FIELDHOUSE

AT

MADERA USD, MADERA HIGH SCHOOL

200 SOUTH "L" STREET MADERA, CA 93637

WE BELIEVE MADERAUNIFIED

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TOTAL SHEETS: 128

SHEET NUMBER LEGEND

SHEET TYPE		DISCIPLINE	
1	FLOOR PLANS	C	CIVIL
2	SCHEDULES	L	LAND/RR
3	CEILING PLANS	A	ARCHITECTURAL
4	ROOF PLANS	S	STRUCTURAL
5	EXTERIOR ELEVATIONS	M	MECHANICAL
6	BUILDING & WALL SECTIONS	P	PLUMBING
7	INTERIOR ELEVATIONS	E	ELECTRICAL
X	DETAILS	FS	FIRE SPRINKLER

1 - DISCIPLIN
1 - SHEET TYPE
12 - SHEET NUMBER
A7.12

A7.12

BUILDING CODE ANALYSIS

OCCUPANCY CLASSIFICATION METHOD:	**NON-SEPARATED**
CCUPANCY CLASSIFICATION:	**E** (A-3, B, E, S-1)
CONSTRUCTION TYPE:	**V-B**
TABULAR BUILDING AREA (CBC TABLE 506.2):	**At (S1) = 24,000 S.F.** (A-3 = 24,000 S.F., B = 36,000 S.F. E = 38,000 S.F., S-1 = 36,000 S.F.)
TABULAR BLDG HEIGHT (CBC TABLE 504.3):	**A (S WITH AREA INCREASE) = 40'- 0"** (A/E = 40' -0", B/S= 60' -0")
PROPOSED BLDG HEIGHT:	**24'- 0" < 40'-0", THEREFORE OKAY.**
TABULAR BLDG STORIES (CBC TABLE 504.4):	**1 STORY (S WITH AREA INCREASE)** (A-3/E, = 1, S-1= 2 B= 3)
PROPOSED BLDG STORIES:	**1 = 1, OKAY.**
FRONTAGE AREA INCREASE:	**NOT USED**
FIRE SPRINKLERS:	**YES**
MIXED-OCCUPANCY BLDG (EQ. 5-3):	Aa = [At + (NS x If)] At= 24,000 S.F. NS = N/A If = N/A **Aa = 24,000 S.F.** (A-3= 24,000 S.F., B= 36,000 S.F. E= 38,000 S.F., S-1= 36,000 S.F.)
PROPOSED BLDG AREA:	
BUILDING AREA:	11,634 S.F.
COVERED AREAS:	4,130 S.F.
TOTAL PROPOSED AREA:	**15,764 S.F. < 24,000 S.F. THEREFORE OKAY**

SCOPE OF WORK

FIELDHOUSE

1. DEMOLISH EXISTING BUILDINGS WHERE NEW FIELDHOUSE IS TO BE CONSTRUCTED.

2. DEMOLISH EXISTING BLEACHER BERM AND DEVELOP SITE GRADING AND UTILITIES.

3. CONSTRUCT NEW FIELDHOUSE.

4. PROVIDE NEW FIRE PUMP

DEFFERED SUBMITTALS: NONE

INSPECTOR CLASS: 1

ENERGY COMPLIANCE NOTES

1. THE CALIFORNIA ENERGY CODE SECTION 10-103 REQUIRES ACCEPTANCE TESTING ON ALL NEWLY INSTALLED LIGHTING CONTROLS, MECHANICAL SYSTEMS, ENVELOPES, AND PROCESS EQUIPMENT AFTER INSTALLATION AND BEFORE PROJECT COMPLETION. AN ACCEPTANCE TEST IS A FUNCTIONAL PERFORMANCE TEST TO HELP ENSURE THAT NEWLY INSTALLED EQUIPMENT IS OPERATING AND IN COMPLIANCE WITH THE ENERGY CODE.

2. LIGHTING CONTROLS ACCEPTANCE TESTS MUST BE PERFORMED BY A CERTIFIED LIGHTING CONTROLS ACCEPTANCE TEST TECHNICIAN (ATT).

3. MECHANICAL SYSTEM ACCEPTANCE TESTS MUST BE PERFORMED BY A CERTIFIED MECHANICAL ATT FOR PROJECTS SUBMITTED ON OR AFTER OCTOBER 1, 2021.

4. ENVELOPE AND PROCESS EQUIPMENT ACCEPTANCE TESTS SHALL BE PERFORMED BY THE INSTALLING CONTRACTOR, ENGINEER/ARCHITECT OF RECORD OR THE OWNER'S AGENT.

5. A LISTING OF CERTIFIED ATT CAN BE FOUND AT: https://www.energy.ca.gov/programs-and-topics/programs/acceptance-test-technician-certification-provider-program/acceptance.

6. THE ACCEPTANCE TESTING PROCEDURES MUST BE REPEATED, AND DEFICIENCIES MUST BE CORRECTED BY THE BUILDER OR INSTALLING CONTRACTOR UNTIL THE CONSTRUCTION/INSTALLATION OF THE SPECIFIED CONFORM AND PASS THE REQUIRED ACCEPTANCE CRITERIA.

7. PROJECT INSPECTORS WILL COLLECT THE FORMS TO CONFIRM THAT THE REQUIRED ACCEPTANCE TESTS HAVE BEEN COMPLETED.

PROJECT DIRECTORY

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ADDITIVE - ALTERNATES

NO ADDDITIVE ALTERNATES

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 01/23/2025

PBK

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MADERA HIGH SCHOOL FIELDHOUSE

200 SOUTH "L" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

PROFESSIONAL SEAL

LICENSED ARCHITECT
MICHAEL R. SCHOEN
No. C-28285
RENEWAL DATE
FEB 28, 2027
STATE OF CALIFORNIA

PROJECT NUMBER 20-51

DATE 01/22/2025

DSA APPLICATION NO. 02-121624

FILE NO. 20-H3

PTN NO. 65243-153

DRAWN BY PBK

REVISIONS

#	DESCRIPTION	DATE

CONSTRUCTION DOCUMENTS

COVER SHEET

AT.0

BIM 360://Madera USD_20-51_MHS Field House/20-51_MHS FIELDHOUSE_V21.rvt
1/20/2025 7:03:43 PM

GENERAL ABBREVIATIONS

AB	ANCHOR BOLT	MED	MEDIUM
AC	ASPHALT CONCRETE	MIN	MINIMUM
ACT	ACOUSTICAL CEILING TILE	MP	METAL PANEL
		MTL	METAL
ACW	ALUMINUM CURTAIN WALL	NIC	NOT IN CONTRACT
		NTS	NOT TO SCALE
AF	ALUMINUM SNAP FRAME	HM	HOLLOW METAL
		o/	OVER
AFF	ABOVE FINISH FLOOR	OBSC	OBSCURE
AGG	AGGRIGATE	OC	SUSPENDED OPEN CELL SYSTEM
AL	ALUMINUM		
ANOD	ANODIZED	OD	OUTSIDE DIAMETER
AT	@	OH	OPPOSITE HAND
BD	BOARD	OP	OPAQUE GLASS
BLDG	BUILDING	OPP	OPPOSITE
BLK'G	BLOCKING	P	PAINT
BO	BOTTOM OF	PERIM	PERIMETER
BUR	BUILT-UP ROOFING	PG	PIPE GRID
CC	CUBICAL CURTAIN	PL	PLASTIC LAMINATE
CEM	CEMENT	PLT	PLATE
CJ (OR)	CONTROL JOINT	PLY	PLYWOOD
CL	CHAIN-LINK FENCE	PO	POLISHED
CLN	CLEAN	POT	PATH OF TRAVEL
CLR	CLEAR	PRT	TOILET PARTITION
CMU	CONCRETE MASONRY UNIT	PT	PRESSURE TREATED
		PW	PICTURE WINDOW
CONC	CONCRETE	RB	RUBBERIZED BASE
CONT	CONTINUOUS	RCP	REFLECTED CEILING
CP	CEMENT PLASTER		PLAN
CPT	CARPET	RECOMM	RECOMMENDATION
CV	INTEGRAL COVE	REQ'D	REQUIRED
DBL	DOUBLE	REQMTS	REQUIREMENTS
DIA	DIAMETER	RF	RUBBER FLOORING
DL	DUAL GLAZED	RT	RUBBERIZED NON-SLIP TREAD
DP	DEEP		
DS	DENSIFIED SEALED CONCRETE	RTB	RUBBER TOPSET BASE
DSS	DENSIFIED SEALED & STAINED	S	SINGLE GLAZED
		SC	SOLID CORE
DTL	DETAIL	SCF	STATIC CONTROL FLOORING
DWGS	DRAWINGS		
DYED	DYED CONCRETE	SDS	SELF DRILLING SCREW
(E)	EXISTING		
EA	EACH	SGP	SEMI-GLOSS PAINT
EG	ELECTROCHROMIC GLASS	SH	SINGLE-HUNG
		SHT	SHEET
EJ (OR)	EXPANSION JOINT	SIM	SIMILAR
ELEV	ELEVATION	SL	SEAL
EP	EPOXY PAINT	SMP	SCUFFMASTER PAINT
EPF	EPOXY FLOOR	SMS	SHEET METAL SCREW
ESP	EGG SHELL PAINT		
EXP	EXPOSED STRUCTURE	SPEC	SPECIFICATION
EXT	EXTERIOR	SQ	SQUARE
F	FIXED	SO	SOLID SURFACE
FB	FLAT BAR	SS	STAINLESS STEEL
FF	FACTORY FINISH	STD	STANDARD
FG	FIBERGLASS	STL	STEEL
FIN	FINISH	STN	STAIN
FLASH'G	FLASHING	STRUCT	STRUCTURAL
FLR	FLOOR	SV	SHEET VINYL
FP	FACTORY PAINT	T	TEMPERED
FOF	FACE OF FINISH	TL	TILE
FR	FIRE RATED	TNT	TINTED
FRAM'G	FRAMING	TO	TOP OF
FRP	FIBER REINFORCED PANEL	TP	TRANSLUCENT PANEL
FT	FACTORY FOOTING	TRP	TRANSLUCENT RESIN PANEL
FTG	FOOTING		
GA	GAUGE	TS	TUBE STEEL
GALV	GALVANIZED	TT	TAPE & TEXTURED
GB	GYPSUM BOARD	TW	TRANSLUCENT WALL SYSTEM
GBLK	GLASS BLOCK		
GP	GLOSS PAINT	TYP	TYPICAL
GSM	GALVANIZED SHEET METAL	UON	UNLESS OTHERWISE NOTED
HM	HOLLOW METAL	VAR	VARIES
HORIZ	HORIZONTAL	VCB	VENTED COVED BASE
HSS	HOLLOW STRUCTURAL SECTION	VERT	VERTICAL
ID	INSIDE DIAMETER	VIF	VERIFY IN FIELD
INSUL	INSULATION	VT	VINYL TILE
INT	INTERIOR	VTB	VINYL TACKBOARD
IOR	INSPECTOR OF RECORD	VWC	VINYL WALL COVERING
ISA	INTERNATIONAL SYMBOL OF ACCESSIBILITY	w/	WITH
		WC	WALL COVERING
		WD	WOOD
L MANUF	LAMINATE MANUFACTURER	WGB	WATER RESISTANT GYP. BOARD
MAX	MAXIMUM	WP	WATER PROOF
MDF	MEDIUM-DENSITY FIBREBOARD	WR	WATER RESISTANT
		WS	WOOD SCREW
		WT	WALL TALKER o/ GYPSUM BOARD
		WWM	WELDED WIRE MESH

GENERAL NOTES

1. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS PRIOR TO ANY WORK AND SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCY. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REPAIRS REQUIRED DUE TO HIS FAILURE TO DO SO. DO NOT SCALE DRAWINGS. DIMENSIONS GOVERN ANY DISCREPANCIES.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL INSPECTIONS AND TESTS INDICATED ON THE PLANS AND SPECIFICATIONS, RECOMMENDED BY THE SOILS REPORT AND/OR REQUIRED BY ANY GOVERNMENT AGENCY. OWNER SHALL BEAR THE COSTS.
3. CONTRACTOR SHALL VERIFY THE SIZE AND LOCATION OF ALL UTILITY LINES AND STUBS TO THE BUILDING(S) AS MAY BE INDICATED ON THE PLANS.
4. THE SOILS REPORT ON THIS PROJECT SHALL BE A PART OF THESE PLANS. CONTRACTOR SHALL NOTIFY THE ARCHITECT / ENGINEER OF ANY DISCREPANCY BETWEEN THIS REPORT AND THE PLANS PRIOR TO BEGINNING WORK.
5. ALL MATERIALS AND WORK TO CONFORM TO LATEST GOVERNING BUILDING CODES AND REGULATIONS.
6. CONTRACTOR SHALL PROVIDE PROTECTION AS NECESSARY PER CITY AND LOCAL CODE REQUIREMENTS.
7. ALL REVISIONS TO THE DRAWINGS MUST PROCEED THROUGH NORMAL CHANNELS. ANY CONTRACTOR REVISIONS MAY BE CONSIDERED NULL AND VOID WITHOUT PRIOR APPROVAL OF THE ARCHITECT.
8. SOLELY AS A CONVENIENCE TO THE OWNER, THE ARCHITECT MAY INCLUDE DOCUMENTS PREPARED BY CERTAIN CONSULTANTS (OR INCORPORATE THE RECOMMENDATION OF SAID CONSULTANTS IN DOCUMENTS PREPARED BY THE ARCHITECT) WITHIN THE SET OF DOCUMENTS ISSUED BY THE ARCHITECT. IT BEING EXPRESSLY UNDERSTOOD THAT, BY SAID ISSUANCE, THE ARCHITECT ASSUMES NO LIABILITY FOR THE SERVICES OF SAID CONSULTANTS.
9. PRIOR TO BUILDING FINAL INSPECTION, APPLIANCE CERTIFICATE, WHICH IS PROVIDED BY APPLIANCE MANUFACTURER, MUST BE COMPLETED BY THE INSTALLER OR GENERAL CONTRACTOR AND POSTED IN A CONSPICUOUS LOCATION. (INCLUDING HVAC UNITS AND WATER HEATERS.) CONTRACTOR SHALL PROVIDE FIRE EXTINGUISHER'S AND ANY REQUIRED SIGNAGE
10. AS DIRECTED AT THE LOCAL FIRE DEPARTMENT. SEE SPECIFICATIONS
11. AUTOMATIC FIRE SPRINKLERS MUST BE IN FULL OPERATIONAL USE PRIOR TO OCCUPANCY.
12. EXIT SIGN WHERE INDICATED SHALL BE WORDED "EXIT" IN SIX INCHES (6") HIGH ILLUMINATED LETTERS AND SHALL CONFORM TO GOVERNING BUILDING CODES AND REGULATIONS.
13. ALL REQUIRED EXITS INDICATED ON PLANS SHALL BE OPENABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT.
14. EXIT SIGNS SHALL BE POWERED BY SEPARATE CIRCUITS, ONE OF WHICH SHALL BE SEPARATED FROM ALL OTHER CIRCUITS IN THE BUILDING AND INDEPENDENTLY CONTROLLED. REFER TO ELEC. PLANS.
15. CONTRACTOR SHALL PROVIDE ACCESS PANELS AS REQUIRED BY PLUMBING, AIR CONDITIONING AND OTHER TRADES. AS REQUIRED BY CODES; AND INSTALL TO FINISH GLASS DOORS AND WINDOWS WITHIN 24" OF DOORS, AND GLASS PANELS WITHIN 18" OF FLOOR SHALL BE TEMPERED OR SAFETY GLASS.
16. THE BOOK OF SPECIFICATIONS ARE A PART OF THIS CONTRACT.
17. A KEY BOX IS REQUIRED FOR EACH BUILDING AS PER C.F.C. 506.1 CONTACT FIRE DEPARTMENT ADMINISTRATIVE OFFICE, COORDINATE WITH ARCHITECT FOR EXACT LOCATION.
18. PRIORITY OF DOCUMENTS: FIGURED DIMENSIONS ON DRAWINGS SHALL GOVERN. BUT WORK NOT DIMENSIONED SHALL BE AS DIRECTED. WORK NOT PARTICULARLY SHOWN OR SPECIFIED SHALL BE THE SAME AS SIMILAR PARTS THAT ARE SHOWN OR SPECIFIED. LARGE SCALE DETAILS SHALL TAKE PRECEDENCE OVER SMALLER SCALE DRAWINGS AS TO SHAPE AND DETAILS OF CONSTRUCTION. SPECIFICATIONS SHALL GOVERN TO MATERIALS, WORKMANSHIP AND INSTALLATION PROCEDURES. THE SPECIFICATIONS CALLING FOR FOR THE HIGHER QUALITY MATERIAL OR WORKMANSHIP SHALL PREVAIL. CONTRACTOR SHALL PROMPTLY NOTIFY THE ARCHITECT/ENGINEER IN WRITING, OF DRAWINGS AND SPECIFICATIONS WHICH MAY BE IN CONFLICT. IN THE EVENT THAT DRAWINGS AND SPECIFICATIONS ARE IN CONFLICT, THE MORE RESTRICTIVE, HIGHER QUALITY MATERIAL OR WORKMANSHIP SHALL PREVAIL.
20. DETAILS NOT SPECIFICALLY REFERENCED ARE STILL A PART OF THE DOCUMENTS.
21. CONTRACTOR RESPONSIBLE FOR ALL DETAILS WITHIN THIS SET.
22. CONTRACTOR SHALL KEEP A COPY OF TITLE 24, PARTS 1-5 ON SITE THROUGHOUT CONSTRUCTION.
23. SUBSTITUTIONS AFFECTING DSA REGULATED ITEMS ARE CONSIDERED CONSTRUCTION CHANGES TO THE APPROVED PLANS OR SPECS. THEY ARE TO BE TREATED AS ADDENDA OR CONSTRUCTION CHANGES AND REQUIRE DSA APPROVAL PRIOR TO FABRICATION AND INSTALLATION (SEC.4-338(c), PART 1, AND IR A-6).
24. ADDENDA MUST BE STAMPED AND SIGNED BY A/E ON RECORD AND DELEGATED DESIN PROFESSIONAL WHEN APPLICABLE, AND APPROVED BY DSA (SEC.4-338(b), PART 1).

SITE NOTES

1. REPAIR ALL DAMAGED AND/OR OFF-GRADE CONCRETE STREET IMPROVEMENTS AS DETERMINED BY THE INSPECTOR PRIOR TO SIGN OFF
2. ALL EXISTING APPROACHES WHICH NO LONGER PROVIDED ACCESS TO APPROVED VEHICLE PARKING AREAS SHALL BE REMOVED, UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER, SUCH AREAS SHALL BE RECONSTRUCTED WITH CURB, GUTTER, AND SIDEWALK TO MATCH EXISTING ADJACENT STREET IMPROVEMENTS. THIS WORK SHALL BE COMPLETED AND ACCEPTED BEFORE A PERMIT OF OCCUPANCY IS ISSUED OR THE BUILDING IS OCCUPIED. AUTHORITY: FMC 11-209
3. ANY SURVEY MONUMENTS WITHIN THE AREA OF CONSTRUCTION SHALL BE PRESERVED OR RESET BY A REGISTERED CIVIL ENGINEER OR A LICENSED LAND SURVEYOR.
4. NO OPEN TRENCH IN STREETS ALLOWED, ALL UTILITY CONNECTIONS MUST BE BORED.
5. ANY UTILITIES REQUIRING RELOCATION SHALL BE THE RESPONSIBILITY AND AT THE EXPENSE OF THE OWNER, CONTACT TRAFFIC ENGINEER FOR INFORMATION REGARDING REIMBURSEMENTS RELATIVE TO RELOCATING TRAFFIC SIGNAL FACILITIES, FIRE HYDRANTS WILL BE RELOCATED BY CITY FORCES. DEVELOPER IS RESPONSIBLE TO NOTIFY CITY WATER DIVISION TO ARRANGE AND COORDINATE WORK.
6. A BACKFLOW PREVENTION DEVICE IS REQUIRED. CONTACT THE CITY WATER DIVISION FOR REQUIREMENTS. DEVICES MUST BE INSTALLED ON-SITE IN A LOCATION APPROVED BY THE CROSS CONNECTION CONTROL OFFICER. A PLUMBING PERMIT IS REQUIRED AND SHALL BE INSTALLED AT THE CONTRACTOR'S EXPENSE BY A QUALIFIED JOURNEYMAN PLUMBER CERTIFIED AS COMPETENT FOR SUCH PURPOSES BY THE WATER SYSTEMS MANAGER, BACKFLOW DEVICES MUST BE TESTED AND ACCEPTED BY THE WATER DIVISION PRIOR TO GRANTING BUILDING FINAL
7. SURFACE DRAINAGE OVER DRIVEWAY APPROACHES AND SIDEWALKS IS NOT PERMITTED WHEN THE AREA TO BE DRAINED EXCEEDS 1/4 ACRE. SHOW METHOD OF CONVEYING ON SITE STORM WATER TO STREET, DETAIL CATCH BASINS AND PIPE OR CHANNEL SIZES TO BE USED PER CITY STANDARDS.
8. ALL CONSTRUCTION WORK ON THIS PROJECT IS SUBJECT TO INTERRUPTION IF THE ROAD SYSTEM BECOMES IMPASSABLE FOR FIRE APPARATUS DUE TO RAIN OR OTHER OBSTACLES.
9. WORKING DAYS BEFORE COMMENCING EXCAVATION OPERATIONS WITHIN THE STREET RIGHT-OF-WAY AND/OR UTILITY EASEMENTS, ALL EXISTING UNDERGROUND FACILITIES SHALL HAVE BEEN LOCATED BY UNDERGROUND SERVICES ALERT (USA). CALL 1-800-642-2444
10. NOTIFY CITY ELECTRONICS AND COMMUNICATIONS DIVISION, 10 DAYS PRIOR TO ANY OFFSITE CONCRETE CONSTRUCTION.
11. DEED(S) OF EASEMENTS FOR THE REQUIRED DEDICATION(S) SHALL BE PREPARED BY THE OWNER'S ENGINEER AND SUBMITTED TO THE CITY WITH VERIFICATION OF OWNERSHIP PRIOR TO ISSUANCE OF BUILDING PERMITS.
12. NO USES OF LAND, BUILDINGS OR STRUCTURES OTHER THAN THOSE SPECIFICALLY APPROVED PURSUANT TO THIS SITE PLAN SHALL BE PERMITTED.
13. INSTALL 12" HIGH ALUMINUM ADDRESS NUMBERS IN A CONSPICUOUS LOCATION ON THE BUILDING SO THAT IT CAN BE EASILY VISIBLE FROM THE STREET PER LOCAL MUNICIPAL CODE. COORDINATE WITH ARCHITECT.
14. IF ARCHAEOLOGICAL AND/OR ANIMAL FOSSIL MATERIAL IS ENCOUNTERED DURING PROJECT SURVEYING, GRADING, EXCAVATING, OR CONSTRUCTION, WORK SHALL STOP IMMEDIATELY.

ACCESSIBLE NOTES

10. PERMANENT IDENTIFICATION SIGNAGE FOR ROOMS AND SPACES: ALL ROOM IDENTIFICATION SIGNAGE ON WALL ADJACENT TO THE LATCH OUTSIDE OF THE DOOR WITH BRAILLE 11B-703.3 PROPORTIONS 11B-703.2.4, CONTRAST 11B-703.5.1, RAISED LETTERS AND SYMBOL (AS APPLIES) AND MOUNTING HEIGHT 11B-703.4.1 AND LOCATION PER 11B-703.4.2 WHERE THERE IS NO WALL SPACE ON THE LATCH SIDE, INCLUDING DOUBLE LEAF DOORS, SIGNS SHALL BE PLACED ON THE NEAREST ADJACENT WALL, PREFERABLY ON THE RIGHT SIDE AT +48" TO +60" ABOVE F.F.
11. BRAILLE SYMBOLS: CONTRACTED GRADE 2 BRAILLE SHALL BE USED WHEREVER BRAILLE SYMBOLS ARE SPECIFICALLY REQUIRED IN OTHER PORTIONS OF THESE STANDARDS. DOTS SHALL BE 1/10 IN. (2.5MM) ON CENTERS IN EACH CELL WITH 3/10 IN. (7.6mm) SPACE BETWEEN CELLS. DOTS SHALL BE RAISED A MINIMUM OF 1/40 IN. (0.6mm) TO MAXIMUM 0.37/10 (0.9mm) ABOVE BACKGROUND. DOTS SHALL BE A MINIMUM 3.95/10 (10mm) TO MAXIMUM 4/10 (10.2mm) FROM ONE CELL DIRECTLY BELOW PER 11B-703.3.1
12. FAUCETS SHALL BE NON-GRIPPING TYPE OR LEVER.
13. EXPOSED PIPING UNDER SINKS SHALL HAVE A PROTECTIVE WRAP.

CODE TABULATION

ALL NEW WORK AND MATERIAL SHALL BE PERFORMED & INSTALLED TO COMPLY WITH THE LATEST APPLICABLE CODES:

PARTIAL LIST OF APPLICABLE CODES AS OF JANUARY 1, 2020*

TITLE 19 CCR	PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS
TITLE 24 CCR	PART 1 - 2022 CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE
TITLE 24 CCR	PART 2 - 2022 CALIFORNIA BUILDING CODE, VOL. 1 & 2 (CBC) (2022 IBC, AS AMENDED BY CA)
TITLE 24 CCR	PART 3 - 2022 CALIFORNIA ELECTRICAL CODE (CEC) (2022NEC, AS AMENDED BY CA)
TITLE 24 CCR	PART 4 - 2022 CALIFORNIA MECHANICAL CODE (CMC) (2022 IAPMO UPC, AS AMENDED BY CA)
TITLE 24 CCR	PART 5 - 2022 CALIFORNIA PLUMBING CODE (CPC) (2022 IAPMO UPC, AS AMENDED BY CA)
TITLE 24 CCR	PART 6 - 2022 CALIFORNIA ENERGY CODE
TITLE 24 CCR	PART 9 - 2022 CALIFORNIA FIRE CODE (CFC) (2018 IFC, AS AMENDED BY CA)
TITLE 24 CCR	PART 11 - 2022 CALIFORNIA GREEN BUILDING STDS. CODE
TITLE 24 CCR	PART 12 - 2022 CALIFORNIA REFERENCED STANDARDS

PARTIAL LIST OF APPLICABLE STANDARDS

2022 - NFPA 13	INSTALLATION OF SPRINKLER SYSTEMS (CA AMENDED)
2019 - NFPA 14	INSTALLATION OF STANDPIPE AND HOSE SYSTEMS (CA AMENDED)
2021 - NFPA 17	DRY CHEMICAL EXTINGUISHING SYSTEMS
2021 - NFPA 17a	WET CHEMICAL EXTINGUISHING SYSTEMS
2019 - NFPA 20	INSTALLATION OF SANITARY PUMPS FOR FIRE PROTECTION
2019 - NFPA 24	INSTALLATION OF PRIVATE FIRE SERVICE MAINS
2022 - NFPA 72	NATIONAL FIRE ALARM CODE (CA AMENDED); SEE UL STD 1971 FOR "VISUAL DEVICES"
2019 - NFPA 80	FIRE DOOR AND OTHER OPENING PROTECTIVES
2018 - NFPA 2001	CLEAN AGENT FIRE EXTINGUISHING SYSTEMS
2005 - UL 300	CLASS I HOOD FIRE SUPPRESSION SYSTEMS
2003 - UL 464	AUDIBLE SIGNAL APPLIANCES
1999 - UL 521	HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING
2002-UL1971	STANDARD FOR SIGNALING DEVICES FOR THE HEARING IMPAIRED
2022 - CH 33 SYSTEMS	FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION

FOR A COMPLETE LIST OF APPLICABLE NFPA STANDARDS, REFER TO 2019 CBC (SFM) CHAPTER 35. AND CALIFORNIA FIRE CODE CHAPTERS 33 - FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION.

*ALL PARTS OF THE 2016 CALIFORNIA BUILDING CODE BECOME EFFECTIVE JANUARY 1, 2017 EXCEPT THE EFFECTIVE DATE FOR THE USE OF THE 2016 BUILDING ENERGY EFICIENCY STANDARDS (TITLE 24, PART 1, CHAPTER 10) IS FEBRUARY 25, 2016 AND THE EFFECTIVE DATE FOR THE USE OF THE CALIFORNIA ADMINISTRATIVE CODE (TITLE 24, PART 1, CHAPTER 4) IS JANUARY 20, 2016.

THE APPROVAL OF THESE PLANS AND SPECIFICATIONS DOES NOT PERMIT THE VIOLATION OF ANY SECTION OF THE BUILDING CODE, MUNICIPAL ORDINANCES, OR STATE LAWS.

INSPECTOR NOTES

1. ALL WORK SHALL CONFORM TO 2019 TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR).
2. CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDUM OR A CONSTRUCTION CHANGED DOCUMENT (CCD) APPROVED BY THE DIVISION OF THE STATE ARCHITECT, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, CCR.
3. THIS PROJECT REQUIRES INSPECTOR CLASS = 1
4. A "DSA CERTIFIED" PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY THE DSA SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR.
5. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.

SYMBOLS LEGEND

SYMBOL	DESCRIPTION
	SYMBOL OF ACCESSIBILITY
SECTION NUMBER / SECTION NUMBER	SECTION CUT
ELEVATION NUMBER / SHEET NUMBER	EXTERIOR ELEVATION SYMBOL
DETAIL NUMBER / SHEET LOCATION	DEATAIL CUT
-	ROOM NUMBER SYMBOL
-	DOOR NUMBER
-	WINDOW NUMBER
-	KEYNOTE REFERENCES
X	INTERIOR ELEVATION SYMBOL
HEIGHT / MODIFIER / DEPTH / CASEWORK MODEL / WIDTH	CASEWORK SYMBOL

SYMBOL	DESCRIPTION
	FINISH KEYNOTE SYMBOL
30" x 48" CLEAR	30"x48" REQUIRED ACCESSIBLE MANEUVERING SPACE,TYP.
5'-0" CLEAR	5'-0" DIA. CLEAR REQUIRED ACCESSIBLE MANEUVERING SPACE,TYP.

DRAWING ORGANIZATION

THE ORGANIZATION OF THESE DRAWINGS IS NOT INTENDED TO CONTROL THE DIVISION OF WORK AMONG SUBCONTRACTORS. IT SHALL BE THE CONSTRUCTION MANAGER'S RESPONSIBILITY TO DIVIDE THE WORK.

COPIES OF THESE DRAWINGS ARE SUPPLIED TO THE OWNER, AND THE CONTRACTOR FOR USE IN THE CONSTRUCTION OF THIS PROJECT ONLY. THE DRAWINGS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION OF S.I.M. ARCHITECTS. ALL DRAWINGS PREPARED BY SIM-PBK ARE AND SHALL REMAIN THE PROPERTY OF SIM-PBK.

IT IS THE INTENTION OF THE PLANS AND SPECIFICATIONS TO COVER ALL THINGS REQUIRED TO MAKE COMPLETE AND OPERATIVE SYSTEMS. CONTRACTOR IS TO FURNISH ALL LABOR, MATERIALS, TRANSPORTATION, EQUIPMENT, MISCELLANEOUS SERVICES, ETC., REQUIRED TO ACCOMPLISH THIS RESULT. ANYTHING WHICH MAY BE REASONABLY CONSTRUED AS A NECESSARY PART OF THE INSTALLATION IS TO BE INCLUDED WHETHER SPECIFICALLY SHOWN OR MENTIONED. THE ARCHITECT WILL GIVE ANY INTERPRETATIONS NECESSARY FOR THE CONTRACTOR TO PROPERLY ESTIMATE THE PROJECT.

DSA REQUIRMENTS

1. CONTRACTOR SHALL KEEP A COPY OF TITLE 24, PARTS 1-5 ON SITE THROUGHT CONSTRUCTION
2. SUBSTITUTIONS AFFECTING DSA REGULATED ITEMS ARE CONSIDERED CHANGES TO THE APPROVED PLANS OR SPECS. THEY ARE TO BE TREATED AS ADDENDA OR CONSTRUCTION CHANGE DOCUMENTS AND REQUIRE DSA APPROVAL PRIOR TO FABRICATION AND INSTALLATION (SEC.4-338(c), PART 1, AND IR A-6).
3. ADDENDA MUST BE STAMPED AND SIGNED BY A/E ON RECORD AND DELEGATED DESIGN PROFESSIONAL (WHEN APPLICABLE), AND APPROVED BY DSA (SEC.4-338(b), PART 1).
4. CONSTRUCTION CHANGE DOCUMENTS AND SUPPLIEMENTARY DRAWINGS MUST BE STAMPED AND SIGNED BY A/E OF RECORD AND DELEGATED DESIGN PROFESSIONAL (WHEN APPLICABLE), AND APPROVED BY DSA. (SEC.4-338(c), PART 1).
5. PROJECT INSPECTOR AND TESTING LAB (WHEN REQUIRED) MUST BE EMPLOYED BY THE OWNER AND APPROVED BY A/E OF RECORD, STRUCTURAL ENGINEER AND DSA (SEC.4-341(d), PART 1).
6. CHANGE TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY ADDENDA OR CONSTRUCTION CHANGE DOCUMENT (CCD) APPROVED BY DSA, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, CCR.
7. GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.
8. THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF THE ALTERATION, REHABILITATION OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, CCR, SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON-COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CCR, A CONSTRUCTION CHANGE DOUCUMENT (CCD), OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK. (SECTION 4-317 (C), PART 1, TITLE 24, CCR).

DESIGN COMPLIANCE

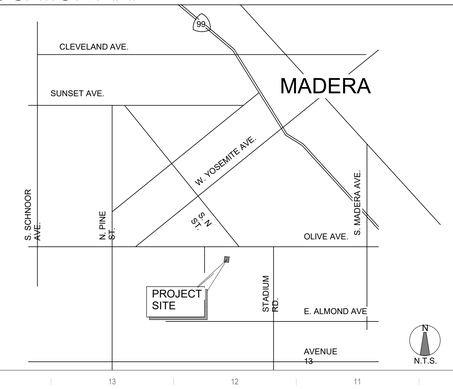
STATEMENT OF DESIGN COMPLIANCE:
THE STATE ENERGY CONSERVATION STANDARDS APPLICABLE TO THIS PROJECT HAVE BEEN REVIEWED AND THE BUILDING DESIGNED DESCRIBED HEREIN IS IN SUBSTANTIAL CONFORMANCE.
THE APPLICABLE STATE CODE TITLE 24 HAS BEEN REVIEWED FOR THIS PROJECT AND THE BUILDING DESIGN HEREIN IS IN SUBSTANTIAL CONFORMANCE.

DEFFERED APPROVAL

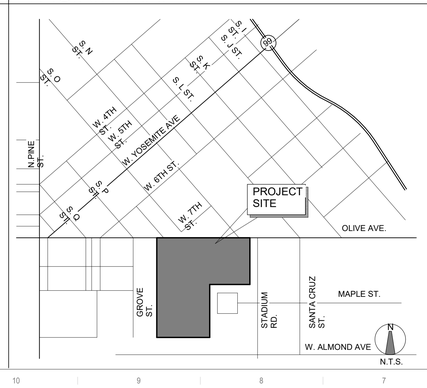
THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PREPARATION AND SUBMITTAL OF THE DEFERRED APPROVAL ITEMS FOR THE REVIEW AND APPROVAL PRIOR TO INSTALLATION.
THE INSTALLATION OF DEFERRED APPROVAL ITEMS SHALL NOT BE UNTIL THE CONTRACTOR'S DRAWINGS, SPECIFICATIONS, AND ENGINEERING CALCULATIONS FOR THE ACTUAL SYSTEM TO BE INSTALLED HAVE BEEN REVIEWED AND AGREED TO IN WRITING BY THE ARCHITECT AND/OR ENGINEER.
THE FOLLOWING ITEMS SHALL BE SUBMITTED, REVIEWED AND PERMITTED SEPERATELY:

1. N/A

LOCATION MAP



VACINITY MAP



STATEMENT OF GENERAL CONFORMANCE

FOR ARCHITECTS/ENGINEERS WHO UTILIZE PLANS, INCLUDING BUT NOT LIMITED TO, SHOP DRAWINGS PREPARED BY OTHER LICENSED DESIGN PROFESSIONALS AND/OR CONSULTANTS

(APPLICATION NO. 02-121624) (FILE NO. 20-H3)

X THE DRAWINGS OR SHEETS LISTED ON THE COVER OR INDEX SHEET
X THIS DRAWING, PAGE OF SPECIFICATIONS/CALCULATIONS

HAVE/HAS BEEN PREPARED BY OTHER DESIGN PROFESSIONALS OR CONSULTANTS WHO ARE LICENSED AND/OR AUTHORIZED TO PREPARE SUCH DRAWINGS IN THIS STATE. IT HAS BEEN EXAMINED BY ME FOR:

1) DESIGN INTENT, AND APPEARS TO MEET THE APPROPRIATE REQUIREMENTS OF TITLE 24, CALIFORNIA CODE OF REGULATIONS, AND THE PROJECT SPECIFICATIONS PREPARED BY ME.
2) COORDINATION WITH MY PLANS AND SPECIFICATIONS, AND IS ACCEPTABLE FOR INCORPORATION INTO THE CONSTRUCTION OF THIS PROJECT.

THE STATEMENT OF GENERAL CONFORMANCE "SHALL NOT BE CONSTRUED AS RELIEVING ME OF MY RIGHTS, DUTIES, AND RESPONSIBILITIES UNDER SECTION 17302 AND 81138 OF THE EDUCATION CODE, AND SECTIONS 4-336, 4-341 AND 4-344 OF TITLE 24, PART 1 (TITLE 24 PART 1, SECTION 4-317 (B)).

I FIND THAT: X ALL DRAWINGS OR SHEETS LISTED ON THE COVER OR INDEX SHEET
X THIS DRAWING OR PAGE

X IS/ARE IN GENERAL CONFORMANCE WITH THE PROJECT DESIGN, AND
X HAS/HAVE BEEN COORDINATED WITH THE PROJECT PLANS AND SPECIFICATIONS

SIGNATURE _____ DATE 01/ 22/ 2025

ARCHITECTS OR ENGINEER DESIGNATED TO BE IN GENERAL RESPONSIBLE CHARGE.
PRINT NAME: MICHAEL R. SCHOEN LICENSE NUMBER: C 35165 EXPIRATION DATE: 02.28.2027

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 01/23/2025

PBK

ARCHITECT PBK Architects, Inc.
FRESNO
7790 North Palm Avenue
Fresno, CA 93711
559-448-8400 P
559-448-8467 F
PBK.com

MADERA HIGH SCHOOL FIELDHOUSE

200 SOUTH "I" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

MADERA UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

PROJECT NUMBER 20-51
DATE 01/22/2025
DSA APPLICATION NO. 02-121624
FILE NO. 20-H3
PTN NO. 65243-153
DRAWN BY Author

REVISIONS

#	DESCRIPTION	DATE

CONSTRUCTION DOCUMENTS

NOTES

AT.2

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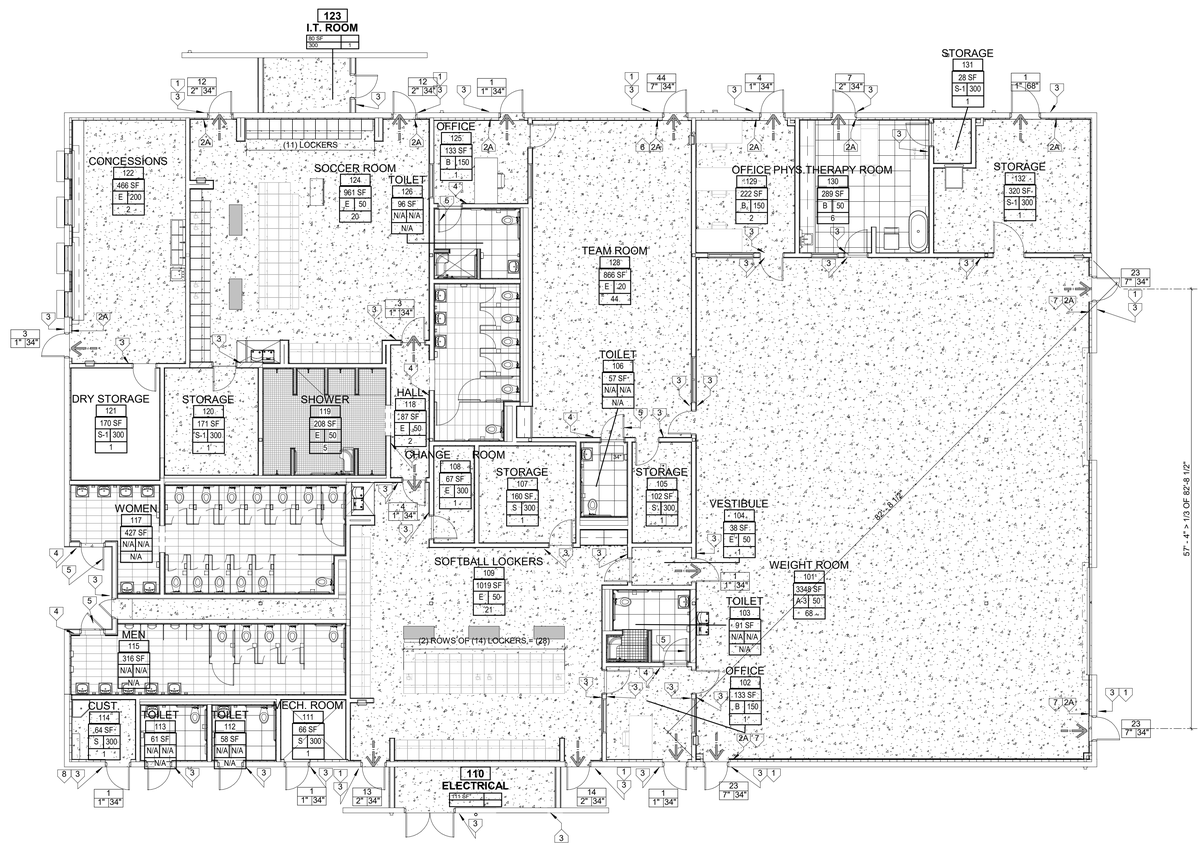


EXIT ANALYSIS/SIGNAGE

(183 OCCUPANTS)

SCALE 1/8" = 1'-0"

OCCUPANCY COUNT:

CONCESSIONS	2
DRY STORAGE	1
SOCCER ROOM	20
OFFICE	1
TEAM ROOM	44
OFFICE	2
PHYSICAL THER	6
STORAGE	1
STORAGE	1
WEIGHT ROOM	68
STORAGE	1
STORAGE	1
CHANGE ROOM	1
SOFTBALL LOCKERS	21
OFFICE	1
CUSTODIAN	1

GRAND TOTAL: 172

EXIT REQUIREMENTS/EGRESS WIDTHS

EXITS REQUIRED (PER CBC 2022, 1006.2.1)

OCCUPANCY 1-500 = 2
OCCUPANCY 501-1,000 = 3
OCCUPANCY > 1,000 = 4

MIN. EGRESS WIDTHS (PER CBC 2022, 1005.3.2)

DOOR WIDTH = 0.15" / OCCUPANT

THE REQUIRED CAPACITY OF EACH DOOR OPENING SHALL BE SUFFICIENT FOR THE OCCUPANT LOAD THEREOF AND SHALL PROVIDE A MINIMUM CLEAR WIDTH OF 32 INCHES.

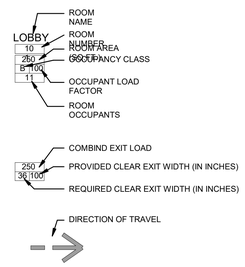
GENERAL NOTES EXIT ANALYSIS

1. SEE DOOR & HARDWARE SCHEDULES FOR ALL DOORS W/ PANIC HARDWARE
2. SEE FLOOR PLANS OF EACH BUILDING FOR APPROPRIATE WALL LEGEND, TYPES & ASSEMBLIES
3. SEE ELECTRICAL PLANS FOR ILLUMINATED EXIT SIGN TYPE, LOCATION AND REQUIREMENTS.

SIGNAGE

1. *ISA ENTRANCE DOOR SIGNAGE,* PER DETAIL 11 / AX7.1
2. *EXIT DOOR SIGNAGE,* PER DETAIL 2 / AX7.1
3. *ROOM IDENTIFICATION SIGNAGE,* PER DETAIL 11 / AX7.1
4. *TACTILE R.R.DOOR SIGNAGE,* PER DETAIL 20 / AX7.1
5. *RESTROOM IDENTIFICATION SYMBOLS,* PER DETAIL 20 / AX7.1
6. *ASSISTIVE LISTENING SIGNAGE,* PER DETAIL 3 / AX7.1
7. *MAXIMUM OCCUPANCY SIGNAGE,* PER DETAIL 1 / AX7.1
8. *FIRE SPRINKLER RISER SIGNAGE,* SEE DETAIL 4 / AX7.1

EXITING ANALYSIS LEGEND



IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 01/23/2025

PBK

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7790 North Palm Avenue
Fresno, CA 93711
559-448-8400 P
559-448-8467 F
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MADERA HIGH SCHOOL FIELDHOUSE

200 SOUTH "I" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT — MICHAEL R. SCHOEN — No. C-18295 — RENEWAL DATE FEB 28, 2027 — STATE OF CALIFORNIA

PROJECT NUMBER 20-51
DATE 01/22/2025
DSA APPLICATION NO. 02-121624
FILE NO. 20-H3
PTN NO. 65243-153
DRAWN BY Author

REVISIONS

#	DESCRIPTION	DATE

CONSTRUCTION DOCUMENTS

EXIT ANALYSIS AND SIGNAGE

AT.3

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1/20/2025 6:37:02 PM

2022 CALIFORNIA GREEN BUILDING STANDARDS CODE

NONRESIDENTIAL MANDATORY MEASURES,

Y = YES
N/A = NOT APPLICABLE
RESPON. PARTY = RESPONSIBLE PARTY (ie: ARCHITECT, ENGINEER, OWNER, CONTRACTOR, INSPECTOR ETC.)

CHAPTER 3
GREEN BUILDING
SECTION 301 GENERAL

301.1 SCOPE. Buildings shall be designed to include the green building measures specified as mandatory in the application checklists contained in this code. Voluntary green building measures are also included in the application checklists and may be included in the design and construction of structures covered by this code, but are not required unless adopted by a city, county, or city and county as specified in Section 101.7.

301.3 NONRESIDENTIAL ADDITIONS AND ALTERATIONS. [BSC-CG] The provisions of individual sections of Chapter 5 apply to newly constructed buildings, building additions of 1,000 square feet or greater, and/or building alterations with a permit valuation of $200,000 or above (for occupancies within the authority of California Building Standards Commission). Code sections relevant to additions and alterations shall only apply to the portions of the building being added or altered within the scope of the permitted work.

A code section will be designated by a banner to indicate where the code section only applies to newly constructed buildings [N] or to additions and/or alterations [A]. When the code section applies to both, no banner will be used.

301.3.1 Nonresidential additions and alterations that cause updates to plumbing fixtures only:

Note: On and after January 1, 2014, certain commercial real property, as defined in Civil Code Section 1101.3, shall have its noncompliant plumbing fixtures replaced with appropriate water-conserving plumbing fixtures under specific circumstances. See Civil Code Section 1101.1 *et seq.* for definitions, types of commercial real property affected, effective dates, circumstances necessitating replacement of noncompliant plumbing fixtures, and duties and responsibilities for ensuring compliance.

301.3.2 Waste Diversion. The requirements of Section 5.408 shall be required for additions and alterations whenever a permit is required for work.

301.4 PUBLIC SCHOOLS AND COMMUNITY COLLEGES. (see GBSC)
301.5 HEALTH FACILITIES. (see GBSC)

SECTION 302 MIXED OCCUPANCY BUILDINGS

302.1 MIXED OCCUPANCY BUILDINGS. In mixed occupancy buildings, each portion of a building shall comply with the specific green building measures applicable to each specific occupancy.

SECTION 303 PHASED PROJECTS

303.1 PHASED PROJECTS. For shell buildings and others constructed for future tenant improvements, only those code measures relevant to the building components and systems considered to be new construction (or newly constructed) shall apply.

303.1.1 Initial Tenant improvements. The provisions of this code shall apply only to the initial tenant improvements to a project. Subsequent tenant improvements shall comply with the scoping provisions in Section 301.3 non-residential additions and alterations.

ABBREVIATION DEFINITIONS:

HCD	Department of Housing and Community Development
BSC	California Building Standards Commission
DSA-SS	Division of the State Architect, Structural Safety
OSHPD	Office of Statewide Health Planning and Development
LR	Low Rise
HR	High Rise
AA	Additions and Alterations
N	New

CHAPTER 5
NONRESIDENTIAL MANDATORY MEASURES
DIVISION 5.1 PLANNING AND DESIGN
SECTION 5.101 GENERAL

5.101.1 SCOPE
The provisions of this chapter outline planning, design and development methods that include environmentally responsible site selection, building design, building siting and development to protect, restore and enhance the environmental quality of the site and respect the integrity of adjacent properties.

SECTION 5.102 DEFINITIONS

5.102.1 DEFINITIONS
The following terms are defined in Chapter 2 *(and are included here for reference)*

CUTOFF LUMINAIRES. Luminaires whose light distribution is such that the candela per 1000 lamp lumens does not numerically exceed 25 (2.5 percent) at an angle of 90 degrees above nadir, and 100 (10 percent) at a vertical angle of 80 degrees above nadir. This applies to all lateral angles around the luminaire.

LOW-EMITTING AND FUEL EFFICIENT VEHICLES.
Eligible vehicles are limited to the following:

1. Zero emission vehicle (ZEV), enhanced advanced technology PZEV (enhanced AT ZEV) or transitional zero emission vehicles (TZEV) regulated under CCR, Title 13, Section 1962.
2. High-efficiency vehicles, regulated by U.S. EPA, bearing a fuel economy and greenhouse gas rating od 9 oe 10 as regulated under 40 CFR Section 600 Subpart D.

NEIGHBORHOOD ELECTRIC VEHICLE (NEV). A motor vehicle that meets the definition of "low-speed vehicle" either in Section 385.5 of the Vehicle Code or in 49CFR571.500 (as it existed on July 1, 2000), and is certified to zero-emission vehicle standards.

TENANT-OCCUPANTS. Building occupants who inhabit a building during its normal hours of operation as permanent occupants, such as employees, as distinguished from customers and other transient visitors.

VANPOOL VEHICLE. Eligible vehicles are limited to any motor vehicle, other than a motortruck or truck tractor, designed for carrying more than 10 but not more than 15 persons including the driver, which is maintained and used primarily for the nonprofit work-related transportation of adults for the purpose of ridesharing.

Note: Source: Vehicle Code, Division 1, Section 668

ZEV. Any vehicle certified to zero-emission standards.

SECTION 5.106 SITE DEVELOPMENT

5.106.1 STORM WATER POLLUTION PREVENTION FOR PROJECTS THAT DISTURB LESS THAN ONE ACRE OF LAND. Newly constructed projects and additions which disturb less than one acre of land, and are not part of a larger common plan of development or sale, shall prevent the pollution of storm water runoff from the construction activities through one or more of the following measures:

5.106.1.1 Local ordinance. Comply with a lawfully enacted storm water management and/or erosion control ordinance.

5.106.1.2 Best Management Practices (BMPs). Prevent the loss of soil through wind or water erosion by implementing an effective combination of erosion and sediment control and good housekeeping BMPs.

1. Soil loss BMPs that should be considered for implementation as appropriate for each project include, but are not limited to, the following:
   a. Scheduling construction activity during dry weather, when possible.
   b. Preservation of natural features, vegetation, soil, and buffers around surface waters.
   c. Drainage swales or lined ditches to control stormwater flow.
   d. Mulching or hydroseeding to stabilize disturbed soils.
   e. Erosion control to protect slopes.
   f. Protection of storm drain inlets (gravel bags or catch basin inserts).
   g. Perimeter sediment control (perimeter silt fence, fiber rolls).
   h. Sediment trap or sediment basin to retain sediment on site.
   i. Stabilized construction exits.
   j. Wind erosion control.
   k. Other soil loss BMPs acceptable to the enforcing agency.
2. Good housekeeping BMPs to manage construction equipment, materials, non-stormwater discharges and wastes that should be considered for implementation as appropriate for each project include, but are not limited to, the following:
   a. Dewatering activities.
   b. Material handling and waste management.
   c. Building materials stockpile management.
   d. Management of washout areas (concrete, paints, stucco, etc.).
   e. Control of vehicle/equipment fueling to contractor's staging area.
   f. Vehicle and equipment cleaning performed off site.
   g Spill prevention and control.
   h. Other housekeeping BMPs acceptable to the enforcing agency.

5.106.2 STORMWATER POLLUTION PREVENTION FOR PROJECTS THAT DISTURB ONE OR MORE ACRES OF LAND. Comply with all lawfully enacted stormwater discharge regulations for projects that (1) disturb one acre or more of land, or (2) disturb less than one acre of land but are part of a larger common plan of development sale.

Note: Projects that (1) disturb one acre or more of land, or (2) disturb less than one acre of land but are part of the larger common plan of development or sale must comply with the post-construction requirements detailed in the applicable National Pollutant Discharge Elimination System (NPDES) General permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities issued by the State Water Resources Control Board or the Lahontan Regional Water Quality Control Board (for projects in the Lake Tahoe Hydrologic Unit).

The NPDES permits require postconstruction runoff (post-project hydrology) to match the preconstruction runoff (pre-project hydrology) with the installation of postconstruction stormwater management measures. The NPDES permits emphasize runoff reduction through on-site stormwater use, interception, evapotranspiration, and infiltration through nonstructural controls, such as Low Impact Development (LID) practices, and conversation design measures. Stormwater volume that cannot be addressed using nonstructural practices is required to be captured in structural practices and be approved by the enforcing agency.

Refer to the current applicable permits on the State Water Resources Control Board website at: www.waterboards.ca.gov/constructionstormwater. Consideration to the stormwater runoff management measures should be given during the initial design process for appropriate integration into site development.

5.106.4 BICYCLE PARKING. For buildings within the authority of California Building Standards Commission as specified in Section 103, comply with Section 5.106.4.1. For buildings within the authority of the Division of the State Architect pursuant to Section 105, comply with Section 5.106.4.2

5.106.4.1 Bicycle parking. [BSC-CG] Comply with Sections 5.106.4.1.1 and 5.106.4.1.2; or meet the applicable local ordinance, whichever is stricter.

5.106.4.1.1 Short-term bicycle parking. If the new project or an addition or alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5% of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack.
Exception: Additions or alterations which add nine or less visitor vehicular parking spaces.

5.106.4.1.2 Long-term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5 percent of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility.

5.106.4.1.3 For additions or alterations that add 10 or more tenant-occupant vehicular parking spaces, provide secure bicycle parking for 5 percent of the tenant vehicular parking spaces being added, with a minimum of one bicycle parking facility.

5.106.4.1.4 For new shell buildings in phased projects provide secure bicycle parking for 5 percent of the anticipated tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility.

5.106.4.1.5 Acceptable bicycle parking facility for Sections 5.106.4.1.2, 5.106.4.1.3, and 5.106.4.1.4 shall be convenient from the street and shall meet one of the following:

1. Covered, lockable enclosures with permanently anchored racks for bicycles;
2. Lockable bicycle rooms with permanently anchored racks; or
3. Lockable, permanently anchored bicycle lockers.

Note: Additional information on recommended bicycle accommodations may be obtained from Sacramento Area Bicycle Advocates.

5.106.4.2 Bicycle parking. [DSA-SS] For public schools and community colleges, comply with Sections 5.106.4.2.1 and 5.106.4.2.2

5.106.4.2.1 Student bicycle parking. Provide permanently anchored bicycle racks conveniently accessed with a minimum of four two-bike capacity racks per new building.
5.106.4.2.2 Staff bicycle parking. Provide permanent, secure bicycle parking conveniently accessed with a minimum of two staff bicycle parking spaces per new building. Acceptable bicycle parking facilities shall be convenient from the street or staff parking area and shall meet one of the following:

1. Covered, lockable enclosures with permanently anchored racks for bicycles;
2. Lockable bicycle rooms with permanently anchored racks; or
3. Lockable, permanently anchored bicycle lockers.

5.106.5.3 Electric vehicle (EV) charging. [N] Construction to provide electric vehicle infrastructure and facilitate electric vehicle charging shall comply with Section 5.106.5.3.1 and shall be provided in accordance with regulations in the California Building Code and the California Electrical Code.

Exceptions:

1. On a case-by-case basis where the local enforcing agency has determined compliance with this section is not feasible based upon one of the following conditions:
   a. Where there is no local utility power supply
   b. Where the local utility is unable to supply adequate power.
   c. Where there is evidence suitable to the local enforcement agency substantiating that local utility infrastructure design requirements, directly related to the implementation of Section 5.106.5.3, may adversely impact the construction cost of the project.
2. Parking spaces accessible only by automated mechanical car parking systems are not required to comply with this code section

5.106.5.3.1 EV capable spaces.
[N] EV capable spaces shall be provided in accordance with Table 5.106.5.3.1 and the following requirements:

1. Raceways complying with the California Electrical Code and no less that 1-inch (25 mm) diameter shall be provided and shall originate at a service panel or a subpanel(s) serving the area, and shall terminate in close proximity to the proposed location of the EV capable and into a suitable listed cabinet, box,enclosure or equivalent. A common raceway may be used to serve multiple EV charging spaces.
2. A service panel or subpanel (s) shall be provided with panel space and electrical load capacity for a dedicated 208/240 volt, 40-ampere minimum branch circuit for each EV capable space, with delivery of 30-ampere minimum to an installed EVSE at each EVCS.
3. The electrical system and any on-site distribution transformers shall have sufficient capacity to supply full rated amperage at each EV capable space.
4. The service panel or subpanel circuit directory shall identify the reserved overcurrent protective devices space(s) as "EV CAPABLE". The raceway termination location shall be permanently and visibly marked as "EV CAPABLE."

Note: A parking space served by electric vehicle supply equipment or designed as a future EV charging space shall count as at least one standard automobile parking space only for the purpose of complying with any applicable minimum parking space requirements established by an enforcement agency. See vehicle Code Section 22511.2 for further details.

TABLE 5.106.5.3.1

TOTAL NUMBER OF ACTUAL PARKING SPACES	NUMBER OF REQUIRED EV CAPABLE SPACES	NUMBER OF EVCS (EV CAPABLE SPACES PROVIDED WITH EVSE)^2
0-9	0	0
10-25	2	0
26-50	8	2
51-75	13	3
76-100	17	4
101-150	25	6
151-200	35	9
201 AND OVER	20% of total[1]	25% of EV capable spaces[1]

1. Where there is insufficient electrical supply.
2. The number of required EVCS (EV capable spaces provided with EVSE) in column 3 count towards the total number of required EV capable spaces shown in column 2.

5.106.5.3.2 Electric vehicle charging stations (EVCS)
EV capable spaces shall be provided with EVSE to create EVCS in the number indicated in Table 5.106.5.3.1. The EVCS required by Table 5.106.5.3.1 may be provided with EVSE in any combination of Level 2 and Direct Current Fast Charging (DCFC), except that at least one Level 2 EVSE shall be provided.

One EV charger with multiple connectors capable of charging multiple EVs simultaneously shall be permitted if the electrical load capacity required by Section 5.106.5.3.1 for each EV capable space is accumulatively supplied to the EV charger.

The installation of each DCFC EVSE shall be permitted to reduce the minimum number of required EV capable spaces without EVSE by five and reduce proportionally the required electrical load capacity to the service panel or subpanel.

5.106.5.3.3 Use of automatic load management systems (ALMS).
ALMS shall be permitted for EVCS. When ALMS is installed, the required electrical load capacity specified in Section
5.106.5.3.1 for each EVCS may be reduced when serviced by an EVSE controlled by an ALMS. Each EVSE controlled by an ALMS shall deliver a minimum 30 amperes to an EV when charging one vehicle and shall deliver a minimum 3.3 kW while simultaneously charging multiple EVs.

5.106.5.3.4 Accessible EVCS.
When EVSE is installed, accessible EVSC shall be provided in accordance with the *California Building Code*, Chapter 11B, Section 11B-228.3.
Note: For EVCS signs, refer to Caltrans Traffic Operations Policy Directive 13-01 (Zero Emission Vehicle Signs and Pavement Markings) or its successor(s).

5.106.5.4 Electric Vehicle (EV) charging: medium-duty and heavy-duty. [N]
Construction shall comply with section 5.106.5.4.1 to facilitate future installation of electric vehicle supply equipment (EVSE). Construction for warehouses, grocery stores and retail stores with planned off-street loading spaces shall also comply with Section 5.106.5.4.1 for future installation of medium- and heavy-duty EVSE.
Exceptions:

1. On a case-by-case basis where the local enforcing agency has determined compliance with this section is not feasible based upon one of the following conditions:
   a. Where there is no local utility power supply.
   b. Where the local utility is unable to supply adequate power.
   c. Where there is evidence suitable to the local enforcing agency substantiating that additional local utility infrastructure design requirements, directly related to the implementation of Section 5.106.5.3, may adversely impact the construction cost of the project.

When EVSE(s) is/are installed, it shall be in accordance with the *California Building Code*, the *California Electrical Code* and as follows:

5.106.5.4.1 Electric vehicle charging readiness requirements for warehouse, grocery stores and retail stores with planned off-street loading spaces.
[N] In order to avoid future demolition when adding EV charging supply and distribution equipment, spare raceways(s) or busway(s) and adequate capacity for transformers(s), service panels(s) or subpanel(s) shall be installed at the time of construction in accordance with the California Electrical Code. Construction plans and specifications shall include but are not limited to, the following:

1. The transformer, main service equipment and subpanel shall meet the minimum power requirement in Table 5.106.5.4.1 to accommodate the dedicated branch circuits for the future installation of EVSE.
2. The construction documents shall indicate on or more location(s) convenient to the planned offstreet loading space(s) reserved for medium-and heavy-duty ZEV charging cabinets and charging dispensers, and a pathway reserved for routing of conduit from the termination of the raceway(s) or busway(s) to the charging cabinet(s) and dispenser(s) as shown in Table 5.106.5.4.1
3. Raceway(s) or busway(s) originating at a main service panel or a subpanel(s) serving the area where potential future medium-and heavy-duty EVSE will be located and shall terminate in close proximity to the potential future location of the charging equipments for medium- and heavy-duty vehicles.
4. The raceway(s) or busway(s) shall be sufficient size to carry the minimum additional system load to the future location of the charging for medium- and heavy-duty ZEVs as shown in Table 5.106.5.4.1.

TABLE 5.106.5.4.1 RACEWAY CONDUIT AND PANEL POWER REQUIREMENTS FOR MEDIUM- AND HEAVY-DUTY EVSE [N]

BUILDING TYPE	BUILDING SIZE (SQ. FT.)	NUMBER OF OFF-STREET LOADING SPACES	ADDITIONAL CAPACITY REQUIRED (KVA) FOR RACEWAY & BUSWAY AND TRANSFORMER & PANEL
Grocery	10,000 to 90,000	1 or 2	200
		3 or Greater	400
	Greater than 90,000	1 or Greater	400
Retail	10,000 to 135,000	1 or 2	200
		3 or Greater	400
	Greater than 135,000	1 or Greater	400
Warehouse	20,000 to 256,000	1 or 2	200
		3 or Greater	400
	Greater than 256,000	1 or Greater	400

5.106.8 LIGHT POLLUTION REDUCTION. [N]. I Outdoor lighting systems shall be designed and installed to comply with the following:

1. The minimum requirements in the California Energy Code for Lighting Zones 0-4 as defined in Chapter 10, Section 10-114 of the California Administrative Code; and
2. Backlight (B) ratings as defined in IES TM-15-11 (shown in Table A-1 in Chapter 8);
3. Uplight and Glare ratings as defined in California Energy Code (shown in Tables 130.2-A and 130.2-B in Chapter 8) and
4. Allowable BUG ratings not exceeding those shown in Table 5.106.8, [N] or Comply with a local ordinance lawfully enacted pursuant to Section 101.7, whichever is more stringent.

Exceptions: [N]

1. Luminaires that qualify as exceptions in Sections 130.2 (b) and 140.7 of the California Energy Code.
2. Emergency lighting.
3. Building facade meeting the requirements in Table 140.7-B of the California Energy Code, Part 6.
4. Custom lighting features as allowed by the local enforcing agency, as permitted by Section 101.8 Alternate materials, designs and methods of construction.
5. Luminaires with less than 6,200 initial luminaire lumens.

TABLE 5.106.8 [N] MAXIMUM ALLOWABLE BACKLIGHT, UPLIGHT AND GLARE (BUG) RATINGS 1,2

ALLOWABLE RATING	LIGHTING ZONE LZ0	LIGHTING ZONE LZ1	LIGHTING ZONE LZ2	LIGHTING ZONE LZ3	LIGHTING ZONE LZ4
MAXIMUM ALLOWABLE BACKLIGHT RATING 3					
Luminaire greater than 2 mounting heights (MH) from property line	N/A	No Limit	No Limit	No Limit	No Limit
Luminaire back hemisphere is 1-2 MH from property line	N/A	B2	B3	B4	B4
Luminaire back hemisphere is 0.5-1 MH from property line	N/A	B1	B2	B3	B3
Luminaire back hemisphere is less than 0.5 MH from property line	N/A	B0	B0	B1	B2
MAXIMUM ALLOWABLE UPLIGHT RATING (U)					
For area lighting 3	N/A	U0	U0	U0	U0
For all other outdoor lighting,including decorative luminaires	N/A	U1	U2	U3	UR
MAXIMUM ALLOWABLE GLARE RATING 3 **(G)**					
MAXIMUM ALLOWABLE GLARE RATING 3 **(G)**	N/A	G1	G2	G3	G4
MAXIMUM ALLOWABLE GLARE RATING 3 **(G)**	N/A	G0	G1	G1	G2
MAXIMUM ALLOWABLE GLARE RATING 3 **(G)**	N/A	G0	G0	G1	G1
MAXIMUM ALLOWABLE GLARE RATING 3 **(G)**	N/A	G0	G0	G0	G1

1. IESNA Lighting Zones 0 and 5 are not applicable; refer to Lighting Zones as defined in the *California Energy Code* and Chapter 10 of the *California Administrative Code.*

2. For property lines that abut public walkways, bikeways, plazas and parking lots, the property line may be considered to be 5 feet beyond the actual property line for purpose of determining compliance with this section. For property lines that abut public roadways and public transit corridors, the property line may be considered to be the centerline of the public roadway or public transit corridor for the purpose of determining compliance with this section.

3. General lighting luminaires in areas such as outdoor parking, sales or storage lots shall meet these reduced ratings. Decorative luminaries located in these areas shall meet *U*-value limits for "all other outdoor lighting"

5.106.8.1 Facing- Backlight
Luminaries within 2MH of a property line shall be oriented so that the nearest property line is behind the fixture, and shall comply with the backlight rating specified in Table 5.106.8 based on the lighting zone and distance to the nearest point of that property line.
Exception: Corners. If two property lines (or two segments of the same property line) have equidistant point to the luminaire, then the luminaire may be oriented so that the intersection of the two lines (the corner) is directly behind the luminaire. The luminaire shall still use the distance to the nearest points(s) on the property lines to determine the required backlight rating.

5.106.8.2 Facing-Glare.
For luminaires covered by 5.106.8.1, if a property line also exists within or extends into the front hemisphere within 2MH of the luminaire then the luminaire shall comply with the more stringent glare rating specified in Table 5.106.8 based on the lighting zone and distance to the nearest point on the nearest property line within the front hemisphere.

Note: [N]
1.See also *California Building Code*, Chapter 12, Section 1205.6 for college campus lighting requirements for parking facilities and walkways.
2.Refer to Chapter 8 (Compliance Forms, Worksheets and Reference Material) for IES TM-15-11 Table A-1, *California Energy Code* Tables 130.2-A and 130.2-B.
3. Refer to the *California Building Code* for requirements for additions and alterations.

5.106.10 GRADING AND PAVING. Construction plans shall indicate how site grading or a drainage system will manage all surface water flows to keep water from entering buildings. Examples of methods to manage surface water include, but are not limited to, the following:

1. Swales.
2. Water collection and disposal systems.
3. French drains.
4. Water retention gardens.
5. Other water measures which keep surface water away from buildings and aid in groundwater recharge.
Exception: Additions and alterations not altering the drainage path.

5.106.12 SHADE TREES [DSA-SS]. Shade Trees shall be planted to comply with Sections 5.106.12.1, 5.106.12.2, and 5.106.12.3. Percentages shown shall be measured at noon on the summer solstice. Landscape irrigation necessary to establish and maintain tree health shall comply with Section 5.304.6.

5.106.12.1 Surface parking areas. Shade tree plantings, minimum #10 container size or equal, shall be installed to provide shade over 50 percent of the parking area within 15 years.

Exceptions: Surface parking area covered by solar photovoltaic shade structures with roofing materials that comply with Table A5.106.11.2.2 in Appendix A5 shall be permitted in whole or in part in lieu of shade tree planting.

5.106.12.2 Landscape areas. Shade tress plantings, minimum #10 container size or equal shall be installed to provide shade of 20% of the landscape area within 15 years.

Exceptions: Playfields for organized sport activity are not included in the total area calculation.

5.106.12.3. Hardscape areas. Shade tree plantings, minimum #10 container size or equal shall be installed to provide shade over 20 percent of the hardscape area within 15 years.

Exceptions:
1. Walks, hardscape areas covered by solar photovoltaic shade structures or shade structures with roofing materials that comply with Table A5.106.11.2.2 in Appendix A5 shall be permitted in whole or in part in lieu of shade tree planting.
2. Designated and marked play areas of organized sport activity are not included in the total area calculation.

DIVISION 5.2 ENERGY EFFICIENCY
SECTION 5.201 GENERAL

5.201.1 Scope [BSC-CG]. ***California Energy Code [DSA-SS].*** For the purposes of mandatory energy efficiency standards in this code, the California Energy Commission will continue to adopt mandatory building standards.

DIVISION 5.3 WATER EFFICIENCY AND CONSERVATION
SECTION 5.301 GENERAL

5.301.1 Scope. The provisions of this chapter shall establish the means of conserving water use indoors, outdoors and in wastewater conveyance.

SECTION 5.302 DEFINITIONS

5.302.1 Definitions. The following terms are defined in Chapter 2 *(and are included here for reference)*

EVAPOTRANSPIRATION ADJUSTMENT FACTOR (ETAF) [DSA-SS]. An adjustment factor when applied to reference evapotranspiration that adjusts for plant factors and irrigation efficiency, which ae two major influences on the amount of water that needs to be applied to the landscape.

FOOTPRINT AREA [DSA-SS]. The total area of the furthest exterior wall of the structure projected to natural grade, not including exterior areas such as stairs, covered walkways, patios and decks.

METERING FAUCET. A self-closing faucet that dispenses a specific volume of water for each actuation cycle. The volume or cycle duration can be fixed or adjustable.

GRAYWATER. Pursuant to Health and Safety Code Section 17922.12, "graywater" means untreated wastewater that has not been contaminated by any toilet discharge, has not been affected by infectious, contaminated, or unhealthy bodily wastes, and does not present a threat from contamination by unhealthful processing, manufacturing, or operating wastes. "Graywater" includes, but is not limited to wastewater from bathtubs, showers, bathroom washbasins, clothes washing machines and laundry tubs, but does not include waste water from kitchen sinks or dishwashers.

MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWELO). The California ordinance regulating landscape design, installation and maintenance practices that will ensure commercial, multifamily and other developer installed landscapes greater than 2500 square feet meet an irrigation water budget developed based on landscaped area and climatological parameters.

MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWELO). [HCD] The California model ordinance (California Code of Regulations, Title 23, Division 2, Chapter 2.7), regulating landscape design, installation and maintenance practices. Local agencies are required to adopt the updated MWELO, or adopt a local ordinance at least as effective as the MWELO.

POTABLE WATER. Water that is drinkable and meets the U.S. Environmental Protection Agency (EPA) Drinking Water Standards. See definition in the California Plumbing Code, Part 5.

POTABLE WATER. [HCD] Water that is satisfactory for drinking, culinary, and domestic purposes, and meets the U.S. Environmental Protection Agency (EPA) Drinking Water Standards and the requirements of the Health Authority Having Jurisdiction.

RECYCLED WATER. Water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur [Water Code Section 13050 (n)]. Simply put, recycled water is water treated to remove waste matter attaining a quality that is suitable to use the water again.

SUBMETER. [HCD 1] A secondary device beyond a meter that measures water consumption of an individual rental unit within a multiunit residential structure or mixed-use residential and commercial structure. (See Civic Code Section 1954.202 (g) and Water code Section 517 for additional details.)

WATER BUDGET. Is the estimated total landscape irrigation water use which shall not exceed the maximum applied water allowance calculated in accordance with the Department of Water Resources Model Efficient Landscape Ordinance (MWELO).

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 01/23/2025

PBK

ARCHITECT PBK Architects, Inc.
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MADERA HIGH SCHOOL FIELDHOUSE
200 SOUTH "I" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

PROFESSIONAL SEAL
LICENSED ARCHITECT — MICHAEL R. SCHOEN — No. C-30295 — REGISTERED PROFESSIONAL ARCHITECT — RENEWAL DATE FEB 28, 2027 — STATE OF CALIFORNIA

PROJECT NUMBER	20-51
DATE	01/22/2025
DSA APPLICATION NO.	02-121624
FILE NO.	20-H3
PTN NO.	65243-153
DRAWN BY	Author

REVISIONS

#	DESCRIPTION	DATE

CONSTRUCTION DOCUMENTS

CALIFORNIA GREEN STANDARDS

AT.4

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1/20/2025 6:37:04 PM

2022 CALIFORNIA GREEN BUILDING STANDARDS CODE

NONRESIDENTIAL MANDATORY MEASURES,

Y = YES
N/A = NOT APPLICABLE
RESPON. PARTY = RESPONSIBLE PARTY (ie: ARCHITECT, ENGINEER, OWNER, CONTRACTOR, INSPECTOR ETC.)

SECTION 5.303 INDOOR WATER USE

5.303.1 METERS. Separate submeters or metering devices shall be installed for the uses described in Sections 503.1.1 and 503.1.2.

5.303.1.1 Buildings in excess of 50,000 square feet. Separate submeters shall be installed as follows:

1. For each individual leased, rented or other tenant space within the building projected to consume more than 100 gal/day (380 L/day), including, but not limited to, spaces used for laundry or cleaners, restaurant or food service, medical or dental office, laboratory, or beauty salon or barber shop.
2. Where separate submeters for individual building tenants are unfeasible, for water supplied to the following subsystems:
   a. Makeup water for cooling towers where flow through is greater than 500 gpm (30 L/s).
   b. Makeup water for evaporative coolers greater than 6 gpm (0.04 L/s).
   c. Steam and hot water boilers with energy input more than 500,000 Btu/h (147 kW).

5.303.1.2 Excess consumption. A separate submeter or metering device shall be provided for any tenant within a new building or within an addition that is projected to consume more than 1,000 gal/day.

5.303.3 WATER CONSERVING PLUMBING FIXTURES AND FITTINGS. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:

5.303.3.1 Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush. Tank-type water closets shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Tank-Type toilets.

Note: The effective flush volume of dual flush toilets is defined as the composite, average flush volume of two reduced flushes and one full flush.

5.303.3.2 Urinals.
5.303.3.2.1 Wall-mounted Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush.

5.303.3.2.2 Floor-mounted Urinals. The effective flush volume of floor-mounted or other urinals shall not exceed 0.5 gallons per flush.

5.303.3.3 Showerheads. [BSC-CG]
5.303.3.3.1 Single showerhead. Showerheads shall have a maximum flow rate of not more than 1.8 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Showerheads.

5.303.3.3.2 Multiple showerheads serving one shower. When a shower is served by more than one showerhead, the combined flow rate of all the showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi, or the shower shall be designed to allow only one shower outlet to be in operation at a time.
Note: A hand-held shower shall be considered a showerhead.

5.303.3.4 Faucets and fountains.

5.303.3.4.1 Nonresidential Lavatory faucets. Lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi.

5.303.3.4.2 Kitchen faucets. Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.8 gallons per minute at 60 psi.

5.303.3.4.3 Wash fountains. Wash fountains shall have a maximum flow rate of not more than1.8 gallons per minute/20 [rim space (inches) at 60 psi].

5.303.3.4.4 Metering faucets. Metering faucets shall not deliver more than 0.20 gallons per cycle.

5.303.3.4.5 Metering faucets for wash fountains. Metering faucets for wash fountains shall have a maximum flow rate of not more than 0.20 gallons per minute/20 [rim space (inches) at 60 psi].

Note: Where complying faucets are unavailable, aerators or other means may be used to achieve reduction.

5.303.3.4.6 Pre-rinse spray value
When installed, shall meet the requirements in the *California Code of Regulations*, Title 20 (Appliance Efficiency Regulations), Section 1605.1 (h)(4) Table H-2, Section 1605.3 (h)(4)(A), and Section 1607 (d)(7), and shall be equipped with an integral automatic shutoff.

FOR REFERENCE ONLY: The following table and code section have been reprinted from the *California Code of Regulations*, Title 20 (Appliance Efficiency Regulations), Section 1605.1 (h)(4) and Section 1605.3 (h)(4)(A).

TABLE H-2

STANDARDS FOR COMMERCIAL PRE-RINSE SPRAY VALUES MANUFACTURED ON OR AFTER JANUARY 28, 2019

PRODUCT CLASS [spray force in ounce force (ozf)]	MAXIMUM FLOW RATE (gpm)
Product Class 1 (≤ 5.0 ozf)	1.00
Product Class 2 (> 5.0 ozf and ≤ 8.0 ozf)	1.20
Product Class 3 (> 8.0 ozf)	1.28

5.303.4 COMMERCIAL KITCHEN EQUIPMENT.

5.303.4.1 Food Waste Disposers. Disposers shall either modulate the use of water to no more than 1 gpm when the disposer is not in use (not actively grinding food waste/no-load) or shall automatically shut off after no more than 10 minutes of inactivity. Disposers shall use no more than 8 gpm of water.
Note: This code section does not affect local jurisdiction authority to prohibit or require disposer installation.

5.303.5 AREAS OF ADDITION OR ALTERATION. For those occupancies within the authority of the California Building Standards Commission as specified in Section 103, the provisions of Section 5.303.3 and 5.303.4 shall apply to new fixtures in additions or areas of alteration to the building.

5.303.6 STANDARDS FOR PLUMBING FIXTURES AND FITTINGS. Plumbing fixtures and fittings shall be installed in accordance with the *California Plumbing Code*, and shall meet the applicable standards referenced in Table 1701.1 of the *California Plumbing Code* and in Chapter 6 of this code.

SECTION 5.304 OUTDOOR WATER USE

5.304.1 OUTDOOR POTABLE WATER USE IN LANDSCAPE AREAS. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent.

Notes:
1. The Model Water Efficient Landscape Ordinance (MWELO) is located in the California Code of Regulations, Title 23, Chapter 2.7, Division 2.
2. MWELO and supporting documents, including a water budget calculator, are available at: https://www.water.ca.gov/.

5.304.6 OUTDOOR POTABLE WATER USE IN LANDSCAPE AREAS. For public schools and community colleges, landscape projects as described in Sections 5.304.6.1 and 5.304.6.2 shall comply with the California Department of Water Resources Model Water Efficient Landscape Ordinance (MWELO) commencing with Section 490 of Chapter 2.7, Division 2, Title 23, *California Code of Regulations*, except that the evapotranspiration adjustment factor (ETAF) shall be 0.65 with an additional water allowance for special landscape areas (SLA) of 0.35.

Exception: Any project with an aggregate landscape area of 2,500 square feet or less may comply with the prescriptive measures contained in Appendix D of the MWELO.

5.304.6.1 Newly constructed landscapes. New construction projects with an aggregate landscape area equal to or greater than 500 square feet.

5.304.6.2 Rehabilitated landscapes. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 1,200 square feet.

DIVISION 5.4 MATERIAL CONSERVATION AND RESOURCE EFFICIENCY

SECTION 5.401 GENERAL

5.401.1 SCOPE. The provisions of this chapter shall outline means of achieving material conservation and resource efficiency through protection of buildings from exterior moisture, construction waste diversion, employment of techniques to reduce pollution through recycling of materials, and building commissioning or testing and adjusting.

SECTION 5.402 DEFINITIONS

5.402.1 DEFINITIONS. The following terms are defined in Chapter 2 *(and are included here for reference)*

ADJUST. To regulate fluid flow rate and air patterns at the terminal equipment, such as to reduce fan speed or adjust a damper.

BALANCE. To proportion flows within the distribution system, including sub-mains, branches and terminals, according to design quantities.

BUILDING COMMISSIONING. A systematic quality assurance process that spans the entire design and construction process, including verifying and documenting that building systems and components are planned, designed, installed, tested, operated and maintained to meet the owner's project requirements.

ORGANIC WASTE. Food waste, green waste, landscape and pruning wste, nonhazardous wood waste, and food soiled paper waste that is mixed in with food waste.

TEST. A procedure to determine quantitative performance of a system or equipment

SECTION 5.407 WATER RESISTANCE AND MOISTURE MANAGEMENT

5.407.1 WEATHER PROTECTION. Provide a weather-resistant exterior wall and foundation envelope as required by California Building Code Section 1402.2 (Weather Protection), manufacturer's installation instructions or local ordinance, whichever is more stringent.

5.407.2 MOISTURE CONTROL. Employ moisture control measures by the following methods.

5.407.2.1 Sprinklers. Design and maintain landscape irrigation systems to prevent spray on structures.

5.407.2.2 Entries and openings. Design exterior entries and/or openings subject to foot traffic or wind-driven rain to prevent water intrusion into buildings as follows:

5.407.2.2.1 Exterior door protection. Primary exterior entries shall be covered to prevent water intrusion by using nonabsorbent floor and wall finishes within at least 2 feet around and perpendicular to such openings plus at least one of the following:

1. An installed awning at least 4 feet in depth.
2. The door is protected by a roof overhang at least 4 feet in depth.
3. The door is recessed at least 4 feet.
4. Other methods which provide equivalent protection.

5.407.2.2.2 Flashing. Install flashings integrated with a drainage plane.

SECTION 5.408 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING

5.408.1 CONSTRUCTION WASTE MANAGEMENT. Recycle and/or salvage for reuse a minimum of 65% of the non-hazardous construction and demolition waste in accordance with Section 5.408.1.1, 5.408.1.2 or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent.

5.408.1.1 Construction waste management plan. Where a local jurisdiction does not have a construction and demolition waste management ordinance, submit a construction waste management plan that:

1. Identifies the construction and demolition waste materials to be diverted from disposal by efficient usage, recycling, reuse on the project or salvage for future use or sale.
2. Determines if construction and demolition waste materials will be sorted on-site (source-separated) or bulk mixed (single stream).
3. Identifies diversion facilities where construction and demolition waste material collected will be taken.
4. Specifies that the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by both.

5.408.1.2 Waste Management Company. Utilize a waste management company that can provide verifiable documentation that the percentage of construction and demolition waste material diverted from the landfill complies with this section.

Note: The owner or contractor shall make the determination if the construction and demolition waste material will be diverted by a waste management company.

Exceptions to Sections 5.408.1.1 and 5.408.1.2:

1. Excavated soil and land-clearing debris.
2. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist.
3. Demolition waste meeting local ordinance or calculated in consideration of local recycling facilities and markets.

5.408.1.3 Waste stream reduction alternative. The combined weight of new construction disposal that does not exceed two pounds per square foot of building area may be deemed to meet the 65% minimum requirement as approved by the enforcing agency.

5.408.1.4 Documentation. Documentation shall be provided to the enforcing agency which demonstrates compliance with Sections 5.408.1.1, through 5.408.1.3. The waste management plan shall be updated as necessary and shall be accessible during construction for examination by the enforcing agency.

Notes:

1. Sample forms found in "A Guide to the California Green Building Standards Code (Nonresidential)" located www.dgs.ca.gov/BSC/Resources/Page-Content/Building-Standards-Commission-Resources-List-Folder/CALGreen may be used to assist in documenting compliance with the waste management plan.
2. Mixed construction and demolition debris processors can be located at the California Department of Resources Recycling and Recovery (CalRecycle).

5.408.2 UNIVERSAL WASTE. [A] Additions and alterations to a building or tenant space that meet the scoping provisions in Section 301.3 for nonresidential additions and alterations, shall require verification that Universal Waste items such as fluorescent lamps and ballast and mercury containing thermostats as well as other California prohibited Universal Waste materials are disposed of properly and are diverted from landfills. A list of prohibited Universal Waste materials shall be included in the construction documents.

Note: Refer to the Universal Waste Rule link at: http://www.dtsc.ca.gov/universalwaste/

5.408.3 EXCAVATED SOIL AND LAND CLEARING DEBRIS. 100 percent of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed.

Exception: Reuse, either on or off-site, of vegetation or soil contaminated by disease or pest infestation.

Notes:

1. If contamination by disease or pest infestation is suspected, contact the County Agricultural Commissioner and follow its direction for recycling or disposal of the material.
2. For a map of know pest and/or disease quarantine zones, consult with the California Department of Food and Agriculture. (www.cdfa.ca.gov)

SECTION 5.410 BUILDING MAINTENANCE AND OPERATIONS

5.410.1 RECYCLING BY OCCUPANTS. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive.

Exception: Rural jurisdictions that meet and apply for the exemption in Public Resources Code 42649.82 (a)(2)(A) et seq. shall also be exempt from the organic waste portion of this section.

5.410.1.1 Additions. All additions conducted within a 12-month period under single or multiple permits, resulting in an increase of 30% or more in floor area, shall provide recycling areas on site.

Exception: Additions within a tenant space resulting in less than a 30% increase in the tenant space floor area.

5.410.1.2 Sample ordinance. Space allocation for recycling areas shall comply with Chapter 18, Part 3, Division 30 of the *Public Resources Code*. Chapter 18 is known as the California Solid Waste Reuse and Recycling Access Act of 1991 (Act).

Note: A sample ordinance for use by local agencies may be found in Appendix A of the document at the CalRecycle's web site.

5.410.2 COMMISSIONING. [N] New buildings 10,000 square feet and over. For new buildings 10,000 square feet and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements. Commissioning shall be performed in accordance with this section by trained personnel with experience on projects of comparable size and complexity. For I-occupancies that are not regulated by OSHPD or for I-occupancies and L-occupancies that are not regulated y the California Energy Code Section 100.0 Scope, all requirements in Sections 5.410.2 through 5.410.2.6 shall apply.

Note: For energy-related systems under the scope (Section 100) of the California Energy Code, including heating, ventilation, air conditioning (HVAC) systems and controls, indoor lighting systems and controls, as well as water heating systems and controls, refer to California Energy Code Section 120.8 for commissioning requirements

Commissioning requirements shall include:

1. Owner's or Owner representative's project requirements.
2. Basis of design.
3. Commissioning measures shown in the construction documents.
4. Commissioning plan.
5. Functional performance testing.
6. Documentation and training.
7. Commissioning report.

Exceptions:

1. Unconditioned warehouses of any size.
2. Areas less than 10,000 square feet used for offices or other conditioned accessory spaces within unconditioned warehouses.
3. Tenant improvements less than 10,000 square feet as described in Section 303.1.1.
4. Open parking garages of any size, or open parking garage areas, of any size, within a structure.

Note: For the purposes of this section, unconditioned shall mean a building, area, or room which does not provide heating and or air conditioning.

Informational Notes:

1. IAS AC 476 is an accreditation criteria for organizations providing training and/or certification of commissioning personnel. AC 476 is available to the Authority Having Jurisdiction as a reference for qualifications of commissioning personnel. AC 476 des not certify individuals to conduct functional performance tests or to adjust and balance systems.
2. Functional performance testing for heating, ventilation, air conditioning systems and lighting controls must be performed in compliance with the *California Energy Code*.

5.410.2.1 Owner's or Owner Representative's Project Requirements (OPR). [N] The expectations and requirements of the building appropriate to its phase shall be documented before the design phase of the project begins. This documentation shall include the following:
1. Environmental and sustainability goals.
2. Building sustainable goals.
3. Indoor environmental quality requirements.
4. Project program, including facility functions and hours of operation, and need for after hours operation.
5. Equipment and systems expectations.
6. Building occupant and operation and maintenance (O&M) personnel expectations.

5.410.2.2 Basis of Design (BOD). [N] A written explanation of how the design of the building systems meets the OPR shall be completed at the design phase of the building project. The Basis of Design document shall cover the following systems:

1. Renewable energy systems.
2. Landscape irrigation systems.
3. Water reuse system.

5.410.2.3 Commissioning plan. [N] Prior to permit issuance a commissioning plan shall be completed to document how the project will be commissioned. The commissioning plan shall include the following:
1. General project information.
2. Commissioning goals.
3. Systems to be commissioned. Plans to test systems and components shall include:
   a. An explanation of the original design intent.
   b. Equipment and systems to be tested, including the extent of tests.
   c. Functions to be tested.
   d. Conditions under which the test shall be performed.
   e. Measurable criteria for acceptable performance.
4. Commissioning team information.
5. Commissioning process activities, schedules and responsibilities. Plans for the completion of commissioning shall be included.

5.410.2.4 Functional performance testing. [N] Functional performance tests shall demonstrate the correct installation and operation of each component, system and system-to-system interface in accordance with the approved plans and specifications. Functional performance testing reports shall contain information addressing each of the building components tested, the testing methods utilized, and include any readings and adjustments made.

5.410.2.5 Documentation and training. [N] A Systems Manual and Systems Operations Training are required, including Occupational Safety and Health Act (OSHA) requirements in *California Code of Regulations* (CCR), Title 8, Section 5142, and other related regulations.

5.410.2.5.1 Systems manual. [N] Documentation of the operational aspects of the building shall be completed within the systems manual and delivered to the building owner or representative. The systems manual shall include the following:
1. Site information, including facility description, history and current requirements.
2. Site contact information.
3. Basic operations and maintenance, including general site operating procedures, basic troubleshooting, recommended maintenance requirements, site events log.
4. Major systems.
5. Site equipment inventory and maintenance notes.
6. A copy of verifications required by the enforcing agency or this code.
7. Other resources and documentation, if applicable.

5.410.2.5.2 Systems operations training. [N] A program for training of the appropriate maintenance staff for each equipment type and/or system shall be developed and documented in the commissioning report and shall include the following:
1. System/equipment overview (what it is, what it does and with what other systems and/or equipment it interfaces).
2. Review and demonstration of servicing/preventive maintenance.
3. Review of the information in the Systems Manual.
4. Review of the record drawings on the system/equipment.

5.410.2.6 Commissioning report. [N] A report of commissioning process activities undertaken through the design and construction phases of the building project shall be completed and provided to the owner or representative.

5.410.4 TESTING AND ADJUSTING. New buildings less than 10,000 square feet. Testing and adjusting of systems shall be required for new buildings less than 10,000 square feet or new systems to serve an addition or alteration subject to Section 303.1.

5.410.4.2 (Reserved)

Note: For energy-related systems under the scope (Section 100) of the California Energy Code, including heating, ventilation, air conditioning (HVAC) systems and controls, indoor lighting system and controls, as well as water heating systems and controls, refer to California Energy Code Section 120.8 for commissioning requirements and Sections 120.5, 120.6, 130.4, and 140.9(b)3 for additional testing requirements of specific systems.

5.410.4.2 Systems. Develop a written plan of procedures for testing and adjusting systems. Systems to be included for testing and adjusting shall include at a minimum, as applicable to the project:

1. Renewable energy systems.
2. Landscape irrigation systems.
3. Water reuse systems.

5.410.4.3 Procedures. Perform testing and adjusting procedures in accordance with manufacturer's specifications and applicable standards on each system.

5.410.4.3.1 HVAC balancing. In addition to testing and adjusting, before a new space-conditioning system serving a building or space is operated for normal use, the system shall be balanced in accordance with the procedures defined by the Testing Adjusting and Balancing Bureau National Standards; the National Environmental Balancing Bureau Procedural Standards; Associated Air Balance Council National Standards or as approved by the enforcing agency.

5.410.4.4 Reporting. After completion of testing, adjusting and balancing, provide a final report of testing signed by the individual responsible for performing these services.

5.410.4.5 Operation and maintenance (O & M) manual. Provide the building owner or representative with detailed operating and maintenance instructions and copies of guaranties/warranties for each system. O & M instructions shall be consistent with OSHA requirements in CCR, Title 8, Section 5142, and other related regulations.

5.410.4.5.1 Inspections and reports. Include a copy of all inspection verifications and reports required by the enforcing agency.

DIVISION 5.5 ENVIRONMENTAL QUALITY

SECTION 5.501 GENERAL

5.501.1 SCOPE. The provisions of this chapter shall outline means of reducing the quantity of air contaminants that are odorous, irritating, and/or harmful to the comfort and well-being of a building's installers, occupants and neighbors.

SECTION 5.502 DEFINITIONS

5.502.1 DEFINITIONS. The following terms are defined in Chapter 2 *(and are included here for reference)*

ARTERIAL HIGHWAY. A general term denoting a highway primarily for through traffic usually on a continuous route.

A-WEIGHTED SOUND LEVEL (dBA). The sound pressure level in decibels as measured on a sound level meter using the internationally standardized A-weighting filter or as computed from sound spectral data to which A-weighting adjustments have been made.

1 BTU/HOUR. British thermal units per hour, also referred to as Btu. The amount of heat required to raise one pound of water one degree Fahrenheit per hour, a common measure of heat transfer rate. A ton of refrigeration is 12,000 Btu, the amount of heat required to melt a ton (2,000 pounds) of ice at 32^{o} Fahrenheit.

COMMUNITY NOISE EQUIVALENT LEVEL (CNEL). A metric similar to the day-night average sound level (Ldn), except that a 5 decibel adjustment is added to the equivalent continuous sound exposure level for evening hours (7pm to 10pm) in addition to the 10 dB nighttime adjustment used in the Ldn.

COMPOSITE WOOD PRODUCTS. Composite wood products include hardwood plywood, particleboard and medium density fiberboard. "Composite wood products" does not include hardboard, structural plywood, structural panels, structural composite lumber, oriented strand board, glued laminated timber, timber, prefabricated wood I–joists or finger–jointed lumber, all as specified in California Code of Regulations (CCR), Title 17, Section 93120.1(a).

Note: See CCR, Title 17, Section 93120.1.

DAY-NIGHT AVERAGE SOUND LEVEL (Ldn). The A-weighted equivalent continuous sound exposure level for a 24-hour period with a 10 dB adjustment added to sound levels occurring during nighttime hours (10p.m. to 7 a.m.).

DECIBEL (db). A measure on a logarithmic scale of the magnitude of a particular quantity (such as sound pressure, sound power, sound intensity) with respect to a reference quantity.

ELECTRIC VEHICLE (EV). An automotive-type vehicle for on-road use, such as passenger automobiles, buses, trucks, vans, neighborhood electric vehicles, electric motorcycles, and the like, primarily powered by an electric motor that draws current from a rechargeable storage battery, fuel cell, photovoltaic array, or other source of electric current. Plug-in hybrid electric vehicles (PHEV) are considered electric vehicles. For purposes of the *California Electrical Code*, off-road, self-propelled electric vehicles, such as industrial trucks, hoists, lifts, transports, golf carts, airline ground support equipment, tractors, boats, and the like, are not included.

ELECTRIC VEHICLE CHARGING STATION(S) (EVCS)). One or more spaces intended for charging electric vehicles.

ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE). The conductors, including the ungrounded, grounded, and equipment grounding conductors and the electric vehicle connectors, attachment plugs, and all other fittings, devices, power outlets, or apparatus installed specifically for the purpose of transferring energy between the premises wiring and the electric vehicle.

ENERGY EQUIVALENT (NOISE) LEVEL (Leq). The level of a steady noise which would have the same energy as the fluctuating noise level integrated over the time of period of interest.

EXPRESSWAY. An arterial highway for through traffic which may have partial control of access, but which may or may not be divided or have grade separations at intersections.

FREEWAY. A divided arterial highway with full control of access and with grade separations at intersections.

GLOBAL WARMING POTENTIAL (GWP). The radiative forcing impact of one mass-based unit of a given greenhouse gas relative to an equivalent unit of carbon dioxide over a given period of time. Carbon dioxide is the reference compound with a GWP of one.

GLOBAL WARMING POTENTIAL VALUE (GWP VALUE). A 100-year GWP value published by the Intergovernmental Panel on Climate Change (IPCC) in either its Second Assessment Report (SAR) (IPCC, 1995); or Its Fourth Assessment A-3 Report (AR4) (IPCC, 2007). The SAR GWP values are found in column "SAR (100-yr)" of Table 2.14.; the AR4 GWP values are found in column "100 yr" of Table 2.14.

HIGH-GWP REFRIGERANT. A compound used as a heat transfer fluid or gas that is: (a) a chlorofluorocarbon, a hdrochlorofluorocarbon, a hydrofluorocarbon, a perfluorocarbon, or any compound or blend of compounds, with a GWP value equal to or greater than 150, or (B) any ozone depleting substance as defined in Title 40 of the Code of Federal Regulations, Part 82, sec.82.3 (as amended March 10, 2009).

LONG RADIUS ELBOW. Pipe fitting installed between two lengths of pipe or tubing to allow a change of direction, with a radius 1.5 times the pipe diameter.

LOW-GWP REFRIGERANT. A compound used as a heat transfer fluid or gas that: (A) has a GWP value less than 150, and (B) is not an ozone depleting substance as defined in Title 40 of the Code of Federal Regulations, Part 82, sec.82.3 (as amended March 10, 2009).

MERV. Filter minimum efficiency reporting value, based on ASHRAE 52.2–1999.

MAXIMUM INCREMENTAL REACTIVITY (MIR). The maximum change in weight of ozone formed by adding a compound to the "Base REactive Organic Gas (ROG) Mixture" per weight of compound added, expressed to hundreths of a gram (g O^3/g ROC).

PRODUCT-WEIGHTED MIR (PWMIR). The sum of all weighted-MIR for all ingredients in a product subject to this article. The PWMIR is the total product reactivity expressed to hundredths of a gram of ozone formed per gram of product (excluding container and packaging).

PSIG. Pounds per square inch, guage.

REACTIVE ORGANIC COMPOUND (ROC). Any compound that has the potential, once emitted, to contribute to ozone formation in the troposphere.

SCHRADER ACCESS VALVES. Access fittings with a valve core installed.

SHORT RADIUS ELBOW. Pipe fitting installed between two lengths of pipe or tubing to allow a change of direction, with a radius 1.0 times the pipe diameter.

SUPERMARKET. For the purposes of Section 5.508.2, a supermarket is any retail food facility with 8,000 square feet or more conditioned area, and that utilizes either refrigerated display cases, or walk-in coolers or freezers connected to remote compressor units or condensing units.

VOC. A volatile organic compound broadly defined as a chemical compound based on carbon chains or rings with vapor pressures greater than 0.1 millimeters of mercury at room temperature. These compounds typically contain hydrogen and may contain oxygen, nitrogen and other elements. See CCR Title 17, Section 94508(a)

Note: Where specific regulations are cited from different agencies such as SCAQMD, ARB, etc., the VOC definition included in that specific regulation is the one that prevails for the specific measure in question.

SECTION 5.503 FIREPLACES

5.503.1 FIREPLACES. Install only a direct-vent sealed-combustion gas or sealed wood-burning fireplace, or a sealed woodstove or pellet stove, and refer to residential requirements in the California Energy Code, Title 24, Part 6, Subchapter 7, Section 150. Woodstoves, pellet stoves and fireplaces shall comply with applicable local ordinances.

5.503.1.1 Woodstoves. Woodstoves and pellet stoves shall comply with U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable, and shall have a permanent label indicating they are certified to meet the emission limits.

SECTION 5.504 POLLUTANT CONTROL

5.504.1 TEMPORARY VENTILATION. The permanent HVAC system shall only be used during construction if necessary to condition the building or areas of addition or alteration within the required temperature range for material and equipment installation. If the HVAC system is used during construction, use return air filters with a Minimum Efficiency Reporting Value (MERV) of 8, based on ASHRAE 52.2-1999, or an average efficiency of 30% based on ASHRAE 52.1-1992 Replace all filters immediately prior to occupancy, or, if the building is occupied during alteration, at the conclusion of construction.

5.504.3 Covering of duct openings and protection of mechanical equipment during construction. At the time of rough installation and during storage on the construction site until final startup of the heating, cooling and ventilation equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheetmetal or other methods acceptable to the enforcing agency to reduce the amount of dust, water and debris which may enter the system.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 01/23/2025

PBK

ARCHITECT PBK Architects, Inc.
FRESNO
7790 North Palm Avenue
Fresno, CA 93711
559-448-8400 P
559-448-8467 F
PBK.com

MADERA HIGH SCHOOL FIELDHOUSE
200 SOUTH "I" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL
LICENSED ARCHITECT MICHAEL R. SCHOEN No. C-29285 RENEWAL DATE FEB 28, 2027 STATE OF CALIFORNIA

PROJECT NUMBER	20-51
DATE	01/22/2025
DSA APPLICATION NO.	02-121624
FILE NO.	20-H3
PTN NO.	65243-153
DRAWN BY	Author

REVISIONS

#	DESCRIPTION	DATE

CONSTRUCTION DOCUMENTS

CALIFORNIA GREEN STANDARDS

AT.5

BIM 360://Madera USD_20-51_MHS Field House/20-51_MHS FIELDHOUSE_V21.rvt
1/20/2025 6:37:07 PM

2022 CALIFORNIA GREEN BUILDING STANDARDS CODE

NONRESIDENTIAL MANDATORY MEASURES,

Y = YES
N/A = NOT APPLICABLE
RESPON. PARTY = RESPONSIBLE PARTY (ie: ARCHITECT, ENGINEER, OWNER, CONTRACTOR, INSPECTOR ETC.)

Y	N/A	RESPON. PARTY
☑	☐	

5.504.4 FINISH MATERIAL POLLUTANT CONTROL. Finish materials shall comply with Sections 5.504.4.1 through 5.504.4.6.

5.504.4.1 Adhesives, sealants and caulks. Adhesives, sealants, and caulks used on the project shall meet the requirements of the following standards:

1. Adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers and caulks shall comply with local or regional air pollution control or air quality management district rules where applicable, or SCAQMD Rule 1168 VOC limits, as shown in Tables 5.504.4.1 and 5.504.4.2. Such products also shall comply with the Rule 1168 prohibition on the use of certain toxic compounds (chloroform, ethylene dichloride, methylene chloride, perchloroethylene and trichloroethylene), except for aerosol products as specified in subsection 2, below.

2. Aerosol adhesives, and smaller unit sizes of adhesives, and sealant or caulking compounds (in units of product, less packaging, which do not weigh more than one pound and do not consist of more than 16 fluid ounces) shall comply with statewide VOC standards and other requirements, including prohibitions on use of certain toxic compounds, of *California Code of Regulations*, Title 17, commencing with Section 94507.

TABLE 5.504.4.1 - ADHESIVE VOC LIMIT[1,2]

Less Water and Less Exempt Compounds in Grams per Liter

ARCHITECTURAL APPLICATIONS	CURRENT VOC LIMIT
INDOOR CARPET ADHESIVES	50
CARPET PAD ADHESIVES	50
OUTDOOR CARPET ADHESIVES	150
WOOD FLOORING ADHESIVES	100
RUBBER FLOOR ADHESIVES	60
SUBFLOOR ADHESIVES	50
CERAMIC TILE ADHESIVES	65
VCT & ASPHALT TILE ADHESIVES	50
DRYWALL & PANEL ADHESIVES	50
COVE BASE ADHESIVES	50
MULTIPURPOSE CONSTRUCTION ADHESIVES	70
STRUCTURAL GLAZING ADHESIVES	100
SINGLE-PLY ROOF MEMBRANE ADHESIVES	250
OTHER ADHESIVES NOT SPECIFICALLY LISTED	50
SPECIALTY APPLICATIONS	
PVC WELDING	510
CPVC WELDING	490
ABS WELDING	325
PLASTIC CEMENT WELDING	250
ADHESIVE PRIMER FOR PLASTIC	550
CONTACT ADHESIVE	80
SPECIAL PURPOSE CONTACT ADHESIVE	250
STRUCTURAL WOOD MEMBER ADHESIVE	140
TOP & TRIM ADHESIVE	250
SUBSTRATE SPECIFIC APPLICATIONS	
METAL TO METAL	30
PLASTIC FOAMS	50
POROUS MATERIAL (EXCEPT WOOD)	50
WOOD	30
FIBERGLASS	80

1. IF AN ADHESIVE IS USED TO BOND DISSIMILAR SUBSTRATES TOGETHER, THE ADHESIVE WITH THE HIGHEST VOC CONTENT SHALL BE ALLOWED.

2. FOR ADDITIONAL INFORMATION REGARDING METHODS TO MEASURE THE VOC CONTENT SPECIFIED IN THIS TABLE, SEE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 1168, www.arb.ca.gov/DRDB/SC/CURHTML/R1168.PDF

TABLE 5.504.4.2 - SEALANT VOC LIMIT

Less Water and Less Exempt Compounds in Grams per Liter

SEALANTS	CURRENT VOC LIMIT
ARCHITECTURAL	250
MARINE DECK	760
NONMEMBRANE ROOF	300
ROADWAY	250
SINGLE-PLY ROOF MEMBRANE	450
OTHER	420
SEALANT PRIMERS	
ARCHITECTURAL	
NONPOROUS	250
POROUS	775
MODIFIED BITUMINOUS	500
MARINE DECK	760
OTHER	750

NOTE: FOR ADDITIONAL INFORMATION REGARDING METHODS TO MEASURE THE VOC CONTENT SPECIFIED IN THESE TABLES, SEE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 1168.

5.504.4.3 Paints and coatings. Architectural paints and coatings shall comply with VOC limits in Table 1 of the ARB Architectural Coatings Suggested Control Measure, as shown in Table 5.504.4.3, unless more stringent local limits apply. The VOC content limit for coatings that do not meet the definitions for the specialty coatings categories listed in Table 5.504.4.3 shall be determined by classifying the coating as a Flat, Nonflat or Nonflat-High Gloss coating, based on its gloss, as defined in Subsections 4.21, 4.36 and 4.37 of the 2007 California Air Resources Board Suggested Control Measure, and the corresponding Flat, Nonflat or Nonflat-High Gloss VOC limit in Table 5.504.4.3 shall apply.

5.504.4.3.1 Aerosol Paints and coatings. Aerosol paints and coatings shall meet the PWMIR Limits for ROC in Section 94522(a)(3) and other requirements, including prohibitions on use of certain toxic compounds and ozone depleting substances, in Sections 94522(c)(2) and (d)(2) of *California Code of Regulations*, Title 17, commencing with Section 94520; and in areas under the jurisdiction of the Bay Area Air Quality Management District additionally comply with the percent VOC by weight of product limits of Regulation 8 Rule 49.

Y	N/A	RESPON. PARTY

TABLE 5.504.4.3 - CONT.

GRAMS OF VOC PER LITER OF COATING, LESS WATER & LESS EXEMPT COMPOUNDS

COATING CATEGORY	CURRENT VOC LIMIT
SPECIALTY COATINGS	
ALUMINUM ROOF COATINGS	400
BASEMENT SPECIALTY COATINGS	400
BITUMINOUS ROOF COATINGS	50
BITUMINOUS ROOF PRIMERS	350
BOND BREAKERS	350
CONCRETE CURING COMPOUNDS	350
CONCRETE/MASONRY SEALERS	100
DRIVEWAY SEALERS	50
DRY FOG COATINGS	150
FAUX FINISHING COATINGS	350
FIRE RESISTIVE COATINGS	350
FLOOR COATINGS	100
FORM-RELEASE COMPOUNDS	250
GRAPHIC ARTS COATINGS (SIGN PAINTS)	500
HIGH-TEMPERATURE COATINGS	420
INDUSTRIAL MAINTENANCE COATINGS	250
LOW SOLIDS COATINGS[1]	120
MAGNESITE CEMENT COATINGS	450
MASTIC TEXTURE COATINGS	100
METALLIC PIGMENTED COATINGS	500
MULTICOLOR COATINGS	250
PRETREATMENT WASH PRIMERS	420
PRIMERS, SEALERS, & UNDERCOATERS	100
REACTIVE PENETRATING SEALERS	350
RECYCLED COATINGS	250
ROOF COATINGS	50
RUST PREVENTATIVE COATINGS	250
SHELLACS:	
CLEAR	730
OPAQUE	550
SPECIALTY PRIMERS, SEALERS & UNDERCOATERS	100
STAINS	250
STONE CONSOLIDANTS	450
SWIMMING POOL COATINGS	340
TRAFFIC MARKING COATINGS	100
TUB & TILE REFINISH COATINGS	420
WATERPROOFING MEMBRANES	250
WOOD COATINGS	275
WOOD PRESERVATIVES	350
ZINC-RICH PRIMERS	340

1. GRAMS OF VOC PER LITER OF COATING, INCLUDING WATER & EXEMPT COMPOUNDS

2. THE SPECIFIED LIMITS REMAIN IN EFFECT UNLESS REVISED LIMITS ARE LISTED IN SUBSEQUENT COLUMNS IN THE TABLE.

3. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIFORNIA AIR RESOURCES BOARD, ARCHITECTURAL COATINGS SUGGESTED CONTROL MEASURE, FEB. 1, 2008. MORE INFORMATION IS AVAILABLE FROM THE AIR RESOURCES BOARD.

5.504.4.3.2 Verification. Verification of compliance with this section shall be provided at the request of the enforcing agency. Documentation may include, but is not limited to, the following:

1. Manufacturer's product specification
2. Field verification of on-site product containers

5.504.4.4 Carpet Systems.
All carpet installed in the building interior shall meet the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers." Version 1.2, January 2017 (Emission testing method for California Specifications 01350).

See California Department of Public Health's website for certification programs and testing labs.
https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx#material

5.504.4.4.1 Carpet cushion. All carpet cushion installed in the building interior shall meet the requirements of the California Department of Public Health,"Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers,"Version 1.2, January 2017 (Emission testing method for California Specifications 01350).

See California Department of Public Health's website for certification programs and testing labs.
https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx#material

5.504.4.4.2 Carpet adhesive. All carpet adhesive shall meet the requirements of Table 5.504.4.1.

5.504.4.5 Composite wood products. Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the buildings shall meet the requirements for formaldehyde as specified in ARB's Air Toxics Control Measure (ATCM) for Composite Wood (17 CCR 93120 et seq.). Those materials not exempted under the ATCM must meet the specified emission limits, as shown in Table 5.504.4.5.

5.504.4.5.3 Documentation. Verification of compliance with this section shall be provided as requested by the enforcing agency. Documentation shall include at least one of the following:

1. Product certifications and specifications.
2. Chain of custody certifications.
3. Product labeled and invoiced as meeting the Composite Wood Products regulation (see CCR, Title 17, Section 93120, et seq.).
4. Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered Wood Association, the Australian AS/NZS 2269 or European 636 3S standards.
5. Other methods acceptable to the enforcing agency.

TABLE 5.504.4.5 - FORMALDEHYDE LIMITS[1]

MAXIMUM FORMALDEHYDE EMISSIONS IN PARTS PER MILLION

PRODUCT	CURRENT LIMIT
HARDWOOD PLYWOOD VENEER CORE	0.05
HARDWOOD PLYWOOD COMPOSITE CORE	0.05
PARTICLE BOARD	0.09
MEDIUM DENSITY FIBERBOARD	0.11
THIN MEDIUM DENSITY FIBERBOARD[2]	0.13

1. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIFORNIA AIR RESOURCES BOARD, AIR TOXICS CONTROL MEASURE FOR COMPOSITE WOOD AS TESTED IN ACCORDANCE WITH ASTM E 1333. FOR ADDITIONAL INFORMATION, SEE CALIFORNIA CODE OF REGULATIONS, TITLE 17, SECTIONS 93120 THROUGH 93120.12.

2. THIN MEDIUM DENSITY FIBERBOARD HAS A MAXIMUM THICKNESS OF 5/16 INCHES (8 MM).

Y	N/A	RESPON. PARTY
☑	☐	
☑	☐	
☑	☐	
☑	☐	
☑	☐	
☑	☐	
☑	☐	

5.504.4.6 Resilient flooring systems. Where resilient flooring is installed, at least 80 percent of floor area receiving resilient flooring shall meet the requirements of the California Department of Public Health,"Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.2, January 2017 (Emission testing method for California Specifications 01350)

See California Department of Public Health's website for certification programs and testing labs.
https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx#material

5.504.4.6.1 Verification of compliance. Documentation shall be provided verifying that resilient flooring materials meet the pollutant emission limits.

5.504.4.7 Thermal insulation
Comply with the requirements of the California Department of Public Health, "Standard Method of the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers, "Version 1.2, January 1.2, January 2017 (Emission testing method for California Specification 01350).
See California Department of Public Health's website for certification programs and testing labs.
https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx#material

5.504.4.7.1 Verification of compliance.
Documentation shall be provided verifying that thermal insulation materials meet the pollutant emission limits.

5.504.4.8 Acoustical celling and wall panels.
Comply with the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers, " Version 1.2, January 2017 (Emission testing method for California Specification 01350).
See California Department of Public Health's website for certification programs and testing labs.

5.504.4.8.1 Verification of compliance. Documentation shall be provided verifying that acoustical finish materials meet the pollutant emission limits.

5.504.5.3 Filters. In mechanically ventilated buildings, provide regularly occupied areas of the building with air filtration media for outside and return air that provides at least a Minimum Efficiency Reporting Value (MERV) of 13. MERV 13 filters shall be installed prior to occupancy, and recommendations for maintenance with filters of the same value shall be included in the operation and maintenance manual.

Exceptions: Existing mechanical equipment.

5.504.5.3.1 Labeling. Installed filters shall be clearly labeled by the manufacturer indicating the MERV rating.

5.504.7 ENVIRONMENTAL TOBACCO SMOKE (ETS) CONTROL. Where outdoor areas are provided for smoking, prohibit smoking within 25 feet of building entries, outdoor air intakes and operable windows and within the building as already prohibited by other laws or regulations; or as enforced by ordinances, regulations or policies of any city, county, city and county, California Community College, campus of the California State University, or campus of the University of California, whichever are more stringent. When ordinances, regulations or policies are not in place, post signage to inform building occupants of the prohibitions.

SECTION 5.505 INDOOR MOISTURE CONTROL

5.505.1 INDOOR MOISTURE CONTROL Buildings shall meet or exceed the provisions of California Building Code, CCR, Title 24, Part 2, Sections 1202 (Ventilation) and Chapter 14 (Exterior Walls). For additional measures, see Section 5.407.2 of this code.

SECTION 5.506 INDOOR AIR QUALITY

5.506.1 OUTSIDE AIR DELIVERY. For mechanically or naturally ventilated spaces in buildings, meet the minimum requirements of Section 120.1 (Requirements For Ventilation) of the *California Energy Code*, or the applicable local code, whichever is more stringent, and Division 1, Chapter 4 of CCR, Title 8.

5.506.2 CARBON DIOXIDE (CO_2) MONITORING. For buildings or additions equipped with demand control ventilation, CO_2 sensors and ventilation controls shall be specified and installed in accordance with the requirements of the California Energy Code, Section 120(c)(4).

5.506.3 Carbon dioxide (CO2) monitoring in classrooms.
(DSA-SS) Each public K-12 school classroom, as listed in Table 120.1-A of the *California Energy Code,* shall be equipped with a carbon dioxide monitor or sensor that meets the following requirements:

1. The monitor or sensor shall be permanently affixed in a tamper-proof manner in each classroom between 3 and 6 feet (914 mm and 1829 mm) above the floor and at least 5 feet (1524 mm) away from door and operable windows.
2. When the monitor or sensor is not integral to an Energy Management Control System (EMCS), the monitor or sensor shall display the carbon dioxide readings on the device. When the sensor is integral to an EMCS, the carbon dioxide readings shall be available to and regularly monitored by facility personnel.
3. A monitor shall provide notification through a visual indicator on the monitor when the carbon dioxide levels in the classroom have exceeded 1,100ppm. A sensor integral to an EMCS shall provide notification to facility personnel through a visual and/or audible indicator when the carbon dioxide levels in the classroom have exceeded 1,100ppm.
4. The monitor or sensor shall measure carbon dioxide levels at minimum 15- minute intervals and shall maintain a record of previous carbon dioxide measurements of not less than 30 days duration.
5. The monitor or sensor used to measure carbon dioxide levels shall have the capacity to measure carbon dioxide levels with a range of 400ppm to 2000ppm or greater.
6. The monitor or sensor shall be certified by the manufacturer to be accurate within 75ppm at 1,000ppm carbon dioxide concentration and shall be certified by the manufacturer to require calibration no more frequently than once every 5 years.

SECTION 5.507 ENVIRONMENTAL COMFORT

5.507.4 ACOUSTICAL CONTROL. Employ building assemblies and components with Sound Transmission Class (STC) values determined in accordance with ASTM E 90 and ASTM E 413, or Outdoor-Indoor Sound Transmission Class (OITC) determined in accordance with ASTM E 1332, using either the prescriptive or performance method in Section 5.507.4.1 or 5.507.4.2.

Exception: Buildings with few or no occupants or where occupants are not likely to be affected by exterior noise, as determined by the enforcement authority, such as factories, stadiums, storage, enclosed parking structures and utility buildings.

Exception: [DSA-SS] For public schools and community colleges, the requirements of this section and all subsections apply only to new construction.

5.507.4.1 Exterior noise transmission, prescriptive method. Wall and roof-ceiling assemblies exposed to the noise source making up the building or addition envelope or altered envelope shall meet a composite STC rating of at least 50 or a composite OITC rating of no less than 40, with exterior windows of a minimum STC of 40 or OITC of 30 in the following locations:

1. Within the 65 CNEL noise contour of an airport.

   Exceptions:

   1. L_{dn} or CNEL for military airports shall be determined by the facility Air Installation Compatible Land Use Zone (AICUZ) plan.
   2. L_{dn} or CNEL for other airports and heliports for which a land use plan has not been developed shall be determined by the local general plan noise element.

2. Within the 65 CNEL or L_{dn} noise contour of a freeway or expressway, railroad, industrial source or fixed-guideway source as determined by the Noise Element of the General Plan.

5.507.4.1.1. Noise exposure where noise contours are not readily available. Buildings exposed to a noise level of 65 dB L_{eq} - 1-hr during any hour of operation shall have building, addition or alteration exterior wall and roof-ceiling assemblies exposed to the noise source meeting a composite STC rating of at least 45 (or OITC 35), with exterior windows of a minimum STC of 40 (or OITC 30).

5.507.4.2 Performance Method. For buildings located as defined in Section 5.507.4.1 or 5.507.4.1.1, wall and roof-ceiling assemblies exposed to the noise source making up the building or addition envelope or altered envelope shall be constructed to provide an interior noise environment attributable to exterior sources that does not exceed an hourly equivalent noise level (Leq-1Hr) of 50 dBA in occupied areas during any hour of operation.

5.507.4.2.1 Site Features. Exterior features such as sound walls or earth berms may be utilized as appropriate to the building, addition or alteration project to mitigate sound migration to the interior.

5.507.4.2.2 Documentation of Compliance. An acoustical analysis documenting complying interior sound levels shall be prepared by personnel approved by the architect or engineer of record.

5.507.4.3 Interior sound transmission. Wall and floor-ceiling assemblies separating tenant spaces and tenant spaces and public places shall have an STC of at least 40.

Note: Examples of assemblies and their various STC ratings may be found at the California Office of Noise Control: www.toolbase.org/PDF/CaseStudies/stc_icc_ratings.pdf.

SECTION 5.508 OUTDOOR AIR QUALITY

5.508.1 Ozone depletion and greenhouse gas reductions. Installations of HVAC, refrigeration and fire suppression equipment shall comply with Sections 5.508.1.1 and 5.508.1.2.

5.508.1.1 Chlorofluorocarbons (CFCs). Install HVAC, refrigeration and fire suppression equipment that do not contain CFCs.

5.508.1.2 Halons. Install HVAC, refrigeration and fire suppression equipment that do not contain Halons.

Y	N/A	RESPON. PARTY
☐	☑	

5.508.2 Supermarket refrigerant leak reduction. New commercial refrigeration systems shall comply with the provisions of this section when installed in retail food stores 8,000 square feet or more conditioned area, and that utilize either refrigerated display cases, or walk-in coolers or freezers connected to remote compressor units or condensing units. The leak reduction measures apply to refrigeration systems containing high-global-warming potential (high-GWP) refrigerants with a GWP of 150 or greater. New refrigeration systems include both new facilities and the replacement of existing refrigeration systems in existing facilities.

Exception: Refrigeration systems containing low-global warming potential (low-GWP) refrigerant with a GWP value less than 150 are not subject to this section. Low-GWP refrigerants are nonozone-depleting refrigerants that include ammonia, carbon dioxide (CO_2), and potentially other refrigerants.

5.508.2.1 Refrigerant piping. Piping compliant with the California Mechanical Code shall be installed to be accessible for leak protection and repairs. Piping runs using threaded pipe, copper tubing with an outside diameter (OD) less than 1/4 inch, flared tubing connections and short radius elbows shall not be used in refrigerant systems except as noted below.

5.508.2.1.1 Threaded pipe. Threaded connections are permitted at the compressor rack.

5.508.2.1.2 Copper pipe. Copper tubing with an OD less than 1/4 inch may be used in systems with a refrigerant charge of 5 pounds or less.

5.508.2.1.2.1 Anchorage. One-fouth-inch OD tubing shall be securely clamped to a rigid base to keep vibration levels below 8 mils.

5.508.2.1.3 Flared tubing connections. Double-flared tubing connections may be used for pressure controls, valve pilot lines and oil.

Exception: Single-flared tubing connections may be used with a multiring seal coated with industrial sealant suitable for use with refrigerants and tightened in accordance with manufacturer's recommendations.

5.508.2.1.4 Elbows. Short radius elbows are only permitted where space limitations prohibit use of long radius elbows.

5.508.2.2 Valves. Valves Valves and fittings shall comply with the *California Mechanical Code* and as follows.

5.508.2.2.1 Pressure relief valves. For vessels containing high-GWP refrigerant, a rupture disc shall be installed between the outlet of the vessel and the inlet of the pressure relief valve.

5.508.2.2.1.1 Pressure detection. A pressure gauge, pressure transducer or other device shall be installed in the space between the rupture disc and the relief valve inlet to indicate a disc rupture or discharge of the relief valve.

5.508.2.2.2 Access valves. Only Schrader access valves with a brass or steel body are permitted for use.

5.508.2.2.2.1 Valve caps. For systems with a refrigerant charge of 5 pounds or more, valve caps shall be brass or steel and not plastic.

5.508.2.2.2.2 Seal caps. If designed for it, the cap shall have a neoprene O-ring in place.

5.508.2.2.2.2.1 Chain tethers. Chain tethers to fit ovr the stem are required for valves designed to have seal caps.

Exception: Valves with seal caps that are not removed from the valve during stem operation.

5.508.2.3 Refrigerated service cases. Refrigerated service cases holding food products containing vinegar and salt shall have evaporator coils of corrosion-resistant material, such as stainless steel; or be coated to prevent corrosion from these substances.

5.508.2.3.1 Coil coating. Consideration shall be given to the heat transfer efficiency of coil coating to maximize energy efficiency.

5.508.2.4 Refrigerant receivers. Refrigerant receivers with capacities greater than 200 pounds shall be fitted with a device tha indicates the level of refrigerant in the receiver.

5.508.2.5 Pressure testing. The system shall be pressure tested during installation prior to evacuation and charging.

5.508.2.5.1 Minimum pressure. The system shall be charged with regulated dry nitrogen and appropriate tracer gas to bring system pressure up to 300 psig minimum.

5.508.2.5.2 Leaks. Check the system for leaks, repair any leaks, and retest for pressure using the same gauge.

5.508.2.5.3 Allowable pressure change. The system shall stand, unaltered, for 24 hours with no more than a +/- one pound pressure change from 300 psig, measured with the same gauge.

5.508.2.6 Evacuation. The system shall be evacuated after pressure testing and prior to charging.

5.508.2.6.1 First vacuum. Pull a system vacuum down to at least 1000 microns (+/- 50 microns), and hold for 30 minutes.

5.508.2.6.2 Second vacuum. Pull a second system vacuum to a minimum of 500 microns and hold for 30 minutes.

5.508.2.6.3 Third vacuum. Pull a third vacuum down to a minimum of 300 microns, and hold for 24 hours with a maximum drift of 100 microns over a 24-hour period.

CHAPTER 7
INSTALLER & SPECIAL INSPECTOR QUALIFICATIONS

702 QUALIFICATIONS

702.1 INSTALLER TRAINING. HVAC system installers shall be trained and certified in the proper installation of HVAC systems including ducts and equipment by a nationally or regionally recognized training or certification program. Uncertified persons may perform HVAC installations when under the direct supervision and responsibility of a person trained and certified to install HVAC systems or contractor licensed to install HVAC systems. Examples of acceptable HVAC training and certification programs include but are not limited to the following:

1. State certified apprenticeship programs.
2. Public utility training programs.
3. Training programs sponsored by trade, labor or statewide energy consulting or verification organizations.
4. Programs sponsored by manufacturing organizations.
5. Other programs acceptable to the enforcing agency.

702.2 SPECIAL INSPECTION [HCD]. When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition to other certifications or qualifications acceptable to the enforcing agency, the following certifications or education may be considered by the enforcing agency when evaluating the qualifications of a special inspector:

1. Certification by a national or regional green building program or standard publisher.
2. Certification by a statewide energy consulting or verification organization, such as HERS raters, building performance contractors, and home energy auditors.
3. Successful completion of a third party apprentice training program in the appropriate trade.
4. Other programs acceptable to the enforcing agency.

Notes:

1. Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code.
2. HERS raters are special inspectors certified by the California Energy Commission (CEC) to rate homes in California according to the Home Energy Rating System (HERS).

[BSC-CG] When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition, the special inspector shall have a certification from a recognized state, national or international association, as determined by the local agency. The area of certification shall be closely related to the primary job function, as determined by the local agency.

Note: Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code.

703 VERIFICATIONS

703.1 DOCUMENTATION. Documentation used to show compliance with this code shall include but is not limited to, construction documents, plans, specifications, builder or installer certification, inspection reports, or other methods acceptable to the enforcing agency which demonstrate substantial conformance. When specific documentation or special inspection is necessary to verify compliance, that method of compliance will be specified in the appropriate section or identified applicable checklist.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 01/23/2025

PBK

ARCHITECT PBK Architects, Inc.
FRESNO
7790 North Palm Avenue
Fresno, CA 93711
559-448-8400 P
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MADERA HIGH SCHOOL FIELDHOUSE

200 SOUTH "I" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

MADERA UNIFIED SCHOOL DISTRICT 1966

PROFESSIONAL SEAL

LICENSED ARCHITECT
MICHAEL R. SCHOEN
No. 32284
RENEWAL DATE
FEB 28, 2027
STATE OF CALIFORNIA

PROJECT NUMBER	20-51
DATE	01/22/2025
DSA APPLICATION NO.	02-121624
FILE NO.	20-H3
PTN NO.	65243-153
DRAWN BY	Author

REVISIONS

#	DESCRIPTION	DATE

CONSTRUCTION DOCUMENTS

CALIFORNIA GREEN STANDARDS

AT.6

BIM 360://Madera USD_20-51_MHS Field House/20-51_MHS FIELDHOUSE_V21.rvt
1/20/2025 6:37:09 PM

GENERAL TOPOGRAPHIC SURVEY LEGEND:

(NOT ALL SYMBOLS SHOWN APPEAR ON THE PLANS)

AB	ABUTMENT
AC	ASPHALTIC CONCRETE
ACE	ASPHALTIC CONCRETE EDGE
AD	ASPHALTIC CONCRETE DIKE
AWT	ALL-WEATHER TRACK
BD	BRIDGE DECK
BFC	BOTTOM FACE OF CURB
BGST	STEPS
BGTR	TOP OF ROOF
BGV	BUILDING VENTS
BOD	BOTTOM OF DITCH
BR	BARRICADE
BRK	BRICK
BW	BARRIER WALL
CB	CATCH BASIN
CDA	CONCRETE DRIVE APPROACH
CE	CONCRETE EDGE
CMP	CORRUGATED METAL PIPE
CON	CONCRETE
COTH	COMMUNICATION TRENCH
CR	CROWN OF ROAD
CRQ	QUARTER CROWN
CS	CONCRETE SLAB
CULV	CULVERT
CW	CONCRETE WALL
DD	DOWN DRAIN
DFL	DITCH FLOWLINE
DWY	DRIVEWAY
ECTH	ELECTRICAL TRENCH
EDR	EDGE OF DIRT ROAD
EGR	EDGE OF GRAVEL ROAD
EOD	EDGE OF OILED DIRT
EP	EDGE OF PAVEMENT
ES	EDGE OF SHOULDER
ET	EDGE OF TRAVELED WAY
FF	FINISH FLOOR
FOTH	FIBER OPTIC TRENCH
GB	GRADE BREAK
GFL	GUTTER FLOWLINE
GR	GRATE
GRA	GRAVEL SPOT SHOT
GRAE	EDGE OF GRAVEL
GSTH	GAS TRENCH
HDR	WOOD HEADER
HW	HEAD WALL
KR	K-RAIL
LIP	LIP OF GUTTER
LSDE	DECOMPOSED GRANITE EDGE
LSDG	DECOMPOSED GRANITE
LSGC	GROUND COVER
LSGF	GOLF COURSE FAIRWAY
LSGG	GOLF COURSE GREEN
LSGT	GOLF COURSE TEE
LSSA	SAND
LSSP	SLOPE PROTECTION
LSST	GOLF COURSE SAND TRAP
NPTH	NON-POTABLE TRENCH
PA	PATIO
PGTH	PROPANE GAS TRENCH
POS	POINT ON SLOPE
RCP	REINFORCED CONCRETE
RIEL	RIPARIAN EDGE OF LAKE
RIEP	RIPARIAN EDGE OF POND
RIES	RIPARIAN EDGE OF STREAM
RIEW	RIPARIAN EDGE OF WETLAND
RIFL	RIPARIAN FLOWLINE
RIMC	RIPARIAN MISC.
RIP	RIP-RAP SLOPE PROTECTION
RK	ROCK
RW	RETAINING WALL
SB	SPEED BUMP
SDCD	STORM DRAIN CROSS DRAIN
SDFL	STORM DRAIN FLOWLINE
SDGR	STORM DRAIN GRATE
SDMG	STORM DRAIN MANHOLE W/ GRATE
SSFL	SEWER FLOWLINE
SDTH	STORM DRAIN TRENCH
SSGT	STORM DRAIN GREASE TRAP
SSST	SEWER TANK (SEPTIC)
SSTH	SEWER TRENCH
SWK	SIDEWALK
SWL	SWALE
T	TURF
TBC	TOP BACK OF CURB
TBW	TOP BACK OF WALK
TF	TOP OF FOOTING
TFC	TOP FACE OF CURB
TFW	TOP FACE OF WALK
TLTH	TELEPHONE TRENCH
TOB	TOP OF BANK
TOE	TOE OF SLOPE
TOP	TOP OF SLOPE
TROD	TRUNCATED DOMES
TVTH	TV TRENCH
TW	TOP OF WALL
UTH	UNIDENTIFIED TRENCH/SCAR LINE
VGFL	VALLEY GUTTER FLOWLINE
VGR	VALLEY GUTTER
WALBA	BARRIER WALL
WALBW	BLOCK WALL
WALCW	CONCRETE WALL
WALHW	HEAD WALL
WALRW	RETAINING WALL
WALWW	WING WALL
WCR	WHEELCHAIR RAMP
WLPD	WELL PAD
WTTH	WATER TRENCH
WW	WING WALL
(335.21)	EXISTING ELEVATION
AL	ACCENT LIGHT
ALV	ALFALFA VALVE
	BACKFLOW ASSEMBLY
	BASKETBALL GOAL
BOV	BLOW-OFF VALVE
	BM=BENCHMARK; OR SBM=SITE BENCHMARK
BO	BOLLARD
CO	CLEANOUT
COPB	COMMUNICATION PULLBOX
COVA	COMMUNICATION VAULT
312.55	SURVEY CONTROL MONUMENT
DF	DRINKING FOUNTAIN
DS	DOORSTOP
DRW	DRYWELL
EG	ELECTRICAL GROUND
ELC	ELECTRICAL CONDUIT
EM	ELECTRICAL METER
EPB	ELECTRICAL PULLBOX
EV	ELECTRICAL VAULT LID
ETS	GAS ELECTRONIC TESTING STATION
FDC	FIRE DEPARTMENT CONNECTION
FH	FIRE HYDRANT
FP	FENCE POST
FLP	FLAG POLE
GAS	GAS LINE; DIAMETER AS SHOWN
GR	GAS REGULATOR
GAV	IRRIGATION GATE VALVE
GM	GAS METER
GOP	GOAL POST
GP	GUY POLE
GS	GATE STOP
GSR	GAS RISER
GV	GAS VALVE
GRD	GROUNDING ROD
GUY	GUY WIRE
HB	HOSE BIBB
HR	HANDRAIL
ICB	IRRIGATION CONTROLLER
	IRRIGATION DISTRICT MANHOLE
IRV	IRRIGATION REMOTE CONTROL VALVE
ISB	IRRIGATION SPLICE BOX
IHB	IN-GROUND HOSE BIBB
IP	IRON PIPE
JP	JOINT UTILITY POLE
LP	LIGHT POLE
MB	MAIL BOX
MH	MANHOLE
MV	MANUAL IRRIGATION VALVE
PB	PULLBOX
PIV	POST INDICATOR VALVE
	UTILITY STUB
	PARKING METER
POST	POST; DIAMETER AS SHOWN
PP	POWER POLE
PVC	PVC PIPE; DIAMETER AS SHOWN
QC	QUICK COUPLER VALVE
RD	ROOF DRAIN
RDU	ROOF DRAIN UNDERGROUND
RS	ROOF SUPPORT
	STADIUM LIGHT POLE
	STORM DRAIN MANHOLE
	SIGN
PPB	SIGNAL LIGHT PUSH BUTTON
	STREET LIGHT
SLE	PIPE SLEEVE; DIAMETER AS SHOWN
	SLOPE
SLPB	STREET LIGHT PULLBOX
SLV	PIPE SLEEVE; DIAMETER AS SHOWN
	SEWER MANHOLE
SP	SERVICE POLE
SPB	SIGNAL PULLBOX
	SPRINKLER
SPO	STEEL POST; DIAMETER AS SHOWN
SS	SAND SEPARATOR; SIZE AS NOTED
STP	STAND PIPE; DIAMETER AS NOTED
STUMP	TREE STUMP; DIAMETER AS SHOWN
MW	SURVEY MONUMENT WELL
TEL	TELEPHONE; DIAMETER AS SHOWN
	TELEPHONE MANHOLE
TN	TENNIS NET POLE
TP	TELEPHONE POLE
TPB	TELEPHONE PULLBOX
TVPB	TELEVISION PULLBOX
	TREE; SPREAD SHOWN GRAPHICALLY AND TRUNK DIAMETER AS SHOWN
	PALM TREE; SPREAD SHOWN GRAPHICALLY
TSB	TELEPHONE SPLICE BOX
	TRAFFIC SIGNAL POLE
TSPB	TRAFFIC SIGNAL PULLBOX
UP	UTILITY POLE
VB	VACUUM BREAKER
VN	VOLLEYBALL NET POST
VPO	VENT PIPE; DIAMETER AS SHOWN
WELL	WELL
WM	WATER METER
WP	WELL PUMP
WPO	CIRCULAR WOOD POST; DIAMETER AS SHOWN
WPO	SQUARE WOOD POST; SIZE AS SHOWN
W	WATER LINE; DIAMETER AS SHOWN
WV	WATER VALVE
	ASPHALT PAVEMENT
	CONCRETE BLOCK WALL
	BUILDING
	CONCRETE
	DETECTABLE WARNINGS
	DG OR GRAVEL
	CHAIN LINK FENCE
	CHAIN LINK ROLL GATE
	EDGE OF ASPHALT PAVEMENT
	WOOD FENCE
	DIRECTION OF FLOW
E	UNDERGROUND ELECTRIC
G	GAS LINE; SIZE AS NOTED
OT	OVERHEAD TELEPHONE
SD	STORM DRAIN LINE; SIZE AS NOTED
S	SEWER LINE; SIZE AS NOTED
T	UNDERGROUND TELEPHONE
W	WATER LINE; SIZE AS NOTED
AG	AGRICULTURAL IRRIGATION LINE; SIZE AS NOTED
A	AIR LINE; SIZE AS NOTED
C	COMMUNICATION LINE
350	MAJOR GRADE CONTOUR LINE
345	MINOR GRADE CONTOUR LINE
CW	CHILLED WATER LINE; SIZE AS NOTED
CWR	CHILLED WATER RETURN LINE; SIZE AS NOTED
CWS	CHILLED WATER SUPPLY LINE; SIZE AS NOTED
	LIMIT OF DIRT
	LIMIT OF TURF
DL	DRAIN LINE; SIZE AS NOTED
EMS	EMERGENCY MANAGEMENT SYSTEM
FA	FIRE ALARM LINE
F	FIRE LINE; SIZE AS NOTED
FO	FIBER OPTIC LINE
	DRAIN TUBE
HW	HOT WATER LINE; SIZE AS NOTED
HWR	HOT WATER RETURN LINE; SIZE AS NOTED
HWS	HOT WATER SUPPLY LINE; SIZE AS NOTED
HYD	HYDRAULIC LINE
ID	IRRIGATION DISTRICT; SIZE AS NOTED
	IRON FENCE
IRR	IRRIGATION MAIN LINE; SIZE AS NOTED
L	IRRIGATION LATERAL LINE; SIZE AS NOTED
ITS	INTELLIGENT TRAFFIC SYSTEM
JT	JOINTLY TRENCHED UTILITIES
OC	OVERHEAD COMMUNICATIONS LINE
OE	OVERHEAD ELECTRIC LINE
OEC	OVERHEAD ELECTRIC AND COMMUNICATION LINE
OET	OVERHEAD ELECTRIC AND TELEPHONE LINE
OETV	OVERHEAD ELECTRIC AND TELEVISION LINE
OETVT	OVERHEAD ELECTRIC, TELEVISION AND TELEPHONE LINE
OTS	OVERHEAD TRAFFIC SIGNAL LINE
OTV	OVERHEAD TELEVISION LINE
OU	OVERHEAD UTILITY LINE
P	PETROLEUM LINE; SIZE AS NOTED
RW	RECYCLED WATER IRRIGATION LINE; SIZE AS NOTED
S&SD	SEWER AND STORM DRAIN LINE; SIZE AS NOTED
SFM	SEWER FORCE MAIN; SIZE AS NOTED
ST	STEAM LINE; SIZE AS NOTED
TFO	TRAFFIC FIBER OPTIC LINE
TS	TRAFFIC SIGNAL LINE
TV	TELEVISION LINE
UNK	UNKNOWN UTILITY LINE
	WIRE FENCE
	PROPERTY LINE
	CITY LIMIT
	EASEMENT 1
	EASEMENT 2
	RIGHT-OF-WAY LINE
	RIGHT-OF-WAY CENTER LINE
	SETBACK LINE

SURVEY NOTES:

1. *THIS TOPOGRAPHIC SURVEY LOCATES SPECIFIC PHYSICAL FEATURES OF THE SITE AND THEIR ELEVATION AS DETERMINED NECESSARY BY THE PROJECT ENGINEER. IT IS NOT A COMPLETE TOPOGRAPHIC SURVEY OF THE SITE. THE INFORMATION SHOWN REFLECTS THE DATA OBTAINED BY FIELD SURVEY CONDUCTED ON 10/12/2022.*
2. *UTILITY INFORMATION SHOWN HEREON IS BASED ON RECORD INFORMATION SUPPLIED TO THE ENGINEER BY UTILITY COMPANIES, PUBLIC AGENCIES AND THE PROPERTY OWNER, TOGETHER WITH OBSERVATION OF VISIBLE EVIDENCE BY A FIELD SURVEY. THE ENGINEER CAN MAKE NO GUARANTEE AS TO THE ACCURACY OR COMPLETENESS OF THE UNDERGROUND UTILITY FACILITIES SHOWN. PRIOR TO ANY SITE EXCAVATIONS, THE CONTRACTOR SHALL CONTACT THE OWNER AND UNDERGROUND SERVICE ALERT (USA) AND REQUEST THAT THEY IDENTIFY THE LOCATION OF ALL UNDERGROUND UTILITIES AT THE SITE.*

SITE BENCHMARK:

CHISELED "X" ON CONCRETE DRIVE NORTH OF THE SOFTBALL FIELDS APPROXIMATELY 165' WEST AND 156' SOUTH OF THE SOUTHWESTERN CORNER OF THE SNACK BAR BUILDING.

ELEV.= 263.70 NAVD88

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 01/23/2025

PBK

ARCHITECT PBK Architects, Inc.
FRESNO
7790 North Palm Avenue
Fresno, CA 93711
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Blair, Church & Flynn
CONSULTING ENGINEERS

MADERA HIGH SCHOOL FIELDHOUSE

200 SOUTH L STREET
MADERA, CA 93837
CONSTRUCTION DOCUMENTS

PROFESSIONAL SEAL

REGISTERED PROFESSIONAL ENGINEER
CLARK R. BAILEY
No. 47150
CIVIL
STATE OF CALIFORNIA
07/18/2024
Date Signed:

PROJECT NUMBER	20-51
DATE	1/13/2025
DSA APPLICATION NO.	02-121624
FILE NO.	20-H3
PTN NO.	65243-153
DRAWN BY	DG

REVISIONS

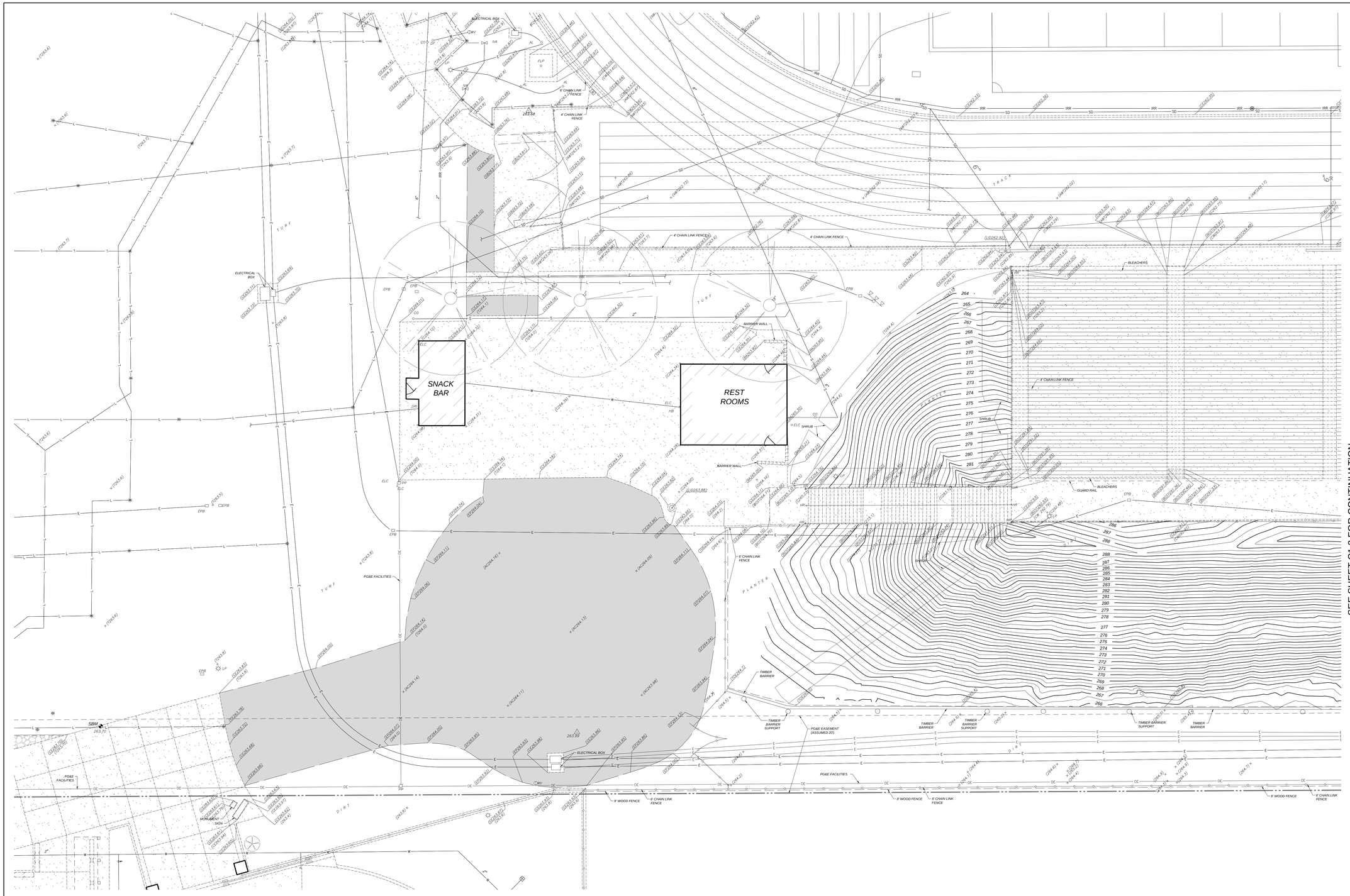
#	DESCRIPTION	DATE

CONSTRUCTION DOCUMENTS

TOPOGRAPHIC SURVEY NOTES AND LEGEND

C1.0

Drawing: P:\2021\20253\Revit\Production\Drawings\20253_T001.dwg, C1.0 — Plot By: Dgrove Jan 16, 2025 - 7:46pm



SURVEY NOTES:

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SITE BENCHMARK:

CHISELED "X" ON CONCRETE DRIVE NORTH OF THE SOFTBALL FIELDS, APPROXIMATELY 165' WEST AND 156' SOUTH OF THE SOUTHWESTERN CORNER OF THE SNACK BAR BUILDING.

ELEV.= 263.70 NAVD88

SCALE: N 1"=10'

0 5 10 20
SCALE IN FEET

IDENTIFICATION STAMP
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SS ☑ FLS ☑ ACS ☑
DATE: 01/23/2025

PBK

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CONSTRUCTION DOCUMENTS

PROFESSIONAL SEAL

REGISTERED PROFESSIONAL ENGINEER
LANE R. BAILEY
No. 47703
STATE OF CALIFORNIA
07/18/2024
Date Signed

PROJECT NUMBER	20-51
DATE	1/13/2025
DSA APPLICATION NO.	02-121624
FILE NO.	20-H3
PTN NO.	65243-153
DRAWN BY	DG

REVISIONS

#	DESCRIPTION	DATE

CONSTRUCTION DOCUMENTS

PARTIAL TOPOGRAPHIC SURVEY

C1.1

Drawing: P:\20-51\DSA\Sheet Production\Drawings\222252_TOS1.dwg, C1.1 — Plot by: dgarcia Jan 16, 2025 - 7:14am

SEE SHEET C1.1 FOR CONTINUATION

PRESS BOX

BLEACHERS

TRENCH DRAIN

DECORATIVE WOOD BARRIER

SHRUB

4' CHAIN LINK FENCE

6' CHAIN LINK FENCE

STAIRS LEADING TO PRESS BOX

8' WOOD FENCE

PG&E EASEMENT (ASSUMED 20')

TURF

SURVEY NOTES:

1. *THIS TOPOGRAPHIC SURVEY LOCATES SPECIFIC PHYSICAL FEATURES OF THE SITE AND THEIR ELEVATION AS DETERMINED NECESSARY BY THE PROJECT ENGINEER. IT IS NOT A COMPLETE TOPOGRAPHIC SURVEY OF THE SITE. THE INFORMATION SHOWN REFLECTS THE DATA OBTAINED BY FIELD SURVEY CONDUCTED ON 10/12/2022.*

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SITE BENCHMARK:

CHISELED "X" ON CONCRETE DRIVE NORTH OF THE SOFTBALL FIELDS APPROXIMATELY 165' WEST AND 156' SOUTH OF THE SOUTHWESTERN CORNER OF THE SNACK BAR BUILDING.

ELEV.= 263.70 NAVD88

SCALE: 1"=10'

0 5 10 20
SCALE IN FEET

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PROFESSIONAL SEAL

REGISTERED PROFESSIONAL ENGINEER
LANE R. BAILEY
No. 41203
CIVIL
STATE OF CALIFORNIA
07/18/2024
Date Signed:

PROJECT NUMBER	20-51
DATE	1/13/2025
DSA APPLICATION NO.	02-121624
FILE NO.	20-H3
PTN NO.	65243-153
DRAWN BY	DG

REVISIONS

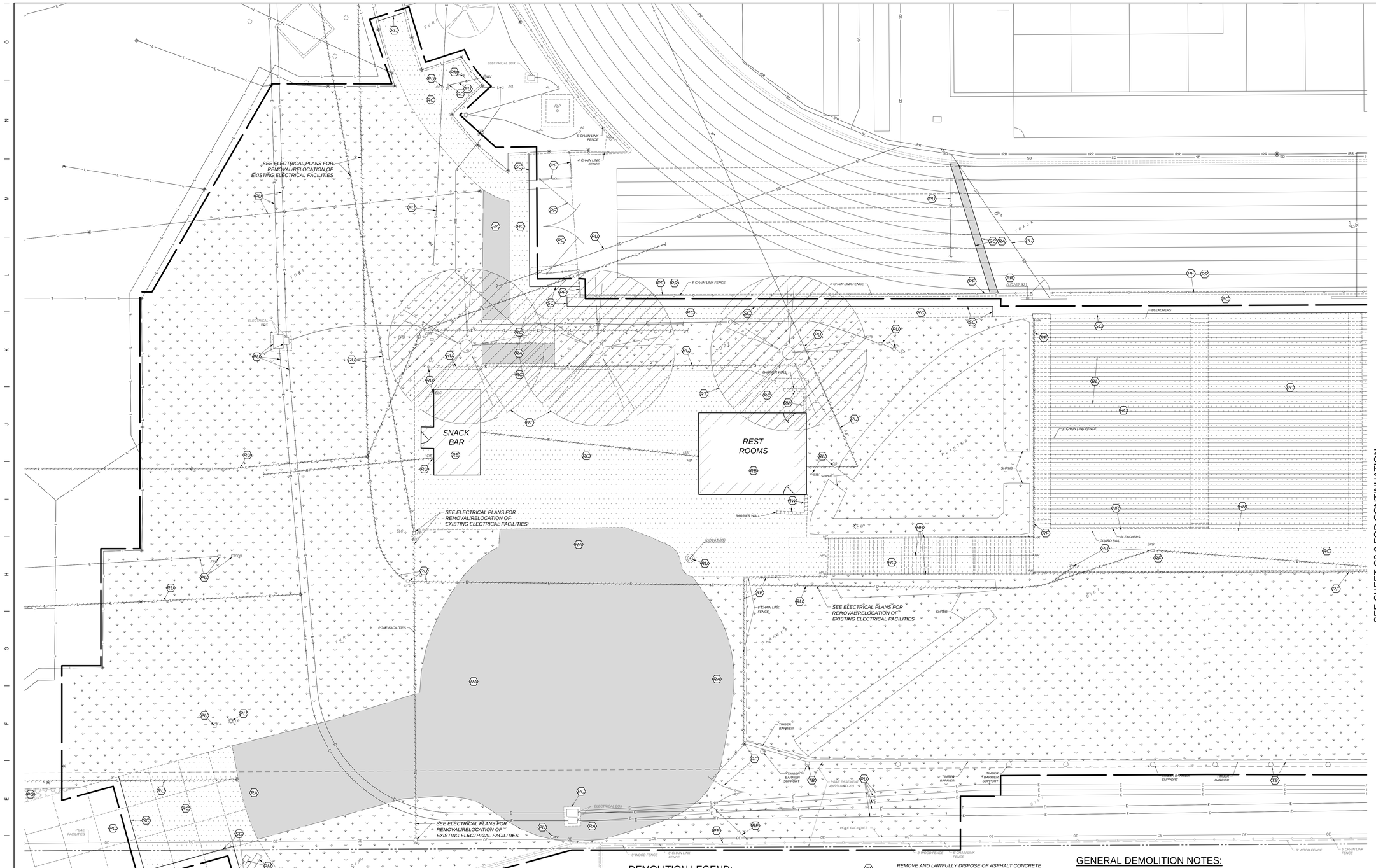
#	DESCRIPTION	DATE

CONSTRUCTION DOCUMENTS

PARTIAL TOPOGRAPHIC SURVEY

C1.2

Drawing: P:\2021\2021024\e\Production\Drawings\222332_TOVI.dwg, C1.2 — Plotted by: dgarcia Jan 16, 2025 - 7:46am



DEMOLITION LEGEND:

- REMOVE EXISTING IMPROVEMENTS AS NECESSARY TO CONSTRUCT NEW IMPROVEMENTS SHOWN ON THESE PLANS UNLESS OTHERWISE NOTED ON THE PLAN. THE REMOVAL OF IMPROVEMENTS MUST BE COORDINATED WITH ALL PLAN SHEETS. CONTRACTOR MUST ALSO COORDINATE REMOVAL OF IMPROVEMENTS WITH UTILITY AGENCIES. PROTECT ALL IMPROVEMENTS NOT DESIGNATED FOR REMOVAL. SEE NOTE 1
- LIMITS OF VEGETATION REMOVAL. 4" MINIMUM DEPTH
- LIMITS OF CONCRETE IMPROVEMENT REMOVAL
- LIMITS OF ASPHALTIC CONCRETE IMPROVEMENT REMOVAL
- (BL) REMOVE AND LAWFULLY DISPOSE OF BLEACHERS
- (HR) REMOVE AND LAWFULLY DISPOSE OF HANDRAIL AND FOOTINGS
- (PB) PROTECT BLEACHERS TO REMAIN
- (PC) PROTECT CONCRETE IMPROVEMENTS TO REMAIN
- (PG) PROTECT GUARDRAIL
- (PF) PROTECT FENCE TO REMAIN
- (PG) PROTECT GRAVEL IMPROVEMENTS TO REMAIN
- (PM) PROTECT MONUMENT TO REMAIN
- (PT) PROTECT TREE TO REMAIN
- (PR) PROTECT ATHLETIC TRACK SURFACE TO REMAIN
- (PU) PROTECT UTILITY TO REMAIN
- (RA) REMOVE AND LAWFULLY DISPOSE OF ASPHALT CONCRETE PAVEMENT STRUCTURAL SECTION
- (RB) REMOVE AND LAWFULLY DISPOSE OF BUILDING, UTILITIES, AND FOUNDATION
- (RC) REMOVE AND LAWFULLY DISPOSE OF CONCRETE IMPROVEMENTS
- (RD) REMOVE AND LAWFULLY DISPOSE OF DRINKING FOUNTAIN. CAP END OF WATER LINE FOR FUTURE USE
- (RF) REMOVE AND LAWFULLY DISPOSE OF CHAIN LINK FENCE FABRIC, POSTS AND FOOTINGS
- (RM) SALVAGE MEMORIAL SIGN FOR REINSTALLATION PER SITE PLAN
- (RT) REMOVE AND LAWFULLY DISPOSE OF TREE AND ROOTS TO A MINIMUM DEPTH OF 3' OR BOTTOM OF ROOT BALL, WHICHEVER IS DEEPER
- (RU) REMOVE AND LAWFULLY DISPOSE OF UTILITY
- (RW) REMOVE AND LAWFULLY DISPOSE OF BARRIER WALL
- (SB) REMOVE AND SALVAGE BLEACHERS TO DISTRICT
- (SC) SAWCUT
- (TB) REMOVE AND LAWFULLY DISPOSE OF TIMBER BARRIER AND SUPPORTS
- REMOVE TREE
- LIMIT OF CHAIN LINK FENCE REMOVAL
- LIMIT OF IRRIGATION MAIN LINE REMOVAL
- LIMIT OF GAS LINE REMOVAL
- LIMIT OF OVERHEAD TELEPHONE LINE REMOVAL
- LIMIT OF SEWER MAIN LINE REMOVAL

GENERAL DEMOLITION NOTES:

1. THE "LIMIT OF DEMOLITION" SHOWN IS APPROXIMATE AND IS GENERALLY CONSIDERED TO BE THE MINIMUM REMOVAL REQUIREMENTS. CONTRACTOR MUST COORDINATE AS NOTED IN THE LEGEND.
2. CONTRACTOR SHALL LEGALLY DISPOSE OF ALL DEMOLISHED MATERIALS OFF SITE.
3. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITY IMPROVEMENTS NOT SPECIFICALLY DESIGNATED FOR REMOVAL.
4. THE ON-SITE UNDERGROUND UTILITIES SHOWN ON THIS SHEET ARE AT APPROXIMATE LOCATIONS. THE EXTENT, LOCATIONS AND SIZES ARE UNKNOWN. THE CONTRACTOR SHALL POTHOLE TO LOCATE AND VERIFY THE UNDERGROUND UTILITY LINES PRIOR TO REMOVAL.
5. CONTRACTOR TO PROTECT AND PRESERVE IN PLACE ANY FOUND SURVEY MONUMENTS. ANY MONUMENTS DISTURBED SHALL BE RESET BY A CALIFORNIA LICENSED SURVEYOR AND THE APPROPRIATE PAPERWORK FILED WITH THE CITY OR COUNTY, AT CONTRACTOR'S EXPENSE.
6. ALL HAZARDOUS MATERIALS ENCOUNTERED DURING SITE DEMOLITION SHALL BE REMEDIATED AND DISPOSED OF PER STATE AND EPA REQUIREMENTS.
7. CONTRACTOR SHALL CONTACT AND COORDINATE WITH ALL UTILITY AGENCIES PRIOR TO THE START OF ANY DEMOLITION OR CONSTRUCTION.
8. ANY EXISTING UTILITIES AND/OR IMPROVEMENTS WHICH ARE TO REMAIN, THAT BECOME DAMAGED DURING CONSTRUCTION SHALL BE COMPLETELY RESTORED TO THE SATISFACTION OF THE OWNER AND AGENCY HAVING AUTHORITY, AT THE CONTRACTOR'S SOLE EXPENSE.
9. REMOVE EXISTING IMPROVEMENTS AS NECESSARY TO CONSTRUCT NEW IMPROVEMENTS SHOWN ON THESE PLANS.
   a) FOR CONCRETE REMOVAL, REMOVE TO THE NEXT NEAREST TOOLED JOINT OR EXPANSION JOINT OF IMPROVEMENTS DESIGNATED TO REMAIN.
   b) FOR ASPHALTIC PAVEMENT REMOVAL, SAWCUT TO A STRAIGHT, CLEAN EDGE AT LOCATIONS INDICATED ON THE PLANS.
10. REFER TO MECHANICAL, ELECTRICAL, PLUMBING, IRRIGATION, AND ARCHITECTURAL PLANS FOR ADDITIONAL DEMOLITION AND COORDINATION.
11. COMPLIANCE WITH FIRE SAFETY DURING CONSTRUCTION WILL BE ENFORCED.

SCALE: N 1"=10'

0 5 10 20
SCALE IN FEET

811 Know what's below. Call before you dig.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 01/23/2025

PBK

ARCHITECT PBK Architects, Inc.
FRESNO
7790 North Palm Avenue
Fresno, CA 93711
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Blair, Church & Flynn
CONSULTING ENGINEERS

MADERA HIGH SCHOOL FIELDHOUSE

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CONSTRUCTION DOCUMENTS

PROFESSIONAL SEAL

REGISTERED PROFESSIONAL ENGINEER
LANE R. BAILEY
No. 47003
STATE OF CALIFORNIA

07/18/2024
Date Signed

PROJECT NUMBER	20-51
DATE	1/13/2025
DSA APPLICATION NO.	02-121624
FILE NO.	20-H3
PTN NO.	65243-153
DRAWN BY	DG
REVISIONS	

CONSTRUCTION DOCUMENTS

PARTIAL DEMOLITION PLAN

C2.1

Drawing: P:\20-51\03 Data\Production\Drawings\222\20_C01.dwg, C2.1 — Plotted by: bgarcia Jan 16, 2025 - 7:14am

SEE SHEET C2.1 FOR CONTINUATION

PRESS BOX

6' CHAIN LINK FENCE

STAIRS LEADING TO PRESS BOX

TRENCH DRAIN

PG&E EASEMENT (ASSUMED 20')

4' CHAIN LINK FENCE

SEE ELECTRICAL PLANS FOR REMOVAL/RELOCATION OF EXISTING ELECTRICAL FACILITIES

DECORATIVE WOOD BARRIER

SHRUB

TURF

6' CHAIN LINK FENCE

8' WOOD FENCE

6' CHAIN LINK FENCE

8' WOOD FENCE

6' CHAIN LINK FENCE

8' WOOD FENCE

6' CHAIN LINK FENCE

DEMOLITION LEGEND:

	REMOVE EXISTING IMPROVEMENTS AS NECESSARY TO CONSTRUCT NEW IMPROVEMENTS SHOWN ON THESE PLANS UNLESS OTHERWISE NOTED ON THE PLAN. THE REMOVAL OF IMPROVEMENTS MUST BE COORDINATED WITH ALL PLAN SHEETS. CONTRACTOR MUST ALSO COORDINATE REMOVAL OF IMPROVEMENTS WITH UTILITY AGENCIES. PROTECT ALL IMPROVEMENTS NOT DESIGNATED FOR REMOVAL. SEE NOTE 1
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	LIMITS OF ASPHALTIC CONCRETE IMPROVEMENT REMOVAL
BL	REMOVE AND LAWFULLY DISPOSE OF BLEACHERS
HR	REMOVE AND LAWFULLY DISPOSE OF HANDRAIL AND FOOTINGS
PB	PROTECT BLEACHERS TO REMAIN
PC	PROTECT CONCRETE IMPROVEMENTS TO REMAIN
PG	PROTECT GUARDRAIL
PF	PROTECT FENCE TO REMAIN
PG	PROTECT GRAVEL IMPROVEMENTS TO REMAIN
PM	PROTECT MONUMENT TO REMAIN
PT	PROTECT TREE TO REMAIN
PX	PROTECT ATHLETIC TRACK SURFACE TO REMAIN
PU	PROTECT UTILITY TO REMAIN
RA	REMOVE AND LAWFULLY DISPOSE OF ASPHALT CONCRETE PAVEMENT STRUCTURAL SECTION
RB	REMOVE AND LAWFULLY DISPOSE OF BUILDING, UTILITIES, AND FOUNDATION
RC	REMOVE AND LAWFULLY DISPOSE OF CONCRETE IMPROVEMENTS
RD	REMOVE AND LAWFULLY DISPOSE OF DRINKING FOUNTAIN. CAP END OF WATER LINE FOR FUTURE USE
RF	REMOVE AND LAWFULLY DISPOSE OF CHAIN LINK FENCE FABRIC, POSTS AND FOOTINGS
RM	SALVAGE MEMORIAL SIGN FOR REINSTALLATION PER SITE PLAN
RT	REMOVE AND LAWFULLY DISPOSE OF TREE AND ROOTS TO A MINIMUM DEPTH OF 3' OR BOTTOM OF ROOT BALL, WHICHEVER IS DEEPER
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SC	SAWCUT
TB	REMOVE AND LAWFULLY DISPOSE OF TIMBER BARRIER AND SUPPORTS
	REMOVE TREE
	LIMIT OF CHAIN LINK FENCE REMOVAL
	LIMIT OF IRRIGATION MAIN LINE REMOVAL
	LIMIT OF GAS LINE REMOVAL
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GENERAL DEMOLITION NOTES:

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10. REFER TO MECHANICAL, ELECTRICAL, PLUMBING, IRRIGATION, AND ARCHITECTURAL PLANS FOR ADDITIONAL DEMOLITION AND COORDINATION.
11. COMPLIANCE WITH FIRE SAFETY DURING CONSTRUCTION WILL BE ENFORCED.

SCALE: 1"=10'

0 5 10 20
SCALE IN FEET

811 Know what's below. Call before you dig.

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PBK

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Blair, Church & Flynn
CONSULTING ENGINEERS

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MADERA, CA 93637
CONSTRUCTION DOCUMENTS

PROFESSIONAL SEAL

REGISTERED PROFESSIONAL ENGINEER
LANCE R. BAKER
No. 47055
CIVIL
STATE OF CALIFORNIA

07/18/2024
Date Signed:

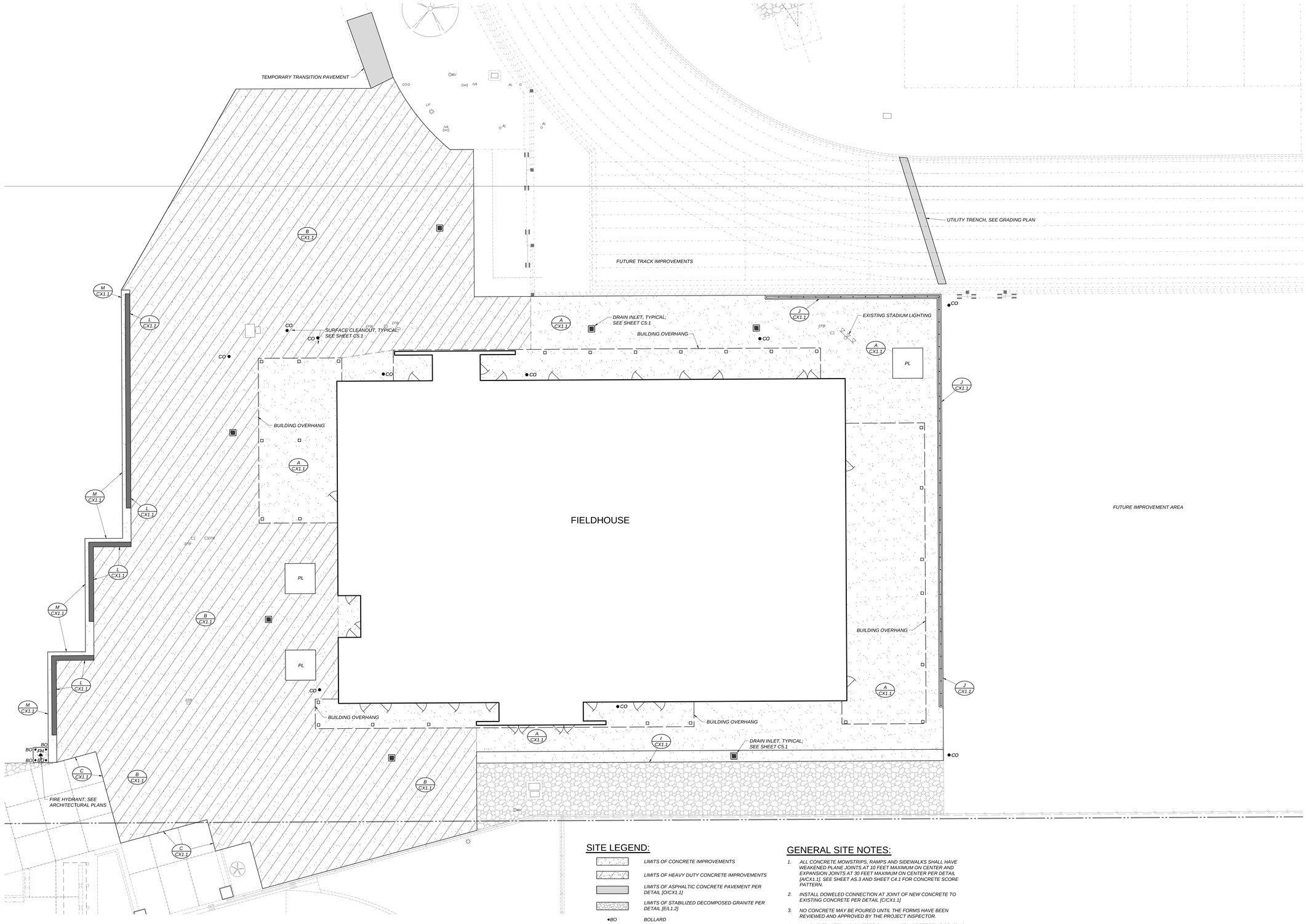
PROJECT NUMBER	20-51
DATE	1/13/2025
DSA APPLICATION NO.	02-121624
FILE NO.	20-H3
PTN NO.	65243-153
DRAWN BY	DG
REVISIONS	

CONSTRUCTION DOCUMENTS

PARTIAL DEMOLITION PLAN

C2.2

Drawing: P:\20-51\05\Site\Production\Drawings\222252_20X1.dwg, C2.2 — Plot By: Dgrace Jan 16, 2025 - 7:46am



SITE LEGEND:

- LIMITS OF CONCRETE IMPROVEMENTS
- LIMITS OF HEAVY DUTY CONCRETE IMPROVEMENTS
- LIMITS OF ASPHALTIC CONCRETE PAVEMENT PER DETAIL [O/CX1.1]
- LIMITS OF STABILIZED DECOMPOSED GRANITE PER DETAIL [E/L1.2]
- •BO BOLLARD
- PL PLANTER

GENERAL SITE NOTES:

1. ALL CONCRETE MOWSTRIPS, RAMPS AND SIDEWALKS SHALL HAVE WEAKENED PLANE JOINTS AT 10 FEET MAXIMUM ON CENTER AND EXPANSION JOINTS AT 30 FEET MAXIMUM ON CENTER PER DETAIL [A/CX1.1]. SEE SHEET AS.3 AND SHEET C4.1 FOR CONCRETE SCORE PATTERN.
2. INSTALL DOWELED CONNECTION AT JOINT OF NEW CONCRETE TO EXISTING CONCRETE PER DETAIL [C/CX1.1]
3. NO CONCRETE MAY BE POURED UNTIL THE FORMS HAVE BEEN REVIEWED AND APPROVED BY THE PROJECT INSPECTOR.
4. ALL BURIED METALLIC OBJECTS SHALL HAVE A PROTECTIVE COATING OR BE WRAPPED WITH APPROVED PROTECTIVE WRAP.
5. ADJUST EXISTING SPRINKLER HEADS AND LATERAL LINES AS REQUIRED BY NEW IMPROVEMENTS, OR AS SHOWN ON THE IRRIGATION PLANS.
6. 2 WORKING DAYS BEFORE COMMENCING EXCAVATION OPERATIONS WITHIN THE STREET RIGHT-OF-WAY AND/OR UTILITY EASEMENTS, ALL EXISTING UNDERGROUND FACILITIES SHALL HAVE BEEN LOCATED BY UNDERGROUND SERVICES ALERT (USA). CALL 1-800-642-2444
7. ANY SURVEY MONUMENTS WITHIN THE AREA OF CONSTRUCTION SHALL BE PRESERVED OR RESET BY A PERSON LICENSED TO PRACTICE LAND SURVEYING IN THE STATE OF CALIFORNIA. REPLACEMENT TO BE AT CONTRACTOR'S SOLE EXPENSE.
8. OBTAIN ALL REQUIRED PERMITS AND APPROVALS FROM AGENCY HAVING JURISDICTION FOR WORK WITHIN THE PUBLIC RIGHT OF WAY

SCALE: N 1"=10'

0 5 10 20
SCALE IN FEET

Know what's below. Call before you dig.

Drawing: P:\20-20253\e\Production\Drawings\20253X2_SW1.dwg, C3.1 — Plot By: tgarcia Jan 16, 2025 - 7:46am

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CONSULTING ENGINEERS

MADERA HIGH SCHOOL FIELDHOUSE

200 SOUTH L STREET
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CONSTRUCTION DOCUMENTS

PROFESSIONAL SEAL

REGISTERED PROFESSIONAL ENGINEER
C. ERIC R. BAILEY
No. 47033
CIVIL
STATE OF CALIFORNIA
07/18/2024
Date Signed:

PROJECT NUMBER	20-51
DATE	1/13/2025
DSA APPLICATION NO.	02-121624
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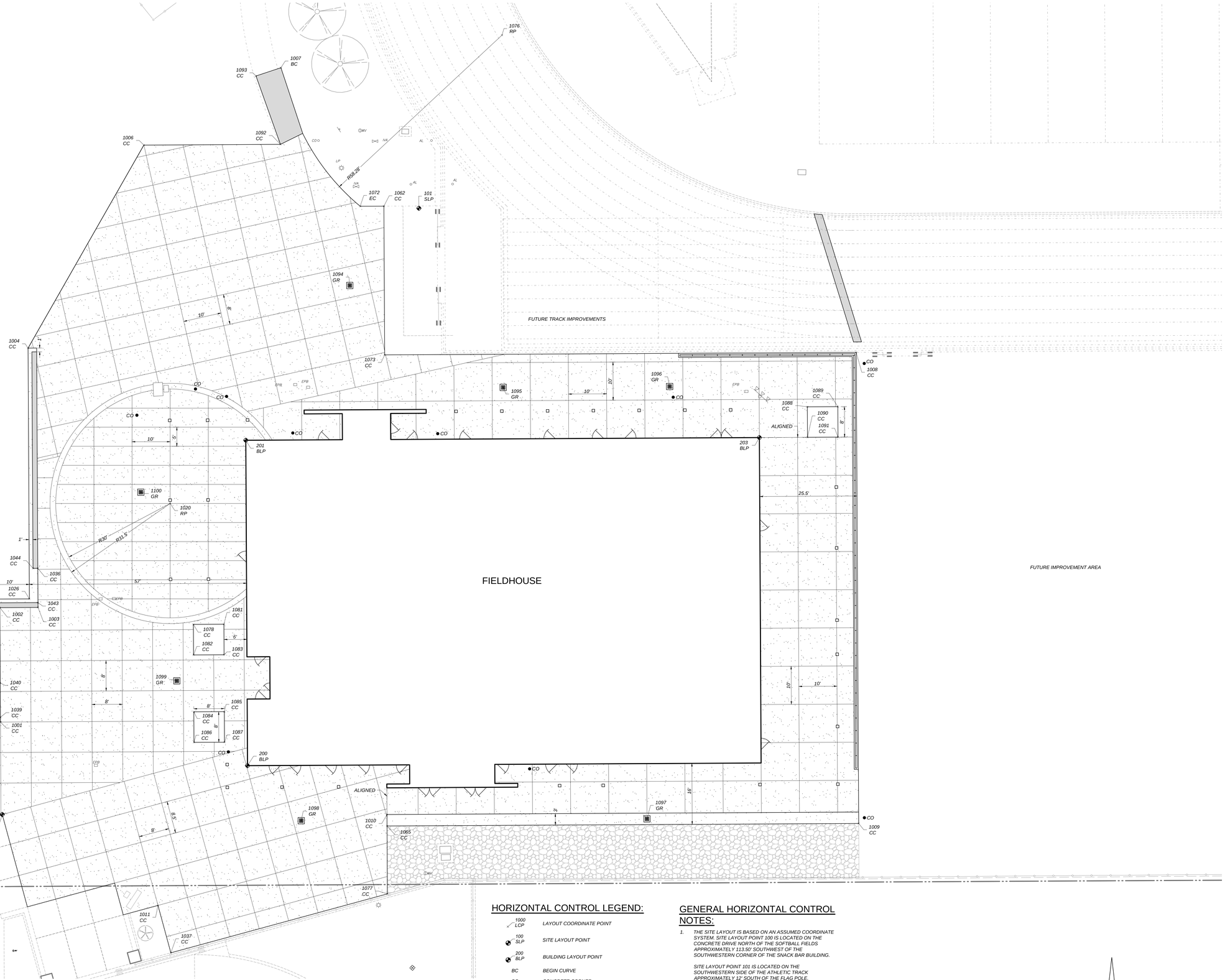
PTN NO.	65243-153
DRAWN BY	DG

REVISIONS

CONSTRUCTION DOCUMENTS

PARTIAL SITE PLAN

C3.1



HORIZONTAL CONTROL LEGEND:

1000 LCP	LAYOUT COORDINATE POINT
100 SLP	SITE LAYOUT POINT
200 BLP	BUILDING LAYOUT POINT
BC	BEGIN CURVE
CC	CONCRETE CORNER
EC	END CURVE
GR	STORM DRAIN GRATE
RP	RADIUS POINT

GENERAL HORIZONTAL CONTROL NOTES:

1. THE SITE LAYOUT IS BASED ON AN ASSUMED COORDINATE SYSTEM. SITE LAYOUT POINT 100 IS LOCATED ON THE CONCRETE DRIVE NORTH OF THE SOFTBALL FIELDS APPROXIMATELY 113.50' SOUTHWEST OF THE SOUTHWESTERN CORNER OF THE SNACK BAR BUILDING.

   SITE LAYOUT POINT 101 IS LOCATED ON THE SOUTHWESTERN SIDE OF THE ATHLETIC TRACK APPROXIMATELY 12' SOUTH OF THE FLAG POLE.

2. DIMENSIONS AND POINTS ARE TO CENTER OF FENCE POSTS, FACE OF BUILDINGS, TOP FACE OF CURB, OR EDGE OF CONCRETE, UNLESS SHOWN OTHERWISE.

SCALE: N 1"=10'

0 5 10 20
SCALE IN FEET

Know what's below. Call before you dig.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 01/23/2025

PBK

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FRESNO
7790 North Palm Avenue
Fresno, CA 93711
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Blair, Church & Flynn
CONSULTING ENGINEERS

MADERA HIGH SCHOOL FIELDHOUSE

200 SOUTH L STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

PROFESSIONAL SEAL

REGISTERED PROFESSIONAL ENGINEER
LANE R. BAILEY
No. 47103
STATE OF CALIFORNIA
07/18/2024
Date Signed:

PROJECT NUMBER	20-51
DATE	1/13/2025
DSA APPLICATION NO.	02-121624
FILE NO.	20-H3
PTN NO.	65243-153
DRAWN BY	DG

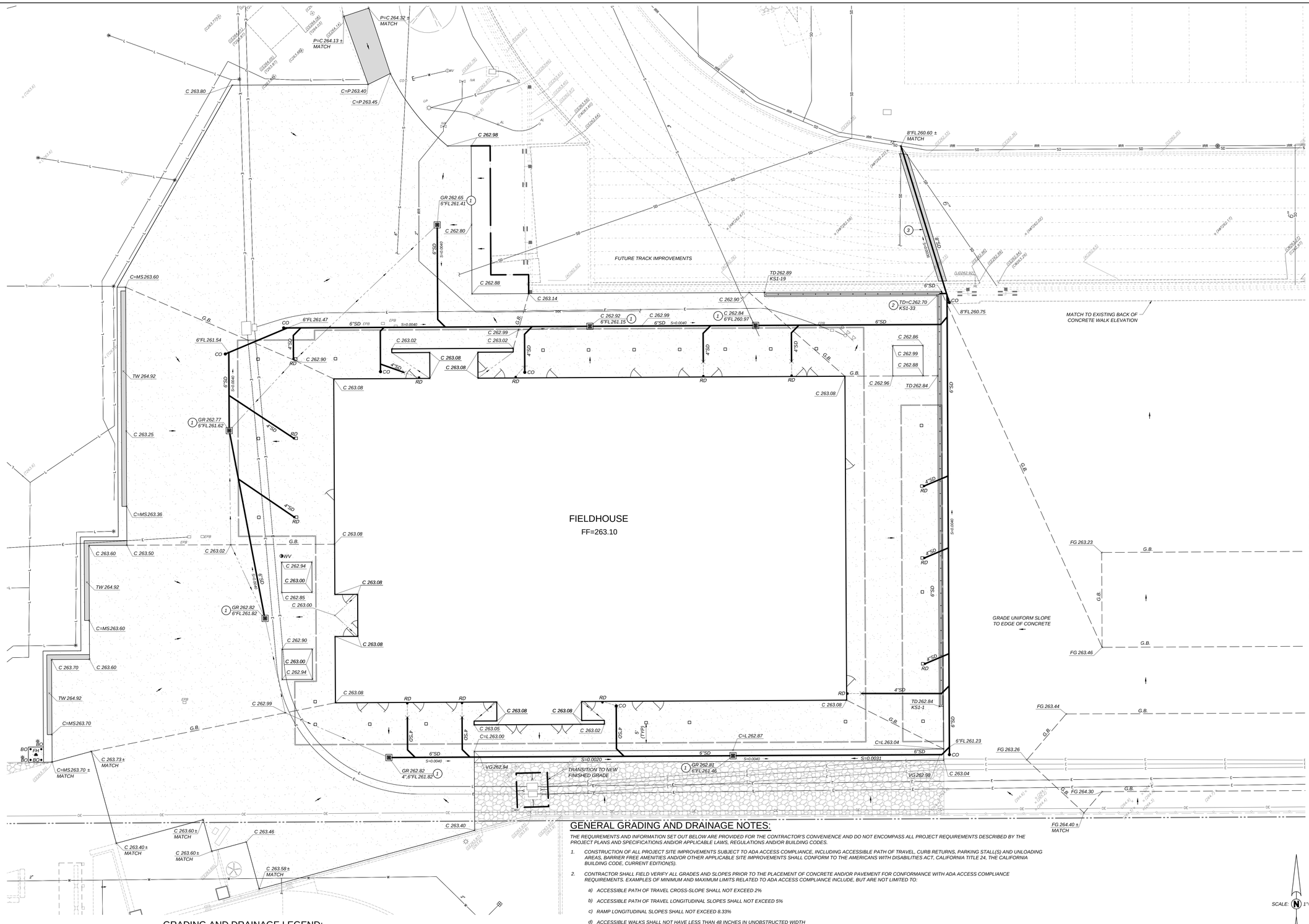
REVISIONS

CONSTRUCTION DOCUMENTS

PARTIAL HORIZONTAL CONTROL PLAN

C4.1

Drawing: P:\22\22-0053\Site\Production\Drawings\222052_HCS1.dwg, C4.1 — Plot By: dgarcia Jan 16, 2025 - 7:36am



GRADING AND DRAINAGE LEGEND:

C	CONCRETE		DIRECTION OF SURFACE DRAINAGE
FF	FINISHED FLOOR	G.B.	GRADE BREAK
FL	FLOWLINE		BUILDING OVER-EXCAVATION PER DETAIL [P/CX1.1]
GR	STORM DRAIN GRATE		LIMITS OF GRADING
MS	MOWSTRIP	S=0.0050	PIPE SLOPE AND DIRECTION OF FLOW
P	PAVEMENT		SWALE AND DIRECTION OF FLOW
TC	TOP OF CURB	1	V12 STORM DRAIN INLET PER DETAIL [H/CX1.1]
TD	TRENCH DRAIN	2	REMOVE PORTION OF EAST/WEST TRENCH DRAIN AS NECESSARY TO BUTT NORTH/SOUTH TRENCH DRAIN INTO EAST/WEST TRENCH DRAIN. PROVIDE UNIVERSAL OUTLET ON END OF EAST/WEST TRENCH DRAIN.
TW	TOP OF WALL		
VG	VALLEY GUTTER FLOWLINE	3	TRENCH RESURFACING PER DETAIL [N/CX1.1]
(344.9)	EXISTING ELEVATION	●CO	SURFACE CLEANOUT PER DETAIL [F/CX1.1]
328.78	NEW FINISHED GRADE	●RD	ROOF DRAIN
MATCH	MATCH EXISTING GRADE	6"SD	STORM DRAIN PIPELINE; SIZE AS NOTED. TRENCH AND BACKFILL PER DETAIL [D/CX1.1]
		S=0.0020	FLOWLINE SLOPE AND DIRECTION OF FLOW

GENERAL GRADING AND DRAINAGE NOTES:

THE REQUIREMENTS AND INFORMATION SET OUT BELOW ARE PROVIDED FOR THE CONTRACTOR'S CONVENIENCE AND DO NOT ENCOMPASS ALL PROJECT REQUIREMENTS DESCRIBED BY THE PROJECT PLANS AND SPECIFICATIONS AND/OR APPLICABLE LAWS, REGULATIONS AND/OR BUILDING CODES.

1. *CONSTRUCTION OF ALL PROJECT SITE IMPROVEMENTS SUBJECT TO ADA ACCESS COMPLIANCE, INCLUDING ACCESSIBLE PATH OF TRAVEL, CURB RETURNS, PARKING STALL(S) AND UNLOADING AREAS, BARRIER FREE AMENITIES AND/OR OTHER APPLICABLE SITE IMPROVEMENTS SHALL CONFORM TO THE AMERICANS WITH DISABILITIES ACT, CALIFORNIA TITLE 24, THE CALIFORNIA BUILDING CODE, CURRENT EDITION(S).*
2. *CONTRACTOR SHALL FIELD VERIFY ALL GRADES AND SLOPES PRIOR TO THE PLACEMENT OF CONCRETE AND/OR PAVEMENT FOR CONFORMANCE WITH ADA ACCESS COMPLIANCE REQUIREMENTS. EXAMPLES OF MINIMUM AND MAXIMUM LIMITS RELATED TO ADA ACCESS COMPLIANCE INCLUDE, BUT ARE NOT LIMITED TO:*
   a) *ACCESSIBLE PATH OF TRAVEL CROSS-SLOPE SHALL NOT EXCEED 2%*
   b) *ACCESSIBLE PATH OF TRAVEL LONGITUDINAL SLOPES SHALL NOT EXCEED 5%*
   c) *RAMP LONGITUDINAL SLOPES SHALL NOT EXCEED 8.33%*
   d) *ACCESSIBLE WALKS SHALL NOT HAVE LESS THAN 48 INCHES IN UNOBSTRUCTED WIDTH*
   e) *ACCESSIBLE PARKING SPACES AND ACCESS AISLES SHALL NOT EXCEED 2% SLOPE IN ANY DIRECTION*
   f) *LANDINGS AT THE TOP AND BOTTOM OF ACCESSIBLE RAMPS SHALL NOT EXCEED 2% SLOPE IN ANY DIRECTION*
   g) *GUTTERS AND ROAD SURFACES DIRECTLY ADJACENT TO AND WITHIN 2 FEET OF A CURB RAMP SHALL HAVE A COUNTER SLOPE NOT TO EXCEED 5%*
3. *CONTRACTOR MUST IMMEDIATELY NOTIFY THE ENGINEER OF RECORD, IDENTIFIED BY THE PROFESSIONAL ENGINEERING SEAL AND SIGNATURE ON THESE PLANS, OF ANY SITE CONDITION(S) AND/OR DESIGN INFORMATION THAT PREVENTS THE CONTRACTOR FROM COMPLYING WITH THE LAWS, REGULATIONS AND/OR BUILDING CODES GOVERNING ADA ACCESS COMPLIANCE.*
4. *GROUND SLOPES AWAY FROM BUILDING PADS IN LANDSCAPED OR DIRT AREAS SHALL BE NO LESS THAN 5% FOR AT LEAST TEN (10) FEET, OR AS OTHERWISE NOTED ON THE PLANS.*
5. *DRAINAGE SHALL NOT BE ALLOWED ONTO ADJACENT PROPERTY.*
6. *ALL FILL MATERIAL USED TO SUPPORT THE FOUNDATIONS OF ANY BUILDING OR STRUCTURE SHALL BE PLACED UNDER THE DIRECTION OF A LICENSED GEOTECHNICAL ENGINEER, AND IN COMPLIANCE WITH THE PROJECT SPECIFICATIONS. A SOILS COMPACTION REPORT SHALL BE SUBMITTED TO THE ENGINEER OF RECORD AS REQUIRED BY THE PROJECT SPECIFICATIONS.*
7. *THE CONTRACTOR SHALL IMPLEMENT DUST CONTROL MEASURES AS REQUIRED BY THE PROJECT SPECIFICATIONS, AND BY GOVERNING PUBLIC AGENCIES.*
8. *THE CONTRACTOR SHALL IMPLEMENT A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AS REQUIRED BY THE PROJECT SPECIFICATIONS AND THE STATE WATER RESOURCES CONTROL BOARD'S CONSTRUCTION GENERAL PERMIT. IMPLEMENT BEST MANAGEMENT PRACTICES WITHIN PUBLIC RIGHT OF WAY PER LOCAL JURISDICTION REQUIREMENTS.*
9. *AS A FIRST ORDER OF WORK, THE CONTRACTOR SHALL POT HOLE THE EXISTING UTILITY LINES AT THE POINT OF CONNECTION TO VERIFY THE LOCATION, SIZE, PIPE MATERIAL AND ELEVATION SO THAT THE ENGINEER CAN MAKE ELEVATION AND/OR ALIGNMENT ADJUSTMENTS IF NECESSARY. SHOULD POT HOLING DISCOVER ANY DISCREPANCIES, CONTACT THE ENGINEER AND OBTAIN WRITTEN DIRECTION BEFORE PROCEEDING.*
10. *ADJUST UTILITY LIDS WITHIN NEW CONSTRUCTION AREA TO FINISHED GRADE PER DETAIL [E/CX1.1]. REPLACE ALL BROKEN LIDS WITH NEW. PROVIDE TRAFFIC RATED LIDS WITHIN VEHICLE LOADING AREAS.*
11. *WATER TEST PAVEMENT WITHIN NEW IMPROVEMENT AREA. REPLACE IMPROVEMENTS WHERE BIRD BATHS OCCUR AFTER TEST AS DIRECTED BY THE INSPECTOR OR ENGINEER.*
12. *MINIMUM SLOPE ON IMPERVIOUS SURFACES PERPENDICULAR TO ADJACENT STRUCTURE(S), WITHIN ADA PATH, SHALL BE 1% MINIMUM AND 2% MAXIMUM AWAY FROM THE BUILDING. WHERE DOOR AND GATE LANDINGS OCCUR THE CROSS SLOPE SHALL BE 2% MAXIMUM IN ALL DIRECTIONS*

SCALE: N 1"=10'

0 5 10 20
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CONSTRUCTION DOCUMENTS

PROFESSIONAL SEAL

REGISTERED PROFESSIONAL ENGINEER JANE R. BARTLETT No. 41033 CIVIL STATE OF CALIFORNIA
07/18/2024 Date Signed:

PROJECT NUMBER	20-51
DATE	1/13/2025
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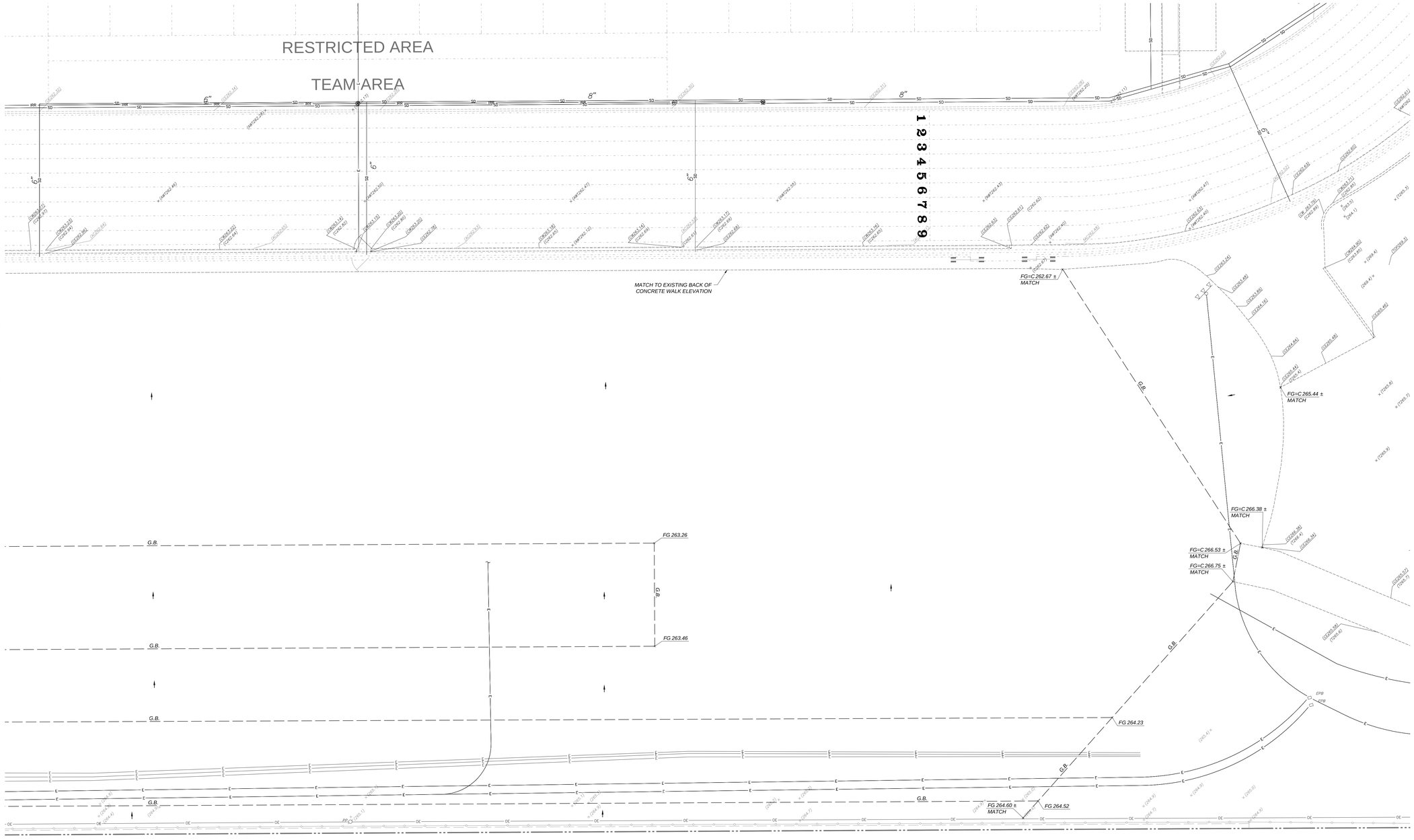
PTN NO.	65243-153
DRAWN BY	DG
REVISIONS	

CONSTRUCTION DOCUMENTS

PARTIAL GRADING AND DRAINAGE PLAN

C5.1

Drawing: P:\2021-03\25\Site\Production\Drawings\222325_GR01.dwg, C5.1 — Plot by: bgarcia - Jan 16, 2025 - 7:38am



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SCALE: N 1"=10'

0 5 10 20
SCALE IN FEET

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DATE: 01/23/2025

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PROFESSIONAL SEAL

REGISTERED PROFESSIONAL ENGINEER
LANE R. BAILEY
No. 21911
STATE OF CALIFORNIA
07/18/2024
Date Signed:

PROJECT NUMBER	20-51
DATE	1/13/2025
DSA APPLICATION NO.	02-121624
FILE NO.	20-H3
PTN NO.	65243-153
DRAWN BY	DG
REVISIONS	

CONSTRUCTION DOCUMENTS

PARTIAL GRADING AND DRAINAGE PLAN

C5.2

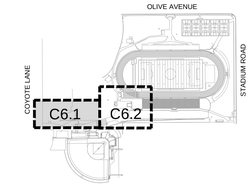
Drawing: P:\20-51\DSA Submittal\Production\Drawings\222222_GR01.dwg, C5.2 — Plotted by: bgarcia Jan 16, 2025 - 7:12am

UTILITY LEGEND:

S	SEWER LINE, SIZE AS NOTED ON PLANS. PIPE BEDDING AND BACKFILL PER DETAIL [D/CX1.1]
W	WATER LINE, SIZE AS NOTED ON PLANS, MIN. 30" COVER. PIPE BEDDING AND BACKFILL PER DETAIL [D/CX1.1]
SD	STORM DRAIN PIPE, SEE GRADING PLAN
F	FIRE LINE, SEE PLUMBING PLAN
G	GAS LINE, SEE PLUMBING PLAN
FF	FINISHED FLOOR
FL	FLOWLINE
	BACKFLOW PREVENTER PER DETAIL [K/CX1.1]
	4" WATER METER PER CITY STANDARD DETAIL W-10
CO	SEWER CLEANOUT PER DETAIL [F/CX1.1]
RD	ROOF DRAIN; SEE PLUMBING PLANS
WV	WATER VALVE PER [G/CX1.1]
	CAP END OF UTILITY LINE.
	POINT OF CONNECTION TO EXISTING OR PROPOSED UTILITY, COORDINATE WITH PLUMBING PLANS PRIOR TO CONNECTION.
S=0.0020	FLOWLINE SLOPE AND DIRECTION OF FLOW
1	PERFORM HOT TAP PER CITY OF MADERA REQUIREMENTS
2	CONNECT TO EXISTING SEWER LINE WITH WATER-TIGHT CONNECTION. VERIFY SIZE, DEPTH, AND LOCATION AND PROVIDE INFORMATION TO ENGINEER PRIOR TO INSTALLATION OF PIPE
3	TRENCH PATCH WITH ASPHALT CONCRETE PLUG PER DETAIL [N/CX1.1].
4	TRENCH PATCH AND BACKFILL PER CITY STANDARD DETAIL ST-29
5	TOP 12" OF TRENCH BACKFILL SHALL BE TOPSOIL PER SPECIFICATION SECTION 329000. FINAL TRENCH SURFACE TO BE SOD.
6	WATER VALVE PER CITY STANDARD DETAIL W-8
7	EXCAVATE UNDER CURB & GUTTER, OR IF REMOVED, REPLACE TO CITY STANDARDS AND REQUIREMENTS
8	CONTRACTOR SHALL REPLACE SURFACING IN KIND AS NECESSARY AND REPAIR ANY DAMAGE DONE TO EXISTING IMPROVEMENTS TO MATCH EXISTING CONDITIONS

GENERAL SITE UTILITY NOTES:

1. AS FIRST ORDER OF WORK, CONTRACTOR SHALL POTHOLE EXISTING UTILITIES AND NOTIFY ENGINEER IMMEDIATELY OF LOCATIONS, SIZE AND DEPTH.
2. THE CONTRACTOR SHALL FIELD VERIFY THE EXACT LOCATION, SIZE, DEPTH, AND TYPE OF ALL EXISTING UTILITIES AND INTERFERENCES SITUATED ALONG THE ROUTE OF THE PROPOSED CONSTRUCTION PRIOR TO COMMENCEMENT OF EXCAVATION, FABRICATION, AND INSTALLATION. THE CONTRACTOR SHALL CONSTRUCT ALL IMPROVEMENTS IN SUCH A MANNER AS WILL PROTECT ALL EXISTING UNDERGROUND UTILITIES AND, IN THE EVENT OF ANY CONFLICTS, SHALL NOTIFY THE ENGINEER BEFORE PROCEEDING.
3. SEE IRRIGATION PLANS FOR PROPOSED IRRIGATION PIPE ALIGNMENT.
4. COORDINATE EXACT POINTS OF CONNECTION TO BUILDING PLUMBING AND NOTIFY THE ENGINEER OF ANY CONFLICT SO THAT ADJUSTMENTS CAN BE MADE IF NEEDED.
5. SAWCUT EXISTING CONCRETE IMPROVEMENTS AS NECESSARY TO INSTALL NEW WATER OR SEWER IMPROVEMENTS. CONSTRUCT NEW CONCRETE IMPROVEMENTS TO MATCH ADJACENT CONCRETE IMPROVEMENTS AND JOIN TOGETHER WITH DOWEL BARS PER DETAIL [C/CX1.1]
6. INSTALLATION, TYPE, AND MANUFACTURER'S MODELS OF DOMESTIC WATER METERS, DRAIN INLETS/OUTLETS AND OTHER APPURTENANCES OF SITE UTILITY SYSTEMS SHALL BE DONE IN STRICT ACCORDANCE WITH GOVERNING AUTHORITY REQUIREMENTS.
7. LAYOUT OF MATERIALS, EQUIPMENT AND SYSTEMS IS GENERALLY DIAGRAMMATIC UNLESS SPECIFICALLY DIMENSIONED. SOME WORK MAY BE SHOWN OFFSET FOR CLARITY. THE ACTUAL LOCATIONS OF ALL MATERIALS, PIPING, FIXTURES, EQUIPMENT, SUPPORTS, ETC., SHALL BE CAREFULLY PLANNED PRIOR TO INSTALLATION OF ANY WORK TO AVOID ALL INTERFERENCES WITH EACH OTHER OR WITH STRUCTURAL, ELECTRICAL, PLUMBING AND MECHANICAL, ARCHITECTURAL OR ANY OTHER ELEMENTS. ALL CONFLICTS SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT AND THE ENGINEER PRIOR TO THE INSTALLATION OF ANY WORK OR THE ORDERING OF ANY EQUIPMENT.
8. ANY INSPECTION TO BE MADE BY THE AUTHORITY HAVING JURISDICTION SHALL REQUIRE A MINIMUM OF 24 HOUR NOTICE.
9. PURITY TESTS ARE REQUIRED ON ALL WATER SYSTEM INSTALLATIONS. CONTRACTOR TO COORDINATE WITH THE AUTHORITY HAVING JURISDICTION.
10. IF THE TOP OF THE STEM OF ANY WATER GATE VALVE IS DEEPER THAN 4' BELOW FINISHED PAVEMENT GRADE, THE CONTRACTOR SHALL INSTALL A STEM EXTENSION SO THAT THE TOP OF THE STEM, WITH EXTENSION, SHALL BE NO DEEPER THAN 4' NOR SHALLOWER THAN 2' FROM FINISHED GRADE.
11. BACKFILL UTILITY TRENCHES PER DETAIL [D/CX1.1]
12. ADJUST EXISTING UTILITY LIDS TO FINISHED GRADE PER UTILITY COMPANY STANDARDS AND DETAIL [E/CX1.1] AND INSTALL TRAFFIC RATED LIDS WHERE LOCATED IN A TRAFFIC AREA.



KEY MAP

SCALE: 1"=10'

0 5 10 20
SCALE IN FEET

811 Know what's below. Call before you dig.

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CONSTRUCTION DOCUMENTS

PROFESSIONAL SEAL

REGISTERED PROFESSIONAL ENGINEER LANE R. BAZZANELLA No. 47155 CIVIL STATE OF CALIFORNIA
27/18/2024
Date Signed:

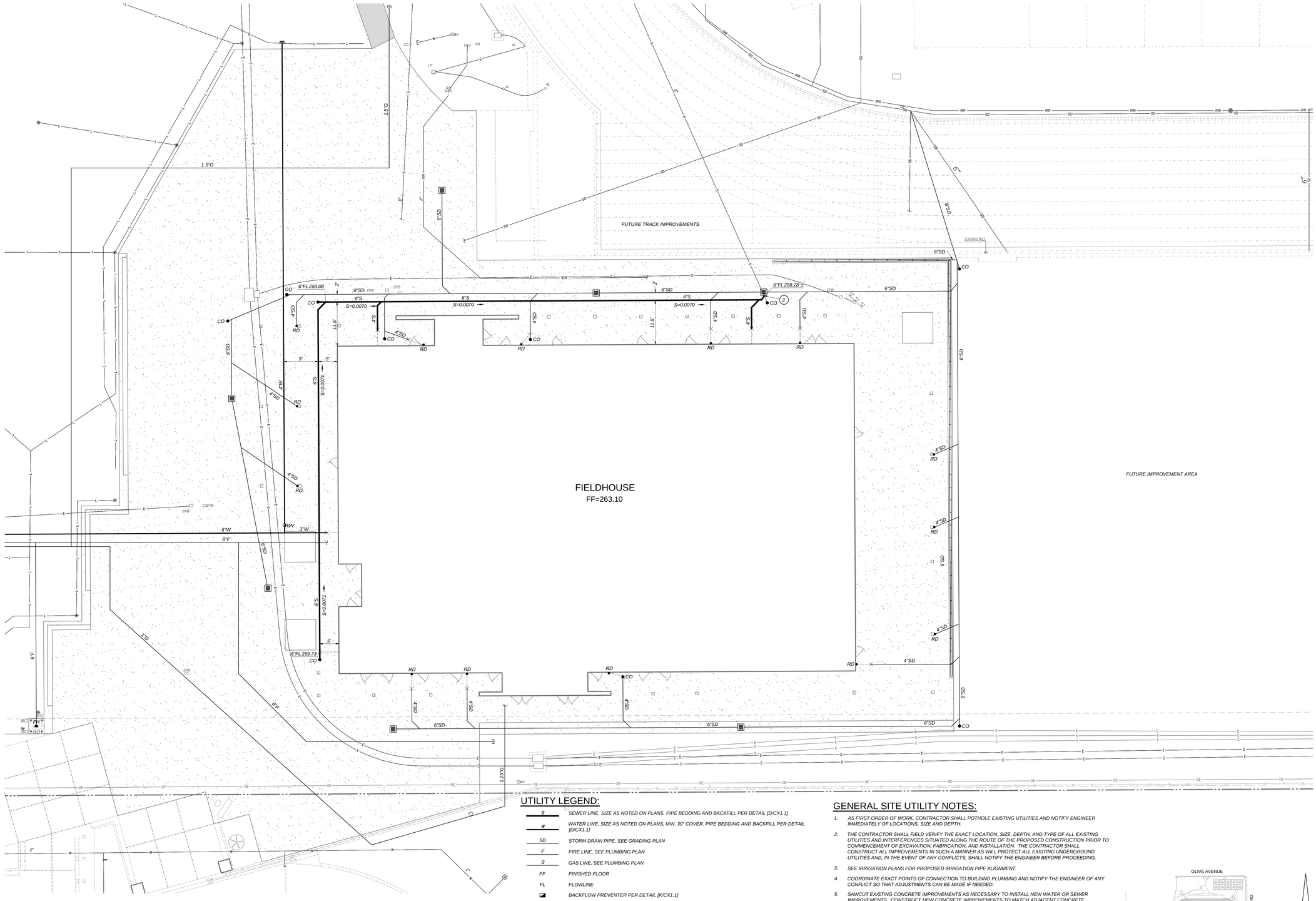
PROJECT NUMBER	20-51
DATE	1/13/2025
DSA APPLICATION NO.	02-121624
FILE NO.	20-H3
PTN NO.	65243-153
DRAWN BY	DG
REVISIONS	

CONSTRUCTION DOCUMENTS

PARTIAL UTILITY PLAN

C6.1

Drawing: P:\22-02\DGN\Production\Drawings\222102_UTIL.dwg, C6.1 — Plotted by: dgrove Jan 16, 2025 - 7:45pm



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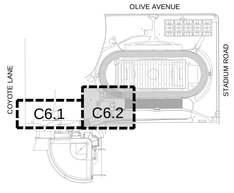
6	WATER VALVE PER CITY STANDARD DETAIL W-8
7	EXCAVATE UNDER CURB & GUTTER, OR IF REMOVED, REPLACE TO CITY STANDARDS AND REQUIREMENTS
8	CONTRACTOR SHALL REPLACE SURFACING IN KIND AS NECESSARY AND REPAIR ANY DAMAGE DONE TO EXISTING IMPROVEMENTS TO MATCH EXISTING CONDITIONS

GENERAL SITE UTILITY NOTES:

1. AS FIRST ORDER OF WORK, CONTRACTOR SHALL POTHOLE EXISTING UTILITIES AND NOTIFY ENGINEER IMMEDIATELY OF LOCATIONS, SIZE AND DEPTH.
2. THE CONTRACTOR SHALL FIELD VERIFY THE EXACT LOCATION, SIZE, DEPTH, AND TYPE OF ALL EXISTING UTILITIES AND INTERFERENCES SITUATED ALONG THE ROUTE OF THE PROPOSED CONSTRUCTION PRIOR TO COMMENCEMENT OF EXCAVATION, FABRICATION, AND INSTALLATION. THE CONTRACTOR SHALL CONSTRUCT ALL IMPROVEMENTS IN SUCH A MANNER AS WILL PROTECT ALL EXISTING UNDERGROUND UTILITIES AND, IN THE EVENT OF ANY CONFLICTS, SHALL NOTIFY THE ENGINEER BEFORE PROCEEDING.
3. SEE IRRIGATION PLANS FOR PROPOSED IRRIGATION PIPE ALIGNMENT.
4. COORDINATE EXACT POINTS OF CONNECTION TO BUILDING PLUMBING AND NOTIFY THE ENGINEER OF ANY CONFLICT SO THAT ADJUSTMENTS CAN BE MADE IF NEEDED.
5. SAWCUT EXISTING CONCRETE IMPROVEMENTS AS NECESSARY TO INSTALL NEW WATER OR SEWER IMPROVEMENTS. CONSTRUCT NEW CONCRETE IMPROVEMENTS TO MATCH ADJACENT CONCRETE IMPROVEMENTS AND JOIN TOGETHER WITH DOWEL BARS PER DETAIL [C/CX1.1]
6. INSTALLATION, TYPE, AND MANUFACTURER'S MODELS OF DOMESTIC WATER METERS, DRAIN INLETS/OUTLETS AND OTHER APPURTENANCES OF SITE UTILITY SYSTEMS SHALL BE DONE IN STRICT ACCORDANCE WITH GOVERNING AUTHORITY REQUIREMENTS.
7. LAYOUT OF MATERIALS, EQUIPMENT AND SYSTEMS IS GENERALLY DIAGRAMMATIC UNLESS SPECIFICALLY DIMENSIONED. SOME WORK MAY BE SHOWN OFFSET FOR CLARITY. THE ACTUAL LOCATIONS OF ALL MATERIALS, PIPING, FIXTURES, EQUIPMENT, SUPPORTS, ETC., SHALL BE CAREFULLY PLANNED PRIOR TO INSTALLATION OF ANY WORK TO AVOID ALL INTERFERENCES WITH EACH OTHER OR WITH STRUCTURAL, ELECTRICAL, PLUMBING AND MECHANICAL ARCHITECTURAL OR ANY OTHER ELEMENTS. ALL CONFLICTS SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT AND THE ENGINEER PRIOR TO THE INSTALLATION OF ANY WORK OR THE ORDERING OF ANY EQUIPMENT.
8. ANY INSPECTION TO BE MADE BY THE AUTHORITY HAVING JURISDICTION SHALL REQUIRE A MINIMUM OF 24 HOUR NOTICE.
9. PURITY TESTS ARE REQUIRED ON ALL WATER SYSTEM INSTALLATIONS. CONTRACTOR TO COORDINATE WITH THE AUTHORITY HAVING JURISDICTION.
10. IF THE TOP OF THE STEM OF ANY WATER GATE VALVE IS DEEPER THAN 4' BELOW FINISHED PAVEMENT GRADE, THE CONTRACTOR SHALL INSTALL A STEM EXTENSION SO THAT THE TOP OF THE STEM, WITH EXTENSION, SHALL BE NO DEEPER THAN 4' NOR SHALLOWER THAN 2' FROM FINISHED GRADE.
11. BACKFILL UTILITY TRENCHES PER DETAIL [D/CX1.1]
12. ADJUST EXISTING UTILITY LIDS TO FINISHED GRADE PER UTILITY COMPANY STANDARDS AND DETAIL [E/CX1.1] AND INSTALL TRAFFIC RATED LIDS WHERE LOCATED IN A TRAFFIC AREA.



KEY MAP

SCALE: 1"=10'

0 5 10 20
SCALE IN FEET

Know what's below. Call before you dig.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 01/23/2025

PBK

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Blair, Church & Flynn
CONSULTING ENGINEERS

MADERA HIGH SCHOOL FIELDHOUSE

200 SOUTH L STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

PROFESSIONAL SEAL

REGISTERED PROFESSIONAL ENGINEER
LANCE R. BARTLETT
No. 31033
CIVIL
STATE OF CALIFORNIA

07/18/2024
Date Signed:

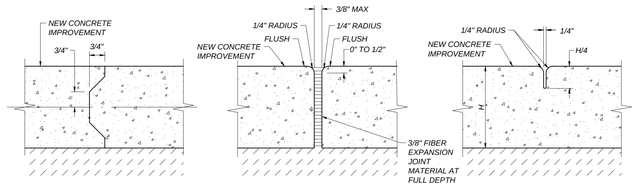
PROJECT NUMBER	20-51
DATE	1/13/2025
DSA APPLICATION NO.	02-121624
FILE NO.	20-H3
PTN NO.	65243-153
DRAWN BY	DG
REVISIONS	

CONSTRUCTION DOCUMENTS

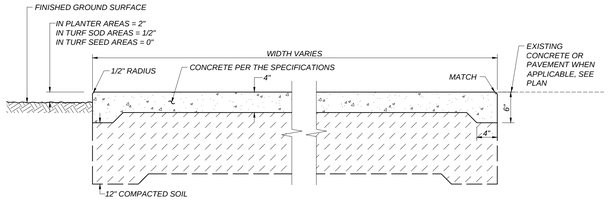
PARTIAL UTILITY PLAN

C6.2

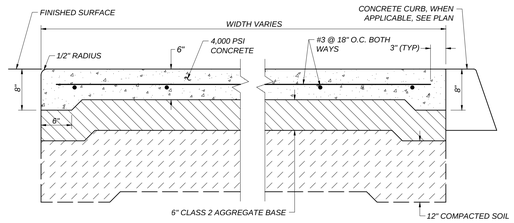
Drawing: P:\20\20-51\Site\Production\Drawings\222\20_H3_UTIL.dwg, C6.2 — Plot by: dgarcia Jan 16, 2025 - 1:46pm



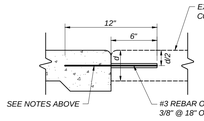
CONSTRUCTION JOINT | EXPANSION JOINT | WEAKENED PLANE JOINT



A CX1.1 REGULAR-DUTY CONCRETE
NOT TO SCALE



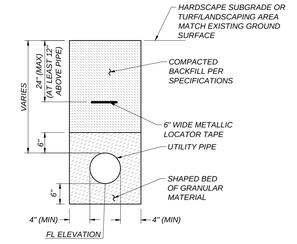
B CX1.1 HEAVY DUTY CONCRETE
NOT TO SCALE



C CX1.1 DOWEL BAR
NOT TO SCALE

NOTES:

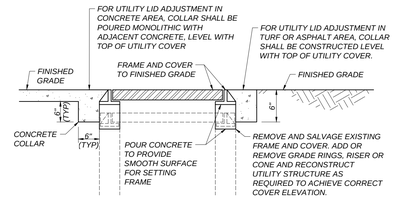
1. DRILL HOLE 1/8" LARGER THAN DOWEL DIAMETER.
2. CLEAN HOLE THOROUGHLY OF DUST AND FRAGMENTS WITH WATER, WIRE BRUSH, AND AIR.
3. FILL HOLE WITH APPROVED ADHESIVE BEFORE INSERTING DOWEL INTO EXISTING CONCRETE.
4. WHERE SMOOTH DOWEL IS USED, APPLY BOND BREAKER TO SIDE IN NEW CONCRETE AS REQUIRED TO ALLOW HORIZONTAL MOVEMENT OF CONCRETE.
5. WHERE DEFORMED REBAR DOWEL IS USED, PROVIDE APPROVED WRAP ON SIDE IN NEW CONCRETE AS REQUIRED TO ALLOW HORIZONTAL MOVEMENT OF CONCRETE.
6. ANCHOR TESTING NOT REQUIRED



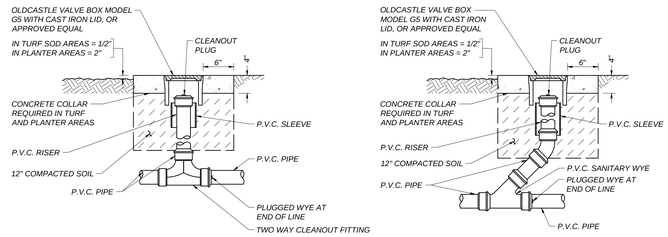
NOTE:

1. DETAIL CORRESPONDS WITH THE RECOMMENDATIONS STATED IN SECTION 4.9 OF THE GEOTECHNICAL REPORT DATED JULY 14, 2023 (BSK PROJECT G00001118).

D CX1.1 TRENCH DETAIL FOR UTILITY LINES
NOT TO SCALE



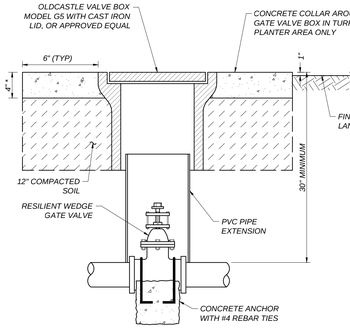
E CX1.1 ADJUST UTILITY LID
NOT TO SCALE



NOTES:

1. USE ONE-WAY CLEANOUTS AT ALL ANGLE POINTS
2. TWO-WAY CLEANOUTS AT ALL OTHER LOCATIONS
3. 6" THICK CONCRETE COLLAR IN VEHICULAR TRAFFIC AREAS

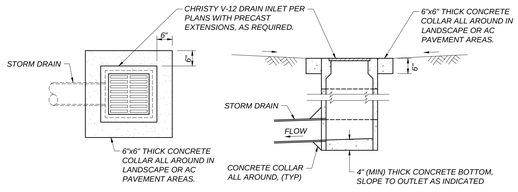
F CX1.1 SURFACE CLEANOUT
NOT TO SCALE



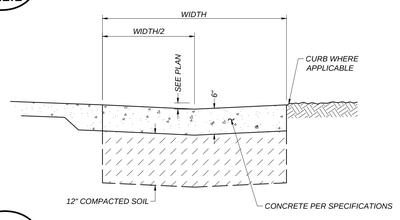
NOTE:

* COLLAR TO BE 6" THICK IN VEHICULAR TRAFFIC AREAS

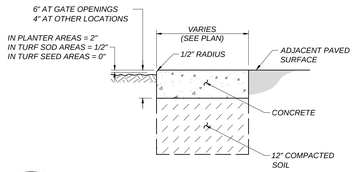
G CX1.1 GATE VALVE AND LID
NOT TO SCALE



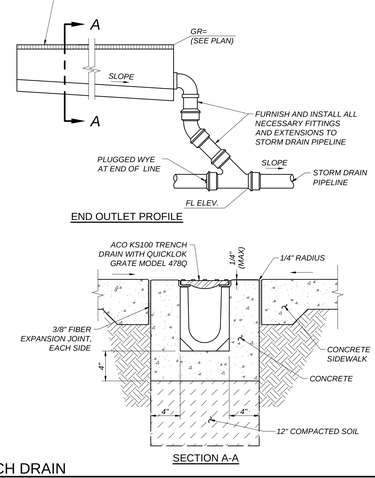
H CX1.1 V-12 DRAIN INLET WITH CONCRETE COLLAR
NOT TO SCALE



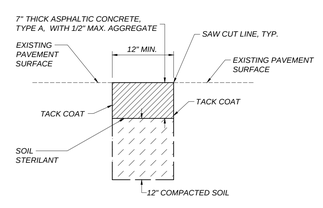
I CX1.1 CONCRETE VALLEY GUTTER
NOT TO SCALE



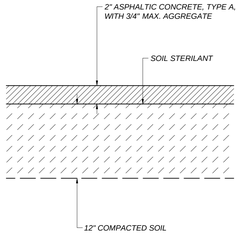
M CX1.1 CONCRETE MOWSTRIP
NOT TO SCALE



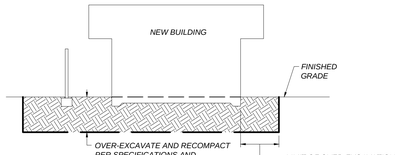
J CX1.1 TRENCH DRAIN
NOT TO SCALE



N CX1.1 ASPHALT CONCRETE PLUG
NOT TO SCALE

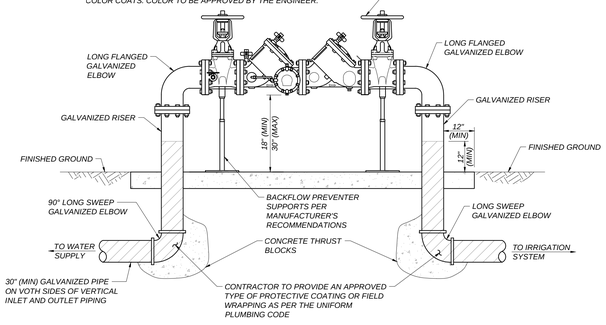


O CX1.1 TEMPORARY ASPHALT CONCRETE PAVEMENT
NOT TO SCALE

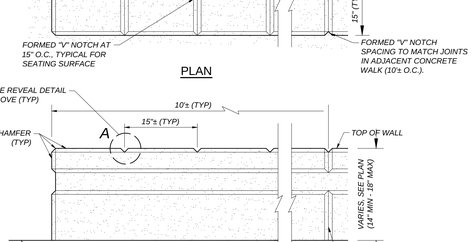


P CX1.1 OVER-EXCAVATION
NOT TO SCALE

NOTE:
ALL NON-GALVANIZED SURFACES AND DAMAGED SURFACES TO BE PAINTED WITH RUST INHIBITIVE PRIMER AND TWO COLOR COATS. COLOR TO BE APPROVED BY THE ENGINEER.



K CX1.1 BACKFLOW PREVENTER
NOT TO SCALE

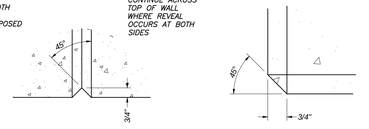


PLAN

FRONT ELEVATION

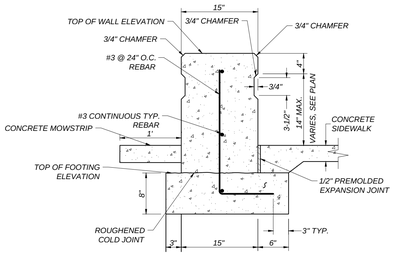
NOTE:
REVEALS OCCUR AT BOTH SIDES OF WALL WHERE CONCRETE WALL IS EXPOSED ON BOTH SIDES

CONTINUE ACROSS TOP OF WALL WHERE REVEAL OCCURS AT BOTH SIDES



CONCRETE "V" REVEAL | CONCRETE CHAMFER

CONCRETE REVEAL
NOT TO SCALE



L CX1.1 SEATING WALL
NOT TO SCALE

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 01/23/2025

PBK

ARCHITECT PBK Architects, Inc.
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7790 North Palm Avenue
Fresno, CA 93711
559-448-8400 P
559-448-8467 F
PBK.com

Blair, Church & Flynn
CONSULTING ENGINEERS

MADERA HIGH SCHOOL FIELDHOUSE

200 SOUTH L STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

PROFESSIONAL SEAL

REGISTERED PROFESSIONAL ENGINEER LANCE R. BAZZANELLA No. 47033 Civil STATE OF CALIFORNIA
07/18/2024
Date Signed:

PROJECT NUMBER	20-51
DATE	1/13/2025
DSA APPLICATION NO.	02-121624
FILE NO.	20-H3
PTN NO.	65243-153
DRAWN BY	DG

REVISIONS

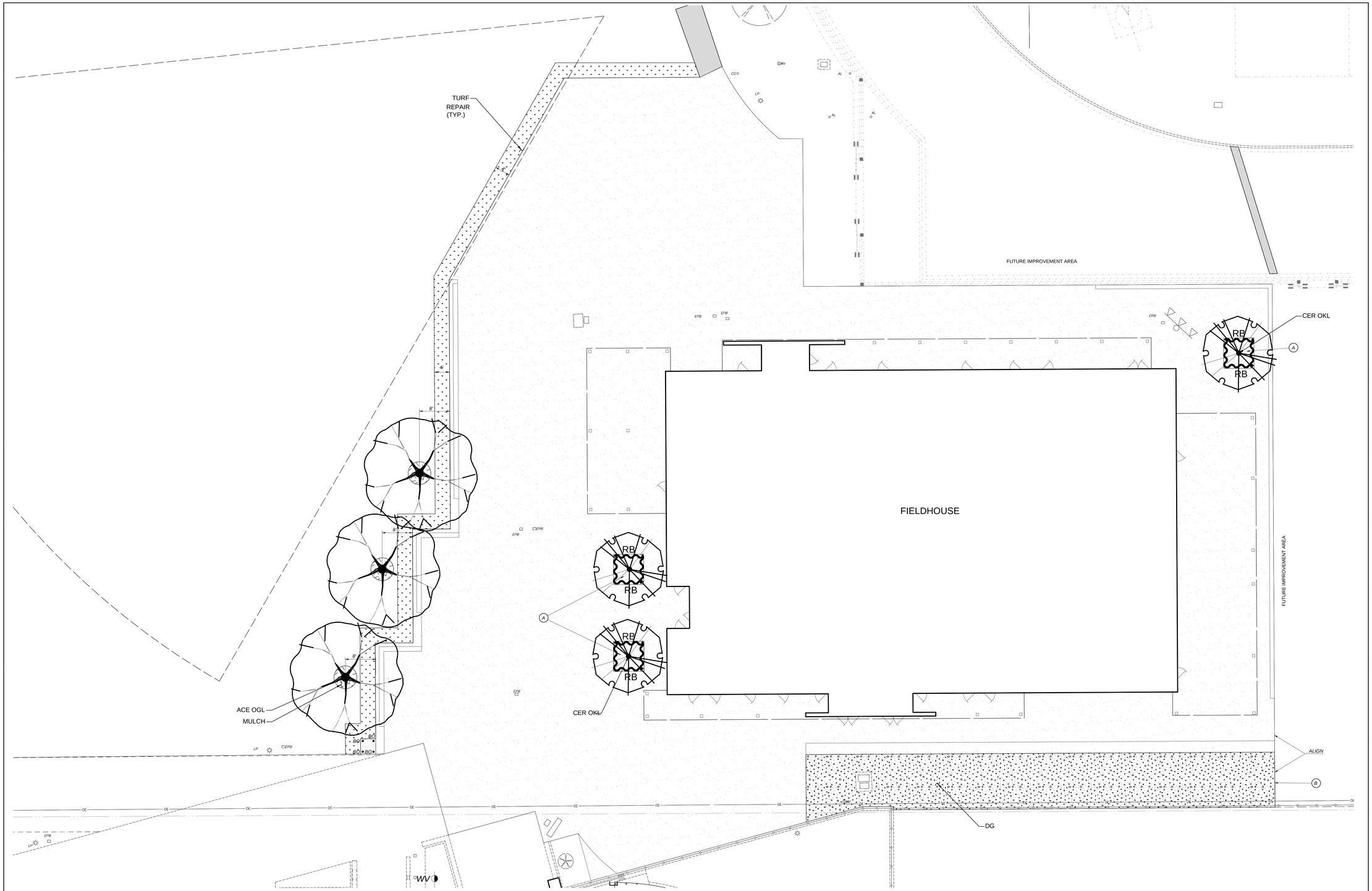
#	DESCRIPTION	DATE

CONSTRUCTION DOCUMENTS

DETAILS

CX1.1

Drawing: P:\22\22053\BackProduction\Drawings\222052_DTS1.dwg, CX1.1 — Plot by: dgrace Jan 16, 2025 - 7:38am



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CONSULTING ENGINEERS

MADERA HIGH SCHOOL FIELDHOUSE

200 SOUTH L STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

PROFESSIONAL SEAL

REGISTERED LANDSCAPE ARCHITECT
DAVID W. BRILEY
No. 2787
1/23/25
RENEWAL DATE
STATE OF CALIFORNIA

PROJECT NUMBER	20-51
DATE	1/13/2025
DSA APPLICATION NO.	02-121624
FILE NO.	20-H3
PTN NO.	65243-153
DRAWN BY	

REVISIONS

CONSTRUCTION DOCUMENTS

PLANTING PLAN

L1.1

LANDSCAPE PLANTING OBSERVATION LOG

ITEM NO.	WORK ITEM DESCRIPTION	REVIEWED & ACCEPTED BY OWNER'S REP OR LAND ARCH		
		PRINT NAME	SIGNATURE	DATE
PL-1	REPORT & PROTECTION OF EXISTING TREES			
PL-2	RIPPING OF PLANTING AREAS			
PL-3	SOIL CONDITIONING & TILLAGE DEPTH			
PL-4	IRRIGATION COVERAGE PRIOR TO PLANTING			
PL-5	FINISH GRADING PRIOR TO PLANTING			
PL-6	TREES - INITIAL QUALITY & LAYOUT			
PL-7	PLANTS - INITIAL QUALITY & LAYOUT			
PL-8	GRANULAR PRE-EMERGENT HERBICIDE IN MULCHED AREAS			
PL-9	WOOD MULCH DEPTH			

NOTES: THE ORIGINAL VERSION OF THIS LOG SHALL BE MAINTAINED ON THE AS-BUILT RECORD DRAWING SET.
WORK ITEMS MAY NOT BE REVIEWED IF PRIOR WORK ITEMS HAVE NOT BEEN ACCEPTED.

LANDSCAPE SHADE CALCULATIONS *SHADING PER CALGREEN 5.106.12*

SITE SHADING - LANDSCAPE & HARDSCAPE	QUANTITY PROPOSED (SF)	PERCENT REQUIRED	SHADE AREA REQUIRED (SF)
LANDSCAPED AREA (EXCLUDING SPECIAL USE & PARKING LANDSCAPE AREAS)	0	20	0
UNCOVERED HARDSCAPE AREA (EXCLUDING PARKING HARDSCAPE AREAS)	18,004	20	3,601
TOTAL SITE SHADE REQUIRED			3,601

PROVIDED SHADE TREES	PROVIDED SHADE AREA	NO. TREES	
VERY LARGE (40' dia.= 1256 SF)	0	0	
LARGE (35' dia.= 962 SF)	2,886	3	
MEDIUM (30' dia.= 707 SF)	0	0	
SMALL (20' dia.= 314 SF)	942	3	
TOTALS	3,828	6	
OVER (UNDER) LANDSCAPE & HARDSCAPE SHADE REQUIREMENT			227

WATER CONSERVATION COMPLIANCE STATEMENT:

I HAVE COMPLIED WITH THE CRITERIA OF THE LANDSCAPE WATER CONSERVATION ORDINANCE AND GUIDELINES, AND HAVE APPLIED THEM FOR THE EFFICIENT USE OF WATER IN THE PLANTING DESIGN PLAN.

DAVID W. BRILEY, RLA 2787

LANDSCAPE PLANTING AREA REQUIREMENT (DSA 1-L)

	AREA (SF)
NEW BUILDING FOOTPRINT:	11,689
REQUIRED MWELO COMPLIANT PLANTING:	8,767
EXISTING IRRIGATED AREA DESIGNATED FOR REMOVAL:	16,616
PROPOSED MWELO COMPLIANT PLANTING:	-
TOTAL CREDIT FOR MWELO COMPLIANT PLANTING:	16,616
EXCESS / (DEFICIT) OF PROPOSED COMPLIANT PLANTING:	7,849

SEE SHEET L1.2 FOR PLANTING NOTES, LEGEND AND DETAILS

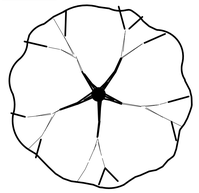
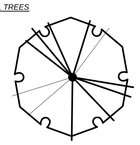
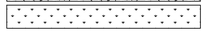
SCALE: N 1"=10'
0 5 10 20
SCALE IN FEET

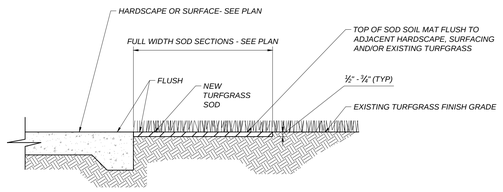
811 Know what's below. Call before you dig.

Drawing: P:\2051\05\Site\Production\Drawings\222182_L401 Key Planting Plan — Plotted by: Jamie Jan 16, 2025 - 7:56am

PLANT LEGEND

SUNSET ZONE: 9 MS = MATURE SIZE

SYMBOL	CODE	BOTANICAL / COMMON NAME	CONT.	WATER USE	QTY.	DETAIL	REMARKS
LARGE TREES							
	ACE OGL	ACER RUBRUM `OCTOBER GLORY` / OCTOBER GLORY RED MAPLE	24"BOX	M	3	A/L1.2	DECIDUOUS.PARTIAL SUN TO FUN SUN. STANDARD FORM. RED FLOWERS IN SPRING. MS: 50' H X 25'-35' W.
SMALL TREES							
	CER OKL	CERCIS CANADENSIS TEXENSIS `OKLAHOMA` / OKLAHOMA REDBUD	24"BOX	M	3	A/L1.2	DECIDUOUS. FULL SUN. STANDARD FORM. PINK FLOWERS IN SPRING. MS: 15' H X 15' W
GROUND COVERS							
	DG	STABILIZED DECOMPOSED GRANITE	N/A	N/A	1,797 SF	E/L1.2	STABILIZED DG, 4" THICKNESS PER DETAIL. TAN/ BEIGE COLOR
	MULCH	WALK-ON WOOD MULCH	N/A	N/A	84 SF	D/L1.2	MIN. 3 INCH COMPRESSED DEPTH. SEE PLANTING NOTE #18. QUANTITY IS IN ADDITION TO THAT PROVIDED IN THE MIXED PLANTING AREA.
	TURF	`CELEBRATION` BERMUDAGRASS	SOD	M	991 SF	B/L1.2	
RB		ROOT BARRIER UB24-2				C/L1.3	
A		8' SQ TREE GRATE AND FRAME (3) IRONSMITH 'OLYMPIAN' 9622					INSTALL PER MANUFACTURER'S SPECIFICATIONS AND DETAILS AT A THICKENED CONCETE EDGE PER CIVIL DETAIL.
B		2X4 TREX HEADER PER E/ L2.1					

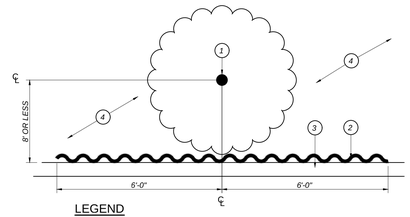


NOTE:

IF THE EXISTING TURFGRASS FINISH GRADE IS HIGHER OR LOWER THAN THE NEW FINISH SURFACE, TRANSITION GRADE THE NEW SOD AT A MAXIMUM 1V:12H SLOPE

B / L1.2 TURF SOD INSTALLATION

NOT TO SCALE

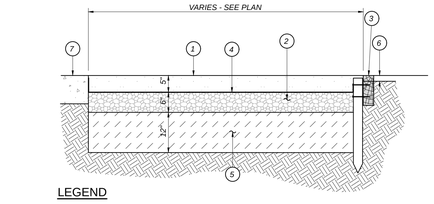


LEGEND

1. *TREE TRUNK.*
2. *12 LF OF 24"-DEEP ROOT CONTROL BARRIER: DEEP ROOT UB24-2 OR EQUIVALENT. CENTER BARRIER ON TRUNK OF TREE. INSTALL PER MANUFACTURER'S SPECIFICATIONS.*
3. *HARDSCAPE ELEMENT: CURB, SIDEWALK, WALL, ETC.*
4. *PLANTING AREA.*
5. *INSTALL ROOT CONTROL BARRIER ON ALL SIDES OF THE PLANTING AREA WHEN SURROUNDED BY HARDSCAPE WITHIN 8' OF THE TREE TRUNK.*

C / L1.2 ROOT CONTROL BARRIER

NOT TO SCALE

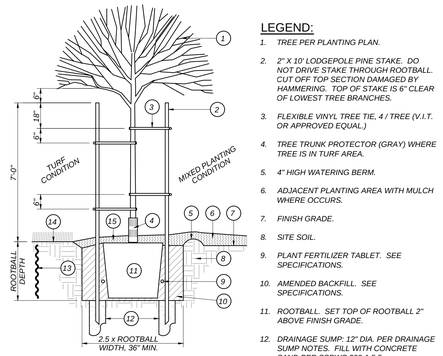


LEGEND

1. *STABILIZED DECOMPOSED GRANITE SURFACE. SEE SPECIFICATIONS FOR MATERIALS AND METHODS. CONTRACTOR TO SUBMIT SAMPLE FOR APPROVAL.*
2. *3/4" MAX TYPE 2 AGGREGATE BASE, COMPACTED TO 95%.*
3. *2x4 TREX HEADER WITH BEVELED JOINTS. SECURE WITH METAL STAKES AT 6' O.C. AND AT EACH SIDE OF JOINT OR CORNER.*
4. *NON-WOVEN GEOTEXTILE FABRIC, MINIMUM 4.0 OZ/SY. WRAP UP 1.5" HIGH ON ALL SIDES OF HEADER.*
5. *SUBGRADE. SCARIFY TO A DEPTH OF 12" MOISTURE CONDITION AND RECOMPACT TO 95% RELATIVE DENSITY.*
6. *FINISH GRADE IN PLANTING AREA SHALL BE 2" BELOW TOP OF HEADER FOR MULCH, 0.5" BELOW FOR TURF SOD, FLUSH FOR TURF SEED OR STOLONS.*
7. *ADJACENT PAVED SURFACE OR CURB. WHERE DG IS ADJACENT TO WALKABLE SURFACE, TOP OF DG IS TO BE LEVEL WITH PAVEMENT'S FINISH SURFACE.*

E / L1.2 STABILIZED DECOMPOSED GRANITE SURFACE

NOT TO SCALE



LEGEND:

1. *TREE PER PLANTING PLAN.*
2. *2" X 10' LODGEPOLE PINE STAKE. DO NOT DRIVE STAKE THROUGH ROOTBALL. CUT OFF TOP SECTION DAMAGED BY HAMMERING. TOP OF STAKE IS 6" CLEAR OF LOWEST TREE BRANCHES.*
3. *FLEXIBLE VINYL TREE TIE, 4 / TREE (V.I.T. OR APPROVED EQUAL.)*
4. *TREE TRUNK PROTECTOR (GRAY) WHERE TREE IS IN TURF AREA.*
5. *4" HIGH WATERING BERM.*
6. *ADJACENT PLANTING AREA WITH MULCH WHERE OCCURS.*
7. *FINISH GRADE.*
8. *SITE SOIL.*
9. *PLANT FERTILIZER TABLET. SEE SPECIFICATIONS.*
10. *AMENDED BACKFILL. SEE SPECIFICATIONS.*
11. *ROOTBALL. SET TOP OF ROOTBALL 2" ABOVE FINISH GRADE.*
12. *DRAINAGE SUMP: 12" DIA. PER DRAINAGE SUMP NOTES. FILL WITH CONCRETE SAND PER SSPWC 200-1.5.5.*
13. *ROOT CONTROL BARRIER WHERE REQUIRED. SEE GENERAL PLANTING NOTES AND DETAIL [K/L1.2].*
14. *ADJACENT TURFGRASS PLANTING WHERE OCCURS.*
15. *MULCH, MINIMUM 3" DEPTH. SEE GENERAL PLANTING NOTE 17.*

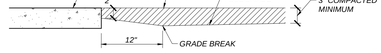
DRAINAGE SUMP NOTES:

A. DRAINAGE SUMPS SHALL PENETRATE THROUGH AND BEYOND ANY UNDERLYING PAVEMENT OR HARDPAN SOIL STRATUM, AND SUCH PAVEMENT OR HARDPAN MATERIAL SHALL BE REMOVED FROM THE SUMP HOLES.

B. THE SUMP HOLE SHALL BE DRILLED TO MINIMUM DEPTH OF TEN (10) FEET, UNLESS VISUAL EVIDENCE OF A SUBSURFACE SAND AND/OR GRAVEL DRAINAGE STRATUM IS APPARENT AT A LESSER DEPTH. THE SUMP HOLES SHALL EXTEND INTO THE DRAINAGE STRATUM A MINIMUM OF ONE (1) FOOT.

A / L1.2 DOUBLE STAKE TREE PLANTING

NOT TO SCALE



D / L1.2 MULCH DETAIL

NOT TO SCALE

PLANTING NOTES:

1. *IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE IF IT IS OBVIOUS THAT OBSTRUCTIONS OR STRUCTURES, IRRIGATION SYSTEM MALFUNCTION, EXISTING TREES OR PLANTS, GRADE DIFFERENCES OR CHANGES IN THE SITE PLAN ARE PRESENT THAT WILL IMPACT THE PLANTING DESIGN. FAILURE TO GIVE SUCH NOTIFICATION SHALL PLACE THE RESPONSIBILITY ON THE CONTRACTOR FOR ANY REVISIONS OR REPLACEMENTS NECESSARY FOR CORRECTION.*
2. *ANY EXISTING PLANTING SHOWN ON THE PLAN IS FOR REFERENCE ONLY. THE CONTRACTOR SHALL VERIFY THE EXISTING PLANTING AT THE SITE PRIOR TO STARTING WORK, UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL PROTECT THE EXISTING PLANTING ADJACENT TO THE WORK FROM DAMAGE OR DISTRESS.*
3. *ALL TREES AND SHRUBS SHALL BE OF CLASS A QUALITY WITHOUT PESTS, DISEASE OR DAMAGE, SHALL BE WELL ESTABLISHED IN THEIR CONTAINERS WITHOUT GIRDLING ROOTS OR EXCESSIVE TOP GROWTH, AND SHALL COMPLY WITH THE REQUIREMENTS OF THE "AMERICAN STANDARDS FOR NURSERY STOCK" (ANSI Z60.1).*
4. *NOTIFY THE LANDSCAPE ARCHITECT PRIOR TO THE INSTALLATION OF IRRIGATION COMPONENTS AND TREE AND/OR SHRUB PLANTING FOR APPROVAL OF THE PLANT LAYOUT AND PLANT QUALITY. PLANT LOCATIONS SHALL AVOID CONFLICTS WITH EXISTING IMPROVEMENTS, PLANTINGS OR UTILITIES, LIGHT POLES WHILE MEETING THE DESIGN INTENT. DO NOT PLANT TREES WITHIN 15 FEET OF LIGHT POLES UNLESS SPECIFICALLY AUTHORIZED. FAILURE TO OBTAIN SUCH APPROVAL SHALL PLACE THE RESPONSIBILITY ON THE CONTRACTOR FOR ANY RELOCATION OR REPLACEMENT OF IRRIGATION COMPONENTS, PLANTED TREES AND/OR SHRUBS.*
5. *PLANT QUANTITIES ARE PROVIDED FOR BIDDING CONVENIENCE ONLY. THE CONTRACTOR SHALL PROVIDE SUFFICIENT QUANTITIES OF PLANTS EQUAL TO THE SYMBOL COUNT OR TO FILL THE AREA SHOWN ON THE PLAN AT THE SPECIFIED TRIANGULAR SPACING.*
6. *WHERE GROUND COVER PLANTS ARE SHOWN AT A SPECIFIED SPACING, THE GROUND COVER PLANTING CONTINUES UNDERNEATH THE TALLER SHRUBS AND TREES AS SHOWN IN THE PLANTING DETAILS. DO NOT PLANT GROUND COVER IN SHRUB OR TREE WATERING BASINS.*
7. *ALL NEW TREES LOCATED WITHIN 8 FEET OF PAVEMENT OR STRUCTURES SHALL HAVE A ROOT CONTROL BARRIER INSTALLED WHEN PLANTED. UNLESS OTHERWISE SPECIFIED, INSTALL A 12 FOOT LONG X 24 INCH DEEP LINEAR POLYETHYLENE BARRIER VESPRO OR EQUAL AT THE EDGE OF PAVEMENT/STRUCTURE, CENTERED ON THE TREE TRUNK AS SHOWN IN THE PLANTING DETAILS.*
8. *REMOVE NURSERY STAKES FROM TREES AFTER TREE STAKING OR GUYING AS SHOWN IN THE DETAILS.*
9. *INSTALL PERFORATED POLYETHYLENE TREE TRUNK PROTECTORS FOR ALL NEW TREES PLANTED IN TURF. UNLESS NOTED OTHERWISE, MAINTAIN A MINIMUM 6 FOOT DIAMETER MULCHED AREA AT THE BASE OF THE TREE INSIDE THE WATERING BASIN.*
10. *THE CONTRACTOR SHALL PRUNE NEW TREES ONLY WHEN SPECIFICALLY DIRECTED BY THE LANDSCAPE ARCHITECT. TREES HEADED BACK WITHOUT INTACT SCAFFOLDING BRANCH STRUCTURE OR IN ROOT-BOUND CONTAINERS SHALL BE REJECTED.*
11. *SUBMIT REPRESENTATIVE SOIL SAMPLES OF NATIVE AND PROPOSED IMPORT, IF NEEDED, PLANTING TOPSOIL TO A SOIL LAB FOR HORTICULTURAL ANALYSES AND FERTILITY RECOMMENDATIONS. AMEND SOIL ACCORDING TO THE RECOMMENDATIONS OF THE SOILS REPORT AND LANDSCAPE ARCHITECT'S DIRECTION. SEE THE LANDSCAPE PLANTING SPECIFICATIONS FOR ADDITIONAL INSTRUCTIONS.*
12. *PROVIDE SANDY LOAM TOPSOIL PER SPECIFICATION IN ALL RAISED PLANTERS AND WHERE IMPORT TOPSOIL IS REQUIRED. NATIVE SITE SOIL MAY BE USED IN RAISED PLANTERS ONLY WHEN THE NATIVE SITE SOIL MEETS THE CRITERIA FOR SANDY LOAM TOPSOIL AS DETERMINED BY A SOIL ANALYSIS.*
13. *PRIOR TO SOIL CONDITIONING, RIP IN TWO DIFFERENT DIRECTIONS WITH TINES AT 12 INCH SPACING, ALL TURFGRASS AREAS TO A 12 INCH DEPTH, AND SHRUB/GROUND COVER AREAS TO A 18 INCH DEPTH. ROUGH GRADE AND TILL THE APPROVED SOIL CONDITIONERS AND FERTILIZERS INTO THE TOP 6 INCHES PER THE LANDSCAPE PLANTING SPECIFICATIONS. COMPOST RATE SHALL BE A MINIMUM OF FOUR (4) CUBIC YARDS PER 1,000 SQUARE FEET.*
14. *UPON THE COMPLETION OF THE SOIL CONDITIONING, REMOVE ROCKS AND CLODS 1 INCH DIAMETER AND GREATER FROM THE TOP TWO INCHES OF TOPSOIL, AND ALL DEBRIS. FINISH GRADE THE AREA TO +/- 0.04 FOOT TOLERANCE. FINISH GRADE IN MULCHED AREAS SHALL BE STRAIGHT GRADES WITHOUT HUMPS OR DEPRESSIONS AND SHALL BE 2 INCHES BELOW ADJACENT HARDSCAPE, INLETS OR UTILITY BOX COLLARS. RELATIVE DENSITY OF THE TOPSOIL SHALL NOT EXCEED 85% COMPACTION.*
15. *OBTAIN THE APPROVAL OF THE OWNER'S REPRESENTATIVE TO BEGIN PLANTING OPERATIONS ONCE THE IRRIGATION SYSTEM IS OPERATIONAL AND THE SOIL CONDITIONING AND FINISH GRADING IS COMPLETED.*
16. *AFTER PLANTING IS COMPLETED AND JUST PRIOR TO MULCH INSTALLATION, APPLY A BROAD SPECTRUM PRE-EMERGENT HERBICIDE TO ALL NON-TURFGRASS PLANTING AREAS PER THE MANUFACTURER'S SPECIFICATIONS.*
17. *WHERE MULCH IS TO BE INSTALLED IN AN EXISTING PLANTING AREA, BREAKUP/TILL THE EXISTING SOIL TO A MINIMUM 6 INCH DEPTH PER SPECS, AND ADJUST FINISH GRADE ADJACENT TO HARDSCAPE AND DRAINAGE ELEMENTS TO PROVIDE A 2 INCH DEPTH THAT TRANSITIONS TO THE EXISTING GRADE OVER 1 TO 2 FEET.*
18. *INSTALL A MINIMUM 3 INCH DEPTH OF CHIPPED WALK-ON WOOD MULCH IN ALL PLANTING AREAS AND TREE WATERING BASINS EXCEPT FOR TURFGRASS AREAS. SLOPES 3H:1V OR GREATER, AREAS TO RECEIVE SEED PLANTING, OR AS NOTED ON THE PLAN. AREAS PLANTED WITH FLATS SHALL HAVE A MINIMUM MULCH DEPTH OF 2 INCHES. INSTALL A MINIMUM 3 FOOT RADIUS OF 3 INCH DEEP WOOD MULCH AT THE BASE OF ALL TREES IN NEW TURFGRASS AREAS.*
19. *ALL EXISTING PLANTS AND/OR TURFGRASS SHOWN TO REMAIN AND DAMAGED OR REMOVED BY CONSTRUCTION OPERATIONS AND/OR UTILITY/IRRIGATION/DRAINAGE LINES SHALL BE REPLACED WITH PLANTS THAT MATCH AS CLOSELY AS POSSIBLE TO THE EXISTING PLANT SPECIES, VARIETY AND SIZE. THE REPLACEMENT TURFGRASS SOD VARIETY SHALL BE THE SAME AS SHOWN IN THE PLANTING LEGEND AS IF FOR NEW WORK, OR SHALL MATCH THE EXISTING TURFGRASS VARIETY WHERE EXISTING. TILL SOIL CONDITIONING MATERIALS INTO THE TOP 6 INCHES OF THE SOIL OVER THE AREA OF REPAIR/REPLACEMENT AS IF FOR NEW WORK. ADJUST FINISH GRADE SO NEW TURFGRASS SOD ABUTS FLUSH TO EXISTING SOD GRADE. THE REPLACEMENT PLANTS AND/OR TURFGRASS SOD SHALL BE MAINTAINED AS PART OF THE ORIGINAL SCOPE OF WORK. THE REPAIR OR REPLACEMENT WORK SHALL BE AT THE CONTRACTOR'S SOLE EXPENSE.*
20. *CONTRACTOR SHALL MAINTAIN THE NEW PLANTING FOR HEALTHY AND VIGOROUS GROWTH, WHICH INCLUDES BUT IS NOT LIMITED TO WATERING, WEEDING, FERTILIZING, MOWING AND EDGING (AT LEAST ONCE A WEEK), REMOVING TRASH AND DEBRIS, AND OTHER RELATED ACTIVITIES THROUGHOUT THE DURATION OF THE MAINTENANCE PERIOD UNTIL FINAL ACCEPTANCE.*

CONTRACTOR SPECIAL PLANTING NOTES:

1. *AN ASSESSMENT AND VALUATION OF ONSITE EXISTING TREES SCHEDULED TO REMAIN IN THE AREA OF WORK SHALL BE PERFORMED BY THE CONTRACTOR'S ARBORIST PRIOR TO THE START OF CONSTRUCTION OPERATIONS PER THE 'EXISTING LANDSCAPE PROTECTION' SPECIFICATION.*
2. *THE CONTRACTOR SHALL RIP, CONDITION AND TILL THE ENTIRE EXTENT OF ALL PLANTING AREAS RECEIVING NEW PLANTS PER THE PLANTING NOTES AND 'LANDSCAPE PLANTING' SPECIFICATIONS.*
3. *ALL EXISTING MIXED PLANTING AREAS RECEIVING NEW WOOD MULCH SHALL BE MANUALLY TILLED TO A MINIMUM DEPTH OF 4 INCHES, CLODS BROKEN UP TO A MAXIMUM 1 INCH DIAMETER, FINISH GRADED TO 2 INCHES BELOW ADJACENT SURFACES AND UTILITY/IRRIGATION BOXES WITHIN 12 INCHES OF THE HARDSCAPE EDGE, AND A PRE-EMERGENT HERBICIDE APPLIED PRIOR TO WOOD MULCH INSTALLATION. PROTECT EXISTING PLANTING DURING WOOD MULCH PREPARATION AND INSTALLATION.*
4. *THE ORIGINAL PLANTING OBSERVATION LOG SHALL BE MAINTAINED ON THE AS-BUILT RECORD DRAWING SET.*
5. *THE AS-BUILT RECORD DRAWING SET AND MAINTENANCE MANUAL SHALL BE SUBMITTED AND ACCEPTED PRIOR TO THE SCHEDULING OF A FINAL ACCEPTANCE REVIEW.*

TREE SIZE AND QUALITY STANDARDS

AMERICAN STANDARDS FOR NURSERY STOCK (ANSI Z60.1) AND GUIDELINE SPECIFICATIONS FOR NURSERY TREE QUALITY (URBAN TREE FOUNDATION) SHALL APPLY.

	TYPES 1 & 2 SHADE TREES			TYPE 3 SMALL UPRIGHT TREES**			TYPE 4 SMALL SPREADING TREES***		
CONTAINER SIZE	MIN. CALIPER	MAX. CALIPER	TYPE 1 MIN./MAX. HEIGHT*	MIN. CALIPER	MAX. CALIPER	MIN./MAX. HEIGHT	MIN. CALIPER	MAX. CALIPER	MIN./MAX. HEIGHT
15 GALLON	0.75	2.0	7-10 FT	0.75	2.0	6-8 FT	0.75	2.0	4-8 FT
24" BOX	1.25	3.0	8-12 FT	1.25	3.0	8-10 FT	1.25	3.0	6-10 FT
36" BOX	1.75	3.5	10-16 FT	1.75	3.5	10-14 FT	1.75	3.5	7-12 FT
42" BOX	2.0	4.0	12-20 FT	2.0	4.0	12-18 FT	2.0	4.0	8-14 FT
48" BOX	2.5	5.0	14-26 FT	2.5	5.0	14-22 FT	2.5	5.0	9-16 FT

** TYPE 2 TREE HEIGHTS SHALL NOT BE LESS THAN TWO-THIRDS THE LISTED HEIGHT RANGE.*

*** TYPE 3 TREES SHALL HAVE A MINIMUM OF SEVEN BRANCHES*

**** TYPE 4 TREES SHALL HAVE A MINIMUM OF EIGHT BRANCHES*

CALIPER MEASUREMENT FOR CLUMP OR MULTI-STEM TREES IS ONE-HALF THE SUM OF THE THREE LARGEST TRUNK CALIPERS

CALIPER MEASUREMENT FOR +4" TRUNK IS +6" ABOVE ROOTBALL (NOT INCLUDING ROOTSTOCK). >4" TRUNK IS +12"

TREES SHALL HAVE A CENTRAL LEADER. NEW LEADERS LESS THAN HALF THE DIAMETER OF A HEADED LEADER, BROKEN OR CO-DOMINATE LEADERS ARE NOT ACCEPTABLE

SCAFFOLD BRANCHES SHALL BE LESS THAN 2/3 THE DIAMETER OF THE TRUNK, WITHOUT INCLUDED BARK AT ATTACHMENT. SCAFFOLD BRANCHES SHALL BE BALANCED, WELL SPACED VERTICALLY, AND WITH A RADIALLY BLANK SECTOR NO GREATER THAN 1/3 OF THE CANOPY CIRCUMFERENCE.

TEMPORARY BRANCHES ON THE LOWER TRUNK SHALL BE LESS THAN 3/8 INCH DIAMETER; AND THE CLEAR TRUNK HEIGHT SHALL BE NO MORE THAN 40% OF THE TOTAL TREE HEIGHT.

THE ROOT COLLAR AND ROOTBALL SHALL BE FREE OF DEFECTS INCLUDING CIRCLING, KINKED AND GIRDLING ROOTS. ROOTS THE EDGE AND BOTTOM OF THE CONTAINER SHALL BE LESS THAN 1/4 INCH DIAMETER, AND UNIFORM THROUGHOUT THE CONTAINER.

TREE CANOPY WIDTH SHALL BE A MINIMUM OF 25% OF THE STANDARD FORM TREE HEIGHT.

DO NOT HEAD BACK OR PRUNE TREES UNLESS APPROVED AND/OR DIRECTED TO BY THE LANDSCAPE ARCHITECT

SEE SHEET L1.1 FOR PLANTING PLAN

811 Know what's below. Call before you dig.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 01/23/2025

PBK

ARCHITECT PBK Architects, Inc.
FRESNO
7790 North Palm Avenue
Fresno, CA 93711
559-448-8400 P
559-448-8467 F
PBK.com

Blair, Church & Flynn CONSULTING ENGINEERS

MADERA HIGH SCHOOL FIELDHOUSE

200 SOUTH L STREET
MADERA, CA 93637

CONSTRUCTION DOCUMENTS

PROFESSIONAL SEAL

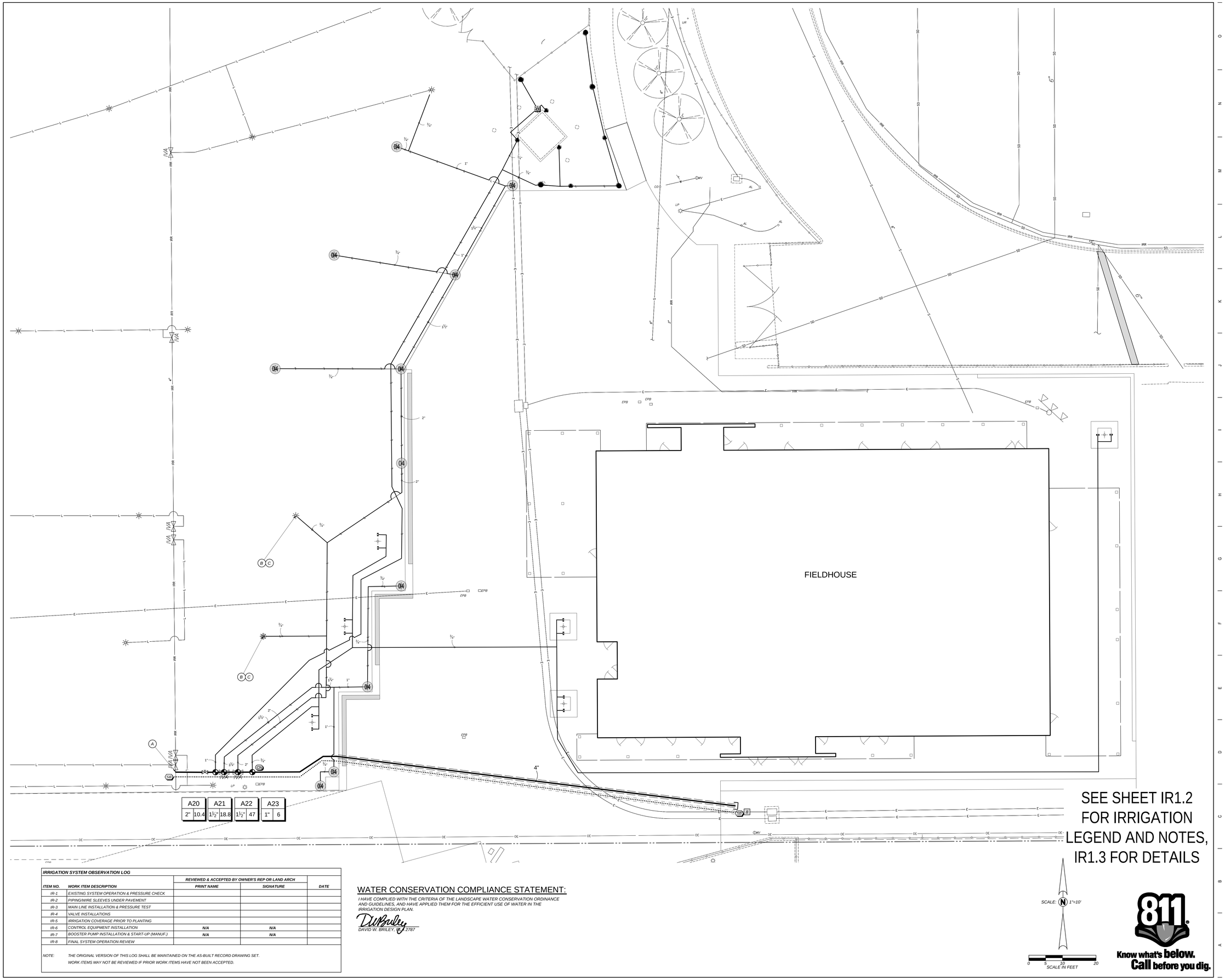
PROJECT NUMBER	20-51
DATE	1/13/2025
DSA APPLICATION NO.	02-121624
FILE NO.	20-H3
PTN NO.	65243-153
DRAWN BY	
REVISIONS	

CONSTRUCTION DOCUMENTS

PLANTING DETAILS

L1.2

Drawing: P:\22\22026\Production\Drawings\222022_LA01.dwg, Planting Details — Fld Dy: Steve Jan 16, 2025 - 2:46pm



IRRIGATION SYSTEM OBSERVATION LOG				
		REVIEWED & ACCEPTED BY OWNER'S REP OR LAND ARCH		
ITEM NO.	WORK ITEM DESCRIPTION	PRINT NAME	SIGNATURE	DATE
IR-1	EXISTING SYSTEM OPERATION & PRESSURE CHECK			
IR-2	PIPING/WIRE SLEEVES UNDER PAVEMENT			
IR-3	MAIN LINE INSTALLATION & PRESSURE TEST			
IR-4	VALVE INSTALLATIONS			
IR-5	IRRIGATION COVERAGE PRIOR TO PLANTING			
IR-6	CONTROL EQUIPMENT INSTALLATION	N/A	N/A	
IR-7	BOOSTER PUMP INSTALLATION & START-UP (MANUF.)	N/A	N/A	
IR-8	FINAL SYSTEM OPERATION REVIEW			

NOTE: THE ORIGINAL VERSION OF THIS LOG SHALL BE MAINTAINED ON THE AS-BUILT RECORD DRAWING SET. WORK ITEMS MAY NOT BE REVIEWED IF PRIOR WORK ITEMS HAVE NOT BEEN ACCEPTED.

WATER CONSERVATION COMPLIANCE STATEMENT:

I HAVE COMPLIED WITH THE CRITERIA OF THE LANDSCAPE WATER CONSERVATION ORDINANCE AND GUIDELINES, AND HAVE APPLIED THEM FOR THE EFFICIENT USE OF WATER IN THE IRRIGATION DESIGN PLAN.

DAVID W. BRILEY, CA 2787

SCALE: N 1"=10'

0 5 10 20 SCALE IN FEET

811 Know what's below. Call before you dig.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
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PBK

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7790 North Palm Avenue
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CONSULTING ENGINEERS

MADERA HIGH SCHOOL FIELDHOUSE

200 SOUTH L STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

PROFESSIONAL SEAL

REGISTERED LANDSCAPE ARCHITECT DAVID W. BRILEY 2787 12/31/24 STATE OF CALIFORNIA

PROJECT NUMBER	20-51
DATE	1/13/2025
DSA APPLICATION NO.	02-121624
FILE NO.	20-H3
PTN NO.	65243-153
DRAWN BY	

REVISIONS

CONSTRUCTION DOCUMENTS

IRRIGATION PLAN

IR1.1

Drawing: P:\20-51\DSA\Prod\doc\Drawing\222252_IR001 Proj. Irrigation Plan —
Plotted by: Matthew Jan 31, 2025 - 7:38pm

IRRIGATION LEGEND

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	ARC	PSI	GPM	RADIUS	DETAIL
▲	*RAIN BIRD R-VAN14 RD-04-SAM-P45 RV-14*	ADJ	45		14'	M/IR1.3
▲	*RAIN BIRD R-VAN18 RD-04-SAM-P45 RV-18*	ADJ	45		17'	M/IR1.3
▲	*RAIN BIRD R-VAN24 RD-04-SAM-P45 RV-24*	ADJ	45		23'	M/IR1.3
▪	*TREE BUBBLER 1402* *RAIN BIRD 1804-SAM-PRS-1402 FLOOD*	360	30	0.5	0'	H/IR1.3

SYMBOL	MANUFACTURER/MODEL	PSI	GPM	RADIUS	DETAIL
20	*HUNTER I-20-04-SS-PRB-LA 2.0*	45	1.9	27'	G/IR1.3
04	*HUNTER I-25-04-SS 04*	45	3.8	40'	G/IR1.3

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	DETAIL
	REMOTE CONTROL VALVE *IRRITROL 100P-G*	I/IR1.3
	GATE VALVE LARGE *LEEMCO LMV-BB WITH 2" NUT* *PUSH-ON BELL ENDS, OR EQUAL*	J/IR1.3
EA1	*EXISTING CONTROLLER - B* *RAIN MASTER - SENTAR II (36 STATIONS TOTAL/16 USED). 6 SPARE WIRES.*	
	CAP FOR FUTURE USE *CAP AT THE MAINLINE OR LATERAL LINE FOR FUTURE USE.*	
CN	*HUNTER NODE-400* *PROVIDE DC LATCHING SOLENOIDS -* *TEMPORARILY UNTIL INC. 2 RUNS NEW CONTROL WIRE TO THE CONTROL VALVES*	
SB	*SPLICE BOX*	K/IR1.3
	IRRIGATION LATERAL LINE: PVC SCHEDULE 40, BELL END, *SOLVENT WELD, SIZE AS NOTED*	C/IR1.3
	IRRIGATION MAINLINE: PVC CLASS 200 SDR 21 *RUBBER GASKETED, SIZE AS NOTED*	A/IR1.3
	PIPE SLEEVE: PVC SCHEDULE 40 *TWICE PIPE SIZE*	D/IR1.3
#	*VALVE NUMBER*	
#" #	*VALVE FLOW (GPM)* *VALVE SIZE*	
	CONTROL WIRE SLEEVE	D/IR1.3
	CONTROL WIRE PLUS ONE (1) COMMON WIRE	E/IR1.3
L	*EXISTING LATERAL LINE*	
IRR	*EXISTING MAIN LINE*	
+	*PROPOSED TREE, SEE PLANTING PLAN ON SHEET L1.1 FOR VARIETY AND SIZE*	
A	*CONNECT NEW MAIN LINE PIPE TO EXISTING MAIN LINE PIPE*	
B	*ADJUST SPRINKLER HEAD ARC TO MINIMIZE OVERSPRAY ONTO HARDSCAPE*	
C	*CONNECT NEW LATERAL LINE TO EXISTING SPRINKLER HEAD*	

GENERAL IRRIGATION NOTES:

1. *ALL ITEMS IN THE LEGEND ARE TO BE FURNISHED AND INSTALLED, UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL FURNISH THE ARTICLES, EQUIPMENT, MATERIALS OR PROCESSES SPECIFIED BY NAME. NO SUBSTITUTION WILL BE ALLOWED WITHOUT PRIOR WRITTEN APPROVAL OF THE DESIGN ENGINEER. (ALL MATERIAL REQUIRED SHALL BE NEW AND OF THE BEST QUALITY AVAILABLE)*
2. *THE DESIGN ENGINEER RESERVES THE RIGHT TO REJECT ANY MATERIAL OR WORK WHICH DOES NOT CONFORM TO THE CONTRACT PLANS AND SPECIFICATIONS WITHOUT THE PRIOR WRITTEN APPROVAL OF THE DESIGN ENGINEER.*
3. *PRIOR TO STARTING WORK, THE CONTRACTOR SHALL VERIFY THE EXISTING SYSTEM COMPONENTS' LOCATION, SIZES AND ROUTING FOR BACKFLOW PREVENTERS, CONTROLLERS, MAIN AND LATERAL PIPING, VALVES, SPRINKLER HEADS AND CONTROL WIRE; AND SHALL CONFIRM THEIR OPERATIONAL STATUS IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL ALSO VERIFY THE AVAILABLE STATIC PRESSURE AT THE POINT-OF-CONNECTION. FAILURE TO NOTIFY THE OWNER'S REPRESENTATIVE BEFORE STARTING WORK OF ANY DEVIATION FROM THE INFORMATION SHOWN ON THE CONTRACT DOCUMENTS, OR NECESSARY REPAIRS TO THE EXISTING SYSTEM, SHALL MAKE THE CONTRACTOR RESPONSIBLE TO PROVIDE, AT HIS OWN EXPENSE, ANY CORRECTIVE WORK OR COMPONENTS NECESSARY FOR A FULLY FUNCTIONAL SYSTEM WITH FULL COVERAGE.*
4. *THE CONTRACTOR IS RESPONSIBLE TO PROTECT AND KEEP ANY EXISTING IRRIGATION SYSTEM SCHEDULED TO REMAIN OPERATIONAL AT ALL TIMES DURING THE COURSE OF THIS WORK. THE CONTRACTOR SHALL REPLACE ANY PLANTS DEAD OR DISTRESSED DUE TO THE INTERRUPTION OF EXISTING IRRIGATION SCHEDULES AND SHALL PERFORM ALL WORK NECESSARY TO MAINTAIN THE EXISTING SYSTEM'S OPERATIONAL.*
5. *THE CONTRACTOR IS RESPONSIBLE TO LOCATE AND PROTECT ALL EXISTING UTILITIES. UTILITIES SHOWN ARE FOR THE CONTRACTOR'S AWARENESS AND NO SURVEY HAS BEEN COMPLETE TO VERIFY THE ACCURACY OF THE UTILITIES SHOWN. IT IS THE CONTRACTORS RESPONSIBILITY TO REPAIR ANY DAMAGED UTILITIES CAUSED BY CONSTRUCTION ACTIVITIES.*
6. *THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY ALL DIMENSIONS SHOWN AND TO ADJUST SAID DIMENSIONS TO FIT SITE CONDITIONS AND ACTUAL EQUIPMENT INSTALLED.*
7. *THE CONTRACTOR SHALL NOT WILLFULLY INSTALL THE IRRIGATION FACILITIES AS INDICATED ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN OBSTRUCTIONS MIGHT NOT HAVE BEEN CONSIDERED IN THE DESIGN. SUCH OBSTRUCTIONS OR DIFFERENCES SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER.*
8. *THE IRRIGATION PLAN IS DIAGRAMMATIC. ALL PIPING, VALVES, AND HEADS SHALL BE LOCATED IN PLANTING AREAS WHENEVER POSSIBLE.*
9. *THE CONTRACTOR SHALL PROVIDE ADEQUATE SAFETY MEASURES TO WARN AND PROTECT THE PUBLIC, OTHER SITE CONTRACTORS AND HIS WORKERS FROM POSSIBLE INJURY DUE TO HIS CONSTRUCTION EQUIPMENT AND OPERATIONS.*
10. *DUE TO THE SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS, ETC. WHICH MAY BE REQUIRED. THE CONTRACTOR SHALL CAREFULLY INVESTIGATE THE STRUCTURAL AND FINISHED CONDITIONS AFFECTING ALL HIS WORK, AND PLAN HIS WORK ACCORDINGLY, FURNISHING SUCH FITTINGS, ETC., AS MAY BE REQUIRED TO INSTALL THE PROPOSED FACILITIES AND ACCOMMODATE THE SITE CONDITIONS. DRAWINGS ARE GENERALLY DIAGRAMMATIC AND INDICATIVE OF THE WORK TO BE DONE TO PROVIDE A COMPLETE AND OPERATIONAL IRRIGATION SYSTEM. ALL WORK TO BE DONE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, LOCAL CODES AND ORDINANCES.*
11. *VALVES SHALL BE LOCATED IN SHRUB/GROUND COVER AREAS INSTEAD OF IN TURFGRASS AREAS WHENEVER POSSIBLE. VALVES IN ATHLETIC SPORTS FIELDS SHALL BE LOCATED OUTSIDE OF THE FIELD-OF-PLAY TO THE GREATEST EXTENT POSSIBLE.*
12. *THE CONTRACTOR SHALL REPLACE ANY EXISTING PLANTS SCHEDULED TO REMAIN (SEE LANDSCAPE PLANS) THAT ARE DAMAGED BY THIS WORK WITH NEW PLANTS OF THE SAME SPECIES/VARIETY AND SIZE AS THE ORIGINAL.*
13. *ANY EXISTING TURFGRASS REMOVED FOR THIS WORK SHALL BE REPLANTED IF VIABLE, OR NEW SOD OF THE SAME SPECIES/VARIETY INSTALLED. THE UPPER 6 INCHES OF THE COMPACTED TRENCH BACKFILL SHALL BE CONDITIONED PER LANDSCAPE SPECIFICATIONS PRIOR TO SOD INSTALLATION. THE NEW SOD SURFACE SHALL BE FLUSH TO THE ADJACENT TURFGRASS WITHOUT HUMPS OR DEPRESSIONS.*
14. *INSTALL SLEEVES UNDER ALL ASPHALT/CONCRETE IMPROVEMENTS. SLEEVES SHALL BE PVC SCH. 40 PVC OR SDR 35 AND TWICE THE DIAMETER OF THE PIPE UNLESS OTHERWISE NOTED. CONTROL WIRING SHALL BE SLEEVED IN 2" SCH 40 PVC UNLESS OTHERWISE NOTED. MINIMUM DEPTH OF SLEEVES UNDER ALL ASPHALT/CONCRETE IMPROVEMENTS IS 18" BELOW SUBGRADE OR 24" BELOW FINISHED GRADE, WHICHEVER IS GREATER.*
15. *CONTRACTOR SHALL SAWCUT TO EXISTING JOINTS. REMOVE AND REPLACE SURFACING (CONCRETE, ASPHALT) AS NECESSARY TO INSTALL THE IRRIGATION SYSTEM.*
16. *THE CONTRACTOR SHALL PROVIDE AND KEEP AN UP-TO-DATE "RECORD DRAWING" SHOWING ALL CHANGES TO THE ORIGINAL DRAWINGS AND EXACT LOCATIONS OF THE FACILITIES INSTALLED. BEFORE FINAL INSPECTION, THE CONTRACTOR SHALL FURNISH MARKED "RECORD DRAWINGS" TO THE INSPECTOR.*
17. *THE CONTRACTOR SHALL PROVIDE ADJUSTMENT OF NOZZLE ARC AND RADIUS, INCLUDING ANY ALTERNATE NOZZLE TYPES, NECESSARY TO PROVIDE COMPLETE COVERAGE, TO SUIT ACTUAL SITE CONDITIONS, AND TO MINIMIZE OVERSPRAY ONTO HARDSCAPE, PAVEMENT AND/OR STRUCTURES.*
18. *CONCRETE ANCHORS OR THRUST BLOCKS SHALL BE PROVIDED ON ALL MAIN LINE PIPING. THEY ARE TO BE LOCATED AT ALL ABRUPT CHANGES IN PIPELINE GRADE, CHANGES IN HORIZONTAL ALIGNMENT, REDUCTION IN PIPE SIZES, END OF LINE AND IN-LINE VALVES TO ABSORB ANY AXIAL THRUST OF THE PIPE. THE PIPE MANUFACTURER'S RECOMMENDATIONS FOR THRUST CONTROL SHALL BE FOLLOWED. THRUST BLOCKS MUST BE FORMED AGAINST UNDISTURBED EARTH.*
19. *ALL MAIN LINE AND LATERAL LINE PIPES UNDER PAVEMENT SHALL BE PRESSURE TESTED WITH THE VALVES INSTALLED. THE CONTRACTOR SHALL PROVIDE ALL EQUIPMENT NEEDED. IF ANY LEAKS DEVELOP, THE REPAIRS ARE TO BE MADE AND THE TEST REPEATED UNTIL THE SYSTEM IS PROVEN WATERTIGHT. THE CONTRACTOR IS TO CENTER LOAD THE PIPE AND LEAVE ALL JOINTS EXPOSED FOR INSPECTION. THE PRESSURE TEST SHALL BE OBSERVED AND APPROVED BY THE OWNER'S REPRESENTATIVE. WHEN THE PIPE IS PROVEN WATERTIGHT AND ONLY THEN MAY THE LINE BE BACKFILLED.*
20. *WIRED CONNECTIONS BETWEEN THE CONTROLLER AND REMOTE CONTROL VALVES SHALL BE MADE WITH ONE CONTINUOUS DIRECT BURIAL WIRE RUN. A VALVE BOX MUST BE PROVIDED AT THE CONTRACTOR'S EXPENSE AT ALL UNDERGROUND SPLICES.*
21. *ONLY TEFLON TAPE OR AN APPROVED TEFLON PASTE MAY BE USED AS THE SEALING MATERIAL TO MAKE ALL THREADED CONNECTIONS. A MINIMUM OF TWO (2) WRAPS IN THE DIRECTION OF THE THREADS TO BE USED FOR TAPE. NO OTHER PIPE JOINT MATERIAL WILL BE ALLOWED WITHOUT THE WRITTEN AUTHORIZATION FROM THE DESIGN ENGINEER.*
22. *THE CONTRACTOR SHALL PROVIDE TWO (2) INDIVIDUALLY BOUND SETS OF OPERATION AND MAINTENANCE MANUALS. THE MANUAL SHALL CONTAIN THE FOLLOWING INFORMATION:*
    - *A. CONTRACTOR'S ADDRESS AND PHONE NUMBER.*
    - *B. DURATION OF GUARANTEE PERIOD (ONE YEAR AFTER FINAL ACCEPTANCE).*
    - *C. NAMES, ADDRESSES AND PHONE NUMBERS OF LOCAL MANUFACTURER REPRESENTATIVES.*
    - *D. COMPLETE SET OF MANUFACTURER'S LITERATURE AND SPECIFICATIONS.*
    - *E. COMPLETE OPERATING AND MAINTENANCE INSTRUCTIONS ON ALL MAJOR EQUIPMENT.*
    - *F. ISSUE A "CERTIFICATE OF CONSTRUCTION COMPLIANCE" WHICH STATES THAT ALL WORK DONE AND MATERIALS AND EQUIPMENT USED ARE IN CONFORMANCE WITH THE APPROVED PLANS, SPECIFICATIONS AND ALL AUTHORIZED REVISIONS.*
    - *G. INITIAL ELECTRICAL DATA ON EACH VALVE:*
      - *(1) OHMMS READING FOR EACH VALVE TAKEN AT THE CONTROLLER.*
      - *(2) VOLTAGE READING FOR EACH VALVE TAKEN BOTH AT THE CONTROLLER AND AT THE VALVE.*
23. *THE CONTRACTOR SHALL PROVIDE TWO SETS OF CONTROLLER CHARTS. THE CHARTS TO BE A REDUCED DRAWING OF THE ACTUAL PLANS. THE CHARTS SHALL BE COLORED WITH A DIFFERENT COLOR FOR EACH IRRIGATION CIRCUIT. THE CHARTS SHALL BE COVERED IN A WATERTIGHT ENVELOPE.*
24. *IRRIGATION LINE TRENCHING AND PIPE INSTALLATION LOCATED WITHIN THE CANOPY DRIP LINE OF EXISTING TREES SHALL BE PERFORMED BY HAND OR BY AIR SPADE WITHOUT CUTTING OR DAMAGING EXISTING ROOTS GREATER THAN ONE INCH IN DIAMETER. SEE EXISTING LANDSCAPE PROTECTION SECTION FOR ADDITIONAL REQUIREMENTS.*
25. *REPLACE ALL DAMAGED EXISTING VALVE BOXES AND/OR LIDS WITHIN THE AREA OF WORK. ADJUST THE ELEVATION OF ALL EXISTING VALVE BOXES WITHIN THE AREA OF WORK TO FINISH GRADE AS NECESSARY TO COMPLY WITH THE VALVE BOX DETAIL.*

DRIP SYSTEM IRRIGATION NOTES:

1. *ALL ITEMS, ACCESSORIES, FITTINGS, ETC. NECESSARY FOR A COMPLETE AND PROPERLY FUNCTIONING SUB-SURFACE DRIP SYSTEM ARE TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR, UNLESS NOTED OTHERWISE.*
2. *THE EQUIPMENT AND COMPONENTS CALLED OUT ON THE DRAWING LEGEND ARE THE PREFERENCE OF THE OWNER AND ARE SELECTED TO MATCH EQUIPMENT AND COMPONENTS IN USE IN OTHER SIMILAR IRRIGATION SYSTEMS OF THE OWNER.*
3. *PRIOR TO STARTING WORK, THE CONTRACTOR SHALL VERIFY ANY EXISTING SYSTEM COMPONENTS' LOCATION, SIZES AND ROUTING FOR BACKFLOW PREVENTERS, CONTROLLERS, MAIN AND LATERAL PIPING, VALVES, SPRINKLER HEADS AND CONTROL WIRE; AND SHALL CONFIRM THEIR OPERATIONAL STATUS IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL ALSO VERIFY THE AVAILABLE STATIC PRESSURE AND AVAILABLE SAFE FLOW AT THE POINT-OF-CONNECTION. FAILURE TO NOTIFY THE OWNER'S REPRESENTATIVE AND THE ENGINEER BEFORE STARTING WORK, OF ANY DEVIATION FROM THE INFORMATION SHOWN ON THE CONTRACT DOCUMENTS OR NECESSARY REPAIRS TO THE EXISTING SYSTEM, SHALL MAKE THE CONTRACTOR RESPONSIBLE TO PROVIDE, AT HIS OWN EXPENSE, ANY CORRECTIVE WORK OR COMPONENTS NECESSARY FOR A FULLY FUNCTIONAL SYSTEM WITH FULL COVERAGE.*
4. *THE IRRIGATION PLAN IS DIAGRAMMATIC. ALL PIPING, VALVES, AND COMPONENTS SHALL BE LOCATED IN PLANTING AREAS, UNLESS NOTED OTHERWISE. VALVES SHALL BE LOCATED IN SHRUB/GROUND COVER AREAS INSTEAD OF IN TURFGRASS AREAS WHENEVER POSSIBLE.*
5. *INSTALL DRIP EMITTERS IN A TRIANGULAR OR STAGGERED PATTERN AND AT A CONSISTENT DEPTH BELOW GRADE AS SHOWN OR INDICATED IN THE DRAWINGS.*
6. *STAKE THE EMITTER TUBING USING THE MANUFACTURER'S RECOMMENDED STAKES DIRECTLY OVER EVERY OTHER EMITTER. FOR EXAMPLE, IF THE EMITTERS ARE SPACED AT 18 INCHES O.C., THEN STAKE AT 36 INCHES O.C.*
7. *PRIOR TO BACKFILLING THE DRIP TUBING AND THE START OF PLANTING OPERATIONS, THE SYSTEM SHALL BE REVIEWED FOR PROPER OPERATION BY THE OWNER'S REPRESENTATIVE.*
8. *PROGRAM THE CONTROLLER TO OPERATE THE CONTROL VALVE(S) FOR THE DRIP SYSTEM USING THE CONTROLLER'S "CYCLE AND SOAK" FEATURE IN ORDER TO APPLY THE REQUIRED WATER AMOUNT IN THREE EQUAL CYCLES.*
9. *PRIOR TO THE START OF PLANTING OPERATIONS, THE DRIP SYSTEM SHALL BE OPERATED FOR A FREQUENCY AND DURATION TO ADEQUATELY MOISTEN THE TOPSOIL TO A MINIMIM DEPTH OF 12 INCHES AT ANY LOCATION WITHIN THE PLANTING AREA .*
10. *THE CONTRACTOR SHALL PROVIDE ONE HUNDRED (100) FEET OF IN-LINE EMITTER TUBING OF THE SAME MODEL AS SPECIFIED, ENOUGH STAKES FOR THE 100 FEET, AND TEN (10) OF EACH TYPE OF FITTINGS USED ON THE PROJECT FOR THE OWNER'S USE AS SPARE PARTS.*
11. *IT IS THE CONTRACTOR'S RESPONSIBILITY TO KEEP ANY EXISTING IRRIGATION SYSTEM SCHEDULED TO REMAIN OPERATIONAL AT ALL TIMES DURING THE COURSE OF THIS WORK. THE CONTRACTOR SHALL REPLACE ANY PLANTS DEAD OR DISTRESSED DUE TO THE INTERRUPTION OF EXISTING IRRIGATION SCHEDULES, AND SHALL PERFORM ALL WORK NECESSARY TO MAINTAIN THE EXISTING SYSTEM'S OPERATION.*
12. *THE CONTRACTOR SHALL REPLACE ANY EXISTING PLANTS SCHEDULED TO REMAIN THAT ARE DAMAGED BY THIS WORK WITH NEW PLANTS OF THE SAME SPECIES/VARIETY AND SIZE AS THE ORIGINAL PRIOR TO THE START OF WORK. ANY EXISTING TURFGRASS REMOVED FOR THIS WORK SHALL BE REPLANTED IF VIABLE, OR NEW SOD OF THE SAME SPECIES/VARIETY INSTALLED. THE UPPER 6 INCHES OF THE COMPACTED TRENCH BACKFILL SHALL BE CONDITIONED PER THE PLANTING SPECIFICATIONS PRIOR TO SOD INSTALLATION. THE NEW SOD SURFACE SHALL BE FLUSH TO THE ADJACENT TURFGRASS WITHOUT HUMPS OR DEPRESSIONS.*

CONTRACTOR SPECIAL IRRIGATION NOTES:

1. *THE CONTRACTOR SHALL PERFORM AN OPERATIONAL ASSESSMENT OF THE EXISTING IRRIGATION SYSTEM WITHIN THE AREA OF WORK WITH THE OWNER'S REPRESENTATIVE PRIOR TO THE START OF CONSTRUCTION OPERATIONS.*
2. *THE CONTRACTOR SHALL ENSURE THAT ALL EXISTING PLANTING SCHEDULED TO REMAIN SHALL CONTINUE TO BE IRRIGATED THROUGHOUT THE COURSE OF CONSTRUCTION OPERATIONS. ANY DAMAGE TO THE EXISTING IRRIGATION SYSTEM THAT IMPACTS EXISTING PLANTING TO REMAIN SHALL BE IMMEDIATELY REPAIRED TO THE OWNER'S SATISFACTION.*
3. *PRIOR TO THE START OF ANY SHRUB, GROUND COVER, AND/OR TURFGRASS PLANTING, AN OPERATIONAL REVIEW OF THE IRRIGATION SYSTEM SHALL BE PERFORMED FOR PROPER COVERAGE AND SOIL MOISTURE DEPTH BY THE OWNER'S REPRESENTATIVE. ALL CORRECTIONS AND/OR ADJUSTMENTS SHALL BE COMPLETED AND VERIFIED BY THE OWNER'S REPRESENTATIVE BEFORE GROUND LEVEL PLANTING MAY COMMENCE.*
4. *THE ORIGINAL IRRIGATION SYSTEM OBSERVATION LOG SHALL BE MAINTAINED ON THE AS-BUILT RECORD DRAWING SET.*
5. *THE AS-BUILT RECORD DRAWING SET AND OTHER CLOSE-OUT ITEMS SHALL BE SUBMITTED AND ACCEPTED PRIOR TO THE SCHEDULING OF A FINAL ACCEPTANCE REVIEW.*
6. *UNLESS NOTED OTHERWISE, SALVAGE AND RETURN TO THE OWNER ALL IRRIGATION VALVES, HEADS AND OTHER EQUIPMENT COMPONENTS REMOVED AS PART OF THE WORK. SALVAGED COMPONENTS SHALL BE CLEAN AND IN WORKING CONDITION UNLESS NOTED AS NON-OPERATIONAL DURING THE OPERATIONAL ASSESSMENT.*

SEE SHEET IR1.1 FOR IRRIGATION PLAN AND IR1.3 FOR DETAILS

811 Know what's below. Call before you dig.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 01/23/2025

PBK

ARCHITECT PBK Architects, Inc.
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Blair, Church & Flynn
CONSULTING ENGINEERS

MADERA HIGH SCHOOL FIELDHOUSE

200 SOUTH L STREET
MADERA, CA 93637

CONSTRUCTION DOCUMENTS

PROFESSIONAL SEAL

PROJECT NUMBER	20-51
DATE	1/13/2025
DSA APPLICATION NO.	02-121624
FILE NO.	20-H3
PTN NO.	65243-153
DRAWN BY	

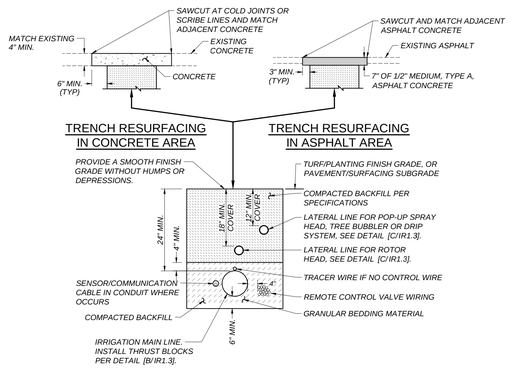
REVISIONS

CONSTRUCTION DOCUMENTS

IRRIGATION PLAN

IR1.2

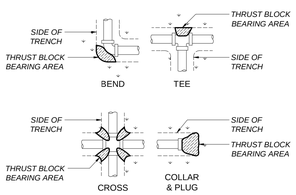
Drawing: P:\220-2052\Site\Products\Drawings\222252_#001 Aug. IR1.2 — Plot by: Dgarcia Jan 16, 2025 - 7:47am



TYPICAL TRENCH SHOWN IN PLANTING AREA

A IR1.3 IRRIGATION TRENCH BACKFILL

NOT TO SCALE

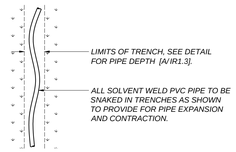


NOTE: CONCRETE PER SPECIFICATIONS. THRUST BLOCKS NOT REQUIRED WITH LESS THAN 2" MAIN LINE

TABLE OF BEARING AREAS REQUIRED (IN SQUARE FEET)					
PIPE DIAMETER	*" 4"*	*6"*	*8"*	*10"*	*12"*
CROSS, TEE, 90° BEND, PLUG, FIRE HYDRANT	*1*	*3*	*5*	*8*	*11*
45° BEND	*1*	*2*	*3*	*4*	*6*
22-1/2" BEND	*0.5*	*1*	*2*	*2*	*3*
11-1/4" BEND	*0*	*0*	*1*	*1*	*2*
GATE VALVE (IN-LINE)	*0*	*1*	*2.5*	*4*	*9*

B IR1.3 CONCRETE THRUST BLOCKS

NOT TO SCALE



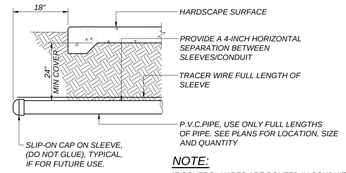
C IR1.3 SOLVENT WELD PIPE

NOT TO SCALE

CONDUIT/SLEEVE FOR CONTROL WIRE

CONDUIT/SLEEVE SIZE	*QTY. 14 GA. WIRE*
1"	*8 OR LESS*
1-1/4"	*15*
1-1/2"	*20*
2"	*32*
2-1/2"	*45*
3"	*70*
4"	*120*

NOTE: SLEEVE FOR PIPE IS 2X THE PIPE DIAMETER



NOTE:

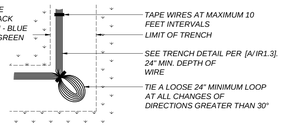
IF CONTROL WIRES ARE ROUTED IN CONDUIT, SLEEVE FOR WIRES IS NOT REQUIRED

D IR1.3 IRRIGATION SLEEVE/CONDUIT

NOT TO SCALE

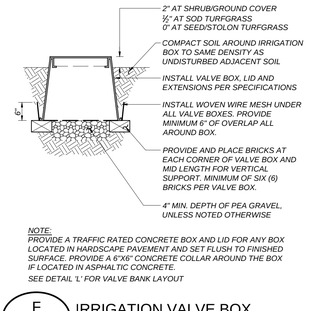
NOTES:

1. *WIRES UNDER PAVEMENT OR WALKS SHALL BE INSTALLED WITHIN A CONDUIT WHICH HAS BEEN PLACED BY BORING, JACKING OR DRILLING. CONDUIT TO BE PVC SCH 40 TYPE II PIPE. WIRES SHALL NOT BE TAPED TOGETHER INSIDE THE CONDUIT.*
2. *NO SPLICES ARE ALLOWED BETWEEN POINTS OF CONNECTIONS.*
3. *A VALVE BOX MUST BE PROVIDED AT ALL UNDERGROUND SPLICE CONNECTIONS.*
4. *HOT - RED*
   COMMON - WHITE
   SPARE HOT - BLACK
   SPARE COMMON - BLUE
   TRACER WIRE - GREEN



E IR1.3 IRRIGATION WIRE

NOT TO SCALE



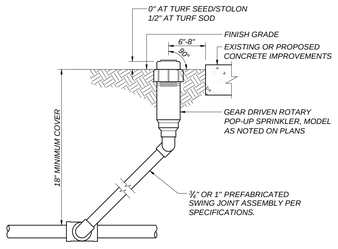
NOTE:

PROVIDE A TRAFFIC RATED CONCRETE BOX AND LID FOR ANY BOX LOCATED IN HARDSCAPE PAVEMENT AND SET FLUSH TO FINISHED SURFACE. PROVIDE A 6"X6" CONCRETE COLLAR AROUND THE BOX IF LOCATED IN ASPHALTIC CONCRETE.

SEE DETAIL 'L' FOR VALVE BANK LAYOUT

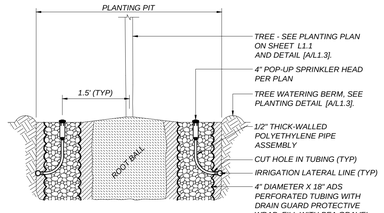
F IR1.3 IRRIGATION VALVE BOX

NOT TO SCALE



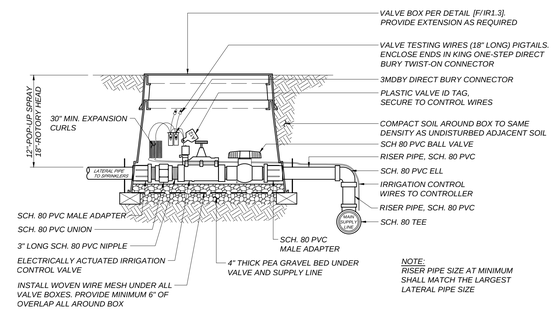
G IR1.3 POP-UP ROTOR

NOT TO SCALE



H IR1.3 TREE BUBBLERS

NOT TO SCALE

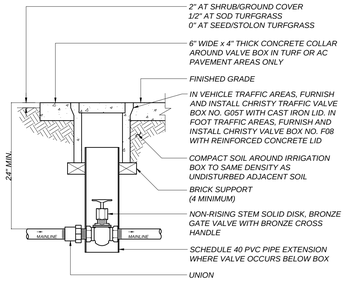


NOTE:

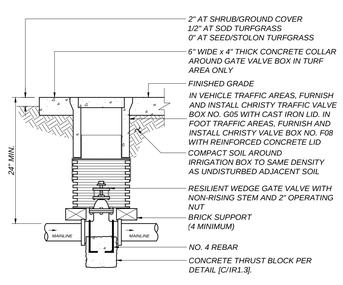
RISER PIPE SIZE AT MINIMUM SHALL MATCH THE LARGEST LATERAL PIPE SIZE

I IR1.3 REMOTE CONTROL VALVE WITH BALL VALVE - GLOBE

NOT TO SCALE



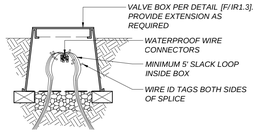
1-1/2" AND SMALLER GATE VALVE



2" AND LARGER GATE VALVE

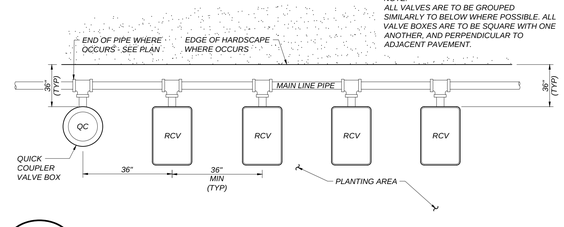
J IR1.3 GATE VALVE

NOT TO SCALE



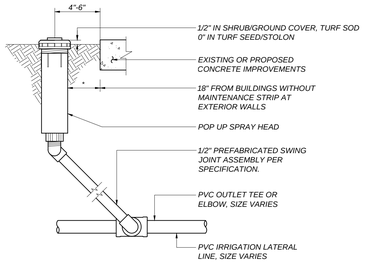
K IR1.3 SPLICEBOX

NOT TO SCALE



L IR1.3 VALVE BOX LAYOUT

NOT TO SCALE



M IR1.3 POP-UP SPRAY

NOT TO SCALE

SEE SHEET IR1.1 FOR IRRIGATION PLAN, IR1.2 FOR IRRIGATION LEGEND AND NOTES

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DATE: 01/23/2025

PBK

ARCHITECT PBK Architects, Inc.

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Blair, Church & Flynn
CONSULTING ENGINEERS

MADERA HIGH SCHOOL FIELDHOUSE

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MADERA, CA 93637

CONSTRUCTION DOCUMENTS

PROFESSIONAL SEAL

REGISTERED LANDSCAPE ARCHITECT — TIMOTHY J. BULLOCK — No. 5616 — 12/31/24 RENEWAL DATE — 12/31/24 DATE — STATE OF CALIFORNIA

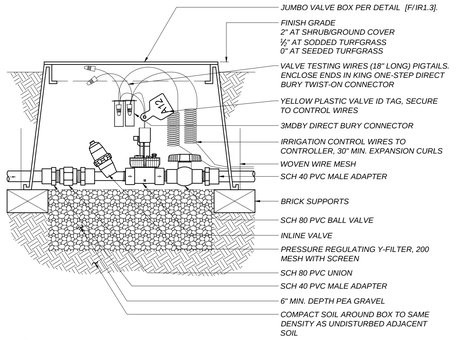
PROJECT NUMBER	20-51
DATE	1/13/2025
DSA APPLICATION NO.	02-121624
FILE NO.	20-H3
PTN NO.	65243-153
DRAWN BY	
REVISIONS	

CONSTRUCTION DOCUMENTS

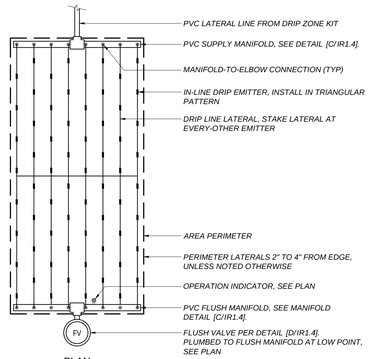
IRRIGATION DETAILS

IR1.3

Drawing: P:\22-02\DSA\Production\Drawings\222022_IR03\1-Reg_IR1.3 — Plot by: bgarcia - Jan 16, 2025 - 7:46am

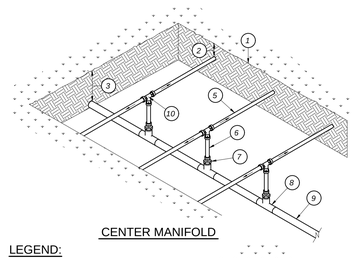


A / IR1.4 DRIP ZONE ASSEMBLY
NOT TO SCALE



PLAN

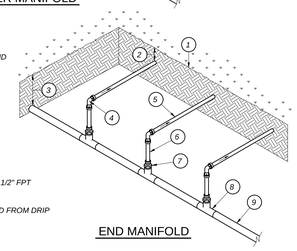
B / IR1.4 DRIPLINE LAYOUT SCHEMATIC
NOT TO SCALE



CENTER MANIFOLD

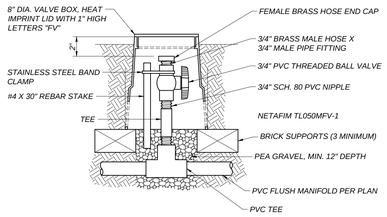
LEGEND:

1. *FINISH GRADE*
2. *DEPTH OF TUBING BELOW FINISHED GRADE - SEE LEGEND*
3. *MIN. 12" DEPTH OF PVC SUPPLY / FLUSH MANIFOLD BELOW FINISHED GRADE*
4. *ELBOW*
5. *DRIPLINE LATERAL, SEE PLAN*
6. *POLY TUBING, LENGTH AS NECESSARY*
7. *MALE ADAPTER*
8. *SCH 40 PVC TEE (SxSxT) WITH 1/2" FPT OUTLET*
9. *SCH 40 PVC SUPPLY MANIFOLD FROM DRIP ZONE KIT*
10. *TEE*

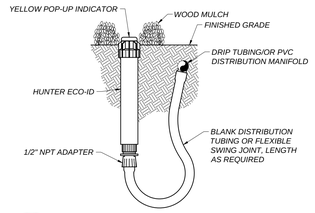


END MANIFOLD

C / IR1.4 DRIPLINE MANIFOLD
NOT TO SCALE



D / IR1.4 DRIPLINE FLUSH VALVE
NOT TO SCALE



E / IR1.4 HUNTER ECO-INDICATOR
NOT TO SCALE

SEE SHEET IR1.1 FOR IRRIGATION PLAN, IR1.2 FOR IRRIGATION LEGEND AND NOTES

811 Know what's below. Call before you dig.

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APP: 02-121624 INC:
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Blair, Church & Flynn
CONSULTING ENGINEERS

MADERA HIGH SCHOOL FIELDHOUSE

200 SOUTH L STREET
MADERA, CA 93637

CONSTRUCTION DOCUMENTS

PROFESSIONAL SEAL

PROJECT NUMBER	20-51
DATE	1/13/2025
DSA APPLICATION NO.	02-121624
FILE NO.	20-H3
PTN NO.	65243-153
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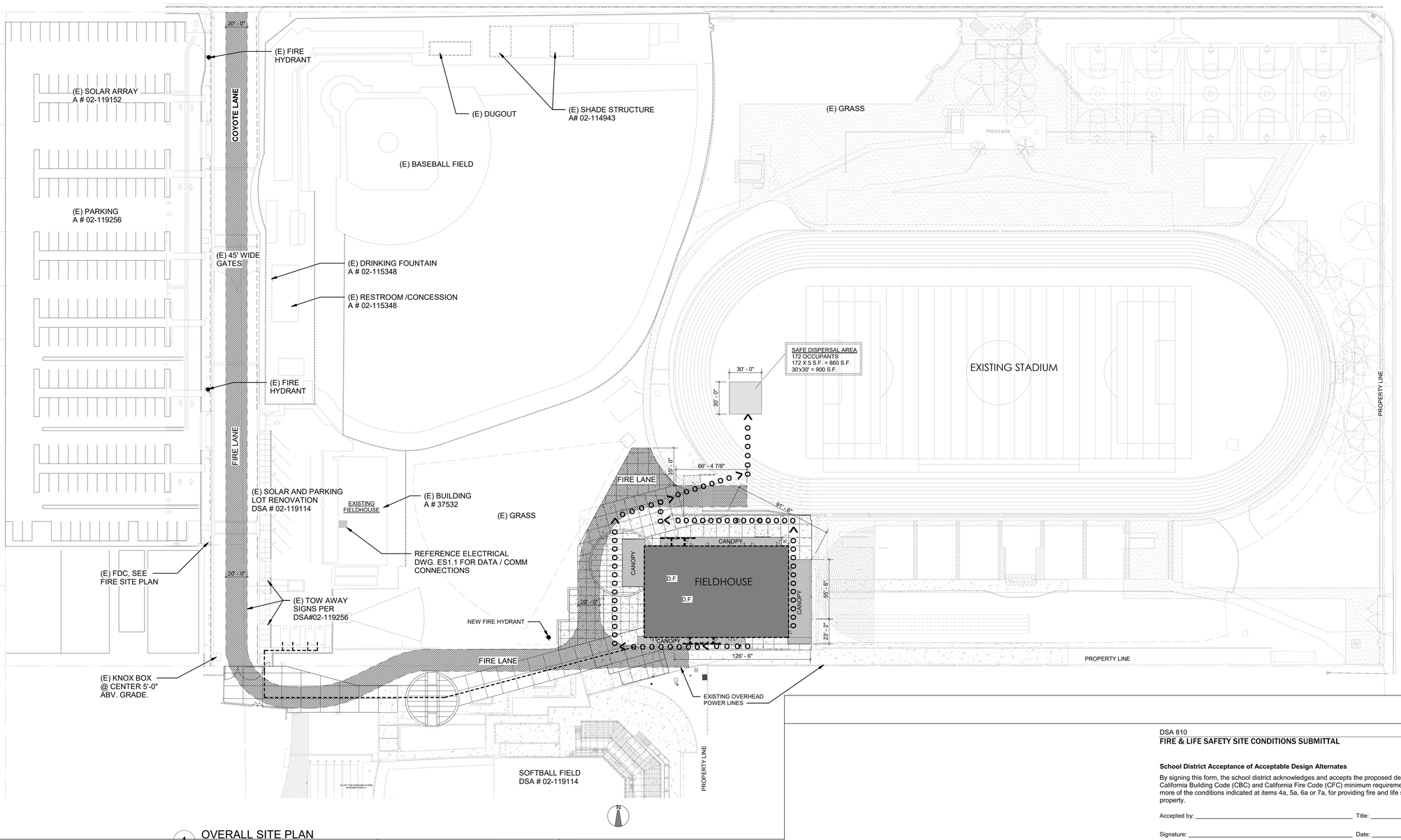
REVISIONS

CONSTRUCTION DOCUMENTS

IRRIGATION DETAILS

IR1.4

Drawing: P:\20-0203\Production\Drawings\202352_IRDTL1.dwg, IR1.4 — Plotted by: dgarcia Jan 10, 2025 - 7:49am



1 OVERALL SITE PLAN
SCALE 1" = 40'-0"

PATH OF TRAVEL NOTES

1. ALL BUILDINGS CAN BE ACCESSED FROM PARKING SPACES
2. ARCHITECT HAS SURVEYED/INSPECTED THE PATH OF TRAVEL (P.O.T.) AS INDICATED ON THE PLANS AND HAS FOUND IT TO BE, OR HAS INDICATED ON THE PLANS REMEDIAL WORK WHICH WOULD CAUSE IT TO BE, A BARRIER-FREE ACCESSIBLE ROUTE:
   - AT LEAST 48" IN WIDTH; OR AS APPROVED BY CODE
   - WITHOUT ABRUPT LEVEL CHANGES EXCEEDING 1/2" IF BEVELED AT 1:2 MAXIMUM SLOPE, OR VERTICAL LEVEL CHANGES EXCEEDING 1/4"
   - WITH A FIRM, STABLE, AND SLIP RESISTANT WALKING SURFACE
   - WITH A RUNNING SLOPE OF 1:20 OR LESS, UNLESS OTHERWISE INDICATED, AND A CROSS SLOPE OF 1:50 OR LESS
   - IS FREE FROM OVERHEAD OBSTRUCTIONS WITHIN 80" ABOVE WALKING SURFACE
   - AND IS FREE OF OBJECTS WHICH PROTRUDE MORE THAN 4" BETWEEN THE HEIGHTS OF 27" AND 80" ABOVE THE WALKING SURFACE.
3. ALL GATES IN PATH OF TRAVEL MUST COMPLY WITH EXIT DOOR REQUIREMENTS AS INDICATED ON A2.1 PROVIDE LEVER HARDWARE, KICK PLATES, 5 lbs PRESURE TO OPERATE, 24" MIN. STRIKE SIDE CLEARANCE, 48" MAX. WIDTH, AND PANIC GARDWARE IF REQUIRED BY FIRE LIFE SAFETY.
4. THERE IS NO DROP-OFF OVER 4" AT THE EDGE OF WALK OR LANDING. IN NEW CONSTRUCTION, ALL WALKS AND ROUTES ARE CONSIDERED PATH OF TRAVEL (P.O.T.) ARCHITECT AND CONTRACTOR SHALL VERIFY THAT THE ENTIRE PATH OF TRAVEL HAS BEEN CONSTRUCTED FREE OF BARRIERS.
5. ALL ACCESSIBLE PARKING SPACES ARE LOCATED SO THAT A PERSON WITH DISABILITY IS NOT COMPELLED TO WHEEL OR WALK BEHIND ANY OTHER CAR.
6. WALKS IN PATH OF TRAVEL SHALL BE FREE OF GRATINGS WHENEVER POSSIBLE. WHEN INSTALLED, OPENINGS SHALL BE 1/2" MAXIMUM IN DIRECTION OF TRAFFIC FLOW.

DSA PR-15-01
DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE STATEMENT:

THE POT IDENTIFIED IN THESE CONSTRUCTION DOCUMENTS IS COMPLIANT WITH CURRENT APPLICABLE CALIFORNIA BUILDING CODE ACCESSIBILITY PROVISIONS FOR PATH OF TRAVEL REQUIREMENTS FOR ALTERATIONS AND STRUCTURAL REPAIRS. AS PART OF THE DESIGN OF THIS PROJECT, THE POT WAS EXAMINED AND ANY ELEMENTS, COMPONENTS OR PORTION OF THE POT THAT WERE DETERMINED TO BE COMPLIANT 1) HAVE BEEN IDENTIFIED AND 2) THE CORRECTIVE WORK NECESSARY TO BRING THEM INTO COMPLIANCE HAS BEEN INCLUDED WIHTIN THE SCOPE OF THIS PROJECT'S WORK THROUGH DETAILS, DRAWINGS AND SPECIFICATIONS INCORPORATED INTO THESE CONSTRUCTION DOCUMENTS. ANY NONCOMPLIANT ELEMENTS, COMPONENTS OR PORTION OF THE POT THAT WILL NOT BE CORRECTED BY THIS PROJECT BASED ON VALUATION THRESHOLD LIMITATIONS OR A FINDING OF UNREASONABLE HARDSHIP ARE SO INDICATED IN THESE CONSTRUCTION DOCUMENTS.

DURING CONSTRUCTION, IF POT ITEMS WITHIN THE SCOPE OF THE PROJECT REPRESENTED AS CODE COMPLIANT ARE FOUND TO BE NONCONFORMING BEYOND REASONABLE CONSTUCTION TOLERANCES, THEY SHALL BE BROUGHT INTO COMPLIANCE WITH THE CBC AS A PART OF THIS PROJECT BY MEANS OF A "CONSTRUCTION CHANGE DOCUMENT" (FORM DSA 140).

COORDINATION NOTES

1. REFER TO CIVIL & LANDSCAPE PLANS FOR ANY ADDITIONAL SITE INFORMATION
2. ALL EGRESS ACCESS GATES THAT ARE EXISTING HAVE PANIC HARDWARE - SEE APP# 02-116013
3. CURBS ALONG FIRE LANE ARE PAINTED RED WITH 3" HIGH WHITE LETTERS STATING 'NO PARKING - FIRE LANE' AT 50' - 0" O.C.

SITE NOTE

UPON COMPLETION OF CONSTRUCTION, THE LOCAL FIRE DEPARTMENT AND/OR EMERGENCY COMMUNICATIONS AUTHORITY WILL BE CONTACTED TO OBTAIN DESIGN AND EQUIPMENT SPECIFICATIONS, AND TESTING AND ACCEPTANCE CRITERIA FOR **EMERGENCY RESPONDER RADIO COVERAGE (ERRC)** PER CFC 510. UPON COMPLETION, COPIES OF THE APPROVED PLANS, EQUIPMENT DATA SHEETS, AND PROOF OF TESTING AND ACCEPTANCE DOCUMENTATION SHALL BE PROVIDED TO THE SCHOOL DISTRICT.

SITE LEGEND

SITE HATCHES

- PROPERTY LINE
- PAINTED CURBS YELLOW w/ 3" HIGH WHITE LETTERS STATING "LOADING AND UNLOADING PASSENGERS" AT 50' O.C.
- 20' WIDE MIN.- FIRE LANE
- INDICATES "KEY POINTS OF PATH OF TRAVEL (EGRESS/ACCESSIBLE). (ENTIRE SITE IS ACCESSIBLE), APP# 02-116013
- PAINTED CURBS RED w/ 3" HIGH WHITE LETTERS STATING "NO PARKING - FIRE LANE" AT 50' O.C.
- PLANTER AREA, REFER TO LANDSCAPE AND IRRIGATION PLANS
- K.B (E) KNOX BOX @ CENTER 5'-0" ABV. GRADE.
- D.F. DRINKING FOUNTAIN:
  - SITE PLAN - EXISTING PER APP# 02-116013
  - BUILDING - SEE FLOOR PLANS
- FIRE HYDRANT, SPACED PER 2016 CFC, TABLE C102.1, 225'-0" FROM ANY POINT ON STREET TO HYDRANT.
- ACCESSIBLE EXIT ROUTE
- PATH OF TRAVEL

DSA 810
FIRE & LIFE SAFETY SITE CONDITIONS SUBMITTAL

School District Acceptance of Acceptable Design Alternates

By signing this form, the school district acknowledges and accepts the proposed design as an alternative to California Building Code (CBC) and California Fire Code (CFC) minimum requirements, as indicated by one or more of the conditions indicated at items 4a, 5a, 6a or 7a, for providing fire and life safety protection of life and property.

Accepted by: _____ Title: _____

Signature: _____ Date: _____

LOCAL FIRE AUTHORITY (LFA) INFORMATION			
LFA Agency Name:	CITY OF MADERA		
LFA Review Official:	MATTHEW S. TARR		
Title:	FIRE MARSHAL	Work Phone:	559-661-5442
Work E-mail:	MTARR@CITY OF MADERA.COM or MTARR@MADERA.GOV		

LFA Reviewer's Signature: _____ Date: _____

FLOW TEST

LOCATION: 200 Coyote Lane

DATE: 15 June 2023

INFO

Static: 50 PSI
Residual: 45 PSI
Pitot: 20 PSI

Orifice Size: 2.5-inch

Flow: 750 GPM

Available Flow at 20 PSI residual pressure: 1973 GPM

Q= (.9)(29.84)(2.5**2)(20**1/2) = 750 GPM

At 20 PSI
Q2 = 750 x [(50-20) /(50-45)]**.54

Q2 = 750 x 6**.54 = 1973 GPM

Flow test performed, and calculations run by Matthew S. Tarr, FPE

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CONSTRUCTION DOCUMENTS

MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT — MICHAEL R. SCHOEN — No. C-30295 — RENEWAL DATE FEB 29, 2027 — STATE OF CALIFORNIA

PROJECT NUMBER 20-51
DATE 01/22/2025
DSA APPLICATION NO. 02-121624
FILE NO. 20-H3
PTN NO. 65243-153
DRAWN BY Author

REVISIONS

#	DESCRIPTION	DATE

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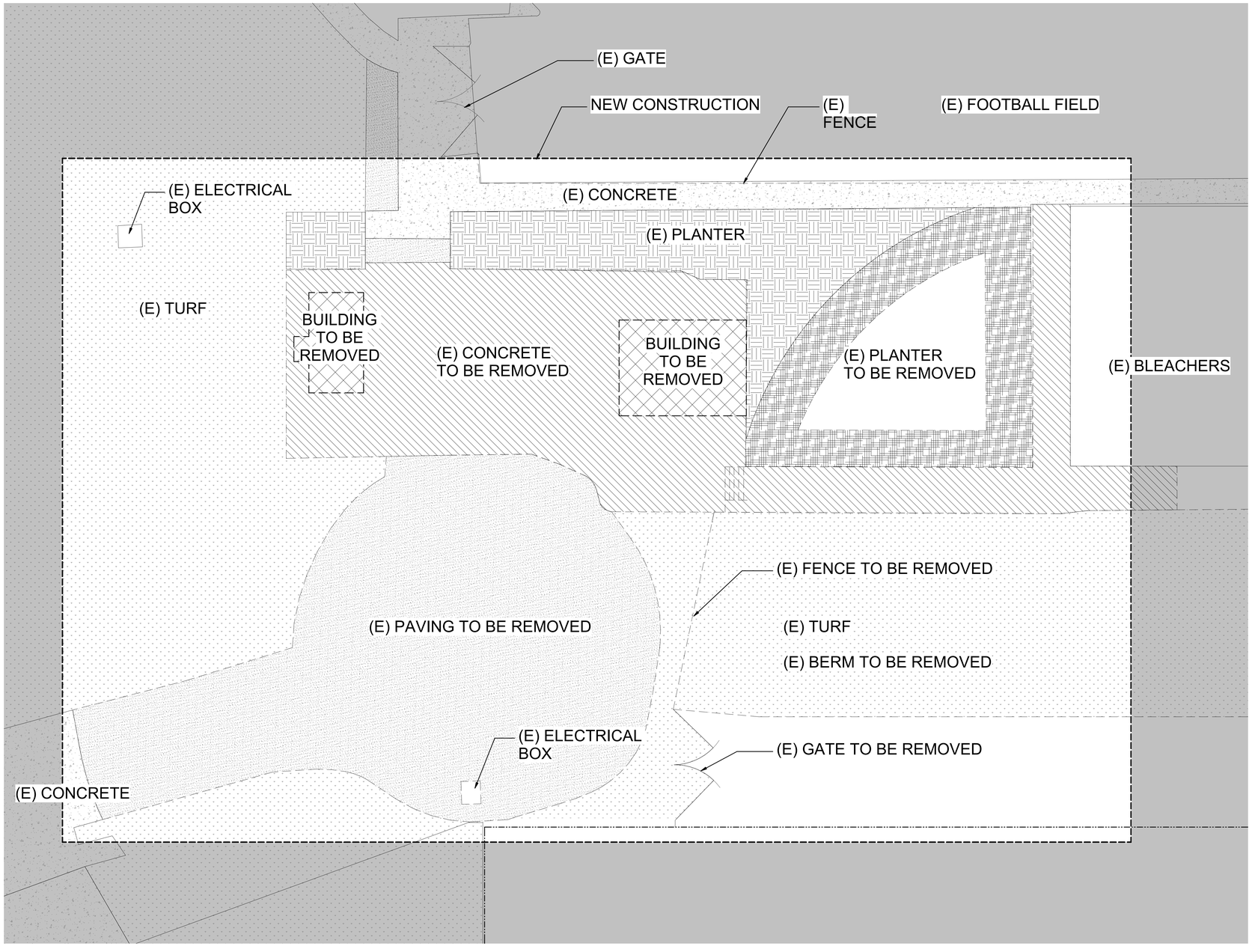
OVERALL SITE PLAN

AS.1

BIM 360://Madera USD_20-51_MHS Field House/20-51_MHS FIELDHOUSE_V21.rvt
1/20/2025 6:36:53 PM



2 DEMO SITE PLAN
SCALE 1" = 10'-0"

KEYNOTES (XX-XX)

SITE LEGEND

SITE HATCHES

- (E) CONCRETE TO REMAIN
- (E) CONCRETE TO BE REMOVED
- CONCRETE
- (E) TURF TO REMAIN
- (E) BUILDING TO BE REMOVED
- (E) PLANTER AREA TO REMAIN, U.O.N.
- (E) PLANTER AREA TO BE REMOVED
- PLANTER AREA, REFER TO LANDSCAPE AND IRRIGATION PLANS
- (E) PAVING TO BE REMOVED AS NECESSARY, SEE CIVIL.
- PAVING, SEE CIVIL.

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PROFESSIONAL SEAL

LICENSED ARCHITECT
MICHAEL B. SCHOEN
No. C25529
RENEWAL DATE
FEB 28, 2027
STATE OF CALIFORNIA

PROJECT NUMBER
20-51

DATE
01/22/2025

DSA APPLICATION NO.
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65243-153

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Author

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ENLARGED SITE PLAN - EXISTING/DEMO.

AS.2

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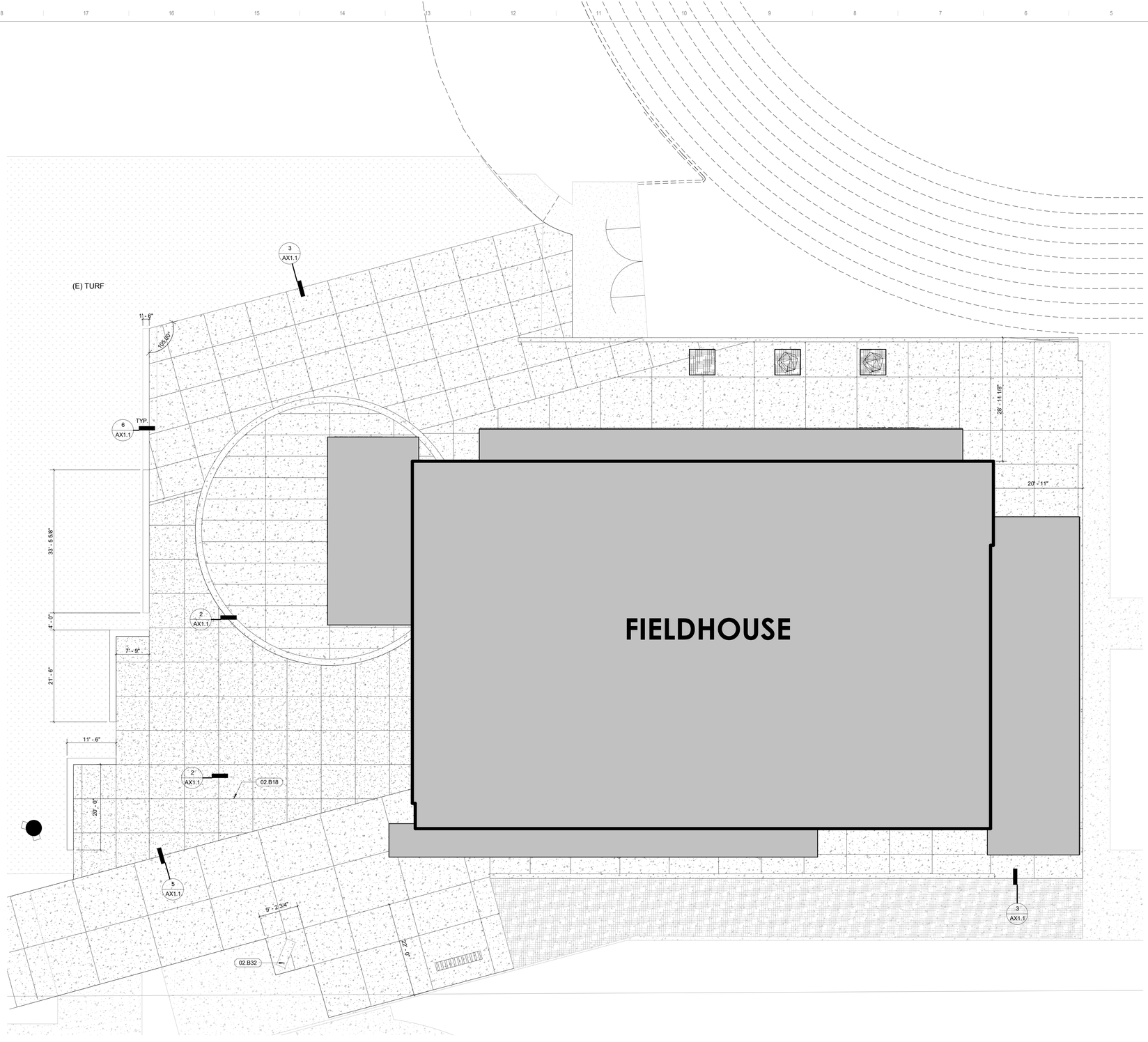

1 ENLARGED SITE PLAN - PROPOSED
SCALE 1" = 10'-0"

KEYNOTES (XX-XX)

02.B18	CRACK CONTROL JOINT
02.B32	CONCRETE MONUMENT SIGN. TO REMAIN AND PROTECT.

SITE LEGEND

- EXISTING CONC. WALKWAY/AC PAVING, SEE CIVIL PLANS
- LANDSCAPE AREA, SEE LANSCAPE PLANS
- NEW CONRETE WALK/PAD, SEE CIVIL PLANS
- EXISTING BUILDING
- NEW BUILDING
- NEW BUILDING
- NEW FIRE HYDRANT

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LICENSED ARCHITECT
MICHAEL B. SCHOEN
No. C25529
RENEWAL DATE
FEB 28, 2027
STATE OF CALIFORNIA

PROJECT NUMBER
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Author

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ENLARGED SITE PLAN

AS.3

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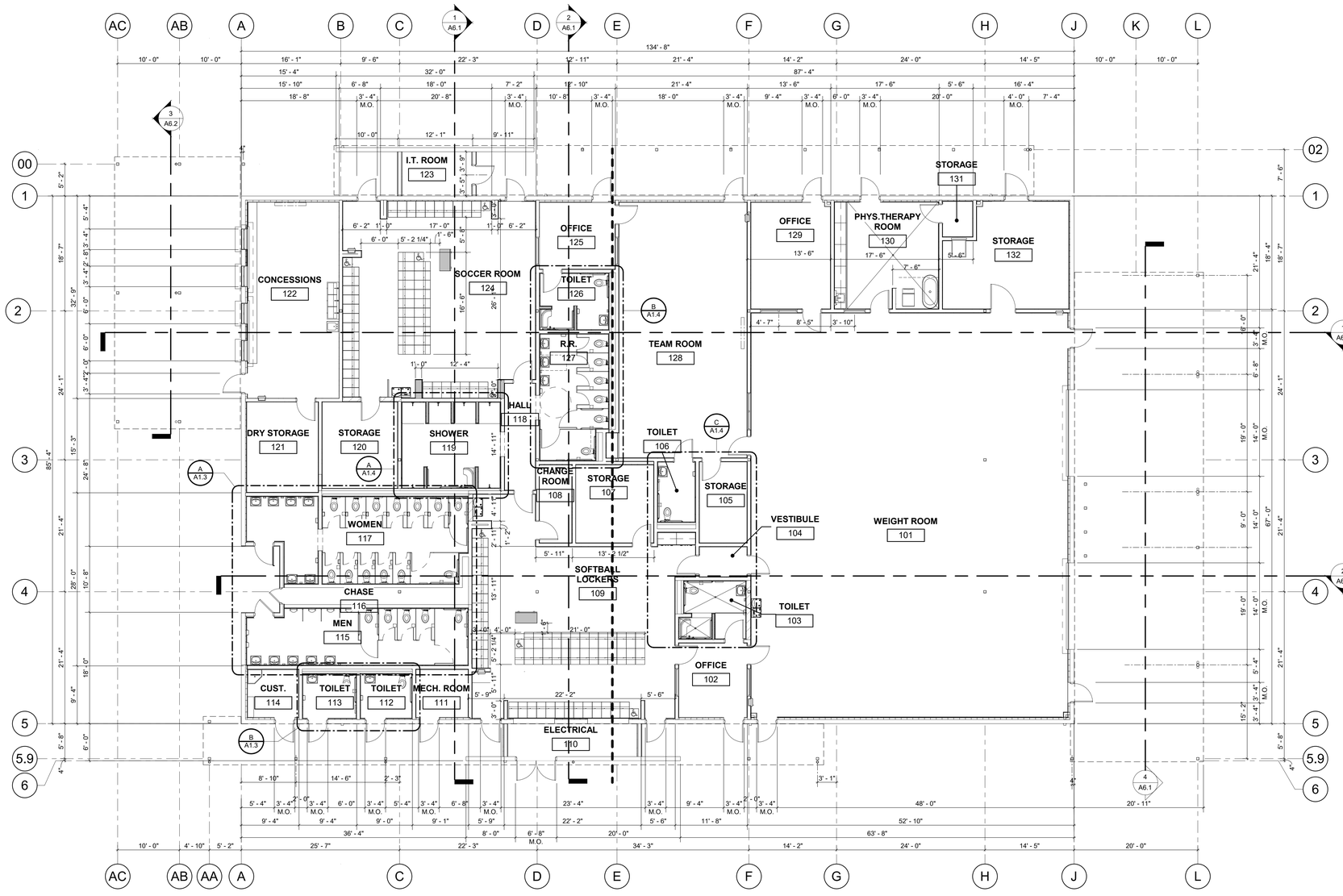

A FLOOR PLAN
SCALE 1/8" = 1'-0"

KEYNOTES (XX-XX)

WALL LEGEND

- 8" CMU WALL
- 8" WOOD STUD WALL
- 6" WOOD STUD WALL
- 4" WOOD STUD WALL
- WALL TYPE — DETAIL REFERENCE SEE SHEET AX5.1
- * EXTERIOR WALL TYPE U.O.N. — 16 IS TYPICAL,
- * INTERIOR WALL TYPE U.O.N. — 11 IS TYPICAL,
- SYMBOL INDICATES ACCESSIBILITY ITEM. SEE DETAIL 16/AX7.1 FOR TYPICAL ACCESSIBILITY STANDARDS, CLEARANCES AND MOUNTING HEIGHTS & LOCATIONS
- XX INTERIOR ELEVATION MARK, SEE INTERIOR ELEVATIONS SHEETS A.7X

FLOOR PLAN NOTES

1. REFER TO SHEET AT.2 FOR ADDITIONAL SYMBOLS NOT SHOWN.
2. ALL DIMENSIONS ARE AS FOLLOWS UNLESS OTHERWISE NOTED:
   A. FACE OF STUD (OR CMU WHERE APPLICABLE) TO FACE OF STUD ;
   B. COLUMN LINE TO FACE OF STUD (OR CMU WHERE APPLICABLE) UNLESS OTHERWISE NOTED.
3. REFERENCE ENLARGED PLANS FOR DIMENSIONS OF ENLARGED PLAN AREAS.
4. DOORS ARE 4" CLR. FROM THE FACE OF FINISH TO ROUGH OPENING OF JAMB UNLESS OTHERWISE NOTED.
5. SEE SHEET AX5.1 FOR WALL ASSEMBLIES.
6. SEE STRUCT. FOR METAL STUD SIZES AND CONNECTIONS.
7. NON RATED INTERIOR WALLS TO EXTEND FROM FLOOR TO ROOF DECK. OTHER INTERIOR NON-RATED WALLS MAY EXTEND FROM FLOOR TO CEILING FRAMING OR 6" ABOVE ACOUSTICAL CEILING GRID.
8. ALL WALLS SHALL HAVE FRAMING, FINISHES, INSULATION, AND SUBSTRATES FROM FLOOR TO STRUCTURAL DECK. UNLESS OTHERWIS NOTED.
9. FOR PLAN DIMENSIONS, REFERENCE DIMENSIONED PLAN ON SHEET A1.1

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LICENSED ARCHITECT — MICHAEL R. SCHOEN — No. C-35295 — RENEWAL DATE FEB 28, 2027 — STATE OF CALIFORNIA

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FLOOR PLAN - DIMENSIONED

A1.1

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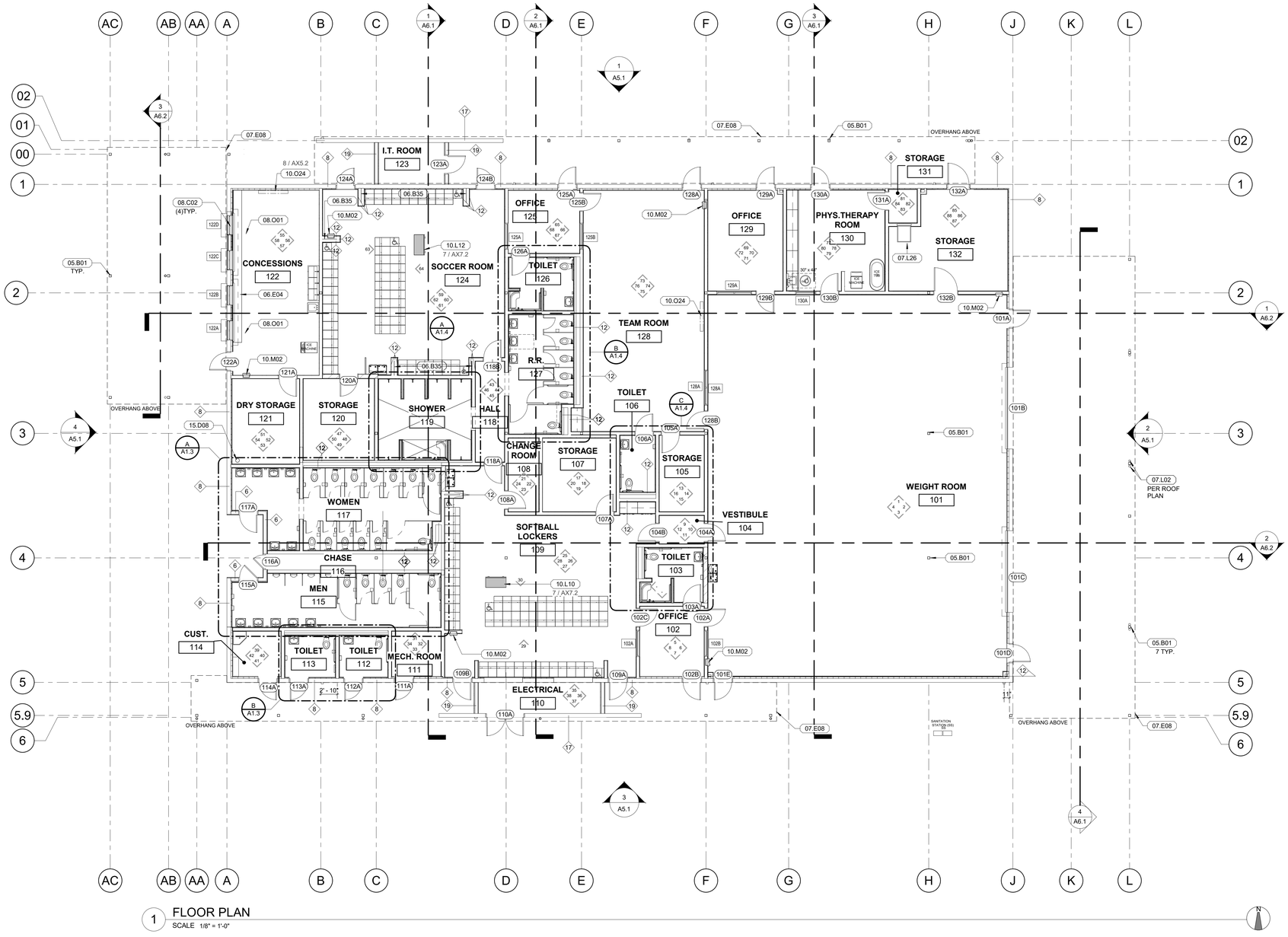

KEYNOTES (XX-XX)

05.B01	EXPOSED TUBE STEEL COLUMN
06.B35	1/2" AIR SPACE BETWEEN WOOD STUDS
06.E04	COUNTERTOP
07.E08	DASHED LINE INDICATES ROOF ABOVE
07.L02	ROOF DRAIN & OVERFLOW
07.L26	ROOF HATCH AND GUARD ASSEMBLY
08.C02	WINDOW, SEE WINDOW SCHEDULE
08.O01	OVERHEAD COILING SERVICE DOOR
10.L10	LOCKER BENCH
10.L12	ACCESSIBLE LOCKER BENCH
10.M02	2A:10BC MIN RATED FIRE EXTINGUISHER W/ SEMI-RECESSED CABINET
10.O24	FLAT SCREEN MONITOR
15.D08	ADD ALTERNATE #1: FIRE RISER, REFER TO CIVIL AND MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.

WALL LEGEND

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- 8" WOOD STUD WALL
- 6" WOOD STUD WALL
- 4" WOOD STUD WALL
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NOTED FLOOR PLAN

A1.2

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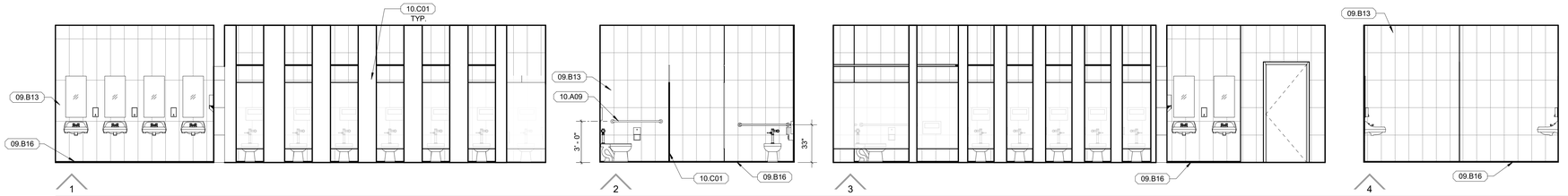
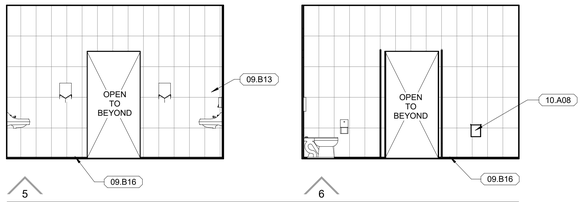
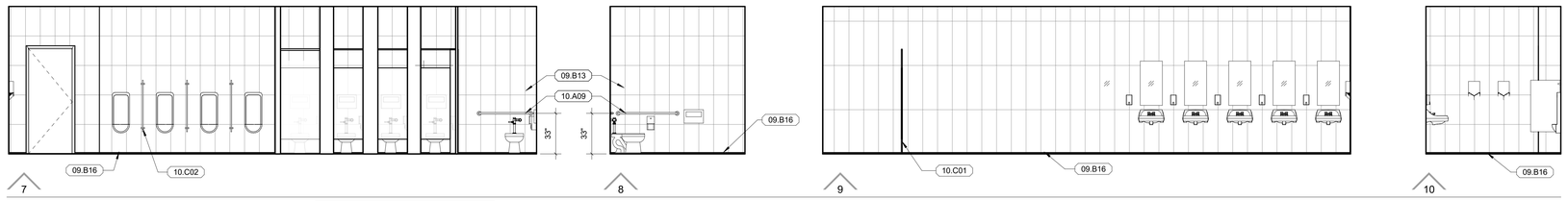


WOMEN R.R. - 1 - RESTROOM

NOTE: NOTE: FOR THE MOUNTING HEIGHT OF
THE FIXTURES AND ACCESSORIES,
SEE DETAIL

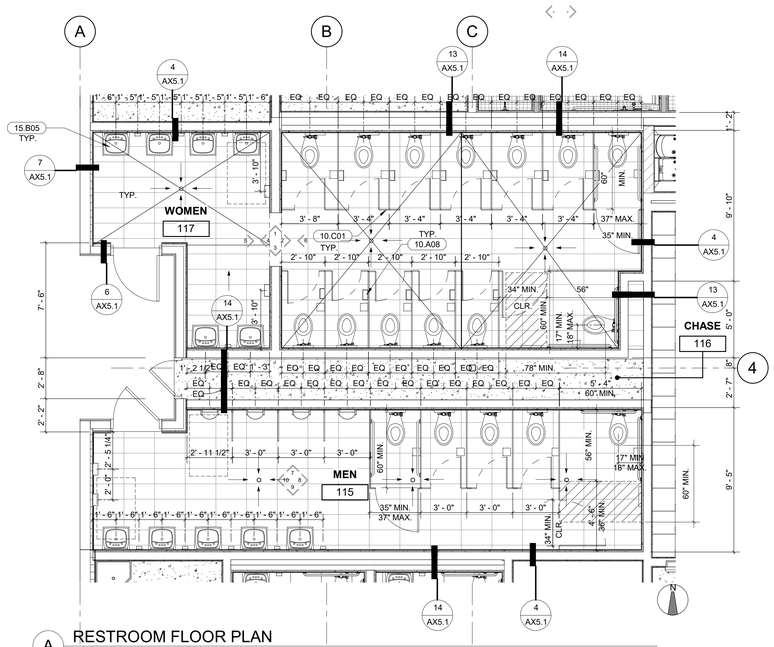


WOMEN R.R.

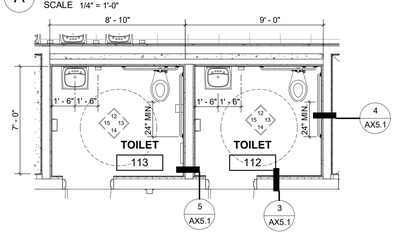


MEN R.R. - RESTROOM

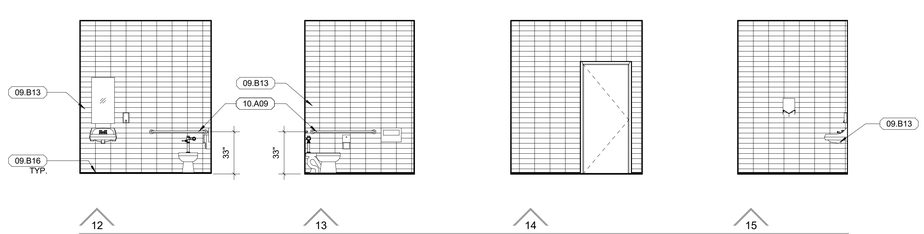
NOTE: NOTE: FOR THE MOUNTING HEIGHT OF
THE FIXTURES AND ACCESSORIES,
SEE DETAILS ON AX7.2



A RESTROOM FLOOR PLAN
SCALE 1/4" = 1'-0"



B RESTROOM FLOOR PLAN
SCALE 1/4" = 1'-0"



TOILET - 1 - RESTROOM

KEYNOTES (XX-XX)

09.B13	WALL TILE
09.B16	FLOOR TO WALL TRANSITION STRIP
10.A08	SANITARY NAPKIN DISPOSAL
10.A09	GRAB BAR, REFER TO DETAIL 16/AX7.2 FOR ANCHORAGE.
10.C01	TOILET PARTITION
10.C02	URINAL SCREEN
15.B05	LAVATORY, SEE PLUMBING PLANS

WALL LEGEND

- 8" CMU WALL
- 8" WOOD STUD WALL
- 6" WOOD STUD WALL
- 4" WOOD STUD WALL
- WALL TYPE — DETAIL REFERENCE SEE SHEET AX5.1
- * EXTERIOR WALL TYPE U.O.N. — 16 — IS TYPICAL,
- * INTERIOR WALL TYPE U.O.N. — 11 — IS TYPICAL,
- SYMBOL INDICATES ACCESSIBILITY ITEM. SEE DETAIL 16/AX7.1 FOR TYPICAL ACCESSIBILITY STANDARDS, CLEARANCES AND MOUNTING HEIGHTS & LOCATIONS
- xx — INTERIOR ELEVATION MARK, SEE INTERIOR ELEVATIONS SHEETS A.7X

GENERAL NOTES - BATHROOM

1. FOR MINIMUM REQUIRED CLEARANCES, GRAB BAR SIZES AND STANDARDS SEE DETAIL 20 / AX7.2 TYPICAL ACCESSIBILITY STANDARDS.
2. FOR MAXIMUM RESTROOM ACCESSORY HEIGHTS AND PROJECTIONS SEE DETAIL 20 / AX7.2 TYPICAL ACCESSIBLITY STANDARDS (TOILET ROOM ACCESSORIES).
3. FOR ELEVATIONS THAT ARE NOT ILLUSTRATED MATCH FINISHES OF TYPICAL ROOM ELEVATION AND REFER TO INTERIOR FINISH SCHEDULE.

INTERIOR ELEVATION LEGEND

- HATCH INDICATES GYPSUM BOARD FINISH — P-1 — U.O.N.
- HATCH INDICATES WALL TILE FINISH — TL-12
- HATCH INDICATES WALL TILE FINISH — TL-3
- HATCH INDICATES WALL TILE FINISH — TL-4
- HATCH INDICATES WALL TILE FINISH — TL-10

SYMBOLS LEGEND - RESTROOM

	ACCESSIBLE HI/LOW DRINKING FOUNTAIN, SEE PLUMBING PLANS
	LAVATORY, SEE PLUMBING PLANS
	WATER CLOSET, SEE PLUMBING PLANS
	URINAL, SEE PLUMBING PLANS
	MOP SINK, SEE PLUMBING PLANS
	MIRROR
	ELECTRIC HAND DRYER, REFER TO ELECTRICAL DRAWINGS.
	SOAP DISPENSER
	TOILET SEAT COVER DISPENSER
	SANITARY NAPKIN DISPOSAL
	TOILET TISSUE DISPENSER

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 01/23/2025

PBK

ARCHITECT PBK Architects, Inc.
FRESNO
7790 North Palm Avenue
Fresno, CA 93711
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MADERA HIGH SCHOOL FIELDHOUSE

200 SOUTH "I" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT — MICHAEL R. SCHOEN — No. C30295 — RENEWAL DATE FEB 28, 2027 — STATE OF CALIFORNIA

PROJECT NUMBER 20-51
DATE 01/22/2025
DSA APPLICATION NO. 02-121624
FILE NO. 20-H3
PTN NO. 65243-153
DRAWN BY Author

REVISIONS

#	DESCRIPTION	DATE

CONSTRUCTION DOCUMENTS

ENLARGED FLOOR PLAN & INT. ELEV.

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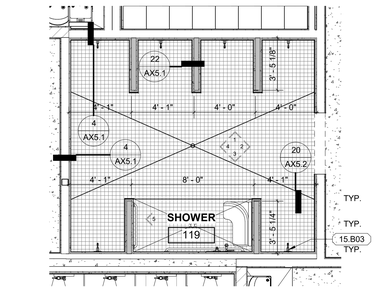
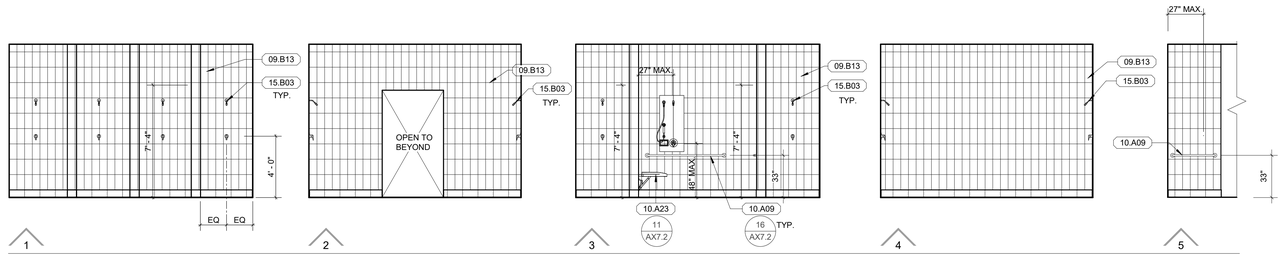
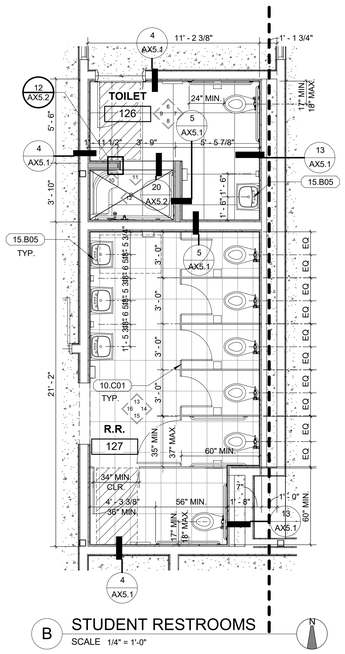


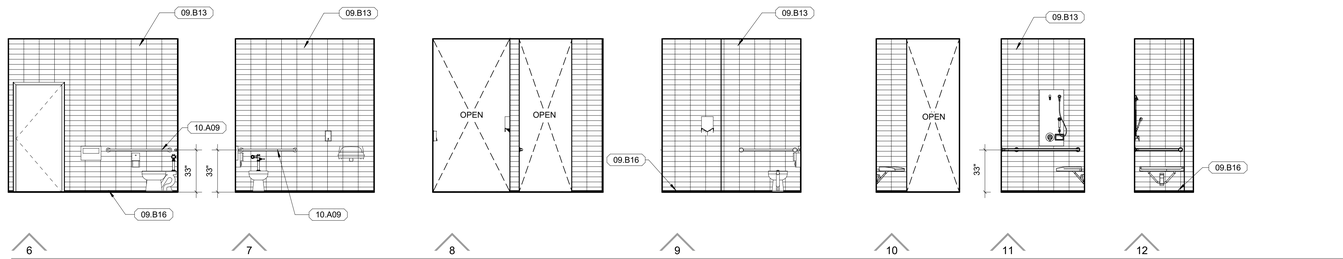
A SHOWERS
SCALE 1/4" = 1'-0"



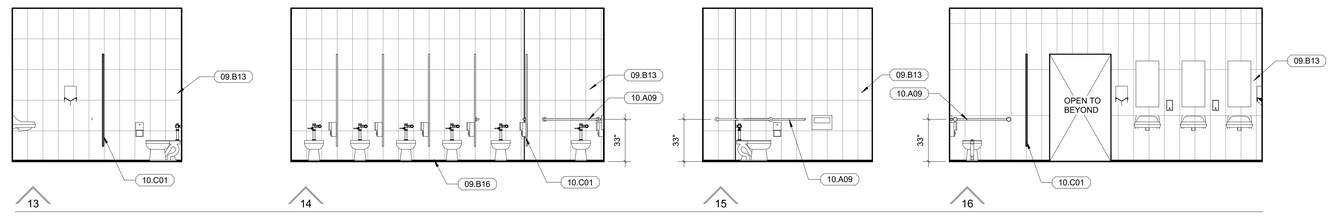
SHOWERS - 1 - RESTROOM



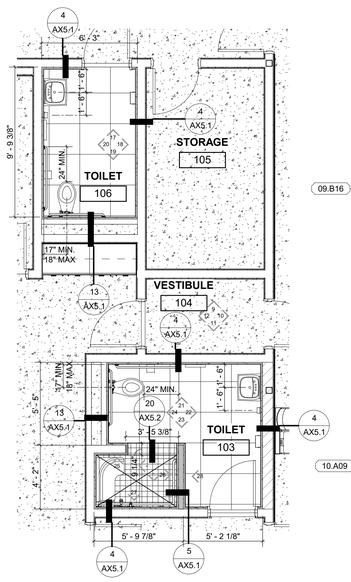
B STUDENT RESTROOMS
SCALE 1/4" = 1'-0"



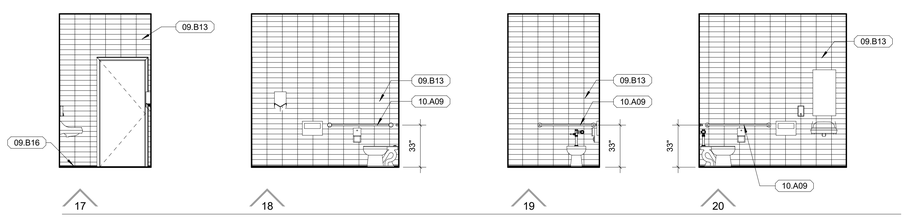
TOILET 126 - 1 - RESTROOM



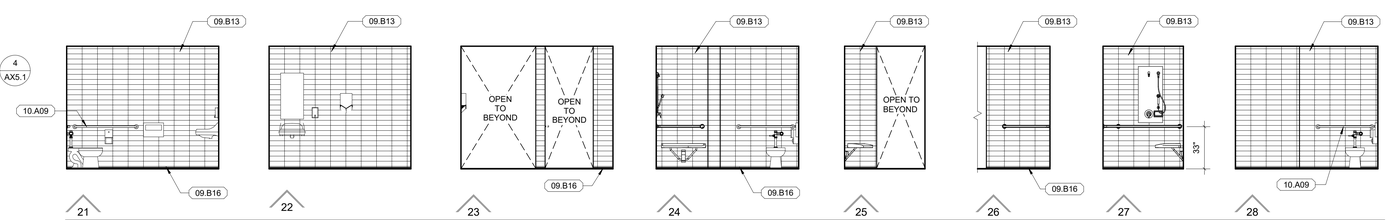
STUDENT R.R. - 1 - RESTROOM



C STAFF AND STUDENT RESTROOMS
SCALE 1/4" = 1'-0"



Toilet 106 - 1



Toilet 103 - 1

KEYNOTES (XX-XX)

09.B13	WALL TILE
09.B16	FLOOR TO WALL TRANSITION STRIP
10.A09	GRAB BAR, REFER TO DETAIL 16/AX7.2 FOR ANCHORAGE.
10.A23	FOLD DOWN SHOWER SEAT
10.C01	TOILET PARTITION
15.B03	SHOWER HEAD, SEE PLUMBING PLANS
15.B05	LAVATORY, SEE PLUMBING PLANS

WALL LEGEND

- 8" CMU WALL
- 8" WOOD STUD WALL
- 6" WOOD STUD WALL
- 4" WOOD STUD WALL
- WALL TYPE — DETAIL REFERENCE SEE SHEET AX5.1
- * EXTERIOR WALL TYPE U.O.N. — 16 IS TYPICAL.
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- SYMBOL INDICATES ACCESSIBILITY ITEM. SEE DETAIL 16/AX7.1 FOR TYPICAL ACCESSIBILITY STANDARDS, CLEARANCES AND MOUNTING HEIGHTS & LOCATIONS
- xx INTERIOR ELEVATION MARK, SEE INTERIOR ELEVATIONS SHEETS A.7X

GENERAL NOTES - BATHROOM

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- HATCH INDICATES WALL TILE FINISH TL-12
- HATCH INDICATES WALL TILE FINISH TL-3
- HATCH INDICATES WALL TILE FINISH TL-4
- HATCH INDICATES WALL TILE FINISH TL-10

SYMBOLS LEGEND - RESTROOM

	ACCESSIBLE HI/LOW DRINKING FOUNTAIN, SEE PLUMBING PLANS
	LAVATORY, SEE PLUMBING PLANS
	WATER CLOSET, SEE PLUMBING PLANS
	URINAL, SEE PLUMBING PLANS
	MOP SINK, SEE PLUMBING PLANS
	MIRROR
	ELECTRIC HAND DRYER, REFER TO ELECTRICAL DRAWINGS.
	SOAP DISPENSER
	TOILET SEAT COVER DISPENSER
	SANITARY NAPKIN DISPOSAL
	TOILET TISSUE DISPENSER

IDENTIFICATION STAMP
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APP: 02-121624 INC:
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SS ☑ FLS ☑ ACS ☑
DATE: 01/23/2025

PBK

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MADERA HIGH SCHOOL FIELDHOUSE
200 SOUTH "I" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

PROFESSIONAL SEAL
LICENSED ARCHITECT — MICHAEL R. SCHOEN — No. C-30381 — RENEWAL DATE 08.31.2027 — STATE OF CALIFORNIA

PROJECT NUMBER	20-51
DATE	01/22/2025
DSA APPLICATION NO.	02-121624
FILE NO.	20-H3
PTN NO.	65243-153
DRAWN BY	Author

REVISIONS

#	DESCRIPTION	DATE

CONSTRUCTION DOCUMENTS

ENLARGED FLOOR PLAN & INT. ELEV.

A1.4

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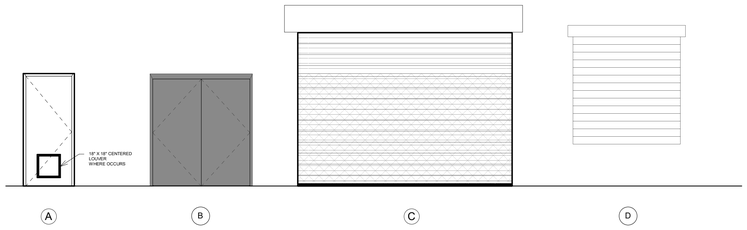
DOOR SCHEDULE

DOOR NO.	DOOR TYPE	DOOR SIZE		DOOR			FRAME		GLASS		LOUVER	FIRE RATING	DETAILS (SEE SHEET AX3.1)			HARDWARE	REMARKS
		WIDTH	HEIGHT	THICKNESS	CONSTRUCTION	FINISH	CONSTRUCTION	FINISH	TYPE	FINISH			HEAD	JAMB	THRESHOLD		
101A	A	3' - 0"	7' - 2"	0' - 1 3/4"	HM	SGP	HM	SGP	-	-	-	-	7	6	3	01	PANIC HARDWARE
101B	C	14' - 0"	10' - 0"	0' - 3"	FF	FF			-	-	-	-	18	19	-	17	ROLL UP DOOR
101C	C	14' - 0"	10' - 0"	0' - 3"	FF	FF			-	-	-	-	18	19	-	17	ROLL UP DOOR
101D	A	3' - 0"	7' - 2"	0' - 1 3/4"	HM	SGP	HM	SGP	-	-	-	-	7	6	3	01	PANIC HARDWARE
101E	A	3' - 0"	7' - 2"	0' - 1 3/4"	HM	SGP	HM	SGP	-	-	-	-	7	6	3	02	PANIC HARDWARE
102A	A	3' - 0"	7' - 0"	0' - 1 3/4"	SC	L	HM	SGP	-	-	-	-	9	9	4	12	
102B	A	3' - 0"	7' - 2"	0' - 1 3/4"	HM	SGP	HM	SGP	-	-	-	-	7	6	3	04	
102C	A	3' - 0"	7' - 0"	0' - 1 3/4"	SC	L	HM	SGP	-	-	-	-	9	9	4	12	
103A	A	3' - 0"	7' - 0"	0' - 1 3/4"	SC	L	HM	SGP	-	-	-	-	9	9	4	13	
104A	A	3' - 0"	7' - 0"	0' - 1 3/4"	SC	L	HM	SGP	-	-	-	-	9	9	4	11	
104B	A	3' - 0"	7' - 0"	0' - 1 3/4"	SC	L	HM	SGP	-	-	-	-	9	9	4	11	
105A	A	3' - 0"	7' - 0"	0' - 1 3/4"	SC	L	HM	SGP	-	-	-	-	9	9	4	15	
106A	A	3' - 0"	7' - 0"	0' - 1 3/4"	SC	L	HM	SGP	-	-	-	-	9	9	4	14	
107A	A	3' - 0"	7' - 0"	0' - 1 3/4"	SC	L	HM	SGP	-	-	-	-	9	9	4	15	
108A	A	3' - 0"	7' - 0"	0' - 1 3/4"	SC	L	HM	SGP	-	-	-	-	9	9	4	15	
109A	A	3' - 0"	7' - 2"	0' - 1 3/4"	HM	SGP	HM	SGP	-	-	-	-	7	6	3	01	PANIC HARDWARE
109B	A	3' - 0"	7' - 2"	0' - 1 3/4"	HM	SGP	HM	SGP	-	-	-	-	7	6	3	01	PANIC HARDWARE
110A	B	6' - 4"	7' - 0"	0' - 1 3/4"	HM							-	7	6	3		
111A	A	3' - 0"	7' - 2"	0' - 1 3/4"	HM	SGP	HM	SGP	-	-	-	-	7	6	3	06	18"X18" LOUVER
112A	A	3' - 0"	7' - 2"	0' - 1 3/4"	HM	SGP	HM	SGP	-	-	-	-	7	6	3	08	
113A	A	3' - 0"	7' - 2"	0' - 1 3/4"	HM	SGP	HM	SGP	-	-	-	-	7	6	3	09	
114A	A	3' - 0"	7' - 2"	0' - 1 3/4"	HM	SGP	HM	SGP	-	-	-	-	7	6	3	07	18"X18" LOUVER
115A	A	3' - 0"	7' - 2"	0' - 1 3/4"	HM	SGP	HM	SGP	-	-	-	-	12	13	3	05	
116A	A	2' - 4"	7' - 0"	0' - 1 3/4"	HM	SGP	HM	SGP	-	-	-		7	6	3	07	
117A	A	3' - 0"	7' - 2"	0' - 1 3/4"	HM	SGP	HM	SGP	-	-	-	-	12	13	3	05	
118A	A	3' - 0"	7' - 0"	0' - 1 3/4"	SC	L	HM	SGP	-	-	-	-	9	9	4	11	
118B	A	3' - 0"	7' - 0"	0' - 1 3/4"	SC	L	HM	SGP	-	-	-	-	9	9	4	11	
120A	A	3' - 0"	7' - 0"	0' - 1 3/4"	SC	L	HM	SGP	-	-	-	-	9	9	4	15	
121A	A	3' - 0"	7' - 0"	0' - 1 3/4"	SC	L	HM	SGP	-	-	-	-	9	9	4	15	
122A	A	3' - 0"	7' - 2"	0' - 1 3/4"	HM	SGP	HM	SGP	-	-	-	-	7	6	3	03	
122E	D	10' - 0"	5' - 6"	0' - 3"	FF	FF	HM	SGP					26	8	24 SIM.	17	ROLL UP COUNTER DOOR
122F	D	10' - 0"	5' - 6"	0' - 3"	FF	FF	HM	SGP					26	8	24 SIM.	17	ROLL UP COUNTER DOOR
123A	A	3' - 0"	7' - 2"	0' - 1 3/4"	HM	SGP	HM	SGP	-	-	-	-	12	13	3	06	
124A	A	3' - 0"	7' - 2"	0' - 1 3/4"	HM	SGP	HM	SGP	-	-	-	-	7	6	3	01	PANIC HARDWARE
124B	A	3' - 0"	7' - 2"	0' - 1 3/4"	HM	SGP	HM	SGP	-	-	-	-	7	6	3	01	PANIC HARDWARE
125A	A	3' - 0"	7' - 2"	0' - 1 3/4"	HM	SGP	HM	SGP	-	-	-	-	7	6	3	03	
125B	A	3' - 0"	7' - 0"	0' - 1 3/4"	SC	L	HM	SGP	-	-	-	-	9	9	4	12	
126A	A	3' - 0"	7' - 0"	0' - 1 3/4"	SC	L	HM	SGP	-	-	-	-	9	9	4	13	
128A	A	3' - 0"	7' - 2"	0' - 1 3/4"	HM	SGP	HM	SGP	-	-	-	-	7	6	3	01	PANIC HARDWARE
128B	A	3' - 0"	7' - 0"	0' - 1 3/4"	SC	L	HM	SGP	-	-	-	-	9	9	4	11	
129A	A	3' - 0"	7' - 2"	0' - 1 3/4"	HM	SGP	HM	SGP	-	-	-	-	7	6	3	03	
129B	A	3' - 0"	7' - 0"	0' - 1 3/4"	SC	L	HM	SGP	-	-	-	-	9	9	4	12	
130A	A	3' - 0"	7' - 2"	0' - 1 3/4"	HM	SGP	HM	SGP	-	-	-	-	7	6	3	03	
130B	A	3' - 0"	7' - 0"	0' - 1 3/4"	SC	L	HM	SGP	-	-	-	-	9	9	4	12	
131A	A	3' - 0"	7' - 0"	0' - 1 3/4"	SC	L	HM	SGP	-	-	-	-	9	9	4	15	
132A	A	3' - 8"	7' - 0"	0' - 1 3/4"	HM	SGP	HM	SGP	-	-	-		7	6	3	03	
132B	A	4' - 0"	7' - 0"	0' - 1 3/4"	SC	L	HM	SGP	-	-	-		9	9	4	12	

DOOR TYPE



WINDOW NOTES

1. FIELD VERIFY ALL ROUGH OPENING DIM'S. PRIOR TO FABRICATIONG WINDOWS.
2. ALL INTERIOR GLAZING SHALL BE A SINGLE LAYER OF CLEAR, FULLY TEMPERED FLOAT GLASS.
3. DUAL GLAZING TO ACHIEVE THE FOLLOWING CRITERIA (REFER TO SPECIFICATION FOR ADDITIONAL INFORMATION):
   VLT: 54%
   U: 33
   SHGC: .28
4. ***PRIOR TO GLASS AND GLASS STOP INSTALATION, VERIFY WITH ARCHITECT ON WHICH SIDE THE GLASS WILL BE PLACED ON THE HOLLOW METAL FRAME.***
5. ANY WINDOW THAT MEETS ANY OF THE FOLLOWING CATAGORIES SHALL BE SAFETY GLAZING PER 2022 CBC 2406
   A. WITHIN 24" OF A DOOR
   B. 18" OR LESS ABOVE THE GROUND
6. SEE DETAIL 24 / AX3.1 FOR WINDOW FLASHING INSTALLATION.
7. SEE DETAIL 15 / AX3.1 FOR HOLLOW METAL FRAME ANCHORAGE
8. PROVIDE A NOTE ON PLAN SPECIFYING: ALL DOORS TO ROOMS OR SPACES THAT HAVE AN OCCUPANT LOAD OF 5 OR MORE SHALL BE EQUIPPED WITH HARDWARE THAT IS LOCKABLE FROM THE INSIDE PER CBC 1010.1.11
9. SAFETY GLAZING SHALL BE PER CBC SECTION 2406.

DOOR NOTES

DOOR NOTES

DOOR OPENING FORCE:
THE FORCE FOR PUSHING OR PULLING OPEN A DOOR OR GATE OTHER THAN FIRE DOORS SHALL BE AS FOLLOWS:
1. INTERIOR HINGED DOORS AND GATES: 5 POUNDS MAXIMUM
2. SLIDING OR FOLDING DOORS: 5 POUNDS MAXIMUM
3. REQUIRED FIRE DOORS: THE MINIMUM OPENING FORCE ALLOWABLE BY THE APPROPRIATE ADMINISTRATIVE AUTHORITY, NOT TO EXCEED 15 POUNDS
4. EXTERIOR HINGED DOORS: 5 POUNDS MAXIMUM

FLOOR ELEVATION:
THERE SHALL BE A FLOOR OR LANDING ON EACH SIDE OF A DOOR. SUCH FLOOR OR LANDING SHALL BE AT THE SAME ELEVATION ON EACH SIDE OF THE DOOR. LANDINGS SHALL BE LEVEL EXCEPT FOR EXTERIOR LANDINGS, WHICH ARE PERMITTED TO HAVE A SLOPE NOT TO EXCEED 2 PERCENT MAX. IN ANY DIRECTION.

THRESHOLDS:
THRESHOLDS AT DOORWAYS SHALL NOT EXCEED 1/2" IN HEIGHT. RAISED THRESHOLDS AND FLOOR LEVEL CHANGES GREATER THAN 1/4" AT DOORWAYS SHALL BE BEVELED WITH A SLOPE NOT GREATER THAN ONE UNIT VERTICAL IN TWO UNITS HORIZONTAL.

DOOR OPERATIONS:
DOORS SHALL BE READILY OPENABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT.

HARDWARE:
DOOR HANDLES, PULLS, LATCHES, LOCKS AND OTHER OPERATING DEVICES ON DOORS REQUIRED TO BE ACCESSIBLE SHALL NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING OR TWISTING OF THE WRIST TO OPERATE.

HARDWARE HEIGHT:
DOOR HANDLES, PULLS, LATCHES, LOCKS AND OTHER OPERATING DEVICES SHALL BE INSTALLED 34 INCHES MINIMUM/ 44 INCHES MAXIMUM ABOVE FINISHED FLOOR.

BOLT LOCKS:
MANUALLY OPERATED FLUSH BOLTS OR SURFACE BOLTS ARE NOT PERMITTED.

UNLATCHING:
THE UNLATCHING OF ANY DOOR OR LEAF SHALL NOT REQUIRE MORE THAN ONE OPERATION.

PANIC AND FIRE EXIT HARDWARE:
DOORS SERVING ROOMS OR SPACES WITH AN OCCUPANT LOAD OF 50 OR MORE IN A GROUP A OCCUPANCY, ASSEMBLY AREA NOT CLASSIFIED AS AN ASSEMBLY OCCUPANCY, OR E OCCUPANCIES SHALL NOT BE PROVIDED WITH A LATCH OR LOCK UNLESS IT IS PANIC HARDWARE OR FIRE EXIT HARDWARE.

INSTALLATION:
WHERE PANIC OR FIRE EXIT HARDWARE IS INSTALLED, IT SHALL COMPLY WITH THE FOLLOWING:
1. PANIC HARDWARE SHALL BE LISTED IN ACCORDANCE WITH UL 305;
2. FIRE EXIT HARDWARE SHALL BE LISTED IN ACCORDANCE WITH UL 10C AND UL 305;
3. THE ACTUATING PORTION OF THE RELEASING DEVICE SHALL EXTEND AT LEAST ONE-HALF OF THE DOOR LEAF WIDTH; AND
4. THE MAXIMUM UNLATCHING FORCE SHALL NOT EXCEED 15 POUNDS.

ACCESSIBLE WATER CLOSET COMPARTMENT DOORS:
THE INSIDE AND OUTSIDE OF THE COMPARTMENT DOOR SHALL BE EQUIPPED WITH A LOOP OR U-SHAPED HANDLE IMMEDIATELY BELOW THE LATCH. THE LATCH SHALL BE FLIP-OVER STYLE, SLIDING OR OTHER HARDWARE NOT REQUIRING THE USER TO GRASP OR TWIST.

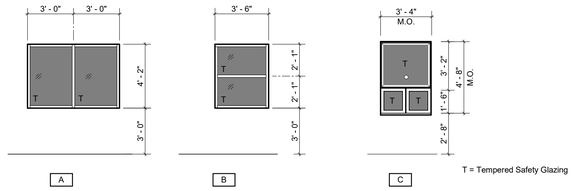
GENERAL DOOR SIGNAGE NOTES:
1. EXIT DOORS SHALL BE CLEARLY MARKED w/ "EXIT" MIN. 6" HIGH LETTERS.
2. POST A SIGN THAT READS "THIS DOOR TO REMAIN UNLOCKED DURING BUSINESS HOURS "USE LETTERS 1" HIGH ON CONTRASTING BACKGROUND ABOVE MAIN ENTRY DOOR.
3. INSTALL 6" MIN. SQUARE INTERNATIONAL SYMBOL OF ACCESSIBILITY (I.S.A.) LOGO NOTING WHEEL CHAIR ACCESS ON OR NEAR ALL ENTRANCE DOORS. SEE DET. 1/D2

GENERAL DOOR NOTES:
1. WEATHER STRIP ALL EXTERIOR DOORS AND OPENINGS.
2. THE BOTTOM 10" OF ALL DOORS (EXCEPT AUTOMATIC AND SLIDING) SHALL HAVE A SMOOTH UNINTERRUPTED SURFACE.
3. ALL DOORS & FRAMES (INCLUDING DOOR EDGING) ON EXTERIOR SIDE SHALL BE PAINTED.
4. EXIT DOORS USED AS PAIRS WITH APPROVED AUTOMATIC FLUSH BOLTS SHALL NOT HAVE DOOR KNOBS OR SURFACE MOUNTED HARDWARE ON THE INACTIVE LEAF.
5. ALL EXTERIOR DOOR LANDINGS GRADE HAVE A SMOOTH TRANSITION TO ADJACENT PAVED SURFACE.
6. ALL DOORS TO CLASSROOMS, AND ANY ROOM WITH AN OCCUPANT LOAD OF FIVE OR MORE PERSONS, SHALL BE EQUIPPED WITH AB211 COMPLIANT HARDWARE.
7. PROVIDE LEVEL LANDINGS FOR EXTERIOR MAIN DOORS w/ NO MORE THAN 1/4" DROP AT THE THRESHOLD.
8. ALL EXTERIOR DOOR LANDINGS GRADE HAVE A SMOOTH TRANSITION TO ADJACENT PAVED SURFACE.
9. MAXIMUM MOUNTING HEIGHT OF DOOR OPERATORS 34" - 44" A.F.F.
10. DOOR AND GATE CLOSERS SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 90 DEGREES, THE TIME REQUIRED TO MOVE THE DOOR TO A POSITION OF 12 DEGREES FROM THE LATCH IS 5 SECONDS MINIMUM.
11. DOOR AND GATE SPRING HINGES SHALL BE ADJUSTED SO THAT FROM THE OPEN POSITION OF 70 DEGREES, THE DOOR OR GATE SHALL MOVE TO THE CLOSED POSITION IN 1.5 SECONDS MINIMUM.

WINDOW SCHEDULE

WINDOW No	TYPE	GLAZING CLASS	WINDOW DIMENSION		WINDOW		FRAME			DETAILS (SEE SHEET AX3.1)			REMARKS
			WIDTH	HEIGHT	GLAZING	FINISH	MATERIAL	FINISH	FIRE RATING	HEAD	JAMB	SILL	
102A	B	II	4' - 6"	4' - 2"	S	CLR	HM	SGP	-	5/AX3.1	5/AX3.1	5/AX3.1	TEMPERED GLAZING
102B	B	II	4' - 6"	4' - 2"	S	CLR	HM	SGP	-	5/AX3.1	5/AX3.1	5/AX3.1	TEMPERED GLAZING
122A	C	II	3' - 3 1/2"	1' - 0"	DL	CLR	HM	SGP	-	24/AX3.1	15&20/AX3.1	24/AX3.1	TEMPERED GLAZING
122B	C	II	3' - 3 1/2"	1' - 0"	DL	CLR	HM	SGP	-	24/AX3.1	15&20/AX3.1	24/AX3.1	TEMPERED GLAZING
122C	C	II	3' - 3 1/2"	1' - 0"	DL	CLR	HM	SGP	-	24/AX3.1	15&20/AX3.1	24/AX3.1	TEMPERED GLAZING
122D	C	II	3' - 3 1/2"	1' - 0"	DL	CLR	HM	SGP	-	24/AX3.1	15&20/AX3.1	24/AX3.1	TEMPERED GLAZING
125A	B	II	4' - 6"	4' - 2"	S	CLR	HM	SGP	-	5/AX3.1	5/AX3.1	5/AX3.1	TEMPERED GLAZING
125B	B	II	4' - 6"	4' - 2"	S	CLR	HM	SGP	-	5/AX3.1	5/AX3.1	5/AX3.1	TEMPERED GLAZING
128A	A	II	6' - 0"	4' - 2"	S	CLR	HM	SGP	-	5/AX3.1	5/AX3.1	5/AX3.1	TEMPERED GLAZING
129A	A	II	6' - 0"	4' - 2"	S	CLR	HM	SGP	-	5/AX3.1	5/AX3.1	5/AX3.1	TEMPERED GLAZING
130A	B	II	3' - 6"	4' - 2"	S	CLR	HM	SGP	-	5/AX3.1	5/AX3.1	5/AX3.1	TEMPERED GLAZING

WINDOW TYPE



T = Tempered Safety Glazing

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MADERA HIGH SCHOOL FIELDHOUSE

200 SOUTH "I" STREET
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CONSTRUCTION DOCUMENTS

MADERA UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT
MICHAEL R. SCHOEN
No. C-30525
RENEWAL DATE
FEB 28, 2027
STATE OF CALIFORNIA

PROJECT NUMBER
20-51

DATE
01/22/2025

DSA APPLICATION NO.
02-121624

FILE NO.
20-H3

PTN NO.
65243-153

DRAWN BY
Author

REVISIONS

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DOOR AND WINDOW SCHEDULE

A2.1

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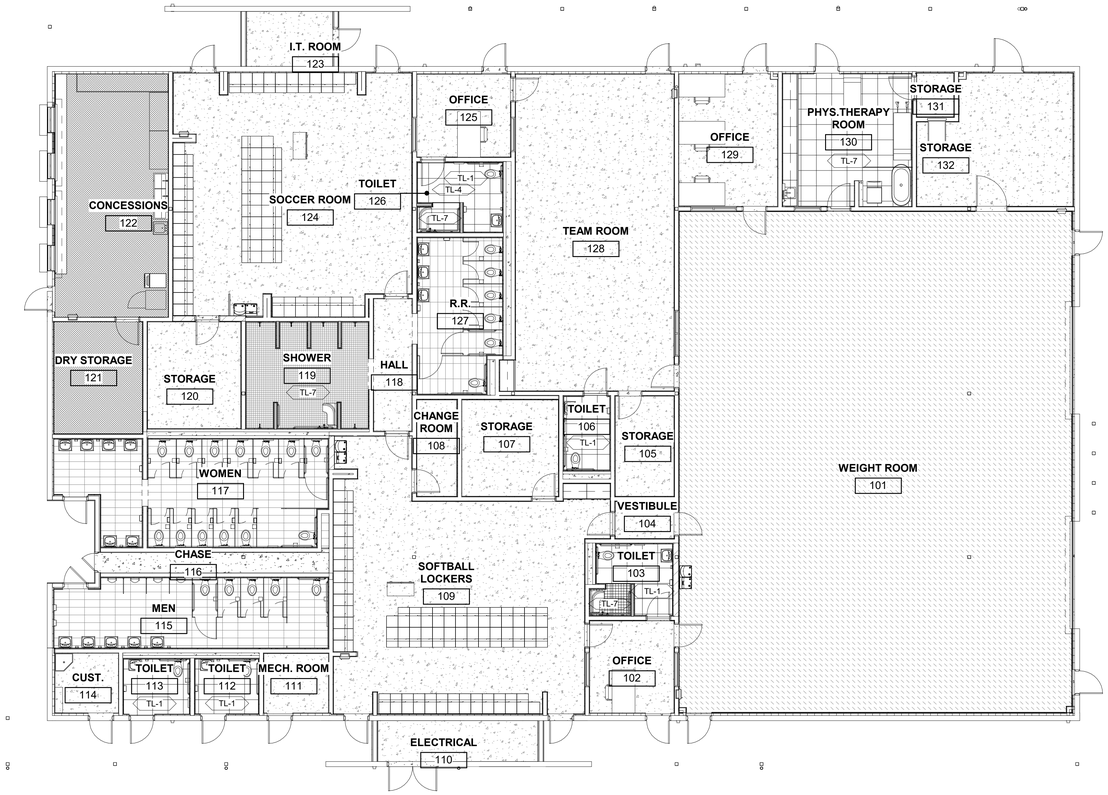

1 FINISH FLOOR

SCALE 1/8" = 1'-0"

N

SCHEDULE ABBREVIATIONS

ACT	ACOUSTIC CEILING TILE	PO	POLISHED
AFF	ABOVE FINISH FLOOR	PL	PLASTIC LAMINATE
AL	ALUMINUM	PLT	PLATE
ANOD	ANODIZED	PLY	PLYWOOD
CLN	CLEAN	PRT	TOILET PARTITION
CLR	CLEAR	RF	RUBBER FLOORING
CMU	CONCRETE MASONRY UNIT	RCP	REFLECTED CEILING PLAN
CONC	CONCRETE	RTB	RUBBER TOPSET
CPT	CARPET	S	SINGLE GLAZED
CV	INTEGRAL COVE	SC	SOLID CORE
DL	DUAL GLAZED	SCF	STATIC CONTROL FLOORING
DS	DENSIFIED SEALED CONCRETE	SGP	SEMI-GLOSS PAINT
(E)	EXISTING	SHGC	SOLAR HEAT GAIN COEFFICIENT
EPF	EPOXY FLOORING	SL	SEALED
ESP	EGGSHEEL PAINT	SO	SOLID SURFACE
EXP	EXPOSED STRUCTURE	STN	STAINED
F	FIXED	T	TEMPERED
FF	FACTORY FINISH	TL	TILE
FRP	FIBER REINFORCED PANEL	TNT	TINTED
GB	GYPSUM BOARD	TSP	TRANSITION STRIP
GP	GLOSS PAINT	U	U VALUE
HM	HOLLOW METAL	VLT	VISUAL LIGHT TRANSMITTANCE
LP	PLASTIC LAMINATE	VT	VINYL TILE
OP	OPAQUE GLAZING (FILM)	VTB	VINYL TACK BOARD
P	PAINTED	VWC	VINYL WALL COVERING
		WGB	WATER-RESISTANT GYPSUM BOARD

FINISH FLOOR PLAN LEGEND

HATCH INDICATES TILE TYPE — TL-5 U.N.O

HATCH INDICATES SEALED CONCRETE

HATCH INDICATES RUBBER FLOORING — RBF-1

HATCH INDICATES EPOXY FLOORING — EPF-1

GENERAL NOTES

1. FINISH SCHEDULES ARE TO BE COORDINATED WITH THE FINISH LEGEND.
2. REFER TO INTERIOR ELEVATIONS FOR LOCATIONS OF PAINTS, AND PLASTIC LAMINATES.
3. SEE REFLECTED CEILING PLANS FOR CEILING FINISHES
4. ALL HARD LID CEILINGS TO BE PAINTED WITH P-1, UNLESS OTHERWISE NOTED.
5. ALL EXPOSED STRUCTURE TO BE PAINTED WITH P-3, UNLESS OTHERWISE NOTED.
6. ALL GYPSUM BOARD WALLS TO BE PAINTED WITH P-1, UNLESS OTHERWISE NOTED.
7. ALL HOLLOW METAL DOORS TO BE PAINTED WITH P-3, UNLESS OTHERWISE NOTED.
8. ALL FLOORS IN PUBLIC AREA SHALL HAVE NON-SLIP SURFACE IN COMPLIANCE WITH DIVISION 18 OF HEALTH AND SAFETY CODES OF THE STATE OF CALIFORNIA.
9. INSTALL PROPER SCHLUTER STRIP AT FLOOR MATERIAL TRANSITIONS PER MANUFACTURER RECOMMENDATION.
10. ALL FINISHES SHALL COMPLY WITH MINIMUM FINISH CLASSIFICATION OF FLAME SPREAD AND SMOKE DEVELOPED REQUIREMENTS PER CBC 2022, SECTION 803.
11. ALL EXPOSED/ SEALED/ POLISHED CONCRETE FLOORING SHALL BE PROTECTED FROM EQUIPMENT/ DAMAGE DURING CONSTRUCTION.
12. WALL FINISHES ARE TYPICAL AS INDICATED, INCLUDING BUT NOT LIMITED TO WING WALLS, ALCOVES, ETC. U.O.N.

REMARKS

1. RUN PLASTIC LAMINATE VERTICAL.
2. RUN PLASTIC LAMINATE HORIZONTAL
3. 3"X"3 MOSAIC TILE TO BE USED IN SHOWERS ONLY UNLESS OTHERWISE NOTED.
4. GROUT COLOR SHALL BE:
   CUSTOM BUILDING PRODUCTS
   COLOR GROUT
   #543 DRIFTWOOD
5. GROUT COLOR SHALL BE:
   CUSTOM BUILDING PRODUCTS
   PRISM SURE COLOR GROUT
   #644 SHADOW
6. GROUT COLOR SHALL BE
   CUSTOM BUILDING PRODUCTS
   PRISM SURE COLOR GROUT
   #19 PEWTER
6. GRAPHICS TO BE COORDINATED WITH ARCHITECT.
7. SEE EXTERIOR ELEVATIONS FOR PATTERN.

FINISH SCHEDULE

NUMBER	ROOM	FLOOR MATERIAL	FLOOR FINISH	BASE MATERIAL	BASE FINISH	BASE HEIGHT	WALLS NORTH MATERIAL	WALLS NORTH FINISH	WALLS EAST MATERIAL	WALLS EAST FINISH	WALLS SOUTH MATERIAL	WALLS SOUTH FINISH	WALLS WEST MATERIAL	WALLS WEST FINISH	CEILING	REMARKS
101	WEIGHT ROOM	RF	FF	RTB	FF	4"	GB	ESP	GB	ESP	GB	ESP	GB	ESP	EXP	
102	OFFICE	SC	FF	RTB	FF	4"	GB	ESP	GB	ESP	GB	ESP	GB	ESP	ACT	
103	TOILET	TL	FF	TSP	FF	-	TL	FF	TL	FF	TL	FF	TL	FF	GB	
104	VESTIBULE	SC	SL	RTB	FF	4"	GB	ESP	GB	ESP	GB	ESP	GB	ESP	GB	
105	STORAGE	SC	SL	RTB	FF	4"	GB	ESP	GB	ESP	GB	ESP	GB	ESP	EXP	
106	TOILET	TL	FF	TSP	FF	-	TL	FF	TL	FF	TL	FF	TL	FF	GB	
107	STORAGE	SC	SL	RTB	FF	4"	GB	ESP	GB	ESP	GB	ESP	GB	ESP	EXP	
108	CHANGE ROOM	SC	SL	RTB	FF	4"	GB	ESP	GB	ESP	GB	ESP	GB	ESP	GB	
109	SOFTBALL LOCKERS	SC	PL	RTB	FF	4"	GB	ESP	GB	ESP	GB	ESP	GB	ESP	EXP	
110	ELECTRICAL	SC	SL	RTB	FF	4"	GB	ESP	GB	ESP	GB	ESP	GB	ESP	EXP	
111	MECH. ROOM	SC	SL	RTB	FF	4"	GB	ESP	GB	ESP	GB	ESP	GB	ESP	EXP	
112	TOILET	TL	FF	TSP	FF	-	TL	FF	TL	FF	TL	FF	TL	FF	GB	
113	TOILET	TL	FF	TSP	FF	-	TL	FF	TL	FF	TL	FF	TL	FF	GB	
114	CUST.	SC	SL	RTB	FF	4"	GB/FRP	ESP/FF	GB	ESP	GB	ESP	GB/FRP	ESP/FF	GB	
115	MEN	TL	FF	TSP	FF	-	TL	FF	TL	FF	TL	FF	TL	FF	GB	
116	CHASE	SC	SL	-	-	-	GB	ESP	GB	ESP	GB	ESP	GB	ESP	EXP	
117	WOMEN	TL	FF	TSP	FF	-	TL	FF	TL	FF	TL	FF	TL	FF	GB	
118	HALL	SC	SL	RTB	FF	4"	GB	ESP	GB	ESP	GB	ESP	GB	ESP	GB	
119	SHOWER	TL	FF	TL	FF	6"	TL	FF	TL	FF	TL	FF	TL	FF	GB	
120	STORAGE	SC	SL	RTB	FF	4"	GB	ESP	GB	ESP	GB	ESP	GB	ESP	EXP	
121	DRY STORAGE	SC	SL	RTB	FF	4"	GB	ESP	GB	ESP	GB	ESP	GB	ESP	GB	
122	CONCESSIONS	EPF	FF	EPF	FF	6"	FRP	FF	FRP	FF	FRP	FF	FRP	FF	ACT	
123	I.T. ROOM	SC	SL	RTB	FF	4"	GB	ESP	GB	ESP	GB	ESP	GB	ESP	EXP	
124	SOCCER ROOM	SC	PL	RTB	FF	4"	GB	ESP	GB	ESP	GB	ESP	GB	ESP	EXP	
125	OFFICE	CPT	FF	RTB	FF	4"	GB	ESP	GB	ESP	GB	ESP	GB	ESP	ACT	
126	TOILET	TL	FF	TSP	FF	-	TL	FF	TL	FF	TL	FF	TL	FF	GB	
127	R.R.	TL	FF	TL	FF	6"	TL	FF	TL	FF	TL	FF	TL	FF	GB	
128	TEAM ROOM	SC	PL	RTB	FF	4"	GB	ESP	GB	ESP	GB	ESP	GB	ESP	ACT	
129	OFFICE	SC	PL	RTB	FF	4"	GB	ESP	GB	ESP	GB	ESP	GB	ESP	ACT	
130	PHYS.THERAPY ROOM	TL	FF	TL	FF	6"	GB	ESP	GB	ESP	GB	ESP	GB	ESP	ACT/GB	
131	STORAGE	SC	SL	RTB	FF	4"	GB	ESP	GB	ESP	GB	ESP	GB	ESP	GB	
132	STORAGE	SC	SL	RTB	FF	4"	GB	ESP	GB	ESP	GB	ESP	GB	ESP	EXP	

COLOR SCHEDULE

MATERIAL	DESIGNATION	MANUFACTURER	SIZE 2	STYLE	COLOR	REMARKS
CONCRETE MASONRY UNIT	CMU-1	BASALITE	8X8X16	PRECISION	S-701	7
CONCRETE MASONRY UNIT	CMU-2	BASALITE	8X8X16	PRECISION	NATURAL	7
CONCRETE MASONRY UNIT	CMU-3	BASALITE	8X8X16	SPLIT FACE	NATURAL	7
FIBER REINFORCED PANEL	FRP-1	NUDO		FIBER-LITE LINER PANEL, PEBBLED	SILVER	
GROUT	GRT-1	CUSTOM			SHADOW	
GROUT	GRT-2	CUSTOM			DRIFTWOOD	
GROUT	GRT-3	CUSTOM			PEWTER	
METAL PANEL	MP-1	IMETCO		LATITUDE LW-5	CUSTOM BLUE	
METAL PANEL	MP-2	IMETCO		LATITUDE LW-1	CADET GRAY	
METAL PANEL	MP-3	IMETCO	16"	FW SERIES	CADET GRAY	
PAINT	P-1	BENJAMIN MOORE			OC-09 BALLET WHITE	
PAINT	P-2	BENJAMIN MOORE			HC-166 KENDALL CHARCOAL	
PAINT	P-3	SHERWIN WILLIAMS			DO BLUE (CUSTOM)	
PARTITIONS	PRT-1	BOBRICK		SIERRA SERIES	FOREST GREEN	
PLASTIC LAMINATE	PL-1	WILSONART		8208K-16 - CASUAL RUSTIC FINISH	FAWN CYPRESS	1
PLASTIC LAMINATE	PL-2	WILSONART		5057K-18	PEARL ALLOY	2
RESINOUS EPOXY	EPF-1	SHERWIN WILLIAMS		RESUFLOR SCREED DECO FLOOR SL 45	METEOR SHOWER	
RUBBER BASE	RTB-1	ROPPE			123 CHARCOAL	
RUBBER FLOORING	RBF-1	MONDO		RAMFLEX 10 MM - HAMMERED	707 - GREY	
SEALED CONCRETE	SC-1					
SOLID SURFACE	SO-1	WILSONART			SILVER SMOKE	
TILE	TL-1	CROSSVILLE	12"X12"	ARGENT	CLEAN SLATE	5
TILE	TL-2	DALTILE	4"X12"	COLOR WHEEL LINEAR	K775 MATTE BISCUIT	6
TILE	TL-3	CROSSVILLE	12"X24"	GOTHAM	CLOCK TOWER	5
TILE	TL-4	CROSSVILLE	12"X36"	HIDE AND SLEEK	LAPIS	4
TILE	TL-5	CROSSVILLE	3"X3"	COLOR BLOX 2.0	CBX38 LITTLE BOY BLUE	6
TILE	TL-6	CROSSVILLE	6"X12"	COLOR BLOX 2.0	CBX38 LITTLE BOY BLUE	6
TILE	TL-7	CROSSVILLE	24"X24"	CIVILIZATION, PORCELAIN STONE	CURRENCY	5
TILE	TL-8	CROSSVILLE	6"X12"	CIVILIZATION, PORCELAIN STONE, COVE BASE	CURRENCY	5
TILE	TL-9	CROSSVILLE	12"X24"	CIVILIZATION, PORCELAIN STONE	CURRENCY	5
WALL COVERING	WC-1	DREAMSCAPE		TERRALON	CUSTOM	6

ALL INTERIOR WALL AND CEILING FINISHES SHALL COMPLY WITH FIRE CLASSIFICATION PER CBC 803 AND TABLE 803.13.

GROUP	SPRINKLERED		
	INTERIOR EXIT STAIRWAYS AND RAMPS AND EXIT PASSAGEWAYS^	CORRIDORS AND ENCLOSURE FOR EXIT ACCESS STAIRWAYS AND RAMPS	ROOMS AND ENCLOSED SPACES^C
A-3, A-4 & A-5	B	B	C
B, E, M, R-1	B	C	C

A. CLASS C INTERIOR FINISH MATERIALS SHALL BE PERMITTED FOR WAINSCOTTING OR PANELING OF NOT MORE THAN 1,000 SQUARE FEET OF APPLIED SURFACE AREA IN THE GRADE LOBBY WHERE APPLIED DIRECTLY TO A NONCOMBUSTIBLE BASE OR OVER FURRING STRIPS APPLIED TO A NONCOMBUSTIBLE BASE AND FIREBLOCKED AS REQUIRED BY SECTION 803.15.1.

C. REQUIREMENTS FOR ROOMS AND ENCLOSED SPACES SHALL BE BASED ON SPACES ENCLOSED BY PARTITIONS. WHERE A FIRE-RESISTANCE RATING IS REQUIRED FOR STRUCTURAL ELEMENTS, THE ENCLOSING PARTITIONS SHALL EXTEND FROM THE FLOOR TO THE CEILING. PARTITIONS THAT DO NOT COMPLY WITH THIS SHALL BE CONSIDERED TO BE ENCLOSING SPACES AND THE ROOMS OR SPACES ON BOTH SIDES SHALL BE CONSIDERED TO BE ONE ROOM OR SPACE. IN DETERMINING THE APPLICABLE REQUIREMENTS FOR ROOMS AND ENCLOSED SPACES, THE SPECIFIC OCCUPANCY THEREOF SHALL BE THE GOVERNING FACTOR REGARDLESS OF THE GROUP CLASSIFICATION OF THE BUILDING OR STRUCTURE.

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MADERA HIGH SCHOOL FIELDHOUSE

200 SOUTH "I" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

MADERA UNIFIED SCHOOL DISTRICT 1966

PROFESSIONAL SEAL

LICENSED ARCHITECT — MICHAEL R. SCHOEN — No. C-35625 — RENEWAL DATE FEB 28, 2027 — STATE OF CALIFORNIA

PROJECT NUMBER 20-51

DATE 01/22/2025

DSA APPLICATION NO. 02-121624

FILE NO. 20-H3

PTN NO. 65243-153

DRAWN BY Author

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FINISH/COLOR PLAN & SCHEDULE

A2.2

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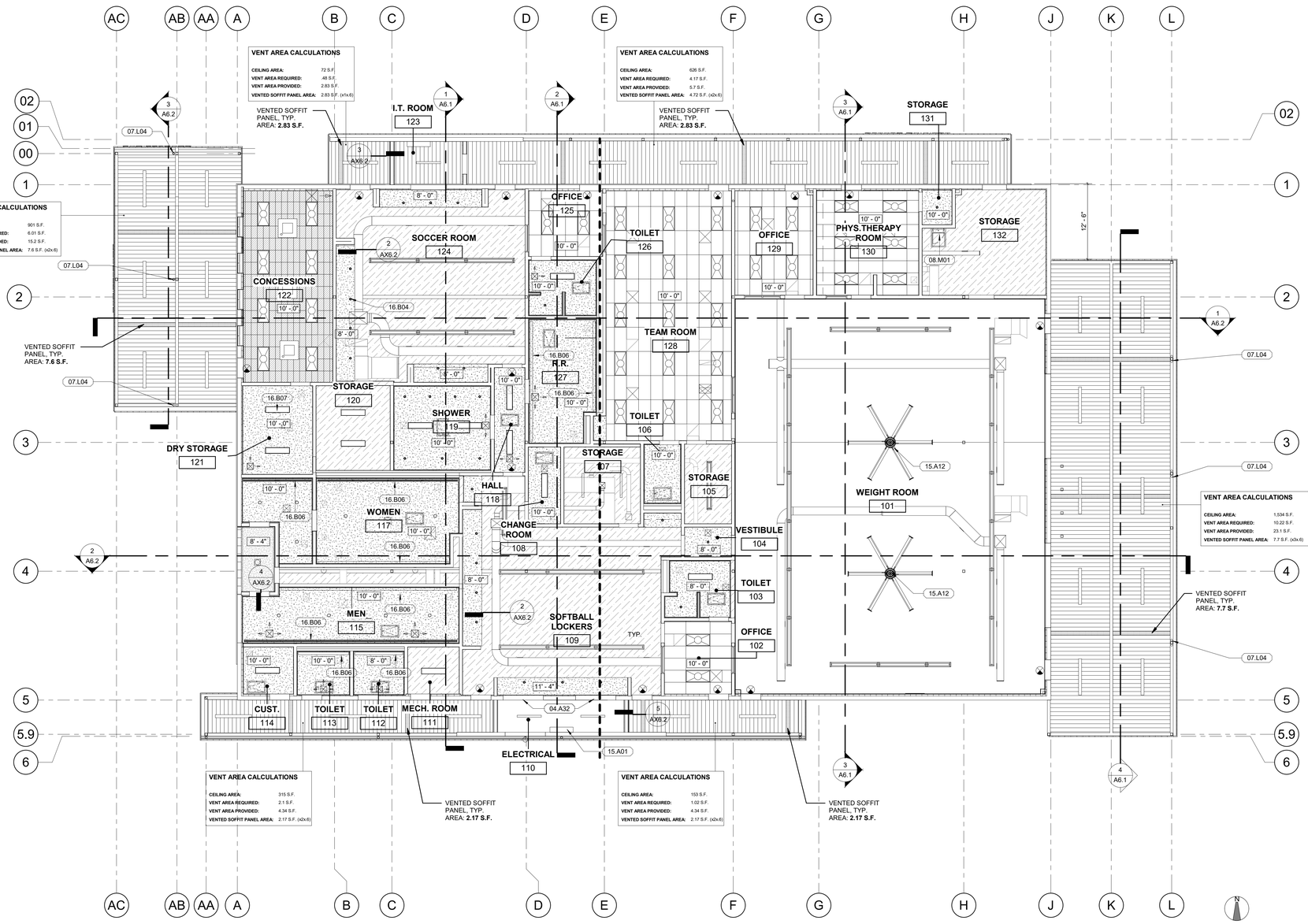

1 REFLECTED CEILING PLAN
SCALE 1/8" = 1'-0"

KEYNOTES (XX-XX)

04.A32	CMU WALL OPENING
07.L04	METAL DOWNSPOUT SEE DETAIL 9/AX4.1
08.M01	ROOF ACCESS HATCH SEE DETAIL 14/AX4.1
15.A01	MECHANICAL UNIT, SEE MECHANICAL PLANS
15.A12	CEILING FAN, TO BE SECURED BY SOLID BEAM MOUNTING KIT PER MANUFACTURER - SEE L/M5.1 ON MECHANICAL PLANS
16.B04	LIGHTING FIXTURE, SEE ELECTRICAL PLANS
16.B06	LIGHT TROUGH ABOVE CEILING SHELF, SEE ELECTRICAL PLANS
16.B07	CEILING MOUNTED LIGHT FIXTURE, SEE ELECTRICAL PLAN

CEILING LEGEND

- 24" x 48" SUSPENDED ACOUSTICAL CEILING SYSTEM SEE SHEET AX6.1 FOR TYPICAL DETAILS — ACT-1
- FLUSH SEAM METAL SOFFIT PANELS SEE DETAIL 28/AX2.1 — MP-3
- 24" x 48" SUSPENDED ACOUSTICAL CEILING SYSTEM SEE SHEET AX6.1 FOR TYPICAL DETAILS — ACT-2
- CEMENT PLASTER SEE DTL. 15 / AX6.1
- HARD LID GYPSUM BOARD CEILING PAINTED — P-1
- POLYTHENE SHEETS TO COVER EXPOSED INSULATION AT UNDERSIDE OF ROOF DECK
- LIGHT FIXTURE(S), REFER TO ELECTRICAL DRAWINGS
- 9' - 0" CEILING HEIGHT ABOVE FINISH FLOOR
- MECHANICAL GRILLES, REFER TO MECHANICAL DRAWINGS
- CEILING ACCESS PANEL, SEE DETAIL 14 / AX6.1
- ILLUMINATED EXIT SIGNS, REFER TO ELECTRICAL FOR FIXTURE TYPE AND LOCATION.

GENERAL NOTES

1. REFER TO SHEET AT.2 FOR ADDITIONAL SYMBOLS NOT SHOWN.
2. ALL DIMENSIONS ARE AS FOLLOWS UNLESS OTHERWISE NOTED:
   A. FACE OF STUD (OR CMU WHERE APPLICABLE) TO FACE OF STUD ;
   B. COLUMN LINE TO FACE OF STUD (OR CMU WHERE APPLICABLE) UNLESS OTHERWISE NOTED.
3. DOORS ARE 4" CLR. FROM FROM THE FACE OF FINISH TO ROUGH OPENING OF JAMB UNLESS OTHERWISE NOTED.
4. SEE SHEET AX5.1 FOR WALL ASSEMBLIES.
5. SEE STRUCT. FOR METAL STUD SIZES AND CONNECTIONS.
6. INTERIOR NON-RATED WALLS MAY EXTEND FROM FLOOR TO CEILING FRAMING OR 6" ABOVE ACOUSTICAL CEILING GRID.
7. ALL WALLS SHALL HAVE FRAMING, FINISHES, INSULATION AND SUBSTRATES FROM FLOOR TO STRUCTURAL DECK, UNLESS OTHERWISE NOTED.
8. ALL EXPOSED CONDUITS AND PIPING UNDER THE CANOPIES ARE TO BE PAINTED TO MATCH THE SURROUNDING AREAS.

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MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL R. SCHOEN No. C-25085 RENEWAL DATE FEB 28, 2027 STATE OF CALIFORNIA

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REFLECTED CEILING PLAN

A3.1

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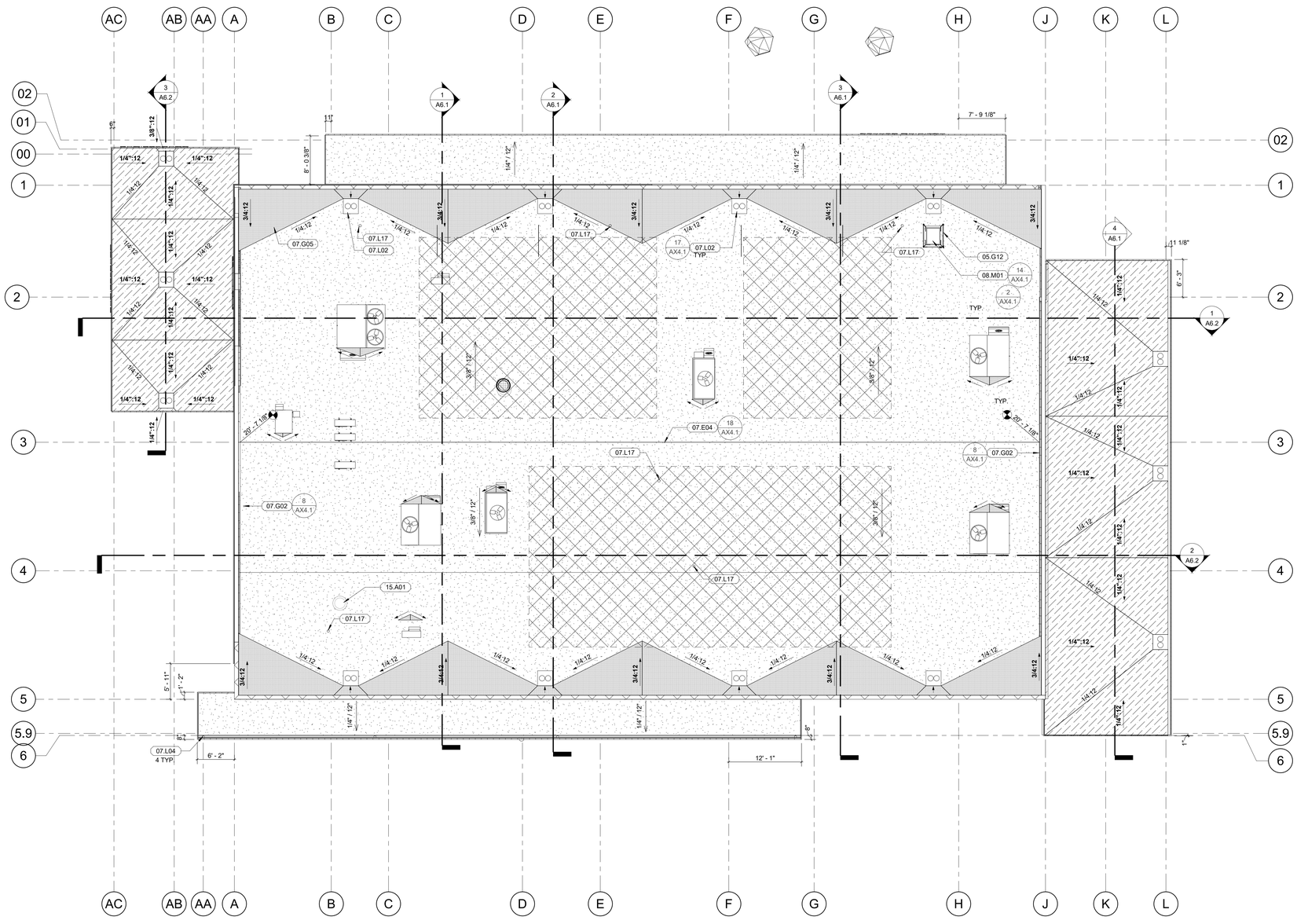

1 ROOF PLAN
SCALE 1/8" = 1'-0"

KEYNOTES (XX-XX)

05.G12	METAL GUARDRAILS ATTACHED TO ROOF HATCH - SEE DETAIL 15/AX4.1
07.E04	RIDGE
07.G02	CONT. FIBROUS CANT STRIP AT VERTICAL TRANSITION
07.G05	RIGID INSULATION CRICKET, TYP.
07.L02	ROOF DRAIN & OVERFLOW
07.L04	METAL DOWNSPOUT SEE DETAIL 9/AX4.1
07.L17	ROOF PENETRATION REFERENCE DETAIL 7/AX4.1
08.M01	ROOF ACCESS HATCH SEE DETAIL 14/AX4.1
15.A01	MECHANICAL UNIT, SEE MECHANICAL PLANS

ROOF LEGEND

- BUILT UP ROOFING SYSTEM CLASS 'A' RATED o/RIGID INSULATION 26 / AX4.1 SIM.
- RIGID INSULATION CRICKET @ ***1/4" - 12 CROSS SLOPE MIN***., SEE DETAIL 3 / AX4.1
- BUILT UP ROOFING SYSTEM CLASS 'A' RATED o/TAPERED INSULATION PER DETAIL 26 / AX4.1
- FUTURE SOLAR ZONES

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
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SS ☑ FLS ☑ ACS ☑
DATE: 01/23/2025

PBK

ARCHITECT PBK Architects, Inc.
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MADERA HIGH SCHOOL FIELDHOUSE

200 SOUTH "I" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT
MICHAEL R. SCHOEN
No. C-35625
RENEWAL DATE
FEB 28, 2027
STATE OF CALIFORNIA

PROJECT NUMBER	20-51
DATE	01/22/2025
DSA APPLICATION NO.	02-121624
FILE NO.	20-H3
PTN NO.	65243-153
DRAWN BY	Author

REVISIONS

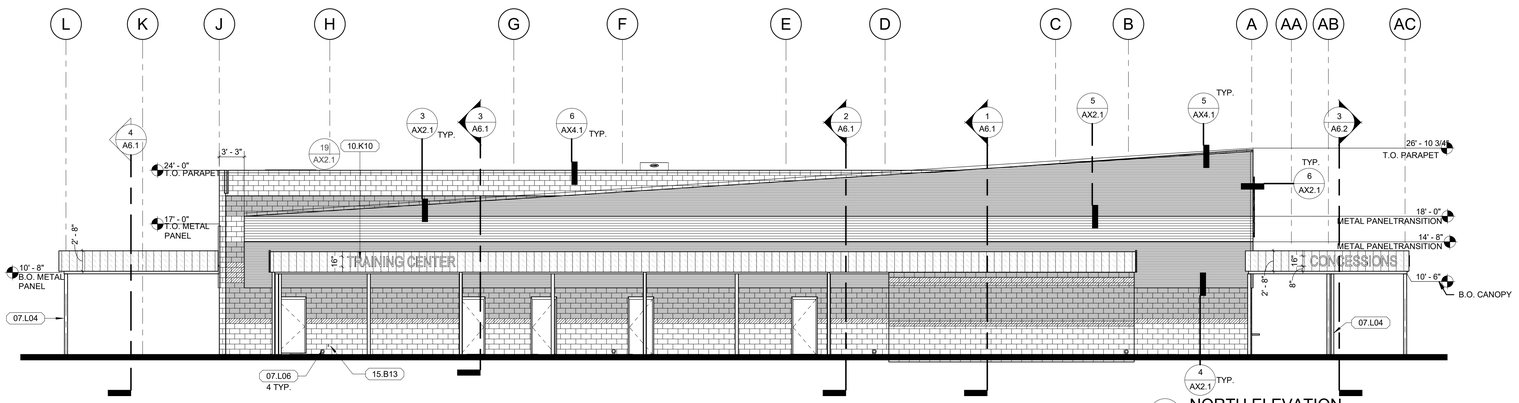
#	DESCRIPTION	DATE

CONSTRUCTION DOCUMENTS

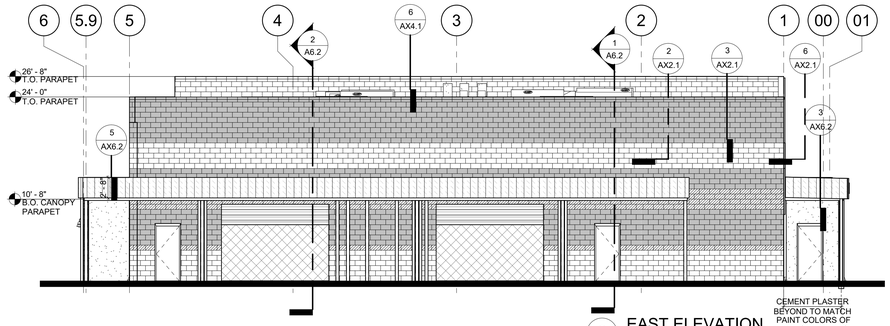
ROOF PLAN

A4.1

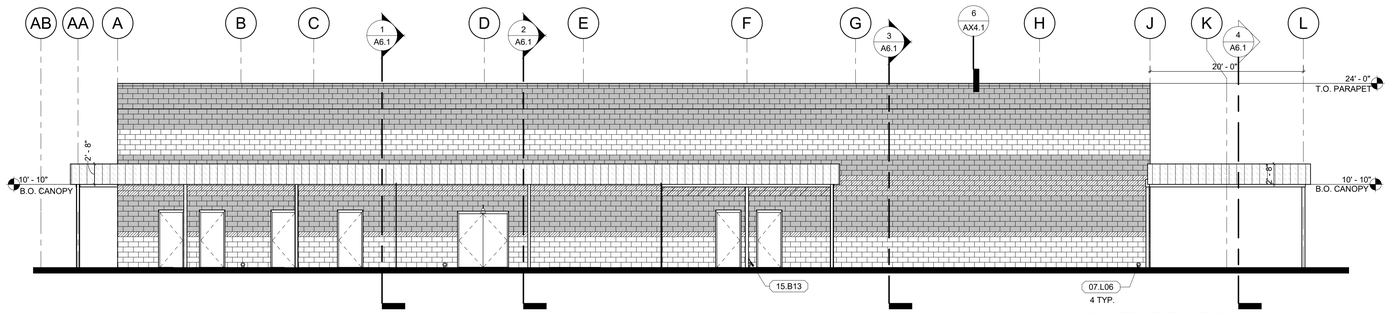
BIM 360://Madera USD_20-51_MHS Field House/20-51_MHS FIELDHOUSE_V21.rvt
1/20/2025 6:36:17 PM



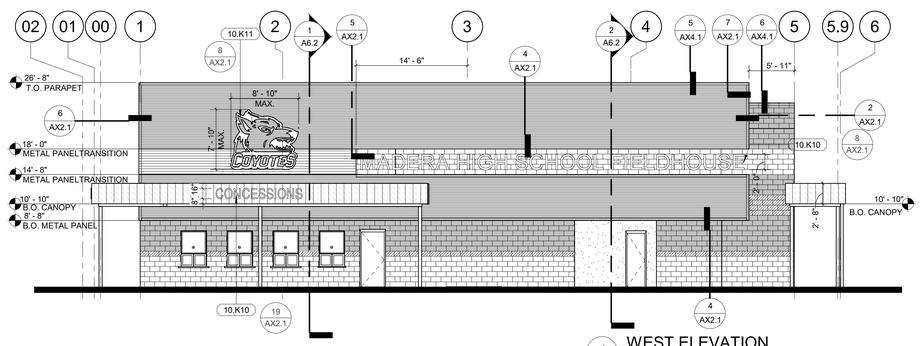
1 NORTH ELEVATION
SCALE 1/8" = 1'-0"



2 EAST ELEVATION
SCALE 1/8" = 1'-0"



3 SOUTH ELEVATION
SCALE 1/8" = 1'-0"



4 WEST ELEVATION
SCALE 1/8" = 1'-0"

KEYNOTES (XX-XX)

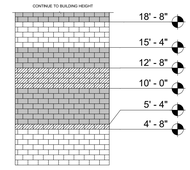
07.L04	METAL DOWNSPOUT SEE DETAIL 9/AX4.1
07.L06	ROOF DRAIN OVERFLOW DAYLIGHT - REFERENCE DETAIL 12/AX4.1
10.K10	CAST ALUMINUM LETTERS
10.K11	VINYL WRAP AROUND CAST ALUMINUM BACK PLATE
15.B13	HOSE BIB, SEE PLUMBING PLANS

GENERAL NOTES

1. CONTRACTOR TO PROVIDE ALL ACCESSORIES REQ'D TO PROVIDE WEATHER TIGHT CONSTRUCTION, COORDINATE w/ MANUFACTURER.
2. ALL EXPOSED EXTERIOR STRUCTURAL STEEL, METAL DECK, CONDUITS, AND PIPING TO BE PAINTED, VERIFY COLOR WITH ARCHITECT.

EXTERIOR ELEVATION LEGEND

- CONCRETE MASONRY UNIT, PRECISION COLOR 1 — CMU-1
- CONCRETE MASONRY UNIT, PRECISION COLOR 2 — CMU-2
- CONCRETE MASONRY UNIT, SPLIT FACE COLOR 2 — CMU-3
- CEMENT PLASTER — P-1
- HORIZONTALLY ORIENTED CORRUGATED METAL WALL PANELS SEE DETAIL — MP-1 — 27 / AX2.1
- HORIZONTALLY ORIENTED CORRUGATED METAL WALL PANELS SEE DETAIL — MP-2 — 26 / AX2.1
- VERTICALLY ORIENTED FLUSH SEAM METAL WALL PANELS SEE DETAIL — MP-3 — 28 / AX2.1



TYPICAL CONCRETE MASONRY UNIT WALL MATERIAL CHANGE HEIGHT (ALL CMU TO BE RUNNING BOND)

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MADERA UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT — MICHAEL R. SCHOEN — No. C-32291 — RENEWAL DATE 08.31.2027 — STATE OF CALIFORNIA

PROJECT NUMBER 20-51
DATE 01/22/2025
DSA APPLICATION NO. 02-121624
FILE NO. 20-H3
PTN NO. 65243-153
DRAWN BY Author

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EXTERIOR ELEVATIONS

A5.1

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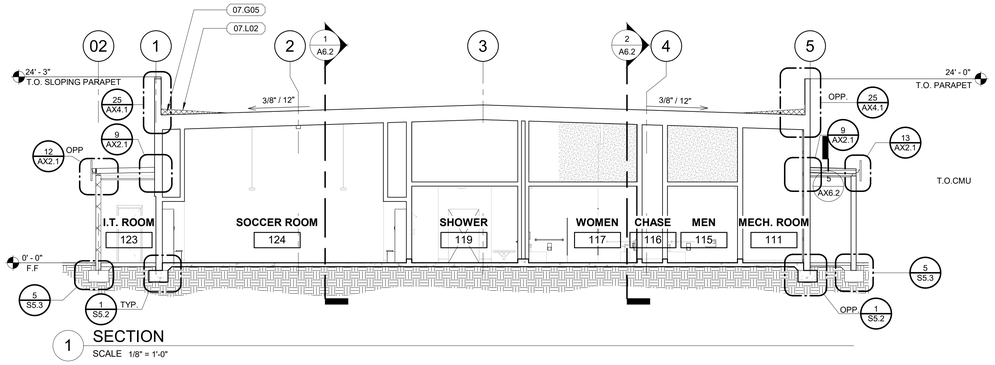
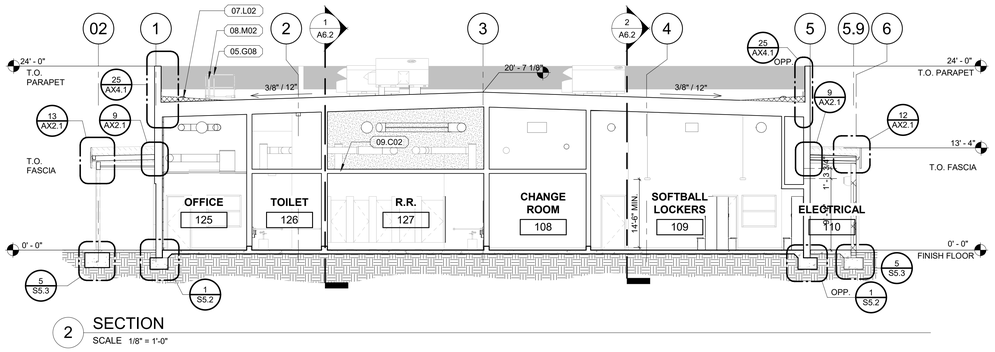


1 SECTION
SCALE 1/8" = 1'-0"



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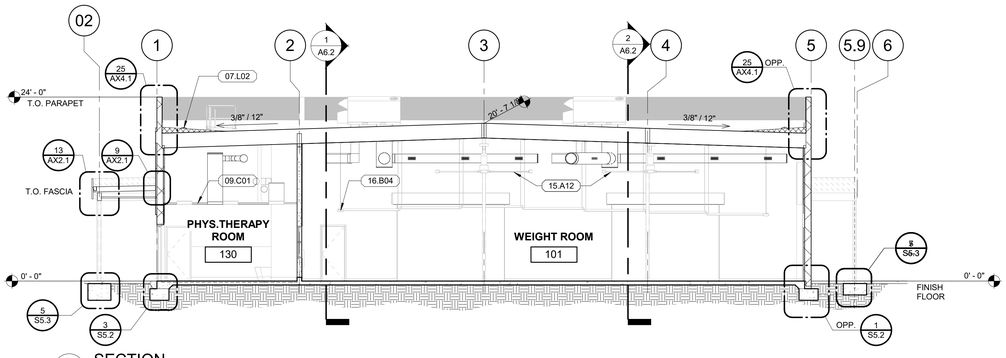

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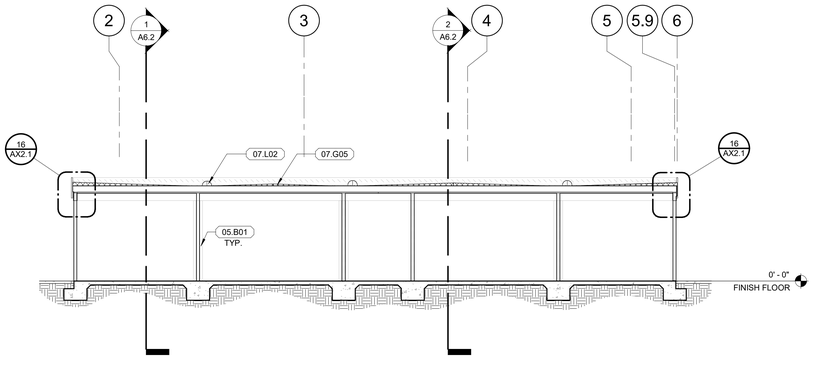

4 EAST CANOPY
SCALE 1/8" = 1'-0"

KEYNOTES (XX-XX)

05.B01	EXPOSED TUBE STEEL COLUMN
05.G08	METAL GUARDRAILS
07.G05	RIGID INSULATION CRICKET, TYP.
07.L02	ROOF DRAIN & OVERFLOW
08.M02	ROOF ACCESS LADDER
09.C01	SUSPENDED CEILING SYSTEM
09.C02	SUSPENDED GYPSUM BOARD CEILING SYSTEM
15.A12	CEILING FAN, TO BE SECURED BY SOLID BEAM MOUNTING KIT PER MANUFACTURER - SEE LIM5.1 ON MECHANICAL PLANS
16.B04	LIGHTING FIXTURE, SEE ELECTRICAL PLANS

GENERAL NOTES

1. SEE SHEET AT.2 FOR ADDITIONAL SYMBOLS NOT SHOWN.

SECTION LEGEND

1 HR ASSEBMLY

BATT INSULATION SCHEDULE

ROOF R- 30
WALL R-19

RIDGID INSULATION SCHEDULE

ROOF R-30 (6" EXTRUDED POLYSTYRENE)
WALL (NONE)

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200 SOUTH "I" STREET
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CONSTRUCTION DOCUMENTS

PROFESSIONAL SEAL

LICENSED ARCHITECT
MICHAEL R. SCHOEN
No. C-36295
REGISTRATION DATE
FEB 29, 2027
STATE OF CALIFORNIA

PROJECT NUMBER	20-51
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DSA APPLICATION NO.	02-121624
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PTN NO.	65243-153
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CONSTRUCTION DOCUMENTS

BUILDING SECTIONS

A6.1

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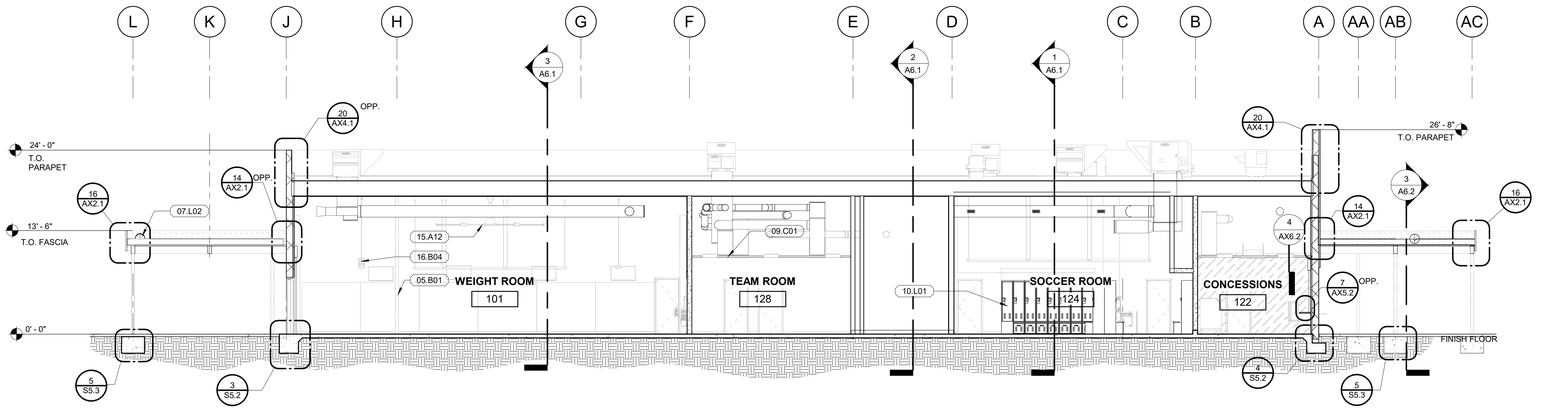

1 SECTION
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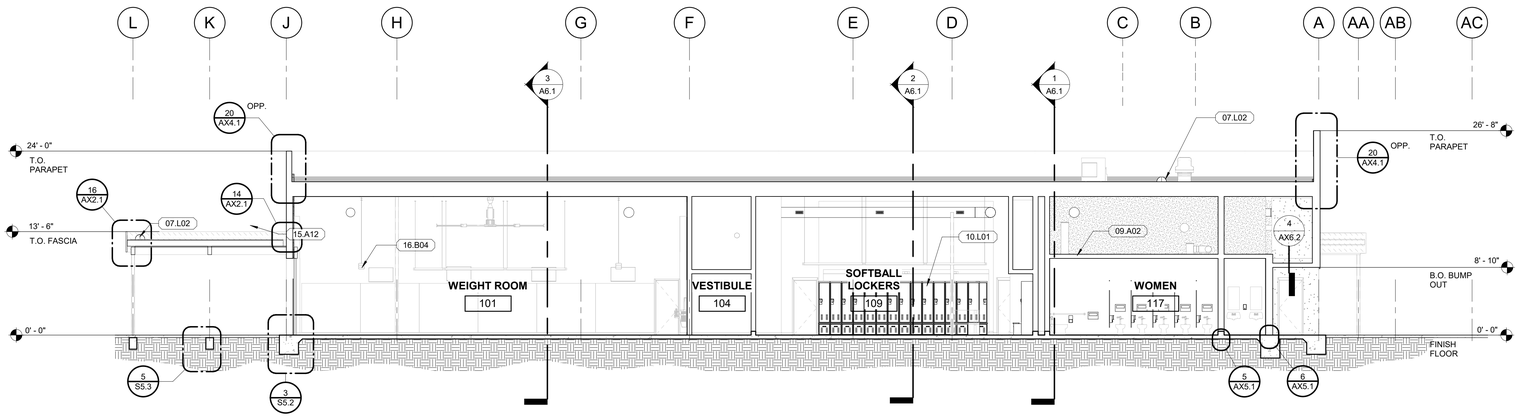

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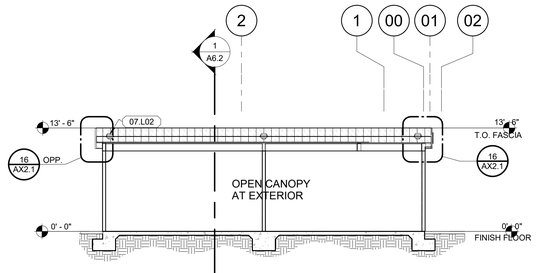

3 SECTION
SCALE 1/8" = 1'-0"

KEYNOTES (XX-XX)

05.B01	EXPOSED TUBE STEEL COLUMN
07.L02	ROOF DRAIN & OVERFLOW
09.A02	GYPSUM BOARD o/ CEILING JOISTS
09.C01	SUSPENDED CEILING SYSTEM
10.L01	LOCKER SYSTEM
15.A12	CEILING FAN, TO BE SECURED BY SOLID BEAM MOUNTING KIT PER MANUFACTURER - SEE L/M5.1 ON MECHANICAL PLANS
16.B04	LIGHTING FIXTURE, SEE ELECTRICAL PLANS

GENERAL NOTES

1. SEE SHEET AT.2 FOR ADDITIONAL SYMBOLS NOT SHOWN.

SECTION LEGEND

1 HR ASSEBMLY

BATT INSULATION SCHEDULE

ROOF R- 30
WALL R-19

RIDGID INSULATION SCHEDULE

ROOF R-30 (6" EXTRUDED POLYSTYRENE)
WALL (NONE)

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200 SOUTH "I" STREET
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PROFESSIONAL SEAL

LICENSED ARCHITECT
MICHAEL R. SCHOEN
No. C-30195
RENEWAL DATE
FEB 28, 2027
STATE OF CALIFORNIA

PROJECT NUMBER
20-51

DATE
01/22/2025

DSA APPLICATION NO.
02-121624

FILE NO.
20-H3

PTN NO.
65243-153

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BUILDING SECTIONS

A6.2

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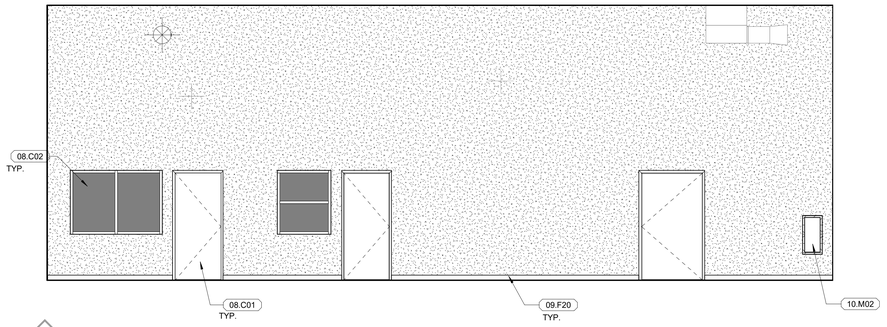

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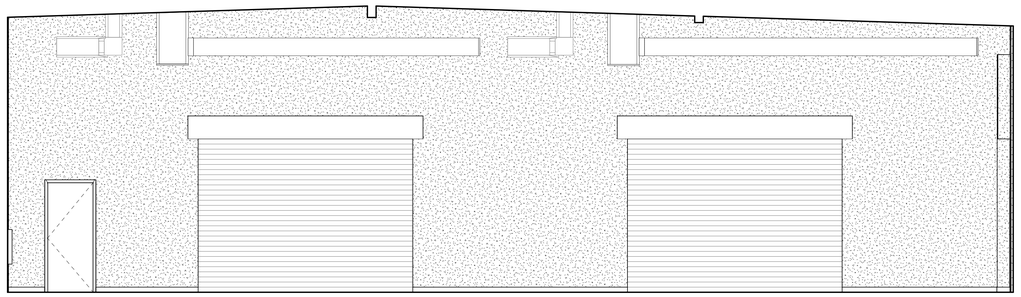

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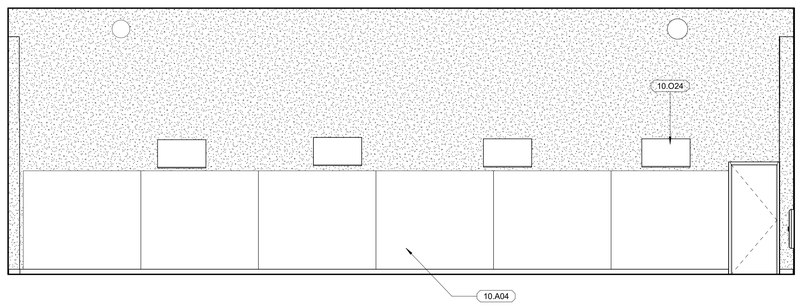
101 - WEIGHT ROOM



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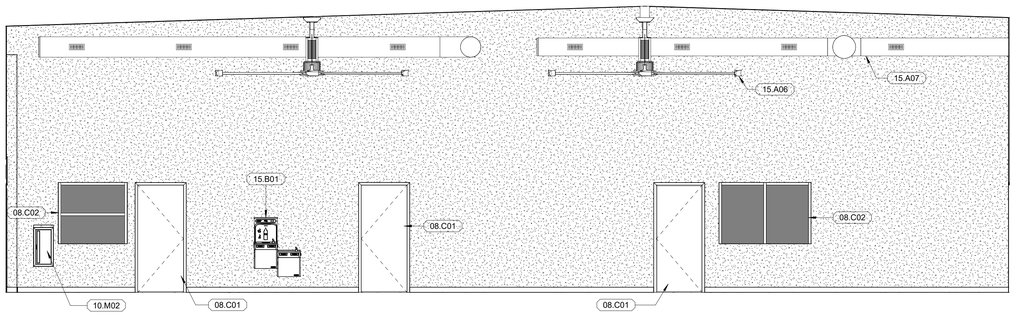

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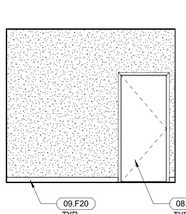
101 - S



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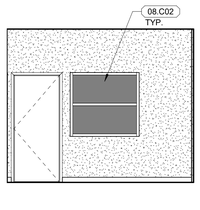

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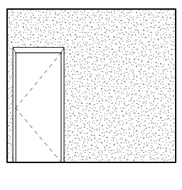

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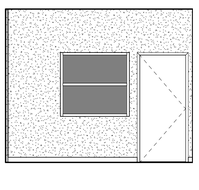

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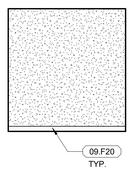
102 - OFFICE



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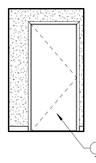

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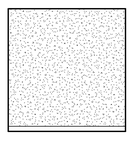

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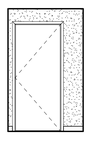

12

104 - VESTIBULE

INTERIOR ELEVATION LEGEND

- HATCH INDICATES GYPSUM BOARD FINISH U.O.N. — P-1
- HATCH INDICATES WALL TILE FINISH, — TL-3 — U.O.N.
- HATCH INDICATES FLOOR & BASE TILE
- HATCH INDICATES CMU WALL
- HATCH INDICATES SCORED CMU WALL
- HATCH INDICATES MDF SEE DETAIL 20 / AX5.1
- HATCH INDICATES ACROVYN
- HATCH INDICATES FIBER REINFORCED PANELS o/ 3/4" PLYWOOD
- HATCH INDICATES VINYL TACKBOARD — VTB-1
- HATCH INDICATES VINYL WALL COVERING — WC-1
- HATCH INDICATES FIRE RESISTANT PAINT o/ 5/8" FIRE RESISTANT PLYWOOD
- HATCH INDICATES GLAZING REFER TO WINDOW SCHEDULE
- INDICATES RUBBER BASE TYPE — RTB-1

SYMBOLS LEGEND INTERIOR ELEV

CASEWORK SYMBOL

- HEIGHT
- MODIFIED
- DEPTH
- CASEWORK MODEL
- LOCK
- WIDTH

NOTE: DIMENSIONS ARE TO THE NEAREST WHOLE NUMBER, CONTRACTOR TO FIELD VERIFY DIMENSIONS PRIOR TO FABRICATION

FINISH KEYNOTE SYMBOL

XX-XX = INDICATES FINISH, SEE COLOR SCHEDULE C---

GENERAL NOTES

1. REFER TO REFLECTED CEILING PLAN FOR CEILING AND SOFFIT HEIGHTS.
2. REFER TO DETAIL 15 / AX5.2 FOR CASEWORK ANCHORAGE DETAILS.
3. FOR ELEVATIONS THAT ARE NOT ILLUSTRATED MATCH FINISHES OF TYPICAL ROOM ELEVATION AND REFER TO INTERIOR FINISH SCHEDULE.
4. SEE SHEET AT.2 FOR ADDITIONAL SYMBOLS NOT SHOWN.
5. REFER TO INTERIOR FINISH SCHEDULE TYPICAL PAINT COLORS.
6. ALL EXPOSED METAL DECK AND STRUCTURAL STEEL IS TO COMPLY WITH "ARCHITECTURALLY EXPOSED STRUCTURAL STEEL FRAMING", REFER TO SPECIFICATION.

KEYNOTES (XX-XX)

08.C01	DOOR, SEE DOOR SCHEDULE
08.C02	WINDOW, SEE WINDOW SCHEDULE
09.F20	RUBBER TOPSET BASE,TYP., 4" U.O.N.
10.A04	MIRROR
10.M02	2A:10BC MIN RATED FIRE EXTINGUISHER W/ SEMI-RECESSED CABINET
10.O24	FLAT SCREEN MONITOR
15.A06	HVAC DUCT, SEE MECHANCAIL PLANS
15.A07	HVAC SUPPLY / RETURN GRILL, SEE MECHANICAL PLANS
15.B01	ACCESSIBLE HI/LOW DRINKING FOUNTAIN, SEE PLUMBING PLANS

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MADERA UNIFIED SCHOOL DISTRICT 19 66

PROFESSIONAL SEAL

LICENSED ARCHITECT · MICHAEL R. SCHOEN · No. C-26295 · RENEWAL DATE FEB 28, 2027 · STATE OF CALIFORNIA

PROJECT NUMBER 20-51

DATE 01/22/2025

DSA APPLICATION NO. 02-121624

FILE NO. 20-H3

PTN NO. 65243-153

DRAWN BY Author

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INTERIOR ELEVATIONS

A7.1

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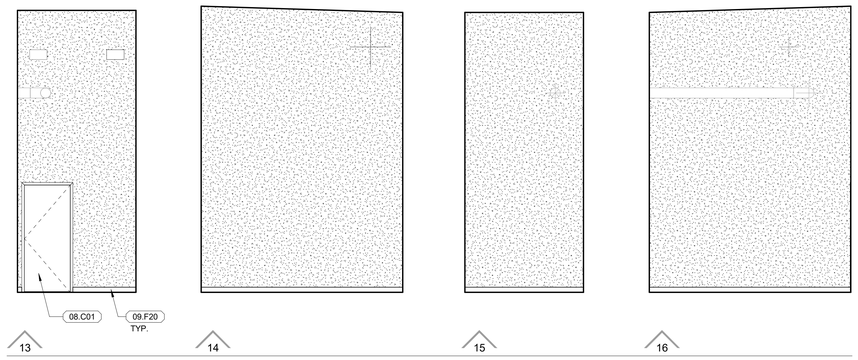
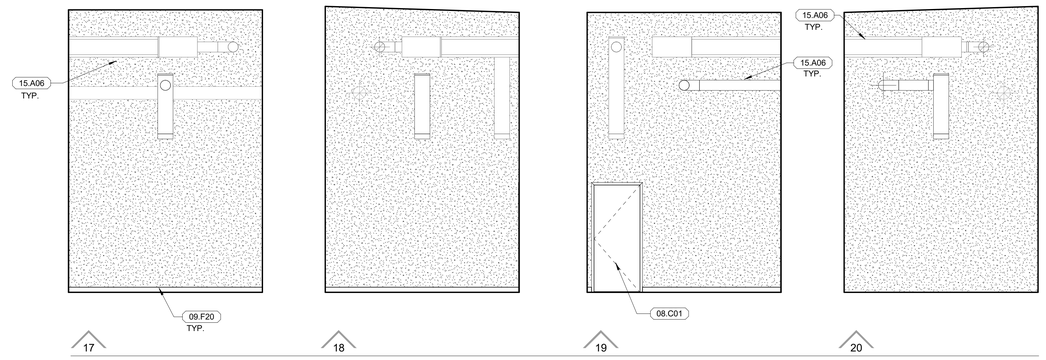
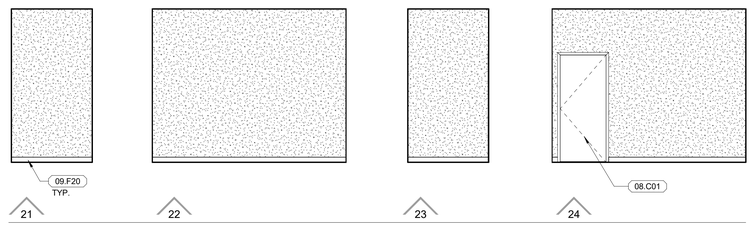


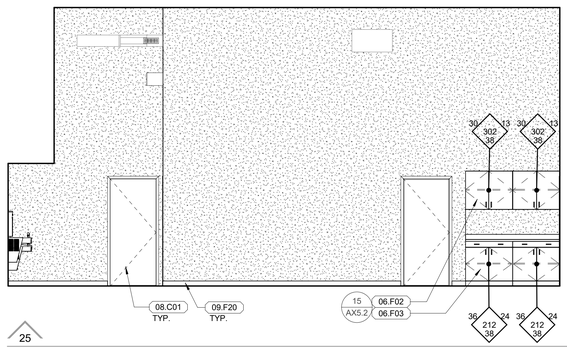
105 - STORAGE



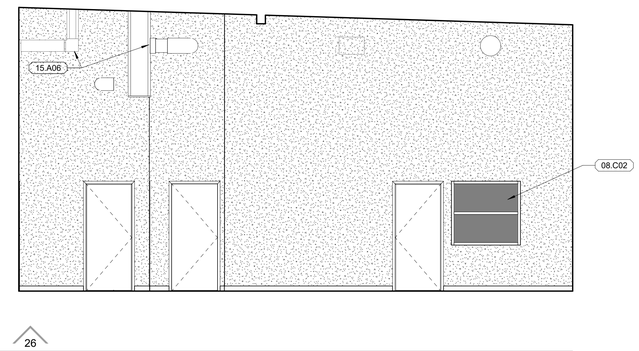
107 - STORAGE



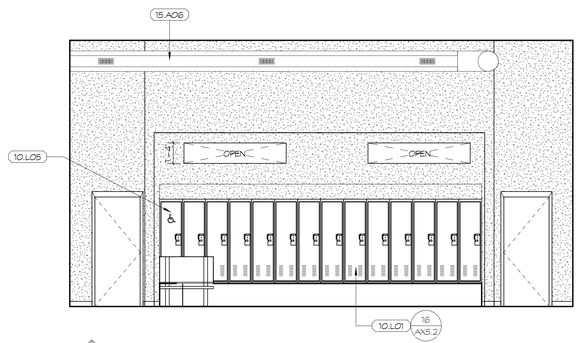
108 - CHANGING ROOM



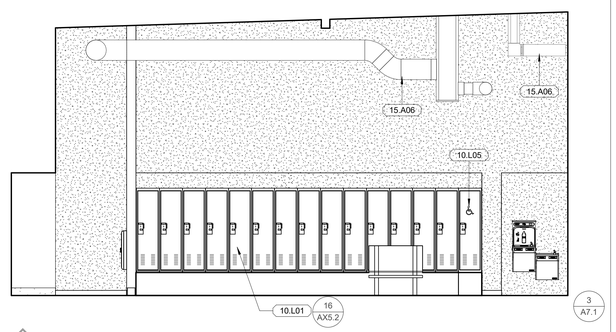
109 - SOFTBALL LOCKERS - NORTH WALL



EAST WALL



109 - SOFTBALL LOCKERS - SOUTH WALL



WEST WALL

INTERIOR ELEVATION LEGEND

- HATCH INDICATES GYPSUM BOARD FINISH U.O.N. — P-1
- HATCH INDICATES WALL TILE FINISH, — TL-3 — U.O.N.
- HATCH INDICATES FLOOR & BASE TILE
- HATCH INDICATES CMU WALL
- HATCH INDICATES SCORED CMU WALL
- HATCH INDICATES MDF SEE DETAIL 20 / AX5.1
- HATCH INDICATES ACROVYN
- HATCH INDICATES FIBER REINFORCED PANELS s/ 3/4" PLYWOOD
- HATCH INDICATES VINYL TACKBOARD — VTB-1
- HATCH INDICATES VINYL WALL COVERING — WC-1
- HATCH INDICATES FIRE RESISTANT PAINT o/ 5/8" FIRE RESISTANT PLYWOOD
- HATCH INDICATES GLAZING REFER TO WINDOW SCHEDULE
- INDICATES RUBBER BASE TYPE — RTB-1

SYMBOLS LEGEND INTERIOR ELEV

CASEWORK SYMBOL

- HEIGHT
- MODIFIED
- DEPTH
- CASEWORK MODEL
- LOCK
- WIDTH

NOTE: DIMENSIONS ARE TO THE NEAREST WHOLE NUMBER, CONTRACTOR TO FIELD VERIFY DIMENSIONS PRIOR TO FABRICATION

FINISH KEYNOTE SYMBOL

XX-XX = INDICATES FINISH, SEE COLOR SCHEDULE C---

GENERAL NOTES

1. REFER TO REFLECTED CEILING PLAN FOR CEILING AND SOFFIT HEIGHTS.
2. REFER TO DETAIL 15 / AX5.2 FOR CASEWORK ANCHORAGE DETAILS.
3. FOR ELEVATIONS THAT ARE NOT ILLUSTRATED MATCH FINISHES OF TYPICAL ROOM ELEVATION AND REFER TO INTERIOR FINISH SCHEDULE. SEE SHEET A7.2 FOR ADDITIONAL SYMBOLS NOT SHOWN.
4. REFER TO INTERIOR FINISH SCHEDULE TYPICAL PAINT COLORS.
5. ALL EXPOSED METAL DECK AND STRUCTURAL STEEL IS TO COMPLY WITH "ARCHITECTURALLY EXPOSED STRUCTURAL STEEL FRAMING", REFER TO SPECIFICATION.
6.

KEYNOTES (XX-XX)

06.F02	PLASTIC LAMINATE UPPER CASEWORK
06.F03	PLASTIC LAMINATE LOWER CASEWORK
08.C01	DOOR, SEE DOOR SCHEDULE
08.C02	WINDOW, SEE WINDOW SCHEDULE
09.F20	RUBBER TOPSET BASE,TYP., 4" U.O.N.
10.L01	LOCKER SYSTEM
10.L05	ACCESSIBLE LOCKER
15.A06	HVAC DUCT, SEE MECHANCAIL PLANS

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
REVIEWED FOR
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DATE: 01/23/2025

PBK

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Fresno, CA 93711
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MADERA HIGH SCHOOL FIELDHOUSE

200 SOUTH "I" STREET
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CONSTRUCTION DOCUMENTS

PROFESSIONAL SEAL

LICENSED ARCHITECT — MICHAEL R. SCHOEN — No. C-35295 — RENEWAL DATE FEB 28, 2027 — STATE OF CALIFORNIA

PROJECT NUMBER 20-51

DATE 01/22/2025

DSA APPLICATION NO. 02-121624

FILE NO. 20-H3

PTN NO. 65243-153

DRAWN BY Author

REVISIONS

#	DESCRIPTION	DATE

CONSTRUCTION DOCUMENTS

INTERIOR ELEVATIONS

A7.2

BIM 360://Madera USD_20-51_MHS Field House/20-51_MHS FIELDHOUSE_V21.rvt
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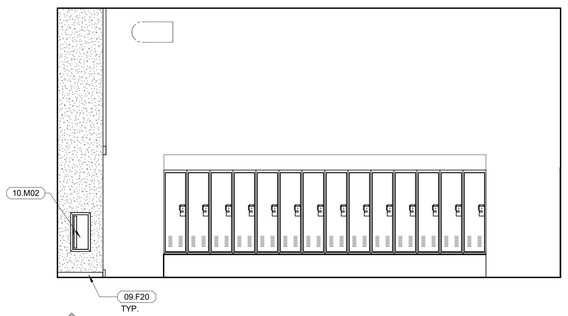

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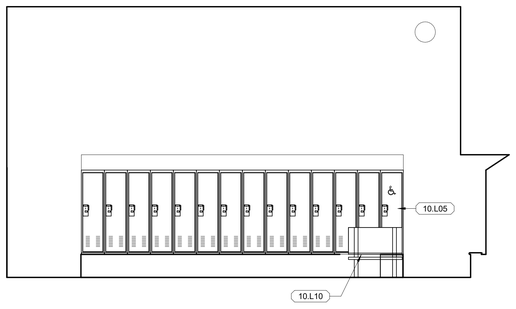
109 - SOFTBALL LOCKERS - ISLE SOUTH VIEW



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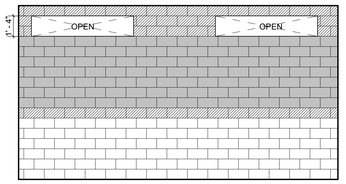
ISLE - NORTH VIEW



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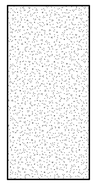

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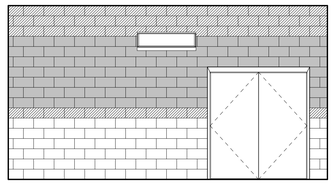

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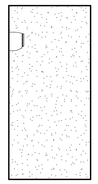

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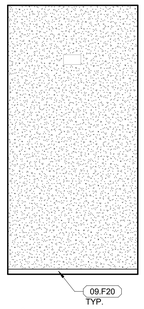
110 - ELECTRICAL



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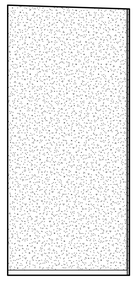

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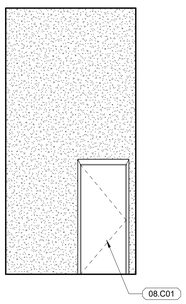

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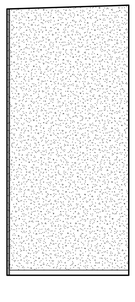

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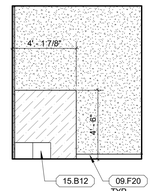
111- BOILERS



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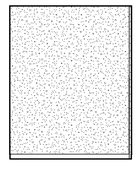

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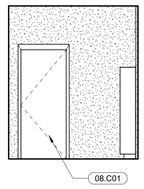

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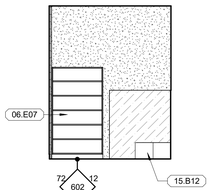

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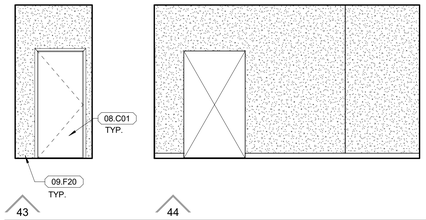
114 - CUSTODIAN



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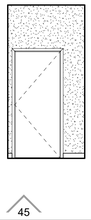

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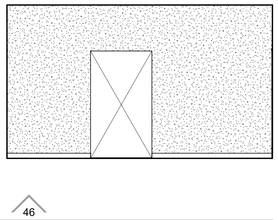

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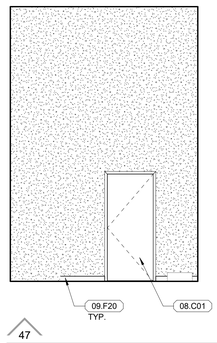
118 - HALL



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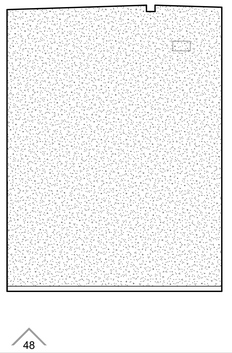

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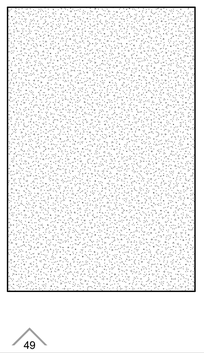

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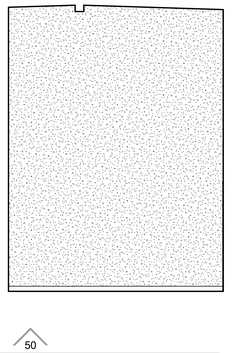

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120 - STORAGE

INTERIOR ELEVATION LEGEND

- HATCH INDICATES GYPSUM BOARD FINISH U.O.N. — P-1
- HATCH INDICATES WALL TILE FINISH, TL-3 U.O.N.
- HATCH INDICATES FLOOR & BASE TILE
- HATCH INDICATES CMU WALL
- HATCH INDICATES SCORED CMU WALL
- HATCH INDICATES MDF SEE DETAIL 20 / AX5.1
- HATCH INDICATES ACROVYN
- HATCH INDICATES FIBER REINFORCED PANELS o/ 3/4" PLYWOOD
- HATCH INDICATES VINYL TACKBOARD — VTB-1
- HATCH INDICATES VINYL WALL COVERING — WC-1
- HATCH INDICATES FIRE RESISTANT PAINT o/ 5/8" FIRE RESISTANT PLYWOOD
- HATCH INDICATES GLAZING REFER TO WINDOW SCHEDULE
- INDICATES RUBBER BASE TYPE — RTB-1

SYMBOLS LEGEND INTERIOR ELEV

CASEWORK SYMBOL

- HEIGHT
- MODIFIED
- DEPTH
- CASEWORK MODEL
- LOCK
- WIDTH

NOTE: DIMENSIONS ARE TO THE NEAREST WHOLE NUMBER. CONTRACTOR TO FIELD VERIFY DIMENSIONS PRIOR TO FABRICATION

FINISH KEYNOTE SYMBOL

XX-XX = INDICATES FINISH, SEE COLOR SCHEDULE C---

GENERAL NOTES

1. REFER TO REFLECTED CEILING PLAN FOR CEILING AND SOFFIT HEIGHTS.
2. REFER TO DETAIL 15 / AX5.2 FOR CASEWORK ANCHORAGE DETAILS.
3. FOR ELEVATIONS THAT ARE NOT ILLUSTRATED MATCH FINISHES OF TYPICAL ROOM ELEVATION AND REFER TO INTERIOR FINISH SCHEDULE. SEE SHEET AT 2 FOR ADDITIONAL SYMBOLS NOT SHOWN.
4. REFER TO INTERIOR FINISH SCHEDULE TYPICAL PAINT COLORS.
5. ALL EXPOSED METAL DECK AND STRUCTURAL STEEL IS TO COMPLY WITH "ARCHITECTURALLY EXPOSED STRUCTURAL STEEL FRAMING", REFER TO SPECIFICATION.

KEYNOTES (XX-XX)

06.E07	SHELVING
08.C01	DOOR, SEE DOOR SCHEDULE
09.F20	RUBBER TOPSET BASE,TYP., 4" U.O.N.
10.L05	ACCESSIBLE LOCKER
10.L10	LOCKER BENCH
10.M02	2A-10BC MIN RATED FIRE EXTINGUISHER W/ SEMI-RECESSED CABINET
15.B12	FLOOR SINK, SEE PLUMBING PLANS

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 01/23/2025

PBK

ARCHITECT PBK Architects, Inc.
FRESNO
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Fresno, CA 93711
559-448-8400 P
559-448-8467 F
PBK.com

MADERA HIGH SCHOOL FIELDHOUSE

200 SOUTH "I" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT — MICHAEL R. SCHOEN — No. C-30295 — CENTRAL DATE FEB 29, 2027 — STATE OF CALIFORNIA

PROJECT NUMBER 20-51
DATE 01/22/2025
DSA APPLICATION NO. 02-121624
FILE NO. 20-H3
PTN NO. 65243-153
DRAWN BY Author

REVISIONS

#	DESCRIPTION	DATE

CONSTRUCTION DOCUMENTS

INTERIOR ELEVATIONS

A7.3

BIM 360://Madera USD_20-51_MHS Field House/20-51_MHS FIELDHOUSE_V21.rvt
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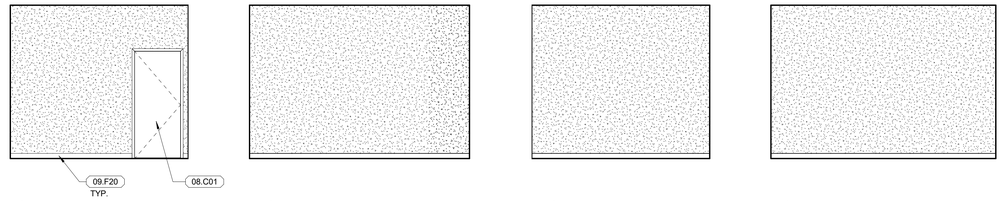
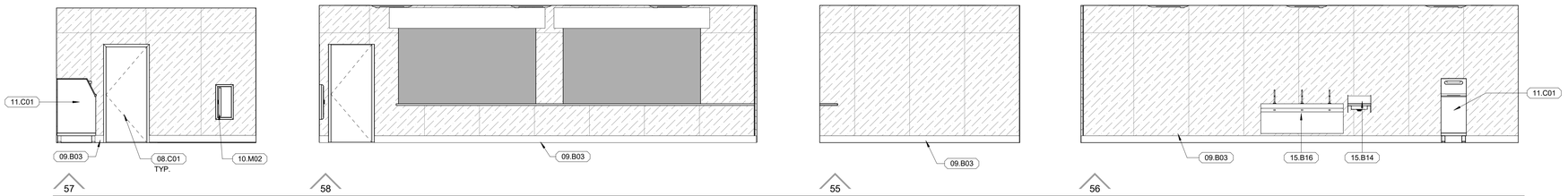
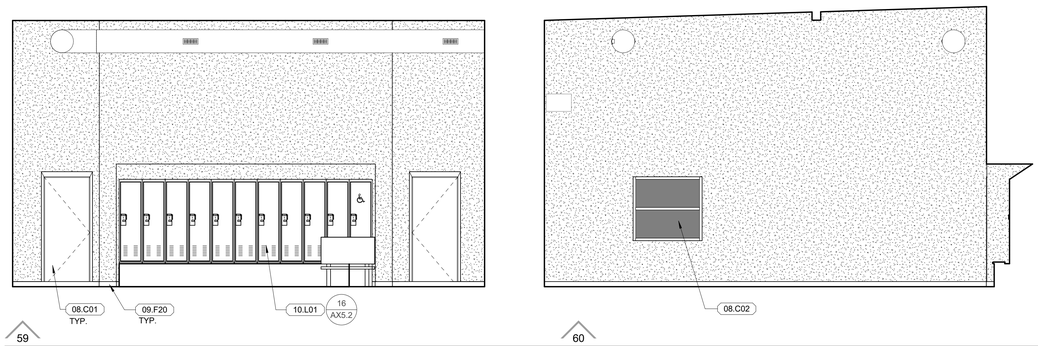


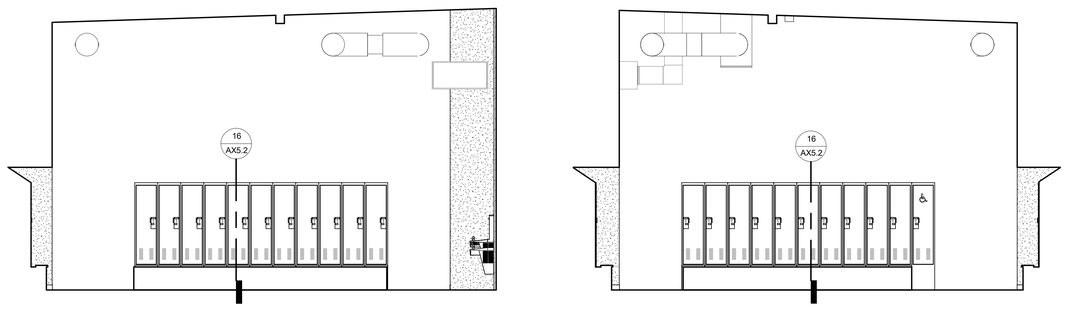
121 - STORAGE



122 - CONCESSIONS



124 - SOCCER LOCKERS



124- SOCCER LOCKERS

INTERIOR ELEVATION LEGEND

- HATCH INDICATES GYPSUM BOARD FINISH U.O.N. — P-1
- HATCH INDICATES WALL TILE FINISH, TL-3 U.O.N.
- HATCH INDICATES FLOOR & BASE TILE
- HATCH INDICATES CMU WALL
- HATCH INDICATES SCORED CMU WALL
- HATCH INDICATES MDF SEE DETAIL 20 / AX5.1
- HATCH INDICATES ACROVYN
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- HATCH INDICATES GLAZING REFER TO WINDOW SCHEDULE
- INDICATES RUBBER BASE TYPE — RTB-1

SYMBOLS LEGEND INTERIOR ELEV

CASEWORK SYMBOL

HEIGHT
MODIFIED
DEPTH
CASEWORK MODEL
LOCK
WIDTH

NOTE: DIMENSIONS ARE TO THE NEAREST WHOLE NUMBER, CONTRACTOR TO FIELD VERIFY DIMENSIONS PRIOR TO FABRICATION

FINISH KEYNOTE SYMBOL

XX-XX = INDICATES FINISH, SEE COLOR SCHEDULE C---

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4. REFER TO INTERIOR FINISH SCHEDULE TYPICAL PAINT COLORS.
5. ALL EXPOSED METAL DECK AND STRUCTURAL STEEL IS TO COMPLY WITH "ARCHITECTURALLY EXPOSED STRUCTURAL STEEL FRAMING", REFER TO SPECIFICATION.

KEYNOTES XX-XX

08.C01	DOOR, SEE DOOR SCHEDULE
08.C02	WINDOW, SEE WINDOW SCHEDULE
09.B03	COVED TILE BASE
09.F20	RUBBER TOPSET BASE,TYP., 4" U.O.N.
10.L01	LOCKER SYSTEM
10.M02	2A:10BC MIN RATED FIRE EXTINGUISHER W/ SEMI-RECESSED CABINET
11.C01	ICE-MACHINE, SEE PLUMBING PLANS
15.B14	ACCESSIBLE SINK, SEE PLUMBING PLANS
15.B16	TRIPLE COMPARTMENT SINK, SEE PLUMBING PLANS

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DATE: 01/23/2025

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CONSTRUCTION DOCUMENTS

PROFESSIONAL SEAL

LICENSED ARCHITECT
MICHAEL R. SCHOEN
No. C-35625
RENEWAL DATE
FEB 28, 2027
STATE OF CALIFORNIA

PROJECT NUMBER 20-51
DATE 01/22/2025
DSA APPLICATION NO. 02-121624
FILE NO. 20-H3
PTN NO. 65243-153
DRAWN BY Author

REVISIONS

#	DESCRIPTION	DATE

CONSTRUCTION DOCUMENTS

INTERIOR ELEVATIONS

A7.4

BIM 360://Madera USD_20-51_MHS Field House/20-51_MHS FIELDHOUSE_V21.rvt
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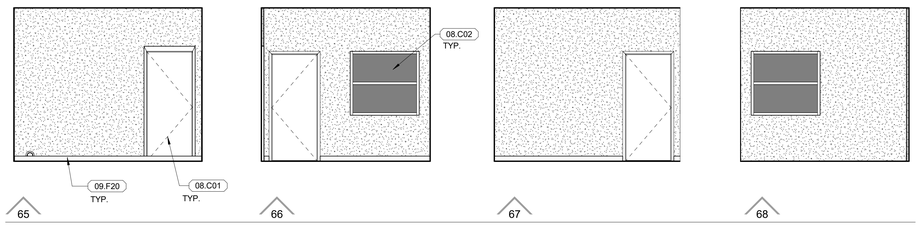
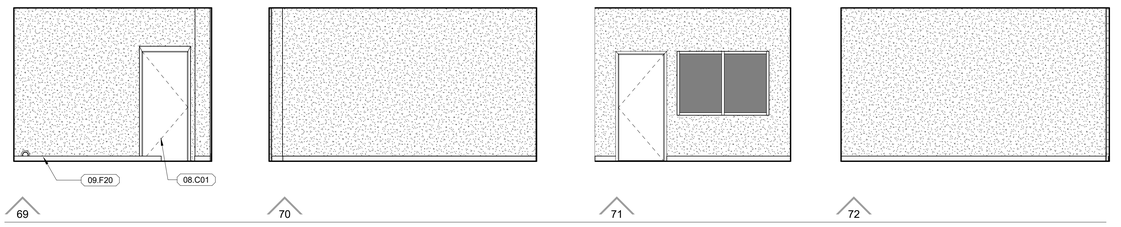


125 - OFFICE



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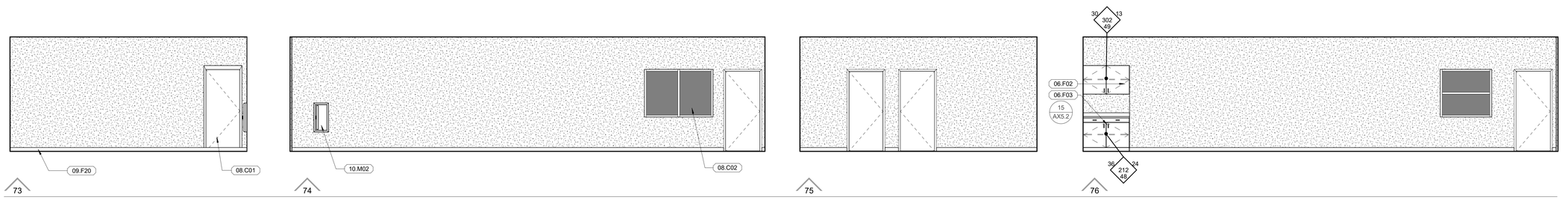
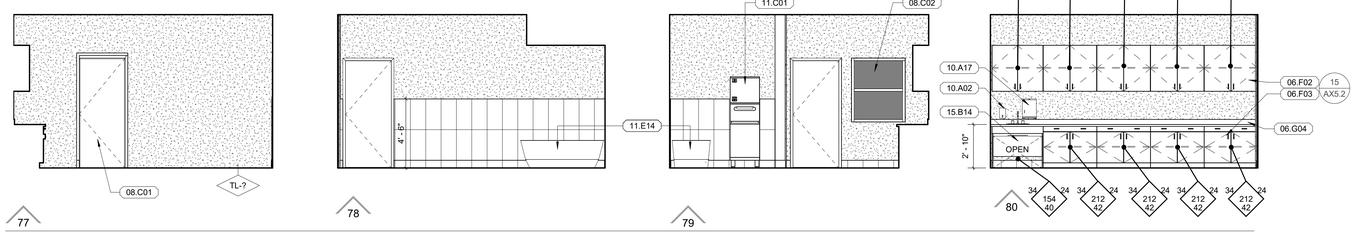
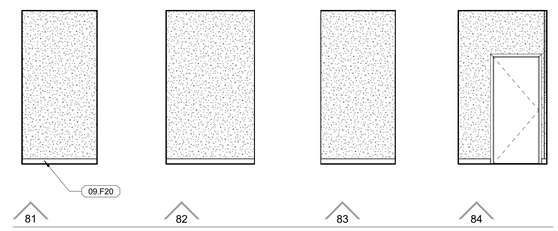


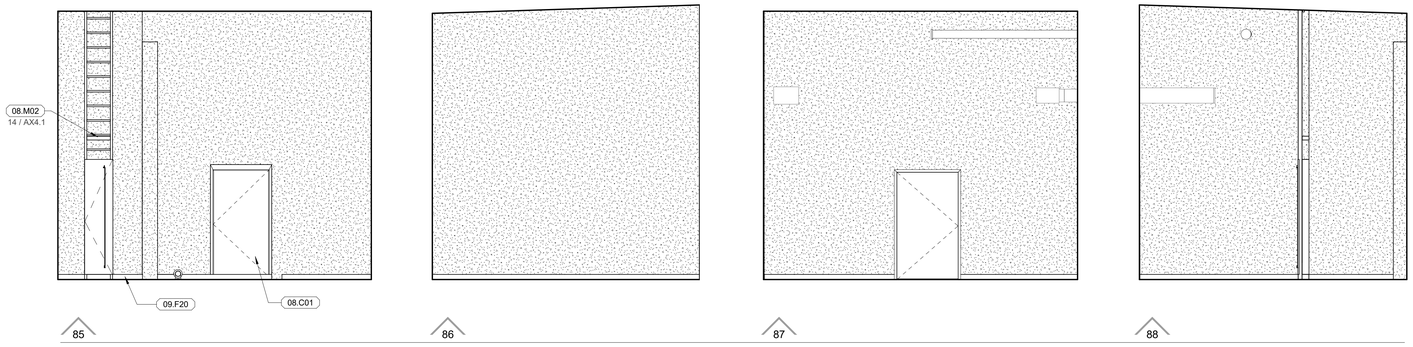
128 - TEAM ROOM



130 - P.T. ROOM



131 - STORAGE



132 - STORAGE

INTERIOR ELEVATION LEGEND

- HATCH INDICATES GYPSUM BOARD FINISH U.O.N. — P-1
- HATCH INDICATES WALL TILE FINISH, TL-3 U.O.N.
- HATCH INDICATES FLOOR & BASE TILE
- HATCH INDICATES CMU WALL
- HATCH INDICATES SCORED CMU WALL
- HATCH INDICATES MDF SEE DETAIL 20 / AX5.1
- HATCH INDICATES ACROVYN
- HATCH INDICATES FIBER REINFORCED PANELS o/ 3/4" PLYWOOD
- HATCH INDICATES VINYL TACKBOARD — VTB-1
- HATCH INDICATES VINYL WALL COVERING — WC-1
- HATCH INDICATES FIRE RESISTANT PAINT o/ 5/8" FIRE RESISTANT PLYWOOD
- HATCH INDICATES GLAZING REFER TO WINDOW SCHEDULE
- INDICATES RUBBER BASE TYPE — RTB-1

SYMBOLS LEGEND INTERIOR ELEV

CASEWORK SYMBOL

- HEIGHT
- MODIFIED
- DEPTH
- CASEWORK MODEL
- LOCK
- WIDTH

NOTE: DIMENSIONS ARE TO THE NEAREST WHOLE NUMBER, CONTRACTOR TO FIELD VERIFY DIMENSIONS PRIOR TO FABRICATION

FINISH KEYNOTE SYMBOL

xx-xx = INDICATES FINISH, SEE COLOR SCHEDULE C---

GENERAL NOTES

1. REFER TO REFLECTED CEILING PLAN FOR CEILING AND SOFFIT HEIGHTS.
2. REFER TO DETAIL 15 / AX5.2 FOR CASEWORK ANCHORAGE DETAILS.
3. FOR ELEVATIONS THAT ARE NOT ILLUSTRATED MATCH FINISHES OF TYPICAL ROOM ELEVATION AND REFER TO INTERIOR FINISH SCHEDULE.
4. SEE SHEET AT.2 FOR ADDITIONAL SYMBOLS NOT SHOWN.
5. REFER TO INTERIOR FINISH SCHEDULE TYPICAL PAINT COLORS.
6. ALL EXPOSED METAL DECK AND STRUCTURAL STEEL IS TO COMPLY WITH "ARCHITECTURALLY EXPOSED STRUCTURAL STEEL FRAMING", REFER TO SPECIFICATION.

KEYNOTES (XX-XX)

06.F02	PLASTIC LAMINATE UPPER CASEWORK
06.F03	PLASTIC LAMINATE LOWER CASEWORK
06.G04	SOLID SURFACE COUNTERTOP w/4" HIGH BACKSPLASH
08.C01	DOOR, SEE DOOR SCHEDULE
08.C02	WINDOW, SEE WINDOW SCHEDULE
08.M02	ROOF ACCESS LADDER
09.F20	RUBBER TOPSET BASE,TYP., 4" U.O.N.
10.A02	SOAP DISPENSER
10.A17	PAPER TOWEL DISPENSER
10.M02	2A:10BC MIN RATED FIRE EXTINGUISHER W/ SEMI-RECESSED CABINET
11.C01	ICE-MACHINE, SEE PLUMBING PLANS
11.E14	SPORTS ICE TUB
15.B14	ACCESSIBLE SINK, SEE PLUMBING PLANS

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 01/23/2025

PBK

ARCHITECT PBK Architects, Inc.
FRESNO
7790 North Palm Avenue
Fresno, CA 93711
559-448-8400 P
559-448-8467 F
PBK.com

MADERA HIGH SCHOOL FIELDHOUSE

200 SOUTH "I" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

MADERA UNIFIED SCHOOL DISTRICT 19 66

PROFESSIONAL SEAL

LICENSED ARCHITECT
MICHAEL R. SCHOEN
No. C-32581
RENEWAL DATE
FEB 28, 2027
STATE OF CALIFORNIA

PROJECT NUMBER 20-51
DATE 01/22/2025
DSA APPLICATION NO. 02-121624
FILE NO. 20-H3
PTN NO. 65243-153
DRAWN BY Author

REVISIONS

#	DESCRIPTION	DATE

CONSTRUCTION DOCUMENTS

INTERIOR ELEVATIONS

A7.5

BIM 360:///Madera USD_20-51_MHS Field House/20-51_MHS FIELDHOUSE_V21.rvt
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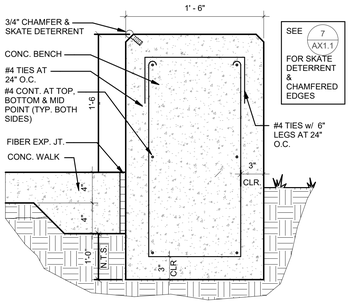
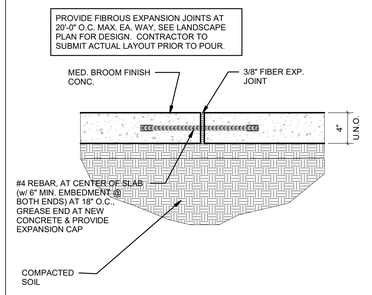


6 CONC. BENCH

1/ AS.3

SCALE 1 1/2" = 1'-0"



1 EXPANSION JOINT

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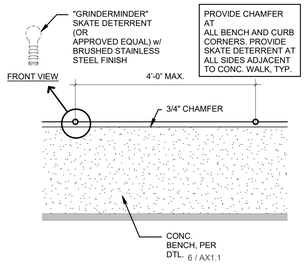
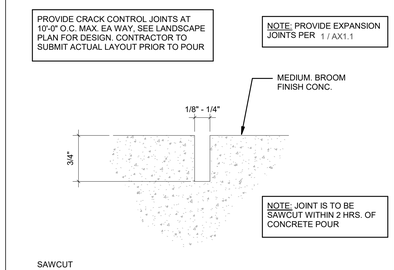


7 CONC. BENCH - REVEALS

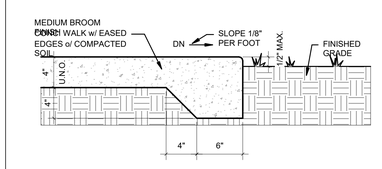
SCALE 1" = 1'-0"



2 TYPICAL CONTROL JOINT

1/ AS.3

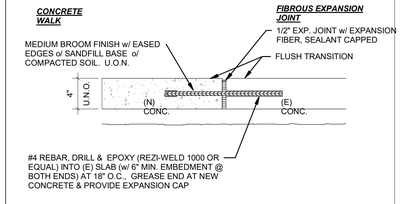
SCALE 12" = 1'-0"



3 WALK AT GRADE

1/ AS.3

SCALE 1 1/2" = 1'-0"



NOTES
PROVIDE FIBROUS EXPANSION JOINTS AT 25'-0" O.C. MAX. EA. WAY (SEE SITE PLAN FOR LOCATIONS)

5 FIBEROUS EXPANSION JOINT @ EX. CONC. WALK

1/ AS.3

SCALE 1 1/2" = 1'-0"

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LICENSED ARCHITECT
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No. C-30345
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FEB 28, 2027
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20-51

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DSA APPLICATION NO.
02-121624

FILE NO.
20-H3

PTN NO.
65243-153

DRAWN BY
Author

REVISIONS

#	DESCRIPTION	DATE

CONSTRUCTION DOCUMENTS

SITE DETAILS

AX1.1

BIM 360://Madera USD_20-51_MHS Field House/20-51_MHS FIELDHOUSE_V21.rvt
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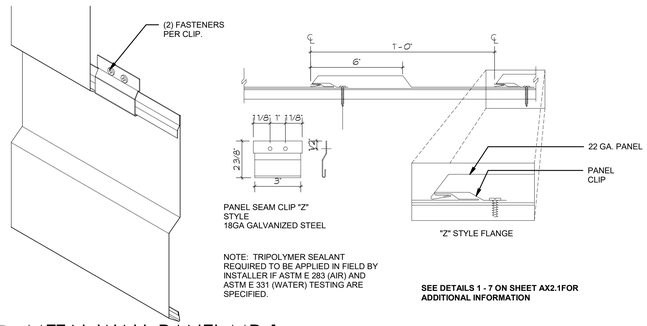
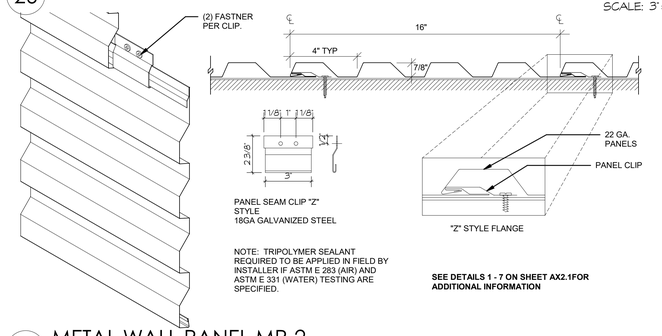


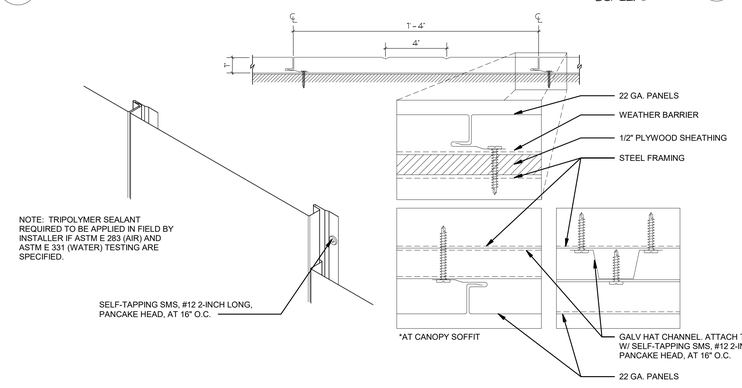
26 METAL WALL PANEL MP-1

SCALE: 3" = 1'-0"



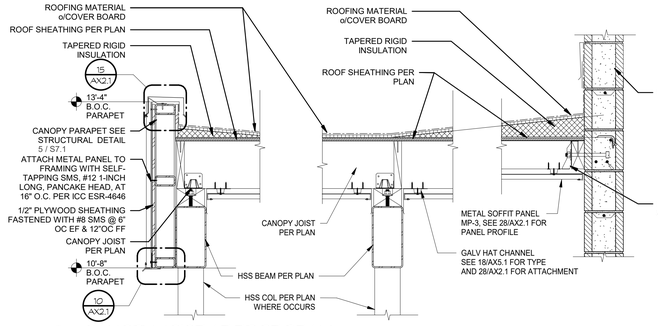
27 METAL WALL PANEL MP-2

SCALE: 3" = 1'-0"



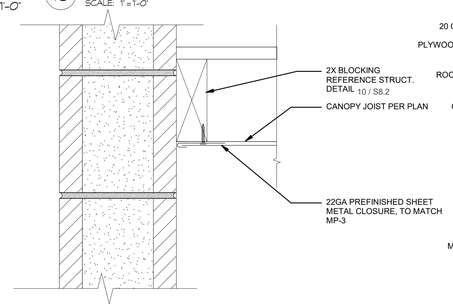
28 METAL WALL/SOFFIT PANEL MP-3

SCALE: 3" = 1'-0"



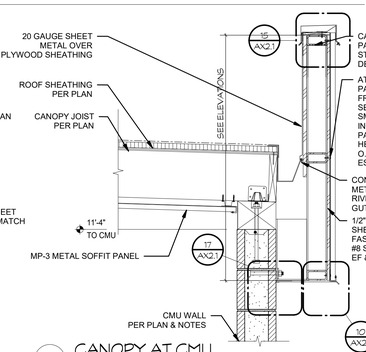
16 CANOPY JOIST AT EDGE BEAM

SCALE: 1"=1'-0"



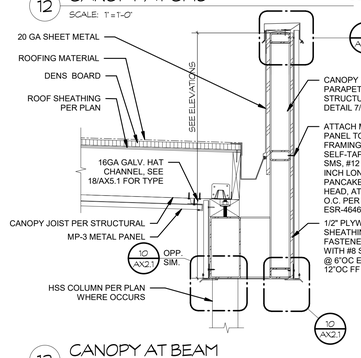
17 CLOSURE @ END WALL

SCALE 3" = 1'-0"



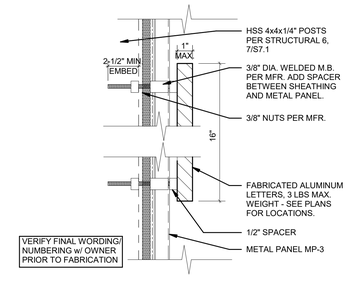
12 CANOPY AT CMU

SCALE: 1"=1'-0"



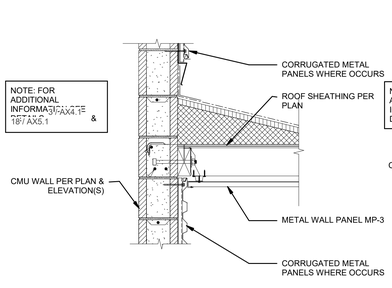
13 CANOPY AT BEAM

SCALE: 1"=1'-0"



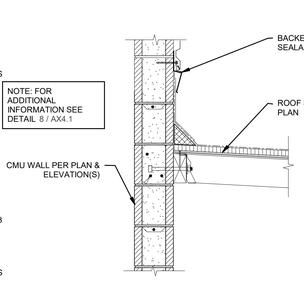
19 ALUM. LETTER MOUNTING @ METAL PANEL

SCALE 3" = 1'-0"



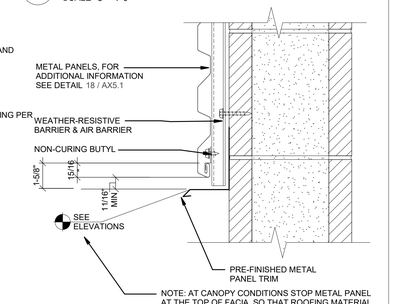
14 CANOPY RETURN @ CMU

SCALE 1" = 1'-0"



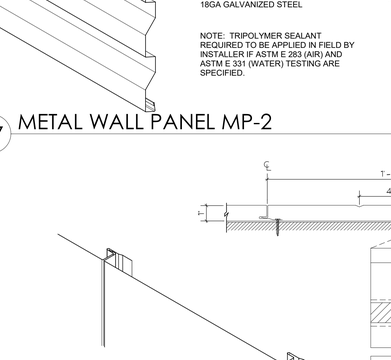
9 SLOPED CANOPY RETURN @ CMU

SCALE 1" = 1'-0"



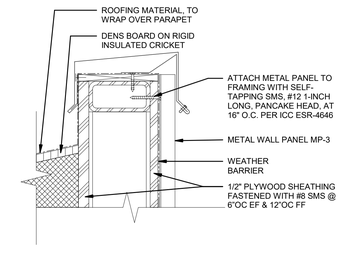
4 METAL PANEL SILL

SCALE 3" = 1'-0"



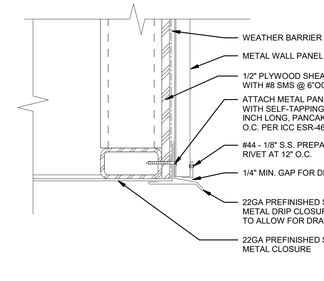
30 LOGO OVER METAL WALL PANEL

SCALE 3" = 1'-0"



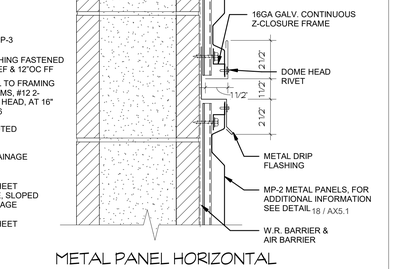
15 CANOPY PARAPET

SCALE: 3"=1'-0"



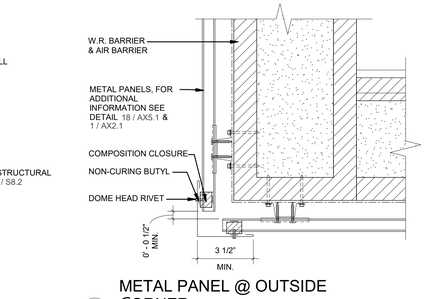
10 CORNER CLOSURE AT FASCIA

SCALE: 3"=1'-0"



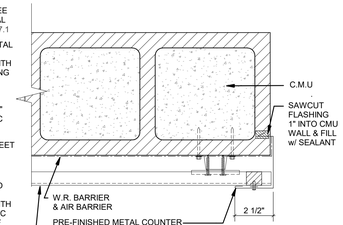
5 METAL PANEL HORIZONTAL REVEAL

SCALE: 3"=1'-0"



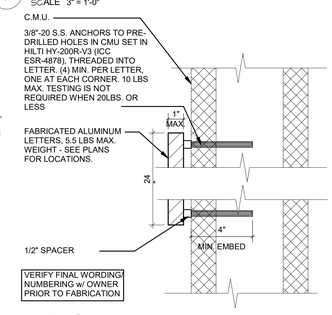
6 METAL PANEL @ OUTSIDE CORNER

SCALE 3" = 1'-0"



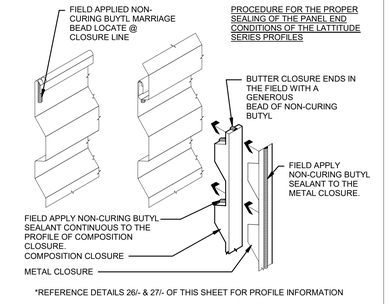
7 METAL PANEL @ END WALL CONDITION

SCALE 3" = 1'-0"



8 MU @ ALUM. LETTER COUNTING

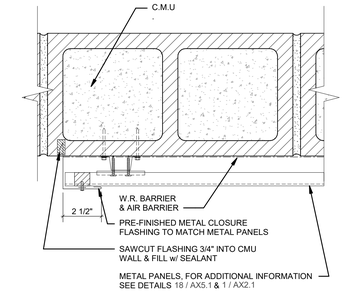
SCALE 3" = 1'-0"



*REFERENCE DETAILS 26/- & 27/- OF THIS SHEET FOR PROFILE INFORMATION

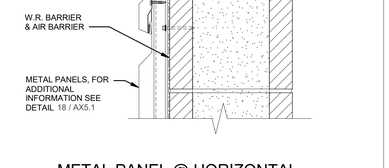
1 MTL PANEL ENDWALL CLOSURE

SCALE 1 1/2" = 1'-0"



2 METAL PANEL @ VERTICAL TRANSITION

SCALE 3" = 1'-0"



3 METAL PANEL @ HORIZONTAL TRANSITION

SCALE 3" = 1'-0"

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LICENSED ARCHITECT MICHAEL R. SCHOEN No. C28246 RENEWAL DATE FEB 28, 2027 STATE OF CALIFORNIA

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EXTERIOR DETAILS

AX2.1

BIM 360://Madera USD_20-51_MHS Field House/20-51_MHS FIELDHOUSE_V21.rvt
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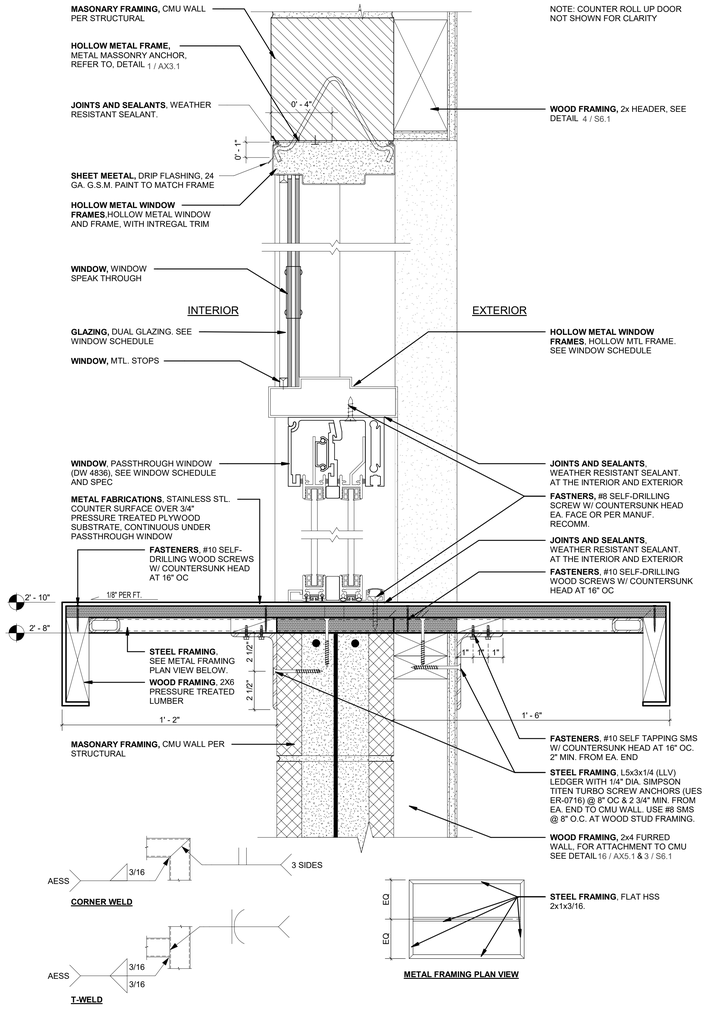
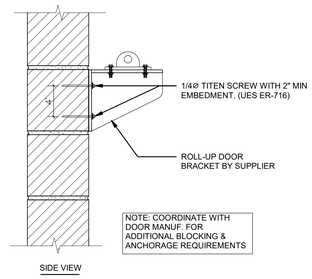


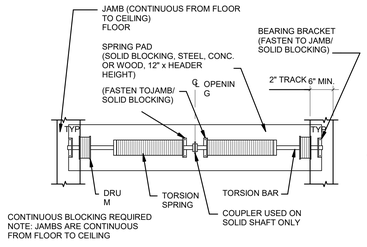
24 PASS THROUGH WINDOW

SCALE 3" = 1'-0"



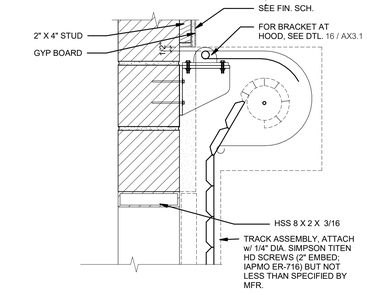
16 OVERHEAD DOOR - BRACKET

SCALE 1 1/2" = 1'-0"



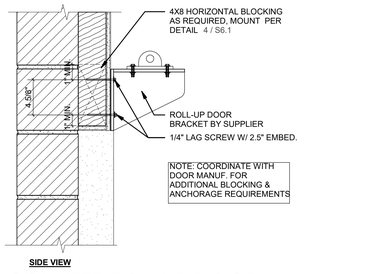
17 OVERHEAD DOOR - COIL

SCALE 3/4" = 1'-0"



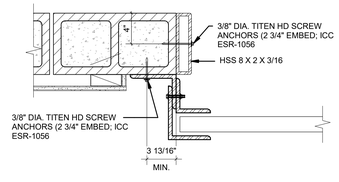
18 OVERHEAD DOOR - HEAD

SCALE 1 1/2" = 1'-0"



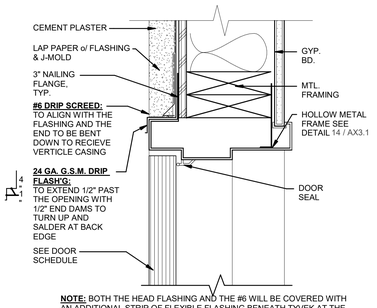
25 COUNTER ROLLUP DOOR - BRACKET

SCALE 1 1/2" = 1'-0"



19 OVERHEAD DOOR - JAMB

SCALE 1 1/2" = 1'-0"

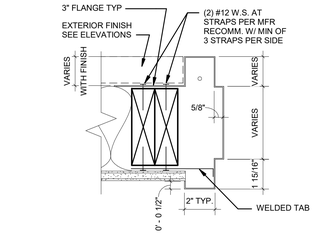


12 DOOR HEAD @ CMU PLANT ON

SCALE 3" = 1'-0"

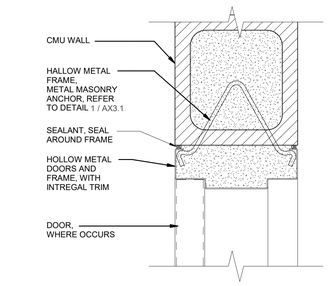
13 DOOR JAMB @ CMU PLANT ON

SCALE 3" = 1'-0"



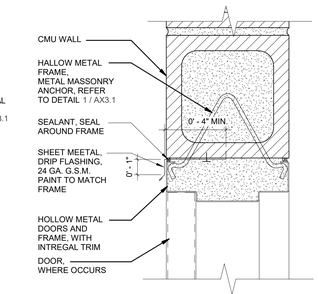
14 H.M. FRAME ANCHOR @ EXT. FRAME

SCALE 3" = 1'-0"



6 HM DOOR FRAME - JAMB

SCALE 3" = 1'-0"

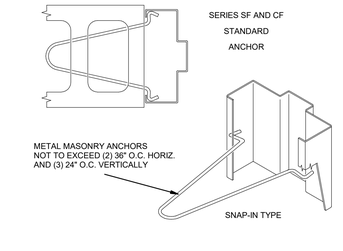


7 HM FRAME AT CMU - HEAD

SCALE 3" = 1'-0"

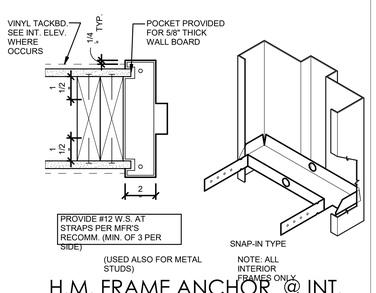
8 COUNTER ROLL UP DOOR - JAMB

SCALE 1 1/2" = 1'-0"



1 WIRE MASONRY ANCHOR

SCALE 1" = 1'-0"

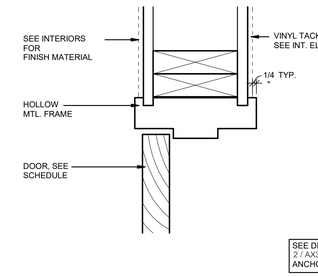


2 H.M. FRAME ANCHOR @ INT. FRAME
(AT INTERIOR FRAMES ONLY)

SCALE 3" = 1'-0"

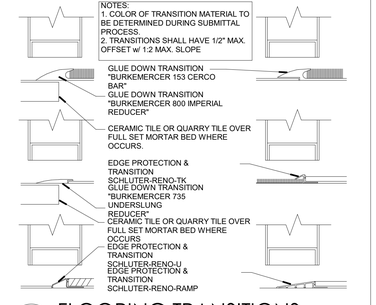
3 DOOR THRESHOLD

SCALE 12" = 1'-0"



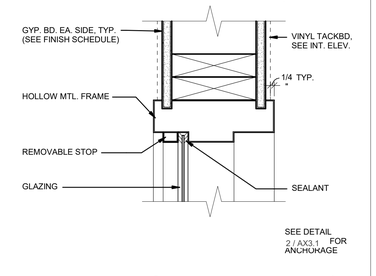
9 INTERIOR DOOR HEAD & JAMB

SCALE 3" = 1'-0"



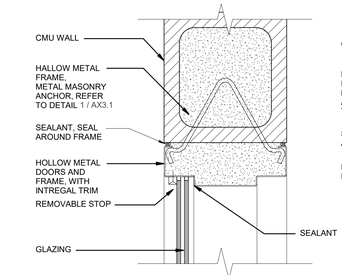
4 FLOORING TRANSITIONS

SCALE 3" = 1'-0"



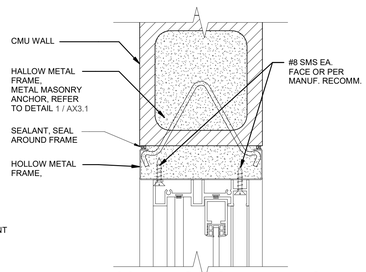
5 INT. WINDOW JAMB - HEAD/ SILL SIM.

SCALE 3" = 1'-0"



20 HM WINDOW FRAME @ CMU - JAMB

SCALE 3" = 1'-0"



15 HM PASS-THROUGH WINDOW FRAME - JAMB

SCALE 3" = 1'-0"

IDENTIFICATION STAMP
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DATE: 01/23/2025

ARCHITECT PBK Architects, Inc.
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7790 North Palm Avenue
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MADERA HIGH SCHOOL FIELDHOUSE

200 SOUTH "I" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

PROFESSIONAL SEAL

LICENSED ARCHITECT
MICHAEL R. SCHOEN
No. C-32975
RENEWAL DATE FEB 28, 2027
STATE OF CALIFORNIA

PROJECT NUMBER 20-51
DATE 01/22/2025
DSA APPLICATION NO. 02-121624
FILE NO. 20-H3
PTN NO. 65243-153
DRAWN BY Author

REVISIONS

#	DESCRIPTION	DATE

CONSTRUCTION DOCUMENTS

OPENING DETAILS

AX3.1

BIM 360://Madera USD_20-51_MHS Field House/20-51_MHS FIELDHOUSE_V21.rvt
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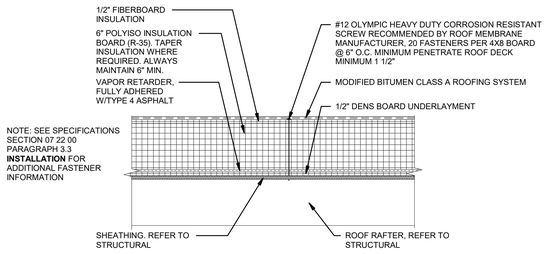
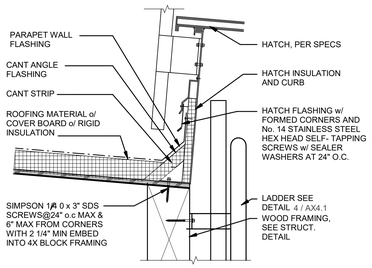


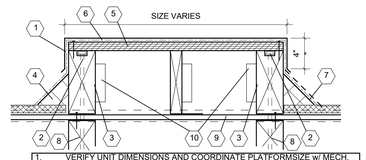
26 TYPICAL ROOF SECTION
SCALE 1 1/2" = 1'-0"



* VAPOR BARRIER SHALL BE SEALED AT EDGES

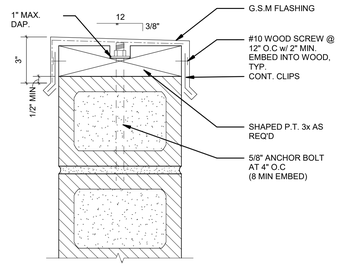
16 ROOF ACCESS
SCALE 1 1/2" = 1'-0"

1. 24 GA. G.S.M. COVER, LAP, FOLD AND SOLDER ALL HORIZONTAL JOINTS
2. 5/8" DIA. THREADED ROD @ 24" O.C. REF. STRUCTURAL DRAWINGS
3. SHIMPED 4x D.F. SUPPORT RAIL AT PERIMETER OF PLATFORM, RIP AS REQUIRED FOR ROOF SLOPE
4. CANT STRIP (3) LOW SIDES, TYP.
5. LEVEL 3/4" EXTERIOR GRADE PLYWD. PLATFORM w/ 10d @ 6" o.c. AT EDGES & 10d @ 12" o.c. FIELD
6. ROOFING UNDER G.S.M. COVER
7. CRICKET ON HIGH SIDE OF ROOF SLOPE, TYPICAL
8. BLOCKING UNDER PLATFORM. SEE STRUCTURAL DWGS
9. ROOF SHEATHING, SEE STRUCT. DWGS.
10. A35 CLIP EACH END AT PLATFORM CORNERS



1. VERIFY UNIT DIMENSIONS AND COORDINATE PLATFORMSIZE w/ MECH. CONTRACTOR PRIOR TO CONSTRUCTION. SEE DETAIL 2/MX.2
2. ALL WOOD SHALL BE TREATED WITH FIRE RETARDANT MATERIAL

11 MECHANICAL PLATFORM
SCALE 1 1/2" = 1'-0"

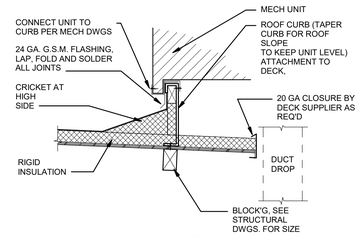


SECTION VIEW

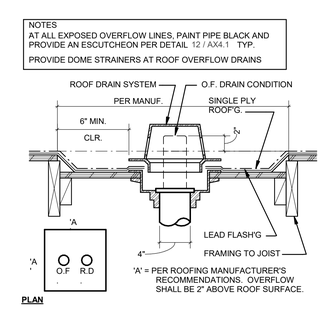
6 CMU @ PARAPET CAP
SCALE 3" = 1'-0"

SEE DETAIL 5/AX4.1 FOR ADDITIONAL NOTES.

1. VERIFY UNIT DIMENSIONS AND COORDINATE CURB LOCATION &SIZE w/ MECH. CONTRACTOR PRIOR TO CONSTRUCTION.
2. SEE DTL. 13/S6.2 FOR ADDITIONAL INFO.
3. IF PLATFORM IS REQUIRED REFER TO DETAIL 12/AX4.1, SEE MECH. PLANS FOR LOCATIONS.

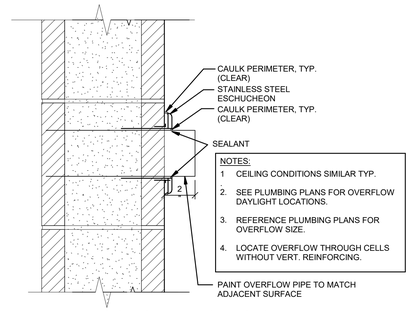


AT HIGH SIDE

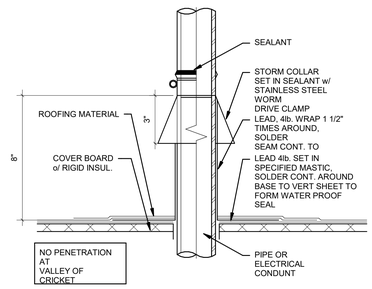


PLAN

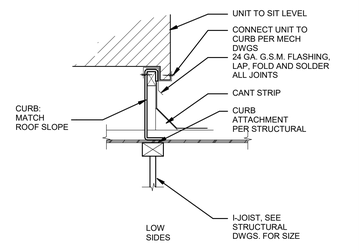
17 ROOF DRAIN
SCALE 1 1/2" = 1'-0"



12 ROOF OVERFLOW @ CMU WALL
SCALE 3" = 1'-0"



7 ROOF PENETRATION
SCALE 3" = 1'-0"



LOW SIDES

2 CURB AT A.C. UNIT
SCALE 3/4" = 1'-0"

18 RIDGE
SCALE 1 1/2" = 1'-0"

14 ROOF/ACCESS HATCH
SCALE 3/4" = 1'-0"

8 CANT STRIP
SCALE 1 1/2" = 1'-0"

3 CRICKET
SCALE 1" = 1'-0"

9 DOWNSPOUT
SCALE 1" = 1'-0"

4 ROOF ACCESS LADDER
SCALE 1" = 1'-0"

15 GUARDRAIL AT ROOF HATCH
SCALE NONE

5 METAL PANEL @ PARAPET CAP
SCALE 3" = 1'-0"

25 ROOF AT PARAPET
SCALE 1" = 1'-0"

20 ROOF @ CMU PARAPET
SCALE 1" = 1'-0"

BIM 360://Madera USD_20-51_MHS Field House/20-51_MHS FIELDHOUSE_V21.rvt
1/20/2025 6:37:16 PM

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MADERA UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL
LICENSED ARCHITECT
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No. C-26346
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PTN NO.
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DRAWN BY
Author

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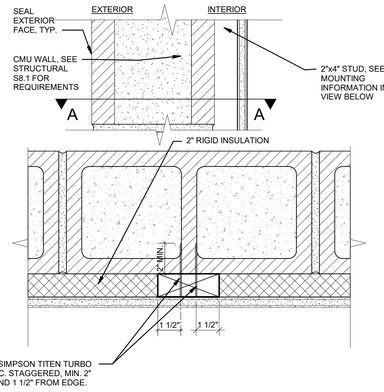
ROOF DETAILS

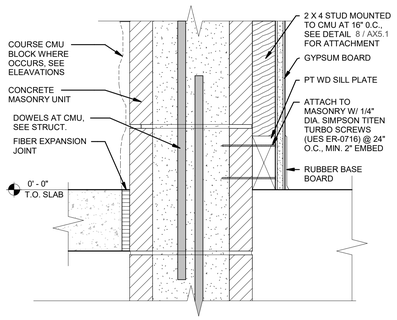
AX4.1

NOTE:
SEE EXTERIOR ELEVATIONS FOR COLORS & PATTERNS OF CMU WALLS

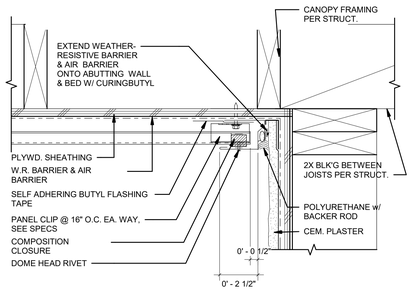
NOTE:
SEE DETAIL 9 / AX5.1 FOR "FLAT" FURRING WALL BASE ATTACHMENT INFORMATION



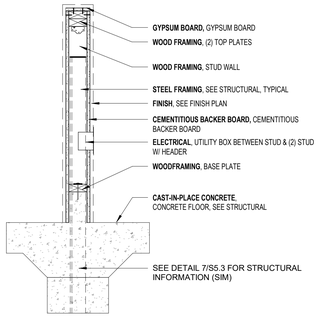
8 WALL TYPE - CMU WALL - GYP (FLAT FURRING)
SCALE: 3" = 1'-0"



9 EXTERIOR CMU WALL W/ GYP (FLAT FURRING)
SCALE: 3" = 1'-0"



21 METAL PANEL @ PLASTER
SCALE: 3" = 1'-0"



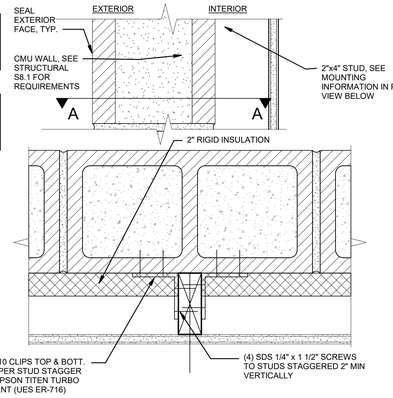
WALL	TYPE OF STUD SIZE	NOTES
22	2X4" D.F. @ 16" O.C.	(1) LAYER OF CEMENTICIOUS BACKER BOARD. (1) LAYER OF TILE. (SEE FINISH SCHEDULE), EACH SIDE.

NOTE:
1. SEE S6.1 FOR STUD INFORMATION

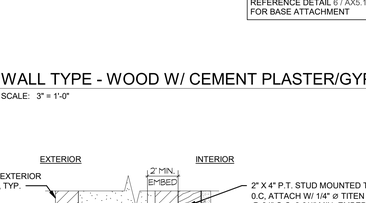
22 NON-RATED LOW WALL PARTITION
SCALE: 1" = 1'-0"

NOTE:
SEE EXTERIOR ELEVATIONS FOR COLORS & PATTERNS OF CMU WALLS

NOTE:
SEE DETAIL 3 / AX5.1 FOR "EDGE" FURRING WALL BASE ATTACHMENT INFORMATION



16 WALL TYPE - CMU WALL - GYP
SCALE: 3" = 1'-0"



NOTE:
SEE EXTERIOR ELEVATIONS FOR COLORS & PATTERNS OF CMU WALLS

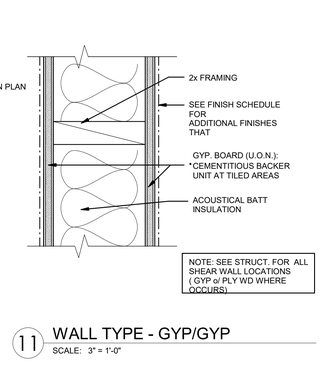
17 WALL TYPE - CMU
SCALE: 3" = 1'-0"

18 WALL TYPE - CMU @ MTL. PNL.
SCALE: 3" = 1'-0"

NOTE:
REFERENCE DETAIL 6 / AX5.1 FOR BASE ATTACHMENT

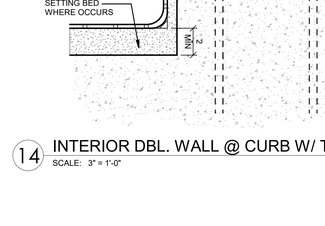
19 WALL TYPE - WOOD W/ CEMENT PLASTER/GYP
SCALE: 3" = 1'-0"

20 WALL TYPE - CMU WALL - MDF
SCALE: 3" = 1'-0"



NOTE: SEE STRUCT. FOR ALL SHEAR WALL LOCATIONS (GYP o/ PLY WD WHERE OCCURS)

11 WALL TYPE - GYP/GYP
SCALE: 3" = 1'-0"

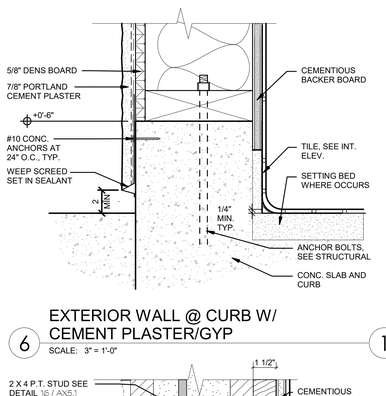


NOTE: SEE STRUCT. FOR ALL SHEAR WALL LOCATIONS (GYP o/ PLY WD WHERE OCCURS)

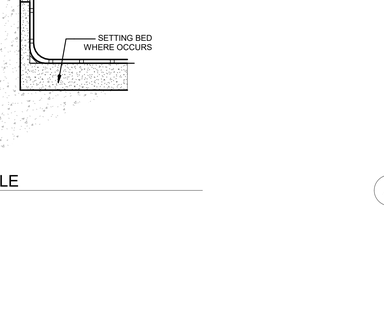
12 WALL TYPE - GYP/OPEN
SCALE: 3" = 1'-0"

13 INTERIOR DBL. WALL @ CURB W/ TILE/GYP
SCALE: 3" = 1'-0"

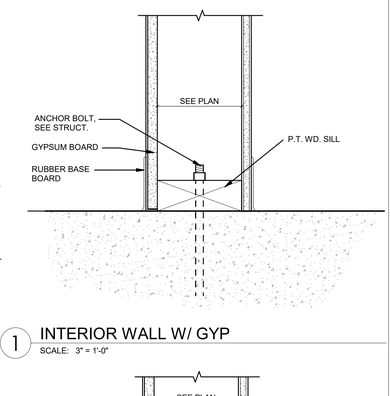
14 INTERIOR DBL. WALL @ CURB W/ TILE
SCALE: 3" = 1'-0"



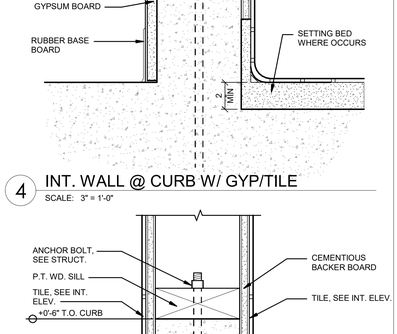
6 EXTERIOR WALL @ CURB W/ CEMENT PLASTER/GYP
SCALE: 3" = 1'-0"



7 EXTERIOR CMU WALL W/ TILE
SCALE: 3" = 1'-0"



1 INTERIOR WALL W/ GYP
SCALE: 3" = 1'-0"



2 INTERIOR WALL @ CURB W/ GYP
SCALE: 3" = 1'-0"

3 EXTERIOR CMU WALL W/ GYP
SCALE: 3" = 1'-0"

4 INT. WALL @ CURB W/ GYP/TILE
SCALE: 3" = 1'-0"

5 INTERIOR WALL @ CURB W/ TILE
SCALE: 3" = 1'-0"

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No. C25529
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INTERIOR DETAILS

AX5.1

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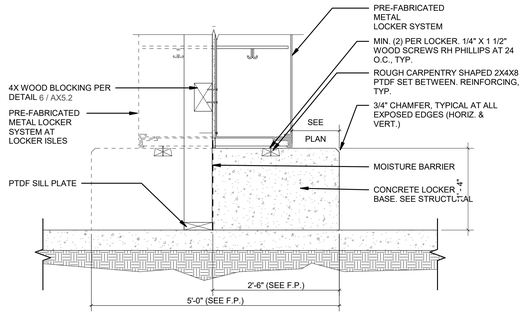
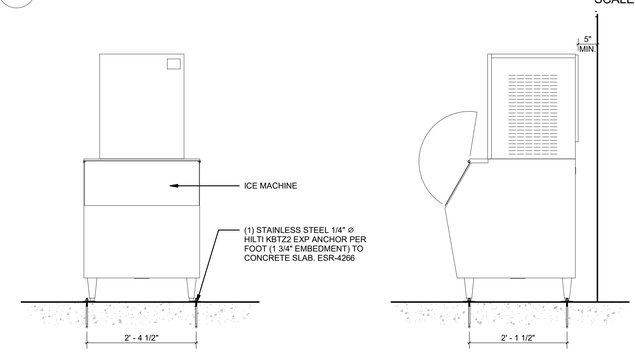


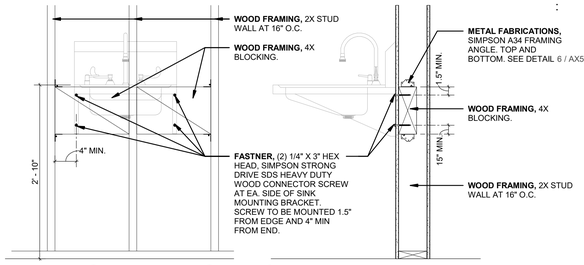
21 LOCKERS BASE

SCALE 1" = 1'-0"



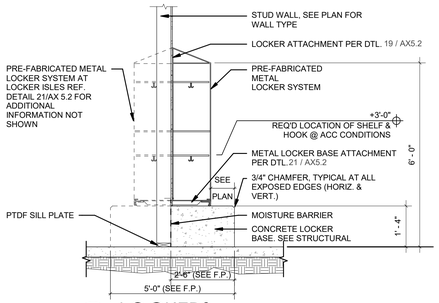
22 ICE MAKER ANCHORAGE DETAIL

SCALE 3/4" = 1'-0"



23 WALL MOUNTED KITCHEN SINK

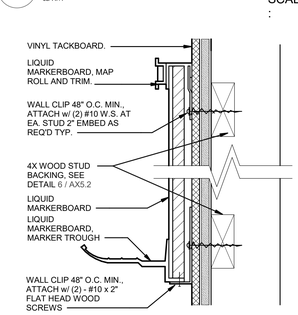
SCALE 1" = 1'-0"



16 LOCKERS

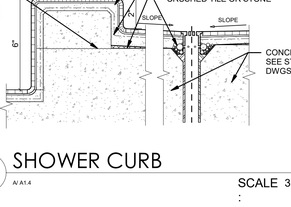
63/ A7.4

SCALE 1/2" = 1'-0"



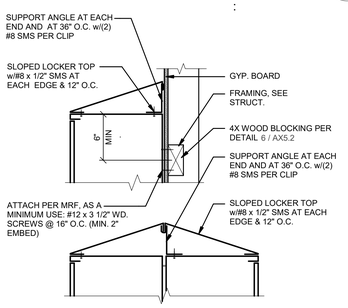
17 LIQUID MARKER BOARD

SCALE 3" = 1'-0"



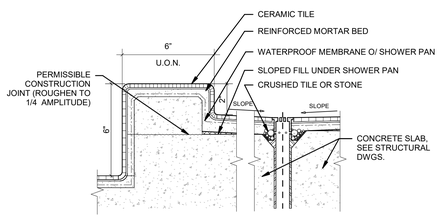
18 RESTROOM MIRROR

SCALE 3" = 1'-0"



19 LOCKER ATTACHMENT

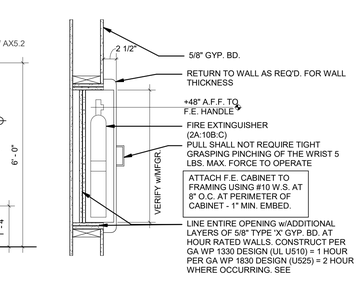
SCALE 1 1/2" = 1'-0"



20 SHOWER CURB

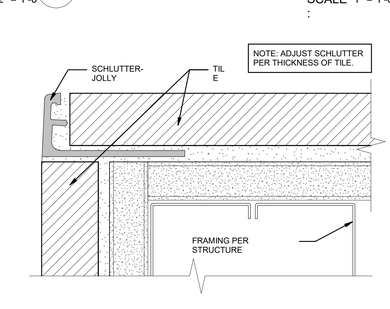
A/ A1.4

SCALE 3" = 1'-0"



11 FIRE EXTINGUISHER CABINET

SCALE 1" = 1'-0"



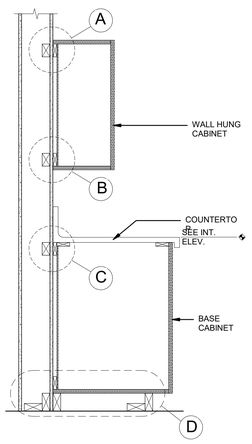
12 SCHLUTER CORNER

B/ A1.4

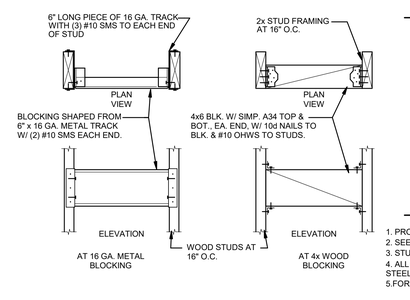
SCALE 12" = 1'-0"

13 SCHLUTER ALUM. COVE @ TILE

SCALE 6" = 1'-0"

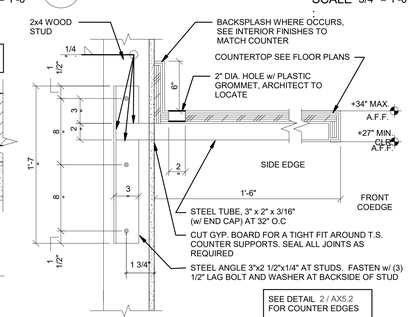


WALL HUNG & BASE CABINETS



6 BLOCKING DETAIL

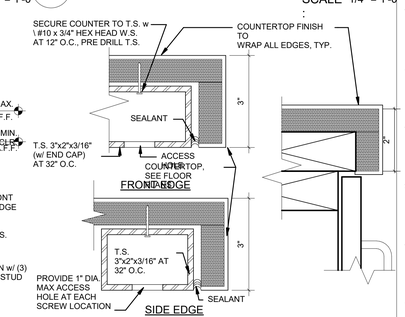
SCALE 3/4" = 1'-0"



7 COUNTER SUPPORT

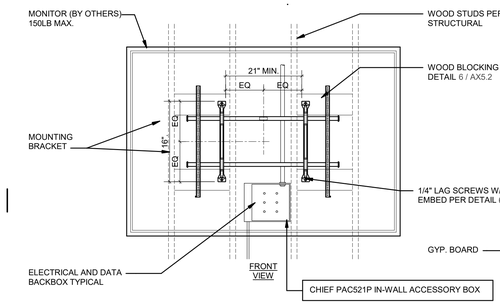
1/ A6.2

SCALE 3" = 1'-0"



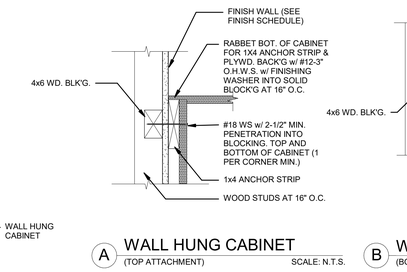
1 CASEWORK BACKING

SCALE 1/4" = 1'-0"



8 TV MOUNT

SCALE 3/4" = 1'-0"

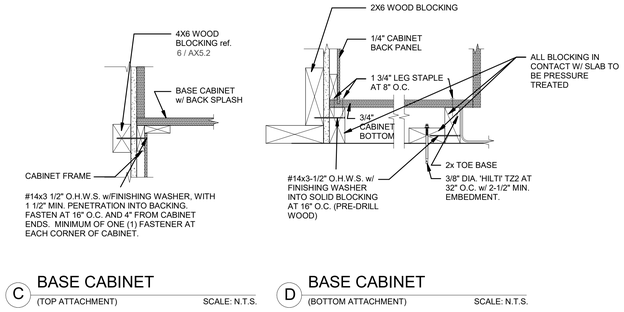


A WALL HUNG CABINET

(TOP ATTACHMENT) SCALE: N.T.S.

B WALL HUNG CABINET

(BOTTOM ATTACHMENT) SCALE: N.T.S.



C BASE CABINET

(TOP ATTACHMENT) SCALE: N.T.S.

D BASE CABINET

(BOTTOM ATTACHMENT) SCALE: N.T.S.

15 CASEWORK

SCALE 1" = 1'-0"

2 COUNTER EDGES

SCALE 6" = 1'-0"

1. PROVIDE FASTENERS PER DETAIL 15 / AX5.2
2. SEE INTERIOR ELEVATIONS FOR CABINET CONFIGURATION AND DIMENSIONS.
3. STUDS OF WALLS BACKING CABINETS SHALL RUN FROM SLAB TO STRUCTURE ABOVE.
4. ALL COUNTERTOPS WITH A SPAN GREATER THAN 42" SHALL BE SUPPORTED WITH A STEEL WALL ANGLE. SEE DTL. 7 / AX5.2
5.FOR BASE CABINETS w/ BACKSPLASH SHELF, SEE DETAIL 15 / AX5.2

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 01/23/2025

PBK

ARCHITECT PBK Architects, Inc.
FRESNO
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Fresno, CA 93711
559-448-8400 P
559-448-8467 F
PBK.com

MADERA HIGH SCHOOL FIELDHOUSE

200 SOUTH "I" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

MADERA UNIFIED SCHOOL DISTRICT 19 66

PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL R. SCHOEN No. C-29295 RENEWAL DATE FEB 28, 2027 STATE OF CALIFORNIA

PROJECT NUMBER 20-51
DATE 01/22/2025
DSA APPLICATION NO. 02-121624
FILE NO. 20-H3
PTN NO. 65243-153
DRAWN BY Author

REVISIONS

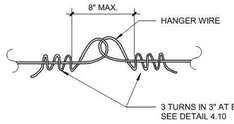
#	DESCRIPTION	DATE

CONSTRUCTION DOCUMENTS

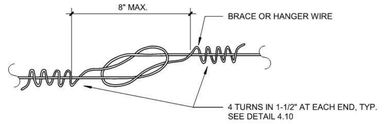
INTERIOR DETAILS

AX5.2

BIM 360://Madera USD_20-51_MHS Field House/20-51_MHS FIELDHOUSE_V21.rvt
1/20/2025 6:37:19 PM



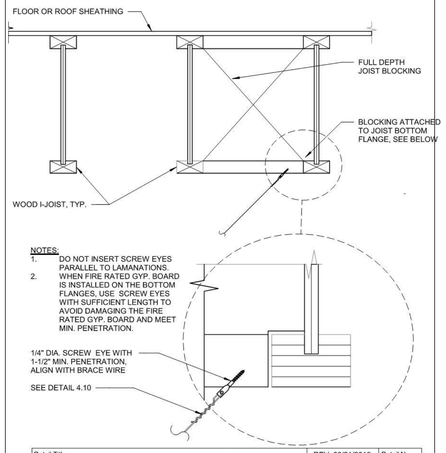
HANGER WIRE ONLY



HANGER OR BRACE WIRE

NOTES:
1. WIRE SPLICES ARE SHOWN LOOSELY TIED FOR ILLUSTRATIVE PURPOSES ONLY AND SHALL BE DRAWN TIGHT TO COMPLETE INSTALLATION WHEN CONSTRUCTED.
2. WIRE LOOPS SHALL BE TIGHTLY WRAPPED AND SHARPLY BENT TO PREVENT ANY VERTICAL MOVEMENT OR ROTATION WITHIN THE LOOPS.
3. EACH HANGER AND BRACE WIRE SHALL BE SPLICED NO MORE THAN ONCE ALONG ITS LENGTH.

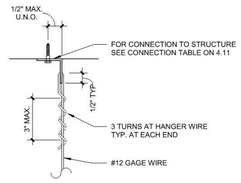
Detail Title :		Detail No.
CEILING WIRE SPLICES		6.10



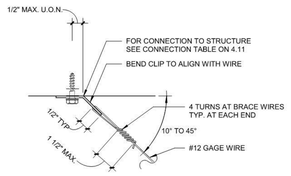
NOTES:
1. DO NOT INSERT SCREW EYES PARALLEL TO LAMANATIONS.
2. WHEN FIRE RATED GYP. BOARD IS INSTALLED ON THE BOTTOM FLANGES, USE SCREW EYES WITH SUFFICIENT LENGTH TO AVOID DAMAGING THE FIRE RATED GYP. BOARD AND MEET MIN. PENETRATION.

Detail Title :	REV: 09/21/2015	Detail No.
BRACE WIRE CONNECTION TO WOOD I-JOIST	REV: 03/2022	4.36

IR 25-2
SUSPENDED LAY-IN PANEL CEILING: 2019 CBC

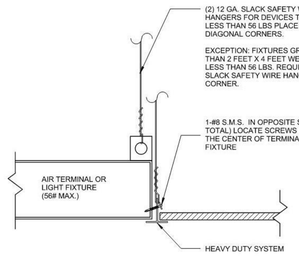


HANGER WIRE

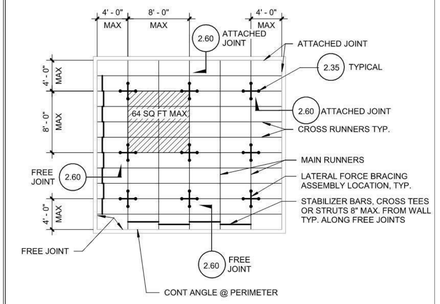


BRACE WIRE

Detail Title :	REV: 09/21/2015	Detail No.
HANGER AND BRACE WIRE CONNECTION - TYP. WIRE TURNS	REV: 03/2022	4.10

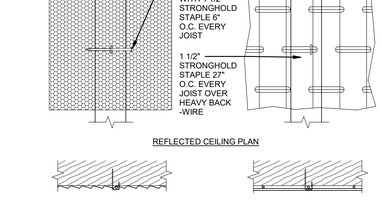


Basis Document : DSA IR 25-2.13			Sheet No:
Sheet Title : SUSPENDED ACOUSTICAL CEILING - LIGHT FIXTURES/ AIR TERMINAL SUPPORT DETAIL	rev.	09-21-15	2.80
	rev.	02-10-16	



NOTE:
BRACING WIRES AND COMP. STRUT SHALL OCCUR AT EVERY 64 SQ. FT. MAX. IN ROOMS OVER 144 SQ. FT.

Detail Title :	REV: 09/21/2015	Detail No.
TYP. CEILING PLAN FOR 8'-0"x8'-0" BRACE ASSEMBLY SPACING	REV: 03/2022	2.10



14 CEILING ACCESS PANEL

SCALE 3" = 1'-0"

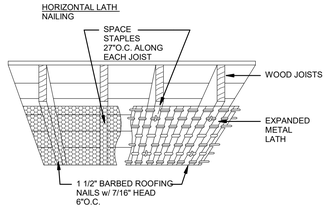
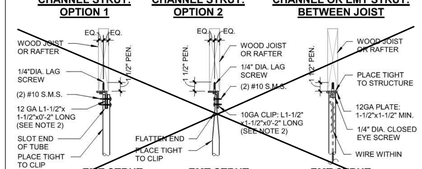


ILLUSTRATION SHOWING HOW A NAILED ON CEILING CAN BE GIVEN ADDITIONAL SUPPORT THROUGH USE OF STRONGHOLD EARTHQUAKE STAPLES, IN BUILDINGS LOCATED IN AREAS SUBJECT TO EARTHQUAKE OR OTHER DISTURBANCES

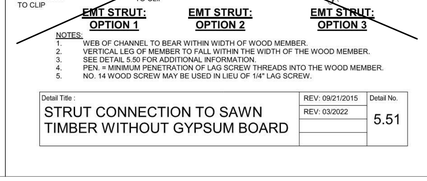
15 CEMENT PLASTER CEILING

SCALE 3" = 1'-0"

IR 25-2
SUSPENDED LAY-IN PANEL CEILING: 2019 CBC



CHANNEL STRUT: OPTION 1 | **CHANNEL STRUT: OPTION 2** | **CHANNEL OR EMT STRUT: BETWEEN I-JOIST**



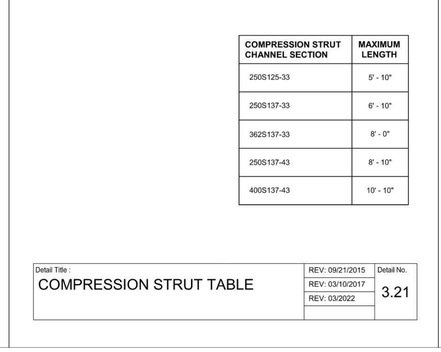
EMT STRUT: OPTION 1 | **EMT STRUT: OPTION 2** | **EMT STRUT: OPTION 3**

NOTES:
1. WEB OF CHANNEL TO BEAR WITHIN WIDTH OF WOOD MEMBER.
2. VERTICAL LEG OF MEMBER TO FALL WITHIN THE WIDTH OF THE WOOD MEMBER.
3. SEE DETAIL 5.50 FOR ADDITIONAL INFORMATION.
4. PEN = MINIMUM PENETRATION OF LAG SCREW THREADS INTO THE WOOD MEMBER.
5. NO. 14 WOOD SCREW MAY BE USED IN LIEU OF 1/4" LAG SCREW.

Detail Title :	REV: 03/2022	Detail No.
STRUT CONNECTION TO I-JOIST		5.52

STRUCTURAL SYSTEM OF FLOOR/ ROOF ABOVE SUSPENDED CEILING	APPLICABLE HANGER WIRE DETAIL	APPLICABLE BRACE WIRE DETAIL
~~BARE METAL DECK~~	~~4.20~~	~~4.30~~
~~CONCRETE OVER METAL DECK~~	~~4.21~~	~~4.30 & 4.31~~
~~CONCRETE SLAB, BEAM, OR JOIST~~	~~4.22~~	~~4.32~~
~~STRUCTURAL STEEL~~	~~4.23~~	~~4.33~~
~~METAL STUD WALL~~	~~4.24~~	~~4.34~~
~~SAWN TIMBER~~	~~4.25 & 4.29~~	~~4.35~~
WOOD I-JOIST	4.26	4.36 & 4.37
~~WOOD SHORD TRUSS~~	~~4.27 & 4.29~~	~~4.38 & 4.29~~
~~OPEN WEB STEEL JOIST~~	~~4.28 & 4.29~~	~~4.39 & 4.29~~

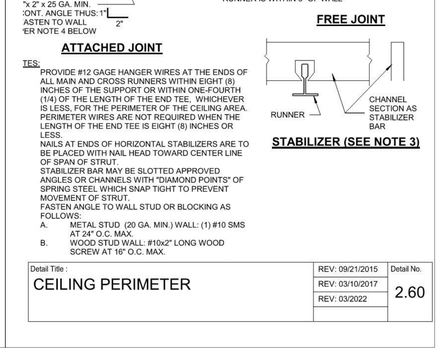
Detail Title :	REV: 09/21/2015	Detail No.
HANGER AND BRACE WIRE CONNECTION TABLE	REV: 03/2022	4.11



NOTES:
1. DIMENSION "L" SHALL NOT EXCEED THE ALLOWABLE LENGTH GIVEN IN THE TABLE ON 3.21 FOR THE COMPRESSION STRUT. SECTION USED.

Ⓐ SECTION
3" = 1'-0"

Detail Title :	REV: 09/21/2015	Detail No.
COMPRESSION STRUT - CHANNEL TYPE	REV: 03/2022	3.10



NOTES:
1. STRUTS SHALL NOT REPLACE HANGER WIRES.
2. THE MINIMUM ACCEPTABLE ANGLE IS DETERMINED SUCH THAT THE WIRES DO NOT INTERFERE WITH THE RUNNERS, LIGHT FIXTURES, ETC. AND REMAIN STRAIGHT AND UNOBSTRUCTED.

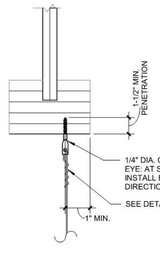
Detail Title :	REV: 09/21/2015	Detail No.
SUSPENSION AND LATERAL BRACING ASSEMBLY	REV: 03/10/2017	2.35
	REV: 03/2022	

CHANNEL STRUT: OPTION 1 | **CHANNEL STRUT: OPTION 2** | **CHANNEL OR EMT STRUT: BETWEEN JOIST**

EMT STRUT: OPTION 1 | **EMT STRUT: OPTION 2** | **EMT STRUT: OPTION 3**

NOTES:
1. WEB OF CHANNEL TO BEAR WITHIN WIDTH OF WOOD MEMBER.
2. VERTICAL LEG OF MEMBER TO FALL WITHIN THE WIDTH OF THE WOOD MEMBER.
3. SEE DETAIL 5.50 FOR ADDITIONAL INFORMATION.
4. PEN. = MINIMUM PENETRATION OF LAG SCREW THREADS INTO THE WOOD MEMBER.
5. NO. 14 WOOD SCREW MAY BE USED IN LIEU OF 1/4" LAG SCREW.

Detail Title :	REV: 09/21/2015	Detail No.
STRUT CONNECTION TO SAWN TIMBER WITHOUT GYPSUM BOARD	REV: 03/2022	5.51



NOTES:
1. WHEN FIRE RATED GYP. BOARD IS INSTALLED ON THE BOTTOM FLANGES, USE SCREW EYES W/ SUFFICIENT LENGTH TO AVOID DAMAGING THE FIRE RATED GYP. BOARD AND MEET MIN. PENETRATION.

Detail Title :	REV: 09/21/2015	Detail No.
HANGER WIRE CONNECTION TO WOOD I-JOIST	REV: 03/2022	4.26

COMPRESSION STRUT CHANNEL SECTION	MAXIMUM LENGTH
250S125-33	5' - 10"
250S137-33	6' - 10"
362S137-33	8' - 0"
250S137-43	8' - 10"
400S137-43	10' - 10"

Detail Title :	REV: 09/21/2015	Detail No.
COMPRESSION STRUT TABLE	REV: 03/10/2017	3.21
	REV: 03/2022	

ATTACHED JOINT

NOTES:
PROVIDE #12 GAGE HANGER WIRES AT THE ENDS OF ALL MAIN AND CROSS RUNNERS WITHIN EIGHT (8) INCHES OF THE SUPPORT OR WITHIN ONE-FOURTH (1/4) OF THE LENGTH OF THE END TEE, WHICHEVER IS LESS, FOR THE PERIMETER OF THE CEILING AREA. PERIMETER WIRES ARE NOT REQUIRED WHEN THE LENGTH OF THE END TEE IS EIGHT (8) INCHES OR LESS.
NAILS AT ENDS OF HORIZONTAL STABILIZERS ARE TO BE PLACED WITH NAIL HEAD TOWARD CENTER LINE OF SPAN OF STRUT.
STABILIZER BAR MAY BE SLOTTED APPROVED ANGLES OR CHANNELS WITH "DIAMOND POINTS" OF SPRING STEEL WHICH SNAP TIGHT TO PREVENT MOVEMENT OF STRUT.
FASTEN ANGLE TO WALL STUD OR BLOCKING AS FOLLOWS:
A. METAL STUD (20 GA. MIN.) WALL: (1) #10 SMS AT 24" O.C. MAX.
B. WOOD STUD WALL: #10x2" LONG WOOD SCREW AT 16" O.C. MAX.

FREE JOINT

STABILIZER (SEE NOTE 3)

Detail Title :	REV: 09/21/2015	Detail No.
CEILING PERIMETER	REV: 03/10/2017	2.60
	REV: 03/2022	

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 01/23/2025

PBK

ARCHITECT PBK Architects, Inc.
FRESNO
7790 North Palm Avenue
Fresno, CA 93711
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MADERA HIGH SCHOOL FIELDHOUSE
200 SOUTH "L" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

PROFESSIONAL SEAL
LICENSED ARCHITECT MICHAEL R. SCHOEN No. C-28285 RENEWAL DATE FEB 28, 2027 STATE OF CALIFORNIA

PROJECT NUMBER	20-51
DATE	01/22/2025
DSA APPLICATION NO.	02-121624
FILE NO.	20-H3
PTN NO.	65243-153
DRAWN BY	Author

REVISIONS

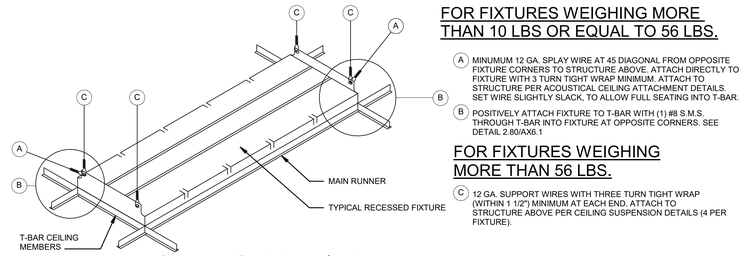
#	DESCRIPTION	DATE

CONSTRUCTION DOCUMENTS

CEILING DETAILS

AX6.1

BIM 360://Madera USD_20-51_MHS Field House/20-51_MHS FIELDHOUSE_V21.rvt
1/20/2026 6:37:21 PM



FOR FIXTURES WEIGHING MORE THAN 10 LBS OR EQUAL TO 56 LBS.

(A) MINIMUM 12 GA. SPLAY WIRE AT 45 DIAGONAL FROM OPPOSITE FIXTURE CORNERS TO STRUCTURE ABOVE. ATTACH DIRECTLY TO FIXTURE WITH 3 TURN TIGHT WRAP MINIMUM. ATTACH TO STRUCTURE PER ACOUSTICAL CEILING ATTACHMENT DETAILS. SET WIRE SLIGHTLY SLACK, TO ALLOW FULL SEATING INTO T-BAR.

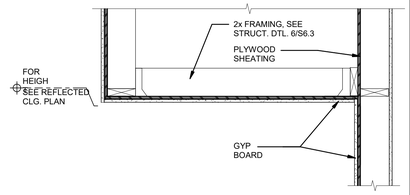
(B) POSITIVELY ATTACH FIXTURE TO T-BAR WITH (1) #8 S.M.S. THROUGH T-BAR INTO FIXTURE AT OPPOSITE CORNERS. SEE DETAIL 2.80/AX6.1

FOR FIXTURES WEIGHING MORE THAN 56 LBS.

(C) 12 GA. SUPPORT WIRES WITH THREE TURN TIGHT WRAP (WITHIN 1 1/2") MINIMUM AT EACH END. ATTACH TO STRUCTURE ABOVE PER CEILING SUSPENSION DETAILS (4 PER FIXTURE).

1 FIXTURE MOUNTING DETAIL(TYP RECESSED TROFFER)

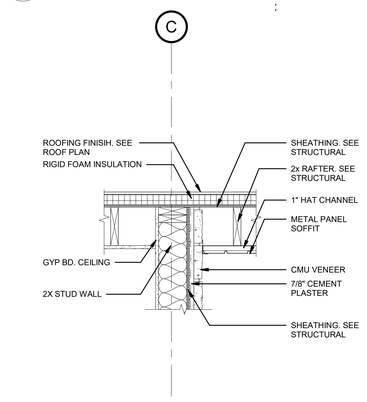
SCALE 1 1/2" = 1'-0"



2 TYPICAL SOFFIT

1/ A3.1

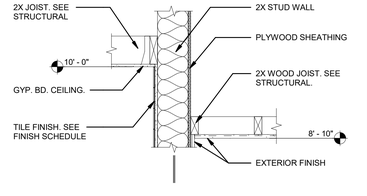
SCALE 1" = 1'-0"



3 FLAT METAL CEILING PANEL

1/ A3.1

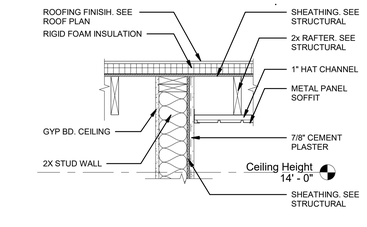
SCALE 1" = 1'-0"



4 CEILING DETAIL

1/ A3.1

SCALE 1" = 1'-0"



5 CEILING AT METAL/EXPOSED CEILING

1/ A3.1

SCALE 1" = 1'-0"

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 01/23/2025

PBK

ARCHITECT PBK Architects, Inc.
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MADERA HIGH SCHOOL FIELDHOUSE

200 SOUTH "I" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

PROFESSIONAL SEAL

LICENSED ARCHITECT
MICHAEL R. SCHOEN
No. C-30525
RENEWAL DATE
FEB 28, 2027
STATE OF CALIFORNIA

PROJECT NUMBER
20-51

DATE
01/22/2025

DSA APPLICATION NO.
02-121624

FILE NO.
20-H3

PTN NO.
65243-153

DRAWN BY
Author

REVISIONS

#	DESCRIPTION	DATE

CONSTRUCTION DOCUMENTS

CEILING DETAILS

AX6.2

BIM 360://Madera USD_20-51_MHS Field House/20-51_MHS FIELDHOUSE_V21.rvt
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SIGNS AND IDENTIFICATION

IDENTIFICATION SIGNS
WHEN SIGNS IDENTIFY PERMANENT ROOMS AND SPACES OF A BUILDING OR SITE, THEY SHALL COMPLY WITH REQUIREMENTS FOR; FINISH AND CONTRAST, PROPORTIONS, RAISED CHARACTERS AND PICTORIAL SYMBOLS, BRAILLE, & MOUNTING LOCATION AND HEIGHT

DIRECTIONAL AND INFORMATIONAL SIGNS
WHEN SIGNS DIRECT TO OR GIVE INFORMATION ABOUT PERMANENT ROOMS AND FUNCTIONAL SPACES OF A BUILDING OR SITE, THEY SHALL COMPLY WITH REQUIREMENTS FOR; FINISH AND CONTRAST, PROPORTIONS, & CHARACTER HEIGHT.

ACCESSIBILITY SIGNS
WHEN SIGNS IDENTIFY, DIRECT TO OR GIVE INFORMATION ABOUT ACCESSIBLE ELEMENTS AND FEATURES OF A BUILDING OR SITE, THEY SHALL INCLUDE THE APPROPRIATE SYMBOL OF ACCESSIBILITY (PROPORTIONS SHALL MATCH CBC FIGURE 11B-703.7.2.1) AND SHALL COMPLY WITH FUNCTIONAL SPACES OF A BUILDING OR SITE, THEY SHALL COMPLY WITH REQUIREMENTS FOR; FINISH AND CONTRAST, & INTERNATIONAL SYMBOL OF ACCESSIBILITY

FINISH AND CONTRAST
CHARACTERS, SYMBOLS AND THEIR BACKGROUND SHALL HAVE A NONGLARE FINISH. CHARACTERS AND SYMBOLS SHALL CONTRAST WITH THEIR BACKGROUND, EITHER LIGHT ON A DARK BACKGROUND OR DARK ON A LIGHT BACKGROUND.

PROPORTIONS
VISUAL CHARACTERS ON SIGNS SHALL BE SELECTED FROM FONTS WHERE THE WIDTH OF THE UPPERCASE "O" IS 60 PERCENT MINIMUM AND 110 PERCENT MAXIMUM ON THE HEIGHT OF THE UPPERCASE "I". STROKE THICKNESS OF THE UPPERCASE "I" SHALL BE 10 PERCENT MINIMUM AND 20 PERCENT MAXIMUM OF THE HEIGHT OF THE CHARACTER.

CHARACTER HEIGHT
CHARACTERS ON DIRECTIONAL, INFORMATIONAL SIGNS, AND ACCESSIBILITY SIGNS SHALL BE SIZED ACCORDING TO THE TABLE BELOW. THE MINIMUM HEIGHT IS MEASURED USING AN UPPERCASE "I". LOWERCASE CHARACTERS ARE PERMITTED. VIEWING DISTANCE SHALL BE MEASURED AS THE HORIZONTAL DISTANCE BETWEEN THE CHARACTER AND AN OBSTRUCTION PREVENTING FURTHER APPROACH TOWARDS THE SIGN.

VISUAL CHARACTER HEIGHT

HEIGHT TO FINISH FLOOR OR GROUND FROM BASELINE OF CHARACTER	***HORIZONTAL VIEWING DISTANCE***	***MINIMUM CHARACTER HEIGHT***
40 INCHES TO LESS THAN OR EQUAL TO 70 INCHES	LESS THAN 72 INCHES	5/8 INCH
	72 INCHES AND GREATER	5/8 INCH, PLUS 1/8 INCH PER FOOT OF VIEWING DISTANCE ABOVE 72 INCHES
GREATER THAN 70 INCHES TO LESS THAN OR EQUAL TO 120 INCHES	LESS THAN 180 INCHES	2 INCHES
	180 INCHES AND GREATER	2 INCHES, PLUS 1/8 INCH PER FOOT OF VIEWING DISTANCE ABOVE 180 INCHES
GREATER THAN 120 INCHES	LESS THAN 21 FEET	3 INCHES
	21 FEET AND GREATER	3 INCHES, PLUS 1/8 INCH PER FOOT OF VIEWING DISTANCE ABOVE 21 FEET

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

A. CHARACTER TYPE:
CHARACTERS ON SIGNS SHALL BE RAISED 1/32 INCH MINIMUM AND SHALL BE SANS SERIF UPPERCASE CHARACTERS ACCOMPANIED BY CONTRACTED (GRADE 2) BRAILLE

B. CHARACTER SIZE:
RAISED CHARACTERS SHALL BE A MINIMUM OF 5/8 INCH AND A MAXIMUM OF 2 INCHES HIGH BASED UPON THE UPPERCASE "I". STROKE THICKNESS OF THE UPPERCASE "I" SHALL BE 15% MAXIMUM OF THE HEIGHT OF THE CHARACTER. SPACING SHALL BE MEASURED BETWEEN THE CLOSEST POINTS

C. CHARACTER SPACING:
CHARACTER SPACING SHALL BE MEASURED BETWEEN THE TWO CLOSET POINTS OF ADJACENT RAISED CHARACTERS WITHIN A MESSAGE, EXCLUDING WORD SPACES. WHERE CHARACTERS HAVE RECTANGULAR CROSS SECTIONS, SPACING BETWEEN INDIVIDUAL RAISED CHARACTERS SHALL BE 1/8 INCH MINIMUM AND 4 TIMES THE RAISED CHARACTER STROKE WIDTH MAXIMUM. WHERE CHARACTERS HAVE OTHER CROSS SECTIONS, SPACING BETWEEN INDIVIDUAL RAISED CHARACTERS SHALL BE 1/16 INCH MINIMUM AND 4 TIMES THE RAISED CHARACTER STROKE WIDTH MAXIMUM AT THE BASE OF THE CROSS SECTIONS, AND 1/8 INCH MINIMUM AND 4 TIMES THE RAISED CHARACTER STROKE WIDTH MAXIMUM AT THE TOP OF THE CROSS SECTIONS. CHARACTERS SHALL BE SEPARATED FROM RAISED BORDERS AND DECORATIVE ELEMETNS 3/8 INCH MINIMUM.

D. LINE SPACING:
SPACING BETWEEN THE BASELINES OF SEPARATE LINES OF RAISED CHARACTERS WITHIN A MESSAGE SHALL BE 135 PERCENT MINIMUM AND 170 PERCENT MAXIMUM OF THE RAISED CHARACTER HEIGHT.

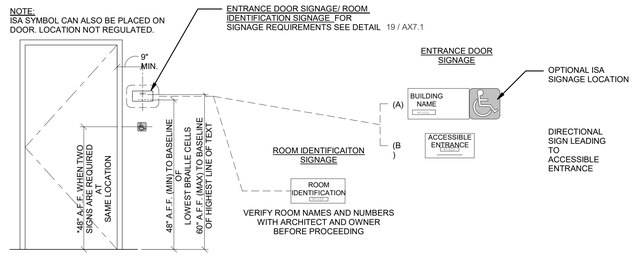
E. PICTORIAL SYMBOL SIGNS (PICTOGRAMS):
PICTORIAL SYMBOL SIGNS (PICTOGRAMS) SHALL BE ACCOMPANIED BY THE VERBAL DESCRIPTION PLACED DIRECTLY BELOW THE PICTOGRAM. THE OUTSIDE DIMENSION OF THE PICTOGRAM FIELD SHALL BE A MINIMUM OF 6 INCHES IN HEIGHT.

F. CHARACTER PLACEMENT:
CHARACTERS AND BRAILLE SHALL BE IN A HORIZONTAL FORMAT. BRAILLE SHALL BE PLACED A MINIMUM OF 3/8 INCH AND A MAXIMUM OF 1/2 INCH DIRECTLY BELOW THE TACTILE CHARACTERS; FLUSH LEFT OR CENTERED. WHEN TACTILE TEXT IS MULTILINED, ALL BRAILLE SHALL BE PLACED TOGETHER BELOW ALL LINES OF TACTILE TEXT.

BRAILLE
CONTRACTED (GRADE 2) BRAILLE DOTS SHALL BE DOMED OR ROUNDED AND 0.059 TO 0.063 INCH DIA. BRAILLE DOTS SHALL BE 0.10 INCH ON CENTER IN EACH CELL AND 0.30 INCH BETWEEN CORRESPONDING DOTS IN ADJACENT CELLS. DOTS SHALL BE RAISED 0.025 TO 0.037 INCH ABOVE THE BACKGROUND. CORRSPONDING DOTS FROM ONE CELL DIRECTLY BELOW SHALL BE 0.395 TO 0.4000 INCHES.

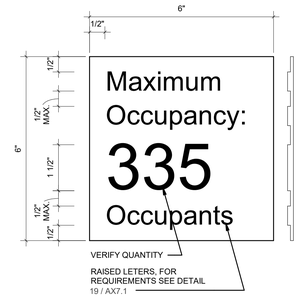
MOUNTING LOCATION AND HEIGHT
WHERE PERMANENT IDENTIFICATION SIGNS ARE PROVIDED FOR ROOMS AND SPACES, SIGNS SHALL BE INSTALLED ON THE WALL ADJACENT TO THE LATCH SIDE OF THE DOOR. WHERE THERE IS NO WALL SPACE ON THE LATCH SIDE, INCLUDING AT DOUBLE LEAF DOORS, SIGNS SHALL BE PLACED ON THE NEAREST ADJACENT WALL, PREFERABLY ON THE RIGHT.

WHERE PERMANENT IDENTIFICATION SIGNAGE IS PROVIDED FOR ROOMS AND SPACES THEY SHALL BE LOCATED ON THE APPROACH SIDE OF THE DOOR AS ONE ENTERS THE ROOM OR SPACE. SIGNS THAT IDENTIFY EXITS SHALL BE LOCATED ON THE APPROACH SIDE OF THE DOOR AS ONE EXITS THE ROOM OR SPACE.



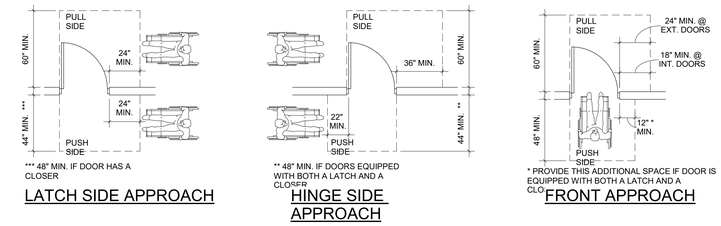
11 ENTRANCE DOOR SIGNAGE/ ROOM IDENTIFICATION SIGNAGE1

SCALE 1/2" = 1'-0"



1 ROOM CAPACITY SIGN

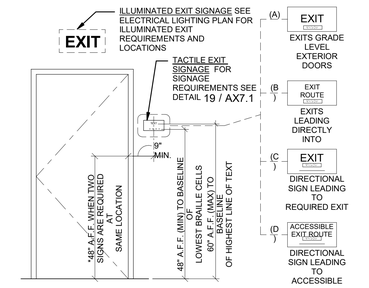
SCALE 6" = 1'-0"



NOTE:
THE FLOOR OR GROUND AREA WITHIN THE REQUIRED CLEARANCES SHALL BE LEVEL AND CLEAR. LEVEL AREA IS A SPECIFIED SURFACE THAT DOES NOT HAVE A SLOPE IN ANY DIRECTION EXCEEDING 2% SLOPE.

12 DOOR/GATE MANEUVERING CLEARANCES

SCALE 1/4" = 1'-0"



2 EXIT DOOR SIGNAGE1

SCALE 1/2" = 1'-0"

NOTE:
FILL IN APPLICABLE TEXT AS PERMANENT PART OF SIGNAGE AS APPLICABLE VERIFY LOCATION WITH ADMINISTRATION BEFORE FABRICATION.

3 ASSISTIVE LISTENING SIGN1

SCALE 3" = 1'-0"

FIRE SPRINKLER RISER LOCATION

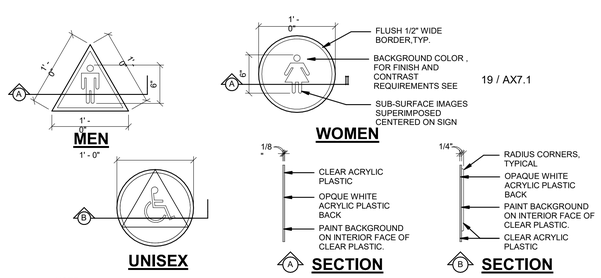
SIGNS & IDENTIFICATION SEE DETAIL 19 / AX7.1 FOR FINISH AND CONTRAST, PROPORTIONS AND CHARECTER HEIGHT REQUIRMENTS

4 FIRE RISER SIGNAGE

SCALE 1 1/2" = 1'-0"

19 SIGNS AND IDENTIFICATION1

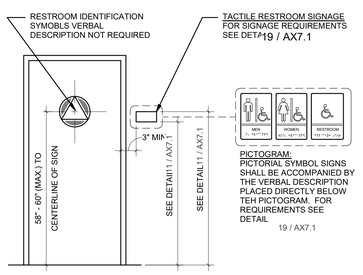
SCALE 3" = 1'-0"

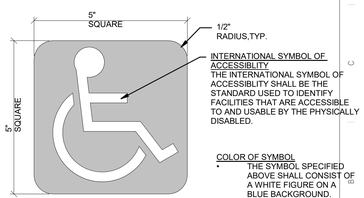


NOTE:
ATTACH EACH SIGN USING (3) FLATHEAD WOOD SCREWS. COUNTERSINK IN ADHESIVE.

20 TACTILE RESTROOM DOOR SIGNAGE AND IDENTIFICATION SYMBOLS

SCALE 1/2" = 1'-0"





5 INTERNATIONAL SYMBOL OF ACCESSIBILITY1

SCALE 3" = 1'-0"

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
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PBK

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MADERA HIGH SCHOOL FIELDHOUSE

200 SOUTH "I" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

MADERA UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT
MICHAEL R. SCHOEN
No. C-35625
RENEWAL DATE
FEB 28, 2027
STATE OF CALIFORNIA

PROJECT NUMBER
20-51

DATE
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DSA APPLICATION NO.
02-121624

FILE NO.
20-H3

PTN NO.
65243-153

DRAWN BY
Author

REVISIONS

#	DESCRIPTION	DATE

CONSTRUCTION DOCUMENTS

ACCESSIBILITY DETAILS

AX7.1

BIM 360://Madera USD_20-51_MHS Field House/20-51_MHS FIELDHOUSE_V21.rvt
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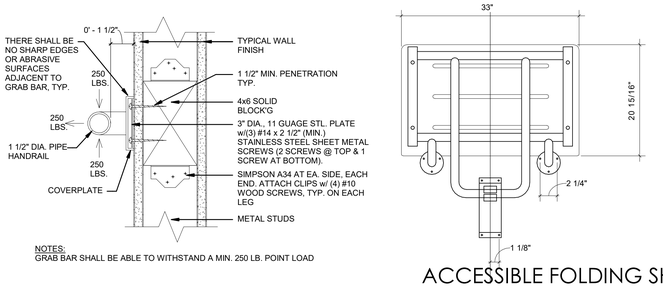


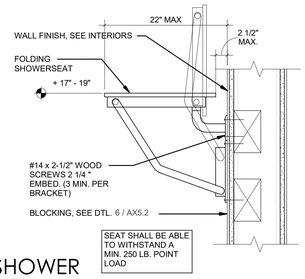
NOTES:
GRAB BAR SHALL BE ABLE TO WITHSTAND A MIN. 250 LB. POINT LOAD

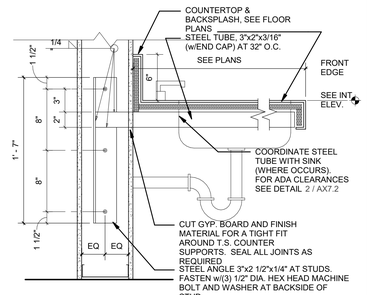
16 GRAB BAR ANCHORAGE

SCALE 3" = 1'-0"

11 ACCESSIBLE FOLDING SHOWER SEAT ANCHORAGE

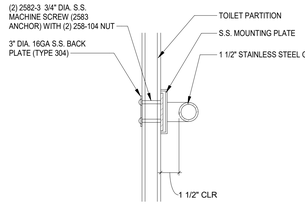
SCALE 1 1/2" = 1'-0"





1 COUNTER SUPPORTS

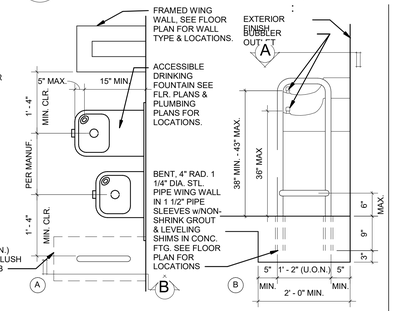
SCALE 1 1/2" = 1'-0"



NOTE:
1. INSTALLATION PER MANUFACTURER RECOMMENDATIONS.
2. BAR MOUNTING & FASTENERS SHALL WITHSTAND A LOAD OF 250#/FT. IN BENDING, SHEAR & TENSION

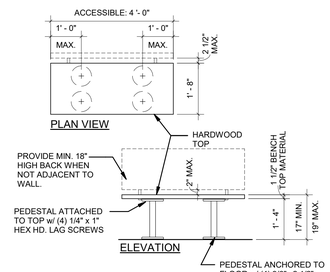
17 GRAB BAR MOUNT AT PARTITION

SCALE 3" = 1'-0"



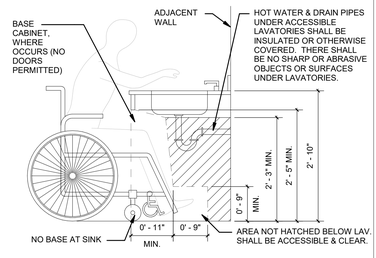
12 DRINKING FOUNTAIN GUARD

SCALE 3/4" = 1'-0"



7 ACCESSIBLE BENCH

SCALE 1/2" = 1'-0"



NOTE: FOR COUNTER SUPPORTS AT ACCESSIBLE SINKS WITH BASE CABINETS (NO BASE AND NO DOORS) SEE DETAIL AX7.2L

2 ACCESSIBLE SINK CLEARANCES

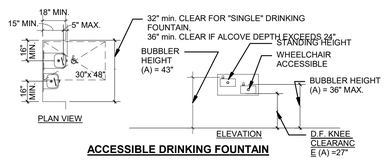
AT FIXTURES & CABINETS

SCALE 3/4" = 1'-0"

SUGGESTED MOUNTING HEIGHTS (CBC TABLE 11B-604.9)	
THE DIVISION OF THE STATE ARCHITECT, OFFICE OF REGULATION SERVICES RECOMMENDS THE FOLLOWING DIMENSIONS AS ADEQUATELY SERVING THE NEEDS OF CHILDREN IN PROJECTS UNDER OUR JURISDICTION THESE "RECOMMENDATIONS ARE BASED ON THE FEDERAL RECOMMENDATIONS FOR ACCESSIBILITY FOR CHILDREN IN ELEMENTARY SCHOOL" AND OTHER RECOGNIZED PUBLICATIONS ON ACCESS FOR CHILDREN: (A) = ADULT (12 YRS AND OVER) * DEVIATES FROM CODE REQUIREMENTS AND REQUIRES A WRITTEN FINDING OF UNREASONABLE HARDSHIP.	
DIMENSION	DIMENSIONS (INCHES) (A)
TOILET CENTERING FROM WALL	17-1
TOILET SEAT HEIGHT	17-1
GRAB BAR HEIGHT	33-36
TOILET PAPER IN FRONT OF TOILET	7-9 C.L.
NAPKIN DISPOSAL IN FRONT OF TOILET	12 MAX.
PAPER TOWEL DISPENSER / MIRROR HEIGHT	40 MAX.
LAVATORY / SINK TOP	34 MAX.
LAVATORY / SINK KNEE CLEARANCE	29 MAX.
DRINKING FOUNTAIN FLUSH HANDLE HEIGHT	17 MAX.
DRINKING FOUNTAIN BUBBLER HEIGHT	36 MAX.
DRINKING FOUNTAIN KNEE CLEARANCE	27 MIN.
RAMP'S TOP HANDRAIL HEIGHT	34-38

DRINKING FOUNTAIN NOTE:

1. THE BUBBLER SHALL BE ACTIVATED BY A MANUALLY OPERATED SYSTEM THAT IS FRONT MOUNTED OR SIDE MOUNTED AND LOCATED WITHIN 6 INCHES OF THE FRONT EDGE OF THE FOUNTAIN OR AN ELECTRONICALLY CONTROLLED DEVICE.
2. THE SPOUT SHALL BE 36 INCHES MAXIMUM ABOVE THE FINISH FLOOR OR GROUND. THE SPOUT SHALL BE LOCATED 15 INCHES MINIMUM FROM THE VERTICAL SUPPORT AND 5 INCHES MAXIMUM FROM THE FRONT EDGE OF THE UNIT, INCLUDING BUMPERS.
3. THE SPOUT SHALL PROVIDE A FLOW OF WATER AT LEAST 4 INCHES HIGH MINIMUM AND SHALL BE LOCATED 5 INCHES MAXIMUM FROM THE FRONT OF THE UNIT. THE ANGLE OF THE WATER STREAM SHALL BE 30 DEGREES MAXIMUM. WHERE SPOUTS ARE LOCATED BETWEEN 3 INCHES AND 5 INCHES MAXIMUM FROM THE FRONT OF THE UNIT, THE ANGLE OF THE WATER STREAM SHALL BE 15 DEGREES MAXIMUM. ON AN ACCESSIBLE DRINKING FOUNTAIN WITH A ROUND OR OVAL BOWL, THE SPOUT MUST BE POSITIONED SO THE FLOW OF WATER IS WITHIN 3 INCHES OF THE FRONT EDGE OF THE FOUNTAIN.



ACCESSIBLE DRINKING FOUNTAIN

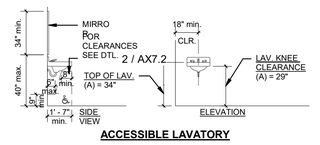
WATER CLOSET NOTE:

1. ALL WATER CLOSETS FOR PUBLIC USE SHALL HAVE ELONGATED BOWLS WITH OPEN FRONT SEATS.
2. GRAB BARS AS REQUIRED BY TYPICAL ACCESSIBLITY STANDARDS SEE GRAB BAR ANCHORAGE, DETAIL FOR ATTACHMENT REQUIREMENTS.

ACCESSIBLE WATER CLOSET

LAVATORY NOTE:

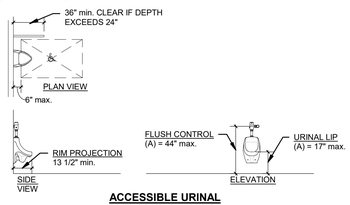
1. INSULATE HOT WATER & DRAIN PIPES UNDER ACCESSIBLE LAVATORIES.
2. THERE SHALL BE NO SHARP OR ABRASIVE OBJECTS OR SURFACES UNDER LAVATORIES.
3. FAUCET CONTROLS AND OPERATING MECHANISMS ARE REQUIRED TO BE OPERABLE WITH ONE HAND AND CANNOT REQUIRE GRASPING, PINCHING, OR TWISTING OF WRIST. THE FORCE REQUIRED TO ACTIVATE CONTROLS IS NOT TO EXCEED 5 lbs. LEVER-OPERATED, PUSH-TYPE AND ELECTRONICALLY CONTROLLED MECHANISMS ARE EXAMPLES OF ACCEPTABLE DESIGN.
4. SELF-CLOSING VALVES ARE ALLOWED IF THE FAUCET REMAINS OPEN FOR AT LEAST 10 SECONDS.



ACCESSIBLE LAVATORY

URINAL NOTE:

1. THE FORCE REQUIRED TO ACTIVATE THE CONTROLS MUST BE NO GREATER THAN 5 lbf.



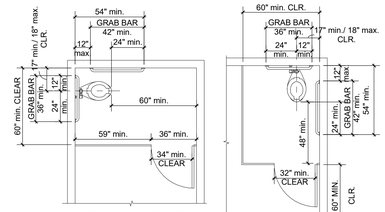
ACCESSIBLE URINAL

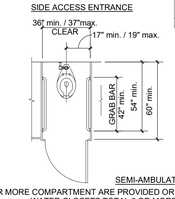
SINGLE ACCOMMODATION TOILET NOTES:

1. MUST HAVE AN OUTWARD SWINGING, SELF-CLOSING DOOR.
2. IF THE DOOR HAS A CLOSER, THEN THE CLOSER SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 90 DEGREES, THE TIME REQUIRED TO MOVE THE DOOR TO A POSITION OF 12 DEGREES FROM THE LATCH IS 5 SECONDS MIN.

SINGLE ACCOMMODATION TOILET

(DIMENSIONS INDICATE MINIMUM/MAXIMUM STANDARDS AND CLEARANCES AND NOT ACTUAL DIMENSIONS)





SEMI-AMBULATORY

(WHERE 6 OR MORE COMPARTMENT ARE PROVIDED OR WHERE THE COMBINATION OF URINALS AND WATER CLOSETS TOTAL 6 OR MORE FIXTURES (11B-213.3.1))

MULTIPLE ACCOMMODATION TOILET NOTES:

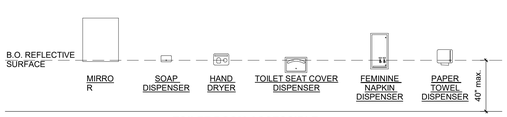
1. EQUIP THE DOOR INTO THE STALL WITH AUTO CLOSING DEVICE AND PROVIDE A CLEAR OPENING WIDTH OF 34" AT END OF STALL.
2. FLUSH VAVLE FOR WATER CLOSET SHALL BE LOCATED ON THE SIDE ACCESSIBLE TO THE WHEELCHAIR
3. COMPARTMENT DOORS SHALL HAVE A SELF-CLOSING DEVICE WITH U-SHAPED HANDLE.
4. THE INSIDE AND OUTSIDE OF THE COMPARTMENT DOOR SHALL BE EQUIPPED WITH A LOOP OR U-SHAPED HANDLE IMMEDIATELY BELOW THE LATCH. THE LATCH SHALL BE FLIP-OVER STYLE, SLIDING, OR OTHER HARDWARE NOT REQUIRING THE USER TO GRASP OR TWIST.

MULTIPLE ACCOMMODATION TOILET

(DIMENSIONS INDICATE MINIMUM/MAXIMUM STANDARDS AND CLEARANCES AND NOT ACTUAL DIMENSIONS)

TOILET ROOM ACCESSORIES NOTES:

1. WHERE TOWEL, SANITARY NAPKIN AND WASTE RECEPTACLES AND SIMILAR DISPENSING AND DISPOSAL FIXTURES ARE PROVIDED, AT LEAST ONE OF EACH TYPE IS TO BE LOCATED WITH ALL OPERABLE PARTS, INCLUDING COIN SLOTS, WITHIN 40" FROM THE FLOOR.
2. MOUNT MIRRORS WITH BOTTOM EDGE NO MORE THAN 40" FROM FLOOR.
3. TOILET TISSUE DISPENSERS THAT CONTROL DELIVERY OR THAT DO NOT PERMIT CONTINUOUS PAPER FLOW SHALL NOT BE USED.
4. REFER TO DETAIL FOR WALL FINISH CONDITION @ RESTROOM ACCESSORIES.



TOILET ROOM ACCESSIBLE

(MAX. 4" PROJECTION, TYP. - SEE DETAIL)

20 TYPICAL ACCESSIBLITY STANDARDS

SCALE 1/4" = 1'-0"

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 01/23/2025

PBK

ARCHITECT PBK Architects, Inc.
FRESNO
7790 North Palm Avenue
Fresno, CA 93711
559-448-8400 P
559-448-8467 F
PBK.com

MADERA HIGH SCHOOL FIELDHOUSE

200 SOUTH "I" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

MADERA UNIFIED SCHOOL DISTRICT 1966

PROFESSIONAL SEAL

LICENSED ARCHITECT
MICHAEL R. SCHOEN
No. C-28585
RENEWAL DATE
01/31/26
STATE OF CALIFORNIA

PROJECT NUMBER	20-51
DATE	01/22/2025
DSA APPLICATION NO.	02-121624
FILE NO.	20-H3
PTN NO.	65243-153
DRAWN BY	Author

REVISIONS

#	DESCRIPTION	DATE

CONSTRUCTION DOCUMENTS

ACCESSIBILITY DETAILS

AX7.2

BIM 360://Madera USD_20-51_MHS Field House/20-51_MHS FIELDHOUSE_V21.rvt
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GENERAL
ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE 2022 CALIFORNIA BUILDING CODE (CBC).

CONCRETE
ALL CONCRETE SHALL BE PROPORTIONED TO PROVIDE THE PROPERTIES LISTED BELOW:

	MAXIMUM WATER/CEMENT RATIO	
SPECIFIED CONCRETE STRENGTH	NON-AIR ENTRAINED	AIR ENTRAINED
5000 PSI CONCRETE AT 28 DAYS	0.48	0.40
4000 PSI CONCRETE AT 28 DAYS		
- AT SLABS-ON-GRADE	0.50	0.45
- ELSEWHERE	0.55	0.48
3500 PSI CONCRETE AT 28 DAYS	0.55	0.52
3000 PSI CONCRETE AT 28 DAYS	0.58	0.55
2500 PSI CONCRETE AT 28 DAYS	0.63	0.59
2000 PSI CONCRETE AT 28 DAYS	0.67	0.62

APPROXIMATELY 3 TO 5 OUNCES PER SACK OF CEMENT OF GCP WRDA 64 OR APPROVED EQUAL MEETING REQUIREMENTS OF ASTM C494 SHALL BE USED AS A WATER DISPERSING ADDITIVE. AT CONTRACTOR'S OPTION, AN AIR ENTRAINING AGENT CONFORMING TO THE LATEST REVISION OF ASTM SPECIFICATION C260 MAY BE ADDED TO THE CONCRETE TO PROVIDE SPECIFIED AMOUNTS OF ENTRAINED AIR. CEMENT SHALL CONFORM TO THE REQUIREMENTS FOR PORTLAND CEMENT OF ASTM C150 TYPE II.

CONCRETE ELEMENTS	EXPOSURE CATEGORIES (PER ACI 318 TABLE 19.3.1): F	S	W	C	COMPRESSIVE STRENGTH (F'c)	AGGREGATE SIZE (MAX)	SLUMP (MAX)	AIR CONTENT
FOOTINGS	F0	S0	W1	C0	3000 PSI	1 INCH	3 INCHES	1.5% ± 0.5%
SLABS-ON-GRADE	F0	S0	W0	C0	4000 PSI	1 INCH	4 INCHES	1.5% ± 0.5%
WALLS, BEAMS, COL'S	F1	S0	W1	C0	3500 PSI	1 INCH	4 INCHES	1.5% ± 0.5%
WALKS, CURBS (NON-STRUCTURAL)	F1	S0	W1	C0	3000 PSI	1 INCH	4 INCHES	4.0% ± 1.5%

ADHERED VENEER
BACKING IS TO BE IN COMPLIANCE WITH TMS 402-16 SECTION 12.3.2.3.
ADHESION BETWEEN VENEER UNITS & BACKING SHALL HAVE A SHEAR STRENGTH OF 50 PSI BASED ON GROSS UNIT SURFACE AREA WHEN TESTED IN ACCORDANCE WITH ASTM C482, AND SHALL BE ADHERED IN COMPLIANCE WITH ARTICLE 3.3C OF TMS 602.

NON-SHRINK GROUT
NON-SHRINK GROUT SHALL BE MASTERFLOW 928 GROUT AS MANUFACTURED BY MASTER BUILDERS OR AN APPROVED EQUAL THAT MEETS THE REQUIREMENTS OF ASTM C 1107. IT SHALL BE FLOWABLE, WITH A MINIMUM 7-DAY COMPRESSIVE STRENGTH OF 5000 PSI.

STRUCTURAL MASONRY
STRUCTURAL CONCRETE MASONRY UNITS (CMU) SHALL BE OPEN ENDED MEDIUM-WEIGHT UNITS CONFORMING TO ASTM C90 AND CBC CHAPTER 21A, AND SHALL PROVIDE A MINIMUM COMPRESSIVE STRENGTH (F'm) OF 2000 PSI. CONSTRUCTION TYPE SHALL BE RUNNING BOND, WITH ALL CELLS GROUTED SOLID, (LOW LIFT GROUTED CONSTRUCTION (LIFTS < 4'-0") IS PERMISSIBLE PER CBC 2104A.1.3.5 AND LIFT GROUTED CONSTRUCTION (LIFTS ≥ 4'-0" AND LIFTS < 12'-0") IS PERMISSIBLE PER DSA IR 21-2.13). THE STANDARD WIDTH OF BOTH HORIZONTAL AND VERTICAL MORTAR JOINTS SHALL BE 3/8-INCH.

ALL PLACEMENT AND DETAILING OF REINFORCING STEEL SHALL SATISFY THE REQUIREMENTS OF CBC SECTION 2104A.1.3.3. ALL VERTICAL REINFORCING STEEL IN WALLS AND COLUMNS SHALL BE LAPPED WITH STANDARD HOOKED DOWELS OF THE SAME SIZE AND SPACING INTO THE FOOTING, UNLESS NOTED OTHERWISE ON THE DRAWINGS. ALL BOLTS EMBEDDED IN THE CMU SHALL BE PLACED A MINIMUM OF 1/2 INCH CLEAR FROM THE INTERIOR UNIT FACE, AND SHALL HAVE A 9-INCH MINIMUM EMBEDMENT.

MORTAR
MORTAR SHALL CONFORM TO ASTM C270 TYPE M OR S AND CBC SECTIONS 2103A.2.1

GROUT
GROUT SHALL BE COARSE GROUT CONFORMING TO ASTM C476 AND CBC SECTION 2103A.3, AND SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH (F'c) OF 2000 PSI AT 28 DAYS. THE ALLOWABLE SLUMP RANGE SHALL BE FROM 8 INCHES TO 11 INCHES

REINFORCING STEEL
BARS FOR REINFORCING STEEL SHALL BE GRADE 60 DEFORMED BARS CONFORMING TO ASTM A615, INCLUDING SUPPLEMENT S1, CBC CHAPTER 19A, AND ACI 318 CHAPTERS 20 + 25, OR ASTM A706 AT WELDED REINFORCEMENT CONDITIONS. LAP SPLICE AND DEVELOPMENT LENGTHS SHALL BE IN ACCORDANCE WITH ACI 318, AS DOCUMENTED BY THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI)

WELDED WIRE FABRIC
WELDED WIRE FABRIC SHALL COMPLY WITH ASTM A1064. WWF SHALL BE PROVIDED IN SHEETS, NOT ROLLS, TYPICAL.

SLAB MEMBRANE
SLAB MEMBRANE SHALL COMPLY WITH ASTM E1745 (CLASS A), WITH A MAXIMUM WATER VAPOR TRANSMISSION RATE OF 0.012 PERMS AS TESTED BY ASTM E96, WITH ALL SEAMS LAPPED AND SEALED WITH A TAPE MEETING THE MVT OF ASTM E1745.

EPOXY ANCHORING SYSTEM IN MASONRY:
EPOXY ANCHORING SYSTEM SHALL BE SIMPSON SET-XP EPOXY ADHESIVE, (ICC-ES ESR-0265). THE PROPORTIONS OF HARDENER TO RESIN SHALL BE AS PER THE EVALUATION REPORT. DRILLING AND PREPARATION OF THE MASONRY, AS WELL AS INSTALLATION OF THE EPOXY AND ANCHORS SHALL ALSO BE AS PER THE EVALUATION REPORT.

EPOXY ANCHORING SYSTEM IN CONCRETE
EPOXY ANCHORING SYSTEM SHALL BE SIMPSON SET-3G EPOXY ADHESIVE, (ICC-ES ESR-4057) FOR BOTH CRACKED + UNCRACKED CONCRETE. THE PROPORTIONS OF HARDENER TO RESIN SHALL BE AS PER THE EVALUATION REPORT. DRILLING AND PREPARATION OF THE CONCRETE AS WELL AS INSTALLATION OF THE EPOXY AND ANCHORS SHALL ALSO BE PER THE EVALUATION REPORT.

EXPANSION ANCHORS
EXPANSION ANCHORS IN CONCRETE SHALL BE SIMPSON STRONG-BOLT 2 AND IN MASONRY SHALL BE HILTI KWIK BOLT TZ2 AND SHALL BE INSTALLED PER THE MANUFACTURER'S REQUIREMENTS AND ICC-ES ESR-3037 AND ESR-4561 RESPECTIVELY.

MECHANICAL SCREW ANCHORS
MECHANICAL SCREW ANCHORS SHALL BE SIMPSON TITEN HD ANCHORS AND SHALL BE INSTALLED PER THE MANUFACTURER'S REQUIREMENTS AND ICC-ES ESR-2713 FOR CONCRETE AND ESR-1056 FOR CMU.

MACHINE BOLTS, ANCHOR BOLTS, AND THREADED RODS
MACHINE BOLTS AND THREADED RODS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307 GRADE A OR B, OR ASTM A36.
ANCHOR BOLTS SHALL CONFORM TO THE ASTM F1554 GRADE 36, UNO.
THE NUTS SHALL BE AS SHOWN BELOW AND SHALL HAVE FINISH TO MATCH FASTENER:

FASTENER GRADE AND SIZE	NUT CLASS	NUT STYLE
ASTM A307-14 OR A36 - 1/2" TO 1 1/2"	ASTM A563-A	HEX
ASTM A307-B - 1/4" TO 4"	ASTM A563-A	HEAVY HEX
ASTM F1554 GRADE 36 - 1/4" TO 1 1/2"	ASTM A563-A	HEAVY HEX
ASTM F1554 GRADE 36 - 1 1/2" TO 4"	ASTM A563-A	HEAVY HEX

HIGH STRENGTH BOLTS, NUTS, WASHERS, AND RODS
HIGH STRENGTH BOLTS SHALL BE HEAVY HEX STRUCTURAL BOLTS PER THE CURRENT EDITION OF AISC "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH STRENGTH BOLTS" AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM F3125 (GR A325). THREADS MAY BE INCLUDED IN THE SHEAR PLANE (TYPE N) BOLTS SHALL BE TYPE 1 OR 3 AND SHALL BE USED IN A "PRETENSIONED" TYPE CONNECTION. RODS SHALL CONFORM TO ASTM F1554 (GR 36). WASHERS SHALL BE FLAT, SHALL CONFORM TO ASTM F436 TYPE 1, SHALL HAVE A FINISH TO MATCH FASTENER, AND BE INSTALLED UNDER THE FASTENER ELEMENT BEING TURNED. THE NUTS SHALL BE AS SHOWN BELOW AND SHALL HAVE A FINISH TO MATCH FASTENER.

FASTENER GRADE AND SIZE	NUT CLASS	NUT STYLE
ASTM F3125 (GR A325), TYPE 1 UNCOATED	ASTM A563-C	HEAVY HEX
ASTM F3125 (GR A325), TYPE 1 ZINC COATED	ASTM A563-CH	HEAVY HEX
ASTM F3125 (GR A325), TYPE 3, UNCOATED	ASTM A563-C3	HEAVY HEX
ASTM F1554 GRADE 36	ASTM A563-A	HEAVY HEX

STRUCTURAL STEEL AND MISCELLANEOUS IRON
STRUCTURAL STEEL AND MISCELLANEOUS IRON SHALL CONFORM TO CBC SECTION 2205A.1 AND TO THE REQUIREMENTS OF ASTM A36, EXCEPT THAT ALL WIDE FLANGE SECTIONS SHALL BE ASTM A992. ALL STRUCTURAL STEEL AND MISCELLANEOUS IRON SHALL RECEIVE A SHOP PRIME COAT, EXCEPT ON SURFACES TO RECEIVE WELDS AND AT SLIP-CRITICAL TYPE HIGH STRENGTH BOLTED CONNECTIONS, WHICH SHALL BE TOUCHED UP AFTER CONNECTION IS COMPLETE. STRUCTURAL STEEL AND MISCELLANEOUS IRON THAT IS TO HAVE SPRAY-ON FIREPROOFING SHALL NOT BE PAINTED. ALL EXPOSED STRUCTURAL STEEL SHALL BE PER AISC 4ESS (CATEGORY 2, MIN) SPECIFICATIONS, SECTION 10 OF CODE OF STANDARD PRACTICE. ALL MOMENT FRAMES AND BRACED FRAMES SHALL BE PER AISC SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS.

STRUCTURAL TUBING
STRUCTURAL RECT HSS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE C (F_y = 50 KSI, MIN).
STRUCTURAL ROUND HSS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE C (F_y = 46 KSI, MIN)

STRUCTURAL PIPE
STRUCTURAL PIPE SHALL CONFORM TO THE REQUIREMENTS OF ASTM A53 TYPES E OR S, GRADE B (F_y = 35 KSI, MIN)

AUTOMATIC END-WELDED STUDS
AUTOMATIC END-WELDED STUDS SHALL BE NELSON (ICC-ES ESR-2856) GRANULAR FLUX-FILLED SHEAR CONNECTOR OR ANCHOR STUDS, OR APPROVED EQUAL. STUDS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A108. THE STUDS SHALL BE AUTOMATICALLY END-WELDED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. WELDING SHALL BE DONE BY QUALIFIED WELDERS, AS APPROVED BY THE WELDING INSPECTOR.

WELDING
ALL WELDING SHALL BE PERFORMED BY WELDERS CERTIFIED TO PERFORM THE TYPE OF WORK REQUIRED AS DEFINED BY THE AWS "STANDARD QUALIFICATION PROCEDURE". ALL WELDING SHALL BE IN ACCORDANCE WITH THE AWS WELDING CODE D1.1. ARC WELDING ELECTRODES SHALL BE E70 SERIES. ALL ELECTRODES SHALL BE LOW HYDROGEN WITH A MINIMUM CVN VALUE OF 20 FT-LBS AT MINUS 20°F. THE ONLY EXCEPTIONS SHALL BE AS FOLLOWS: WELDING FOR METAL DECK, STAIR AND HANDRAIL AND LIGHT GAUGE STEEL. WELD METAL TOUGHNESS SHALL BE REPORTED ON THE ELECTRODE MANUFACTURER'S CERTIFICATE OF COMPLIANCE. THE FILLER METAL MANUFACTURER'S PUBLISHED RECOMMENDATIONS SHALL BE THE BASIS FOR DETERMINING THE ALLOWABLE RANGE OF ESSENTIAL VARIABLES FOR THE PREQUALIFIED WELDING PROCEDURE SPECIFICATION (WPS). TACK WELDS, AIR-ARC GOUGING, AND FLAME CUTTING SHALL NOT BE PERFORMED WITHOUT ADEQUATE PREHEATING OR INCORPORATION INTO THE FINAL WELD. ALL WELDING AT MOMENT-FRAME AND BRACED-FRAME CONNECTIONS SHALL BE PERFORMED PER THE ADDITIONAL REQUIREMENTS OF AWS D1.8 SEISMIC SUPPLEMENT IN COMPLIANCE WITH AISC SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS.

POWER ACTUATED FASTENERS
POWER ACTUATED FASTENERS SHALL BE HILTI FASTENERS, OR APPROVED EQUAL. FOR WOOD SILL PLATE TO CONCRETE APPLICATIONS, FASTENERS SHALL BE "X-DC 72" TYPE IN CONFORMANCE WITH ICC-ES ESR-2375. FOR ALL OTHER APPLICATIONS, FASTENERS SHALL BE "X-U P8636" TYPE IN CONFORMANCE WITH ICC-ES ESR-2269.

SHEET METAL SCREWS
SHEET METAL SCREWS SHALL BE BUILDEX TEKS IN CONFORMANCE WITH ICC-ES ESR-1976, OR APPROVED EQUAL, AND SHALL BE WAFER HEAD SELF-DRILLING TYPE AT FRAMING AND FLAT HEAD SELF-DRILLING TYPE AT SHEATHING, UNLESS NOTED OTHERWISE ON THE DRAWINGS.

LIGHT GAUGE METAL CONNECTORS
ALL LIGHT GAUGE METAL CONNECTORS SHALL BE SIMPSON COMPANY STRONG-TIE CONNECTORS, UNLESS NOTED OTHERWISE ON THE DRAWINGS, AND SHALL BE MANUFACTURED AND INSTALLED IN ACCORDANCE WITH A CURRENT ICC-ES REPORT. ALL EXPOSED CONNECTORS SHALL BE STAINLESS STEEL, HOT-DIP GALVANIZED, OR ZMAX COATED.

MACHINE APPLIED NAILING
USE OF MACHINE NAILING IS SUBJECT TO A SATISFACTORY JOB SITE DEMONSTRATION FOR EACH PROJECT AND THE APPROVAL BY THE PROJECT ARCHITECT OR ENGINEER. THE APPROVAL IS SUBJECT TO CONTINUED SATISFACTORY PERFORMANCE. DIAPHRAGM SHEATHING NAILS OR OTHER APPROVED SHEATHING CONNECTORS SHALL BE DRIVEN SO THAT THEIR HEAD OR CROWN IS FLUSH WITH THE SURFACE OF THE SHEATHING.

PANEL SHEATHING
PANEL SHEATHING SHALL BE IDENTIFIED WITH THE APPROPRIATE APA TRADEMARK, AND SHALL MEET THE REQUIREMENTS OF THE APA PRP-108, PS 1 OR PS 2 PERFORMANCE STANDARDS, AND ICC ESR-2586. ALL PANELS WHICH HAVE ANY EDGE OR SURFACE PERMANENTLY EXPOSED TO WEATHER SHALL BE CLASSED EXTERIOR. PANEL THICKNESS, GRADE, AND SPAN RATING SHALL BE AT LEAST EQUAL TO THAT SHOWN BELOW OR ON THE DRAWINGS. APPLICATION SHALL BE IN ACCORDANCE WITH APA RECOMMENDATIONS. ALL UNBLOCKED EDGES SHALL BE TONGUE-AND-GROOVE OR SUPPORTED BY SHEATHING CLIPS AT MIDSPAN. MATERIAL PROPERTIES SHALL BE PROVIDED AS FOLLOWS:

PANEL APPLICATION	GRADE	SPAN RATING	DURABILITY
ROOF SHEATHING (5/32")	APA RATED OSB	32/16	EXPOSURE 1
WALL SHEATHING (15/32")	APA RATED	32/16	EXPOSURE 1

MANUFACTURED WOOD I-JOISTS
MANUFACTURED WOOD I-JOISTS SHALL BE RED-I SERIES JOISTS MANUFACTURED BY REDBUILT LLC. DESIGN, FABRICATION, TESTING, AND INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF ASTM D5055, AND SHALL BE IN ACCORDANCE WITH ESR-3994 RESPECTIVELY. THE JOIST MANUFACTURER SHALL OBTAIN ALL NECESSARY APPROVALS FROM DSA, AND APPROVED TRUSS DRAWINGS SHALL BE AVAILABLE AT THE JOB SITE AS REQUIRED. THE JOIST LOADING SHALL BE AS FOLLOWS:

LOCATION	DEAD LOAD	LIVE LOAD
ROOF	20 PSF + MECHANICAL UNITS	20 PSF (REDUCIBLE)

STRUCTURAL COMPOSITE LUMBER
STRUCTURAL COMPOSITE LUMBER (SCL), INCLUDING LAMINATED STRAND LUMBER (TIMBERSTRAND LSL 1.55E 4 Fb= 2325 PSI), PARALLEL STRAND LUMBER (PARALLAM PSL 2.0E 4 Fb= 2900 PSI), AND LAMINATED VENEER LUMBER (MICRO=LAM LVL 2.0E 4 Fb= 2600 PSI), SHALL BE MANUFACTURED BY WEYERHAUSER. TRUS JOIST AND INSTALLED IN CONFORMANCE WITH ICC-ES ESR-1387, OR APPROVED EQUAL, WITH VALID EVALUATION REPORT(S) PER DSA IR A-5.

LAMINATED WOOD MEMBERS
LAMINATED WOOD MEMBERS SHALL BE IN CONFORMANCE WITH ANSI STANDARD A190.1, AND ASTM D3737. ADHESIVES USED IN THE MANUFACTURE SHALL BE CLASSED EXTERIOR OR EXPOSED WHERE PERMANENTLY EXPOSED TO WEATHER, AND THE ENDS SHALL BE SEAL COATED. MEMBERS SHALL BE LOAD WRAPPED FOR SHIPMENT, AND MARKED WITH THE APA E.S.R. TRADEMARK INDICATING CONFORMANCE WITH ANSI STANDARD A190.1, WITH AN ACCOMPANYING CERTIFICATE OF CONFORMANCE TO BE PROVIDED TO THE BUILDING DEPARTMENT AND ENGINEER. A STANDARD CAMBER SHALL BE PROVIDED USING A 2000 FOOT RADIUS OF CURVATURE AT ROOF MEMBERS AND 3500 FOOT RADIUS OF CURVATURE AT FLOOR MEMBERS, UNLESS NOTED OTHERWISE. MATERIAL PROPERTIES SHALL BE PROVIDED AS FOLLOWS:

APPLICATION	AITC SYMBOL	LAMINATIONS
SIMPLE SPAN	24F-V4	DF/DF
CANTILEVER OR CONTINUOUS SPAN(S)	24F-V8	DF/DF

WOOD FRAMING
FRAMING SHALL BE DOUGLAS FIR - LARCH WITH A MOISTURE CONTENT NOT EXCEEDING 19%, CONFORMING TO THE WEST COAST LUMBER INSPECTION BUREAU STANDARD GRADING AND DRESSING RULE NO. 17, AS AMENDED TO DATE SHALL CONFORM TO CBC SECTION 2303. LUMBER GRADES SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE ON THE DRAWINGS:

APPLICATION	GRADE
PLATES, JOISTS, PURLINS, RAFTERS, BEAMS	NO. 1
4x BEAMS AND LARGER	NO. 1
2x, 3x, 4x LEDGERS	NO. 2
4x POSTS	NO. 1
6x POSTS AND LARGER	NO. 1
2x4, 3x4 STUDS, BLOCKING	NO. 2
2x6 STUDS & LARGER	NO. 1

FOUNDATION SILL PLATES AND OTHER LUMBER IN DIRECT PERMANENT CONTACT WITH CONCRETE SHALL BE PRESSURE TREATED DOUGLAS FIR, PROVIDE HOT-DIPPED GALVANIZED OR STAINLESS STEEL FASTENERS AT ALL PRESSURE TREATED LUMBER CONDITIONS. AT SILL PLATE AB & WASHERS PROVIDE MECHANICALLY DEPOSITED ZINC COATED STEEL IN ACCORDANCE WITH ASTM B695, CLASS 55 MINIMUM.

SUBMITTALS
SUBMITTALS FOR REVIEW BY THE ENGINEER WILL BE REQUIRED AS FOLLOWS:
1. CONCRETE MIX DESIGNS
2. REINFORCING STEEL
3. CONCRETE SLAB CONSTRUCTION/CONTROL JOINT LAYOUT
4. STRUCTURAL STEEL AND MISCELLANEOUS IRON
5. MANUFACTURED TRUSSES AND JOISTS
6. LAMINATED WOOD MEMBERS
7. CMU WALL REINFORCING LAYOUTS

CONTRACTOR SHALL SUBMIT FOUR COPIES (OR THREE COPIES AND ONE SET OF REPRODUCIBLE DRAWINGS (WHERE APPLICABLE) FOR REVIEW, AND SHALL PROVIDE A MINIMUM REVIEW TIME OF 10 WORKING DAYS FROM TIME OF RECEIPT BY THE ENGINEER. CONTRACTOR REQUESTED REDUCTIONS TO MINIMUM REVIEW TIME MAY BE CONSIDERED. CONTRACTOR SHALL DIRECTLY REIMBURSE ENGINEER FOR ALL COSTS ASSOCIATED WITH ANY SUCH REDUCTION. NO ORDERING OR FABRICATION OF MATERIALS SHALL PROCEED UNTIL SUBMITTALS HAVE BEEN REVIEWED AND APPROVED BY THE ENGINEER.

REQUESTS FOR SUBSTITUTION
THE CONTRACTOR MAY SUBMIT A REQUEST FOR SUBSTITUTION (RFS) FOR SPECIFIED STRUCTURAL MATERIALS OR PRODUCTS FOR REVIEW BY THE ENGINEER. ANY SUCH RFS SHALL DOCUMENT THE ITEM(S) UNDER CONSIDERATION, THE EFFECTS OF SUBSTITUTION ON COST, PERFORMANCE AND SCHEDULE, AND SHALL INCLUDE RESPECTIVE APPROVAL(S) BY ICC OR RELATED AGENCIES. ALL COSTS INCURRED BY THE ENGINEER AS PART OF ANY RFS SUBMITTAL SUCH FOR ADDITIONAL RESEARCH, REVIEW OR REDESIGN OF STRUCTURAL ELEMENTS OR SYSTEMS, SHALL BE DIRECTLY REIMBURSED BY THE CONTRACTOR; ALL SUBSTITUTIONS SHALL BE BY ADDENDUM AND APPROVED BY DSA PRIOR TO IMPLEMENTATION.

EXISTING CONDITIONS
PRIOR TO ORDERING OR FABRICATING ANY MATERIAL, THE CONTRACTOR SHALL FIELD VERIFY ALL CONTROLLING FIELD DIMENSIONS AND CONDITIONS. ANY DISCREPANCIES BETWEEN THE EXISTING CONDITIONS AND CONSTRUCTION DOCUMENTS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT AND ENGINEER. IN ADDITION, THE CONTRACTOR IS ALERTED TO THE POSSIBILITY THAT EXISTING STRUCTURAL MATERIALS UNSUITABLE FOR REUSE DUE TO DETERIORATION MAY BE DISCOVERED DURING THE COURSE OF CONSTRUCTION. THESE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER FOR REVIEW AND APPROVAL OF PROPOSED REPLACEMENT MATERIALS.

CONSTRUCTION LIABILITY
CONSTRUCTION CONTRACTOR AND HIS SUBCONTRACTORS AGREE THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONSTRUCTION CONTRACTOR AND HIS SUBCONTRACTORS WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF PROJECT CONSTRUCTION, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT LIMITED TO NORMAL WORKING HOURS, AND THE CONSTRUCTION CONTRACTOR AND HIS SUBCONTRACTORS FURTHER AGREE TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK IN THIS PROJECT, EXCEPT FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

1 STRUCTURAL SPECIFICATIONS

GENERAL
THE DISTRICT OR LAB OF RECORD SHALL EMPLOY A SPECIAL INSPECTOR DURING CONSTRUCTION ON THE FOLLOWING TYPES OF WORK IN CONFORMANCE WITH CBC CHAPTER 17A AND FORM DSA - 103 IN CONJUNCTION WITH THE DSA PROJECT INSPECTOR:

CONCRETE
PROVIDE PERIODIC INSPECTION OF BATCH PLANT IN CONFORMANCE WITH CBC SECTION 1705A.3.3.1, PROVIDE INSPECTION DURING THE PLACEMENT OF ALL CONCRETE IN CONFORMANCE WITH CBC SECTIONS 1705A.3, 1903A AND 1910A EXCEPT DURING THE INSTALLATION OF CONCRETE FOR NON-STRUCTURAL SLABS-ON-GRADE AND AS OTHERWISE EXCEPTED BY THE CBC.

GRADING, EXCAVATION & FILLING
PROVIDE PERIODIC INSPECTION DURING GRADING, EXCAVATION AND FILLING OPERATIONS AS SPECIFIED BY THE GEOTECHNICAL REPORT, AND IN CONFORMANCE WITH CBC SECTION 1705A.6, UNLESS EXCEPTED BY CBC SECTION 1803A.2.

TASK	TYPE
1. VERIFY MATERIALS	PERIODIC
2. VERIFY EXCAVATIONS	PERIODIC
3. CLASSIFICATION AND TESTING	PERIODIC
4. VERIFY LIFTS AND COMPACTION	CONTINUOUS
5. OBSERVE SUBGRADE	PERIODIC

REINFORCING STEEL
PROVIDE CONFORMANCE WITH CBC SECTION AND TABLE 1705A.3, AND 1705A.13.1 WHERE PART OF THE SEISMIC FORCE-RESISTING SYSTEM, AND VERIFY THAT MILL CERTIFICATES INDICATE REINFORCING STEEL TO BE IN COMPLIANCE WITH PROJECT SPECIFICATIONS. PROVIDE PERIODIC OR CONTINUOUS INSPECTION OF THE PLACEMENT OF ALL REINFORCING STEEL FOR CONCRETE. WHERE STRUCTURAL MASONRY THAT IS REQUIRED TO HAVE INSPECTION, PROVIDE CONTINUOUS INSPECTION DURING THE INSTALLATION OF ALL MECHANICAL COUPLING DEVICES.

STRUCTURAL MASONRY
PROVIDE INSPECTION DURING ALL MASONRY CONSTRUCTION IN CONFORMANCE WITH CBC SECTION 1705A.4 AND 2105A.

NON-SHRINK GROUT
PROVIDE INSPECTION DURING THE TAKING OF REQUIRED TEST SPECIMENS, AND CONTINUOUSLY DURING THE PLACING OF ALL NON-SHRINK GROUT IN CONFORMANCE WITH RESPECTIVE PRODUCT ICC-ES REPORT(S).

BOLTS INSTALLED IN CONCRETE
PROVIDE PERIODIC INSPECTION DURING THE INSTALLATION OF BOLTS AND CONTINUOUS INSPECTION DURING THE PLACEMENT OF CONCRETE AROUND BOLTS IN CONFORMANCE WITH CBC SECTION 1705A.3, AND 2105A.

EXPANSION ANCHORS
PROVIDE CONTINUOUS INSPECTION DURING THE TESTING OF EXPANSION ANCHORS. ALL TESTS SHALL BE IN ACCORDANCE WITH CBC CHAPTER 17A, SECTION 1910A.5, AND RESPECTIVE ICC-ES REPORT(S). THE CONTRACTOR MUST SUBMIT A TEST REPORT TO THE ENGINEER AND THE DSA FIELD REPRESENTATIVE. EXPANSION ANCHORS SHALL BE TORQUE TESTED TO THE FOLLOWING VALUES:

ANCHOR ø (IN)	INSTALLATION TORQUE (FT-LBS) STRONG-BOLT 2 CS (SB) IN CONCRETE	KWIK BOLT TZ2 CS (SB) IN FULL GROUTED CMU
1/4	4	4 (6)
3/8	30	15
1/2	60 (65)	25
5/8	90 (80)	30 (35)
3/4	150	50
1	230	-

MECHANICAL SCREW ANCHORS
PROVIDE CONTINUOUS INSPECTION DURING THE TESTING OF MECHANICAL SCREW ANCHORS. ALL TESTS SHALL BE IN ACCORDANCE WITH CBC CHAPTER 17A, SECTION 1910A.5, AND RESPECTIVE ICC-ES REPORT(S). THE CONTRACTOR MUST SUBMIT A TEST REPORT TO THE ENGINEER AND THE DSA FIELD REPRESENTATIVE. MECHANICAL SCREW ANCHORS SHALL BE TORQUE TESTED TO THE FOLLOWING VALUES:

ANCHOR ø (IN)	INSTALLATION TORQUE (FT-LBS) TITEN HD IN CONCRETE
1/4	24
3/8	50
1/2	65
5/8	100
3/4	150

EPOXY ANCHORING SYSTEMS
INSPECT CONTINUOUSLY DURING ALL EPOXY ANCHORING INSTALLATIONS. ALL TESTS SHALL BE IN ACCORDANCE WITH CBC CHAPTER 17A, SECTION 1910A.5, AND RESPECTIVE ICC-ES REPORT(S). THE CONTRACTOR MUST SUBMIT A TEST REPORT TO THE ENGINEER AND THE DSA REPRESENTATIVE. UNLESS NOTED OTHERWISE.

STRUCTURAL STEEL AND MISCELLANEOUS IRON
PROVIDE INSPECTION DURING THE FABRICATION AND ERECTION OF STRUCTURAL STEEL IN CONFORMANCE WITH CBC SECTIONS 1705A.2, 1705A.14, 1705A.19 FOR SPRAYED FIRE-RESISTANT MATERIALS WHERE THEY OCCUR, AND 1705A.12.1 AND 1705A.13.1 WHERE PART OF THE SEISMIC FORCE-RESISTING SYSTEM(S) IN CONJUNCTION WITH AISC SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS.

WELDING
PROVIDE INSPECTION DURING THE WELDING OF STRUCTURAL STEEL IN CONFORMANCE WITH CBC SECTION 1705A.2 AND 1705A.13.1 WHERE PART OF THE SEISMIC FORCE-RESISTING SYSTEM(S). WELDING OF STEEL MOMENT-FRAMES AND BRACED-FRAMES SHALL BE INSPECTED PER AISC SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS, IN CONJUNCTION WITH AWS D1.8 "SEISMIC WELDING SUPPLEMENT" AND AWS D1.1 "STRUCTURAL WELDING CODE - STEEL."

HIGH STRENGTH BOLTING
INSPECTION OF ALL HIGH STRENGTH BOLTING OPERATIONS SHALL BE PER THE CURRENT EDITION OF THE "AMERICAN INSTITUTE OF STEEL CONSTRUCTION' (AISC) "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH STRENGTH BOLTS" IN CONJUNCTION WITH CBC SECTION 1705A.13.1 REQUIREMENTS.

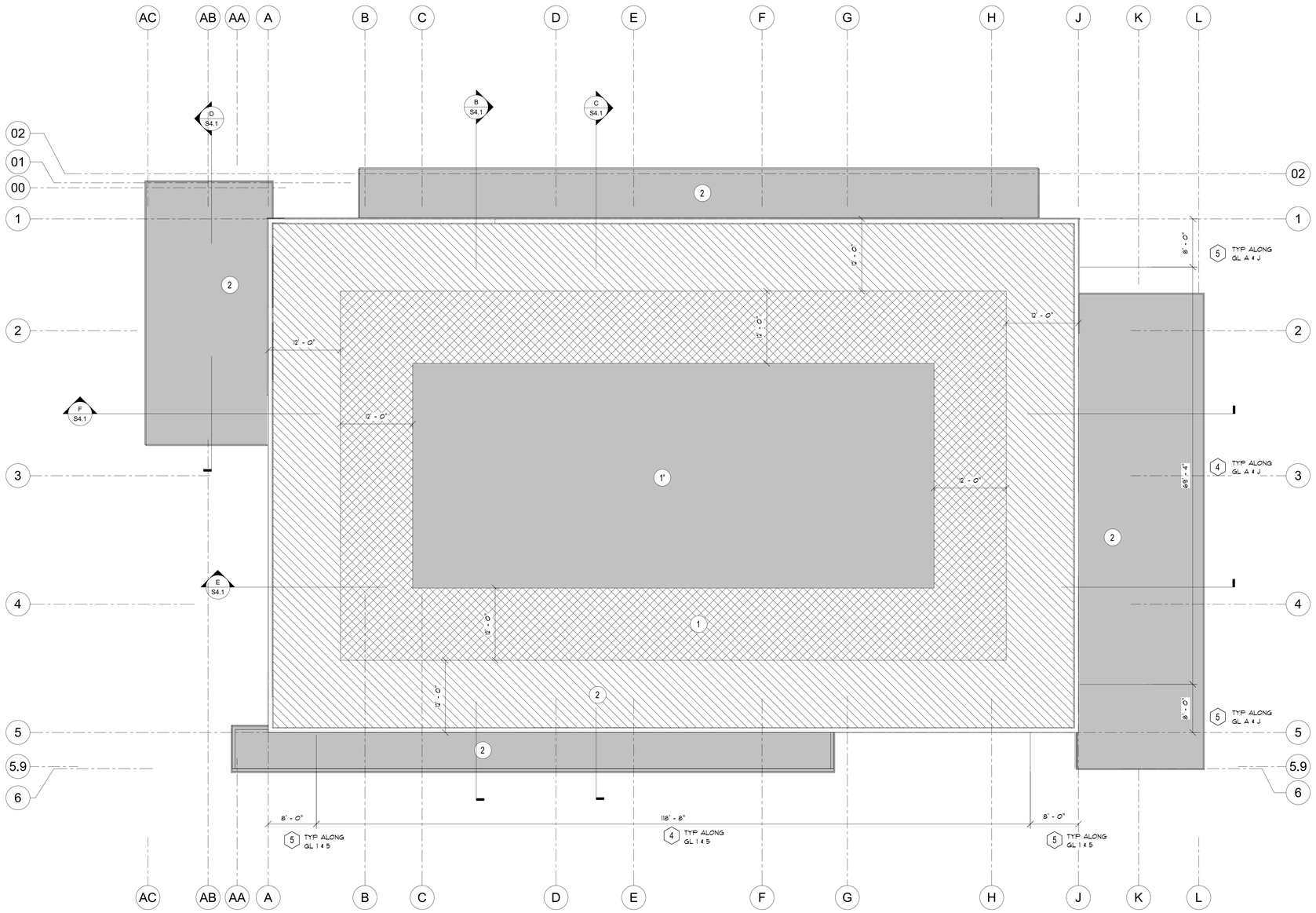
WOOD CONSTRUCTION
PROVIDE INSPECTION DURING THE FABRICATION PROCESS OF PREFABRICATED WOOD STRUCTURAL ELEMENTS AND ASSEMBLIES IN ACCORDANCE WITH CBC SECTION 1705A.5, INCLUDING "HIGH-LOAD DIAPHRAGMS" PER 1705A.5.2 WHERE SPECIFIED, AND CBC SECTIONS 1705A.12.1 & 1705A.13.2 FOR MAIN WIND FORCE-RESISTING SYSTEM(S) AND FOR FASTENING OF COMPONENTS WITHIN THE SEISMIC FORCE-RESISTING SYSTEM(S) RESPECTIVELY.

LAMINATED WOOD MEMBERS
PROVIDE INSPECTION DURING THE FABRICATION PROCESS OF LAMINATED WOOD MEMBERS IN ACCORDANCE WITH CBC SECTION 1705A.5.5.

SPECIAL INSPECTOR
FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION, THE SPECIAL INSPECTOR MUST BE CERTIFIED BY THE DIVISION OF STATE ARCHITECT (DSA)

DUTIES AND RESPONSIBILITES OF THE SPECIAL INSPECTOR
THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK ASSIGNED FOR CONFORMANCE WITH THE APPLICABLE DESIGN DRAWINGS, SPECIFICATIONS AND SPECIAL INSPECTION PROGRAM AS DEFINED BY CBC SECTION 1704A, 1705A, AND CAC 4-335 (F) AS WELL AS SECTION 1705A.12 FOR WIND FORCE RESISTANCE AND 1705A.13 FOR SEISMIC FORCE-RESISTING SYSTEMS. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO DSA, THE DISTRICT OR DISTRICT DESIGNATED REPRESENTATIVE, THE ARCHITECT OR PROJECT MANAGER, THE ENGINEER, THE CONTRACTOR, AND OTHER PERSONS DESIGNATED BY THE OWNER OR OWNER'S REPRESENTATIVE. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, AND IF UNCORRECTED TO THE ENGINEER AND DSA.

THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF TH



1 WIND ZONE PLAN
1/8" = 1'-0"

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MADERA HIGH SCHOOL FIELDHOUSE

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CONSTRUCTION DOCUMENTS

MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL R. ARCHER C 36165 02-28-27 RENEWAL DATE STATE OF CALIFORNIA

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CONSTRUCTION DOCUMENTS

WIND ZONE PLAN

S1.1

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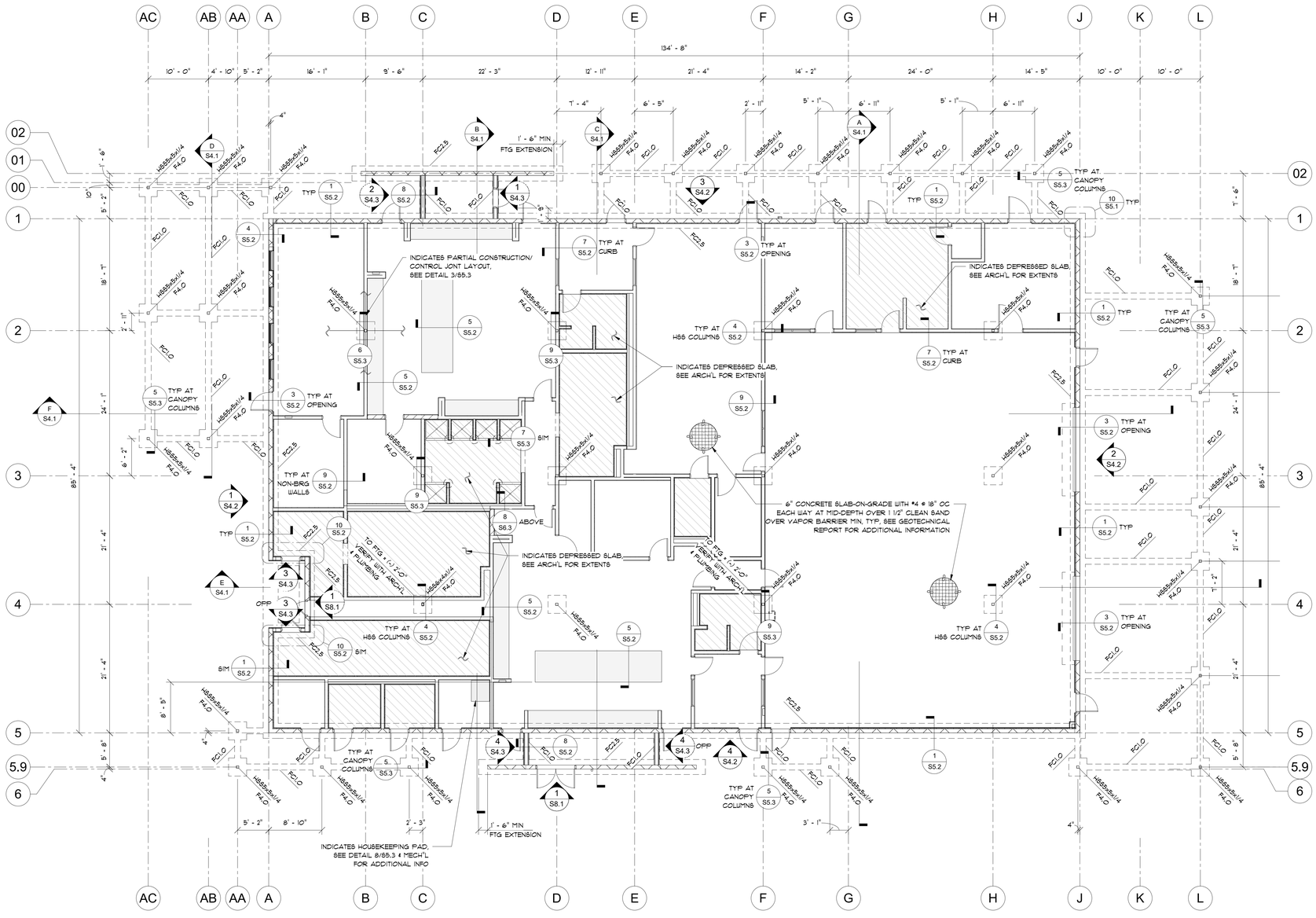

1 FOUNDATION PLAN
1/8" = 1'-0"

FOUNDATION LEGEND:

1. SECTION OR DETAIL NUMBER (1 / S5.1) — SHEET NUMBER WHERE SECTION OR DETAIL IS SHOWN
2. INDICATES VIEWING DIRECTION OF PARTIAL WALL ELEVATIONS
3. INDICATES CONCRETE FOOTING
4. INDICATES LIMITS OF LIGHT-WOOD PARTITION WALL, SEE ARCH'L FOR WIDTHS
5. INDICATES LIMITS OF 8" CMU WALL
6. INDICATES COLUMN AND ISOLATED FOOTING TYPE OR POST AND BASE
7. FC# — INDICATES CONT./ISOLATED FOOTING TYPE, SEE FOOTING SCHEDULE
8. INDICATES LIGHT-WOOD BEARING WALL

FOUNDATION NOTES:

1. REFER TO STRUCTURAL SPECIFICATIONS ON SHEET S1.0
2. TOP OF SLAB ELEVATION = +0'-0" TYPICAL, UNLESS NOTED OTHERWISE
3. ALL DIMENSIONS ARE TO FACE OF WALL/FACE OF CONCRETE, OR CENTERLINE OF COL/POST UNLESS NOTED OTHERWISE
4. PRIOR TO THE CONTRACTOR REQUESTING A FOUNDATION INSPECTION, THE GEOTECHNICAL ENGINEER SHALL ADVISE DSA AND THE EOR IN WRITING THAT THE BUILDING PAD HAS BEEN PREPARED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT AND SPECIFICATIONS
5. FOR PIPES NEAR OR THROUGH FOOTINGS, SEE DETAILS 6 & 7/S5.1
6. FOR TYPICAL BAR REINFORCING HOOKS, BENDS & LAPS, SEE DETAIL 4 & 8/S5.1
7. REFER TO ARCH'L DRAWINGS FOR DIMENSIONS NOT SHOWN, VERIFY ALL DIMENSIONS WITH ARCH'L, TYPICAL
8. REFER TO ARCH'L FOR CONCRETE CURB LOCATIONS WHERE OCCUR, TYPICAL
9. REFER TO DETAIL 1/S5.1 AND GEOTECHNICAL REPORT FOR OVEREXCAVATION REQUIREMENTS
10. REFER TO DETAIL 2/S5.1 FOR CONCRETE SLAB-ON-GRADE CONSTRUCTION/ CONTROL JOINT REQUIREMENTS
11. REFER TO DETAIL 3/S5.1 FOR FOUNDATION FORMWORK REQUIREMENTS
12. REFER TO DETAIL 5/S5.1 FOR REINFORCING REQUIREMENTS AT INTERSECTING FOOTINGS

CMU WALL NOTES:

1. REFER STRUCTURAL SPECIFICATIONS ON SHEET S1.0
2. SEE ARCH'L & CIVIL DRAWINGS FOR TOP OF CONCRETE SLAB-ON-GRADE AND ELEVATED SLAB ELEVATIONS, DEPRESSIONS AND SLOPES, WALL OVERALL DIMENSIONS AND LOCATIONS OF OPENINGS NOT INDICATED ON STRUCTURAL DRAWINGS
3. PROVIDE 8" CMU WALL WITH #5 VERTS @ 16" OC CENTERED AND #5 HORIZ @ 16" OC CENTERED, UNO PER ELEVATION
4. CONSTRUCT MASONRY WALL INCLUDING CONDITION AT WALL ENDS AND OPENINGS PER DETAIL 1/S8.1 UNLESS DETAILED OTHERWISE. SOLID GROUT ALL CELLS IN MASONRY WALLS
5. FOR TYPICAL BAR REINFORCING HOOKS, BENDS, AND LAPS AT CMU WALL SEE DETAILS 4/S5.1, 2 & 3/S8.1
6. FOR CHORD REINFORCING ELEVATIONS AND ADDITIONAL CMU WALL CONSTRUCTION SEE ELEVATIONS ON SHEET S4.2
7. ENSURE FIRST HORIZONTAL CMU BLOCK JOINT ALIGNS WITH FINISH FLOOR
8. NO OPENING(S) LARGER THAN 6"ø OR 6" WIDE x 14" TALL IN 8" CMU WALL MADE WITHOUT CUTTING WALL VERTICAL REINFORCING ARE PERMITTED UNLESS THE LOCATIONS AND SIZES ARE SHOWN ON SHEARWALL ELEVATIONS. SEE DETAIL 5/S8.1 FOR LIMITATIONS OF OPENINGS MADE WITHOUT INTERRUPTING REINFORCING
9. REFER TO DETAIL 6/S8.1 WHERE CONDUITS ARE INSTALLED IN CMU WALL(S)

LIGHT WOOD FRAMING NOTES:

1. REFER TO STRUCTURAL SPECIFICATIONS ON SHEET S1.0
2. CONTRACTOR TO VERIFY ALL DIMENSIONS & ELEVATIONS SHOWN WITH ARCHITECTURAL SHEETS AND INFORM ARCHITECT AND ENGINEER OF ANY DISCREPANCY
3. ALL EXTERIOR BEARING WALLS TO BE 2x6 @ 16" OC, UNO.
4. ALL INTERIOR NON-BEARING WALLS TO BE 2x @ 16" OC, UNO, SEE ARCH'L FOR NOMINAL WALL THICKNESS
5. FOR FASTENING SCHEDULE, SEE DETAIL 1/S6.1 & CBC TABLE 2304.10.2
6. NAIL SIZES
   8d NAIL = 0.131" x 2 1/2" MIN COMMON
   10d NAIL = 0.148" x 3" MIN COMMON
   16d NAIL = 0.162" x 3 1/2" MIN COMMON
7. FOR TYPICAL WALL FRAMING, SEE DETAIL 3/S6.1
8. ALL SHEATHING SHALL BE SPLICED AT CENTERLINE OF FRAMING & BLOCKING
9. BLOCK AND FASTEN ALL SHEATHING EDGES TO FRAMING
10. PROVIDE DOUBLE 2x6 MIN TOP PLATE WITH (8) 16d COMMONS EACH SIDE OF EACH UPPER TOP PLATE SPLICE, MIN. SEE DETAIL 3/S6.1 FOR ADDITIONAL SPLICE INFO
11. PROVIDE 15/32" RATED SHEATHING WITH 10d @ 6" OC EN & 12" OC FN, TYP AT EXTERIOR WALL FRAMING
12. PROVIDE 2x CONT PT SILL PLATE WITH 5/8"ø AB @ 48" OC MAX, TYP AT ALL EXTERIOR BEARING WALLS, SEE DETAILS 2 & 3/S6.1 FOR ADDITIONAL INFORMATION
13. REFER TO DETAIL 7/S6.1 FOR PERMISSIBLE LOCATIONS OF NOTCHES & BORED HOLES IN WALL FRAMING & CEILING JOISTS

ITEM	DESCRIPTION				DETAIL
	W	L	D	REINFORCING	NUMBER
FC1.0	1'-0"	CONT	1'-6"	(2) CONT #5 AT TOP & AT BOTTOM	8/S5.2
FC2.5	2'-6"	CONT	1'-6"	(5) #5 CONT AT TOP & BOTTOM	1 & 2/S5.2
F4.0	4'-0"	4'-0"	1'-6"	(5) #5 CONT AT TOP & BOTTOM	4 & 5/S5.3

FOOTING SCHEDULE

SEE SHEET S1.0 FOR CONCRETE AND SOIL INFORMATION
TO FOOTING = (-) 1' - 0", UNO

SPAN	HEADER	TRIMMERS	KING POST/STUD
(INTERIOR) LESS THAN 5'-0"	4x8/6x8	(1) 2x4/(1) 2x6	(2) 2x4/(2) 2x6
(EXTERIOR) LESS THAN 5'-0" (6" NOMINAL)	6x8	(1) 2x6	(2) 2x6

HEADER SCHEDULE

- ALL 6x HEADERS TO BE DF-L#1 WITH (1) A35 CLIP TOP & BOTTOM EACH END TO KING STUD(S) PER DETAIL 4/S6.1, TYPICAL

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PROFESSIONAL SEAL

LICENSED ARCHITECT — MICHAEL R. SCHOEN — C 38165 — 02-28-27 — STATE OF CALIFORNIA

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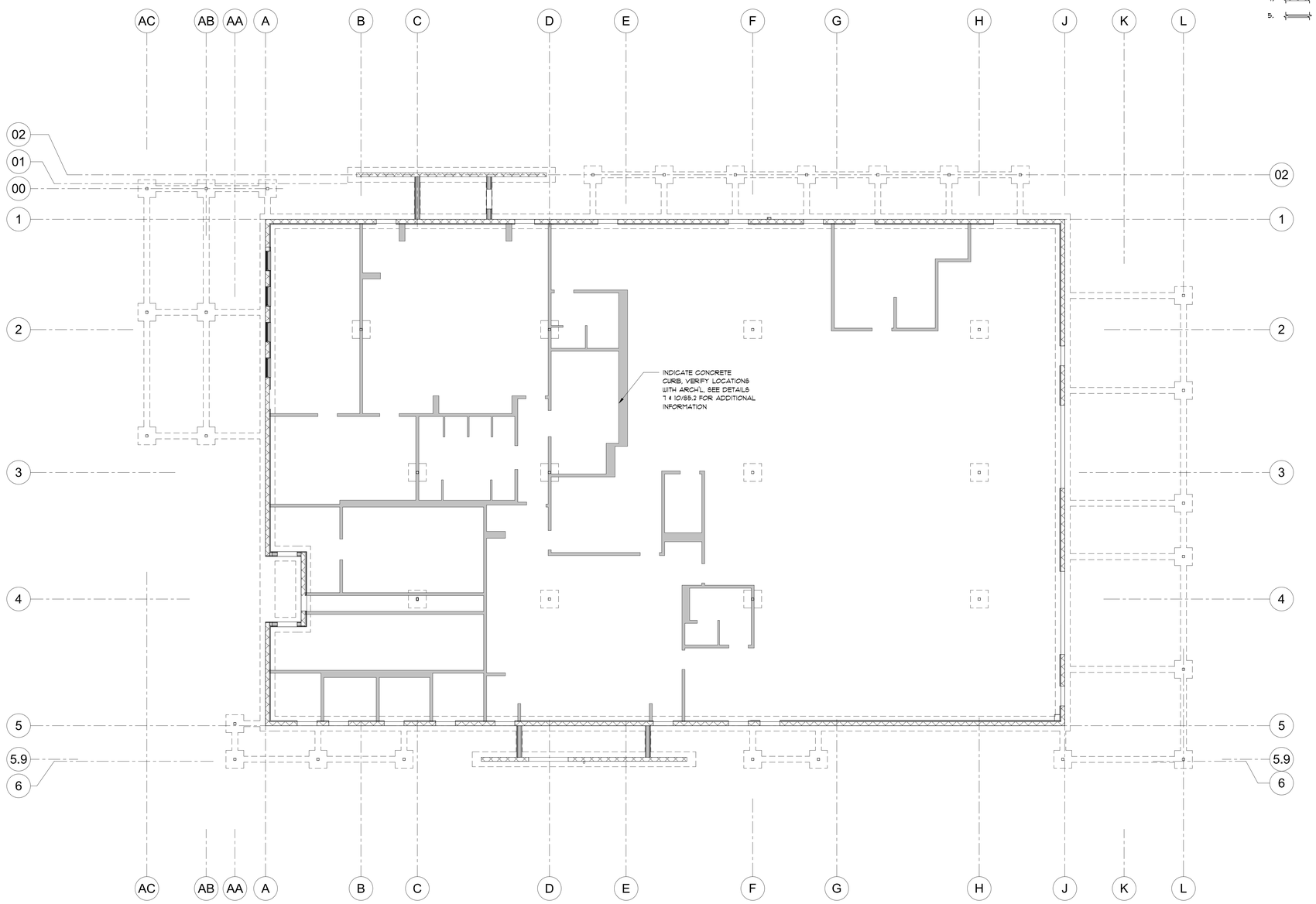
CONSTRUCTION DOCUMENTS

FOUNDATION PLAN

S2.1

CURB FOUNDATION LEGEND:

1. 1 / S5.1 — SECTION OR DETAIL NUMBER; SHEET NUMBER WHERE SECTION OR DETAIL IS SHOWN
2. INDICATES VIEWING DIRECTION OF PARTIAL WALL ELEVATIONS
3. INDICATES CONCRETE FOOTING
4. INDICATES LIMITS OF 8" CMU WALL
5. INDICATES LIMITS OF CONCRETE CURB. VERIFY WIDTHS AND EXTENTS WITH ARCH'L



1 CURB LAYOUT PLAN
1/8" = 1'-0"

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CURB LAYOUT PLAN

S2.2

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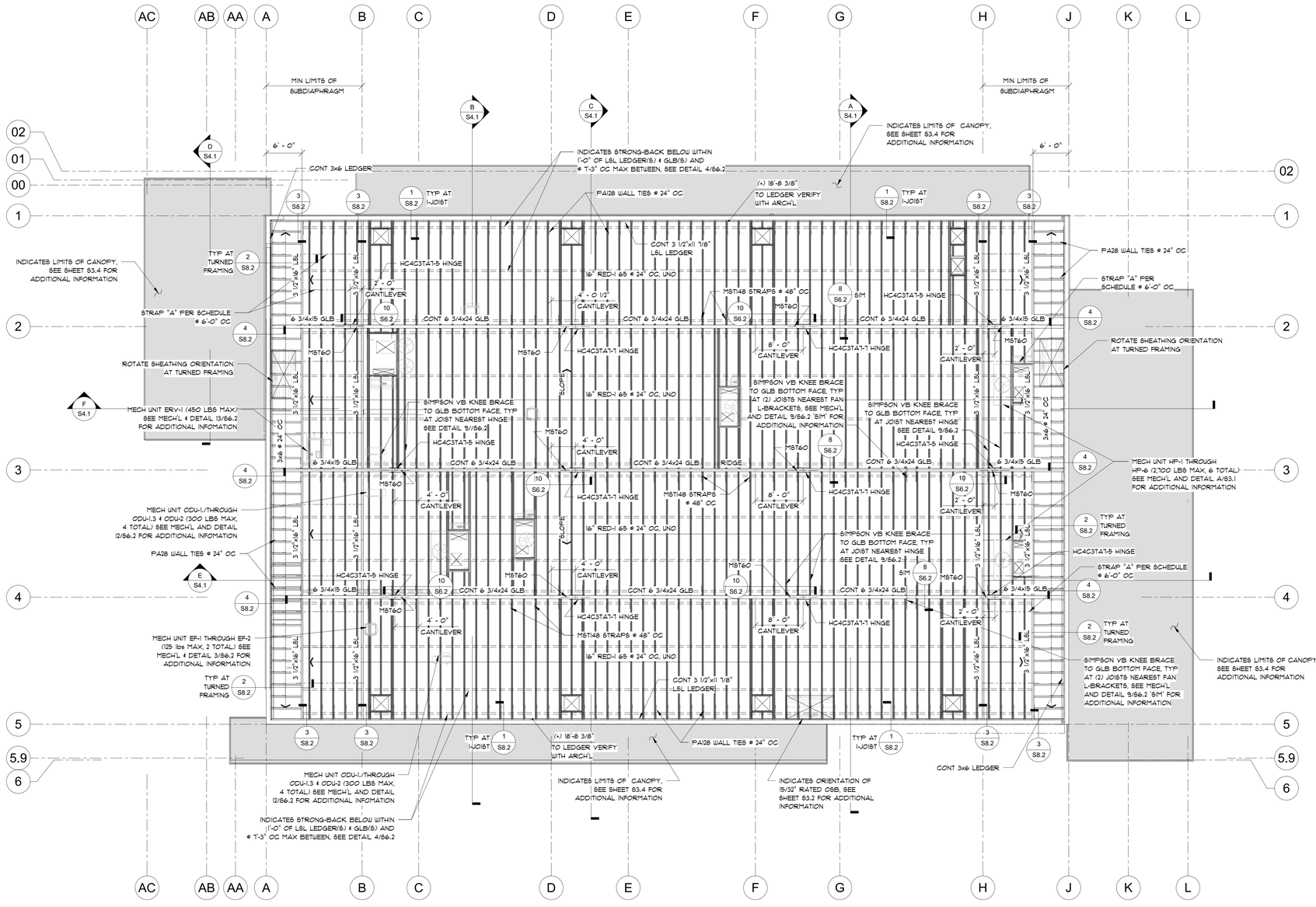


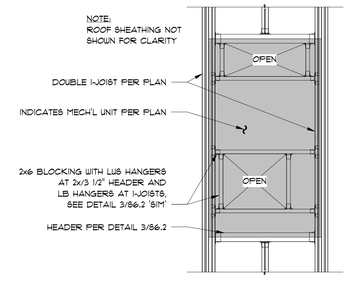
1 ROOF FRAMING PLAN
1/8" = 1'-0"

ROOF FRAMING LEGEND:

1. SECTION OR DETAIL NUMBER / SHEET NUMBER WHERE SECTION OR DETAIL IS SHOWN
2. (+) X'-X" — INDICATES ELEVATION ABOVE FINISHED FLOOR TO BE VERIFIED WITH ARCHITECTURAL DRAWINGS
3. INDICATES PENETRATION IN ROOF, SEE ARCH'L & MECHANICAL SHEETS FOR SIZE AND LOCATION & DETAILS 5/S6.1 & 3/S6.2 FOR TYPICAL FRAMING
4. INDICATES STEP IN ELEVATION
5. INDICATES CMU WALL
6. INDICATES HSS COL PER PLAN BELOW, SEE S2.1
7. SLOPE — INDICATES ROOF SLOPE PER ARCH'L DRAWINGS

ROOF FRAMING NOTES:

1. REFER TO STRUCTURAL SPECIFICATIONS ON SHEET S1.0
2. CONTRACTOR TO VERIFY ALL DIMENSIONS & ELEVATIONS SHOWN WITH ARCHITECTURAL SHEETS AND INFORM ARCHITECT AND ENGINEER OF ANY DISCREPANCY
3. CONTRACTOR SHALL VERIFY SIZES, LOCATIONS AND ORIENTATIONS OF ALL MECHANICAL UNITS, CURBS, SLEEPERS, AND OPENINGS WITH THE ARCHITECTURAL AND MECHANICAL SHEETS, AS WELL AS THE UNIT MANUFACTURER. ANY CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY
4. NO PENETRATIONS FOR PIPING, CONDUITS, OR DUCT-WORK SHALL BE MADE THROUGH THE RED-I JOISTS OR GIRDERS UNLESS APPROVED BY THE ENGINEER & DSA
5. ALL DIMENSIONS ARE TO FACE OF STUD OR CENTERLINE OF COLUMN, UNLESS NOTED OTHERWISE
6. WOOD PANEL DIAPHRAGM PENETRATIONS SHALL BE BLOCKED PER DETAILS 5/S6.1 & 3/S6.2
7. AT MECH UNITS, PROVIDE 4x6 BLOCKING WITH LUS46 HANGER EACH END MIN BELOW CURBS WITH SDS1/4"x4 1/2" SCREWS @ 24" OC (MIN 2 PER SIDE), UNO
8. AT MST STRAP LOCATIONS OVER SHEATHING, SUBSTITUTE 10d COMMON x 2" MIN PLYWOOD NAILS FOR 10dx1 1/2" SHORT NAILS, TYPICAL
9. FOR RED-I JOIST REQUIREMENTS SEE DETAIL 1/S6.2
10. FOR TYPICAL WOOD DIA SHEATHING LAYOUT, SEE DETAIL 8/S8.1
11. PROVIDE MST136 STRAP(S) AT ALL 3x/L5L LEDGER SPLICES, MIN



A OPENING AT MECH'L
1/2" = 1'-0"

JOIST	HANGER
3x6	HU36TF
16" RED-I 65	BA.2.56/16 (MAX NAILING PER MANUFACTURER)
3 1/2" x 16" L5L	BA.3.56/16 (MAX NAILING PER MANUFACTURER)

HANGER SCHEDULE

STRAP	DESCRIPTION
A	CMST14 STRAP WITH (2) ROWS OF 10d COMMONS @ 3 1/2" OC TO FLAT 3x4 BLOCKING BELOW (Z38 CLIP EACH END) & (33) 10d COMMONS AT END L = 2'-6" TO 3x JOISTS

STRAP SCHEDULE

- SEE DETAIL 6/S6.2 FOR ADDITIONAL INFORMATION

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ROOF FRAMING PLAN

S3.1

REGISTERED PROFESSIONAL ENGINEER BRIAN S. BARCUS S 4827 STRUCTURAL STATE OF CALIFORNIA 01/23/25

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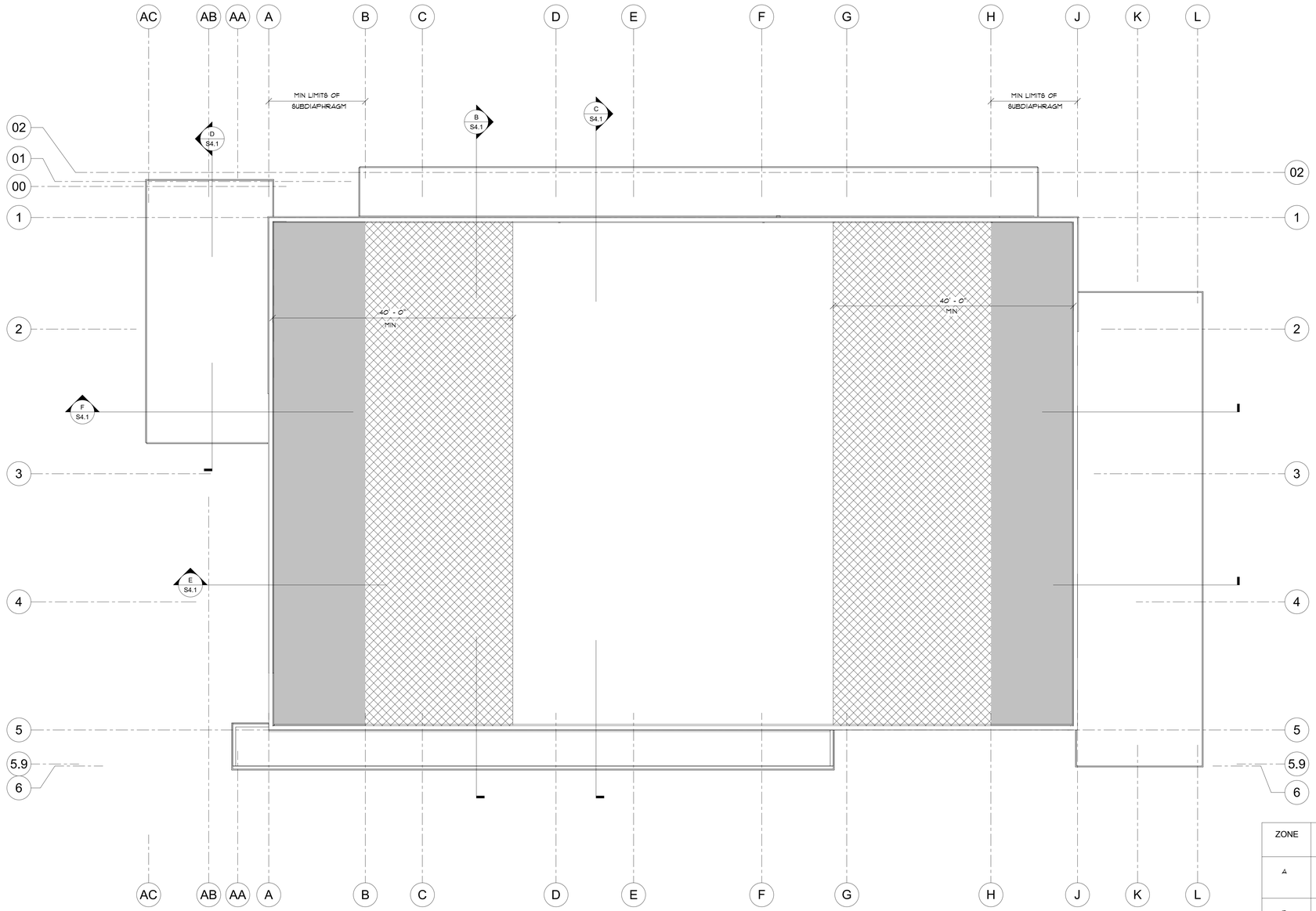

1 ROOF DIAPHRAGM NAILING PLAN
1/8" = 1'-0"

ZONE	APA RATED SHEATHING	NAILING	UNSUPPORTED PANEL EDGE BLOCKING	HATCH
A	15/32" RATED OSB	10d COMMONS @ 2 1/2" OC BN @ CONTINUOUS PANEL EDGES, (STAGGER NAILING), 4" OC EN AND 12" OC FN	FLAT 2x4	
B	15/32" RATED OSB	10d COMMONS @ 6" OC BN @ CONTINUOUS PANEL EDGES, 6" OC EN AND 12" OC FN	FLAT 2x4	
C	15/32" RATED OSB	10d COMMONS @ 6" OC EN AND 12" OC FN	-	

ROOF DIAPHRAGM NAILING SCHEDULE

SEE DETAIL 8/S8.1 FOR ADDITIONAL INFORMATION

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ROOF DIAPHRAGM NAILING PLAN

S3.2

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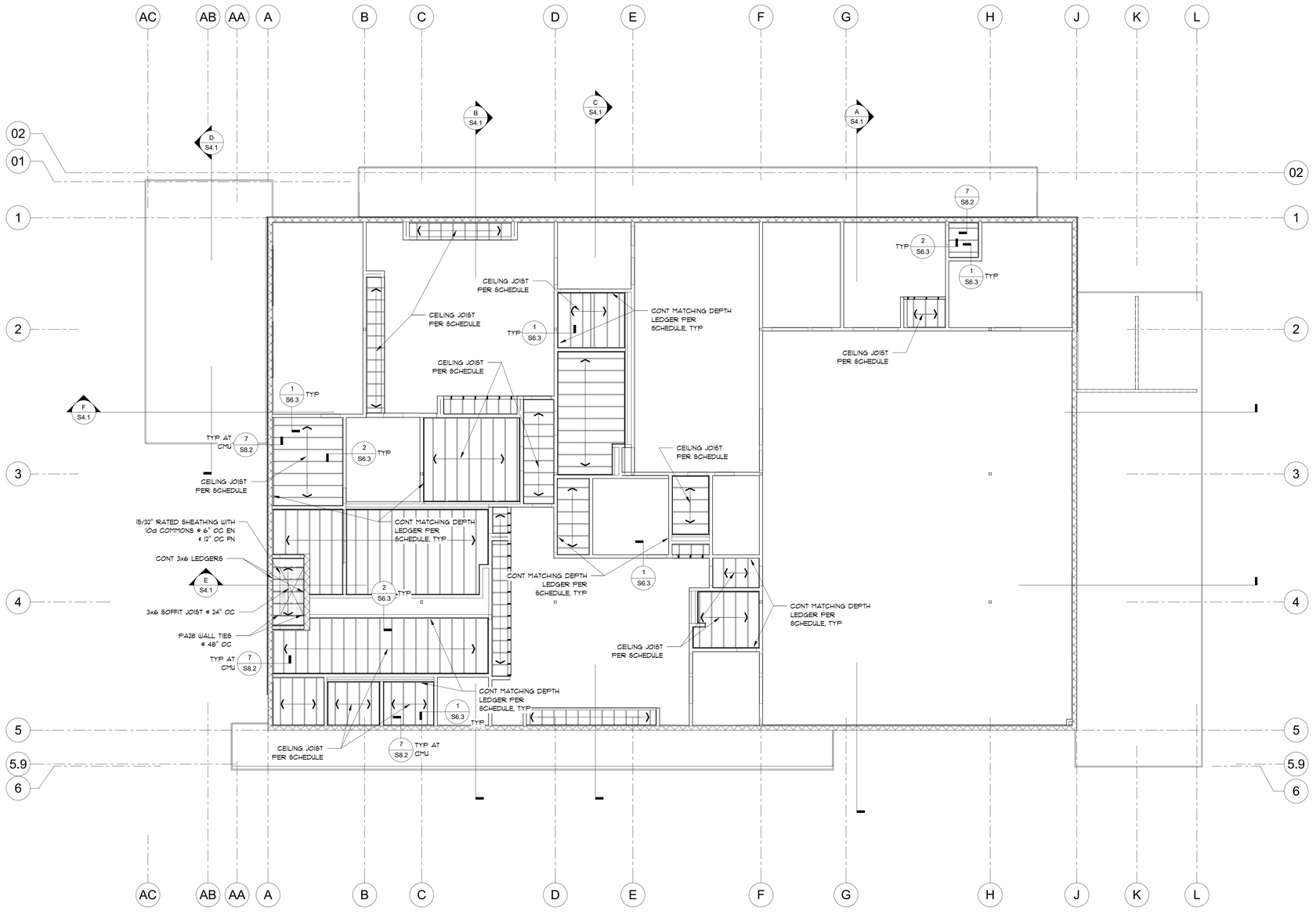

1 CEILING FRAMING
1/8" = 1'-0"

CEILING FRAMING LEGEND:

1. 1 / S6.1 — SECTION OR DETAIL NUMBER; SHEET NUMBER WHERE SECTION OR DETAIL IS SHOWN
2. INDICATES LIMITS OF 8" CMU WALL
3. INDICATES LIGHT-WOOD WALL FRAMING
4. INDICATES FRAMING MEMBER

CEILING FRAMING NOTES:

1. REFER TO STRUCTURAL SPECIFICATIONS ON SHEET S1.0
2. AT CEILING FRAMING, PROVIDE GYPSUM BOARD (THICKNESS PER ARCH'L, 1/2" MIN, 1 1/4" TOTAL MAX) WITH #6 SELF-DRILLING DRYWALL SCREWS @ 7" OC EF & 12" OC FF IN COMPLIANCE CBC SECTION 2508.5
3. AT NON-SHEARWALLS SUPPORTING CEILING FRAMING, PROVIDE GYPSUM BOARD FULL-HEIGHT (THICKNESS PER ARCH'L, 1/2" MIN) WITH #6 SELF-DRILLING DRYWALL SCREWS @ 7" OC EF & 12" OC FF
4. CONTRACTOR TO VERIFY ALL DIMENSIONS AND ELEVATIONS SHOWN WITH ARCHITECTURAL SHEETS AND INFORM ARCHITECT AND ENGINEER OF ANY DISCREPANCY
5. NO PENETRATIONS FOR PIPING, CONDUITS, OR DUCT-WORK SHALL BE MADE THROUGH THE JOISTS UNLESS APPROVED BY THE ENGINEER AND DSA
6. ALL DIMENSIONS ARE TO FACE OF WALL, UNLESS NOTED OTHERWISE

SPAN	JOIST SIZE
0'-0" TO 7'-6"	2x4 @ 24" OC
7'-7" TO 10'-0"	2x6 @ 24" OC
10'-1" TO 12'-6"	2x8 @ 24" OC (WITH STRONG-BACK AT MID-SPAN
12'-7" TO 15'-0"	2x10 @ 24" OC (WITH STRONG-BACK AT MID-SPAN

CEILING JOIST SCHEDULE

- PROVIDE MATCHING DEPTH LEDGER AT WALL
- SEE DETAIL 3/S6.3 FOR STRONG-BACK REQUIREMENTS
- CEILING DEAD LOAD = 10 PSF
- CEILING LIVE LOAD = 20 PSF

JOIST	HANGER
3x6	HU36TF

HANGER SCHEDULE

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DATE: 01/23/2025

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MADERA HIGH SCHOOL FIELDHOUSE

200 SOUTH "I" STREET
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CONSTRUCTION DOCUMENTS

PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL R. SCHOEN C 36165 02-28-27 STATE OF CALIFORNIA

PROJECT NUMBER
22PBK-08

DATE
01/07/25

DSA APPLICATION NO.
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FILE NO.
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PTN NO.
65243-153

DRAWN BY
JWK

REVISIONS

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	DSA SUBMITTAL	08-21-23
	DSA BACKCHECK SUBMITTAL	01-08-25

CONSTRUCTION DOCUMENTS

CEILING/SOFFIT FRAMING PLAN

S3.3

REGISTERED PROFESSIONAL ENGINEER SHAWN S. BARCUS S 4867 STRUCTURAL STATE OF CALIFORNIA
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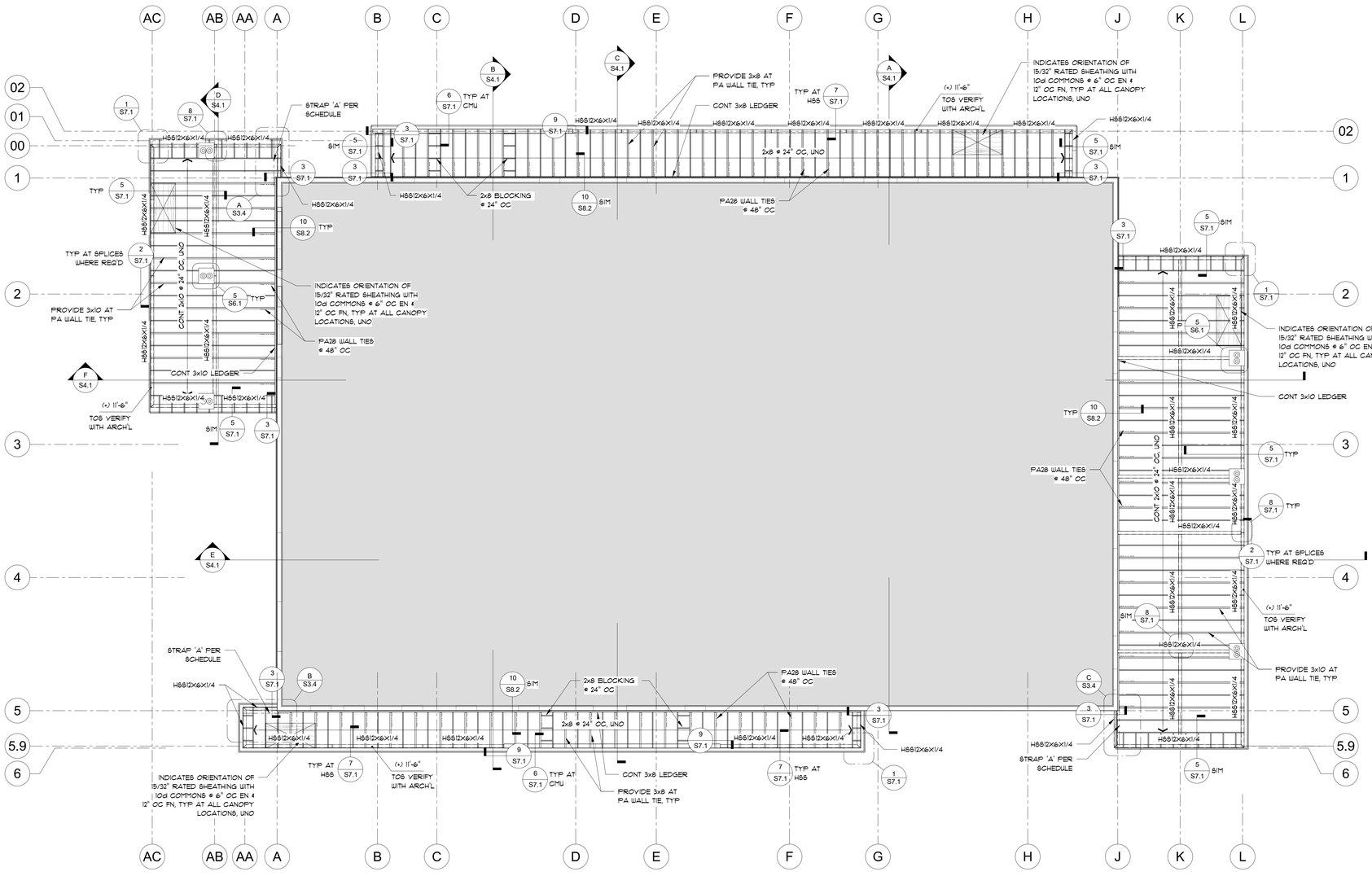
BSE Inc. BARCUS STRUCTURAL ENGINEERING



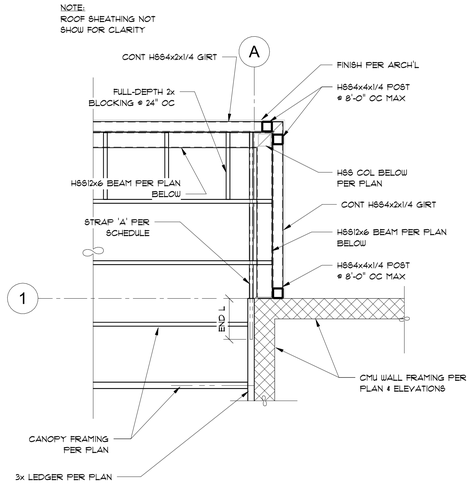
1 CANOPY FRAMING PLAN
1/8" = 1'-0"

CANOPY FRAMING LEGEND:

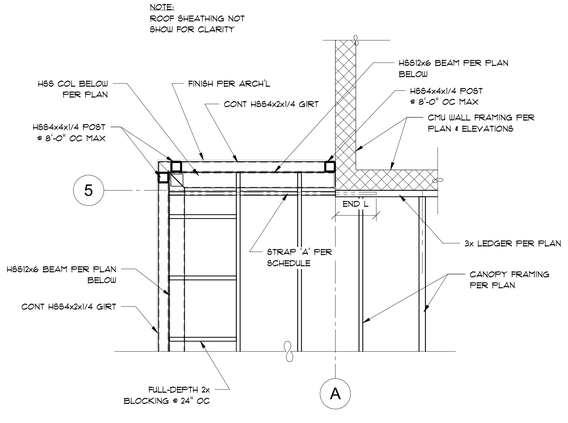
1. 1 / S6.1 — SECTION OR DETAIL NUMBER / SHEET NUMBER WHERE SECTION OR DETAIL IS SHOWN
2. (+) X'-X" — INDICATES ELEVATION ABOVE FINISHED FLOOR TO BE VERIFIED WITH ARCHITECTURAL DRAWINGS
3. INDICATES PENETRATION IN ROOF, SEE ARCH'L & MECHANICAL SHEETS FOR SIZE AND LOCATION & DETAIL 5/S6.1 FOR TYPICAL FRAMING
4. INDICATES STEP IN ELEVATION
5. INDICATES CMU WALL
6. INDICATES HSS COL PER PLAN BELOW, SEE S2.1

CANOPY FRAMING NOTES:

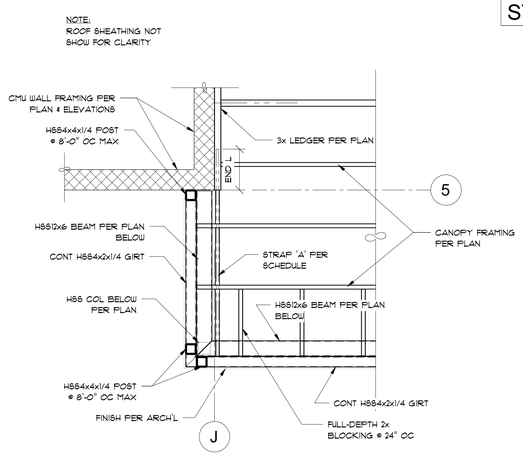
1. REFER TO STRUCTURAL SPECIFICATIONS ON SHEET S1.0
2. CONTRACTOR TO VERIFY ALL DIMENSIONS & ELEVATIONS SHOWN WITH ARCHITECTURAL SHEETS AND INFORM ARCHITECT AND ENGINEER OF ANY DISCREPANCY
3. CONTRACTOR SHALL VERIFY SIZES, LOCATIONS AND ORIENTATIONS OF ALL MECHANICAL UNITS, CURBS, SLEEPERS, AND OPENINGS WITH THE ARCHITECTURAL AND MECHANICAL SHEETS, AS WELL AS THE UNIT MANUFACTURER. ANY CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY
4. NO PENETRATIONS FOR PIPING, CONDUITS, OR DUCT-WORK SHALL BE MADE THROUGH THE RED-I JOISTS OR GIRDERS UNLESS APPROVED BY THE ENGINEER & DSA
5. ALL DIMENSIONS ARE TO FACE OF STUD OR CENTERLINE OF COLUMN, UNLESS NOTED OTHERWISE
6. WOOD PANEL DIAPHRAGM PENETRATIONS SHALL BE BLOCKED PER DETAIL 5/S6.1
7. AT MECH UNITS, PROVIDE 4x6 BLOCKING WITH LUS46 HANGER EACH END MIN BELOW CURBS WITH SDS1/4"x4 1/2" SCREWS @ 24" OC (MIN 2 PER SIDE), UNO
8. AT MSTI STRAP LOCATIONS OVER SHEATHING, SUBSTITUTE 10d COMMON x 2" MIN PLYWOOD NAILS FOR 10dx1 1/2" SHORT NAILS, TYPICAL
9. FOR RED-I JOIST REQUIREMENTS SEE DETAIL 1/S6.2
10. FOR TYPICAL WOOD DIA SHEATHING LAYOUT, SEE DETAIL 8/S8.1
11. PROVIDE MSTI36 STRAP(S) AT ALL 3x/LSL LEDGER SPLICES, MIN



A CANOPY AT GRIDLINES A & 1
1/2" = 1'-0"



B CANOPY AT GRIDLINES A & 5
1/2" = 1'-0"



C CANOPY AT GRIDLINES J & 5
1/2" = 1'-0"

STRAP	DESCRIPTION
A	CS16 STRAP OVER SHEATHING & 2x BLOCKING WITH (2) ROWS OF 10d COMMONS @ 4 1/8" OC & (10) 10d COMMONS EACH END L = 0'-11"

STRAP SCHEDULE

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MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL R. SCHOEN C 36165 02-28-27 STATE OF CALIFORNIA

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CONSTRUCTION DOCUMENTS

CANOPY FRAMING PLAN

S3.4

REGISTERED PROFESSIONAL ENGINEER BRIAN S. BARCUS S 4857 STRUCTURAL STATE OF CALIFORNIA 01/07/25

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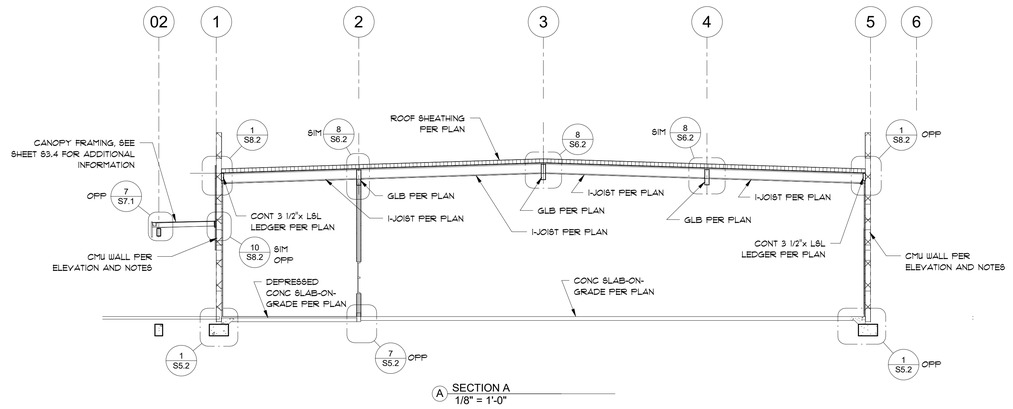
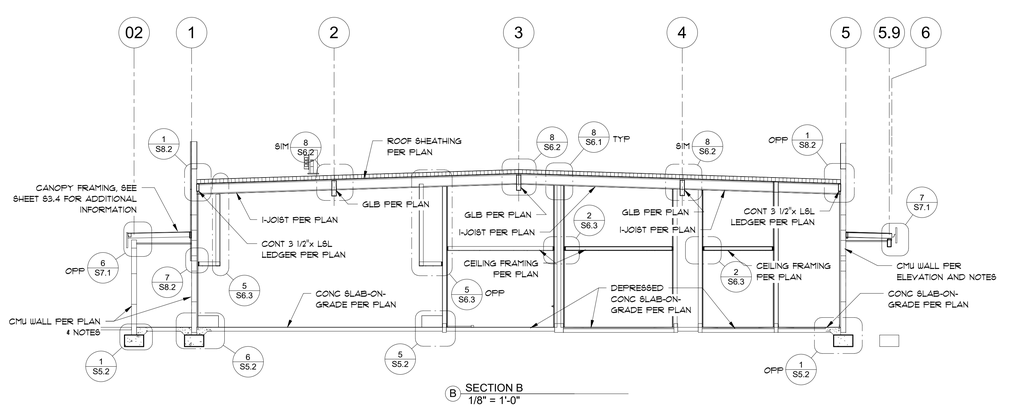
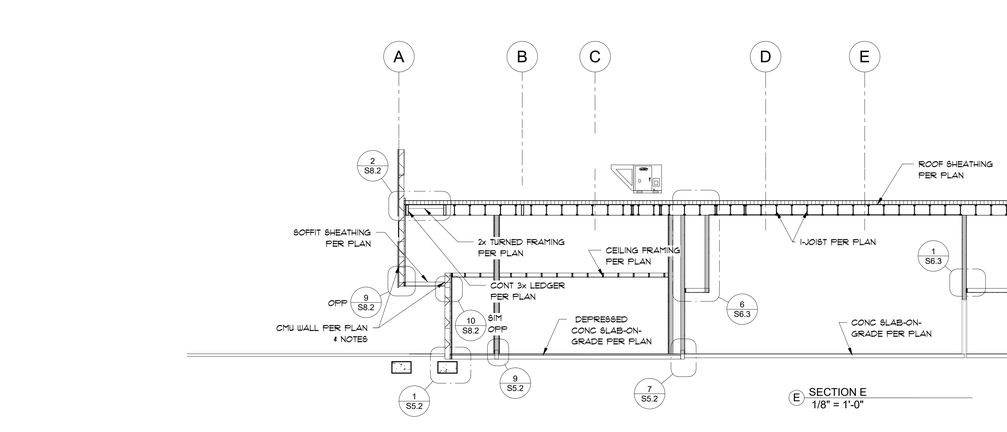


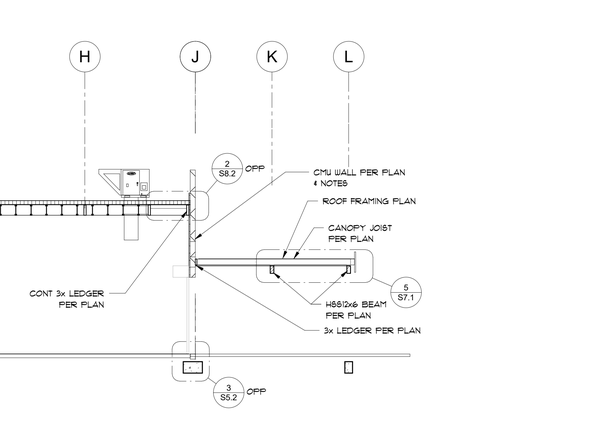
A SECTION A
1/8" = 1'-0"



B SECTION B
1/8" = 1'-0"

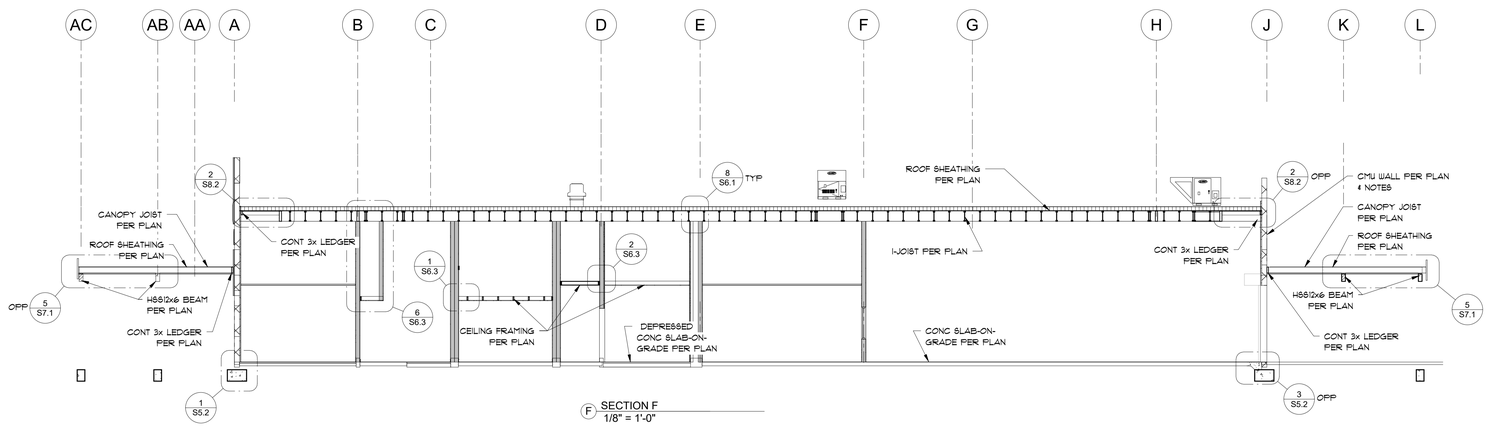


C SECTION C
1/8" = 1'-0"



D SECTION D
1/8" = 1'-0"

E SECTION E
1/8" = 1'-0"



F SECTION F
1/8" = 1'-0"

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PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL R. SCHEER C-30165 02-28-27 RENEWAL DATE STATE OF CALIFORNIA

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CONSTRUCTION DOCUMENTS

SECTIONS

S4.1

REGISTERED PROFESSIONAL ENGINEER SHAWN S. BARCUS C-48672 STRUCTURAL STATE OF CALIFORNIA

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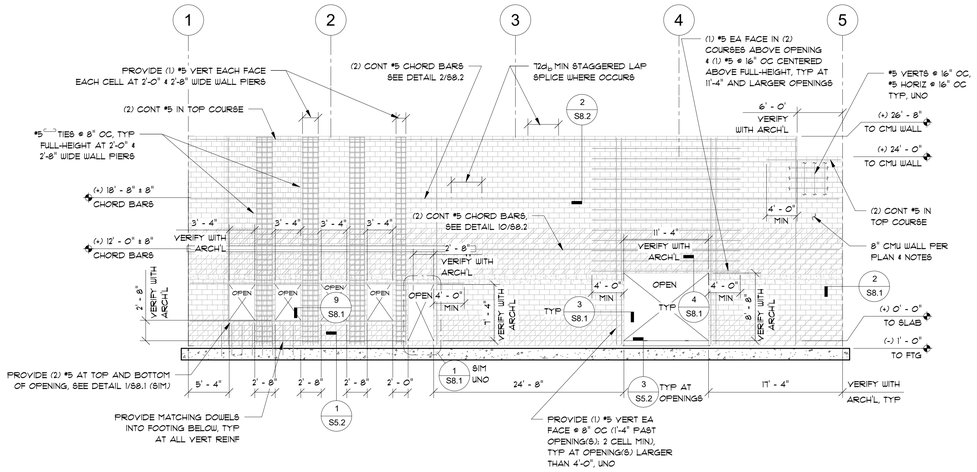
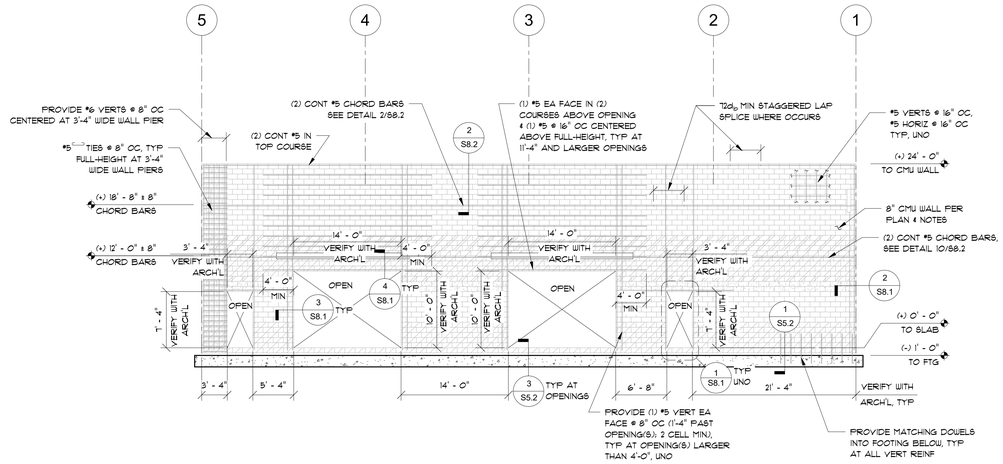


1 CMU WALL ELEVATION GRID A
1/8" = 1'-0"



2 CMU WALL ELEVATION GRID J
1/8" = 1'-0"

3 CMU WALL ELEVATION GRID 1
1/8" = 1'-0"

4 CMU WALL ELEVATION GRID 5
1/8" = 1'-0"

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MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL R. SCHOLTEN C 36165 02-28-27 RENEWAL DATE STATE OF CALIFORNIA

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Author

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CONSTRUCTION DOCUMENTS

CMU WALL ELEVATIONS

S4.2

REGISTERED PROFESSIONAL ENGINEER HERMAN S. BARCUS S 4582 STRUCTURAL STATE OF CALIFORNIA 01/07/25

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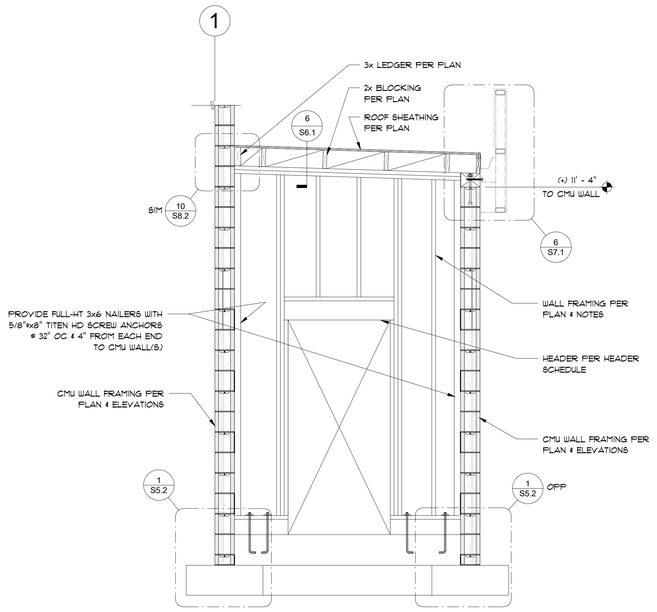
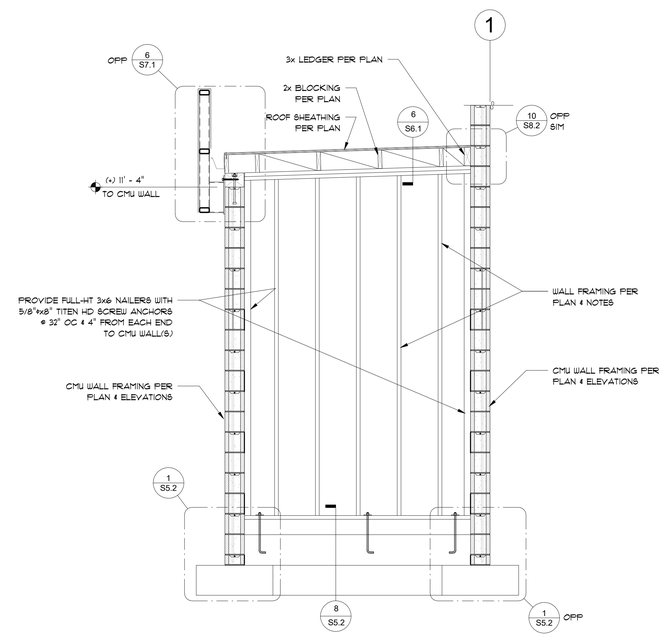
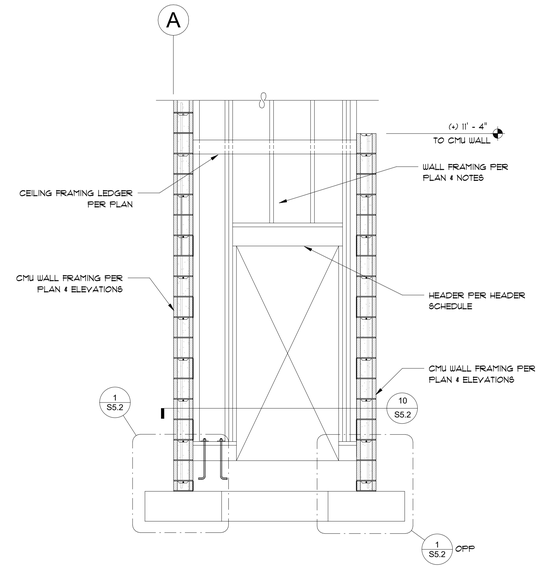
BSE Inc.
BARCUS STRUCTURAL ENGINEERING



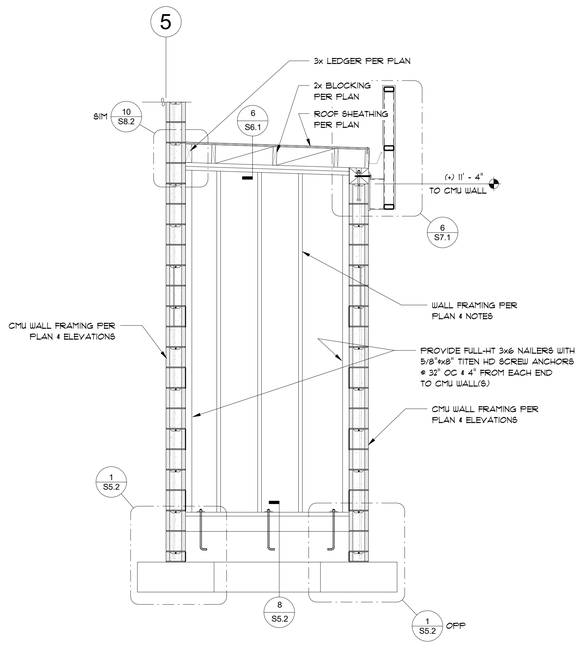
1 WOOD WALL ELEVATION 1
1/2" = 1'-0"



2 WOOD WALL ELEVATION 2
1/2" = 1'-0"



3 WOOD WALL ELEVATION 3
1/2" = 1'-0"



4 WOOD WALL ELEVATION 4
1/2" = 1'-0"

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LICENSED ARCHITECT MICHAEL R. SCHEER C- 38165 02-28-27 RENEWAL DATE STATE OF CALIFORNIA

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WOOD WALL ELEVATIONS

S4.3

REGISTERED PROFESSIONAL ENGINEER BRIAN S. BARCUS S 4807 STRUCTURAL STATE OF CALIFORNIA

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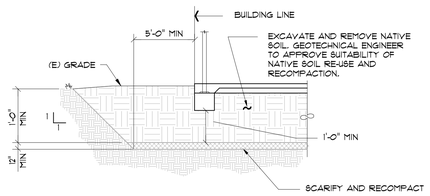
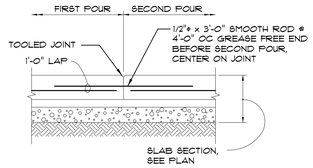
NOTES:
1. REMOVE AND STRIP ALL SURFACE ORGANIC MATERIAL
2. EXCAVATE AND REMOVE NATIVE SOIL INDICATED, SEE GEOTECHNICAL REPORT FOR ADDITIONAL REQUIREMENTS
3. REVIEW WITH GEOTECHNICAL ENGINEER FOR ANY ADDITIONAL REMOVAL
4. SCARIFY, MOISTURE CONDITION AND RECOMPACT AT BOTTOM OF EXCAVATION PER ASTM D1557
5. RETURN EXCAVATED SOIL W/ ENGINEERED FILL MATERIAL, WITH APPROVAL FROM GEOTECHNICAL ENGINEER, AND RECOMPACT PER GEOTECHNICAL REPORT
6. IF REQUIRED, IMPORTED FILL PLACED WITHIN THE BUILDING PAD AREA MUST MEET THE CRITERIA SET FORTH IN DETAIL 9/S5.1
7. SEE GEOTECHNICAL REPORT FOR ADDITIONAL REQUIRMENTS



DETAIL SIMILAR WHERE WALK OCCURS

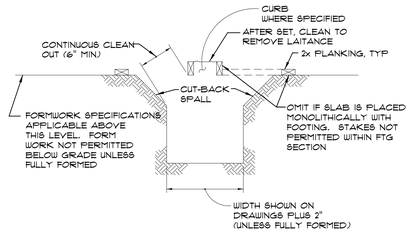
1 OVEREXCAVATION DETAIL
1" = 1'-0"

NOTE:
AT CONTRACTOR'S OPTION, SAWCUT JOINT MAY BE SUBSTITUTED FOR CONSTRUCTION JOINTS. CONTROL JOINTS SHALL BE MADE BY SAWCUTTING SLAB AS SOON AS THE SURFACE IS FIRM ENOUGH THAT IT WILL NOT BE DAMAGED BY THE BLADE (USUALLY WITHIN 4 TO 12 HOURS AFTER THE CONCRETE HARDENS (NO LATER THAN 24 HOURS AFTER PLACEMENT). SAWCUT DEPTH SHALL BE 1/4 OF THE SLAB DEPTH (1 1/2" MAX), AND SHALL BE SPACED AT 10'-0" OC MAX EACH WAY.

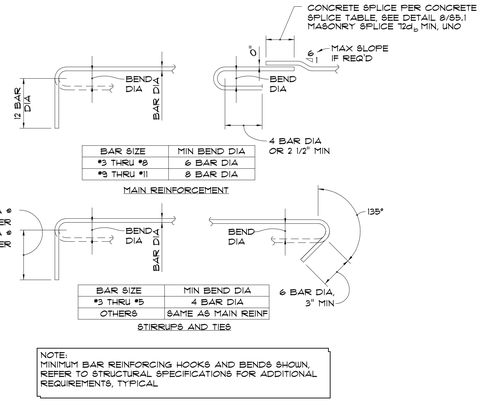


2 CONST SLAB JOINT
3/4" = 1'-0"

NOTE:
FOUNDATION CONCRETE MAY BE PLACED DIRECTLY INTO NEAT EXCAVATIONS PROVIDED THE FOUNDATION TRENCH WALLS ARE STABLE AS DETERMINED BY THE ENGINEER SUBJECT TO REVIEW BY THE GEOTECHNICAL ENGINEER



3 FOUNDATION FORMWORK
3/4" = 1'-0"



BAR SIZE	MIN BEND DIA
#3 THRU #8	6 BAR DIA
#9 THRU #11	8 BAR DIA

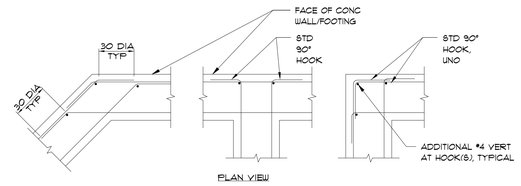
MAIN REINFORCEMENT

BAR SIZE	MIN BEND DIA
#3 THRU #5	4 BAR DIA
OTHERS	SAME AS MAIN REINF

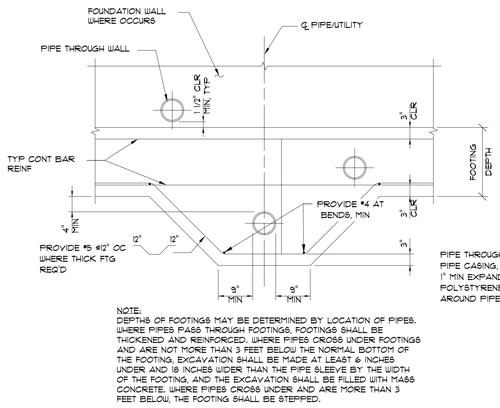
STIRRUPS AND TIES

NOTE:
MINIMUM BAR REINFORCING HOOKS AND BENDS SHOWN. REFER TO STRUCTURAL SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS, TYPICAL

4 TYPICAL BAR BENDS
3/4" = 1'-0"

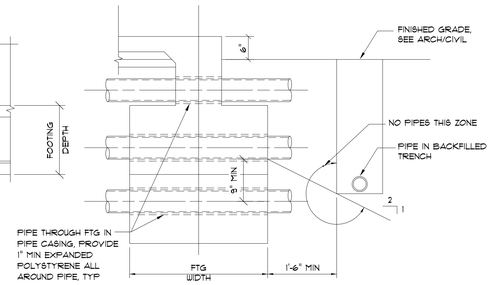


NOTE:
NOT ALL VERTICAL REINFORCING REINFORCING SHOWN. SEE SPECIFIC DETAILS FOR ADDITIONAL REQUIREMENTS

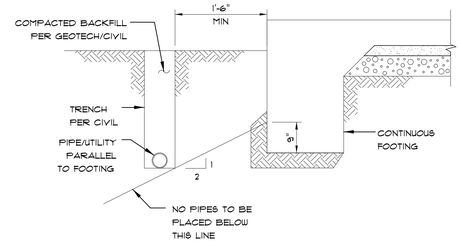


NOTE:
DEPTHS OF FOOTINGS MAY BE DETERMINED BY LOCATION OF PIPES. WHERE PIPES PASS THROUGH FOOTINGS, FOOTINGS SHALL BE THICKENED AND REINFORCED. WHERE PIPES CROSS UNDER FOOTINGS AND ARE NOT MORE THAN 3 FEET BELOW THE NORMAL BOTTOM OF THE FOOTING, EXCAVATION SHALL BE MADE AT LEAST 6 INCHES UNDER AND 18 INCHES WIDER THAN THE PIPE SLEEVE BY THE WIDTH OF THE FOOTING, AND THE EXCAVATION SHALL BE FILLED WITH MASS CONCRETE. WHERE PIPES CROSS UNDER AND ARE MORE THAN 3 FEET BELOW, THE FOOTING SHALL BE STEPPED.

5 FOOTING WALL INTERSECTION
3/4" = 1'-0"



6 PIPES PERPENDICULAR TO FOOTING
3/4" = 1'-0"



7 PIPES PARALLEL TO FOOTING
1" = 1'-0"

BAR SIZE	LAP CLASS	f'_c = 3,000 psi				f'_c =4,000 psi			
		TOP BARS		OTHER BARS		TOP BARS		OTHER BARS	
		CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2
#3	B	28	42	22	32	24	36	19	28
#4	B	37	56	29	43	32	48	25	37
#5	B	47	70	36	54	40	60	31	47
#6	B	56	84	43	64	48	72	37	56
#7	B	81	122	63	94	70	106	54	81
#8	B	93	139	72	107	80	121	62	93
#9	B	105	157	81	121	91	136	70	105
#10	B	118	177	91	136	102	153	79	118

CONCRETE LAP SPLICE LENGTHS

1. ALL LENGTHS ABOVE ARE IN INCHES
2. CASES 1 AND 2, WHICH DEPEND ON THE TYPE OF STRUCTURAL ELEMENT, CONCRETE COVER, AND THE CENTER-TO-CENTER SPACING OF THE BARS, ARE DEFINED AS:
   BEAMS OR COLUMNS: CASE 1: COVER AT LEAST 1.0 d_b AND C.-C. SPACING AT LEAST 2.0 d_b; CASE 2: COVER LESS THAN 1.0 d_b OR C.-C. SPACING LESS THAN 2.0 d_b
   ALL OTHERS: CASE 1: COVER AT LEAST 1.0 d_b AND C.-C. SPACING AT LEAST 3.0d_b; CASE 2: COVER LESS THAN 1.0 d_b OR C.-C. SPACING LESS THAN 3.0d_b
3. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW THE BARS
4. FOR LIGHTWEIGHT AGGREGATE CONCRETE, MULTIPLY TABULATED VALUES BY 1.3
5. FOR EPOXY-COATED BARS, MULTIPLY THE TABULATED VALUES BY ONE OF THE FOLLOWING:

CONCRETE COVER AND SPACING	TOP BARS	OTHER BARS
COVER < 3.0 d_b OR C.-C. SPACING < 7.0 d_b	1.7/1.3 = 1.31	1.50
COVER ≥ 3.0 d_b AND C.-C. SPACING ≥ 7.0d_b	1.20	1.20

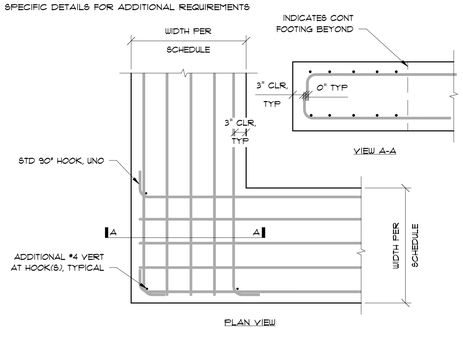
8 CONCRETE LAP SPLICE SCHEDULE
12" = 1'-0"

NOTE:
IF REQUIRED, IMPORTED FILL MATERIALS THAT WILL BE PLACED WITHIN BUILDING OR CONCRETE FLATWORK AREAS MUST BE NON-HAZARDOUS AND BE OBTAINED FROM A SINGLE, UNIFORM SOURCE THAT MEETS THE FOLLOWING CRITERIA.

Maximum Particle Size:	3-inches
Percent Passing #4 Sieve:	65 – 100
Percent Passing #200 Sieve:	20 – 45
Plasticity Index:	less than 12
Expansion Index:	< 20
R-Value:	> 36
Low Corrosion Potential:	
Soluble Sulfates:	< 1,500 mg/kg
Soluble Chlorides:	< 300 mg/kg
Soil Resistivity:	> 5,000 ohm-cm

9 IMPORTED FILL MATERIAL
1" = 1'-0"

NOTE:
NOT ALL VERTICAL REINFORCING SHOWN. SEE SPECIFIC DETAILS FOR ADDITIONAL REQUIREMENTS



10 CONT FOOTING INTERSECTION DETAIL
3/4" = 1'-0"

IDENTIFICATION STAMP
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PBK

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MADERA HIGH SCHOOL FIELDHOUSE
200 SOUTH "I" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL
LICENSED ARCHITECT MICHAEL R. GORDON C 36165 02-28-27 STATE OF CALIFORNIA

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	DSA BACKCHECK SUBMITTAL	01-08-25

CONSTRUCTION DOCUMENTS

FOUNDATION DETAILS

S5.1

LICENSED PROFESSIONAL ENGINEER HERMAN S. BARCUS S 4867 STRUCTURAL STATE OF CALIFORNIA 01/31/25

7600 North Palm Avenue
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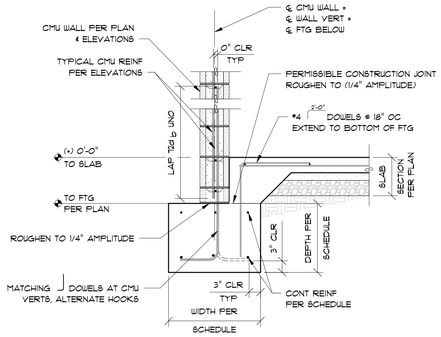
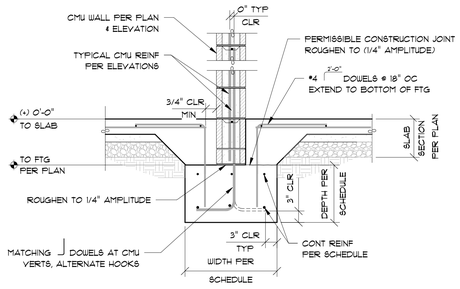
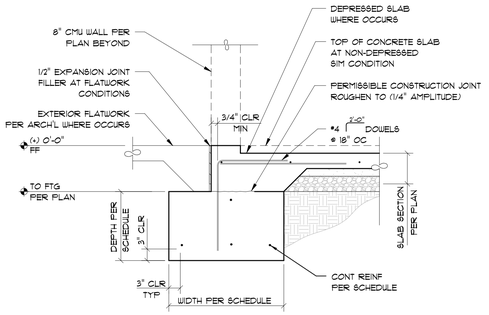
BSE Inc. BARCUS STRUCTURAL ENGINEERING



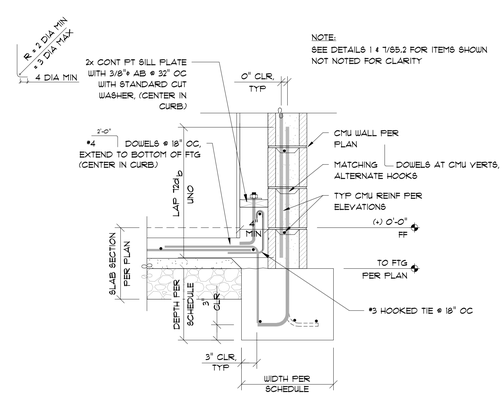
1 TYPICAL PERIMETER FOOTING AT CMU
3/4" = 1'-0"



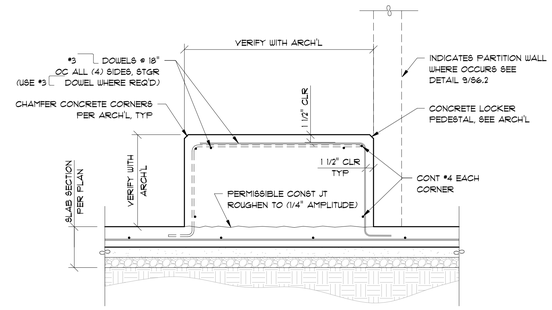
2 TYPICAL INTERIOR FOOTING AT CMU
3/4" = 1'-0"



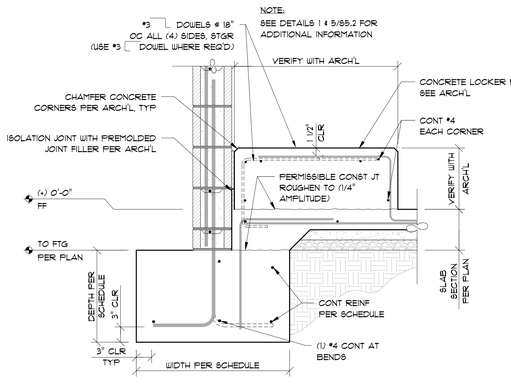
3 CMU WALL FTG AT OPENING
3/4" = 1'-0"



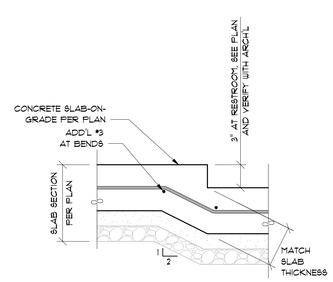
4 CMU FOOTING WITH CURB
1" = 1'-0"



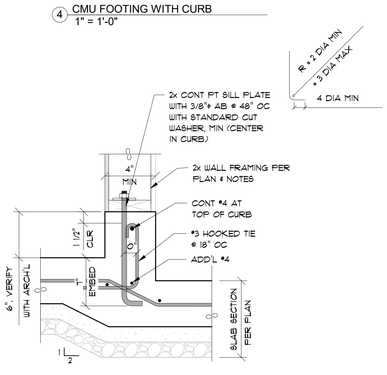
5 LOCKER PEDESTAL
1" = 1'-0"



6 LOCKER PEDESTAL AT CMU WALL
1" = 1'-0"

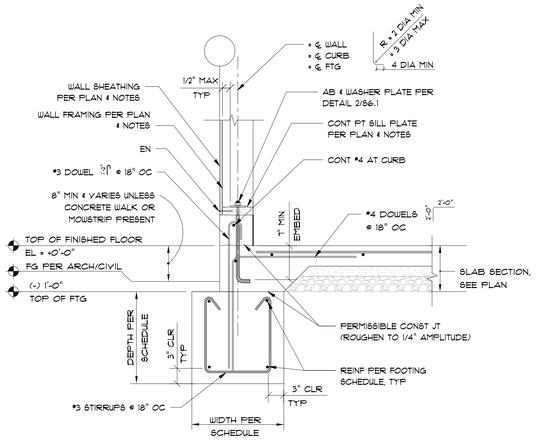


DEPRESSED SLAB

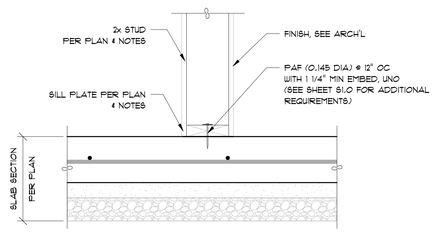


DEPRESSED SLAB AT CURB

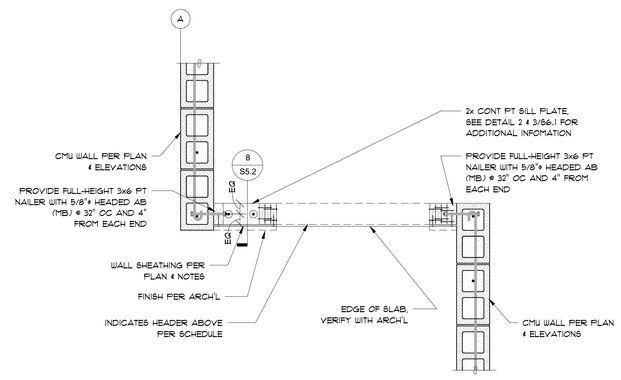
7 DEPRESSED SLAB DETAIL
1 1/2" = 1'-0"



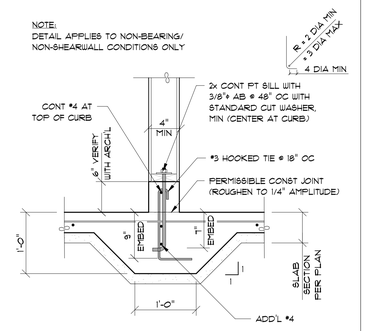
8 CENTERED PERIMETER FOOTING
1" = 1'-0"



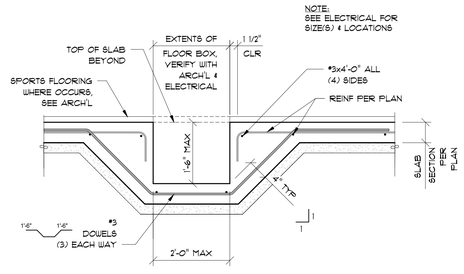
9 NON BEARING WALL AT SLAB
1 1/2" = 1'-0"



10 WOOD WALL AT CMU WALLS
3/4" = 1'-0"



11 NON-BEARING WALL AT CURB
1" = 1'-0"



12 SLAB AT ELECTRICAL FLOOR BOX
1" = 1'-0"

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FOUNDATION DETAILS

S5.2

REGISTERED PROFESSIONAL ENGINEER JORDAN S. BARCUS S 4802 STRUCTURAL STATE OF CALIFORNIA

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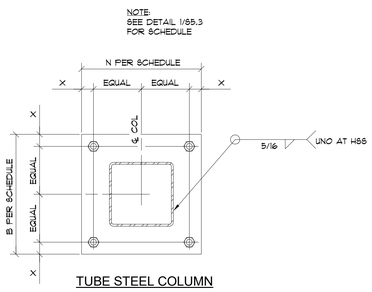
Suite 200 / Fresno, CA 93711
office 559.261.8585
fax 559.261.8580
website www.BarcusInc.com
BSE Inc. BARCUS STRUCTURAL ENGINEERING

COL SIZE	℄ GRADE	B	N	T	X	ANCHOR BOLTS (*) DIA x EMB
HSS5x5	GR 50	0'-11"	0'-11"	5/8"	1 1/2"	(4) 3/4"ø x1'-0" MIN
HSS6x4	GR 50	1'-0"	0'-10"	3/4"	1 1/2"	(4) 3/4"ø x1'-0" MIN

COLUMN BASE PLATE SCHEDULE

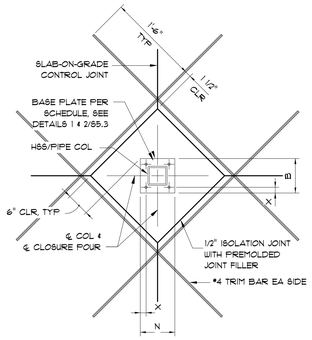
NOTES:
1. PROVIDE DBL NUTS FOR LEVELING AT BASE PLATE ANCHOR BOLTS, UNLESS NOTED OTHERWISE
2. BASE PLATE TO BE CENTERED ON COL, UNLESS NOTED OTHERWISE
3. GROUT BASE PLATES PRIOR TO LOADING COLUMN, TYPICAL PER AISC
4. AT THREADED RODS, PROVIDE EMBED ℄ 1/2x2 1/4xO'-2 1/4" ¢ DBL NUT, TYP
5. T = BASE ℄ THICKNESS
6. SEE DETAIL 2/S5.3 FOR ADDITIONAL INFO

1 BASE PLATE SCHEDULE
NTS

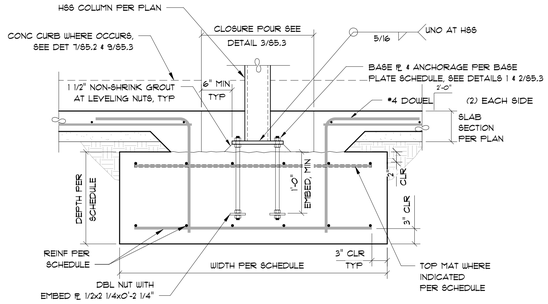


TUBE STEEL COLUMN

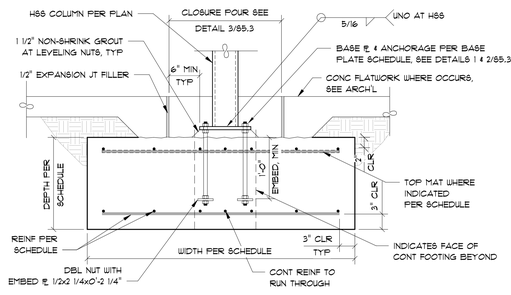
2 BASE PLATE DETAIL
NTS



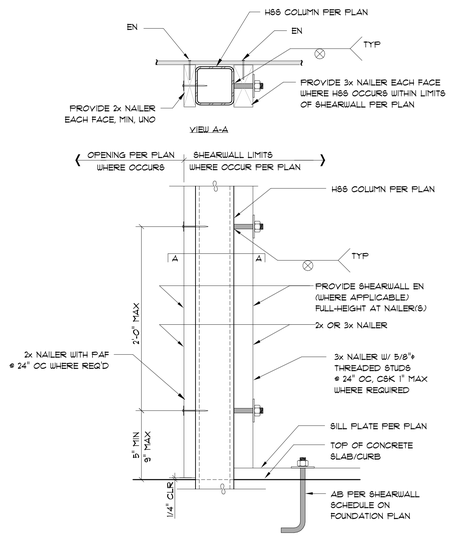
3 ISOLATED JOINT AT HSS COL
3/4" = 1'-0"



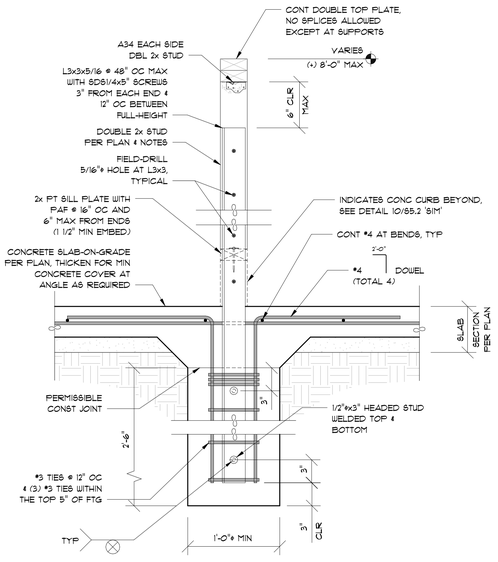
4 HSS COL FOOTING
1" = 1'-0"



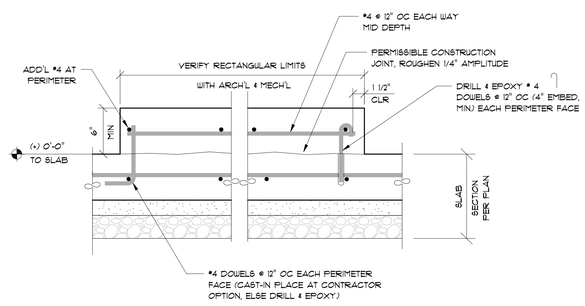
5 HSS CANOPY COL FOOTING
1" = 1'-0"



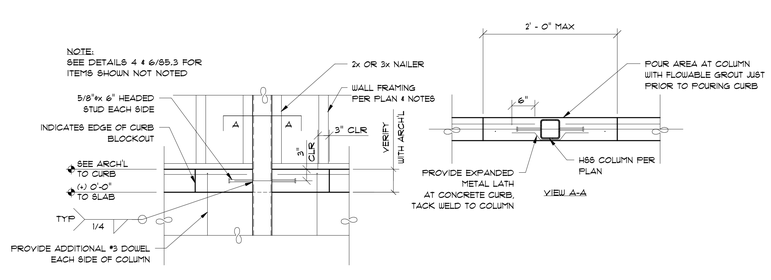
6 NAILER AT HSS COLUMN
1 1/2" = 1'-0"



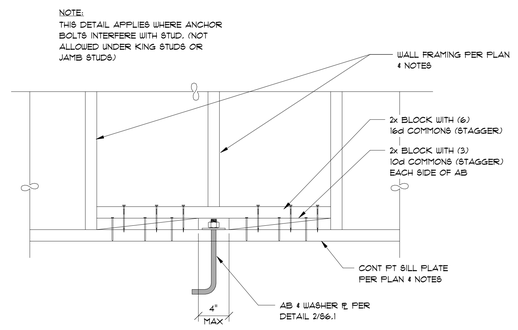
7 UNBRACED NON-BEARING WALL DETAILS
1 1/2" = 1'-0"



8 HOUSEKEEPING PAD AT SLAB
1 1/2" = 1'-0"



9 HSS COLUMN AT CURB
3/4" = 1'-0"



10 WALL BLOCKING AT SILL ANCHOR
1 1/2" = 1'-0"

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PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL R. SCHEIN C 36165 02-28-27 RENEWAL DATE STATE OF CALIFORNIA

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FOUNDATION DETAILS

S5.3

REGISTERED PROFESSIONAL ENGINEER JOHN S. BARCUS III S 4987 STRUCTURAL STATE OF CALIFORNIA 01/07/25

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Suite 200 / Fresno, CA 93711
office 559.261.8585
fax 559.261.8580
website www.BarcusInc.com
BSE Inc. BARCUS STRUCTURAL ENGINEERING

NOTE:
CONTRACTOR TO USE COMMON NAILS ONLY.
SEE LIGHT WOOD FRAMING NOTES ON FOUNDATION PLAN FOR REQUIREMENTS

TABLE 2304.10.2
FASTENING SCHEDULE

DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER[a]	SPACING AND LOCATION
Roof		
1. Blocking between ceiling joists, rafters or trusses to top plates or other framing below	3-8d common (2½" x 0.131"); or 2-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" x 0.120" nails; or 3-3" 14 gage staples, 7/16" crown	Each end, toenail
Blocking between rafters or truss not at the wall top plate, to rafter or truss	3-8d common (2½" x 0.131"); or 3-8d box (2½" x 0.113"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	Each end, toenail
	2-16d common (3½" x 0.162"); 3-3" x 0.131" nails	End nail
Flat blocking to truss and web filler	16d common (3½" x 0.162") (8-8" o.c. 3-3" x 0.131" nails (8" o.c.	Face nail
2. Ceiling joists to top plate	3-8d common (2½" x 0.131"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	Each joist, toenail
3. Ceiling joist not attached to parallel rafter, laps over partitions (no continuous tie Section 2308.7.3.1, Table 2308.7.3.1)	3-16d common (3½" x 0.162"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, 7/16" crown	Face nail
4. Ceiling joist attached to parallel rafter (heel joint (see Section 2308.7.3.1, Table 2308.7.3.1)	Per Table 2308.7.3.1	Face nail
5. Collar-tie to rafter	3-10d common (3" x 0.148"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, 7/16" crown	Face nail
6. Rafter or roof truss to top plate (See Section 2308.7.5, Table 2308.7.5)	3-16d common (3½" x 0.162") or 4-10d box (3" x 0.128") or 4-3" x 0.131" nails or 4-3" 14 gage staples, 7/16" crown	2 toenails on one side and 1 toenail on opposite side of rafter or truss[f]
7. Roof rafters to ridge valley or hip rafters; or roof rafter to 2-inch ridge beam	2-16d common (3½" x 0.162") or 3-10d box (3" x 0.128") or 3-3" x 0.131" nails or 3-3" 14 gage staples, 7/16" crown	End nail
	3-10d common (3" x 0.148") or 4-10d box (3" x 0.128") or 4-3" x 0.131" nails	Toenail
Wall		
8. Stud to stud (not at braced wall panels)	16d common (3½" x 0.162"); 2[f] x 0.131" nails at	24" o.c. face nail
		16" o.c. face nail
9. Stud to stud and abutting studs at intersecting wall corners (at braced wall panels)	16d common (3½" x 0.162"); 3[f] x 0.131" nails, at	16" o.c. face nail
		12" o.c. face nail
10. Built-up header (2" to 2" header)	16d common (3½" x 0.162")	16" o.c. each edge, face nail
		12" o.c. each edge, face nail
11. Continuous header to stud	4-8d common (2½" x 0.131"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	Toenail
12. Top plate to top plate	16d common (3½" x 0.162"); 2[f] x 0.131" nails at	16" o.c. face nail
		12" o.c. face nail
13. Top plate to top plate, at end joints	8-16d common (3½" x 0.162"); or 12-10d box (3" x 0.128"); or 12-3" x 0.131" nails	End nail, each side of end joint, face nail (minimum 24" lap splice length each side of end joint)
14. Bottom plate to joist, rim joist, band joist or blocking (at braced wall panels)	16d common (3½" x 0.162")	16" o.c. face nail
		12" o.c. face nail
15. Bottom plate to joist, rim joist, band joist or blocking at braced wall panels	3-16d common (3½" x 0.162"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, 7/16" crown	16" o.c. face nail
16. Stud to top or bottom plate	4-8d common (2½" x 0.131"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	Toenail
	2-16d common (3½" x 0.162"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	End nail
17. Top plates, laps at corners and intersections	2-16d common (3½" x 0.162"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	Face nail
18. 1" brace to each stud and plate	2-8d common (2½" x 0.131"); or 2-10d box (3" x 0.128"); or 2-3" x 0.131" nails; or 2-3" 14 gage staples, 7/16" crown	Face nail
19. 1" × 6" sheathing to each bearing	2-8d common (2½" x 0.131"); or 2-10d box (3" x 0.128"); or 2-3" x 0.131" nails; or 2-3" 14 gage staples, 7/16" crown	Face nail
20. 1" × 8" and wider sheathing to each bearing	3-8d common (2½" x 0.131"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	Face nail
	Wider than 1" × 8" 3-8d common (2½" x 0.131"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, 7/16" crown	Face nail
Floor		
21. Joist to sill, top plate, or girder	4-8d box (2½" x 0.113"); or 3-8d common (2½" x 0.131"); or floor-to-floor connection 3-16d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	Toenail
	8d box (2½" x 0.113")	4" o.c., toenail
22. Rim joist, band joist, or blocking to top plate, sill or other framing below	8d common (2½" x 0.131"); or 10d box (3" x 0.128"); or 3" x 0.131" nails; or 3" 14 gage staples, 7/16" crown	6" o.c., toenail
23. 1" × 6" subfloor or less to each joist	3-8d box (2½" x 0.113"); or 3-8d common (2½" x 0.131"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 7/16" crown	Face nail
24. 2 subfloor to joist or girder	2-16d box (3½" x 0.135"); or 3-10d common (3" x 0.162")	Blind and face nail
25. 2" planks (plank & beam — floor & roof)	3-16d box (3½" x 0.135"); or 3-16d common (3½" x 0.162")	Each bearing, face nail
	20d common nail[e] x 0.192")	32" o.c. face nail at top and bottom staggered on opposite sides
26. Built-up girders and beams, 2" lumber plies	10d box (3" x 0.128") nails[d] or 3" x 0.131" nails or 3" 14 gage staples, 7/16" crown	24" o.c. face nail at top and bottom staggered on opposite sides
	And: 2-20d common nail[e] x 0.192"); or 3-16d box (3½" x 0.128"); or 3-3" x 0.131" nails or 3-3" 14 gage staples, 7/16" crown	Ends and at each splice, face nail
27. Ledger strip supporting joists or rafters	3-16d common (3½" x 0.162"); or 4-16d box (3½" x 0.128"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, 7/16" crown	Each joist or rafter, face nail
28. Joist to band joist or rim joist	3-16d common (3½" x 0.162"); or 4-16d box (3½" x 0.128"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, 7/16" crown	End nail
29. Bridging or blocking to joist, rafter or truss	2-8d common (2½" x 0.131"); or 2-10d box (3" x 0.128"); or 2-3" x 0.131" nails; or 2-3" 14 gage staples, 7/16" crown	Each end, toenail

Wood structural panels (WSP), subfloor, roof and interior wall sheathing to framing and particleboard wall sheathing to framing[b]

		Edges (inches)	Intermediate supports (inches)
30. 5/16" — 1/2"	8d common or deformed (2" x 0.113"); or 2½" x 0.113" nail; subfloor and wall	6	12
	8d common or deformed (2½" x 0.131" nail[c]; Panel web (roof) or 2½" x 0.113") nail (roof)[c]	6[h]	6[h]
	1½" 16 gage staple, ⅞" crown (subfloor and wall)	4	8
	2½" x 0.131"/0.220" ring-shank nail (roof)	3[i]	3[i]
	1¾" 16 gage staple, ⅞" crown (roof)	3[i]	3[i]
31. 19/32" — 3/4"	8d common or deformed (2½" x 0.131"); or 2½" x 0.113" nail (subfloor and wall)	6	12
	8d common or deformed (2½" x 0.131" x 0.281" head (roof)[c]; or RSRS 01 (2½" x 0.113") wall (roof)[c]	6[h]	6[h]
	2½" x 0.131"/0.266" head nail; or 2" 16 gage staple, ⅞" crown	4	8
32. 7/8" — 1 1/4"	10d common (3" x 0.148"); or deformed (3" x 0.131" x 0.297" head)	6	12
Other exterior wall sheathing			
33. ½" fiberboard sheathing[g]	1½" x 0.120", galvanized roofing nail (⅜" head diameter) or	3	6
34. 25/32" fiberboard sheathing[g]	1½" x 0.134" galvanized roofing nail (⅜" diameter heads) or	3	6
Wood structural panels, combination subfloor underlayment to framing			
35. ½" and less	8d common (2½" x 0.131"); or deformed (2½" x 0.113")	6	12
36. ⅝" — 1"	8d common (2½" x 0.131"); or deformed (2½" x 0.113") or 2½" x 0.120")	6	12
37. 1 1/4" — 1 1/2"	10d common (3" x 0.148"); or deformed (3" x 0.131" x 0.297" head) or deformed (2½" x 0.120")	6	12
Panel siding to framing			
38. ½" or less	6d corrosion-resistant siding (1½" x 0.106"); or 8d corrosion-resistant casing (2" x 0.099")	6	12
39. ⅝"	8d corrosion-resistant siding (2½" x 0.128"); or 8d corrosion-resistant casing (2½" x 0.113")	6	12
Interior paneling			
40. ¼"	6d casing (2" x 0.080"); or 6d finish (2¼" x 0.072")	6	12
41. ⅜"	8d casing (2" x 0.099"); or 8d finish (2½" x 0.091") (Panel supports at 24 inches)	6	12

For SI: 1 inch = 25.4 mm.

a. Nails spaced at 6 inches at intermediate supports where spans are 48 inches or more. For nailing of wood structural panel and particleboard diaphragms and shear walls, refer to Section 2305. Nails for wall sheathing are permitted to be common, box or casing.

b. Spacing shall be 6 inches on center on the edges and 12 inches on center at intermediate supports for nonstructural applications. Panel supports at 16 inches (20 inches if strength axis in the long direction of the panel, unless otherwise marked.

c. Where a rafter is fastened to an adjacent parallel ceiling joist in accordance with this schedule and the ceiling joist is fastened to the top plate in accordance with this schedule, the number of toenails in the rafter shall be permitted to be reduced by one nail.

d. RSRS-01 is a Roof Sheathing Ring Shank nail meeting the specifications in ASTM F1667.

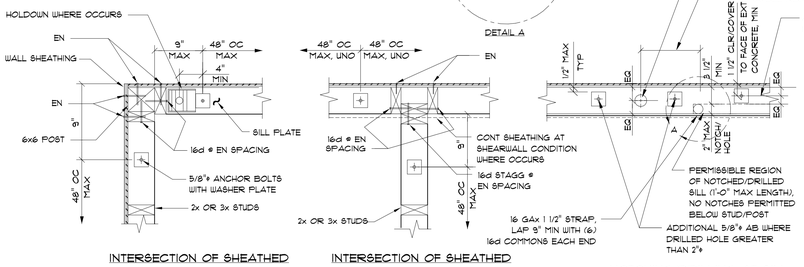
e. Tabulated fastener requirements apply where the ultimate design wind speed is less than 140 mph. For wood structural panel roof sheathing attached to gable-end roof framing and to intermediate supports within 48 inches of roof edges and ridges, nails shall be spaced at 6 inches on center where the ultimate design wind speed is greater than 130 mph in Exposure B or greater than 110 mph in Exposure C. Spacing exceeding 6 inches on center at intermediate supports shall be permitted where the fastening is designed per the AWC NDS.

f. Fastening is only permitted where the ultimate design wind speed is less than or equal to 110 mph.

g. Nails and staples are carbon steel meeting the specifications of ASTM F1667. Connections using nails and staples of other materials, such as stainless steel, shall be designed by acceptable engineering practice or approved under Section 104.11.

1 FASTENING SCHEDULE
NTS

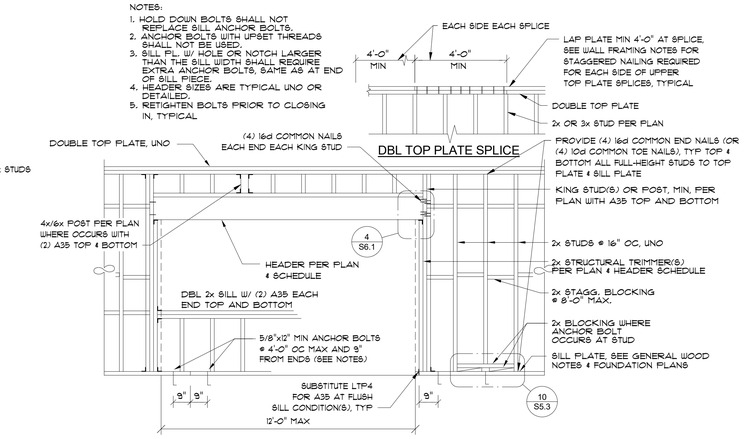
NOTE:
SEE FOUNDATION PLAN & SHEARWALL SCHEDULE FOR ADDITIONAL INFORMATION INCLUDING AB SPACING AT SHEARWALLS. PROVIDE 20d COMMON FACE NAILS (FREDRILL) AT 3x STUDS, TYP



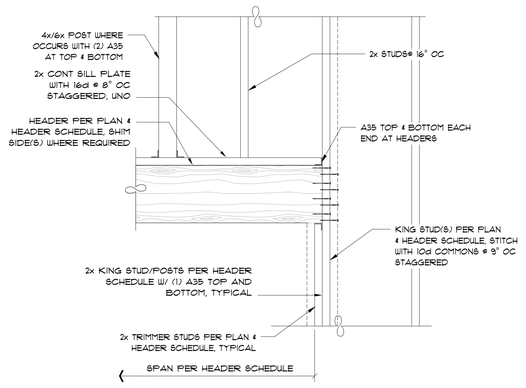
INTERSECTION OF SHEATHED WALLS AT CORNERS | INTERSECTION OF SHEATHED AND UNSHEATHED WALLS | NOTCHING/DRILLING AT SILL | INTERSECTION OF SHEATHED WALLS

2 STUD WALL CORNER INTERSECTION
12" = 1'-0"

NOTES:
1. HOLD DOWN BOLTS SHALL NOT REPLACE SILL ANCHOR BOLTS.
2. ANCHOR BOLTS WITH UPSET THREADS SHALL NOT BE USED.
3. SILL PL. W/ HOLE OR NOTCH LARGER THAN THE SILL WIDTH SHALL REQUIRE EXTRA ANCHOR BOLTS, SAME AS AT END OF SILL PIECE.
4. HEADER SIZES ARE TYPICAL UNO OR DETAILED.
5. RETIGHTEN BOLTS PRIOR TO CLOSING IN, TYPICAL

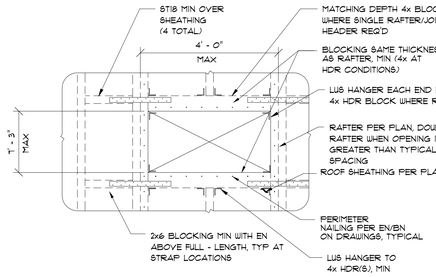


3 TYPICAL WALL FRAMING
12" = 1'-0"

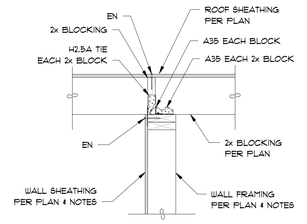


4 HEADER DETAIL
1" = 1'-0"

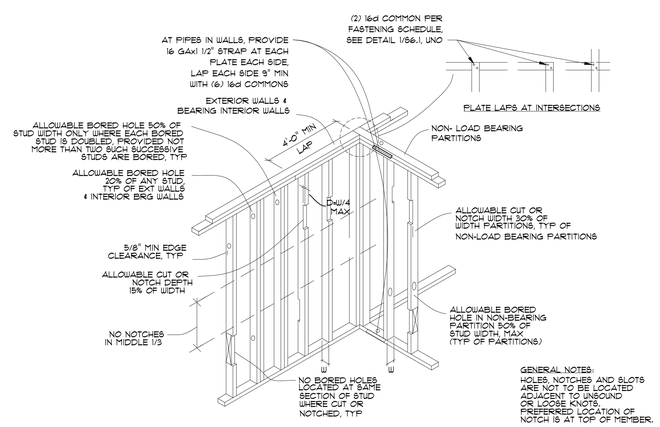
NOTES:
1. ONLY SINGLE (1) CONSEC JOIST/RAFTER MAY BE CUT AT OPENING(S)
2. NO DOUBLE RAFTERS OR LVL/LSL JOISTS MAY BE CUT AT OPENING(S) WITHOUT PRIOR APPROVAL OF ENGINEER AND DSA



5 TYPICAL PENETRATION AT JOIST/RAFTER
1" = 1'-0"



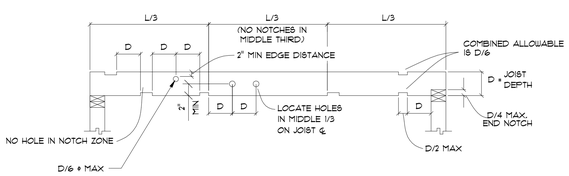
6 2x BLOCKING AT INTERIOR BRG WALL
1" = 1'-0"



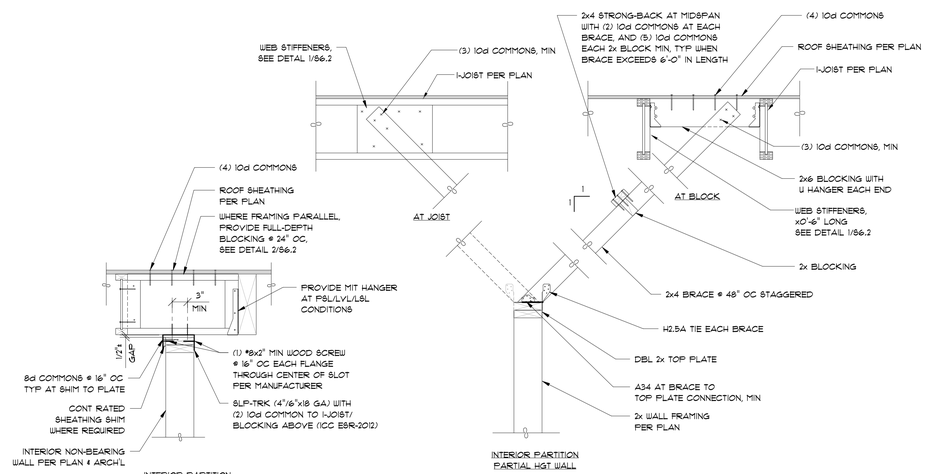
GENERAL NOTES:
HOLES, NOTCHES AND SLOTS ARE NOT TO BE LOCATED ADJACENT TO UNSOUND OR LOOSE KNOTS. PREFERRED LOCATION OF NOTCH IS AT TOP OF MEMBER.

FOR SILL NOTCHES OR HOLES, SEE DETAIL 2/B6.1

STUDS						
	STUD WIDTH		NOTCHING		BORING	
SIZE	NOMINAL	ACTUAL	15%	30%	20%	50%
2x4	4"	3-1/2"	1/2"	1"	5/8"	1-3/4"
2x6	6"	5-1/2"	3/4"	1-1/2"	1"	2-3/4"



7 STUD AND JOIST NOTCHING AT INT PARTITION WALLS AND CEILING JOISTS
12" = 1'-0"



8 NON-BEARING WALL BRACING
1" = 1'-0"

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
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DATE: 01/23/2025

PBK

ARCHITECT PBK Architects, Inc.
FRESNO
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PBK.com

MADERA HIGH SCHOOL FIELDHOUSE
200 SOUTH "I" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL
LICENSED ARCHITECT MICHAEL R. CHECKETTS C 38165 02-28-27 RENEWAL DATE STATE OF CALIFORNIA

PROJECT NUMBER 22PBK-08
DATE 01/07/25
DSA APPLICATION NO. 02-121624
FILE NO. 20-H3
PTN NO. 65243-153
DRAWN BY JWK

REVISIONS

#	DESCRIPTION	DATE
	DSA SUBMITTAL	08-21-23
	DSA BACKCHECK SUBMITTAL	01-08-25

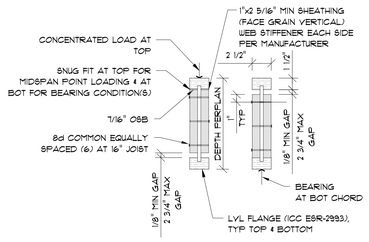
CONSTRUCTION DOCUMENTS

WOOD FRAMING DETAILS

S6.1

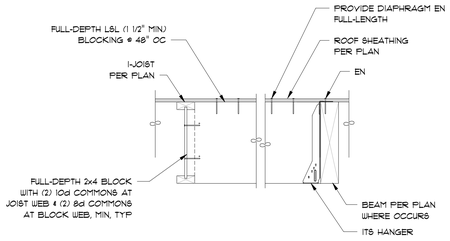
STRUCTURAL PROFESSIONAL ENGINEER BARCUS S 4867 STRUCTURAL STATE OF CALIFORNIA 01/07/25

7600 North Palm Avenue
Suite 200 / Fresno, CA 93711
office 559.261.8585
fax 559.261.8580
website www.Barcusinc.com
BSE Inc. BARCUS STRUCTURAL ENGINEERING

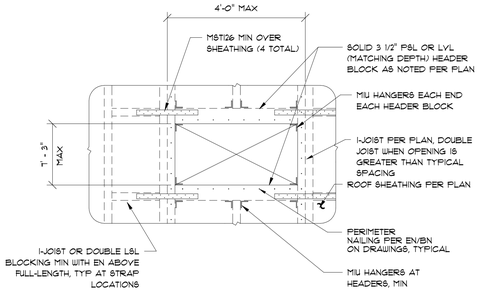


RED-I 65 JOIST

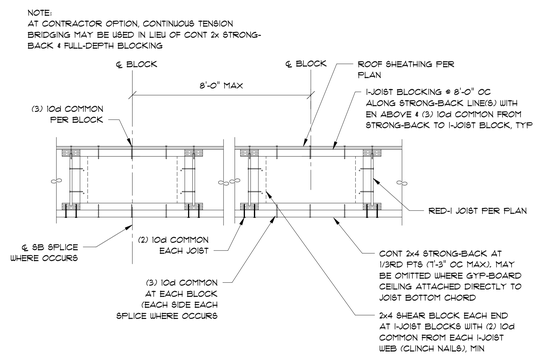
1 WEB STIFFENERS
1 1/2" = 1'-0"



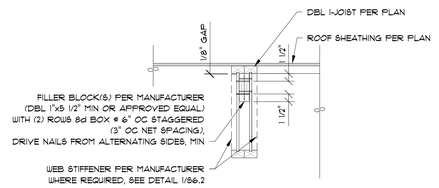
2 FULL-DEPTH BLOCKING
1" = 1'-0"



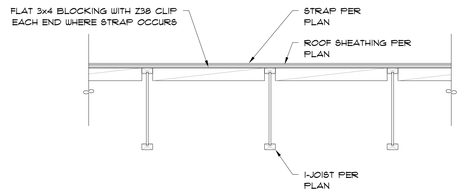
3 TYPICAL PENETRATION AT I-JOIST
1" = 1'-0"



4 STRONGBACK AT I-JOIST
1" = 1'-0"

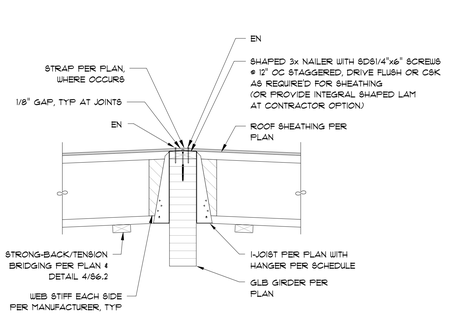


5 DBL I-JOIST CONNECTION
1" = 1'-0"

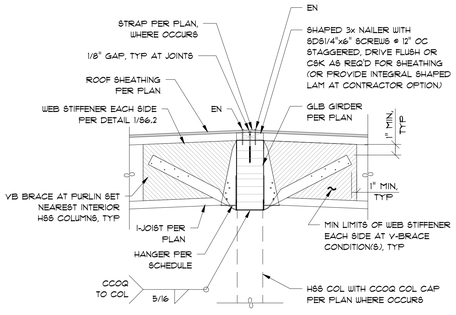


6 STRAPS AT I-JOIST
1" = 1'-0"

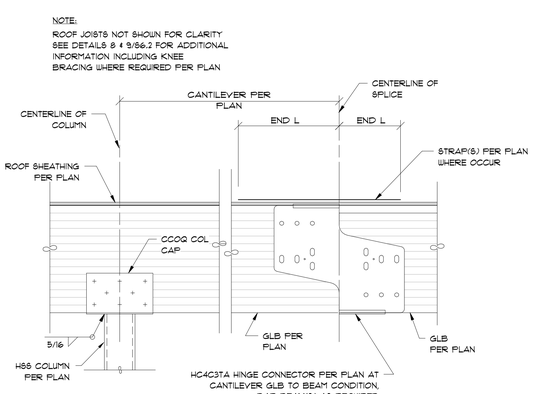
7 NOT USED
NTS



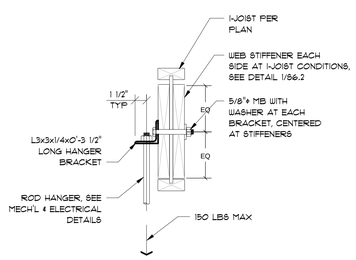
8 I-JOIST AT GLB
1" = 1'-0"



9 I-JOIST AT RIDGE
1" = 1'-0"

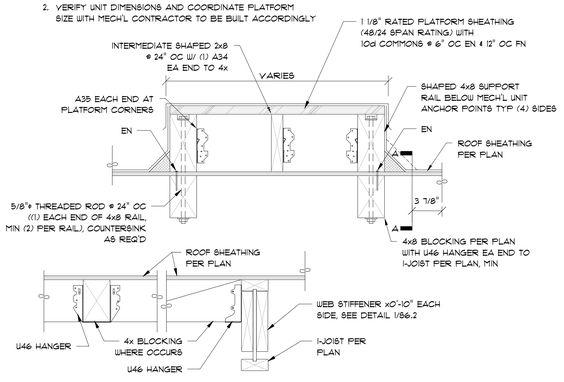


10 GLB HINGE CONNECTION
1" = 1'-0"

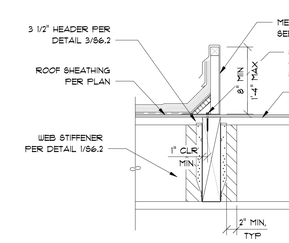


11 TYP HANGER CONNECTION
1 1/2" = 1'-0"

NOTES:
1. SEE MECH'L & ARCH'L FOR ADDITIONAL INFORMATION
2. VERIFY UNIT DIMENSIONS AND COORDINATE PLATFORM SIZE WITH MECH'L CONTRACTOR TO BE BUILT ACCORDINGLY



12 MECHANICAL PLATFORM DETAIL
1 1/2" = 1'-0"



13 MECH CURB ANCHORAGE AT HEADER
1" = 1'-0"

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
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SS ☑ FLS ☑ ACS ☑
DATE: 01/23/2025

PBK

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FRESNO
7790 North Palm Avenue
Fresno, CA 93711
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559-448-8467 F
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LICENSED ARCHITECT MICHAEL A. SCHEIDEN C 36165 02-28-27 STATE OF CALIFORNIA

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	DSA SUBMITTAL	08-21-23
	DSA BACKCHECK SUBMITTAL	01-08-25

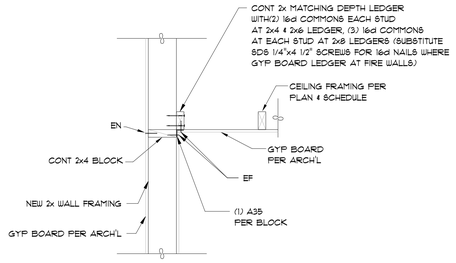
CONSTRUCTION DOCUMENTS

WOOD FRAMING DETAILS

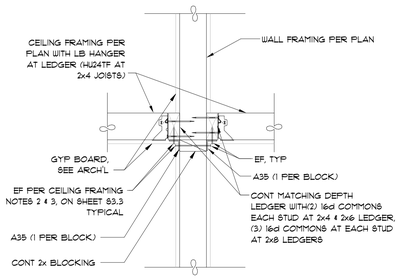
S6.2

REGISTERED PROFESSIONAL ENGINEER BARCUS S. BARCUS III S 4857 STRUCTURAL STATE OF CALIFORNIA 09/30/25

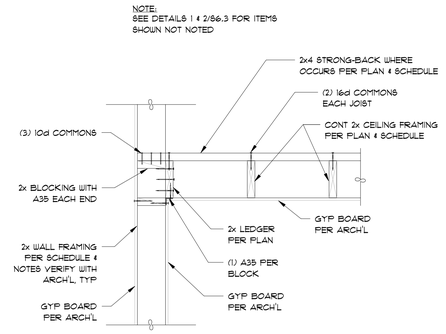
7600 North Palm Avenue
Suite 200 / Fresno, CA 93711
office 559.261.8585
fax 559.261.8580
website www.BarcusInc.com
BSE Inc. BARCUS STRUCTURAL ENGINEERING



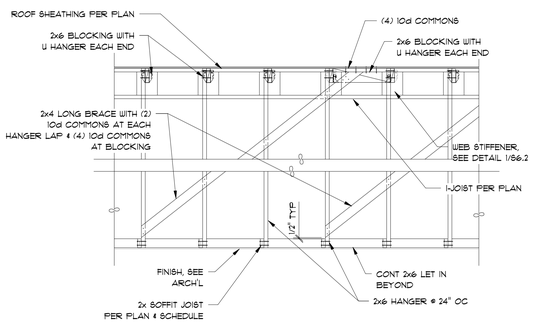
1 CEILING FRAMING AT ENDWALL
1" = 1'-0"



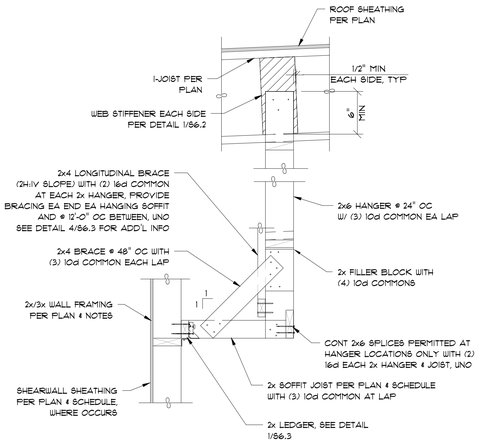
2 CEILING FRAMING AT 2x WALL
1 1/2" = 1'-0"



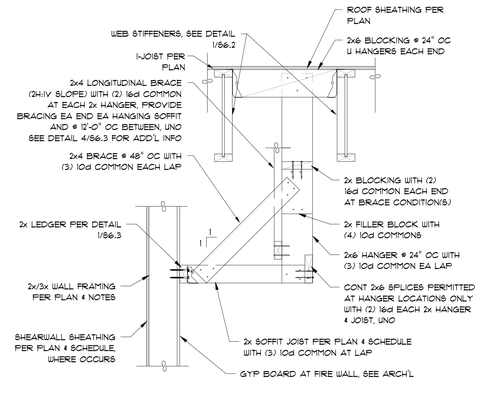
3 STRONG-BACK AT CEILING FRAMING
1" = 1'-0"



4 SOFFIT BRACING AT I-JOIST
1/2" = 1'-0"

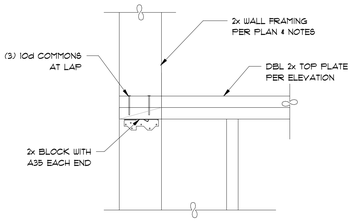


5 SOFFIT HANGER AT I-JOIST
1" = 1'-0"

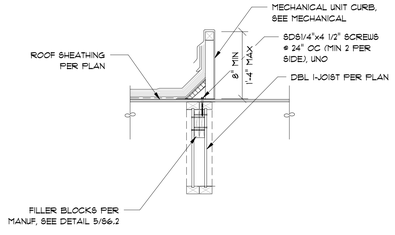


6 HANGING SOFFIT PERP TO I-JOISTS
1" = 1'-0"

7 NOT USED
NTS



8 TOP PLATE AT PLATFORM FRAMED WALL
1 1/2" = 1'-0"



9 MECH CURB ANCHORAGE AT DBL I-JOIST
1" = 1'-0"

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MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL
LICENSED ARCHITECT MICHAEL R. SCHEER C 36165 02-28-27 RENEWAL DATE STATE OF CALIFORNIA

PROJECT NUMBER
22PBK-08

DATE
01/07/25

DSA APPLICATION NO.
02-121624

FILE NO.
20-H3

PTN NO.
65243-153

DRAWN BY
JWK

REVISIONS

#	DESCRIPTION	DATE
	DSA SUBMITTAL	08-21-23
	DSA BACKCHECK SUBMITTAL	01-08-25

CONSTRUCTION DOCUMENTS

WOOD FRAMING DETAILS

S6.3

REGISTERED PROFESSIONAL ENGINEER JORDAN S. BARCUS S 5482 STRUCTURAL STATE OF CALIFORNIA 01/31/25

7600 North Palm Avenue
Suite 200 / Fresno, CA 93711
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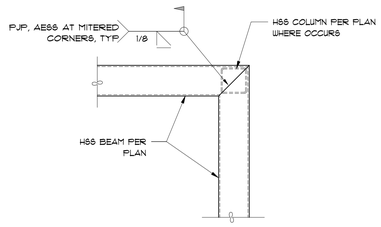
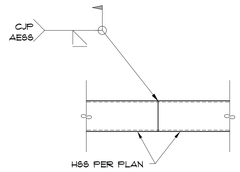
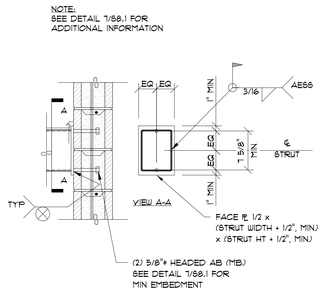
website www.Barcusinc.com
BSE Inc.
BARCUS STRUCTURAL ENGINEERING



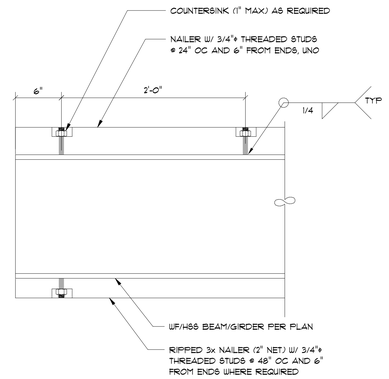
1 MITERED CORNER CONNECTION
1" = 1'-0"



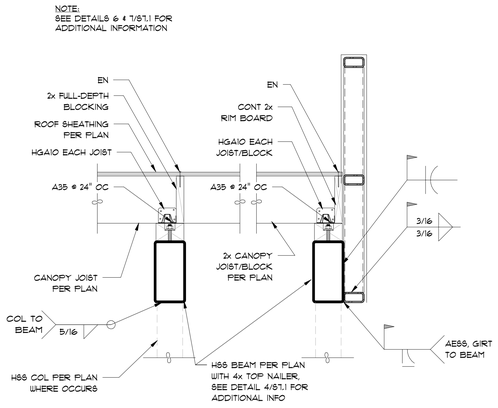
2 HSS SPLICE
1" = 1'-0"



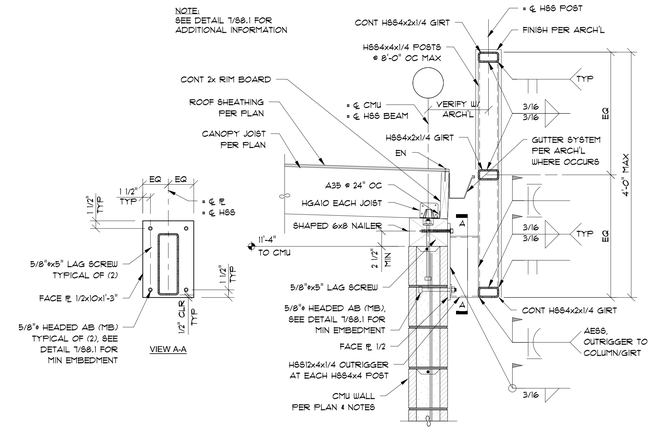
3 HSS BEAM AT CMU
1" = 1'-0"



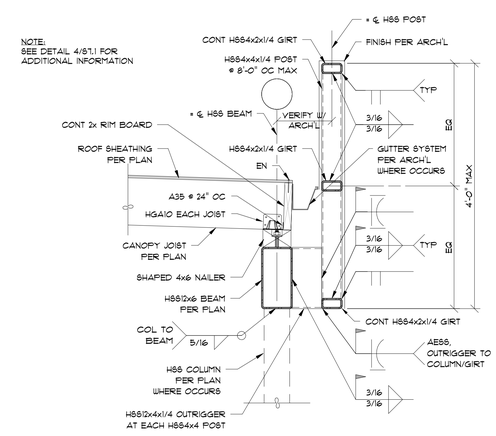
4 TYPICAL NAILER ANCHORAGE
1 1/2" = 1'-0"



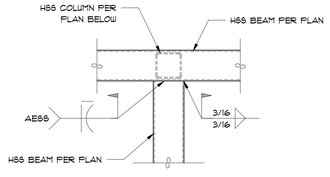
5 CANOPY JOIST AT HSS BEAMS
1" = 1'-0"



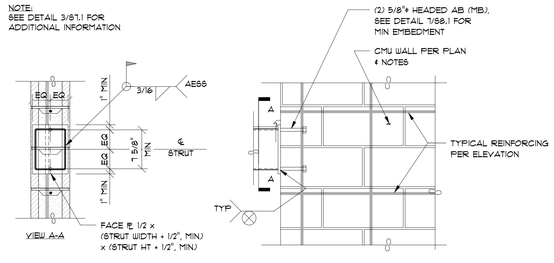
6 CANOPY DETAIL AT CMU
1" = 1'-0"



7 CANOPY JOIST AT EDGE BEAM
1" = 1'-0"



8 HSS BEAM INTERSECTION
1" = 1'-0"



9 HSS BEAM AT CMU
1" = 1'-0"

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
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DATE: 01/23/2025

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MADERA HIGH SCHOOL FIELDHOUSE

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CONSTRUCTION DOCUMENTS

MADERA 19 66 UNIFIED SCHOOL DISTRICT

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CONSTRUCTION DOCUMENTS

STEEL FRAMING DETAILS

S7.1

REGISTERED PROFESSIONAL ENGINEER BRIAN S. BARCUS S 5807 STRUCTURAL STATE OF CALIFORNIA

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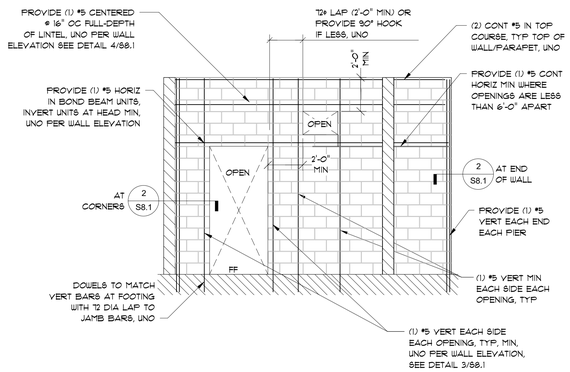
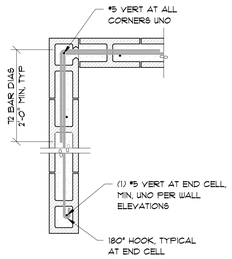
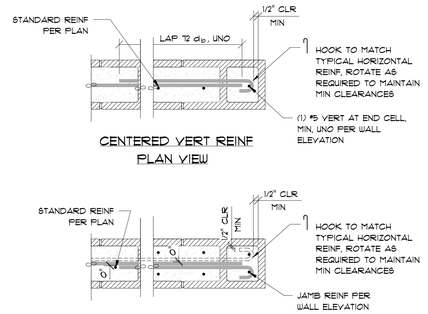


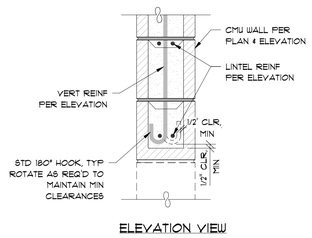
1 TYPICAL CMU WALL
12" = 1'-0"



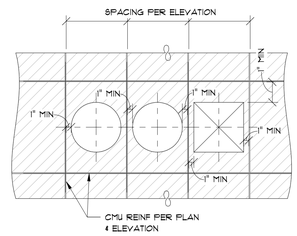
2 CMU WALL CORNER & END OF WALL
3/4" = 1'-0"



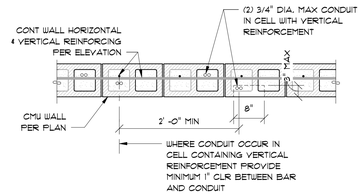
3 CMU JAMB REINFORCING
1" = 1'-0"



4 CMU LINTEL REINFORCING
1 1/2" = 1'-0"

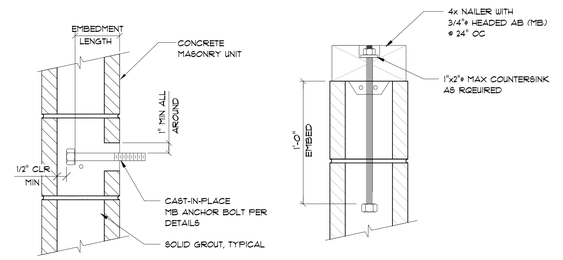


5 HORIZONTAL CONDUIT PENETRATIONS IN CMU WALL
3/4" = 1'-0"



NOTES:
1. PLACE CONDUITS IN CELLS WITHOUT VERTICAL REINFORCEMENT WHEREVER POSSIBLE
2. WIRE VERTICAL CONDUIT TO WALL HORIZONTAL BARS, MAINTAIN BARS IN PLACE DURING GROUT POUR
3. HORIZONTAL CONDUIT ARE NOT PERMITTED
4. NO ALUMINUM COMPONENTS SHALL BE IN MASONRY CONSTRUCTION

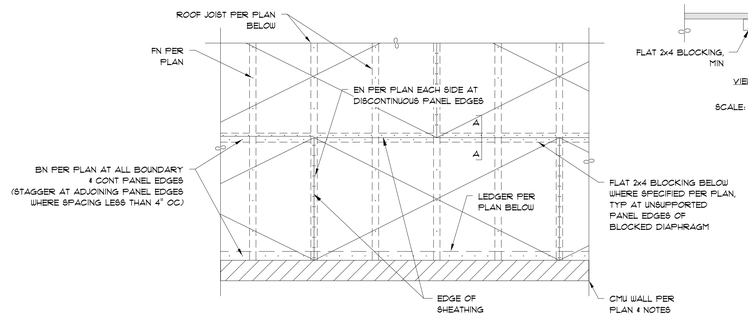
6 VERTICAL CONDUITS IN CMU WALL
3/4" = 1'-0"

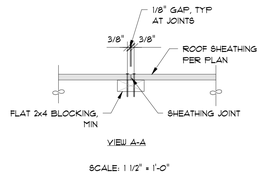


BOLT EMBEDMENT SCHEDULE

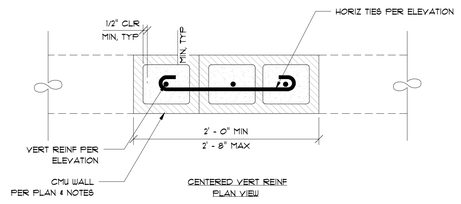
BOLT DIAMETER	EMBEDMENT (8" CMU)	EMBEDMENT (12" CMU)
1/2"	5"	6"
5/8"	5"	6"
3/4"	5"	6"

7 CMU WALL DOWEL
12" = 1'-0"





8 DIAPHRAGM BLOCKING AT CMU WALLS
1/2" = 1'-0"



9 WALL TIES AT PIER
1 1/2" = 1'-0"

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CONSTRUCTION DOCUMENTS

CMU FRAMING DETAILS

S8.1

REGISTERED PROFESSIONAL ENGINEER SHAWN S. BARCUS S 4807 STRUCTURAL STATE OF CALIFORNIA

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website www.BarcusInc.com
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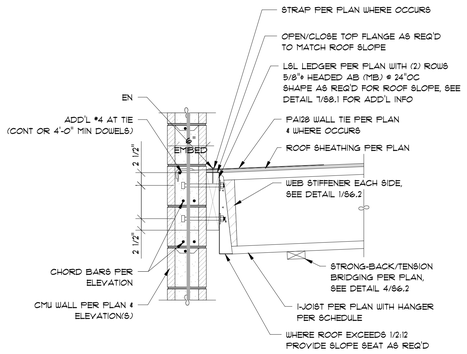
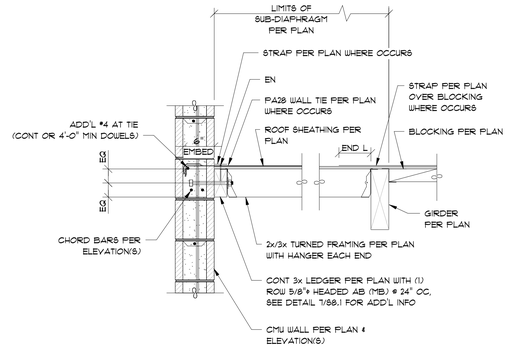
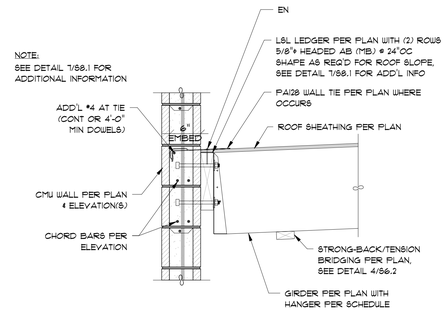


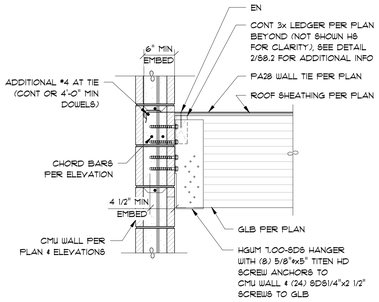
1 I-JOIST AT CMU
1" = 1'-0"



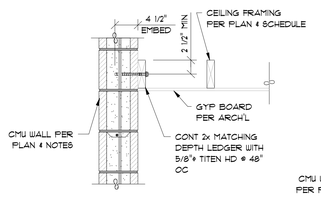
2 TURNED FRAMING AT CMU
1" = 1'-0"



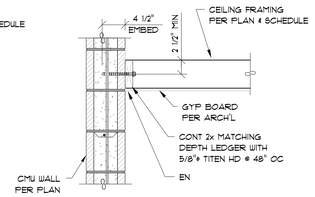
3 GIRDER AT CMU
1" = 1'-0"



4 GLB AT CMU WALL
1" = 1'-0"



JOIST PARALLEL TO CMU

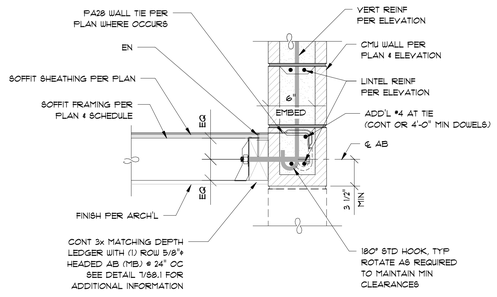


JOIST PERPENDICULAR TO CMU

5 NOT USED
NTS

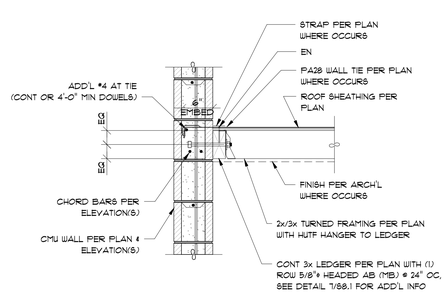
6 NOT USED
NTS

7 CEILING FRAMING AT CMU
1" = 1'-0"



8 NOT USED
NTS

9 SOFFIT FRAMING AT CMU LINTEL
1 1/2" = 1'-0"



10 CANOPY FRAMING AT CMU
1" = 1'-0"

7600 North Palm Avenue
Suite 200 / Fresno, CA 93711
office 559.261.8585
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website www.BarcusInc.com
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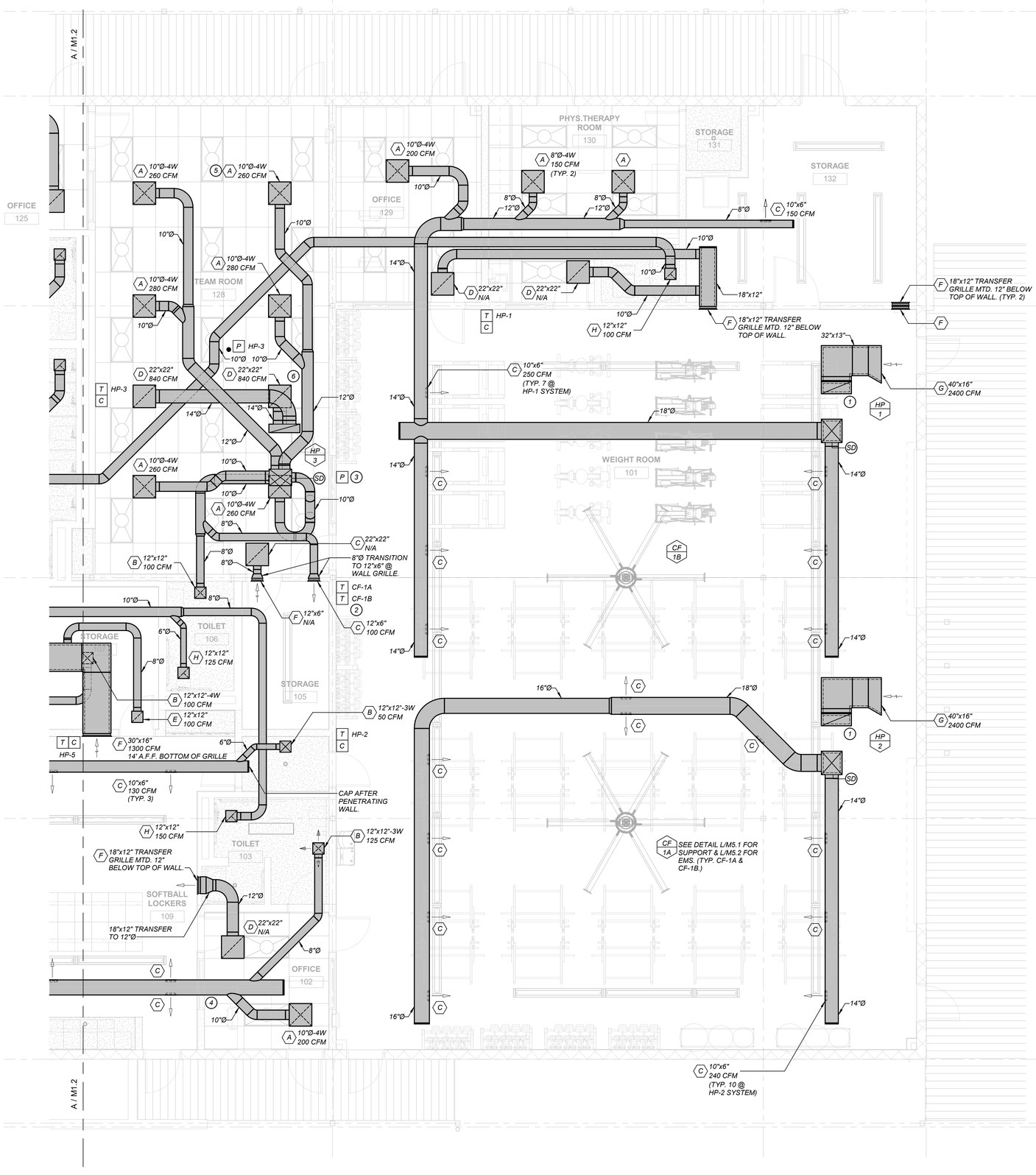
	DSA BACKCHECK SUBMITTAL	01-08-25

CONSTRUCTION DOCUMENTS

CMU FRAMING DETAILS

S8.2



A ENLARGED MECHANICAL PLAN

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

SHEETNOTES:

1. *FOR LOCATIONS NOT AT A BRACE, SEE DETAILS A, B, C & D/M5.2 FOR UPPER DUCT & PIPING ATTACHMENT.*
2. *PROVIDE REMOTE REGULATORS PER DETAIL K/M5.1 FOR ALL INACCESSIBLE VOLUME DAMPERS. (TYP.)*

KEYNOTES: (THIS SHEET ONLY)

1. *R/A DROP FROM HP. ACOUSTICALLY LINE ALL R/A DUCT, (2) 90° ELLS W/ TURNING VANES & TRANSITION TO 40"x16" W/ MIN 24" TRANSITION LENGTH (TYP. 2).*
2. *CF-1A & 1B SHALL BE ENABLED BY EMS SCHEDULE BUT CONTROLLED BY LOCAL WALL CONTROLLER.*
3. *PRESSURE SENSOR FOR HP-1 & HP-2 POWERED EXHAUST MODULATION. MAINTAIN .008" W.C. NEGATIVE ROOM PRESSURE. MTD. @ 12' A.F.F. OR GREATER.*
4. *TRANSITION FROM EXPOSED TO CONCEALED SPIRAL DUCT (TYP.).*
5. *SEE DETAIL A/M5.1 FOR S/A GRILLE & TERMINAL DUCT INFORMATION. (TYP. ALL S/A GRILLES)*
6. *SEE DETAIL B/M5.1 FOR R/A & E/A GRILLES & TERMINAL DUCT INFORMATION. (TYP. ALL R/A & E/A GRILLES)*

KEY PLAN

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PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL R. SCHGEN C 38165 02-28-27 RENEWAL DATE STATE OF CALIFORNIA

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DRAWN BY	Author

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CONSTRUCTION DOCUMENTS

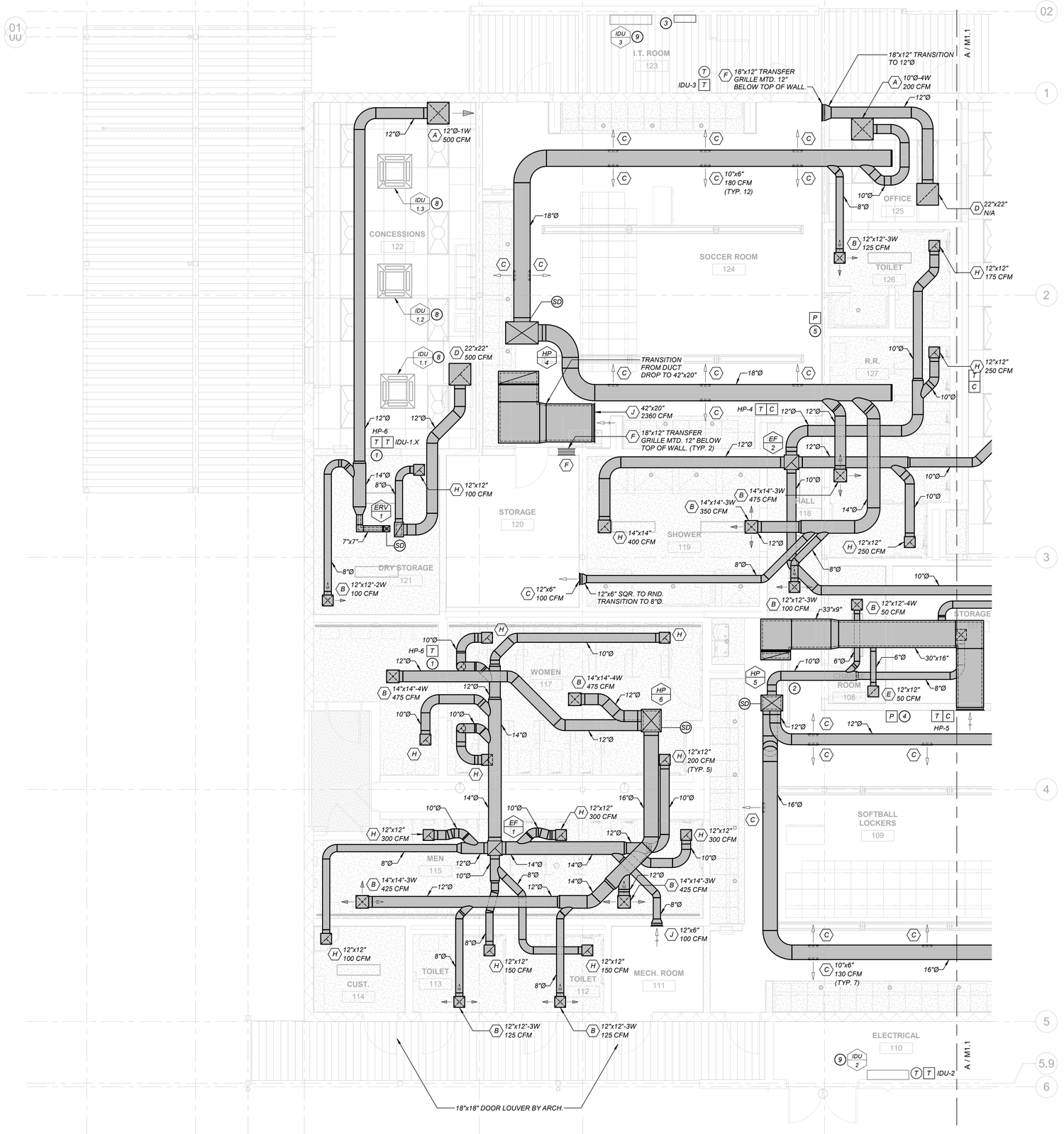
ENLARGED MECHANICAL PLAN

M1.1

REGISTERED PROFESSIONAL ENGINEER PETER W. CALLAHAN M34846 REN. 6-30-2026 MECHANICAL STATE OF CALIFORNIA

LAWRENCE ENGINEERING GROUP
4110 E. Clinton Way, Suite 103 Fresno, CA 93727
(559) 431-0101 23073 FAX (559) 431-1362

C:\Users\markd\Documents\MECH_Madera HS Varsity Field_V21_markdED58H.rvt
1/14/2025 2:45:25 PM



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

SHEETNOTES:

1. SEE DETAILS B, C, & D/M5.2 FOR UPPER DUCT & PIPING ATTACHMENT.

2. PROVIDE REMOTE REGULATORS PER DETAIL K/M5.1 FOR ALL INACCESSIBLE VOLUME DAMPERS. (TYP.)

KEYNOTES: (THIS SHEET ONLY)

1. *VANDAL PROOF WALL TEMPERATURE SENSOR ONLY. TEMPERATURE SET-POINT & BY-PASS TO BE LOCATED IN CONCESSIONS 122.*
2. *TRANSITION FROM EXPOSED TO CONCEALED SPIRAL DUCT (TYP.).*
3. *EMS CABINET. 120V POWER & DATA BY ELECTRICAL. SEE DETAILS E & F/M5.2 FOR MTG INFORMATION.*
4. *PRESSURE SENSOR FOR HP-5 POWERED EXHAUST. MTD. @ 12' A.F.F. OR GREATER.*
5. *PRESSURE SENSOR FOR HP-4 POWERED EXHAUST. MTD. @ 12' A.F.F. OR GREATER.*
6. *SEE DETAIL A/M5.1 FOR S/A GRILLE & TERMINAL DUCT INFORMATION. (TYP. ALL S/A GRILLES).*
7. *SEE DETAIL B/M5.1 FOR R/A & E/A GRILLED & TERMINAL DUCT INFORMATION. (TYP. ALL R/A & E/A GRILLES).*
8. *SEE DETAIL F/M5.1 FOR MTG & J/M5.2 FOR EMS. (TYP. IDU-1.X).*
9. *SEE DETAILS G/M5.1 FOR MTG @ C.M.U. WALLS & K/M5.2 FOR EMS. (TYP. IDU-2 & IDU-3).*

KEY PLAN

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ENLARGED MECHANICAL PLAN

M1.2

REGISTERED PROFESSIONAL ENGINEER PETER W. CHILDERHOSE M34846 REN. 6-30-2026 MECHANICAL STATE OF CALIFORNIA

LAWRENCE ENGINEERING GROUP
4110 E. Clinton Way, Suite 103 Fresno, CA 93727
(559) 431-0101 23073 FAX (559) 431-1362

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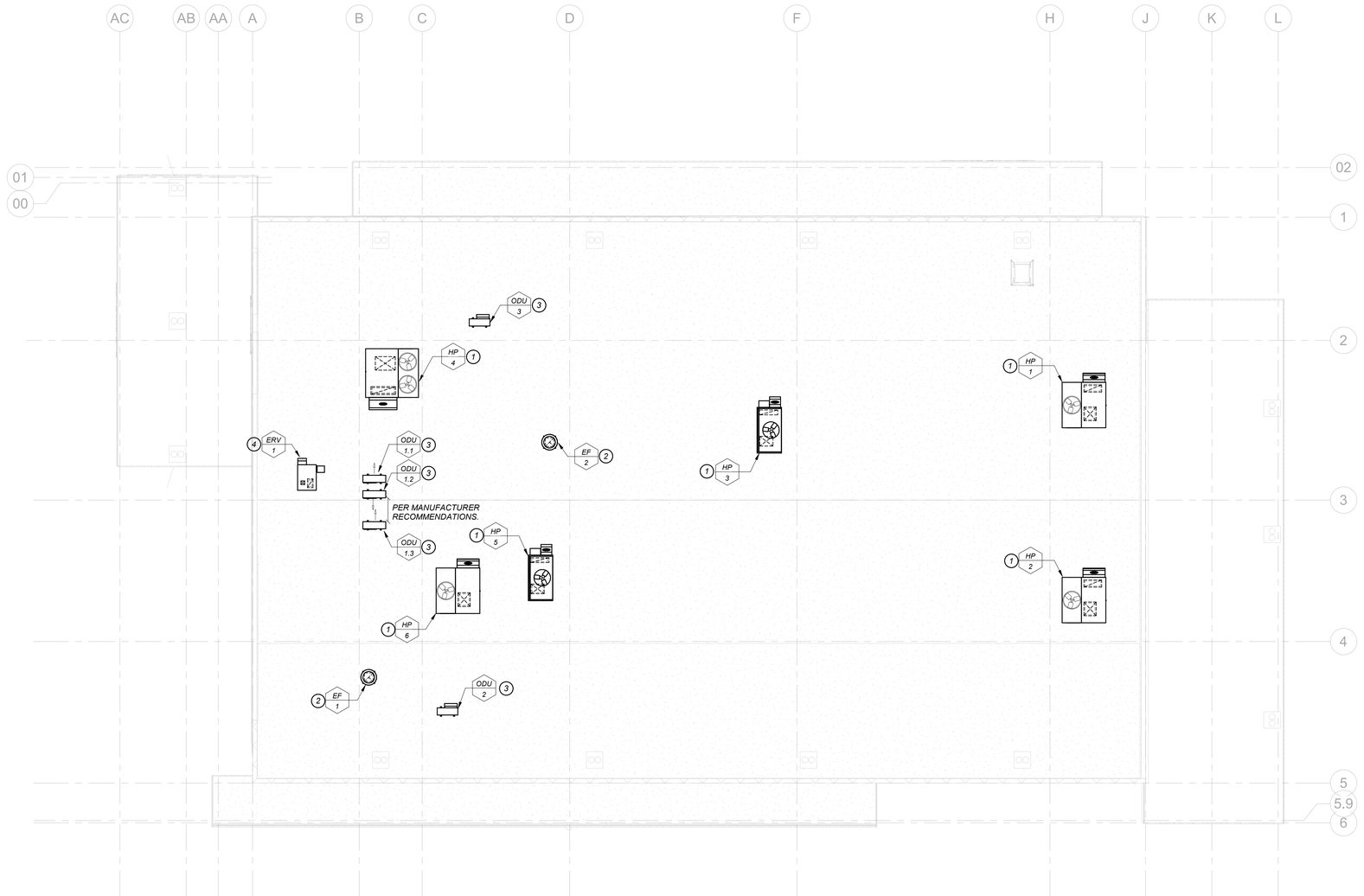

A MECHANICAL ROOF PLAN

SCALE: 1/8" = 1'-0"

KEYNOTES: (THIS SHEET ONLY)

1. *SEE DETAIL D/M5.1 FOR MTG. & G/M5.2 FOR EMS. (TYP. HP-1 THRU HP-6).*
2. *SEE DETAIL E/M5.1 FOR MTG. & H/M5.2 FOR EMS. (TYP. EF-1 & EF-2)*
3. *SEE DETAIL H & J/M5.1 FOR MTG. & J/M5.2 FOR EMS. (TYP. ODU 1.X, 2, & 3.)*
4. *SEE DETAIL D/M5.1 FOR SIMILAR MTG. & K/M5.2 FOR EMS.*

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 01/23/2025

PBK

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MADERA HIGH SCHOOL FIELDHOUSE

200 SOUTH "I" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

MADERA UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL R. SCHEEN C 36165 02-28-27 RENEWAL DATE STATE OF CALIFORNIA

PROJECT NUMBER 20-51

DATE MM/DD/YYYY

DSA APPLICATION NO. 02 - 121624

FILE NO. 20-H3

PTN NO. 65243-153

DRAWN BY Author

REVISIONS

#	DESCRIPTION	DATE

CONSTRUCTION DOCUMENTS

MECHANICAL ROOF PLAN

M3.1

REGISTERED PROFESSIONAL ENGINEER JOHN W. CAVALLO M34846 REN. 6-30-2026 MECHANICAL STATE OF CALIFORNIA

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GENERAL NOTES

1. THE INTENT OF THE DRAWING AND SPECIFICATIONS IS TO CONSTRUCT THE BUILDING IN ACCORDANCE WITH THE 2022 EDITION OF TITLE 24, CALIFORNIA CODE OF REGULATIONS. CHANGES TO THE STRUCTURAL ACCESSIBILITY OR FIRE AND LIFE-SAFETY PORTIONS OF THE APPROVED PLANS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDUM OR CONSTRUCTION CHANGE DOCUMENT AS REQUIRED IN SECTION 4-338, PART 1, TITLE 24, CCR, AND SHALL BE SUBMITTED TO AND APPROVED BY DSA PRIOR TO COMMENCEMENT OF THE WORK. DOCUMENTS SHALL BE PREPARED AND SUBMITTED TO DSA IN COMPLIANCE WITH DSA INTERPRETATION OF REGULATION IR A-6.

2. LAYOUT OF MATERIALS, EQUIPMENT AND SYSTEMS IS GENERALLY DIAGRAMMATIC UNLESS SPECIFICALLY DIMENSIONED. SOME WORK MAY BE SHOWN OFFSET FOR CLARITY. THE HVAC BUILDING PLANS HAVE BEEN PREPARED TO MATCH THE ARCHITECTURAL PLANS. IF DIFFERENCES OCCUR, THE ARCHITECTURAL PLANS ARE TO TAKE PRECEDENCE. THE ACTUAL LOCATIONS OF ALL MATERIALS, PIPING, DUCTWORK, FIXTURES, EQUIPMENT, SUPPORTS, ETC. SHALL BE CAREFULLY PLANNED, PRIOR TO INSTALLATION OF ANY WORK, TO AVOID ALL INTERFERENCE WITH EACH OTHER, OR WITH STRUCTURAL, ELECTRICAL, ARCHITECTURAL, OR OTHER ELEMENTS. ALL DUCT AND PIPE OFFSET ELBOWS FOR COORDINATION BETWEEN TRADES ARE NOT SHOWN. CONTRACTOR SHALL INCLUDE SUFFICIENT FUNDS FOR THE COORDINATION OFFSETS IN THE BID. VERIFY THE PROPER VOLTAGE AND PHASE OF ALL EQUIPMENT WITH THE ELECTRICAL PLANS. ALL CONFLICTS SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT AND THE ENGINEER PRIOR TO THE INSTALLATION OF ANY WORK OR THE ORDERING OF ANY EQUIPMENT.

3. WHEN INSTALLING DRILLED-IN ANCHORS AND/OR POWDER-DRIVEN PINS IN EXISTING NON-PRESTRESSED CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. WHEN INSTALLING THEM INTO EXISTING PRESTRESSED CONCRETE (PRE- OR POST-TENSIONED), LOCATE THE PRESTRESSED TENDONS BY USING A NON-DESTRUCTIVE METHOD PRIOR TO INSTALLATION. EXERCISE EXTREME CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE TENDONS DURING INSTALLATION. MAINTAIN A MINIMUM CLEARANCE OF ONE INCH BETWEEN THE REINFORCEMENT AND THE DRILLED-IN ANCHOR AND/OR PIN.

4. ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. WHERE THERE NO DETAIL IS INDICATED, THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2022 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 OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER.
   3. MOVABLE EQUIPMENT WHICH IS STATIONED IN ONE PLACE FOR MORE THAN 8 HOURS AND HEAVIER THAN 400 POUNDS ARE REQUIRED TO BE ANCHORED WITH TEMPORARY ATTACHMENTS.

   THE ATTACHMENT OF THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT NEED NOT BE DETAILED ON THE PLANS. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.

   A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER 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 THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

   FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD AND THE DSA DISTRICT STRUCTURAL ENGINEER. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.

5. 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 2022 CBC, SECTIONS 1617A.1.24, 1617A.1.25, 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., HCAI OPM FOR 2022 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):

   MP☒ MD☒ PP☐ IR 16-13 SECTION 2.1: PROJECT-SPECIFIC DESIGN

   MP☐ MD☐ PP☐ IR 16-13 SECTION 2.2: DESIGN BASED ON OSHPD OPM, PART OF PROJECT SUBMITTAL.

6. PENETRATIONS THROUGH FIRE RATED WALLS, FLOOR/CEILING, AND ROOF/CEILING ASSEMBLIES SHALL BE SEALED USING AN APPROVED SYSTEM CAPABLE OF PREVENTING THE PASSAGE OF FLAMES AND HOT GASES WHEN SUBJECTED TO THE REQUIREMENTS OF THE TEST STANDARD SPECIFIC TO FIRE STOPS PER 2022 CBC SECTION 714. THIS INCLUDES EXISTING PIPE AND CONDUIT THROUGH NEW ASSEMBLIES. CUSTOM DESIGNED SYSTEMS WHICH COMBINE COMPONENTS FROM DIFFERENT APPROVED SYSTEMS BUT HAVE NOT BEEN TESTED AS A COMPLETE ASSEMBLY WILL NOT BE ACCEPTABLE. FOR FIRE STOPS FOR PIPE PENETRATIONS SEE SPECIFICATIONS.

7. DUCTWORK SIZES SHOWN ARE INSIDE CLEAR DIMENSIONS. WHERE ACOUSTIC LINING IS SHOWN, INCREASE EACH SHEET METAL DIMENSION TO ACCOMMODATE LINING & MAINTAIN CLEAR INSIDE DUCT DIMENSIONS SHOWN.

8. SA DUCTWORK SHALL BE 1" PRESSURE CLASS, AND] RA & EA DUCTWORK SHALL 1" PRESSURE CLASS UNLESS OTHERWISE NOTED.

GRILLE SCHEDULE

MARK	DUTY	DESCRIPTION
A	CEILING SUPPLY	TITUS TDC (TYPE 3) LOUVER FACE SQUARE OR RECTANGULAR NECK DIFFUSER FOR STD. LAY-IN CEILING, AND NO. 26 OFF-WHITE FINISH. (18"X18" NECK ADAPTER SIZE SHOWN).
B	CEILING SUPPLY	TITUS TDC (TYPE 1) LOUVER FACE SQUARE OR RECTANGULAR NECK DIFFUSER FOR SURFACE MOUNTING, AND NO. 26 OFF-WHITE FINISH.
C	DUCT SUPPLY	TITUS MODEL 272RL (TYPE 7) WITH HORIZONTAL LOUVERS IN FRONT, 3/4" LOUVER SPACING, 1-1/4" WIDE FRAME, NO. 26 OFF-WHITE FINISH.
D	CEILING RETURN	TITUS CORE 50F (TYPE 3) ALUMINUM EGG CRATE REGISTER WITH 1/2" x 1/2" GRID, FOR LAY-IN CEILING, AND NO. 26 OFF-WHITE FINISH.
E	CEILING RETURN	TITUS CORE 50F (TYPE 1) ALUMINUM EGG CRATE REGISTER WITH 1/2" x 1/2" GRID, FOR SURFACE MOUNTING WITH NO. 26 OFF-WHITE FINISH.
F	WALL RETURN	TITUS CORE 25RL (TYPE 1) STEEL RETURN REGISTER, , AND NO. 26 OFF-WHITE FINISH.
G	DUCT RETURN	TITUS CORE 25RL (TYPE 1) STEEL RETURN REGISTER, , AND NO. 26 OFF-WHITE FINISH.
H	CEILING EXHAUST	TITUS CORE 50F (TYPE 1) ALUMINUM EGG CRATE REGISTER WITH 1/2" x 1/2" GRID, FOR SURFACE MOUNTING WITH NO. 26 OFF-WHITE FINISH.
J	WALL EXHAUST	TITUS CORE 25RL (TYPE 1) STEEL RETURN REGISTER, , AND NO. 26 OFF-WHITE FINISH.

ENERGY RECOVERY VENTILATOR SCHEDULE

DESIGNATION	ERV 1
SUPPLY AIR (CFM)	600
EXT. SP (IN WC)	0.60
BHP	0.27
HP	0.50
EXHAUST AIR (CFM)	600
EXT. SP (IN WC)	0.60
BHP	0.35
HP	0.50
SUMMER DESIGN (INDOOR)	75/62
SUMMER DESIGN (OUTDOOR)	105/74
SUPPLY CONDITIONS	80.6/65
WINTER DESIGN (INDOORS)	72/55.8
WINTER DESIGN (OUTDOORS)	31.5/26.5
SUPPLY CONDITIONS	63.5/50.5
MINIMUM CKT. AMPACITY	8.9
MOP (A)	15
VOLTS/PHASE	208/1
MANUFACTURER	GREENHECK
MODEL NUMBER	ERV-10-20L-VG
OPER. WT (LBS)	400
ACCESSORIES	1 2 3 4 5 6 7 8 9

1. MERV 13 S/A FILTERS
2. MERV 8 E/A FILTERS
3. DOUBLE WALL CONSTRUCTION
4. HINGED ACCESS DOOR
5. VFD'S FOR BOTH FANS
6. LOW LEAKAGE DAMPERS
7. EMS CONTRACTOR TO PROVIDE BACNET/IP METASYS INTEGRATION WITH FIELD INSTALLED CONTROLLER.
8. FROST CONTROL
9. FACTORY SLOPED ROOF CURB

TITLE 24 ACCEPTANCE TESTING TABLE

FORM / TITLE — DESIGNATION	HP 1	HP 2	HP 3	HP 4	HP 5	HP 6	IDU 1.1 THRU IDU 1.3	IDU 2	ERV 1
NRCA-MCH-02-A OUTDOOR AIR.	X	X	X	X	X	X			X
NRCA-MCH-03-A CONSTANT VOLUME SINGLE ZONE HVAC.	X	X	X	X	X	X	X	X	
NRCA-MCH-04-A AIR DISTRIBUTION DUCT LEAKAGE.									
NRCA-MCH-05-A AIR ECONOMIZER CONTROLS.	X	X	X	X	X	X	X		
NRCA-MCH-06-A DEMAND CONTROL VENTILATION SYSTEMS.			X						
NRCA-MCH-07-A SUPPLY FAN VARIABLE FLOW CONTROLS.									
NRCA-MCH-08-A VALVE LEAKAGE TEST.									
NRCA-MCH-09-A SUPPLY WATER TEMPERATURE RESET CONTROLS.									
NRCA-MCH-10-A HYDRONIC SYSTEM VARIABLE FLOW CONTROLS.									
NRCA-MCH-11-A AUTOMATIC DEMAND SHED CONTROLS.									
NRCA-MCH-12-A FDD FOR PACKAGED DIRECT EXPANSION UNITS.	X	X	X	X	X	X			
NRCA-MCH-13-A AUTOMATIC FDD FOR AIR HANDLING UNITS AND ZONE TERMINAL UNITS.									
NRCA-MCH-14-A DISTRIBUTED ENERGY STORAGE DX AC SYSTEMS.									
NRCA-MCH-15-A THERMAL ENERGY STORAGE (TES) SYSTEM.									
NRCA-MCH-16-A SUPPLY AIR TEMPERATURE RESET CONTROLS.									
NRCA-MCH-17-A CONDENSER WATER TEMPERATURE RESET CONTROLS.									
NRCA-MCH-18-A ENERGY MANAGEMENT CONTROL SYSTEMS.	X	X	X	X	X	X			
NRCA-MCH-19-A OCCUPANCY SENSOR CONTROLS.									
NRCA-MCH-20 MULTI-FAMILY VENTILATION.									
NRCA-MCH-21 MULTI-FAMILY ENVENLOPE LEAKAGE.									
NRCA-MCH-22-A MF DUCT LEAKAGE.									
NRCA-MCH-23-A MF HRV/ERV VERIFICATION.									

NOTES:
1. REFER TO TITLE-24 DOCUMENTS FOR ADDITIONAL INFORMATION.
2. NRCA MUST BE SUMBITTED AND COMPLETED BY A CERTIFIED ACCEPTANCE TEST TECHNICIAN TO COMPLY WITH CALIFORNIA ENERGY CODE.
3. SUBMIT ACCEPTANCE FORMS TO PROJECT INSPECTOR & MEOR FOR REVIEW.

PACKAGE HEAT PUMP SCHEDULE

DESIGNATION	HP 1	HP 2	HP 3	HP 4	HP 5	HP 6
VOLTS / PHASE	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3
FLA / MCA	29.0 / 34.0 5.)	29.0 / 34.0 5.)	30 / 36 5.)	58 / 66 5.)	29 / 35 5.)	42 / 51 5.)
M.O.C.P	40	40	40	70	40	60
IEER / SEER (AT ARI)	14.1 / 12.1	14.1 / 12.1	14.8 / 11.7	15.6 / 11.5	14.8 / 11.7	21 / 11.2
BLOWER — CFM	2,400	2,400	1,800	3,510	1,800	2,050
BLOWER — EXT. SP (IN WC)	1.25	1.25	1.25	1.25	1.25	1.0
BLOWER — MIN OSA	500	500	810	1,840	970	2,050
BLOWER — HP / BHP	2.0 / 1.39	2.0 / 1.39	2.0 / 1.29	3.0 / 1.87	2.0 / 1.28	2.0 / 0.98
BLOWER — RPM	1,724	1,724	1,657	1,378	1,652	1,554
BLOWER — DRIVE	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT
COOLING — SENSIBLE (MBH)	59.2	59.2	57.9	133.3	61	95.4
COOLING — TOTAL (MBH)	60.4	60.4	60.1	142.8	61	95.4
COOLING — EADB / EAWB (°F)	81 / 64	81 / 64	88 / 67	90 / 68	91 / 68	105 / 72
COOLING — AMBIENT AIR (°F)	105	105	105	105	105	105
HEATING — CAPACITY @ 47 DEG. (MBH)	48.9	48.9	50.6	110.6	50.7	72.1
HEATING — COP	3.7	3.7	3.9	3.4	3.9	3.5
HEATING — AUXILARY ELEC. (KW)	10	10	10	20	10	20
HEATING — NO. OF STAGES	1	1	1	1	1	1
FILTER — QUANTITY / SIZE (RETURN)	SEE FACTORY	SEE FACTORY	SEE FACTORY	SEE FACTORY	SEE FACTORY	SEE FACTORY
FILTER — TYPE	MERV 13	MERV 13	MERV 13	MERV 13	MERV 13	MERV 13
FILTER — QUANTITY / SIZE (OSA)	SEE FACTORY	SEE FACTORY	SEE FACTORY	SEE FACTORY	SEE FACTORY	SEE FACTORY
FILTER — TYPE	2" PLEATED	2" PLEATED	2" PLEATED	2" PLEATED	2" PLEATED	2" PLEATED
FILTER — P D (IN WC)	N/A	N/A	N/A	N/A	N/A	N/A
MANUFACTURER	AAON	AAON	AAON	AAON	AAON	AAON
TYPE	HEAT PUMP	HEAT PUMP	HEAT PUMP	HEAT PUMP	HEAT PUMP	HEAT PUMP
MODEL NUMBER	RN-007-3-0-G60C	RN-007-3-0-G60C	RQ-006-3-V-E60E	RN-013-3-0-H80S	RQ-006-3-V-E60E	RN-008-3-0-E809
CONDENSING UNIT						
LOCATION	ROOF	ROOF	ROOF	ROOF	ROOF	ROOF
OPER. WT. (LBS)	1,500	1,500	1,200	2,400	1,200	1,600
ACCESSORIES	1 2 3 4 5 6 7 8 9 10 11	1 2 3 4 5 6 7 8 9 10 11	1 2 3 4 5 6 7 9 10 11 12	1 2 3 4 5 6 7 9 10 11 12	1 2 3 4 5 6 7 9 10 11 12	1 3 4 5 7 9 10 11 12 13

1. MECHANICAL CONTRACTOR TO COORDINATE WITH FACTORY FOR SLOPE SEISMIC CURB
2. MODULATING ECONOMIZER AND POWER EXHAUST
3. EMS CONTRACTOR TO PROVIDE BACNET/IP METASYS INTEGRATION WITH FIELD INSTALLED CONTROLLER
4. VFD FOR BALANCING
5. SUPPLEMENTAL ELETRIC HEAT, INCLUDED IN MCA
6. FDD & ECONOMIZER ACTUATOR ONLY
7. ECM CONDENSER FANS WITH COIL GUARDS
8. DIGITAL 2-STAGE COMPRESSORS
9. DOUBLE WALL CONSTRUCTION W/ S/S DRIP PANS
10. UNIT TO SHUTDOWN UPON SMOKE DETECTION, BY FIRE ALARAM. COORDINATE WITH DIVISION 26.
11. PROVIDE CO2 SENSOR
12. VARIABLE CAPACITY SCROLL COMPRESSOR
13. LOW LEAK MOTORIZED OSA DAMPER

NOTE:
THIS EQUIPMENT HAS BEEN FURNISHED BY THE OWNER. MECHANICAL CONTRACTOR TO VERIFY AND INSTALL OWNER-FURNISHED EQUIPMENT. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, FACTORY START-UP, DISCIPLINE COORDINATION, SUPPORT COORDINATION, TESTING AND BALANCING, ACCESSORIES, TITLE 24 TESTING, AND CONTROLS; ALL REQUIRED LABOR / MATERIAL, SERVICES FOR PROPER INSTALLATION, OPERATION, AND WARRANTY OF OWNER-FURNISHED EQUIPMENT. MECHANICAL CONTRACTOR TO PICK-UP EQUIPMENT AT OWNER STORAGE LOCATION AND DELIVER TO ON-SITE STORAGE AT THE START OF CONSTRUCTION. MECHANICAL CONTRACTOR TO PROVIDE, INSTALL, AND COORDINATE ROOF CURB FOR EACH OWNER- FURNISHED EQUIPMENT AND VERIFY ALL CURB DIMENSIONS.

INDOOR UNIT SCHEDULE

DESIGNATION	IDU 1.1 THRU IDU 1.3	IDU 2	IDU 3
BLOWER — SUPPLY AIR (CFM)	800	600	600
BLOWER — EXT. S P (IN. WC)	N/A	N/A	N/A
BLOWER — MIN. O.S.A. (CFM)	OSA BY ERV - 1	N/A	N/A
BLOWER — MOCP	N/A	N/A	N/A
BLOWER — MCA / FLA (AMPS)	2.0/.95 1.)	1.0/.36 1.)	1.0/.36 1.)
BLOWER — VOLTS/PHASE	208-230/1	208-230/1	208-230/1
BLOWER — SEER / EER	21.8/12.9	21.4/12.2	21.4/12.2
COOLING — SENSIBLE (MBH)	36.0	24.0	24.0
COOLING — TOTAL (MBH)	36.0	24.0	24.0
COOLING — EADB/EAWB (°F)	80/67	80/67	80/67
COOLING — REFRIGERANT	R-410A	R-410A	R-410A
HEATING — CAPACITY (MBH) @47°F	42.0	28.0	28.0
HEATING — KW	N/A	N/A	N/A
HEATING — STAGES	VARIABLE	VARIABLE	VARIABLE
FILTER — QUANTITY/SIZE	FACTORY	FACTORY	FACTORY
FILTER — TYPE	FACTORY	FACTORY	FACTORY
FILTER — P D (IN. WC)	N/A	N/A	N/A
MANUFACTURER	MITSUBISHI	MITSUBISHI	MITSUBISHI
TYPE	CEILING CASETTE	WALL MTD.	WALL MTD.
MODEL NUMBER	TPLA0A036	TPKA0A024	TPKA0A024
CONDENSING UNIT	ODU 1.1-1.3	ODU-2	ODU-2
LOCATION	SNACK BAR	ELECTRICAL	IDF
OPER. WT (LBS)	57	46	46
ACCESSORIES	1 3 4	1 2 3	1 2 3

1. IDU POWERED BY ODU
2. WIRED SIMPLE WALL CONTROLLER
3. FACTORY CONDENSATE PUMP (POWERED BY IDU) W/ OVER FLOW CUT-OFF.
4. DELUXE MA REMOTE CONTROLLER

EXHAUST FAN SCHEDULE

DESIGNATION	EF 1	EF 2
CFM	2400	1450
EXT. S.P. (IN. WC)	1.0	1.0
HP / BHP	1.0 / 0.91	0.75 / 0.50
VOLTS / PHASE	230/1	230/1
MCA / MOP (AMPS)	9.0 / 15	6.0 / 15
FLA (AMPS)	7.1	5.0
RPM	1637	1635
TIP SPEED/ SONES	6,269 / 16.0	5,617 / 14.0
DRIVE	VARI-GREEN	VARI-GREEN
MOUNTING	ROOF	ROOF
MANUFACTURER	GREENHECK	GREENHECK
TYPE	DOWN BLAST	DOWN BLAST
MODEL NUMBER	G-140-VG	G-130-VG
CONTROL	EMS	EMS
LOCATION	ROOF	ROOF
OPER. WT. (LBS)	110	95
ACCESSORIES	1 2 3 4 5 6	1 2 3 4 5 6

1.B.D.D.
2.FACTORY SLOPED CURB
3.E.C. MOTOR
4.BIRDSCREEN
5.FACTORY DISCONNECT (FIELD MTD)
6.DIAL ON MOTOR FOR BALANCING

OUTDOOR UNIT SCHEDULE

DESIGNATION	ODU 1.1 THRU ODU 1.3	ODU 2	ODU 3
COOLING CAPACITY (MBH)	36.0	24.0	24.0
HEATING CAPACITY (MBH)	42.0	28.0	28.0
NOMINAL TONS	3.0	2.0	2.0
VOLTS/PHASE	208-230 / 1	208-230 / 1	208-230 / 1
FLA	-	-	-
MCA / MOCP	25.0 / 31	19/26	19/26
SEER / EER (AT ARI)	21.8 / 12.9	21.4 / 12.2	21.4 / 12.2
AMBIENT (°F)	105	105	105
REFRIG. LINE SIZE			
LIQUID (IN.OD)	3/8	3/8	3/8
SUCTION (IN. OD)	5/8	5/8	5/8
REFRIG. TYPE	R-410A	R-410A	R-410A
MANUFACTURER	MITSUBISHI	MITSUBISHI	MITSUBISHI
TYPE	HEAT PUMP	HEAT PUMP	HEAT PUMP
MODEL NUMBER	TRUZA036	TRUZA024	TRUZA024
SERVICE	SNACK BAR	ELECTRICAL	IDF
OPER. WT (LBS)	275	175	175
ACCESSORIES	1	1	1

1. ODU POWERS ASSOCIATED IDU

CEILING FAN SCHEDULE

DESIGNATION	CF 1A THRU CF 1B
WATTS	380
BREAKER REQUIRED	10amp
VOLTS / PHASE	480/3
NO. OF BLADES	6
MAX. RMP	120
DRIVE	DIRECT
MOUNTING	2.)
MANUFACTURER	BIG ASS FANS
MODEL NUMBER	POWERFOIL D-14'
DIAMETER	14'
CONTROL	EMS W/LOCAL OVER-RIDE
SERVICE	WEIGHT ROOM
OPER. WT. (LBS)	300
ACCESSORIES	1 2 3

1.BAFCON CONTROLLER
2.SOLID BEAM MTG. KIT
3.PDF LED KIT, 4,000k W/ 120° LENS. BLACK.

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REVIEWED FOR
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CONSTRUCTION DOCUMENTS

MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL
LICENSED ARCHITECT MICHAEL R. SCHOLL C 36165 02-28-27 RENEWAL DATE STATE OF CALIFORNIA

PROJECT NUMBER 20-51
DATE MM/DD/YYYY
DSA APPLICATION NO. 02 - 121624
FILE NO. 20-H3
PTN NO. 65243-153
DRAWN BY Author

REVISIONS

#	DESCRIPTION	DATE

CONSTRUCTION DOCUMENTS

MECHANICAL NOTES & SCHEDULES

M4.1

REGISTERED PROFESSIONAL ENGINEER RYAN W. CARLSON No. M34814 Exp. 6-30-26 MECHANICAL STATE OF CALIFORNIA

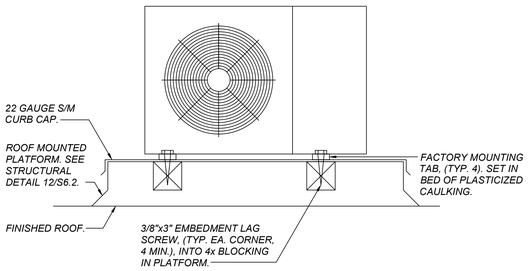
LAWRENCE ENGINEERING GROUP
4910 E. Clinton Way, Suite 105 Fresno, CA 93727
(559) 431-0101 23073 FAX (559) 431-1362

14 January 2025 2:21 PM p:\2023\23073 modero usd – modero hs stadium locker addition\4-drawings\4 M\M4.1 – MECHANICAL SCHEDULES.dwg mark d

AIR CONDITIONING LEGEND

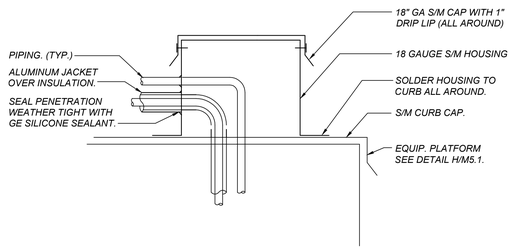
SYMBOL	ITEM	ABBR
	ROUND DUCT	Ø
	FLAT OVAL DUCT	
	SHEET METAL DUCT	—
	ACOUSTIC LINING FOR DUCT OR GRILLES	(L)
	DUCT W/EXT INSULATION & GALV. SM SUNSHIELD	—
	SUPPLY AIR DUCT DROP	—
	RETURN AIR DUCT DROP	—
	EXHAUST DUCT AIR DROP	—
	SUPPLY AIR DUCT RISE	—
	RETURN AIR DUCT RISE	—
	EXHAUST AIR DUCT RISE	—
	TURNING VANES	TV
	EXTRACTOR	—
	VOLUME CONTROL DAMPER W/LOCKING QUADRANT	VCD
	OPPOSED BLADE DAMPER	OBD
	BACKDRAFT DAMPER	BDD
	VOLUME CONTROL DAMPER W/ REMOTE REGULATOR	VCR
& ■	FIRE/SMOKE DAMPER WITH ACCESS PANEL	F/SD
& ▲	FIRE DAMPER WITH ACCESS PANEL	FD
& ◆	SMOKE DAMPER WITH ACCESS PANEL	SD
CFM	CUBIC FEET OF AIR PER MINUTE	CFM
M	EMS MOTORIZED DUCT DAMPER/ PIPE VALVE ACTUATOR	—
T	THERMOSTAT @ +4'-0" TOP OF BOX	T'STAT
H	HUMIDISTAT @ +4'-0" TOP OF BOX	H'STAT
C	CO_2SENSOR @ +4'-0" TOP OF BOX	CO_2
T	EMS TEMPERATURE SENSOR @ +4'-0" TOP OF BOX	—
H	EMS HUMIDITY SENSOR @ +4'-0" TOP OF BOX	—
C	EMS CO_2 SENSOR @ +4'-0" TOP OF BOX	CO_2
SP	EMS STATIC PRESSURE SENSOR	SP
DP	EMS DIFFERENTIAL PRESSURE SENSOR	DP
CS	EMS CURRENT SENSOR	CS
	DIRECTION OF FLOW	—
	SUPPLY AIR	SA
	RETURN AIR	RA
	EXHAUST AIR	EA
—	OUTSIDE AIR	OSA
	PIPE/DUCT TURN DOWN	—
	PIPE/DUCT TURN UP	—
	POINT OF CONNECTION	POC
	EXISTING (DESIGNATED)	(E)
	NEW (DESIGNATED)	(N)
SD	DUCT SMOKE DETECTOR	SD
A/V	AUDIBLE/VISUAL ALARM	A/VA
	BYPASS TIMER	BPT
—EMS—	ENERGY MANAGEMENT SYSTEM CABLE IN CONDUIT	EMS

MAX EQUIPMENT WEIGHT: 300 LBS



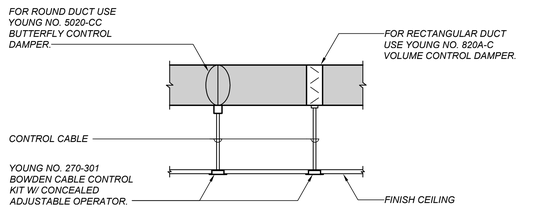
OUTDOOR UNIT MOUNTING DETAIL — H / M5.1

SCALE: NONE



PIPE THRU PLATFORM DETAIL — J / M5.1

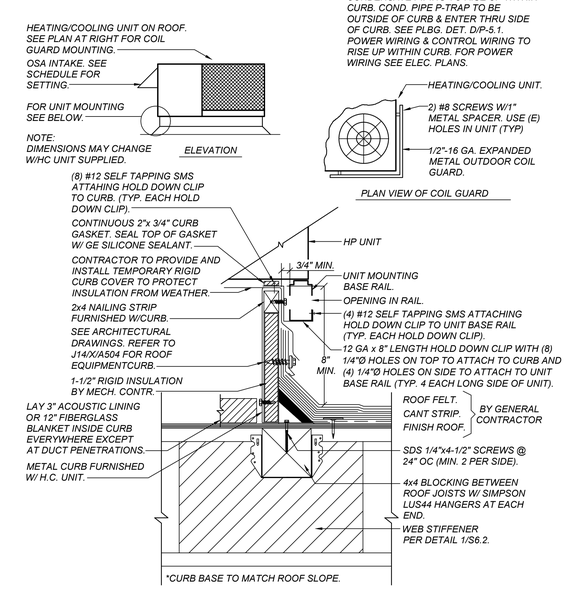
SCALE: NONE MP198



REMOTE REGULATOR DETAIL — K / M5.1

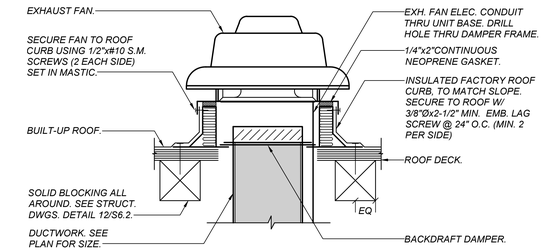
SCALE: NONE MD020

NOTE:
CONDENSATE PIPING TO RISE UP WITHIN CURB. COND. PIPE P-TRAP TO BE OUTSIDE OF CURB & ENTER THRU SIDE OF CURB. SEE PLBG. DET. D/P-5.1. POWER WIRING & CONTROL WIRING TO RISE UP WITHIN CURB. FOR POWER WIRING SEE ELEC. PLANS.



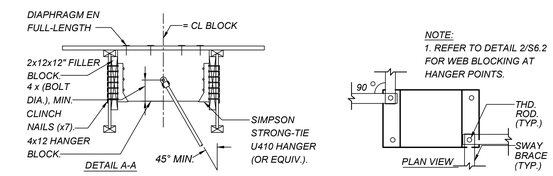
HP & ERV UNIT ROOF MOUNTING DETAIL — D / M5.1

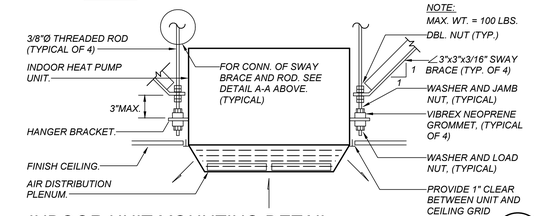
SCALE: NONE



ROOF EXHAUST FAN MOUNTING DETAIL — E / M5.1

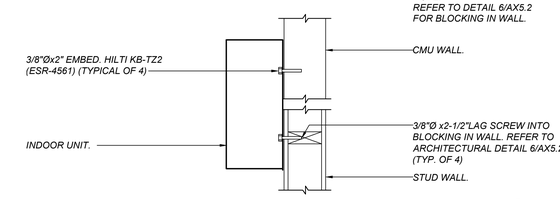
SCALE: NONE MM120





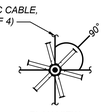
INDOOR UNIT MOUNTING DETAIL — F / M5.1

SCALE: NONE MM130



INDOOR UNIT MOUNTING DETAIL — G / M5.1

SCALE: NONE MM055



CEILING FAN MOUNTING DETAIL - MPR — L / M5.1

SCALE: NONE MC033

RECTANGULAR DUCT SEISMIC REGULATIONS

24 GA. (LBS/SQ/FT)	1.00
22 GA. (LBS/SQ/FT)	1.25
20 GA. (LBS/SQ/FT)	1.50
18 GA. (LBS/SQ/FT)	2.00
16 GA. (LBS/SQ/FT)	2.50

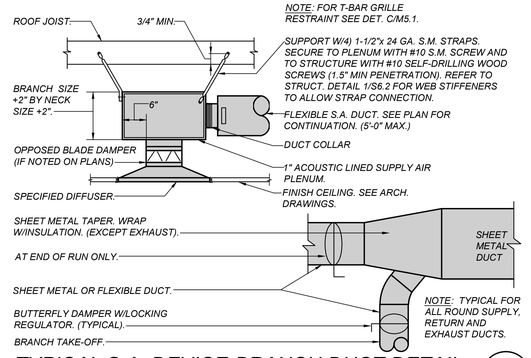
HANGER SPACING: 10' O.C.

DUCT DIM. W X D (IN.)		SHEET METAL GA.	CROSS-SECTIONAL AREA (SQFT)	SHEET METAL LBS/FT	P/2
18"	12"	22	1.50	6.3	60"
30"	16"	18	3.33	15.3	92"
40"	16"	18	4.44	18.7	112"
42"	20"	18	5.83	20.7	124"

SEISMIC EXEMPTION NOTES:

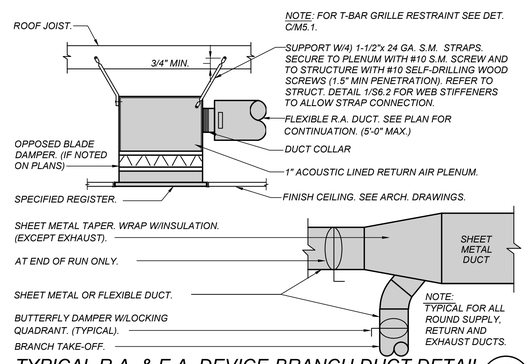
1. CROSS-SECTIONAL AREA FOR DUCTS IS LESS THAN 6 SQ.FT.
2. DUCTS ARE LESS THAN 20 LBS PER LINEAL FOOT.
3. THE SEPARATION DISTANCE BETWEEN AN UNBRACED COMPONENT AND BRACED ELEMENTS OR COMPONENTS SHALL BE BASED ON A MINIMUM HORIZONTAL DISTANCE OF 12 INCHES. WHEN ADJACENT COMPONENTS ARE ALSO UNBRACED, THIS SEPARATION SHALL BE INCREASED TO A MINIMUM OF 18 INCHES.

* FOR DUCT THAT EXCEED THE EXEMPTION NOTES. REFER TO SEISMIC BRACING DETAILS FROM MASON WEST OPM #0043.



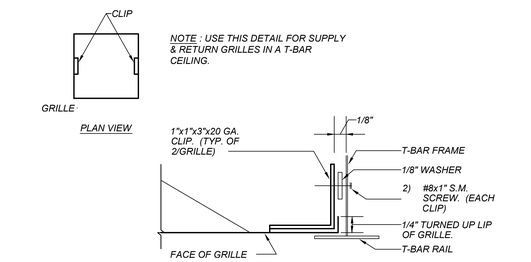
TYPICAL S.A. DEVICE-BRANCH DUCT DETAIL — A / M5.1

SCALE: NONE MD002



TYPICAL R.A. & E.A. DEVICE-BRANCH DUCT DETAIL — B / M5.1

SCALE: NONE MD102



GRILLE RESTRAINT DETAIL — C / M5.1

SCALE: NONE MD090

ROUND DUCT SEISMIC REGULATIONS

24 GA. (LBS/SQFT)	1.156
22 GA. (LBS/SQFT)	1.406

HANGER SPACING: 10' O.C.

DUCT DIAM. (IN.)	GALV. METAL GA.	CROSS-SECTIONAL AREA (SQFT)	GALV. METAL LBS/FT
6"	24	0.20	2.0
8"	24	0.35	2.8
10"	24	0.55	3.1
12"	24	0.79	4.1
14"	24	1.07	4.8
16"	24	1.40	5.5
18"	22	1.77	9.9

SEISMIC EXEMPTION NOTES:

1. CROSS-SECTIONAL AREA IS LESS THAN 6 SQ.FT.
2. DUCTS ARE LESS THAN 20 LBS PER LINEAL FOOT.
3. THE SEPARATION DISTANCE BETWEEN AN UNBRACED COMPONENT AND BRACED ELEMENTS OR COMPONENTS SHALL BE BASED ON A MINIMUM HORIZONTAL DISTANCE OF 12 INCHES. WHEN ADJACENT COMPONENTS ARE ALSO UNBRACED, THIS SEPARATION SHALL BE INCREASED TO A MINIMUM OF 18 INCHES.

* FOR DUCT THAT EXCEED THE EXEMPTION NOTES. REFER TO SEISMIC BRACING DETAILS FROM MASON WEST OPM #0043.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 01/23/2025

PBK

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CONSTRUCTION DOCUMENTS

PROFESSIONAL SEAL
LICENSED ARCHITECT MICHAEL R. SCHOEN C 36165 02-28-27 RENEWAL DATE STATE OF CALIFORNIA

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DRAWN BY	Author

REVISIONS

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CONSTRUCTION DOCUMENTS

MECHANICAL LEGEND & DETAILS

M5.1

REGISTERED PROFESSIONAL ENGINEER TRAVIS W. CARLSON No. M34814 Exp. 6-30-26 MECHANICAL STATE OF CALIFORNIA

LAWRENCE ENGINEERING GROUP
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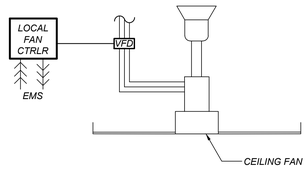
(559) 431-0101 23073 FAX (559) 431-1362

14 January 2025 2:21 PM p:\2023\23073 modero usd – modero hs stadium locker addition\4-drawings\4 M\M5.1 – 5.2 – MECHANICAL DETAILS.dwg mark d

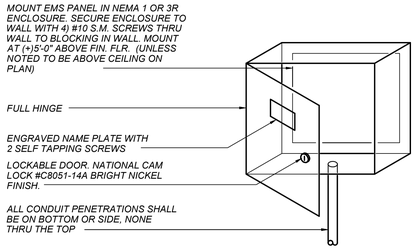


CEILING FAN DIAGRAM

SCALE: NONE

MC153

L / M5.2

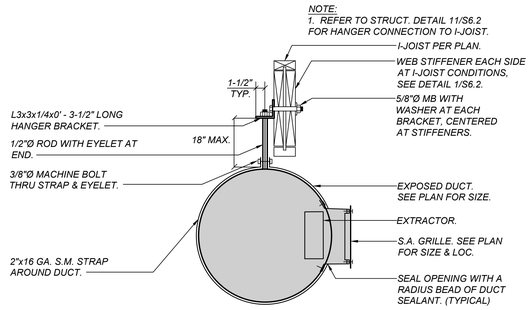


EMS PANEL ENCLOSURE DETAIL

SCALE: NONE

MC014

F / M5.2

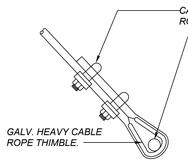


EXPOSED DUCT MOUNTING DETAIL

SCALE: NONE

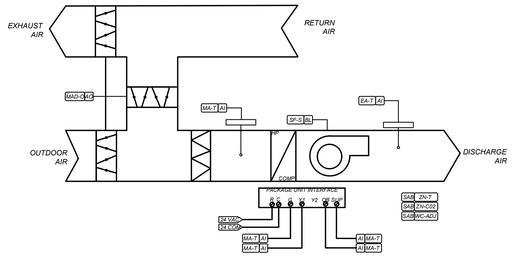
MD110

A / M5.2



NOTES:
REFER TO SEISMIC KIT INSTALLATION GUIDE PROVIDED BY MANUFACTURER.

GUY CABLE LOWER CONNECTION



NOTES:
1. DIAGRAM REFLECTS HP-1 THRU HP-5.
2. INCLUDE CO2 SENSOR FOR HP-3 PER UNIT SCHEDULE.
3. HP-6 ONLY HAS OSA DAMPER, REMOVE ECONOMIZER & POWER EXHAUST PER UNIT SCHEDULE.

PACKAGE HP UNIT DIAGRAM

SCALE: NONE

MC090

G / M5.2

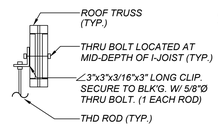
NOTES:
1. DO NOT NAIL TO SIDE OF TJI CHORD.
2. MAXIMUM STRAP LOAD OF 50 LBS. AT HANGER SPACING PER CURRENT SMACNA GUIDELINES.

TJI DUCT HANGER STRAP DETAIL

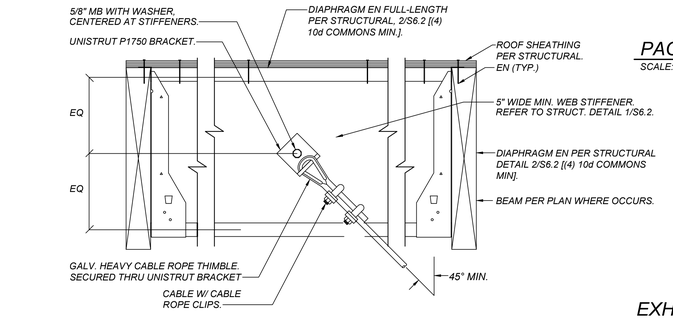
SCALE: NONE

MD066

B / M5.2



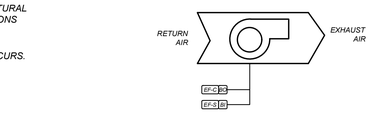
NOTE:
1. REFER TO STRUCT. DETAIL 11/S6.2.



GUY CABLE JOIST UPPER CONNECTION

SCALE: NONE

M / M5.2

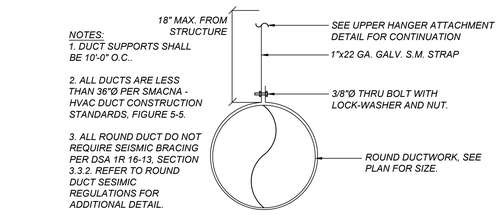


EXHAUST FAN DIAGRAM

SCALE: NONE

MC125

H / M5.2

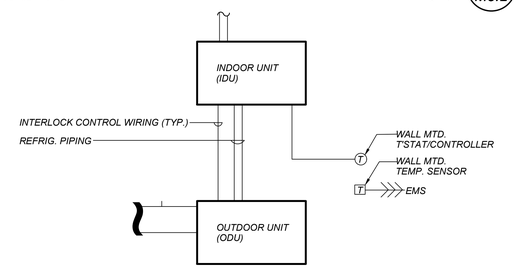


NOTES:
1. DUCT SUPPORTS SHALL BE 10'-0" O.C..
2. ALL DUCTS ARE LESS THAN 36"Ø PER SMACNA - HVAC DUCT CONSTRUCTION STANDARDS, FIGURE 5-5.
3. ALL ROUND DUCT DO NOT REQUIRE SEISMIC BRACING PER DSA 1R 16-13, SECTION 3.3.2. REFER TO ROUND DUCT SESIMIC REGULATIONS FOR ADDITIONAL DETAIL.

ROUND DUCT HANGING DETAIL

SCALE: NONE

K / M4.1

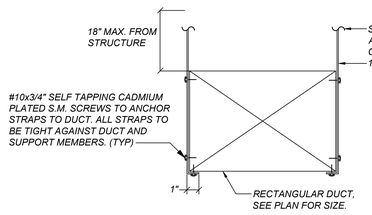


SPLIT SYSTEM DIAGRAM

SCALE: NONE

MC146

J / M5.2

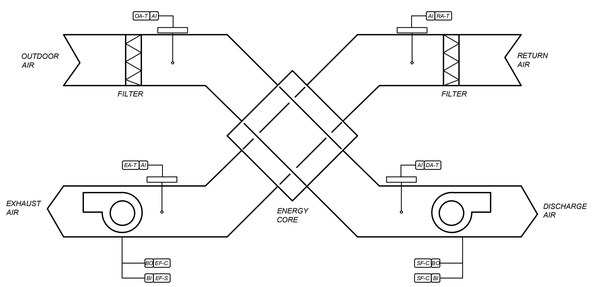


NOTES:
1. DUCT SUPPORTS SHALL BE 10'-0" O.C.
2. ALL RECTANGULAR DUCT DO NOT REQUIRE SEISMIC BRACING PER DSA 1R 16-13, SECTION 3.3.2. REFER TO RECTANGULAR DUCT SESIMIC REGULATIONS FOR ADDITIONAL DETAIL.

RECTANGULAR DUCT HANGING DETAIL

SCALE: NONE

L / M4.1

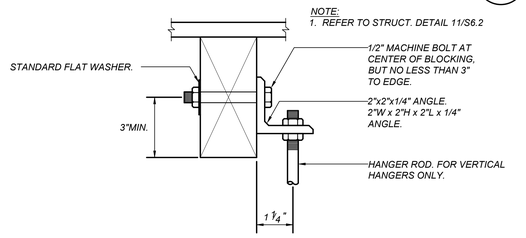


ENERGY RECOVERY VENTILATOR DIAGRAM

SCALE: NONE

MC151

K / M5.2

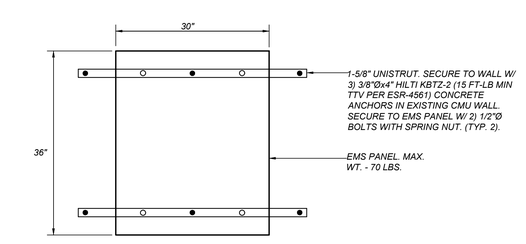


UPPER HANGER CONNECTION

SCALE: NONE

MB024

C / M5.2



UPPER HANGER CONNECTION

SCALE: NONE

MB023

D / M5.2

EMS PANEL MOUNTING DETAIL

SCALE: NONE

MC015

E / M5.2

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 01/23/2025

PBK

ARCHITECT PBK Architects, Inc.

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MADERA, CA 93637
CONSTRUCTION DOCUMENTS

MADERA 19 66 UNIFIED SCHOOL DISTRICT

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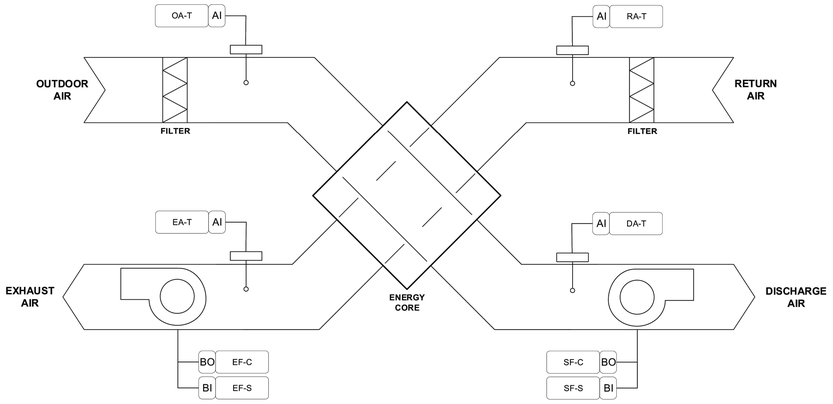
LAWRENCE ENGINEERING GROUP
4910 E. Clinton Way, Suite 103 Fresno, CA 93727
(559) 431-0101 23073 FAX (559) 431-1362

MECHANICAL DETAILS

M5.2

14 January 2025 2:21 PM p:\2023\23073 modera usd – modera hs stadium locker addition\4-drawings\4 M\M5.1-5.2 – MECHANICAL DETAILS.dwg mark d

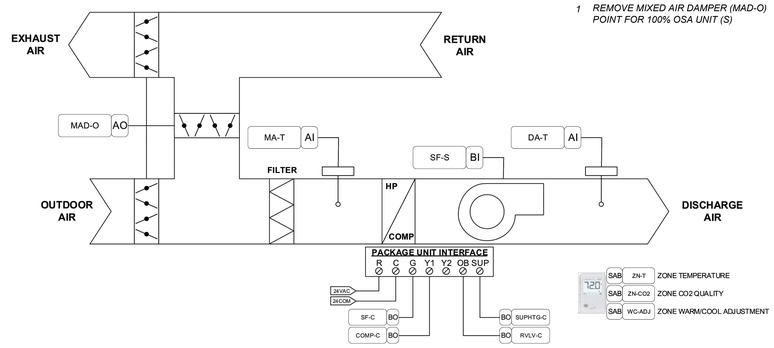
ENERGY VENTILATION RECOVERY UNIT



ENERGY VENTILATION RECOVERY UNIT — C / M5.3

SCALE: NONE *detail #*

PACKAGED HEAT PUMP UNIT – SINGLE ZONE



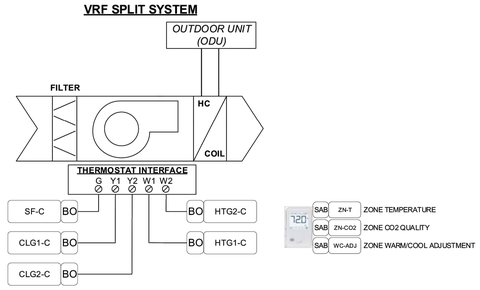
NOTE:

1 *REMOVE MIXED AIR DAMPER (MAD-O) POINT FOR 100% OSA UNIT (S)*

PACKAGED HEAT PUMP UNIT - SINGLE ZONE — A / M5.3

SCALE: NONE *detail #*

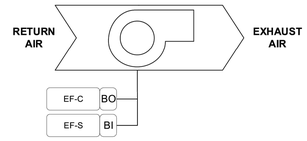
VRF SPLIT SYSTEM



VRF SPLIT SYSTEM — D / M5.3

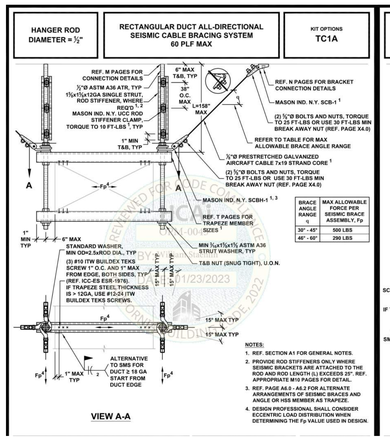
SCALE: NONE *detail #*

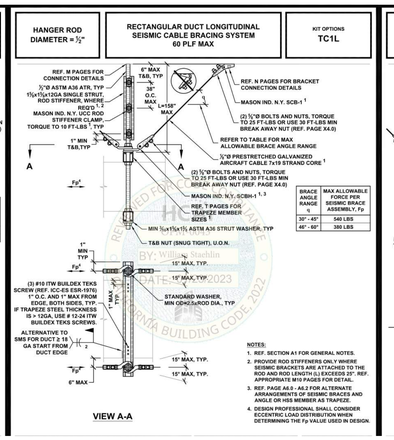
EXHAUST FAN

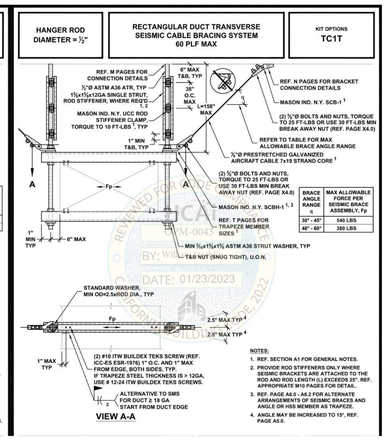


EXHAUST FAN — B / M5.3

SCALE: NONE *detail #*







IDENTIFICATION STAMP
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APP: 02-121624 INC:
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DATE: 01/23/2025

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MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL R. SCHOEN C-36165 02-28-27 RENEWAL DATE STATE OF CALIFORNIA

PROJECT NUMBER
20-51

DATE
MM/DD/YYYY

DSA APPLICATION NO.
02 - 121624

FILE NO.
20-H3

PTN NO.
65243-153

DRAWN BY
Author

REVISIONS

#	DESCRIPTION	DATE

CONSTRUCTION DOCUMENTS

MECHANICAL DETAILS

M5.3

REGISTERED PROFESSIONAL ENGINEER RYAN W. CARLSEN No. M34814 Exp. 6-30-26 MECHANICAL STATE OF CALIFORNIA

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14 January 2025 2:21 PM p:\2023\23073 modera usd – modera hs stadium locker addition\4-drawings\4 M\M5.1-5.2 – MECHANICAL DETAILS.dwg mark d

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD	NRCC-PRF-E
Nonresidential Performance Compliance Method	(Page 4 of 19)

C2. TDV ENERGY COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS (Annual TDV Energy Use, kBtu/ft² - yr)

COMPLIES[2]			
Energy Component	**Standard Design (TDV)**	**Proposed Design (TDV)**	**Compliance Margin (TDV)[1]**
Space Heating	36.1	7.48	28.62
Space Cooling	121.58	96.95	24.63
Indoor Fans	96.99	122.45	-25.46
Heat Rejection	0	0	0
Pumps & Misc.	0	0	0
Domestic Hot Water	21.44	17.91	3.53
Indoor Lighting	48.46	48.46	0
Flexibility	---	---	---
EFFICIENCY COMPLIANCE TOTAL	**324.57**	**293.25**	**31.32 (9.6%)**
Photovoltaics	-51.13	-77.23	26.1
Batteries	---	0	---
TOTAL COMPLIANCE	**273.44**	**216.02**	**57.42 (21%)**

[1] *Notes: This number in parenthesis following the Compliance Margin in column 4, represents the Percent Better than Standard.*

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD	NRCC-PRF-E
Nonresidential Performance Compliance Method	(Page 3 of 19)

C1. COMPLIANCE SUMMARY

COMPLIES[3]			
	Time Dependent Valuation (TDV)		Source Energy Use
	Efficiency[1] (kBtu/ft² - yr)	Total[2] (kBtu/ft² - yr)	Total[2] (kBtu/ft² - yr)
Standard Design	324.57	273.44	24.79
Proposed Design	293.25	216.02	22.71
Compliance Margins	**31.32**	**57.42**	**2.08**
	Pass	**Pass**	**Pass**

[1] *Efficiency measures include improvements like a better building envelope and more efficient equipment*
[2] *Compliance Totals include efficiency, photovoltaics and batteries*
[3] *Building complies when efficiency and total compliance margins are greater than or equal to zero and unmet load hour limits are not exceeded*

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD	NRCC-PRF-E
Nonresidential Performance Compliance Method	(Page 2 of 19)

B. PROJECT SUMMARY

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 the permit application.

Building Components Complying via Performance					Building Components Complying Prescriptively		
Envelope (See Table G)	Nonres	Performance	Solar Thermal Water Heating (See Table I3)	☐	Performance	The following building components are ONLY eligible for prescriptive compliance and should be documented on the NRCC form listed if within the scope of the permit application (i.e. compliance will not be shown on the NRCC-PRF-E).	
	MultiFam	Not Included		☒	Not Included		
Mechanical (See Table H)	Nonres	Performance	Covered Process: Commercial Kitchens (see Table J)	☐	Performance	Indoor Lighting (Unconditioned) 140.6 & 170.2(e)	NRCC-LTI-E is required
	MultiFam	Not Included		☒	Not Included	Outdoor Lighting 140.7 & 170.2(e)	NRCC-LTO-E is required
Domestic Hot Water (See Table I)	Nonres	Performance	Covered Process: Laboratory Exhaust (see Table J)	☐	Performance	Sign Lighting 140.8 & 170.2(e)	NRCC-LTS-E is required
	MultiFam	Not Included		☒	Not Included	**Building Components Complying with Mandatory Measures**	
Lighting (Indoor Conditioned, see Table K)	Nonres	Not Included	Photovoltaics (see Table F)	☒	Performance	Electrical power systems, commissioning, solar ready, elevator and escalator requirements are mandatory and should be documented on the NRCC form listed if applicable (i.e. compliance will not be shown on the NRCC-PRF-E.)	
	MultiFam	Not Included		☐	Not Included	Electrical Power Distribution 110.11	NRCC-ELC-E is required
			Battery (see Table F)	☒	Performance	Commissioning 120.8	NRCC-CXR-E is required
				☐	Not Included	Solar and Battery 110.10	NRCC-SAB-E is required

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD	NRCC-PRF-E
Nonresidential Performance Compliance Method	(Page 1 of 19)

Project Name:	Madera HS Stadium Locker Addition	Date Prepared:	2023-12-12

A. General Information

1	Project Name	Madera HS Stadium Locker Addition		
2	Run Title	Title 24 Analysis		
3	Project Location	200 S L St, Madera		
4	City	Madera	5	Standards Version	Compliance 2022
6	Zip code	93637	7	Compliance Software (version)	EnergyPro 9.1
8	Climate Zone	13	9	Building Orientation (deg)	0
10	Building Type(s)	• Nonresidential	11	Weather File	MADERA_STYP20.epw
12	Project Scope	• New envelope and mechanical	13	Number of Dwelling Units	0
14	Total Conditioned Floor Area in Scope (ft²)	10431	15	Total # of hotel/motel rooms	0
16	Total Unconditioned Floor Area (ft²)	0	17	Fuel Type	Natural gas
18	Nonresidential Conditioned Floor Area	10431	19	Total # of Stories (Habitable Above Grade)	1
20	Residential Conditioned Floor Area	0			

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD	NRCC-PRF-E
Nonresidential Performance Compliance Method	(Page 8 of 19)

C7. 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	13.4	2.4	11	---	---	---
Space Cooling	35	27.6	7.4	---	---	---
Indoor Fans	34.9	46.4	-11.5	---	---	---
Heat Rejection	---	---	---	---	---	---
Pumps & Misc.	---	---	---	---	---	---
Domestic Hot Water	2.9	---	---	57.1	73.5	-16.4
Indoor Lighting	19.6	19.6	0	---	---	---
Flexibility	---	---	---	---	---	---
EFFICIENCY TOTAL	**105.8**	**96**	**9.8**	**57.1**	**73.5**	**-16.4**
Photovoltaics	-27	-40.3	13.3	---	---	---
Batteries	---	0	---	---	---	---
ENERGY USE SUBTOTAL	**78.8**	**55.7**	**23.1**	**57.1**	**73.5**	**-16.4**
Receptacle	22.2	22.2	0	---	---	---
Process	81.5	81.5	0	---	---	---
Other Ltg	---	---	---	---	---	---
Process Motors	---	---	---	---	---	---
ENERGY USE TOTAL	**182.5**	**159.4**	**23.1**	**57.1**	**73.5**	**-16.4**

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD	NRCC-PRF-E
Nonresidential Performance Compliance Method	(Page 7 of 19)

C5. SOURCE ENERGY RESULTS FOR NON-REGULATED COMPONENTS[1]

Non-Regulated Energy Component	Standard Design (SOURCE)	Proposed Design (SOURCE)	Compliance Margin (SOURCE)[1]
Receptacle	4.04	4.04	---
Process	15.45	15.45	---
Other Ltg	---	---	---
Process Motors	---	---	---
TOTAL (TOTAL COMPLIANCE + NON-REGULATED COMPONENTS)	**44.28**	**42.2**	**2.08 (4.7%)**

[1] *Notes: This table is not used for Energy Code Compliance.*

C6. 'ABOVE CODE' QUALIFICATIONS

☐ This project is pursuing CalGreen Tier 1 ☐ This project is pursuing CalGreen Tier 2

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD	NRCC-PRF-E
Nonresidential Performance Compliance Method	(Page 6 of 19)

C4. SOURCE ENERGY COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS (Annual SOURCE Energy Use, kBtu/ft² -yr)

COMPLIES[2]			
Energy Component	**Standard Design (SOURCE)**	**Proposed Design (SOURCE)**	**Compliance Margin (SOURCE)[1]**
Space Heating	4.58	0.98	3.6
Space Cooling	5.24	4.15	1.09
Indoor Fans	7.39	10.04	-2.65
Heat Rejection	0	0	0
Pumps & Misc.	0	0	0
Domestic Hot Water	5.74	6.56	-0.82
Indoor Lighting	3.59	3.59	0
Flexibility	---	---	---
EFFICIENCY COMPLIANCE TOTAL	**26.54**	**25.32**	**1.22 (4.6%)**
Photovoltaics	-1.75	-2.61	0.86
Batteries	---	0	---
TOTAL COMPLIANCE	**24.79**	**22.71**	**2.08 (8.4%)**

[1] *Notes: This number in parenthesis following the Compliance Margin in column 4, represents the Percent Better than Standard.*

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD	NRCC-PRF-E
Nonresidential Performance Compliance Method	(Page 5 of 19)

C3. TDV ENERGY RESULTS FOR NON-REGULATED COMPONENTS[1]

Non-Regulated Energy Component	Standard Design (TDV)	Proposed Design (TDV)	Compliance Margin (TDV)[1]
Receptacle	54.94	54.94	---
Process	202.2	202.2	---
Other Ltg	---	---	---
Process Motors	---	---	---
TOTAL (TOTAL COMPLIANCE + NON-REGULATED COMPONENTS)	**530.58**	**473.16**	**57.42 (10.8%)**

[1] *Notes: This table is not used for Energy Code Compliance.*

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD	NRCC-PRF-E
Nonresidential Performance Compliance Method	(Page 12 of 19)

G5. OPAQUE SURFACE ASSEMBLY SUMMARY

01	02	03	04	05	06		07	08	09	10
					Continuous R-Value					
Surface Name	**Construction Type**	**Area (ft²)**	**Framing Type**	**Cavity R-Value**	**Interior**	**Exterior**	**Units**	**Value**	**Description of Assembly Layers**	**Status[1]**
New 23073 R-30 Roof Attic9	Roof	10,431	Wood	0	N/A	30	U-factor	0.0309	Single Ply Roofing - 1/4 in. Vapor permeable felt - 1/8 in. Plywood - 1/2 in. Composite-1 Extruded Polystyrene - XPS - 6 in. R30.00 Gypsum Board - 5/8 in.	N
Slab On Grade11	Underground Floor	10,431	N/A	0	N/A	N/A	F-factor	0.73	Slab Type =Unheated slab on grade Insulation Orientation =None Insulation R-Value =none	N
23073 8 CMU Wall13	Exterior Wall	7,968	Wood	19	N/A	N/A	U-factor	0.0742	Concrete - Solid Grout - 105 lb/ft3 - 8 in. Composite-2 Gypsum Board - 5/8 in.	N
R-0 Wall50	Interior Wall	55	N/A	0	N/A	N/A	U-factor	0.3145	Gypsum Board - 1/2 in. Air - Cavity - Wall Roof Ceiling - 4 in. or more Gypsum Board - 1/2 in.	N

[1] *Status: N - New, A - Altered, E - Existing*

G6A. OPAQUE DOOR SUMMARY (NONRESIDENTIAL)

01	02	03	04
Assembly Name	**Area (ft²)**	**Overall U-factor**	**Status[1]**
Metal Door15	420	0.7	N
Garage door32	360	1.45	N

[1] *Status: N - New, A - Altered, E - Existing*

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD	NRCC-PRF-E
Nonresidential Performance Compliance Method	(Page 11 of 19)

G1. ENVELOPE GENERAL INFORMATION (conditioned spaces only)

01	02	03	04
Opaque Surfaces & Orientation	**Total Gross Surface Area (ft²)**	**Total Fenestration Area (ft²)**	**Window to Wall Ratio (%)**
North-Facing[1]	2482	0	0
East-Facing[2]	1582	0	0
South-Facing[3]	2500	0	0
West-Facing[4]	1404	0	0
Total	**7968**	**0**	**0**
Roof	10431	0	0

Notes
[1]*North-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),*
[2]*East-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),*
[3]*South-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),*
[4]*West-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),*

G4. NONRESIDENTIAL AIR BARRIER

01	02
Building Story Name	**Air Barrier**
Com-Floor 1	No air barrier

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD	NRCC-PRF-E
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F1B. PV BATTERY BUILDING TYPE(S)

01	02	03
Building Occupancy Type[1] (From Table 140.10-A/B and 170.2-U/V)	**Conditioned Floor Area (ft²)**	**Unconditioned Floor Area (ft²)**
Grocery	0	0
High-Rise Multifamily	0	0
Office, Financial Institutions, Unleased Tenant Space	0	0
Retail	0	0
School	10431	0
Warehouse	0	0
Auditorium, Convention Center, Hotel/Motel, Library, Medical Office Building/Clinic, Restaurant, Theater	0	0
None	0	0

[1]*Building Occupancy Types are defined in Section 100.1 of the Energy Code*

F2. BATTERY SYSTEMS[1]

01	02	03	04	05	06	07
Control	**Capacity (kWh)**	**Charging Efficiency**	**Charging Rate (kW)**	**Discharging Efficiency**	**Discharging Rate (kW)**	**Round Trip Efficiency**
Basic	45	N/A	5	N/A	5	0.9

[1]*See Table D1 for any Battery exceptions used.*

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD	NRCC-PRF-E
Nonresidential Performance Compliance Method	(Page 9 of 19)

C8. ENERGY USE INTENSITY (EUI)

	Standard Design (kBtu/ft² / yr)	Proposed Design (kBtu/ft² / yr)	Margin (kBtu/ft² / yr)	Margin Percentage
GROSS EUI[1]	74	72.37	1.63	2.2
NET EUI[1]	65.17	59.19	5.98	9.18

[1] *Notes: Gross EUI is Energy Use Total (not including PV)/Total Building Area. Net EUI is Energy Use Total (including PV)/Total Building Area.*

D1. EXCEPTIONAL CONDITIONS

• 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.
• PV/Battery Building Type has been modified from software defaults for one or more spaces. Review project's PV/Battery Building Type(s) with documentation author. Refer to Energy Code section 140.10 for Nonresidential or 170.2(g) for more information.

F3. REQUIRED PV SYSTEMS

01	02	03	04	05	06	07	08	09	10	11	12
DC System Size (kWdc)	**Exception[1]**	**Module Type**	**Array Type**	**Power Electronics**	**CFI**	**Azimuth (deg)**	**Tilt Input**	**Array Angle (deg)**	**Tilt: (x in 12)**	**Inverter Eff. (%)**	**Annual Solar Access (%)**
24.3	n/a	Standard (14-17%)	Fixed	none	false	180	Degrees	22	4.85	96	100

[1]*See Table D1 for any PV exceptions used.*

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD	NRCC-PRF-E
Nonresidential Performance Compliance Method	(Page 15 of 19)

H5. GENERAL EXHAUST FAN SUMMARY

01	02	03	04	05	06	07	08
System ID	**Zone Name**	**Qty**	**CFM**	**Power**	**Power Units**	**Continuous Operation?**	**Status[1]**
Z13	1-Z1	1	200	0.07	BHP	No	N
Z238	2-Z2	1	100	0.03	BHP	No	N
Z354	3-Z3	1	1450	0.5	BHP	No	N
Z482	4-Z4	1	650	0.2	BHP	No	N
Z5105	5-Z5	1	2400	0.9	BHP	No	N
Z6133	6-Z6	1	600	0.2	BHP	No	N

[1] *Status: N - New, A - Altered, E - Existing*

H8. SYSTEM SPECIAL FEATURES

01	02	03	04
System Name	**Equipment Type**	**Interlocks per 140.4(n)[1]**	**Other Special Features and Controls**
HP - 1 and HP - 2 RN-007-	Single Zone Heat Pump (SZHP) Air System	N/A	Differential DB
HP - 3 RQ-006-3-V-E60E	Single Zone Heat Pump (SZHP) Air System	N/A	Zone(s) With CO2 Sensor Vent. Control Differential DB
HP - 4 RN-013-3-O-H60E	Single Zone Heat Pump (SZHP) Air System	N/A	Differential DB
HP - 5 RQ-006-3-V-E60E	Single Zone Heat Pump (SZHP) Air System	N/A	Differential DB
HP - 6 RN-007-3-O-K609	Single Zone Heat Pump (SZHP) Air System	N/A	Differential DB
ODU 1.1-1.3 TRUZA036	Variable Refrigerant Flow	N/A	Heat Recovery
Bradford White #EF-100T-21 - SHW	Service Hot Water	N/A	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.

[1] *Yes = interlocks are provided, No = interlocks are not provided, NA means no operable openings.*

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD	NRCC-PRF-E
Nonresidential Performance Compliance Method	(Page 14 of 19)

H3. NONRESIDENTIAL / COMMON USE AREA FAN SYSTEMS SUMMARY

01	02	03	04	05	06	07	08	09	10	11	12	13
				Supply Fan			Return / Relief Fan					
Name or Item Tag	**Qty**	**Design OA CFM**	**CFM**	**Power**	**Power Units**	**Control**	**Fan Type**	**CFM**	**Power**	**Power Units**	**Control**	**Status[1]**
HP - 1 and HP - 2 RN-007-	2	317.7	2,400	1.3	BHP	Constant Vol	N/A	N/A	N/A	N/A	N/A	N
HP - 3 RQ-006-3-V-E60E	1	516.5	1,800	1.2	BHP	Constant Vol	N/A	N/A	N/A	N/A	N/A	N
HP - 4 RN-013-3-O-H60E	1	0	3,500	1.7	BHP	Constant Vol	N/A	N/A	N/A	N/A	N/A	N
HP - 5 RQ-006-3-V-E60E	1	51.3	1,800	1.2	BHP	Constant Vol	N/A	N/A	N/A	N/A	N/A	N
HP - 6 RN-007-3-O-K609	1	0	2,400	1.1	BHP	Constant Vol	N/A	N/A	N/A	N/A	N/A	N
ODU/EDU 2: TPKADA024	1	0	600	0.1	BHP	Constant Vol	N/A	N/A	N/A	N/A	N/A	N
7-Z6-V8F	3	0	800	0.08	BHP	Constant Vol	N/A	N/A	N/A	N/A	N/A	N

[1] *Status: N - New, A - Altered, E - Existing*

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD	NRCC-PRF-E
Nonresidential Performance Compliance Method	(Page 13 of 19)

H1. DRY SYSTEM EQUIPMENT (FURNACES, AIR HANDLING UNITS, HEAT PUMPS, VRF, ECONOMIZERS ETC.)

01	02	03	04	05	06	07	08	09	10	11	12
			Heating				Cooling				
Equipment Name	**Equipment Type**	**Qty**	**Total Heating Output (kBtu/h)**	**Supp Heat Output (kBtu/h)**	**Efficiency Unit**	**Efficiency**	**Total Cooling Output (kBtu/h)**	**Efficiency Unit**	**Efficiency**	**Economizer Type (if present)**	**Status[1]**
HP - 1 and HP - 2 RN-007-	Single Zone Heat Pump (SZHP) Air System	2	50.93	34.13	N/A	NA	57.99	EER SEER	12.1 14.1	Differential DB	N
HP - 3 RQ-006-3-V-E60E	Single Zone Heat Pump (SZHP) Air System	1	52.7	34.13	N/A	NA	57.7	EER SEER	11.7 14.8	Differential DB	N
HP - 4 RN-013-3-O-H60E	Single Zone Heat Pump (SZHP) Air System	1	112.8	68.26	COP	3.4	129.33	EER	11.5	Differential DB	N
HP - 5 RQ-006-3-V-E60E	Single Zone Heat Pump (SZHP) Air System	1	52.81	34.13	N/A	NA	58.57	EER SEER	11.7 14.8	Differential DB	N
HP - 6 RN-007-3-O-K609	Single Zone Heat Pump (SZHP) Air System	1	61.24	68.26	COP	3.5	80.17	EER	11.2	Differential DB	N
ODU/EDU 2: TPKADA024	Single Zone Heat Pump (SZHP) Air System	1	29.16	0	N/A	NA	23.04	EER SEER	12.2 21.4	No Economizer	N
ODU 1.1-1.3 TRUZA036	Variable Refrigerant Flow	3	42	N/A	HSPF	10.4	36	N/A		N/A	N

[1] *Status: N - New, A - Altered, E - Existing*

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CONSTRUCTION DOCUMENTS

MADERA UNITED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL R. SCHGEN C 36165 02-28-27 RENEWAL DATE STATE OF CALIFORNIA

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CONSTRUCTION DOCUMENTS

TITLE 24

M6.1

REGISTERED PROFESSIONAL ENGINEER RYAN W. CARLSON No. M34814 Exp. 6-30-26 MECHANICAL STATE OF CALIFORNIA

LAWRENCE ENGINEERING GROUP
4910 E. Clinton Way, Suite 102 Fresno, CA 93727
(559) 431-0101 23073 FAX (559) 431-1362

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CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD NRCC-PRF-E

Nonresidential Performance Compliance Method (Page 19 of 19)

Documentation Author's Declaration Statement

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

Documentation Author Name: Brent Yang	Documentation Author Signature: *Brent Yang*
Company: Lawrence Engineering Group	Signature Date: 2023-12-12
Address: 4910 E Clinton Way	CEA/HERS Certification Identification (if applicable):
City/State/Zip: Fresno, CA 93727	Phone: 5594310101

Responsible Person's Declaration statement

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

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. 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.
4. 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.
5. I understand that a registered copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy, and I will take the necessary steps to accomplish these requirements.
6. I understand that a registered copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy, and I will take the necessary steps to accomplish these requirements.

Responsible Designer Name: Jeffrey S. Berrios	Responsible Designer Signature:
Company: PBK Architects	
Address: 7790 North Palm Ave	Date Signed:
City/State/Zip: Fresno, CA 93711	License #: C 32578
Phone: 559-448-8400	Title: Scope:
Responsible Designer Name: Ryan W. Carlson	Responsible Designer Signature:
Company: Lawrence Engineering Group	
Address: 4910 E. Clinton Way, Suite 101	Date Signed: 2023-12-12
City/State/Zip: Fresno, CA 93727	License #: M34846
Phone: (559) 431-0101	Title: Scope:

STATE OF CALIFORNIA
Domestic Water Heating System CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		**NRCC-PLB-E**
Project Name: Madera HS Football Field Modernizaton	**Report Page:**	**(Page 4 of 7)**
	Date Prepared:	12/12/2023

G. DOMESTIC HOT WATER DISTRIBUTION SYSTEM

This table is used to demonstrate compliance for nonresidential occupancies with distribution requirements in 120.3 and 140.5. For multifamily and hotel/motel occupancies, compliance is demonstrated with requirements 110.3(c), 160.4, 170.2(d).

Mandatory Pipe Insulation All Occupancies

13	☐	For systems serving dwelling units, pipe insulation must meet the minimum insulation requirements in Table 160.4-A (see blow) except: • Piping that penetrates framing members shall not be required to have pipe insulation for the distance of the framing penetration. Piping that penetrates metal framing shall use grommets, plugs, wrapping or other insulating material to assure that no contact is made with the metal framing. Insulation shall abut securely against all framing members • Piping installed in interior or exterior walls shall not be required to have pipe insulation if all of the requirements are met for compliance with Quality Insulation Installation (QII) as specified in the Reference Residential Appendix RA3.5. • Piping surrounded with a minimum of 1 inch of wall insulation, 2 inches of crawlspace insulation, or 4 inches of attic insulation, shall not be required to have pipe insulation.
14	☒	For systems serving nonresidential spaces, pipe insulation for the following applications is specified to comply with Table 120.3-A (see below) per 120.3: • Recirculating system piping, including supply and return piping of the water heater • The first 8 ft of hot and cold outlet piping, including between storage tank and heat trap, for a nonrecirculating storage system • Pipes that are externally heated
15	☐	Insulation shall be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather shall be installed with a cover suitable for outdoor service per 120.3(b) / 160.4(f). Pipe insulation buried below grade must be installed in a water proof and non-crushable casing or sleeve.

TABLE 120.3-A / 160.4-A PIPE INSULATION THICKNESS

Fluid Temperature Range (°F)	Conductivity Range (Btu-in per hour per ft² per °F)	Insulation Mean Rating Temp (°F)	Nominal Pipe Diameter (in)			
			< 1	1 to < 1.5	1.5 to < 4	1.5 to < 4 Multifamily & Hotel/Motel
			Minimum Insulation Required			
105-140	0.22 - 0.28	100	1.0 in or R-7.7	1.5 in or R-12.5	1.5 in or R-11	2.0 in or R-16

STATE OF CALIFORNIA
Nonresidential Building Commissioning CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		**NRCC-CXR-E**
This document is used to demonstrate compliance with mandatory commissioning requirements in 120.8 for nonresidential buildings and hotel/motel or mixed-use buildings with nonresidential spaces. This document does not demonstrate compliance with commissioning requirements within Title 24, Part 11, which need to be documented separately if they apply.		
Project Name: Field House at Madera High School	**Report Page:**	**(Page 1 of 16)**
Project Address:	**Date Prepared:**	2023-08-28T19:08:59-04:00

A. GENERAL INFORMATION

01	Project Location (city)	Madera	04	Building Size (ft²)	11634
02	Occupancy Type	Nonresidential	05		10,000 - 49,999 ft²
03	Project Type	Newly constructed	06		Unitary or packaged equipment each serving one zone
			07	Climate Zone	13

B. PROJECT SCOPE

Based on project information provided in Table A, Table B indicates which commissioning related requirements apply per 120.8. Table B is not editable by the user.

Commissioning Requirements per 120.8			
01	Table F: Design Review Kickoff	120.8(d)1 and 120.8(d)2	The design review kickoff meeting establishes who will play the role of the design reviewer, the project schedule and identify owner's requirements. This meeting should be conducted during schematic design.
02	Table G: Owner's Project Requirements (OPR)	120.8(b)	The owner's project requirements establish the owner's goals, requirements and expectations for everything related to energy consumption and operation. This should be completed during schematic design.
03	Table H: Basis of Design (BOD)	120.8(c)	The basis of design documents the design elements such as calculations and product selections that meet the owner's project requirements and applicable regulatory requirements. This should be completed during schematic design.
04	Table I: Design Review	120.8(d) and 120.8(e)	The design reviewer(s) reviews the construction documents for clarity, completeness, and adherence to the owner's goals. Commissioning measures must be included in the construction documents to facilitate the design review and commissioning process. For projects with >= 10,000 ft² of nonresidential conditioned floor area, the design review is for adherence with the Owner's Project Requirements (OPR) and Basis of Design (BOD). This should be conducted during design.
05	Table J: Commissioning Plan	120.8(f)	The commissioning plan is developed by the commissioning provider with input from the designer and defines the scope of commissioning the project. This should be drafted during design and completed during early construction.
06	Table K: Functional Performance Testing	120.8(g)	Functional performance testing is conducted on building systems to demonstrate correct installation and operation.
07	Table L: Documentation and Training	120.8(h)	Documentation of the operational aspects of the building shall be completed within the Systems Manual and delivered to the building owner or representative and facilities operator.

STATE OF CALIFORNIA
Nonresidential Building Commissioning CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		**NRCC-CXR-E**
Project Name: Field House at Madera High School	**Report Page:**	**(Page 4 of 16)**
	Date Prepared:	2023-08-28T19:08:59-04:00

G. OWNER'S PROJECT REQUIREMENTS (OPR)

This table is only completed if an OPR document is not attached to permit application to demonstrate compliance with 120.8(b). If a specific field is not applicable to the project scope, "NA" is indicated in the table. Per 120.8(b), the OPR is to be completed before design begins. This may be done at the Design Review Kickoff Meeting (see Table F)

		YES	NO
01	Attaching Completed Owner's Project Requirements Document?	○	●
02	Owner's Project Requirements Document Authors and Roles	Rosalind Cox, Owners Rep	
Energy Efficiency Goals: General			
03	What is the target total energy usage per square foot per year? (ie, Energy User Intensity (EUI) in kBtu/ft²)	1	
04	What is the target total energy cost per square foot per year?	1	
05	Is kW demand control specifically an interest of the client or the design team? If so, for what reason?	The owner have not specified.	
06	What are the project goals and requirements for building siting that will impact energy use?	The new Fieldhouse will be located on the existing Madera High School campus. The existing building will be demolished to make way for the new Fieldhouse adjacent to the stadium. Overhangs are strategically located to provide shade to the structure.	
07	What are the project goals and requirements for landscape that will impact energy use?	The project is to comply with the mandatory measures of CalGreen Code to ensure water efficiency and conservation..	
08	Additional notes regarding general efficiency	The project is to comply with code minimum requirements.	
Energy Efficiency Goals: Envelope			
09	What are the project goals and requirements for building fenestration that will impact energy use?	All proposed window openings, exterior wall insulation, and roof insulation to comply with California Energy Code (CEC).	
10	What are the project goals and requirements for walls/floors that will impact energy use?	All proposed window openings, exterior wall insulation, and roof insulation to comply with California Energy Code (CEC).	
11	What are the project goals and requirements for building roof that will impact energy use?	All proposed window openings, exterior wall insulation, and roof insulation to comply with California Energy Code.	
12	Additional notes regarding envelope efficiency	N/A	

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD NRCC-PRF-E

Nonresidential Performance Compliance Method (Page 18 of 19)

M. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections made by Documentation Author 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).

Building Component	Form/Title
Mechanical	NRCA-MCH-02-A - Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH-02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap
Mechanical	NRCA-MCH-03-A - Constant Volume Single Zone HVAC
Mechanical	NRCA-MCH-05-A - Air Economizer Controls
Mechanical	NRCA-MCH-06-A Demand Control Ventilation Systems must be submitted for all systems required to employ demand controlled ventilation (refer to) can vary outside ventilation flow rates based on maintaining interior carbon dioxide (CO2) concentration setpoints.
Mechanical	NRCA-MCH-12-A FDD for Packaged Direct Expansion Units

N. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

Selections made by Documentation Author indicate which Certificates of Verification 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

There are no Certificates of Verification applicable to this project

STATE OF CALIFORNIA
Domestic Water Heating System CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		**NRCC-PLB-E**
Project Name: Madera HS Football Field Modernization	**Report Page:**	**(Page 3 of 7)**
	Date Prepared:	12/12/2023

F. DOMESTIC HOT WATER EQUIPMENT

This table is used to demonstrate compliance with mandatory equipment requirements in 110.1 and 110.3. Compliance with prescriptive requirements in 140.5(c) / 170.2(d) must also be demonstrated and with 141.0 / 180.1 / 180.2 for addition and alteration scopes.

Equipment Schedule: Water Heating Efficiency and Standby Loss

03	04			05	06			
System Name	Bradford White #EF-100T-250E3N(A)	Exception to 140.5(c)/ 170.2(d)3		☐	Gas Service Water Heating System >= 1MMBtu/h[1]	Capacity-weighted Average Efficiency %		
07	08	09	10	11	12	13	14	15
Name or Item Tag	Equipment Type	Volume (gal)	Rated Input Capacity (Btu/h)	Max GPM/ First Hour Rating (FHR)	Minimum Efficiency Required	Efficiency Unit	Designed Standby Loss	Maximum Standby Loss
Bradford White #EF-100T-250E3N(A)	Commercial Package Gas Hot Water Supply Boilers (300kBtu/h - <1MMBtu/h)	100	250,000	FHR >=75	0.97	0.57	UEF	

[1]FOOTNOTE: In systems >= 1MMBtu/h with multiple units, gas water heaters with input capacity > 100,000 Btu/h may meet 90% Et requirements via an input capacity-weighted average.

Water Heating Equipment All Occupancies

	Yes	No	Not Applicable	Requirement
18	☐	☐	☒	Unfired storage tank insulation shall have Internal + External >=R-16 OR External >=R-3.5. Label required per 110.3(c)3
19	☐	☐	☒	New state buildings 60% of energy for service water heating from site solar energy or recovered energy per 110.3(c)5
20	☐	☐	☒	Isolation valves for instantaneous water heater with input rating >6.8 kBTUH or 2 kW has been specified per 110.3(c)6
21	☐	☐	☒	School buildings < 25,000 ft² and < 4 stories must install a heat pump water heating system per 140.5(a)1. Water heating systems serving an individual bathroom space may be an instantaneous electric water heater.

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Nonresidential Building Commissioning CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		**NRCC-CXR-E**
Project Name: Field House at Madera High School	**Report Page:**	**(Page 3 of 16)**
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F. DESIGN REVIEW KICKOFF MEETING

This table indicates that the design reviewer meets the qualification requirements per Title 24, Part 1 Section 10-103(a)1 and demonstrates compliance with design review kickoff requirements per 120.8(d)2. This meeting should occur during the Schematic Design phase of the project.

Design Review Kickoff Meeting Details

01	Date of Design Review Kickoff Meeting			2023-08-08
02	Meeting Attendees: (one person may play multiple roles)			
☐	Owner/Facility Manager:		☒ Design Reviewer(s):	Muey Tarvin
☒	Project Manager:	John Smith	☒ Design Architect/ Engineer(s):	John Smith, Rich Hardin, Wayne McCracken
☐	Contractor:		☐ Certified Acceptance Test Tech(s):	
☐	Commissioning Provider:		☐ Energy/ T24 Part 6 Consultant:	

Design Reviewer Qualifications per Title 24 Part 1 Section 10-103(a)1

		Yes	No
03	The design reviewer(s) must be licensed professional engineers or licensed architects, or licensed contractors representing services performed by or under the direct supervision of a licensed engineer or architect, as specified in the provisions of Division 3 of the Business and Professions Code. In addition, for buildings with >= 10,000 ft² but < 50,000 ft², the design reviewer(s) shall be a qualified in-house engineer or architect with no other project involvement or a third party engineer, architect, or contractor	Do the Design Reviewer(s) meet these qualifications? ●	○
04	The design reviewer(s) for this project will be:	Muey Tarvin	

Preliminary Construction Schedule

		Start Date	Completion Date
05	Schematic Design	2022-09-19	2022-10-14
06	Design Development	2022-10-17	2023-02-28
07	Construction Documents	2023-03-01	2023-07-10
08	Construction	2024-01-22	2024-11-29
09	Building Turnover	2024-12-02	2024-12-27

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD NRCC-PRF-E

Nonresidential Performance Compliance Method (Page 17 of 19)

H11. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY

01	02	03	04	05	06	07	08	09	10	11	12
System ID	System Type	Qty	Rated Capacity (kBtuh)		Airflow (cfm)			Fan			VSD
			Heating	Cooling	Design	Min.	Min. Ratio	Power	Power Units	Cycles	
5-Z5-Trm	Uncontrolled	1	N/A	N/A	2,400	N/A	0	N/A	N/A	N/A	☐
7-Elec 153-Trm	Uncontrolled	1	N/A	N/A	600	N/A	0	N/A	N/A	N/A	☐
7-Z6-VRF	Variable Refrigerant Flow	3	42	36	800	N/A	N/A	0.08	BHP	Continuous	☐

I1. WATER HEATER EQUIPMENT SUMMARY

01	02	03	04	05	06	07	08	09	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 Hr. Rating or Flow Rate (gal)	Heat Pump Type	Tank Location or Ambient Condition
Bradford White #EF-100T-22	Natural Gas	Storage	1	100	250	kBtu/Hr	0.97	TE	N/A	0.04	N/A	N/A	N/A

L. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections made by Documentation Author 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

Building Component	Form/Title
Envelope	NRCI-ENV-01-E - Must be submitted for all buildings
Envelope	NRCI-ENV-E - Envelope (for all buildings)
Mechanical	NRCI-MCH-01-E - Must be submitted for all buildings
Mechanical	NRCI-MCH-E - For all buildings with Mechanical Systems
Plumbing	NRCI-PLB-01-E - Must be submitted for all buildings
Plumbing	NRCI-PLB-E - For all buildings with Plumbing Systems

STATE OF CALIFORNIA
Domestic Water Heating System CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		**NRCC-PLB-E**
Project Name: Madera HS Football Field Modernizaton	**Report Page:**	**(Page 2 of 7)**
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E. ADDITIONAL REMARKS

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

STATE OF CALIFORNIA
Domestic Water Heating System CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		**NRCC-PLB-E**
Project Name: Madera HS Football Field Modernizaton	**Report Page:**	**(Page 6 of 7)**
	Date Prepared:	12/12/2023

I. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection have 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
NRCI-PLB-E - Must be submitted for all buildings

J. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no forms required for this project.

K. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

There are no forms required for this project.

STATE OF CALIFORNIA
Nonresidential Building Commissioning CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		**NRCC-CXR-E**
Project Name: Field House at Madera High School	**Report Page:**	**(Page 2 of 16)**
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B. PROJECT SCOPE

08	Table M: Commissioning Report	120.8(i)	A complete report of commissioning process activities undertaken through the design, construction and reporting recommendations for post-construction phases of the building project shall be completed and provided to the owner or representative.

C. COMPLIANCE RESULTS

Table C will indicate if the project data input into the compliance document is compliant with commissioning requirements per 120.8. This table is not editable by the user. If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

01	02	03	04	05	06	07	08	09	
Design Kickoff Review	Owner's Project Requirements	Basis of Design	Design Review	Commissioning Plan	Functional Performance Testing	Documentation and Training	Commissioning Report		
Table F	Table G	Table H	Table I	Table J	Table K	Table L	Table M		
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	COMPLIES	
10	Muey Tarvin							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.

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD NRCC-PRF-E

Nonresidential Performance Compliance Method (Page 16 of 19)

H9. NONRESIDENTIAL / COMMON USE AREA & HOTEL/MOTEL VENTILATION

01	02	03	04	05	06	07
Zone Name	Mechanical Ventilation				Conditioned Area (sf)	DCV or Occupant Sensor Controls, or Both
	Ventilation Function	# of People	Supply OA CFM	Exhaust CFM		
1-Z1	Sports/Entertainment - Health club/weight rooms	42.36	635.4	200	4236	N/A
2-Z2	General - Conference/meeting	34.44	516.5	100	1033	DCV
3-Z3	Exhaust - Locker rooms for athletic or industrial facilities	19.36	0	1450	1936	N/A
4-Z4	Exhaust - Locker rooms for athletic or industrial facilities Misc - All others	11.62	51.3	650	1470	N/A
5-Z5	Exhaust - Toilets, public	5.25	0	2400	1049	N/A
6-Z6	Food Service - Kitchen (cooking)	16.05	240.75	600	642	N/A
7-Elec 153	General - Unoccupied	0.1	0	0	65	N/A

H11. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY

01	02	03	04	05	06	07	08	09	10	11	12
System ID	System Type	Qty	Rated Capacity (kBtuh)		Airflow (cfm)			Fan			VSD
			Heating	Cooling	Design	Min.	Min. Ratio	Power	Power Units	Cycles	
1-21-Trm	Uncontrolled	2	N/A	N/A	4,800	N/A	0	N/A	N/A	N/A	☐
2-22-Trm	Uncontrolled	1	N/A	N/A	1,800	N/A	0	N/A	N/A	N/A	☐
3-23-Trm	Uncontrolled	1	N/A	N/A	3,500	N/A	0	N/A	N/A	N/A	☐
4-24-Trm	Uncontrolled	1	N/A	N/A	1,800	N/A	0	N/A	N/A	N/A	☐

STATE OF CALIFORNIA
Domestic Water Heating System CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		**NRCC-PLB-E**
This document is used to demonstrate compliance for nonresidential occupancies with requirements in 110.1, 110.3, 120.3, and 140.5, and with requirements in 141.0 for additions and alterations, for domestic water heating scopes using the prescriptive path. For high-rise residential and hotel/motel occupancies compliance is demonstrated with requirements in 110.1, 110.3, 160.4 and 170.2(d), and with requirements 180.1 for additions and 180.2 for alterations.		
Project Name: Madera HS Football Field Modernization	**Report Page:**	**(Page 1 of 7)**
Project Address: 200 S L St, Madera	**Date Prepared:**	12/12/2023

A. GENERAL INFORMATION

01	Project Location (city)	Madera	02	Climate Zone	13
03	Occupancy Types Within Project (select all that apply):				

● Classroom ● Gymnasium ● Support Areas ● Warehouse ● All Other Occupancies

B. PROJECT SCOPE

This table includes domestic water heating systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive paths outlined in 140./170.2(d) and 141.0(a)/ 180.1, or 141.0(b)2N / 180.2 for additions or alterations. Solar water heating systems are documented on the NRCC-SAB compliance document. Combined hydronic water heating systems are documented on the NRCC-MCH compliance document.

01	02	03
My project consists of (check all that apply):	System Type[1,2]	System Components
☒ New system (DHW system being installed for the first time)	Individual System (serving nonresidential spaces)	☒ Equipment ☒ Distribution ☒ Controls
☐ System Alteration (equipment, distribution or controls)		☐ Equipment ☐ Distribution ☐ Controls

[1]FOOTNOTES: Point of use water heaters, or other non-central systems used to serve nonresidential spaces, are considered individual systems.
[2] Dwelling units refers to hotel/motel guest rooms and units in a multifamily residential occupancy.
[3] DHW systems serving 2 or more dwelling units are considered "Central Systems" for multifamily occupancies

C. COMPLIANCE RESULTS

Table C will indicate if the project data input into the compliance document is compliant with water heating requirements. If this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. or the table indicated as not compliant for guidance.

01	02	03	04
Domestic Hot Water Equipment	Distribution Systems	Controls	Compliance Results
Table F	Table G	Table H	
Yes	Yes	Yes	COMPLIES

D. EXCEPTIONAL CONDITIONS

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

STATE OF CALIFORNIA
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CERTIFICATE OF COMPLIANCE		**NRCC-PLB-E**
Project Name: Madera HS Football Field Modernization	**Report Page:**	**(Page 5 of 7)**
	Date Prepared:	12/12/2023

H. DOMESTIC HOT WATER CONTROLS

This table is used to demonstrate compliance with control requirements in 110.3 for all occupancies. For multifamily residential and hotel/motel occupancies, compliance is also demonstrated with requirements in 160.4(e) / 170.2(d).

	Yes	No	Not Applicable	Requirement
01	☒	☐	☐	Construction documents require manufacturer certification that service water-heating systems are equipped with automatic temperature controls capable of adjusting temperature settings per 110.3(a).
02	☒	☐	☐	Systems with capacity > 167,000 BTUH equipped with outlet temperature controls per 110.3(c)1 unless covered by California Plumbing Code §13.0.
03	☐	☐	☒	Controls for circulating pumps or electrical heat trace systems are capable of automatically turning off the system per §110.3(c)2 unless systems serves healthcare facility.
04	☐	☐	☒	For recirculation systems serving multiple dwelling units, design includes automatic pump controls per 170.2(d) or 180.1(b)3 for additions.
05	☐	☐	☒	For recirculation systems serving individual dwelling units, design includes manual on/off controls as specified in Reference Appendix RA4.4.9 par 170.2(d).
06	☐	☐	☒	Combustion air positive shut-off shall be provided per 160.4(3).on all newly installed commercial boilers as follows: • Boilers with input capacity >= 2.5 MMBtu/h, in which the boiler is designed to operate with a nonpositive vent static pressure • Boilers where one stack serves two or more boilers with a total combined input capacity per stack of 2.5 MMBtu/h.
07	☐	☐	☒	Boiler combustion air fans with motor >= 10 hp shall meet one of the following • The fan motor shall be driven by a variable speed drive OR • The fan motor shall include controls that limit the fan motor demand to <=30% of the total design wattage at 50% of the design air volume.
08	☐	☐	☒	Newly installed boilers with an input capacity (dg/te/l) 5MMBtu/h and a steady state full-load combustion efficiency < 90% shall maintain excess (stack-gas) oxygen concentrations <= 5% by volume on a dry basis over firing rates of 20-100%. Combustion air volume shall be controlled with respect to firing rate or flue gas oxygen concentration. Use of a common gas and combustion air control linkage or jack shaft is prohibited.

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CERTIFICATE OF COMPLIANCE		**NRCC-CXR-E**
Project Name: Field House at Madera High School	**Report Page:**	**(Page 1 of 16)**
	Date Prepared:	2023-08-28T19:08:59-04:00

A. GENERAL INFORMATION

01	Project Location (city)	Madera	04	Building Size (ft²)	11634
02	Occupancy Type	Nonresidential	05		10,000 - 49,999 ft²
03	Project Type	Newly constructed	06		Unitary or packaged equipment each serving one zone
			07	Climate Zone	13

B. PROJECT SCOPE

Based on project information provided in Table A, Table B indicates which commissioning related requirements apply per 120.8. Table B is not editable by the user.

Commissioning Requirements per 120.8			
01	Table F: Design Review Kickoff	120.8(d)1 and 120.8(d)2	The design review kickoff meeting establishes who will play the role of the design reviewer, the project schedule and identify owner's requirements. This meeting should be conducted during schematic design.
02	Table G: Owner's Project Requirements (OPR)	120.8(b)	The owner's project requirements establish the owner's goals, requirements and expectations for everything related to energy consumption and operation. This should be completed during schematic design.
03	Table H: Basis of Design (BOD)	120.8(c)	The basis of design documents the design elements such as calculations and product selections that meet the owner's project requirements and applicable regulatory requirements. This should be completed during schematic design.
04	Table I: Design Review	120.8(d) and 120.8(e)	The design reviewer(s) reviews the construction documents for clarity

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Title 24 Part 6 Compliance Approach							
03	Title 24 Part 6 Compliance Approach (select one)	☐	Prescriptive	☐	Performance	☒	Performance and Prescriptive Combined
04	Description of prescriptive scope and performance scope	Electrical - Prescriptive / Mechanical - Performance					
General Energy Efficiency Goals							
05	Energy Use Intensity (EUI)	The project is to comply with code minimum requirements using Energy Pro Software, for calculations.					
06	Energy Cost Budget	The project is to comply with code minimum requirements using Energy Pro Software, for calculations.					
Envelope Basis of Design							
07	Window to Wall Ratio	All proposed window openings, exterior wall insulation, and roof insulation to comply with California Energy Code (CEC).					
08	Opaque Wall Assembly	All proposed window openings, exterior wall insulation, and roof insulation to comply with California Energy Code (CEC).					
09	Window Performance	All proposed window openings, exterior wall insulation, and roof insulation to comply with California Energy Code (CEC).					
10	Response to OPR Document	All proposed window openings, exterior wall insulation, and roof insulation to comply with California Energy Code (CEC).					
HVAC System Basis of Design							
11	HVAC System Design	The heating and air conditioning system serving the building will consist heat pump packaged air conditioning units equipped with supplemental electric heat . Units will be located on the roofs and ducted to areas served. Units will be zoned to serve similar spaces. MERV 13 filter as required by code. In addition, integrated economizer with powered exhaust fans, VFD for balancing, and outside air monitoring station for additional energy savings, ventilation, maintain building pressure, and to comply with code.					
12	Heating System Description	Units will be zoned to serve similar spaces. Each zone consists of a heat pump packaged unit with electric heating/electric cooling, and a thermostat for temperature control. Electric heating with supplemental heat for heating.					
13	Cooling System Description	Units will be zoned to serve similar spaces. Each zone consists of a heat pump packaged unit with electric heating/electric cooling, and a thermostat for temperature control. R-410A refrigerant used for cooling.					

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G. OWNER'S PROJECT REQUIREMENTS (OPR)		
41	Describe how occupants will interact with the lighting control system (overrides etc).	Lighting controls system comply with code minimum requirements.
42	Additional notes regarding Outdoor lighting system efficiency	N/A
Energy Efficiency Goals: Water Heating Systems		
43	Describe what the water heating system will be used for and expected demand?	Water heaters shall be designed to comply code minimum requirements.
44	Describe the desired type (if any) of water heating system and those that should not be considered, (example: instantaneous, heatpump, manufacturer, etc.)	Natural gas, storage tank type water heater with recirculating pump. All equipment and accessories shall comply code minimum requirements.
45	What are the desired automation features and controls for the water heating system.	Comply with code minimum requirements.
46	What are the efficiency requirements of the water heating system?	Comply with code minimum requirements.
47	Additional notes regarding Water Heating system efficiency.	N/A
Operations and Maintenance Requirements		
48	Desired building life span	The desired life span is 30+ years.
49	What are the broad goals relative to life cycle of the equipment?	It is anticipated the Contractor's workmanship and equipment warranty shall be included in the O&M's. Anticipated average lifecycle of HVAC and Solar PV equipment is approximately 20 years and water heating system is approximately 10 years.
50	What is the desired level of training and orientation for building occupants to understand and use the building systems?	Training for systems and equipment operations will be conducted on-site by each sub-contractor to the building and maintenance personnel.
51	What is the desired level of training and orientation for O&M staff to understand and maintain the building systems?	Training for systems and equipment operations will be conducted on-site by each sub-contractor to the maintenance personnel. The training will be hands-on demonstration and documentations.

H. BASIS OF DESIGN (BOD)			
This table is only completed if a BOD document is not attached to the permit application to demonstrate compliance with 120.8(c). If a specific field is not applicable to the project scope, "NA" is indicated in the table. Per 120.8(c), the BOD should be completed and updated during the design phase.			
		YES	NO
01	Attaching Completed Basis of Design Document?	○	●
02	Basis of Design Document Authors and Roles	Ryan Carlson/Mechanical Engineer, Patrick May/Electrical Engineer	

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G. OWNER'S PROJECT REQUIREMENTS (OPR)		
28	Describe the maintenance plan and how the HVAC design needs to address operation and maintenance issues.	Training for systems and equipment operations will be conducted on-site by each sub-contractor to the maintenance personnel. The training will be hands-on demonstration and documentations.
29	Additional notes regarding HVAC system efficiency	System heating and cooling capacities shall be established by engineering calculations and energy modeling in conformance with the design summer/winter conditions and ventilation required by code. All equipment selected for the project is expected to comply with CEC.
Energy Efficiency Goals: Indoor Lighting Systems		
30	Describe specific lighting requirements including quality and glare.	Lighting systems and lighting controls shall be designed to meet or exceed the CEC. Include occupancy sensors and automatic daylight controls where required to minimize electric lighting usage. Illuminance shall comply with Illuminating Engineering Society (IES) Lighting Standards.
31	List the desired types of lighting (if any) and ones that are not to be considered. (example: fluorescent in 2x2 grid, accent lighting, particular lamps)	Illumination shall meet the IES requirement. LED lighting used throughout the building for efficiency. Natural Lighting where possible. Primary and Secondary Daylit where required.
32	Describe (if any) task lighting requirements.	N/A
33	Describe any desired features of the lighting control system including occupancy, daylighting, and demand response if applicable.	Lighting controls system comply with code minimum requirements.
34	What is the expected occupancy schedule? Will the occupants be allowed to override the lighting system controls during "unoccupied hours"?	Weekdays: 8:00 AM to 5:00 PM / Weekends: Off
35	Does occupancy-based control need to be coordinated with mechanical demand control ventilation?	N/A
36	Describe how occupants will interact with the lighting control system (overrides etc)	Occupant sensor will shut off after 20 mins when space is unoccupied. Override button or lighting control system can be programmed to allow for after hour maintenance.
37	Additional notes regarding Indoor lighting system efficiency	N/A
Energy Efficiency Goals: Outdoor Lighting Systems		
38	Describe specific outdoor lighting requirements.	Lighting systems and lighting controls shall be designed to meet or exceed the CEC.
39	List the desired types of outdoor lighting, including lighting for building facade, landscape, walkways, roof-top, etc. if applicable.	Include building facade lighting, walkways, and site pole lighting to meet or exceed the CEC.
40	Describe any features of the outdoor lighting control system, including motion sensors, photocontrol, time-switch and automatic scheduling.	Lighting controls system comply with code minimum requirements.

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G. OWNER'S PROJECT REQUIREMENTS (OPR)		
Energy Efficiency Goals: HVAC Systems		
13	List the HVAC system types considered desirable, and ones that are not to be considered.	The HVAC system design, equipment efficiencies, and installation shall meet or exceed all applicable building and energy codes and/or ASHRAE 90.1 requirements for the site location. All equipment selected for the project is expected to comply with CEC, where required.
14	What is the desired thermostatic setpoint range in the heating season, and cooling season?	Heating: 68°F, Cooling: 74°F, User Adjustment: +/- 3°F
15	What is the expected occupancy schedule? Will the occupants be allowed to override the mechanical system controls during "unoccupied hours"?	Weekdays: 7:00 AM to 5:00 PM / Weekends: off
16	Are there times during the day that the zone temperature is allowed to drift out of the temperature setpoint range? If so, how long and what times are acceptable.	Temperature range maximum is +/-5°F
17	Is it acceptable to let the facility cool down to a night setback temperature in the winter?	Night setback temperature is desired.
18	Is it acceptable to let the facility temperature drift above setpoint during the summer evenings?	The building will be in operation year round with summer camp program. It is expected that drift is acceptable if the district is set up for the process.
19	How many days out of the year is it acceptable to not meet the entire cooling/heating load?	The building will be in operation year round.
20	Are there zones with special temperature, humidity, air filtering, etc., requirements? If so, identify and list the special environmental control requirements.	100% OSA for Public restrooms and toilet rooms.
21	What expectations are there around building ventilation?	Ventilation shall comply with code minimum requirements.
22	Is occupancy-based demand control ventilation (DCV) desired, or required?	Comply with code minimum requirements.
23	Is a building automation system (BAS) desired? If so, what are the requirements of the BAS and what value is expected to be added with the BAS?	MUSD existing standard is Johnson Metasys.
24	Will zone setpoints be controlled locally by the user, or via the BAS only by the maintenance staff?	Zone setpoints will be controlled via BAS only by maintenance staff.
25	Explain the requirements of the HVAC system in regards to temperature, humidity and draft control.	Comply with code minimum requirements.
26	Explain the requirements of the facility in regards to indoor air quality	Comply with code minimum requirements.
27	What are the acoustic requirements of the HVAC system within the various spaces of the facility?	Comply with code minimum requirements.

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J. COMMISSIONING PLAN					
This table is only completed if a Commissioning Plan document is not attached to permit application to demonstrate compliance with 120.8(f). Per 120.8(f), the Commissioning Plan is to be started during the design phase and a completed draft must be submitted with permit application					
		YES	NO		
01	Attaching Completed Commissioning Plan?	○	●		
02	Commissioning Plan Authors and Roles	Muey Tarvin / Commissioning			
Commissioning Provider Information					
03	Company Name	Lawrence Engineering Group	05	Contact Email	muey@LEGFresno.com
04	Contact Person	Muey Tarvin	06	Contact Phone	559-431-0101
Commissioning Process Overview					
07	Owner Goals	Building commissioning is to provide documented confirmation that building systems function to meet the owner's operational needs and to meet code minimum requirements.			
08	Roles and Responsibilities	The contractor verifies installation, provides scheduling and coordination of commissioning activities, performs training, starts up equipment, conducts tests, corrects deficiencies, performs re-tests, and provides documentation of the process. The CxA provides the owner an unbiased, objective view of the systems installation, documentation, operation, and performance. Commissioning procedures and results are observed by the CxA. The contractor is expected to verify the functional readiness of systems to be tested prior to performing the tests in the presence of the witnesses. A high rate of test failure will indicate that the contractor has not adequately verified the readiness of the systems. This plan is the key means for the CxA to inform all parties as to how each system functions independently and with respect to other systems.				
09	Schedule	As this is the first issuance of the commissioning plan and no definitive construction schedule has been adopted, a finalized commissioning schedule will be provided following the identification of a construction schedule. For the purpose of review and analysis all checklists necessary for the commissioning of referenced systems will be included for subcontractors.			
Commissioning Activities During Construction					
10	Construction Observation	The CxA makes periodic site visits to witness equipment and system installations, and will verify installation procedures and conformance to specifications and construction documents. Each site visit will have a specific agenda and will be coordinated with the general contractor site supervisor. The CxA attends selected planning and job-site meetings in order to remain informed on construction progress and to update parties involved in commissioning. The GC provides the CxA with information regarding construction schedules, substitutions or change orders that may affect commissioned equipment or the commissioning schedule.			

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33	Water Heating Load Calculations	The water heater was selected using the ASHRAE and ASPE sizing method in conjunction with sizing software from the manufacturer. The 100 gallon storage capacity with 250,000 BTUH input water heater selected will supply hot water as follows: 416 GPH at 125°F temperature rise.
34	Response to OPR Document	The selected system meets the owner's project requirements because of its thermal efficiency, low operating cost, natural gas, and meets or exceeds code minimum compliance.

I. CONSTRUCTION DOCUMENT DESIGN REVIEW CHECKLIST			
This table is only completed if a design review document is not attached to permit application to demonstrate compliance with 120.8(b) and 120.8(e). For buildings with >= 10,000 ft² conditioned floor area, the design review will ensure the construction documents meet the Owner's Project Requirements (Table G.) and the Basis of Design Documents (Table H.). For buildings with < 10,000 ft² conditioned floor area, the design review will ensure the construction documents meet the goals documented in Table F. during the Design Review Kickoff.			
		YES	NO
01	Attaching Completed Design Review Documentation?	○	●
Design Review Checklist			
02	Envelope Design	Envelope design complies with code minimum requirements.	
03	HVAC System Design	HVAC system designed matches owner's expectation which is rooftop packaged units with programmable thermostats as well as ventilation and filtration to comply with code minimum requirements.	
04	HVAC Controls Design	Johnson Metasys integration is described in the specifications as well as integration notes on the mechanical plans.	
05	Indoor Lighting System Design	Indoor lighting is controlled by dimmers, motion sensors, lighting relay control panel with astronomical time switch, photosensors in rooms with windows, programmable room controllers, and programmable central controller. Specialty lighting installed where required.	
06	Indoor Lighting Controls Design	Project lighting control system shall consist of a network of occupancy sensors, photocontrols, low voltage dimming and control relays.	
07	Outdoor Lighting System and Controls Design	Exterior lighting will be controlled by the automatic time switch or the photocell feature of the central lighting control system to meet the requirements of code and OPR.	
08	Water Heating System Design	Water heating system with circulating pump complies with code minimum requirements and OPR.	
09	Other Systems and Features	N/A	

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24	Control Intent Narrative/ Sequence of Operations	Project lighting control system shall consist of a network of occupancy sensors, photocontrols, low voltage dimming and control relays. Lighting control system shall comply with code minimum requirements.
25	Response to OPR Document	The selected LED lighting system is a better choice than alternatives using Fluorescent and Incandescent fixtures. The LED fixtures have greater visual comfort performance, efficiency, reliability, flexibility, simplicity, color rendering, integration with daylighting, ease of maintenance and longevity.
Outdoor Lighting System Basis of Design		
26	Outdoor Lighting System Narrative	Exterior lighting will be controlled by the automatic time switch or the photocell feature of the central lighting control system.
27	Fixture Types	LEDs and Drivers for all fixtures.
28	Lamp and Ballast Types	N/A
29	Control Types	Exterior lighting will be controlled by the automatic time switch or the photocell feature of the central lighting control system.
30	Control Intent Narrative/ Sequence of Operations	Lighting control system shall comply with code minimum requirements.
31	Response to OPR Document	The selected LED lighting system is a better choice than alternatives using Fluorescent and Incandescent fixtures. The LED fixtures have greater visual comfort performance, efficiency, reliability, flexibility, simplicity, color rendering, integration with daylighting, ease of maintenance and longevity.
Water Heating System Basis of Design		
32	Water Heating System Narrative	The water heaters is located in Boiler Room and supplies hot water to all lavatories, sinks, and showers. The 94% thermal efficiency, 100-gallon natural gas storage tank type water heater is an Bradford White EF-100T. To achieve high thermal efficiency, the water heater is capable adjusting firing rate to the specific demand to further efficiency. The direct fired heat exchanger keeps hot burner gases swirling, uses centrifugal force to maximize efficiency of heat transfer to water in tank. This efficiency allows for operational cost savings, a minimal amount of wasted fuel with the maximum output of BTU's transferred to the water. The water heater complies with the Low-NOx emission requirements of less than 20 ppm or less. The water heater is provided with a circulating pump that will continuously circulate a small amount of hot water from the water heater to the farthest fixture and back to the water heater providing hot water to the fixtures allowing the end user to have precise control of water temperature and usage which will result in energy savings.

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14	Ventilation System Description	Ventilation complies with 2022 California Mechanical Code.
15	Control Intent Narrative/ Sequence of Operations	Johnson Metasys is MUSD standard. Integration into district server for remote access.
16	Outside Air Supply	Ventilation complies with 2022 California Mechanical Code.
17	Load Calculation	Assumptions • Exterior Wall: Masonry Wall • Roof: Built up roof with R-30 Insulation • Ventilation per code • Heat producing equipment (ie: TV monitors, coffee maker, vending machines, refrigerators, freezers, etc.), as applicable
18	Indoor Design Conditions	Occupied Spaces / Unoccupied Spaces Occupied Periods: Temp (°F) / Temp (°F) / Relative Humidity (%) Heating: 68 / 68 / 50 Cooling: 74 / 72 / 50 Unoccupied Periods: Temp (°F) / Temp (°F) / Relative Humidity (%) Heating: 55 / 55 / 50 Cooling: 95 / 95 / 50
19	Response to OPR Document	The mechanical systems meets the OPR because it is designed according to the following objectives: code compliant, energy efficient, cost effective, thermal comfort, and maintainability.
Indoor Lighting System Basis of Design		
20	Indoor Lighting System Narrative	The system is comprised of lighting zones which are controlled by a Lighting Control and lighting controller panel. Time clock and power pack control is overridden through the use of occupancy sensors with dimming controls within each space to be controlled. Sensors are mounted on the ceiling or wall with the mounting location determined by the amount of potential interference from areas outside the space to be controlled.
21	Fixture Types	• All lighting fixtures used in this building are LED with integral dimming drivers. • Dimmable fixtures are LED 0-10V. • All light fixtures are LED. They are recess, and surface mounted as appropriate for the room. • Exterior fixtures are controlled via astronomical time clock or photocontrol to meet code minimum requirements.
22	Lamp and Ballast Types	N/A – LEDs and Drivers for all fixtures.
23	Control Types	• Lighting fixtures will be LED controlled by wall or ceiling room occupancy sensors and/or wall switches. Lighting controls shall comply with CEC. • Illuminance shall comply with IES Standards.

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DOCUMENTATION AUTHOR'S DECLARATION STATEMENT	
I certify that this Certificate of Compliance documentation is accurate and complete.	
Documentation Author Name: Muey Tarvin	Documentation Author Signature:
Company: Lawrence Engineering Group	Signature Date: 8/28/23
Address: 4910 E. Clinton Way, Suite 101	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Fresno, CA 93727	Phone: 559-431-0101
RESPONSIBLE PERSON'S DECLARATION STATEMENT	

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

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. 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.
4. 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.
5. 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 building owner receives prior to the building owner at occupancy.

Responsible Designer Name: Ryan Carlson	Responsible Designer Signature:
Company: Lawrence Engineering Group	Date Signed: 8/23/23
Address: 4910 E. Clinton Way, Suite 101	License: M34846
City/State/Zip: Fresno, CA 93727	Phone: 559-431-0101

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M. COMMISSIONING REPORT	
The table below is completed to demonstrate compliance with commissioning report requirements per 120.8(i)	
By checking this box, the responsible party[1] certifies that a complete report of commissioning process' activities undertaken through the design, construction and reporting recommendations for post-construction phases of the building project shall be completed and provided to the owner or owner's representative.	01 ☒
[1] FOOTNOTE: See the signature block on the last page of this compliance document for the responsible party.	

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

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

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K. FUNCTIONAL PERFORMANCE TESTING			
System/ Equipment to be Tested	Brief description of functional performance test	Applicable Reference Appendix	Certified Acceptance Test Technician Required?
HP-1 thru HP-6, ERV-1	Envelope design complies with code minimum requirements.	NA7.5.1 Outdoor Air	Yes
HP-1 thru HP-6, IDU-1 thru IDU-1.3, IDU-2	Single zone unitary	NA7.5.2 CV, Single Zone AC/HP's	Yes
HP-1 thru HP-6	Verify economizer operation and proper functions	NA7.5.4 Air Economizer Controls & Exhaust Heat Recovery	Yes
HP-3	Verify the system can vary outside air rates based on CO2 levels	NA7.5.5 DCV Systems	Yes
HP-1 thru HP-6	Verify faults can be detected and reported	NA7.5.11 FDD for Package DX	Yes
Indoor Lighting	Verify occupancy sensor operation	NA7.6.2 Lighting Shut-Off	Yes
Indoor Lighting	Verify automatic lighting reduction upon receipt of demand response signal.	NA7.6.3 Lighting Demand Response	Yes
Outdoor Lighting	Verify astronomical time clock function	NA7.8.2 Photocontrol	Yes

The acceptance tests required by Title 24, Part 6 outline the minimum functional performance testing scope to be conducted for compliance. However, the commissioning scope may include additional functional performance tests on systems or equipment not having acceptance tests required by Title 24 Part 6.

The following additional functional performance tests have been requested by the owner or owner's representative:

06	07
System/ Equipment to be Tested	Brief description of functional performance test

[1] FOOTNOTE: See the signature block on the last page of this compliance document for the responsible party.
[2] Required acceptance tests can be determined by reviewing the "Certificates of Acceptance" table on each Certificate of Compliance submitted for permit application.

L. DOCUMENTATION AND TRAINING	
The table below is completed to demonstrate compliance with documentation and training requirements per 120.8(h)	
By checking this box, the responsible party[1] certifies that a systems manual will be provided to the building owner or representative per 120.8(h)1.	01 ☒
By checking this box, the responsible party[1] certifies that a training of the appropriate maintenance staff for each equipment and system will be completed and documented in the commissioning report per 120.8(h)2. Training requirements should be included in the contract document in the specifications.	02 ☒
[1] FOOTNOTE: See the signature block on the last page of this compliance document for the responsible party.	

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J. COMMISSIONING PLAN		
11	Issues Logs	All deficiencies identified during the verification testing are reviewed to see if a resolution has been made. The deficiency report includes all details of the components or systems found to be non-compliant with the parameters of the test plans. The report details the adjustments or alterations required to correct system operation, at which time owner will identify the responsible party. Corrections of minor deficiencies identified may be made during the tests at the discretion of the CxA. In such cases the deficiency and resolution will be documented by the CxA. Every effort will be made to expedite the testing process and minimize unnecessary delays, while not compromising the integrity of the procedures.
12	Installation Verification	Verification is a systematic process of ensuring that all building systems perform interactively according to operational needs. This is achieved by reviewing construction submittals in the Construction Phase and continuing a review of the project through the occupancy and operations period with actual verification of performance prior to occupancy.
13	Functional Performance Testing	Observation is conducted with the technician or subcontrator. Verification during the construction of this project is intended to achieve the following specific objectives according to the Contract Documents: • Ensure that applicable equipment and systems are installed properly and receive adequate operational checkout by installing contractors. • Verify and document proper performance of equipment and systems. • Ensure that O&M documentation is complete. • Verify that adequate and accurate system and assembly documentation is provided to the owner. • Verify that operation and maintenance personnel and occupants are properly trained. • Utilize quality-based sampling techniques to detect systemic problems. • Verify proper coordination among systems and assemblies.
14	Documentation and Training	The final commissioning report will include an overview or summary of the commissioning process, major results of the process, the final commissioning issues log and resolutions, commissioning progress and field reports, a deferred testing log, an unresolved issues log, a lessons-learned evaluation, and concluding with a recommendation to accept the process as complete.

K. FUNCTIONAL PERFORMANCE TESTING			
The table below is completed to demonstrate compliance with functional performance testing requirements per 120.8(g).			
By checking this box, the responsible party[1] certifies that functional performance testing will be executed to demonstrate the correct installation and operation of each component, system and system-to-system interface in accordance with the acceptance test requirements in 120.5, 130.4 and 140.9. The functional performance testing reports shall contain information addressing each of the building components tested, the testing methods utilized, and include any readings and adjustments made.			01 ☒
The following acceptance tests have been identified as applicable to the project scope:[2]			
02	03	04	05

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 01/23/2025

PBK

ARCHITECT PBK Architects, Inc.
FRESNO
7790 North Palm Avenue
Fresno, CA 93711
559-448-8400 P
559-448-8467 F
PBK.com

MADERA HIGH SCHOOL FIELDHOUSE
200 SOUTH "L" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

MADERA UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL R. SCHEEN C-36165 02-28-27 RENEWAL DATE STATE OF CALIFORNIA

PROJECT NUMBER	20-51
DATE	MM/DD/YYYY
DSA APPLICATION NO.	02 - 121624
FILE NO.	20-H3
PTN NO.	65243-153
DRAWN BY	Author

REVISIONS

#	DESCRIPTION	DATE

CONSTRUCTION DOCUMENTS

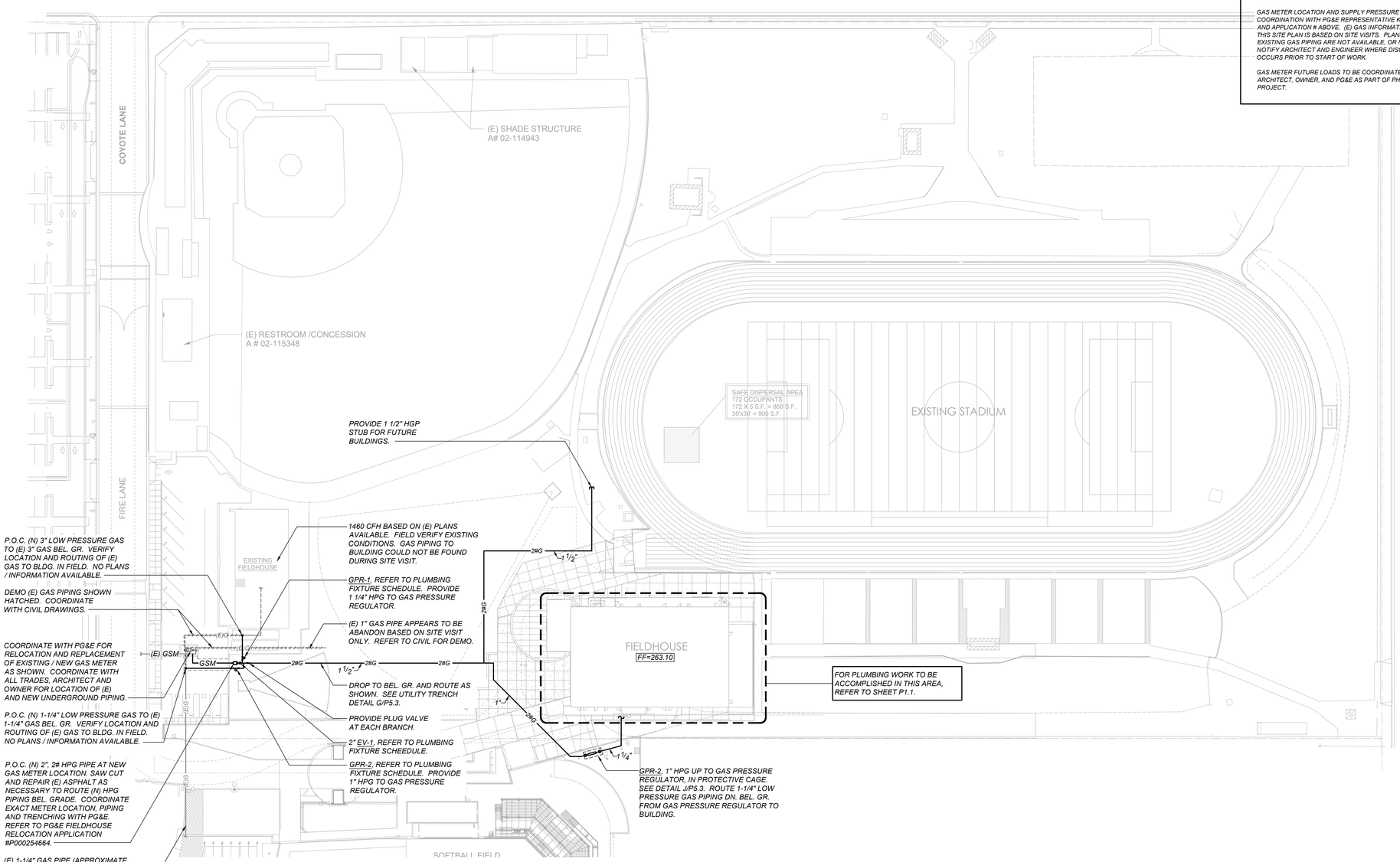
TITLE 24

M6.3

REGISTERED PROFESSIONAL ENGINEER RYAN W. CARLSON No. M34846 Exp. 6-30-25 MECHANICAL STATE OF CALIFORNIA

LAWRENCE ENGINEERING GROUP
4910 E. Clinton Way, Suite 101 Fresno, CA 93727
(559) 431-0101 23073 FAX (559) 431-1362

14 January 2025 2:21 PM p:\2023\23073 modera usd – modera hs stadium locker addition\4-drawings\4 M\M6.1-M6.3 – TITLE 24.dwg mark d



A PLUMBING SITE PLAN
SCALE: 1" = 40'-0"

EXISTING GAS INFORMATION:

LOCAL GAS UTILITY: PG&E
METER: #34670405, NATURAL GAS METER.

PG&E GAS METER TO BE RELOCATED AND UPGRADED TO 2 PSI PRESSURE.
REFER TO SITE PLAN BELOW FOR AREA OF RELOCATION.
PG&E APPLICATION #P000254664.
PG&E CONTACT:
KIRK ATHERTON (SENIOR PLANNING PROJECT MANAGER)
CELL: 559-706-6584
EMAIL: KDA9@pge.com

NATURAL GAS HEATING VALUE OF 1,000 BTUH/CFH AND SPECIFIC GRAVITY 0.60.

NOTE:

CONTRACTOR SHALL COORDINATE WITH PG&E GAS UTILITY DEPT. PRIOR TO START OF CONSTRUCTION TO VERIFY LOCATION OF NEW 2 PSI GAS SERVICE AND METER. AS NECESSARY, OWNER TO ARRANGE FOR UPGRADE INSTALLATION AND PAY ALL COSTS. FOR GAS CALCULATIONS, REFER TO SHEET P4.2.

GAS METER LOCATION AND SUPPLY PRESSURE (2 PSI) BASED ON COORDINATION WITH PG&E REPRESENTATIVE KIRK ATHERTON. AND APPLICATION # ABOVE. (E) GAS INFORMATION SHOWN ON THIS SITE PLAN IS BASED ON SITE VISITS. PLANS FOR THE EXISTING GAS PIPING ARE NOT AVAILABLE, OR NOT ACCURATE. NOTIFY ARCHITECT AND ENGINEER WHERE DISCREPANCIES OCCURS PRIOR TO START OF WORK.

GAS METER FUTURE LOADS TO BE COORDINATED WITH ARCHITECT, OWNER, AND PG&E AS PART OF PHASE 2 OF PROJECT.

	PLUMBING LEGEND	
SYMBOL	ITEM	ABBR
———	SOIL or WASTE	S or W
- - - -	VENT	V
	VENT RISER	VR
	VENT THRU ROOF	VTR
—·—·—	DOMESTIC COLD WATER	CW
—··—··—	DOMESTIC HOT WATER	HW
—··—··—	DOMESTIC HOT WATER RETURN	HWR
—G—	LOW PRESSURE NATURAL GAS	G
—2#G—	2 PSI GAS	2#G
—5#G—	5 PSI GAS	5#G
—GSM—	GAS SERVICE MAIN BY THE LOCAL GAS UTILITY	GSM
—C—	CONDENSATE DRAIN	CD
	ROOF DRAIN	RD
—RWL—	RAIN WATER LEADER	RWL
—OD—	OVERFLOW DRAIN	OD
—SD—	STORM DRAIN	SD
—IW—	INDIRECT WASTE	IW
—F—	FIRE PROTECTION LINE	F
———	EXISTING PIPING	(E)
(E)	EXISTING	
(N)	NEW	
	ABOVE CEILING	ABV CLG
	BELOW FLOOR	BEL FLR
	BELOW GRADE	BEL GR
—AFF—	ABOVE FINISH FLOOR	AFF
—BFF—	BELOW FINISH FLOOR	BFF
	INVERT ELEVATION	I.E.
	TYPICAL	TYP
	CONTINUATION	CONT.
	DOWN	DN
	FLOOR CLEANOUT	FCO
	CLEANOUT TO GRADE	COTG
	WALL CLEANOUT	WCO
	PIPING TURN UP	
	PIPING TURN DOWN	
	POINT OF CONNECTION	POC
	SHUT-OFF VALVE IN BOX	SOV
	SHUT-OFF VALVE	SOV
	SHUT-OFF VALVE IN RISER	-
	SHUT-OFF VALVE IN DROP	-
	GATE VALVE	-
	BUTTERFLY VALVE	-
	GLOBE VALVE	-
	GAS PRESSURE REGULATOR	GPR
	CHECK VALVE	-
	PLUG VALVE	-
	BALL VALVE	-
	BALANCE COCK	-
	REDUCER	-
	MANHOLE	MH
	FLOW LINE	FL
	UNION	-
	RELIEF VALVE	-
	BALANCING VALVE	-
	PRESSURE GAUGE	-
	THERMOMETER	-

IDENTIFICATION STAMP
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APP: 02-121624 INC:
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DATE: 01/23/2025

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MADERA HIGH SCHOOL FIELDHOUSE

200 SOUTH "L" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL R. SCHOEN C 36165 02-28-27 REGISTERED PROFESSIONAL ENGINEER STATE OF CALIFORNIA

PROJECT NUMBER	20-51
DATE	MM/DD/YYYY
DSA APPLICATION NO.	02 - 121624
FILE NO.	20-H3
PTN NO.	65243-153
DRAWN BY	Author

REVISIONS

#	DESCRIPTION	DATE

CONSTRUCTION DOCUMENTS

PLUMBING SITE PLAN

PS.1

REGISTERED PROFESSIONAL ENGINEER JOHN W. CARLSON NO. M34846 Exp. 6-30-26 MECHANICAL STATE OF CALIFORNIA

LAWRENCE ENGINEERING GROUP
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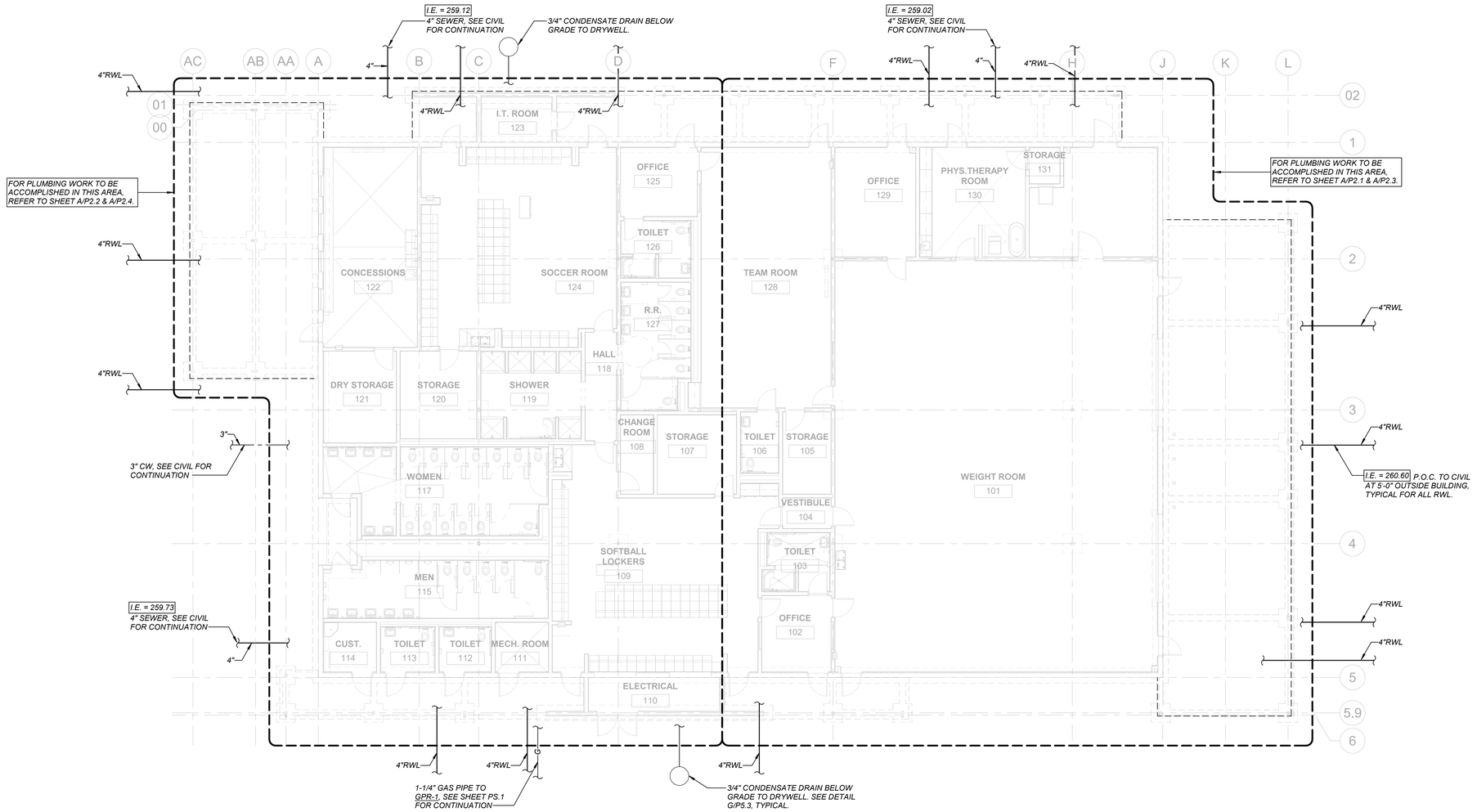

A OVERALL PLUMBING PLAN

SCALE: 1/8" = 1'-0"

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CONSTRUCTION DOCUMENTS

OVERALL PLUMBING PLAN

P1.1

REGISTERED PROFESSIONAL ENGINEER JORDAN N. CARLSON M34644 REN. 6-30-2026 SACRAMENTO STATE OF CALIFORNIA

LAWRENCE ENGINEERING GROUP
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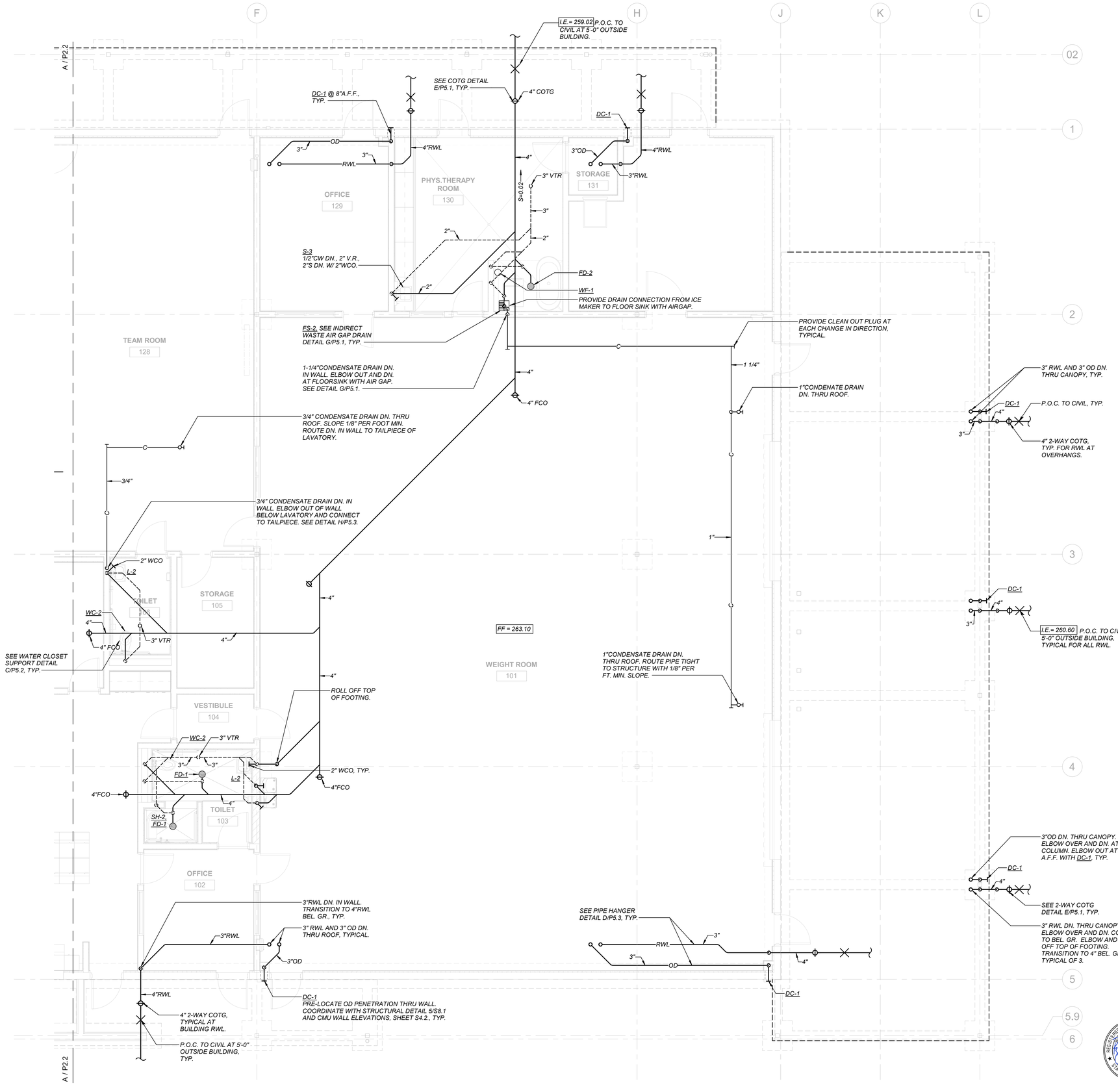

A ENLARGED PLUMBING PLAN - DRAIN, SEWER, AND VENT

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

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MADERA 19 66 UNIFIED SCHOOL DISTRICT

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CONSTRUCTION DOCUMENTS

ENLARGED PLUMBING PLAN

P2.1

REGISTERED PROFESSIONAL ENGINEER JOHN N. CARLSON M34646 REN. 6-30-2026 MECHANICAL STATE OF CALIFORNIA

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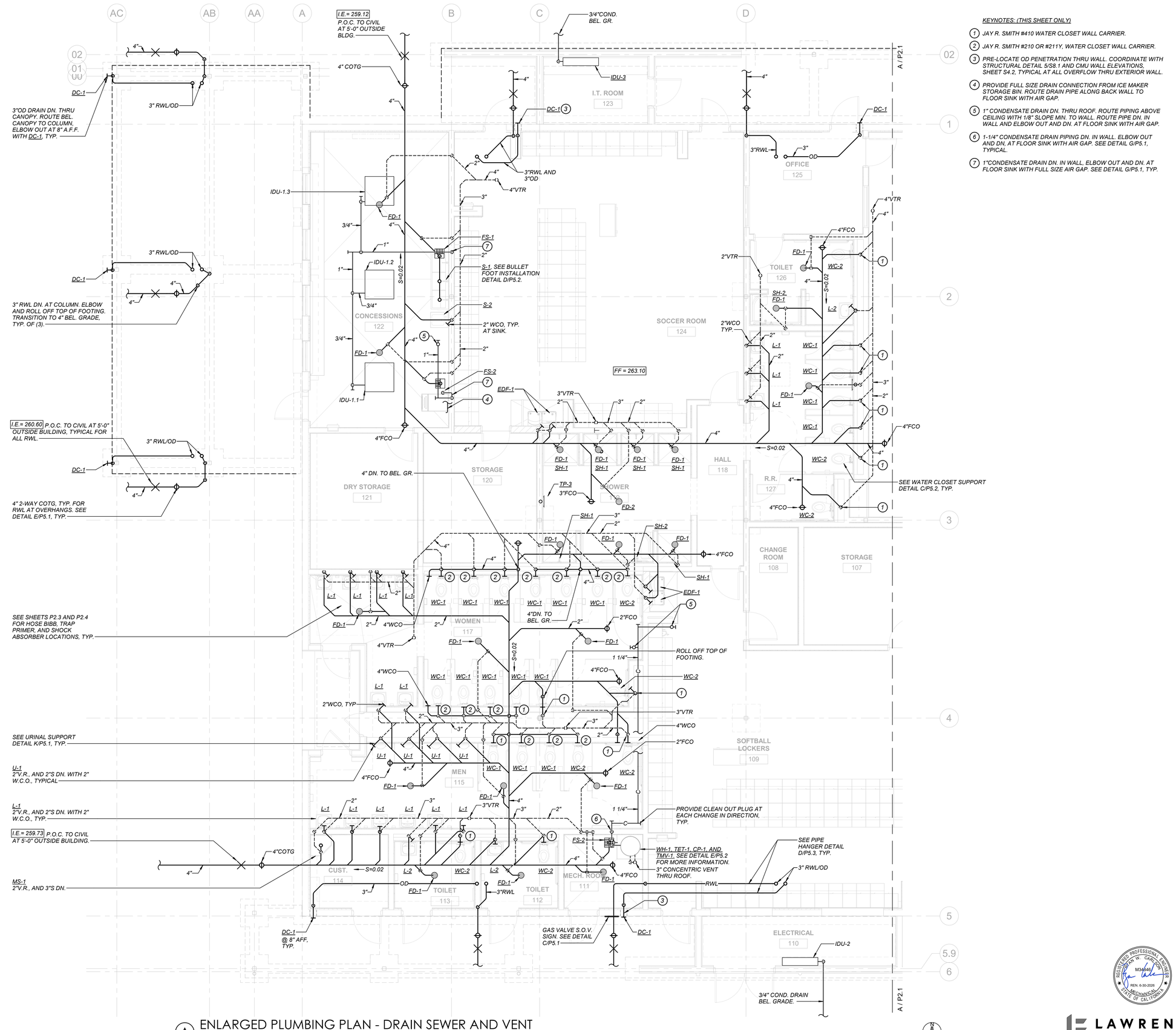

A ENLARGED PLUMBING PLAN - DRAIN SEWER AND VENT

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

KEYNOTES: (THIS SHEET ONLY)

1. *JAY R. SMITH #410 WATER CLOSET WALL CARRIER.*
2. *JAY R. SMITH #210 OR #211Y, WATER CLOSET WALL CARRIER.*
3. *PRE-LOCATE OD PENETRATION THRU WALL. COORDINATE WITH STRUCTURAL DETAIL 5/S8.1 AND CMU WALL ELEVATIONS, SHEET S4.2, TYPICAL AT ALL OVERFLOW THRU EXTERIOR WALL.*
4. *PROVIDE FULL SIZE DRAIN CONNECTION FROM ICE MAKER STORAGE BIN. ROUTE DRAIN PIPE ALONG BACK WALL TO FLOOR SINK WITH AIR GAP.*
5. *1" CONDENSATE DRAIN DN. THRU ROOF. ROUTE PIPING ABOVE CEILING WITH 1/8" SLOPE MIN. TO WALL. ROUTE PIPE DN. IN WALL AND ELBOW OUT AND DN. AT FLOOR SINK WITH AIR GAP.*
6. *1-1/4" CONDENSATE DRAIN PIPING DN. IN WALL. ELBOW OUT AND DN. AT FLOOR SINK WITH AIR GAP. SEE DETAIL G/P5.1, TYPICAL.*
7. *1"CONDENSATE DRAIN DN. IN WALL, ELBOW OUT AND DN. AT FLOOR SINK WITH FULL SIZE AIR GAP. SEE DETAIL G/P5.1, TYP.*

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LICENSED ARCHITECT MICHAEL R. SCHEEN C 36165 02-28-27 RENEWAL DATE STATE OF CALIFORNIA

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CONSTRUCTION DOCUMENTS

ENLARGED PLUMBING PLAN

P2.2

REGISTERED PROFESSIONAL ENGINEER BENJAMIN N. CARLSON M34644 REN: 6-30-2026 MECHANICAL STATE OF CALIFORNIA

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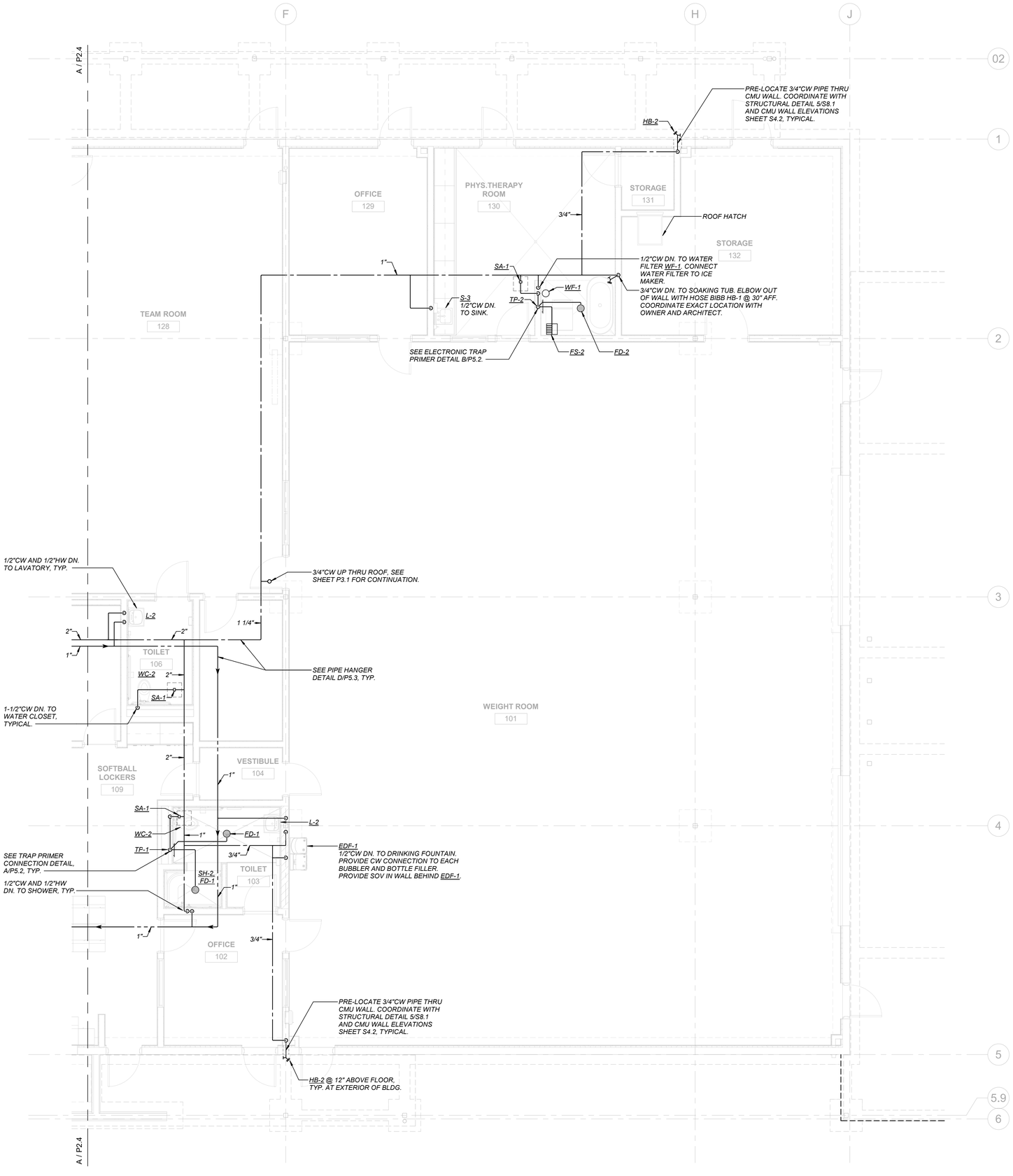

A ENLARGED PLUMBING PLAN - WATER AND GAS

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

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CONSTRUCTION DOCUMENTS

ENLARGED PLUMBING PLAN

P2.3

REGISTERED PROFESSIONAL ENGINEER JOHN W. CARLSON M34644 REN. 6-30-2026 MECHANICAL STATE OF CALIFORNIA

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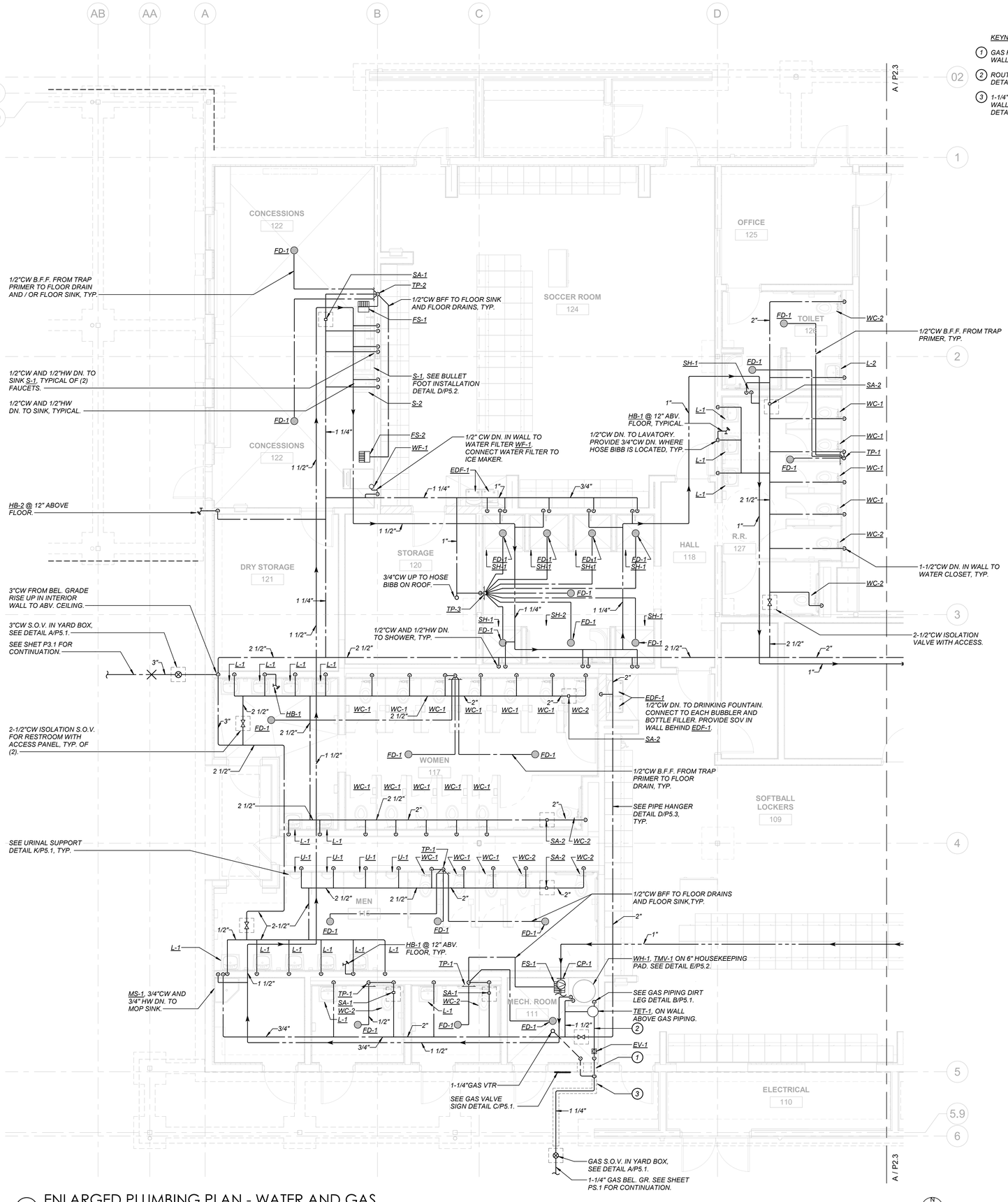

A ENLARGED PLUMBING PLAN - WATER AND GAS
SCALE: 1/4" = 1'-0"

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ENLARGED PLUMBING PLAN

P2.4

REGISTERED PROFESSIONAL ENGINEER JOHN W. CARLSON M34644 REN. 6-30-2026 MECHANICAL STATE OF CALIFORNIA

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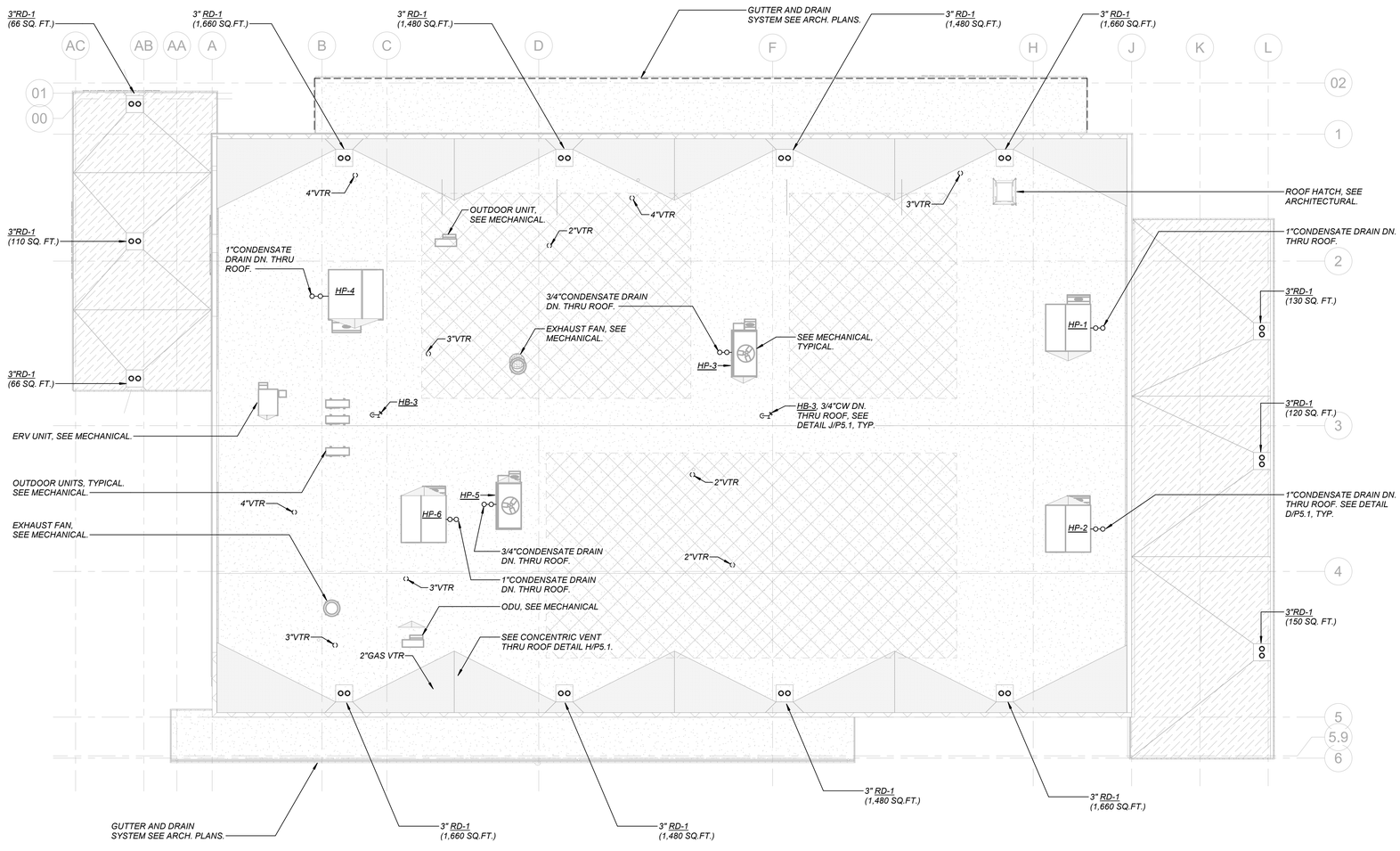

A PLUMBING ROOF PLAN

SCALE: 1/8" = 1'-0"

NOTE:
PLUMBING VENTS OUTLETS, FLUE VENTS AND EXHAUST OUTLETS SHALL MAINTAIN 10'-0" MINIMUM CLEARANCE FROM OUTSIDE AIR INTAKES.

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MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL R. SCHEER C 36165 02-28-27 RENEWAL DATE STATE OF CALIFORNIA

PROJECT NUMBER	20-51
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PTN NO.	65243-153
DRAWN BY	Author

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#	DESCRIPTION	DATE

CONSTRUCTION DOCUMENTS

PLUMBING ROOF PLAN

P3.1

REGISTERED PROFESSIONAL ENGINEER JORDAN W. CARLSON M34644 REN. 6-30-2026 MECHANICAL STATE OF CALIFORNIA

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PLUMBING FIXTURE AND EQUIPMENT SCHEDULE

MARK	FIXTURE	CONNECTION SIZES				DESCRIPTION
		S or W	V	CW	HW	
TP-3	ELECTRONIC TRAP PRIMER	-	-	3/4"	-	PRECISION PLUMBING PRODUCTS MODEL #PT-8 (OR MIFAB EQUAL) RECESSED/ FLUSH MOUNT CABINET WITH ACCESS DOOR AND CYLINDER LOCK. PROVIDE STAINLESS STEEL DOOR IN AREAS WITH CERAMIC TILE WALL FINISH. TRAP PRIMER IS FACTORY ASSEMBLED AND PRE-PIPED WITH COPPER MANIFOLD, INLET BALL VALVE, ELECTRIC SOLENOID VALVE, TIMER, AND VACUUM BREAKER. ELECTRICAL REQUIRED: 120V / 1ø 2 AMPS, REFER TO DRAWINGS FOR NUMBER OF DRAINS SERVED.
SH-1	SHOWER	-	-	1/2"	1/2"	ACORN "ZENITH BUILT-IN SHOWER" #538-A-YY. WITH LOGAN WIZARD SHOWERHEAD (1.6 GPM), TEMPERATURE-PRESSURE BALANCING MANUAL MIXING VALVE (ASSE 1016 COMPLIANT) WITH PATENTED LIGATURE RESISTANT TRI-LEVER HANDLE, SHOWERHEAD ANCHOR PLATE, AND LOCKABLE UNIVERSAL BALL JOINT. PROVIDE ALL PIPING REQUIRED FOR A COMPLETE FINISH.
SH-2 ♿	SHOWER	-	-	1/2"	1/2"	ACORN "ZENITH BUILT-IN SHOWER" #538-ADA-A-YY-HL-QD-PSO-FSP. CBC ACCESS COMPLIANT, WITH LOGAN WIZARD FIXED SHOWERHEAD (1.6 GPM), ANCHOR PLATE, TEMPERATURE AND PRESSURE BALANCING MIXING VALVE (ASSE 1016 COMPLIANT), WITH TRI-LEVER HANDLE, DETACHABLE HANDHELD SHOWERHEAD WITH 5'-0" S.S. HOSE AND DIVERTER VALVE W/ TRI-LEVER HANDLE, INTEGRAL CHECK STOPS, QUICK DISCONNECT WITH POSITIVE SHUT-OFF VALVE., AND PHENOLIC FOLDING SEAT. COORDINATE SEAT ORIENTATION AND MOUNTING HEIGHTS WITH ARCHITECT. PROVIDE ALL PIPING REQUIRED FOR A COMPLETE FINISH.
RD-1	ROOF & OVERFLOW DRAIN	3"	-	-	-	"JAY R. SMITH" #148-Y03, COMBINATION ROOF/OVERFLOW DRAIN, WITH CAST IRON FLASHING CLAMPS AND GRAVEL STOPS, 6" HIGH CAST IRON DOME STRAINER, AND #148-10 OPTIONAL CI DOME STRAINER FOR OVERFLOW.
DC-1	DOWN SPOUT COVER	3"	-	-	-	"JAY R. SMITH" #1775-U STAINLESS STEEL DOWNSPOUT COVER FOR OVERFLOW DRAIN WITH VANDAL PROOF SCREWS. SEE PLAN FOR SIZE.
WH-1	GAS WATER HEATER	-	-	1-1/2"	1-1/2"	BRADFORD WHITE #EF-100T-250E-3N(A), ASME RATED TANK , GAS FIRED LOW NOx STORAGE WATER HEATER, 94% THERMAL EFFICIENCY, 100 GALLON STORAGE CAPACITY, 416 GPH RECOVERY RATE AT 70°F TEMPERATURE RISE, 125°F SUPPLY TEMPERATURE, 250,000 BTUH INPUT, POWER BURNER ASSEMBLY WITH 1/3 HP, 120V, 2 AMP MOTOR. PROVIDE 3" CPVC AIR INTAKE AND FLUE EXHAUST THRU ROOF WITH CPVC CONCENTRIC VENT KIT, #A2123601 CONDENSATE NEUTRALIZING KIT (OR EQUAL), SIZED FOR EQUIPMENT CAPACITY. OPERATING WEIGHT = 1,800 LBS.
TET-1	EXPANSION TANK	-	-	3/4"	-	AMTROL "THERM-X-TROL" #ST-12-C-DD, FIVE GALLON ASME RATED EXPANSION TANK WITH INLINE CONNECTIONS AND WITH FDA APPROVED BLADDER FOR POTABLE WATER USE. WT. = 87 LBS.
CP-1	CIRCULATING PUMP	-	-	-	3/4"	B&G/XYLEM LEAD-FREE WET ROTOR CIRCULATOR #NBF-25, (OR GRUNDFOS OR TACO EQUAL), THREE SPEED IN-LINE CENTRIFUGAL PUMP WITH B&G/XYLEM FLANGED IPS CONNECTIONS WITH INTEGRAL BALL AND CHECK VALVES. FLANGE SIZE TO MATCH HWR PIPE SIZE, 125 WATTS, 2940 RPM, 2.30 FLA, XYL EM#TC-1 AND AQS-3/4" COMBINATION TIME CLOCK AND AQUASTAT. 120V/1Ø, 15 LBS
TMV-1	THERMOSTATIC MIXING VALVE	-	-	3/4"	3/4"	BRADLEY "NAVIGATOR" HL45 MODEL #S59-3045-C-P-SS CHROME PLATED HI/LO THERMOSTATIC MIXING VALVE. 1.5 GPM MINIMUM FLOW CAPACITY. 25 GPM FLOW AT 20 PSIG PRESSURE DROP. 120°F. SET OUTLET TEMPERATURE.
EV-1	EARTHQUAKE VALVE	-	-	-	-	PACIFIC SEISMIC PRODUCTS "CALIFORNIA SEISMIC VALVE" #314(60)NPT, 2" THREADED VALVE, HORIZONTAL FLOW INSTALLATION, 60 PSI MAX. PRESSURE RATING, DRY FUEL GAS, LEVEL INDICATOR, U.L. LISTED, CA-DSA CERTIFIED.
GPR-1	GAS PRESSURE REGULATOR	-	-	-	-	NORGAS / NMT - NGR04 (OR EQUAL) CSA 6.22/ANSI Z21.80 LISTED GAS PRESSURE REGULATOR W/ OVERPRESSURE PROTECTION DEVICE, 1-1/4" NPT INLET AND OUTLET SIZE, 1,636 CFH CAPACITY AT 2 PSIG INLET PRESSURE, WITH 7" W.C. OUTLET PRESSURE. 1/2" ORIFICE (F0406C) 4" W.C. - 13" W.C. GRAY SPRING, (S04B).
GPR-2	GAS PRESSURE REGULATOR	-	-	-	-	NORGAS / NMT - NGR02 (OR EQUAL) CSA 6.22/ANSI Z21.80 LISTED GAS PRESSURE REGULATOR W/ OVERPRESSURE PROTECTION DEVICE, 1" NPT INLET AND OUTLET SIZE, 377 CFH CAPACITY AT 2 PSIG INLET PRESSURE, WITH 7" W.C. OUTLET PRESSURE. 3/8" ORIFICE (F02C) 6.5" W.C. - 16" W.C. GREEN SPRING, (S02A).

PLUMBING FIXTURE AND EQUIPMENT SCHEDULE

MARK	FIXTURE	CONNECTION SIZES				DESCRIPTION
		S or W	V	CW	HW	
FS-2	FLOOR SINK	2"	1-1/2"	1/2"	-	JAY R. SMITH #3140-12, (OR MIFAB OR ZURN EQUAL) 12"x12"x6"DEEP WITH ANCHOR FLANGE, DOME BOTTOM STRAINER & NICKEL BRONZE RIM WITH HALF GRATE. SEE DWGS. FOR SIZE. INSTALL FLUSH WITH FINISH FLOOR. PROVIDE TRAP PRIMER CONNECTION WHERE APPLICABLE.
MS-1	MOP SINK	3"	2"	3/4"	3/4"	KOHLER "WHITBY" #K-6710, 28" x 28" FLOOR MOUNT, CORNER STYLE ENAMELED CAST IRON MOP SINK WITH #K-8940 RIM GUARD, #K-9146 GRID DRAIN, CHICAGO #897-CCP (OR T&S BRASS OR ZURN EQUAL) WALL MOUNTED POLISHED CHROME FAUCET WITH VACUUM BREAKERS, INTERGAL CHECK VALVES, STOPS, AND WALL BRACE. FLORESTONE #MR-370 60" HOSE WITH WALL BRACKET AND #MR-372 MOP HANGER. PROVIDE 3" W.C.O.
S-1	THREE COMP. SINK	2" IW	-	1/2"	1/2"	JUST #NSFB-345-24RL-12/12, FREE STANDING, NSF CERTIFIED, 14 GAUGE, TYPE 304 STAINLESS STEEL, TRIPLE COMPARTMENT SINK, (15"x24"x12" DEEP EACH BOWL SIZE), WITH 12" HIGH BACK SPLASH, AND 24" LONG LEFT AND RIGHT DRAIN BOARDS, (3) "JUST" # J-35LAC-2 TWIST HANDLE DRAINS (2) " CHICAGO" #445-L9E35ABCP BACKSPLASH MOUNT FAUCETS WITH 9" SWING SPOUT AND 1.5 GPM FLOW OUTLET. (2) HOLES 8"O.C. CENTERED OVER PARTITIONS OVERALL SINK LENGTH = 96".
S-2 ♿	HAND SINK	2"	2"	1/2"	1/2"	ADVANCE TABCO #7-PS-75 ACCESSIBLE WALL HUNG 18 GAUGE TYPE 304 STAINLESS STEEL AND WASH SINK (20"x18") WITH OPTIONAL #7-PS-11D 12" SIDE SPLASH, (LEFT SIDE), BACKSPLASH AND WALL BRACKET, "CHICAGO" #895-317E65VPXKAAB GOOSNECK FAUCET WITH 1.0GPM VANDAL RESISTANT LAMINAR FLOW OUTLET AND LEVER HANDLES, "JUST" # J-115-FS GRID DRAIN WITH FLAT STRAINER, "LEONARD" #170-LF-BP-BRKT, POINT-OF-USE THERMOSTATIC MIXING VALVE WITH COLD WATER BYPASS AND WALL MOUNTING BRACKET. SET FAUCET SUPPLY TEMERATURE TO 120°F. SEE ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT.
S-3 ♿	SINK	2"	2"	1/2"	-	JUST #SL-ADA-2017-A-GR (OR ELKAY EQUAL), CBC ACCESS COMPLIANT, SINGLE COMPARTMENT 18 GAUGE STAINLESS STEEL, 14"x14"x4-1/2" DEEP BOWL SIZE WITH CENTER REAR DRAIN, #J-35GS BASKET STRAINER, AND CHICAGO #350-GN2FCABCP WITH LAMINAR FLOW AERATOR, 1.5 GPM (OR T&S BRASS OR ZURN EQUAL) 5-1/2" SWIVEL GOOSENECK FAUCET WITH LAMINAR FLOW CONTROL & VANDAL PROOF 2-3/8" LEVER HANDLE.
S4-1	SHOCK ARRESTOR	-	-	1"	-	SIOUX CHIEF "HYDRA-RESTER" #654-CS, SEAMLESS COPPER CHAMBER APPROVED FOR CONCEALED INSTALLATION. P.D.I. SYMBOL "C" FOR UP TO 60 FIXTURE UNITS. INSTALL IN UPWARD POSITION.
SA-2	SHOCK ARRESTOR	-	-	3/4"	-	SIOUX CHIEF "HYDRA-RESTER" #652-B, SEAMLESS COPPER CHAMBER APPROVED FOR CONCEALED INSTALLATION. P.D.I. SYMBOL "B" FOR UP TO 32 FIXTURE UNITS. INSTALL IN UPWARD POSITION.
HB-1	HOSE BIBB	-	-	3/4"	-	WOODFORD #24P-PC (OR MIFAB EQUAL) OPTIONAL POLISHED CHROME WALL HOSE VALVE WITH LOCKSHIELD, NON-REMOVABLE VACUUM BREAKER, AND OPTIONAL LOOSE TEE KEY HANDLE. WITH MODEL 34HD.
HB-2	HOSE BIBB	-	-	3/4"	-	WOODFORD #24P-BR (OR MIFAB EQUAL) ROUGH BRASS WALL HOSE VALVE WITH LOCKSHIELD, NON-REMOVABLE VACUUM BREAKER, AND OPTIONAL LOOSE TEE KEY HANDLE WITH MODEL 34HD.
HB-3	HOSE BIBB	-	-	3/4"	-	WOODFORD #Y24-BR (OR MIFAB EQUAL) ROUGH BRASS STANDPIPE HOSE VALVE WITH NON-REMOVABLE VACUUM BREAKER, & OPTIONAL LOOSE TEE KEY HANDLE WITH MODEL 34HD.
WF-1	WATER FILTER ICE MACHINE	-	-	1/2"	-	EVERPURE "INSURE-ICE SINGLE i2000" #EV9324-01 w/#EV9612-22. 0.5 MICRON CARTRIDGE (PROVIDE (2) ADDITIONAL CARTRIDGES). 1.67 GPM MAX. FLOW, 9,000 GALLONS RATED CAPACITY AND WALL MOUNTING BRACKET. OVERALL DIMENSIONS=29.5Hx8.04"Wx5.25"D. WT.= 9LBS
TP-1	TRAP PRIMER	-	-	1/2"	-	PRECISION PLUMBING PRODUCTS #P1-500 FOR UP TO (4) DRAINS SERVED #DU-4 DISTRIBUTION UNIT, #D-1212SS-CL, 12"x12" STAINLESS STEEL ACCESS PANEL w/CYLINDER LOCK.
TP-2	ELECTRONIC TRAP PRIMER	-	-	3/4"	-	PRECISION PLUMBING PRODUCTS MODEL #PT-4 (OR MIFAB EQUAL) RECESSED/ FLUSH MOUNT CABINET WITH ACCESS DOOR AND CYLINDER LOCK. PROVIDE STAINLESS STEEL DOOR IN AREAS WITH CERAMIC TILE WALL FINISH. TRAP PRIMER IS FACTORY ASSEMBLED AND PRE-PIPED WITH COPPER MANIFOLD, INLET BALL VALVE, ELECTRIC SOLENOID VALVE, TIMER, AND VACUUM BREAKER. ELECTRICAL REQUIRED: 120V / 1ø 2 AMPS, REFER TO DRAWINGS FOR NUMBER OF DRAINS SERVED.

PLUMBING FIXTURE AND EQUIPMENT SCHEDULE

MARK	FIXTURE	CONNECTION SIZES				DESCRIPTION
		S or W	V	CW	HW	
WC-1	WATER CLOSET	4"	2"	1"	-	AMERICAN STANDARD "AFWALL MILLENIUM FLOWISE" MODEL #3351.101, ELONGATED BOWL WALL-HUNG WITH INLET SPUD, ZURN #Z6200-HET-VC, METROFLUSH HIGH EFFICIENCY PISTON FLUSH VALVE WITH LEVER HANDLE AND VANDAL RESISTANT STOP CAP, (1.28 GALLONS/FLUSH), OLSONITE #95SSCT EXTRA HEAVY DUTY OPEN-FRONT WHITE SEAT WITH SELF-SUSTAINING STAINLESS STEEL CHECK HINGES. JAY R. SMITH FIXTURE SUPPORT SERIES (OR MIFAB OR ZURN EQUAL) "QUARTERBACK" WITH M58-M54 FACEPLATE WITH ADJUSTABLE NIPPLE AND "O" RING . REFER TO PLAN LAYOUT FOR APPLICABLE CARRIER #0210Y, #0211Y-M54, OR #410Y SINGLE, VERTICAL, OR HORIZONTAL LEFT/RIGHT ORIENTATION. SEE WATER CLOSET SUPPORT DETAIL C/P5.2.
WC-2 ♿	WATER CLOSET	4"	2"	1"	-	AMERICAN STANDARD "AFWALL MILLENIUM FLOWISE" MODEL #3351.101, ELONGATED BOWL WALL-HUNG WITH INLET SPUD, CBC ACCESS COMPLIANT, ZURN #Z6200-HET-VC, METROFLUSH HIGH EFFICIENCY PISTON FLUSH VALVE WITH LEVER HANDLE AND VANDAL RESISTANT STOP CAP, (1.28 GALLONS/FLUSH), OLSONITE #95SSCT EXTRA HEAVY DUTY OPEN-FRONT WHITE SEAT WITH SELF-SUSTAINING STAINLESS STEEL CHECK HINGES. MOUNT FLUSH VALVE HANDLE ON WIDE SIDE OF STALL OR ROOM. JAY R. SMITH FIXTURE SUPPORT SERIES (OR MIFAB OR ZURN EQUAL) "QUARTERBACK" WITH M58-M54 FACEPLATE WITH ADJUSTABLE NIPPLE AND "O" RING . REFER TO PLAN LAYOUT FOR APPLICABLE CARRIER #0210Y, #0211Y-M54, OR #410Y SINGLE, VERTICAL, OR HORIZONTAL LEFT/RIGHT ORIENTATION. SEE ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT. SEE WATER CLOSET SUPPORT DETAIL C/P5.2.
U-1 ♿	URINAL	2"	2"	3/4"	-	AMERICAN STANDARD DECORUM 6042.001EC (OR ZURN EQUAL) CBC ACCESS COMPLIANT, 0.125 GPF, WASHOUT STYLE WITH OPTIONAL #7381755-200.0020A VANDAL RESISTANT STRAINER, AND ZURN "AQUAVANTAGE" MODEL Z6003AZ-ULF (0.125 GPF) ULTRA LOW FLOW FLUSH VALVE, AND JAY R. SMITH #637 SUPPORT CARRIER WITH ADJUST-TO-WALL OUTLET CONNECTION. SEE ARCH DWGS FOR ACCESSIBLE MOUNTING HEIGHT. SEE URINAL SUPPORT DETAIL K/P5.1.
L-1 ♿	LAVATORY	2"	2"	1/2"	-	AMERICAN STANDARD "LUCERNE" WALL HUNG 0355.012.020 (OR KOHLER EQUAL) CBC ACCESS COMPLIANT, 20-1/2"x18-1/4", VIT. CHINA WITH 4" CENTERS, McGUIRE #155A GRID DRAIN, CHICAGO 3400-ABCP METERING FAUCET WITH (0.5 GPM) VANDAL PROOF PRESSURE COMPENSATING ECO-FLOW SPRAY OUTLET AND PUSH KNOB HANDLE, JAY R. SMITH #700-Z SUPPORT CARRIER. ADJUST FAUCET RUN TIME TO 10 SECONDS. SEE ARCH DWGS FOR MOUNTING HEIGHT.
L-2 ♿	LAVATORY	2"	2"	1/2"	1/2"	AMERICAN STANDARD "LUCERNE" WALL HUNG 0355.012.020 (OR KOHLER EQUAL) CBC ACCESS COMPLIANT, 20-1/2"x18-1/4", VIT. CHINA WITH 4" CENTERS, McGUIRE #155A GRID DRAIN,CHICAGO 802-VE2805-665-ABCP METERING FAUCET WITH (0.5 GPM) VANDAL PROOF PRESSURE COMPENSATING ECO-FLOW SPRAY OUTLET AND PUSH KNOB HANDLES, JAY R. SMITH #700-Z SUPPORT CARRIER. ADJUST FAUCET RUN TIME TO 10 SECONDS. LEONARD 170-LF-BP "ECO-MIX" THERMOSTATIC MIXING VALVE, LEAD FREE BODY., 25 GPM MINIMUM FLOW, 3/8" INLETS AND 3/8" OUTLET, ASSE 1070 COMPLIANT. MOUNT DIRECTLY BELOW SINK. PIPING FROM THE ANGLE STOPS TO THE THERMOSTATIC MIXING VALVE SHALL BE RIGID TUBING. SET HW TEMP FOR 110° F. SEE ARCH DWGS FOR MOUNTING HEIGHT.
EDF-1 ♿	ELECTRIC DRINKING FOUNTAIN	2"	1-1/2"	1/2"	-	"ELKAY EZH20" #LZWS-EDFPBM117K, ACCESSIBLE BI-LEVEL STAINLESS STEEL NON-REFRIGERATED DRINKING FOUNTAIN, VANDAL RESISTANT, MECHANICAL PUSH BUTTON ACTIVATION-(FRONT BUBBLERS), INTEGRAL WATER FILTER WITH TOUCHLESS SENSOR ACTIVATED BOTTLE FILLING STATION, FLEX-GUARD SAFETY BUBBLER, "ELKAY" # MFWS200 (IN WALL) MOUNTING FRAME. PROVIDE (2) ADDITIONAL ELKAY #51300C WATER FILTERS TO OWNER. ELECTRICAL: 115V, 1.0 FLA, 15 WATTS. WEIGHT: 121 LBS. SEE ARCHITECTURAL DRAWINGS FOR ACCESSIBLE MOUNTING HEIGHT.
FD-1	FLOOR DRAIN	2"	1-1/2"	1/2"	-	JAY R. SMITH #2005Y-P050-HP (OR MIFAB OR ZURN EQUAL) DUCO CAST IRON BODY WITH 5" SQUARE NICKEL BRONZE STRAINER, NO-HUB OUTLET, TRAP PRIMER CONNECTION, AND HEELPROOF GRATE.
FD-2	FLOOR DRAIN	3"	2"	1/2"	-	JAY R. SMITH #2005Y-P050-HP (OR MIFAB OR ZURN EQUAL) DUCO CAST IRON BODY WITH 6" SQUARE NICKEL BRONZE STRAINER, NO-HUB OUTLET, TRAP PRIMER CONNECTION, AND HEELPROOF GRATE.
FS-1	FLOOR SINK	3"	2"	1/2"	-	JAY R. SMITH #3160-12, (OR MIFAB OR ZURN EQUAL) 12"x12"x10"DEEP WITH ANCHOR FLANGE, DOME BOTTOM STRAINER & NICKEL BRONZE RIM WITH HALF GRATE. INSTALL FLUSH WITH FINISH FLOOR. PROVIDE TRAP PRIMER CONNECTION WHERE APPLICABLE.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 01/23/2025

PBK

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MADERA HIGH SCHOOL FIELDHOUSE
200 SOUTH "L" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL
LICENSED ARCHITECT MICHAEL R. SCHOEN No. 36165 02-28-27 RENEWAL DATE STATE OF CALIFORNIA

PROJECT NUMBER 20-51
DATE MM/DD/YYYY
DSA APPLICATION NO. 02 - 121624
FILE NO. 20-H3
PTN NO. 65243-153
DRAWN BY Author

REVISIONS

#	DESCRIPTION	DATE

CONSTRUCTION DOCUMENTS

PLUMBING SCHEDULES

P4.1

REGISTERED PROFESSIONAL ENGINEER BRIAN W. CAMPBELL No. M34846 Exp. 6-30-26 MECHANICAL STATE OF CALIFORNIA

LAWRENCE ENGINEERING GROUP
4910 E. Clinton Way, Suite 101 (559) 431-0101
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15 January 2025 10:42 AM p:\2023\23073 madera usd – moders hs stadium locker addition\4-drawings\5 P\P4.1 – PLUMBING SCHEDULES.dwg gyatovo

RAINWATER PIPING - SIZING FOR 1.5 INCHES PER HOUR RAINFALL RATE		
2022 CPC TABLE 1103.1 (EXCERPT): SIZING ROOF DRAINS... AND VERTICAL RAINWATER PIPING		
SIZE OF DRAIN PIPE, INCHES	FLOW GPM	MAXIMUM ALLOWANCE HORIZONTAL PROJECTED ROOF AREA 1.5" PER HOUR.
3	92	5867 SQ FT
4	192	12266 SQ FT
2022 CPC TABLE 1103.2 (EXCERPT): SIZING OF HORIZONTAL RAINWATER PIPING		
SIZE OF DRAIN PIPE, INCHES	SLOPE VS. FLOW GPM	MAXIMUM ALLOWANCE HORIZONTAL PROJECTED ROOF AREA 1.5" PER HOUR.
3	1/8"/FT = 34	2192 SQ FT
3	1/4"/FT = 48	3094 SQ FT
3	1/2"/FT = 68	4384 SQ FT
4	1/8"/FT = 78	5014 SQ FT
4	1/4"/FT = 110	7067 SQ FT
4	1/2"/FT = 156	10027 SQ FT

NOTES:
A. FOR PIPING MATERIALS, SUPPORTS, AND SPACING REFER TO:
 i. PLUMBING DETAIL SHEET P5.3.
 ii. SPECIFICATION 22 00 00, PART 2 - "PRODUCTS" (PART 2.1 - PIPING MATERIALS - MISCELLANEOUS PIPING ITEMS - PIPE SUPPORT), AND SECTION 22 00 00, PART 3 - "EXECUTION" (PART 3.1 - PIPING INSTALLATION - PIPE SUPPORT).

B. SEISMIC PIPE BRACING NOT REQUIRED:
 i. SHEET P4.2 "GENERAL PLUMBING NOTES", #5 & #6, (PLUMBING PIPING CHECKED FOR DETAILED ON THE APPROVED PLANS WITH PROJECT SPECIFIC NOTES AND DETAILS).
 ii. PLUMBING PIPING IS 3" IN DIAMETER AND LESS WHERE Ip=1.0. PLUMBING PIPING IS 1" IN DIAMETER OR LESS WHERE Ip=1.5. (GAS PIPING IS ATTACHED LOW ON WALL AND NOT HUNG FROM ABOVE).

GAS PIPE SIZING:

TOTAL DEMAND : 2,360 CFH (2,360 MBH)

FUTURE STADIUM BLDG TOTAL DEMAND: 550 CFH (550 MBH)
(NEW) FIELD HOUSE TOTAL DEMAND: 250 CFH (250 MBH)
(EXIST.) FIELDHOUSE TOTAL DEMAND: 1,460 CFH (1,460 MBH)

REFER TO 2022 CPC TABLE 1215.2 (4) - 2 PSI AT 1300' COLUMN:
MAIN GAS PIPE FROM METER:
A 2" GAS PIPE WILL DELIVER: 2,530 CFH (2,530 MBH)
A 1-1/2" GAS PIPE WILL DELIVER: 1,320 CFH (1,320 MBH)

GAS BRANCH TO FUTURE STADIUM BUILDING:
1300' COLUMN:
A 1-1/2"" GAS PIPE WILL DELIVER: 1,320 CFH (1,320 MBH)

GAS BRANCH TO NEW FIELDHOUSE BUILDING:
550' COLUMN:
A 1" GAS PIPE WILL DELIVER: 681 CFH (681 MBH)

GAS BRANCH TO EXIST. FIELDHOUSE BUILDING:
200' COLUMN:
A 1-1/4" GAS PIPE WILL DELIVER: 2410 CFH (2410 MBH)

LOW PRESSURE GAS PIPE SIZING (FUTURE STADIUM BUILDINGS):

TOTAL GAS DEMAND: 550 MBH (550 CFH)

REFER TO 2022 CPC TABLE 1215.2 (1):
(LESS THAN 2 PSI INLET PRESSURE)

TOTAL DEVELOPED LENGTH FROM NEW REGULATOR TO MOST REMOTE FIXTURE IS 200 FT.

USE 250 FT. COLUMN.
TOTAL DEMAND: 550 CFH (550 MBH)

2" GAS PIPE WILL DELIVER: 704 CFH (704 MBH)
1-1/2" GAS PIPE WILL DELIVER: 366 CFH (366 MBH)
1-1/4" GAS PIPE WILL DELIVER: 244 CFH (244 MBH)
1" GAS PIPE WILL DELIVER: 119 CFH (119 MBH)
3/4" GAS PIPE WILL DELIVER: 63 CFH (63 MBH)
1/2" GAS PIPE WILL DELIVER: 30 CFH (30 MBH)

GAS EQUIPMENT:
WH-1 250 MBH (EA) X (1) = 250 MBH (250 CFH)
FUTURE DRYERS 150 MBH (EA) X (2) = 300 MBH (300 CFH)

TOTAL GAS LOAD: 550 MBH (550 CFH)

LOW PRESSURE GAS PIPE SIZING (NEW FIELDHOUSE BUILDING):

TOTAL GAS DEMAND: 250 MBH (250 CFH)

REFER TO 2022 CPC TABLE 1215.2 (1):
(LESS THAN 2 PSI INLET PRESSURE)

TOTAL DEVELOPED LENGTH FROM NEW REGULATOR TO MOST REMOTE FIXTURE IS 100 FT.

USE 100 FT. COLUMN.
TOTAL DEMAND: 250 CFH (250 MBH)

1-1/4" GAS PIPE WILL DELIVER: 400 CFH (400 MBH)
1" GAS PIPE WILL DELIVER: 195 CFH (195 MBH)
3/4" GAS PIPE WILL DELIVER: 104 CFH (104 MBH)
1/2" GAS PIPE WILL DELIVER: 50 CFH (50 MBH)

GAS EQUIPMENT:
WH-1 250 MBH (EA) X (1) = 250 MBH (250 CFH)

TOTAL GAS LOAD: 250 MBH (250 CFH)

LOW PRESSURE GAS PIPE SIZING (EXIST. FIELDHOUSE BUILDING):

TOTAL GAS DEMAND: 1,460 MBH (1,460 CFH)

REFER TO 2022 CPC TABLE 1215.2 (1):
(LESS THAN 2 PSI INLET PRESSURE)

TOTAL DEVELOPED LENGTH FROM NEW REGULATOR TO MOST REMOTE FIXTURE IS 200 FT.

USE 200 FT. COLUMN.
TOTAL DEMAND: 1,460 CFH (1,460 MBH)

3" GAS PIPE WILL DELIVER: 2,240 CFH (2,240 MBH)
2-1/2" GAS PIPE WILL DELIVER: 1,270 CFH (1,270 MBH)
2" GAS PIPE WILL DELIVER: 794 CFH (794 MBH)
1-1/2" GAS PIPE WILL DELIVER: 412 CFH (412 MBH)
1-1/4" GAS PIPE WILL DELIVER: 275 CFH (275 MBH)
1" GAS PIPE WILL DELIVER: 134 CFH (134 MBH)
3/4" GAS PIPE WILL DELIVER: 71 CFH (71 MBH)
1/2" GAS PIPE WILL DELIVER: 34 CFH (34 MBH)

GAS EQUIPMENT:
(E) GAS FIRED AHU, WATER HEATER, MISC: 1,460 MBH (1,460 CFH)

TOTAL GAS LOAD: 1,460 MBH (1,460 CFH)

LOW PRESSURE GAS PIPE SIZING (BUILDING TO SOUTH OF FIELDHOUSE):

TOTAL GAS DEMAND: ASSUMED 100 MBH (100 CFH)

REFER TO 2022 CPC TABLE 1215.2 (1):
(LESS THAN 2 PSI INLET PRESSURE)

TOTAL DEVELOPED LENGTH FROM NEW REGULATOR TO MOST REMOTE FIXTURE IS 500 FT.

USE 500 FT. COLUMN.
TOTAL DEMAND: 100 CFH (100 MBH)

1-1/4" GAS PIPE WILL DELIVER: 168 CFH (168 MBH)
1" GAS PIPE WILL DELIVER: 82 CFH (82 MBH)
3/4" GAS PIPE WILL DELIVER: 43 CFH (43 MBH)
1/2" GAS PIPE WILL DELIVER: 21 CFH (21 MBH)

GAS EQUIPMENT:
HVAC UNIT 80 MBH (EA) X (1) = 80 MBH (80 CFH)

TOTAL GAS LOAD: 80 MBH (250 CFH) - USE 100 MBH

GENERAL PLUMBING NOTES:

1. THE INTENT OF THE DRAWINGS AND SPECIFICATIONS IS TO CONSTRUCT THE BUILDING IN ACCORDANCE WITH THE 2022 EDITION OF TITLE 24, CALIFORNIA CODE OF REGULATIONS. SHOULD ANY CONDITIONS DEVELOP NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WOULD NOT COMPLY WITH SAID TITLE 24, CALIFORNIA CODE OF REGULATIONS, A CHANGE ORDER DETAILING AND SPECIFYING THE REQUESTED WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK.

2. THE APPLICABLE CODES AND REGULATIONS FOR THIS PROJECT INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

 CALIFORNIA CODE OF REGULATIONS
 TITLE 8, INDUSTRIAL RELATIONS
 TITLE 19, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS
 TITLE 24, PART 1, ADMINISTRATIVE REGULATIONS
 2022 CALIFORNIA BUILDING CODE, PART 2, TITLE 24 CCR
 2022 CALIFORNIA ELECTRICAL CODE, PART 3, TITLE 24 CCR
 2022 CALIFORNIA MECHANICAL CODE, PART 4, TITLE 24 CCR
 2022 CALIFORNIA PLUMBING CODE, PART 5, TITLE 24 CCR
 2022 CALIFORNIA FIRE CODE, PART 9, TITLE 24 CCR

 NFPA 101 2021 EDITION
 OSHA - OCCUPATIONAL SAFETY AND HEALTH ACT

3. LAYOUT OF MATERIALS, EQUIPMENT AND SYSTEMS IS GENERALLY DIAGRAMMATIC UNLESS SPECIFICALLY DIMENSIONED. SOME WORK MAY BE SHOWN OFFSET FOR CLARITY. THE PLUMBING BUILDING PLANS HAVE BEEN PREPARED TO MATCH THE ARCHITECTURAL PLANS. IF DIFFERENCES OCCUR, THE ARCHITECTURAL PLANS ARE TO TAKE PRECEDENCE. THE ACTUAL LOCATIONS OF ALL MATERIALS, PIPING, DUCTWORK, FIXTURES, EQUIPMENT, SUPPORTS, ETC. SHALL BE CAREFULLY PLANNED, PRIOR TO INSTALLATION OF ANY WORK, TO AVOID ALL INTERFERENCE WITH EACH OTHER, OR WITH STRUCTURAL, ELECTRICAL, ARCHITECTURAL, OR OTHER ELEMENTS. ALL PIPE OFFSET ELBOWS FOR COORDINATION BETWEEN TRADES ARE NOT SHOWN. CONTRACTOR SHALL INCLUDE SUFFICIENT FUNDS FOR THE COORDINATION OFFSETS IN THE BID. VERIFY THE PROPER VOLTAGE AND PHASE OF ALL EQUIPMENT WITH THE ELECTRICAL PLANS. ALL CONFLICTS SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT AND THE ENGINEER PRIOR TO INSTALLATION OF ANY WORK OR THE ORDERING OF ANY EQUIPMENT.

4. WHEN INSTALLING DRILLED-IN ANCHORS AND/OR POWDER-DRIVEN PINS IN EXISTING NON-PRESTRESSED CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. WHEN INSTALLING THEM INTO EXISTING PRE-STRESSED CONCRETE (PRE- OR POST-TENSIONED), LOCATE THE PRESTRESSED TENDONS BY USING A NON-DESTRUCTIVE METHOD PRIOR TO INSTALLATION. MAINTAIN A MINIMUM CLEARANCE OF ONE INCH BETWEEN THE REINFORCEMENT AND THE DRILLED-IN ANCHOR AND/OR PIN.

5. **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 2022 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 OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER.
 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 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 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 2022 CBC, SECTIONS 1617A.1.24, 1617A.1.25, 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., HCAI 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.

 MP ☐ MD ☐ PP ☒ A. OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.

 MP ☐ MD ☐ PP ☐ B. OPTION 2: PLUMBING PIPING (PP) - SHALL COMPLY WITH OPM-0043-13 HCAI PRE-APPROVAL (MASON WEST, SEISMIC RESTRAINT GUIDELINES FOR SUSPENDED DISTRIBUTION SYSTEMS).

6. BRACE ALL PIPING GREATER THAN 3" DIAMETER; USE Ip=1.0 FOR SEISMIC DESIGN CALCULATIONS. EXCEPTION: NATURAL GAS PIPING GREATER THAN 1" DIAMETER, USE Ip=1.5 FOR SEISMIC DESIGN CALCULATIONS.

7. PENETRATIONS THROUGH FIRE RATED WALLS, FLOOR/CEILING, AND ROOF/CEILING ASSEMBLIES SHALL BE SEALED USING AN APPROVED SYSTEM CAPABLE OF PREVENTING THE PASSAGE OF FLAMES AND HOT GASES WHEN SUBJECTED TO THE REQUIREMENTS OF THE TEST STANDARD SPECIFIC TO FIRE STOPS PER 2022 CBC SECTION 714. THIS INCLUDES EXISTING PIPE AND CONDUIT THROUGH NEW ASSEMBLIES. CUSTOM DESIGNED SYSTEMS WHICH COMBINE COMPONENTS FROM DIFFERENT APPROVED SYSTEMS BUT HAVE NOT BEEN TESTED AS A COMPLETE ASSEMBLY WILL NOT BE ACCEPTABLE. FOR FIRE STOPS FOR PIPE PENETRATIONS SEE SPECIFICATIONS.

8. FIELD VERIFY THE EXACT LOCATION, DEPTH AND SIZE OF ALL NEW POINTS OF CONNECTION TO EXISTING UTILITIES PRIOR TO COMMENCING NEW UTILITY WORK.

9. INSTALLATION OF NEW UTILITIES FROM EXISTING MAINS IN THE STREET SHALL BE DONE IN STRICT ACCORDANCE WITH GOVERNING AUTHORITY REQUIREMENTS.

10. INSTALLATION, TYPE AND MANUFACTURERS MODELS OF DOMESTIC WATER METERS, BACKFLOW PREVENTERS, FIRE HYDRANTS, DETECTOR CHECK VALVES, MANHOLES, DRAIN INLETS/OUTLETS AND OTHER APPURTENANCE OF SITE UTILITY SYSTEMS SHALL BE DONE IN STRICT ACCORDANCE WITH GOVERNING AUTHORITY REQUIREMENTS.

11. CONTRACTOR SHALL EXCAVATE AND BACKFILL THE GAS SERVICE TRENCH FOR THE LOCAL GAS UTILITY. THE LOCAL GAS UTILITY SHALL INSTALL THEIR GAS SERVICE LINE TO THE GAS METER. TRENCHING SHALL BE IN ACCORDANCE WITH UTILITY STANDARDS. ALL CHARGES AND FEES INCURRED BY THE UTILITY FOR NEW GAS SERVICE SHALL BE PAID BY THE CONTRACTOR.

12. ALL DOMESTIC WATER PIPING SHALL BE A MINIMUM OF 1/2" SIZE UNLESS NOTED OTHERWISE. USE A REDUCING DROP ELL AT FIXTURE CONNECTION WHEN APPLICABLE.

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MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL R. SCHEGEL No. C-36165 02-28-27 RENEWAL DATE STATE OF CALIFORNIA

PROJECT NUMBER	20-51
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FILE NO.	20-H3
PTN NO.	65243-153
DRAWN BY	Author

REVISIONS

#	DESCRIPTION	DATE

CONSTRUCTION DOCUMENTS

PLUMBING NOTES AND CALCS

P4.2

REGISTERED PROFESSIONAL ENGINEER RYAN W. CARLSON No. M34846 Exp. 6-30-26 MECHANICAL STATE OF CALIFORNIA

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4910 E. Clinton Way, Suite 103 (559) 431-0101
23073
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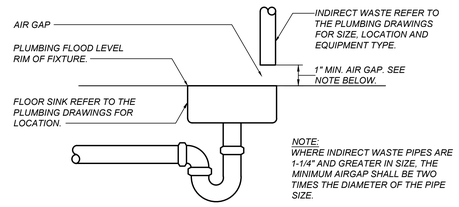
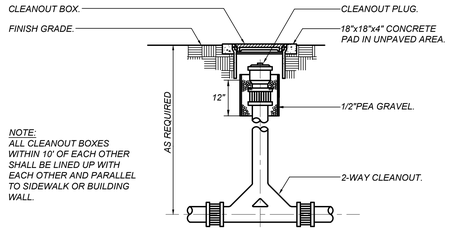
15 January 2025 10:42 AM p:\2023\23073 modera usd - modera hs stadium locker addition\4-drawings\5 P\P4.2 - PLUMBING NOTES AND CALCS.dwg gustavo



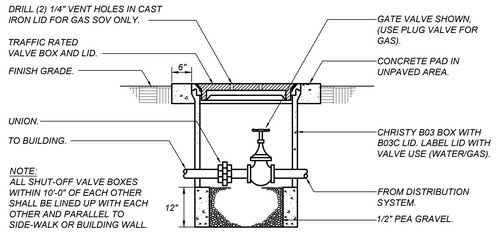
INDIRECT WASTE AIR GAP DRAIN DETAIL

SCALE: NONE

G / P-5.1



2-WAY SURFACE CLEANOUT DETAIL

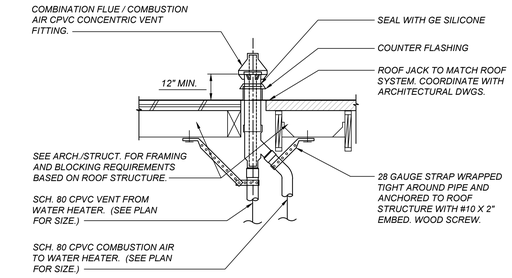


COLD WATER/GAS SHUT-OFF VALVE IN BOX

SCALE: NONE

P159

A / P-5.1

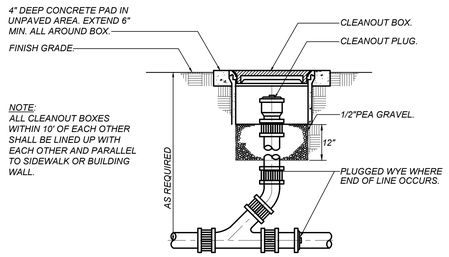


CONCENTRIC VENT THRU ROOF DETAIL

SCALE: NONE

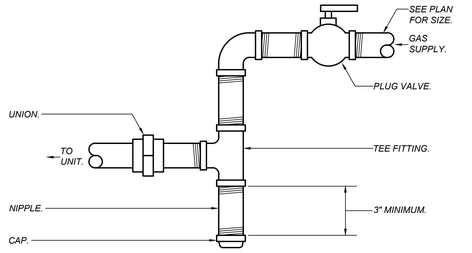
P121

H / P-5.1



CLEANOUT TO GRADE DETAIL

(OPTION 1)



GAS PIPING DIRT LEG DETAIL

SCALE: NONE

P128

B / P-5.1

PIPE THRU ROOF DETAIL - INSULATED

SCALE: NONE

J / P-5.1

CLEANOUT TO GRADE DETAILS

(OPTION 2)

SCALE: NONE

P117

E / P-5.1

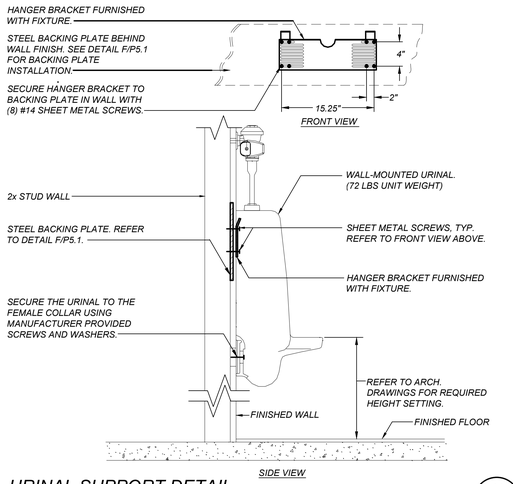
NOTE:
SIGN TO BE CONSPICUOUSLY LOCATED ON EXTERIOR WALL ABOVE BUILDING GAS SHUT-OFF VALVE AS INDICATED ON FLOOR PLAN.

GAS VALVE SIGN DETAIL

SCALE: NONE

P121

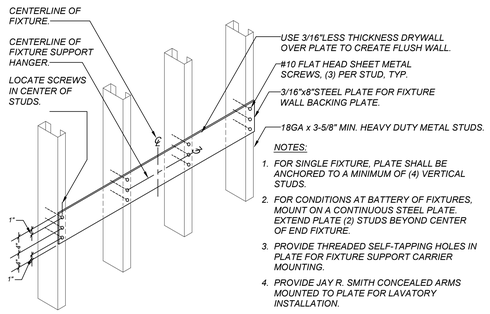
C / P-5.1



URINAL SUPPORT DETAIL

SCALE: NONE

K / P-5.1

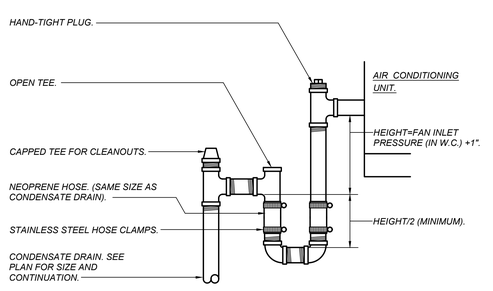


FIXTURE SUPPORT BACKING PLATE DETAIL

SCALE: NONE

METAL STUD WALL

F / P-5.1



CONDENSATE DRAIN CONNECTION DETAIL

SCALE: NONE

P020

D / P-5.1

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LICENSED ARCHITECT MICHAEL R. SCHICHTEL C-39165 02-28-27 RENEWAL DATE STATE OF CALIFORNIA

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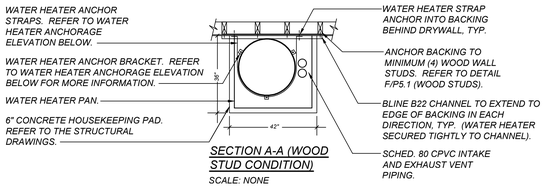
PLUMBING DETAILS

P5.1

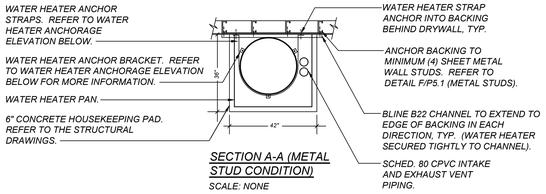
REGISTERED PROFESSIONAL ENGINEER NATAN W. CARLOS No. M34846 Exp. 6-30-26 MECHANICAL STATE OF CALIFORNIA

15 January 2025 10:42 AM p:\2023\23073 madera usd - madera hs stadium locker addition\a-drawings\s f\P5.1 - PLUMBING DETAILS.dwg gustavo



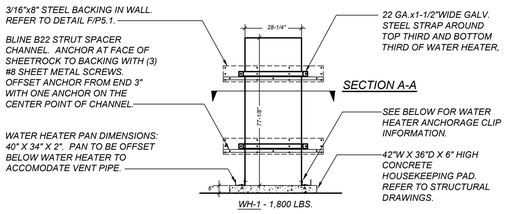
SECTION A-A (WOOD STUD CONDITION)

SCALE: NONE



SECTION A-A (METAL STUD CONDITION)

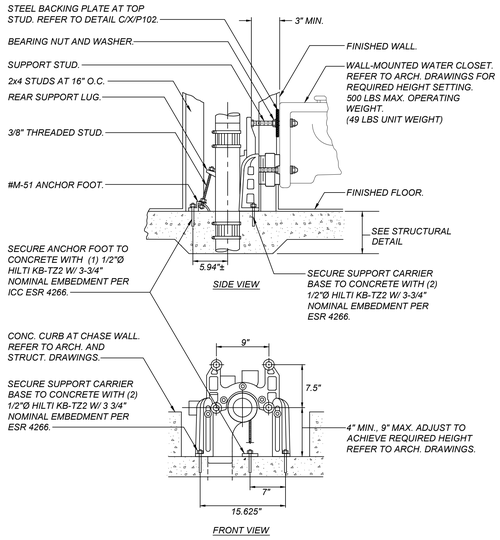
SCALE: NONE



SECTION A-A

WATER HEATER ANCHORAGE ELEV.

SCALE: NONE

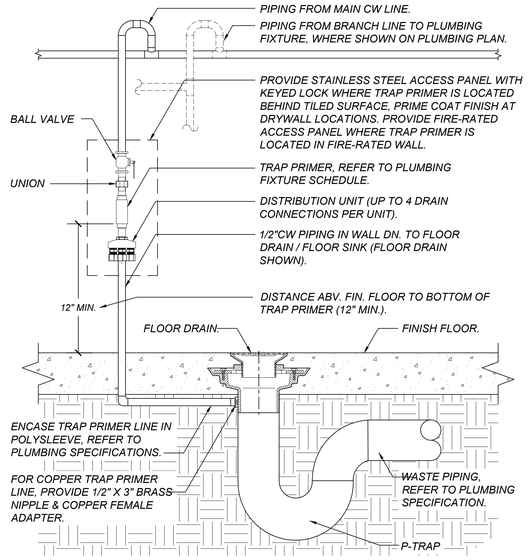


NOTE:
INSTALLATION DETAIL FOR JAY R. SMITH #410 CARRIER,. CONSULT MANUFACTURER'S SUBMITTAL SHEETS AND INSTALLATION INSTRUCTIONS FOR ALTERNATE CARRIERS. INSTALLATION DETAIL PROVIDED FOR ANCHORAGE REQUIREMENTS INTO SLAB.

SINGLE WATER CLOSET SUPPORT DETAIL

C P-5.2

SCALE: NONE

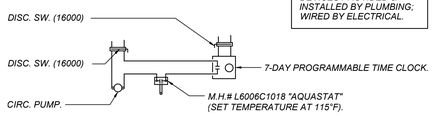


NOTE:
REFER TO MANUFACTURER'S INSTALLATION REQUIREMENTS FOR ELEVATION OF TRAP PRIMER VS. LENGTH OF RUN TO DRAINS. TRAP PRIMER ELEVATION TO BE INCREASED IN HEIGHT ABOVE FINISHED FLOOR FOR RUNS OVER 20'-0". REFER TO PLUMBING PLANS FOR SIZING.

TRAP PRIMER CONNECTION DETAIL

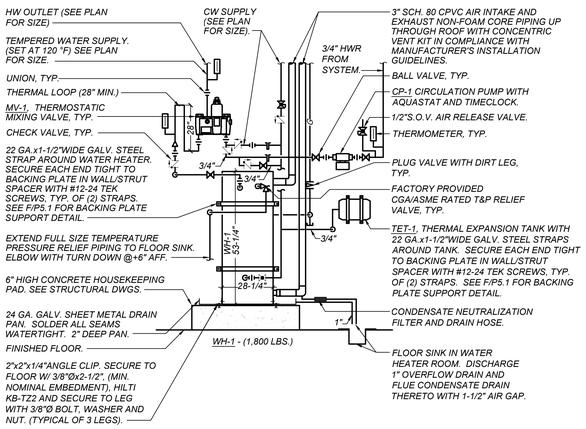
A P-5.2

SCALE: NONE



CONTROL WIRING DIAGRAM

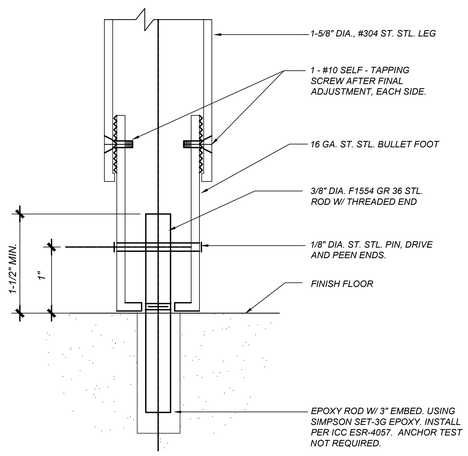
SCALE: NONE



GAS WATER HEATER DETAIL (WH-1)

E P-5.2

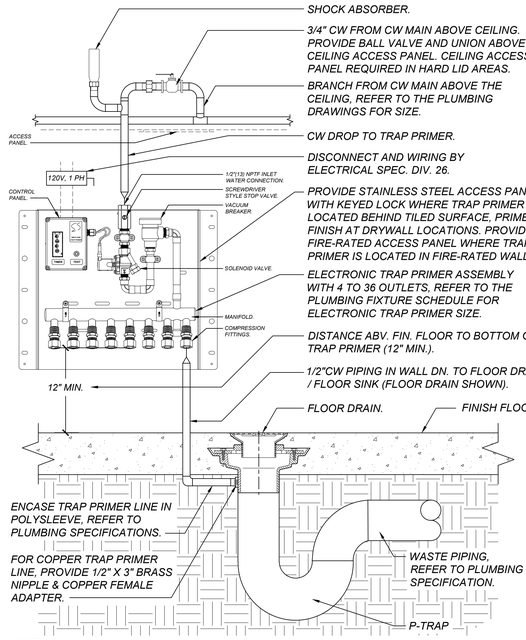
SCALE: NONE



BULLET FOOT INSTALLATION DETAIL

D P-5.2

SCALE: NONE



NOTE:
REFER TO MANUFACTURER'S INSTALLATION REQUIREMENTS FOR ELEVATION OF TRAP PRIMER VS. LENGTH OF RUN TO DRAINS. TRAP PRIMER ELEVATION TO BE INCREASED IN HEIGHT ABOVE FINISHED FLOOR FOR RUNS OVER 20'-0". REFER TO PLUMBING PLANS FOR SIZING.

ELECTRONIC TRAP PRIMER CONNECTION

B P-5.2

SCALE: NONE

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LICENSED ARCHITECT MICHAEL R. SCHOOLEY C 36165 02-28-27 RENEWAL DATE STATE OF CALIFORNIA

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PLUMBING DETAILS

P5.2

REGISTERED PROFESSIONAL ENGINEER BRIAN W. CALLOW No. M34846 Exp. 6-30-26 MECHANICAL STATE OF CALIFORNIA

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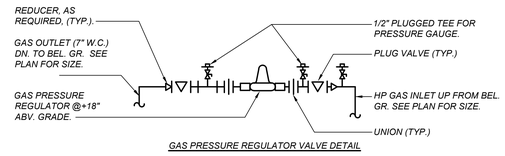
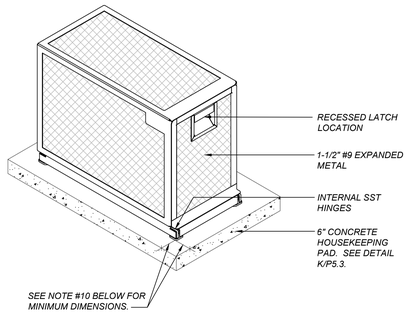
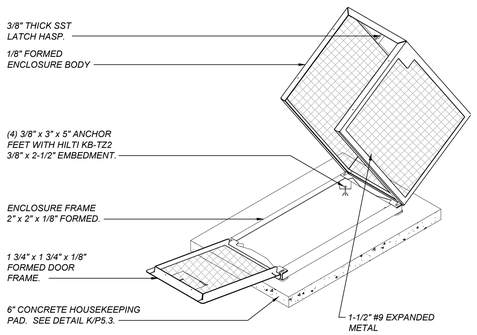
15 January 2025 10:42 AM p:\2023\23073 modera usd - modera hs stadium locker addition\4-drawings\5 PLYS.2 - PLUMBING DETAILS.dwg gyatovo



GAS PRESSURE REGULATOR VALVE DETAIL



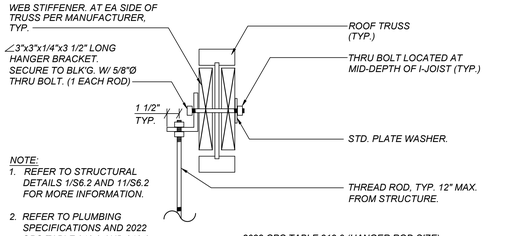


ALL MEASUREMENT STATED ARE OUTSIDE MEASUREMENT			
CAT. #	WIDTH	LENGTH	HEIGHT
PW/ E1A - (XS)	12"	24"	26"
PW/ E1A - (S)	14"	30"	24"
PW/ E1A - (M)	17"	40"	30"
PW/ E1A - (L)	20"	47"	36"

NOTES:
1. ENCLOSURE TYPE: E1A GAS REGULATING ENCLOSURE
2. BODY FRAME MATERIAL: 1/8" OR 10GA FORMED BODY
3. EXPANDED METAL SCREEN IS NO.9 W/ 1-1/2" WELDED EVERY 6"
4. DOOR TO HAVE SST INTERNAL HINGES.
5. (4) FOUNDATION ANCHOR PLATES 3"x5"x3/8" WITH 5/8" DIA HOLES.
6. ALL PARTS TO BE SAND BLASTED TO SSPC-5 W/ METAL BLAST, W/ A 3-4 MILS ANGULAR PROFILE
7. POWDER COATED HUNTER GREEN TO 2-3 MILS THICKNESS AFTER FABRICATION
8. ALL WELDING DONE PER AWS SPECIFICATIONS.
9. OPTIONAL RE-BAR EMBEDMENT FRAME.
10. THE HOUSEKEEPING PAD SHALL BE 4" LARGER THAN THE ENCLOSURE ON ALL SIDES FOR ANCHORAGE.
11. SIZE AS NECESSARY TO FIT REGULATOR AND PIPING.

GAS PRESSURE REGULATOR ENCLOSURE — J / P5.3

SCALE: NONE



NOTE:
1. REFER TO STRUCTURAL DETAILS 1/S6.2 AND 11/S6.2 FOR MORE INFORMATION.
2. REFER TO PLUMBING SPECIFICATIONS AND 2022 CPC TABLE 313.3 AND 313.6 FOR REQUIRED SUPPORT HANGER SIZE AND SPACING.

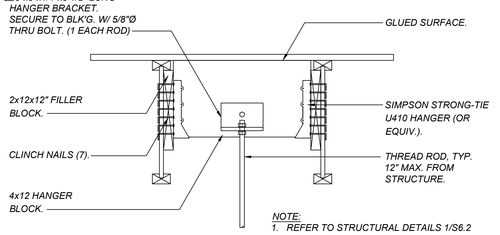
2022 CPC TABLE 313.6 (HANGER ROD SIZE)

PIPE & TUBE SIZE	ROD SIZE
1/2" - 3" (EXCEPT GAS)	3/8"

UPPER HANGER CONNECTION AT I-JOIST — E / P5.3

SCALE: NONE

MB024



2022 CPC TABLE 313.6 (HANGER ROD SIZE)

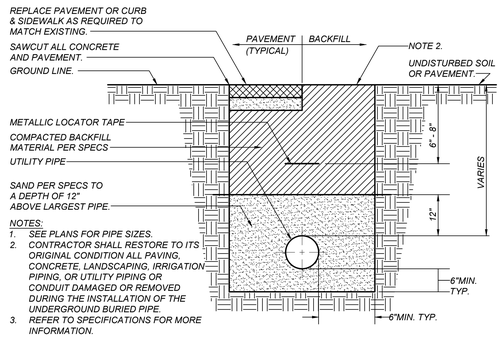
PIPE & TUBE SIZE	ROD SIZE
1/2" - 3" (EXCEPT GAS)	3/8"

NOTE:
1. REFER TO STRUCTURAL DETAILS 1/S6.2 AND 11/S6.2 FOR MORE INFORMATION.
2. REFER TO PLUMBING SPECIFICATIONS AND 2022 CPC TABLE 313.3 AND 316.3 FOR REQUIRED SUPPORT HANGER SIZE AND SPACING.

UPPER HANGER CONNECTION AT BLOCKING — F / P5.3

SCALE: NONE

MB023

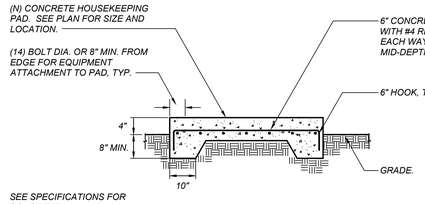


NOTES:
1. SEE PLANS FOR PIPE SIZES.
2. CONTRACTOR SHALL RESTORE TO ITS ORIGINAL CONDITION ALL PAVING, CONCRETE, LANDSCAPING, IRRIGATION PIPING, OR UTILITY PIPING OR CONDUIT DAMAGED OR REMOVED DURING THE INSTALLATION OF THE UNDERGROUND BURIED PIPE.
3. REFER TO SPECIFICATIONS FOR MORE INFORMATION.

TYPICAL UTILITY TRENCH DETAIL — G / P5.3

SCALE: NONE

P161

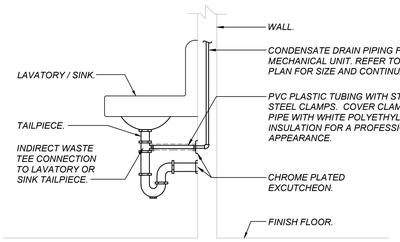


SEE SPECIFICATIONS FOR CONCRETE.

HOUSEKEEPING PAD DETAIL — K / P5.3

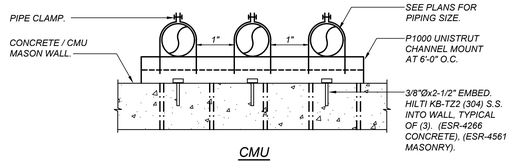
SCALE: NONE

P185

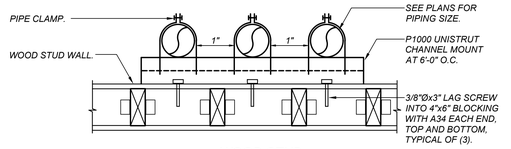


CONDENSATE TERMINATION TO TAILPIECE — H / P5.3

SCALE: NONE



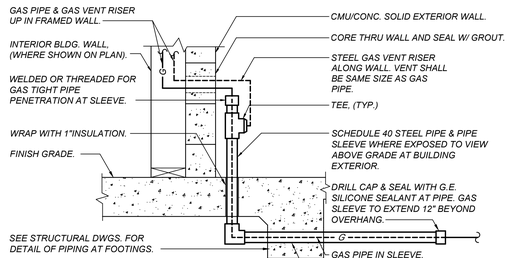
CMU



WOOD STUD

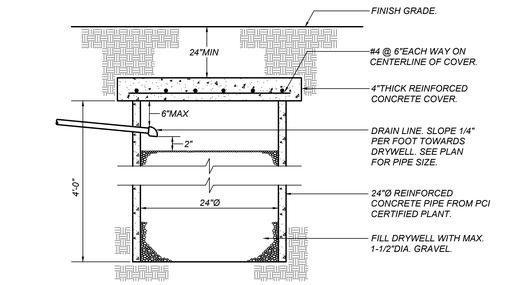
PIPE SUPPORT ON WALL DETAIL — A / P5.3

SCALE: NONE



GAS PIPE IN SLEEVE DETAIL — B / P5.3

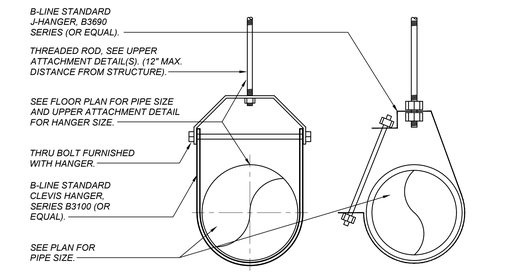
SCALE: NONE



DRYWELL DETAIL — C / P5.3

SCALE: NONE

P035



PIPE HANGER DETAIL — D / P5.3

SCALE: NONE

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 01/23/2025

PBK

ARCHITECT PBK Architects, Inc.

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MADERA HIGH SCHOOL FIELDHOUSE

200 SOUTH "L" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

MADERA UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL R. SCHICKER C 36165 02-28-27 RENEWAL DATE STATE OF CALIFORNIA

PROJECT NUMBER 20-51
DATE MM/DD/YYYY
DSA APPLICATION NO. 02 - 121624
FILE NO. 20-H3
PTN NO. 65243-153
DRAWN BY Author

REVISIONS

#	DESCRIPTION	DATE

CONSTRUCTION DOCUMENTS

PLUMBING DETAILS

P5.3

REGISTERED PROFESSIONAL ENGINEER RYAN W. CALL No. M34846 Exp. 6-30-26 MECHANICAL STATE OF CALIFORNIA

LAWRENCE ENGINEERING GROUP
4910 E. Clinton Way, Suite 101 (559) 431-0101
23073
Fresno, CA 93727 FAX (559) 431-1362

15 January 2025 10:42 AM p:\2023\23073 modera usd – modern hs stadium locker addition\4-drawings\5 PLANS – PLUMBING DETAILS.dwg gyulovo

LOW VOLTAGE GENERAL SCOPE:

1. THE CONTRACTOR SHALL PROVIDE A COMPLETE AND OPERATIONAL DATA AND VOICE COMMUNICATIONS LOCAL AREA NETWORK (LAN), INCLUDING MAIN AND INTERMEDIATE DATA FRAMES, 24-STRAND SINGLEMODE FIBER OPTIC CABLING FROM THE CAMPUS IDF TO TELECOM RM. 123 IDF, 12-STRAND SINGLEMODE FIBER OPTIC CABLING FROM THE TELECOM RM. 123 IDF TO THE IDF RM. 126 IDF, FIBER OPTIC TERMINATIONS TO LC CONNECTORS (VERIFY AND MAINTAIN POLARITY), COPPER CAT6A HORIZONTAL CABLING THROUGHOUT, LABELING, LADDER RACKING, CABLE MANAGEMENT, MANAGED POWER DISTRIBUTION UNITS (PDUs), TERMINATION OF ALL CABLES, PATCH PANELS WITH PATCH CABLES FOR EVERY PORT (INCLUDING PORTS IN A PATCH PANEL THAT ARE UNUSED), COMMUNICATIONS GROUND BUS BAR AND GROUND CONNECTION, GROUNDING OF ALL METALLIC FRAMES AND LADDER RACKING WITH PAINT REMOVED AT LUGS, UNINTERRUPTABLE POWER SUPPLIES WITH 30 MINUTES BACKUP TIME, DATA AND COMMUNICATION OUTLETS, WIRELESS ACCESS POINT OUTLETS, CAMERA OUTLETS, AND TESTING AND REPORTS FOR ALL INSTALLED FIBER AND COPPER CABLES AND OUTLETS. NETWORK ELECTRONICS SUCH AS GATEWAYS AND SWITCHES SHALL BE FURNISHED BY THE OWNER AND INSTALLED BY THE CONTRACTOR. DELIVER REPORTS TO OWNER.

2. THE CONTRACTOR SHALL PROVIDE A COMPLETE AND OPERATIONAL IP PUBLIC ADDRESS SYSTEM, INCLUDING HEAD END SOFTWARE, INTERFACES WITH A/V SYSTEMS TO OVERRIDE THOSE SYSTEMS WHEN ANNOUNCEMENTS ARE MADE, INTERFACES WITH THE VOIP SYSTEM TO ALLOW ANNOUNCEMENTS BY USE OF HANDSETS, INTERFACE WITH FIRE ALARM SYSTEM TO DISPLAY A FIRE ALERT WHEN THE FIRE ALARM SYSTEM IS ACTIVATED, IP INDOOR AND OUTDOOR SPEAKERS, IP SPEAKER/CLOCKS, IP LARGE FORMAT DISPLAYS, LICENSES, SYSTEM PROGRAMMING, OWNER COORDINATION DURING COMMISSIONING, AND TESTING AND REPORTS. NOTE A HYBRID IP-ANALOG SYSTEM IS NOT AN ACCEPTABLE SUBSTITUTION FOR THIS SYSTEM.

3. THE CONTRACTOR SHALL PROVIDE A COMPLETE AND OPERATIONAL, AUTOMATIC, FIRE ALARM SYSTEM WITH EMERGENCY VOICE/ALARM COMMUNICATIONS, TO INCLUDE CONTROL PANELS, ANNUNCIATORS, OPERATING CONSOLES, POWER SUPPLIES, AMPLIFIERS, PULL STATIONS, SMOKE AND HEAT DETECTION DEVICES, ADDRESSABLE INPUT AND OUTPUT MODULES, SPEAKER STROBES, SPEAKERS, 6-STRAND SINGLE MODE FIBER OPTIC CABLING LINK TO EXISTING CAMPUS FIRE ALARM SYSTEM, LOCAL COPPER CABLING, INTERFACE WITH IP PA SYSTEM DO DISPLAY "FIRE ALARM" ON THE CLOCK DISPLAY, LABELING, PROGRAMMING, TESTING, AND REPORTS. DELIVER REPORTS TO OWNER FOR REVIEW.

LOW VOLTAGE GENERAL NOTES:

1. THE ELECTRICAL CONTRACTOR SHALL CONTACT EACH SIGNAL SYSTEM VENDOR AND THOROUGHLY INVESTIGATE THE EXPANDABILITY OF ALL EXISTING SYSTEMS. THE CONTRACTOR'S BID SHALL INCLUDE ALL REQUIRED COMPONENTS, PROGRAMMING, CABLING, UPGRADES, ETC. TO INTEGRATE THE WORK SHOWN IN DIV. 26 DRAWINGS AND PROVIDE FOR FULLY FUNCTIONAL LOW VOLTAGE SYSTEMS.

2. EXISTING PULL BOX LOCATIONS ARE DIAGRAMMATIC. FIELD VERIFY EXACT LOCATIONS. ADD CONDUITS TO EXISTING PULL BOXES WHERE INDICATED. REPAIR ANY DAMAGE INCURRED.

3. TERMINAL CABINETS TO BE WIEGMANN RHC SERIES, OR EQUAL, W/ MOUNTING PANELS / PLYWOOD BACK BOARD. INSTALL ALL REQUIRED TERMINAL STRIPS, PUNCH DOWN BLOCKS, ETC.

4. INSTALL NYLON PULL LINE WITH ALL CABLE RUNS IN UNDERGROUND CONDUITS.

5. INSTALL CABLING IN J-HOOKS. SEE DETAIL E7/X/E104.

GENERAL ELECTRICAL NOTES:

1. ALL WORK SHALL MEET THE LATEST ADOPTED ADDITIONS OF THE CALIFORNIA CODE OF REGULATIONS, TITLE 24 AND ALL OTHER APPLICABLE REGULATIONS, WHICH INCLUDE:

CALIFORNIA BUILDING CODE	2022
CALIFORNIA ELECTRICAL CODE	2022
NON RESIDENTIAL CEC ENERGY STANDARDS	2022

2. NOTHING IN THE PLANS OR SPECIFICATIONS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

3. IT IS THE INTENTION OF THESE PLANS AND SPECIFICATIONS TO COVER EVERYTHING REQUIRED TO PROVIDE FOR COMPLETE AND OPERATIVE SYSTEMS. THE CONTRACTOR IS TO FURNISH LABOR, MATERIAL, TRANSPORTATION, EQUIPMENT, MISCELLANEOUS SERVICES, ETC. REQUIRED TO ACCOMPLISH THIS RESULT, ANYTHING WHICH MAY BE REASONABLY CONSTRUED AS A NECESSARY PART OF THE INSTALLATION IS TO BE INCLUDED, WHETHER OR NOT SPECIFICALLY SHOWN OR MENTIONED.

4. THE CONTRACTOR SHALL EXAMINE THE SITE AND EXISTING VISIBLE CONDITIONS AND MAKE ALLOWANCES IN THE BID FOR ANY CONDITIONS NOT SHOWN ON THE ELECTRICAL DOCUMENTS.

5. THE PLANS AND SPECIFICATIONS ARE INTENDED TO BE USED AS CONSTRUCTION GUIDELINES AND ARE NOT THE TOTAL INSTRUMENT OF CONTRACT DOCUMENTS. IT IS NOT THE INTENTION OF ANY CONSTRUCTION PLANS TO DIVIDE WORK AMONG DIFFERENT TRADES. VERIFY THE SCOPE OF WORK WITH THE ARCHITECT AND THE GENERAL CONTRACTOR.

6. ELECTRICAL ROUTING IS DIAGRAMMATIC ONLY. ACTUAL ROUTING & PHYSICAL CONDITIONS MAY VARY. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE ACTUAL ROUTING, CONNECTIONS, & PROVISION OF ALL APPURTENANCES NECESSARY FOR A COMPLETE & OPERATING SYSTEM.

7. ELECTRICAL EQUIPMENT SHALL HAVE AN APPROVED TESTING LABORATORY LABEL ATTACHED (UL, CSA ETC.) PER CEC 110.2.

8. PROVIDE LABELING AND DIRECTORIES FOR ALL SWITCHBOARDS AND PANELBOARDS PER CEC 408.4.

9. ELECTRICAL EQUIPMENT SHALL HAVE A SHORT CIRCUIT CURRENT RATING CAPABLE OF WITHSTANDING THE AVAILABLE SHORT CIRCUIT CURRENT PER CEC 110.9.

10. PROVIDE MINIMUM 30" WIDE x 78" HIGH x 36" DEEP [42" DEEP] WORK CLEARANCES IN FRONT OF PANELS, SERVICE OR EQUIPMENT RATED AT 120/208V 3Ø 4W [277/480V 3Ø 4W] PER CEC 110.26.

11. ELECTRICAL RECEPTACLE OUTLETS ON BRANCH CIRCUIT OF 30 AMPERES OR LESS AND COMMUNICATION SYSTEM RECEPTACLES SHALL BE MOUNTED BETWEEN 15" AFF AND 48" AFF AND SHALL COMPLY WITH CBC SECTION 11B-308. THE LOW REACH SHALL BE MEASURED TO THE BOTTOM OF THE OUTLET BOX AND THE HIGH REACH SHALL BE MEASURED TO THE TOP OF THE OUTLET BOX. IF THE REACH IS OBSTRUCTED (E.G. BY CASEWORK, COUNTERS, ETC.), RECEPTACLES SHALL BE LOCATED WITHIN THE REACH RANGES SPECIFIED IN CBC 11B-308.2.2 AND 11B-308.3.2.

12. CONTROLS AND SWITCHES INTENDED TO BE USED BY THE OCCUPANT OF A ROOM OR AREA TO CONTROL LIGHTING AND RECEPTACLE OUTLETS, APPLIANCES, OR COOLING, HEATING AND VENTILATING EQUIPMENT SHALL BE MOUNTED BETWEEN 15" AFF AND 48" AFF AND SHALL COMPLY WITH CBC SECTION 11B-308. THE LOW REACH SHALL BE MEASURED TO THE BOTTOM OF THE OUTLET BOX AND THE HIGH REACH SHALL BE MEASURED TO THE TOP OF THE OUTLET BOX. IF THE REACH IS OBSTRUCTED (E.G. BY CASEWORK, COUNTERS, ETC.), SWITCHES AND CONTROLS SHALL BE LOCATED WITHIN THE REACH RANGES SPECIFIED IN CBC 11B-308.2.2 AND 11B-308.3.2.

13. ALL WALL AND SURFACE MOUNTED FIXTURES PROTRUDING IN THE PATH OF TRAVEL (POT) OR COMMON PEDESTRIAN WAYS SHALL COMPLY WITH CBC 11B-307.2, OR SHALL BE MOUNTED LESS THAN 27" AFF OR GREATER THAN 80" AFF, OR SHALL BE PROVIDED WITH A BARRIER CONFORMING TO CBC 11B-307.4.

14. EMERGENCY EGRESS LIGHTING SHALL PROVIDE A MINIMUM LUMINANCE OF 1 FOOTCANDLE AT THE WALKING SURFACE FOR A MINIMUM OF 90 MINUTES.

15. FIRE ALARM EQUIPMENT SHALL BE SERVED BY DEDICATED FIRE ALARM BRANCH CIRCUITS PER NFPA 72 10.6.5.1.2. THE CIRCUIT NUMBER SHALL BE PERMANENTLY IDENTIFIED AT THE FIRE ALARM EQUIPMENT PER NFPA 10.6.5.2.1. THE CIRCUIT BREAKER SHALL BE EQUIPPED WITH RED HANDLE AND LOCK-ON DEVICE, AND PERMANENTLY IDENTIFIED AS "FIRE ALARM CIRCUIT" PER NFPA 72 10.6.5.2.2, 10.6.5.2.3, 10.6.5.2.4, AND 10.6.5.4.

16. WIRING FOR 120/208V AND 277/480V SYSTEMS SHALL BE MIN. #12 AWG THWN-2 COPPER. ALL WIRING TO BE IN RACEWAYS. ALL RACEWAYS TO BE CONCEALED WITHIN WALLS & CEILINGS. WHERE EXISTING WALLS HAVE PLYWOOD TO REMAIN, MC CABLE & CUT-IN BOXES MAY BE USED FOR VERTICAL WIRING TO AVOID CUTTING WALLS FOR HORIZONTAL WIRING. FLEXIBLE CONDUIT FOR VERTICAL DATA CABLING RUNS MAY BE USED.

17. FEEDERS SIZE #4 AND LARGER SHALL BE MEGGER TESTED. TEST RESULTS SHALL BE SUBMITTED TO THE ENGINEER.

18. COLORS/FINISHES/MATERIALS FOR ALL ELECTRICAL DEVICES, PLATES, LIGHT FIXTURES, ETC. SHALL BE CHOSEN BY THE ARCHITECT.

19. CONTRACTOR SHALL EXTEND ALL SIGNAL AND FIRE ALARM SYSTEMS AS REQUIRED. MODIFY HEAD-IN EQUIPMENT TO ACCOMMODATE NEW DEVICES AS REQUIRED. VERIFY THE CONDITION AND EXPANDABILITY OF ALL HEAD-IN EQUIPMENT PRIOR TO BID AND MODIFY ACCORDINGLY.

20. CALL USA UNDERGROUND ALERT AND VERIFY WITH DISTRICT THE DESIRED ROUTING AND LOCATIONS OF UNDERGROUND CONDUITS AND STRUCTURES PRIOR TO TRENCHING.

21. EXISTING EQUIPMENT TO BE REMOVED AND/OR REPLACED SHALL BE DELIVERED TO THE DISTRICT MAINTENANCE DEPARTMENT OR DISPOSED OF, AT THE DISCRETION OF THE DISTRICT.

22. ALL CONDUITS UNDER CONCRETE OR ASPHALT WILL HAVE 24" MINIMUM COVER OF ROCK FREE NATIVE SOIL, METALLIC WARNING TAPE AT 12", AND NO ENCASEMENT REQUIRED. ALL CONDUITS THAT HAVE CONDUCTORS WITH A POTENTIAL OF 250 VOLT TO GROUND OR GREATER, THAT ARE NOT UNDER ASPHALT AND/OR CONCRETE SHALL REQUIRE 1,500 PSI CONCRETE ENCASEMENT, METALLIC WARNING TAPE AT 12", AND A MINIMUM COVER FROM TOP OF ENCASEMENT OF 24". ALL CONDUITS THAT HAVE CONDUCTORS WITH A POTENTIAL OF LESS THAN 250 VOLTS TO GROUND, THAT ARE NOT UNDER ASPHALT AND/OR CONCRETE WILL HAVE 30" MINIMUM COVER OF NATIVE SOIL, METALLIC WARNING TAPE AT 12" AND NO ENCASEMENT REQUIRED.

23. INSTALL GALVANIZED RIGID STEEL RISERS & ELBOWS WHERE THEY OCCUR. WRAP GALVANIZED RIGID STEEL BELOW GRADE. PVC SHALL NOT BE INSTALLED ABOVE GRADE.

24. CONDUIT INSTALLED ABOVE GRADE SHALL BE MIN. 3/4" TRADE SIZE. CONDUIT BELOW GRADE SHALL BE MIN. 1" TRADE SIZE.

25. PROVIDE (4) 1" CONDUIT STUBS FROM NEW ELECTRICAL PANEL TO ACCESSIBLE ATTIC SPACE FOR FUTURE USE.

26. CIRCUIT BREAKERS SERVING FIRE ALARM EQUIPMENT SHALL HAVE A RED HANDLE AND LOCK-ON DEVICE.

27. HOLES ARE NOT ALLOWED THROUGH TOP PLATES OF BEARING WALLS AND SHEAR WALLS.

28. INCLUDE FIRE STOP SYSTEMS REQUIRED FOR ALL WORK AFFECTED BY FIRE RATED ASSEMBLIES.

29. INCLUDE ALL WORK REQUIRED TO INVESTIGATE, DEMOLISH, & RECONNECT EXISTING ITEMS.

LIGHTING GENERAL NOTES:

1. THE CONTRACTOR SHALL PROVIDE A COMPLETE SYSTEM OF LIGHT FIXTURES AND CONTROLS THAT COMPLY WITH THE REQUIREMENTS OF CALIFORNIA ENERGY COMMISSION TITLE 24.

2. PROVIDE A COMPLETE AND OPERATIONAL CONTROLS PACKAGE IN LIGHTING AREAS. PROVIDE WALL SWITCHES, SENSORS, POWER PACKS, MISCELLANEOUS APPURTENANCES, FACTORY CABLING, AND FACTORY COMMISSIONING.

3. AN EQUAL SUBSTITUTE PACKAGE BY ANOTHER MANUFACTURER MAY BE ACCEPTABLE. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ALL REQUIRED COMPONENTS, ADDITIONAL WIRING FOR DIMMING OPERATION OF LIGHT FIXTURES, AND ANYTHING ELSE NEEDED FOR A COMPLETE AND OPERATIONAL SYSTEM. SUBMIT SUBSTITUTE PACKAGE, INCLUDING SHOP DRAWINGS, TO ENGINEER FOR REVIEW AND APPROVAL. FAILURE TO COMPLY WITH THIS REQUIREMENT MAY RESULT IN REJECTION OF SUBSTITUTE COMPONENTS.

4. THE PLANS GENERALLY SHOW THE LOCATION OF SWITCHES, SENSORS, CONTROL MODULES ETC. ACTUAL LOCATIONS AND INSTALLATION REQUIREMENTS SHALL BE DETERMINED BY THE MANUFACTURER. SUBMIT SHOP DRAWINGS TO ENGINEER FOR APPROVAL.

5. PROVIDE FACTORY COMMISSIONING, TO INCLUDE COMPLETE CONTROL WIRING/ CALIBRATION/ PROGRAMMING OF LIGHTING CONTROL COMPONENTS.

6. LIGHTING SYSTEM ACCEPTANCE TESTING IS REQUIRED AS PER TITLE 24. THE CONTRACTOR SHALL INCLUDE ACCEPTANCE TESTING COSTS IN BID. THE CONTRACTOR IS RESPONSIBLE TO MAKE ANY ADJUSTMENTS NECESSARY TO ACHIEVE ACCEPTANCE.

7. LIGHTING FIXTURE COLORS, WHEN NOT SPECIFIED, SHALL BE SELECTED BY THE ARCHITECT'S OFFICE. DO NOT SUBMIT COLORS THAT HAVE NOT BEEN APPROVED BY THE ARCHITECT.

8. THE OUTDOOR LIGHTING SYSTEMS SHALL COMPLY WITH ALL OF THE FOLLOWING:
   A. THE MINIMUM REQUIREMENTS IN CALIFORNIA ENERGY CODE FOR LIGHTING ZONE 3.
   B. BACKLIGHT, UPLIGHT, AND GLARE (BUG) RATINGS AS DEFINED IN IES TM-15-11.
   C. ALLOWABLE BUG RATINGS NOT EXCEEDING THOSE SHOWN ON TABLE 5.106.8.
   (CAL GREEN 5.106.8)

ELEC. EQUIPMENT ANCHORAGE NOTES:

ALL 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 2022 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 ELECTRICAL UTILITY SERVICE. "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 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 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 SUPPORTS 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 ELECTRICAL 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.

ELEC. DISTRIBUTION SYSTEM BRACING NOTES:

THE ELECTRICAL DISTRIBUTION SYSTEM 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 2022 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 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.

OPTION 1: THE ELECTRICAL DISTRIBUTION SYSTEM IS DETAILED ON THE APPROVED DRAWINGS WITH SPECIFIC NOTES AND DETAILS.

ELECTRICAL SYMBOLS:

- LIGHT FIXTURE, CEILING OR WALL MOUNTED
- LIGHT FIXTURE EQUIPPED WITH EMERGENCY BATTERY BACKUP
- LIGHT FIXTURE, RECESSED CEILING, SURFACE CEILING, OR WALL MOUNTED
- LIGHT FIXTURE WITH EMERGENCY BATTERY BACKUP
- POLE LIGHT
- EMERGENCY EXIT LIGHT
- EMERGENCY EXIT LIGHT WITH EMERGENCY BATTERY BACKUP
- SINGLE POLE SWITCH, WALL MOUNTED +48" TO TOP OF BOX, UNLESS OTHERWISE NOTED
- INV — INVERTER
- WALL MOUNTED DUAL TECH OCCUPANCY SENSOR SWITCH, 0-10V DIMMING, AT +48' AFF TO TOP OF BOX
- DIGITAL DIMMER SWITCH, AT +48' AFF TO TOP OF BOX
- DIGITAL 'FRESCO GRAPHICAL TOUCHSCREEN DIMMING CONTROLLER AT +48 AFF TO TOP OF BOX
- DIGITAL OCCUPANCY SENSOR W/ PHOTOSENSOR DUAL-TECHNOLOGY CEILING MOUNT
- GW — DIGITAL GATEWAY
- BR — DIGITAL BRIDGE
- PP — DIMMING POWER PACK VERIFY 0-10V, 2- OR 3-WIRE MLV, OR ELV BY FIXTURE
- PP E — DIMMING POWER PACK W/ EMERGENCY CONTROL VERIFY 0-10V, 2- OR 3-WIRE MLV, OR ELV BY FIXTURE
- RR — RECEPTACLE RELAY CONTROLLED BY OCCUPANCY SENSOR
- DUPLEX RECEPTACLE, WALL MOUNTED +15" TO BOTTOM OF BOX, UNLESS OTHERWISE NOTED
- E — RED DUPLEX RECEPTACLE ON STANDBY POWER, WALL MOUNTED +15" TO BOTTOM OF BOX, UNLESS OTHERWISE
- PTV — DUPLEX RECEPTACLE, CEILING MOUNTED AT PROJECTION TELEVISION
- FOUR-PLEX RECEPTACLE, WALL MOUNTED +15" TO BOTTOM OF BOX, UNLESS OTHERWISE NOTED
- WEATHERPROOF, G.F.I. PROTECTED DUPLEX RECEPTACLE, WALL MOUNTED +15" TO BOTTOM OF BOX, UNLESS OTHERWISE NOTED
- G.F.I. PROTECTED DUPLEX RECEPTACLE, WALL MOUNTED +15" TO BOTTOM OF BOX, UNLESS OTHERWISE NOTED
- DUPLEX RECEPTACLE, HALF UN-SWITCHED & HALF LIGHTING CONTROLLER SWITCHED, WALL MOUNTED +15" TO BOTTOM OF BOX, UNLESS OTHERWISE NOTED. EATON #WR-20
- FOUR-PLEX RECEPTACLE, HALF UN-SWITCHED & HALF LIGHTING CONTROLLER SWITCHED, WALL MOUNTED +15" TO BOTTOM OF BOX, UNLESS OTHERWISE NOTED. EATON #(2)WR-20
- FLOOR POCKET OR BOX AS NOTED
- SPECIAL RECEPTACLE AS NOTED
- DM — FIRE/SMOKE DAMPER MOTOR
- JUNCTION BOX
- MOTOR CONNECTION AND FUSIBLE DISCONNECT SWITCH, FUSE AS REQUIRED, NEMA 3R FOR OUTDOOR
- MOTOR CONNECTION, STARTER W/ OVERLOADS, AND FUSIBLE DISCONNECT SWITCH, FUSE AS REQUIRED, NEMA 3R FOR OUTDOOR
- POWER DISTRIBUTION BOARD OR WIRE GUTTER AS NOTED
- T — TRANSFORMER
- TERMINAL CABINET OR CONTROL PANEL AS NOTED
- EXISTING CONDUIT/WIRING TO BE DEMOLISHED
- EXISTING CONDUIT/WIRING
- LV — LOW VOLTAGE LIGHTING CONTROL CABLING
- WIRES IN CONDUIT, CONCEALED IN OR UNDER FLOOR
- WIRES IN CONDUIT, CONCEALED IN WALL OR CEILING
- A-2 — HOMERUN OF CONDUIT AND WIRING, CIRCUIT NO. 2 TO PANEL 'A'
- #12 — CROSS HATCHES INDICATE NUMBER OF #12 AWG. CONDUCTORS IN CONDUIT, WHEN MORE THAN TWO. WIRE SIZE INDICATED ON PLANS WHEN OTHER #12 AWG. PROVIDE GROUND PER CEC 250. (LARGE HATCHES ARE NEUTRAL CONDUCTORS, SMALL HATCHES ARE HOT OR SWITCH-LEG CONDUCTORS, CURVED HATCHES ARE 0-10V PURPLE & GREY CONDUCTORS)
- SURFACE / FLUSH — PANELBOARD
- S WP — PA SPEAKER, WP HORN & ENCLOSURE: ATLAS SOUND #IP-HVP SPEAKER AMD #IP-FEST-IH (FLUSH MOUNT) OR #IP-SEST-IH (SURFACE MOUNT) ENCLOSURE WITH CAT6 CABLE TO IDF
- CLOCK: ATLAS SOUND #IP-DM CLOCK AND #IP-FEC-DM (FLUSH MOUNT) OR #IP-SEC-DM (SURFACE MOUNT) ENCLOSURE WITH CAT6 CABLE TO IDF
- S — FLUSH PA WALL SPEAKER: ATLAS SOUND #IP-SM SPEAKER AND #IP-FEST-SD (FLUSH MOUNT) OR #IP-SEA-SD (SURFACE MOUNT) ENCLOSURE WITH CAT6 CABLE TO IDF
- S — FLUSH PA CEILING SPEAKER: ATLAS SOUND #IP-SM SPEAKER AND #IP-STBE (FLUSH MOUNT) OR #IP-SEA-SD (SURFACE MOUNT) ENCLOSURE WITH CAT6 CABLE TO IDF
- ATLAS SOUND #IP-SDM SPEAKER/CLOCK AND #IP-FEST-SD (FLUSH MOUNT) OR #IP-SEST-IH (SURFACE MOUNT) ENCLOSURE WITH CAT6 CABLE TO IDK
- IP CAMERA OUTLET (SAME AS SINGLE DATA OUTLET)
- SINGLE CAT6 DATA OUTLET: PROVIDE 4-11/15" BOX WITH ONE GANG RING FLUSH IN WALL AT +15" TO BOTTOM OF BOX, (UNLESS NOTED) 1-1/4"C TO CEILING SPACE & (1) CAT6 CABLE TO IDF
- 2 — COMBO DATA/(2) CAT6 JACK OUTLET: PROVIDE 4-11/15" BOX WITH ONE GANG RING FLUSH IN WALL AT +15" TO BOTTOM OF BOX, (UNLESS NOTED) 1-1/4"C TO CEILING SPACE & (2) CAT6 CABLES TO IDF
- SINGLE TEL. CAT6 OUTLET: PROVIDE 4-11/15" BOX WITH ONE GANG RING FLUSH IN WALL AT +15" TO BOTTOM OF BOX, (UNLESS NOTED) 1-1/4"C TO CEILING SPACE & (1) CAT6 CABLE TO IDF
- W — SINGLE WALL TELEPHONE CAT6 OUTLET: PROVIDE 4-11/16" BOX WITH ONE GANG RING FLUSH IN WALL AT +48" TO BOTTOM OF BOX, 1-1/4"C TO CEILING SPACE & (1) CAT6 CABLE TO IDF
- WIRELESS ACCESS POINT, DUAL CAT6A DATA OUTLET: PROVIDE 2 PORT SURFACE JACK IN CEILING SPACE ON SUPPORT WIRE, (2) CAT-6A CABLES TO IDF. MOUNT PER DETAIL E13/X/104.
- WALL MOUNT DATA/TELEPHONE OUTLET AT +18" AFF, U.O.N. (1) DATA JACK AND (1) TELEPHONE JACK U.O.N.
- TV — WALL TV OUTLET: PROVIDE 3-GANG RING FLUSH IN WALL WITH 2"C TO CEILING SPACE. (UNLESS NOTED OTHERWISE)
- TS — TEACHER'S STATION OUTLET: PROVIDE 1-GANG RING WITH 2"C TO CEILING SPACE.
- CP — TEACHERS CONTROL STATION
- SP — CLASSROOM AV CEILING SPEAKER
- SS — GYM SOUND SYSTEM SPEAKER
- (E) — EXISTING
- (N) — NEW
- W.P. — WEATHERPROOF
- U.O.N. — UNLESS OTHERWISE NOTED

REGISTERED PROFESSIONAL ENGINEER — R. J. HARDIN — No. 9125 — ELECTRICAL — STATE OF CALIFORNIA

Hardin-Davidson Engineering
356 Pollasky Ave, Suite 200
Clovis, CA 93612
559.323.4995 tel
559.323.4928 fax

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 01/23/2025

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ARCHITECT PBK Architects, Inc.
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7790 North Palm Avenue
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MADERA HIGH SCHOOL FIELDHOUSE

200 SOUTH "L" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

MADERA UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT — MICHAEL R. SCHOEN — C 36165 — 02-28-27 — STATE OF CALIFORNIA

PROJECT NUMBER	20-51
DATE	08/22/2023
DSA APPLICATION NO.	02 - 121624
FILE NO.	20-H3
PTN NO.	65243-153
DRAWN BY	HDE

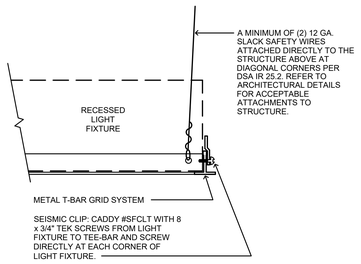
REVISIONS

#	DESCRIPTION	DATE

ELECTRICAL GENERAL NOTES & SYMBOLS

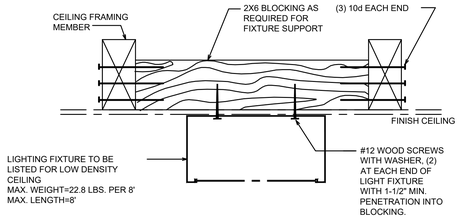
EX0.1

HEAVY DUTY GRID SYSTEM			
LIGHT FIXTURE DIMENSION	WEIGHT	NO. OF HANGER WIRES	TYPE
<= 24" x 48"	<= 56 LBS	2	SLACK
> 24" x 48"	> 56 LBS	4	TAUT



L18 T-BAR LAY-IN LIGHT FIXTURE MOUNTING DETAIL

SCALE: NO SCALE



I18 TYPICAL SURFACE MOUNT LIGHT FIXTURE MOUNTING DETAIL

SCALE: NO SCALE

TYPE OF SPACE	MANUAL ON/OFF/OVERRIDE	DIMMING SWITCH	AUTOMATIC DAYLIGHT DIMMING W/MEN AVAILABLE	CONTINUOUS DAYLIGHT DIMMING	OCCUPANCY SENSOR ON TO 70%	OCCUPANCY SENSOR REDUCE TO 50% AFTER 10 MIN.	OCCUPANCY SENSOR OFF AFTER 20 MIN	GATEWAY OPEN HOURS SCHEDULE ON	GATEWAY CUSTODIAL HOLIDAY HOURS SCHEDULE OFF	GATEWAY CLASSROOM HOLIDAY HOURS SCHEDULE OFF	COLOR TOUCHSCREEN WITH AT LEAST 8 SCENES	REMOTE ON/OFF CONTROL OR KEY SWITCH	CONTROLLED POWER RECEPTACLES	DEMAND RESPONSE CAPABLE	ASTRONOMIC TIMECLOCK ON/OFF	ASTRONOMIC TIMECLOCK DIMMING	ASTRONOMIC TIMECLOCK X40 RELAYS
ENTRY / LOBBY	X	X	X	X		X		X	X	X	X		X				
CORRIDOR	X		X	X		X		X	X	X							
OFFICE	X	X	X	X		X		X					X				
CLASSROOM	X	X	X			X		X									
CONFERENCE ROOM	X	X	X			X		X					X				
MULTI-PURPOSE	X	X	X			X		X				X					
GYMNASIUM	X	X	X			X		X				X					
CAFETERIA	X	X	X			X		X				X					
KITCHEN	X	X	X			X		X									
KITCHENETTES IN OFFICES	X	X	X			X		X									
COPY ROOMS	X	X	X			X		X					X				
LARGE RESTROOM				X		X	X					X					
STAIRWELLS				X	X		X	X									
STORAGE <100 S.F.	X						X										
ELECTRICAL ROOM	X																
OTHER	X	X	X		X		X										
BUILDING >10,000 S.F.														X			
BUILDING EXTERIOR															X	X	X
PEDESTRIAN WALKS															X		
PARKING LOT															X		X

I13 LIGHTING CONTROL MATRIX

SCALE: NO SCALE

LIGHTING FIXTURE SCHEDULE

TYPE	MFG'R	MODEL	LAMPS	WATTS	VOLTS	MOUNTING	WEIGHT (LB)	DETAIL	NOTES
A	LITHONIA	2BLT4 30L ADP EZ1 LP835 NLTAIR2 RIO	LED	22.5	UNV	TROFFER	18.2	L18/EX1.1	
AE	LITHONIA	2BLT4 30L ADP EZ1 LP835 NLTAIR2 RIO E10WLCP	LED	22.5	UNV	TROFFER	20.7	L18/EX1.1	W/ BATTERY BACKUP
AS	LITHONIA	2BLT4 30L ADP EZ1 LP835 NLTAIR2 RES7	LED	22.5	UNV	TROFFER	18.2	L18/EX1.1	W/ OCCUPANCY SENSOR
BA20	PRUDENTIAL LTG	BPRO5-LIN-FLSH-LED35-HO-LO-R20'-XXX-BTW-SCW-ADC-SC-UNV-CA96-X3-DM01	LED	286.0	UNV	SUSPENDED @14' A.F.F.	70	A18/EX1.1	
BA36E	PRUDENTIAL LTG	BPRO5-LIN-FLSH-LED35-HO-LO-R36'-XXX-BTW-SCW-ADC-SC-UNV-CA96-X3-DM01-2EMHE	LED	800.8	UNV	SUSPENDED @14' A.F.F.	206	A18/EX1.1	W/ BATTERY BACKUP
BB8	PRUDENTIAL LTG	BPRO5-LIN-FLSH-LED35-MO-LO-8'-XXX-BTW-SCW-ADC-SC-UNV-CA96-X3-DM01	LED	75.2	UNV	SUSPENDED @14' A.F.F.	28	A18/EX1.1	
BB24E	PRUDENTIAL LTG	BPRO5-LIN-FLSH-LED35-MO-LO-R24'-XXX-BTW-SCW-ADC-SC-UNV-CA96-X3-DM01-2EMHE	LED	225.6	UNV	SUSPENDED @14' A.F.F.	89	A18/EX1.1	W/ BATTERY BACKUP
BC24	PRUDENTIAL LTG	BPRO5-LIN-FLSH-LED35-LO-LO-R24'-XXX-BTW-SCW-ADC-SC-UNV-CA96-X3-DM01	LED	182.4	UNV	SUSPENDED @14' A.F.F.	84	A18/EX1.1	
BC24E	PRUDENTIAL LTG	BPRO5-LIN-FLSH-LED35-LO-LO-R24'-XXX-BTW-SCW-ADC-SC-UNV-CA96-X3-DM01-2EMHE	LED	182.4	UNV	SUSPENDED @14' A.F.F.	89	A18/EX1.1	W/ BATTERY BACKUP
CA5	PRUDENTIAL LTG	BPRO5-LIN-FLSH-LED35-PROG375LUM-5'-XXX-PFL-NU-SC-UNV-SUR-X3-DM01	LED	14.3	UNV	SURFACE	17.5	A5/EX1.1	
CA8	PRUDENTIAL LTG	BPRO5-LIN-FLSH-LED35-PROG375LUM-8'-XXX-PFL-NU-SC-UNV-SUR-X3-DM01	LED	22.8	UNV	SURFACE	28	A5/EX1.1	
CA11E	PRUDENTIAL LTG	BPRO5-LIN-FLSH-LED35-PROG375LUM-R11'-XXX-PFL-NU-SC-UNV-SUR-X3-DM01-1EMHE	LED	31.4	UNV	SURFACE	44.5	A5/EX1.1	W/ BATTERY BACKUP
CA21E	PRUDENTIAL LTG	BPRO5-LIN-FLSH-LED35-PROG375LUM-R21'-XXX-PFL-NU-SC-UNV-SUR-X3-DM01-2EMHE	LED	59.9	UNV	SURFACE	89	A5/EX1.1	W/ BATTERY BACKUP
CA23E	PRUDENTIAL LTG	BPRO5-LIN-FLSH-LED35-PROG375LUM-R23'-XXX-PFL-NU-SC-UNV-SUR-X3-DM01-2EMHE	LED	65.6	UNV	SURFACE	89	A5/EX1.1	W/ BATTERY BACKUP
CB15E	PRUDENTIAL LTG	BPRO5-LIN-FLSH-LED35-PROG250LUM-R15'-XXX-PFL-NU-SC-UNV-SUR-X3-DM01-1EMHE	LED	42.8	UNV	SURFACE	53.8	A5/EX1.1	W/ BATTERY BACKUP
CB20E	PRUDENTIAL LTG	BPRO5-LIN-FLSH-LED35-PROG250LUM-R20'-XXX-PFL-NU-SC-UNV-SUR-X3-DM01-1EMHE	LED	36.7	UNV	SURFACE	71.7	A5/EX1.1	W/ BATTERY BACKUP
CB29E	PRUDENTIAL LTG	BPRO5-LIN-FLSH-LED35-PROG250LUM-R29'-XXX-PFL-NU-SC-UNV-SUR-X3-DM01-1EMHE	LED	55.1	UNV	SURFACE	107.5	A5/EX1.1	W/ BATTERY BACKUP
CB35E	PRUDENTIAL LTG	BPRO5-LIN-FLSH-LED35-PROG250LUM-R35'-XXX-PFL-NU-SC-UNV-SUR-X3-DM01-2EMHE	LED	66.5	UNV	SURFACE	131	A5/EX1.1	W/ BATTERY BACKUP
D10	LUMINAIRE	VRDL6 MIN1 NLTAIR2 1000LM MD 35K 80CRI MVOLT CPL AMF	LED	12.0	UNV	RECESSED	14	E10/EX1.1	
D15	LUMINAIRE	VRDL6 MIN1 NLTAIR2 1500LM MD 35K 80CRI MVOLT CPL AMF	LED	18.8	UNV	RECESSED	14	E10/EX1.1	
D15E	LUMINAIRE	VRDL6 MIN1 NLTAIR2 1500LM MD 35K 80CRI MVOLT CPL AMF EMB310T20	LED	18.8	UNV	RECESSED	16.5	E10/EX1.1	W/ BATTERY BACKUP
F4	LITHONIA	CLX L48 3000LM SEF RDL MVOLT EZ1 35K 80CRI RIO WH ZACVH M100	LED	18.5	UNV	SUSPENDED	7.5		SUSPEND 24"
F4H	LITHONIA	CLX L48 3000LM SEF RDL MVOLT EZ1 35K 80CRI RIO WH	LED	18.5	UNV	SURFACE	7.5	I18/EX1.1	
F4E	LITHONIA	CLX L48 3000LM SEF RDL MVOLT EZ1 35K 80CRI E10WLCP SPD WH ZACVH M100	LED	18.5	UNV	SUSPENDED	7.5		W/ BATTERY BACKUP, SUSPEND 24"
F8	LITHONIA	CLX L96 6000LM SEF RDL MVOLT EZ1 35K 80CRI WH ZACVH M100	LED	37.0	UNV	SUSPENDED	14		SUSPEND 24"
F8N	LITHONIA	CLX L96 6000LM SEF RDL MVOLT EZ1 35K 80CRI NLTAIR2 RIO WH ZACVH M100	LED	37.0	UNV	SUSPENDED	14		SUSPEND 24"
F8S	LITHONIA	CLX L96 6000LM SEF RDL MVOLT EZ1 35K 80CRI NLTAIR2 RES7 WH ZACVH M100	LED	37.0	UNV	SUSPENDED	14	I18/EX1.1	W/ OCCUPANCY SENSOR, SUSPEND 24"
J	LITHONIA	OLVTWM	LED	15.0	UNV	WALL	5	E5/EX1.1	
K	LITHONIA	CPX 2X4 3000LM 80CRI 35K SWL MIN1 EZT MVOLT NLTAIR2	LED	24.6	UNV	TROFFER	17.25	L18/EX1.1	
KE	LITHONIA	CPX 2X4 3000LM 80CRI 35K SWL MIN1 EZT MVOLT E10WLCP NLTAIREM2	LED	24.6	UNV	TROFFER	17.25	L18/EX1.1	W/ BATTERY BACKUP
KS	LITHONIA	CPX 2X4 3000LM 80CRI 35K SWL MIN1 EZT MVOLT NLTAIR2 APIR	LED	24.6	UNV	TROFFER	17.25	L18/EX1.1	W/ OCCUPLANY SENSOR
L	LITHONIA	CPANL 1X4 ALO1 SWW7 / DCMK14	LED	31.0	UNV	SURFACE	9.3	I18/EX1.1	
M6	PINNACLE LTG	EX6-WET-N-CL840250-6FT-XX-S-U-FSD-1-0-XX	LED	15.0	UNV	SURFACE	34	A10/EX1.1	
M6E	PINNACLE LTG	EX6-WET-N-CL840250-6FT-XX-S-U-FSD-1-1-FSB-XX	LED	15.0	UNV	SURFACE	36.5	A10/EX1.1	W/ BATTERY BACKUP
P1E	LITHONIA	WDGE2 LED P1 40K 80CRI T1S MVOLT SRM E10WH NLTAIR2 PIR XXXXXX	LED	11.0	UNV	WALL	13.5	E5/EX1.1	W/ BATTERY BACKUP
X	LITHONIA	LQC 1 R EL N	LED	0.6	UNV	WALL	4.5	E5/EX1.1	W/ BATTERY BACKUP

DETAIL KEY NOTES:

A. HANGER WIRE:
12GA GALV. HANGER WIRES FROM SUPPORT CLIP TO ROOF STRUCTURE PER DSA IR 25-2. REFER TO ARCHITECTURAL DETAILS FOR ACCEPTABLE HANGER WIRE CONNECTIONS.

B. SUPPORT CLIP:
CADDY "INDEPENDENT SUPPORT CLIP" W/ 1/4-20 STUD. ATTACHES OVER T-BAR RUNNER.

C. J-BOX:
LIGHTING CIRCUIT J-BOX (AT POWER FEED END OF FIXTURE ONLY).

D. ACOUSTIC CEILING TILE:
INSTALLED IN T-BAR GRID SYSTEM. SEE ARCH. PLANS.

E. POWER FEED:
WHITE SO CORD, 18/3 OR 18/4, AS REQUIRED.

F. AIRCRAFT CABLE:
3/32" STAINLESS STEEL AIRCRAFT CABLE W/ BARREL TERMINAL AT ONE END.

G. CANOPY:
1/4" INTERNAL THREAD CEILING COUPLER, AND BARREL TERMINAL CAPTURE; BY MFG'R

H. ZIP TIE:
NEATLY ZIP TIE POWER FEED TO AIRCRAFT CABLE AT 6" CENTERS W/ WHITE ZIP TIES.

I. GRIPPER:
UL LISTED AIRCRAFT CABLE GRIPPER W/ KNURLED LOCK NUT. 1/4-20" THREADED BODY & NUT ATTACHES TO FIXTURE.

J. STRAIN RELIEF:
STRAIN RELIEF BUSHING AT FIXTURE.

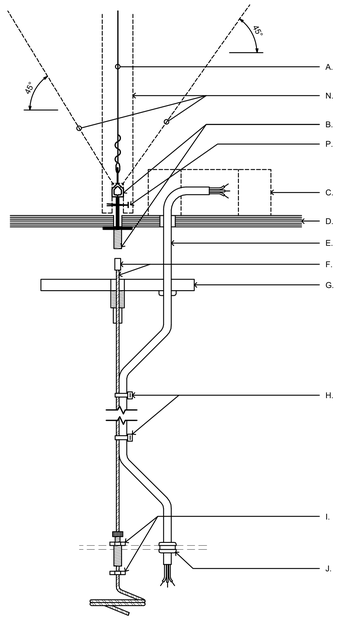
K. 2-CABLE CLAMP:
SECURE TO EACH HANGER CABLE WITHIN 4" OF FIXTURE ATTACHMENT POINT.

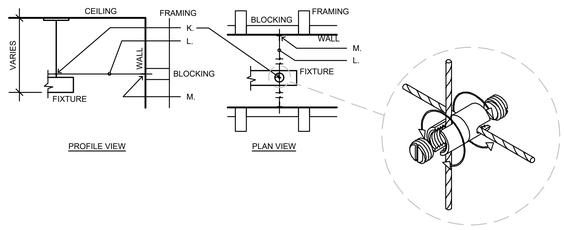
L. LATERAL BRACING CABLE:
3/32" STAINLESS STEEL AIRCRAFT CABLE INSTALLED LONGITUDINALLY ACROSS FIXTURE TO PREVENT SWAYING.

M. WALL CABLE ANCHOR:
GRIPLOCK #2SZ-M13-1420-SL SECURED WITH #10 WOOD SCREW TO WALL FRAMING/BLOCKING WITH 1-1/2" PENETRATION AT EACH END OF FIXTURE.

N. COMPRESSION STRUT:
PROVIDE COMPRESSION STRUT AND (4) SPLAY WIRES THROUGH MAIN RUNNER PER DSA IR 25-2. WITHIN 6" OF EACH SUPPORT CLIP, SUPPORT CLIPS TO BE SPACED MAX. 8' O.C. & WITHIN 6" OF EACH END. SEE ARCH. DETAILS FOR INSTALLATION REQUIREMENTS.

P. INSTALL #10 S.M.S. THROUGH CLIP AND MAIN RUNNER.

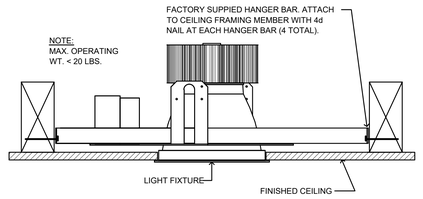




LINEAR FIXTURE LATERAL SEISMIC BRACING
REQUIRED WHEN FIXTURE CONTACTS OBSTRUCTION WHEN SWINGING 45° FROM VERTICAL.

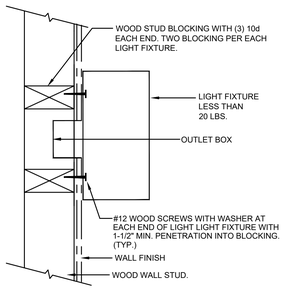
A18 SUSPENDED FIXTURE DETAIL

SCALE: NO SCALE



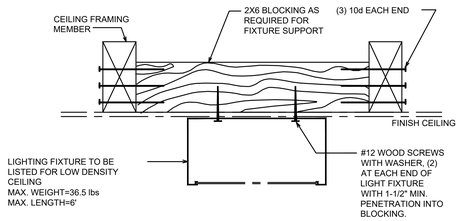
E10 TYPICAL RECESSED LIGHT MOUNTING DETAIL

SCALE: NO SCALE



E5 TYPICAL SURFACE WALL LIGHT MOUNTING DETAIL

SCALE: NO SCALE



First/ Independent Fixture Mounting Example

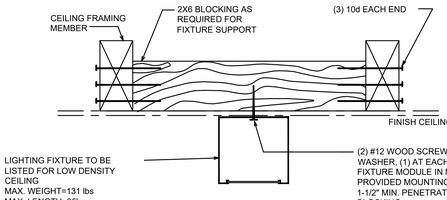
2'	27-1/8" center to center of support
3'	39" center to center of support
4'	50-3/4" center to center of support
5'	62-5/8" center to center of support
6'	74-5/8" center to center of support
7'	86-1/2" center to center of support
8'	98-3/8" center to center of support

Intermediate/ End Fixture Mounting Example

2'	27-1/8" center to center of support
3'	39" center to center of support
4'	50-3/4" center to center of support
5'	62-5/8" center to center of support
6'	74-5/8" center to center of support
7'	86-1/2" center to center of support
8'	98-3/8" center to center of support

A10 TYPICAL SURFACE MOUNT LIGHT FIXTURE MOUNTING DETAIL

SCALE: NO SCALE



FIXTURE LENGTH	MODULE LENGTHS	MODULE CONFIGURATION
11'	4+3+4	4FT STR + 3FT INT + 4FT END
13'	4+5+5	4FT STR + 5FT INT + 5FT END
20'	8+4+8	8FT STR + 4FT INT + 8FT END
23'	8+7+8	8FT STR + 7FT INT + 8FT END
29'	8+4+5+4+8	8FT STR + 4FT INT + 5FT INT + 4FT INT + 8FT END
35'	8+6+7+6+8	8FT STR + 6FT INT + 7FT INT + 6FT INT + 8FT END

A5 SURFACE LINEAR LIGHT FIXT. MTG DETAIL

SCALE: NO SCALE

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APP: 02-121624 INC:
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DATE: 01/23/2025

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MADERA HIGH SCHOOL FIELDHOUSE

200 SOUTH "L" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL R. SCHECK C-36165 02-28-27 STATE OF CALIFORNIA

PROJECT NUMBER	20-51
DATE	08/22/2023
DSA APPLICATION NO.	02 - 121624
FILE NO.	20-H3
PTN NO.	65243-153
DRAWN BY	HDE

REVISIONS

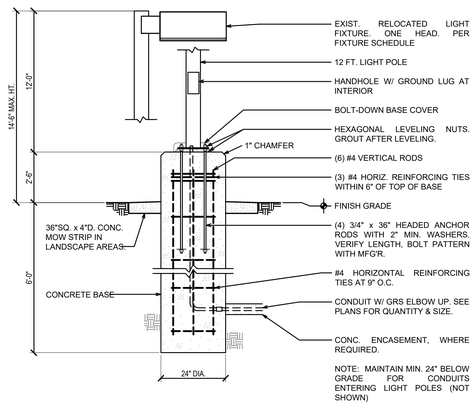
#	DESCRIPTION	DATE

LIGHTING FIXTURE SCHEDULE

EX1.1

ASSISTED PROFESSIONAL ENGINEER R.J. HARDIN 9125 ELECTRICAL STATE OF CALIFORNIA

Hardin-Davidson Engineering
356 Pollasky Ave.
Suite 200
Clovis, CA 93612
559.323.4995 tel
559.323.4928 fax



DSA REVIEW IS NOT REQUIRED FOR LIGHT POLES LESS THAN 35 FT ABOVE ADJACENT GRADE IN HEIGHT.

K5 POLE LIGHT MOUNTING DETAIL

SCALE: NO SCALE

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CONSTRUCTION DOCUMENTS

MADERA UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL R. SCHOEN C 36165 02-28-27 RENEWAL DATE STATE OF CALIFORNIA

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DRAWN BY	HDE

REVISIONS

#	DESCRIPTION	DATE

LIGHTING FIXTURE SCHEDULE

EX1.2

ASSESSED PROFESSIONAL ENGINEER R. J. HARDIN NO. 9125 ELECTRICAL STATE OF CALIFORNIA

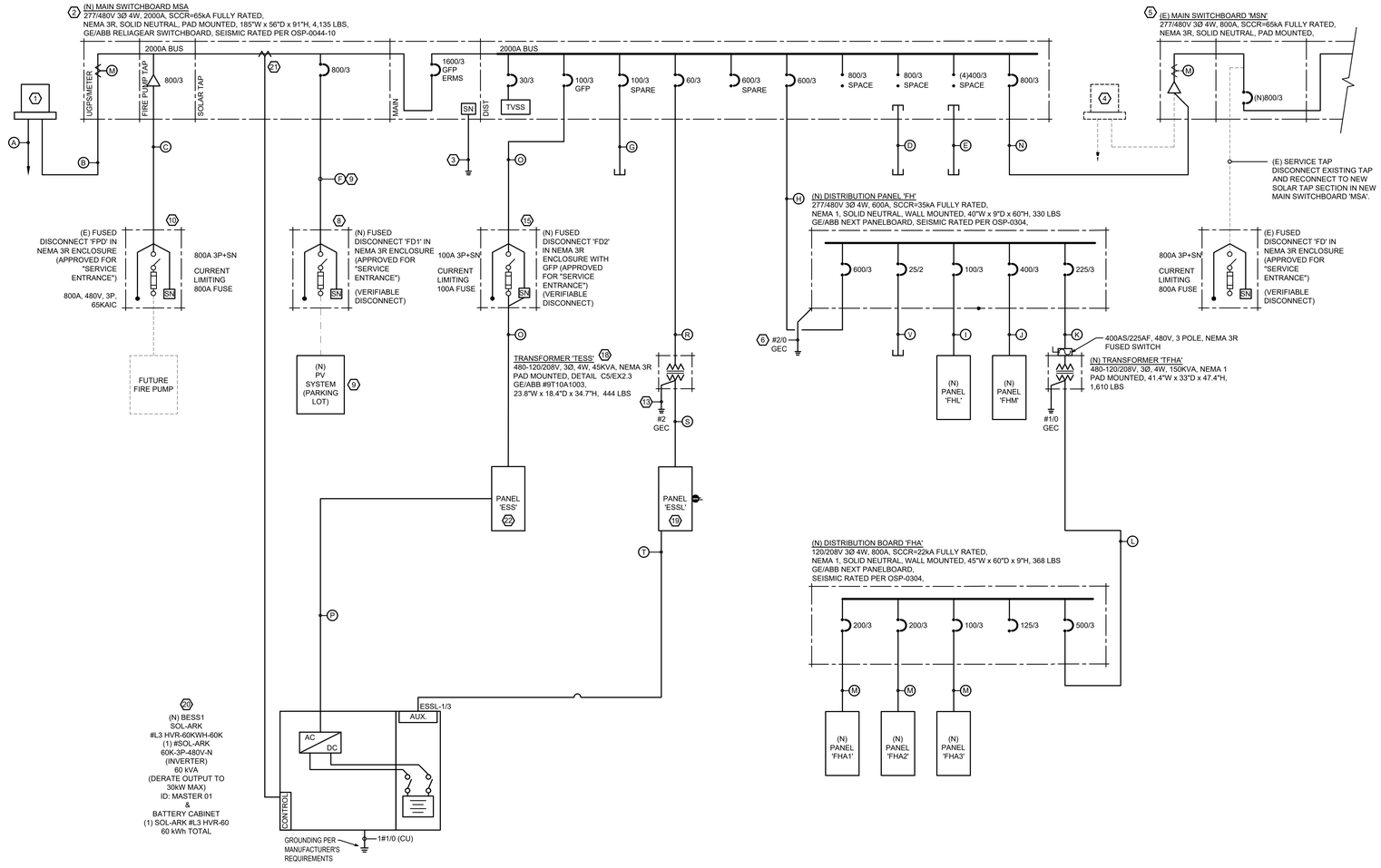
Hardin-Davidson Engineering
356 Pollasky Ave.
Suite 200
Clovis, CA 93612
559.323.4995 tel
559.323.4928 fax

KEYNOTES

1. PAD MOUNTED P.G.&E. TRANSFORMER. PROVIDE TRANSFORMER PAD PER P.G.&E. REQUIREMENTS AND RULE 16 DRAWING. SEE DETAIL A12/EX2.1 FOR REFERENCE P.G.&E. DRAWING. MAXIMUM TRANSFORMER WEIGHT IS 13,000LBS. TRANSFORMER SPECIFIED, PROVIDED AND INSTALLED BY P.G.&E. CONCRETE PAD TO BE PRE-CAST BY PG&E APPROVED VENDOR. MOUNT PER DETAIL A15/EX2.1.
2. PAD MOUNTED MAIN SWITCHBOARD 'MSA'. 2000A BUS/1600A MAIN, 277/480V, 3Ø, 4W, 65kA SCCR FULLY RATED, NEMA 3R, SOLID NEUTRAL, PAD MOUNTED. PROVIDE LOCK-OFF DEVICES FOR ALL CIRCUIT BREAKERS. PROVIDE HOUSEKEEPING PAD PER DETAIL C5/EX2.3. HOUSEKEEPING PAD SHALL BE FLUSH WITHIN 1/4" OF SURROUNDING SURFACE. PROVIDE GROUNDING PER DETAIL L5/EX2.3. MAIN SWITCHBOARD 'MSA' IS OWNER FURNISHED AND CONTRACTOR INSTALLED.
3. ELECTRODE CONDUCTOR PER DETAIL L5/EX2.3.
4. (E) PAD MOUNTED P.G.&E. PAD MOUNTED TRANSFORMER ON CONCRETE PAD. P.G.&E. TO REMOVE TRANSFORMER. CONTRACTOR TO REMOVE EXISTING CONCRETE TRANSFORMER PAD, ACCESSIBLE CONDUIT AND GROUND RODS AND RETURN TO SURROUNDING GRADE.
5. (E) PAD MOUNTED MAIN SWITCHBOARD 'MSB'. P.G.&E. TO DISCONNECT AND REMOVE EXISTING SERVICE CONDUCTORS AND METER. CONTRACTOR TO CONNECT EXISTING 'MSB' TO NEW MAIN SWITCHBOARD 'MSA' PER FEEDER SCHEDULE. PROVIDE ANY REQUIRED CONNECTIONS TO REPLACE REMOVED P.G.&E. METER CTS. REMOVE ANY NEUTRAL TO GROUND BONDING JUMPERS PRESENT.
6. BOND TO BUILDING STRUCTURAL STEEL, COLD WATER PIPING, PER C.E.C. ARTICLE 250. PROVIDE 3/4" X 10' COPPER CLAD GROUND ROD.
7. NOT USED.
8. (E) SOLAR DISCONNECT TO REMAIN.
9. (E) SOLAR PHOTOVOLTAIC SYSTEM TO REMAIN. DISCONNECT EXISTING SOLAR SYSTEM FROM EXISTING FROM EXISTING SWITCHBOARD 'MSB' AND RECONNECT TO NEW SOLAR SYSTEM TAP IN NEW MAIN SWITCHBOARD 'MSA'. RELOCATE ANY CT SYSTEM FROM FROM THE EXISTING 'MSB' TO 'MSA'. EXTEND CONDUCTORS AS REQUIRED. COORDINATE WITH (E) SOLAR SYSTEM VENDOR AS REQUIRED.
10. (N) 800A FUSED FIRE PUMP DISCONNECT. SEE DETAIL C13/EX2.3.
11. (N) 600A, 277/480V, 3Ø, 4W, 35KA SCCR FULLY RATED, NEMA 1, DISTRIBUTION BOARD. MOUNT PER DETAIL L15/EX2.4.
12. 150kVA TRANSFORMER: 480/208/120V 3Ø 4W, 80°C RISE, NEMA 3R, K-4 RATED. TRANSFORMER SHALL BE INSULATION CLASS 220 OR HIGHER. PAD MOUNT PER DETAIL C5/EX2.3.
13. TRANSFORMER GROUNDING ELECTRODE CONDUCTOR PER DETAIL G5/EX2.3.
14. (N) 800A, 600A MAIN, 120/208V, 3Ø, 4W, 22KA SCCR FULLY RATED, NEMA 1, DISTRIBUTION BOARD. MOUNT PER DETAIL G9/EX2.3.
15. PG&E COMPLIANT VERIFIABLE DISCONNECT, 800A, 4-POLE, 277/480V, 200KAIC.
16. (N) 800A, 277/480V, 3Ø, 4W, 65KA SCCR FULL RATED, NEMA 3R, DISTRIBUTION BOARD. MOUNT PER DETAIL L15/EX2.4. PANEL SHALL BE CAPABLE OF INSTALLING A 450A/3P CIRCUIT BREAKER FOR FUTURE EXPANSION OF THE BATTERY ENERGY STORAGE SYSTEM TO 250KVA.
17. BATTERY ENERGY STORAGE SYSTEM CIRCUIT BREAKER SHALL BE INSTALLED AT THE OPPOSITE END OF THE BUS FROM THE SOURCE CONNECTION. BREAKER POSITION SHALL BE CAPABLE OF SUPPORTING A 450A/3P CIRCUIT BREAKER IN THE FUTURE. SEE KEYNOTE 16 ABOVE.
18. 45kVA TRANSFORMER: 480/208/120V 3Ø 4W, 80°C RISE, NEMA 3R, K-1 RATED. PAD MOUNT PER DETAIL C5/EX2.3.
19. (N) 150A, 120/208V, 3Ø, 4W, 10KA SCCR FULLY RATED, NEMA 3R, PANELBOARD 'ESSL'. MOUNT PER DETAIL XX/EX2.X. PROVIDE 20A, 120V, GFCI-PROTECTED, WEATHER RESISTANCE RECEPTACLE WITH WEATHERPROOF WHILE-IN-USE COVER MOUNTED TO SIDE OF PANEL 'ESSL'.
20. (N) 60KVA/120KWH, 277/480V, 3Ø, 4W, NEMA 3R BATTERY ENERGY STORAGE SYSTEM. PROVIDE ALL REQUIRED CONNECTIONS AND MATERIAL FOR INSTALLATION. SUPPLY FACTORY STARTUP. CONNECT SYSTEM TO NOT PROVIDE POWER BACK TO GRID NOR CHARGE FROM THE GRID. SYSTEM SHALL HAVE C.E.C. CERTIFICATION AS A POWER CONTROL SYSTEM. PROVIDE ALL REQUIRED COORDINATION WITH P.G.&E. SEE DETAIL A18/EX2.8.
21. PROVIDE AC CURRENT TRANSDUCERS RATED FOR 2000A. PROVIDE 1°C TO BESS. EXTEND CT CONDUCTORS PER MANUFACTURER'S REQUIREMENTS.
22. (N) 125A, 277/480V, 3Ø, 4W, 35KA SCCR FULLY RATED, NEMA 3R, PANELBOARD 'ESS'.

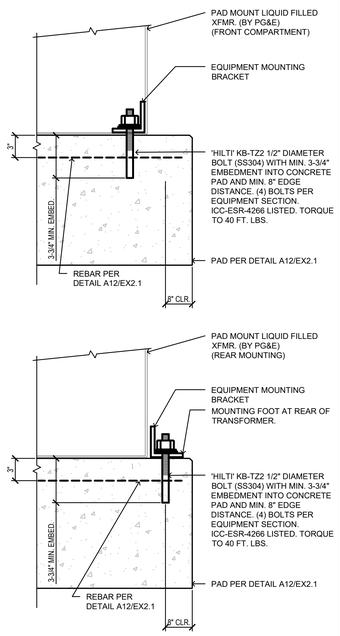
FEEDERS

- A. P.G.&E. PRIMARY CONDUIT. 4"C. PER P.G.&E. REQUIREMENTS.
- B. INCOMING P.G.&E. SECONDARY. 7-5"C. PER P.G.&E. REQUIREMENTS.
- C. (2)4"C. 4#600 KCMIL CU, 1#1/0 CU GRD.
- D. (8)4"C. (SPARE - FUTURE) STUB 10' NORTH OF 'MSA'
- E. (2)2"C. (SPARE - FUTURE) STUB TO PULLBOX 'P2'. SEE SHEET ES1.1.
- F. (2)3-1/2"C. 3#600 KCMIL CU, 1#3/0 CU NEUT., 1#3/0 CU GRD EA.
- G. 2"C. (SPARE - FUTURE PUMP HOUSE)
- H. (2)4"C. 4#350 KCMIL CU, 1#1 CU GRD EA.
- I. 2"C. 4#3 CU, 1#8 CU GRD.
- J. 3"C. 4#500 KCMIL CU, 1#3 CU GRD.
- K. 2-1/2"C. 3#4/0 CU, 1#4 CU GRD EA.
- L. (2)2"C. 4#250 KCMIL CU, 1#2 CU GRD EA.
- M. 2"C. 4#3/0 CU. 1#6 CU GRD.
- N. (2)4"C. 4#600 KCMIL CU, 1#1/0 CU GRD. EA.
- O. 2"C. 4#3 CU, 1#8 CU GRD.
- P. 1.25"C. 4#3 CU, 1#8 CU GRD.
- Q. 1"C. 4#12 CU, 1#12 CU GRD.
- R. 1"C. 3#6 CU, 1#8 CU GRD.
- S. 2"C. 4#3/0 CU, 1#6 CU GRD.
- T. 1"C. 2#10 CU, 1#10 CU GRD.
- U. 1"C. 2#3 RHW-2 1000V RATED WIRE (BATTERY CABINET TO BATTERY CABINET)
- V. 1.25"C STUB



G15 SINGLE LINE DIAGRAM

NO SCALE



A15 PG&E TRANSF. MNT'G DETAIL

NO SCALE

UG-1: Transformers
Greenbook

Concrete Pad for Three-Phase, Loop-Style, Pad-Mounted Transformers

Concrete Pad Details for Style IID, IIE, and IIG Transformers

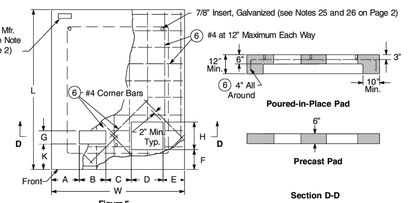


Figure 5
Construction Details of Style IID, IIE, IIG Pad
(see Figure 2 on Page 6 for pad arrangement)

Table 3 Dimensions and Codes for Style IID, IIE, and IIG Transformer Pads [1]

Transformer			Pad Dimensions (inches)										
Style	kVA Size	Approximate Maximum Weight (lbs)	A	B	C	D	E	F	G	H	K	L	W	Code
IID and IIE	75	4,600	17	16	15	19	13	10	6	17	14	61	80	040291
	(112.5) [2]	4,600												
	150	5,000												
	(225) [2]	5,500												
IIE	300	5,800	22	16	15	20	17	20	6	19	25	106	90	040292
	(500) [2]	6,100												
	750	9,000												
	1,000	11,000												
	1,500	13,000												
IIE	2,500	16,000	26	16	15	20	17	20	6	19	25	106	90	040292
IIG	2965/3330	22,000												

[1] See Document 066211 for approved suppliers.
[2] ( ) = Indicates a kVA size that is no longer purchased.

Revision Notes
Revision 13 has the following changes:
1. Add Note 10 on Page 1.

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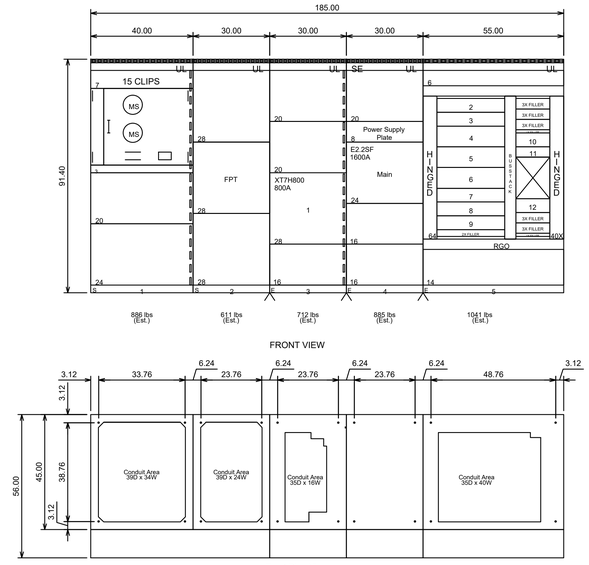
A12 PG&E TRANSFORMER PAD DETAIL (FOR REFERENCE ONLY)

NO SCALE



A7 SWITCHBOARD ELEVATION AND PLAN VIEW DETAIL

NO SCALE

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 01/23/2025

PBK

ARCHITECT PBK Architects, Inc.
FRESNO
7790 North Palm Avenue
Fresno, CA 93711
559-448-8400 P
559-448-8467 F
PBK.com

MADERA HIGH SCHOOL FIELDHOUSE
200 SOUTH "L" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL
LICENSED ARCHITECT MICHAEL R. SCHOEN C-36165 02-28-27 STATE OF CALIFORNIA

PROJECT NUMBER	20-51
DATE	08/22/2023
DSA APPLICATION NO.	02 - 121624
FILE NO.	20-H3
PTN NO.	65243-153
DRAWN BY	HDE

REVISIONS

#	DESCRIPTION	DATE

ELECTRICAL SINGLE LINE DIAGRAM

EX2.1

REGISTERED PROFESSIONAL ENGINEER R.J. HARTON No. 9125 ELECTRICAL STATE OF CALIFORNIA

Hardin-Davidson Engineering
356 Pollasky Ave.
Suite 200
Clovis, CA 93612
559.323.4995 tel
559.323.4928 fax

PANEL "MSA" SCHEDULE

277/480V 3Φ 4W — OUTDOOR / PAD

CKT. NO.	DESCRIPTION	BREAKER AMPS	BREAKER POLE(S)	VA	Φ	VA	BREAKER AMPS	BREAKER POLE(S)	DESCRIPTION	CKT. NO.
1	EXIST 'MSB'	800	3	177357	A		400	3	SPACE ONLY	2
3	-----	--	--	177357	B		--	--	-----	4
5	-----	--	--	177357	C		--	--	-----	6
7	PANEL 'PH'	100	3	80326	A		400	3	SPACE ONLY	8
9	-----	--	--	78298	B		--	--	-----	10
11	-----	--	--	82222	C		--	--	-----	12
13	PANEL 'FH'	400	3		A		400	3	SPACE ONLY	14
15	-----	--	--		B		--	--	-----	16
17	-----	--	--		C		--	--	-----	18
19	SPACE ONLY	800	3		A		400	3	SPACE ONLY	20
21	-----	--	--		B		--	--	-----	22
23	-----	--	--		C		--	--	-----	24
25	SPACE ONLY	800	3		A		225	3	SPACE ONLY	26
27	-----	--	--		B		--	--	-----	28
29	-----	--	--		C		--	--	-----	30
31	SPACE ONLY				A		225	3	SPACE ONLY	32
33	SPACE ONLY				B		--	--	-----	34
35	SPACE ONLY				C		--	--	-----	36
37	SPACE ONLY				A				SPACE ONLY	38
39	SPACE ONLY				B				SPACE ONLY	40
41	SPACE ONLY				C				SPACE ONLY	42

LOAD SUMMARY:
Φ A 257683 VA
Φ B 255655 VA
Φ C 259579 VA
CONNECTED LOAD: 772.9 kVA
MAX CURRENT: 937 A

BUSING: 2000A CU
MAIN: 1600A
SCCR: 65000 AMPS

PANEL "FH" SCHEDULE

277/480V 3Φ 4W — INDOOR / SURFACE

CKT. NO.	DESCRIPTION	BREAKER AMPS	BREAKER POLE(S)	VA	Φ	VA	BREAKER AMPS	BREAKER POLE(S)	DESCRIPTION	CKT. NO.
1	PANEL 'FHL'	200	3	2121	A					2
3	--	--	--	1553	B					4
5	--	--	--	2264	C					6
7	PANEL 'FHM'	400	3	60362	A					8
9	--	--	--	60362	B					10
11	--	--	--	60362	C					12
13					A					14
15					B					16
17					C					18
19					A					20
21					B					22
23					C					24
25					A					26
27					B					28
29					C					30
31					A					32
33					B					34
35					C					36
37	XFMR. 'TFHA' (PANEL "FHA")	225	3	17843	A					38
39	-----	--	--	16383	B					40
41	-----	--	--	19596	C					42

LOAD SUMMARY:
Φ A 80326 VA
Φ B 78298 VA
Φ C 82222 VA
CONNECTED LOAD: 240.8 kVA
MAX CURRENT: 297 A

BUSING: 600A CU
MAIN: 600A M.C.B.
SCCR: 35000 AMPS

PANEL "FHL" SCHEDULE

277/480V 3Φ 4W — INDOOR / SURFACE

CKT. NO.	DESCRIPTION	BREAKER AMPS	BREAKER POLE(S)	VA	Φ	VA	BREAKER AMPS	BREAKER POLE(S)	DESCRIPTION	CKT. NO.
1	LTS - ELECTRICAL ROOM, WEST BLDG (EM LTG)	20	1	1701	A	420	20	1	LTS - EXTERIOR	2
3	LTS - CENTRAL BLDG (EM. LTG)	20	1	1353	B	200	20	1	LIGHTING CTRL. PANEL 'LCP-FH'	4
5	LTS - EAST BLDG. (EM. LTG)	20	1	2264	C		20	1		6
7		20	1		A		20	1		8
9		20	1		B		20	1		10
11		20	1		C		20	1		12
13		20	1		A		20	1		14
15		20	1		B		20	1		16
17		20	1		C		20	1		18
19		20	1		A		20	1		20
21		20	1		B		20	1		22
23		20	1		C		20	1		24
25		20	1		A		20	1		26
27		20	1		B		20	1		28
29		20	1		C		20	1		30
31		20	1		A		20	1		32
33		20	1		B		20	1		34
35		20	1		C		20	1		36
37		20	1		A		20	1		38
39		20	1		B		20	1		40
41		20	1		C		20	1		42

LOAD SUMMARY:
Φ A 2121 VA
Φ B 1553 VA
Φ C 2264 VA
CONNECTED LOAD: 5.9 kVA
MAX CURRENT: 8 A

BUSING: 125A CU
MAIN: 100A M.L.O.
SCCR: 35000 AMPS

PANEL "FHM" SCHEDULE

277/480V 3Φ 4W — INDOOR / SURFACE

CKT. NO.	DESCRIPTION	BREAKER AMPS	BREAKER POLE(S)	VA	Φ	VA	BREAKER AMPS	BREAKER POLE(S)	DESCRIPTION	CKT. NO.
1	HP-1	50	3	8033	A	253	20	3	CF-1A, CF-1B	2
3	--	--	--	8033	B	253	--	--	--	4
5	--	--	--	8033	C	253	--	--	--	6
7	HP-2	50	3	8033	A					8
9	--	--	--	8033	B					10
11	--	--	--	8033	C					12
13	HP-3	50	3	8310	A					14
15	--	--	--	8310	B					16
17	--	--	--	8310	C					18
19	HP-4	80	3	16066	A					20
21	--	--	--	16066	B					22
23	--	--	--	16066	C					24
25	HP-5	50	3	8033	A					26
27	--	--	--	8033	B					28
29	--	--	--	8033	C					30
31	HP-6	70	3	11634	A					32
33	--	--	--	11634	B					34
35	--	--	--	11634	C					36
37					A					38
39					B					40
41					C					42

LOAD SUMMARY:
Φ A 60362 VA
Φ B 60362 VA
Φ C 60362 VA
CONNECTED LOAD: 181.1 kVA
MAX CURRENT: 218 A

BUSING: 400A CU
MAIN: 400A M.L.O.
SCCR: 35000 AMPS

PANEL "FHA" SCHEDULE

120/208V 3Φ 4W — INDOOR / SURFACE

CKT. NO.	DESCRIPTION	BREAKER AMPS	BREAKER POLE(S)	VA	Φ	VA	BREAKER AMPS	BREAKER POLE(S)	DESCRIPTION	CKT. NO.
1	PANEL 'FHA1'	200	3	5208	A					2
3	-----	--	--	5480	B					4
5	-----	--	--	6048	C					6
7	PANEL 'FHA2'	200	3	10355	A					8
9	-----	--	--	9295	B					10
11	-----	--	--	10920	C					12
13	PANEL 'FHA3'	100	3	2280	A					14
15	-----	--	--	1608	B					16
17	-----	--	--	2628	C					18
19	SOLAR INVERTER	125	3	0	A					20
21	-----	--	--	0	B					22
23	-----	--	--	0	C					24
25					A					26
27					B					28
29					C					30
31					A					32
33					B					34
35					C					36
37					A					38
39					B					40
41					C					42

LOAD SUMMARY:
Φ A 17843 VA
Φ B 16383 VA
Φ C 19596 VA
CONNECTED LOAD: 53.8 kVA
MAX CURRENT: 163 A

BUSING: 800A CU
MAIN: 500A M.L.O.
SCCR: 22000 AMPS
* PROVIDE RED HANDLE C.B. W/ INTEGRAL LOCK-ON DEVICE
** PROVIDE GFI CIRCUIT BREAKER

PANEL "FHA1" SCHEDULE

120/208V 3Φ 4W — INDOOR / SURFACE

CKT. NO.	DESCRIPTION	BREAKER AMPS	BREAKER POLE(S)	VA	Φ	VA	BREAKER AMPS	BREAKER POLE(S)	DESCRIPTION	CKT. NO.
1	RECEP - ELECTRICAL	20	1	180	A	180	20	1	RECEP - MECHANICAL 111	2
3	RECEP - OFFICE 102, TOILET 103	20	1	720	B	360	20	1	RECEP - TOILET 112, 113	4
5	RECEP - TEAM ROOM 128 SOUTH & WEST	20	1	720	C	360	20	1	RECEP - JANITOR 114	6
7	RECEP - TEAM ROOM 128 NORTH & EAST	20	1	540	A	540	20	1	RECEP - MENS R.R. 115, MECH. CHASE 116	8
9	RECEP - WEIGHT ROOM 101 WEST & NORTH	20	1	900	B	720	20	1	RECEP - WOMENS R.R. 117, STORAGE 120, 121	10
11	RECEP - WEIGHT ROOM 101 NORTH & EAST	20	1	900	C	720	20	1	RECEP - SOFTBALL LOCKERS 109	12
13	RECEP - WEIGHT ROOM 101 COLUMNS	20	1	360	A	720	20	1	RECEP - STOR 105, TOILET 106, STOR 107, CR 108	14
15	RECEP - WEIGHT ROOM 101 WEST TREADMILL	20	1	600	B	540	20	1	RECEP - HALL 118, R.R. 127, TOILET 126	16
17	RECEP - WEIGHT ROOM 101 WEST TREADMILL	20	1	600	C	360	20	1	RECEP - SOCCER RM 124	18
19	RECEP - WEIGHT ROOM 101 WEST TREADMILL	20	1	600	A	540	20	1	RECEP - OFFICE 125	20
21	RECEP - WEIGHT ROOM 101 WEST TREADMILL	20	1	600	B	0	20	1	SPARE	22
23	RECEP - OFFICE 129	20	1	1080	C	0	20	1	SPARE	24
25	RECEP - PT ROOM 130	20	1	360	A	0	20	1	SPARE	26
27	RECEP - STORAGE 131, 132	20	1	540	B	0	20	1	SPARE	28
29	RECEP - PT ROOM 130 ICE MACHINE	20	1	348	C	0	20	1	SPARE	30
31	RECEP - PT ROOM 130 ICE BATH WHIRLPOOL	20	1	828	A	0	20	1	SPARE	32
33	SPARE	20	1		B	0	20	1	SPARE	34
35	SPARE	20	1		C	720	20	1	RECEP - IT ROOM	36
37	SPARE	20	1		A	360	20	1	RECEP - IDU	38
39	SPARE	20	1		B	500	20	1	EMS PANEL	40
41	SPARE	20	1		C	240	20	1	FACP-F*	42

LOAD SUMMARY:
Φ A 5208 VA
Φ B 5480 VA
Φ C 6048 VA
CONNECTED LOAD: 16.7 kVA
MAX CURRENT: 50 A

BUSING: 200A CU
MAIN: 200A M.L.O.
SCCR: 22000 AMPS
* PROVIDE RED HANDLE C.B. W/ INTEGRAL LOCK-ON DEVICE
** PROVIDE GFI CIRCUIT BREAKER

PANEL "FHA2" SCHEDULE

120/208V 3Φ 4W — INDOOR / SURFACE

CKT. NO.	DESCRIPTION	BREAKER AMPS	BREAKER POLE(S)	VA	Φ	VA	BREAKER AMPS	BREAKER POLE(S)	DESCRIPTION	CKT. NO.
1	DRINKING FOUNTAIN - SOFTBALL LOCKERS 109*	20	1	13	A	1260	20	1	RECEP - ROOF MAINT	2
3	DRINKING FOUNTAIN - SOCCER ROOM 124*	20	1	13	B	240	20	1	TRAP PRIMER	4
5	DRINKING FOUNTAIN - WEIGHT ROOM 101*	20	1	13	C	276	20	1	HOT WATER CIRC PUMP	6
7	SPARE	20	1	0	A	240	20	1	WATER HEATER	8
9	SPARE	20	1	0	B	200	20	1	EMS PANEL	10
11	SPARE	20	1	0	C	738	20	2	EF-1 (1HP)	12
13	SPARE	20	1	0	A	738	--	--	--	14
15	SPARE	20	1	0	B	738	20	2	EF-2 (1HP)	16
17	SPARE	20	1	0	C	738	--	--	--	18
19	SPARE	20	1	0	A	926	20	2	ERV-1 (1/2 HP)	20
21	SPARE	20	1	0	B	926	--	--	--	22
23	SPARE	20	1	0	C	2600	35	2	ODU-1.1	24
25	SPARE	20	1	0	A	2600	--	--	--	26
27	SPARE	20	1	0	B	2600	35	2	ODU-1.2	28
29	SPARE	20	1	0	C	2600	--	--	--	30
31	SPARE	20	1	0	A	2600	35	2	ODU-1.3	32
33	SPARE	20	1	0	B	2600	--	--	--	34
35	SPARE	20	1	0	C	1976	30	2	ODU-2	36
37	SPARE	20	1	0	A	1976	--	--	--	38
39	SPARE	20	1	0	B	1976	30	2	ODU-3	40
41	SPARE	20	1	0	C	1976	--	--	--	42

LOAD SUMMARY:
Φ A 10355 VA
Φ B 9295 VA
Φ C 10920 VA
CONNECTED LOAD: 30.6 kVA
MAX CURRENT: 91 A

BUSING: 200A CU
MAIN: 200A M.L.O.
SCCR: 22000 AMPS
* PROVIDE GFCI BREAKER
**

PANEL "FHA3" SCHEDULE

120/208V 3Φ 4W — INDOOR / FLUSH

CKT. NO.	DESCRIPTION	BREAKER AMPS	BREAKER POLE(S)	VA	Φ	VA	BREAKER AMPS	BREAKER POLE(S)	DESCRIPTION	CKT. NO.
1	RECEP - FREEZER	20	1	1140	A	180	20	1	RECEP - SOUTH WALL	2
3	RECEP - ICE MACHINE	20	1	348	B	540	20	1	RECEP - WEST WALL	4
5	RECEP - REFRIGERATOR	20	1	1908	C	360	20	1	RECEP - NORTH WALL	6
7	ICE MAKER CONDENSER	20	2	720	A	240	20	1	TRAP PRIMER	8
9	--	--	--	720	B	0	20	1	SPARE	10
11	RECEP - EAST WALL	20	1	360	C	0	20	1	SPARE	12
13					A					14
15					B					16
17					C					18
19					A					20
21					B					22
23					C					24
25					A					26
27					B					28
29					C					30

LOAD SUMMARY:
Φ A 2280 VA
Φ B 1608 VA
Φ C 2628 VA
CONNECTED LOAD: 6.5 kVA
MAX CURRENT: 22 A

BUSING: 100A CU
MAIN: 100A M.L.O.
SCCR: 22000 AMPS
*
**

PANEL "ESS" SCHEDULE

277/480V 3Φ 4W — OUTDOOR / SURFACE

CKT. NO.	DESCRIPTION	BREAKER AMPS	BREAKER POLE(S)	VA	Φ	VA	BREAKER AMPS	BREAKER POLE(S)	DESCRIPTION	CKT. NO.
1	BESS-1*	100	3	10000	A	0	20	1	SPACE	2
3	--	--	--	10000	B	0	20	1	SPACE	4
5	--	--	--	10000	C	0	20	1	SPACE	6
7	SPACE	20	1	0	A	10000	100	3	SPARE (FUTURE BESS-2)*	8
9	SPACE	20	1	0	B	10000	--	--		10
11	SPACE	20	1	0	C	10000	--	--		12
13	SPACE	20	1	0	A	0	20	1	SPACE	14
15	SPACE	20	1	0	B	0	20	1	SPACE	16
17	SPACE	20	1	0	C	0	20	1	SPACE	18

LOAD SUMMARY:
Φ A 20000 VA
Φ B 20000 VA
Φ C 20000 VA
CONNECTED LOAD: 60.0 kVA
MAX CURRENT: 72 A

BUSING: 125A CU
MAIN: 125A M.L.O.
SCCR: 35000 AMPS (FULLY RATED)
NOTES: * PROVIDE LOCK OFF DEVICE ON BREAKER

PANEL "ESSL" SCHEDULE

120/208V 3Φ 4W — OUTDOOR / SURFACE

CKT. NO.	DESCRIPTION	BREAKER AMPS	BREAKER POLE(S)	VA	Φ	VA	BREAKER AMPS	BREAKER POLE(S)	DESCRIPTION	CKT. NO.
1	BATTERY CABINET #1 AUXILLARY*	20	2	1500	A	180	20	1	RECEP - SERVICE	2
3	--	--	--	1500	B					4
5	SPARE*	20	2	0	C					6
7	--	--	--	0	A					8
9					B					10
11					C					12
13					A					14
15					B					16
17					C					18
19					A					20
21					B					22
23					C					24
25					A					26
27					B					28
29					C					30

LOAD SUMMARY:
Φ A 1680 VA
Φ B 1500 VA
Φ C 0 VA
CONNECTED LOAD: 3.2 kVA
MAX CURRENT: 14 A

BUSING: 225A CU
MAIN: 150A M.C.B.
SCCR: 10000 AMPS
*
**

REGISTERED PROFESSIONAL ENGINEER — R.J. HARDIN — No. 9125 — ELECTRICAL — STATE OF CALIFORNIA

Hardin-Davidson Engineering
356 Pollasky Ave.
Suite 200
Clovis, CA 93612
559.323.4995 tel
559.323.4928 fax

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 01/23/2025

PBK

ARCHITECT PBK Architects, Inc.
FRESNO
7790 North Palm Avenue
Fresno, CA 93711
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559-448-8467 F
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MADERA HIGH SCHOOL FIELDHOUSE

200 SOUTH "L" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

MADERA UNITED SCHOOL DISTRICT 19 66

PROFESSIONAL SEAL

LICENSED ARCHITECT — MICHAEL R. SHORT — C 36165 — 02-28-27 — STATE OF CALIFORNIA

PROJECT NUMBER
20-51

DATE
08/22/2023

DSA APPLICATION NO.
02 - 121624

FILE NO.
20-H3

PTN NO.
65243-153

DRAWN BY
HDE

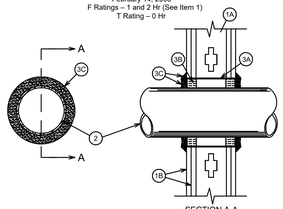
REVISIONS

#	DESCRIPTION	DATE

PANEL SCHEDULES

EX2.2

System No. W-L-1003
February 14, 2008
F Ratings – 1 and 2 Hr (See Item 1)
T Rating – 0 Hr

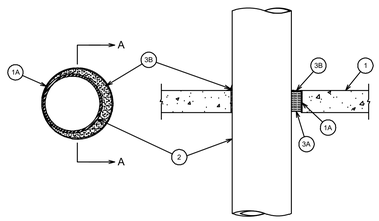


SECTION A-A

1. Wall Assembly – The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300, U400 or V400 Series Wall and Partition Design in the UL Fire Resistance Directory and shall include the following construction features:
   A. Studs – Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC with nom 2 by 4 in. (51 by 102 mm) lumber end plates and cross braces. Steel studs to be min 3-1/2 in. (89 mm) wide by 1-3/8 in. (35 mm) deep channels spaced max 24 in. (610 mm) OC.
   B. Gypsum Board* – Nom 5/8 in. (16 mm) thick, 4 ft (1.2 m) wide with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300, U400 or V400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 15 in. (381 mm).
   The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.
2. Through Penetrant – One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. The space between pipes, conduits or tubing and the steel sleeve (Item 3A) shall be min of 0 in. (point contact) to max 2-3/8 in. (60 mm). Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:
   A. Steel Pipe – Nom 12 in. (305 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
   B. Iron Pipe – Nom 12 in. (305 mm) diam (or smaller) service weight (or heavier) cast iron soil pipe, nom 12 in. (305 mm) diam (or smaller) or Class 50 (or heavier) ductile iron pressure pipe.
   C. Conduit – Nom 6 in. (152 mm) diam (or smaller) steel conduit or nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing.
   D. Copper Tubing – Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing.
   E. Copper Pipe – Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe.
3. Firestop System – Installed symmetrically on both sides of wall assembly. The details of the firestop system shall be as follows.
   A. Steel Sleeve – Cylindrical sleeve fabricated from min 0.019 in. thick (0.48 mm) galv sheet steel and having a min 2 in. (51 mm) lap along the longitudinal seam. Length of steel sleeve to be equal to thickness of wall plus 1 to 4 in. (25 to 102 mm) such that, when installed, the ends of the sleeve will project approx 1/2 to 2 in. (13 to 51 mm) beyond the surface of the wall on both sides of the wall assembly.
   Sleeve installed by coiling the sheet steel to a diam smaller than the through opening, inserting the coil through the openings and releasing the coil to let it uncoil against the circular cutouts in the gypsum board layers.
   B. Packing Material – Min 1 in. (25 mm) thickness of mineral wool batt insulation firmly packed into steel sleeve on both sides of the wall assembly as permanent forms. Packing material to be recessed min 1/2 in. (13 mm) from end of steel sleeve (flush with or recessed into gypsum board surface) on both sides of wall assembly.
   B1. Packing Material – (Not shown) – As an alternate to Item B, nom 1 in. (25 mm) thick polyethylene backer rod may be used. The backer rod is to be recessed within the steel sleeve a min of 1 in. (25 mm) from each surface of wall.
   C. Fill, Void or Cavity Materials* – Caulk or Sealant – When mineral wool batt insulation is used, caulk or sealant applied to fill the steel sleeve to a min depth of 1/2 in. (13 mm) on both sides of wall assembly. When backer rod is used, a min thickness of 1 in. (25 mm) of caulk or sealant is required flush with both sides of wall. A nom 1/4 in. (6 mm) diam continuous bead of caulk or sealant shall be applied around the circumference of the steel sleeve at its egress from the gypsum board layers on both sides of the wall assembly.
   3M COMPANY – CP 25WB+, IC 15WB+ or FB-3000 WT

*Bearing the UL Classification Mark

System No. C-AJ-1366
December 04, 2008
F Rating – 2 Hr
T Rating – 0 Hr
L Rating At Ambient – Less Than 1 CFM/sq ft
L Rating At 400 F – 2 CFM/sq ft



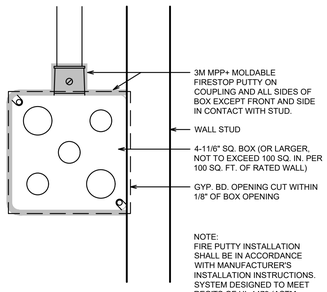
SECTION A-A

) concrete

1. Floor or Wall Assembly – Min 2-1/2 in. (64 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m3) concrete floor or min 3 in. (76 mm) thick. reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m3) concrete wall. Wall may also be constructed of any UL Classified Concrete Blocks*. Max diam of opening is 10 in. (254 mm).
   See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.
1A. Steel Sleeve (Optional) – Nom 10 in. (254 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe sleeve cast into concrete floor or wall. Sleeve to be flush with top and bottom surfaces of floor or both surfaces of wall.
2. Through Penetrants – One metallic pipe, tubing or conduit to be installed either concentrically or eccentrically within the firestop system. The annular space between tube and periphery of opening shall be min 0 in. to max 7/8 in. (22 mm). Penetrants to be rigidly supported on both sides of floor assembly. The following types and sizes of metallic pipes, tubing or conduit may be used:
   A. Steel Pipe – Nom 8 in. (203 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
   B. Iron Pipe – Nom 8 in. (203 mm) diam (or smaller) cast or ductile iron pipe.
   C. Conduit – Nom 6 in. (152 mm) diam (or smaller) rigid steel conduit.
   D. Conduit – Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing.
   E. Copper Tubing – Nom 4 in. (102 mm) diam (or smaller) Type L (or heavier) copper tube.
   F. Copper Pipe – Nom 4 in. (102 mm) diam (or smaller) Regular (or heavier) copper pipe.
3. Firestop System – The details of the firestop system shall be as follows:
   A. Packing Material – Min 2 in. (51 mm) thickness of min 4 pcf (64 kg/m3) mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor or both surfaces of wall to accommodate the required thickness of fill material.
   B. Fill, Void or Cavity Materials* – Caulk – Min 1/2 in. (13 mm) thickness of caulk applied within the annulus, flush with top surface of floor or both surfaces of wall. Min 1/2 in. (13 mm) diam bead of caulk applied to the penetrant/concrete interface at the point contact location on the top surface of floor or both surfaces of wall.
   3M COMPANY – FireDam 150+

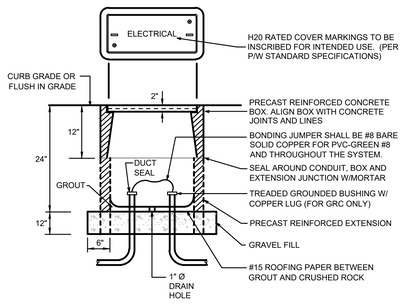
*Bearing the UL Classification Mark

E18 CONDUIT THROUGH PENETRATION FIRE STOP DETAILS
SCALE: NO SCALE



NOTE:
FIRE PUTTY INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS. SYSTEM DESIGNED TO MEET REQTS OF UL 1479 (ASTM E814).

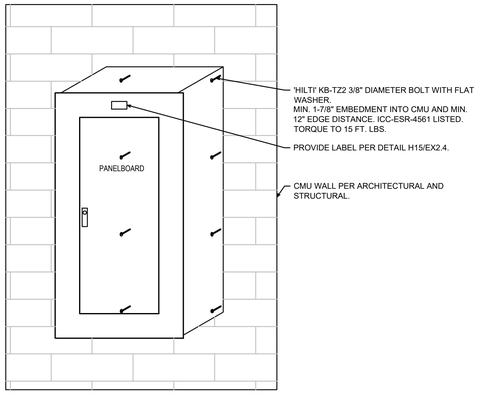
A18 ELECTRICAL OUTLET AT FIRE RATE WALL DETAIL
SCALE: NO SCALE



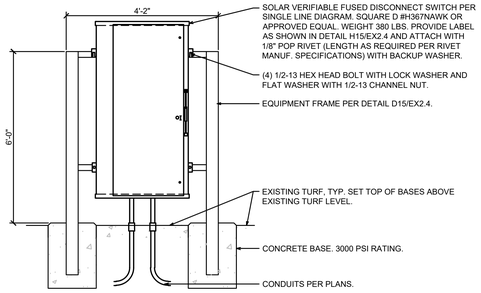
L13 TYPICAL PULL BOX DETAIL
SCALE: NO SCALE

PANELBOARD WEIGHTS/DIMS
(UNLESS OTHERWISE NOTED)

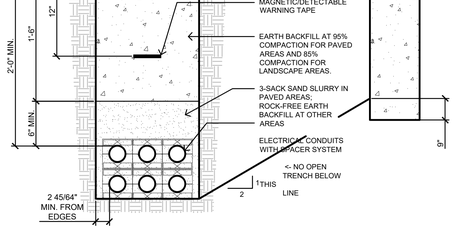
UP TO 400 AMPS - 20"W x 5.75"D	600-800 AMPS - 30"W x 8"D
30 CIRCUITS: 72"H, 430 LBS.	30 CIRCUITS: 72"H, 475 LBS.
42 CIRCUITS: 72"H, 450 LBS.	42 CIRCUITS: 72"H, 495 LBS.
54 CIRCUITS: 84"H, 525 LBS.	54 CIRCUITS: 84"H, 570 LBS.



G13 PANELBOARD MOUNTING DETAIL (CMU WALL)
SCALE: NO SCALE

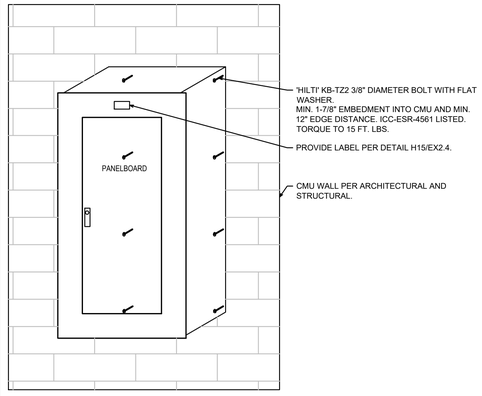


C13 FIRE PUMP DISCONNECT SWITCH DETAIL
SCALE: NO SCALE

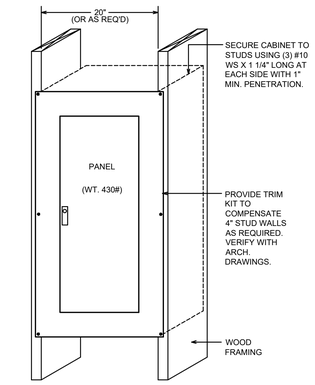


NOTE:
MAINTAIN CLEARANCES FROM EXISTING FOOTINGS PER CBC 1809A.14.

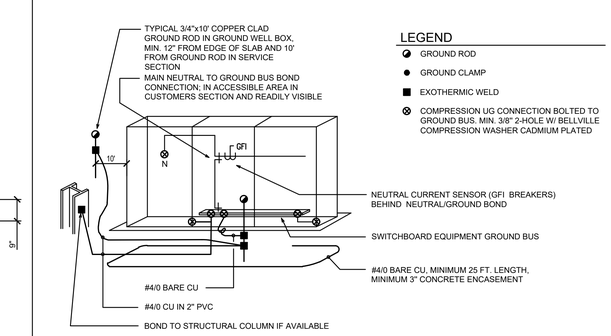
L9 TYPICAL TRENCH DETAIL
SCALE: NO SCALE



G9 DISTRIBUTION BOARD MOUNTING DETAIL (CMU WALL)
SCALE: NO SCALE



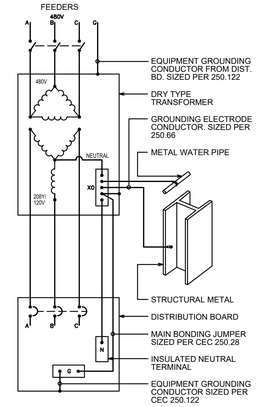
C9 FLUSH PANEL MOUNTING DETAIL
SCALE: NO SCALE



LEGEND
- GROUND ROD
- GROUND CLAMP
- EXOTHERMIC WELD
- COMPRESSION UG CONNECTION BOLTED TO GROUND BUS. MIN. 3/8" 2-HOLE W/ BELLVILLE COMPRESSION WASHER CADMIUM PLATED

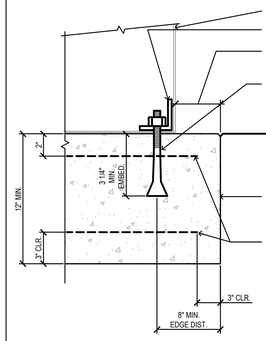
NOTE:
SERVICE GROUND SIZE AS SHOWN OR OTHERWISE AS PER CEC 250. ALL SERVICE GROUNDS TO BE COPPER.

L5 SWITCHBOARD GROUNDING DETAIL
SCALE: NO SCALE



A GROUNDING ARRANGEMENT FOR A SEPARATELY DERIVED SYSTEM WHERE THE GROUNDING ELECTRODE CONDUCTOR CONNECTION IS MADE AT THE TRANSFORMER.

C5 SWITCHBOARD AND TRANSFORMER PAD MTG. DETAIL
SCALE: NO SCALE



G5 TRANSFORMER GROUNDING DETAIL
SCALE: NO SCALE

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APP: 02-121624 INC:
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CONSTRUCTION DOCUMENTS

MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL
LICENSED ARCHITECT MICHAEL R. SONSCH C 36165 02-28-27 RENEWAL DATE STATE OF CALIFORNIA

PROJECT NUMBER 20-51
DATE 08/22/2023
DSA APPLICATION NO. 02 - 121624
FILE NO. 20-H3
PTN NO. 65243-153
DRAWN BY HDE

REVISIONS

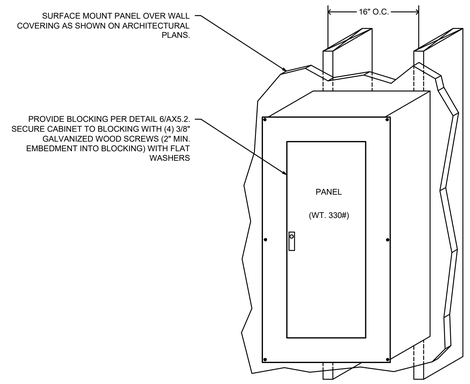
#	DESCRIPTION	DATE

ELECTRICAL DETAILS

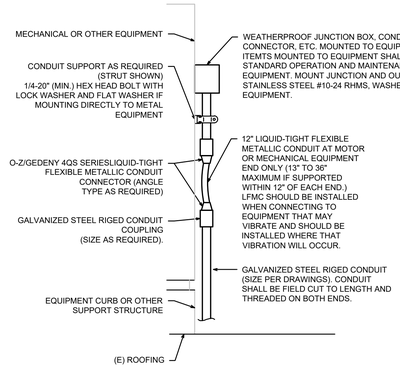
EX2.3

REGISTERED PROFESSIONAL ENGINEER R. J. HARDIN No. 9125 ELECTRICAL STATE OF CALIFORNIA

Hardin-Davidson Engineering
356 Pollasky Ave.
Suite 200
Clovis, CA 93612
559.323.4995 tel
559.323.4928 fax

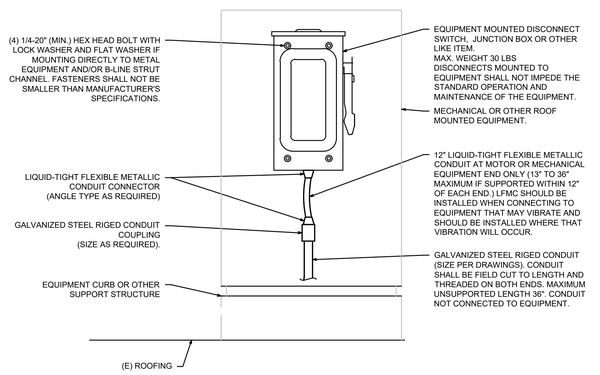


L15 — SCALE: NO SCALE



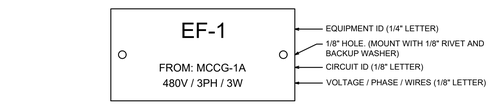
L10 — EQUIPMENT MTD. CONNECTION DETAIL (ROOF)

SCALE: NO SCALE



L5 — EQUIPMENT MTD. DISCONNECT CONNECTION DETAIL (ROOF)

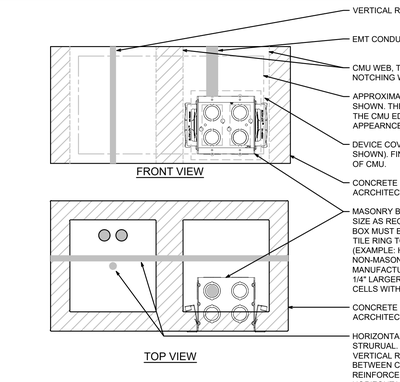
SCALE: NO SCALE



LABEL TYPE:	ENGRAVED 2 LAYER PHENOLIC (OR EQUAL)
LABEL SIZE:	3"W X 1-1/2"H
LABEL COLOR:	BLACK: 120/208/240V RED: 277/480V YELLOW: OVER 480V
TEXT COLOR:	WHITE (YELLOW TAGS SHALL BE BLACK TEXT)
LABEL COLORS SPECIFIED IN WRITTEN SPECIFICATIONS SHALL TAKE PRECEDENCE UON.	
EQUIPMENT ID:	SHALL BE AS IDENTIFIED ON THE PLANS BY THE EQUIPMENT SPECIFIER.
CIRCUIT ID:	SHALL BE THE CIRCUIT SOURCE SWITCHBOARD, PANEL, MCC, ETC.
VOLTAGE / PHASE / WIRES:	VOLTAGE SHALL BE THE COMPLETE VOLTAGE PHASE SHALL BE EITHER 1PH OR 3PH WIRES SHALL BE 2W, 3W OR 4W.

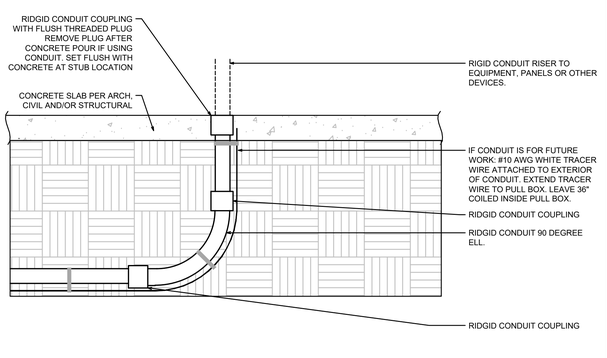
H15 — EQUIPMENT & DISCONNECT LABEL

SCALE: NO SCALE



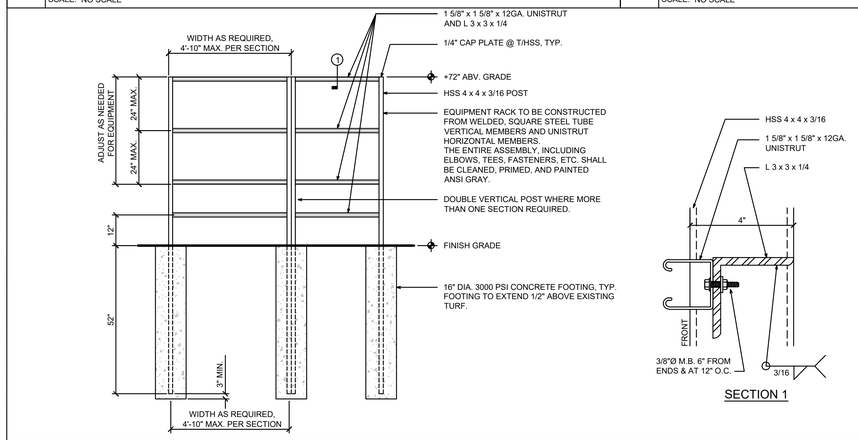
H10 — BOX DETAIL (CMU WALL)

SCALE: NO SCALE



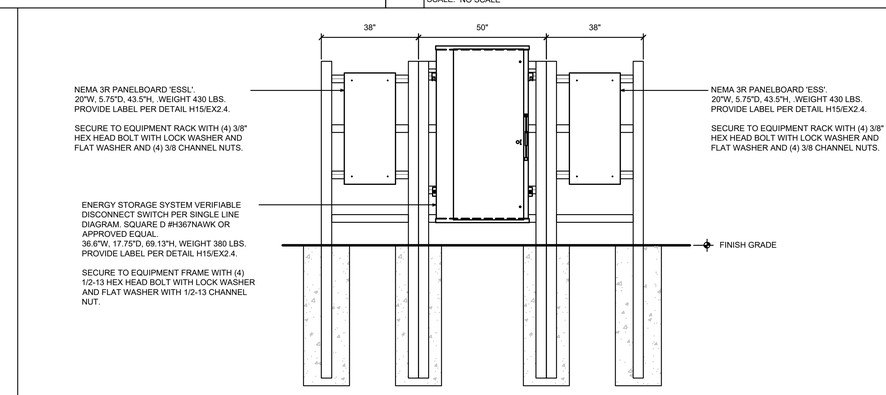
H5 — CONDUIT STUB DETAIL

SCALE: NO SCALE



D15 — TYPICAL EQUIPMENT RACK DETAIL

SCALE: NO SCALE



D8 — EQUIPMENT RACK AT SERVICE YARD DETAIL

SCALE: NO SCALE

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APP: 02-121624 INC:
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SS ☑ FLS ☑ ACS ☑
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PBK

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MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL R. SCHEEN No. 36165 02-28-27 RENEWAL DATE STATE OF CALIFORNIA

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PTN NO.	65243-153
DRAWN BY	HDE

REVISIONS

#	DESCRIPTION	DATE

ELECTRICAL DETAILS

EX2.4

REGISTERED PROFESSIONAL ENGINEER R.J. HARDIN No. 19125 ELECTRICAL STATE OF CALIFORNIA

Hardin-Davidson Engineering
356 Pollasky Ave.
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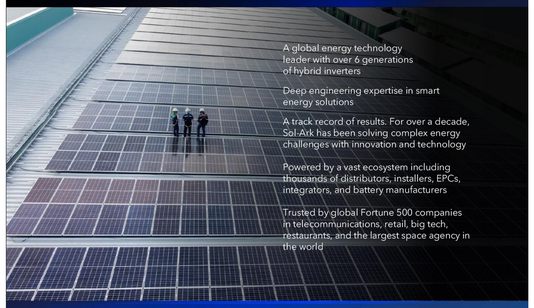
559.323.4595 tel
559.323.4928 fax

Sol-Ark

Sol-Ark Commercial Energy Solutions



A global energy technology leader with over 6 generations of hybrid inverters

Deep engineering expertise in smart energy solutions

A track record of results. For over a decade, Sol-Ark has been solving complex energy challenges with innovation and technology

Powered by a vast ecosystem including thousands of distributors, installers, EPCs, integrators, and battery manufacturers

Trusted by global Fortune 500 companies in telecommunications, retail, big tech, restaurants, and the largest space agency in the world

Sol-Ark | L3 Series Limitless Lithium™ Battery Energy Storage System

480V Options

Battery Energy Storage System

	Outdoor	Indoor
Battery Model Name:	L3 HVR-60	L3 HV-60
ESS Model Name:	L3 HVR-60KWH-60K	L3 HV-60KWH-60K
Sol-Ark Product SKU:		L3-HV-60KWH
System Data		
Compatible Inverter Model	Sol-Ark 60K-3P-480V	
Cell Chemistry	Lithium Iron Phosphate	
Nameplate Energy Capacity (DC)	61.44 kWh	
Usable Energy Capacity (DC) [1]	55.30 kWh	
Built-In DC Disconnect Rating	200A	
Internal Fuse Rating	160A	
Max. # Battery Units Per Inverter	6	1
Max. # Inverters in Parallel	6	1
Recommend Depth of Discharge	90%	
Roundtrip Efficiency Charge/Discharge (DC)	94% (25C, 0.5C)	
System Nominal Voltage (DC)	614.4V	
System Operating Voltage (DC)	588V-672V	
Battery Pack Internal Configuration	12s1p	12s1p
Charge/Discharge Current (DC)[2]		
• Recommend	50A	
• Max. Continuous	100A	
• Peak Discharge (60 sec @ 25°C)	125A	
Battery Max. Continuous Charge/Discharge Power (DC)	61.44kW	
ESS Max. Continuous Charge/Discharge Power (AC)	60kW	
Fault Current Contribution per Battery	4,200A / 1.47ms	
Mechanical Specifications		
Product Dimensions (WxDxH)	76x107x226 cm (30x42x89 in)	58x58x218 cm (23x23x86 in)
Net Weight	950 kg (2,095 lbs)	773 kg (1,705lbs)
Mounting Type	Outdoor Enclosure	Freestanding Rack Mount
Material and Finish	Steel – Corrosion Resistant Powder Coat	Steel – Powder Coated
Operating Temperature[3] and Humidity	-20°C – 50°C (14°F – 122°F) – 5%–85% RH	4°C – 43°C (39°F – 110°F) – 5% –85% RH
Operating Altitude [4]	3000m (9,843 ft)	
Storage Conditions [5]	-4°F – 95°F up to 85% RH (non-condensing) – State of Charge (SOC) 30%	
Ingress Rating	IP55 (NEMA 3R)	IP20 (NEMA 1)
Noise Level @ 1m	75 dBA at 30°C (86°F)	60 dBA at 30°C (86°F)
Seismic Mounting	Up to Category F	
Communication Ports	CAN2.0/RS485	
Battery Module Specifications		
Battery Module Nominal Energy Capacity	5.12kWh	
Battery Module Nominal Voltage and Capacity	51.2V / 100Ah	
Terminal Type	Amphenol SurLok – Push Lock Connector	
Warranty and Certification		
Performance Warranty [6]	10 years or 19MWh Throughput	
Product Warranty	10 Years	
Certifications	UL1973, UL9540, UL9540a, UN38.3, FCC, Prop 65	

1. DC usable energy, test conditions: 95% DOD, 0.3C charge and discharge at 25°C. System usable energy may vary due to system configuration parameters.
2. Output current is affected by battery temperature and SOC.
3. Temperature is based on the average cell temperature as measured by the BMS. Charging is disabled below 0°C (32°F). Derating occurs above 45°C (113°F). See Sol-Ark technical sales for outdoor sites.
4. Battery will operate at a maximum of 1C charge/discharge up to 2000m, above 2000m maximum output is derated to 0.8C, contact Sol-Ark for details.
5. Storage temperature of the battery with no charge or discharge
6. EOL (End of Life) 70% retained capacity. See L3 Series warranty document for details.

I18 BATTERY ENERGY STORAGE SYSTEM BATTERY DATA SHEETS
SCALE: NO SCALE

DATASHEET

60K-3P-480V

C&I Hybrid Inverter

Input Data (PV)	
Max. Allowed PV Power (STC)	78,000W
Nominal Voltage Range	150-850V
Startup Voltage	150V
Max. Input Voltage [1]	1,000V
Max. Input Current per MPPT	36A
Max. short circuit current per MPPT	55A
No. of MPP Trackers	4
No. of PV Strings per MPPT	2
Max. AC Coupled Input	120,000W
Output Data (AC)	
Nominal AC Voltage (3Φ)	277/480V
Grid Frequency	50 / 60Hz
Real Power, max continuous (3Φ)	60,000W
Max. Output Current	72.3A
Peak Apparent Power (7s, off-grid, 3Φ)	120,000VA @ 144A
Max. Grid Passthrough Current	200A
Power Factor Output Range	+/- 0.8 adjustable
Backup Transfer Time	5ms (adjustable)
CEC Efficiency	96.5%
Max Efficiency	97.5%
Design (DC to AC)	Transformerless DC
Stackable	Up to 12 in parallel
Battery Input Data (DC)	
Battery Chemistry	Lithium iron phosphate
No. of Battery Inputs	2
Battery Input Terminal Rating	50A
Nominal DC Voltage	> 600V
Operating Voltage Range	160 - 800V
Battery Capacity Range	50 – 9900Ah
Max. Battery Charge / Discharge Current	100A (50A per input)
Charge Controller Type	3-Stage with Equalization
Grid to Battery Charging Efficiency	96.0%
Automatic Generator Start (AGS)	2 Wire Start - Integrated
BMS Communication[2]	CANBus & RS485
General Data	
Dimensions (H x W x D)	894 x 528 x 295 mm (35.2 x 20.8 x 11.6 in)
Weight	79.4 kg (172 lb)
Enclosure	IP65 / NEMA 3R
Ambient Temperature	-40–60°C, > 45°C Derating
Noise	< 30 dB @ 25°C (77°F)
Idle Consumption - No Load	60W
Communication and Monitoring	Wi-Fi & LAN Hardware Included
Warranty	10 Years (15 Years [4])
Category	
Certifications and Listings (Grid Support Interactive Inverter)	UL 1741-2021 (incl UL1741SB), CSA C22.2 No 107.1-16, IEEE 1547-2018 & 1547a-2020 & 1547.1-2020 (SRD V2.0), UL1699B, CEC[3], SGIP[3]
PV DC Disconnect Switch – NEC 240.15	Integrated
Ground Fault Detection – NEC 690.5	Integrated
PV Rapid Shutdown Control – NEC 690.12	Integrated
PV Arc Fault Detection – NEC 690.11	Integrated
PV Input Lightning Protection	Integrated
PV String Input Reverse Polarity Protection	Integrated
Surge Protection	DC Type II / AC Type III

1. See Installation Guide for more details on sizing array strings, the highest input voltage is based on the voltage open circuit of the array at the minimum design temperature.
2. Active BMS communication is required for all lithium batteries. A list of compatible batteries can be found on our website.
3. Currently pending listing.
4. 5-year extension is available for purchase by registered Gold level installers only.

I9 BATTERY ENERGY STORAGE SYSTEM INVERTER DATA SHEETS
SCALE: NO SCALE

THE BATTERY ENERGY STORAGE SYSTEM BEING INSTALLED UNDER THIS APPLICATION IS SIZED FOR FUTURE STADIUM MODERNIZATION PROJECT (APPLICATION HAS NOT BE SUBMITTED). THE FUTURE STADIUM MODERNIZATION PROJECT WILL REQUIRE AN ADDITIONAL 37.3 kWH AND 8.8kW OUTPUT.

PHOTOVOLTAIC SYSTEM SIZE CALCULATION

Equation 9-1		
kWPV	18.7	kWdc size of the PV system (CFA x A)/1000
CFA	11489	Conditioned Floor Area
A	1.63	Capacity Factor from Table 9-1
Equation 9-2		
kWPV	52.1	kWdc size of the PV system (SARA x 14W/ft2)
SARA	3722.3	Solar Access Roof Area
kWPV	18.7	The smaller of Equation 9-1 or 9-2
kWPV	**648.8**	Size of the PV System Provided (Existing)

BATTERY SYTSEM SIZE CALCULATION

Equation 9-3		
kWhbatt	37.3	kWhbatt size of the battery system (kWPVdc x B/$D^{0.5}$) required
kWPVdc	18.7	PV system capacity required by Section 9.2
B	1.87	Battery energy capacity factor from Table 9-6
D	0.88	Rated single charge-discharge cycle AC to AC efficiency
kWhbatt	**55.3**	kWhbatt size of the battery system provided
Equation 9-4		
kWbatt	8.6	kWbatt size of the battery system (kWPVdc x C)
kWPVdc	18.7	PV system capacity required by Section 9.2
C	0.46	Battery power capacity factor from Table 9-6
kWbatt	**60.0**	kWbatt power capacity of the battery system provided

EXISTING INSTALLED SOLAR SYSTEM INSTALLED UNDER DSA #02-119114 SPECIFICATIONS:

PV SYSTEM SUMMARY

MODULE MODEL	LONGi SOLAR LR4-72HPH-445M
MODULE STC DC RATING	445W
TOTAL MODULE COUNT	1,458
TOTAL STC DC SYSTEM SIZE	648.81kW
NOMINAL AC SYSTEM SIZE	528.00kW
CEC-AC SYSTEM SIZE	597.760kW
INVERTER MODELS	(7) CHINT POWER SYSTEMS AMERICA CPS SCA60KTL-DO/US-480
	(3) CHINT POWER SYSTEMS AMERICA CPS SCA36KTL-DO/US-480
MODULE TILT	7°
ARRAY AZIMUTH	180°
POINT OF INERCONNECTION FAULT CURRENT CONTRIBUTION	1,276 AIC
POINT OF INERCONNECTION RATING	65,000 AIC

CAMPUS PV SYSTEM CALCULATION TABLE (DSA PR 23-04)

TOTAL EXISTING CAMPUS PV SYSTEM CAPACITY (a)	
PV SYSTEM A:	
SYSTEM SIZE (kWdc):	648.8
INSTALLED:	Nov-22
AGE (YEARS):	2
ANNAUAL DEGRADATION:	0.80%
TOTAL DEGRADATION:	1.60%
KW DEGRATION (kWdc):	10.4
CURRENT DEGRADED SYSTEM SIZE (kWdc) (a):	**638.4**
EQUIVALENT CALCULATED TOTAL EXISTING CAMPUS PHOTOVOLTAIC DIRECT CURRENT SIZE (kWdc) (b)	
CAMPUS SQ. FT.	230,175
SOLAR kWdc PER SQ. FT	1.63
REQUIRED SYSTEM SIZE (kWdc) (b)	**375.2**
EXCESS CAMPUS POWER (kWdc) (c)	
CURRENT SIZE - REQUIRED SYSTEM SIZE (kWdc) (c)	**263.2**
NEW BUILDING REQUIRED PV SIZE (kWdc) (d)	**18.7**
FINAL SURPLUS CAMPUS POWER (kWdc) (f)	
EXCESS CAMPUS POWER - NEW BUILDING REQUIRED (kWdc) (f)	**244.5**

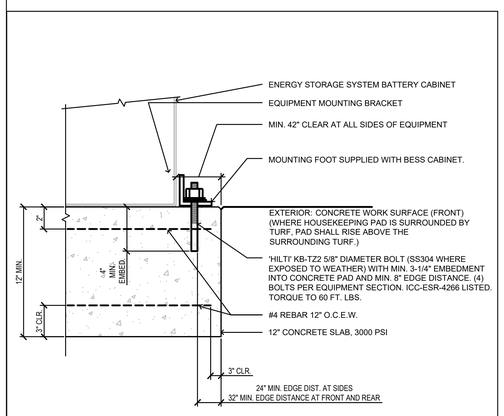
THE FOLLOWING CALCULATIONS WERE PERFORMED IN JUSTIFICATION FOR THE USE OF THE EXISTING SOLAR INSTALLATION UNDER DSA APPLICATION #02-119114 (SEE SUMMARY AT LEFT). THE EXISTING FOOTPRINTS OF ALL EXISTING BUILDINGS ON THE CAMPUS WERE MEASURED. THIS VALUE INCLUDES NON-CONDITIONED FLOOR AREAS AS WELL AS BUILDINGS THAT HAVE A CONDITIONED FLOOR AREA THAT DOES NOT REQUIRE SOLAR AS IT WOULD BE LESS THAN 4KW WHICH IS EXEMPT FROM SOLAR REQUIREMENTS.

THE EXISTING SOLAR REQUIREMENT WOULD BE 375.2KW.

SUBTRACTING THE SOLAR REQUIREMENT FROM THE INSTALLED AND DEGRADED SYSTEM RESULTS IN A CURRENT "EXCESS" SOLAR OF 263.2 KW.

THE CURRENT PROPOSED BUILDING HAS A REQUIREMENT OF 18.7KW.

THIS RESULTS IN A FINAL EXCESS SOLAR CAPACITY OF 244.5KW.



A18 BATTERY CABINET MTG. DETAIL
SCALE: NO SCALE

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MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL R. SCHEEN C-36165 02-28-27 RENEWAL DATE STATE OF CALIFORNIA

PROJECT NUMBER	**20-51**
DATE	**08/22/2023**
DSA APPLICATION NO.	**02 - 121624**
FILE NO.	**20-H3**
PTN NO.	**65243-153**
DRAWN BY	HDE

REVISIONS

#	DESCRIPTION	DATE

SOLAR PHOTOVOLTAIC SYSTEM DETAILS

EX2.8

REGISTERED PROFESSIONAL ENGINEER R.J. HARDIN No. 9125 ELECTRICAL STATE OF CALIFORNIA

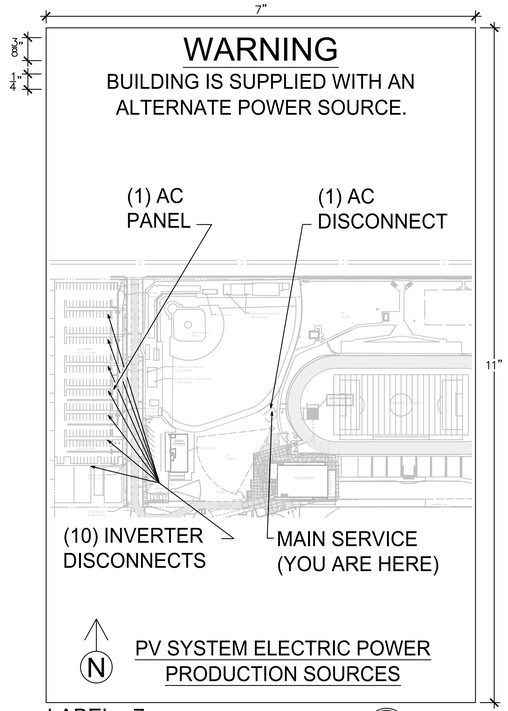
Hardin-Davidson Engineering
356 Pollasky Ave.
Suite 200
Clovis, CA 93612
559.323.4595 tel
559.323.4928 fax

LOCATION:	MAIN SERVICE DISCONNECT
BACKGROUND	RED
LETTERING	WHITE
NOTES:	

LABEL - 6

SCALE: NONE

6



LABEL - 7

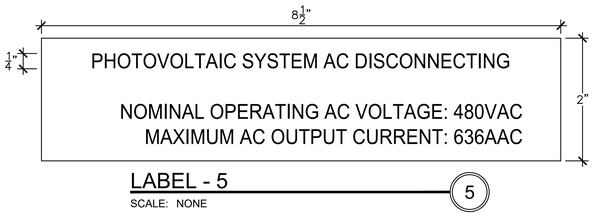
SCALE: NONE

7

WARNING LABELS & MARKING NOTES:

1. MARKING IS REQUIRED ON INTERIOR AND EXTERIOR DIRECT-CURRENT (DC) CONDUIT, ENCLOSURES, RACEWAYS, CABLE ASSEMBLIES, JUNCTION BOXES, COMBINER BOXES AND DISCONNECTS.
2. THE MATERIALS USED FOR MARKING SHALL BE REFLECTIVE, WEATHER RESISTANT AND SUITABLE FOR THE ENVIRONMENT. MARKING AS REQUIRED IN SECTIONS 605.11.1.2 THROUGH 605.11.1.4 SHALL HAVE ALL LETTERS CAPITAL SIZED WITH A MINIMUM HEIGHT OF 3/8 INCH (9.5 MM) WHITE ON RED BACKGROUND.
3. THE MARKING SHALL CONTAIN THE WORDS "WARNING: PHOTOVOLTAIC POWER SOURCE."
4. THE MARKING SHALL BE PLACED ADJACENT TO THE MAIN SERVICE DISCONNECT IN A LOCATION CLEARLY VISIBLE FROM THE LOCATION WHERE THE DISCONNECT IS OPERATED.
5. MARKING SHALL BE PLACED ON INTERIOR AND EXTERIOR DC CONDUIT. RACEWAYS, ENCLOSURES AND CABLE ASSEMBLIES EVERY 10 FEET (3048 MM), WITHIN 1 FOOT (305 MM) OF TURNS OR BENDS AND WITHIN 1 FOOT (305 MM) ABOVE AND BELOW PENETRATIONS OF ROOF/CEILING ASSEMBLIES, WALLS OR BARRIERS.

LOCATION:	MAIN SERVICE DISCONNECT
BACKGROUND	RED
LETTERING	WHITE
NOTES:	1 SIGN AT (E) SERVICE METER. PLACE ADDITIONAL SIGN AT SOLAR AC SYSTEM DISCONNECT WHERE NOT LOCATED WITHIN 25' & IN VIEW OF (E) SERVICE METER.



LOCATION:	AC DISCONNECT
BACKGROUND	RED
LETTERING	WHITE
NOTES:	

LABEL - 5

SCALE: NONE

5

ARC FLASH WITH EXAMPLE TEXT AND DIMENSIONS

LOCATION:	INVERTER DISCONNECTS, AC DISCONNECT, PANEL
BACKGROUND	WHITE, RED OR YELLOW
LETTERING	BLACK AND/OR RED
NOTES:	

LABEL - 8

SCALE: NONE

8

I18 RENEWABLES LABELS

SCALE: NO SCALE

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PTN NO.	65243-153
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REVISIONS

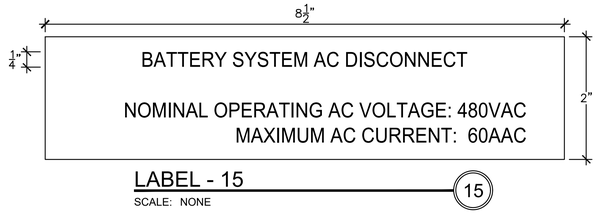
#	DESCRIPTION	DATE

RENEWABLES LABELS

EX2.9

REGISTERED PROFESSIONAL ENGINEER R.J. HARDIN NO. 9125 ELECTRICAL STATE OF CALIFORNIA

Hardin-Davidson Engineering
356 Pollasky Ave.
Suite 200
Clovis, CA 93612
559.323.4995 tel
559.323.4928 fax

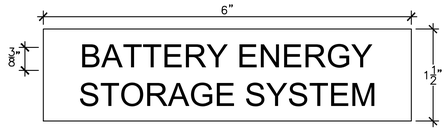


LABEL - 15

SCALE: NONE

15

LOCATION:	AC DISCONNECT 'FD2'
BACKGROUND	RED
LETTERING	WHITE
NOTES:	

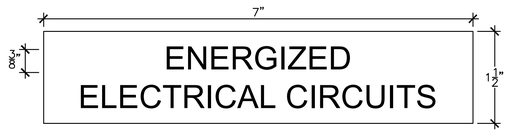


LABEL - 16

SCALE: NONE

16

LOCATION:	BESS
BACKGROUND	RED
LETTERING	WHITE
NOTES:	

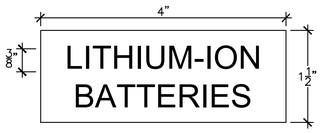


LABEL - 17

SCALE: NONE

17

LOCATION:	BESS
BACKGROUND	RED
LETTERING	WHITE
NOTES:	



LABEL - 18

SCALE: NONE

18

LOCATION:	BESS
BACKGROUND	RED
LETTERING	WHITE
NOTES:	

LABEL - 19

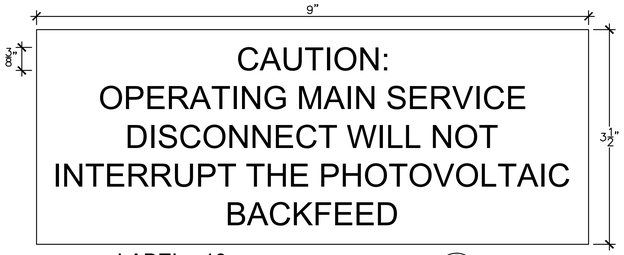
SCALE: NONE

19

LOCATION:	BESS
BACKGROUND	RED
LETTERING	WHITE
NOTES:	

BESS WARNING LABEL NOTE:

1. PROVIDE SIGNAGE ON THE BATTERY ENERGY STORAGE SYSTEM WITH THE CURRENT CONTACT INFORMATION, INCLUDING PHONE NUMBER, FOR PERSONNEL AUTHORIZED TO SERVICE THE EQUIPMENT AND FOR FIRE MITIGATION PERSONNEL REQUIRED BY SECTION 1207.1.6.1



LABEL - 10

SCALE: NONE

10

LOCATION:	MAIN SERVICE DISCONNECT
BACKGROUND	RED
LETTERING	WHITE
NOTES:	

LABEL - 11

SCALE: NONE

11

LOCATION:	AC DISCONNECT, PANELS, TRANSFORMERS, DAS
BACKGROUND	BLUE
LETTERING	WHITE
NOTES:	

I18 RENEWABLES LABELS

SCALE: NO SCALE

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REVISIONS

#	DESCRIPTION	DATE

RENEWABLES LABELS

EX2.10

REGISTERED PROFESSIONAL ENGINEER R. J. HARDIN No. 9125 ELECTRICAL STATE OF CALIFORNIA

Hardin-Davidson Engineering
356 Pollasky Ave, Suite 200
Clovis, CA 93612
559.323.4995 tel
559.323.4928 fax

Energy Storage System Safety:

Plan Review and Inspection Checklist

PC Cole
DR Conover

April 2017

Prepared for
U.S. Department of Energy, Contract DE-AC05-76RL01830

Pacific Northwest National Laboratory
Richland, Washington 99352

Sandia National Laboratories
Albuquerque, New Mexico 87185

Executive Summary

Codes, standards, and regulations (CSR) governing the design, construction, installation, commissioning, and operation of the built environment are intended to protect the public health, safety, and welfare. While these documents change over time to address new technology and new safety challenges, there is generally some lag time between the introduction of a technology into the market and the time it is specifically covered in model codes and standards developed in the voluntary sector. After their development, there is also a timeframe of at least a year or two until the codes and standards are adopted. Until existing model codes and standards are updated or new ones are developed and then adopted, one seeking to deploy energy storage technologies or needing to verify the safety of an installation may be challenged in trying to apply currently implemented CSRs to an energy storage system (ESS).

The Energy Storage System Guide for Compliance with Safety Codes and Standards[1] (CG), developed in June 2016, is intended to help address the acceptability of the design and construction of stationary ESSs, their component parts, and the siting, installation, commissioning, operations, maintenance, and repair/renovation of ESS within the built environment. The bases for addressing acceptability are CSRs that have been adopted as of the publication date of this CG. Until those CSRs are updated, specific criteria for some ESS may not be provided in the CSR, and as a result, the acceptability of the ESS may be more challenging in terms of documenting and verifying it for safety.

The CG is anticipated to facilitate the timely deployment of stationary ESSs within an infrastructure of safety-related regulations, specifications, and other governing (adopted) criteria based on voluntary sector standards and model codes developed in the United States that may not have been updated to specifically cover all ESS technologies or their intended application. The availability of this CG hopefully will assist those that need to document compliance with current safety-related codes and standards and guidance that what is proposed is safe. The CG is also intended to assist those responsible for verifying compliance with those same codes and standards.

The CG first covers frequently asked questions in order of how they are likely to occur along the timeline associated with development and deployment of an ESS. It then addresses the ESS as a product or combination of components followed by the installation of the ESS in the built environment. Guidance for documenting or verifying compliance with current CSRs is also provided to facilitate the review and approval of ESS installations. Those seeking approval for an ESS should consider completion of this or a similar document in conjunction with any plans and specifications submitted for consideration by an AHJ.

Because of the current evolution in ESS technology development and deployment, anticipated use of the CG and future availability of details associated with particular ESS technology installations, it is recognized this document can be further enhanced. The CG will be updated to include the following Plan Review/Inspection Checklist. The authors welcome suggestions for future enhancements of this document.

[1] Energy Storage System Guide for Compliance with Safety Codes and Standards, June 2016, http://www.sandia.gov/ess/publication/pacific-northwest-national-laboratory-pnnl-publications-2/

Acronyms and Abbreviations

A	ampere
AC	alternating current
AHJ	authority having jurisdiction
ANSI	American National Standards Institute
ASTM	American Society for Testing and Materials
CG	Compliance Guide
CSR	codes, standards, and regulations
ESS	energy storage system
FMEA	failure modes and effects analysis
Hz	hertz
HVAC	heating, ventilation, and air conditioning
ICC	International Code Council
ICE	In Case of Emergency
IEEE	Institute of Electrical and Electronics Engineers
IFC	International Fire Code
kW	kilowatt
kWh	kilowatt hour
NFPA	National Fire Protection Association
NRTL	Nationally Recognized Testing Laboratories
UL	Underwriters Laboratory
V	voltage/volt
VA	volt ampere
VAC	volts of alternating current
WG	Working Group

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Energy Storage System (ESS) Plan Review/Inspection Checklist i

Energy Storage System (ESS) Plan Review/Inspection Checklist

Date: ____/__/____

Project Name _____

Address _____

State: _____ County: _____ Jurisdiction: _____

Facility Owner (owner of facility where ESS is installed):_____ I.C.E. #_____

ESS Owner (owner of ESS if different than facility owner):_____ I.C.E. #_____

☐ New System ☐ Addition ☐ Renewal or Renovation ☐ Repair

System Manufacturer(s): _____

System Installer: _____

System Integrator (if one is involved in the project):_____ I.C.E. #_____

System Operator: _____ I.C.E. #_____

System Name: _____

System Address: _____

System Location (in relation to the primary electrical meter): _____

Services Provided: _____

ESS Technology Information

Type of ESS			
ESS chemistry (if electrochemical)			
Enclosure Type			
Footprint Area (ft.^{2})			
Weight (lbs.)			
Overall Dimensions L x W x H (ft.)	Length	Width	Height
Rated Continuous Discharge Power (kW)			
Input Voltage into the ESS (VAC)			
Output Voltage (nominal)(VAC)			
Frequency (Hz)			
Number of phases (input and output)	Input	Output	
Duty cycle (if applicable)			
Maximum short circuit current (A)			
Auxiliary (if applicable)	Input voltage (V)	Output voltage (V)	
Auxiliary (if applicable)	Current (A)	Frequency (Hz)	
Rated Discharge Energy (kWh)			
Minimum Discharge Time (min.)			
Maximum Discharge Time (min.)			
Operating Temperature Range (°F)			
Stored Energy Capacity (kWh)			
Self-discharge Rate (% energy loss/day)			
Liquid Capacity (Gal.) needed for secondary containment of flow batteries			
Special environmental ratings and limitations as applicable	Seismic	Indoor	Outdoor

Pre-Inspection/Plan Review

1.1 Documentation prepared by a registered engineer or approved third party indicating that the system and system components meet all applicable safety standards (e.g., UL 9540, UL 1973, etc.).

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ N/A	☐ Yes	
☐ No		☐ No	
☐ N/A		☐ N/A	

1.2 Documentation of Failure Modes and Effects Analysis (FMEA), Hazard Analysis, or other analysis is provided that supports the safety of the system and system components.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ N/A	☐ Yes	
☐ No		☐ No	
☐ N/A		☐ N/A	

Self-Contained, Prepackaged Energy Storage Systems

2.1 Each self-contained, prepackage energy storage system is designed, tested, and listed in accordance with applicable safety standards (e.g., UL 9540).

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

Pre-Engineered Energy Storage Systems

3.1 Each pre-engineered energy storage system comprising two or more factor-matched modular components intended to be assembled in the field is designed, tested, and listed in accordance with applicable safety standards (e.g., UL 9540).

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

Engineered and Field-Constructed Energy Storage Systems

4.1 System is composed of components that have been listed and evaluated to safety standards that are applicable to each component.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

4.2 Documentation in the form of a Failure Modes and Effects Analysis (FMEA), Hazard Analysis or other approved analysis is provided that supports the safety of the system and its components.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

Repairs to Existing Energy Storage System

5.1 Repairs to an existing energy storage system are made in such a manner that the existing system as approved (when originally installed and commissioned) is not modified or documentation is provided by the entity performing the repair(s) (e.g., Failure Modes and Effects Analysis [FMEA] or other approved analysis) that supports the safety of the repair(s) to an existing system and is approved by the authority having jurisdiction.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

5.2 Repairs that necessitate any substantial change to the existing energy storage system as originally installed have been assessed in relation to the applicable provisions of the sections below and the system has been recommissioned.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

5.3 Any repairs to batteries associated with the existing energy storage system have been performed according to the battery manufacturer's instructions. Where an energy storage system battery is replaced, it has been replaced with a battery that has been tested and listed in accordance with UL 1973 or otherwise approved by the authority having jurisdiction.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

Additions to Existing Energy Storage System

6.1 Additions to existing energy storage system satisfy the provisions applicable to the original system classifications and are made in such a manner that the existing system, as approved when originally installed and commissioned, is not materially modified or documentation is provided (e.g., Failure Modes and Effects Analysis [FMEA] or other approved analysis) by the entity performing the addition that supports the safety of the addition to an existing system and is approved by the authority having jurisdiction.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

6.2 Additions to existing energy storage system which necessitate a change to the manner in which the existing system is installed, meet the applicable provisions of this document, and the system has been recommissioned in accordance with the commissioning requirements after the addition is completed.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

Renewal or Renovation of Existing Energy Storage System

7.1 Renewal or renovation to existing energy storage system is made in such a manner that the existing system, as approved when originally installed and commissioned, is not materially modified or documentation (e.g., Failure Modes and Effects Analysis [FMEA] or other approved analysis) is provided by the entity performing the renewal or renovation that supports the safety of the renewal or renovation, and is approved by the authority having jurisdiction.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

7.2 Renewal or renovation that necessitates any material change meets the applicable provisions of this document and the system is recommissioned in accordance with commissioning requirements.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

General Siting of ESS and Associated Equipment, Components, and Controls

8.1 The system is sited and installed in accordance with the manufacturer's installation instructions or when relevant the system designer or integrator.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

8.2 The system is placed on an approved bearing surface capable of supporting the calculated dead and live loads of all system components designed to bear on the foundation.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

8.3 When inside or on a building, dead and live loads associated with the system are considered in the building design.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

8.4 The system is located or protected where it will not be adversely impacted by natural hazards (i.e., rain, snow, wind, lightning, and wildfire).

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

8.5 The system is anchored to resist anticipated seismic forces in accordance with IEEE 693 or locally adopted building codes.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

8.6 The system is located above the base flood elevation or otherwise protected against flooding.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

8.7 Signage indicating the designated means of access to and egress from the installation is provided.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

8.8 Signage indicating containment and/or neutralization means provided for incident response mechanisms and any flow battery electrolyte tanks.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

8.9 The system is installed outside potentially hazardous atmospheres as defined by NFPA 70 or IEEE C-2 or tested and listed for installation within such atmospheres.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

8.10 Emergency egress: The system is located in a manner to not adversely affect emergency egress from its location and buildings or facilities in which it is installed.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

8.11 Emergency access: The system is located in a manner that is accessible by emergency responders.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

8.12 The system is designed and located to allow for service and maintenance and provided with artificial lighting on the serviceable areas of the system.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

8.13 The system is located at or greater than minimum required distance away from stored combustible materials, hazardous chemicals, high-piled stock and other fire hazard exposures.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

8.14 The system is located or protected to prevent physical damage.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

8.15 Multiple systems are located or protected such that a fire or failure of one system does not pose an exposure hazard to an adjacent system.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

8.16 Fire protection of systems and the surrounding area is provided during construction.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

8.17 Safety signs and labels indicating hazards associated with the system are provided.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

Outdoor Installations of Energy Storage System and Associated Equipment, Components and Controls

9.1 System is designed and constructed for outdoor installation.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

9.2 Any air intakes and exhausts are designed and located so they are not adversely affected by other exhausts, gases or contaminants.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

9.3 Exhaust outlet(s) that exhaust other than ventilation air are designed and located the required distance from heating, ventilating, and air conditioning (HVAC) air intakes; windows, doors; loading docks; and other openings into buildings and facilities.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

9.4 Exhaust outlet(s) are not directed onto walkways or pedestrian or vehicular travel paths.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

9.5 Security barriers, fences, landscaping and other enclosures do not affect required intake and exhaust air flow.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

9.6 Systems and air intakes and exhausts are not located in areas used for combustible, flammable, or hazardous materials storage.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

9.7 The system is not located in an area designated as an Urban Wildland Interface.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

Rooftop Installations of Energy Storage System and Associated Equipment, Components and Controls

10.1 Designed and installed in accordance with applicable outdoor installation requirements and protected against anticipated environmental exposures.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

10.2 The system is installed on noncombustible rooftops of buildings that are not located above the maximum acceptable height above grade.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

10.3 Access to the roof for first responders is provided either through the interior of the building or on the exterior of the building.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

10.4 A service walkway meeting the minimum required width is provided for service and emergency personnel from the point of access to the roof to and around the system.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

10.5 The system is located from the edge of the roof a distance equal to at least the height of the system, equipment, or component, but not less than the minimum acceptable distance for roof mounted equipment.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

10.6 Roofing materials under and within the required horizontal distance are noncombustible or have a Class A rating when tested in accordance with ASTM E108, Standard Test Method for Fire Tests of Roof Coverings, or UL 790, Standard Test Methods for Fire Tests of Roof Coverings.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

Interior Installations of ESS and Associated Equipment, Components and Controls

11.1 Rooms, spaces, and areas in which the system is located have a floor level that is not more than the established safe distance above the lowest level of fire department vehicle access and that is not more than the established safe distance below the finished floor of the lowest level of exit discharge (portion of a means of egress system between the termination of an exit and a public way).

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

11.2 Rooms, spaces, or areas dedicated to or housing the system or system components are separated from other areas of the building by building construction in accordance with the building and fire codes.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

11.3 Openings into rooms, spaces, or areas dedicated to or housing the system or system components are protected by fire doors and dampers in accordance with the building and fire codes.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

11.4 Rooms, spaces, or areas containing dedicated to or housing the system or system components are provided with egress in accordance with the building and fire codes.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

11.5 Rooms, spaces, or areas that contain a potential hazardous level of flammable gas are provided with a gas detection system in accordance with the fire code.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

11.6 When located in an area accessible to other than service personnel, batteries are contained in a noncombustible cabinet or other enclosure that prevents access by unauthorized personnel.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

Interconnections with Other Systems

12.1 All electrical connections to a self-contained prepackaged energy storage system or the components of a pre-engineered energy storage system comply with the provisions of NFPA 70, National Electrical Code, when installed on the customer side of the primary electrical meter, or IEEE C-2, National Electrical Safety Code, when installed on the utility side of the primary electrical meter.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

12.2 Connections to other energy sources are in accordance with NFPA 54, National Fuel Gas Code; NFPA 58, Liquefied Petroleum Gas Code; NFPA 2, Hydrogen Gas Code; and other national standards applicable to the energy source connected to the energy storage system.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

12.3 All energy sources are provided with disconnecting means and a visible identification of the disconnecting means in accordance with the standards applicable to the interconnection of the energy storage system.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

12.4 All connections associated with the energy storage system including any required plumbing, fire alarm, detection, control circuits, or mechanized systems are in accordance with applicable nationally recognized standards, including any necessary provisions for ventilation, thermal management, exhaust, and fire protection.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

12.5 Where the building or facilities in which the energy storage system is installed are required by the local building or fire code to have central operation and control systems, the control and management systems associated with the energy storage system are connected into those operational and control systems.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

Ventilation, Thermal Management and Exhaust

13.1 Where self-contained and prepackaged or pre-engineered energy storage system include a tested and listed enclosure as part of the system are located indoors and have sealed direct ventilation and exhaust systems, the ventilation and exhaust systems that connect the system with the outdoor environment are designed and installed in accordance with the terms of the listing and manufacturer's installation instructions.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

13.2 Ventilation and exhaust systems are designed to provide a negative or neutral pressure in the room or area where the energy storage system is installed, relative to the remainder of the adjacent interior spaces that are not completely sealed from and have no openings into the room or area where the system is installed.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

13.3 Where located indoors and where there is a potential for a hazardous level of gases being produced by the energy storage system or occurring within the indoor space where the system is located, the indoor space is provided by either an explosion prevention system or the indoor space is provided with sufficient ventilation to prevent a potentially hazardous level of flammable gases.

Plans Verified	Field Verified	Complies	Comments/Assumptions
☐ Yes	☐ Yes	☐ Does Not Comply	
☐ No	☐ No	☐ Not Observable	
☐ N/A	☐ N/A	☐ Not Applicable	

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 01/23/2025

PBK

ARCHITECT PBK Architects, Inc.
FRESNO
7790 North Palm Avenue
Fresno, CA 93711
559-448-8400 P
559-448-8467 F
PBK.com

MADERA HIGH SCHOOL FIELDHOUSE

200 SOUTH "L" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

MADERA UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL R. SCHEIDEN C 36165 02-28-27 RENEWAL DATE STATE OF CALIFORNIA

PROJECT NUMBER
20-51

DATE
08/22/2023

DSA APPLICATION NO.
02 - 121624

FILE NO.
20-H3

PTN NO.
65243-153

DRAWN BY
HDE

REVISIONS

#	DESCRIPTION	DATE

B.E.S.S. DOCUMENT.

EX2.11

REGISTERED PROFESSIONAL ENGINEER R. J. HARDIN No. 9125 ELECTRICAL STATE OF CALIFORNIA

Hardin-Davidson Engineering
356 Pollasky Ave.
Suite 200
Clovis, CA 93612
559.323.4995 tel
559.323.4928 fax

I18 B.E.S.S. COMMISSIONING
SCALE: NO SCALE

13.4	A separate mechanical ventilation system meeting the provisions of the local building, mechanical, and fire codes is provided for any dedicated room or enclosed area containing an energy storage system.				
Plans Verified	Field Verified		Complies	Comments/Assumptions	
Yes	Yes		Does Not Comply		
No	No		Not Observable		
N/A	N/A		Not Applicable		
13.5	Where required, a means of temperature and/or humidity control in the room or enclosed area is provided to maintain required operating conditions for the energy storage system.				
Plans Verified	Field Verified		Complies	Comments/Assumptions	
Yes	Yes		Does Not Comply		
No	No		Not Observable		
N/A	N/A		Not Applicable		
13.6	The mechanical ventilation system serving the energy storage system provides sufficient ventilation air for thermal management of the system.				
Plans Verified	Field Verified		Complies	Comments/Assumptions	
Yes	Yes		Does Not Comply		
No	No		Not Observable		
N/A	N/A		Not Applicable		
13.7	The inlets of the mechanical ventilation system are designed to prevent foreign matter from entering the ventilation system and accumulating on the outside of or immediately adjacent to the inlet.				
Plans Verified	Field Verified		Complies	Comments/Assumptions	
Yes	Yes		Does Not Comply		
No	No		Not Observable		
N/A	N/A		Not Applicable		
13.8	The mechanical ventilation system is controlled so that, if needed, it continues to operate regardless of the operating status of the energy storage system.				
Plans Verified	Field Verified		Complies	Comments/Assumptions	
Yes	Yes		Does Not Comply		
No	No		Not Observable		
N/A	N/A		Not Applicable		
13.9	The mechanical ventilation system has a manual control to shut off the energy storage system in case of emergency. The manual control readily visible and accessible and is provided with the necessary signage to immediately identify the control.				
Plans Verified	Field Verified		Complies	Comments/Assumptions	
Yes	Yes		Does Not Comply		
No	No		Not Observable		
N/A	N/A		Not Applicable		
13.10	Where required, a separate mechanical exhaust system meeting the provisions of the local building, mechanical and fire codes is provided for the room or area where the energy storage system is located.				
Plans Verified	Field Verified		Complies	Comments/Assumptions	
Yes	Yes		Does Not Comply		
No	No		Not Observable		
N/A	N/A		Not Applicable		

12

13.11	The mechanical exhaust system provides exhaust air equal to or greater than that provided by the ventilation and thermal management system and is interlocked to operate in conjunction with the ventilation and thermal management system.				
Plans Verified	Field Verified		Complies	Comments/Assumptions	
Yes	Yes		Does Not Comply		
No	No		Not Observable		
N/A	N/A		Not Applicable		
13.12	Where harmful emissions from the energy storage system are possible, a mechanical exhaust system is provided and is designed to ensure that harmful emissions are exhausted to a safe location.				
Plans Verified	Field Verified		Complies	Comments/Assumptions	
Yes	Yes		Does Not Comply		
No	No		Not Observable		
N/A	N/A		Not Applicable		
13.13	Inlets to the mechanical exhaust system are designed to prevent foreign matter from entering the system and to prevent the accumulation of foreign matter outside and immediately adjacent to the inlet.				
Plans Verified	Field Verified		Complies	Comments/Assumptions	
Yes	Yes		Does Not Comply		
No	No		Not Observable		
N/A	N/A		Not Applicable		
13.14	Outlets of the mechanical exhaust system are designed to prevent the accumulation of foreign matter outside and immediately adjacent to the outlet.				
Plans Verified	Field Verified		Complies	Comments/Assumptions	
Yes	Yes		Does Not Comply		
No	No		Not Observable		
N/A	N/A		Not Applicable		
13.15	The mechanical exhaust system is controlled so that, if needed, it continues to operate regardless of the operating status of the energy storage system.				
Plans Verified	Field Verified		Complies	Comments/Assumptions	
Yes	Yes		Does Not Comply		
No	No		Not Observable		
N/A	N/A		Not Applicable		
13.16	The mechanical exhaust system has a manual control to shut off the energy storage system in case of emergency, and the manual control is interconnected with the manual control provided on the mechanical ventilation system.				
Plans Verified	Field Verified		Complies	Comments/Assumptions	
Yes	Yes		Does Not Comply		
No	No		Not Observable		
N/A	N/A		Not Applicable		
Fire Protection–Fire and Smoke Detection					
14.1	Self-contained, prepackaged, or pre-engineered energy storage systems that include fire and smoke detection systems in accordance with the manufacturer's installation instructions are interconnected with fire and smoke detection systems as required by local codes for the building, facility, or property associated with the system installation.				
Plans Verified	Field Verified		Complies	Comments/Assumptions	
Yes	Yes		Does Not Comply		
No	No		Not Observable		
N/A	N/A		Not Applicable		

13

14.2	Engineered and field-constructed energy storage systems that include fire and smoke detection systems in accordance with the system installation hazard analysis and local fire codes are interconnected with fire and smoke detection systems required by local codes for the building, facility or property associated with the system installation.				
Plans Verified	Field Verified		Complies	Comments/Assumptions	
Yes	Yes		Does Not Comply		
No	No		Not Observable		
N/A	N/A		Not Applicable		
14.3	Energy storage systems not capable of being assessed under 14.1 or 14.2 above are accompanied by a fire risk assessment documenting the acceptability of the proposed fire detection and smoke detection systems.				
Plans Verified	Field Verified		Complies	Comments/Assumptions	
Yes	Yes		Does Not Comply		
No	No		Not Observable		
N/A	N/A		Not Applicable		
14.4	Fire protection systems not provided as a component of a tested and listed energy storage system comply with applicable criteria in fire alarm and signaling codes.				
Plans Verified	Field Verified		Complies	Comments/Assumptions	
Yes	Yes		Does Not Comply		
No	No		Not Observable		
N/A	N/A		Not Applicable		
14.5	Smoke detection systems not provided as a component of a tested and listed energy storage system comply with applicable criteria in standards covering smoke alarms.				
Plans Verified	Field Verified		Complies	Comments/Assumptions	
Yes	Yes		Does Not Comply		
No	No		Not Observable		
N/A	N/A		Not Applicable		
Fire Protection–Fire Suppression					
15.1	Self-contained, prepackaged, or pre-engineered energy storage systems that include fire suppression system(s) in accordance with the manufacturer's installation instructions have the fire suppression system(s) interconnected with fire and smoke detection systems as required by local codes for the building, facility or property associated with the system installation.				
Plans Verified	Field Verified		Complies	Comments/Assumptions	
Yes	Yes		Does Not Comply		
No	No		Not Observable		
N/A	N/A		Not Applicable		
15.2	Engineered and field-constructed energy storage systems that include fire suppression system(s) in accordance with the system installation hazard analysis and local fire codes have the fire suppression system(s)interconnected with fire and smoke detection systems as required by local codes for the building, facility or property associated with the system installation.				
Plans Verified	Field Verified		Complies	Comments/Assumptions	
Yes	Yes		Does Not Comply		
No	No		Not Observable		
N/A	N/A		Not Applicable		

14

15.3	Energy storage systems not capable of being assessed under 15.1 or 15.2 above are accompanied by a fire risk assessment documenting the acceptability of the proposed fire suppression systems.				
Plans Verified	Field Verified		Complies	Comments/Assumptions	
Yes	Yes		Does Not Comply		
No	No		Not Observable		
N/A	N/A		Not Applicable		
15.4	Fire suppression systems that are not provided as a component of a tested and listed energy storage system meet the provisions of an applicable standard as documented in accordance with the hazard analysis.				
Plans Verified	Field Verified		Complies	Comments/Assumptions	
Yes	Yes		Does Not Comply		
No	No		Not Observable		
N/A	N/A		Not Applicable		
15.5	Where the energy storage system type and/or hazard analysis indicates that fire suppression could result in a greater hazard (than if the system is not provided with fire suppression), a fire suppression system is not required subject to the approval of the authority having jurisdiction.				
Plans Verified	Field Verified		Complies	Comments/Assumptions	
Yes	Yes		Does Not Comply		
No	No		Not Observable		
N/A	N/A		Not Applicable		
Fire Protection–Fire Containment					
16.1	Rooms, spaces, and areas dedicated to an energy storage system are separated from other areas of the building in accordance with local building and fire codes.				
Plans Verified	Field Verified		Complies	Comments/Assumptions	
Yes	Yes		Does Not Comply		
No	No		Not Observable		
N/A	N/A		Not Applicable		
Fire Protection–Removal of Smoke					
17.1	Smoke control meeting the provisions of standards for smoke control systems and local fire codes is provided unless: • The energy storage system is installed outdoors and able to freely communicate directly with the outdoor environment • The energy storage system is self-contained and prepackaged or pre-engineered and is listed for application without a smoke control system • A hazard analysis is provided that documents the system or its intended installation does not require smoke containment or management.				
Plans Verified	Field Verified		Complies	Comments/Assumptions	
Yes	Yes		Does Not Comply		
No	No		Not Observable		
N/A	N/A		Not Applicable		
Fire Protection–Containment of Fluids					
18.1	Where the energy storage system contains fluids, it is provided with a means to safely contain the volume of fluid contained in the system unless a hazard analysis documents that all fluids in the system are not hazardous and can be safely conveyed to the sanitary drainage system serving the building, facility or site associated with the energy storage system installation.				
Plans Verified	Field Verified		Complies	Comments/Assumptions	
Yes	Yes		Does Not Comply		
No	No		Not Observable		
N/A	N/A		Not Applicable		

15

Fire Protection–Signage					
19.1	Self-contained and prepackage or pre-engineered energy storage system include signage on the system and its component parts as required by their listing either on the system or system component or installed onsite in accordance with the manufacturer's installation instructions.				
Plans Verified	Field Verified		Complies	Comments/Assumptions	
Yes	Yes		Does Not Comply		
No	No		Not Observable		
N/A	N/A		Not Applicable		
19.2	Signage adjacent to all doors, gates, or other means of access to the energy storage system contains the following information: • Point-of-contact(s) in case of emergency (ICE) to include facility owner and energy storage owner, integrator, and operator • Type of system(s) battery technology if applicable and capacity of each system in kWh • Location and purpose of all manual controls and emergency shutoff devices • Amount and type of any corrosive liquids • Amount and type of any hazardous chemicals • Type of any fire suppression system provided • Instructions for first responders for addressing fire and smoke control • Signage should be in accordance with ANSI Z535, locally adopted codes, or approved by the authority having jurisdiction.				
Plans Verified	Field Verified		Complies	Comments/Assumptions	
Yes	Yes		Does Not Comply		
No	No		Not Observable		
N/A	N/A		Not Applicable		
Commissioning					
20.1	Self-contained, prepackaged energy, or pre-engineered energy storage systems are evaluated for propar operation by an approved entity in accordance with manufacturer's instructions and a commissioning plan they have prepared that outlines how the safety systems will be tested to ensure they are calibrated, adjusted and in proper working condition after the installation is complete, but prior to final approval. A report documenting the commissioning process and the results are provided prior to final inspection and approval.				
Plans Verified	Field Verified		Complies	Comments/Assumptions	
Yes	Yes		Does Not Comply		
No	No		Not Observable		
N/A	N/A		Not Applicable		
20.2	Engineered and field-constructed energy storage systems are evaluated for proper operation by the party responsible for the documentation of the system safety in accordance with a commissioning plan they have prepared that outlines how the safety systems will be tested to ensure they are calibrated, adjusted and in proper working condition after the installation is complete, but prior to final approval. A report documenting the commissioning process and the results are provided prior to final inspection and approval.				
Plans Verified	Field Verified		Complies	Comments/Assumptions	
Yes	Yes		Does Not Comply		
No	No		Not Observable		
N/A	N/A		Not Applicable		

16

ESS Decommissioning

1. PURPOSE
   The purpose of this process, for decommissioning and/or removal of equipment, is to ensure all ESS equipment, Power Monitoring and Metering support systems, and Balance of Plant removal are executed in a manner consistent with applicable codes, regulations and sound engineering practices. This process ensures that equipment and support systems are decommissioned then removed in a manner that will allow lowest possible risk to employees, the facility, operations or maintenance activities.

2. SCOPE
   This process applies to decommissioning and / or removal of ESS equipment and Power Monitoring equipment. Any equipment, which is being decommissioned or removed, must go through the equipment decommissioning and removal sign-off checklist process.

3. RESPONSIBILITIES AND AUTHORITIES
   3.1 Contact Battery OEM if applicable to begin decommision process. Refer to End of Life Protocols as batteries may need to be shipped to the OEM.
   3.2 Depending on geographical location of ESS, choose a local, well established electrical equipment recycler for decommissioning the balance of the system.

4. DISTRICT OPERATIONS
   4.1 Schedule date and time with certified contractor for the system decommissioning and removal.

5. CONTRACTOR OPERATIONS
   5.1 Two to three days prior to system removal, the contractor shall charge or discharge Batteries to a SOC of 30% for shipment and storage purposes.
   5.2 Site to be prepared with customer and other accountable contacts in mind of the decommission process.
   5.3 Identify all electrical interconnection points and grounds to be disconnected. If the site will require a shutdown please identify before being onsite.
   5.4 Begin by shutting down the system at the main ESS disconnect and working down to the inverter and DC bus levels as necessary.
   5.5 Use only ESS OEM approved packaging or other transportation means.
   5.6 All non ESS related equipment like transformers, switchgear, and other Balance of Plant shall be removed and recycled appropriately by the contractor. Services like green citizen are widely available for pickup and responsible disposition.

I18 B.E.S.S. COMMISSIONING
SCALE: NO SCALE

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 01/23/2025

PBK

ARCHITECT PBK Architects, Inc.
FRESNO
7790 North Palm Avenue
Fresno, CA 93711
559-448-8400 P
559-448-8467 F
PBK.com

MADERA HIGH SCHOOL FIELDHOUSE
200 SOUTH "L" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL A. SCHEIDEN C-36165 02-28-27 RENEWAL DATE STATE OF CALIFORNIA

PROJECT NUMBER	20-51
DATE	08/22/2023
DSA APPLICATION NO.	02 - 121624
FILE NO.	20-H3
PTN NO.	65243-153
DRAWN BY	HDE

REVISIONS

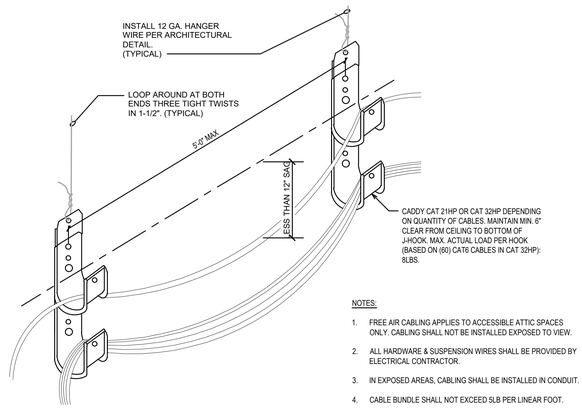
#	DESCRIPTION	DATE

B.E.S.S. DOCUMENT.

EX2.12

ASSESSED PROFESSIONAL ENGINEER R. J. HARDIN ME 9125 ELECTRICAL STATE OF CALIFORNIA

Hardin-Davidson Engineering
356 Pollasky Ave.
Suite 200
Clovis, CA 93612
559.323.4995 tel
559.323.4928 fax

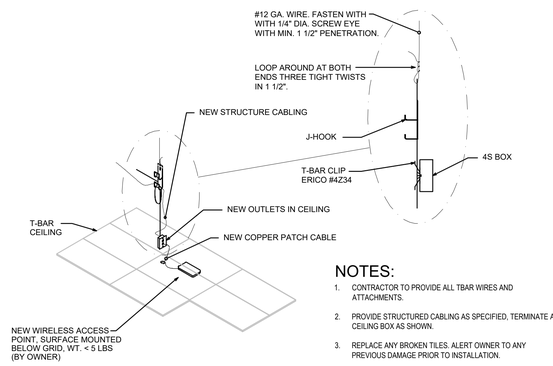


NOTES:

1. FREE AIR CABLING APPLIES TO ACCESSIBLE ATTIC SPACES ONLY. CABLING SHALL NOT BE INSTALLED EXPOSED TO VIEW.
2. ALL HARDWARE & SUSPENSION WIRES SHALL BE PROVIDED BY ELECTRICAL CONTRACTOR.
3. IN EXPOSED AREAS, CABLING SHALL BE INSTALLED IN CONDUIT.
4. CABLE BUNDLE SHALL NOT EXCEED 5LB PER LINEAR FOOT.

L15 TYPICAL J-HOOK CABLE SUPPORT DETAIL

SCALE:

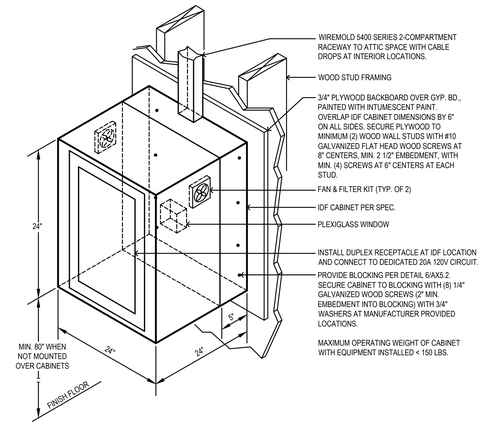


NOTES:

1. CONTRACTOR TO PROVIDE ALL TBAR WIRES AND ATTACHMENTS.
2. PROVIDE STRUCTURED CABLING AS SPECIFIED, TERMINATE AT CEILING BOX AS SHOWN.
3. REPLACE ANY BROKEN TILES. ALERT OWNER TO ANY PREVIOUS DAMAGE PRIOR TO INSTALLATION.

L10 TYPICAL WIRELESS ACCESS POINT AT T-BAR CEILING

SCALE:



L5 WALL MOUNT IDU CABINET MOUNTING DETAIL

SCALE: NO SCALE

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MADERA, CA 93637
CONSTRUCTION DOCUMENTS

MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL R. SCHOEN C 36165 02-28-27 RENEWAL DATE STATE OF CALIFORNIA

PROJECT NUMBER 20-51
DATE 08/22/2023
DSA APPLICATION NO. 02 - 121624
FILE NO. 20-H3
PTN NO. 65243-153
DRAWN BY HDE

REVISIONS

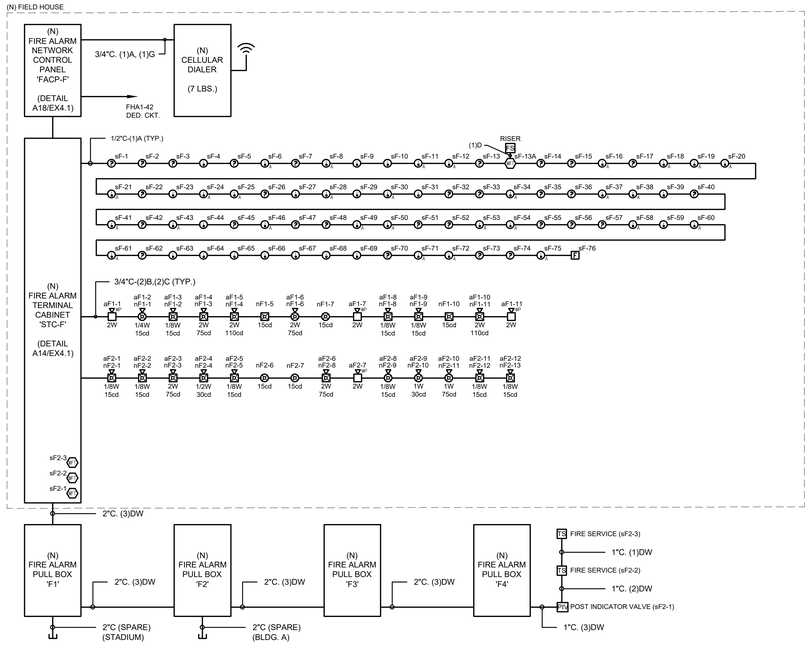
#	DESCRIPTION	DATE

ELECTRICAL LOW VOLTAGE DETAILS

EX3.1

REGISTERED PROFESSIONAL ENGINEER R. J. HARDIN No. 9125 ELECTRICAL STATE OF CALIFORNIA

Hardin-Davidson Engineering
356 Pollasky Ave.
Suite 200
Clovis, CA 93612
559.323.4995 tel
559.323.4928 fax



BATTERY CALCULATION

F.A. Control Panel 'FACP-F'

POWER REQUIREMENTS

	CURRENT [A] SUPERVISORY	ALARM
(1) 3-CPU3 (Main Board)	0.1550	0.1650
(1) 4-PPS/M (Power Supply)	0.0450	0.0450
(2) 3-SSDC1 (Driver Controller)	0.1440	0.2040
(1) 3-LCD (Panel Display)	0.0400	0.0420
(1) 3-FIBMB2 (FO Comm. Interface)	0.0200	0.0200
(2) SMXLO2 (SM FO Transceiver)	0.1580	0.1580
(1) 3-ZA40B (Audio Amplifier)	0.0620	1.1200
NAC Circuits	-	0.7280
24VDC Auxiliary	0.0000	0.0000
TOTALS	0.6240	2.4820

BATTERY CAPACITY

SUPERVISORY POWER (24 HOURS)	= 24 Hr * 0.624A =	14.976 AHr
ALARM POWER (15 MINUTES)	= 0.25 Hr * 2.482A =	0.621 AHr
TOTAL POWER REQUIREMENT =		15.597 AHr
MINIMUM BATTERY CAPACITY (includes 25% safety factor) =		20 AHr

VOLTAGE DROP CALCULATION

NAC Circuit 'nF1'

VD = Voltage Drop [V]
I = Current [A] (0.329A)
K = 12.9 (Copper Constant)
L = Distance to Load [ft.] (500')
CM = Circular Mils (#12 AWG = 6530)
V = Voltage [V] (24VDC)

$VD = \frac{K * I * 2L}{CM} = \frac{12.9 * 0.329 * 2 * 500'}{6530} = 0.650\ V$

$VD\% = \frac{VD}{24} = 2.7\%$

VOLTAGE DROP CALCULATION

NAC Circuit 'nF2'

VD = Voltage Drop [V]
I = Current [A] (0.399A)
K = 12.9 (Copper Constant)
L = Distance to Load [ft.] (270')
CM = Circular Mils (#12 AWG = 6530)
V = Voltage [V] (24VDC)

$VD = \frac{K * I * 2L}{CM} = \frac{12.9 * 0.399 * 2 * 270'}{6530} = 0.426\ V$

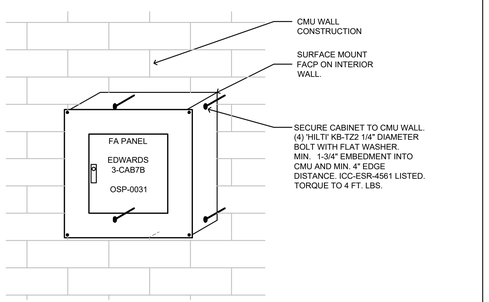
$VD\% = \frac{VD}{24} = 1.8\%$

VOICE EVACUATION SPEAKER VOLTAGE DROP

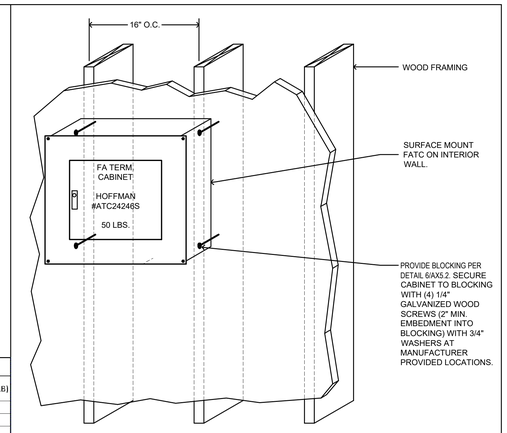
Volt Drop Common Parameters

Volts 70.7 Volts
Wire Size 14 AWG
Wire Resistance 3.28 ohm/Kft

	INDOOR					OUTDOOR				CIRCUIT LENGTH		
Type Wattage Tap	1/8 W	1/4 W	1/2W	1W	2W	1W	2W	4W	8W	Total Watts	Max Length	Actual Length
aF1	3	1		1	4		3			15.625	5814	500
aF2	6		1	2	2		1			9.25	9821	270



A18 FA PANEL MOUNTING DETAIL
SCALE: NO SCALE



A14 FIRE ALARM TERMINAL CABINET MOUNTING DETAIL
SCALE: NO SCALE

EST3 / EST4 CABINET CONFIGURATIONS

MODEL LINE	MODEL	DIMENSIONS DEPTH	WIDTH	HEIGHT	WEIGHT (LB)
EST3 & EST4 BACKBOX ENCLOSURE	3-CAB7B	5.8	28.0	26.0	99.5

FIRE ALARM GENERAL NOTES

1. FIRE ALARM SYSTEM: ADDRESSABLES, CLASS B, AUTOMATIC. VOICE EVACUTATION
2. ALL WORK SHALL CONFORM TO THE 2016 EDITION OF NFPA 72, AND 2022 EDITION OF CBC, CEC, AND CFC.
3. INSTALLATION OF THE FIRE ALARM SYSTEM (FAS) SHALL NOT BE STARTED UNTIL DETAILED DESIGN DOCUMENTS AND SPECIFICATIONS, INCLUDING STATE FIRE MARSHAL LISTING NUMBERS FOR EACH COMPONENT OF THE SYSTEM HAS BEEN APPROVED BY DSA.
4. UPON COMPLETION OF THE INSTALLATION OF THE FIRE ALARM SYSTEM, A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE OF A DSA PROJECT INSPECTOR. (THE LOCAL FIRE AUTHORITY MAY WITNESS THE TEST).
5. A STAMPED SET OF APPROVED FIRE ALARM DESIGN DOCUMENTS SHALL BE ON THE JOB SITE AND USED FOR THE INSTALLATION.
6. ANY DISCREPANCIES BETWEEN THE DRAWINGS AND THE CODE OR RECOGNIZED STANDARDS SHALL BE BROUGHT TO THE ATTENTION OF DSA AND THE ARCHITECT/ENGINEER OF THE PROJECT.
7. DSA, ARCHITECT/ENGINEER AND OWNER SHALL BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO THE FINAL INSPECTION AND/OR TESTING.
8. ALL PENETRATIONS THROUGH RATED ASSEMBLIES REQUIRING OPENING PROTECTION SHALL BE PROVIDED WITH A PENETRATION FIRE STOP SYSTEM AS IDENTIFIED IN CBC CHAPTER 7, UL, OR OTHER LAB TESTING CRITERIA. APPROVED TYPE OF MATERIALS SHALL BE IDENTIFIED WITHIN THE SPECIFICATION WITHIN THE FIRE ALARM SECTION.
9. MICROPHONE ACCESSIBILITY SHALL COMPLY WITH CBC 11B-305 AND 11B-308.
10. WALL MOUNTED VISUAL NOTIFICATION DEVICES SHALL HAVE THEIR ENTIRE LENS WITHIN AT 80" MINIMUM AND 96" MAXIMUM FROM FINISHED FLOOR.
11. WALL MOUNTED AUDIBLE NOTIFICATION DEVICES SHALL HAVE THEIR TOPS MOUNTED AT 90" MINIMUM AND 100" MAXIMUM FROM FINISHED FLOOR AND NO CLOSER THAN 6" TO A HORIZONTAL STRUCTURE.
12. AUDIBLE DEVICES SHALL PROVIDE A SOUND PRESSURE LEVEL OF 15 DECIBELS (dBA) ABOVE THE AVERAGE AMBIENT SOUND LEVEL OR 5 dBA ABOVE THE MAXIMUM SOUND LEVEL HAVING A DURATION OF AT LEAST 60 SECONDS, WHICHEVER IS GREATER, IN EVERY SPACE WITHIN A BUILDING THAT MAY BE OCCUPIED AND BE INTELLIGIBLE.
13. AUDIBLE DEVICES SHALL BE SYNCHRONIZED TEMPORAL CODE 3 PATTERN, PRIOR TO "EVAC" ANNOUNCEMENT. THE CARBON MONOXIDE SIGNAL SHALL SOUND A FOUR-PULSE TEMPORAL PATTERN PER NFPA 720, 5.8.6.5.1.
14. THE CONTRACTOR SHALL ADJUST/INSTALL ALL DEVICES TO MAXIMIZE PERFORMANCE AND TO MINIMIZE FALSE ALARMS.
15. VISUAL DEVICES SHALL NOT EXCEED 2 FLASHES PER SECOND AND SHALL NOT BE SLOWER THAN 1 FLASH PER SECOND. THE DEVICE SHALL HAVE A PULSING LIGHT SOURCE NOT LESS THAN 15 CANDELA. VISUAL DEVICES WITHIN 55' FROM EACH OTHER SHALL BE SYNCHRONIZED.
16. UNDERGROUND AND EXTERIOR CONDUITS SHALL HAVE WATERTIGHT FITTINGS AND WIRE APPROVED FOR WET LOCATIONS.
17. ALL FIRE ALARM WIRING SHALL BE FLP OR FPLP (FIRE POWER LIMITED OR FIRE POWER LIMITED PLENUM) AS REQUIRED FOR APPLICATION. WIRING IN CONDUIT ABOVE GROUND MAY BE THHN OR THWN.
18. PER CEC STANDARDS, ALL WIRING SHALL BE PULLED THROUGH EACH JUNCTION BOX AND CONNECTED DIRECTLY TO EACH FIRE DEVICE. DO NOT SPLICE WIRE. ANY CONNECTION SHALL BE BY LUG CONNECTION AT A DEVICE OR AT A FATC TERMINAL BLOCK ONLY. ALL BOXES TO BE SIZED PER CEC.
19. SMOKE DETECTORS SHALL NOT BE CLOSER THAN 12" FROM FIRE SPRINKLERS NOR 36" FROM SUPPLY AIR DIFFUSERS. IN AREA OF CONSTRUCTION OR POSSIBLE DAMAGE/CONTAMINATION, NEWLY INSTALLED FIRE ALARM DEVICES SHALL BE COVERED UNTIL THAT AREA IS READY TO BE TURNED OVER TO THE OWNER.
20. ALL FIRE ALARM CIRCUITS SHALL BE IN CONDUIT, SURFACE RACEWAY, OR OPEN RUN ABOVE CEILINGS, UNDER FLOORS, AND IN WALLS IN A NEAT AND PROTECTED MANOR AS INDICATED ON DESIGN DOCUMENTS. EXPOSED CIRCUITS ARE ONLY PERMITTED WHEN NOTED AS EXPOSED ON DESIGN DOCUMENTS. OWNER STANDARDS MAY BE MORE STRINGENT.
21. FIRE ALARM PANEL, REMOTES, AND COMPONENTS SHALL BE SECURED TO MOUNTING SURFACES PER MANUFACTURERS' SPECIFICATIONS. ANY SINGLE DEVICE SHALL NOT EXCEED THE WEIGHT OF 20 LBS. WITHOUT SPECIAL MOUNTING DETAILS.
22. A DEDICATED BRANCH CIRCUIT SHALL BE PROVIDED FOR FIRE ALARM EQUIPMENT. THIS CIRCUIT SHALL BE ENERGIZED FROM THE COMMON USE AREA PANEL AND SHALL HAVE NO OTHER OUTLETS. THE BREAKER SHALL HAVE A LOCKING DEVICE WITH RED MARKING PER NFPA 72, SECTION 10.6.5.4 AND 10.6.5.2.3 TO BLOCK THE HANDLE IN THE "ON" POSITION. THE CIRCUIT BREAKER SHALL BE LABELED "FIRE ALARM CIRCUIT CONTROL". CIRCUIT ID TO BE LABELED AT THE FIRE PANEL/EXTENDERS.
23. THE INSTALLING CONTRACTOR SHALL PROVIDE A RECORD OF COMPLETION IN COMPLIANCE WITH NFPA 72, SECTION 7.5.6.
24. CONTROL PANELS AND REMOTE ANNUNCIATORS SHALL BE INSTALLED WITH THEIR BOTTOMS MOUNTED AT 48".
25. THE INSTALLING CONTRACTOR SHALL PROVIDE SYSTEM PROGRAMMING FOR SUPERVISORY MONITORING PER CBC 901.6.2.
26. SUPERVISORY MONITORING SHALL BE TESTED AND VERIFIED AS SENDING CORRECT SIGNALS IN CONJUNCTIONS WITH FINAL TEST. FIRE ALARM SYSTEMS SHALL TRANSMIT THE ALARM, SUPERVISORY AND TROUBLE SIGNALS TO AN APPROVED SUPERVISING STATION IN ACCORDANCE WITH NFPA 72. THE SUPERVISING STATIONS SHALL BE LISTED AS EITHER UUFX (CENTRAL STATION) OR UUUS (REMOTE AND PROPRIETARY) BY UNDERWRITERS LABORATORY (UL) OR SHALL COMPLY WITH THE REQUIREMENTS OF STANDARD FM 3011. A COPY OF ALL DEVICES REPORTED TO THE CENTRAL STATION SHALL BE PROVIDED TO THE OWNER'S ELECTRONICS DEPARTMENT.
27. OWNER SHALL BE RESPONSIBLE FOR ESTABLISHING A FIRE SYSTEM MONITORING CONTRACT OR PROVISIONS.
28. ALL WIRING IS SHOWN DIAGRAMMATICALLY. SUBJECT TO DSA APPROVAL. CONTRACTOR MAY VARY SEQUENCE OF CIRCUITRY; HOWEVER, ALL CIRCUITS SHALL BE CONTINUOUS AND SUPERVISED.
29. ALL CONNECTIONS SHALL BE PROPERLY LABELED BY CONDUCTOR AND SHALL HAVE STA-KON LUG CONNECTORS. PANDUIT TAG (TIE WRAP) SEPARATELY.
30. FIRE ALARM TERMINAL CABINETS SHALL HAVE SUFFICIENT SPACE, TERMINAL BOARDS AND SCREW TERMINAL CONNECTORS TO ALLOW CONNECTION OF ALL CONDUCTORS SHOWN. PROVIDE BARRIER TO SEPARATE FIRE ALARM SYSTEM WHEN TERMINAL CABINET IS SHARED WITH NON-FIRE ALARM SYSTEMS. CONTRACTOR SHALL BE REQUIRED TO SUBMIT WITH HIS OTHER SHOP DRAWINGS DETAILED DRAWINGS OF HIS PROPOSED CONNECTIONS AT EACH FIRE ALARM TERMINAL CABINET PRIOR TO COMMENCING ANY WORK.
31. ALL NAC CIRCUIT CONDUCTORS SHALL BE #12 AWG, STRANDED (19 STRANDS OR LESS) COPPER, UNLESS OTHERWISE NOTED.
32. SET END-OF-LINE RESISTORS IN DISTRIBUTION TERMINAL CABINETS.
33. BATTERIES SHALL BE STAMPED WITH DATE OF MANUFACTURE.
34. INSTALLATION OF FAS EQUIPMENT SHALL BE BY AN AUTHORIZED ENGINEERED SYSTEM DISTRIBUTOR FOR THE EQUIPMENT SPECIFIED BY THE MANUFACTURER FOR SALES, SERVICE, INSTALLATION AND MAINTENANCE. PROVIDE CERTIFICATIONS WITH EQUIPMENT SUBMITTALS. SUBMITTALS BY FIRMS NOT FULFILLING THIS REQUIREMENT WILL BE AUTOMATICALLY REJECTED.
35. THE FAS INSTALLER SHALL BE NICET LEVEL 2 CERTIFIED.
36. THE FAS INSTALLER SHALL PROVIDE ALL FACTORY WARRANTIES TO THE OWNER AT THE CLOSE UP OF THE PROJECT.
37. THE FAS INSTALLER SHALL PROVIDE WRITTEN CERTIFICATION USING NFPA 72 INSPECTION AND TESTING FORMS AND SHALL CERTIFY THAT THE INSTALLATION, TESTING, AND OPERATION CONFORM IN ALL RESPECTS TO THE REQUIREMENTS AS SET FORTH IN TITLE 19 OF THE CALIFORNIA CODE OF REGULATIONS AND PART 3, ARTICLE 760 OF TITLE 24 OF THE C.C.R. AND C.B.C. SECTION 907. THE CONTRACTOR SHALL SUBMIT THE COMPLETED FAS CERTIFICATION AND DESCRIPTION FORM TO DIVISION OF STATE ARCHITECT.
38. INCLUDE ALL DEMOLITION OF EXISTING FIRE ALARM SYSTEM WHETHER SPECIFICALLY SHOWN OR NOT. REMOVE ALL CABLING & UNUSED EXPOSED RACEWAY & OUTLETS. BLANK OFF ALL UNUSED WALL & HARD CEILING OUTLETS. REMOVE ALL UNUSED OUTLETS IN TEE-BAR CEILING & REPLACE ACOUSTIC TILES. RETURN ALL DEVICES, APPLIANCES, & CONTROL PANELS TO OWNER IF REQUESTED BY OWNER DURING CONSTRUCTION.
39. WHEN FIRE ALARM WORK WILL DISABLE PORTIONS OF THE EXISTING FAS, PROVIDE ALL REQUIRED OVERTIME AND FIRE WATCH IN SCOPE OF WORK.
40. WHERE FIRE ALARM DEVICES ARE BEING INSTALLED IN OTHERWISE INACCESSIBLE AREAS, PROVIDE AN ALLOWANCE FOR THE INSTALLATION OF ACCESS PANELS AND ALL WORK ASSOCIATED WITH THE INSTALLATION. THE CONTRACTOR SHALL CUT ALL THE OPENINGS. THE SIZE OF THE ACCESS PANEL SHALL BE DETERMINED BY THE MAN ACCESS REQUIREMENTS. PROVIDE PAINT GRADE ACCESS DOORS AND PAINT TO MATCH THE COLOR & SHEEN OF THE EXISTING CEILING.
41. FIRE ALARM SYSTEM INSPECTION, TESTING, AND MAINTENANCE SHALL COMPLY WITH NFPA 72, CHAPTER 14.
42. PROVIDE FIRE ALARM RECORD DOCUMENTS CABINET NFPA 72, 7.7.2

- EVERY NEW FILE ALARM SYSTEM SHALL PROVIDE A DOCUMENTATION CABINET, INSTALLED AT THE SYSTEM CONTROL PANEL OR OTHER APPROVED LOCATION.
- THE DOCUMENTATION CABINET SHALL BE PROMINENTLY LABELED, "FIRE ALARM SYSTEM RECORD DOCUMENTS"
- ALL RECORD AND TESTING DOCUMENTATION SHALL BE STORED IN THE CABINET.
- CONTENTS SHALL BE ACCESSIBLE BY AUTHORIZED PERSONNEL ONLY.
- WHERE CABINET IS INSTALLED IN A LOCATION OTHER THAN THE SYSTEM CONTROL UNIT, ITS LOCATION SHALL BE IDENTIFIED AT THE SYSTEM CONTROL UNIT.

PROVIDE SYSTEM DOCUMENTS AS APPLICABLE:

- RECORD DRAWINGS/AS-BUILTS
- EQUIPMENT CUT SHEETS & CA SFM LISTINGS
- ALTERNATIVE MEANS AND METHODS
- PERFORMANCE BASED DESIGN DOCUMENTATION (NFPA 72, 7.3.7)
- SYSTEM RECORD OF COMPLETION & ANY SUPPLEMENTAL INSPECTION AND TESTING DOCUMENTATION (NFPA 72, 7.8.2)
- EMERGENCY RESPONSE PLAN (NFPA 72, 7.3.8)
- EVALUATION DOCUMENTATION (NFPA 72, 7.3.9)
- RISK ANALYSIS DOCUMENTATION (NFPA 72, 7.3.6)
- SOFTWARE & FIRMWARE CONTROL DOCUMENTATION (NFPA 72, 23.2.2)

FIRE ALARM SYMBOLS

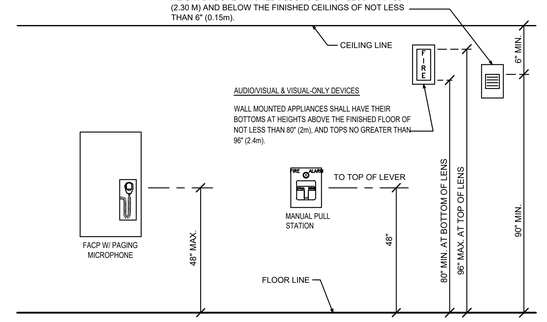
SYMBOL	NAME	DESCRIPTION	CSFM
FACP-F1	FIRE ALARM CONTROL PANEL	EST #EST3	7165-1657:0186
	CENTRAL PROCESSOR	EST #3-CPU3	7165-1657:0186
	POWER SUPPLY	EST #4-PPS/M	7300-1657:0519
	DRIVER CONTROLLER	EST #3-SSDC1	7165-1657:0186
	PANEL DISPLAY	EST #3-LCD	7165-1657:0186
	PAGING MICROPHONE	EST #3-REMICA	7165-1657:0186
	FIBER OPTIC COMM. INTERFACE	EST #3-FIBMB2	7165-1657:0186
	(2) SM FIBER OPTIC TRANSCEIVER	EST #SMXLO2	7165-1657:0186
	DACT	EST #3-MODCOM	7165-1657:0186
FACP-F	FIRE ALARM CONTROL PANEL	EST #EST3	7165-1657:0186
	CENTRAL PROCESSOR	EST #3-CPU3	7165-1657:0186
	POWER SUPPLY	EST #4-PPS/M	7300-1657:0519
	DRIVER CONTROLLER	EST #3-SSDC1	7165-1657:0186
	PANEL DISPLAY	EST #3-LCD	7165-1657:0186
	FIBER OPTIC COMM. INTERFACE	EST #3-FIBMB2	7165-1657:0186
	(2) SM FIBER OPTIC TRANSCEIVER	EST #SMXLO2	7165-1657:0186
	40W AUDIO AMBPLIFIER	EST #3-ZA40B	7165-1657:0186
P	SMOKE DETECTOR, PHOTOELECTRIC	EST #SIGA-OSD	7272-1657:0511
	DETECTOR BASE	EST #SIGA-SB	7300-1657:0120
H	HEAT DETECTOR, CEILING MT'D	EST #SIGA-HFD	7270-1657:0333
	DETECTOR BASE	EST #SIGA-SB	7300-1657:0120
H	HEAT DETECTOR, ATTIC MT'D	SYSTEM SENSOR #5604	7270-1653:0167
	DETECTOR BASE	SYSTEM SENSOR # B110LP	7300-1653:0109
	MONITOR MODULE	EST #SIGA-MM1	7300-1657:0121
	WATERFLOW/TAMPER MODULE	EST #SIGA-WTM	7300-1657:0121
	UNIVERSAL INPUT/OUTPUT MODULE	EST #SIGA-UM	7300-1657:0121
	PULL STATION	EST #SIGA-278	7150-1657:0129
	SPEAKER/STROBE, CEILING MT'D	EST #GCSVWF	7320-1657:0516
	SPEAKER/STROBE DEVICE, WALL MT'D	EST #G4SVWF	7320-1657:0516
	STROBE, CEILING MT'D	EST #GCVWF	7320-1657:0516
	STROBE DEVICE, WALL MT'D	EST #G4VWF	7320-1657:0516
	EXTERIOR SPEAKER, W.P., WALL MT'D	EST #WG4WF-S	7125-1657:0311
TS	SPRINKLER TAMPER SWITCH	SPECIFIED BY FIRE PROTECTION ENG.	
FS	FLOW SWITCH	SPECIFIED BY FIRE PROTECTION ENG.	
PIV	PIV	SPECIFIED BY FIRE PROTECTION ENG.	

FIRE ALARM CABLE SCHEDULE

SYMBOL	NAME	DESCRIPTION
A	SIGNALING LINE CIRCUIT (SLC) CABLE WEST PENN #D990	16/2 TWISTED PAIR, STRANDED, LOW CAPACITANCE FA POWER LIMITED, RISER CABLE (FPLR)
AW	SIGNALING LINE CIRCUIT (SLC) CABLE, OSP WEST PENN #AQC225	16/2 TWISTED PAIR, STRANDED, AQUASEAL FA POWER LIMITED CABLE (FPL)
B	NOTIFICATION APPLIANCE CKT (NAC) CABLE WEST PENN #998S	12/2 TWISTED PAIR, STRANDED FA POWER LIMITED, RISER CABLE (FPLR)
BW	NOTIFICATION APPLIANCE CKT (NAC) CABLE, OSP WEST PENN #AQ227	12/2 TWISTED PAIR, STRANDED, AQUASEAL FA POWER LIMITED CABLE (FPL)
C	EM. VOICE/ALARM COMM. (EV/AC) CABLE WEST PENN #HF995	14/2 SHIELDED TWISTED PAIR, STRANDED FA POWER LIMITED CABLE (FPL)
CW	EM. VOICE/ALARM COMM. (EV/AC) CABLE, OSP WEST PENN #AQC295	14/2 SHIELDED TWISTED PAIR, STRANDED, AQUASEAL FA POWER LIMITED CABLE (FPL)
D	INITIATING DEVICE CKT (IDC) CABLE WEST PENN #994S	14/2 TWISTED PAIR, STRANDED FA POWER LIMITED, RISER CABLE (FPLR)
DW	INITIATING DEVICE CKT (IDC) CABLE, OSP WEST PENN #AQC226	14/2, TWISTED PAIR, STRANDED, AQUASEAL FA POWER LIMITED CABLE (FPL)
FA06	NETWORK COMM	6-STR SM ISP FIBER
FA06W	SITE NETWORK COMM	6-STR SM OSP FIBER
G	POWER CABLE WEST PENN #998S	12/2, TWISTED PAIR, STRANDED FA POWER LIMITED, RISER CABLE (FPLR)
M	MIC CABLE	16/6, TWISTED SHIELDED PAIR, PLENUM RATED

FIRE ALARM CABLE SCHEDULE

ACTION \ INITIATION CONDITON	FIRE SPRINKLER TAMPER SWITCH, POST INDICATOR VALVE	SMOKE, HEAT, OR DUCT DETECTOR, FIRE SPRINKER FLOW SWITCH	POWER LOSS, SHORT CIRCUIT, GROUND FAULT
ANNUNCIATE TROUBLE			●
ANNUNCIATE ALARM		●	
ANNUNCIATE CO ALARM			
ANNUNCIATE SUPERVISORY	●		
INITIATE NOTIFICATION APPLICANCES		●	
INITIATE EV/AC APPLICANCES		●	
TRANSMIT TO CENTRAL STATION	●	●	●
CLOSE FIRE/SMOKE DAMPER		●	
SHUTDOWN HVAC UNITS		●	
DOOR RELEASE		●	●
ACCESS CONTROL OVERRIDE		●	



FIRE ALARM DEVICE ELEVATION

Hardin-Davidson Engineering
356 Pollasky Ave. Suite 200
Clovis, CA 93612
559.323.4995 tel
559.323.4928 fax

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 01/23/2025

PBK

ARCHITECT PBK Architects, Inc.
FRESNO
7790 North Palm Avenue
Fresno, CA 93711
559-448-8400 P
559-448-8467 F
PBK.com

MADERA HIGH SCHOOL FIELDHOUSE

200 SOUTH "L" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL R. SCHEIN C-38165 02-28-27 RENEWAL DATE STATE OF CALIFORNIA

PROJECT NUMBER	20-51
DATE	08/22/2023
DSA APPLICATION NO.	02 - 121624
FILE NO.	20-H3
PTN NO.	65243-153
DRAWN BY	HDE

REVISIONS

#	DESCRIPTION	DATE

FIRE ALARM

EX4.1

STATE OF CALIFORNIA
Electrical Power Distribution
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-ELC-E
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)2P for alterations. For multifamily addition or alterations compliance will be documented per 180.1(a) or 180.2 (b)4Bvii	
Project Name: Madera High School Fieldhouse	**Report Page:** (Page 1 of 6)
Project Address: 200 South "L" St	**Date Prepared:** 8/28/2023

A. GENERAL INFORMATION

01	Project Location (city)	Madera	02	Climate Zone	13
			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
MSA	New electrical service equipment and meter	1330	☐	☐	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.	☐

[1] *FOOTNOTES: 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.*
[2] *If common use areas in a multifamily are submetered, rating is for submeter size serving common use areas.*
[3] *Applicable if the utility company is providing a metering system that indicates instantaneous kW demand and kWh for a utility-defined period.*

STATE OF CALIFORNIA
Electrical Power Distribution
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-ELC-E
Project Name: Madera High School Fieldhouse	**Report Page:** (Page 2 of 6)
	Date Prepared: 8/28/2023

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 "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)	AND	Separation for Monitoring 130.5(b)/ 160.6(b) (See Table G)	AND	Voltage Drop 130.5(c)/ 160.6(c) (See Table H)	AND	Controlled Receptacles 130.5(d)/ 160.6(d) (See Table I)	Electric Ready 160.9 (See Table J)	**Compliance Results**
Yes	AND	Yes	AND	Yes	AND	Yes		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.

F. SERVICE ELECTRICAL METERING

This table includes new or replacement electrical service systems OR equipment to demonstrate compliance with 130.5(a) / 160.6(a). For multfamily occupancies, submetered systems that provide power to common use areas must meet the following metering requirements. Submetered systems providing power to dwelling units do not.

01	02	03				04	05	
Electrical Service Designation/ Description	Rating[1] (kVA)	Required Metering Capabilities per Table 130.5-A				Location of Requirements in Construction Documents	Field Inspector	
		Instantaneous Demand (kW)	Historical Peak Demand (kW)	Tracking kWh for user-defined period	kWh per rate period		Pass	Fail
MSA	1330	☒	☒	☒	☒	EX2.1	☐	☐

[1] *FOOTNOTES: If common use areas in a multifamily are submetered, rating is for submeter size serving common use areas.*

STATE OF CALIFORNIA
Electrical Power Distribution
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-ELC-E
Project Name: Madera High School Fieldhouse	**Report Page:** (Page 3 of 6)
	Date Prepared: 8/28/2023

G. SEPARATION OF ELECTRICAL CIRCUITS FOR ENERGY MONITORING

This table includes entirely new or complete replacement electrical power distribution systems to demonstrate compliance with 130.5(b)/ 160.6(b). Any load types that are not included in the service do not need to be shown. For multifamily occupancies, submetered systems that provide power to dwelling units do not need to meet these separation requirements and therefore load types on those submetered systems also do not need to be shown.

01	02	03	04	05	
Load Type per Table 130.5-B[1]	Minimum Required Separation of Load per Table 130.5-B	Compliance Method[2]	Location of Requirements in Construction Documents	Field Inspector	
				Pass	Fail
MSA					
Lighting including exit, egress and exterior	All lighting disaggregated by floor, type or area	Method 1: Switchboards, motor control centers, or panelboard loads disaggregated for each load type	EX2.2	☐	☐
HVAC systems and components	All HVAC in aggregate and each HVAC load rated at least 50 kVA	Method 1: Switchboards, motor control centers, or panelboard loads disaggregated for each load type	EX2.2	☐	☐
Plug Loads and appliances less than 25kVA	All plug loads separated by floor, type or area Groups of plug loads exceeding 25 kVA connected load in an area less than 5000 sf	Method 1: Switchboards, motor control centers, or panelboard loads disaggregated for each load type	EX2.2	☐	☐
Renewable power sources (net or total)	Each group	Method 1: Switchboards, motor control centers, or panelboard loads disaggregated for each load type	E-Sheets	☐	☐

STATE OF CALIFORNIA
Electrical Power Distribution
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-ELC-E
Project Name: Madera High School Fieldhouse	**Report Page:** (Page 4 of 6)
	Date Prepared: 8/28/2023

G. SEPARATION OF ELECTRICAL CIRCUITS FOR ENERGY MONITORING

This table includes entirely new or complete replacement electrical power distribution systems to demonstrate compliance with 130.5(b)/ 160.6(b). Any load types that are not included in the service do not need to be shown. For multifamily occupancies, submetered systems that provide power to dwelling units do not need to meet these separation requirements and therefore load types on those submetered systems also do not need to be shown.

01	02	03	04	05	
Load Type per Table 130.5-B[1]	Minimum Required Separation of Load per Table 130.5-B	Compliance Method[2]	Location of Requirements in Construction Documents	Field Inspector	
				Pass	Fail

** NOTES: If "Other**" is selected under Compliance Method above, please indicate how compliance has been achieved in the space provided below.*

[1] *FOOTNOTES: For each separate load type, up to 10% of the connected load may be of any type.*
[2] *Method 1: Switchboards/ motor control centers/ panelboard loads disaggregated for each load type.*
Method 2: Switchboards/ motor control centers/ panelboard supply other distribution equipment with loads disaggregated for each load type.
Method 3: Branch circuits serve load types individually and provisions for adding future branch circuit monitoring.
Method 4: Complete metering system measures and reports loads by type.
See Chapter 8 of the Nonresidential Compliance Manual for more detail on Compliance Methods.

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)2Piii/ 180.2(b)4Bviic.

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
MSA	☒	Voltage drop less than 5%	Contractor Responsible		☐	☐
	☐	Permitted by CA Elec Code (Exception to 130.5(c))*				

** NOTES: If "Permitted by CA Elec Code *" is selected under Compliance Method above, please indicate where the exception applies in the space provided below.*

[1] *FOOTNOTES: Voltage drop calculations may be attached to the permit application outside the construction documents if allowed by the Authority Having Jurisdiction. Select "attached" if applicable. If calculations will be the responsibility of the installing contractor, select "Contractor Responsible".*

I. CIRCUIT CONTROLS FOR 120-VOLT RECEPTACLES AND CONTROLLED RECEPTACLES

This table includes entirely new or complete replacement electrical power distribution systems to demonstrate compliance with 130.5(d)/ 160.6(d).. Both controlled and uncontrolled receptacles must be provided in office areas, lobbies, conference rooms, kitchen areas in office spaces, copy rooms and hotel/motel guest rooms.

STATE OF CALIFORNIA
Electrical Power Distribution
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-ELC-E
Project Name: Madera High School Fieldhouse	**Report Page:** (Page 5 of 6)
	Date Prepared: 8/28/2023

I. CIRCUIT CONTROLS FOR 120-VOLT RECEPTACLES AND CONTROLLED RECEPTACLES

01	02	03	04	05	06	07	
Room name or Description	Location/ Type of Controlled Receptacles[1]	Shut-Off Controls	Demand Responsive Controls	Permanent Durable Marking Will be Used	Location of Requirements in Construction Documents	Field Inspector	
						Pass	Fail
	Within 6ft of uncontrolled receptacle	Occupancy Sensor	NA: Building does not require demand responsive lighting controls per 110.12(c)	☒		☐	☐

** NOTES: If "Other** is selected under Shut-Off Controls above, please indicate how compliance has been achieved in the space provided below.*

[1] *FOOTNOTES: Receptacles dedicated to refrigerators and water dispensers in kitchens, located a minimum of 6ft above the floor specifically for clocks, network copiers, fax machines, A/V and data equipment other than personal computers in copy rooms, circuits rated more than 20 Amps, or connected to a UPS that are intended to be in continuous use and are marked to differentiate them from other receptacles or circuits are excepted from the requirements. .*

J. ELECTRIC READY BUILDINGS

This section does not apply to this project.

K. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection have 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
NRCI-ELC-E - Must be submitted for all buildings

STATE OF CALIFORNIA
Electrical Power Distribution
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-ELC-E
Project Name: Madera High School Fieldhouse	**Report Page:** (Page 6 of 6)
Project Address: 200 South "L" St	**Date Prepared:** 8/28/2023

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Richard J. Hardin, PE	Documentation Author Signature:
Company: Hardin-Davidson Engineering	Signature Date: 2023-08-28
Address: 356 Pollasky Ave, Ste 200	CEA/ HERS Certification Identification (if applicable): E-9125
City/State/Zip: Clovis CA 93612	Phone: 559-323-4995

RESPONSIBLE PERSON'S DECLARATION STATEMENT

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

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. 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.
4. 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.
5. 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 building provides to the building owner at occupancy.

Responsible Designer Name: Richard J. Hardin, PE	Responsible Designer Signature:
Company: Hardin-Davidson Engineering	Date Signed: 2023-08-28
Address: 355 Pollasky Ave Ste 200	License: E9125
City/State/Zip: Clovis CA 93612	Phone: 559-323-4995

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-E
Project Name: Madera High School Fieldhouse	**Report Page:** (Page 1 of 8)
Project Address: 200 South "L" St	**Date Prepared:** 8/28/2023

A. GENERAL INFORMATION

01	Project Location (city)	Madera	04	Total Conditioned Floor Area (ft²)	11,662
02	Climate Zone	13	05	Total Unconditioned Floor Area (ft²)	0
03	Occupancy Types Within Project (select all that apply):		06	# of Stories (Habitable Above Grade)	1

● Classroom

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 / 170.2(e) or 141.0(b)2 / 180.2(b)4 for alterations.

Scope of Work	Conditioned Spaces		Unconditioned Spaces	
01	02	03	04	05
My Project Consists of (check all that apply):	Calculation Method	Area (ft²)	Calculation Method	Area (ft²)
☒ New Lighting System	Complete Building Method	11662	Complete Building Method	0
☐ New Lighting System - Parking Garage				
Total Area of Work (ft²)	11662		0	

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-E
Project Name: Madera High School Fieldhouse	**Report Page:** (Page 2 of 8)
	Date Prepared: 8/28/2023

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 / 170.2(e)	Allowed Lighting Power per 140.6(b) / 170.2(e) (Watts)						Adjusted Lighting Power per 140.6(a) / 170.2(e) (Watts)				Compliance Results
	01	02	03	04		05		06	07	08	09
	Complete Building 140.6(c)1	Area Category 140.6(c)2 / 170.2(e)4	Area Category Additional 140.6(c)2G / 170.2(e)4Av (+)	Tailored 140.6(c)3 / 170.2(e)4B (+)		**Total Allowed** (Watts)		Total Designed (Watts)	Adjustments PAF Lighting Control Credits 140.6(a)2 / 170.2(e)1B (-)	**Total Adjusted** (Watts) *Includes Adjustments	**05 must be >= 08 140.6 / 170.2(e)**
	(See Table I)	(See Table I)	(See Table J)	(See Table K)				(See Table F)	(See Table P)		
Conditioned	6,997				=	6,997	≥	5,464	0	= 5464	COMPLIES
Unconditioned					=		≥			=	
									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.

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-E
Project Name: Madera High School Fieldhouse	**Report Page:** (Page 3 of 8)
	Date Prepared: 8/28/2023

F. INDOOR LIGHTING FIXTURE SCHEDULE

This table includes all planned permanent and portable lighting other than dwelling unit/ hotel/ motel room lighting. Multifamily dwelling unit and hotel/motel room lighting is documented in Table T. If using Table T to document lighting in multifamily common use areas providing shared provisions for living, eating, cooking or sanitation, those luminaires are not included here.

Designed Wattage: Conditioned 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 / 170.2(e)2C	Design Watts	Field Inspector	
									Pass	Fail
A/AE/AS	22.5W LED TROFFER	No	NA	22.5	Mfr. Spec	28	No	630	☐	☐
BA20	286W LED LINEAR	No	NA	286	Mfr. Spec	2	No	572	☐	☐
BA56E	800.8W LED LINEAR	No	NA	808	Mfr. Spec	2	No	1,616	☐	☐
BB24	225.6W LED LINEAR	No	NA	225.6	Mfr. Spec	2	No	451.2	☐	☐
BB8	75.2W LED LINEAR	No	NA	75.2	Mfr. Spec	1	No	75.2	☐	☐
BC24/BC24E	182.4W LED LINEAR	No	NA	182.4	Mfr. Spec	3	No	547.2	☐	☐
CA12E	34.2W LED LINEAR SURFACE	No	NA	34.2	Mfr. Spec	1	No	34.2	☐	☐
CA24E	68.4W LED LINEAR SURFACE	No	NA	68.4	Mfr. Spec	2	No	136.8	☐	☐
CA5	14.3W LED LINEAR SURFACE	No	NA	14.3	Mfr. Spec	1	No	14.3	☐	☐
CA8	22.8W LED LINEAR SURFACE	No	NA	22.8	Mfr. Spec	2	No	45.6	☐	☐
CB15E	28.5W LED LINEAR SURFACE	No	NA	28.5	Mfr. Spec	1	No	28.5	☐	☐
CB20E	38W LED LINEAR SURFACE	No	NA	38	Mfr. Spec	1	No	38	☐	☐
CB30E	57W LED LINEAR SURFACE	No	NA	57	Mfr. Spec	1	No	57	☐	☐
CB36E	68.4W LED LINEAR SURFACE	No	NA	68.4	Mfr. Spec	1	No	68.4	☐	☐
D10	12W LED RECESSED	No	NA	12	Mfr. Spec	29	No	348	☐	☐
F4/F4E	18.5W LED STRIP	No	NA	18.5	Mfr. Spec	11	No	203.5	☐	☐
F8/F8N/F8S	37W LED STRIP	No	NA	37	Mfr. Spec	5	No	185	☐	☐
J	15W LED JAR	No	NA	15	Mfr. Spec	2	No	30	☐	☐
K/KE/KS	24.6W LED TROFFER	No	NA	24.6	Mfr. Spec	8	No	196.8	☐	☐

REGISTERED PROFESSIONAL ENGINEER R. J. HARDIN No. 9125 ELECTRICAL STATE OF CALIFORNIA

Hardin-Davidson Engineering
356 Pollasky Ave. Suite 200
Clovis, CA 93612
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IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 01/23/2025

PBK

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MADERA HIGH SCHOOL FIELDHOUSE
200 SOUTH "L" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL
LICENSED ARCHITECT RACHEL R. SCHOEN No. 38165 02-28-27 RENEWAL DATE STATE OF CALIFORNIA

PROJECT NUMBER 20-51
DATE 08/22/2023
DSA APPLICATION NO. 02 - 121624
FILE NO. 20-H3
PTN NO. 65243-153
DRAWN BY HDE

REVISIONS

#	DESCRIPTION	DATE

ELECTRICAL POWER DIST. T24

EX5.1

STATE OF CALIFORNIA
Indoor Lighting CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-E
Project Name: Madera High School Fieldhouse	**Report Page:** (Page 4 of 8)
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F. INDOOR LIGHTING FIXTURE SCHEDULE

L	31W LED SURFACE	No	NA	31	Mfr. Spec	6	No	186	☐	☐
							Total Designed Watts: CONDITIONED SPACES		5,464	

[1]*FOOTNOTE: Design Watts for small aperture and color changing luminaires which qualify per 140.6(a)4B / 170.2(e)2D is adjusted to be 75% /80% 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) / 160.5(b). 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.

H. INDOOR LIGHTING CONTROLS (Not including PAFs)

This table includes lighting controls for conditioned and unconditioned spaces.

Building Level Controls

01	02	03	
		Field Inspector	
Mandatory Demand Response 110.12(c)	Shut-off controls 130.1(c) / 160.5(b)4C	Pass	Fail
Required >= 4,000W subject to multilevel	See Area/Space Level Controls	☐	☐

Area Level Controls

04	05	06	07	08	09	10	11	12	
								Field Inspector	
Area Description	Complete Building or Area Category Primary Function Area	Manual Area Controls 130.1(a) / 160.5(b)4A	Multi-Level Controls 130.1(b) / 160.5(b)4B	Shut-Off Controls 130.1(c) // 160.5(b)4C	Primary/Sky lit Daylighting 130.1(d) / 160.5(b)4D	Secondary Daylighting 130.1(d) / 160.5(b)4D	Interlocked Systems 140.6(a)1/ 170.2(e)2A	Pass	Fail
All Areas Not Below	School or Classroom	Readily Accessible	Dimmer	Occupancy Sensor	NA: Rm < 24sf Glazing	NA: Rm < 24sf Glazing	No	☐	☐
Electrical Room	All Other Occupancies	Readily Accessible	Dimmer	NA: Elec. equip. rm	NA: Rm < 24sf Glazing	NA: Rm < 24sf Glazing	No	☐	☐

STATE OF CALIFORNIA
Indoor Lighting CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-E
Project Name: Madera High School Fieldhouse	**Report Page:** (Page 5 of 8)
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H. INDOOR LIGHTING CONTROLS (Not including PAFs)

	13
	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 .

Conditioned Spaces

01	02	03	04	05	06	
Area Description	Complete Building or Area Category Primary Function Area	Allowed Density (W/ft^2)	Area (ft^2)	Allowed Wattage (Watts)	Additional Allowance / Adjustment	
					Area Category	PAF
Whole Building	School or Classroom	0.6	11,662	6,997.2	No	No
		TOTALS:	11,662	6,997.2	See Tables J, or P for detail	

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.

STATE OF CALIFORNIA
Indoor Lighting CALIFORNIA ENERGY COMMISSION

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N. ADDITIONAL LIGHTING ALLOWANCE: TAILORED DECORATIVE /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 ONE-FOR-ONE 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.

T. DWELLING UNIT LIGHTING

This section does not apply to this project.

STATE OF CALIFORNIA
Indoor Lighting CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-E
Project Name: Madera High School Fieldhouse	**Report Page:** (Page 7 of 8)
	Date Prepared: 8/28/2023

U. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selections have 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
NRCI-LTI-E - Must be submitted for all buildings

V. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in this document. If any selections have been changed by the 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
NRCA-LTI-02-A - Must be submitted for occupancy sensors and automatic time switch controls.	All Areas Not Below;
NRCA-LTI-04-A - Must be submitted for demand responsive lighting controls.	Whole Building Demand Response;

STATE OF CALIFORNIA
Indoor Lighting CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-E
Project Name: Madera High School Fieldhouse	**Report Page:** (Page 8 of 8)
Project Address: 200 South "L" St	**Date Prepared:** 8/28/2023

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Richard J. Hardin, PE	Documentation Author Signature:
Company: Hardin-Davidson Engineering	Signature Date: 2023-08-28
Address: 356 Pollasky Ave, Ste 200	CEA/ HERS Certification Identification (if applicable): E-9125
City/State/Zip: Clovis CA 93612	Phone: 559-323-4995

RESPONSIBLE PERSON'S DECLARATION STATEMENT

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

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. 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.
4. 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.
5. 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: Richard J. Hardin, PE	Responsible Designer Signature:
Company: Hardin-Davidson Engineering	Date Signed: 2023-08-28
Address: 355 Pollasky Ave Ste 200	License: E9125
City/State/Zip: Clovis CA 93612	Phone: 559-323-4995

STATE OF CALIFORNIA
Outdoor Lighting CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
This document is used to demonstrate compliance with requirements in 110.9, 130.0, 130.2, 140.7, and 141.0(b)2L for outdoor lighting scopes using the prescriptive path for nonresidential and hotel/motel occupancies. It is also used to document compliance with requirements in 160.5, 170.2(e)6, 180.1(a) and 180.2(b)4Bv for outdoor lighting scopes using the prescriptive path for multifamily and mixed-use occupancies. Multifamily includes dormitory and senior living facilities.	
Project Name: Madera High School Fieldhouse	**Report Page:** (Page 1 of 8)
Project Address: 200 South "L" St	**Date Prepared:** 8/28/2023

A. GENERAL INFORMATION

01	Project Location (city)	Madera	04	Total Illuminated Hardscape Area (ft^2)	33464
02	Climate Zone	13			
03	Outdoor Lighting Zone per Title 24 Part 1 10.114 or as designated by Authority Having Jurisdiction (AHJ):				
☐	LZ-0: Very Low - Undeveloped Parkland	☒ LZ-2: Moderate - Urban Clusters	☐ LZ-4: High - Must be reviewed by CA Energy Commission for Approval		
☐	LZ-1: Low - Rural Areas	☐ LZ-3: Moderately High - Urban Areas			
05	Occupancy Types within Project				
• Classroom					

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 / 170.2(e)6 or 141.0(b)2L / 180.2(b)4Bv for alterations.

My Project Consists of:

01	02		
☒ New Lighting System	Must Comply with Allowances from 140.7 / 170.2(e)6		
☐ Altered Lighting System	Is your alteration increasing the connected lighting load (Watts)?	○ Yes	○ No
03	04	05	
% of Existing Luminaires Being Altered[1]	Sum Total of Luminaires Being Added or Altered	Calculation Method	
☐ < 10% ☐ >= 10% and < 50% ☐ >= 50%			

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.*

STATE OF CALIFORNIA
Outdoor Lighting CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
Project Name: Madera High School Fieldhouse	**Report Page:** (Page 2 of 8)
	Date Prepared: 8/28/2023

C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables F through N. 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 / 170.2(e)6 or 141.0(b)2L / 180.2(b)4Bv | **Compliance Results**

01		02		03		04		05		06		07		08	09
General Hardscape Allowance 140.7/d1 / 170.2(e)6 (See Table I)	+	Per Application 140.7(d)2 / 170.2(e)6 (See Table J)	+	Sales Frontage 140.7/d2 (See Table K)	+	Ornamental 140.7(d)2 / 170.2(e)6 (See Table L)	+	Per Specific Area 140.7(d)2 / 170.2(e)6 (See Table M)	OR	Existing Power Allowance 141.0(b)2L / 180.2(b)4Bv (See Table N)	=	**Total Allowed** (Watts)	≥	**Total Actual** (Watts)	**07 must be >= 08**
966	+	11	+	---	+	---	+	---	OR	---	=	977	≥	431	COMPLIES
										Shielding Compliance (See Table G for Details)					N/A
										Controls Compliance (See Table H for Details)					Not applicable

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.

STATE OF CALIFORNIA
Outdoor Lighting CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
Project Name: Madera High School Fieldhouse	**Report Page:** (Page 3 of 8)
	Date Prepared: 8/28/2023

F. OUTDOOR LIGHTING FIXTURE SCHEDULE

For new or altered lighting systems demonstrating compliance with 140.7 / 170.2(e)6 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)2L only new luminaires being installed and replacement luminaires being installed as part of the project scope are included (ie, existing luminaires remaining or existing luminaires being moved are not included). Outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit are included in Table H. and are not included here. All other multifamily outdoor lighting is included here.

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) / 170.2(e)6A	Design Watts	Cutoff Req. > 6,200 initial lumen output 130.2(b) / 160.5(c)1[4]	Field Inspector	
										Pass	Fail
M6/M6E	15W LED SURFACE	☐ Linear	15	Mfr. Spec	28	New	☐	420	NA: < 6200 lumens	☐	☐
P1E	11W LED WALL PACK	☐ Linear	11	Mfr. Spec	1	New	☐	11	NA: < 6200 lumens	☐	☐
							Total Design Watts:	431			

* 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)

[1] *FOOTNOTES: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per 130.0(c) / 160.5(b)*

[2] *For linear luminaires, wattage should be indicated as W/lf 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 Reinstalled" for existing luminaires which are being removed and reinstalled as part of the project scope.*

[4] *Compliance with mandatory shielding requirements is required for luminaires with initial lumen output >= 6,200 unless exempted by 130.2(b)/ 160.5(c)*

G. SHIELDING REQUIREMENTS (BUG)

This section does not apply to this project.

STATE OF CALIFORNIA
Outdoor Lighting CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
Project Name: Madera High School Fieldhouse	**Report Page:** (Page 4 of 8)
	Date Prepared: 8/28/2023

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.
Outdoor lighting for nonresidential buildings, parking garages and common service areas in multifamily buildings must be documented separately from outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit

Mandatory Controls for Nonresidential Occupancies, Parking Garages & Common Areas in Multifamily Buildings

01	02	03	04	05	
Area Description	Shut-Off 130.2(c)1 / 160.5(c)	Auto-Schedule 130.2(c)2 / 160.5(c)	Motion Sensor 130.2(c)3 / 160.5(c)	Field Inspector	
				Pass	Fail

[1] *FOOTNOTE: Text has been abbreviated, please refer to Table 160.5-A to confirm compliance with the specific light source technologies listed.*

[2] *Authority having jurisdiction may ask for cutsheets or other documentation to confirm compliance of light source.*

[3] *Recessed luminaires marked for use in fire-rated installations, and recessed luminaires installed in non-insulated ceilings are excepted from ii and iii.*

REGISTERED PROFESSIONAL ENGINEER R.J. HARDIN No. 9125 ELECTRICAL STATE OF CALIFORNIA

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IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
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DATE: 01/23/2025

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MADERA HIGH SCHOOL FIELDHOUSE
200 SOUTH "L" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

MADERA UNITED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL R. SCHEER No. 36165 02-28-27 RENEWAL DATE STATE OF CALIFORNIA

PROJECT NUMBER 20-51
DATE 08/22/2023
DSA APPLICATION NO. 02 - 121624
FILE NO. 20-H3
PTN NO. 65243-153
DRAWN BY HDE

REVISIONS

#	DESCRIPTION	DATE

INDOOR LIGHTING T24

EX5.2

STATE OF CALIFORNIA
Outdoor Lighting CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name: Madera High School Fieldhouse	**Report Page:**	(Page 5 of 8)
	Date Prepared:	8/28/2023

I. LIGHTING POWER ALLOWANCE (per 140.7 / 170.2(e))

This table includes areas using allowance calculations per 140.7 / 170.2(e). General Hardscape Allowance is per Table 140.7-A/Table 170.2-R while "Use it or lose it" Allowances are per Table 140.7-B /Table 170.2-S. 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. Outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit are included in Table H. and are not included here. All other multifamily outdoor lighting is included here.

01				
	"Use it or lose it" Allowance (select all that apply) (select all that apply)			
☒ General Hardscape Allowance Table I (below)	☒ Per Application Table J	☐ Sales Frontage Table K	☐ Ornamental Table L	☐ Per Specific Area Table M

Calculated General Hardscape Lighting Power Allowance per Table 140.7-A for Nonresidential & Hotel/Motel

02	03	04	05	06	07	08	09
Area Description	Area Wattage Allowance (AWA)			Linear Wattage Allowance (LWA)			Total General AWA + LWA (Watts)
	Illuminated Area (ft²)	Allowed Density (W/ft²)	Area Allowance (Watts)	Perimeter Length (lf)	Allowed Density (W/lf)	Linear Allowance (Watts)	
PEDESTRIAN	33464	0.019	635.8	868	0.2	130.2	766
						Initial Wattage Allowance for Entire Site (Watts):	200
						Instances of Initial Wattage Allowance (LZ 0 only)[1]	
						Total General Hardscape Allowance (Watts):	966

STATE OF CALIFORNIA
Outdoor Lighting CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name: Madera High School Fieldhouse	**Report Page:**	(Page 8 of 8)
Project Address: 200 South "L" St	**Date Prepared:**	8/28/2023

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Richard J. Hardin, PE	Documentation Author Signature:
Company: Hardin-Davidson Engineering	Signature Date: 2023-08-28
Address: 356 Pollasky Ave, Ste 200	CEA/ HERS Certification Identification (if applicable): E-9125
City/State/Zip: Clovis CA 93612	Phone: 559-323-4995

RESPONSIBLE PERSON'S DECLARATION STATEMENT

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

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. 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.
4. 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.
5. 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: Richard J. Hardin, PE	Responsible Designer Signature:
Company: Hardin-Davidson Engineering	Date Signed: 2023-08-28
Address: 355 Pollasky Ave Ste 200	License: E9125
City/State/Zip: Clovis CA 93612	Phone: 559-323-4995

STATE OF CALIFORNIA
Outdoor Lighting CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name: Madera High School Fieldhouse	**Report Page:**	(Page 6 of 8)
	Date Prepared:	8/28/2023

J. LIGHTING ALLOWANCE: PER APPLICATION

This table includes areas using the wattage allowance per application from Table 140.7-B / Table 170.2-S.

01	02	03	04	05	06	07	08	09	10
Area Description	Application per Table 140.7-B[1]	CALCULATED ALLOWANCE (Watts)			DESIGN WATTS				Additional Allowance (Watts)
		# of Locations	Allowance per Location[2]	Extra Allowance (Watts)	Luminaire Name or Item Tag	Watts per Luminaire	# of Luminaires	Design Watts	
ELEC ROOM ENTRANCE	Building Entrance/Exit	1	15	15	P1E	11	1	11	11
							Total Design Watts for this Area:	11	
							Total Allowance (Watts) All Areas:		11

[1] *FOOTNOTES: Primary entrance applications are only available for senior care facilities, healthcare facilities, police stations, hospitals, fire stations, and emergency vehicle facilities.*
[2] *The Allowance per Location for ATMs is 100W for the first ATM and 35W for each additional per Table 140.7-B /Table 170.2-S.*
[3] *For luminaires indicated in Table F as linear, wattage in column 07 is W/lf instead of Watts/luminaire. Total linear feet should be indicated in column 08 instead of number of luminaires.*

K. LIGHTING ALLOWANCE: SALES FRONTAGE

This section does not apply to this project.

L. LIGHTING ALLOWANCE: ORNAMENTAL

This section does not apply to this project.

M. LIGHTING ALLOWANCE: PER SPECIFIC AREA

This section does not apply to this project.

N. EXISTING CONDITIONS POWER ALLOWANCE (alterations only)

This section does not apply to this project.

STATE OF CALIFORNIA
Solar And Battery CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-SAB-E
Project Name: Madera High School Fieldhouse	**Report Page:**	(Page 1 of 6)
Project Address: 200 South "L" St	**Date Prepared:**	8/28/2023

This document is used to demonstrate compliance with prescriptive PV and battery requirements in 140.10/ 170.2 for nonresidential, multifamily and mixed-use buildings and prescriptive solar thermal requirements in 170.2(d)3C for multifamily and hotel/ motel occupancies. When PV/battery/solar thermal requirements don't apply or are traded using the performance approach, this document demonstrates compliance with mandatory solar readiness requirements in 110.10/ 160.8 for newly constructed buildings which are either multifamily ten stories or fewer, hotel/motel ten stories or fewer or all other nonresidential buildings three stories or fewer. It is also used to demonstrate compliance with solar readiness in 110.10/ 160.8 for additions to nonresidential, multifamily or hotel/motel building types which add more than 2,000 ft² of roof area. Alterations, or additions of less than 2,000 ft² of roof area, are not required to comply with solar readiness, solar PV and battery requirements and do not need to complete this document.

A. GENERAL INFORMATION

01	Project Location (city)	Madera	04	Building Occupancies	All Other Occupancies
02	Climate Zone	13	05	Construction Type	New construction w/ roof <=533 ft²
03	Conditioned Floor Area (ft²)	11662	06	Number of Stories	Bldg <= 3 stories

B. PROJECT SCOPE

The compliance path the project is using to comply per 110.10(b)1B/ 140.10/ 170.2(g and h) is indicated below.

Compliance with Solar Photovoltaic (PV) and Battery Requirements in 140.10/ 170.2(g and h)

01		
☒	Provided PV system and battery storage sized per 140.10/ 170.2 (g and h)	The project has included an installed PV system and battery storage system per requirements in 140.10/ 170.2(g and h) as documented in Table J.
☐	Exception to PV and Battery: Not enough Solar Access Roof Area	The total of all available Solar Access Roof Area(s) of the project site is less than three percent of the conditioned floor area as documented in Table J.
☐	Exception to PV and Battery: Required PV < 4kW	The required PV system size is less than 4 kW dc as documented in Table J..
☐	Exception to PV and Battery: No contiguous Solar Access Roof Area	The Solar Access Roof Area(s) of the project site contains less than 80 contiguous square feet as documented in Table J.
☐	Exception to PV and Battery: Can't meet snow load	The project has a roof design where the enforcement authority has verified it is not possible for the PV system, including panels, modules, components, supports, and attachments to the roof structure, to meet ASCE 7-16 Chapter 7, Snow Loads.
☐	Exception to PV and Battery: Multi-tenant without VNEM or Community Solar	The project is a multi-tenant building in an area where a load serving entity does not provide either a Virtual Net Metering (VNEM) or community solar program.
☐	The prescriptive PV/battery requirement has been traded off using the performance compliance approach as documented on the PRF Certificate of Compliance form.	

STATE OF CALIFORNIA
Solar And Battery CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-SAB-E
Project Name: Madera High School Fieldhouse	**Report Page:**	(Page 3 of 6)
	Date Prepared:	8/28/2023

F. ALLOCATED SOLAR ZONE

This section does not apply to this project.

G. PERMANENTLY INSTALLED SOLAR PV FOR SOLAR READY EXCEPTION

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 FOR SOLAR READY EXCEPTION

This section does not apply to this project.

STATE OF CALIFORNIA
Solar And Battery CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-SAB-E
Project Name: Madera High School Fieldhouse	**Report Page:**	(Page 4 of 6)
	Date Prepared:	8/28/2023

J. PHOTOVOLTAIC (PV) AND BATTERY SYSTEMS

This table documents compliance with prescriptive photovoltaic and battery system requirements in 140.10/ 170.2(g and h). Unless the project meets one of the listed exceptions, or trades-off PV in an energy model using performance path, 140.10/ 170.2(g and h) requires installed photovoltaic and battery systems for newly constructed buildings. The installed PV systems must meet the minimum requirements in Joint Appendix 11.

Photovoltaic (PV) System

01	02	03	04	05	06	07	08
Occupancy	Conditioned Floor Area (ft²)	Area of New Roof[1] (ft²)	Roof Area < 70% Solar Access[2] (ft²)	Plansheet or Document showing Solar Access Calculations	Occupied Roof Area[3] (ft²)	Solar Access Roof Area (SARA) (ft²)	Min Size of PV System Required (kWdc)
School or Classroom	11,489	11,662	0	EX2.8	0	11,662	18.73
						Total Min Size PV System Required for all Spaces (kWdc):	18.73
						Total Size PV System in Design (kWdc):	24.3

[1] *FOOTNOTES: Includes the area of the building's roof space capable of structurally supporting a PV system and the area of all roof space on covered parking areas, carports, and all other newly constructed structures on the site that are compatible with supporting a PV system per Title 24, Part 2 Section 1511.2.*
[2] *Solar access must be determined using CEC approved solar access calculation tools found at https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/solar-assessment-tools.*
[3] *As specified by CBC Section 503.1.4.*

Battery Storage System

01	02	03	04	05
Space Type	Min Size of PV System Required (kWdc)	Rated Single Charge-Discharge AC Efficiency of Battery System[1]	Min Battery Rated Energy Capacity Required (kWh)	Min Power Capacity of Battery Required (kWdc)
School or Classroom	18.73	96	36.29	8.61
		Total Min Energy (kWh) and Power (kW) Capacity Required	36.29	8.61
		Total Energy (kWh) and Power (kW) Capacity in Design	45	8.7

[1] *FOOTNOTE: Rated single charge-discharge cycle AC to AC (round trip) efficiency of the battery storage system*

STATE OF CALIFORNIA
Outdoor Lighting CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name: Madera High School Fieldhouse	**Report Page:**	(Page 7 of 8)
	Date Prepared:	8/28/2023

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

Form/Title
NRCI-LTO-E - Must be submitted for all buildings

P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no NRCA forms required for this project.

STATE OF CALIFORNIA
Solar And Battery CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-SAB-E
Project Name: Madera High School Fieldhouse	**Report Page:**	(Page 2 of 6)
	Date Prepared:	8/28/2023

Compliance with Solar Thermal Water Heating Requirements in 170.2(d)3C (Multifamilly and hotel/ motel occupancies only)

01	
☐	The project includes a hotel/motel or multifamily occupancy with a gas or propane central water-heating system (serves 2+ dwelling units) and includes a permanently installed domestic solar water-heating system to comply with 170.2(d)3C and Reference Residential Appendix RA4, as documented in Table H. Compliance meets Exception 2 to solar ready requirements in 110.10(b).

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 "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		Compliance Results
01		02		03		04		05		06		07	08	
Required Minimum Area (ft²)	<=	Designated Area (ft²)	OR	Required Minimum DC Power Rating (Watts)	<=	Designed DC Power Rating (Watts)	OR	Required Minimum Solar Savings Fraction	<=	Designed/Rated Solar Savings Fraction	OR	JA5 Compliant Thermostat Specified?	Alternative Energy Efficiency Measure	
(See Table F)				(See Tables G or J)				(See Table H)				(See Table I)		
	<=		OR	18,727	<=	24,300	OR		<=		OR			
Battery storage system design meets the minimum requirements in Joint Appendix JA12 and the minimum energy (kWh)/ power (kW) capacity per Table J.														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 is includes remarks made by the permit applicant to the Authority Having Jurisdiction.

STATE OF CALIFORNIA
Solar And Battery CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-SAB-E
Project Name: Madera High School Fieldhouse	**Report Page:**	(Page 5 of 6)
	Date Prepared:	8/28/2023

K. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selections have been changed by the permit applicant, an explanation should be included Table E. Additional Remarks and ExceptionalConditionMessageCCSABE += UserChangedSelectionInCI. These documents must be provided to the building inspector during construction and can be found online

Form/Title
NRCI-SAB-01-E - Must be submitted for all buildings that must comply with solar readiness or PV/Battery requirements.

L. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no forms required for this project.

REGISTERED PROFESSIONAL ENGINEER R. J. HARDIN No. 9125 ELECTRICAL STATE OF CALIFORNIA

Hardin-Davidson Engineering
356 Pollasky Ave.
Suite 200
Clovis, CA 93612
559.323.4995 tel
559.323.4928 fax

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 01/23/2025

PBK

ARCHITECT PBK Architects, Inc.
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7790 North Palm Avenue
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559-448-8467 F
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MADERA HIGH SCHOOL FIELDHOUSE
200 SOUTH "L" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT RANDALL R. SCHROEDER C 36165 02-28-27 RENEWAL DATE STATE OF CALIFORNIA

PROJECT NUMBER 20-51
DATE 08/22/2023
DSA APPLICATION NO. 02 - 121624
FILE NO. 20-H3
PTN NO. 65243-153
DRAWN BY HDE

REVISIONS

#	DESCRIPTION	DATE

OUTDOOR LIGHTING T24

EX5.3

STATE OF CALIFORNIA
Solar And Battery
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-SAB-E
Project Name:	Madera High School Fieldhouse	**Report Page:** (Page 6 of 6)
Project Address:	200 South "L" St	**Date Prepared:** 8/28/2023

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT	
I certify that this Certificate of Compliance documentation is accurate and complete.	
Documentation Author Name: Richard J. Hardin, PE	Documentation Author Signature:
Company: Hardin-Davidson Engineering	Signature Date: 2023-08-28
Address: 356 Pollasky Ave, Ste 200	CEA/ HERS Certification Identification (if applicable): E-9125
City/State/Zip: Clovis CA 93612	Phone: 559-323-4995

RESPONSIBLE PERSON'S DECLARATION STATEMENT

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

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. 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.
4. 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.
5. 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: Richard J. Hardin, PE	Responsible Designer Signature:
Company: Hardin-Davidson Engineering	Date Signed: 2023-08-28
Address: 355 Pollasky Ave Ste 200	License: E9125
City/State/Zip: Clovis CA 93612	Phone: 559-323-4995

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

Generated Date/Time:

Report Version: 2022.0.000
Schema Version: nrv 20220101

Documentation Software: EnergyPro

Compliance ID:
EnergyPro-7514-0823-0264
Report Generated: 2023-08-28 10:17:31

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SS ☑ FLS ☑ ACS ☑
DATE: 01/23/2025

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MADERA HIGH SCHOOL FIELDHOUSE

200 SOUTH "L" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL R. SCHOEN C 36165 02-28-27 RENEWAL DATE STATE OF CALIFORNIA

PROJECT NUMBER
20-51

DATE
08/22/2023

DSA APPLICATION NO.
02 - 121624

FILE NO.
20-H3

PTN NO.
65243-153

DRAWN BY
HDE

REVISIONS

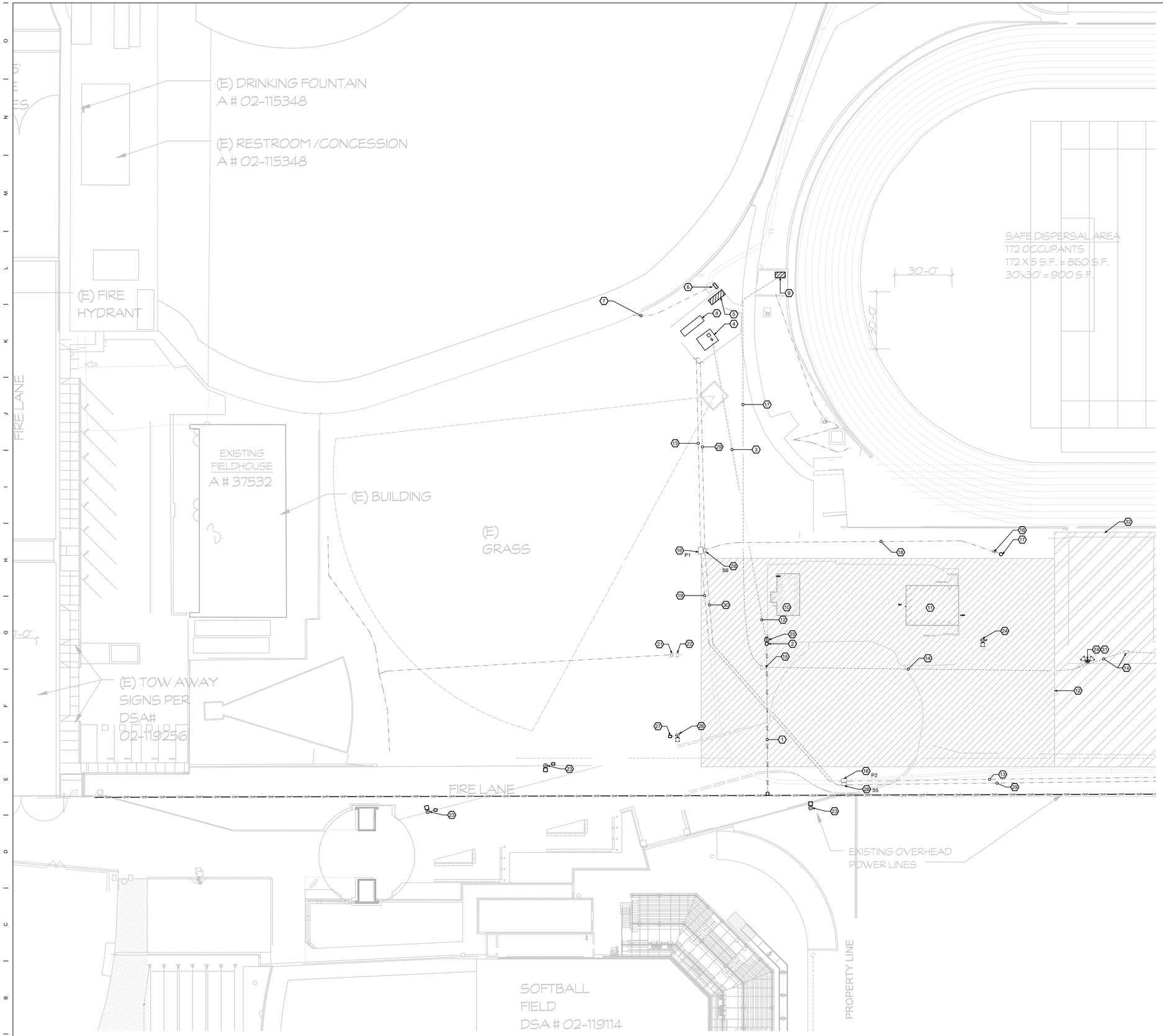
#	DESCRIPTION	DATE

OUTDOOR LIGHTING T24

EX5.4

REGISTERED PROFESSIONAL ENGINEER R. J. HARDIN No. 9125 ELECTRICAL STATE OF CALIFORNIA

Hardin-Davidson Engineering
356 Pollasky Ave.
Suite 200
Clovis, CA 93612
559.323.4995 tel
559.323.4928 fax



DEMOLITION KEYNOTES

1. (E) P.G.&E. PRIMARY OVERHEAD CONDUCTORS TO BE REMOVED BY P.G.&E.
2. (E) P.G.&E. RISER POLE TO BE REMOVED BY CONTRACTOR AFTER P.G.&E. REMOVES PRIMARY CONDUCTORS.
3. (E) P.G.&E. PRIMARY UNDERGROUND FEEDER TO BE RELOCATED BY P.G.&E. ACCESSIBLE OR EXPOSED CONDUIT TO BE REMOVED BY CONTRACTOR.
4. (E) PAD MOUNTED P.G.&E. PAD MOUNTED TRANSFORMER ON CONCRETE PAD. P.G.&E. TO REMOVE TRANSFORMER. CONTRACTOR TO REMOVE EXISTING CONCRETE TRANSFORMER PAD, ACCESSIBLE CONDUIT AND GROUND RODS AND RETURN TO SURROUNDING GRADE.
5. (E) PAD MOUNTED MAIN SWITCHBOARD 'MSB'. P.G.&E. TO DISCONNECT AND REMOVE EXISTING SERVICE CONDUCTORS AND METER. CONTRACTOR TO CONNECT EXISTING 'MSB' TO NEW MAIN SWITCHBOARD 'MSB' PER FEEDER SCHEDULE.
6. (E) SOLAR DISCONNECT TO REMAIN. DSA #02-119114. PROVIDE THE FOLLOWING RENEWABLES LABELS IF NOT CURRENTLY PRESENT: 2, 5, 8 & 11. SEE SHEETS EX2.9 & EX2.10.
7. APPROXIMATE LOCATION OF EXISTING UNDERGROUND PATHWAY FOR EXISTING SOLAR SYSTEM LOCATED AT PARKING LOT ON COYOTE LANE. EXERCISE CAUTION WHEN DIGGING IN THIS AREA AND LOCATE CONDUITS PRIOR TO EXCAVATING. OTHER UNDERGROUND PATHWAYS FOR SPORTS LIGHTING, LANDSCAPING, ETC. MAY BE PRESENT IN THIS AREA.
8. (E) STAND-BY GENERATOR TO REMAIN.
9. (E) DISTRIBUTION BOARD 'MDB' TO REMAIN.
10. DEMO EXISTING SNACK BAR (NOT SHOWN) ELECTRICAL CONNECTIONS BACK TO SOURCE. ALL CONDUIT EXPOSED DURING CONSTRUCTION SHALL BE REMOVED.
11. DEMO EXISTING REST ROOM BUILDING (NOT SHOWN) ELECTRICAL CONNECTIONS BACK TO SOURCE. ALL CONDUIT EXPOSED DURING CONSTRUCTION SHALL BE REMOVED.
12. REMOVE ANY ELECTRICAL INFRASTRUCTURE (CONDUIT, CONDUCTORS, ETC CONTAINED UNDER THE FOOTPRINT OF THE BUILDING , PLUS 4' OR WITHIN ANY AREA OF REPOSE WHEN EXPOSED BY EXCAVATION.
13. (E) SPORTS LIGHTING CONDUIT AND EMERGENCY SPORTS LIGHTING CONDUIT TO REMAIN. REMOVE EXISTING CONDUCTORS. NEW FEEDERS TO BE PROVIDED UNDER STADIUM PROJECT.
14. DEMO (E) PRESS BOX FEEDER AND EMERGENCY LIGHTING CIRCUIT. REMOVE EXISTING CONDUCTORS AND EXPOSED CONDUIT.
15. (E) POWER PULL BOX AND CONDUIT TO BE REMOVED.
16. (E) SPORTS LIGHTING PULL BOX TO REMAIN.
17. (E) SPORTS LIGHTING POLE TO REMAIN.
18. (E) SPORTS LIGHTING FEEDER TO BE REMOVED. IDENTIFY EXACT CONDUIT LOCATION IN FIELD AND COORDINATE WITH NEW LANDSCAPING. REROUTE CONDUIT AROUND NEW LANDSCAPING IF REQUIRED. NEW SPORTS LIGHTING FEEDER TO BE PROVIDED UNDER STADIUM PROJECT.
19. (E) SPORTS LIGHTING AND EMERGENCY SPORTS LIGHTING CONDUITS TO BE REROUTED. REMOVE ALL CONDUIT EXPOSED DURING CONSTRUCTION.
20. EXISTING PULL BOX TO REMAIN. VERIFY CONDUITS AND CONDUCTORS. DOCUMENT ON AS-BUILT DRAWINGS.
21. REPLACE EXISTING PULL BOX WITH NEW H20-RATED PULL BOX (B1017BOX (BOX), B1017X12 (EXTENSION) & B1017-51JHG (LID, MARKED "SIGNAL") PER DETAIL L13/EX2.3.
22. REPLACE EXISTING PULL BOX WITH NEW H20-RATED PULL BOX (B1324BOX (BOX), B1324X12 (EXTENSION) & B1324-51JHG (LID, MARKED "ELECTRIC") PER DETAIL L13/EX2.3.
23. EXISTING SITE LIGHTING POLE TO REMAIN.
24. EXISTING LIGHT FIXTURE, POLE, ETC TO BE REMOVED. REMOVE EXISTING CONDUCTORS AND EXPOSED CONDUIT BACK TO SOURCE.
25. EXISTING DUPLEX RECEPTACLE MOUNTED TO PG&E RISER POLE TO BE REMOVED. REMOVE EXISTING CONDUCTORS AND EXPOSED CONDUIT BACK TO SOURCE.
26. DISCONNECT EXISTING LIGHT POLE AND FIXTURE TO BE RELOCATED. PROTECT FIXTURE FROM DAMAGE DURING CONSTRUCTION. DEMOLISH EXISTING BASE.
27. REPLACE EXISTING PULL BOX WITH NEW H20-RATED PULL BOX (B1017BOX (BOX), B1017X12 (EXTENSION) & B1017-51JHG (LID, MARKED "ELECTRIC") PER DETAIL L13/EX2.3. INTERCEPT EXISTING CONDUCTORS AND EXTEND TO NEW POLE LOCATION. PROVIDE SUBMERSIBLE RATED SPLICES.
28. (E) SOUND SYSTEM PULL BOX TO REMAIN.
29. (E) SOUND SYSTEM CONDUIT TO REMAIN. REMOVE EXISTING CONDUCTORS. NEW CONDUCTORS TO BE PROVIDED UNDER STADIUM PROJECT.
30. (E) SOUND SYSTEM CONDUIT AND CABLING TO BE REROUTED. REMOVE EXISTING CONDUCTORS AND EXPOSED CONDUIT.
31. (E) SOUND SYSTEM SPEAKER, POLE, OR OTHER COMPONENTS TO BE REMOVED. DISCONNECT EXISTING CONDUCTORS AND REMOVE EXPOSED CONDUIT.
32. REMOVE ANY ELECTRICAL INFRASTRUCTURE (CONDUIT, CONDUCTORS, ETC CONTAINED UNDER THE FOOTPRINT OF THE BLEACHER BERM WHETHER SHOWN ON THE THESE PLANS OR NOT. NOT ALL HISTORICAL INFRASTRUCTURE IS KNOWN. EXISTING SPORTS LIGHTING POLES AND CONDUITS TO REMAIN. PROTECT FROM DAMAGE DURING DEMOLITION AND CONSTRUCTION.
33. REMOVE EXISTING SOUND SYSTEM CONDUCTORS AND CONDUIT.
34. DISCONNECT AND REMOVE EXISTING ELECTRICAL INFRASTRUCTURE AT PRESS BOX. DELIVER ANY SOUND SYSTEM, ELECTRONICS, ETC. TO DISTRICT AS DIRECTED BY THE DISTRICT REPRESENTATIVE. PROPERLY DISCARD OF ALL EQUIPMENT NOT TO BE RETAINED BY THE DISTRICT.
35. DISCONNECT AND REMOVE EXISTING ELECTRICAL INFRASTRUCTURE AT TICKET BOOTH. DELIVER ANY SOUND SYSTEM, ELECTRONICS, ETC. TO DISTRICT AS DIRECTED BY THE DISTRICT REPRESENTATIVE. PROPERLY DISCARD OF ALL EQUIPMENT NOT TO BE RETAINED BY THE DISTRICT.

1 ENLARGED DEMOLITION ELECTRICAL SITE PLAN
SCALE: 1"=20'-0"

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 01/23/2025

PBK

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MADERA HIGH SCHOOL FIELDHOUSE

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PROFESSIONAL SEAL

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PROJECT NUMBER	20-51
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DSA APPLICATION NO.	02 - 121624
FILE NO.	20-H3
PTN NO.	65243-153
DRAWN BY	HDE

REVISIONS

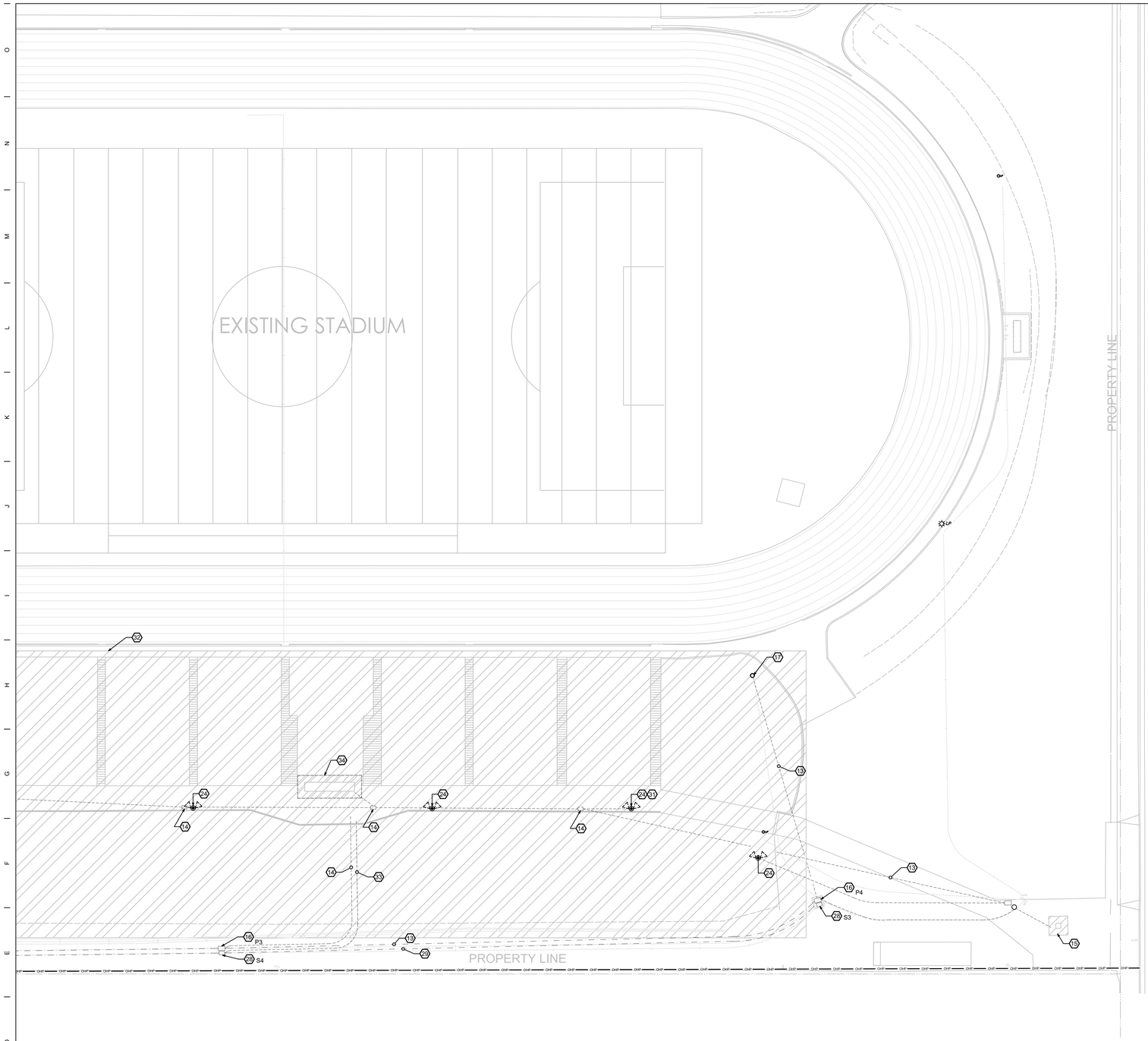
#	DESCRIPTION	DATE

ENLARGED DEMOLITION ELECTRICAL SITE PLAN

ES1.1

REGISTERED PROFESSIONAL ENGINEER R. J. HARDIN NO. 9125 ELECTRICAL STATE OF CALIFORNIA

Hardin-Davidson Engineering
356 Pollasky Ave, Suite 200
Clovis, CA 93612
559.323.4995 tel
559.323.4928 fax



DEMOLITION KEYNOTES

1. (E) P.G.&E. PRIMARY OVERHEAD CONDUCTORS TO BE REMOVED BY P.G.&E.
2. (E) P.G.&E. RISER POLE TO BE REMOVED BY CONTRACTOR AFTER P.G.&E. REMOVES PRIMARY CONDUCTORS.
3. (E) P.G.&E. PRIMARY UNDERGROUND FEEDER TO BE RELOCATED BY P.G.&E. ACCESSIBLE OR EXPOSED CONDUIT TO BE REMOVED BY CONTRACTOR.
4. (E) PAD MOUNTED P.G.&E. PAD MOUNTED TRANSFORMER ON CONCRETE PAD. P.G.&E. TO REMOVE TRANSFORMER. CONTRACTOR TO REMOVE EXISTING CONCRETE TRANSFORMER PAD, ACCESSIBLE CONDUIT AND GROUND RODS AND RETURN TO SURROUNDING GRADE.
5. (E) PAD MOUNTED MAIN SWITCHBOARD 'MSB'. P.G.&E. TO DISCONNECT AND REMOVE EXISTING SERVICE CONDUCTORS AND METER. CONTRACTOR TO CONNECT EXISTING 'MSB' TO NEW MAIN SWITCHBOARD 'MSB' PER FEEDER SCHEDULE.
6. (E) SOLAR DISCONNECT TO REMAIN. DSA #02-119114. PROVIDE THE FOLLOWING RENEWABLES LABELS IF NOT CURRENTLY PRESENT: 2, 5, 8 & 11. SEE SHEETS EX2.9 & EX2.10.
7. APPROXIMATE LOCATION OF EXISTING UNDERGROUND PATHWAY FOR EXISTING SOLAR SYSTEM LOCATED AT PARKING LOT ON COYOTE LANE. EXERCISE CAUTION WHEN DIGGING IN THIS AREA AND LOCATE CONDUITS PRIOR TO EXCAVATING. OTHER UNDERGROUND PATHWAYS FOR SPORTS LIGHTING, LANDSCAPING, ETC. MAY BE PRESENT IN THIS AREA.
8. (E) STAND-BY GENERATOR TO REMAIN.
9. (E) DISTRIBUTION BOARD 'MDB' TO REMAIN.
10. DEMO EXISTING SNACK BAR (NOT SHOWN) ELECTRICAL CONNECTIONS BACK TO SOURCE. ALL CONDUIT EXPOSED DURING CONSTRUCTION SHALL BE REMOVED.
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12. REMOVE ANY ELECTRICAL INFRASTRUCTURE (CONDUIT, CONDUCTORS, ETC CONTAINED UNDER THE FOOTPRINT OF THE BUILDING , PLUS 4' OR WITHIN ANY AREA OF REPOSE WHEN EXPOSED BY EXCAVATION.
13. (E) SPORTS LIGHTING CONDUIT AND EMERGENCY SPORTS LIGHTING CONDUIT TO REMAIN. REMOVE EXISTING CONDUCTORS. NEW FEEDERS TO BE PROVIDED UNDER STADIUM PROJECT.
14. DEMO (E) PRESS BOX FEEDER AND EMERGENCY LIGHTING CIRCUIT. REMOVE EXISTING CONDUCTORS AND EXPOSED CONDUIT.
15. (E) POWER PULL BOX AND CONDUIT TO BE REMOVED.
16. (E) SPORTS LIGHTING PULL BOX TO REMAIN.
17. (E) SPORTS LIGHTING POLE TO REMAIN.
18. (E) SPORTS LIGHTING FEEDER TO BE REMOVED. IDENTIFY EXACT CONDUIT LOCATION IN FIELD AND COORDINATE WITH NEW LANDSCAPING. REROUTE CONDUIT AROUND NEW LANDSCAPING IF REQUIRED. NEW SPORTS LIGHTING FEEDER TO BE PROVIDED UNDER STADIUM PROJECT.
19. (E) SPORTS LIGHTING AND EMERGENCY SPORTS LIGHTING CONDUITS TO BE REROUTED. REMOVE ALL CONDUIT EXPOSED DURING CONSTRUCTION.
20. EXISTING PULL BOX TO REMAIN. VERIFY CONDUITS AND CONDUCTORS. DOCUMENT ON AS-BUILT DRAWINGS.
21. REPLACE EXISTING PULL BOX WITH NEW H20-RATED PULL BOX (B1017BOX (BOX), B1017X12 (EXTENSION) & B1017-51JHG (LID, MARKED "SIGNAL") PER DETAIL L13/EX2.3.
22. REPLACE EXISTING PULL BOX WITH NEW H20-RATED PULL BOX (B1324BOX (BOX), B1324X12 (EXTENSION) & B1324-51JHG (LID, MARKED "ELECTRIC") PER DETAIL L13/EX2.3.
23. EXISTING SITE LIGHTING POLE TO REMAIN.
24. EXISTING LIGHT FIXTURE, POLE, ETC TO BE REMOVED. REMOVE EXISTING CONDUCTORS AND EXPOSED CONDUIT BACK TO SOURCE.
25. EXISTING DUPLEX RECEPTACLE MOUNTED TO PG&E RISER POLE TO BE REMOVED. REMOVE EXISTING CONDUCTORS AND EXPOSED CONDUIT BACK TO SOURCE.
26. DISCONNECT EXISTING LIGHT POLE AND FIXTURE TO BE RELOCATED. PROTECT FIXTURE FROM DAMAGE DURING CONSTRUCTION. DEMOLISH EXISTING BASE.
27. REPLACE EXISTING PULL BOX WITH NEW H20-RATED PULL BOX (B1017BOX (BOX), B1017X12 (EXTENSION) & B1017-51JHG (LID, MARKED "ELECTRIC") PER DETAIL L13/EX2.3. INTERCEPT EXISTING CONDUCTORS AND EXTEND TO NEW POLE LOCATION. PROVIDE SUBMERSIBLE RATED SPLICES.
28. (E) SOUND SYSTEM PULL BOX TO REMAIN.
29. (E) SOUND SYSTEM CONDUIT TO REMAIN. REMOVE EXISTING CONDUCTORS. NEW CONDUCTORS TO BE PROVIDED UNDER STADIUM PROJECT.
30. (E) SOUND SYSTEM CONDUIT AND CABLING TO BE REROUTED. REMOVE EXISTING CONDUCTORS AND EXPOSED CONDUIT.
31. (E) SOUND SYSTEM SPEAKER, POLE, OR OTHER COMPONENTS TO BE REMOVED. DISCONNECT EXISTING CONDUCTORS AND REMOVE EXPOSED CONDUIT.
32. REMOVE ANY ELECTRICAL INFRASTRUCTURE (CONDUIT, CONDUCTORS, ETC CONTAINED UNDER THE FOOTPRINT OF THE BLEACHER BERM WHETHER SHOWN ON THE THESE PLANS OR NOT. NOT ALL HISTORICAL INFRASTRUCTURE IS KNOWN. EXISTING SPORTS LIGHTING POLES AND CONDUITS TO REMAIN. PROTECT FROM DAMAGE DURING DEMOLITION AND CONSTRUCTION.
33. REMOVE EXISTING SOUND SYSTEM CONDUCTORS AND CONDUIT.
34. DISCONNECT AND REMOVE EXISTING ELECTRICAL INFRASTRUCTURE AT PRESS BOX. DELIVER ANY SOUND SYSTEM, ELECTRONICS, ETC. TO DISTRICT AS DIRECTED BY THE DISTRICT REPRESENTATIVE. PROPERLY DISCARD OF ALL EQUIPMENT NOT TO BE RETAINED BY THE DISTRICT.
35. DISCONNECT AND REMOVE EXISTING ELECTRICAL INFRASTRUCTURE AT TICKET BOOTH. DELIVER ANY SOUND SYSTEM, ELECTRONICS, ETC. TO DISTRICT AS DIRECTED BY THE DISTRICT REPRESENTATIVE. PROPERLY DISCARD OF ALL EQUIPMENT NOT TO BE RETAINED BY THE DISTRICT.

1 ENLARGED DEMOLITION ELECTRICAL SITE PLAN
SCALE: 1"=20'-0"

IDENTIFICATION STAMP
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APP: 02-121624 INC:
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DATE: 01/23/2025

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MADERA HIGH SCHOOL FIELDHOUSE

200 SOUTH "L" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL R. SCHOEN C 36165 02-28-27 RENEWAL DATE STATE OF CALIFORNIA

PROJECT NUMBER	20-51
DATE	08/22/2023
DSA APPLICATION NO.	02 - 121624
FILE NO.	20-H3
PTN NO.	65243-153
DRAWN BY	HDE

REVISIONS

#	DESCRIPTION	DATE

ENLARGED DEMOLITION ELECTRICAL SITE PLAN

ES1.2

REGISTERED PROFESSIONAL ENGINEER R.J. HARDIN 9125 ELECTRICAL STATE OF CALIFORNIA

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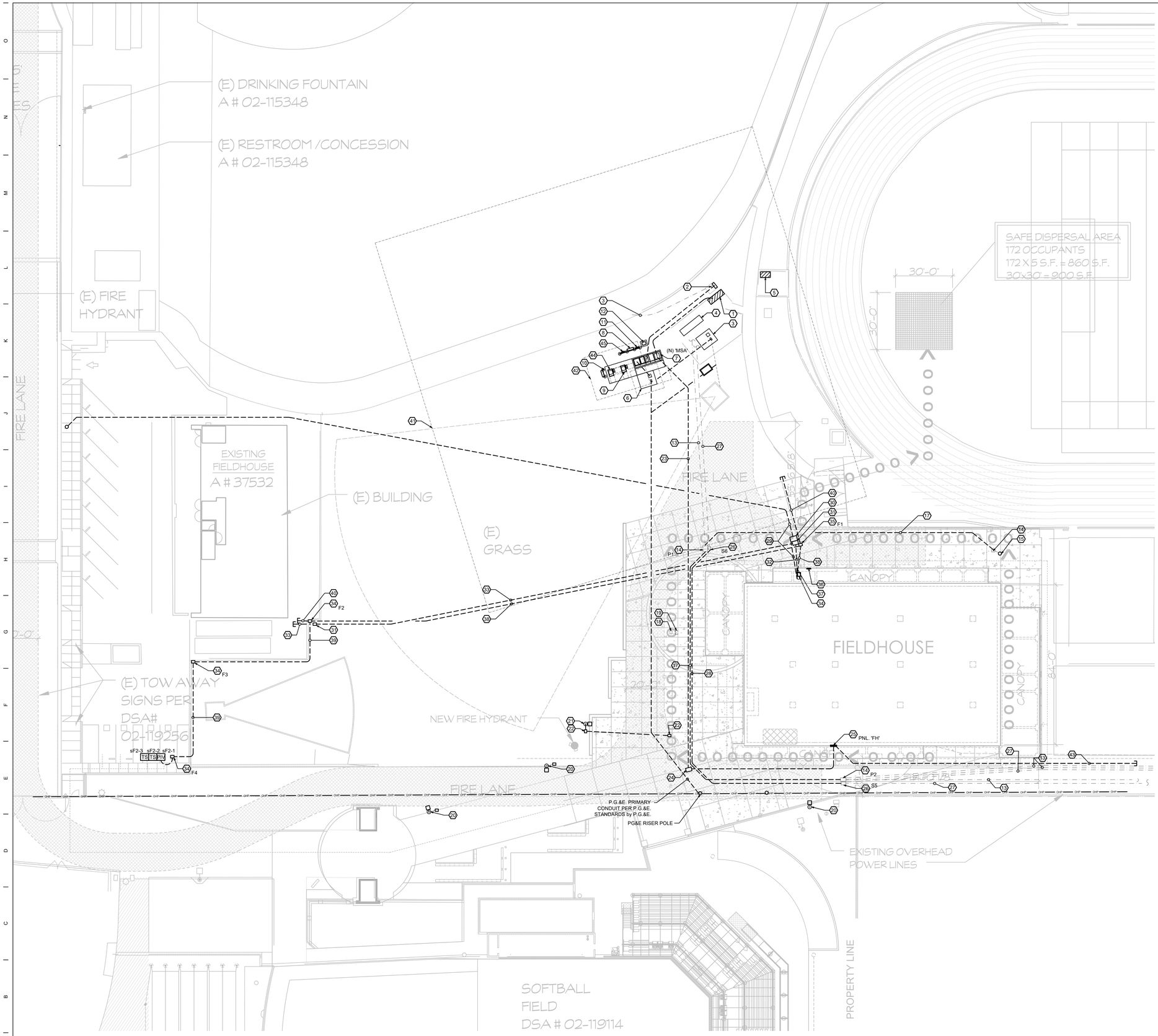

KEYNOTES

1. (E) PAD MOUNTED MAIN SWITCHBOARD 'MSB'. P.G.&E. TO DISCONNECT AND REMOVE EXISTING SERVICE CONDUCTORS AND METER. CONTRACTOR TO CONNECT EXISTING 'MSB' TO NEW MAIN SWITCHBOARD 'MSB' PER FEEDER SCHEDULE.
2. (E) SOLAR DISCONNECT TO REMAIN. DSA #02-119114. PROVIDE THE FOLLOWING RENEWABLES LABELS IF NOT CURRENTLY PRESENT: 2, 5, 8 & 11. SEE SHEETS EX2.9 & EX2.10.
3. APPROXIMATE LOCATION OF EXISTING UNDERGROUND PATHWAY FOR EXISTING SOLAR SYSTEM LOCATED AT PARKING LOT ON COYOTE LANE. EXERCISE CAUTION WHEN DIGGING IN THIS AREA AND LOCATE CONDUITS PRIOR TO EXCAVATING. OTHER UNDERGROUND PATHWAYS FOR SPORTS LIGHTING, LANDSCAPING, ETC. MAY BE PRESENT IN THIS AREA.
4. (E) STAND-BY GENERATOR TO REMAIN.
5. (E) DISTRBUTION BOARD 'MDB' TO REMAIN.
6. (N) PAD MOUNTED P.G.&E. TRANSFORMER. PROVIDE TRANSFORMER PAD PER P.G.&E. REQUIREMENTS AND RULE 16 DRAWING. SEE DETAIL A12/EX2.1 FOR REFERENCE P.G.&E. DRAWING. MAXIMUM TRANSFORMER WEIGHT IS 13,000LBS. TRANSFORMER SPECIFIED, PROVIDED AND INSTALLED BY P.G.&E. CONCRETE PAD TO BE PRE-CAST BY PG&E APPROVED VENDOR.
7. (N) PAD MOUNTED MAIN SWITCHBOARD 'MSA'. 2000A BUS/1600A MAIN, 277/480V, 3Ø, 4W, 65kA SCCR FULLY RATED, NEMA 3R, SOLID NEUTRAL, PAD MOUNTED. PROVIDE HOUSEKEEPING PAD PER DETAIL C5/EX2.3. HOUSEKEEPING PAD SHALL BE RAISED ABOVE SURROUNDING TURF. PROVIDE CONCRETE WORK AREA IN FRONT OF SWITCHBOARD 42" DEEP BY WIDTH OF HOUSEKEEPING PAD FLUSH WITHIN 1/4" OF TOP OF HOUSEKEEPING PAD. SEE DETAIL A/CX1.1. PROVIDE GROUNDING PER DETAIL L5/EX2.3. PROVIDE THE FOLLOWING RENEWABLES LABELS: 6, 7 & 10. SEE SHEETS EX2.9 & EX2.10. LABELS MAY BE RELOCATED FROM THE EXISTING MAIN SWITCHBOARD TO THE NEW SWITCHBOARD IF PRESENT AND IN EXCELLENT CONDITION.
8. (N) 100A FUSED BATTERY STORAGE DISCONNECT 'FDS' MOUNTED TO EQUIPMENT FRAME, SEE SINGLE LINE DIAGRAM AND DETAIL D9/EX2.4. PROVIDE THE FOLLOWING RENEWABLES LABELS: 2, 8 & 15. SEE SHEETS EX2.9 & EX2.10.
9. (N) BATTERY ENERGY STORAGE SYSTEM, BESS-2. SEE SINGLE LINE DIAGRAM, G15/EX2.1 AND SHEET EX2.8. PROVIDE 15'-0"W X 9'-2"D HOUSEKEEPING PAD PER DETAILS A14/EX2.8 & A18/EX2.8. MAINTAIN ALL REQUIRED CLEARANCES AROUND SYSTEM PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. PROVIDE THE FOLLOWING RENEWABLES LABELS: 16, 17, 18 & 19. SEE SHEETS EX2.9 & EX2.10. SYSTEM CONSISTS OF ONE 60KW INVERTER WITH PCS AND ONE 60KWH BATTERY CABINET CONTAINING THE BATTERY STORAGE MODULES. PAD SHALL HAVE A MINIMUM OF 2'-0" SPACE FROM THE MOUNTING FASTENERS TO THE EDGE PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. THE WORKING AREA OF THE EQUIPMENT PAD SHALL EXTEND TO PROVIDE AN UNOBSTRUCTED SPACE 42" DEEP. SEE DETAIL A/CX1.1.
10. (N) 800A FUSED FIRE PUMP DISCONNECT. SEE DETAIL C13/EX2.3.
11. (N) PANEL 'ESSL' MOUNTED TO EQUIPMENT FRAME. SEE SINGLE LINE DIAGRAM AND DETAIL D8/EX2.4.
12. (N) TRANSFORMER 'TESS' MOUNTED ON EQUIPMENT PAD. SEE SINGLE LINE DIAGRAM AND DETAIL C5/EX2.3.
13. (E) SPORTS LIGHTING CONDUIT AND EMERGENCY SPORTS LIGHTING CONDUIT. NEW FEEDERS TO BE PROVIDED UNDER STADIUM PROJECT.
14. (E) SPORTS LIGHTING PULL BOX TO REMAIN.
15. (E) SPORTS LIGHTING POLE TO REMAIN. NEW FEEDERS TO BE PROVIDED UNDER STADIUM PROJECT.
16. REROUTE CONDUIT AROUND NEW LANDSCAPING IF REQUIRED. NEW SPORTS LIGHTING FEEDER TO BE PROVIDED UNDER STADIUM PROJECT.
17. (N) REROUTED SPORTS LIGHTING CONDUIT. SEE DETAIL L9/EX2.3. 1-#4°C. NEW CONDUCTORS TO BE PROVIDED UNDER STADIUM PROJECT.
18. (E) H20-RATED PULL BOX MARKED "SIGNAL".
19. (E) H20-RATED PULL BOX MARKED "ELECTRIC".
20. EXISTING SITE LIGHTING POLE.
21. RELOCATED EXISTING LIGHT POLE AND FIXTURE. 1°C. 2#10, 1#10GRD. RECONNECT FEED THROUGH WIRING.
22. (E) H20-RATED PULL BOX MARKED "ELECTRIC" FOR SITE LIGHTING. 1°C. 2#10, 1#10GRD. RECONNECT FEED THROUGH WIRING.
23. (N) PANEL 'FH' FEEDER. SEE SINGLE LINE DIAGRAM. SEE DETAIL L9/EX2.3. WHERE POSSIBLE, PROVIDE TRENCH PLACEMENT PARALLEL TO NEW AND EXISTING CONDUIT TRENCHES. MAINTAIN REQUIRED CLEARANCE FROM ANY UTILITY EASEMENT.
24. PROVIDE B2436BOX (BOX), B2436-12 (EXTENSION) & B2436-52JH (LID). MARK LID "ELECTRICAL". INSTALL PER DETAIL L13/EX2.3.
25. (N) PANEL 'FH'. SEE SINGLE LINE DIAGRAM, SHEET EX2.1.
26. (E) SOUND SYSTEM PULL BOX TO REMAIN.
27. (E) SOUND SYSTEM CONDUIT TO REMAIN. NEW CONDUCTORS TO BE PROVIDED UNDER STADIUM PROJECT.
28. REROUTED SOUND SYSTEM CONDUITS. SEE DETAIL L9/EX2.3. NEW FEEDERS TO BE PROVIDED UNDER STADIUM PROJECT.
29. PROVIDE (2)4"C PER AT&T STANDARDS TO TELEPHONE POLE. COORDINATE WITH AT&T REPRESENTATIVE.
30. PROVIDE B2436BOX (BOX), B2436-12 (EXTENSION) & B2436-52JH (LID), MARK LID "TELEPHONE" FOR AT&T SERVICE. INSTALL PER DETAIL L13/EX2.3. COORDINATE WITH AT&T REPRESENTATIVE.
31. PROVIDE B1730BOX (BOX), B1730-12 (EXTENSION) AND B1730-51JH LID MARKED "COMMUNICATION". INSTALL BOX PER DETAIL L13/EX2.3. ORIENT PULL BOX WITH ANY ADJACENT CONCRETE, EDGES, JOINTS, ETC.
32. PROVIDE (2)3"C. PROVIDE (1) MAXCELL MXED64283 (3", 3-CELL, DETECTABLE) INNERDUCT IN EACH CONDUIT. INSTALL MAXCELL STRICTLY PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
33. PROVIDE 3"C FOR FUTURE. PROVIDE (1) MAXCELL MXED64283 (3", 3-CELL, DETECTABLE) INNERDUCT. INSTALL MAXCELL STRICTLY PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
34. 'IDF-F'. SEE SHEET E3.1.
35. PROVIDE B1017BOX (BOX), B1017-12 (EXTENSION) & B1017-51JH (LID), MARK LID "FIRE ALARM". INSTALL PER DETAIL L13/EX2.3. ORIENT PULL BOX WITH ANY ADJACENT CONCRETE, EDGES, JOINTS, ETC.
36. 'FACP-F'. SEE SHEET E4.1
37. SIGNAL TERMINAL CABINET 'STC-F'. SEE DETAIL A14/EX4.1.
38. PROVIDE 2"C. WITH (1) MAXCELL #MXED52223 (2", 3 CELL, DETECTABLE) INNERDUCT, (3)DW FOR FIRE ALARM. INSTALL MAXCELL STRICTLY PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
39. PROVIDE 1"C. (3)DW CABLES FOR FIRE SPRINKLER SERVICE EQUIPMENT ((1)PIV, (2)TS)). SEE DETAIL L9/EX2.3.
40. PROVIDE 2" STUB FOR FUTURE FIRE ALARM CONNECTIONS.
41. 100' CLEARANCE AROUND B.E.S.S. PER C.F.C. 1207.8.1.
42. 10' CLEARANCE AROUND B.E.S.S. PER C.F.C. 1207.8.3.
43. STUB 1.25"C FROM PANEL 'FH' FOR FUTURE MINI POWERZONE UNDER FUTURE BLEACHERS. STUB 50' CLEAR OF BUILDING. SEE FEEDER 'V' ON SINGLE LINE DIAGRAM, SHEET EX2.1.
44. FUTURE BATTERY ENERGY STORAGE SYSTEM . SHOWN FOR REFERENCE.
45. (N) PANEL 'ESS' MOUNTED TO EQUIPMENT FRAME, SEE SINGLE LINE DIAGRAM AND DETAIL D8/EX2.4.

1 ENLARGED ELECTRICAL SITE PLAN
SCALE: 1"=30'-0"

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MADERA HIGH SCHOOL FIELDHOUSE
200 SOUTH "L" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL R. SCHOEN C 36165 02-28-27 STATE OF CALIFORNIA

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REVISIONS

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ENLARGED ELECTRICAL SITE PLAN

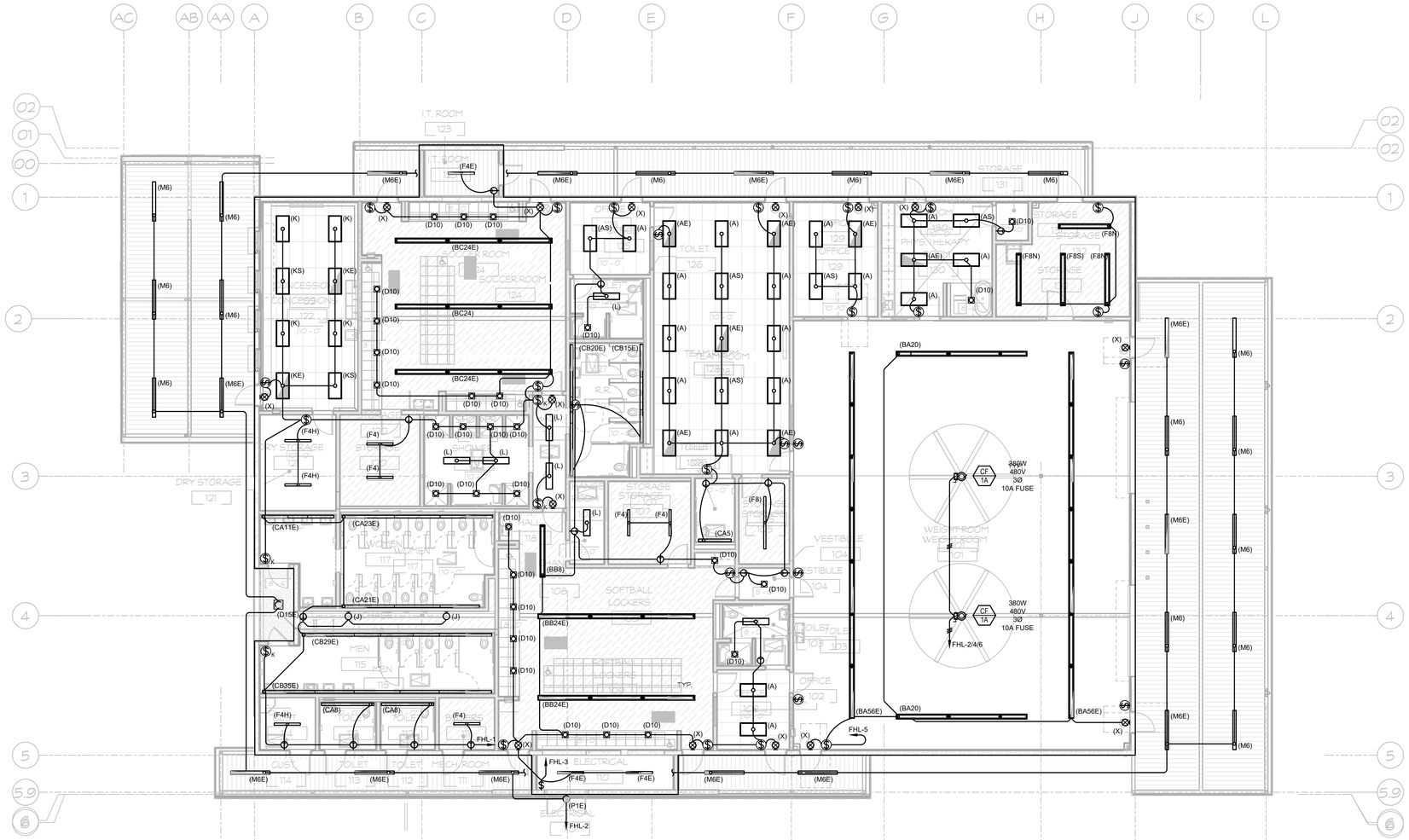
ES1.3

REGISTERED PROFESSIONAL ENGINEER R.J. HARDIN NO. 9125 ELECTRICAL STATE OF CALIFORNIA

Hardin-Davidson Engineering
356 Pollasky Ave.
Suite 200
Clovis, CA 93612
559.323.4995 tel
559.323.4928 fax

DRAWING KEY NOTES (#)

2. WHERE OUTLET BOXES ARE LOCATED IN CMU WALL, SEE DETAIL H10/EX2.4.



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

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MADERA HIGH SCHOOL FIELDHOUSE

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CONSTRUCTION DOCUMENTS

MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL R. SCHOEN C 36165 02-28-27 RENEWAL DATE STATE OF CALIFORNIA

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LIGHTING PLAN

E1.1

REGISTERED PROFESSIONAL ENGINEER R.J. HARTON No. 9125 ELECTRICAL STATE OF CALIFORNIA

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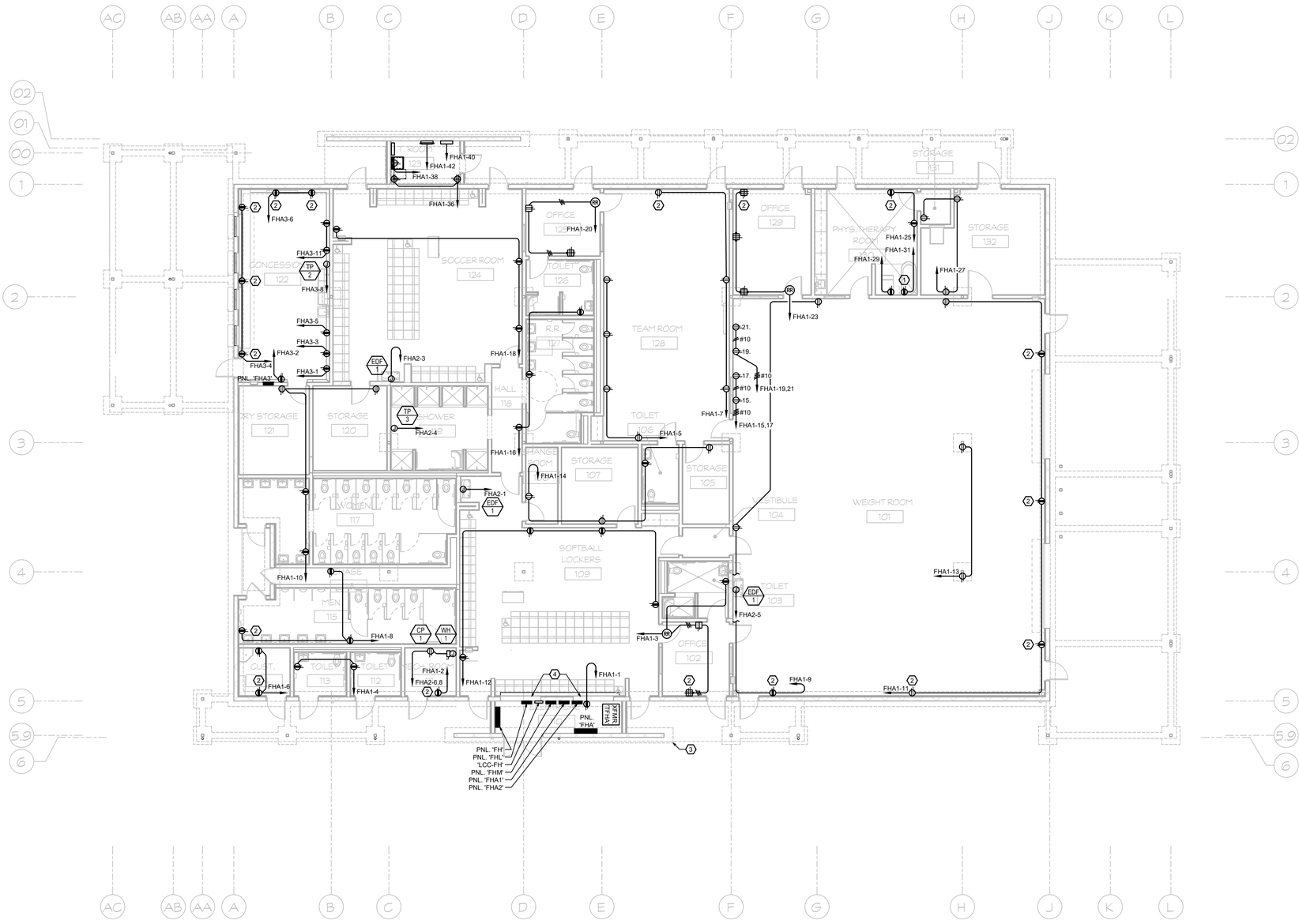
356 Pollasky Ave, Suite 200
Clovis, CA 93612
559.323.4995 tel
559.323.4928 fax

DRAWING KEY NOTES

1. PROVIDE HOSPITAL GRADE 20A, 120V GFCI-PROTECTED RECEPTACLE. LEVITON #GFTR2-HGW OR APPROVED EQUAL.
2. WHERE OUTLET BOXES ARE LOCATED IN CMU WALL, SEE DETAIL H10/EX2.4.
3. STRUCTURAL CONCRETE FOOTING SHOWN FOR REFERENCE. SEE SHEET S2.1 FOR DETAILED INFORMATION.
4. PASS THROUGH WINDOW FOR ELECTRICAL CONDUITS INTO SOFFIT IN LOCK ROOM.



1 POWER PLAN
SCALE: 1/8" = 1'-0"

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MADERA HIGH SCHOOL FIELDHOUSE

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MADERA UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL R. RICHDEN 36165 02-28-27 RENEWAL DATE STATE OF CALIFORNIA

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POWER PLAN

E2.1

REGISTERED PROFESSIONAL ENGINEER R.J. HARDIN No. 9125 ELECTRICAL STATE OF CALIFORNIA

Hardin-Davidson Engineering
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Clovis, CA 93612
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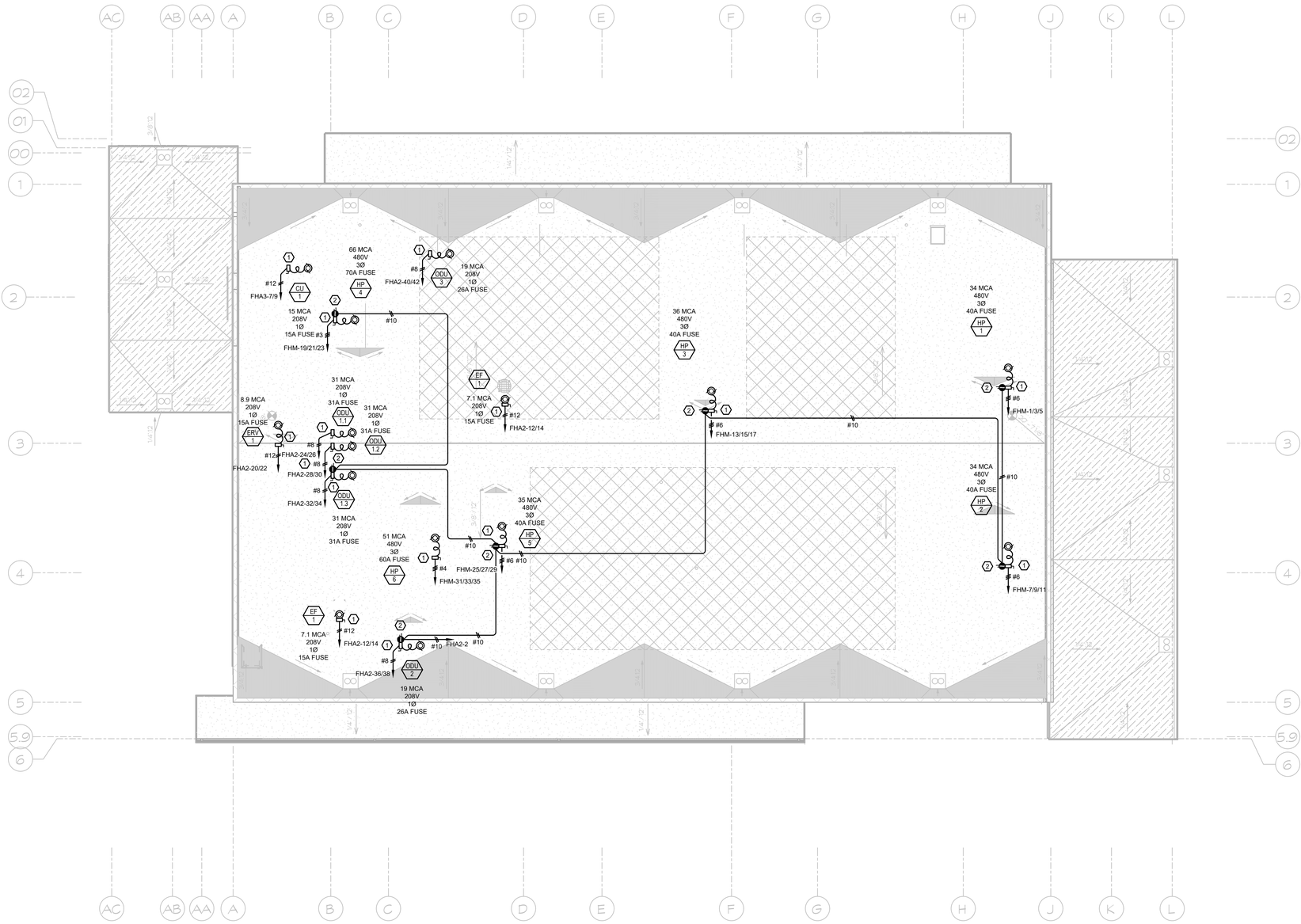
559.323.4928 fax

DRAWING KEY NOTES (#)

1. SEE DETAIL L5/EX2.4 FOR EQUIPMENT MOUNTED DISCONNECT DETAIL AND DETAIL L10/EX2.4 FOR OTHER CONNECTIONS.
2. SEE DETAIL L10/EX2.4 FOR RECEPTACLE MOUNTING.
3. ALL CONDUIT SHALL BE INSTALLED UNDER THE ROOF.



1 ROOF POWER PLAN (3)
SCALE: 1/8" = 1'-0"

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MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL R. SCHICHEN No. 39165 02-28-27 RENEWAL DATE STATE OF CALIFORNIA

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ROOF POWER PLAN

E2.2

REGISTERED PROFESSIONAL ENGINEER R.J. HARDIN No. 9125 ELECTRICAL STATE OF CALIFORNIA

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Clovis, CA 93612
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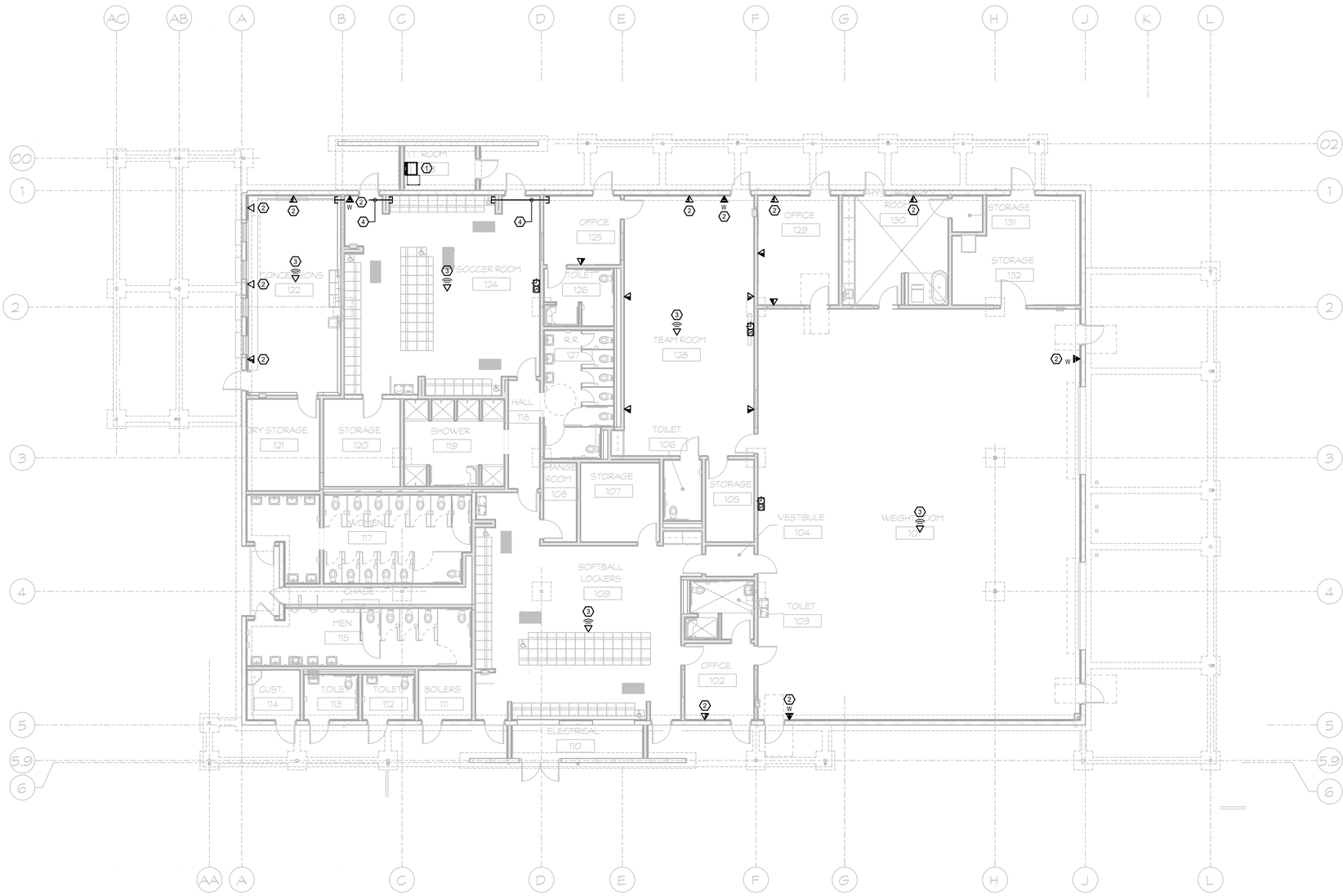
559.323.4928 fax

DRAWING KEY NOTES (#)

1. IDF-FH. INSTALL PER DETAIL L5/EX3.1.
2. WHERE OUTLET BOXES ARE LOCATED IN CMU WALL, SEE DETAIL H10/EX2.4.
3. PROVIDE WAP CONNECTION ABOVE ACCESSIBLE CEILING PER DETAIL L10/EX3.1.
4. PROVIDE 4"C PATHWAY BETWEEN ENCLOSED CEILING SPACES FOR LOW VOLTAGE CABLING.



1 DATA / COMM PLAN
SCALE: 1/8" = 1'-0"

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PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL R. SCHOOLEY C 36165 02-28-27 STATE OF CALIFORNIA

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DATA/COMM PLAN

E3.1

REGISTERED PROFESSIONAL ENGINEER R.J. HARDIN No. 9125 ELECTRICAL STATE OF CALIFORNIA

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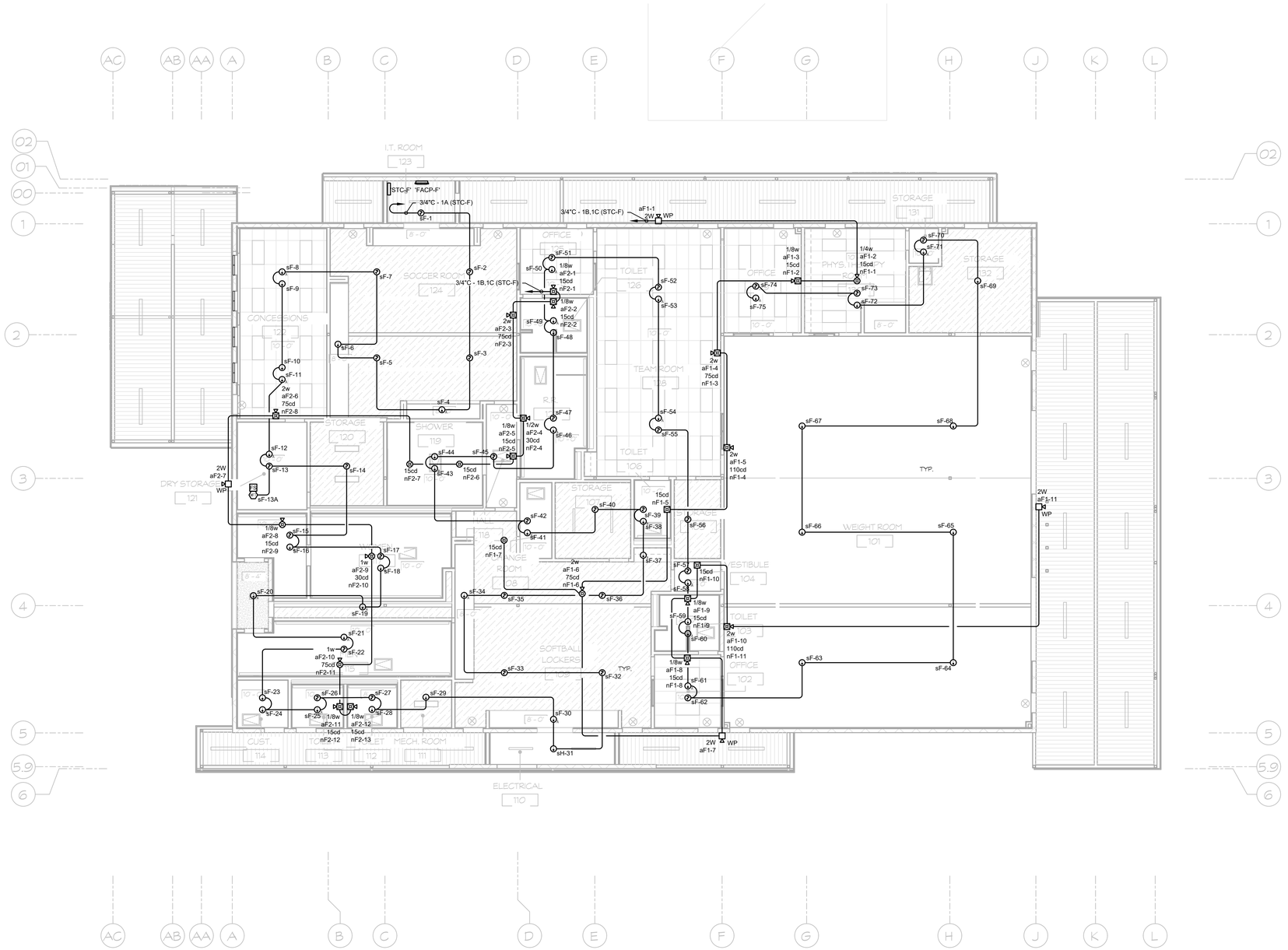
DRAWING KEY NOTES (#)

1. FIRE ALARM CONTROL PANEL 'FACP-F'. INSTALL PER DETAIL A17/EX4.1.
2. SIGNAL TERMINAL CABINET 'STC-F'. INSTALL PER DETAIL A14/EX4.1.



1 FIRE ALARM PLAN
SCALE: 1/8" = 1'-0"

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MADERA HIGH SCHOOL FIELDHOUSE

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PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL R. SCHOEN C-36165 02-28-27 RENEWAL DATE STATE OF CALIFORNIA

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FIRE ALARM PLAN

E4.1

REGISTERED PROFESSIONAL ENGINEER R.J.HARDIN ELECTRICAL STATE OF CALIFORNIA No. 9125

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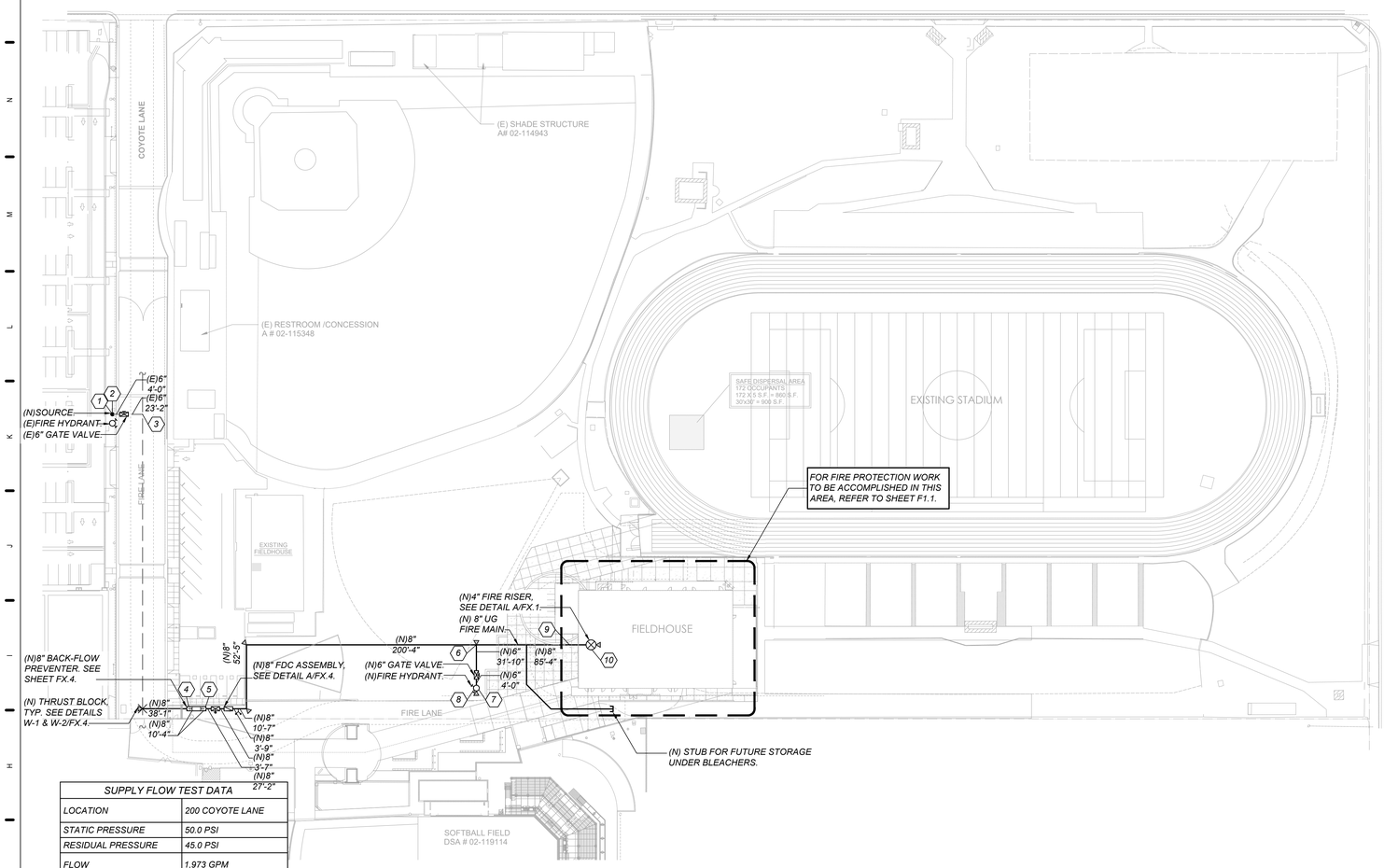

SUPPLY FLOW TEST DATA	
LOCATION	200 COYOTE LANE
STATIC PRESSURE	50.0 PSI
RESIDUAL PRESSURE	45.0 PSI
FLOW	1,973 GPM
OUTSIDE HOSE FLOW	100 GPM

A FIRE PROTECTION SITE PLAN
SCALE: 1" = 50'-0"

GENERAL NOTES

SPRINKLER SYSTEM DESIGNED IN ACCORDANCE WITH NFPA 13 (2022), CFC/CBC (2022), DIVISION OF THE STATE ARCHITECT - DEPARTMENT OF GENERAL SERVICES, AND CITY OF MADERA STANDARDS. ALL WORK TO BE DONE IN ACCORDANCE WITH THESE PLANS AND ALL NATIONAL, STATE, AND LOCAL CODES.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FURNISH AND INSTALL ALL ITEMS REQUIRED FOR A COMPLETE ACCEPTABLE WORKING INSTALLATION, WHETHER SHOWN OR NOT SHOWN, APPLICABLE TO ALL CITED CODES AND STANDARDS. AT TIME OF DESIGN FINAL, COORDINATED STRUCTURAL, MECHANICAL, PLUMBING, ELECTRICAL, AND SPECIAL EQUIPMENT PLANS WERE NOT AVAILABLE. IT SHALL BE THE RESPONSIBILITY OF THE SPRINKLER INSTALLATION CONTRACTOR TO COORDINATE WITH ALL TRADES.

CONTRACTOR TO REVIEW FOR BID, SYSTEM PLANS AS DESIGNED BY ENGINEER. ANY ALTERNATE PROPOSED DESIGN CHANGES OR REVISIONS BY CONTRACTOR, ARE TO BE SUBMITTED IN WRITTEN FORMAT, REVIEWED AND RESPONDED TO, BY ENGINEER PRIOR TO BIDDING. AFTER AWARD OF BID, ALL DEVIATIONS FROM THE ORIGINAL DESIGN INTENTION SHALL BE CLOUDED AND NOTED ON CONTRACTOR ISSUED SHOP DRAWINGS TO ENGINEER, WHICH HAVE BEEN COORDINATED AMONGST THE TRADES, FOR REVIEW AND APPROVAL BY ENGINEER.

GENERAL CONTRACTOR IS SOLELY RESPONSIBLE FOR INSURING ALL SUB-CONTRACTOR'S COORDINATE SHOP DRAWINGS PRIOR TO ORDERING OR INSTALLATION OF ANY EQUIPMENT, DEVICE, MATERIAL, ETC. SUBMISSION OF SHOP DRAWINGS TO THE ENGINEER CONSTITUTES THAT THE DRAWINGS SUBMITTED HAVE BEEN COORDINATED AMONGST THE TRADES. FAILURE TO COORDINATE ALL SHOP DRAWINGS AMONGST THE TRADES, FOR REVIEW AND APPROVAL BY ENGINEER, WILL NOT CONSTITUTE A CHANGE ORDER TO THE OWNER, FOR UNIDENTIFIED FIELD COORDINATION ISSUES.

ANY DESIGN REVISIONS OR DEVIATIONS THAT ARISE FROM COORDINATION OF INSTALLATION METHODS AND MEANS AMONGST THE TRADES DURING CONSTRUCTION, SHALL BE PROVIDED TO THE ARCHITECT BY RFI, DETAILING COORDINATION ISSUE AND PROPOSED SOLUTION. ONCE REVIEWED AND APPROVED BY ENGINEER, THE DESIGN REVISIONS OR DEVIATIONS SHALL BE COORDINATED IN THE FIELD AMONGST THE IMPACTED TRADES, AND SHOWN ON THE AS-BUILTS. A COMPLETE, ACCURATE SET OF AS-BUILTS SHALL BE MAINTAINED ONSITE DURING CONSTRUCTION, AND ARE TO BE ISSUED TO ARCHITECT AND ENGINEER UPON COMPLETION, INSPECTION, AND TESTING OF INSTALLATION.

CONTRACTOR TO PROVIDE SIX (6) SETS OF THE FOLLOWING:

SPRINKLER SPECIFICATIONS

SYSTEM DESIGN:

1. SYSTEM SHALL BE DESIGNED TO CONFORM WITH NFPA 13 (2022), CFC/CBC (2022), DIVISION OF THE STATE ARCHITECT - DEPARTMENT OF GENERAL SERVICES, AND CITY OF MADERA STANDARDS.
2. SYSTEM TO BE AN AUTOMATIC, WET TYPE SPRINKLER SYSTEM.
3. SPRINKLER DISCHARGE DENSITY FOR THIS PROJECT: MIN. OF 0.20 GPM/1500 sqft.
4. POINT OF SERVICE SHALL BE AT THE 8" SUPPLY MAIN AS SHOWN.
5. FIRE SPRINKLER ALARM SYSTEM SHALL BE DESIGNED, INSTALLED AND PERMITTED BY OTHERS, AND IS NOT IN THE SCOPE OF WORK. FLOW DETECTOR AND TAMPER RESISTANT VALVES WILL BE SUPPLIED AND INSTALLED BY FIRE SPRINKLER CONTRACTOR AND WIRED BY ALARM CONTRACTOR.
6. SPRINKLER SYSTEM SHALL BE SINGLE ZONE (SEE RISER DETAIL)
7. FIRE SPRINKLER PIPING SHALL BE AS FOLLOWS (UNLESS NOTED OTHERWISE ON PLANS):
   7.A. PIPING 2-1/2" AND LARGER SHALL BE SCH.10 BLACK STEEL WITH ROLLED FITTINGS, RISER TO BE SCH.10 GALVANIZED STEEL PIPE.
   7.B. PIPING 2" AND LESS SHALL BE SCH.40 BLACK STEEL.
8. ALL HANGERS, BRACES, AND RESTRAINTS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 13 (2022), CBC/CFC (2022), DIVISION OF THE STATE ARCHITECT - DEPARTMENT OF GENERAL SERVICES, AND CITY OF MADERA REQUIREMENTS.
9. PROVIDE CAGE-TYPE SPRINKLER HEAD GUARDS TO ALL SPRINKLERS. TO MINIMIZE CHANCE OF MECHANICAL DAMAGE TO SPRINKLER HEADS WHEN APPLICABLE.
10. IF DESIGN OR MATERIALS DIFFER FROM THAT SPECIFIED HEREIN, SUPPLEMENTAL ENGINEERING DESIGN, SUBMITTAL, AND REVIEW SHALL BE REQUIRED.
11. MICROBIAL INDUCED CORROSION WILL NOT BE A FACTOR FOR THIS SYSTEM.
12. ACCEPTANCE TEST IN ACCORDANCE WITH NFPA 13 (2022), CBC/CFC (2022), DIVISION OF THE STATE ARCHITECT - GENERAL SERVICES DEPARTMENT, AND CITY OF MADERA REQUIREMENTS.
13. HYDRAULIC CALCULATIONS SHALL BE TO THE STREET CONNECTION, ACCORDING TO LOCAL FIRE PREVENTION DISTRICT WATER CURVE DETERMINATIONS AND OR TESTING PROCEDURES.

HYDRAULIC DATA: CITY OF MADERA FIRE DEPARTMENT ISSUED WATER CURVE-

50.0 PSI STATIC
45.0 PSI RESIDUAL
FLOW 1,973 GPM

SITE UNDERGROUND PLAN NOTES

1. ALL UG PIPE LENGTHS INDICATED ON PLANS, REFLECT TOTAL PIPE LENGTH (CENTER TO CENTER) WITH NO TAKE-OUT FOR FITTINGS.
2. ALL UG PVC, C-900, OR OTHER PLASTIC PIPING UTILIZED SHALL BE EQUIPPED WITH A SUITABLE MAGNETIC LOCATION TAPE INSTALLED APPROPRIATELY TO THE TOP OF THE PIPING.
   A.) UG FIRE PIPING INSTALLATION CONTRACTOR SHALL COORDINATE WITH CIVIL, MECHANICAL, PLUMBING AND LANDSCAPE PIPING PLANS PRIOR TO INSTALLATION; TYPICAL.

APPLICABLE SPECIFICATIONS

1. THE CONTRACTOR IS RESPONSIBLE TO ADHERE TO ALL APPLICABLE SPECIFICATIONS PERTINENT TO THE PROJECT, INCLUDING:

CITY OF MADERA STANDARDS AND SPECIFICATIONS
DIVISION OF THE STATE ARCHITECT INFORMATION BULLETINS, INTERPRETATIONS AND ADDENDA

A. FULLY COORDINATED AMONGST THE TRADES INSTALLATION SHOP DRAWINGS, INCLUDING ALL PIPE CUT LENGTHS, FITTINGS, HANGERS, BRACES, SPRINKLERS WITH LEGEND, HYDRAULIC AND SEISMIC CALCULATIONS, AND PRODUCT SUBMITTAL.
B. BOUND SUBMITTAL TO INCLUDE COVER PAGE, PIPING, HARDWARE, AND MATERIALS (INCLUDING FIRE STOPPING). COVER PAGE TO INCLUDE PROJECT NAME, SPRINKLER CONTRACTOR, GENERAL CONTRACTOR, ARCHITECT, AND DATE SUBMITTED FOR REVIEW.

ALL ITEMS REQUIRED BY NFPA 13 (2022) CHAPTER 28.1.3 (FOR WORKING DRAWINGS) SHALL BE PROVIDED ON THE SHOP DRAWINGS. SUBMITTALS ARE IN ADDITION TO, AND NOT IN LIEU OF, THIS REQUIREMENT.

CLEVIS TYPE HANGERS SHALL BE INSTALLED AT TOP OF RISER, AND AS SHOWN ON RISER DETAILS. LOOP TYPE HANGERS ARE ACCEPTABLE IN ALL OTHER AREAS.

FINAL INSTALLATION SPACING FOR SPRINKLER SYSTEM PIPING AND SPRINKLERS, MAY VARY WITH FIELD COORDINATION ISSUES. ALL VARIANCES TO COMPLY WITH LISTING OF SPRINKLERS, NFPA 13 (2022), CFC/CBC (2022), DIVISION OF THE STATE ARCHITECT - DEPARTMENT OF GENERAL SERVICES, AND CITY OF MADERA REQUIREMENTS.

ALL HANGERS, THREADED ROD, BRACING COMPONENTS AND HARDWARE, SHALL BE HOT DIPPED GALVANIZED - OR FACTORY COATED GALVANIZED - FOR ALL EQUIPMENT AND COMPONENTS IN EXTERIOR APPLICATIONS. ALL FASTENERS USED (IE BOLTS - NUTS / WASHERS) TO BE STAINLESS STEEL.

SPRINKLERS ARE TO BE LOCATED CENTER TILE (OR AS SHOWN) ACCORDING TO INDUSTRY STANDARDS AND PRACTICES.

SPRINKLER CONTRACTOR SHALL BE RESPONSIBLE FOR SHOWING THE EXACT LOCATION OF SEISMIC RESTRAINTS ON SUBMITTED COORDINATED AMONGST THE TRADES SHOP DRAWINGS, AND FINAL AS-BUILTS. SUBMITTED SHOP DRAWINGS SHALL DESIGNATE THE TYPE AND LOCATION OF EACH BRACE, HANGER OR RESTRAINT, AND SHALL BE ACCOMPANIED BY A DETAIL WITH LEGEND, AND CALCULATIONS (IF APPLICABLE) IN ACCORDANCE WITH NFPA 13 (2022), CFC/CBC (2022), AND THE APPROPRIATE SEISMIC DESIGN CRITERIA FOR THE PROJECT.

ANY SUBSTITUTION OF "FLEXIBLE" TYPE PIPING IN LIEU OF "RIGID" PIPE, OR ANY CHANGES TO SIZE, MANUFACTURER, OR LENGTHS OF "FLEXIBLE" TYPE PIPING WILL REQUIRED RE-SUBMITTAL OF PIPING PLANS, PRODUCT DATA SHEETS, AND HYDRAULIC CALCULATIONS TO DIVISION OF THE STATE ARCHITECT - DEPARTMENT OF GENERAL SERVICES (FIRE LIFE SAFETY) FOR REVIEW AND APPROVAL.

SHOP DRAWINGS THAT HAVE NOT BEEN COORDINATED AMONGST THE TRADES UTILIZING THE MOST CURRENT 2D/3D FILES, WILL NOT BE ACCEPTED FOR REVIEW.

ELECTRONIC (DIGITAL) SUBMITTAL IN PDF FORMAT IS ACCEPTABLE, IF PREPARED IN ACCORDANCE WITH SPECIFICATION 2105 00, SECTION (1-10, A.5). SUBMITTALS NOT CONFORMING TO THE SPECIFICATION WILL NOT BE REVIEWED.

PIPE INSULATION SPECIFICATIONS

1. ALL WATER-FILLED SPRINKLER SYSTEM PIPING 2" AND SMALLER EXPOSED TO EXTERIOR, OR IN SPACES MAINTAINED BELOW 40 DEGREES FAHRENHEIT, SHALL BE INSULATED WITH 1" THICK RUBBER BASED ELASTOMERIC PRE-FORMED PIPE INSULATION.
2. ALL-WEATHER ALUMINUM PIPE AND FITTING JACKETING SHALL BE APPLIED OVER PIPE INSULATION, W/PRE-FABRICATED ALUMINUM STRAPPING AND SEALS BY SAME MANUFACTURER.
3. ALUMINUM JACKETING SHALL BE SEALED WITH OUTDOOR BARRIER MASTIC, WITH 1/8" BEAD OF GREY METAL JACKET SEALANT AT ALL SEAMS.

FIRE PROTECTION SITE LEGEND		
SYMBOL	DESCRIPTION	ABBR
— — — —	(E) FIRE SUPPLY LINE	F
———	(N) FIRE UG LINE	(E) F
	(N) FIRE HYDRANT	FH
	(N) GATE VALVE	GV
	(N) THRUST BLOCK	TB
	(N) BACKFLOW PREVENTER (RP)	
	(N) FIRE DEPARTMENT CONNECTION	F+DC
	(N) FREE STANDING FDC	FFDC
	(N) RISER	
	HYDRAULIC NODE	
	POINT OF CONNECTION	POC

*⟨0⟩ HYDRAULIC NODE, TYP.

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MADERA HIGH SCHOOL FIELDHOUSE
200 SOUTH "L" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

PROFESSIONAL SEAL
LICENSED ARCHITECT MICHAEL R. SCHOEN C-36165 02-28-27 RENEWAL DATE STATE OF CALIFORNIA

PROJECT NUMBER	20-51
DATE	MM/DD/YYYY
DSA APPLICATION NO.	02 - 121624
FILE NO.	20-H3
PTN NO.	65243-153
DRAWN BY	Author

REVISIONS

#	DESCRIPTION	DATE

CONSTRUCTION DOCUMENTS

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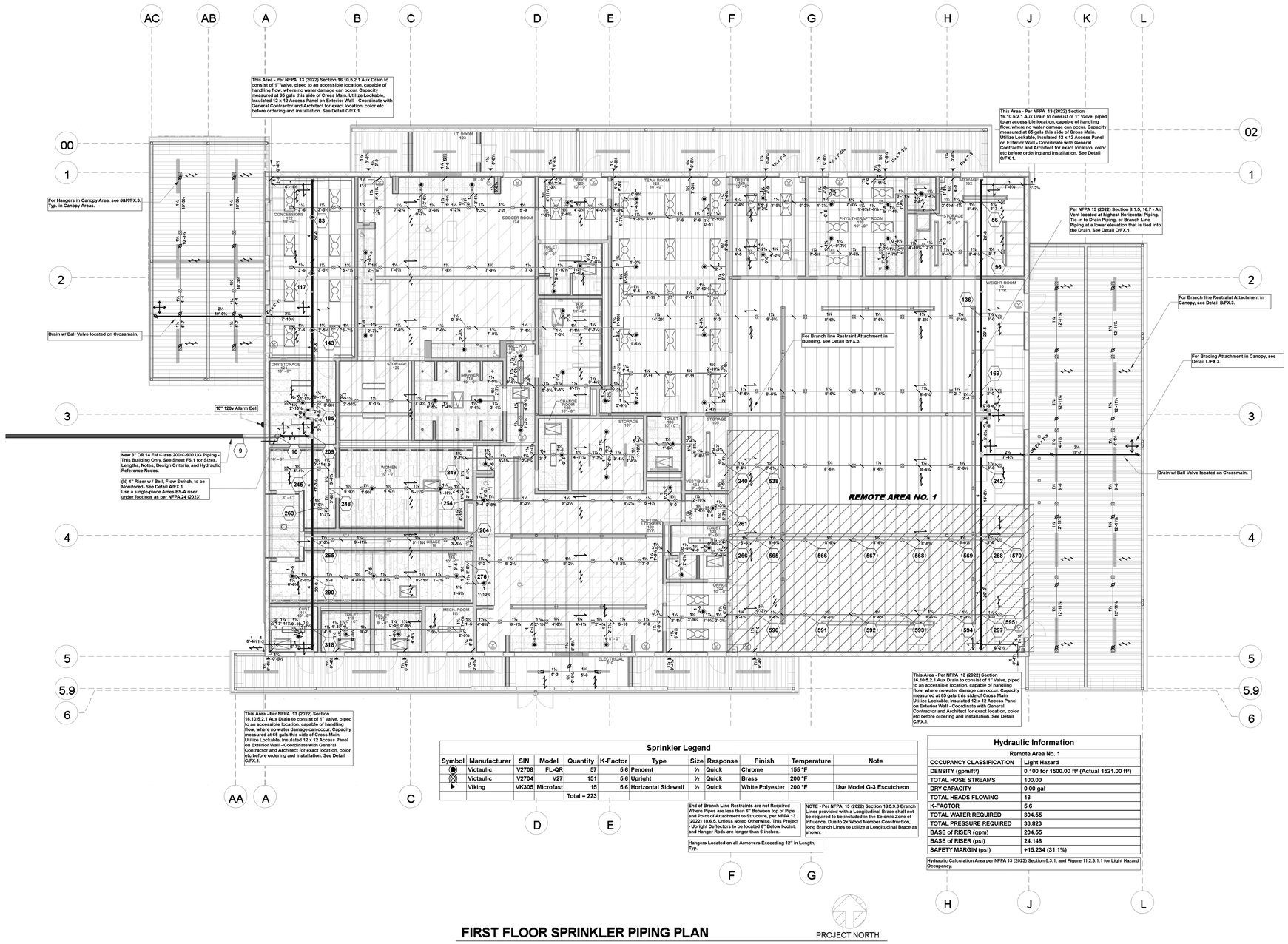
FIRE PROTECTION SITE PLAN

FS.1

16 January 2025 10:38 AM P:\2023\23073 Modesto USD – Modesto HS Stadium Locker Addition\4-Drawings\6 FLP\0.1 – SITE PLAN – PH.1 – FIELDHOUSE.dwg benjamin



Sprinkler Components Legend

- FLEXIBLE GROOVED COUPLING
- PIPING W/ GROOVED FITTINGS
- PIPING W/ THREADED FITTINGS
- PIPING W/ PENDENT SPRINKLER (Varies - See Details)
- PIPING W/ UPRIGHT SPRINKLER (Varies - See Details)
- SEISMIC SWING JOINT
- HYDRAULIC NODE REF
- (E) PIPING
- FIRE PENETRATION THRU RATED WALL
- FLEX DROP W/ PENDENT SPRINKLER (N/A This Project)

Sprinkler Brace / Hanger Legend

Symbol	Description	Detail Reference
	LATERAL SEISMIC BRACE (Perpindicular)	SHEET FX.3
	LONGITUDINAL SEISMIC BRACE (Parallel)	SHEET FX.3
	4-WAY SEISMIC BRACE (Parallel / Perpindicular)	SHEET FX.3
	END OF LINE RESTRAINT / BRANCH LINE RESTRAINT	SHEET FX.3
	PIPE HANGER	SHEET FX.3

"Details are specific to construction type"

Building is I-Joist, 3x and HSS Wood & Steel / Metal Pan Deck Construction.
All Design and Installation shall conform to NFPA 13 (2022), NFPA 24 (2019), CFC/CBC (2022), and City of Madera Fire Prevention District / Building Department Standards.
In sloped areas, Fire Sprinkler Piping Mains to follow the slope of the Roof as shown.
Per NFPA 13 (2022) A.5.3.1 - Unused Attics, Auditoriums, Educational, Libraries with common stacking, Overhangs with no combustibles underneath etc to be Light Hazard Occupancy.
Per NFPA 13 (2022) A.5.3.1 - All Kitchen Service Areas to be an Ordinary Group I Occupancy.
Per NFPA 13 (2022) A.5.3.2 - All Stages, Mechanical and Storage Rooms to be an Ordinary Group II Occupancy.
Per NFPA 13 (2022) Table 13.2.1 - All Electrical Rooms / Equipment Rooms / Storage Rooms limited to Class I-IV Commodities (solid-piled, palletized, bin-box, rack, and back-to-back shelf storage) to a maximum of 10'-0 this project and to be an Ordinary Group II Occupancy.
Per NFPA 13 (2022) Table 8.6.2.2.1 (b) - The maximum Pendent Sprinkler in an Ordinary Group I Occupancy to be 130 sqft, with a maximum distance between Sprinklers of 15'-0.
Per NFPA 13 (2022) Table 8.6.2.2.1 (a) - The maximum Pendent Sprinkler in an Light Hazard Occupancy to be 225 sqft, with a maximum distance between Sprinklers of 15'-0.
Per NFPA 13 (2022) Section A.5.2 - All unused Attics to be a Light Hazard Occupancy.
Per NFPA 13 (2022) Section Table 8.6.2.2.1 (a) - Light Hazard Occupancy (unused Attics) with Non-Combustible Obstructed Construction to have a maximum Sprinkler Spacing of 225 sqft, with a maximum Sprinkler spacing of 15'-0.
Per NFPA 13 (2022) Section 8.6.4.1.2 - Non-Combustible Obstructed Construction Sprinkler Deflectors to be positioned in a horizontal plane of 1" to 6" below the structural members, to a maximum of 22" below the inside face of the Roof Deck.
Per NFPA 13 (2022) Section 8.5.4.2 - Sprinkler Deflectors shall be aligned parallel to ceilings, roofs, or the incline of stairs. Upright Sprinklers shall be installed with the frame arms parallel to the piping, unless listed otherwise.
Per NFPA 13 (2022) Figure 11.2.3.1.1 - Light Hazard Occupancy to be Hydraulically Calculated at a Density of .10 / 1500 sqft. minimum utilizing most demanding Sprinkler Spacing.
Per NFPA 13 (2022) Section 11.2.3.2.3.1 - Where listed Quick Response Sprinklers are used, a reduction in the Hydraulically Calculated System Area of Operation shall be permitted to be reduced without revising the Density as indicated in Figure 11.2.3.2.3.1. in Light Hazard Occupancy Only.
Per NFPA 13 (2022) Section 11.2.3.2.4 - System Area of Operation shall be increased by 30% without revising the density when the Roof Slope exceeds 1 in 6 (a rise of 2 units in a single run of 12 units, a Roof Slope of 16.7%) in non-storage applications.
Per NFPA 13 (2022) Section 8.16.2.5.2.3 - System(s) to be equipped with Auxiliary Drains. If trapped water in Existing Branch Line contains less than 5'-0 gallons an Auxiliary Drain shall not be required if Branch Line can be drained by the removal of a single Pendent Sprinkler.
Per NFPA 13 (2022) Handbook Sections 8.15.1.2.3 - 8.15.1.2.5, A.8.15.1.2.1, Exhibit 8.33, 8.15.1.2.1.1, 8.15.1.2.2, 8.15.1.2.10-12, 8.15.1.2.14 - No Sprinkler protection required for Non-Combustible Construction type attics, and concealed spaces as defined.
Per NFPA 13 (2022) Section 8.15.3, 8.15.3.2.3- In Stairways of Non-Combustible Construction,Sprinklers shall be installed at top of shaft and under first intermediate landing, and under areas used for Storage.
Per NFPA 13 (2022) Section 8.15.7.2, A.8.15.7.2 - Sprinklers protection not required for exterior projections are constructed with materials that are Non-Combustible.
Per NFPA 13 (2022) Section 8.15.5.1, 8.15.5.2 - Sidewall Sprinkler to be installed in Elevator pit, near the side of the pit below the Elevator Doors, and not more than 2'-0 above the bottom of the floor of the pit.
Electrical Equipment Room to have no pass-through Piping. Coordinate with Electrical Contractor to ensure no Piping is installed above Electrical Equipment as per NFPA 72 (2022), and OFC 2022.
Per NFPA 13 (2022) Section 9.3.6.5 - Where Branch lines are supported by rods less than 6" long, from the top of the Pipe to the point of attachment to the Building Structure, no End-of Line Restraints required.

Per NFPA 13 (2016) Table 9.3.6.4 (a) Maximum Spacing of Steel Branch Line Retraints (ft)			
This project: Use the values for Cp .50			
	Seismic Coefficient (Cp)		
Pipe (in.)	Cp__ 0.50	0.50 < Cp__ 0.71	Cp > 0.71
1"	43	34	29
1-1/4"	46	39	27
1-1/2"	49	41	28
2"	53	45	31

1 HR RATED BARRIER
1 HR RATED CORRIDOR

All Lateral Bracing of Mains to be spaced at 30'-0 Maximum.
All Longitudinal Bracing of Mains to be spaced at 60'-0 Maximum.
Installation Contractor to verify all Hanger types, locations, and configurations with Project Structural Engineers before Installation.
All Hanger and Bracing Components are to be installed per NFPA 13 (2023), OBC / OFC (2023), and Manufacturer Installation Instructions.
Fire Sprinkler Piping to be as close as possible to bottom Flange of Steel Beams, and to be above Ducts as possible or applicable.
***Fire Protection Contractor shall coordinate Grille, Access Panel and Unit Locations with HVAC Contractor to Avoid Conflicts.**

Sprinkler Legend

Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature	Note
	Victaulic	V2708	FL-QR	57	5.6	Pendent	½	Quick	Chrome	155 °F	
	Victaulic	V2704	V27	151	5.6	Upright	½	Quick	Brass	200 °F	
	Viking	VK305	Microfast	15	5.6	Horizontal Sidewall	½	Quick	White Polyester	200 °F	Use Model G-3 Escutcheon
				Total = 223							

End of Branch Line Restraints are not Required Where Pipes are less than 6" Between top of Pipe and Point of Attachment to Structure, per NFPA 13 (2022) 18.6.5, Unless Noted Otherwise. This Project - Upright Deflectors to be located 6" Below I-Joist, and Hanger Rods are longer than 6 inches.

NOTE - Per NFPA 13 (2022) Section 18.5.9.6 Branch Lines provided with a Longitudinal Brace shall not be required to be included in the Seismic Zone of influence. Due to 2x Wood Member Construction, long Branch Lines to utilize a Longitudinal Brace as shown.

Hangers Located on all Armovers Exceeding 12" in Length, Typ.

Hydraulic Information

Remote Area No. 1	
OCCUPANCY CLASSIFICATION	Light Hazard
DENSITY (gpm/ft²)	0.100 for 1500.00 ft² (Actual 1521.00 ft²)
TOTAL HOSE STREAMS	100.00
DRY CAPACITY	0.00 gal
TOTAL HEADS FLOWING	13
K-FACTOR	5.6
TOTAL WATER REQUIRED	304.55
TOTAL PRESSURE REQUIRED	33.823
BASE of RISER (gpm)	204.55
BASE of RISER (psi)	24.148
SAFETY MARGIN (psi)	+15.234 (31.1%)

Hydraulic Calculation Area per NFPA 13 (2023) Section 5.3.1, and Figure 11.2.3.1.1 for Light Hazard Occupancy.

FIRST FLOOR SPRINKLER PIPING PLAN

SCALE: 1/8" = 1'-0

PROJECT NORTH

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DATE: 01/23/2025

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MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL
LICENSED ARCHITECT MICHAEL R. SCHOEN C 36165 02-28-27 RENEWAL DATE STATE OF CALIFORNIA

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DRAWN BY	Author

REVISIONS

#	DESCRIPTION	DATE

CONSTRUCTION DOCUMENTS

FIRE PROTECTION PIPING PLAN

F1.1

REGISTERED PROFESSIONAL ENGINEER JOHN W. CIRULLI No. M34846 Exp. 6-30-26 MECHANICAL STATE OF CALIFORNIA

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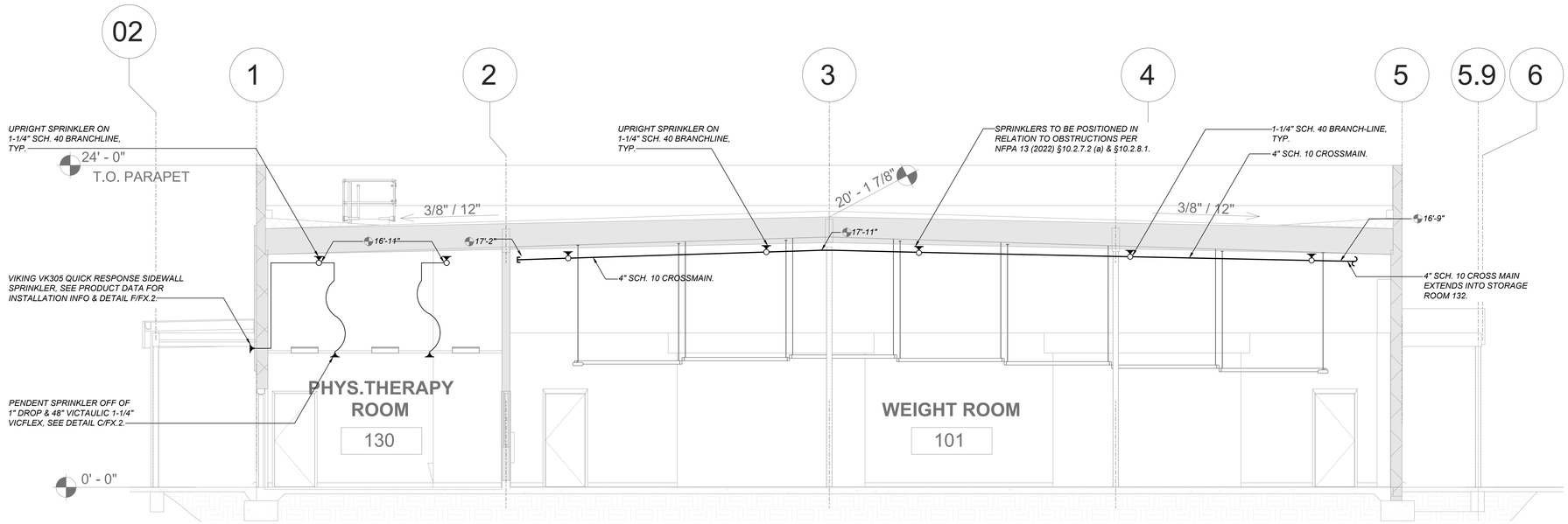

A BUILDING SECTION A-A

SCALE 1/4" = 1'-0"

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PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL R. SCHOCH C 36165 02-28-27 STATE OF CALIFORNIA

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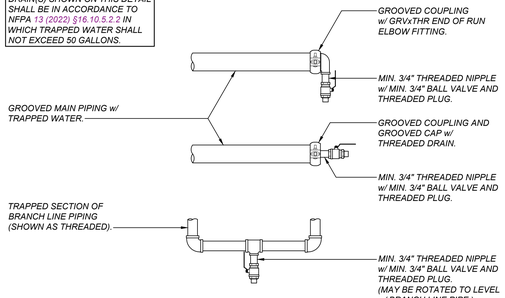
FIRE PROTECTION SECTIONS

F2.1

16 January 2025 10:38 AM P:\2023\23073 Modera USD - Modera HS Stadium Locker Addition\4-Drawings\6 FLY\F2.1 - SECTIONS.dwg benjamin

INSTALLATION OF AUXILIARY DRAIN(S) SHOWN ON THIS DETAIL SHALL BE IN ACCORDANCE TO NFPA 13 (2022) §16.10.5.2.2 IN WHICH TRAPPED WATER SHALL NOT EXCEED 50 GALLONS.

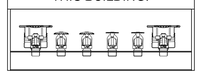


AUXILIARY DRAIN DETAIL

SCALE: NONE

E / FX.1

PROVIDE MIN. 6 SPARE SPRINKLERS FOR THIS BUILDING.



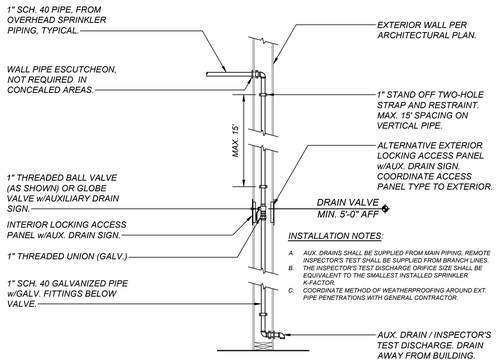
SPARE HEAD BOX NOTES:

1. PER NFPA 13 (2022) §16.2.7.3 THE SPRINKLERS SHALL BE KEPT IN A CABINET LOCATED WHERE THE TEMPERATURE TO WHICH THEY ARE SUBJECTED WILL AT NO TIME EXCEED THE MAXIMUM CEILING TEMPERATURES SPECIFIED IN TABLE 7.2.4.1 FOR EACH OF THE SPRINKLERS WITHIN THE CABINET.
2. THE SPARE HEAD CABINET SHALL BE PLACED IN A SECURE LOCATION, PREFERABLY FASTENED TO A WALL ABOVE 6'-0" A.F.F. LOCATION SHALL BE COORDINATED BY THE OWNER.
3. PER NFPA 13 (2022) §16.2.7.5 THE STOCK OF SPARE SPRINKLERS SHALL INCLUDE ALL TYPES AND RATINGS INSTALLED AND SHALL BE AS FOLLOWS:
   - 3.1. FOR PROTECTED FACILITIES HAVING UNDER 300 SPRINKLERS — NO FEWER THAN SIX SPRINKLERS.
   - 3.2. FOR PROTECTED FACILITIES HAVING 300 TO 1000 SPRINKLERS — NO FEWER THAN 12 SPRINKLERS.
   - 3.3. FOR PROTECTED FACILITIES HAVING OVER 1000 SPRINKLERS — NO FEWER THAN 24 SPRINKLERS.
   - 3.4. A MINIMUM OF TWO SPRINKLERS OF EACH TYPE AND TEMPERATURE RATING SHOULD BE PROVIDED.
4. PER NFPA 13 (2022) §16.2.7.6 ONE SPRINKLER WRENCH AS SPECIFIED BY THE SPRINKLER MANUFACTURER SHALL BE PROVIDED IN THE CABINET FOR EACH TYPE OF SPRINKLER INSTALLED TO BE USED FOR THE REMOVAL AND INSTALLATION OF SPRINKLERS IN THE SYSTEM. ONE SPRINKLER WRENCH DESIGN CAN BE APPROPRIATE FOR MANY TYPES OF SPRINKLERS AND SHOULD NOT REQUIRE MULTIPLE WRENCHES OF THE SAME DESIGN.
5. PER NFPA 13 (2022) §16.2.7.7.1 A LIST OF THE SPRINKLERS INSTALLED IN THE PROPERTY SHALL BE POSTED IN THE SPRINKLER CABINET. THE LIST SHALL INCLUDE THE FOLLOWING:
   - 5.1. SPRINKLER IDENTIFICATION NUMBER (SIN) IF EQUIPPED; ORTHE MANUFACTURER, MODEL, ORIFICE, DEFLECTOR TYPE, THERMAL SENSITIVITY, AND PRESSURE RATING.
   - 5.2. GENERAL DESCRIPTION.
   - 5.3. QUANTITY OF EACH TYPE TO BE CONTAINED IN THE CABINET.
   - 5.4. ISSUE OR REVISION DATE OF THE LIST.

SPARE HEAD BOX DETAIL

SCALE: NONE

B / FX.1



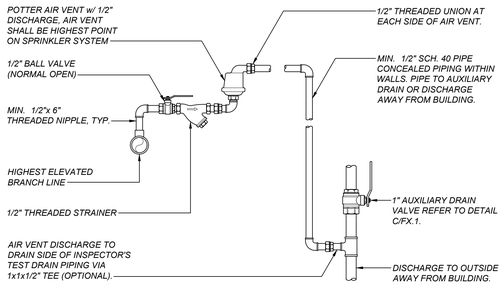
INSTALLATION NOTES:

- A. AUX. DRAINS SHALL BE SUPPLIED FROM MAIN PIPING. REMOTE INSPECTOR'S TEST SHALL BE SUPPLIED FROM BRANCH LINES.
- B. THE INSPECTOR'S TEST DISCHARGE ORIFICE SIZE SHALL BE EQUIVALENT TO THE SMALLEST INSTALLED SPRINKLER K-FACTOR.
- C. COORDINATE METHOD OF WEATHERPROOFING AROUND EXT. PIPE PENETRATIONS WITH GENERAL CONTRACTOR.

CONCEALED AUXILIARY DRAIN DETAIL/ REMOTE INSPECTOR'S TEST

SCALE: NONE

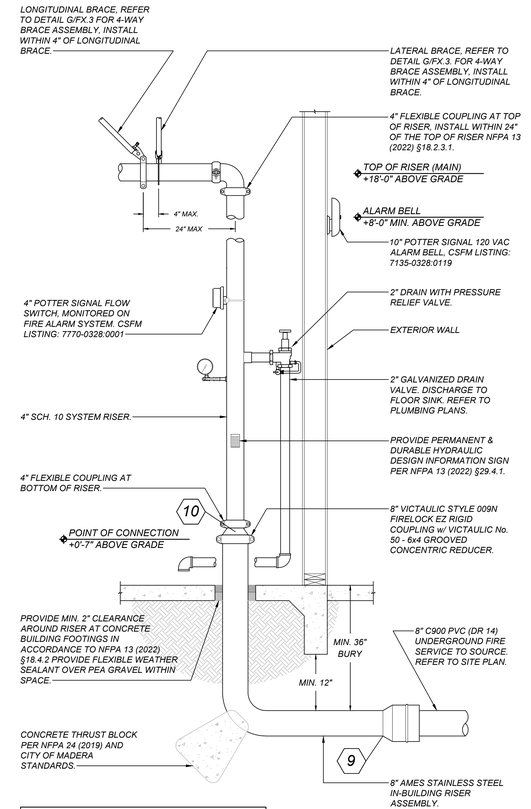
C / FX.1



POTTER AIR VENT

SCALE: NONE

D / FX.1



HYDRAULIC INFORMATION	
REMOTE AREA NO. XX (MOST DEMANDING)	
OCCUPANCY CLASSIFICATION	LIGHT HAZARD
DENSITY	.10 GPM/FT²
HOSE ALLOWANCE	100 GPM
TOTAL HEADS FLOWING	13
K-FACTOR	5.6
TOTAL WATER REQUIRED	304.55 GPM
TOTAL PRESSURE REQUIRED	33.815 PSI
SAFETY MARGIN (PSI)	+16.028 (32.2%)

TITLE 19 ARTICLE 906 (A) A LABEL OF THE SELF-ADHESIVE TYPE SHALL BE PLACED ON THE FIRE DEPARTMENT CONNECTION OR ON THE RISER FOR FIRE SPRINKLER SYSTEM WITH THE DATE OF SERVICE AND/OR DATE INSTALLATION WAS PERFORMED AND LICENSE NUMBER OF PERSON PERFORMING SERVICE WORK.

RISER NOTES:

1. EACH RISER DETAIL IS A SCHEMATIC REPRESENTATION OF THE RISER(S). ORIENTATION OF FITTINGS, VALVES, GAUGES, AND OTHER DEVICES HAVE BEEN MODIFIED FOR ILLUSTRATION PURPOSES AND MAY VARY IN ACTUAL INSTALLATION.
2. PER NFPA 13 (2022) §18.2.3.1 - A FLEXIBLE COUPLING SHALL BE INSTALLED WITHIN 24" OF THE TOP AND BOTTOM OF ALL RISERS. RISERS LESS THAN 3 FT IN LENGTH MAY OMIT FLEX COUPLINGS. ONE FLEX COUPLING IS ADEQUATE FOR RISERS 3' TO 7' IN LENGTH.
3. PER NFPA 13 (2022) §18.5.8.3 - WHEN A FOUR-WAY BRACE AT THE TOP OF A RISER IS ATTACHED ON THE HORIZONTAL PIPING, IT SHALL BE WITHIN 24" OF THE CENTERLINE OF THE RISER AND THE LOADS FOR THAT BRACE SHALL INCLUDE BOTH THE VERTICAL AND HORIZONTAL PIPE.
4. PER NFPA 13 (2022) §29.4.1. - THE INSTALLING CONTRACTOR SHALL IDENTIFY A HYDRAULICALLY DESIGNED SPRINKLER SYSTEM WITH A PERMANENTLY MARKED WEATHERPROOF METAL OR RIGID PLASTIC SIGN SECURED WITH CORROSION RESISTANT WIRE, CHAIN, OR OTHER APPROVED MEANS.
5. PER NFPA 13 (2022) §29.6.1 - THE INSTALLING CONTRACTOR SHALL PROVIDE A GENERAL INFORMATION SIGN USED TO DETERMINE SYSTEM DESIGN BASIS AND INFORMATION RELEVANT TO THE INSPECTION, TESTING, AND MAINTENANCE REQUIREMENTS REQUIRED BY NFPA 25.
6. LOCATION OF 2" SYSTEM DRAIN TO BE COORDINATED WITH GENERAL CONTRACTOR. DRAIN PIPE AND FITTINGS SHALL BE GALV.
7. FIRE RISER ROOM SHALL COMPLY WITH CBC (2022) 901.3 PER CFC (2022) SECTION 509.1 FIRE EQUIPMENT ROOMS SHALL BE IDENTIFIED IN AN APPROVED MANNER. APPROVED SIGNS SHALL BE DURABLE, PERMANENT, AND VISIBLE.

RISER DETAIL (NOT IN SCOPE): 4" SYSTEM RISER ON 8" IN-BUILDING RISER (INT)

SCALE: NONE

A / FX.1

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 01/23/2025

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MADERA HIGH SCHOOL FIELDHOUSE

200 SOUTH "L" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

MADERA UNIFIED SCHOOL DISTRICT 1966

PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL R. SCHEER No. 36165 02-28-27 RENEWAL DATE STATE OF CALIFORNIA

PROJECT NUMBER	20-51
DATE	MM/DD/YYYY
DSA APPLICATION NO.	02 - 121624
FILE NO.	20-H3
PTN NO.	65243-153
DRAWN BY	Author

REVISIONS

#	DESCRIPTION	DATE

CONSTRUCTION DOCUMENTS

FIRE PROTECTION RISER DETAILS

FX.1

REGISTERED PROFESSIONAL ENGINEER BRIAN W. CARLSON No. M34846 Exp. 6-30-26 MECHANICAL STATE OF CALIFORNIA

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23073

16 January 2025 10:38 AM P:\2023\23073 Modera USD – Modera HS Stadium Locker Addition\+-Drawings\6 FX\FX.1 – DETAILS.dwg benjamin

NOTES:
1. WALL ASSEMBLY - THE 1 OR 2 HR FIRE-RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
   A. STUDS - WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOMINAL 2"x4" LUMBER SPACED 16" OC. STEEL STUDS TO BE MIN. 2-1/2" WIDE AND SPACED MAX. 24" OC. WHEN STEEL STUDS ARE USED AND THE DIAMETER OF OPENING EXCEEDS THE WIDTH OF STUD CAVITY, THE OPENING SHALL BE FRAMED ON ALL SIDES USING LENGTHS OF STEEL STUD INSTALLED BETWEEN THE VERTICAL STUDS AND SCREW-ATTACHED TO THE STEEL STUDS AT EACH END. THE FRAMED OPENING IN THE WALL SHALL BE 4"-6" WIDER AND 4"-6" HIGHER THAN THE DIAMETER OF THE PENETRATING ITEM SUCH THAT, WHEN THE PENETRATING ITEM IS INSTALLED IN THE OPENING, A 2"-3" CLEARANCE IS PRESENT BETWEEN THE PENETRATING ITEM AND THE FRAMING ON ALL FOUR SIDES.
   B. GYPSUM BOARD* - 5/8" THICK, 4' WIDE WITH SQUARE OR TAPERED EDGES. THE GYPSUM BOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES DESIGN IN THE UL FIRE RESISTANCE DIRECTORY. MAX DIAMETER OF OPENING IS 32-1/4" FOR STEEL STUD WALLS. MAX. DIAMETER OF OPENING IS 14-1/2" FOR WOOD STUD WALLS. THE F RATING OF THE FIRESTOP SYSTEM IS EQUAL TO THE FIRE RATING OF THE WALL ASSEMBLY.
2. THROUGH-PENETRANTS - ONE METALLIC PIPE, CONDUIT OR TUBING TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE SHALL BE MIN. 0" TO MAX 2-1/4" PIPE MAY BE INSTALLED WITH CONTINUOUS POINT CONTACT. PIPE, CONDUIT OR TUBING MAY BE INSTALLED AT AN ANGLE NOT GREATER THAN 45° FROM PERPENDICULAR. PIPE, CONDUIT OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES, CONDUITS OR TUBING MAY BE USED:
   A. STEEL PIPE - NOMINAL 30"Ø (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
   B. IRON PIPE - NOMINAL 30"Ø (OR SMALLER) CAST OR DUCTILE IRON PIPE.
   C. CONDUIT - NOMINAL 4"Ø (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR 6 IN. DIAMETER STEEL CONDUIT.
   D. COPPER TUBING - NOMINAL 6"Ø (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.
   E. COPPER PIPE - NOMINAL 6"Ø (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.
3. FILL, VOID OR CAVITY MATERIAL HILTI FS-ONE SEALANT - MIN. 5/8" THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH BOTH SURFACES OF WALL. AT THE POINT OR CONTINUOUS CONTACT LOCATIONS BETWEEN PIPE AND WALL, A MIN. 1/2"Ø BEAD OF FILL MATERIAL SHALL BE APPLIED AT THE PIPE WALL INTERFACE ON BOTH SURFACES OF WALL.

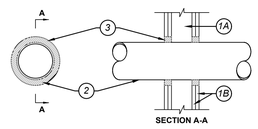
PIPE CLEARANCE NOTES:
PER NFPA 13 (2022) §18.4.1 - CLEARANCE SHALL BE PROVIDED AROUND ALL PIPING EXTENDING THROUGH WALLS, FLOORS, PLATFORMS, AND FOUNDATIONS, INCLUDING DRAINS, FIRE DEPARTMENT CONNECTIONS, AND OTHER AUXILIARY PIPING.

PER NFPA 13 (2022) §18.4.2 - WHERE PIPE PASSES THROUGH HOLES IN PLATFORMS, FOUNDATIONS, WALLS, OR FLOORS, THE HOLES SHALL BE SIZED SUCH THAT THE DIAMETER OF THE HOLES IS NOMINALLY 2" LARGER THAN THE PIPE FOR PIPE 1" NOMINAL TO 3-1/2" NOMINAL AND 4" LARGER THAN THE PIPE FOR PIPE 4" NOMINAL AND LARGER.

PER NFPA 13 (2022) §18.4.4 - NO CLEARANCE SHALL BE REQ'D FOR PIPING PASSING THROUGH GYPSUM BOARD OR EQUALLY FRANGIBLE CONSTRUCTION THAT IS NOT REQ'D TO HAVE A FIRE RESISTANCE RATING.

SYSTEM NO. W-L-1054

F RATINGS - 1 AND 2 HR (SEE ITEMS 1 AND 3)
T RATING - 0 HR
L RATING AT AMBIENT - LESS THAN 1 CFM/SQ FT
L RATING AT 400 F-4 CFM/SQ FT

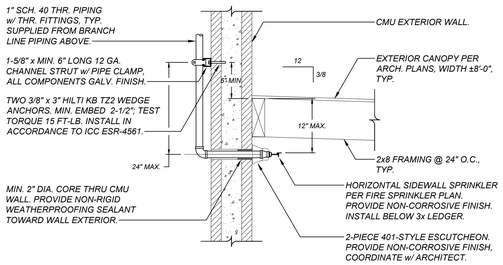


SECTION A-A

HILTI FS-ONE FIRE RATED PENETRATION

SCALE: NONE

E FX.2

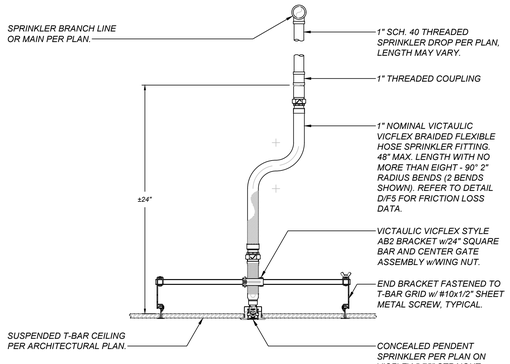


EXTERIOR HORIZONTAL SIDEWALL SPRINKLER INSTALLATION AT CMU WALLS

SCALE: NONE

FRM010

F FX.2



VICFLEX FLEXIBLE SPRINKLER DROP w/CONCEALED PENDENT SPRINKLER

SCALE: NONE

C FX.2

SERIES AH2/AH2-CC VICTAULIC VICFLEX - FRICTION LOSS DATA (UL)									
LENGTH IN INCHES	OUTLET SIZE	1 - 90° BEND	2 - 90° BEND	3 - 90° BEND	4 - 90° BEND	5 - 90° BEND	6 - 90° BEND	7 - 90° BEND	8 - 90° BEND
31"	1/2"	11.0'	13.0'	15.0'	16.0'	N/A	N/A	N/A	N/A
	3/4"	12.0'	14.0'	19.0'	20.0'	N/A	N/A	N/A	N/A
36"	1/2"	14.0'	16.0'	18.0'	19.0'	21.0'	N/A	N/A	N/A
	3/4"	17.0'	19.0'	21.0'	22.0'	23.0'	N/A	N/A	N/A
48"	1/2"	18.0'	19.0'	21.0'	23.0'	25.0'	27.0'	30.0'	32.0'
	3/4"	21.0'	24.0'	26.0'	28.0'	31.0'	33.0'	35.0'	37.0'
60"	1/2"	21.0'	24.0'	27.0'	30.0'	32.0'	35.0'	37.0'	40.0'
	3/4"	23.0'	25.0'	27.0'	29.0'	32.0'	34.0'	37.0'	40.0'
72"	1/2"	27.0'	29.0'	31.0'	34.0'	37.0'	40.0'	43.0'	46.0'
	3/4"	26.0'	28.0'	30.0'	33.0'	37.0'	40.0'	44.0'	48.0'

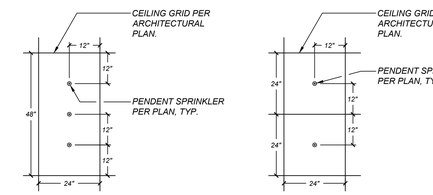
INSTALLATION NOTES:
A. ALL VICTAULIC VICFLEX FLEXIBLE SPRINKLER HOSE FITTINGS AND ANCHORING COMPONENTS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER GUIDELINES.
B. PER NFPA 13 (2022) §17.4.1.3.3, THE MAXIMUM UNSUPPORTED LENGTH FOR FLEXIBLE HOSE SPRINKLER FITTINGS SHALL NOT EXCEED 6-FEET.
C. PER NFPA 13 (2022) §17.4.1.3.3.4, WHERE FLEXIBLE SPRINKLER HOSE FITTINGS ARE USED TO CONNECT SPRINKLERS TO BRANCH LINES IN SUSPENDED CEILINGS, A LABEL LIMITING RELOCATION OF THE SPRINKLER SHALL BE PROVIDED ON THE ANCHORING COMPONENT.

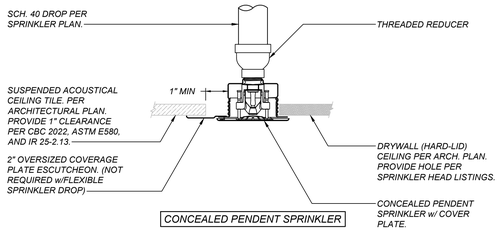
VICFLEX FLEXIBLE SPRINKLER DROP FRICTION LOSS DATA AND INSTALLATION NOTES

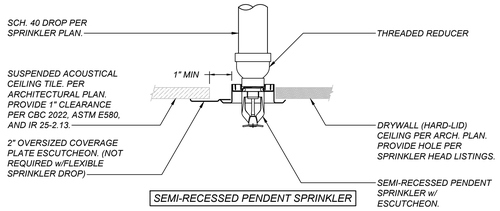
SCALE: NONE

D FX.2

INSTALLATION NOTES:
A. PENDENT SPRINKLER HEADS INSTALLED WITHIN SUSPENDED CEILING TILES SHALL BE POSITIONED "CENTER OF TILE" AS INDICATED PER PROJECT SPECIFICATIONS. HOWEVER, SPRINKLER SPACING SHALL NOT EXCEED THE MAXIMUM SPRINKLER SPACING PER NFPA 13 (2022) §10.2.5.1, §10.2.5.2, §10.2.5.2.3.1, §11.2.3.1, §11.2.3.2 AND FIRE SPRINKLER MANUFACTURER LISTINGS.
B. PENDENT SPRINKLER HEADS INSTALLED IN DRY-WALL CEILINGS SHALL BE POSITIONED PER PLAN, ALIGNED WITH LIGHTING, AUDIO, AND OTHER CEILING FEATURES. HOWEVER, SPRINKLER SPACING SHALL NOT EXCEED MAXIMUM NFPA 13 REQUIREMENTS AND FIRE SPRINKLER MANUFACTURER LISTINGS.





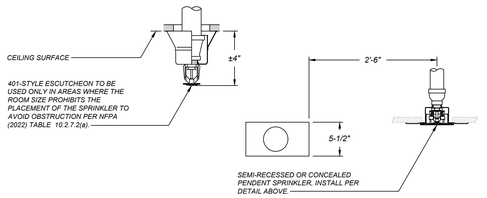


SPRINKLER HEAD INSTALLATION DETAIL

SCALE: NONE

A FX.2

THIS DETAIL IS TO BE USED FOR AVOIDING OBSTRUCTIONS PRESENTED BY SURFACE MOUNTED LIGHTING IN GYPBOARD CEILINGS. SPRINKLER SPACING TO BE IN ACCORDANCE WITH NFPA 13 (2022) FOR PARTICULAR HAZARD, AND TYPE OF SPRINKLER WHERE OBSTRUCTION OCCURS. DETAIL AS SHOWN IS FOR STANDARD SPRAY PENDENT SPRINKLER, WITH PRESSURES FROM 15 PSI TO 100 PSI ONLY. IF EXTENDED COVERAGE OR SPECIAL LISTED SPRINKLERS ARE USED, REFER TO APPROPRIATE NFPA 13 (2022) TABLE FOR THE SPECIFIC REQUIREMENTS FOR EACH SPECIFIC TYPE OF SPRINKLER.



NFPA 13 (2022) TABLE 10.2.7.2(a) POSITIONING OF SPRINKLERS TO AVOID OBSTRUCTIONS TO DISCHARGE	
DISTANCE FROM SPRINKLERS TO SIDE OF OBSTRUCTION	MAX. ALLOWABLE DISTANCE OF DEFLECTOR ABOVE BOTTOM OF OBSTRUCTION
2' TO LESS THAN 2'-6"	5-1/2"
COORDINATE ALL CONCEALED PENDENT SPRINKLERS W/ CURRENT LIGHT LAYOUT AND TYPES. AN AREAS W/ SURFACE MOUNTED LIGHT FIXTURES, UTILIZE OBSTRUCTION SPACING PER NFPA 13 (2022). IF SIZE OF ROOM PROHIBITS SPACING REQUIREMENTS TO BE MET, UTILIZE ST-1E 401 ESCUTCHEON W/ PENDENT SPRINKLER OF SAME TEMPERATURE, K-FACTOR, AND DESIGN CRITERIA.	

SPRINKLER HEAD OBSTRUCTION DETAIL

SCALE: NONE

B FX.2

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 01/23/2025

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MADERA HIGH SCHOOL FIELDHOUSE

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MADERA, CA 93637
CONSTRUCTION DOCUMENTS

MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL R. SCHOEN RENEWAL 08-31-2026 C-36165 02-28-27 STATE OF CALIFORNIA

PROJECT NUMBER	20-51
DATE	MM/DD/YYYY
DSA APPLICATION NO.	02 - 121624
FILE NO.	20-H3
PTN NO.	65243-153
DRAWN BY	Author

REVISIONS

#	DESCRIPTION	DATE

CONSTRUCTION DOCUMENTS

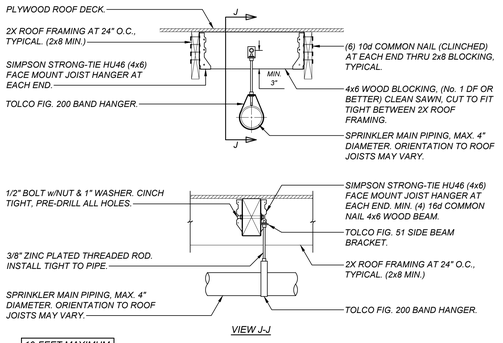
FIRE PROTECTION INSTALL DETAILS

FX.2

REGISTERED PROFESSIONAL ENGINEER JASON W. CARLSON No. M34846 Exp. 6-30-26 MECHANICAL STATE OF CALIFORNIA

LAWRENCE ENGINEERING GROUP
4910 E. Clinton Way, Suite 101 Fresno, CA 93727
(559) 431-0101 23073 FAX (559) 431-1362

16 January 2025 10:38 AM P:\2023\23073 Modera USD - Modera HS Stadium Locker Addition\4-Drawings\6 FI\FX.2 - DETAILS.dwg benjamin



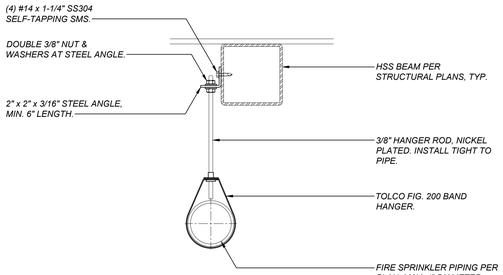
10-FEET MAXIMUM HANGER SPACING

SYMBOL

HANGER AT 4x6 WOOD BLOCKING SPANNING 2X ROOF FRAMING - 4" MAX. PIPE DIAMETER

J FX.3

SCALE: NONE FSS006



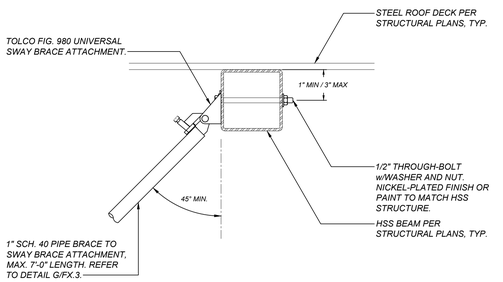
12-FEET MAXIMUM HANGER SPACING

SYMBOL

HANGER ATTACHMENT TO HSS STRUCTURE

K FX.3

SCALE: NONE

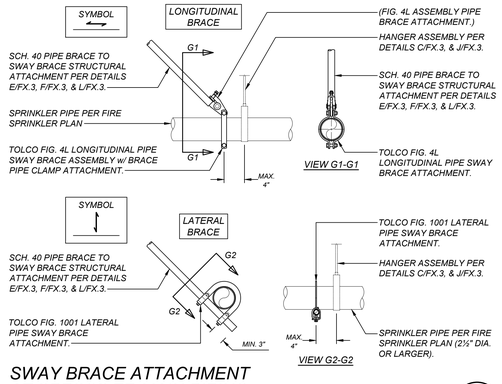


SYMBOL

SWAY BRACE ATTACHMENT TO HSS STRUCTURE

L FX.3

SCALE: NONE



SWAY BRACE ATTACHMENT AT SPRINKLER MAIN PIPING

G FX.3

SCALE: NONE

MAX. SPACING OF BRANCH LINE RESTRAINTS				
	SEISMIC COEFFICIENT - C_p			
PIPE DIA. (INCHES)	$C_p \leq 0.50$	$0.50 < C_p \leq 0.71$	$0.71 < C_p \leq 1.40$	$C_p \geq 1.40$
1	43-FT	36-FT	26-FT	22-FT
1¼	46-FT	39-FT	27-FT	24-FT
1½	49-FT	41-FT	29-FT	25-FT
2	53-FT	45-FT	31-FT	27-FT

NFPA 13 (2022) TABLE 18.6.4(a)

MAXIMUM PIPE BRACE LENGTH NFPA 13 (2022) TABLE 18.5.11.8(b) WITH I/r=200	
BRACE PIPE DIA. (INCHES)	BRACE LENGTH
1	7'-0"
1¼	9'-0"
1½	10'-4"
2	13'-1"

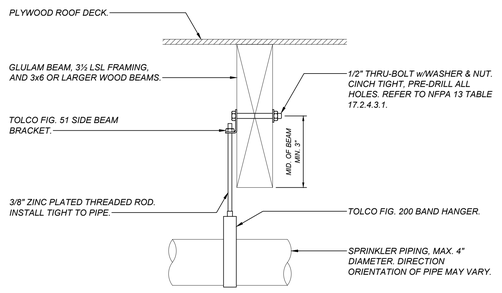
10-FEET MAXIMUM HANGER SPACING

SYMBOL

SPRINKLER PIPING HANGER SUPPORT AT GLULAM BEAMS - LSL FRAMING - 3x6 WOOD BEAMS

H FX.3

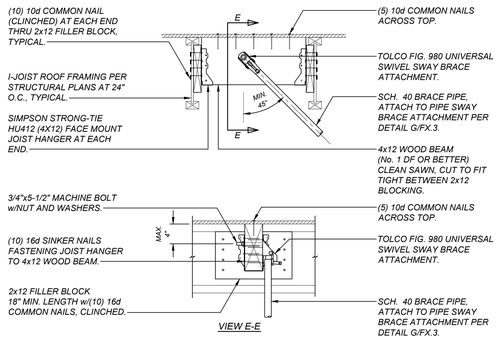
SCALE: NONE



DETAIL NOT USED

D FX.3

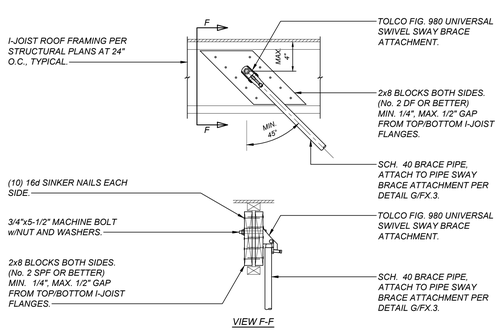
SCALE: NONE



4x12 WOOD BEAM ASSEMBLY FOR SEISMIC BRACING ATTACHMENT AT I-JOIST (PERPENDICULAR FORCES ONLY)

E FX.3

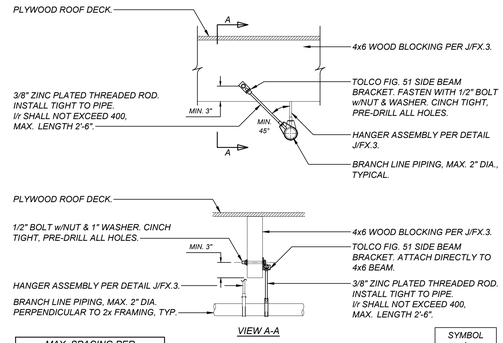
SCALE: NONE



2x8 BLOCKING ASSEMBLY FOR SEISMIC BRACING ATTACHMENT AT I-JOIST (PARALLEL FORCES ONLY)

F FX.3

SCALE: NONE



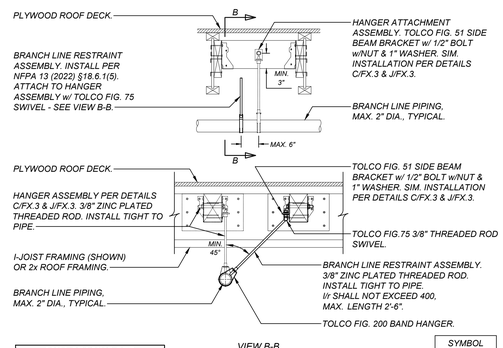
MAX. SPACING PER NFPA 13 (2022) TABLE 18.6.4(a)

SYMBOL

BRANCH LINE RESTRAINT AT 2x ROOF FRAMING

A FX.3

SCALE: NONE FSS102-11.19



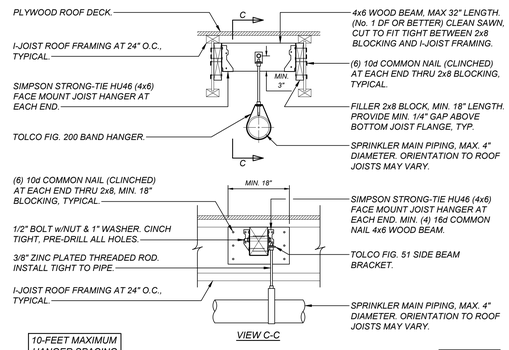
MAX. SPACING PER NFPA 13 (2022) TABLE 18.6.4(a)

SYMBOL

BRANCH LINE RESTRAINT AT I-JOIST FRAMING

B FX.3

SCALE: NONE



10-FEET MAXIMUM HANGER SPACING

SYMBOL

HANGER AT 4x6 WOOD BLOCKING SPANNING I-JOIST FRAMING - 4" MAX. PIPE DIAMETER

C FX.3

SCALE: NONE

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-121624 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 01/23/2025

PBK

ARCHITECT PBK Architects, Inc.
FRESNO
7790 North Palm Avenue
Fresno, CA 93711
559-448-8400 P
559-448-8467 F
PBK.com

MADERA HIGH SCHOOL FIELDHOUSE

200 SOUTH "L" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL R. SCHEER No. 36165 02-28-27 RENEWAL DATE STATE OF CALIFORNIA

PROJECT NUMBER	20-51
DATE	MM/DD/YYYY
DSA APPLICATION NO.	02 - 121624
FILE NO.	20-H3
PTN NO.	65243-153
DRAWN BY	Author

REVISIONS

#	DESCRIPTION	DATE

CONSTRUCTION DOCUMENTS

FIRE PROTECTION STRUCTURAL DETAILS

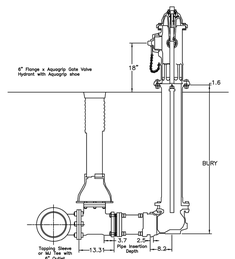
FX.3

REGISTERED PROFESSIONAL ENGINEER BRIAN W. CARLSON No. M34846 Exp. 6-30-26 MECHANICAL STATE OF CALIFORNIA

LAWRENCE ENGINEERING GROUP
4910 E. Clinton Way, Suite 101
Fresno, CA 93727
(559) 431-0101
23073
FAX (559) 431-1362

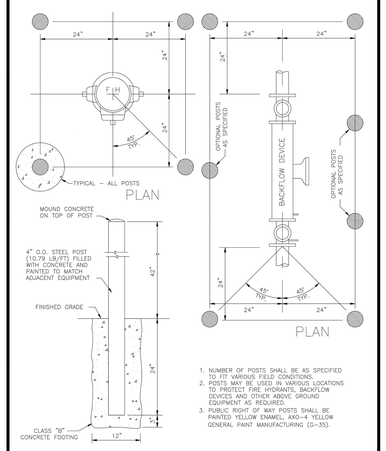
16 January 2025 10:38 AM P:\2023\23073 Modero USD – Modero HS Stadium Locker Addition\A-Drawings\A FX\FX.3 – DETAILS.dwg benjamin

IN LIEU OF POURING A THRUST BLOCK ON A FIRE HYDRANT RUN, THE CONTRACTOR SHALL HAVE THE OPTION TO INSTALL A MUELLER A423 FIRE HYDRANT WITH AN AQUAGRIP SHOE AND A MUELLER GATE VALVE WITH AN AQUAGRIP X FLANGE END CONNECTION,(A2361-76) AS DETAILED IN THE ATTACHED DRAWING. IF THE HYDRANT RUN IS SUCH THAT IT REQUIRES A PIPE JOINT THEN AN AQUAGRIP RESTRAINED COUPLING SHALL ALSO BE USED (6"=MODEL#AGC0690).



AQUAGRIP GATE VALVE

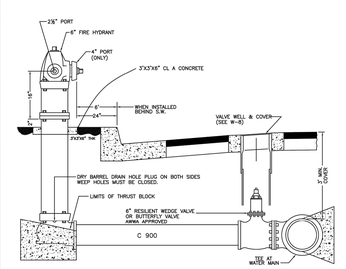
REF. & REV.	CITY OF MADERA
MARCH 2005	W-29



1. NUMBER OF POSTS SHALL BE AS SPECIFIED TO FIT VARIOUS FIELD CONDITIONS.
2. POSTS MAY BE USED IN VARIOUS LOCATIONS TO PROTECT FIRE HYDRANTS, BACKFLOW DEVICES AND OTHER ABOVE GROUND EQUIPMENT AS REQUIRED.
3. PUBLIC RIGHT OF WAY POSTS SHALL BE PAINTED YELLOW ENAMEL, AXO-4 YELLOW GENERAL PAINT MANUFACTURING (G-35).

GUARD POST DETAILS

REF. & REV.	CITY OF MADERA
MARCH 2005 AUG. 2008	W-27

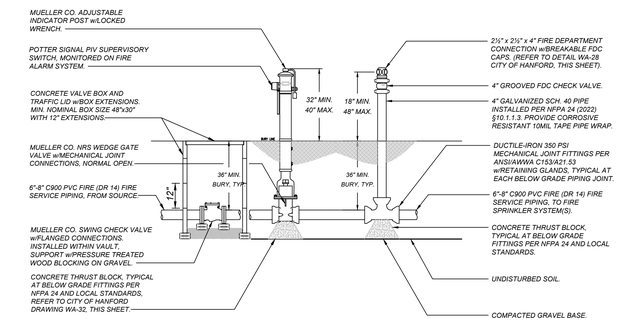


NOTES

1. FIRE HYDRANTS SHALL BE 6" DRY BARREL, TRAFFIC-TYPE WITH LOW PROFILE DESIGN.
2. NOZZLE AND CAPS SHALL HAVE NATIONAL STANDARD THREADS.
3. HYDRANTS SHALL HAVE ONE 4" DIA. PORT FACING THE STREET AND TWO 2½" DIA. PORTS WITH 5½" MINIMUM VALVE OPENING.
4. PAINT ALL EXPOSED METAL ABOVE GROUND WITH YELLOW ENAMEL (RUSTOLEUM 5244402). PRIVATE HYDRANTS SHALL BE RED.
5. RUN FROM WATER MAIN TO HYDRANT ELL TO BE HORIZONTAL.
6. MAXIMUM DISTANCE BETWEEN HYDRANTS SHALL BE 400' IN RESIDENTIAL AND 300' IN COMMERCIAL DISTRICTS.
7. DEAD END HYDRANTS SHALL BE ON 8" SIZE MAINS.
8. HYDRANTS SHALL CONFORM TO LATEST ISSUE OF AWWA STANDARD C-502 FOR FIRE HYDRANTS. USE WATEROUS TYPE WB-67, MUELLER NO. A-423 OR AMC THREE 250.
9. CONC. THRUST BLOCK SHALL NOT COVER DRY BARREL DRAIN HOLES.
10. WATER MAINS SUPPLYING HYDRANTS SHALL HAVE A MINIMUM INSIDE DIAMETER OF 6" FOR RESIDENTIAL AREAS AND 8" FOR COMMERCIAL AND/OR INDUSTRIAL AREAS.
11. REFLECTIVE FIRE HYDRANT MARKERS SHALL BE INSTALLED AT THE FIRE DEPARTMENT'S DIRECTIONS.
12. TWO MARKERS SHALL BE PLACED ON EACH INTERSECTING STREET WHEN FIRE HYDRANT IS WITHIN 50' OF A CORNER.

FIRE HYDRANT INSTALLATION

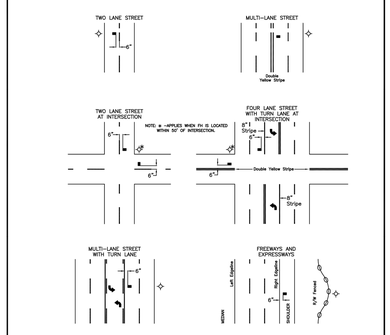
REF. & REV.	CITY OF MADERA
MARCH 2005 AUG. 2008	W-26



ABOVE GRADE REMOTE RISER ASSEMBLY BUTTERFLY VALVE - CHECK VALVE - FDC

SCALE: NONE

A
FX.4

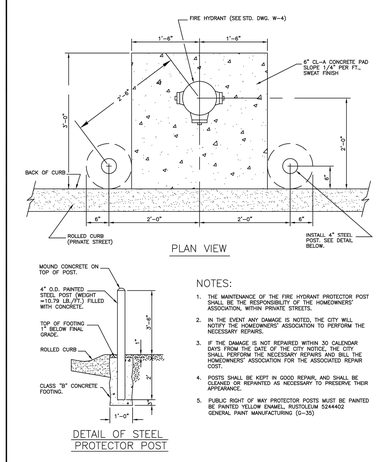


NOTES

1. REFLECTIVE FIRE HYDRANT MARKERS SHALL BE INSTALLED AT THE FIRE DEPARTMENTS DIRECTIONS.
2. MARKERS SHOULD BE PLACED IN LINE WITH HYDRANT AND ABOUT 6" OFF CENTER ON HYDRANT SIDE AND NOT IN A LOW SPOT.
3. MARKERS SHALL BE BLUE "STIMSONITE 88" B-DIRECTIONAL, OR EQUIVALENT APPROVED BY THE FIRE CHIEF.
4. WHEN A FIRE HYDRANT IS WITHIN 50' OF A CORNER, TWO MARKERS SHOULD BE PLACED ON EACH INTERSECTING STREET.

FIRE HYDRANT PAVEMENT MARKERS

REF. & REV.	CITY OF MADERA
MARCH 2005	W-6



NOTES:

1. THE MAINTENANCE OF THE FIRE HYDRANT PROTECTOR POST SHALL BE THE RESPONSIBILITY OF THE HOMEOWNERS' ASSOCIATION, WITHIN PRIVATE STREETS.
2. IN THE EVENT ANY DAMAGE IS NOTED, THE CITY WILL NOTIFY THE HOMEOWNERS' ASSOCIATION TO PERFORM THE NECESSARY REPAIRS.
3. IF THE DAMAGE IS NOT REPAIRED WITHIN 30 CALENDAR DAYS FROM THE DATE OF THE CITY NOTICE, THE CITY SHALL PERFORM THE NECESSARY REPAIRS AND BILL THE HOMEOWNERS' ASSOCIATION FOR THE ASSOCIATED REPAIR COST.
4. POSTS SHALL BE KEPT IN GOOD REPAIR, AND SHALL BE PAINTED OR REPAINTED AS NECESSARY TO PRESERVE THEIR APPEARANCE.
5. PUBLIC RIGHT OF WAY PROTECTOR POSTS MUST BE PAINTED BE PAINTED YELLOW ENAMEL, RUSTOLEUM 5244402 GENERAL PAINT MANUFACTURING (G-35)

FIRE HYDRANT INSTALLATION WITH PROTECTOR POSTS
FOR ROLLED CURB

REF. & REV.	CITY OF MADERA
MARCH 2005 AUG. 2008	W-5

NOTES

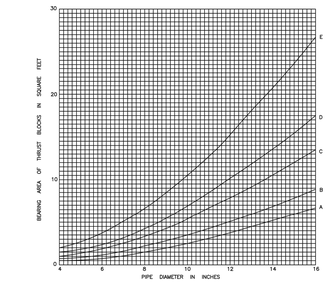
1. Horizonal thrust at fittings are based on 150 psi of water pressure.
2. Values from curves are for tees and dead ends, i.e. straight line thrust. For other fittings, multiply the bearing area obtained from curves by the following factors:

   For 90° Bend, 1.4
   For 45° Bend, 0.8
   For 22½° Bend, 0.4

3. Safe bearing loads on undisturbed soil are as follows:

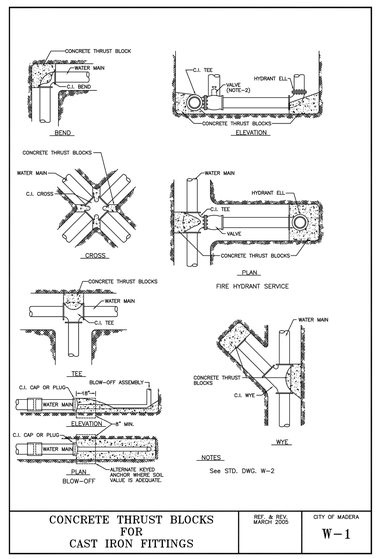
   Curve A = 4,000 psf, Massive crystalline bedrock.
   Curve B = 3,000 psf, Sedimentary and foliated bedrock.
   Curve C = 2,000 psf, Sandy gravel and/or gravel.
   Curve D = 1,500 psf, Sand, silty sand or gravel and clayey sand or gravel.
   Curve E = 1,000 psf, Clay, sandy clay, silty clay, and clayey silt.

4. Thrust blocks for conditions not covered by curves shall be approved by the County Engineer.



THRUST BLOCK BEARING AREA

REF. & REV.	CITY OF MADERA
MARCH 2005	W-3

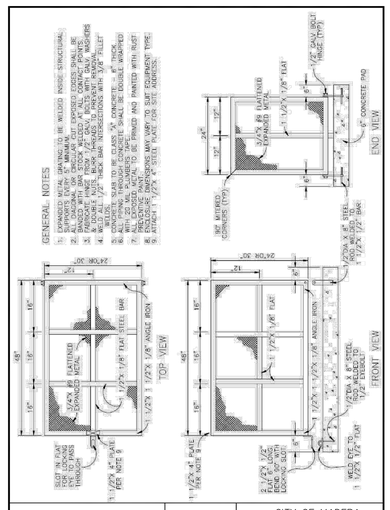


NOTES

See STD. DWG. W-2

CONCRETE THRUST BLOCKS FOR CAST IRON FITTINGS

REF. & REV.	CITY OF MADERA
MARCH 2005	W-1


GENERAL NOTES
1. ALL STEEL TO BE WELDED INSIDE STRUCTURAL ENVELOPE WITH 3/16" MIN. FILLET WELDS, UNLESS NOTED OTHERWISE.
2. ANCHOR WITH 3/4" DIA. HILTI HVA ADHESIVE ANCHORS WITH 3/4" DIA. STUDS EMBEDDED 8" MIN. INTO CONCRETE.
3. ALL STEEL TO BE PRIMED AND PAINTED WITH RUST INHIBITIVE PAINT.
4. ALL EXPOSED METAL TO BE PRIMED AND PAINTED WITH RUST INHIBITIVE PAINT.
5. ALL FITTING THROUGH CONCRETE SHALL BE DOUBLE WRAPPED WITH 8 MIL POLYETHYLENE.
6. ALL EXPOSED METAL TO BE PRIMED AND PAINTED WITH RUST INHIBITIVE PAINT.
7. ENCLOSURE (WHERE REQUIRED) MAY VARY TO SUIT EQUIPMENT TYPE
8. ENCLOSURE (WHERE REQUIRED) MAY VARY TO SUIT EQUIPMENT TYPE
9. ENCLOSURE SHALL HAVE ONE ACCESS DOOR OVER EACH ASSEMBLY
TOP VIEW
FRONT VIEW
END VIEW
SLOT IN FLAT FOR LOCKING DEVICE THROUGH
1/4"X 8" FLATTENED GALVANIZED METAL
1"X2"X 1/4" TEAR STEEL BAR
1"X2"X 1/8" FLAT
1"X1"X 1/8" ANGLE IRON
1"X2"X 1/4" FLAT
1"X2"X 1/4" ANGLE IRON
1"X2"X 1/4" FLAT
1"X2"X 1/4" FLAT
1"X2"X 1/4" FLAT