12 PM
 Risk Category: II - Detail (See Section 11A.2)
 Site Class: II

Type	Value	Description
S ₁	0.223	MCE ground motion, (0.2 second period)
S ₁	0.294	MCE ground motion, (1.0 second period)
S ₁	0.383	Site coefficient spectral acceleration value
S ₁	0.608	Site coefficient spectral acceleration value
S ₂	0.089	Minimum seismic design value at 0.2 second SA
S ₂	0.145	Minimum seismic design value at 1.0 second SA
S ₂	0.188	Minimum seismic design value at 2.0 second SA
S ₂	0.231	Minimum seismic design value at 3.0 second SA
S ₂	0.274	Minimum seismic design value at 4.0 second SA
S ₂	0.317	Minimum seismic design value at 5.0 second SA
S ₂	0.360	Minimum seismic design value at 6.0 second SA
S ₂	0.403	Minimum seismic design value at 7.0 second SA
S ₂	0.446	Minimum seismic design value at 8.0 second SA
S ₂	0.489	Minimum seismic design value at 9.0 second SA
S ₂	0.532	Minimum seismic design value at 10.0 second SA
S ₂	0.575	Minimum seismic design value at 11.0 second SA
S ₂	0.618	Minimum seismic design value at 12.0 second SA
S ₂	0.661	Minimum seismic design value at 13.0 second SA
S ₂	0.704	Minimum seismic design value at 14.0 second SA
S ₂	0.747	Minimum seismic design value at 15.0 second SA
S ₂	0.790	Minimum seismic design value at 16.0 second SA
S ₂	0.833	Minimum seismic design value at 17.0 second SA
S ₂	0.876	Minimum seismic design value at 18.0 second SA
S ₂	0.919	Minimum seismic design value at 19.0 second SA
S ₂	0.962	Minimum seismic design value at 20.0 second SA
S ₂	1.005	Minimum seismic design value at 21.0 second SA
S ₂	1.048	Minimum seismic design value at 22.0 second SA
S ₂	1.091	Minimum seismic design value at 23.0 second SA
S ₂	1.134	Minimum seismic design value at 24.0 second SA
S ₂	1.177	Minimum seismic design value at 25.0 second SA
S ₂	1.220	Minimum seismic design value at 26.0 second SA
S ₂	1.263	Minimum seismic design value at 27.0 second SA
S ₂	1.306	Minimum seismic design value at 28.0 second SA
S ₂	1.349	Minimum seismic design value at 29.0 second SA
S ₂	1.392	Minimum seismic design value at 30.0 second SA
S ₂	1.435	Minimum seismic design value at 31.0 second SA
S ₂	1.478	Minimum seismic design value at 32.0 second SA
S ₂	1.521	Minimum seismic design value at 33.0 second SA
S ₂	1.564	Minimum seismic design value at 34.0 second SA
S ₂	1.607	Minimum seismic design value at 35.0 second SA
S ₂	1.650	Minimum seismic design value at 36.0 second SA
S ₂	1.693	Minimum seismic design value at 37.0 second SA
S ₂	1.736	Minimum seismic design value at 38.0 second SA
S ₂	1.779	Minimum seismic design value at 39.0 second SA
S ₂	1.822	Minimum seismic design value at 40.0 second SA
S ₂	1.865	Minimum seismic design value at 41.0 second SA
S ₂	1.908	Minimum seismic design value at 42.0 second SA
S ₂	1.951	Minimum seismic design value at 43.0 second SA
S ₂	1.994	Minimum seismic design value at 44.0 second SA
S ₂	2.037	Minimum seismic design value at 45.0 second SA
S ₂	2.080	Minimum seismic design value at 46.0 second SA
S ₂	2.123	Minimum seismic design value at 47.0 second SA
S ₂	2.166	Minimum seismic design value at 48.0 second SA
S ₂	2.209	Minimum seismic design value at 49.0 second SA
S ₂	2.252	Minimum seismic design value at 50.0 second SA
S ₂	2.295	Minimum seismic design value at 51.0 second SA
S ₂	2.338	Minimum seismic design value at 52.0 second SA
S ₂	2.381	Minimum seismic design value at 53.0 second SA
S ₂	2.424	Minimum seismic design value at 54.0 second SA
S ₂	2.467	Minimum seismic design value at 55.0 second SA
S ₂	2.510	Minimum seismic design value at 56.0 second SA
S ₂	2.553	Minimum seismic design value at 57.0 second SA
S ₂	2.596	Minimum seismic design value at 58.0 second SA
S ₂	2.639	Minimum seismic design value at 59.0 second SA
S ₂	2.682	Minimum seismic design value at 60.0 second SA
S ₂	2.725	Minimum seismic design value at 61.0 second SA
S ₂	2.768	Minimum seismic design value at 62.0 second SA
S ₂	2.811	Minimum seismic design value at 63.0 second SA
S ₂	2.854	Minimum seismic design value at 64.0 second SA
S ₂	2.897	Minimum seismic design value at 65.0 second SA
S ₂	2.940	Minimum seismic design value at 66.0 second SA
S ₂	2.983	Minimum seismic design value at 67.0 second SA
S ₂	3.026	Minimum seismic design value at 68.0 second SA
S ₂	3.069	Minimum seismic design value at 69.0 second SA
S ₂	3.112	Minimum seismic design value at 70.0 second SA
S ₂	3.155	Minimum seismic design value at 71.0 second SA
S ₂	3.198	Minimum seismic design value at 72.0 second SA
S ₂	3.241	Minimum seismic design value at 73.0 second SA
S ₂	3.284	Minimum seismic design value at 74.0 second SA
S ₂	3.327	Minimum seismic design value at 75.0 second SA
S ₂	3.370	Minimum seismic design value at 76.0 second SA
S ₂	3.413	Minimum seismic design value at 77.0 second SA
S ₂	3.456	Minimum seismic design value at 78.0 second SA
S ₂	3.499	Minimum seismic design value at 79.0 second SA
S ₂	3.542	Minimum seismic design value at 80.0 second SA
S ₂	3.585	Minimum seismic design value at 81.0 second SA
S ₂	3.628	Minimum seismic design value at 82.0 second SA
S ₂	3.671	Minimum seismic design value at 83.0 second SA
S ₂	3.714	Minimum seismic design value at 84.0 second SA
S ₂	3.757	Minimum seismic design value at 85.0 second SA
S ₂	3.800	Minimum seismic design value at 86.0 second SA
S ₂	3.843	Minimum seismic design value at 87.0 second SA
S ₂	3.886	Minimum seismic design value at 88.0 second SA
S ₂	3.929	Minimum seismic design value at 89.0 second SA
S ₂	3.972	Minimum seismic design value at 90.0 second SA
S ₂	4.015	Minimum seismic design value at 91.0 second SA
S ₂	4.058	Minimum seismic design value at 92.0 second SA
S ₂	4.101	Minimum seismic design value at 93.0 second SA
S ₂	4.144	Minimum seismic design value at 94.0 second SA
S ₂	4.187	Minimum seismic design value at 95.0 second SA
S ₂	4.230	Minimum seismic design value at 96.0 second SA
S ₂	4.273	Minimum seismic design value at 97.0 second SA
S ₂	4.316	Minimum seismic design value at 98.0 second SA
S ₂	4.359	Minimum seismic design value at 99.0 second SA
S ₂	4.402	Minimum seismic design value at 100.0 second SA

SAMMYS for Steel - Seismic Restraint

DESCRIPTION (SIDEWINDER)
 SAMMYS for Steel - Seismic Restraint is a software tool that provides a comprehensive analysis and design of steel bracing systems. It is designed to be used in conjunction with the SAMMYS for Steel - Seismic Restraint software.

PERFORMANCE TABLES

Maximum Horizontal Loads for Restraints with 100, 200, 300, and 400

Restraint Type	100	200	300	400
Restraint Type	100	200	300	400
Restraint Type	100	200	300	400
Restraint Type	100	200	300	400
Restraint Type	100	200	300	400

TOLBRACE™ Seismic Bracing Calculations V.B. 122

Project Address: Agricultural Science Bldg, 10555 Thornton Rd, Stockton, CA 95209
 Contractor: Great Plains Fire Specialists, 106 6th Street, Plattsburgh, NY 05648

Brace Information
 Maximum Brace Length: 7'-0" (2.134 m)
 Diameter of Brace: 1"
 Type of Brace: Sch 40
 Angle of Brace: 45° Min.
 Least Rad. of Gyration: 0.42" (11 mm)
 L/R Value: 200
 Max Horizontal Load: 1310 lbs (594 kg)

TOLCO™ Brace Components
 TOLCO™ Component: Fig. 1001 Clamp, 2000 lbs (907 kg), 1414 lbs (641 kg)
 TOLCO™ Component: Fig. 980 - 12" Universal Sway Brace Attachment, 2100 lbs (953 kg), 1485 lbs (674 kg)

Fastener Information
 Fastener Type: 1/2" Unfinished Steel Bolt
 Diameter: 1/2"
 Length: N/A
 Maximum Load: 2050 lbs (930 kg)

Seismic Brace Assembly Detail

Fastener Information
 Fastener Type: 1/2" Unfinished Steel Bolt
 Diameter: 1/2"
 Length: N/A
 Maximum Load: 2050 lbs (930 kg)

Seismic Brace Assembly Detail

TOLBRACE™ Seismic Bracing Calculations V.B. 122

Project Address: Agricultural Science Bldg, 10555 Thornton Rd, Stockton, CA 95209
 Contractor: Great Plains Fire Specialists, 106 6th Street, Plattsburgh, NY 05648

Brace Information
 Maximum Brace Length: 7'-0" (2.134 m)
 Diameter of Brace: 1"
 Type of Brace: Sch 40
 Angle of Brace: 45° Min.
 Least Rad. of Gyration: 0.42" (11 mm)
 L/R Value: 200
 Max Horizontal Load: 1310 lbs (594 kg)

TOLCO™ Brace Components
 TOLCO™ Component: Fig. 1001 Clamp, 2000 lbs (907 kg), 1414 lbs (641 kg)
 TOLCO™ Component: Fig. 980 - 12" Universal Sway Brace Attachment, 2100 lbs (953 kg), 1485 lbs (674 kg)

Fastener Information
 Fastener Type: 1/2" Unfinished Steel Bolt
 Diameter: 1/2"
 Length: N/A
 Maximum Load: 2050 lbs (930 kg)

Seismic Brace Assembly Detail

Fastener Information
 Fastener Type: 1/2" Unfinished Steel Bolt
 Diameter: 1/2"
 Length: N/A
 Maximum Load: 2050 lbs (930 kg)

Seismic Brace Assembly Detail

Seismic Brace Assembly Detail

1/2" THRU-BOLT W/ NUT & WASHER
 TOLCO FIG. 980 UNIVERSAL SWAY BRACE ATTACHMENT
 1" SCHEDULE 40 7'-0" MAX LENGTH
 STEEL PIPE
 3" MAIN PIPE

Seismic Brace Assembly Detail

1/2" THRU-BOLT W/ NUT & WASHER
 TOLCO FIG. 980 UNIVERSAL SWAY BRACE ATTACHMENT
 1" SCHEDULE 40 7'-0" MAX LENGTH
 STEEL PIPE
 3" MAIN PIPE

FIRE SPRINKLER KEY NOTES

- DENOTES AN ORDINARY HAZARD OCCUPANCY
- AIR VENT (MANUAL BALL VALVE)
- SEE RISER DETAIL ON FP1.00
- FIRE RATED WALL

ALL BRANCHLINES INSTALLED ON RISER NIPPLED ARE TO BE INSTALLED WITH A CENTERLINE OF THE PIPE 0'-5" BELOW BOTTOM OF 6" C-CHANNEL AND PITCHING WITH THE STRUCTURE UNLESS NOTED OTHERWISE.

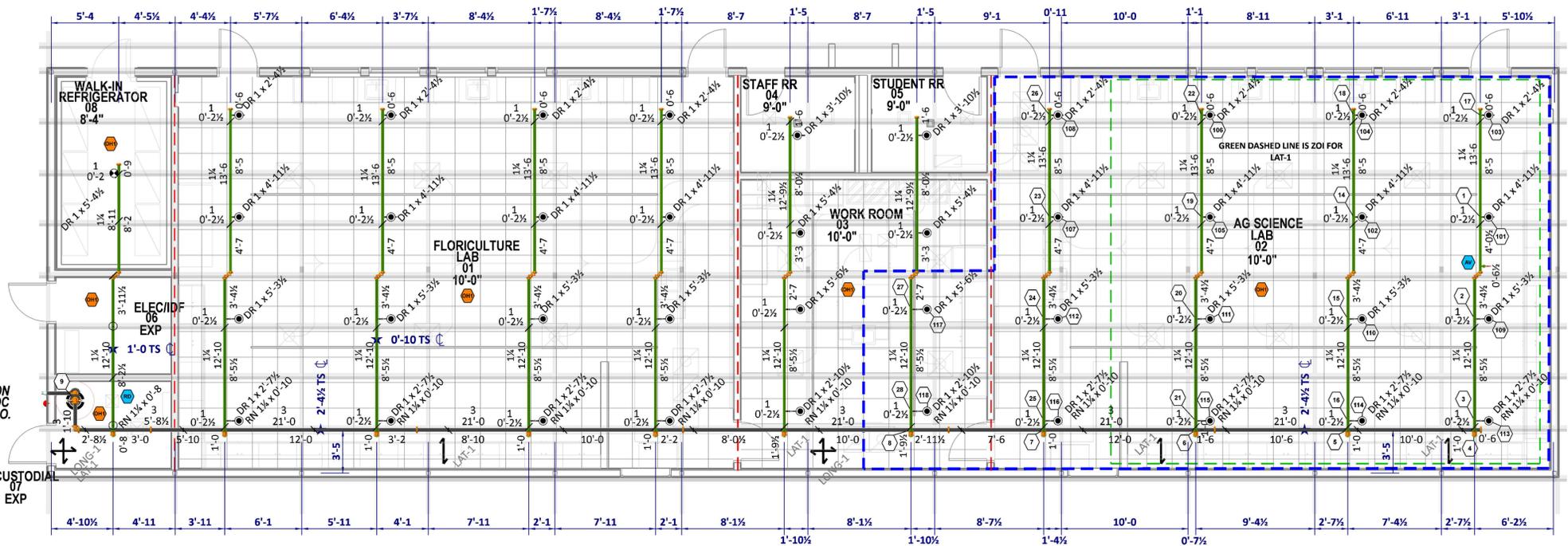
HANGING / BRACING LEGEND

- LAT-1 = LATERAL BRACE TO BE INSTALLED SEE LATERAL BRACE INSTALL DETAIL FP1.01
- LONG-1 = LONGITUDINAL BRACE TO BE INSTALLED SEE LONGITUDINAL BRACE INSTALL DETAIL FP1.01
- 1 = PIPE HANGER TO BE INSTALLED SEE HANGER -1 DETAIL FP1.0

Hydraulic Information

Remote Area RA-1

Occupancy Classification	Ordinary Group I
Density (gpm/ft²)	0.15 for 1500 ft² (Actual 1507 ft²)
Total Hose Streams	250.00
Total Heads Flowing	18
K-Factor	5.6
Total Water Required	624.32
Total Pressure Required	44.765
Base of Riser (gpm)	374.32
Base of Riser (psi)	43.786
Safety Margin (psi)	+8.998 (16.7%)



FIRE SPRINKLER PLAN
 SCALE: 3/16" = 1'

Sprinkler Legend

Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature
○	Tycos	TY3231	TY-FRB	44	5.6	Pendent	1/2"	Quick	White	200 °F
○	Tycos	TY3235	DS-1	1	5.6	Pendent	1"	Quick	White	200 °F
○	Tycos	TY3131	TY-FRB	2	5.6	Upright	1/2"	Quick	Brass	200 °F
				Total = 47						

AUTOMATIC SPRINKLER DESIGN BASED ON THE FOLLOWING NFPA STANDARD:
 NFPA 13 2022

WATER TEST INFORMATION
 Static Pressure (PSI): 58
 Residual Pressure (PSI): 51

PIPE TYPES AND FITTING TYPES
 FOREIGN
 ALL SYSTEM COMPONENTS AND HARDWARE SHALL BE IN COMPLIANCE WITH NFPA 13
 ALL EQUIPMENT FOR THIS SYSTEM SHALL BE U.S. LISTED
 LINE PIPING: BLACK STEEL SCH 40 GROOVED, 40 THREADABLE
 MAIN PIPING: BLACK STEEL SCH 30 ROLL GROOVED
 THREADED FITTINGS: BLACK DUCTILE IRON SCREWED FITTINGS
 GROOVED FITTINGS: FIRELOCK, SHORT RADIUS GROOVED (LNO)

MAXIMUM DISTANCE BETWEEN HANGERS

NOMINAL PIPE SIZE (in.)	10"	12"	14"	16"	18"	20"	24"	30"	36"
STEEL PIPE EXCEPT THREADED LIGHTWALL	N/A	12-0	12-0	12-0	12-0	12-0	12-0	12-0	12-0
THREADED LIGHTWALL STEEL PIPE	N/A	12-0	12-0	12-0	12-0	12-0	12-0	12-0	12-0

SYMBOLS / ABBREVIATIONS
 ○ EXISTING SPRINKLER PIPE
 ○ SPRINKLER MAIN - GROOVED
 ○ BRANCH LINE - GROOVED
 ○ BRANCH LINE - THREADED
 ○ HYDRULIC REFERENCE POINT
 ○ DENOTES CL OF PIPE ABOVE FINISH FLOOR
 ○ DENOTES CL OF PIPING BELOW DECK
 ○ HANGER LOCATION

NOTE:
 IT IS THE OWNER'S RESPONSIBILITY TO PROVIDE ADEQUATE HEAT THROUGHOUT WET PIPE SPRINKLER SYSTEMS AND IN ENCLOSURES FOR DRY PIPE, DELUGE AND OTHER TYPES OF VALVES CONTROLLING WATER SUPPLIES TO THE SPRINKLER SYSTEMS.

JL MODULAR
 70 STONY POINT ROAD, SUITE D
 SANTA ROSA, CA 95401
 PHONE: 707.527.5788
 FAX: 707.542.7718

DUMOR FIRE SYSTEMS performed the design of this fire sprinkler system. California law states that this design is only valid if the same C-26 licensed contractor who designed the system performs the installation. DSA project approval will become invalid if a different contractor installs any portion of the fire sprinkler system (including the riser). If another contractor will install any portion of the fire sprinkler system, responsibility for the entire fire sprinkler system (including the riser) must be accepted by a California registered mechanical engineer or fire protection engineer. Acceptance of responsibility is indicated by signing and stamping all fire sprinkler drawings. Signed and stamped drawings must be submitted to DSA and approved prior to proceeding with construction. Note that these requirements may apply if the building is subsequently relocated to a new location in the future.

DRAWN BY: BS PLOT DATE: 11.04.2023
 CHECKED BY: JH

AGRICULTURAL SCIENCE BLDG
BEAR CREEK HIGH SCHOOL
10555 THORTON RD.
STOCKTON, CA 95209

DUMOR FIRE SYSTEMS
 17119 PLACER HILLS RD
 MEADOW VISTA, CA 95722
 PHONE: (930)78-9055

SCALE: AS NOTED

FIRE PROTECTION PLAN

FP1.01

Project Name:	BEAR CREEK HIGH SCHOOL-AGRICULTURAL SCIENCE BUILDING	NRCC-PRF-01-E	Page 1 of 14
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A. GENERAL INFORMATION			
1 Project Location (city)	STOCKTON	8 Standards Version	Compliance2019
2 CA Zip Code	95209	9 Compliance Software (version)	EnergyPro 8.3
3 Climate Zone	12	10 Weather File	STOCKTON_724920_CZ2010.epw
4 Total Conditioned Floor Area in Scope	3,403 ft ²	11 Building Orientation (deg)	(E) 90 deg
5 Total Unconditioned Floor Area	250 ft ²	12 Permitted Scope of Work	NewComplete
6 Total # of Stories (Habitable Above Grade)	1	13 Building Type(s)	Nonresidential
7 Total # of dwelling units	0	14 Gas Type	NaturalGas

B. PROJECT SUMMARY			
Table Instructions: Table B shows which building components are included in the performance calculation. If indicated as not included, the project must show compliance prescriptively if within permit application.			
Building Components Complying via Performance		Building Components Complying Prescriptively	
Envelope (see Table G)	<input checked="" type="checkbox"/> Performance <input type="checkbox"/> Not Included	Covered Process: Commercial Kitchens	<input type="checkbox"/> Performance <input checked="" type="checkbox"/> Not Included
Mechanical (see Table H)	<input checked="" type="checkbox"/> Performance <input type="checkbox"/> Not Included	Covered Process: Computer Rooms	<input type="checkbox"/> Performance <input checked="" type="checkbox"/> Not Included
Domestic Hot Water (see Table I)	<input checked="" type="checkbox"/> Performance <input type="checkbox"/> Not Included	Covered Process: Laboratory Exhaust	<input type="checkbox"/> Performance <input checked="" type="checkbox"/> Not Included
Lighting (Indoor Conditioned, see Table K)	<input checked="" type="checkbox"/> Performance <input type="checkbox"/> Not Included		
Solar Thermal Water Heating (see Table I)	<input type="checkbox"/> Performance <input checked="" type="checkbox"/> Not Included		

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C1. COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS (Annual TDV Energy Use, kWh/ft ² -yr)			
COMPLIES			
Energy Component	Standard Design (TDV)	Proposed Design (TDV)	Compliance Margin (TDV) ¹
Space Heating	14.98	19.53	-4.55
Space Cooling	99.97	88.44	11.53
Indoor Fans	133.50	147.53	-14.03
Heat Rejection	--	--	--
Pumps & Misc.	--	--	--
Domestic Hot Water	7.09	8.49	-1.40
Indoor Lighting	55.24	29.35	25.89
ENERGY STANDARDS COMPLIANCE TOTAL	310.78	293.34	17.44 (5.6%)

¹ Notes: The number in parenthesis following the Compliance Margin in column 4, represents the Percent Better than Standard.

C2. RESULTS FOR 'ABOVE CODE' QUALIFICATIONS ¹			
<input type="checkbox"/> This project is pursuing CalGreen Tier 1		<input type="checkbox"/> This project is pursuing CalGreen Tier 2	
Miscellaneous Energy Component	Standard Design (TDV)	Proposed Design (TDV)	Compliance Margin (TDV) ¹
Receptacle	141.20	141.20	--
Process	50.94	50.94	--
Other Ltg	2.79	2.79	--
Process Motors	2.06	7.49	-5.43
COMPLIANCE TOTAL PLUS MISCELLANEOUS COMPONENTS	507.77	495.76	12.0 (2.4%)

¹ Notes: This table is used to document compliance with programs OTHER THAN Title 24 Part 6, if applicable.

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C3. ENERGY USE SUMMARY						
Energy Component	Standard Design Site (MWh)	Proposed Design Site (MWh)	Margin (MWh)	Standard Design Site (MBtu)	Proposed Design Site (MBtu)	Margin (MBtu)
Space Heating	--	2.7	-2.7	24.9	--	24.9
Space Cooling	7.4	5.8	1.6	--	--	--
Indoor Fans	14.9	16.5	-1.6	--	--	--
Heat Rejection	--	--	--	--	--	--
Pumps & Misc.	--	--	--	--	--	--
Domestic Hot Water	0.0	--	--	13.3	16.1	-2.8
Indoor Lighting	6.6	3.5	3.1	--	--	--
Compliance Total	28.9	28.5	0.4	38.2	16.1	22.1
Receptacle	17.0	17.0	0.0	--	--	--
Process	6.3	6.3	0.0	--	--	--
Other Ltg	0.3	0.3	0.0	--	--	--
Process Motors	0.2	0.8	-0.6	--	--	--
TOTAL	52.7	52.9	-0.2	38.2	16.1	22.1

D. EXCEPTIONAL CONDITIONS						
This project uses the Simplified Geometry Performance Modeling Approach which is not capable of modeling daylighting controls and assumes the prescriptive Secondary Daylit Control requirements are met. PRESCRIPTIVE COMPLIANCE documentation (form NRCC-LTI-02-E) for the requirements of section 140.6(6) Automatic Daylighting Controls in Secondary Daylit Zones is required.						
The user model includes space(s) that are designed to be served by mechanical cooling systems, but the cooling systems were not included in the simulation model. A cooling system has been modeled for both the proposed and standard cases.						
The user model includes space(s) without sufficient cooling equipment. Cooling equipment has been added to the model to meet cooling loads.						

E. HERS VERIFICATION						
This Section Does Not Apply						

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G1. ENVELOPE GENERAL INFORMATION (conditioned spaces only)			
1	2	3	4
Opaque Surfaces & Orientation	Total Gross Surface Area (ft ²)	Total Fenestration Area (ft ²)	Window to Wall Ratio (%)
North-Facing ¹	137 ft ²	0 ft ²	00.0%
East-Facing ²	1,159 ft ²	176 ft ²	15.2%
South-Facing ³	504 ft ²	0 ft ²	00.0%
West-Facing ⁴	1,419 ft ²	44 ft ²	03.1%
Total	3,219 ft²	220 ft²	06.8%
Roof	3,599 ft ²	0 ft ²	00.0%

Notes:
¹North-Facing is oriented to within 45 degrees of true north, including 45°00'00" east of north (NE), but excluding 45°00'00" west of north (NW).
²East-Facing is oriented to within 45 degrees of true east, including 45°00'00" south of east (SE), but excluding 45°00'00" north of east (NE).
³South-Facing is oriented to within 45 degrees of true south, including 45°00'00" west of south (SW), but excluding 45°00'00" east of south (SE).
⁴West-Facing is oriented to within 45 degrees of true west, including 45°00'00" north of west (NW), but excluding 45°00'00" south of west (SW).

G3. OPAQUE SURFACE ASSEMBLY SUMMARY									
1	2	3	4	5	6	7	8	9	10
Surface Name	Surface Type	Area (ft ²)	Framing Type	Cavity R-Value	Continuous R-Value	Units	Value	Description of Assembly Layers	U-Factor
Metal Framing Roof10	Roof	4032	Metal	30	5	U-Factor	0.048	Metal Deck - 1/16 in. Compliance Insulation R5.00 Plywood - 3/4 in. Metal Framed roof, 24in. OC, 9.25in., R-21	N
MetalFrameWall12	ExteriorWall	4106	Metal	21	6	U-Factor	0.078	Stucco - 7/8 in. Vapor permeable felt - 1/8 in. Gypsum Board - 5/8 in. Metal Framed wall, 16in. OC, 5.5in., R-21	N
Slab On Grade24	UndergroundFloor	3813	NA	0	NA	F-Factor	0.73	Slab Type = UnheatedSlabOnGrade Insulation Orientation = None insulation R-Value = R0	N

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G3. OPAQUE SURFACE ASSEMBLY SUMMARY									
1	2	3	4	5	6	7	8	9	10
Surface Name	Surface Type	Area (ft ²)	Framing Type	Cavity R-Value	Continuous R-Value	Units	Value	Description of Assembly Layers	U-Factor
Int. Walls26	InteriorWall	3269	Metal	19	NA	U-Factor	0.137	Gypsum Board - 5/8 in. Air - Cavity - Wall Roof Ceiling - 4 in. or more Metal framed wall, 16in. OC, 5.5in., R-19 Gypsum Board - 5/8 in.	N

¹ Status: N - New, A - Altered, E - Existing

G4. OPAQUE DOOR SUMMARY		
1	2	3
Assembly Name	Overall U-Factor	Status ¹
Metal Door14	0.700	N

G5. FENESTRATION ASSEMBLY SUMMARY								
1	2	3	4	5	6	7	8	9
Fenestration Assembly Name / Tag or I.D.	Fenestration Type / Product Type / Frame Type	Certification Method ¹	Assembly Method	Area ft ²	Overall U-Factor	Overall SHGC	Overall VT	Status ¹
*Type A All Weather Series 5000 (49/28)	VerticalFenestration Operable/Window	NFRC Rated	Manufactured	220	0.49	0.28	0.49	N

¹ Newly installed fenestration shall have a certified NFRC Label Certificate or use the CEC default tables found in Table 110.6-A and Table 110.6-B. Center of Glass (COG) values are for the glass only, determined by the manufacturer, and are shown for ease of verification. Site wall fenestration values are calculated per Nonresidential Appendix 104 and are used in the analysis.
² Status: N - New, A - Altered, E - Existing

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H1. DRY SYSTEM EQUIPMENT (furnaces, air handling units, heat pumps, VRF, economizers etc.)											
1	2	3	4	5	6	7	8	9	10	11	12
Equipment Name	Equipment Type	Qty	Heating			Cooling			Economizer Type (if present)	Status	
			Total Heating Output (kBtu/h)	Supp Heat Output (kBtu/h)	Efficiency Unit	Efficiency	Total Cooling Output (kBtu/h)	Efficiency Unit			Efficiency
AC-1	SZHP (Packaged3Phase)	1	86	41	COP	3.40	86	EER	11.2	DifferentialEnthalpy	N
AC-2	SZHP (Packaged3Phase)	1	86	41	COP	3.40	86	EER	11.2	DifferentialEnthalpy	N
AC-3	SZHP (Packaged3Phase)	1	36	22	HSPF	8.20	36	SEER/EEER	14.30/11.80	DifferentialEnthalpy	N
FC1 / CU1	SZHP (Split1Phase)	1	30	0	HSPF	11.600	23	SEER/EEER	21.500/13.000	NoEconomizer	N

¹ Status: N - New, A - Altered, E - Existing

H2. FAN SYSTEMS SUMMARY															
1	2	3	4	5	6	7	8	9	10	11	12	13	14		
Name or Item Tag	Design OA	CFM	Modeling Method	Power	Power Units	Control	CFM	Modeling Method	Power	Power Units	Control	Status			
													Supply Fan	Return Fan	
AC-1	1	214	3000	BrakeHorsePower	1.330	bhp	ConstantVolume	NA	NA	NA	NA	N			
AC-2	1	214	3000	BrakeHorsePower	1.330	bhp	ConstantVolume	NA	NA	NA	NA	N			
AC-3	1	176	1200	BrakeHorsePower	0.460	bhp	ConstantVolume	NA	NA	NA	NA	N			
FC1 / CU1	1	0	719	BrakeHorsePower	0.500	bhp	ConstantVolume	NA	NA	NA	NA	N			

¹ Status: N - New, A - Altered, E - Existing

H3. EXHAUST FAN SUMMARY							
1	2	3	4	5	6	7	8
System ID	Zone Name	Qty	CFM	Motor BHP	Power Per Flow (W/cfm)	Total Static Pressure (in. H ₂ O)	Status
01 FLORICULTURE LAB3	1-01 FLORICULTURE LAB	1	1,424	0.240	0.147	0.70	N
02 AG SCIENCE LAB27	2-02 AG SCIENCE LAB	1	1,429	0.240	0.146	0.69	N
04/05 STAFF RR71	5-04/05 STAFF RR	2	80	0.112	1.224	5.79	N

¹ Status: N - New, A - Altered, E - Existing

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H4. Wet System Equipment(boilers,chillers,cooling towers,etc.)			
This Section Does Not Apply			

H5. PUMPS			
This Section Does Not Apply			

H6. SYSTEM SPECIAL FEATURES			
1	2	3	4
System Name	Equipment Type	Window Interlocks per §140.4(i)	Other Special Features and Controls
AC-1	SZHP	No	Differential Enthalpy Economizer
AC-2	SZHP	No	Differential Enthalpy Economizer
AC-3	SZHP	NA	Zones With CO2Sensor Vent. Control Differential Enthalpy Economizer
Plant1 - SHW	Service Hot Water, Primary Only	NA	Fixed Temperature Control

Notes: This table includes controls related to the performance path only. For projects using the prescriptive path, mandatory and prescriptive controls requirements are documented on the NRCC-MCH-E.

H7. NONRESIDENTIAL VENTILATION						
1	2	3	4	5	6	7
Zone Name	Ventilation Function	Mechanical Ventilation			Conditioned Area (ft ²)	DCV or Occupant Sensor Controls, or Both
		# of people	Supply OA CFM	Exhaust CFM		
1-01 FLORICULTURE LAB	Education - Science laboratories	7.12	214	1424	1424	NA
2-02 AG SCIENCE LAB	Education - Science laboratories	7.15	214	1429	1429	NA
3-03 WORK ROOM	Education - Classrooms (ages 9-18)	11.75	176	0	470	DCV
4-06 ELEC/DF	General - Unoccupied	0.12	0	0	80	NA
6-Walk-in	NA	0.00	0	0	0	NA

H8. HIGH-RISE RESIDENTIAL DWELLING UNIT AND HOTEL/MOTEL VENTILATION						
This Section Does Not Apply						

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H9. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY												
1	2	3	4	5	6	7	8	9	10	11	12	13
System ID	Zone Name	System Type	Qty	Rated Capacity (kBtu/h)		Airflow (cfm)			Fan			
				Heating	Cooling	Design	Min.	Min. Ratio	Power	Power Units	Cycles	VSD
1-01 FLORICULTURE LAB-Trm	1-01 FLORICULTURE LAB	Uncontrolled	1	NA	NA	3000	NA	0.00	1.330	bhp	NA	<input type="checkbox"/>
2-02 AG SCIENCE LAB-Trm	2-02 AG SCIENCE LAB	Uncontrolled	1	NA	NA	3000	NA	0.00	1.330	bhp	NA	<input type="checkbox"/>
3-03 WORK ROOM-Trm	3-03 WORK ROOM	Uncontrolled	1	NA	NA	1200	NA	0.00	0.460	bhp	NA	<input type="checkbox"/>
4-06 ELEC/DF-Trm	4-06 ELEC/DF	Uncontrolled	1	NA	NA	719	NA	0.00	0.500	bhp	NA	<input type="checkbox"/>

H10. EVAPORATIVE COOLER SUMMARY						
This Section Does Not Apply						

H11. HEAT RECOVERY SUMMARY						
This Section Does Not Apply						

H1. WATER HEATER EQUIPMENT SUMMARY													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Name	Heater Element Type	Tank Type	Qty	Tank Vol (gal)	Rated Input	Rated Input Unit	Efficiency	Efficiency Unit	Tank Insulation R-Value (Int/Ext)	Standby Loss Fraction	1st Hour Rating or Flow Rate (gal)	Heat Pump Type	

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K3. INDOOR CONDITIONED LIGHTING CONTROL CREDITS

Lighting Control Credits Schedule (includes all lighting controls installed in conditioned space for compliance credit per §140.6(a)2 and Table 140.6-A)

1	2	3	4	5	6	7	8	9
Area Description	Primary Function Area (must meet requirements of Table 140.6-A)	Type of Lighting Control	Power Adjustment Factor (PAF)	Luminaire Name or Item Tag	Watts per Luminaire	# of Luminaires	Lighting Controlled (Watts)	Control Credit (Watts)
5-1-01 FLOOR/CULTURE LAB	Scientific Laboratory Area	NA	0.00 0.00 0.00 0.00	LP32	718.0	2	718	0
5-2-02 AG SCIENCE LAB	Scientific Laboratory Area	NA	0.00 0.00 0.00 0.00	LP32	718.0	2	718	0
5-3-03 WORK ROOM	Classroom, Lecture, Training, Vocational Areas	NA	0.00 0.00 0.00 0.00	LP16	256.0	2	256	0
5-4-06 ELEC/IDF	Electrical, Mechanical, Telephone Rooms	NA	0.00 0.00 0.00 0.00	LP14A	16.0	1	16	0

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K4. INDOOR CONDITIONED LIGHTING MANDATORY LIGHTING CONTROLS

Building Level Controls

1		2	
Mandatory Demand Response §110.12(c)		Shut-Off Controls §130.1(c)	
Required	Required	Required	Required

Area Level Controls (includes all lighting controls installed in conditioned space to meet mandatory requirements per §130.1)

4	5	6	7	8	9	10
Area Description	Area Category Primary Function Area	Area Controls §130.1(a)	Multi-Level Controls §130.1(b)	Shut-Off Controls §130.1(c)	Primary Daylighting §130.1(d)	Secondary Daylighting §140.5(d)

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: NRCC-PRF-01-E-12092021-6844 Report Generated at: 2023-11-06 15:24:20

Project Name:	BEAR CREEK HIGH SCHOOL: AGRICULTURAL SCIENCE BUILDING	NRCC-PRF-01-E	Page 12 of 14
Project Address:	10555 THORNTON RD STOCKTON 95209	Calculation Date/Time:	15:24, Mon, Nov 06, 2023
Input File Name:	Bear Creek - EP8 Model.cbd19x		

L. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Table Instructions: Selections shall be made by Documentation Author to indicate which Certificates of Installation must be submitted for the features to be recognized for compliance. These documents must be retained and provided to the building inspector during construction and can be found online at: https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCC/

Building Component	Form/Title
Envelope	NRCC-ENV-01-E - Must be submitted for all buildings
Mechanical	NRCC-MCH-01-E - Must be submitted for all buildings
Plumbing	NRCC-PLB-01-E - Must be submitted for all buildings
Indoor Lighting	NRCC-LTI-01-E - Must be submitted for all buildings

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: NRCC-PRF-01-E-12092021-6844 Report Generated at: 2023-11-06 15:24:20

Project Name:	BEAR CREEK HIGH SCHOOL: AGRICULTURAL SCIENCE BUILDING	NRCC-PRF-01-E	Page 13 of 14
Project Address:	10555 THORNTON RD STOCKTON 95209	Calculation Date/Time:	15:24, Mon, Nov 06, 2023
Input File Name:	Bear Creek - EP8 Model.cbd19x		

M. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Table Instructions: Selections shall be made by Documentation Author to indicate which Certificates of Acceptance must be submitted for the features to be recognized for compliance. These documents must be provided to the building inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCC/

Building Component	Form/Title
Envelope	NRCC-ENV-02-F - NRC label verification for fenestration
Indoor Lighting	NRCC-LTI-02-A - Occupancy Sensors and Automatic Time Switch Controls
Mechanical	NRCC-MCH-02-A Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap NRCC-MCH-03-A Constant Volume Single Zone HVAC NRCC-MCH-05-A Air Economizer Controls NRCC-MCH-06-A Demand Control Ventilation Systems Acceptance must be submitted for all systems required to employ demand controlled ventilation (refer to §120.1(c)(3) can vary outside ventilation flow rates based on maintaining interior carbon dioxide (CO2) concentration setpoints NRCC-MCH-11-A Automatic Demand Shed Controls NRCC-MCH-12-A FDD for Packaged Direct Expansion Units NRCC-MCH-13-A Automatic FDD for Air Handling Units and Zone Terminal Units Acceptance

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: NRCC-PRF-01-E-12092021-6844 Report Generated at: 2023-11-06 15:24:20

Project Name:	BEAR CREEK HIGH SCHOOL: AGRICULTURAL SCIENCE BUILDING	NRCC-PRF-01-E	Page 14 of 14
Project Address:	10555 THORNTON RD STOCKTON 95209	Calculation Date/Time:	15:24, Mon, Nov 06, 2023
Input File Name:	Bear Creek - EP8 Model.cbd19x		

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Matt Hargadon
Company: Guttmann & Blawie Consulting Engineers
Address: 1320 Montgomery St.
City/State/Zip: San Francisco CA 94133
Phone: 4156554000

Signature: *Matt Hargadon*
Signature Date: 2023-11-06
CEA/HERS Certification Identification (if applicable):

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

- The information provided on this Certificate of Compliance is true and correct.
- 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 designer).
- The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
- 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, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
- 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 building owner at occupancy.

Responsible Envelope Designer Name: Charles L. Beavers, AIA
Company: Brokaw Design
Address: 8050 Dawn Drive
City/State/Zip: Rahway Park CA 94928
Phone: (415) 860-5043
Title: AOR License #: _____

Responsible Lighting Designer Name: Courtney Chuenyane
Company: Brokaw Design
Address: 8050 Dawn Drive
City/State/Zip: Rahway Park CA 94928
Phone: (707) 799-6822
Title: Electrical Engineer License #: E18225

Responsible Mechanical Designer Name: Brad Manning
Company: TEP Engineering
Address: 880 Second Street
City/State/Zip: Santa Rosa CA 95404
Phone: (707) 538-0400
Title: _____ License #: M30815

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: NRCC-PRF-01-E-12092021-6844 Report Generated at: 2023-11-06 15:24:20

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
NRCC-LTI-E
This document is used to demonstrate compliance with requirements in §110.9, §110.12(c), §130.0, §130.1, §140.6 and §141.0(b)(2) for indoor lighting scopes using the prescriptive path.

Project Name: BEAR CREEK HIGH SCHOOL: AGRICULTURAL SCIENCE BUILDING Report Page: (Page 1 of 6)
Project Address: 10555 THORNTON RD Date Prepared: 11/6/2023

A. GENERAL INFORMATION

D1 Project Location (city)	STOCKTON	04 Total Conditioned Floor Area (ft²)	0
D2 Climate Zone	12	05 Total Unconditioned Floor Area (ft²)	410
D3 Occupancy Types Within Project (select all that apply):		06 # of Stories (Habitable Above Grade)	1

• Classroom • Support Areas • See Table I

B. PROJECT SCOPE

This table includes any lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.6 or §141.0(b)(2) for alterations.

Scope of Work	Conditioned Spaces		Unconditioned Spaces		
	01	02	03	04	05
	Calculation Method	Area (ft²)	Calculation Method	Area (ft²)	
My Project Consists of (check all that apply):					
<input checked="" type="checkbox"/> New Lighting System	Area Category Method	0	Area Category Method	410	
<input type="checkbox"/> New Lighting System - Parking Garage					
Total Area of Work (ft²)		0		410	

C. COMPLIANCE RESULTS

If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D, for guidance.

Lighting in conditioned and unconditioned spaces must not be combined for compliance per §140.6(b)(1)	Allowed Lighting Power per §140.6(b) (Watts)				05	06	Adjusted Lighting Power per §140.6(a) (Watts)		08	Compliance Results
	01	02	03	04			07	08		
	Complete Building §140.6(c)(1)	Area Category §140.6(c)(2)	Area Category Additional §140.6(c)(2)(+) (+)	Tailored §140.6(c)(3) (+)	Total Allowed (Watts)	Total Designed (Watts)	PAF Adjustments §140.6(a)(2)(+) (+)	Total Adjusted (Watts) *Includes Adjustments	05 must be >= 08 §140.6	09
(See Table I)	(See Table I)	(See Table I)	(See Table I)	(See Table K)	=	≥	(See Table F)	(See Table P)	=	COMPLIES
Conditioned		162.5	0		=	≥	80	0	=	80
Unconditioned					=	≥			=	

Registration Number: _____ Registration Date/Time: _____ Registration Provider: Energysoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Schema Version: rev 20200601 Report Generated: 2023-11-06 15:27:29

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
NRCC-LTI-E
Project Name: BEAR CREEK HIGH SCHOOL: AGRICULTURAL SCIENCE BUILDING Report Page: (Page 2 of 6)
Project Address: 10555 THORNTON RD Date Prepared: 11/6/2023

C. COMPLIANCE RESULTS

Controls Compliance (See Table H for Details)	COMPLIES
Rated Power Reduction Compliance (See Table Q for Details)	

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. INDOOR LIGHTING FIXTURE SCHEDULE

This table includes all permanent designed lighting and all portable lighting in offices.

Designed Wattage: Unconditioned Spaces									
01	02	03	04	05	06	07	08	09	10
Name or Item Tag	Complete Luminaire Description	Modular (Track) Fixture	Small Aperture & Color Change ¹	Watts per luminaire ²	How is Wattage determined	Total Number of Luminaires	Excluded per §140.6(a)(3)	Design Watts	Field Inspector
LP14A	LP14A	No	No	16	Mfr. Spec	1	No	16	<input type="checkbox"/>
LS14A	LS14A	No	No	32	Mfr. Spec	2	No	64	<input type="checkbox"/>
Total Designed Watts: UNCONDITIONED SPACES									80

¹ FOOTNOTE: Design Watts for small aperture and color changing luminaires which qualify per §140.6(a)(4) is adjusted to be 75% of their rated wattage. Table F automatically makes this adjustment, the permit applicant should enter full rated wattage in column 05.
² Authority Having Jurisdiction may ask for luminaire cut sheets to confirm wattage used for compliance per §130.0(c). Wattage used must be the maximum rated for the luminaire, not the lamp.

G. MODULAR LIGHTING SYSTEMS

This section does not apply to this project.

Registration Number: _____ Registration Date/Time: _____ Registration Provider: Energysoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Schema Version: rev 20200601 Report Generated: 2023-11-06 15:27:29

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
NRCC-LTI-E
Project Name: BEAR CREEK HIGH SCHOOL: AGRICULTURAL SCIENCE BUILDING Report Page: (Page 3 of 6)
Project Address: 10555 THORNTON RD Date Prepared: 11/6/2023

H. INDOOR LIGHTING CONTROLS (Not including PAFs)

This table includes lighting controls for conditioned and unconditioned spaces. When a control having a * is shown, the notes section of this table provides more detail on how compliance is achieved. The lighting controls section of the Compliance Summary Table on the first page will show "DOES NOT COMPLY" if the notes are left blank.

Building Level Controls

01	02	03	
Mandatory Demand Response §110.12(c)	Shut-off controls §130.1(c)	Field Inspector	
Required > 10,000 SF	Whole Building Auto Time Switch	Pass	Fail
		<input type="checkbox"/>	<input type="checkbox"/>

Area Level Controls

04	05	06	07	08	09	10	11	12	
Area Description	Complete Building or Area Category Primary Function Area	Area Controls §130.1(a)	Multi-Level Controls §130.1(b)	Shut-Off Controls §130.1(c)	Primary/Sky lit Daylighting §130.1(d)	Secondary Daylighting §140.6(d)	Interlocked Systems §140.6(a)(1)	Field Inspector	
								Pass	Fail
								<input type="checkbox"/>	<input type="checkbox"/>

*NOTES: Controls with a * require a note in the space below explaining how compliance is achieved.
EX: Conference 1: Primary/Skylight Daylighting: Exempt because less than 120 watts of general lighting; EXCEPTION 1 to §130.1(d)(2)

Plan Sheet Showing Daylit Zones:

I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS

Each area complying using the Complete Building or Area Category Methods per §140.6(b) are included in this table. Column 06 indicates if additional lighting power allowances per §140.6(c) or adjustments per §140.6(a) are being used.

Unconditioned Spaces					
01	02	03	04	05	06
Area Description	Complete Building or Area Category Primary Function Area	Allowed Density (W/ft²)	Area (ft²)	Allowed Wattage (Watts)	Additional Allowance / Adjustment
04/05 STAFF RR	Restrooms	0.65	250	162.5	Area Category PAF
Walk-in	All Other Space Types	0	160	0	No
TOTALS:				410	162.5

Registration Number: _____ Registration Date/Time: _____ Registration Provider: Energysoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Schema Version: rev 20200601 Report Generated: 2023-11-06 15:27:29

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
NRCC-LTI-E
Project Name: BEAR CREEK HIGH SCHOOL: AGRICULTURAL SCIENCE BUILDING Report Page: (Page 4 of 6)
Project Address: 10555 THORNTON RD Date Prepared: 11/6/2023

J. ADDITIONAL ALLOWANCE: AREA CATEGORY METHOD QUALIFYING LIGHTING SYSTEM

This section does not apply to this project.

K. TAILORED METHOD GENERAL LIGHTING POWER ALLOWANCE

This section does not apply to this project.

L. ADDITIONAL LIGHTING ALLOWANCE: TAILORED WALL DISPLAY

This section does not apply to this project.

M. ADDITIONAL LIGHTING ALLOWANCE: TAILORED FLOOR AND TASK LIGHTING

This section does not apply to this project.

N. ADDITIONAL LIGHTING ALLOWANCE: TAILORED ORNAMENTAL/SPECIAL EFFECTS

This section does not apply to this project.

O. ADDITIONAL LIGHTING ALLOWANCE: TAILORED VERY VALUABLE MERCHANDISE

This section does not apply to this project.

P. POWER ADJUSTMENT: LIGHTING CONTROL CREDIT (POWER ADJUSTMENT FACTOR (PAF))

This section does not apply to this project.

Q. RATED POWER REDUCTION COMPLIANCE FOR ALTERATIONS

This section does not apply to this project.

R. 80% LIGHTING POWER FOR ALL ALTERATIONS - CONTROLS EXCEPTIONS

This section does not apply to this project.

S. DAYLIGHT DESIGN POWER ADJUSTMENT FACTOR (PAF)

This section does not apply to this project.

Registration Number: _____ Registration Date/Time: _____ Registration Provider: Energysoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Schema Version: rev 20200601 Report Generated: 2023-11-06 15:27:29



AGRICULTURAL SCIENCE BLDG
 BEAR CREEK HIGH SCHOOL
 10555 THORNTON RD
 STOCKTON, CA 95209
 INCREMENT 2

ISSUE	DATE	DESCRIPTION

PROJECT NUMBER: 02-120677
 DRAWN BY: DSP
 DESIGNER: CLB
 PLOT DATE: 11-10-2023

SHEET TITLE:
ENERGY COMPLIANCE

SHEET #:
EC-2

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T. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION
 Selections have been made based on information provided in this document. If any selection has been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Form/Title	Field Inspector	
	Pass	Fail
NRCC-LTI-01-E - Must be submitted for all buildings	<input type="checkbox"/>	<input type="checkbox"/>

U. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE
 Selections have been made based on information provided in this document. If any selection has been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and any with "A" in the form name must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: <http://www.energy.ca.gov/title24/attcp/providers.html>

Form/Title	Systems/Spaces To Be Field Verified	Field Inspector	
		Pass	Fail
NRCA-LTI-02-A - Must be submitted for occupancy sensors and automatic time switch controls.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NRCA-LTI-04-A - Must be submitted for demand responsive lighting controls.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
 Registration Date/Time: Report Version: 2019.1.003
 Registration Provider: Energysoft Schema Version: rev 20200601
 Report Generated: 2023-11-06 15:27:29

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT
 I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Matt Hargadon	Documentation Author Signature:
Company: Guttman & Blaevoet Consulting Engineers	Signature Date: 11/6/2023
Address: 1620 Montgomery St.	CEA/HERS Certification Identification (if applicable):
City/State/Zip: San Francisco CA 94133	Phone: 4156554000

RESPONSIBLE PERSON'S DECLARATION STATEMENT
 I certify the following under penalty of perjury, under the laws of the State of California:

- The information provided on this Certificate of Compliance is true and correct.
- 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 designer).
- The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
- 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, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
- 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 building owner at occupancy.

Responsible Designer Name: Courtney Chuenyane	Responsible Designer Signature:
Company: Brokaw Design	Date Signed: 2023-11-06
Address: 6060 Dawn Drive	License: E18225
City/State/Zip: Rohnert Park CA 94928	Phone: (707) 799-6822

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
 Registration Date/Time: Report Version: 2019.1.003
 Registration Provider: Energysoft Schema Version: rev 20200601
 Report Generated: 2023-11-06 15:27:29

A. GENERAL INFORMATION

01 Project Location (city)	STOCKTON	04 Total Illuminated Hardscape Area (ft ²)	0
02 Climate Zone	12	05 Outdoor Lighting Zone per Title 24 Part 1 §10.114 or as designated by Authority Having Jurisdiction (AHJ):	
<input type="checkbox"/> LZ-0: Very Low - Undeveloped Parkland <input type="checkbox"/> LZ-2: Moderate - Rural Areas <input type="checkbox"/> LZ-4: High - Must be reviewed by CA Energy Commission for Approval <input type="checkbox"/> LZ-1: Low - Developed Parkland <input checked="" type="checkbox"/> LZ-3: Moderately High - Urban Areas			

B. PROJECT SCOPE
 This table includes outdoor lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.7 or §141.0(b)(2), for alterations.

My Project Consists of:

01	02
<input checked="" type="checkbox"/> New Lighting System	Must Comply with Allowances from §140.7
<input type="checkbox"/> Altered Lighting System	Is your alteration increasing the connected lighting load (Watts)? <input type="radio"/> Yes <input type="radio"/> No
03 % of Existing Luminaires Being Altered ¹	04 Sum Total of Luminaires Being Added or Altered
<input type="checkbox"/> < 10% <input type="checkbox"/> >= 10% and < 50% <input type="checkbox"/> >= 50%	05 Calculation Method

Please proceed to Table F, Outdoor Lighting Fixture Schedule to define the project's luminaires.
¹ FOOTNOTES: % of Existing Luminaires Being Altered = (Sum Total of Luminaires Being Added or Altered / Existing Luminaires within the Scope of the Permit Application) x 100.

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
 Registration Date/Time: Report Version: 2019.1.003
 Registration Provider: Energysoft Schema Version: rev 20200601
 Report Generated: 2023-11-06 15:27:29

C. COMPLIANCE RESULTS
 Results in this table are automatically calculated from data input and calculations in Tables F through I. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D, Exceptional Conditions for guidance or see applicable Table referenced below.

Calculations of Total Allowed Lighting Power (Watts) §140.7 or §141.0(b)(2)										Compliance Results		
01	02	03	04	05	06	07	08	09				
General Hardscape Allowance §140.7(d)(1) (See Table I)	Per Application §140.7(d)(2) (See Table J)	Sales Frontage §140.7(d)(2) (See Table K)	Ornamental §140.7(d)(2) (See Table L)	Per Specific Area §140.7(d)(2) (See Table M)	Existing Power Allowance §141.0(b)(2) (See Table N)	Total Allowed (Watts)	Total Actual (Watts)	07 must be >= 08				
0	---	---	---	201	---	201	201	COMPLIES	N/A			
Cutoff Compliance (See Table G for Details)										COMPLIES		
Controls Compliance (See Table H for Details)										COMPLIES		

D. EXCEPTIONAL CONDITIONS
 This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS
 This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
 Registration Date/Time: Report Version: 2019.1.003
 Registration Provider: Energysoft Schema Version: rev 20200601
 Report Generated: 2023-11-06 15:27:29

F. OUTDOOR LIGHTING FIXTURE SCHEDULE
 For new or altered lighting systems demonstrating compliance with §140.7 all new luminaires being installed and any existing luminaires remaining or being moved within the spaces covered by the permit application are included in the Table below. For altered lighting systems using the Existing Power method per §141.0(b)(2), only new luminaires being installed and replacement luminaires being installed as part of the project scope are included (i.e. existing luminaires remaining or existing luminaires being moved are not included).

Designed Wattage:									
01	02	03	04	05	06	07	08	09	10
Name or Item Tag	Complete Luminaire Description	Watts per Luminaire ^{1,2}	How is Wattage determined	Total number luminaires ²	Luminaire Status ³	Excluded per §140.7(a)	Design Watts	Cutoff Req. > 6,200 Initial lumen output §130.2(b) ⁴	Field Inspector
LWA	LWA	<input type="checkbox"/> Linear	20.1	Mfr. Spec	10	New	201	NA < 6200 lumens	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
Total Design Watts: 201									

- ¹ NOTES: Selections with a * require a note in the space below explaining how compliance is achieved.
 EX: Luminaire is lighting a statue; EXCEPTION 2 to §130.2(b)
- ² For linear luminaires, wattage should be indicated as W/l instead of Watts/luminaire. Total linear feet should be indicated in column 05 instead of number of luminaires.
³ Select "New" for new luminaires in a new outdoor lighting project, or for added luminaires in an alteration. Select "Altered" for replacement luminaires in an alteration. Select "Existing to Remain" for existing luminaires within the project scope that are not being altered and are remaining. Select "Existing Reinstated" for existing luminaires which are being removed and reinstalled as part of the project scope.
⁴ Compliance with mandatory cutoff requirements is required for luminaires with initial lumen output >= 6,200 unless exempted by §130.2(b)

G. CUTOFF REQUIREMENTS (BUG)
 This section does not apply to this project.

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
 Registration Date/Time: Report Version: 2019.1.003
 Registration Provider: Energysoft Schema Version: rev 20200601
 Report Generated: 2023-11-06 15:27:29

H. OUTDOOR LIGHTING CONTROLS
 This table demonstrates compliance with controls requirements for all new or altered luminaires installed as part of the permit application. For alteration projects, luminaires which are existing to remain (ie untouched) and luminaires which are removed and reinstalled (wiring only) do not need to be included in this table even if they are within the spaces covered by the permit application.
 When an option having a * is selected, the notes section of this table must be completed. The lighting controls section of the Compliance Summary Table on the first page will show "DOES NOT COMPLY" if the notes are left blank.

Mandatory Controls				
01	02	03	04	05
Area Description	Shut-Off §130.2(c)(1)	Auto-Schedule §130.2(c)(2)	Motion Sensor §130.2(c)(3)	Field Inspector
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Pass <input type="checkbox"/> Fail

¹ NOTES: Controls with a * require a note in the space below explaining how compliance is achieved.
 EX: Not permitted by health & safety to be turned off; EXCEPTION 2 to §130.2(c)

I. LIGHTING POWER ALLOWANCE (per §140.7)
 This table includes areas using allowance calculations per §140.7. General Hardscape Allowance is per Table 140.7-A while "Use it or lose it" Allowances are per Table 140.7-B. Indicate which allowances are being used to expand sections for user input. Luminaires that qualify for one of the "Use it or lose it" allowances shall not qualify for another "Use it or lose it" allowance.

Calculated General Hardscape Lighting Power Allowance per Table 140.7-A (LZ 0, 1 & 4)	01
Calculated General Hardscape Lighting Power Allowance per Table 140.7-A (LZ 2 & 3)	<input type="checkbox"/> General Hardscape Allowance Table I (Below) <input type="checkbox"/> Per Application Table J <input type="checkbox"/> Sales Frontage Table K <input type="checkbox"/> Ornamental Table L <input checked="" type="checkbox"/> Per Specific Area Table M

J. LIGHTING ALLOWANCE: PER APPLICATION
 This section does not apply to this project.

K. LIGHTING ALLOWANCE: SALES FRONTAGE
 This section does not apply to this project.

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
 Registration Date/Time: Report Version: 2019.1.003
 Registration Provider: Energysoft Schema Version: rev 20200601
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L. LIGHTING ALLOWANCE: ORNAMENTAL
 This section does not apply to this project.

M. LIGHTING ALLOWANCE: PER SPECIFIC AREA
 This table includes areas using the wattage allowance per specific area from Table 140.7-B. More than one specific area allowance may be taken in a single project, if applicable. However, multiple specific area allowances may not be taken for the exact same area on the site.

01	02	03	04	05	06	07	08	09	10
Area Description	Specific Area Type per Table 140.7-B	Calculated Allowance (Watts)	Allowed Density (W/ft ²)	Extra Allowance (Watts)	Luminaire Name or Item Tag	Watts per Luminaire	# of Luminaires	Design Watts	Additional Allowance (Watts)
Building Facade	Building Facade	3000	0.17	510	LWA	20.1	10	201	201
Total Allowance (Watts) All Areas:									201

- ¹ FOOTNOTES: See Table 140.7-B for rules for calculating the specific areas (ft²) for these additional lighting allowances.
² For luminaires indicated in Table F as linear, wattage in column 07 is W/l instead of Watts/luminaire. Total linear feet should be indicated in column 08 instead of number of luminaires.

N. EXISTING CONDITIONS POWER ALLOWANCE (alterations only)
 This section does not apply to this project.

O. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION
 Selections have been made based on information provided in this document. If any selection has been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Form/Title	Field Inspector	
	Pass	Fail
NRCC-LTO-01-E - Must be submitted for all buildings	<input type="checkbox"/>	<input type="checkbox"/>

P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE
 There are no NRCA forms required for this project.

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
 Registration Date/Time: Report Version: 2019.1.003
 Registration Provider: Energysoft Schema Version: rev 20200601
 Report Generated: 2023-11-06 15:27:29

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT
 I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Matt Hargadon	Documentation Author Signature:
Company: Guttman & Blaevoet Consulting Engineers	Signature Date: 11/6/2023
Address: 1620 Montgomery St.	CEA/HERS Certification Identification (if applicable):
City/State/Zip: San Francisco CA 94133	Phone: 4156554000

RESPONSIBLE PERSON'S DECLARATION STATEMENT
 I certify the following under penalty of perjury, under the laws of the State of California:

- The information provided on this Certificate of Compliance is true and correct.
- 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 designer).
- The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
- 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, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
- 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 building owner at occupancy.

Responsible Designer Name: Courtney Chuenyane	Responsible Designer Signature:
Company: Brokaw Design	Date Signed: 2023-11-06
Address: 6060 Dawn Drive	License: E18225
City/State/Zip: Rohnert Park CA 94928	Phone: (707) 799-6822

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
 Registration Date/Time: Report Version: 2019.1.003
 Registration Provider: Energysoft Schema Version: rev 20200601
 Report Generated: 2023-11-06 15:27:29



AGRICULTURAL SCIENCE BLDG
 BEAR CREEK HIGH SCHOOL
 10555 THORTON RD
 STOCKTON, CA 95209
 INCREMENT 2

ISSUE	DATE	DESCRIPTION

PROJECT NUMBER: 02-120677
 DRAWN BY: DSP
 DESIGNER: CLB
 PLOT DATE: 11-10-2023
 SHEET TITLE: ENERGY COMPLIANCE
 SHEET #: EC-3

STATE OF CALIFORNIA
Electrical Power Distribution
CALIFORNIA ENERGY COMMISSION
NRC-ELC-E

CERTIFICATE OF COMPLIANCE
This document is used to demonstrate compliance with mandatory requirements in 130.5, for electrical systems in newly constructed nonresidential and hotel/motel occupancies and 160.6 and 160.9 for electrical systems in newly constructed multifamily occupancies. Additions and alterations to electrical service systems in nonresidential and hotel/motel occupancies will also use this document to demonstrate compliance per 141.0(a) or 141.0(b)(2) for alterations. For multifamily addition or alterations compliance will be documented per 180.1(a) or 180.2 (b)(4)(vi)

Project Name: Bear Creek High School - AG/Science Building Report Page: (Page 1 of 4)
Project Address: 10555 THORTON RD STOCKTON 95209 Date Prepared: 2023-11-30T17:30:56-05:00

A. GENERAL INFORMATION

01	Project Location (city)	Stockton	02	Climate Zone	12
			03	Occupancy Types Within Project:	Classroom

B. PROJECT SCOPE
This table includes electrical systems that are within the scope of the permit application.

01	02	03	04	05	06	07
Electrical Service Designation/Description	Scope of Work ¹	Rating ² (kVA)	Utility Provided Metering System Exception to 130.5(a)/160.6(a) ³	System subject to CA Elec Code Article 517 Exception to 130.5(a) and (b)	Demand Response Controls	Provides power to dwelling units/common living areas only in multifamily occupancy
Distribution Panel AGS	Add/Alt to feeders and branch circuits only	---	<input type="checkbox"/>	<input type="checkbox"/>	Where required, demand response controls must be specified which are capable of receiving and automatically responding to at least one standards based messaging protocol which enables demand response after receiving a demand response signal. Sections 120.2/160.3, 130.1/160.5, and 130.3/160.5, and mechanical, indoor lighting, and sign lighting Certificate of Compliance documents will indicate when demand response controls are required.	<input type="checkbox"/>

¹FOOTNOTES: Adding only new feeders and branch circuits triggers Voltage Drop 130.5(c)/160.6(c), no other requirements from 130.5/160.6 are required.
²If common use areas in a multifamily are submetered, rating is for submeter size serving common use areas.
³Applicable if the utility company is providing a metering system that indicates instantaneous kW demand and kWh for a utility-defined period.

Generated Date/Time: Documentation Software: Energy Code Ace
CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000 Compliance ID: 161944-1123-0002
Schema Version: rev 20220101 Report Generated: 2023-11-30 14:30:59

STATE OF CALIFORNIA
Electrical Power Distribution
CALIFORNIA ENERGY COMMISSION
NRC-ELC-E

CERTIFICATE OF COMPLIANCE
Project Name: Bear Creek High School - AG/Science Building Report Page: (Page 2 of 4)
Date Prepared: 2023-11-30T17:30:56-05:00

C. COMPLIANCE RESULTS
Results in this table are automatically calculated from data input and calculations in Tables F through J. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see applicable Table referenced below.

01	02	03	04	05	06
Service Electrical Metering 130.5(a)/160.6(a) (See Table F)	Separation for Monitoring 130.5(b)/160.6(b) (See Table G)	Voltage Drop 130.5(c)/160.6(c) (See Table H)	Controlled Receptacles 130.5(d)/160.6(d) (See Table I)	Electrical Ready 160.9 (See Table J)	Compliance Results
AND	AND	AND	AND	AND	COMPLIES

D. EXCEPTIONAL CONDITIONS
This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS
This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

H. VOLTAGE DROP
This table includes entirely new or complete replacement electrical power distribution systems, or alterations that add, modify or replace both feeders and branch circuits to demonstrate compliance with 130.5(c)/160.6(c). For alterations, only the altered circuits must demonstrate compliance per 141.0(b)(2)(ii)/180.2(b)(4)(vi).

01	02	03	04	05
Electrical Service Designation/Description	Combined Voltage Drop on Installed Feeder/Branch Circuit Conductors Compliance Method	Location of Voltage Drop Calculations ¹	Sheet Number for Voltage Drop Calculations in Construction Documents	Field Inspector Pass/Fail
Distribution Panel AGS	<input checked="" type="checkbox"/> Voltage drop less than 5% <input type="checkbox"/> Permitted by CA Elec Code (Exception to 130.5(c)) ²	In construction documents	Increment 1 E3.0	<input type="checkbox"/> Pass <input type="checkbox"/> Fail

¹ NOTES: If "Permitted by CA Elec Code" is selected under Compliance Method above, please indicate where the exception applies in the space provided below.
² FOOTNOTES: Voltage drop calculations may be attached to the permit application outside the construction documents (if applicable). Select "attached" if applicable. If calculations will be the responsibility of the installing contractor, select "Contractor Responsible".

Generated Date/Time: Documentation Software: Energy Code Ace
CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000 Compliance ID: 161944-1123-0002
Schema Version: rev 20220101 Report Generated: 2023-11-30 14:30:59

STATE OF CALIFORNIA
Electrical Power Distribution
CALIFORNIA ENERGY COMMISSION
NRC-ELC-E

CERTIFICATE OF COMPLIANCE
Project Name: Bear Creek High School - AG/Science Building Report Page: (Page 3 of 4)
Date Prepared: 2023-11-30T17:30:56-05:00

K. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION
Selections have been made based on information provided in this document. If any selection has been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online.

Form/Title

NRC-ELC-E - Must be submitted for all buildings

L. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE
There are no forms required for this project.

Generated Date/Time: Documentation Software: Energy Code Ace
CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000 Compliance ID: 161944-1123-0002
Schema Version: rev 20220101 Report Generated: 2023-11-30 14:30:59

STATE OF CALIFORNIA
Electrical Power Distribution
CALIFORNIA ENERGY COMMISSION
NRC-ELC-E

CERTIFICATE OF COMPLIANCE
Project Name: Bear Creek High School - AG/Science Building Report Page: (Page 4 of 4)
Project Address: 10555 THORTON RD STOCKTON 95209 Date Prepared: 2023-11-30T17:30:56-05:00

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT
I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Courtney Chuenyane
Company: Brokaw Design
Address: 6060 Dawn Drive
City/State/Zip: Rohnert Park, CA 94928

Documentation Author Signature: [Signature]
Signature Date: 11-30-23
CEA/HERS Certification Identification (if applicable): E13225
Phone: 707-799-6822

RESPONSIBLE PERSON'S DECLARATION STATEMENT
I certify the following under penalty of perjury, under the laws of the State of California:

- The information provided on this Certificate of Compliance is true and correct.
- 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 designer).
- The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
- 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, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
- 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 building owner at occupancy.

Responsible Designer Name: Courtney Chuenyane
Company: Brokaw Design
Address: 6060 Dawn Drive
City/State/Zip: Rohnert Park, CA 94928

Responsible Designer Signature: [Signature]
Date Signed: 11-30-23
License: E13225
Phone: 707-799-6822

Generated Date/Time: Documentation Software: Energy Code Ace
CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000 Compliance ID: 161944-1123-0002
Schema Version: rev 20220101 Report Generated: 2023-11-30 14:30:59

STATE OF CALIFORNIA
Solar Ready Areas
CALIFORNIA ENERGY COMMISSION
NRC-SRA-E

CERTIFICATE OF COMPLIANCE
Project Name: BEAR CREEK HIGH SCHOOL- AGRICULTURAL SCIENCE BUILDING Report Page: (Page 1 of 5)
Project Address: 10555 THORTON RD STOCKTON 95209 Date Prepared: 11/30/2023

A. GENERAL INFORMATION

01	Project Location (city)	STOCKTON	04	Building Type	Other nonresidential bldg 3 stories or fewer
02	Climate Zone	12	05	Construction Type	New Construction
03	<input type="checkbox"/> Roof is designed for vehicle traffic, parking or for heliport				
03a	Plan sheet showing roof design for vehicle traffic, parking or heliport exception:				

B. PROJECT SCOPE
The compliance path the project is using to comply per §110.10(b)(18) is indicated below.
My project consists of (check one):

1. The project has allocated a solar zone on the roof plan per requirements in §110.10(b), as documented in Table F.

Provide Solar Ready Area: no exceptions

The project includes a permanently installed solar electric system having a nameplate DC power rating, measured under Standard Test Conditions, of no less than one watt per square foot of roof area as documented in Table G.

Exception to Solar Ready Area: Installed Solar Photovoltaic System

The project is a hotel/motel or high-rise multifamily occupancy and includes a permanently installed domestic solar water-heating system complying with §150.1(c)(8)(ii) and Reference Residential Appendix RA4, as documented in Table H.

Exception to Solar Ready Area: Installed Solar Water Heating System

The project is a high-rise multifamily occupancy where all thermostats in each dwelling unit comply with §110.10(a) AND at least one additional measure listed in Exception 4 to §110.10(b)(18) is installed, as documented in Table I.

Exception to Solar Ready Area: Smart Thermostat and Alternative Energy Efficiency Measure

Registration Number: Registration Date/Time: Registration Provider: Energysoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Schema Version: rev 20200601 Report Generated: 2023-11-30 15:02:31

STATE OF CALIFORNIA
Solar Ready Areas
CALIFORNIA ENERGY COMMISSION
NRC-SRA-E

CERTIFICATE OF COMPLIANCE
Project Name: BEAR CREEK HIGH SCHOOL- AGRICULTURAL SCIENCE BUILDING Report Page: (Page 2 of 5)
Project Address: 10555 THORTON RD STOCKTON 95209 Date Prepared: 11/30/2023

C. COMPLIANCE RESULTS
Results in this table are automatically calculated from data input and calculations in Tables F through J. Note: If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D, for guidance or see the applicable Table referenced below.

Allocated Solar Zone		Installed PV System		Installed SWH System		Smart Tstat and Alternative EE Measure	
01	02	03	04	05	06	07	08
Required Minimum Area (ft ²)	Designated Area (ft ²)	Required Minimum DC Power Rating (Watts)	Designed DC Power Rating (Watts)	Required Minimum Solar Savings Fraction	Designed/Rated Solar Savings Fraction	JAS Compliant Thermostat Specified?	Alternative Energy Efficiency Measure
(See Table F)	(See Table F)	(See Table G)	(See Table G)	(See Table H)	(See Table H)	(See Table I)	(See Table I)
604.9	744						

Location within the construction documents showing the location for inverters and metering equipment and a pathway for the routing of conduit/plumbing to the electrical service/water heating system per §110.10(c).

D. EXCEPTIONAL CONDITIONS
This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS
This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

Registration Number: Registration Date/Time: Registration Provider: Energysoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Schema Version: rev 20200601 Report Generated: 2023-11-30 15:02:31

STATE OF CALIFORNIA
Solar Ready Areas
CALIFORNIA ENERGY COMMISSION
NRC-SRA-E

CERTIFICATE OF COMPLIANCE
Project Name: BEAR CREEK HIGH SCHOOL- AGRICULTURAL SCIENCE BUILDING Report Page: (Page 3 of 5)
Project Address: 10555 THORTON RD STOCKTON 95209 Date Prepared: 11/30/2023

F. ALLOCATED SOLAR ZONE
This table is completed if the project is designating a solar zone to comply with §110.10(b)(18). New construction consider the total roof area; Additions consider newly added roof area. This table demonstrates that the project has designated the minimum area required for the Allocated Solar Zone, and also that the requirements for Solar Zone Subareas have been met. Each subarea must be shown on a roof plan or documented in construction documents. The solar zones must also comply with fire code requirements, including, but not limited to, setback and pathway requirements. Requirements for interconnection pathways must also be included in construction documents, and the location is specified in this table.

Required Minimum Solar Zone

01	02	03	04	05	06	07	08
Minimum Solar Zone Area Calculation Method	Total New or Added Roof Area (ft ²)	Total New or Added Roof Area Covered with Skylights (ft ²)	Minimum Solar Zone Based on Total or Added Roof Area (0.15 x (Roof-Skylt) (ft ²))	Method/Tools Used to Determine Annual Solar Access for Potential Zones ¹	Potential Solar Zone Areas: Roof areas with >= 70% Solar Access Low-Sloped Area (<= 2.12 pitch) (ft ²) Steep-Sloped Area (>= 2.12 pitch) Oriented 90° ± 300° (ft ²) Total Potential Solar Zone Area (ft ²)	Minimum Solar Zone Based on Potential Zone (0.5 x (Total Potential Zone)) (ft ²)	Required Minimum Solar Zone Area (ft ²)
Total New or Added Roof Area	4032.3457726 2354	0	604.85186589353				604.85186589353

Designated Solar Zone Subareas

09	10	11	12	13	14	15	16	17	18	19
Subarea Name or Tag	Building Plan Reference	Roof or Overhang Slope (Low <= 2.12 pitch) (Steep > 2.12 pitch)	Is Steep-Sloped Roof or Overhang between 90 and 300 degrees?	Subarea Complies with Title 24, Part 9	Solar Zone Subarea Free of Obstructions per §110.10(b)(3)(B)	Subarea is Required Distance from Potential Obstructions per §110.10(b)(3)(B)	Is the Smallest Dimension 5 feet or greater?	Min. Area Required per Subarea (ft ²)	Designated Area (ft ²)	Subarea Complies?
Area A	A241	SteepSlope	No	Yes	Yes	Yes	Yes	80	408	COMPLIES
Area B	A241	SteepSlope	No	Yes	Yes	Yes	Yes	80	336	COMPLIES
Total Designated Solar Zone Area (ft ²):									744	

Registration Number: Registration Date/Time: Registration Provider: Energysoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Schema Version: rev 20200601 Report Generated: 2023-11-30 15:02:31

STATE OF CALIFORNIA
Solar Ready Areas
CALIFORNIA ENERGY COMMISSION
NRC-SRA-E

CERTIFICATE OF COMPLIANCE
Project Name: BEAR CREEK HIGH SCHOOL- AGRICULTURAL SCIENCE BUILDING Report Page: (Page 4 of 5)
Project Address: 10555 THORTON RD STOCKTON 95209 Date Prepared: 11/30/2023

Interconnection Pathways
Location in construction documents showing the location for inverters and metering equipment and a pathway for the routing of conduit/plumbing to the electrical service/water heating system per §110.10(c).

¹FOOTNOTE: This field is used to document how the percentage of annual solar access was determined per §110.10(b)(18). Solar access is the ratio of solar insolation including shade to the solar insolation without shade. Shading from obstructions located on the roof or any other part of the building shall not be included in the determination of annual solar access.

G. PERMANENTLY INSTALLED SOLAR PHOTOVOLTAIC (PV) SYSTEM
This section does not apply to this project.

H. PERMANENTLY INSTALLED SOLAR HOT WATER SYSTEMS
This section does not apply to this project.

I. SMART THERMOSTATS AND ALTERNATIVE EFFICIENCY MEASURE
This section does not apply to this project.

J. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION
There are no NRC forms required for this project.

K. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE
There are no Certificates of Acceptance applicable to solar ready requirements.

Registration Number: Registration Date/Time: Registration Provider: Energysoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Schema Version: rev 20200601 Report Generated: 2023-11-30 15:02:31

STATE OF CALIFORNIA
Solar Ready Areas
CALIFORNIA ENERGY COMMISSION
NRC-SRA-E

CERTIFICATE OF COMPLIANCE
Project Name: BEAR CREEK HIGH SCHOOL- AGRICULTURAL SCIENCE BUILDING Report Page: (Page 5 of 5)
Project Address: 10555 THORTON RD STOCKTON 95209 Date Prepared: 11/30/2023

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT
I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Matt Hargader
Company: Guttman & Blaevoet Consulting Engineers
Address: 1620 Montgomery St.
City/State/Zip: San Francisco CA 94133

Documentation Author Signature: [Signature]
Signature Date: 11/30/2023
CEA/HERS Certification Identification (if applicable):
Phone: 4156554000

RESPONSIBLE PERSON'S DECLARATION STATEMENT
I certify the following under penalty of perjury, under the laws of the State of California:

- The information provided on this Certificate of Compliance is true and correct.
- 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 designer).
- The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
- 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, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
- 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 building owner at occupancy.

Responsible Designer Name: Charles Beavers
Company: Brokaw Design
Address: P.O. Box 3103
City/State/Zip: Rohnert Park, CA 94927

Responsible Designer Signature: [Signature]
Date Signed: 11/30/2023
License: C 9601
Phone: 415-860-5043

Registration Number: Registration Date/Time: Registration Provider: Energysoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Schema Version: rev 20200601 Report Generated: 2023-11-30 15:02:31



AGRICULTURAL SCIENCE BLDG
 BEAR CREEK HIGH SCHOOL
 10555 THORTON RD
 STOCKTON, CA 95209
 INCREMENT 2

PROJECT NUMBER:	02-120677
DRAWN BY:	DSP
DESIGNER:	CLB
PLOT DATE:	11-10-2023
SHEET TITLE:	ENERGY COMPLIANCE
SHEET #:	EC-4

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