Addendum No. 02

August 22, 2025

Memorial Stadium Modernization

Fieldhouse & Stadium

OWNER: Madera Unified School District
1902 Howard Road
Madera, CA 93637

PREPARED BY: PBK Architects, Inc.
7790 N. Palm Avenue
Fresno, California 93711

MADERA UNIFIED BID NO.: 073025
PBK PROJECT NO.: 20-51
DSA APPLICATION NO.: 02-121624 Fieldhouse
02-122784 Stadium

NOTICE TO BIDDERS

A. Receipt of this Addendum shall be acknowledged on the Proposal Form.
B. This Addendum forms part of the Contract Documents for the above-mentioned project and shall be incorporated integrally therewith.
C. Each proposer shall make necessary adjustments and submit their proposal with full knowledge of all modifications, clarifications, and supplemental data included therein. Where provisions of the following supplemental data differ from those of the original Contract Documents, this Addendum shall govern.
D. The description of changes to the documents included below is for the bidder's reference and should not be interpreted as an exhaustive list of every design change in the documents. The design team has put together a list to help bidders quickly assess and quantify the changes that have been incorporated. Design changes on the documents have been clouded, but it is the bidders' responsibility to fully examine the addendum documents and allow for all design changes included in them.

02-121624 FIELDHOUSE - ADDENDUM 02 ITEMS:

SPECIFICATION SECTIONS:

2-01 Remove and replace the following Specifications Sections with the attached revised versions:

a. 10 51 13 - Metal Lockers - Fieldhouse (9 pages)

2-02 Add the following Specifications Section to the Project Manual where indicated:

a. 07 21 00 - Thermal Insulation - Fieldhouse (5 pages)
b. 08 87 13 - Solar Control Films - Fieldhouse (5 pages)
c. 11 40 00 - Food Service Equipment – Fieldhouse (13 pages)

ARCHITECTURAL DRAWINGS:

2-03 Remove and replace the following sheets, revisions have been clouded: (4 Sheets)

a. A1.3 – ENLARGED FLOOR PLAN & INT. ELEV.
   - Revised interior elevations.
   - Updated legend.

b. A1.4 – ENLARGED FLOOR PLAN & INT. ELEV.
   - Revised interior elevations.
   - Updated legend.
c. A2.2 – FINISH/ COLOR PLAN & SCHEDULE
   - Updated finish plan, color schedule, and notes.
d. A5.1 – EXTERIOR ELEVATIONS
   - Updated exterior elevations and legend.

02-122784 STADIUM - ADDENDUM 02 ITEMS:

SPECIFICATION SECTIONS:

2-04 Remove and replace the following Specifications Sections with the attached revised versions:

a. 10 51 13 - Metal Lockers - Stadium (9 pages)

2-05 Add the following Specifications Section to the Project Manual where indicated:

a. 07 21 00 - Thermal Insulation – Stadium (5 pages)
b. 08 87 13 - Solar Control Films – Stadium (5 pages)
c. 11 40 00 - Food Service Equipment – Stadium (13 pages)

ARCHITECTURAL DRAWINGS:

2-06 Remove and replace the following sheets, revisions have been clouded: (17 Sheets)

a. AS.1 – OVERALL SITE PLAN
   - Corrected detail reference
   - Added flag pole note on west side of track.
b. AS.3 – ENLARGED SITE PLAN
   - Corrected detail reference.
   - Added exterior elevations.
c. AS.4 – ELEVATIONS - HOME BLEACHERS
   - Added sheet.
d. AS.5 – ELEVATIONS - VISITOR BLEACHERS
   - Added sheet.
e. AA1.1 – FLOOR PLAN - BUILDING A
   - Removed OFCI note from Freezer and Refrigerator in Concessions A100.
f. AA5.1 – EXTERIOR ELEVATIONS - BUILDING A
   - Added CMU control joints note on elevations.
   - Updated legend.
g. AA7.2 – INTERIOR ELEVATIONS - BUILDING A
   - Corrected elevations.
   - Corrected legend.
h. AB5.1 – EXTERIOR ELEVATIONS - BUILDING B
   - Added CMU control joints note on elevations.
   - Updated legend.
i. AB7.1 – INTERIOR ELEVATIONS - BUILDING B
   - Corrected elevations and legend.

j. AB9.1 – SPECIALTY DETAILS
   - Removed detail 5.
k. AC1.1 – FLOOR PLAN - BUILDING C
   - Removed legend.
l. AC9.1 – SPECIALTY DETAILS
   - Revised storefront detail.
m. AD4.1 – ROOF PLAN - BUILDING D
   - Corrected legend.
n. AX3.2 – TYPICAL OPENING DETAILS – STOREFRONT
   - Removed details 01 and 06.
o. AX4.1 – ROOF DETAILS
   - Removed details 28 and 30.
p. AX8.0 – FINISH/ COLOR SCHEDULE
   - Revised Finish Plan.
   - Revised color schedule and notes.
q. AX8.1 – DOOR AND WIDNOW SCHEDULE
   - Updated door types.

STRUCTURAL DRAWINGS:

2-07 Remove and replace the following sheets, revisions have been clouded: (4 Sheets)

a. S2.1A – FOUNDATION PLAN - BUILDING A
   - Revised foundation plan.
   - Updated legend.
b. S2.1B – FOUNDATION PLAN - BUILDING B
   - Revised foundation plan.
   - Updated legend.
c. S3.4 – FLOOR FRAMING & CURB LAYOUT PLANS - BULIDING C
   - Added detail 2.
   - Updated legend.
d. S6.5 – METAL STUD FRAMING DETAILS
   - Revised detail.

MECHANICAL DRAWINGS:

2-08 Remove and replace the following sheets, revisions have been clouded: (1 Sheet)

a. M4.1 – MECHANICAL SCHEDULES
   - Updated mechanical schedule.

PLUMBING DRAWINGS:

2-09 Remove and replace the following sheets, revisions have been clouded: (5 Sheets)

a. PS.1 – PLUMBING SITE PLAN
   - Added callout for added scope of work.
b. P2.1 – ENLARGED PLUMBING PLAN -EAST (SEWER, DRAIN, & VENT)
   - Added condensate drain and drywells.
c. P2.2 – ENLARGED PLUMBING PLAN -WEST (SEWER DRAIN & VENT)
   - Added condensate drain and drywells.
d. P2.5 – ENLARGED PLUMBING PLAN -PRESSBOX

- Added condensate drain and area drains to the Pressbox area.
- Added Ticket Booth plan, condensate drains and drywells.

e. P4.2 – PLUMBING NOTES AND CALCS
- Added area drain AD-1 to plumbing fixture schedule.
- Added Fire Stop Detail A/P4.2

ELECTRICAL DRAWINGS:

2-10 Remove and replace the following sheets, revisions have been clouded: (13 Sheets)

a. ES1.2 – ENLARGED ELECTRICAL SITE PLAN
- Modified fixture type 'P6' mounting between buildings 'A' and 'B'.
- Added WAP to speaker support poles.
- Added the replacement of the MUSCO Control and Monitoring Cabinet.
- Added fused disconnect at panel 'FBSB'.
- Added outdoor IDF under visitor bleachers.
- Modified Keynotes 4 & 13.
- Added Keynotes 65 through 68.

b. EA1.1 – POWER & LOW.VOLT. PLANS BUILDING A
- Corrected typo for boxes in block.

c. EA4.1 – FIRE ALARM PLAN BUILDING A
- Modified symbol for input module at riser.

d. EB4.1 – FIRE ALARM PLAN BUILDING B
- Updated detail A10 for updated weight of larger fixture and changed name.
- Modified symbol for input module at riser.
- Added keynote 3.

e. EC1.1 – ELEC. PLANS BUILDING C
- Added MUSCO Communications Controller, Touch Screen and outlet.
- Added WAP under eave of Press Box.
- Added Key Notes 20 through 22.

f. EC4.1 – FIRE ALARM PLANS BUILDING C
- Added output module to mute stadium sound system.
- Added multiple output module for elevator.
- Added Key Notes 5 and 6.

g. EX1.1 – LIGHTING FIXTURE SCHEDULE
- Changed fixture type 'P6' to knuckle mount and added box mount.
- Updated detail A10.

h. EX2.1 – ELECTRICAL SINGLE LINE DIAGRAM
- Added fused disconnect in front of panel 'FBSB'.
- Added keynote 29.

i. EX2.2 – PANEL SCHEDULES
- Updated panel schedules FHV and ESSL.

j. EX2.5 – ELECTRICAL DETAILS
- Updated panel schedule FBSB.

k. EX3.1 – ELECTRICAL LOW VOLTAGE DETAILS
- Added detail B10.

l. EX4.1 – FIRE ALARM
- Changed Fire Alarm to Gamewell E3 System. All Fire Alarm equipment has changed.
- Modified system to add Multi-Output card at elevator controller.
- Added Local Operators Console (at Coaches Office B103.
- Added note to install duct detectors below roof.

m. EX4.2 – FIRE ALARM CALCS & DETAILS
- Updated Fire Alarm Calculations.

- Updated A18 mounting detail for Gamewell/FCI E3 system.

REPORTS:

2-11 Add the following reports to the Project Manual where indicated:

a. Madera High School - Geotechnical Report (40 pages)

RFI RESPONSES:

2-12 PRE-BID RFI's:

a. PRE-BID RFI LOG: Refer to attached log. (7 pages)
b. Request for Direction: see attached RFD responses for 001, 002, 003, 004, 005, 006 (12 pages)

GENERAL CLARIFICATIONS:

2-13 BID FORMS – MEMORIAL STADIUM MODERNIZATION BID PROTESTS:

Submitted bids will be timely made available for review upon request of any bidder. Bidders may file a "protest" of a Bid with the District's Director of Purchasing. In order for a Bidder's protest to be considered valid, the protest must:

a. Be filed in writing within five (5) calendar days after the bid opening date/time (2:00pm).

END OF ADDENDUM NO. 2

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Michael Schöen, Architect

SECTION 10 51 13 METAL LOCKERS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and Conditions of Contract, including General and Supplementary Conditions and Division 01 Administration Sections, apply to this Division.

1.2 SUMMARY

A. This Section includes the following:
1. Knocked-down, quiet metal lockers.
2. Knocked-down athletic lockers.
3. Locker benches.

B. Related Sections include the following:
1. Section 03 30 00: Cast-in-Place Concrete.
2. Section 05 50 00: Metal Fabrications.

1.3 DEFINITIONS

A. Uncoated Steel Sheet Thicknesses: Indicated as the minimum thicknesses.

1.4 SUBMITTALS

A. Product Data: Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of metal locker and bench.

B. Shop Drawings - Include plans, elevations, sections, details, and attachments to other work:
1. Show base, sloping tops, filler panels and other accessories.
2. Include locker identification system.

C. Samples for Initial Selection: For units with factory-applied color finishes.

D. Qualification Data: For Installer.

E. Maintenance Data: For adjusting, repairing, and replacing locker doors and latching mechanisms to include in maintenance manuals.

F. Warranty: Special warranty specified in this Section.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: An authorized representative of metal locker manufacturer for installation and maintenance of units required for this Project.

B. Source Limitations: Obtain metal lockers and accessories through one source from a single manufacturer.

C. Regulatory Requirements - Where metal lockers are indicated to comply with accessibility requirements, comply with ADA Guidelines and the California Building Code Sections 11B-225.2.1 and 11B-811:
1. Provide not less than 1 shelf located no higher than 48 inches (1372 mm) above the

floor for side reach.
2. Provide 1 shelf located at bottom of locker no lower than 15 inches (230 mm) above the floor for side reach.
3. Provide hardware that does not require tight grasping, pinching, or twisting of the wrist, and that operates with a force of not more than 5 lbf (22.2 N).
4. Provide decal indicating accessibility.

1.6 WARRANTY

A. Special Warranty - Manufacturer's standard form in which manufacturer agrees to repair or replace components of metal lockers that fail in materials or workmanship, excluding finish, within specified warranty period:
   1. Failures include, but are not limited to, the following:
      a. Structural failures.
      b. Faulty operation of latches and other door hardware.
   2. Damage from deliberate destruction and vandalism is excluded.
   3. Warranty Period for Knocked-Down Metal Lockers: Two years from date of Substantial Completion.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Do not deliver metal lockers until spaces to receive them are clean, dry, and ready for metal locker installation.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
   1. Products: Subject to compliance with requirements, provide products by one of the specified manufacturers.

2.2 MATERIALS

A. Cold-Rolled Steel Sheet: ASTM A1008, Commercial Steel (CS) Type B, suitable for exposed applications.

B. Expanded Metal: ASTM F1267, Type II (flattened), Class I, 3/4-inch (19-mm) steel mesh, with at least 70 percent open area.

C. Stainless-Steel Sheet: ASTM A666, Type 304.

D. Extruded Aluminum: ASTM B221, alloy and temper recommended by aluminum producer and manufacturer for type of use and finish indicated.

E. Fasteners: Zinc- or nickel-plated steel, slotless-type exposed bolt heads, and self-locking nuts or lock washers for nuts on moving parts.

F. Anchors - Select material, type, size, and finish required for secure anchorage to each substrate:
   1. Provide nonferrous-metal or hot-dip galvanized anchors and inserts on inside face of exterior walls and elsewhere as required for corrosion resistance.
   2. Provide toothed-steel or lead expansion sleeves for drilled-in-place anchors.

2.3 KNOCKED-DOWN, QUIET METAL LOCKERS

A. Products:
1. **Lyon Workspace Products**
2. Art Metal Products, Div. of Fort Knox Storage Co.
3. Tennsco Corp.
4. Republic Storage

B. Locker Arrangement: As indicated in Metal Locker Schedule located at the end of Part 3.

C. Body - Assembled by riveting or bolting body components together. Fabricate from unperforated, cold-rolled steel sheet with thicknesses as follows:
1. Tops, Bottoms, and Intermediate Dividers: 0.0209 inch, with single bend at sides.
2. Backs and Sides: 0.0209 inch thick, with full-height, double-flanged connections.
3. Shelves: 0.0209 inch thick, with double bend at front and single bend at sides and back.

D. Frames - Channel formed; fabricated from 0.0528-inch- (1.35-mm-) thick, cold-rolled steel sheet; lapped and factory welded at corners; with top and bottom main frames factory welded into vertical main frames. Form continuous, integral door strike full height on vertical main frames. Retain subparagraph below if needed; cross frames between tiers are not offered by all manufacturers:
1. Cross Frames between Tiers: Channel formed and fabricated from same material as main frames; welded to vertical frame members.
2. Frame Vents: Fabricate horizontal face frames with vents.

E. Doors - One-piece; fabricated from 0.0528-inch- (1.35-mm-) thick, cold-rolled steel sheet; formed into channel shape with double bend at vertical edges, and with right-angle single bend at horizontal edges:
1. Doors less than 12 inches (305 mm) wide may be fabricated from 0.0428-inch- (1.1-mm) thick, cold-rolled steel sheet.
2. Reinforcement: Manufacturer's standard reinforcing angles, channels, or stiffeners for doors more than 15 inches (381 mm) wide; welded to inner face of doors.
3. Stiffeners: Manufacturer's standard full-height stiffener fabricated from 0.0428-inch- (1.1-mm-) thick, cold-rolled steel sheet; welded to inner face of doors.
4. Sound-Dampening Panels: Manufacturer's standard, designed to stiffen doors and reduce sound levels when doors are closed, of die-formed metal with full perimeter flange and sound-dampening material; welded to inner face of doors.
5. Door Style - Vented panel as follows:
   a. Louvered Vents - Not less than:
      1) Six louver openings at top and bottom for single-tier.
      2) Three louver openings at top and bottom for double-tier.
      3) Two louver openings at top and bottom for multiple-tier lockers.

F. Hinges - Self-closing; welded to door and attached to door frame with not less than 2 factory-installed rivets per hinge that are completely concealed and tamper resistant when door is closed; fabricated to swing 180 degrees:
1. Hinges - Manufacturer's standard, steel continuous or knuckle type:
   a. Knuckle Hinges: Steel, full loop, 5 or 7 knuckles, tight pin; minimum 2 inches (51 mm) high. Provide not less than 3 hinges for each door more than 42 inches (1067 mm) high.

G. Recessed Door Handle and Latch - Stainless-steel cup with integral door pull, recessed so locking device does not protrude beyond face of door; pry resistant:
1. Multipoint Latching - Finger-lift latch control designed for use with built-in combination locks, built-in key locks, or padlocks; positive automatic and prelocking:

a. Latch Hooks: Equip doors 48 inches (1219 mm) and higher with 3 latch hooks and doors less than 48 inches (1219 mm) high with 2 latch hooks; fabricated from minimum 0.0966-inch- (2.5-mm-) thick steel; welded or riveted to full-height door strikes; with resilient silencer on each latch hook.
b. Latching Mechanism: Manufacturer's standard rattle-free latching mechanism and moving components isolated with vinyl or nylon to prevent metal-to-metal contact, and incorporating a prelocking device that allows locker door to be locked while door is open and then closed without unlocking or damaging lock or latching mechanism.

H. Combination Padlocks: Key-controlled, three-number dialing combination locks; capable of five combination changes.

I. Equipment - Equip each metal locker with identification plate and the following, unless otherwise indicated:
1. Single-Tier Units: Shelf, one double-prong ceiling hook, and two single-prong wall hooks.
2. Double-Tier Units: One double-prong ceiling hook and two single-prong wall hooks.
3. Multiple-Tier Units: Two single-prong wall hooks.
4. Coat Rods: In lieu of ceiling hook for metal lockers 18 inches (457 mm) deep or greater.

J. Accessories:
1. Continuous Sloping Tops - Fabricated from cold-rolled steel sheet, manufacturer's standard thickness, but not less than 0.0329 inch (0.85 mm) thick:
a. Closures: Vertical-end type.
b. Sloped top corner fillers, mitered.
2. Recess Trim: Fabricated from 0.0428-inch- (1.1-mm-) thick, cold-rolled steel sheet.
3. Filler Panels: Fabricated from cold-rolled steel sheet, manufacturer's standard thickness, but not less than 0.0329 inch (0.85 mm) thick.
4. Finished End Panels: Fabricated from 0.0209-inch- (0.55-mm-) thick, cold-rolled steel sheet.

K. Finish - Baked enamel or powder coat:
1. Color: As selected by Architect from manufacturer's full range.

2.4 KNOCKED-DOWN ATHLETIC LOCKERS

A. Products are subject to compliance with requirements; provide one of the following available products that may be incorporated into the Work include, as indicated on drawings, but are not limited to, the following:
1. **LOCKERS Manufacturing: All-Welded SGL Tier Locker** (Basis of design)
2. Lyon Workspace Products, LLC; Knocked Down Expanded Metal.
3. ASI Storage Solutions Inc; Competitor.
4. Hadrian Manufacturing Inc; Gladiator.
5. List Industries Inc.
6. Olympus Lockers & Storage Products, Inc; Apollo HDV Lockers.
7. Republic Storage Systems Company; Heavy Duty Ventilated.

B. Expanded-Metal Doors: Fabricated from 0.090-inch (2.28-mm) nominal-thickness expanded metal; welded to 0.105-inch (2.66-mm) nominal-thickness steel angle frame; with 0.090-inch (2.28-mm) nominal-thickness, steel sheet lock panel backed by 0.060-inch (1.52-mm) nominal-thickness, steel sheet retainer welded to door frame.

C. Body - Assembled by riveting or bolting body components together. Fabricate from unperforated steel sheet with thicknesses as follows:

1. Tops and Bottoms: 0.060-inch (1.52-mm) nominal thickness, with single bend at edges.
2. Backs: 0.048-inch (1.21-mm) nominal thickness.
3. Shelves: 0.060-inch (1.52-mm) nominal thickness, with double bend at front and single bend at sides and back.

D. Unperforated Sides: Fabricated from 0.048-inch (1.21-mm) nominal-thickness steel sheet.

E. Frames - Channel formed; fabricated from 0.060-inch (1.52-mm) nominal-thickness steel sheet or 0.097-inch (2.45-mm) nominal-thickness steel angles; lapped and factory welded at corners; with top and bottom main frames factory welded into vertical main frames. Form continuous, integral, full-height door strikes on vertical main frames:
1. Cross Frames for Double-TierLockers: Channel formed and fabricated from same material as main frames; welded to vertical main frames.

F. Reinforced Bottoms: Structural channels, formed from 0.060-inch (1.52-mm) nominal-thickness steel sheet; welded to front and rear of side-panel frames.

G. Hinges - Welded to door and attached to door frame with no fewer than two factory-installed rivets per hinge that are completely concealed and tamper resistant when door is closed; fabricated to swing 180 degrees; self-closing:
1. Knuckle Hinges: Steel, full loop, five or seven knuckles, tight pin; minimum 2 inches (51 mm) high. Provide no fewer than three hinges for each door more than 42 inches (1067 mm) high.
2. Continuous Hinges: Manufacturer's standard, steel; side or top mounted as required by locker configuration.
3. Hinges: Manufacturer's standard, steel, continuous or knuckle type.

H. Recessed Door Handle and Latch - Stainless-steel cup with integral door pull, recessed so locking device does not protrude beyond door face; pry and vandal resistant:
1. Multipoint Latching - Finger-lift latch control designed for use with built-in combination locks, built-in cylinder locks, or padlocks; positive automatic latching and prelocking:
   a. Latch Hooks: Equip doors 48 inches (1219 mm) and higher with three latch hooks and doors less than 48 inches (1219 mm) high with two latch hooks; fabricated from 0.120-inch (3.04-mm) nominal-thickness steel sheet; welded to full-height door strikes; with resilient silencer on each latch hook.
   b. Latching Mechanism: Manufacturer's standard, rattle-free latching mechanism and moving components isolated to prevent metal-to-metal contact, and incorporating a prelocking device that allows locker door to be locked while door is open and then closed without unlocking or damaging lock or latching mechanism.

I. Projecting Turn-Handle and Latch: Steel handle welded to manufacturer's standard, three-point, cremone-type latching mechanism consisting of steel rods or bars that engage locker frame at top and bottom of door, and center latch that engages strike jamb; with steel padlock loop.

J. Door Handle and Latch for Box Lockers: Stainless-steel strike plate with integral pull; with steel padlock loop that projects through metal locker door.

K. Identification Plates: Manufacturer's standard, etched, embossed, or stamped aluminum plates, with numbers and letters at least 3/8 inch (9 mm) high.

L. Hooks: Manufacturer's standard ball-pointed type, aluminum or steel; zinc plated.

M. Coat Rods: Manufacturer's standard.

N. Continuous Zee Base: 4 inches (102 mm) high; fabricated from 0.075-inch (1.90-mm) nominal-thickness steel sheet.

O. Finish - Baked enamel or powder coat:
1. Color: as selected by Architect from manufacturer's full range.

2.5 LOCKER BENCHES

A. General: Provide locker benches fabricated by same manufacturer as metal lockers.

B. Bench Tops: Manufacturer's standard 1-piece units, of the following material, minimum 9-1/2 inches (240 mm) wide by 1-1/4 inches (32 mm) thick, with rounded corners and edges.

C. ADA Bench tops standard 1-piece units with back 48 inch by 24 inch with 20 inch high back support:
1. Laminated maple with one coat of clear sealer on all surfaces, and one coat of clear lacquer on top and sides.

D. Fixed Pedestals - Manufacturer's standard supports, with predrilled fastener holes for attaching bench top and anchoring to floor, complete with fasteners and anchors, provide one of the following:
1. Cast Iron: 1-1/2-inch- (38-mm-) diameter steel tubing threaded on both ends, with standard pipe flange at top and bell-shaped cast-iron base; with baked-enamel or powder-coat finish; anchored with exposed fasteners.
2. Tubular Steel: 1-1/4-inch- (32-mm-) diameter steel tubing, with 0.1265-inch- (3.2-mm-) thick steel flanges welded at top and base; with baked-enamel or powder-coat finish; anchored with exposed fasteners.
3. Color: As selected by Architect from manufacturer's full range.

2.6 FABRICATION

A. General - Fabricate metal lockers square, rigid, and without warp; with metal faces flat and free of dents or distortion. Make exposed metal edges free of sharp edges and burrs, and safe to touch:
1. Form body panels, doors, shelves, and accessories from one-piece steel sheet, unless otherwise indicated.
2. Provide fasteners, filler plates, supports, clips, and closures as required for a complete installation.

B. Unit Principle: Fabricate each metal locker with an individual door and frame; individual top, bottom, and back; and common intermediate uprights separating compartments.

C. Knocked-Down Construction: Fabricate metal lockers for nominal assembly at Project site using nuts, bolts, screws, or rivets. Factory weld frame members together to form a rigid, one-piece assembly.

D. Hooks: Manufacturer's standard ball-pointed type, aluminum or steel; zinc plated.

E. Coat Rods: Fabricated from 3/4-inch- (19-mm-) diameter steel; chrome finished.

F. Identification Plates: Manufacturer's standard etched, embossed, or stamped aluminum plates; with numbers and letters at least 3/8 inch (9 mm) high.

G. Continuous Sloping Tops - Fabricated in lengths as long as practicable, without visible fasteners at splice locations; finished to match lockers:

1. Sloped top corner fillers, mitered.

H. Filler Panels: Fabricated in an unequal leg angle shape; finished to match lockers. Provide slip joint filler angle formed to receive filler panel.

I. Finished End Panels - Designed for concealing unused penetrations and fasteners, except for perimeter fasteners, at exposed ends of nonrecessed metal lockers; finished to match lockers:
   1. Provide one-piece panels for double-row (back-to-back) locker ends.

2.7 STEEL SHEET FINISHES

A. General: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

B. Factory finish steel surfaces and accessories except stainless-steel and chrome-plated surfaces.

C. Surface Preparation: Clean surfaces of dirt, oil, grease, mill scale, rust, and other contaminants that could impair paint bond. Use manufacturer's standard methods.

D. Baked-Enamel Finish: Immediately after cleaning, pretreating, and phosphatizing, apply manufacturer's standard thermosetting baked-enamel finish. Comply with paint manufacturer's written instructions for application, baking, and minimum dry film thickness.

PART 3 EXECUTION

3.1 PROJECT CONDITIONS

A. Field Measurements - Verify the following by field measurements before fabrication and indicate measurements on Shop Drawings:
   1. Concealed framing, blocking, and reinforcements that support metal lockers before they are enclosed.
   2. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish recessed opening dimensions and proceed with fabricating metal lockers without field measurements. Coordinate wall and floor construction to ensure that actual recessed opening dimensions correspond to established dimensions.

3.2 COORDINATION

A. Coordinate size and location of concrete bases for metal lockers.

B. Coordinate sizes and locations of framing, blocking, furring, reinforcements, and other related units of Work specified in other Sections to ensure that metal lockers can be supported and installed as indicated.

3.3 EXTRA MATERIALS

A. Furnish extra materials described below, before construction begins, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents:
   1. Full-size units of the following metal locker hardware items equal to 10 percent of amount installed for each type and finish installed, but no fewer than 5 units:
      a. Locks.
      b. Identification plates.

c. Hooks.

3.4 EXAMINATION

A. Examine walls, floors, and support bases, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work:
   1. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance of work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.5 INSTALLATION

A. General - Install level, plumb, and true; shim as required, using concealed shims:
   1. Anchor locker runs at ends and at intervals recommended by manufacturer, but not more than 36 inches (910 mm) o.c. Install anchors through backup reinforcing plates, channels, or blocking as required to prevent metal distortion, using concealed fasteners.
   2. Anchor single rows of metal lockers to walls near top and bottom of lockers.
   3. Anchor back-to-back metal lockers to floor.

B. Knocked-Down Metal Lockers: Assemble knocked-down metal lockers with standard fasteners, with no exposed fasteners on door faces or face frames.

C. Equipment and Accessories - Fit exposed connections of trim, fillers, and closures accurately together to form tight, hairline joints, with concealed fasteners and splice plates:
   1. Attach hooks with at least two fasteners.
   2. Attach door locks on doors using security-type fasteners.
   3. Identification Plates:
      a. Identify metal lockers with identification noted on shop drawing submittal.
      b. Attach plates to each locker door, near top, centered, with at least two aluminum rivets.
   4. Attach filler panels with concealed fasteners. Locate fillers panels where indicated on Drawings.
   5. Attach sloping top units to metal lockers, with closures at exposed ends.
   6. Attach finished end panels with fasteners only at perimeter to conceal exposed ends of nonrecessed metal lockers.

D. Fixed Locker Benches: Provide not less than 2 pedestals for each bench, uniformly spaced not more than 36 inches apart. Securely fasten tops of pedestals to undersides of bench tops, and anchor bases to floor.

3.6 ADJUSTING, CLEANING, AND PROTECTION

A. Clean, lubricate, and adjust hardware. Adjust doors and latches to operate easily without binding. Verify that integral locking devices operate properly.

B. Protect metal lockers from damage, abuse, dust, dirt, stain, or paint. Do not permit metal locker use during construction.

C. Touch up marred finishes, or replace metal lockers that cannot be restored to factory-finished appearance. Use only materials and procedures recommended or furnished by metal locker manufacturer.

3.7 METAL LOCKER SCHEDULE

A. Athletic Lockers:
   1. Single tier configuration as indicated on drawings:
      a. Single tier for a total of 72-inches high.
   2. Color: As selected by Architect from manufacturer's full range. Metal Wardrobe Locker:
   3. Sloped Top as indicated on drawings.

B. ADA lockers as indicated on drawings, 2 tier.

C. Metal Staff Lockers.
   1. Locker Size:
      a. 2 tiers for a total of 72-inches high.
   2. Color: As selected by Architect from manufacturer's full range.

END OF SECTION 10 51 13

SECTION 07 21 00 THERMAL INSULATION

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes requirements including but not limited to:
   1. Polyisocyanurate foam plastic board.
   2. Glass fiber blanket.
   3. Acoustical Insulation.
   4. Accessories necessary for a complete installation.

B. Related Sections:
   1. Section 05 40 00: Cold-Formed Metal Framing.
   2. Division 07: Thermal Moisture Protection.
   3. Division 08: Openings
   4. Division 09: Finishes

1.3 SUBMITTALS

A. Product Data: Technical data and installation instructions for each type of insulation product specified.

1.4 QUALITY ASSURANCE

A. Regulatory Requirements:
   1. Fire performance characteristics - Identify products with appropriate markings of applicable testing and inspecting organization:
      a. Surface burning characteristic: ASTM E84.
      b. Flame spread index: Maximum 25.
      c. Smoke developed index: Maximum 450.
      d. Fire resistance ratings: ASTM E119.
      e. Combustion characteristics: ASTM E136.
   2. Underwriter's Laboratories (UL) 723 Tests for Surface Burning Characteristics of Building Materials.
   3. SCAQMD – South Coast Air Quality Management District Regulations Rule 1168 Adhesive and Sealant Applications.
   4. Greenguard Children and Schools (http://www.greenguard.org/).

B. Single Source Responsibility for Insulation Products: Obtain each type of building insulation from single source with resources to provide products of consistent quality in appearance and physical properties without delaying progress of Work.

C. Environmental Requirements:
   1. Manufacture extruded polystyrene with HCFC or other CFC free blowing agents. Mark insulation boards and packages with manufacturer's name and product designation. Unmarked boards and packages will be rejected:
      a. Wherever possible, provide boards from manufacturers who recycle insulation materials.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Protect insulation materials from physical damage and from deterioration due to moisture, soiling, and other sources. Store inside and in a dry location. Comply with manufacturer's written instructions for handling, storing, and protecting during installation.

B. Protect foam plastic board insulation:
   1. Do not expose to sunlight except to necessary extent for period of installation and concealment.
   2. Protect against ignition at all times. Do not deliver foam-plastic board materials to Project site until just before installation time.
   3. Quickly complete installation and concealment of foam-plastic board insulation in each area of construction.

PART 2 PRODUCTS

2.1 POLYISOCYANURATE FOAM PLASTIC BOARD

A. Polyisocyanurate Board, Foil Faced - ASTM C1289, Foil Faced, Type I, Class 1 or 2:
   1. Manufacturers are subject to compliance with requirements; provide products by one of the following:
      b. Hunter Panels.
      c. DuPont.
      d. Rmax, Inc.
      e. Approved equal.
   2. Fire propagation characteristics: Passes NFPA 285 testing as part of an approved assembly.
   3. Psi: 15 minimum.
   4. R-Value: 12 minimum.
   5. Thickness: Refer to drawings.

2.2 GLASS FIBER BLANKET

A. Glass Fiber Blanket, Unfaced - ASTM C665, Type I; with maximum flame spread and smoke developed indexes of 25 and 50, respectively, per ASTM E84; passing ASTM E136 for combustion characteristics:
   1. Manufacturers are subject to compliance with requirements; provide products by one of the following:
      a. Johns Manville (Basis of Design).
      b. CertainTeed Corporation.
      c. Guardian Building Products, Inc.
      d. Owens Corning.
      e. Approved equal.

B. Glass Fiber Blanket, Polypropylene Scrim Kraft Faced - ASTM C665, Type II (non-reflective faced), Class A (faced surface with a flame spread index of 25 or less); Category 1 (membrane is a vapor barrier):
   1. Manufacturers are subject to compliance with requirements; provide products by one of the following:
      a. Johns Manville (Basis of Design).
      b. CertainTeed Corporation.
      c. Owens Corning.
      d. Approved equal.

2.3 ACOUSTICAL INSULATION

A. Glass Fiber Noise Reducer Blanket, Kraft-faced - ASTM C665, Type II; with maximum flame spread and smoke developed indexes of 25 and 50, respectively, per ASTM E84; combustion characteristics. To be installed on interior wood stud framing:
   1. Manufacturers are subject to compliance with requirements; provide products by one of the following:
      a. CertainTeed Corporation (Basis of Design).
      b. Guardian Building Products, Inc.
      c. Johns Manville; a Berkshire Hathaway company.
      d. Owens Corning.
      e. Approved equal.

2.4 INSULATION FASTENERS

A. Adhesively Attached, Spindle Type Anchors:
   1. Plate welded to projecting spindle; capable of holding insulation of specified thickness securely in position with self-locking washer in place:
      a. Plate: Perforated, galvanized carbon steel sheet, 0.030-inch (0.762 mm) thick by two inches (50 mm) square.
      b. Spindle: Copper coated, low carbon steel; fully annealed; 0.105 inch (2.67 mm) in diameter; length to suit depth of insulation.

B. Adhesively Attached, Angle Shaped, and Spindle Type Anchors:
   1. Angle welded to projecting spindle; capable of holding insulation of specified thickness securely in position with self-locking washer in place:
      a. Angle: Formed from 0.030-inch (0.762 mm) thick, perforated, galvanized carbon steel sheet with each leg two inches (50 mm) square.
      b. Spindle: Copper coated, low carbon steel; fully annealed; 0.105 inch (2.67 mm) in diameter; length to suit depth of insulation.

C. Insulation Retaining Washers:
   1. Self-locking washers formed from 0.016-inch (0.41 mm) thick galvanized steel sheet, with beveled edge for increased stiffness, sized as required to hold insulation securely in place, but not less than 1-1/2 inches (38 mm) square or in diameter:
      a. Protect ends with capped self-locking washers incorporating a spring steel insert to ensure permanent retention of cap in the following locations:
         1) Crawl spaces.
         2) Ceiling plenums.
         3) Attic spaces.

D. Insulation Standoff: Spacer fabricated from galvanized mild steel sheet for fitting over spindle of insulation anchor to maintain air space of two inches (50 mm) between face of insulation and substrate to which anchor is attached.

E. Anchor Adhesive: Product with demonstrated capability to bond insulation anchors securely to substrates without damaging insulation, fasteners, or substrates.

F. All other materials such as wire supports, fasteners, and retainers not specifically described but required to complete the work shall be as recommended by approved manufacturer, provided and installed by Contractor.

2.5 ACCESSORIES

A. Insulation for Miscellaneous Voids:
   1. Glass fiber insulation: ASTM C764, Type II, loose fill; with maximum flame spread and smoke developed indexes of 5, per ASTM E84.

2. Spray polyurethane foam insulation: ASTM C1029, Type II, closed cell, with maximum flame spread and smoke developed indexes of 75 and 450, respectively, per ASTM E84, and shall conform to all SCAQMD and EPA air quality regulations.

B. Adhesive for Bonding Insulation: Product compatible with insulation and air and water barrier materials, and with demonstrated capability to bond insulation securely to substrates without damaging insulation and substrates.

C. Eave Ventilation Troughs: Preformed, rigid fiberboard or plastic sheets designed and sized to fit between roof framing members and to provide ventilation between insulated attic spaces and vented eaves.

PART 3 EXECUTION

3.1 PROJECT CONDITIONS

A. Do not install insulation adhesives when temperature or weather conditions are detrimental to successful installation.

B. Sequence work to ensure fireproofing and firestop materials are in place before beginning work.

3.2 PREPARATION

A. Clean substrates of substances that are harmful to insulation, including removing projections capable of puncturing insulation or vapor retarders, or that interfere with insulation attachment.

B. Foam in Place Insulation:
1. Verify that substrates are clean, dry, and free of substances that are harmful to insulation:
   a. Priming: Prime substrates where recommended by insulation manufacturer. Apply primer to comply with insulation manufacturer's written instructions. Confine primers to areas to be insulated; do not allow spillage or migration onto adjoining surfaces.

3.3 INSTALLATION

A. Comply with insulation manufacturer's written instructions applicable to products and applications.

B. Board and Batt Insulation:
1. Install insulation that is undamaged, dry, and unsoiled and has not been exposed to ice, rain, or snow at any time:
   a. Extend insulation to envelop entire area to be insulated. Fit tightly around obstructions and fill voids with insulation. Remove projections that interfere with placement.
   b. Provide sizes to fit applications and selected from manufacturer's standard thicknesses, widths, and lengths. Apply single layer of insulation units unless multiple layers are otherwise shown or required to make up total thickness or to achieve R-value.

C. Cavity Wall Insulation:
1. Foam plastic board insulation:
   a. Install pads of adhesive spaced approximately 24 inches (610 mm) o.c. both ways

on inside face and as recommended by manufacturer. Fit courses of insulation between wall ties and other obstructions, with edges butted tightly in both directions. Press units firmly against inside substrates:

1) Supplement adhesive attachment of insulation by securing boards with two-piece wall ties designed for this purpose and specified in.

D. Framed Construction - Blanket Insulation:

1. Install in cavities formed by framing members according to the following requirements:
   a. Use insulation widths and lengths that fill the cavities formed by framing members. If more than one length is required to fill the cavities, provide lengths that will produce a snug fit between ends.
   b. Place insulation in cavities formed by framing members to produce a friction fit between edges of insulation and adjoining framing members.
   c. Maintain three-inch (76 mm) clearance of insulation around recessed lighting fixtures not rated for or protected from contact with insulation.
   d. Attics: Install eave ventilation troughs between roof framing members in insulated attic spaces at vented eaves.
   e. For metal framed wall cavities where cavity heights exceed 96 inches (2,438 mm), support unfaced blankets mechanically and support faced blankets by taping flanges of insulation to flanges of metal studs.
   f. For wood framed construction, install blankets according to ASTM C1320 and as follows:
      1) With faced blankets having stapling flanges, lap blanket flange over flange of adjacent blanket to maintain continuity of vapor retarder once finish material is installed over it.
   g. Miscellaneous voids: Install insulation in miscellaneous voids and cavity spaces where required to prevent gaps in insulation using the following materials:
      1) Glass fiber insulation: Compact to approximately 40 percent of normal maximum volume equaling a density of approximately 2.5 lb/cu. ft. (40 kg/cu. m).
      2) Spray polyurethane insulation: Apply according to manufacturer's written instructions.

E. Reflective Insulation:

1. Install sheet reflective insulation according to ASTM C727:
   a. Install sheet radiant barriers according to ASTM C1744.
   b. Install interior radiation control coating system according to ASTM C1321.

F. Continuous Insulation for Exterior Walls (Polyisocyanurate Board):

1. Install continuous insulation board according to manufacturer's written instructions:
   a. Fastener components shall include a minimum two-inch diameter plastic plate/washer and self-taping screws attached directly to stud framing.
   b. All joints, penetrations, and flashings shall be taped and/or otherwise sealed with manufacture’s recommended products.

3.4 PROTECTION

A. Protect installed insulation from damage due to harmful weather exposures, physical abuse, and other causes. Provide temporary coverings or enclosures where insulation is subject to abuse and cannot be concealed and protected by permanent construction immediately after installation.

END OF SECTION 07 21 00

SECTION 08 87 13 SOLAR CONTROL FILMS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section refers to Security Window Films and Wet Seal Glazing System:
   1. Solar control films of varying thicknesses, tints and reflectivity for application to existing glazing.

B. Related Sections:
   1. Section 08 80 00: Glass and Glazing.

C. Reference Standards:
   1. ANSI Z97.1 - American National Standard for Safety Glazing Materials Used in Buildings - Safety Performance Specifications and Methods of Test.
   2. ASHRAE - American Society for Heating, Refrigeration, and Air Conditioning Engineers; Handbook of Fundamentals.
   3. ASTM International (ASTM):
      a. ASTM D882 - Standard Test Method for Tensile Properties of Thin Plastic Sheeting.
      b. ASTM D1044 - Standard Method of Test for Resistance of Transparent Plastics to Surface Abrasion (Taber Abrader Test).
      c. ASTM D4830 - Standard Test Methods for Characterizing Thermoplastic Fabrics Used in Roofing and Waterproofing.
      d. ASTM E84 - Standard Method of Test for Surface Burning Characteristics of Building Materials.
      e. ASTM E903 - Standard Methods of Test for Solar Absorbance, Reflectance and Transmittance of Materials Using Integrating Spheres.
   4. Consumer Products Safety Commission 16 CFR, Part 1201 - Safety Standard for Architectural Glazing Materials.
   5. NFRC 100/200 (Formerly ASTM E903) - Standard Methods of Test for Solar Absorbance, Reflectance and Transmittance of Materials Using Integrating Spheres.
   6. Underwriters Laboratories Inc. (UL): UL 972 - Burglary Resisting Glazing Material.

1.3 PERFORMANCE REQUIREMENTS

A. Meet the minimum performance requirements for each designated product type and manufacturer listed herein including:
   1. Safety Glazing Impact Performance.
   2. Blast Hazard Mitigation Performance.
   3. Impact Resistance and Pressure Cycling.
   4. Adhesion to Glass.
   5. Flammability: Surface burning characteristics when tested in accordance ASTM E84, demonstrating film applied to glass rated Class A for Interior Use
   6. Abrasion Resistance:
   7. UV Light Rejection:

1.4 SUBMITTALS

A. Submit under provisions of Section 01 33 00: Submittal Procedures.

B. Product Data: Manufacturer's current technical literature on each product to be used, including:
   1. Manufacturer's Data Sheets.
   2. Preparation instructions and recommendations.
   3. Storage and handling requirements and recommendations.
   4. Installation methods.

C. Verification Samples: For each film specified, two samples representing actual film color and pattern.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications:
   1. All primary products specified in this section will be supplied by a single manufacturer with a minimum of ten years' experience:
      a. Provide documentation that the adhesive used on the specified films is a Pressure Sensitive Adhesive (PSA).

B. Installer Qualifications:
   1. All products listed in this section are to be installed by a single installer with a minimum of five years demonstrated experience in installing products of the same type and scope as specified:
      a. Provide documentation that the installer is authorized by the Manufacturer to perform Work specified in this section.
      b. Provide a commercial building reference list of 5 properties where the installer has applied window film. This list will include the following information:
         1) Name of building.
         2) The name and telephone number of a management contact.
         3) Type of glass.
         4) Type of film and/or film attachment system.
         5) Amount of film and/or film attachment system installed.
         6) Date of completion.

C. Mock-Up:
   1. Provide a mock-up for evaluation of surface preparation techniques and application workmanship:
      a. Finish areas designated by Architect.
      b. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
      c. Refinish mock-up area as required to produce acceptable work.

1.6 WARRANTY

A. At project closeout, provide to Owner or Owners Representative an executed current copy of the manufacturer's standard limited warranty of not less than ten years against manufacturing defects, outlining its terms, conditions, and exclusions from coverage. Coverage shall include all materials and labor required for replacement.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Follow Manufacturer's instructions for storage and handling.

B. Store products in manufacturer's unopened packaging until ready for installation.

C. Store and dispose of hazardous materials, and materials contaminated by hazardous materials, in accordance with requirements of local authorities having jurisdiction.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Window Film: Subject to compliance with requirements, provide products by one of the following:
1. 3M Global Gateway.
2. Hanitek Window Films Ltd.
3. LLumar® Safety and-Security Films, an Eastman Chemical Company Business: CPFilms Inc.
4. Madico Window Films.
5. Solar Gard, a subsidiary of Saint-Gobain Performance Plastics Corporation, Solar Control Films.

B. Provide film products from a single manufacturer.

C. Type 1 – Silver Reflective Films:

Manuf.	Film Series	Product Name	Thickness	Light Trans.	Tensile Strength (psi)	Break Strength (lbs/in)
Hanita	SolarZone	9 mil Silver 20 SR	9 mil	20%	28,500	245
Llumar	Magnum	R-20 SR PS8	8 mil	16%	32,000	269
Madico	SafetyShield	SafetyShield 800 RS 20	8 mil	17%	32,000	240
Solar Gard	Armorcoat	8 mil Silver 20	8 mil	14%	30,000	240

D. Type 1 – Neutral Films:

Manuf.	Film Series	Product Name	Thickness	Light Trans.	Tensile Strength (psi)	Break Strength (lbs/in)
Hanita	SolarZone	10 mil PerLite 35	10 mil	40%	28,500	270
Llumar	Magnum	N-1040 SR PS8	8 mil	40%	32,000	269
Madico	SafetyShield	SafetyShield 800 DG 35	8 mil	36%	32,000	240
Solar Gard	Armorcoat	8 mil Stainless Steel 35	8 mil	38%	30,000	240

2.2 IMPACT ATTACHMENT SYSTEMS

A. Subject to compliance with testing and performance requirements, provide one of the following perimeter attachment systems:
1. Wet-glaze: The security film is applied to the glass in a fashion whereby the window glazing gaskets are trimmed and the film's edges are inserted behind the window frame. A bead of Dow Corning 995® structural silicone is then applied flush against the frame to overlap the security film and take the place of the original gasket.

PART 3 EXECUTION

3.1 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

3.2 EXAMINATION

A. Film Examination:
   1. Notify Architect in writing of deviations from manufacturer's recommended installation tolerances and conditions:
      a. Glass surfaces receiving new film should first be examined to verify that they are free from defects and imperfections, which will affect the final appearance.
   2. Do not proceed with installation until glass surfaces have been properly prepared and deviations from manufacturer's recommended tolerances are corrected. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result under the project conditions.
   3. Commencement of installation constitutes acceptance of conditions.

3.3 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

C. Refer to Manufacturer's installation instructions for methods of preparation for Impact Protection Adhesive or Impact Protection Profile film attachment systems.

3.4 INSTALLATION

A. Film Installation - Windows:
   1. Install in accordance with manufacturer's instructions.
   2. Cleanly cut and remove those portions of interior glazing gaskets which protrude beyond window’s daylight opening flush with surface of frame.
   3. Apply film to daylight opening of windows. Cut film edges neatly and square at a uniform distance of 1/8 inch (3 mm) to 1/16 inch of window daylight opening.
   4. Spray the slip solution, composed of one capful of baby shampoo or dishwashing liquid to 1 gallon of water, on window glass and adhesive to facilitate proper positioning of film.
   5. Apply film to interior of glass and lightly spray film with slip solution.
   6. Squeegee from top to bottom of window. Spray slip solution to film and squeegee a second time.
   7. Bump film edge with lint-free towel wrapped around edge of a 5-way tool.
   8. When conditions allow, install Impact Protection Adhesive.
   9. Upon completion of film application, allow 30 days for moisture from film installation to dry thoroughly, and to allow film to dry flat with no moisture dimples when viewed under normal viewing conditions.

3.5 CLEANING AND PROTECTION

A. Remove left over material and debris from Work area. Use necessary means to protect film before, during, and after installation.

B. Touch-up, repair or replace damaged products before Substantial Completion.

C. After application of film, wash film using common window cleaning solutions, including ammonia solutions, 30 days after application. Do not use abrasive type cleaning agents and bristle brushes to avoid scratching film. Use synthetic sponges or soft cloths.

END OF SECTION 08 87 13

SECTION 11 40 00

FOOD SERVICE EQUIPMENT

PART 1 – GENERAL

1.1 SUMMARY

A. Section Includes: Foodservice equipment work as indicated on the drawings and by equipment schedule at the end of this section.

B. Drawings, the provisions of the Agreement, the General Conditions, and the Division 1 specification sections apply to all work of this Section.

C. Substitutions: Substitute products will be considered only under the terms and conditions of Division 1.

D. Substitutions: Proposals for alternate products and methods for applications indicated may be considered by the Architect, subject to requirements of Division 1, system performance requirements and applicable PART 1 requirements of this Section.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: For fabricated equipment. Include plans, elevations, sections, roughing-in dimensions, fabrication details, utility service requirements, and attachments to other work.

C. Samples: For each exposed product and for each color and texture specified.

1.3 INFORMATIONAL SUBMITTALS

A. Coordination Drawings: For foodservice facilities.

1. Indicate locations of foodservice equipment and connections to utilities.

2. Key equipment using same designations as indicated on drawings.

3. Include plans and elevations; clearance requirements for equipment access and maintenance; details of equipment supports; and utility service characteristics.

B. Equipment Spec Books: Submit six spec books in hardcover binder. Insert spec sheets in order of list of kitchen equipment shown in written specifications and labeled with the appropriate item number. Highlight accessories and voltages as appropriate on the spec sheets. If factory spec sheets are not available, indicate relevant information (size, plumbing requirements, and electrical requirements)

on white sheet. Gather spec sheets from the Owner for Owner supplied equipment and insert in spec book.

1.4 CLOSEOUT SUBMITTALS

A. Maintenance Manuals: Submit three sets in hardcover binders with the project address and "Foodservice Operation & Maintenance Manuals" on the front and edge of binder. Include information from each piece of equipment with electrical or gas connections. Information should include operation instructions, cleaning and maintenance instructions, parts listing if available, list of service agencies (names, addresses and phone numbers) authorized to repair the equipment, voltage, gas type, refrigerant used, serial number and copies of the warranties. List should be sorted alphabetically by manufacturer.

1.5 QUALITY ASSURANCE

A. Certify that all work and materials comply with Federal, State and Local laws, ordinances and regulations and is confirmed by the local inspector having jurisdiction.

B. Work and materials must be in full accord and when appropriate, shall be listed with following agencies:

1. Local Health Department

2. National Sanitation Foundation (N.S.F.)

3. Underwriters Laboratories (U.L.) and ETL equivalent.

4. American Gas Association (A.G.A)

5. N.F.P.A. - latest edition, for exhaust system.

C. Qualifications

1. Kitchen Equipment Contractor (KEC) and its sub-contractors to have at least five (5) years experience in this type of work. Upon request provide at least three references for jobs of similar size and content.
2. Commercially manufactured equipment is not acceptable unless evidence is furnished that similar equipment has been operating successfully in a minimum of three (3) installations (excluding testing laboratories, field testing, or prototypes) for at least one (1) year.
3. Commercially manufactured equipment will be reviewed based on submittal data provide on manufacturer's literature and/or manufacturer's shop drawings for prime alternate or substituted items. Failure of the equipment to meet the capacity, operation, size, utility and production as submitted will result in the rejection of the equipment regardless of disclaimers.
4. Custom-fabricated equipment shall be manufactured by a foodservice equipment fabricator with a least five (5) years experience in this type of

work, who has the plant, personnel, and engineering facilities to properly design, detail and manufacture high quality foodservice equipment.

D. Regulatory Requirements: Install equipment to comply with the following:

1. ASHAE 15, "Safety Code for Mechanical Refrigeration."
2. NFPA 54, "National Fuel Gas Code."
3. NFPA 70, "National Electrical Code."
4. NFPA 96, "Ventilation Control and Fire Protection of Commercial Cooking Operations."

E. Seismic Restraints: Comply with SMACNA's "Kitchen Ventilation Systems and Food Service Equipment Fabrication and Installation Guidelines," Appendix A, "Seismic Restraint Details," unless otherwise indicated.

1.6 WARRANTY

A. All equipment shall be fully guaranteed against defects in workmanship and material for one (1) year after Owner's final acceptance. Refrigeration Compressors shall be fully guaranteed for five (5) years. All repairs and replacement shall be made without charge to the Owner. Guarantee period shall commence with the first usage of the equipment for the intended purpose after final acceptance.

1.7 START-UP DEMONSTRATION AND MANUALS

A. Provide factory-trained personnel for start-up and demonstration of equipment. Demonstration shall be done in two stages: One for operation and the second for maintenance personnel.

B. Return to the job site within 10 days for final adjustment and calibration of equipment.

C. Furnish service parts manuals as well as maintenance manuals for all equipment provided.

D. Prepare list of service agencies authorized by the manufacturer to service its equipment. Include the name of the person to contact and a telephone number.

PART 2 - PRODUCTS

2.1 GENERAL REQUIREMENTS OF FABRICATION

A. Fabrication shall conform to general acceptance of the foodservice industry.

B. Fabrication shall meet or exceed National Sanitation Foundation standards including the latest editions and revisions.

2.2 MATERIALS

A. Stainless Steel (S/S): Stainless steel shall be of U.S. Standard-gauges as indicated, but not less than 18-gauge or as noted, Type 304 with No. 4 finish.

B. Galvanized Steel: Galvanized steel shall be of 14-gauge and shall be electro galvanized. Galvanized steel shall be used in non-exposed areas, areas which have not contact with food for food serving items, and in framework, when used in framework, galvanized steel shall be all welded construction.

C. Plastic Laminate (PL):

1. Shall be Formica, Parkwood, LamiArt, or approved equal.

2. Shall be veneered with approved waterproof and heatproof cement. Rubber base adhesives are not acceptable.

3. Shall be applied directly over 3/4" plywood.

4. Exposed faces and edges shall be faced with 1/16" thick material. Corresponding backs shall be covered with approved backing and balancing sheet material.

D. Solid Surface Material (SSM):

1. Shall be Granite, Caesarstone, Silestone or approved equal and installed over 3/4" plywood or metal bases. Provide air space, trim, and/or insulation around any heat or cold producing equipment to guard against discoloration and cracking.

2.3 METAL TOP CONSTRUCTION

A. Metal tops shall be one-piece 14-gauge welded construction, including field joints. Secure to a full perimeter galvanized steel channel frame cross-braced not farther than 30 inches on center. Fasten top with stud bolt or tack welds.

2.4 ENCLOSED CABINET BASES

A. Bases shall be fabricated from not less than 18-gauge steel reinforced by forming the metal ends and shelves. Partitions shall be all stainless steel. The ends and vertical partitions may be of single wall construction, with a 2-inch face, all partitions and sides shall be welded in the intersection and flush with the bottom.

B. Unexposed backs and structural members may be constructed of galvanized steel.

C. Intermediate shelves shall be removable, except the bottom shelf when the cabinet is on legs. When the cabinets is on a masonry base, the bottom shelf shall be removable to all access for cleaning.

2.5 LEG AND CROSS RAILS

A. Legs and cross railings shall be 1-5/8", 16-gauge stainless steel tubing. All cross rails shall be continuously welded, ground and polished. Tack welds or other methods of connection are not acceptable. Bottoms of legs shall be wedged inward and fitted with a stainless steel bullet type foot with not less than 2" adjustment. Freestanding legs shall be pegged to floor with 1/4" stainless steel rod.

B. Stainless steel gussets shall be not less than 3" diameter at top and 3-3/4" long. Outer shell 16-gauge stainless steel reinforced with 12-gauge mild steel inserts welded interior shell. Gussets shall be large enough to accommodate 1-5/8" tube with provision for Allen screw fastener.

C. Low counter legs shall be constructed of stainless steel exterior of 5-3/4" minimum height or 7" maximum height with 3-1/2" inch square plate with four countersunk holes, welded to top for fastening.

D. Adjustable foot shall be constructed of stainless steel 1-1/2" diameter tapered at the bottom to 1" diameter, fitted with threaded cold rolled rod for minimum 1-1/2" by 3/4" threaded busing plug welded to legs.

E. When legs are fastened to equipment, the following methods should be used:

1. Sinks: Reinforced with bushing and set screws.
2. Metal Top Table or Dishtable: Welded to galvanized steel frame of 14-gauge or more and secure to the top with screws through slotted holes.
3. Wood or Composition Top: A welded stainless steel channel of not less than 14-gauge, secured to the top with screws through slotted holes.

2.6 SHELVES

A. When shelves are part of the fixture, the following shall take place:

1. Open base type shelf shall be notched around the leg and continuously welded to the leg.
2. Cabinet base type shelf shall be turned up on the back side a minimum of 1/4" radius and further slightly to insure a tight fit to enclosure panels.

B. Wall shelves shall be one-piece 16-gauge welded construction, including field joints. Secure to walls with 14-gauge s/s brackets at 36" on-center maximum spacing.

C. Overshelves shall be one-piece 16-gauge welded construction, including field joints. Secure to 1" s/s tubular supports at 60" on-center maximum spacing attached to counter tops.

2.7 SINKS

A. When multiple compartments are part of the design, they shall be continuous on the exterior without applied facing strips or panels. Bottom of each compartment shall be creased such as to ensure complete drainage to waste opening.

B. Partitions between compartments shall be double thickness, continuous, and welded.

C. Where sink bowls are exposed, the exterior shall be polished to a number 4 finish.

D. Fabricator shall provide drains, wastes, and faucets as indicated on drawings, or itemized specifications.

2.8 OTHER FABRICATED COMPONENTS

A. Casters:

1. Shall be heavy-duty type, ball bearing, solid or disc wheel with non-marking greaseproof rubber, neoprene or polyurethane tire.
2. Wheel shall be 5" diameter, minimum width of tread 1-1/2", with a minimum capacity per caster of 250 pounds.
3. Solid material wheels shall be provided with stainless steel rotating wheel guards.
4. Shall be sanitary, have sealed wheel and swivel bearing and polished plate finish.

B. Doors:

1. Metal doors shall be double cased stainless steel. Outer pans shall be 18-gauge stainless steel with corners welded, ground smooth, and polished. Inner pan shall be 20-gauge stainless steel fitted tightly into outer pan with a sound deadening material such as Celotex or Styrofoam used as a core. The two pans shall be tack welded together and joints solder filled. Doors shall finish approximately 3/4" thick and be fitted with flush recessed type stainless steel door pulls.
2. Sliding doors shall be mounted on large, quiet ball bearing rollers in 14-gauge stainless steel overhead tracks and be removable with the use of tools. Bottom of cabinet shall have stainless steel guide pins and not channel tracks for doors.
3. Wood doors shall be fabricated as detailed. If Formica or other plastic surfaces are used, all sides shall be laminated.
4. Hinged doors shall be mounted on heavy-duty NSF approved hinges, or as noted on plans or specifications.

C. Hardware:

1. Shall be solid, heavy-duty type.
2. Door hardware shall be locking type, keyed and master keyed.
3. Shall be identified with manufacturer's name and number so that broken or worn parts may be replaced.
4. Submit samples for approval, when requested.
5. Pulls shall be Component Hardware or equal.

D. Drawer Assemblies:

1. Assemblies shall consist of removable drawer body mounted in a ball bearing slide assembly and padlock assembly.
2. Slide assembly consists of one pair of roller bearing extension slides with side and back enclosure panels, front space angle, two drawer carrier angles secured to slides and stainless steel front.
3. Slides shall be 250-pound capacity made by Component Hardware or equal.
4. Drawer bodies for general storage shall be 20" x 20" with Royalite containers.
5. Drawers intended to hold food products shall be removable type with 12" x 20" stainless steel food pan.
6. Drawer fronts are double case 3/4" thick, with 18-gauge stainless steel welded and polished front pan. Steel back pan is tightly fitted and tacked welded. Sound deadened with rigid insulation.
7. All drawers shall be provided with replaceable soft neoprene bumpers or, for refrigerated drawers, a full perimeter soft gasket.

2.9 FABRICATED WORKMANSHIP

A. Items of specially fabricated equipment shall be fabricated by an acceptable manufacturer, which is NSF approved and fabricated in an approved manner to the complete satisfaction of the Owner.

1. Welding and Soldering:

a. Materials 18-gauge or heaver shall be welded.
b. Seams and joints shall be shop welded or soldered as the nature of the material may require.
c. Welds shall be ground smooth and polished to mater original finished.
d. Where galvanizing has been burned off, the weld shall be cleaned and touched up with high-grade aluminum paint.

B. Fasteners and Joints:

1. The following shall not be accepted:

a. Exposed screw or bolt heads.
b. Rivets.
c. Butt joints made by riveting straps under seams and then filled with solder.

C. Rolled Edges: Rolled edges shall be as detailed, with corners bull nosed, ground and polished.

D. Coved Corners: All stainless steel foodservice equipment shall have 1/2" or larger radius coves in all horizontal and vertical corners and intersections per NSF standards.

E. Closures: Where ends of fixtures, backsplashes, shelves, etc. are open, fill by forming the metal, or weld sections, if necessary to close entire opening flush to walls or adjoining fixtures.

2.10 OPERATION REQUIREMENTS

A. Insure quiet operation of foodservice and related equipment.

B. Insure that bumper gaskets, stops, and any other needed protection is installed on all fabricated equipment as needed.

2.11 COLD STORAGE ROOMS. (Not Used)

2.12 REFRIGERATION SYSTEMS (Not Used)

2.13 EXHAUST HOODS

A. All exhaust hoods shall be construction of stainless steel no less than 18-gauge, type 304. All exposed surfaces shall be a number 4 finish. See plans for size and location of ducts.

B. All exhaust hoods shall be (UL) Underwriter's Listed under the category "Exhaust Hood with Damper", listed with NSF (National Sanitation Foundation), and in accordance with all recommendations of NFPA's Standard #96.

C. Provide stainless steel enclosure panels to finished ceiling, adjacent walls, and spaces between hoods.

D. Light fixtures are to be incandescent unless otherwise specified.

E. Bottom of hood to be mounted at 80" above finished floor.

2.14 FIRE PROTECTION SYSTEM

A. The fire protection system shall conform to NFPA 17A latest edition.

B. Provide all surface appliance, hood, and duct protection nozzles.

C. All exposed piping to be chrome plated or sleeved. Run unexposed wherever possible.

D. Include manual pull station, location as shown on drawings.

E. Provide mechanical fire-fuel gas shut off valve for equipment below hoods. Verify size with plumbing plans.

F. Upon completion the system must be tested in the presence of the enforcing agency.

2.15 ENCLOSURES

A. Provide and install enclosure panels secured or removable for any equipment that houses equipment with movable parts for access. Also, cover and provide protection for any exposed steam line or condensate line that may be within reach of operating personnel.

2.16 ELECTRICAL WORK - GENERAL REQUIREMENTS.

A. Before ordering equipment, confirm with the serving electric utility, all pertinent electrical requirements such as actual voltages available, number of phases, and number of wire in the system. Coordinate also with any electrical service provided by other Divisions.

B. Components and assemblies shall bear the UL, RU, or ETL label or be approved by the prevailing authority.

C. Custom fabricated and standard refrigerator units shall be provided with vapor tight receptacles, shatterproof lams, and automatic switches. All wiring shall be concealed when possible.

2.17 INSERT PANS

A. All cut-outs, openings, drawers, or equipment specified or detailed to hold stainless steel insert pans shall be provided with a full compliment of pans as follows:

1. One stainless steel, 20-gauge minimum, solid insert pan for each space, sized per plans, details, or specifications.
2. Where pan sizes are not indicated in plans, details, or specification, provide on full size pan for each opening.
3. Provide maximum depth pan to suite application and space.
4. Provide 18-gauge removable stainless steel adapter bars where applicable.

2.18 CORDS AND PLUGS

A. Where cords and plugs are used, they shall comply with National Electrical Manufacturer's Association (N.E.M.A.) requirements.

2.19 WATER FILTERS

A. Provide water filters on all icemakers, beverage equipment, and steamers.

PART 3 – EXECUTION

3.1 DELIVERY, STORAGE AND HANDLING

A. No provisions are normally made for receipt or storage of any item delivered to the job site before commencement of installation. Contractor is solely responsible for the staging, delivery and safe-keeping of all equipment until turned over to the owner.

B. Fabricated and commercially manufactured equipment (buy-outs) must be received and accounted for by the Contractor at his warehouse facilities until such time as placement is possible and acceptable by the GC.

C. Clearly identify all items by item number and area prior to delivery to the job site.

D. Under no circumstances shall any individual or agent of the owner, architectural, trades, maintenance or security companies be asked to sign for or receive goods, equipment or services on the job site. Items, parts, optional pieces, trim, or any goods provided under this contract are the responsibility of the contractor whether on the owner's property or in transit until the areas shown in these documents are handed over to the owner or owner's agents.

3.2 INSTALLATION

A. Contractor shall supervise and direct his work using his best skill and attention. During the installation period, the Contractor shall provide a competent superintendent or foreman for such directions regarding connection, installation and coordination of all work under the contract.

B. Contractor shall be solely responsible for all construction means, methods, techniques, procedures and coordination of all portions of his work under the contract and for coordinating the installations with the General Contractor, so as not to interfere with or delay the overall construction of the project.

C. Contractor shall verify conditions at the building, particularly door openings, passages, and availability and size of elevators and avoid building any items too large for available openings. Contractor shall provide for the possible necessity of removing and replacing windows or wall panels. Any pieces too bulky for existing facilities shall be hoisted or otherwise handled with apparatus as required. All special handling equipment charges shall be paid by the Contractor.

D. Floor troughs and drip pans shall be provided by Contractor and installed by the General Contractor. The Contractor shall provide a supervisor for the installation.

E. Accurately set, scribe, square, level and permanently secure all items in precise position as indicated on drawings and shop drawings. Exercise extreme care to avoid damaging finished surfaces during the handling and erecting of all items. Repair, replace or otherwise make good all damaged surfaces or blemishes arising from installation in a manner approved by the Owner.

F. Complete installation with required fastenings, clip angles, braces, anchors and other fittings as required to render the work rigid and secure. Secure wood items with screws or anchor to furring strips to permit removal.

G. Caulk all items resting on concrete pads to eliminate crevices between item and pad.

H. Shim level items without legs with stainless steel shims. Caulk watertight to eliminate crevices between item and mounting surfaces on floor.

I. Seal spaces between all units and walls, ceilings, floors or fixed adjoining units against entrance of food particles or vermin by means of trim strips, welding, soldering, or commercial joint material as suited to the nature of the equipment. Seal and smooth, (when not exposed to extreme heat) with General Electric Silicone Construction Sealant Series SE1200 in appropriate color. Width of joints sealed with silicone not to exceed ¼".

J. Contractor shall do all cutting and fitting on the equipment required by other contractors for access for their piping, conduit or utility access.

K. Do not use any exposed bolts, nuts or screws other than those shown on shop drawings. Any additional and approved bolts, nuts or screws must be stainless steel.

L. Protect equipment that has been delivered to the job site from damage. Counter and table tops to be covered with plywood, flakeboard or hardboard during the installation period.

M. Upon completion of installation, clean and polish all surfaces of each item with appropriate materials. At this time, prepare to account to the consultant and Owner for quantities, locations and conditions of all items.

N. Should any repairs be required due to the neglect of the other contractors, the repairs must be approved by owner before the work is performed. All extra charges must be approved and all repairs required must be noted in writing before work is performed, stipulating the price and by whom the extra expense is to be paid. In case the Contractor does not secure such extra order, the expense shall be borne by him. No cutting, notching, drilling or altering of any kind shall

be done to the building by the contractor without first obtaining permission from the GC, owner, or architect.

O. Throughout the progress of the work, the Contractor shall keep the working area free from debris of all types and remove from premises all rubbish resulting from any work being done by him. At the completion of work, the Contractor shall leave the premises in a clean and finished condition.

3.3 START-UP AND DEMONSTRATION

A. Provide factory-trained personnel for start-up and demonstration of equipment. Demonstration shall be done in two stages: One for operation and the second for maintenance personnel.

B. Return to the job site within 10 days for final adjustment and calibration of equipment.

PART 4A – SCHEDULED EQUIPMENT – CONCESSION AREA

Furnish and set-in-place all equipment listed in accordance with Part 2 Products, Plans, and Details, and manufacturers' standard specifications with options as listed in each item. Any existing equipment to be picked up by KEC, delivered, and set-in-place. Coordinate with owner.

EQUIPMENT

ITEM 1 – SINK
See Plumbing Schedule

ITEM 2 – 3-COMP SINK
See Plumbing Schedule

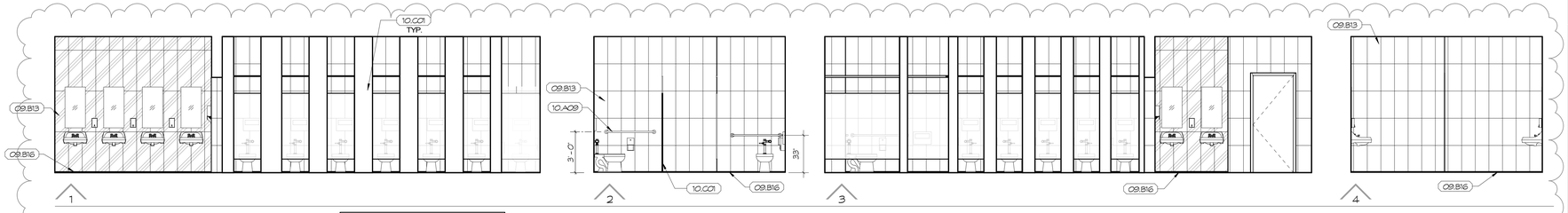
ITEM 3A- CUBLET ICEMAKER, WATER-COOLED
Quantity: One (2)
Manufacturer: Manitowoc
Model: RNF-1020C
RCU Condensing Unit
(RCUF1000)

ITEM 3B – ICE STORAGE BIN
Quantity: One (2)
Manufacturer: Manitowoc
Model: D420

ITEM 4 – 2-DOOR FREEZER, REACH-IN
Quantity: One (1)
Manufacturer: Traulsen
Model: G22010

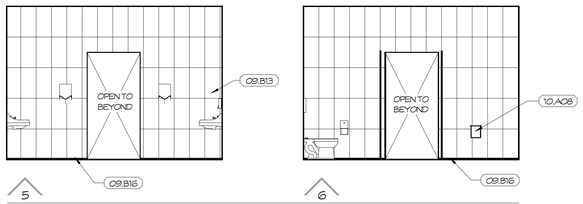
ITEM 5 – 2-DOOR REFRIFERATOR, REACH-IN
Quantity: One (1)
Manufacturer: Traulsen Model: G20010

END OF SECTION

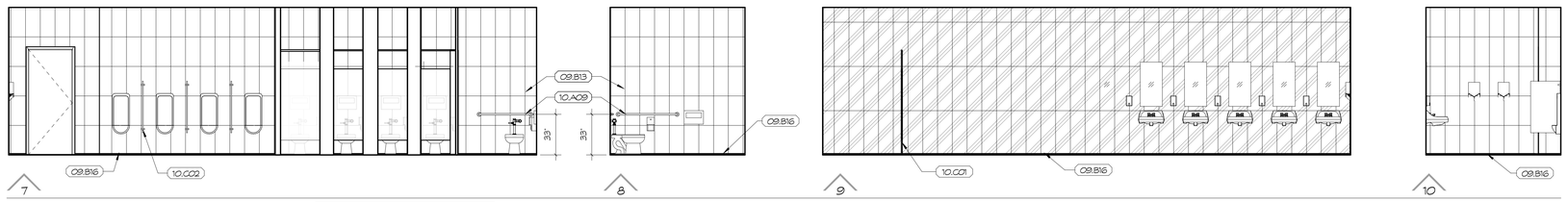


WOMEN R.R. - 1 - RESTROOM

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

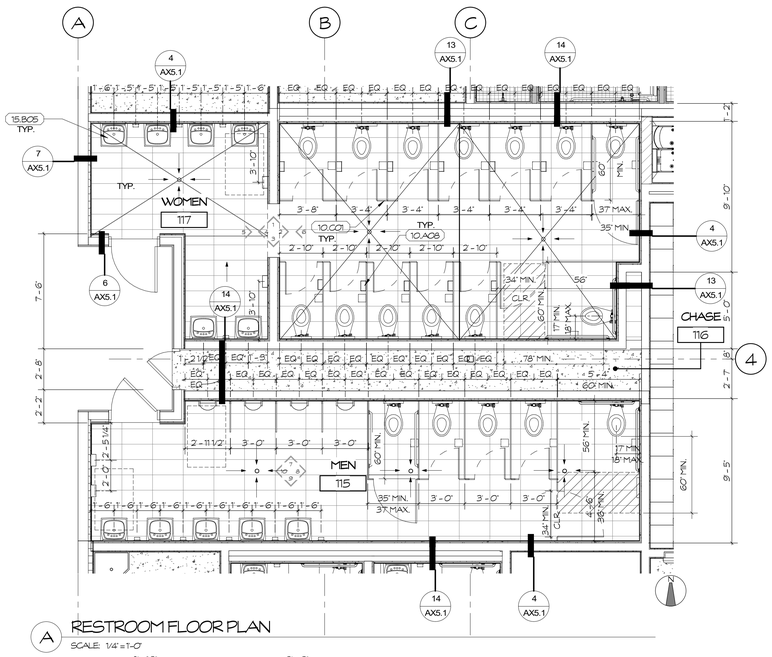


WOMEN R.R.



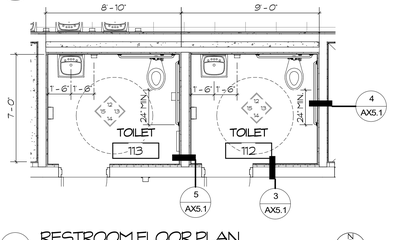
MEN R.R. - RESTROOM

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



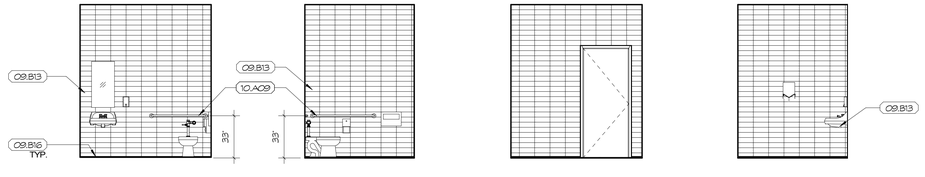
A RESTROOM FLOOR PLAN

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.CC2	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 ACCESSIBILITY 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-2
- HATCH INDICATES WALL TILE FINISH — TL-3
- HATCH INDICATES WALL TILE FINISH — TL-4

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

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. SCHOEN — No. C-30505 — 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
2	ADDENDUM 02	08/22/2025

CONSTRUCTION DOCUMENTS

ENLARGED FLOOR PLAN & INT. ELEV.

A1.3

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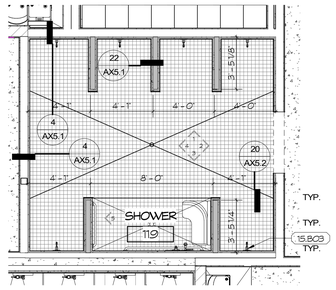

A SHOWERS

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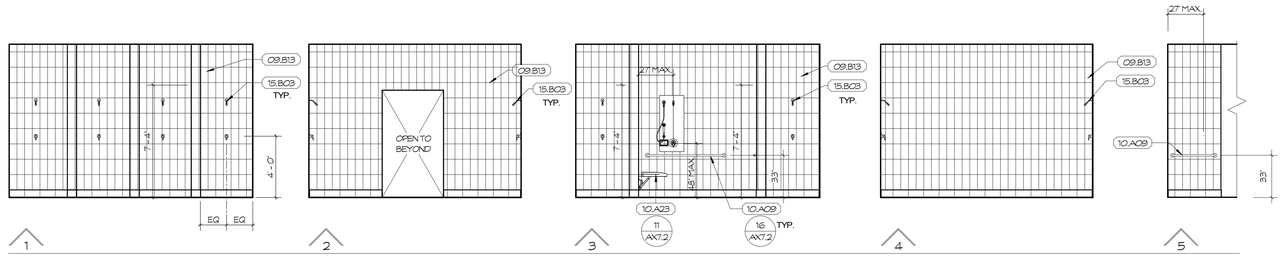
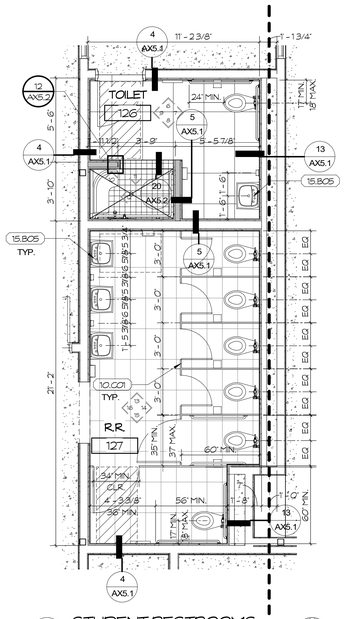


SHOWERS - 1 - RESTROOM



B STUDENT RESTROOMS

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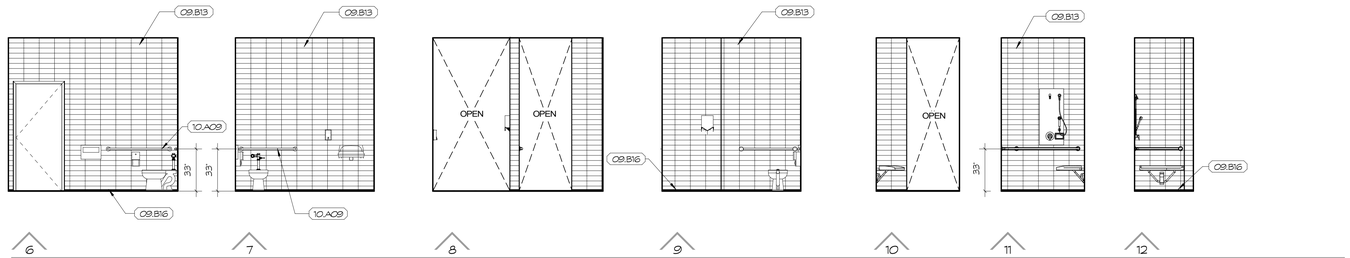
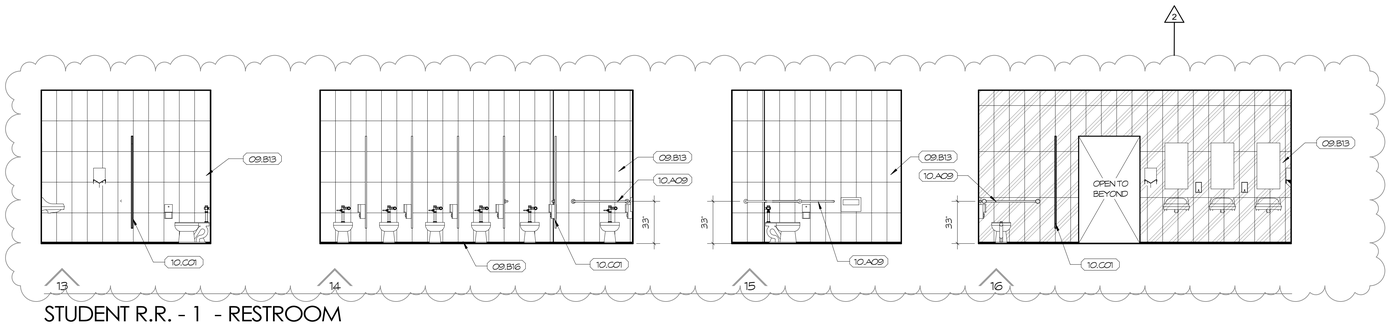
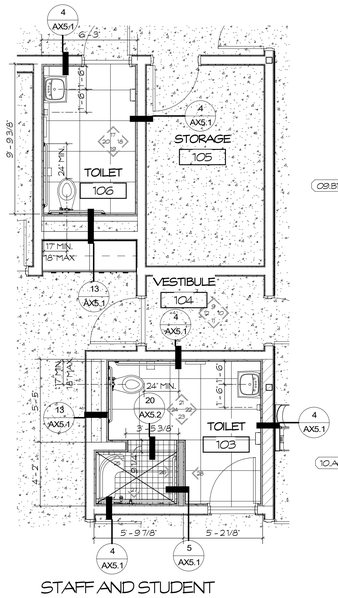


TOILET 126 - 1 - RESTROOM

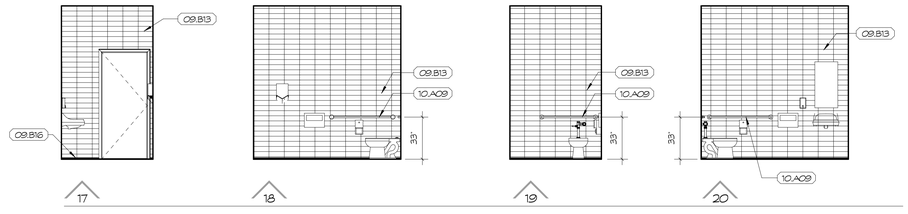


STUDENT R.R. - 1 - RESTROOM

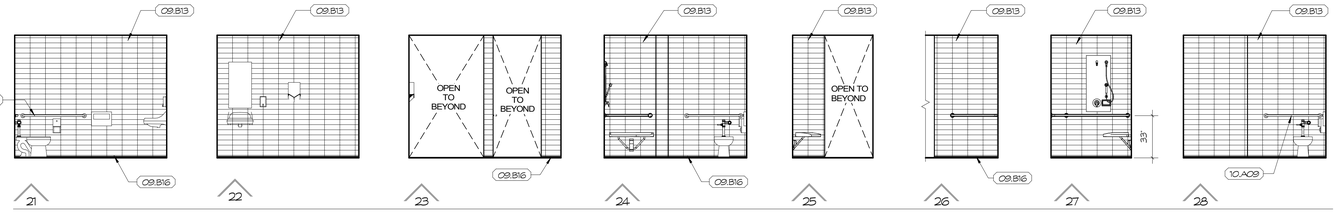


C STAFF AND STUDENT RESTROOMS

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.
- * 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 ACCESSIBILITY 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-2
- HATCH INDICATES WALL TILE FINISH — TL-3
- HATCH INDICATES WALL TILE FINISH — TL-4

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

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. 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
2	ADDENDUM 02	08/22/2025

CONSTRUCTION DOCUMENTS

ENLARGED FLOOR PLAN & INT. ELEV.

A1.4

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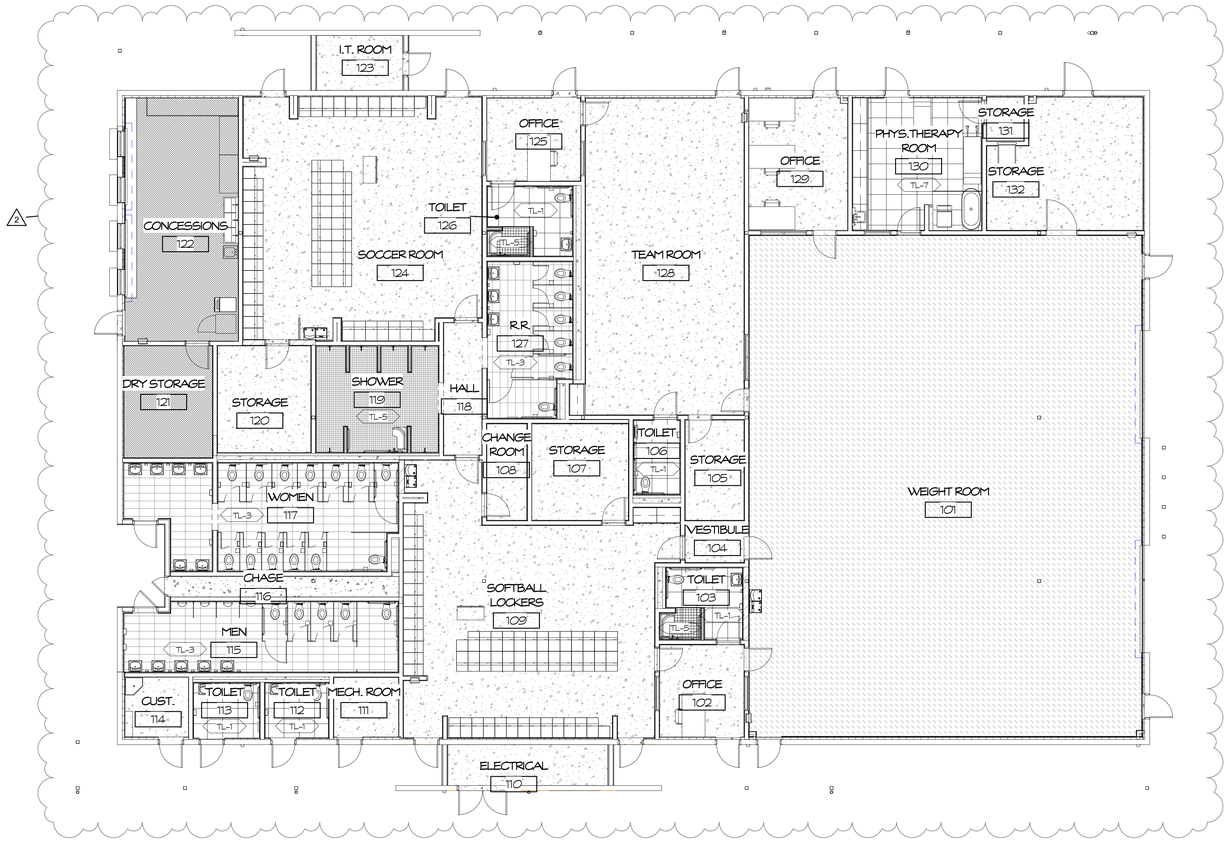
8/22/2025 12:59:38 AM



1 FINISH FLOOR

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

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-703	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	WHITE	
GROUT	GRT-1	CUSTOM			SHADOW	
GROUT	GRT-2	CUSTOM			DRIFTWOOD	
GROUT	GRT-3	CUSTOM			PEWTER	
METAL PANEL	MP-1	METCO		LATITUDE LW-5	CUSTOM BLUE	
METAL PANEL	MP-2	METCO		LATITUDE LW-1	CADET GRAY	
METAL PANEL	MP-3	METCO	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[A]	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.

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-3 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 INTERIOR STRUCTURE TO BE PAINTED WITH P-1 UNLESS OTHERWISE NOTED.
6. ALL EXPOSED EXTERIOR STRUCTURE TO BE PAINTED WITH P-1 UNLESS OTHERWISE NOTED.
7. ALL GYPSUM BOARD WALLS TO BE PAINTED WITH P-2 UNLESS OTHERWISE NOTED.
8. ALL HOLLOW METAL DOORS TO BE PAINTED WITH UNLESS OTHERWISE NOTED.
9. ALL FLOORS IN PUBLIC AREA SHALL HAVE NON-SLIP SURFACE IN COMPLIANCE WITH DIVISION 1.8 OF HEALTH AND SAFETY CODES OF THE STATE OF CALIFORNIA.
10. INSTALL PROPER SCHLUTER STRIP AT FLOOR MATERIAL TRANSITIONS PER MANUFACTURER RECOMMENDATION.
11. ALL FINISHES SHALL COMPLY WITH MINIMUM FINISH CLASSIFICATION OF FLAME SPREAD AND SMOKE DEVELOPED REQUIREMENTS PER CBC 2022, SECTION 803.
12. ALL EXPOSED/ SEALED/ POLISHED CONCRETE FLOORING SHALL BE PROTECTED FROM EQUIPMENT/ DAMAGE DURING CONSTRUCTION.
13. 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.

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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-30295 — RENEWAL DATE: FEB 29, 2024 — 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
2	ADDENDUM 02	08/22/2025

CONSTRUCTION DOCUMENTS

FINISH/COLOR PLAN & SCHEDULE

A2.2

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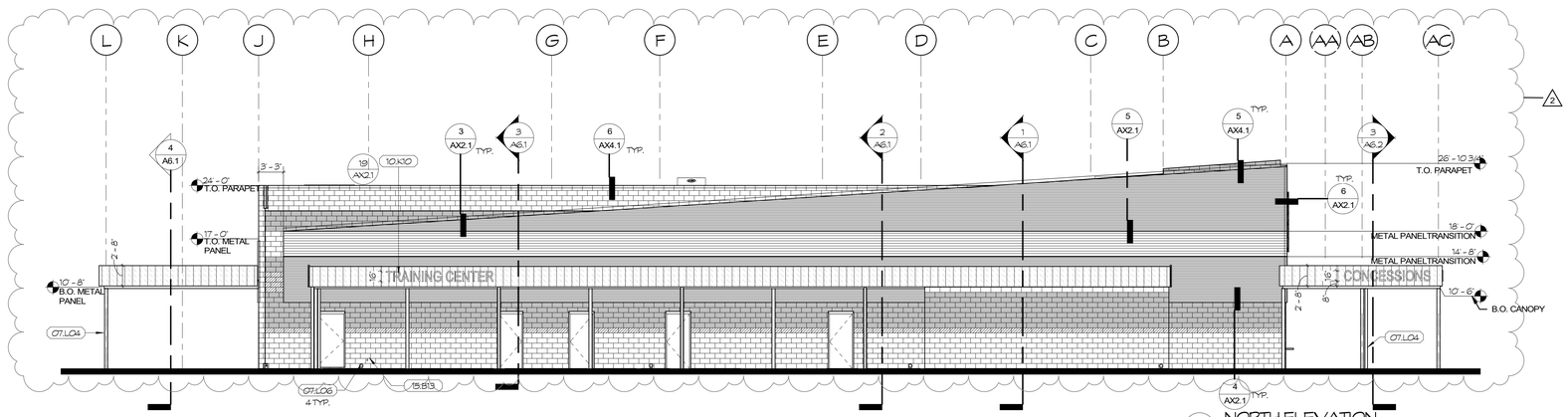
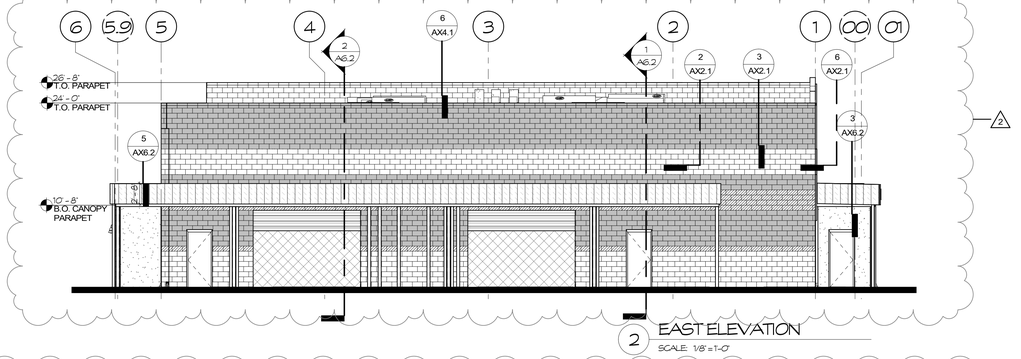
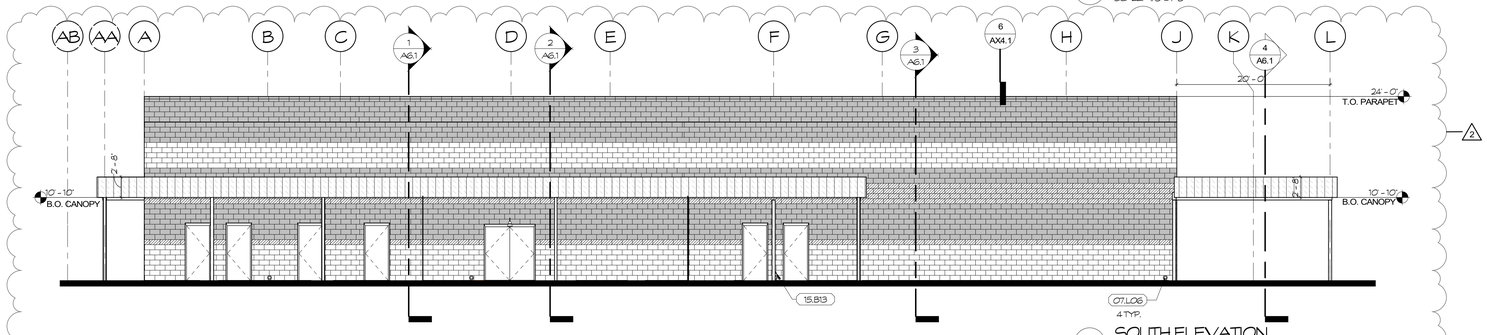


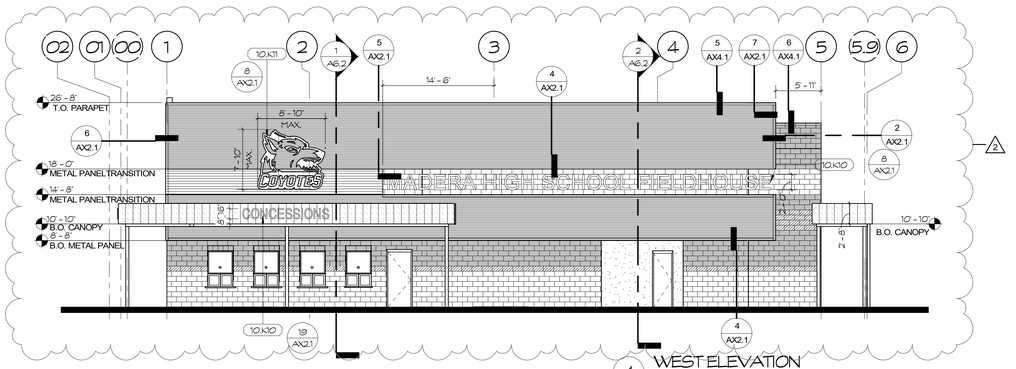
1 NORTH ELEVATION
SCALE: 1/8" = 1'-0"



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)

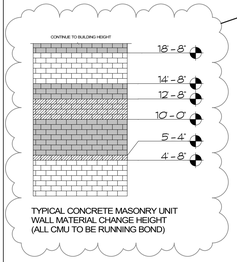
07.L04	METAL DOWNSPOUT SEE DETAIL 9/AX4.1
07.L06	ROOF DRAIN OVERFLOW DAYLIGHT - REFERENCE DETAIL 12/AX4.1
10.K10	CAST ALUMINUM LETTERS
10.K11	VINYL WRAP AROUND CAST ALUMINUM BACK PLATE
15.B13	HOSE BIB, SEE PLUMBING PLANS

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 — F-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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CONSTRUCTION DOCUMENTS

MADERA UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT — STATE OF CALIFORNIA
MICHAEL R. SCHOEN
No. C-29295
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DRAWN BY
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REVISIONS

#	DESCRIPTION	DATE
2	ADDENDUM 02	08/22/2025

CONSTRUCTION DOCUMENTS

EXTERIOR ELEVATIONS

A5.1

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SECTION 10 51 13 METAL LOCKERS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and Conditions of Contract, including General and Supplementary Conditions and Division 01 Administration Sections, apply to this Division.

1.2 SUMMARY

A. This Section includes the following:
1. Knocked-down, quiet metal lockers.
2. Knocked-down athletic lockers.
3. Locker benches.

B. Related Sections include the following:
1. Section 03 30 00: Cast-in-Place Concrete.
2. Section 05 50 00: Metal Fabrications.

1.3 DEFINITIONS

A. Uncoated Steel Sheet Thicknesses: Indicated as the minimum thicknesses.

1.4 SUBMITTALS

A. Product Data: Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of metal locker and bench.

B. Shop Drawings - Include plans, elevations, sections, details, and attachments to other work:
1. Show base, sloping tops, filler panels and other accessories.
2. Include locker identification system.

C. Samples for Initial Selection: For units with factory-applied color finishes.

D. Qualification Data: For Installer.

E. Maintenance Data: For adjusting, repairing, and replacing locker doors and latching mechanisms to include in maintenance manuals.

F. Warranty: Special warranty specified in this Section.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: An authorized representative of metal locker manufacturer for installation and maintenance of units required for this Project.

B. Source Limitations: Obtain metal lockers and accessories through one source from a single manufacturer.

C. Regulatory Requirements - Where metal lockers are indicated to comply with accessibility requirements, comply with ADA Guidelines and the California Building Code Sections 11B-225.2.1 and 11B-811:
1. Provide not less than 1 shelf located no higher than 48 inches (1372 mm) above the

floor for side reach.
2. Provide 1 shelf located at bottom of locker no lower than 15 inches (230 mm) above the floor for side reach.
3. Provide hardware that does not require tight grasping, pinching, or twisting of the wrist, and that operates with a force of not more than 5 lbf (22.2 N).
4. Provide decal indicating accessibility.

1.6 WARRANTY

A. Special Warranty - Manufacturer's standard form in which manufacturer agrees to repair or replace components of metal lockers that fail in materials or workmanship, excluding finish, within specified warranty period:
   1. Failures include, but are not limited to, the following:
      a. Structural failures.
      b. Faulty operation of latches and other door hardware.
   2. Damage from deliberate destruction and vandalism is excluded.
   3. Warranty Period for Knocked-Down Metal Lockers: Two years from date of Substantial Completion.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Do not deliver metal lockers until spaces to receive them are clean, dry, and ready for metal locker installation.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
   1. Products: Subject to compliance with requirements, provide products by one of the specified manufacturers.

2.2 MATERIALS

A. Cold-Rolled Steel Sheet: ASTM A1008, Commercial Steel (CS) Type B, suitable for exposed applications.

B. Expanded Metal: ASTM F1267, Type II (flattened), Class I, 3/4-inch (19-mm) steel mesh, with at least 70 percent open area.

C. Stainless-Steel Sheet: ASTM A666, Type 304.

D. Extruded Aluminum: ASTM B221, alloy and temper recommended by aluminum producer and manufacturer for type of use and finish indicated.

E. Fasteners: Zinc- or nickel-plated steel, slotless-type exposed bolt heads, and self-locking nuts or lock washers for nuts on moving parts.

F. Anchors - Select material, type, size, and finish required for secure anchorage to each substrate:
   1. Provide nonferrous-metal or hot-dip galvanized anchors and inserts on inside face of exterior walls and elsewhere as required for corrosion resistance.
   2. Provide toothed-steel or lead expansion sleeves for drilled-in-place anchors.

2.3 KNOCKED-DOWN, QUIET METAL LOCKERS

A. Products:
1. **Lyon Workspace Products**
2. Art Metal Products, Div. of Fort Knox Storage Co.
3. Tennsco Corp.
4. Republic Storage

B. Locker Arrangement: As indicated in Metal Locker Schedule located at the end of Part 3.

C. Body - Assembled by riveting or bolting body components together. Fabricate from unperforated, cold-rolled steel sheet with thicknesses as follows:
1. Tops, Bottoms, and Intermediate Dividers: 0.0209 inch, with single bend at sides.
2. Backs and Sides: 0.0209 inch thick, with full-height, double-flanged connections.
3. Shelves: 0.0209 inch thick, with double bend at front and single bend at sides and back.

D. Frames - Channel formed; fabricated from 0.0528-inch- (1.35-mm-) thick, cold-rolled steel sheet; lapped and factory welded at corners; with top and bottom main frames factory welded into vertical main frames. Form continuous, integral door strike full height on vertical main frames. Retain subparagraph below if needed; cross frames between tiers are not offered by all manufacturers:
1. Cross Frames between Tiers: Channel formed and fabricated from same material as main frames; welded to vertical frame members.
2. Frame Vents: Fabricate horizontal face frames with vents.

E. Doors - One-piece; fabricated from 0.0528-inch- (1.35-mm-) thick, cold-rolled steel sheet; formed into channel shape with double bend at vertical edges, and with right-angle single bend at horizontal edges:
1. Doors less than 12 inches (305 mm) wide may be fabricated from 0.0428-inch- (1.1-mm) thick, cold-rolled steel sheet.
2. Reinforcement: Manufacturer's standard reinforcing angles, channels, or stiffeners for doors more than 15 inches (381 mm) wide; welded to inner face of doors.
3. Stiffeners: Manufacturer's standard full-height stiffener fabricated from 0.0428-inch- (1.1-mm-) thick, cold-rolled steel sheet; welded to inner face of doors.
4. Sound-Dampening Panels: Manufacturer's standard, designed to stiffen doors and reduce sound levels when doors are closed, of die-formed metal with full perimeter flange and sound-dampening material; welded to inner face of doors.
5. Door Style - Vented panel as follows:
   a. Louvered Vents - Not less than:
      1) Six louver openings at top and bottom for single-tier.
      2) Three louver openings at top and bottom for double-tier.
      3) Two louver openings at top and bottom for multiple-tier lockers.

F. Hinges - Self-closing; welded to door and attached to door frame with not less than 2 factory-installed rivets per hinge that are completely concealed and tamper resistant when door is closed; fabricated to swing 180 degrees:
1. Hinges - Manufacturer's standard, steel continuous or knuckle type:
   a. Knuckle Hinges: Steel, full loop, 5 or 7 knuckles, tight pin; minimum 2 inches (51 mm) high. Provide not less than 3 hinges for each door more than 42 inches (1067 mm) high.

G. Recessed Door Handle and Latch - Stainless-steel cup with integral door pull, recessed so locking device does not protrude beyond face of door; pry resistant:
1. Multipoint Latching - Finger-lift latch control designed for use with built-in combination locks, built-in key locks, or padlocks; positive automatic and prelocking:

a. Latch Hooks: Equip doors 48 inches (1219 mm) and higher with 3 latch hooks and doors less than 48 inches (1219 mm) high with 2 latch hooks; fabricated from minimum 0.0966-inch- (2.5-mm-) thick steel; welded or riveted to full-height door strikes; with resilient silencer on each latch hook.
b. Latching Mechanism: Manufacturer's standard rattle-free latching mechanism and moving components isolated with vinyl or nylon to prevent metal-to-metal contact, and incorporating a prelocking device that allows locker door to be locked while door is open and then closed without unlocking or damaging lock or latching mechanism.

H. Combination Padlocks: Key-controlled, three-number dialing combination locks; capable of five combination changes.

I. Equipment - Equip each metal locker with identification plate and the following, unless otherwise indicated:
1. Single-Tier Units: Shelf, one double-prong ceiling hook, and two single-prong wall hooks.
2. Double-Tier Units: One double-prong ceiling hook and two single-prong wall hooks.
3. Multiple-Tier Units: Two single-prong wall hooks.
4. Coat Rods: In lieu of ceiling hook for metal lockers 18 inches (457 mm) deep or greater.

J. Accessories:
1. Continuous Sloping Tops - Fabricated from cold-rolled steel sheet, manufacturer's standard thickness, but not less than 0.0329 inch (0.85 mm) thick:
a. Closures: Vertical-end type.
b. Sloped top corner fillers, mitered.
2. Recess Trim: Fabricated from 0.0428-inch- (1.1-mm-) thick, cold-rolled steel sheet.
3. Filler Panels: Fabricated from cold-rolled steel sheet, manufacturer's standard thickness, but not less than 0.0329 inch (0.85 mm) thick.
4. Finished End Panels: Fabricated from 0.0209-inch- (0.55-mm-) thick, cold-rolled steel sheet.

K. Finish - Baked enamel or powder coat:
1. Color: As selected by Architect from manufacturer's full range.

2.4 KNOCKED-DOWN ATHLETIC LOCKERS

A. Products are subject to compliance with requirements; provide one of the following available products that may be incorporated into the Work include, as indicated on drawings, but are not limited to, the following:
1. **LOCKERS Manufacturing: All-Welded SGL Tier Locker** (Basis of design)
2. Lyon Workspace Products, LLC; Knocked Down Expanded Metal.
3. ASI Storage Solutions Inc; Competitor.
4. Hadrian Manufacturing Inc; Gladiator.
5. List Industries Inc.
6. Olympus Lockers & Storage Products, Inc; Apollo HDV Lockers.
7. Republic Storage Systems Company; Heavy Duty Ventilated.

B. Expanded-Metal Doors: Fabricated from 0.090-inch (2.28-mm) nominal-thickness expanded metal; welded to 0.105-inch (2.66-mm) nominal-thickness steel angle frame; with 0.090-inch (2.28-mm) nominal-thickness, steel sheet lock panel backed by 0.060-inch (1.52-mm) nominal-thickness, steel sheet retainer welded to door frame.

C. Body - Assembled by riveting or bolting body components together. Fabricate from unperforated steel sheet with thicknesses as follows:

1. Tops and Bottoms: 0.060-inch (1.52-mm) nominal thickness, with single bend at edges.
2. Backs: 0.048-inch (1.21-mm) nominal thickness.
3. Shelves: 0.060-inch (1.52-mm) nominal thickness, with double bend at front and single bend at sides and back.

D. Unperforated Sides: Fabricated from 0.048-inch (1.21-mm) nominal-thickness steel sheet.

E. Frames - Channel formed; fabricated from 0.060-inch (1.52-mm) nominal-thickness steel sheet or 0.097-inch (2.45-mm) nominal-thickness steel angles; lapped and factory welded at corners; with top and bottom main frames factory welded into vertical main frames. Form continuous, integral, full-height door strikes on vertical main frames:
1. Cross Frames for Double-TierLockers: Channel formed and fabricated from same material as main frames; welded to vertical main frames.

F. Reinforced Bottoms: Structural channels, formed from 0.060-inch (1.52-mm) nominal-thickness steel sheet; welded to front and rear of side-panel frames.

G. Hinges - Welded to door and attached to door frame with no fewer than two factory-installed rivets per hinge that are completely concealed and tamper resistant when door is closed; fabricated to swing 180 degrees; self-closing:
1. Knuckle Hinges: Steel, full loop, five or seven knuckles, tight pin; minimum 2 inches (51 mm) high. Provide no fewer than three hinges for each door more than 42 inches (1067 mm) high.
2. Continuous Hinges: Manufacturer's standard, steel; side or top mounted as required by locker configuration.
3. Hinges: Manufacturer's standard, steel, continuous or knuckle type.

H. Recessed Door Handle and Latch - Stainless-steel cup with integral door pull, recessed so locking device does not protrude beyond door face; pry and vandal resistant:
1. Multipoint Latching - Finger-lift latch control designed for use with built-in combination locks, built-in cylinder locks, or padlocks; positive automatic latching and prelocking:
   a. Latch Hooks: Equip doors 48 inches (1219 mm) and higher with three latch hooks and doors less than 48 inches (1219 mm) high with two latch hooks; fabricated from 0.120-inch (3.04-mm) nominal-thickness steel sheet; welded to full-height door strikes; with resilient silencer on each latch hook.
   b. Latching Mechanism: Manufacturer's standard, rattle-free latching mechanism and moving components isolated to prevent metal-to-metal contact, and incorporating a prelocking device that allows locker door to be locked while door is open and then closed without unlocking or damaging lock or latching mechanism.

I. Projecting Turn-Handle and Latch: Steel handle welded to manufacturer's standard, three-point, cremone-type latching mechanism consisting of steel rods or bars that engage locker frame at top and bottom of door, and center latch that engages strike jamb; with steel padlock loop.

J. Door Handle and Latch for Box Lockers: Stainless-steel strike plate with integral pull; with steel padlock loop that projects through metal locker door.

K. Identification Plates: Manufacturer's standard, etched, embossed, or stamped aluminum plates, with numbers and letters at least 3/8 inch (9 mm) high.

L. Hooks: Manufacturer's standard ball-pointed type, aluminum or steel; zinc plated.

M. Coat Rods: Manufacturer's standard.

N. Continuous Zee Base: 4 inches (102 mm) high; fabricated from 0.075-inch (1.90-mm) nominal-thickness steel sheet.

O. Finish - Baked enamel or powder coat:
1. Color: as selected by Architect from manufacturer's full range.

2.5 LOCKER BENCHES

A. General: Provide locker benches fabricated by same manufacturer as metal lockers.

B. Bench Tops: Manufacturer's standard 1-piece units, of the following material, minimum 9-1/2 inches (240 mm) wide by 1-1/4 inches (32 mm) thick, with rounded corners and edges.

C. ADA Bench tops standard 1-piece units with back 48 inch by 24 inch with 20 inch high back support:
1. Laminated maple with one coat of clear sealer on all surfaces, and one coat of clear lacquer on top and sides.

D. Fixed Pedestals - Manufacturer's standard supports, with predrilled fastener holes for attaching bench top and anchoring to floor, complete with fasteners and anchors, provide one of the following:
1. Cast Iron: 1-1/2-inch- (38-mm-) diameter steel tubing threaded on both ends, with standard pipe flange at top and bell-shaped cast-iron base; with baked-enamel or powder-coat finish; anchored with exposed fasteners.
2. Tubular Steel: 1-1/4-inch- (32-mm-) diameter steel tubing, with 0.1265-inch- (3.2-mm-) thick steel flanges welded at top and base; with baked-enamel or powder-coat finish; anchored with exposed fasteners.
3. Color: As selected by Architect from manufacturer's full range.

2.6 FABRICATION

A. General - Fabricate metal lockers square, rigid, and without warp; with metal faces flat and free of dents or distortion. Make exposed metal edges free of sharp edges and burrs, and safe to touch:
1. Form body panels, doors, shelves, and accessories from one-piece steel sheet, unless otherwise indicated.
2. Provide fasteners, filler plates, supports, clips, and closures as required for a complete installation.

B. Unit Principle: Fabricate each metal locker with an individual door and frame; individual top, bottom, and back; and common intermediate uprights separating compartments.

C. Knocked-Down Construction: Fabricate metal lockers for nominal assembly at Project site using nuts, bolts, screws, or rivets. Factory weld frame members together to form a rigid, one-piece assembly.

D. Hooks: Manufacturer's standard ball-pointed type, aluminum or steel; zinc plated.

E. Coat Rods: Fabricated from 3/4-inch- (19-mm-) diameter steel; chrome finished.

F. Identification Plates: Manufacturer's standard etched, embossed, or stamped aluminum plates; with numbers and letters at least 3/8 inch (9 mm) high.

G. Continuous Sloping Tops - Fabricated in lengths as long as practicable, without visible fasteners at splice locations; finished to match lockers:

1. Sloped top corner fillers, mitered.

H. Filler Panels: Fabricated in an unequal leg angle shape; finished to match lockers. Provide slip joint filler angle formed to receive filler panel.

I. Finished End Panels - Designed for concealing unused penetrations and fasteners, except for perimeter fasteners, at exposed ends of nonrecessed metal lockers; finished to match lockers:
   1. Provide one-piece panels for double-row (back-to-back) locker ends.

2.7 STEEL SHEET FINISHES

A. General: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

B. Factory finish steel surfaces and accessories except stainless-steel and chrome-plated surfaces.

C. Surface Preparation: Clean surfaces of dirt, oil, grease, mill scale, rust, and other contaminants that could impair paint bond. Use manufacturer's standard methods.

D. Baked-Enamel Finish: Immediately after cleaning, pretreating, and phosphatizing, apply manufacturer's standard thermosetting baked-enamel finish. Comply with paint manufacturer's written instructions for application, baking, and minimum dry film thickness.

PART 3 EXECUTION

3.1 PROJECT CONDITIONS

A. Field Measurements - Verify the following by field measurements before fabrication and indicate measurements on Shop Drawings:
   1. Concealed framing, blocking, and reinforcements that support metal lockers before they are enclosed.
   2. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish recessed opening dimensions and proceed with fabricating metal lockers without field measurements. Coordinate wall and floor construction to ensure that actual recessed opening dimensions correspond to established dimensions.

3.2 COORDINATION

A. Coordinate size and location of concrete bases for metal lockers.

B. Coordinate sizes and locations of framing, blocking, furring, reinforcements, and other related units of Work specified in other Sections to ensure that metal lockers can be supported and installed as indicated.

3.3 EXTRA MATERIALS

A. Furnish extra materials described below, before construction begins, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents:
   1. Full-size units of the following metal locker hardware items equal to 10 percent of amount installed for each type and finish installed, but no fewer than 5 units:
      a. Locks.
      b. Identification plates.

c. Hooks.

3.4 EXAMINATION

A. Examine walls, floors, and support bases, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work:
   1. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance of work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.5 INSTALLATION

A. General - Install level, plumb, and true; shim as required, using concealed shims:
   1. Anchor locker runs at ends and at intervals recommended by manufacturer, but not more than 36 inches (910 mm) o.c. Install anchors through backup reinforcing plates, channels, or blocking as required to prevent metal distortion, using concealed fasteners.
   2. Anchor single rows of metal lockers to walls near top and bottom of lockers.
   3. Anchor back-to-back metal lockers to floor.

B. Knocked-Down Metal Lockers: Assemble knocked-down metal lockers with standard fasteners, with no exposed fasteners on door faces or face frames.

C. Equipment and Accessories - Fit exposed connections of trim, fillers, and closures accurately together to form tight, hairline joints, with concealed fasteners and splice plates:
   1. Attach hooks with at least two fasteners.
   2. Attach door locks on doors using security-type fasteners.
   3. Identification Plates:
      a. Identify metal lockers with identification noted on shop drawing submittal.
      b. Attach plates to each locker door, near top, centered, with at least two aluminum rivets.
   4. Attach filler panels with concealed fasteners. Locate fillers panels where indicated on Drawings.
   5. Attach sloping top units to metal lockers, with closures at exposed ends.
   6. Attach finished end panels with fasteners only at perimeter to conceal exposed ends of nonrecessed metal lockers.

D. Fixed Locker Benches: Provide not less than 2 pedestals for each bench, uniformly spaced not more than 36 inches apart. Securely fasten tops of pedestals to undersides of bench tops, and anchor bases to floor.

3.6 ADJUSTING, CLEANING, AND PROTECTION

A. Clean, lubricate, and adjust hardware. Adjust doors and latches to operate easily without binding. Verify that integral locking devices operate properly.

B. Protect metal lockers from damage, abuse, dust, dirt, stain, or paint. Do not permit metal locker use during construction.

C. Touch up marred finishes, or replace metal lockers that cannot be restored to factory-finished appearance. Use only materials and procedures recommended or furnished by metal locker manufacturer.

3.7 METAL LOCKER SCHEDULE

A. Athletic Lockers:
   1. Single tier configuration as indicated on drawings:
      a. Single tier for a total of 72-inches high.
   2. Color: As selected by Architect from manufacturer's full range. Metal Wardrobe Locker:
   3. Sloped Top as indicated on drawings.

B. ADA lockers as indicated on drawings, 2 tier.

C. Metal Staff Lockers.
   1. Locker Size:
      a. 2 tiers for a total of 72-inches high.
   2. Color: As selected by Architect from manufacturer's full range.

END OF SECTION 10 51 13

SECTION 07 21 00 THERMAL INSULATION

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes requirements including but not limited to:
1. Polyisocyanurate foam plastic board.
2. Glass fiber blanket.
3. Acoustical Insulation.
4. Accessories necessary for a complete installation.

B. Related Sections:
1. Section 05 40 00: Cold-Formed Metal Framing.
2. Division 07: Thermal Moisture Protection.
3. Division 08: Openings
4. Division 09: Finishes

1.3 SUBMITTALS

A. Product Data: Technical data and installation instructions for each type of insulation product specified.

1.4 QUALITY ASSURANCE

A. Regulatory Requirements:
1. Fire performance characteristics - Identify products with appropriate markings of applicable testing and inspecting organization:
a. Surface burning characteristic: ASTM E84.
b. Flame spread index: Maximum 25.
c. Smoke developed index: Maximum 450.
d. Fire resistance ratings: ASTM E119.
e. Combustion characteristics: ASTM E136.
2. Underwriter's Laboratories (UL) 723 Tests for Surface Burning Characteristics of Building Materials.
3. SCAQMD – South Coast Air Quality Management District Regulations Rule 1168 Adhesive and Sealant Applications.
4. Greenguard Children and Schools (http://www.greenguard.org/).

B. Single Source Responsibility for Insulation Products: Obtain each type of building insulation from single source with resources to provide products of consistent quality in appearance and physical properties without delaying progress of Work.

C. Environmental Requirements:
1. Manufacture extruded polystyrene with HCFC or other CFC free blowing agents. Mark insulation boards and packages with manufacturer's name and product designation. Unmarked boards and packages will be rejected:
a. Wherever possible, provide boards from manufacturers who recycle insulation materials.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Protect insulation materials from physical damage and from deterioration due to moisture, soiling, and other sources. Store inside and in a dry location. Comply with manufacturer's written instructions for handling, storing, and protecting during installation.

B. Protect foam plastic board insulation:
   1. Do not expose to sunlight except to necessary extent for period of installation and concealment.
   2. Protect against ignition at all times. Do not deliver foam-plastic board materials to Project site until just before installation time.
   3. Quickly complete installation and concealment of foam-plastic board insulation in each area of construction.

PART 2 PRODUCTS

2.1 POLYISOCYANURATE FOAM PLASTIC BOARD

A. Polyisocyanurate Board, Foil Faced - ASTM C1289, Foil Faced, Type I, Class 1 or 2:
   1. Manufacturers are subject to compliance with requirements; provide products by one of the following:
      b. Hunter Panels.
      c. DuPont.
      d. Rmax, Inc.
      e. Approved equal.
   2. Fire propagation characteristics: Passes NFPA 285 testing as part of an approved assembly.
   3. Psi: 15 minimum.
   4. R-Value: 12 minimum.
   5. Thickness: Refer to drawings.

2.2 GLASS FIBER BLANKET

A. Glass Fiber Blanket, Unfaced - ASTM C665, Type I; with maximum flame spread and smoke developed indexes of 25 and 50, respectively, per ASTM E84; passing ASTM E136 for combustion characteristics:
   1. Manufacturers are subject to compliance with requirements; provide products by one of the following:
      a. Johns Manville (Basis of Design).
      b. CertainTeed Corporation.
      c. Guardian Building Products, Inc.
      d. Owens Corning.
      e. Approved equal.

B. Glass Fiber Blanket, Polypropylene Scrim Kraft Faced - ASTM C665, Type II (non-reflective faced), Class A (faced surface with a flame spread index of 25 or less); Category 1 (membrane is a vapor barrier):
   1. Manufacturers are subject to compliance with requirements; provide products by one of the following:
      a. Johns Manville (Basis of Design).
      b. CertainTeed Corporation.
      c. Owens Corning.
      d. Approved equal.

2.3 ACOUSTICAL INSULATION

A. Glass Fiber Noise Reducer Blanket, Kraft-faced - ASTM C665, Type II; with maximum flame spread and smoke developed indexes of 25 and 50, respectively, per ASTM E84; combustion characteristics. To be installed on interior wood stud framing:
   1. Manufacturers are subject to compliance with requirements; provide products by one of the following:
      a. CertainTeed Corporation (Basis of Design).
      b. Guardian Building Products, Inc.
      c. Johns Manville; a Berkshire Hathaway company.
      d. Owens Corning.
      e. Approved equal.

2.4 INSULATION FASTENERS

A. Adhesively Attached, Spindle Type Anchors:
   1. Plate welded to projecting spindle; capable of holding insulation of specified thickness securely in position with self-locking washer in place:
      a. Plate: Perforated, galvanized carbon steel sheet, 0.030-inch (0.762 mm) thick by two inches (50 mm) square.
      b. Spindle: Copper coated, low carbon steel; fully annealed; 0.105 inch (2.67 mm) in diameter; length to suit depth of insulation.

B. Adhesively Attached, Angle Shaped, and Spindle Type Anchors:
   1. Angle welded to projecting spindle; capable of holding insulation of specified thickness securely in position with self-locking washer in place:
      a. Angle: Formed from 0.030-inch (0.762 mm) thick, perforated, galvanized carbon steel sheet with each leg two inches (50 mm) square.
      b. Spindle: Copper coated, low carbon steel; fully annealed; 0.105 inch (2.67 mm) in diameter; length to suit depth of insulation.

C. Insulation Retaining Washers:
   1. Self-locking washers formed from 0.016-inch (0.41 mm) thick galvanized steel sheet, with beveled edge for increased stiffness, sized as required to hold insulation securely in place, but not less than 1-1/2 inches (38 mm) square or in diameter:
      a. Protect ends with capped self-locking washers incorporating a spring steel insert to ensure permanent retention of cap in the following locations:
         1) Crawl spaces.
         2) Ceiling plenums.
         3) Attic spaces.

D. Insulation Standoff: Spacer fabricated from galvanized mild steel sheet for fitting over spindle of insulation anchor to maintain air space of two inches (50 mm) between face of insulation and substrate to which anchor is attached.

E. Anchor Adhesive: Product with demonstrated capability to bond insulation anchors securely to substrates without damaging insulation, fasteners, or substrates.

F. All other materials such as wire supports, fasteners, and retainers not specifically described but required to complete the work shall be as recommended by approved manufacturer, provided and installed by Contractor.

2.5 ACCESSORIES

A. Insulation for Miscellaneous Voids:
   1. Glass fiber insulation: ASTM C764, Type II, loose fill; with maximum flame spread and smoke developed indexes of 5, per ASTM E84.

2. Spray polyurethane foam insulation: ASTM C1029, Type II, closed cell, with maximum flame spread and smoke developed indexes of 75 and 450, respectively, per ASTM E84, and shall conform to all SCAQMD and EPA air quality regulations.

B. Adhesive for Bonding Insulation: Product compatible with insulation and air and water barrier materials, and with demonstrated capability to bond insulation securely to substrates without damaging insulation and substrates.

C. Eave Ventilation Troughs: Preformed, rigid fiberboard or plastic sheets designed and sized to fit between roof framing members and to provide ventilation between insulated attic spaces and vented eaves.

PART 3 EXECUTION

3.1 PROJECT CONDITIONS

A. Do not install insulation adhesives when temperature or weather conditions are detrimental to successful installation.

B. Sequence work to ensure fireproofing and firestop materials are in place before beginning work.

3.2 PREPARATION

A. Clean substrates of substances that are harmful to insulation, including removing projections capable of puncturing insulation or vapor retarders, or that interfere with insulation attachment.

B. Foam in Place Insulation:
1. Verify that substrates are clean, dry, and free of substances that are harmful to insulation:
   a. Priming: Prime substrates where recommended by insulation manufacturer. Apply primer to comply with insulation manufacturer's written instructions. Confine primers to areas to be insulated; do not allow spillage or migration onto adjoining surfaces.

3.3 INSTALLATION

A. Comply with insulation manufacturer's written instructions applicable to products and applications.

B. Board and Batt Insulation:
1. Install insulation that is undamaged, dry, and unsoiled and has not been exposed to ice, rain, or snow at any time:
   a. Extend insulation to envelop entire area to be insulated. Fit tightly around obstructions and fill voids with insulation. Remove projections that interfere with placement.
   b. Provide sizes to fit applications and selected from manufacturer's standard thicknesses, widths, and lengths. Apply single layer of insulation units unless multiple layers are otherwise shown or required to make up total thickness or to achieve R-value.

C. Cavity Wall Insulation:
1. Foam plastic board insulation:
   a. Install pads of adhesive spaced approximately 24 inches (610 mm) o.c. both ways

on inside face and as recommended by manufacturer. Fit courses of insulation between wall ties and other obstructions, with edges butted tightly in both directions. Press units firmly against inside substrates:

1) Supplement adhesive attachment of insulation by securing boards with two-piece wall ties designed for this purpose and specified in.

D. Framed Construction - Blanket Insulation:

1. Install in cavities formed by framing members according to the following requirements:
   a. Use insulation widths and lengths that fill the cavities formed by framing members. If more than one length is required to fill the cavities, provide lengths that will produce a snug fit between ends.
   b. Place insulation in cavities formed by framing members to produce a friction fit between edges of insulation and adjoining framing members.
   c. Maintain three-inch (76 mm) clearance of insulation around recessed lighting fixtures not rated for or protected from contact with insulation.
   d. Attics: Install eave ventilation troughs between roof framing members in insulated attic spaces at vented eaves.
   e. For metal framed wall cavities where cavity heights exceed 96 inches (2,438 mm), support unfaced blankets mechanically and support faced blankets by taping flanges of insulation to flanges of metal studs.
   f. For wood framed construction, install blankets according to ASTM C1320 and as follows:
      1) With faced blankets having stapling flanges, lap blanket flange over flange of adjacent blanket to maintain continuity of vapor retarder once finish material is installed over it.
   g. Miscellaneous voids: Install insulation in miscellaneous voids and cavity spaces where required to prevent gaps in insulation using the following materials:
      1) Glass fiber insulation: Compact to approximately 40 percent of normal maximum volume equaling a density of approximately 2.5 lb/cu. ft. (40 kg/cu. m).
      2) Spray polyurethane insulation: Apply according to manufacturer's written instructions.

E. Reflective Insulation:

1. Install sheet reflective insulation according to ASTM C727:
   a. Install sheet radiant barriers according to ASTM C1744.
   b. Install interior radiation control coating system according to ASTM C1321.

F. Continuous Insulation for Exterior Walls (Polyisocyanurate Board):

1. Install continuous insulation board according to manufacturer's written instructions:
   a. Fastener components shall include a minimum two-inch diameter plastic plate/washer and self-taping screws attached directly to stud framing.
   b. All joints, penetrations, and flashings shall be taped and/or otherwise sealed with manufacture’s recommended products.

3.4 PROTECTION

A. Protect installed insulation from damage due to harmful weather exposures, physical abuse, and other causes. Provide temporary coverings or enclosures where insulation is subject to abuse and cannot be concealed and protected by permanent construction immediately after installation.

END OF SECTION 07 21 00

SECTION 08 87 13 SOLAR CONTROL FILMS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section refers to Security Window Films and Wet Seal Glazing System:
   1. Solar control films of varying thicknesses, tints and reflectivity for application to existing glazing.

B. Related Sections:
   1. Section 08 80 00: Glass and Glazing.

C. Reference Standards:
   1. ANSI Z97.1 - American National Standard for Safety Glazing Materials Used in Buildings - Safety Performance Specifications and Methods of Test.
   2. ASHRAE - American Society for Heating, Refrigeration, and Air Conditioning Engineers; Handbook of Fundamentals.
   3. ASTM International (ASTM):
      a. ASTM D882 - Standard Test Method for Tensile Properties of Thin Plastic Sheeting.
      b. ASTM D1044 - Standard Method of Test for Resistance of Transparent Plastics to Surface Abrasion (Taber Abrader Test).
      c. ASTM D4830 - Standard Test Methods for Characterizing Thermoplastic Fabrics Used in Roofing and Waterproofing.
      d. ASTM E84 - Standard Method of Test for Surface Burning Characteristics of Building Materials.
      e. ASTM E903 - Standard Methods of Test for Solar Absorbance, Reflectance and Transmittance of Materials Using Integrating Spheres.
   4. Consumer Products Safety Commission 16 CFR, Part 1201 - Safety Standard for Architectural Glazing Materials.
   5. NFRC 100/200 (Formerly ASTM E903) - Standard Methods of Test for Solar Absorbance, Reflectance and Transmittance of Materials Using Integrating Spheres.
   6. Underwriters Laboratories Inc. (UL): UL 972 - Burglary Resisting Glazing Material.

1.3 PERFORMANCE REQUIREMENTS

A. Meet the minimum performance requirements for each designated product type and manufacturer listed herein including:
   1. Safety Glazing Impact Performance.
   2. Blast Hazard Mitigation Performance.
   3. Impact Resistance and Pressure Cycling.
   4. Adhesion to Glass.
   5. Flammability: Surface burning characteristics when tested in accordance ASTM E84, demonstrating film applied to glass rated Class A for Interior Use
   6. Abrasion Resistance:
   7. UV Light Rejection:

1.4 SUBMITTALS

A. Submit under provisions of Section 01 33 00: Submittal Procedures.

B. Product Data: Manufacturer's current technical literature on each product to be used, including:
   1. Manufacturer's Data Sheets.
   2. Preparation instructions and recommendations.
   3. Storage and handling requirements and recommendations.
   4. Installation methods.

C. Verification Samples: For each film specified, two samples representing actual film color and pattern.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications:
   1. All primary products specified in this section will be supplied by a single manufacturer with a minimum of ten years' experience:
      a. Provide documentation that the adhesive used on the specified films is a Pressure Sensitive Adhesive (PSA).

B. Installer Qualifications:
   1. All products listed in this section are to be installed by a single installer with a minimum of five years demonstrated experience in installing products of the same type and scope as specified:
      a. Provide documentation that the installer is authorized by the Manufacturer to perform Work specified in this section.
      b. Provide a commercial building reference list of 5 properties where the installer has applied window film. This list will include the following information:
         1) Name of building.
         2) The name and telephone number of a management contact.
         3) Type of glass.
         4) Type of film and/or film attachment system.
         5) Amount of film and/or film attachment system installed.
         6) Date of completion.

C. Mock-Up:
   1. Provide a mock-up for evaluation of surface preparation techniques and application workmanship:
      a. Finish areas designated by Architect.
      b. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
      c. Refinish mock-up area as required to produce acceptable work.

1.6 WARRANTY

A. At project closeout, provide to Owner or Owners Representative an executed current copy of the manufacturer's standard limited warranty of not less than ten years against manufacturing defects, outlining its terms, conditions, and exclusions from coverage. Coverage shall include all materials and labor required for replacement.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Follow Manufacturer's instructions for storage and handling.

B. Store products in manufacturer's unopened packaging until ready for installation.

C. Store and dispose of hazardous materials, and materials contaminated by hazardous materials, in accordance with requirements of local authorities having jurisdiction.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Window Film: Subject to compliance with requirements, provide products by one of the following:
1. 3M Global Gateway.
2. Hanitek Window Films Ltd.
3. LLumar® Safety and-Security Films, an Eastman Chemical Company Business: CPFilms Inc.
4. Madico Window Films.
5. Solar Gard, a subsidiary of Saint-Gobain Performance Plastics Corporation, Solar Control Films.

B. Provide film products from a single manufacturer.

C. Type 1 – Silver Reflective Films:

Manuf.	Film Series	Product Name	Thickness	Light Trans.	Tensile Strength (psi)	Break Strength (lbs/in)
Hanita	SolarZone	9 mil Silver 20 SR	9 mil	20%	28,500	245
Llumar	Magnum	R-20 SR PS8	8 mil	16%	32,000	269
Madico	SafetyShield	SafetyShield 800 RS 20	8 mil	17%	32,000	240
Solar Gard	Armorcoat	8 mil Silver 20	8 mil	14%	30,000	240

D. Type 1 – Neutral Films:

Manuf.	Film Series	Product Name	Thickness	Light Trans.	Tensile Strength (psi)	Break Strength (lbs/in)
Hanita	SolarZone	10 mil PerLite 35	10 mil	40%	28,500	270
Llumar	Magnum	N-1040 SR PS8	8 mil	40%	32,000	269
Madico	SafetyShield	SafetyShield 800 DG 35	8 mil	36%	32,000	240
Solar Gard	Armorcoat	8 mil Stainless Steel 35	8 mil	38%	30,000	240

2.2 IMPACT ATTACHMENT SYSTEMS

A. Subject to compliance with testing and performance requirements, provide one of the following perimeter attachment systems:
1. Wet-glaze: The security film is applied to the glass in a fashion whereby the window glazing gaskets are trimmed and the film's edges are inserted behind the window frame. A bead of Dow Corning 995® structural silicone is then applied flush against the frame to overlap the security film and take the place of the original gasket.

PART 3 EXECUTION

3.1 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

3.2 EXAMINATION

A. Film Examination:
   1. Notify Architect in writing of deviations from manufacturer's recommended installation tolerances and conditions:
      a. Glass surfaces receiving new film should first be examined to verify that they are free from defects and imperfections, which will affect the final appearance.
   2. Do not proceed with installation until glass surfaces have been properly prepared and deviations from manufacturer's recommended tolerances are corrected. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result under the project conditions.
   3. Commencement of installation constitutes acceptance of conditions.

3.3 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

C. Refer to Manufacturer's installation instructions for methods of preparation for Impact Protection Adhesive or Impact Protection Profile film attachment systems.

3.4 INSTALLATION

A. Film Installation - Windows:
   1. Install in accordance with manufacturer's instructions.
   2. Cleanly cut and remove those portions of interior glazing gaskets which protrude beyond window’s daylight opening flush with surface of frame.
   3. Apply film to daylight opening of windows. Cut film edges neatly and square at a uniform distance of 1/8 inch (3 mm) to 1/16 inch of window daylight opening.
   4. Spray the slip solution, composed of one capful of baby shampoo or dishwashing liquid to 1 gallon of water, on window glass and adhesive to facilitate proper positioning of film.
   5. Apply film to interior of glass and lightly spray film with slip solution.
   6. Squeegee from top to bottom of window. Spray slip solution to film and squeegee a second time.
   7. Bump film edge with lint-free towel wrapped around edge of a 5-way tool.
   8. When conditions allow, install Impact Protection Adhesive.
   9. Upon completion of film application, allow 30 days for moisture from film installation to dry thoroughly, and to allow film to dry flat with no moisture dimples when viewed under normal viewing conditions.

3.5 CLEANING AND PROTECTION

A. Remove left over material and debris from Work area. Use necessary means to protect film before, during, and after installation.

B. Touch-up, repair or replace damaged products before Substantial Completion.

C. After application of film, wash film using common window cleaning solutions, including ammonia solutions, 30 days after application. Do not use abrasive type cleaning agents and bristle brushes to avoid scratching film. Use synthetic sponges or soft cloths.

END OF SECTION 08 87 13

SECTION 11 40 00

FOOD SERVICE EQUIPMENT

PART 1 – GENERAL

1.1 SUMMARY

A. Section Includes: Foodservice equipment work as indicated on the drawings and by equipment schedule at the end of this section.

B. Drawings, the provisions of the Agreement, the General Conditions, and the Division 1 specification sections apply to all work of this Section.

C. Substitutions: Substitute products will be considered only under the terms and conditions of Division 1.

D. Substitutions: Proposals for alternate products and methods for applications indicated may be considered by the Architect, subject to requirements of Division 1, system performance requirements and applicable PART 1 requirements of this Section.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: For fabricated equipment. Include plans, elevations, sections, roughing-in dimensions, fabrication details, utility service requirements, and attachments to other work.

C. Samples: For each exposed product and for each color and texture specified.

1.3 INFORMATIONAL SUBMITTALS

A. Coordination Drawings: For foodservice facilities.

1. Indicate locations of foodservice equipment and connections to utilities.

2. Key equipment using same designations as indicated on drawings.

3. Include plans and elevations; clearance requirements for equipment access and maintenance; details of equipment supports; and utility service characteristics.

B. Equipment Spec Books: Submit six spec books in hardcover binder. Insert spec sheets in order of list of kitchen equipment shown in written specifications and labeled with the appropriate item number. Highlight accessories and voltages as appropriate on the spec sheets. If factory spec sheets are not available, indicate relevant information (size, plumbing requirements, and electrical requirements)

on white sheet. Gather spec sheets from the Owner for Owner supplied equipment and insert in spec book.

1.4 CLOSEOUT SUBMITTALS

A. Maintenance Manuals: Submit three sets in hardcover binders with the project address and "Foodservice Operation & Maintenance Manuals" on the front and edge of binder. Include information from each piece of equipment with electrical or gas connections. Information should include operation instructions, cleaning and maintenance instructions, parts listing if available, list of service agencies (names, addresses and phone numbers) authorized to repair the equipment, voltage, gas type, refrigerant used, serial number and copies of the warranties. List should be sorted alphabetically by manufacturer.

1.5 QUALITY ASSURANCE

A. Certify that all work and materials comply with Federal, State and Local laws, ordinances and regulations and is confirmed by the local inspector having jurisdiction.

B. Work and materials must be in full accord and when appropriate, shall be listed with following agencies:

1. Local Health Department

2. National Sanitation Foundation (N.S.F.)

3. Underwriters Laboratories (U.L.) and ETL equivalent.

4. American Gas Association (A.G.A)

5. N.F.P.A. - latest edition, for exhaust system.

C. Qualifications

1. Kitchen Equipment Contractor (KEC) and its sub-contractors to have at least five (5) years experience in this type of work. Upon request provide at least three references for jobs of similar size and content.
2. Commercially manufactured equipment is not acceptable unless evidence is furnished that similar equipment has been operating successfully in a minimum of three (3) installations (excluding testing laboratories, field testing, or prototypes) for at least one (1) year.
3. Commercially manufactured equipment will be reviewed based on submittal data provide on manufacturer's literature and/or manufacturer's shop drawings for prime alternate or substituted items. Failure of the equipment to meet the capacity, operation, size, utility and production as submitted will result in the rejection of the equipment regardless of disclaimers.
4. Custom-fabricated equipment shall be manufactured by a foodservice equipment fabricator with a least five (5) years experience in this type of

work, who has the plant, personnel, and engineering facilities to properly design, detail and manufacture high quality foodservice equipment.

D. Regulatory Requirements: Install equipment to comply with the following:

1. ASHAE 15, "Safety Code for Mechanical Refrigeration."
2. NFPA 54, "National Fuel Gas Code."
3. NFPA 70, "National Electrical Code."
4. NFPA 96, "Ventilation Control and Fire Protection of Commercial Cooking Operations."

E. Seismic Restraints: Comply with SMACNA's "Kitchen Ventilation Systems and Food Service Equipment Fabrication and Installation Guidelines," Appendix A, "Seismic Restraint Details," unless otherwise indicated.

1.6 WARRANTY

A. All equipment shall be fully guaranteed against defects in workmanship and material for one (1) year after Owner's final acceptance. Refrigeration Compressors shall be fully guaranteed for five (5) years. All repairs and replacement shall be made without charge to the Owner. Guarantee period shall commence with the first usage of the equipment for the intended purpose after final acceptance.

1.7 START-UP DEMONSTRATION AND MANUALS

A. Provide factory-trained personnel for start-up and demonstration of equipment. Demonstration shall be done in two stages: One for operation and the second for maintenance personnel.

B. Return to the job site within 10 days for final adjustment and calibration of equipment.

C. Furnish service parts manuals as well as maintenance manuals for all equipment provided.

D. Prepare list of service agencies authorized by the manufacturer to service its equipment. Include the name of the person to contact and a telephone number.

PART 2 - PRODUCTS

2.1 GENERAL REQUIREMENTS OF FABRICATION

A. Fabrication shall conform to general acceptance of the foodservice industry.

B. Fabrication shall meet or exceed National Sanitation Foundation standards including the latest editions and revisions.

2.2 MATERIALS

A. Stainless Steel (S/S): Stainless steel shall be of U.S. Standard-gauges as indicated, but not less than 18-gauge or as noted, Type 304 with No. 4 finish.

B. Galvanized Steel: Galvanized steel shall be of 14-gauge and shall be electro galvanized. Galvanized steel shall be used in non-exposed areas, areas which have not contact with food for food serving items, and in framework, when used in framework, galvanized steel shall be all welded construction.

C. Plastic Laminate (PL):

1. Shall be Formica, Parkwood, LamiArt, or approved equal.

2. Shall be veneered with approved waterproof and heatproof cement. Rubber base adhesives are not acceptable.

3. Shall be applied directly over 3/4" plywood.

4. Exposed faces and edges shall be faced with 1/16" thick material. Corresponding backs shall be covered with approved backing and balancing sheet material.

D. Solid Surface Material (SSM):

1. Shall be Granite, Caesarstone, Silestone or approved equal and installed over 3/4" plywood or metal bases. Provide air space, trim, and/or insulation around any heat or cold producing equipment to guard against discoloration and cracking.

2.3 METAL TOP CONSTRUCTION

A. Metal tops shall be one-piece 14-gauge welded construction, including field joints. Secure to a full perimeter galvanized steel channel frame cross-braced not farther than 30 inches on center. Fasten top with stud bolt or tack welds.

2.4 ENCLOSED CABINET BASES

A. Bases shall be fabricated from not less than 18-gauge steel reinforced by forming the metal ends and shelves. Partitions shall be all stainless steel. The ends and vertical partitions may be of single wall construction, with a 2-inch face, all partitions and sides shall be welded in the intersection and flush with the bottom.

B. Unexposed backs and structural members may be constructed of galvanized steel.

C. Intermediate shelves shall be removable, except the bottom shelf when the cabinet is on legs. When the cabinets is on a masonry base, the bottom shelf shall be removable to all access for cleaning.

2.5 LEG AND CROSS RAILS

A. Legs and cross railings shall be 1-5/8", 16-gauge stainless steel tubing. All cross rails shall be continuously welded, ground and polished. Tack welds or other methods of connection are not acceptable. Bottoms of legs shall be wedged inward and fitted with a stainless steel bullet type foot with not less than 2" adjustment. Freestanding legs shall be pegged to floor with 1/4" stainless steel rod.

B. Stainless steel gussets shall be not less than 3" diameter at top and 3-3/4" long. Outer shell 16-gauge stainless steel reinforced with 12-gauge mild steel inserts welded interior shell. Gussets shall be large enough to accommodate 1-5/8" tube with provision for Allen screw fastener.

C. Low counter legs shall be constructed of stainless steel exterior of 5-3/4" minimum height or 7" maximum height with 3-1/2" inch square plate with four countersunk holes, welded to top for fastening.

D. Adjustable foot shall be constructed of stainless steel 1-1/2" diameter tapered at the bottom to 1" diameter, fitted with threaded cold rolled rod for minimum 1-1/2" by 3/4" threaded busing plug welded to legs.

E. When legs are fastened to equipment, the following methods should be used:

1. Sinks: Reinforced with bushing and set screws.
2. Metal Top Table or Dishtable: Welded to galvanized steel frame of 14-gauge or more and secure to the top with screws through slotted holes.
3. Wood or Composition Top: A welded stainless steel channel of not less than 14-gauge, secured to the top with screws through slotted holes.

2.6 SHELVES

A. When shelves are part of the fixture, the following shall take place:

1. Open base type shelf shall be notched around the leg and continuously welded to the leg.
2. Cabinet base type shelf shall be turned up on the back side a minimum of 1/4" radius and further slightly to insure a tight fit to enclosure panels.

B. Wall shelves shall be one-piece 16-gauge welded construction, including field joints. Secure to walls with 14-gauge s/s brackets at 36" on-center maximum spacing.

C. Overshelves shall be one-piece 16-gauge welded construction, including field joints. Secure to 1" s/s tubular supports at 60" on-center maximum spacing attached to counter tops.

2.7 SINKS

A. When multiple compartments are part of the design, they shall be continuous on the exterior without applied facing strips or panels. Bottom of each compartment shall be creased such as to ensure complete drainage to waste opening.

B. Partitions between compartments shall be double thickness, continuous, and welded.

C. Where sink bowls are exposed, the exterior shall be polished to a number 4 finish.

D. Fabricator shall provide drains, wastes, and faucets as indicated on drawings, or itemized specifications.

2.8 OTHER FABRICATED COMPONENTS

A. Casters:

1. Shall be heavy-duty type, ball bearing, solid or disc wheel with non-marking greaseproof rubber, neoprene or polyurethane tire.
2. Wheel shall be 5" diameter, minimum width of tread 1-1/2", with a minimum capacity per caster of 250 pounds.
3. Solid material wheels shall be provided with stainless steel rotating wheel guards.
4. Shall be sanitary, have sealed wheel and swivel bearing and polished plate finish.

B. Doors:

1. Metal doors shall be double cased stainless steel. Outer pans shall be 18-gauge stainless steel with corners welded, ground smooth, and polished. Inner pan shall be 20-gauge stainless steel fitted tightly into outer pan with a sound deadening material such as Celotex or Styrofoam used as a core. The two pans shall be tack welded together and joints solder filled. Doors shall finish approximately 3/4" thick and be fitted with flush recessed type stainless steel door pulls.
2. Sliding doors shall be mounted on large, quiet ball bearing rollers in 14-gauge stainless steel overhead tracks and be removable with the use of tools. Bottom of cabinet shall have stainless steel guide pins and not channel tracks for doors.
3. Wood doors shall be fabricated as detailed. If Formica or other plastic surfaces are used, all sides shall be laminated.
4. Hinged doors shall be mounted on heavy-duty NSF approved hinges, or as noted on plans or specifications.

C. Hardware:

1. Shall be solid, heavy-duty type.
2. Door hardware shall be locking type, keyed and master keyed.
3. Shall be identified with manufacturer's name and number so that broken or worn parts may be replaced.
4. Submit samples for approval, when requested.
5. Pulls shall be Component Hardware or equal.

D. Drawer Assemblies:

1. Assemblies shall consist of removable drawer body mounted in a ball bearing slide assembly and padlock assembly.
2. Slide assembly consists of one pair of roller bearing extension slides with side and back enclosure panels, front space angle, two drawer carrier angles secured to slides and stainless steel front.
3. Slides shall be 250-pound capacity made by Component Hardware or equal.
4. Drawer bodies for general storage shall be 20" x 20" with Royalite containers.
5. Drawers intended to hold food products shall be removable type with 12" x 20" stainless steel food pan.
6. Drawer fronts are double case 3/4" thick, with 18-gauge stainless steel welded and polished front pan. Steel back pan is tightly fitted and tacked welded. Sound deadened with rigid insulation.
7. All drawers shall be provided with replaceable soft neoprene bumpers or, for refrigerated drawers, a full perimeter soft gasket.

2.9 FABRICATED WORKMANSHIP

A. Items of specially fabricated equipment shall be fabricated by an acceptable manufacturer, which is NSF approved and fabricated in an approved manner to the complete satisfaction of the Owner.

1. Welding and Soldering:

a. Materials 18-gauge or heaver shall be welded.
b. Seams and joints shall be shop welded or soldered as the nature of the material may require.
c. Welds shall be ground smooth and polished to mater original finished.
d. Where galvanizing has been burned off, the weld shall be cleaned and touched up with high-grade aluminum paint.

B. Fasteners and Joints:

1. The following shall not be accepted:

a. Exposed screw or bolt heads.
b. Rivets.
c. Butt joints made by riveting straps under seams and then filled with solder.

C. Rolled Edges: Rolled edges shall be as detailed, with corners bull nosed, ground and polished.

D. Coved Corners: All stainless steel foodservice equipment shall have 1/2" or larger radius coves in all horizontal and vertical corners and intersections per NSF standards.

E. Closures: Where ends of fixtures, backsplashes, shelves, etc. are open, fill by forming the metal, or weld sections, if necessary to close entire opening flush to walls or adjoining fixtures.

2.10 OPERATION REQUIREMENTS

A. Insure quiet operation of foodservice and related equipment.

B. Insure that bumper gaskets, stops, and any other needed protection is installed on all fabricated equipment as needed.

2.11 COLD STORAGE ROOMS. (Not Used)

2.12 REFRIGERATION SYSTEMS (Not Used)

2.13 EXHAUST HOODS

A. All exhaust hoods shall be construction of stainless steel no less than 18-gauge, type 304. All exposed surfaces shall be a number 4 finish. See plans for size and location of ducts.

B. All exhaust hoods shall be (UL) Underwriter's Listed under the category "Exhaust Hood with Damper", listed with NSF (National Sanitation Foundation), and in accordance with all recommendations of NFPA's Standard #96.

C. Provide stainless steel enclosure panels to finished ceiling, adjacent walls, and spaces between hoods.

D. Light fixtures are to be incandescent unless otherwise specified.

E. Bottom of hood to be mounted at 80" above finished floor.

2.14 FIRE PROTECTION SYSTEM

A. The fire protection system shall conform to NFPA 17A latest edition.

B. Provide all surface appliance, hood, and duct protection nozzles.

C. All exposed piping to be chrome plated or sleeved. Run unexposed wherever possible.

D. Include manual pull station, location as shown on drawings.

E. Provide mechanical fire-fuel gas shut off valve for equipment below hoods. Verify size with plumbing plans.

F. Upon completion the system must be tested in the presence of the enforcing agency.

2.15 ENCLOSURES

A. Provide and install enclosure panels secured or removable for any equipment that houses equipment with movable parts for access. Also, cover and provide protection for any exposed steam line or condensate line that may be within reach of operating personnel.

2.16 ELECTRICAL WORK - GENERAL REQUIREMENTS.

A. Before ordering equipment, confirm with the serving electric utility, all pertinent electrical requirements such as actual voltages available, number of phases, and number of wire in the system. Coordinate also with any electrical service provided by other Divisions.

B. Components and assemblies shall bear the UL, RU, or ETL label or be approved by the prevailing authority.

C. Custom fabricated and standard refrigerator units shall be provided with vapor tight receptacles, shatterproof lams, and automatic switches. All wiring shall be concealed when possible.

2.17 INSERT PANS

A. All cut-outs, openings, drawers, or equipment specified or detailed to hold stainless steel insert pans shall be provided with a full compliment of pans as follows:

1. One stainless steel, 20-gauge minimum, solid insert pan for each space, sized per plans, details, or specifications.
2. Where pan sizes are not indicated in plans, details, or specification, provide on full size pan for each opening.
3. Provide maximum depth pan to suite application and space.
4. Provide 18-gauge removable stainless steel adapter bars where applicable.

2.18 CORDS AND PLUGS

A. Where cords and plugs are used, they shall comply with National Electrical Manufacturer's Association (N.E.M.A.) requirements.

2.19 WATER FILTERS

A. Provide water filters on all icemakers, beverage equipment, and steamers.

PART 3 – EXECUTION

3.1 DELIVERY, STORAGE AND HANDLING

A. No provisions are normally made for receipt or storage of any item delivered to the job site before commencement of installation. Contractor is solely responsible for the staging, delivery and safe-keeping of all equipment until turned over to the owner.

B. Fabricated and commercially manufactured equipment (buy-outs) must be received and accounted for by the Contractor at his warehouse facilities until such time as placement is possible and acceptable by the GC.

C. Clearly identify all items by item number and area prior to delivery to the job site.

D. Under no circumstances shall any individual or agent of the owner, architectural, trades, maintenance or security companies be asked to sign for or receive goods, equipment or services on the job site. Items, parts, optional pieces, trim, or any goods provided under this contract are the responsibility of the contractor whether on the owner's property or in transit until the areas shown in these documents are handed over to the owner or owner's agents.

3.2 INSTALLATION

A. Contractor shall supervise and direct his work using his best skill and attention. During the installation period, the Contractor shall provide a competent superintendent or foreman for such directions regarding connection, installation and coordination of all work under the contract.

B. Contractor shall be solely responsible for all construction means, methods, techniques, procedures and coordination of all portions of his work under the contract and for coordinating the installations with the General Contractor, so as not to interfere with or delay the overall construction of the project.

C. Contractor shall verify conditions at the building, particularly door openings, passages, and availability and size of elevators and avoid building any items too large for available openings. Contractor shall provide for the possible necessity of removing and replacing windows or wall panels. Any pieces too bulky for existing facilities shall be hoisted or otherwise handled with apparatus as required. All special handling equipment charges shall be paid by the Contractor.

D. Floor troughs and drip pans shall be provided by Contractor and installed by the General Contractor. The Contractor shall provide a supervisor for the installation.

E. Accurately set, scribe, square, level and permanently secure all items in precise position as indicated on drawings and shop drawings. Exercise extreme care to avoid damaging finished surfaces during the handling and erecting of all items. Repair, replace or otherwise make good all damaged surfaces or blemishes arising from installation in a manner approved by the Owner.

F. Complete installation with required fastenings, clip angles, braces, anchors and other fittings as required to render the work rigid and secure. Secure wood items with screws or anchor to furring strips to permit removal.

G. Caulk all items resting on concrete pads to eliminate crevices between item and pad.

H. Shim level items without legs with stainless steel shims. Caulk watertight to eliminate crevices between item and mounting surfaces on floor.

I. Seal spaces between all units and walls, ceilings, floors or fixed adjoining units against entrance of food particles or vermin by means of trim strips, welding, soldering, or commercial joint material as suited to the nature of the equipment. Seal and smooth, (when not exposed to extreme heat) with General Electric Silicone Construction Sealant Series SE1200 in appropriate color. Width of joints sealed with silicone not to exceed ¼".

J. Contractor shall do all cutting and fitting on the equipment required by other contractors for access for their piping, conduit or utility access.

K. Do not use any exposed bolts, nuts or screws other than those shown on shop drawings. Any additional and approved bolts, nuts or screws must be stainless steel.

L. Protect equipment that has been delivered to the job site from damage. Counter and table tops to be covered with plywood, flakeboard or hardboard during the installation period.

M. Upon completion of installation, clean and polish all surfaces of each item with appropriate materials. At this time, prepare to account to the consultant and Owner for quantities, locations and conditions of all items.

N. Should any repairs be required due to the neglect of the other contractors, the repairs must be approved by owner before the work is performed. All extra charges must be approved and all repairs required must be noted in writing before work is performed, stipulating the price and by whom the extra expense is to be paid. In case the Contractor does not secure such extra order, the expense shall be borne by him. No cutting, notching, drilling or altering of any kind shall

be done to the building by the contractor without first obtaining permission from the GC, owner, or architect.

O. Throughout the progress of the work, the Contractor shall keep the working area free from debris of all types and remove from premises all rubbish resulting from any work being done by him. At the completion of work, the Contractor shall leave the premises in a clean and finished condition.

3.3 START-UP AND DEMONSTRATION

A. Provide factory-trained personnel for start-up and demonstration of equipment. Demonstration shall be done in two stages: One for operation and the second for maintenance personnel.

B. Return to the job site within 10 days for final adjustment and calibration of equipment.

PART 4A – SCHEDULED EQUIPMENT – CONCESSION AREA

Furnish and set-in-place all equipment listed in accordance with Part 2 Products, Plans, and Details, and manufacturers' standard specifications with options as listed in each item. Any existing equipment to be picked up by KEC, delivered, and set-in-place. Coordinate with owner.

EQUIPMENT

ITEM 1 – SINK
See Plumbing Schedule

ITEM 2 – 3-COMP SINK
See Plumbing Schedule

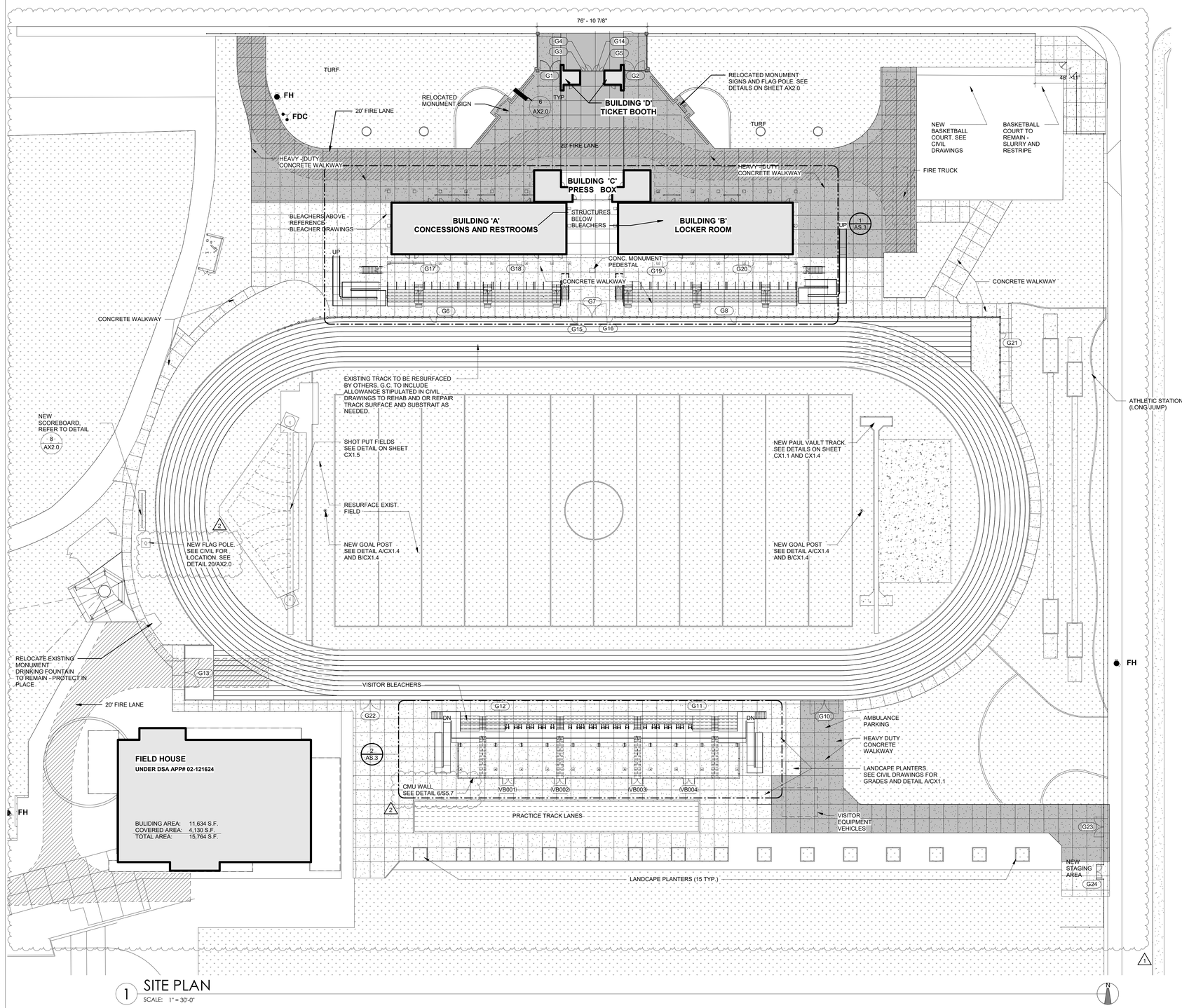
ITEM 3A- CUBLET ICEMAKER, WATER-COOLED
Quantity: One (2)
Manufacturer: Manitowoc Model: RNF-1020C
RCU Condensing Unit
(RCUF1000)

ITEM 3B – ICE STORAGE BIN
Quantity: One (2)
Manufacturer: Manitowoc Model: D420

ITEM 4 – 2-DOOR FREEZER, REACH-IN
Quantity: One (1)
Manufacturer: Traulsen Model: G22010

ITEM 5 – 2-DOOR REFRIFERATOR, REACH-IN
Quantity: One (1)
Manufacturer: Traulsen Model: G20010

END OF SECTION



1 SITE PLAN
SCALE: 1" = 30'-0"

PATH OF TRAVEL NOTES

1. ALL BUILDINGS SHALL BE ACCESSIBLE 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 HARDWARE 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.

DSA **810**

FIRE & LIFE SAFETY SITE CONDITIONS SUBMITTAL

To facilitate the Division of the State Architect's (DSA) fire and life safety plan review of project site conditions, DSA requires the design professional to provide the following information at time of project submittal for projects consisting of construction of a new campus, construction of new building(s), additions to existing buildings, and for site alternate design means for fire department emergency vehicle access, and fire suppression water supply.

Information associated with compliance items 1–3 below is to be provided for all project types indicated above. Information associated with items 4–7 is to be completed when an alternate means is utilized. Acknowledgement by the school district and signature from the local fire authority (LFA) is only required when an alternate design means is being requested.

Page 1 of the completed form must be imaged onto the fire access site plan. When an alternate design/means is proposed, completed pages 1 *and* 2 are to be imaged on the fire access site plan.

For additional information refer to the instructions at the end of this form and DSA Policy 09-01.

PROJECT INFORMATION	
School District/Owner:	MADERA UNIFIED SCHOOL DISTRICT
Project Name/School:	MADERA HIGH SCHOOL - FIELD HOUSE
Project Address:	200 SOUTH "L" STREET, MADERA, CA 93637

FIRE & LIFE SAFETY INFOMATION					
1.	Has a fire hydrant flow test been performed within the past 12 months? *(If yes, provide a copy of the test data.)*	Yes ☒		No ☐	
2.	Was the fire hydrant water flow test performed as part of this LFA review?	Yes ☒		No ☐	
3.	Is the project located within a designated fire hazard severity zone as established by Cal-Fire? *(If yes, indicate fire hazard zone classification below)*	Yes ☐		No ☒	
	Refer to the following for fire hazard zone locations: www.fire.ca.gov/fire_prevention/fire_prevention_wildland_zones_maps	Moderate ☐	High ☐	Very High ☐	
	Wildland Interface Area (WIFA) *(If any designations are checked, project design must meet the requirements of CBC Chapter 7A.)*			WIFA ☐	

CONDITION MEANS AND METHODS RESOLUTION		ALTERNATE ACCEPTED			
		Yes	No	N/A	N/R
4.	Emergency vehicle access roadways do not meet CFC requirements.			✓	
4a.	**Acceptable Alternate:** Emergency vehicle and personnel access as proposed by the project architect is acceptable for providing fire suppression and protection of life and property.				
5.	**Fire Hydrants:** Number and spacing does not meet CFC requirements.				
5a.	**Acceptable Alternate:** Number of fire hydrants and spacing as proposed by the project architect is acceptable for fire suppression and protection of life and property.	✓			
6.	**Fire Hydrants:** Water flow and pressure are less than CFC minimum.			✓	
6a.	**Acceptable Alternate**: The available flow and pressure is acceptable for providing fire suppression and protection of life and property.				
7.	Location of fire department connection(s) serving fire sprinkler systems or standpipe systems does not meet CFC requirements.			✓	
7a.	**Acceptable Alternate:** The location of fire department connection serving the fire sprinkler system and/or standpipe system is acceptable for providing fire suppression and protection of life and property.				

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: _____

SITE LEGEND

SITE HATCHES

- PROPERTY LINE
- 20' WIDE MIN.- FIRE LANE
- SCORED CONCRETE, SEE DETAILS 1, 2, 3, 5 / AX2.0
- HEAVY DUTY CONCRETE
- 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
- FH — FIRE HYDRANT, SPACED PER 2022 CFC, TABLE C102.1, 225'-0" FROM ANY POINT ON STREET TO HYDRANT.
- FDC — FIRE DEPARTMENT CONNECTION.
- ACCESSIBLE EXIT ROUTE
- PATH OF TRAVEL
- CHAIN LINK FENCE
- SITE GATE, REFER TO SHEET A2.1 FOR SCHEDULE

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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MADERA HIGH SCHOOL STADIUM
200 SOUTH "L" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

MADERA UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT
MICHAEL R. SCHOEN
No. C-32641
RENEWAL DATE
FEB 28, 2027
STATE OF CALIFORNIA

PROJECT NUMBER	20-51
DATE	08/12/2024
DSA APPLICATION NO.	02-122784
FILE NO.	20-H3
PTN NO.	65243-154
DRAWN BY	XXX

REVISIONS

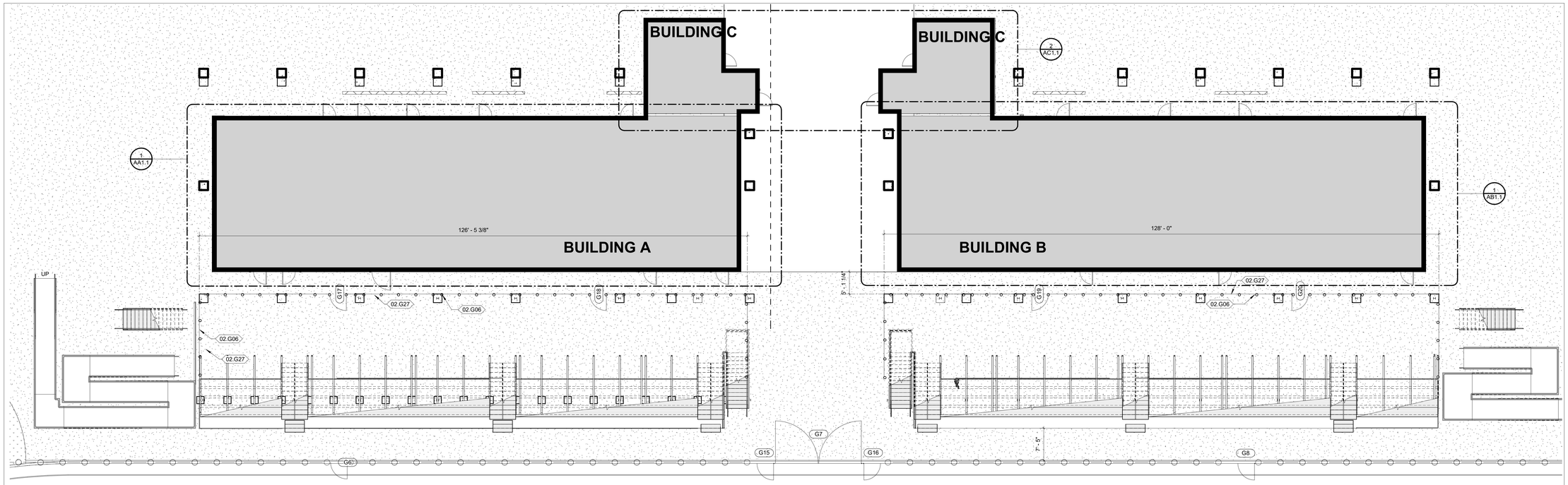
#	DESCRIPTION	DATE
1	ADDENDUM 01	08/18/2025
2	ADDENDUM 02	08/22/2025

CONSTRUCTION DOCUMENTS

OVERALL SITE PLAN

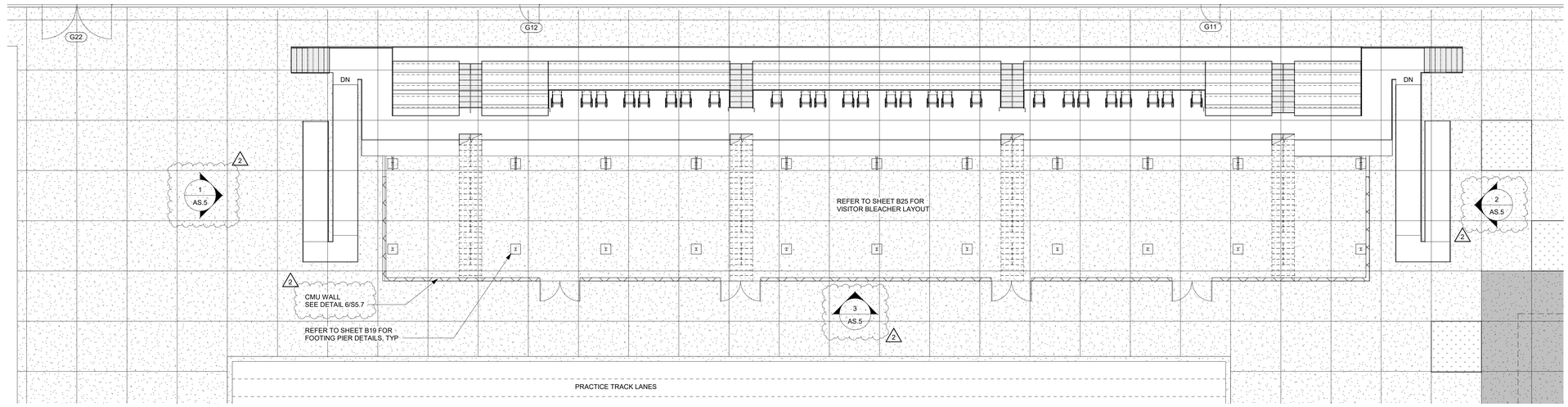
AS.1

BIM 360://Madera USD_20-51_MHS Field House/20-51_MHS STADIUM_V21.rvt
8/22/2025 1:44:19 AM



1 ENLARGED SITE PLAN - CONCOURSE

SCALE: 1" = 10'-0"



2 ENLARGED SITE PLAN - VISTOR BLEACHERS

SCALE: 1" = 10'-0"

PATH OF TRAVEL NOTES

1. ALL BUILDINGS SHALL BE ACCESSIBLE 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 HARDWARE 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 PROJECTS 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).

SITE LEGEND

SITE HATCHES

- (E) CONCRETE TO REMAIN
- (E) CONCRETE TO BE REMOVED
- CONCRETE
- PLANTER AREA, REFER TO LANDSCAPE AND IRRIGATION PLANS
- (E) TURF TO REMAIN
- (E) PAVING TO BE REMOVED AS NECESSARY, SEE CIVIL.
- (E) TURF TO BE REMOVED
- PAVING, SEE CIVIL.
- (E) FIRE HYDRANT, SPACED PER 2016 CFC, TABLE C102.1, 225'-0" FROM ANY POINT ON STREET TO HYDRANT.
- SITE GATE, REFER TO SHEET A2.1 FOR SCHEDULE

KEYNOTES

02.G06 6'-0" HIGH CHAIN LINK FENCE
02.G27 VINYL PRIVACY SLATS TO MATCH FENCE HEIGHT

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MADERA HIGH SCHOOL STADIUM

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

PROFESSIONAL SEAL

LICENSED ARCHITECT — MICHAEL R. SCHOEN — No. C-30295 — REGISTRATION DATE FEB 29, 2020 — STATE OF CALIFORNIA

PROJECT NUMBER 20-51
DATE 08/12/2024
DSA APPLICATION NO. 02-122784
FILE NO. 20-H3
PTN NO. 65243-154
DRAWN BY Author

REVISIONS

#	DESCRIPTION	DATE
2	ADDENDUM 02	08/22/2025

CONSTRUCTION DOCUMENTS

ENLARGED SITE PLANS

AS.3

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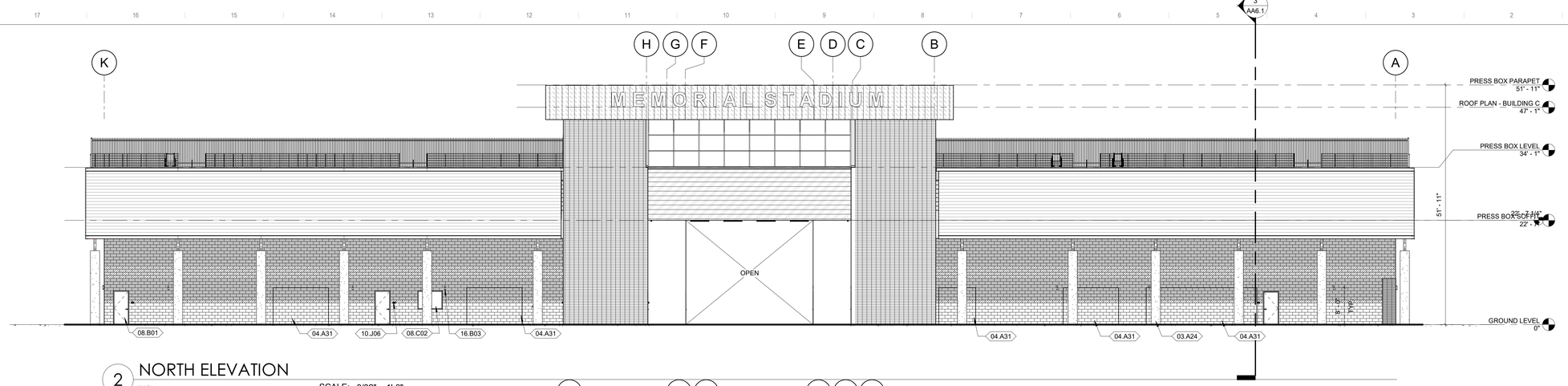
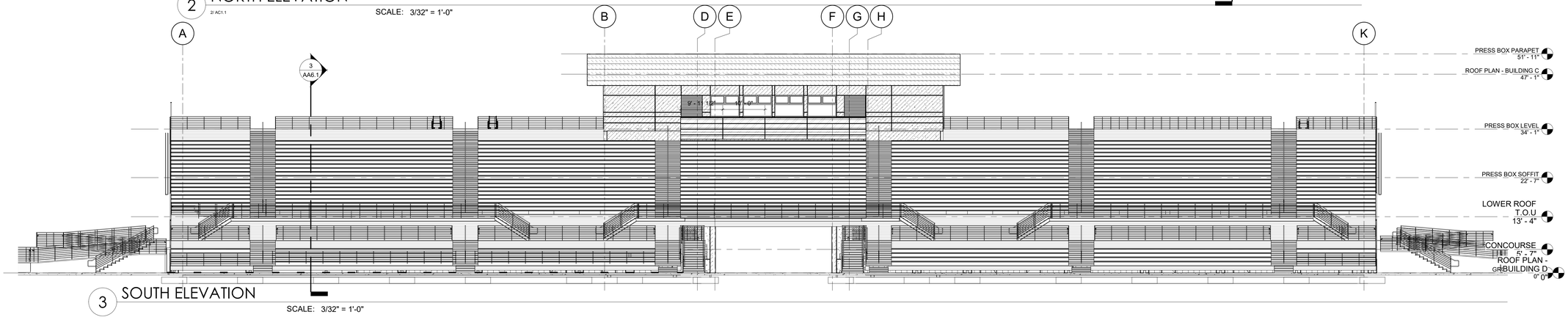


2 NORTH ELEVATION

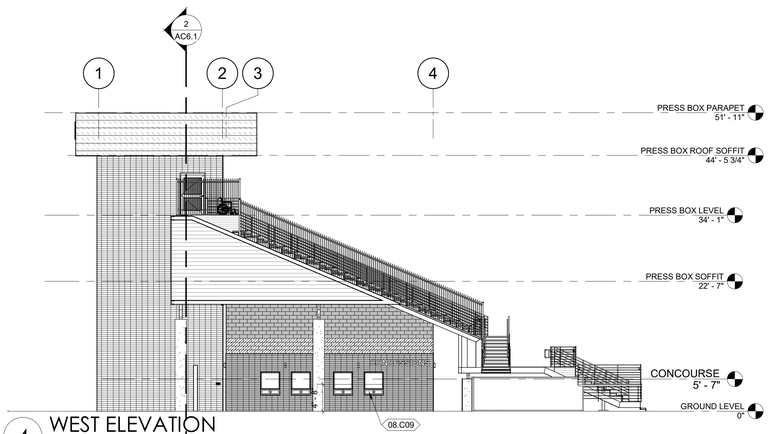
2/ AC1.1

SCALE: 3/32" = 1'-0"



3 SOUTH ELEVATION

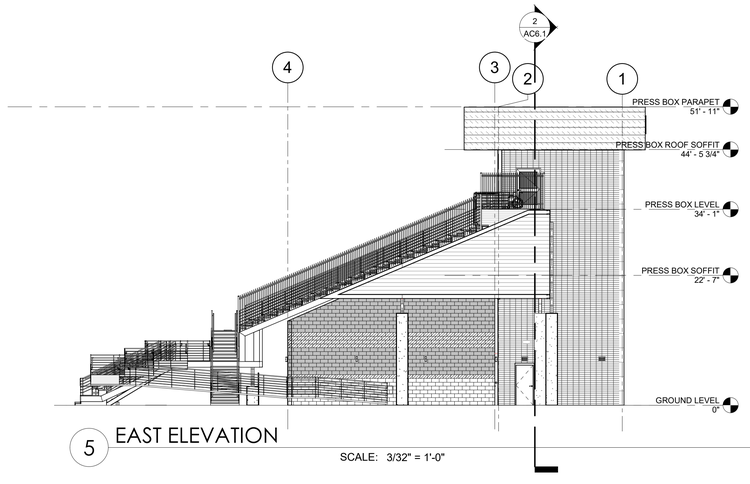
SCALE: 3/32" = 1'-0"



4 WEST ELEVATION

1/ A1.0

SCALE: 3/32" = 1'-0"



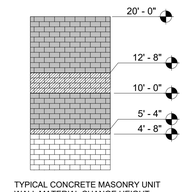
5 EAST ELEVATION

SCALE: 3/32" = 1'-0"

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
- THIN BRICK 20 / AX2.1 — TB-1
- THIN BRICK 20 / AX2.1 — TB-2
- HORIZONTALLY ORIENTED FLUSH METAL WALL AND SOFFIT PANELS, 7 / AX2.1 — MP-3
- VERTICALLY ORIENTED STANDING SEAM METAL ROOF AND FASCIA PANELS, 9 / AX2.1 — MP-4
- CEMENT PLASTER INTEGRAL COLOR — P-4

2



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

GENERAL NOTES EXT. ELEVATIONS

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.
3. SEE 23 / AX2.1 AND 24 / AX2.1 FOR PLASTER ACCESORIES AND REVEAL DETAILS.

KEYNOTES XX-XX

03.A24 CONCRETE PILASTER, REFERENCE BLEACHER DRAWINGS TYP.
04.A31 CMU SCREEN WALL. SEE DETAIL 2/S5.2
08.B01 HOLLOW METAL DOOR, SEE DOOR SCHEDULE
08.C02 WINDOW, SEE WINDOW SCHEDULE
08.C09 TRANSACTION WINDOW
10.J06 ROOM NAME SIGN SEE DTL. 6/AX7.1
16.B03 WALL MOUNTED LIGHT FIXTURE, SEE ELECTRICAL PLANS

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CONSTRUCTION DOCUMENTS

MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

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

PROJECT NUMBER
20-51

DATE
08/12/2024

DSA APPLICATION NO.
02-122784

FILE NO.
20-H3

PTN NO.
65243-154

DRAWN BY
Author

REVISIONS

#	DESCRIPTION	DATE
2	ADDENDUM 02	08/22/2025

CONSTRUCTION DOCUMENTS

ELEVATIONS - HOME BLEACHERS

AS.4 2

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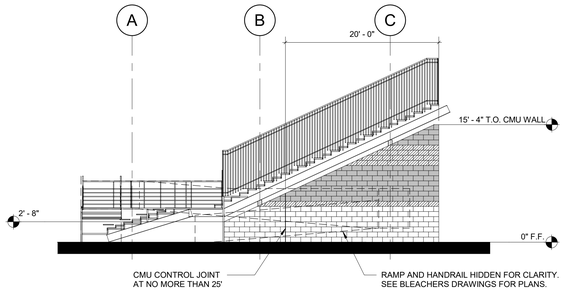
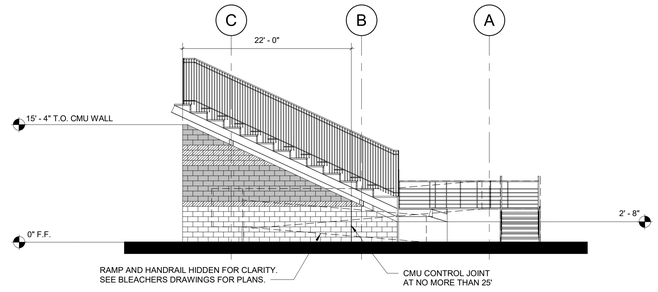
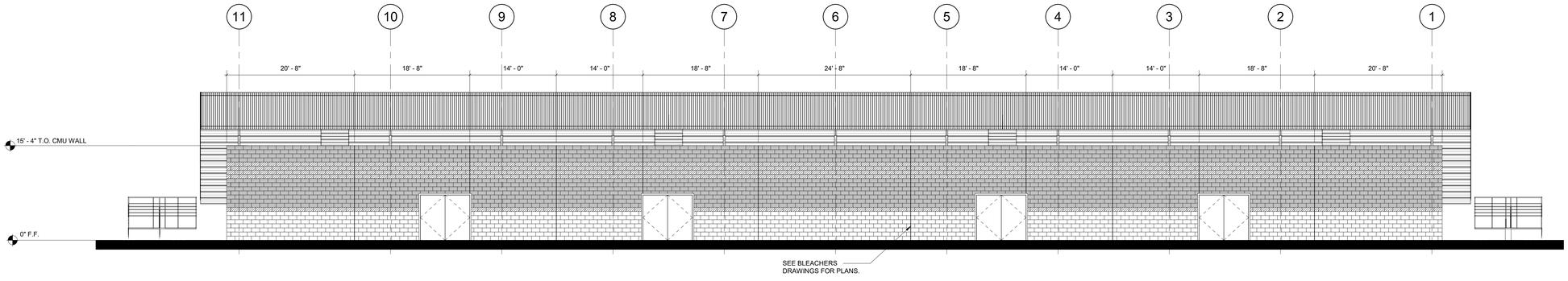


1 WEST ELEVATION - VISITOR BLEACHERS
SCALE: 1/8" = 1'-0"

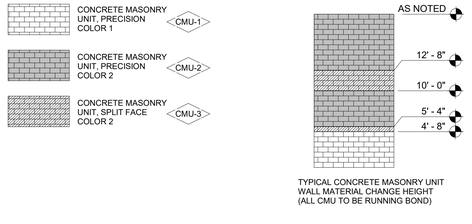


2 EAST ELEVATION - VISITOR BLEACHERS
SCALE: 1/8" = 1'-0"



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

EXTERIOR ELEVATION LEGEND - VISITOR BLEACHERS



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

GENERAL NOTES EXT. ELEVATIONS

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.
3. SEE 23 / AX2.1 AND 24 / AX2.1 FOR PLASTER ACCESORIES AND REVEAL DETAILS.

KEYNOTES XX-XX

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CONSTRUCTION DOCUMENTS

PROFESSIONAL SEAL

LICENSED ARCHITECT
MICHAEL R. SCHOEN
No. C-35495
RENEWAL DATE
FEB 28, 2027
STATE OF CALIFORNIA

PROJECT NUMBER
20-51

DATE
08/12/2024

DSA APPLICATION NO.
02-122784

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20-H3

PTN NO.
65243-154

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Author

REVISIONS

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2	ADDENDUM 02	08/22/2025

CONSTRUCTION DOCUMENTS

ELEVATIONS - VISITOR BLEACHERS

AS.5

2

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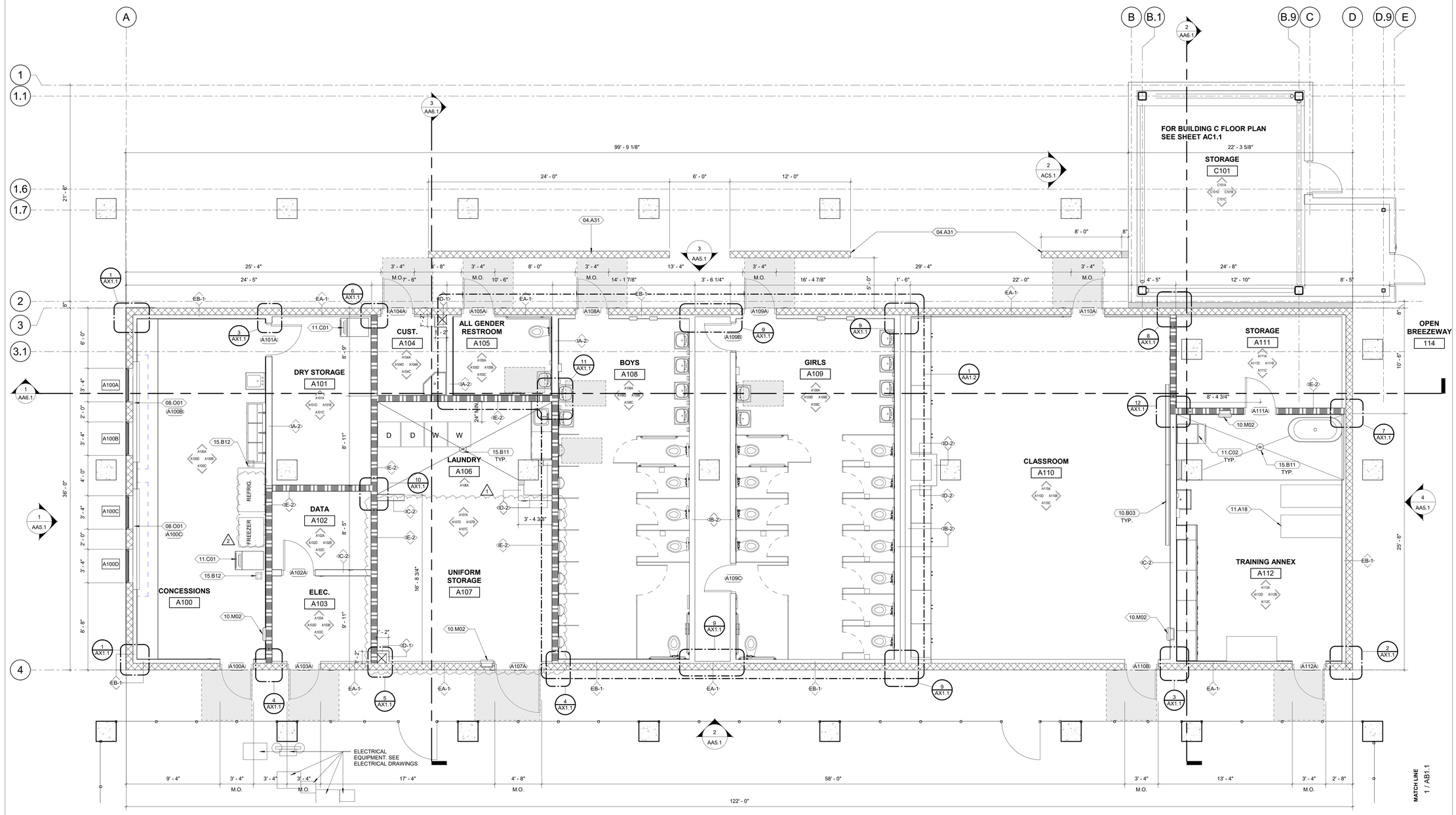

1 FIRST FLOOR PLAN - BUILDING A

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

KEYNOTES (XX-XX)

03.A24 CONCRETE PILASTER, REFERENCE BLEACHER DRAWINGS TYP.
04.A31 CMU SCREEN WALL. SEE DETAIL 2/SS.2
08.O01 OVERHEAD COILING SERVICE DOOR
10.B03 MARKERBOARD
10.M02 2A:10BC MIN RATED FIRE EXTINGUISHER W/ SEMI-RECESSED CABINET
11.A18 PHYSICAL TREATMENT GURNEY
11.C01 ICE-MACHINE, SEE PLUMBING PLANS
11.C02 REFRIGERATOR (N.I.C.)
15.B11 FLOOR DRAIN W/ SLOPED FLOOR (2% MAX), SEE PLUMBING AND STRUCTURAL PLANS
15.B12 FLOOR SINK, SEE PLUMBING PLANS

FLOOR PLAN NOTES

1. REFER TO SHEET G0.20 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 FROM THE FACE OF FINISH TO ROUGH OPENING OF JAMB UNLESS OTHERWISE NOTED.
5. SEE SHEETS AX1.0 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. REFERENCE BLEACHER PLANS FOR DIMENSIONS OF BLEACHERS AND COLUMNS.
10. SEE SHEET AX8.0 FOR FOR FINISH AND COLOR SCHEDULE

WALL LEGEND

- NEW WALL, SEE WALL TYPES ON SHEET AX1.0
- NEW MASONRY WALL. SEE WALL TYPES ON SHEET AX1.0
- NEW 1HR FIRE RATED WALL ASSEMBLY. SEE WALL TYPES ON SHEET AX1.0
- CONCRETE COLUMN SEE STRUCTURAL DRAWINGS FOR SIZE AND LOCATION
- WALL TYPE — DETAIL REFERENCE SEE SHEET AX1.0
- SYMBOL INDICATES ACCESSIBILITY ITEM. SEE DETAIL 15 / AX7.2 FOR TYPICAL ACCESSIBILITY STANDARDS, CLEARANCES AND MOUNTING HEIGHTS & LOCATIONS
- INTERIOR ELEVATION MARK, SEE INTERIOR ELEVATIONS SHEETS AA7.1, AA7.2 , AB7.1, AB1.2 & AD7.1

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MADERA HIGH SCHOOL STADIUM

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

PROFESSIONAL SEAL

LICENSED ARCHITECT — MICHAEL R. SCHOEN — No. C-28295 — RENEWAL DATE FEB 28, 2027 — STATE OF CALIFORNIA

PROJECT NUMBER	20-51
DATE	08/12/2024
DSA APPLICATION NO.	02-122784
FILE NO.	20-H3
PTN NO.	65243-154
DRAWN BY	Author

REVISIONS

#	DESCRIPTION	DATE
1	ADDENDUM 01	08/18/2025
2	ADDENDUM 02	08/22/2025

CONSTRUCTION DOCUMENTS

FLOOR PLAN - BUILDING A

AA1.1

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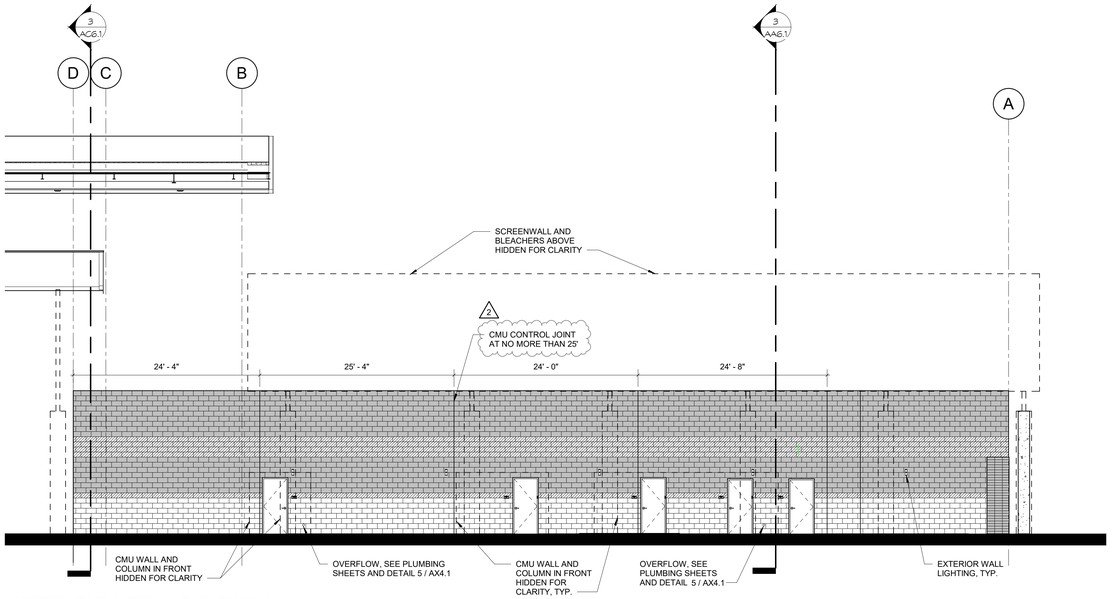

3 NORTH ELEVATION - BUILDING A
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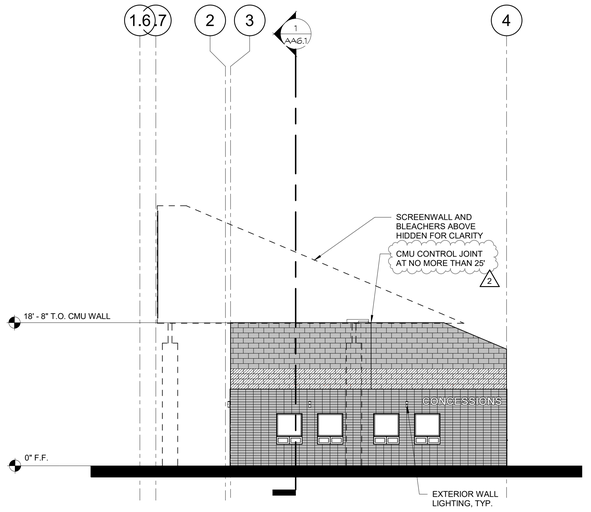

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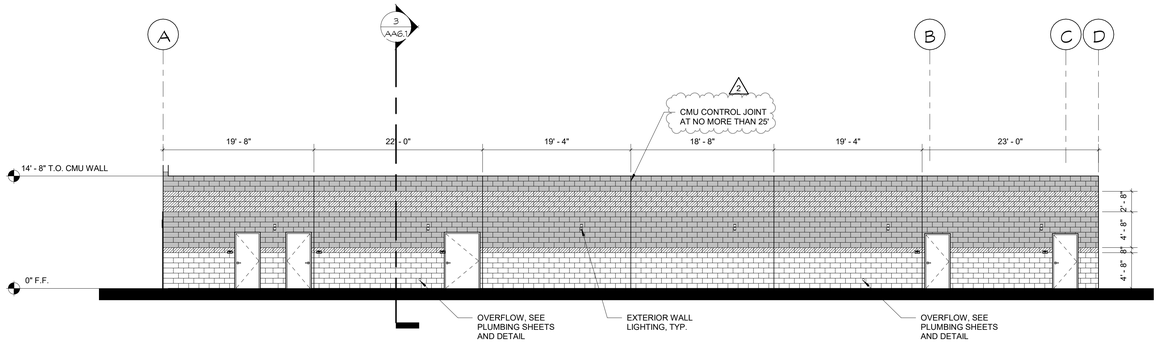

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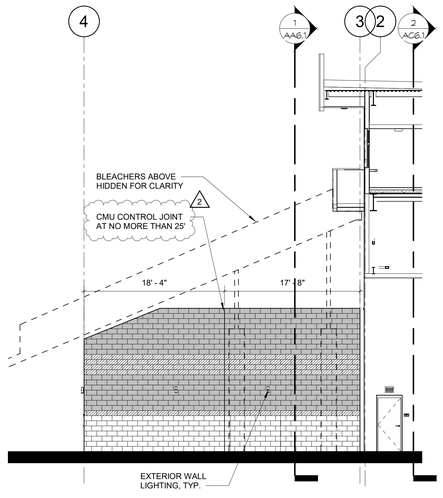

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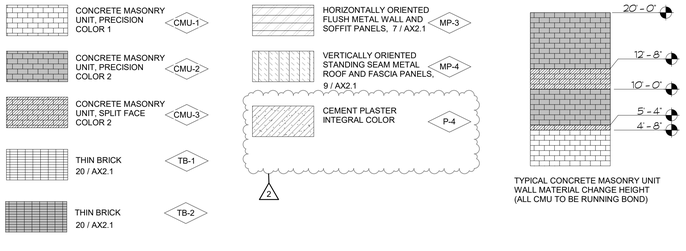
SCALE: 1/8" = 1'-0"

EXTERIOR ELEVATION LEGEND



GENERAL NOTES EXT. ELEVATIONS

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.
3. SEE 23 / AX2.1 AND 24 / AX2.1 FOR PLASTER ACCESORIES AND REVEAL DETAILS.

KEYNOTES XX-XX

PBK

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PBK.com

MADERA HIGH SCHOOL STADIUM

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

PROFESSIONAL SEAL

LICENSED ARCHITECT
MICHAEL R. SCHOEN
No. C-35495
RENEWAL DATE
FEB 28, 2027
STATE OF CALIFORNIA

PROJECT NUMBER	20-51
DATE	08/12/2024
DSA APPLICATION NO.	02-122784
FILE NO.	20-H3
PTN NO.	65243-154
DRAWN BY	Author

REVISIONS

#	DESCRIPTION	DATE
2	ADDENDUM 02	08/22/2025

CONSTRUCTION DOCUMENTS

EXTERIOR ELEVATIONS - BUILDING A

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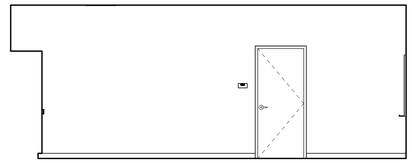

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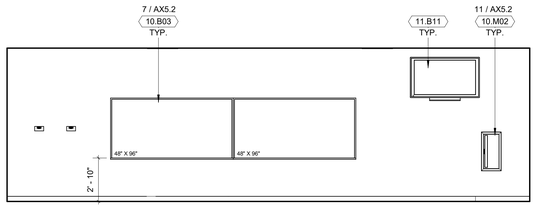

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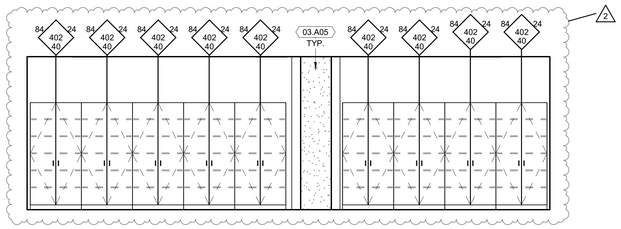
CLASSROOM A110

A110C



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CLASSROOM A110

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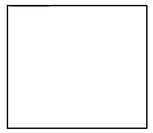

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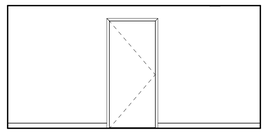

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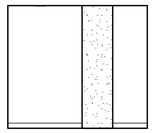

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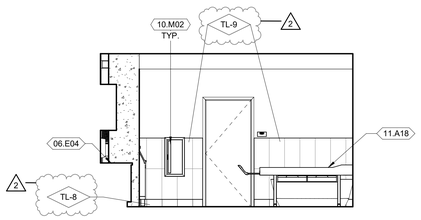
STORAGE A111



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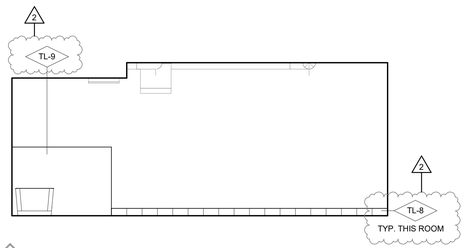

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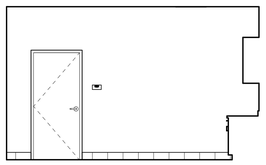

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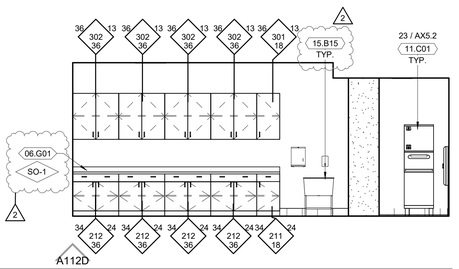


A112D

TRAINING ANNEX A112

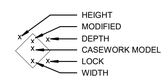
KEYNOTES XX-XX

03.A05	CONCRETE COLUMN, SEE STRUCTURAL PLANS
06.E04	COUNTERTOP
06.G01	SOLID SURFACE COUNTERTOP
10.B03	MARKERBOARD
10.M02	2A:10BC MIN RATED FIRE EXTINGUISHER W/ SEMI-RECESSED CABINET
11.A18	PHYSICAL TREATMENT GURNEY
11.B11	TELEVISION (N.I.C.), CONTRACTOR TO INSTALL AND PROVIDE BLOCKING. COORDINATE SIZE AND LOCATION WITH OWNER.
11.C01	ICE-MACHINE, SEE PLUMBING PLANS
15.B15	SINGLE COMPARTMENT SINK, SEE PLUMBING PLANS

SYMBOL LEGEND - INT. ELEVATION

CASEWORK SYMBOL

CASEWORK SYMBOL



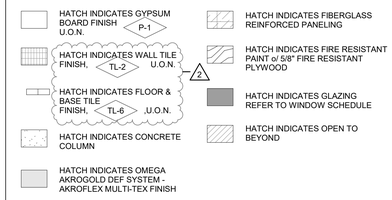
NOTE: SEE CASEWORK BACKING AND ATTACHMENT DETAILS ON SHEET AX5.2

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 ON AX8.0

INTERIOR ELEVATION LEGEND



GENERAL NOTES

1. REFER TO REFLECTED CEILING PLAN FOR CEILING AND SOFFIT HEIGHTS.
2. REFER TO DETAIL 25 / 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 G0.20 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.

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CONSTRUCTION DOCUMENTS

MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

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

PROJECT NUMBER
20-51

DATE
08/12/2024

DSA APPLICATION NO.
02-122784

FILE NO.
20-H3

PTN NO.
65243-154

DRAWN BY
Author

REVISIONS

#	DESCRIPTION	DATE
2	ADDENDUM 02	08/22/2025

CONSTRUCTION DOCUMENTS

INTERIOR ELEVATIONS - BUILDING A

AA7.2

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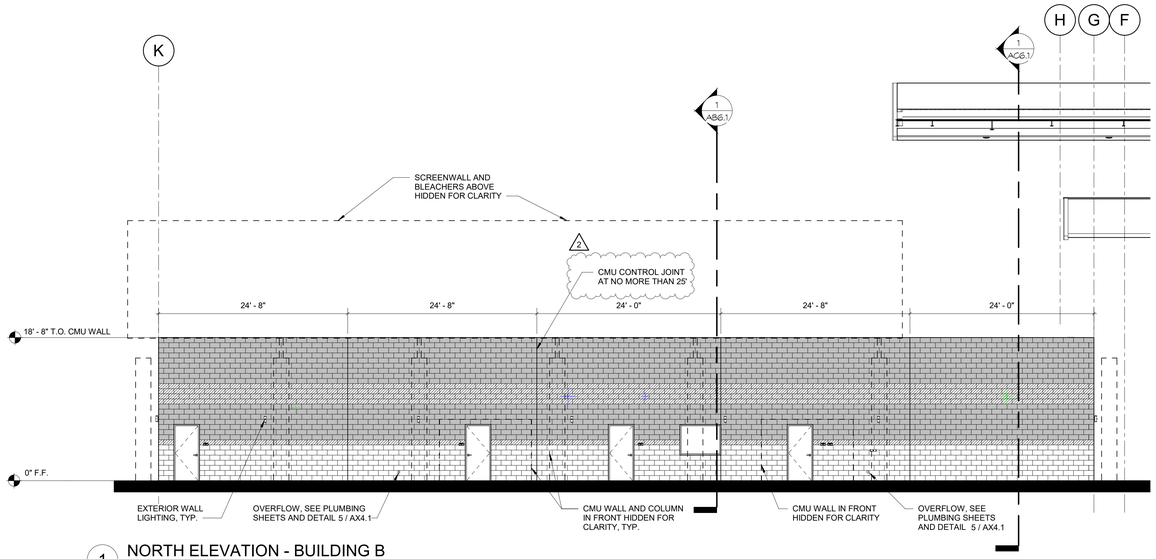
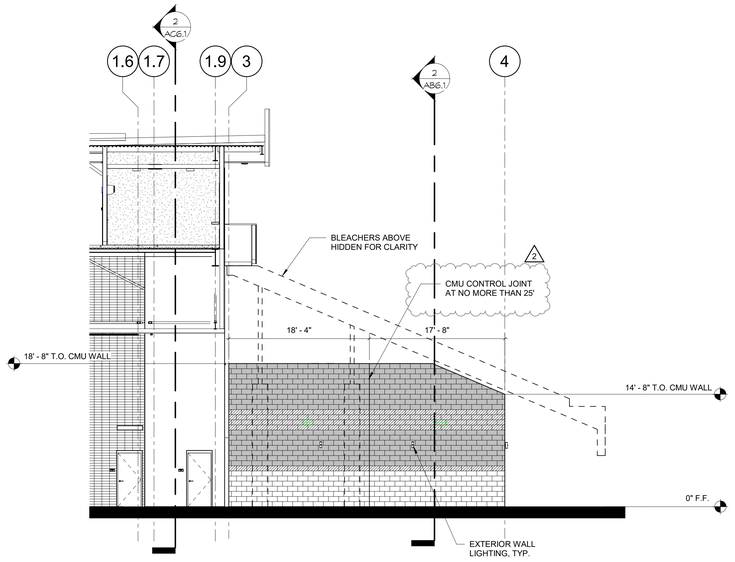


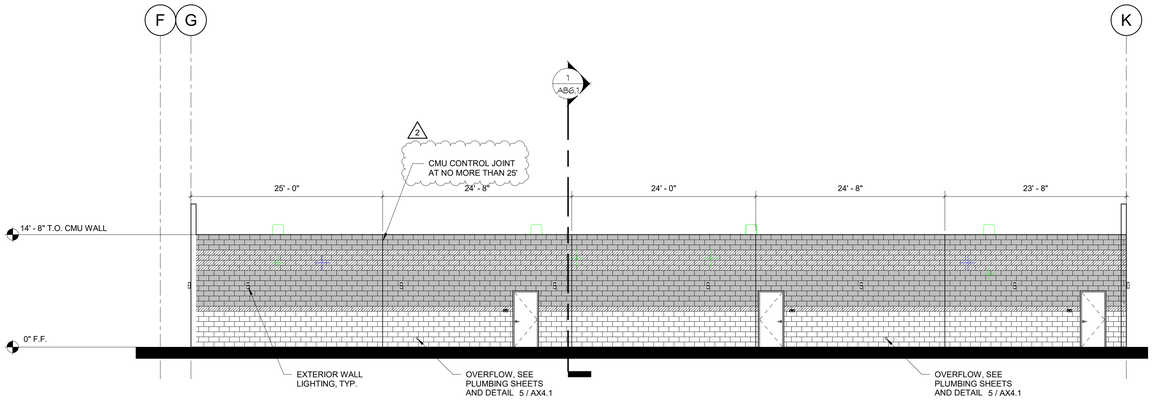
1 NORTH ELEVATION - BUILDING B

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



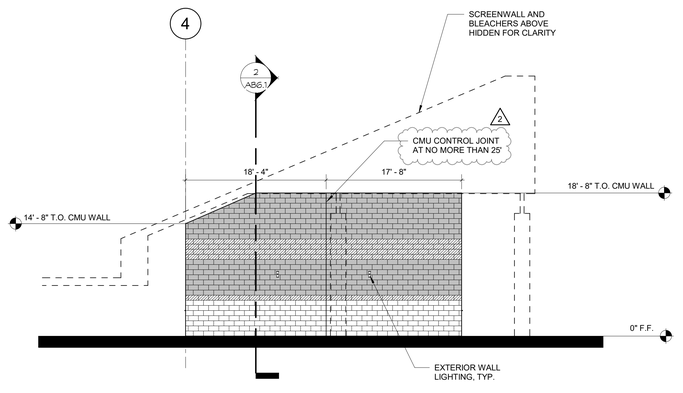
4 WEST ELEVATION - BUILDING B

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



3 SOUTH ELEVATION - BUILDING B

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



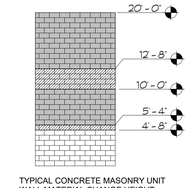
2 EAST ELEVATION - BUILDING B

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

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
- THIN BRICK 20 / AX2.1 — TB-1
- THIN BRICK 20 / AX2.1 — TB-2
- HORIZONTALLY ORIENTED FLUSH METAL WALL AND SOFFIT PANELS, 7 / AX2.1 — MP-3
- VERTICALLY ORIENTED STANDING SEAM METAL ROOF AND FASCIA PANELS, 9 / AX2.1 — MP-4
- CEMENT PLASTER INTEGRAL COLOR — P-4

2



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

GENERAL NOTES EXT. ELEVATIONS

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.
3. SEE 23 / AX2.1 AND 24 / AX2.1 FOR PLASTER ACCESORIES AND REVEAL DETAILS.

KEYNOTES XX-XX

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CONSTRUCTION DOCUMENTS

PROFESSIONAL SEAL

LICENSED ARCHITECT — MICHAEL R. SCHOEN — No. C-36295 — REGISTRATION DATE FEB 29, 2020 — STATE OF CALIFORNIA

PROJECT NUMBER	20-51
DATE	08/12/2024
DSA APPLICATION NO.	02-122784
FILE NO.	20-H3
PTN NO.	65243-154
DRAWN BY	Author

REVISIONS

#	DESCRIPTION	DATE
2	ADDENDUM 02	08/22/2025

CONSTRUCTION DOCUMENTS

EXTERIOR ELEVATIONS - BUILDING B

AB5.1

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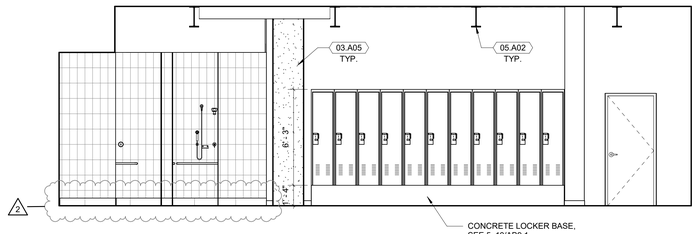

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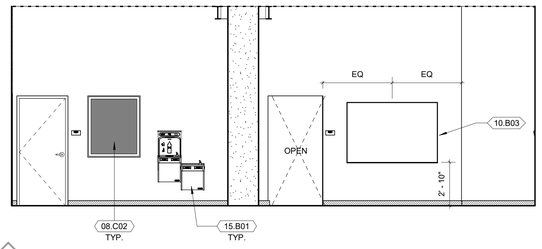
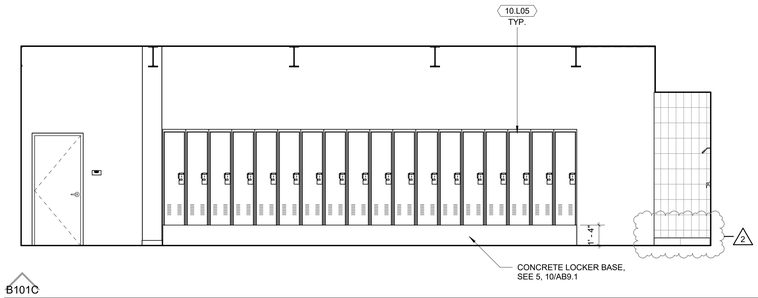


B101B

LOCKER ROOM B101



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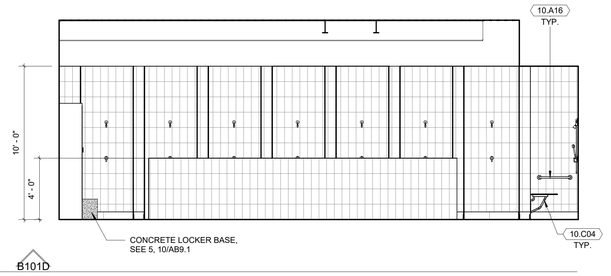

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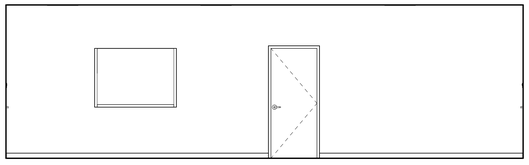
LOCKER ROOM B101



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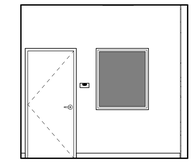

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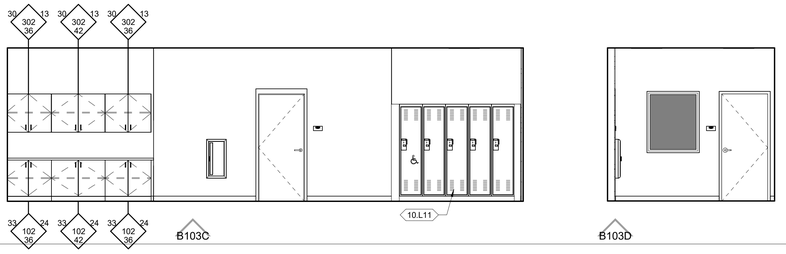

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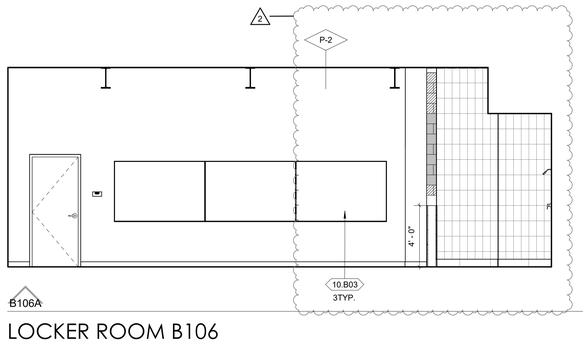
OFFICE - B103



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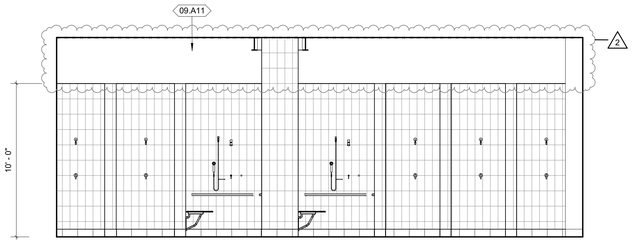

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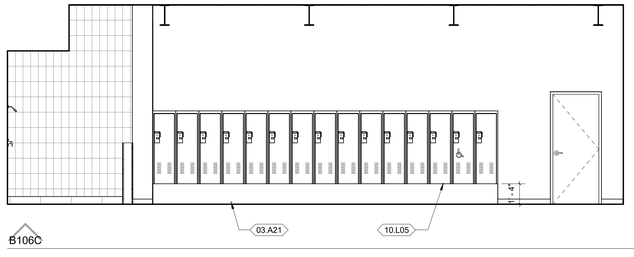
LOCKER ROOM B106



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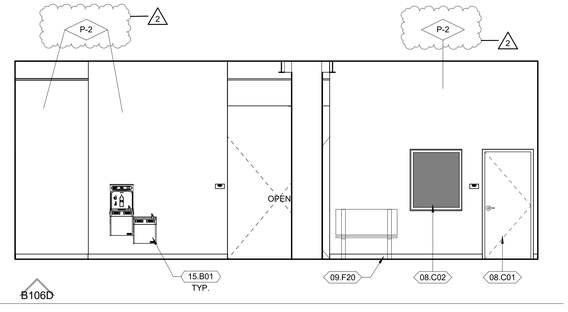


B106D

LOCKER ROOM B106

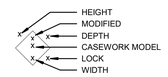
KEYNOTES XX-XX

03.A05	CONCRETE COLUMN, SEE STRUCTURAL PLANS
03.A14	CONCRETE COLUMN
03.A21	CONCRETE SEAT WALL
05.A02	EXPOSED STEEL BEAM, SEE STRUCTURAL PLANS
08.C01	DOOR, SEE DOOR SCHEDULE
08.C02	WINDOW, SEE WINDOW SCHEDULE
09.A11	GYPSUM BOARD SOFFIT
09.F20	RUBBER TOPSET BASE,TYP., 4" U.O.N.
10.A16	36" LONG GRAB BAR
10.B03	MARKERBOARD
10.C04	ACCESSIBLE SHOWER BENCH
10.L05	ACCESSIBLE LOCKER
10.L11	STAFF LOCKERS. SEE DETAIL 10/AB9.1
15.B01	ACCESSIBLE HI/LOW DRINKING FOUNTAIN, SEE PLUMBING PLANS

SYMBOL LEGEND - INT. ELEVATION

CASEWORK SYMBOL

CASEWORK SYMBOL



NOTE: SEE CASEWORK BACKING AND ATTACHMENT DETAILS ON SHEET AX5.2

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 ON AX8.0

INTERIOR ELEVATION LEGEND

- HATCH INDICATES GYPSUM BOARD FINISH U.O.N. P-1
- HATCH INDICATES WALL TILE FINISH, TL-2 U.O.N.
- HATCH INDICATES FLOOR & BASE TILE FINISH, TL-6 U.O.N.
- HATCH INDICATES CONCRETE COLUMN
- HATCH INDICATES OMEGA AKROGOLD DEF SYSTEM - AKROFLEX MULTI-TEX FINISH
- HATCH INDICATES FIBERGLASS REINFORCED PANELING
- HATCH INDICATES FIRE RESISTANT PAINT o/ 5/8" FIRE RESISTANT PLYWOOD
- HATCH INDICATES GLAZING REFER TO WINDOW SCHEDULE
- HATCH INDICATES OPEN TO BEYOND

GENERAL NOTES

1. REFER TO REFLECTED CEILING PLAN FOR CEILING AND SOFFIT HEIGHTS.
2. REFER TO DETAIL 25 / 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 G0.20 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.

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PROFESSIONAL SEAL

LICENSED ARCHITECT
MICHAEL R. SCHOEN
No. C-36926
REGISTRATION DATE
FEB 29, 2027
STATE OF CALIFORNIA

PROJECT NUMBER
20-51

DATE
08/12/2024

DSA APPLICATION NO.
02-122784

FILE NO.
20-H3

PTN NO.
65243-154

DRAWN BY
Author

REVISIONS

#	DESCRIPTION	DATE
2	ADDENDUM 02	08/22/2025

CONSTRUCTION DOCUMENTS

INTERIOR ELEVATIONS - BUILDING B

AB7.1

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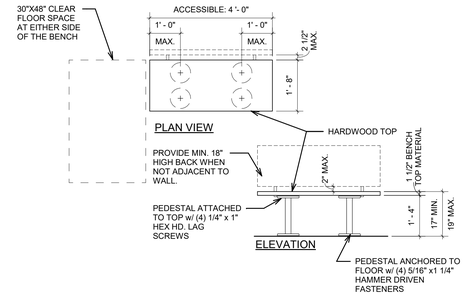
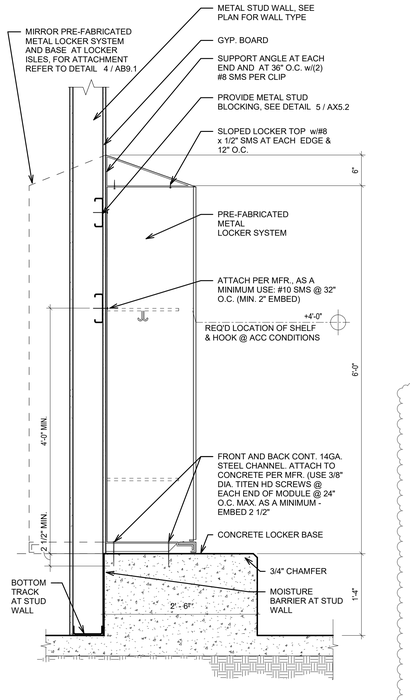
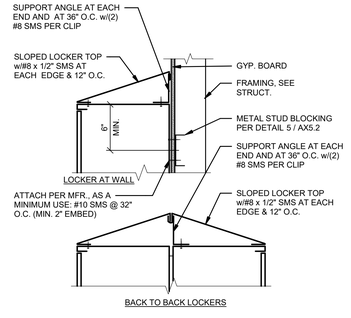


1 ACCESSIBLE BENCH
SCALE: 1/2" = 1'-0"



10 METAL LOCKER
SCALE: 1" = 1'-0"



4 LOCKER ATTACHMENT
SCALE: 1 1/2" = 1'-0"

2

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MADERA HIGH SCHOOL STADIUM
200 SOUTH "L" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

PROFESSIONAL SEAL

LICENSED ARCHITECT
MICHAEL R. SCHOEN
No. C-35405
RENEWAL DATE FEB 28, 2027
STATE OF CALIFORNIA

PROJECT NUMBER
20-51

DATE
08/12/2024

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CONSTRUCTION DOCUMENTS

SPECIALTY DETAILS

AB9.1

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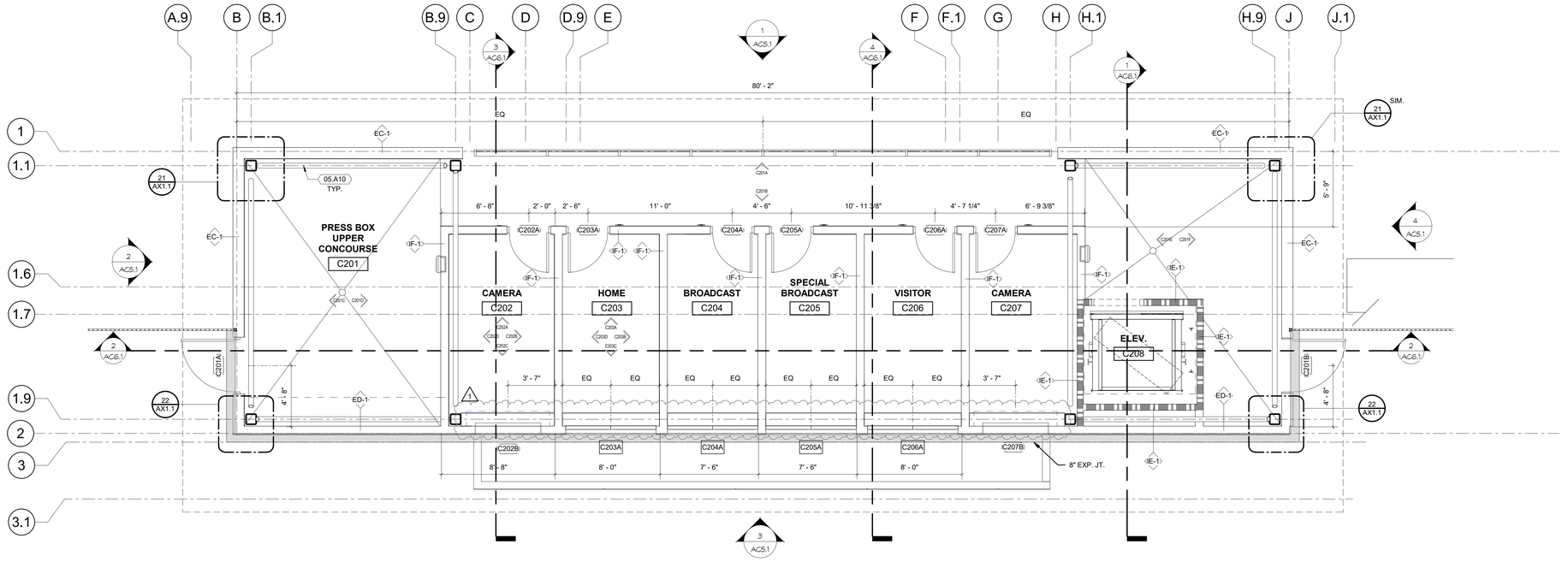
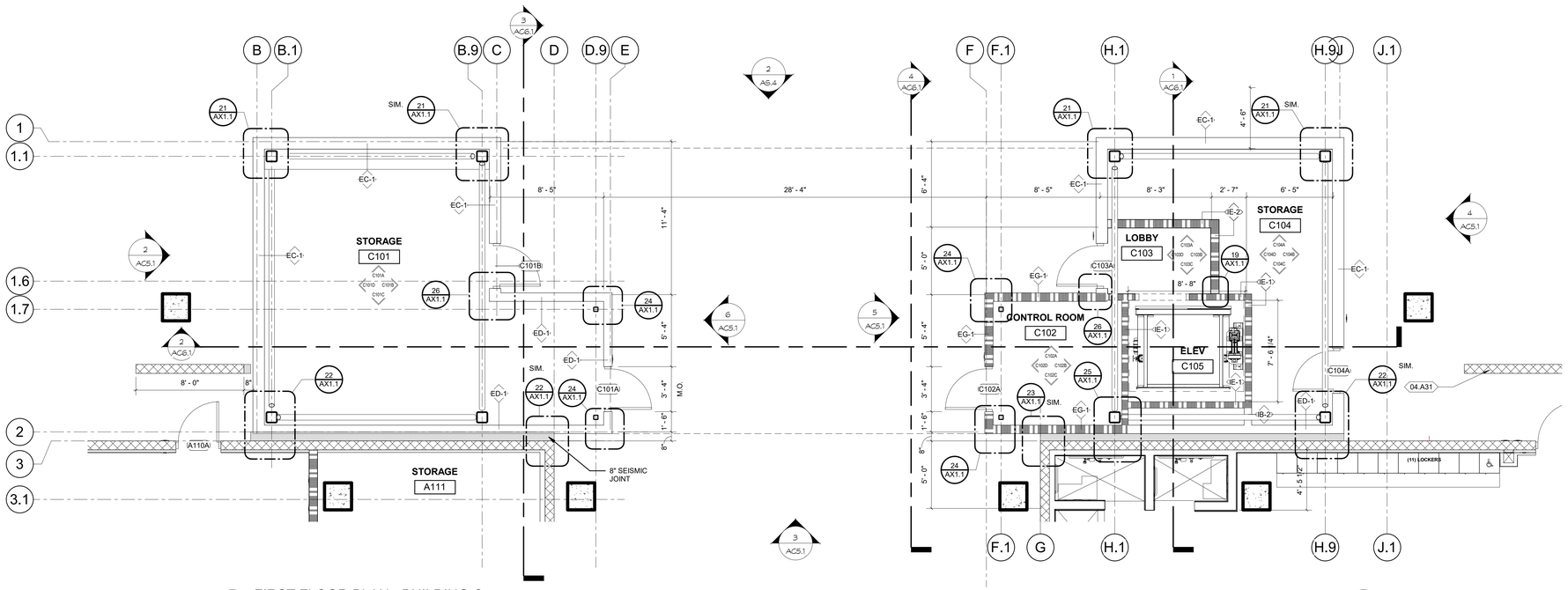


1 SECOND FLOOR PLAN - BUILDING C

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



2 FIRST FLOOR PLAN - BUILDING C

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

KEYNOTES

XX-XX

04.A31 CMU SCREEN WALL. SEE DETAIL 2/S5.2
05.A10 STEEL BRACE FRAME, SEE STRUCTURAL PLANS

FLOOR PLAN NOTES

1. REFER TO SHEET G0.20 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 FROM THE FACE OF FINISH TO ROUGH OPENING OF JAMB UNLESS OTHERWISE NOTED.
5. SEE SHEETS AX1.0 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. REFERENCE BLEACHER PLANS FOR DIMENSIONS OF BLEACHERS AND COLUMNS.
10. SEE SHEET AX8.0 FOR FINISH AND COLOR SCHEDULE

WALL LEGEND

- NEW WALL. SEE WALL TYPES ON SHEET AX1.0
- NEW MASONRY WALL. SEE WALL TYPES ON SHEET AX1.0
- NEW 1HR FIRE RATED WALL ASSEMBLY. SEE WALL TYPES ON SHEET AX1.0
- CONCRETE COLUMN SEE STRUCTURAL DRAWINGS FOR SIZE AND LOCATION
- WALL TYPE — DETAIL REFERENCE SEE SHEET AX1.0
- SYMBOL INDICATES ACCESSIBILITY ITEM. SEE DETAIL 15 / AX7.2 FOR TYPICAL ACCESSIBILITY STANDARDS, CLEARANCES AND MOUNTING HEIGHTS & LOCATIONS
- XX INTERIOR ELEVATION MARK, SEE INTERIOR ELEVATIONS SHEETS AA7.1 , AA7.2 , AB7.1 , AB1.2 & AD7.1

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MADERA HIGH SCHOOL STADIUM

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

MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

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

PROJECT NUMBER
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PTN NO.
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DRAWN BY
Author

REVISIONS

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2	ADDENDUM 02	08/22/2025

CONSTRUCTION DOCUMENTS

FLOOR PLAN - BUILDING C

AC1.1

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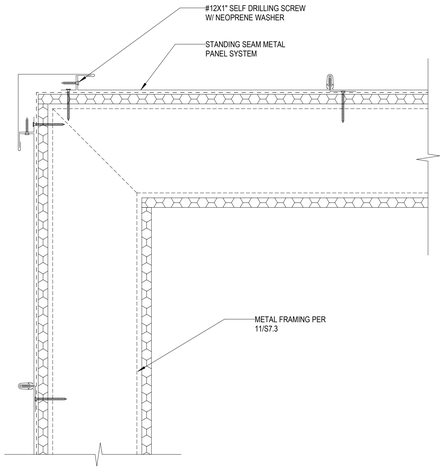
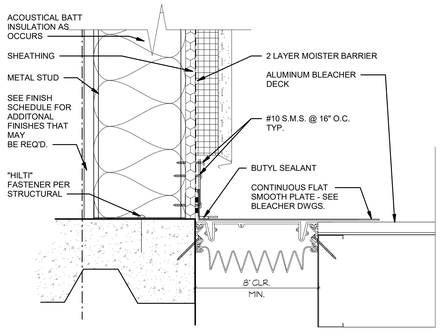
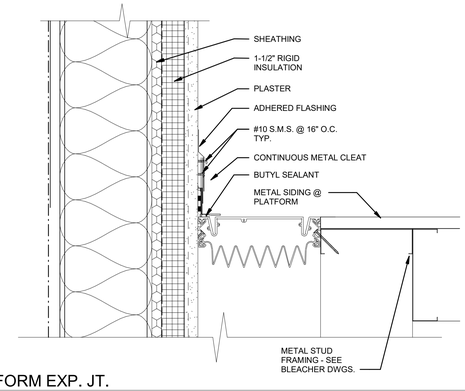


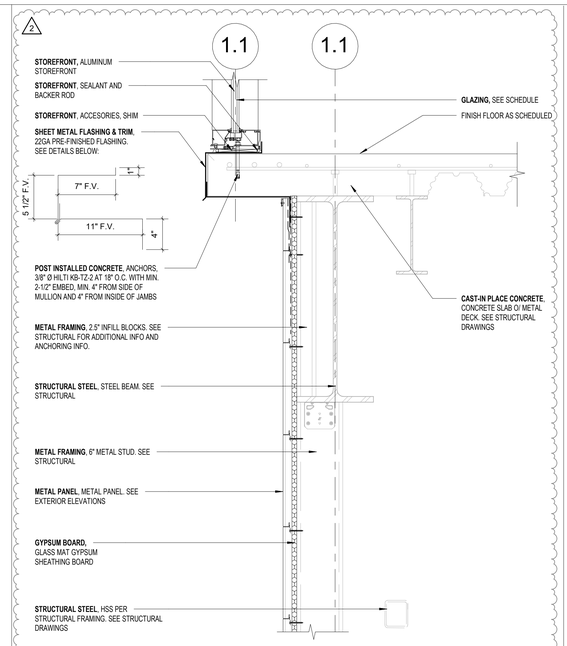
28 CORNER AT METAL PANEL FASCIA - BUILDING C
SCALE: 3" = 1'-0"



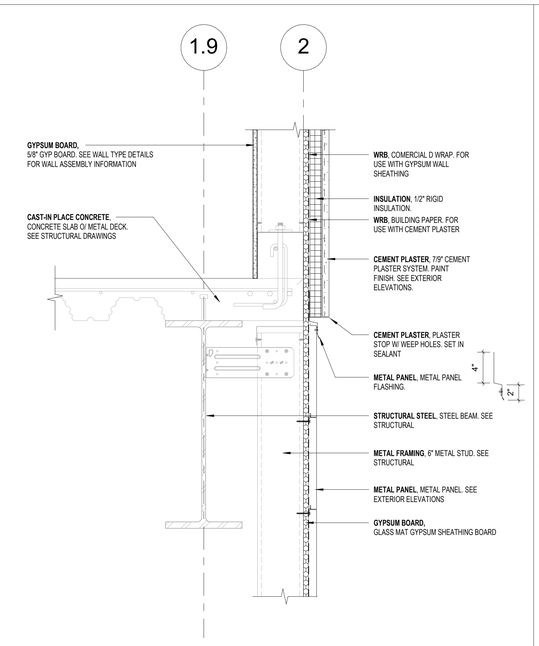
29 METAL PANEL @ SILL
SCALE: 3" = 1'-0"



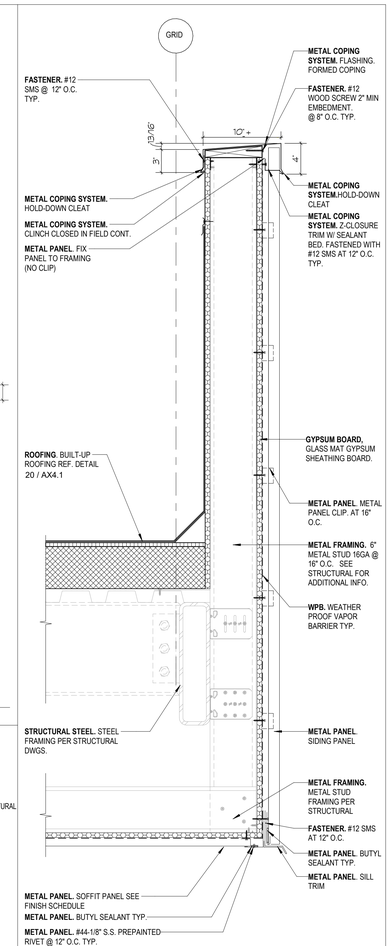
30 PLATFORM EXP. JT.
SCALE: 3" = 1'-0"



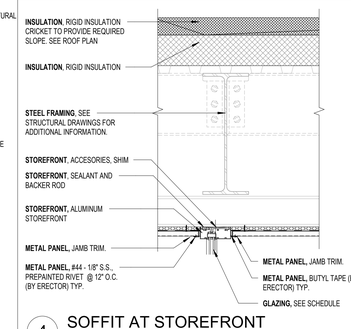
17 STOREFRONT AT FLOOR
SCALE: 1 1/2" = 1'-0"



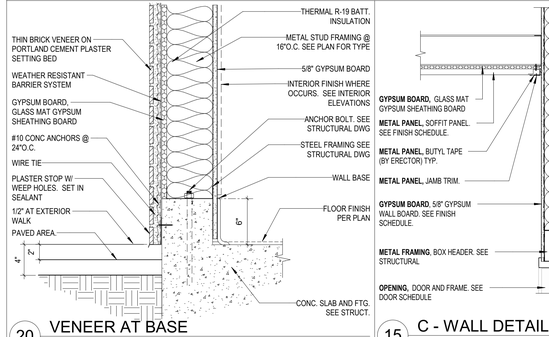
7 PRESS BOX LEVEL - WALL TO FLOOR
SCALE: 1 1/2" = 1'-0"



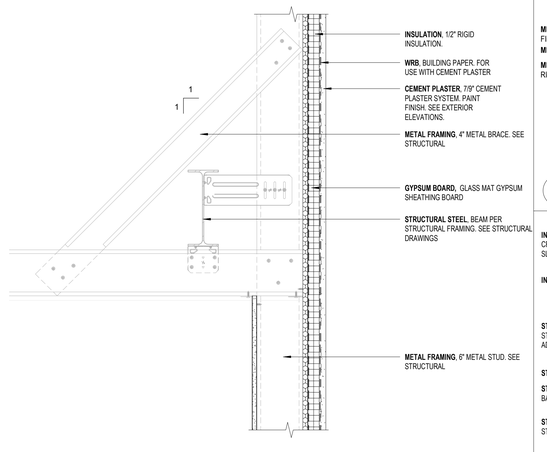
3 METAL PANEL PARAPET - BUILDING C
SCALE: 1 1/2" = 1'-0"



4 SOFFIT AT STOREFRONT
SCALE: 1" = 1'-0"



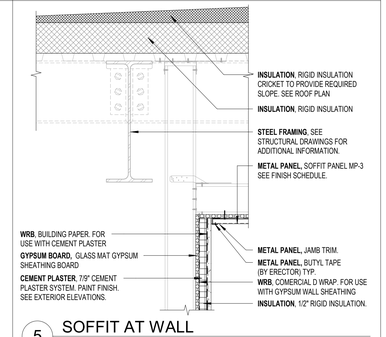
19 CORNER AT SOFFIT 1
SCALE: 1 1/2" = 1'-0"



9 CORNER AT SOFFIT 2
SCALE: 1 1/2" = 1'-0"

20 VENEER AT BASE
SCALE: 1 1/2" = 1'-0"

15 C - WALL DETAIL
SCALE: 1" = 1'-0"



5 SOFFIT AT WALL
SCALE: 1" = 1'-0"

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200 SOUTH "I" STREET
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CONSTRUCTION DOCUMENTS

MADERA UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT
MICHAEL R. SCHOEN
No. C-22599
RENEWAL DATE
FEB 28, 2027
STATE OF CALIFORNIA

PROJECT NUMBER 20-51

DATE 08/12/2024

DSA APPLICATION NO. 02-122784

FILE NO. 20-H3

PTN NO. 65243-154

DRAWN BY Author

REVISIONS

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2	ADDENDUM 02	08/22/2025

CONSTRUCTION DOCUMENTS

SPECIALTY DETAILS

AC9.1

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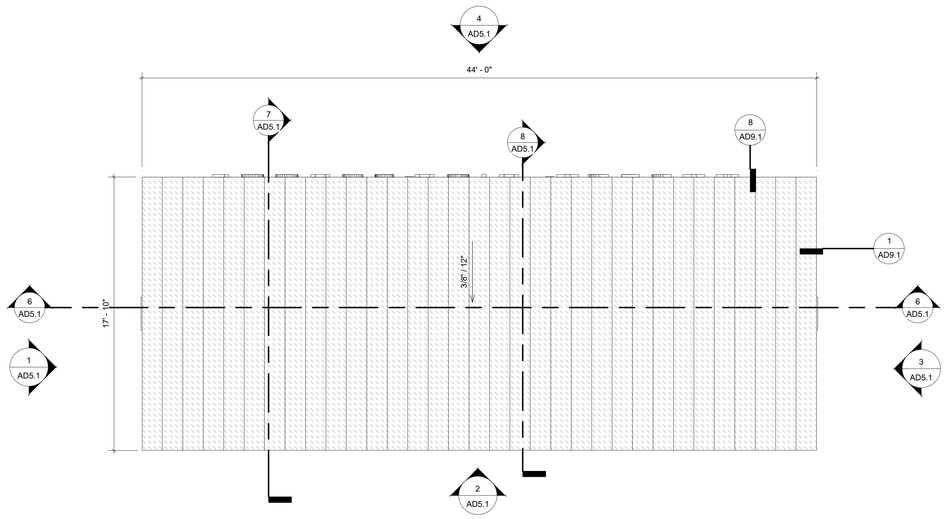

1 ROOF PLAN - BUILDING D
SCALE: 1/4" = 1'-0"

GENERAL NOTES - ROOF PLAN

1. REFERENCE MECHANICAL PLANS FOR ALL MECHANICAL EQUIPMENT AN PENETRATIONS.
2. SEE AX4.1 FOR ALL CURB AND PENETRATION DETAILS.

ROOF LEGEND

BUILT UP ROOFING SYSTEM CLASS 'A' RATED o/ TAPERED RIGID INSULATION SEE AX4.1 FOR BUR ASSEMBLIES

RIGID INSULATION CRICKET - ***1/4" : 12 CROSS SLOPE MIN***. SEE DETAIL 3 / AX4.1

CLASS 'A' METAL STANDING SEAM ROOFING O/ SHEATHING 2

KEYNOTES XX-XX

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MICHAEL R. SCHOEN
No. C-31505
RENEWAL DATE
FEB 28, 2027
STATE OF CALIFORNIA

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ROOF PLAN - BUILDING D

AD4.1

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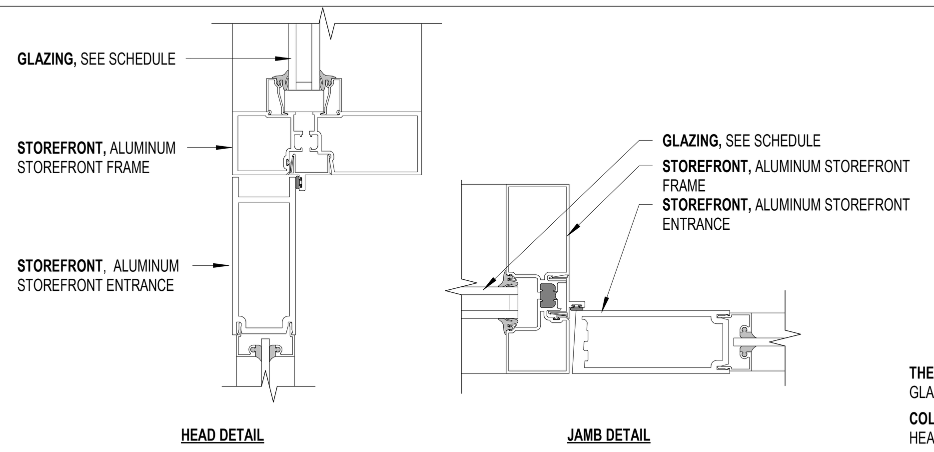
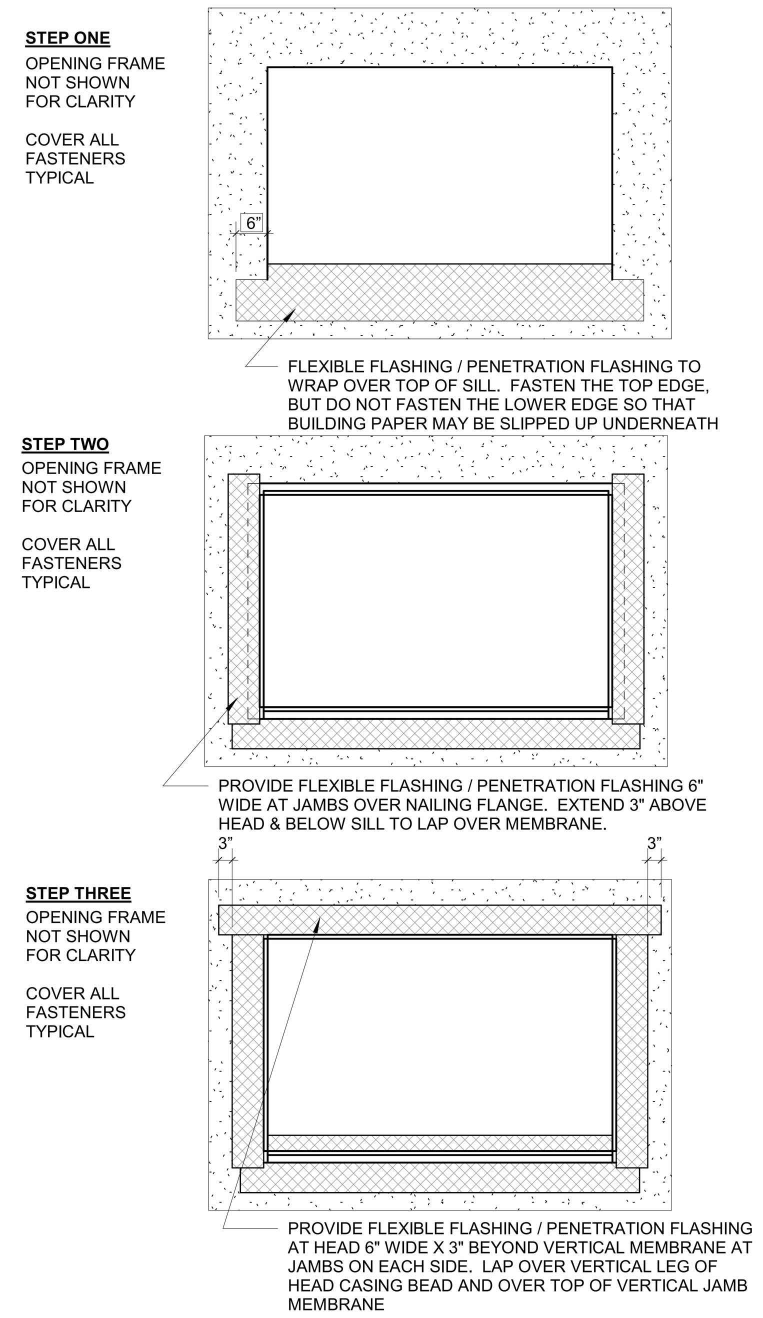


25 ALUMINUM STOREFRONT TRANSITION
SCALE: 3" = 1'-0"



24 TYPICAL OPENINGS FLEXIBLE FLASHING
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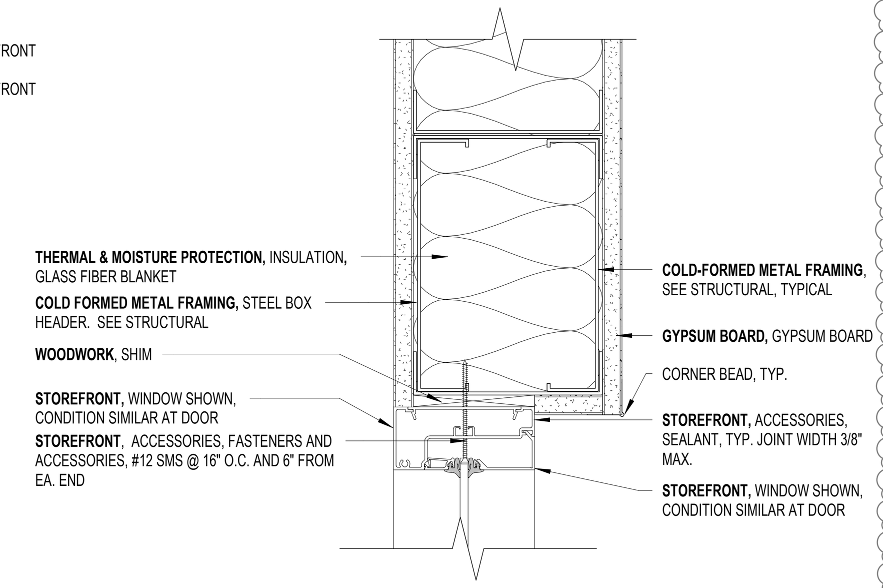
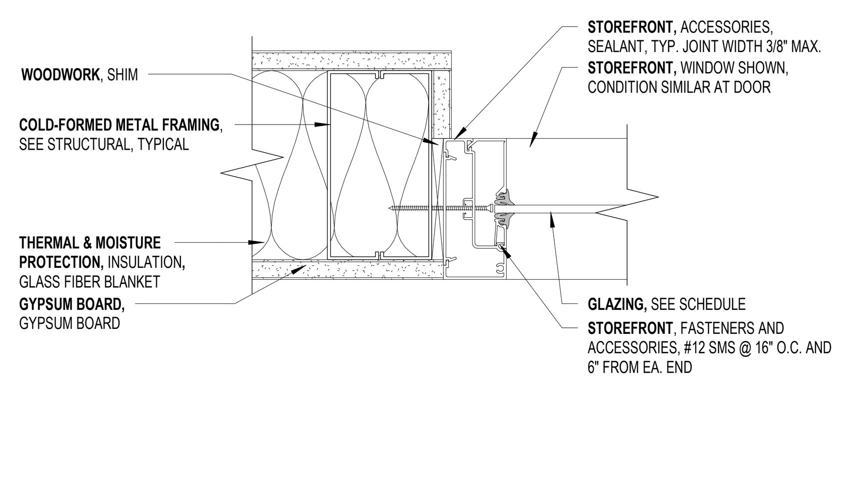


20 INTERIOR ALUMINUM STOREFRONT HEAD
SCALE: 3" = 1'-0"



19 INTERIOR ALUMINUM STOREFRONT JAMB
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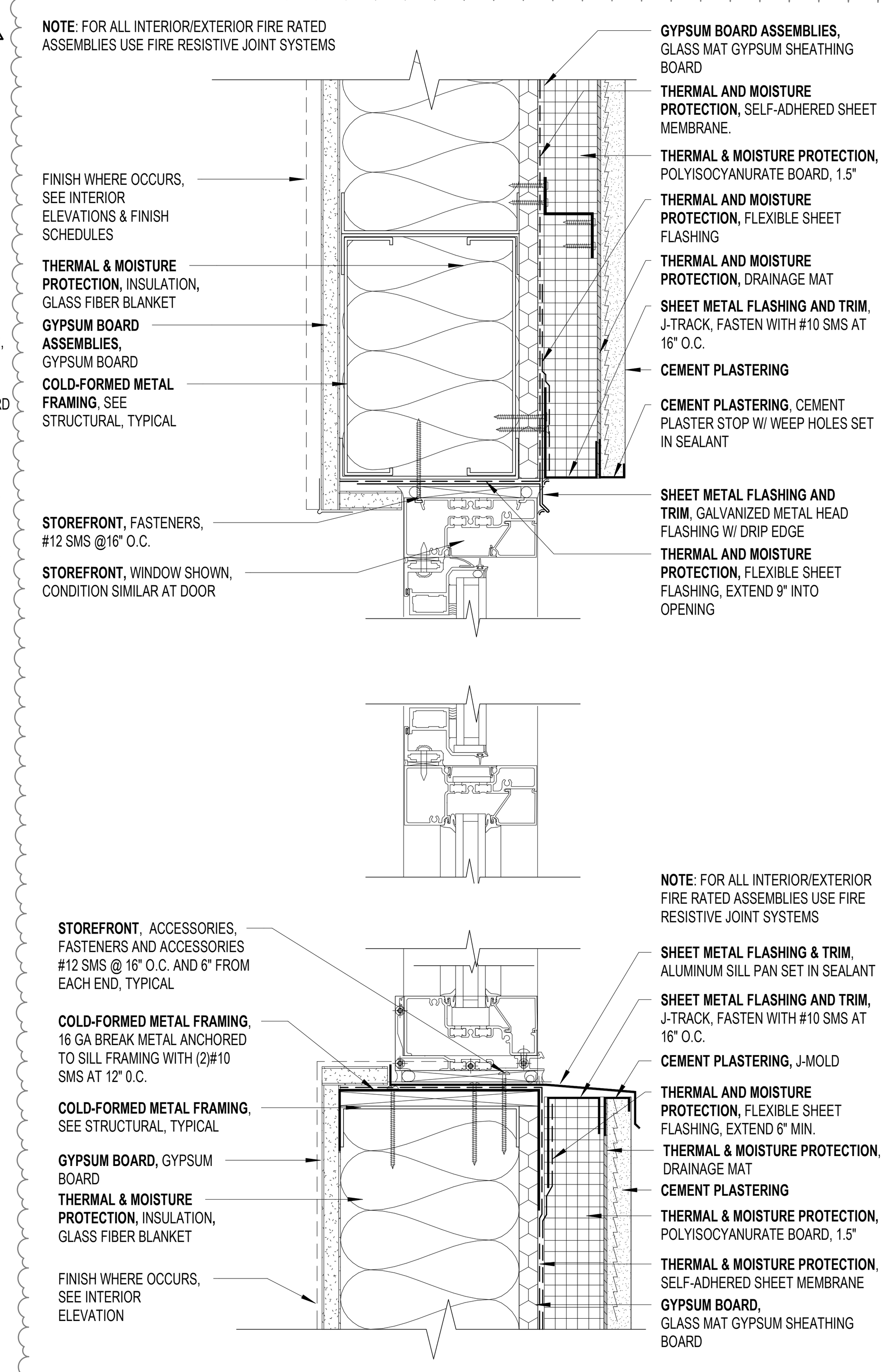

14 PRESSBOX WINDOW - HEAD/MULLION/SILL
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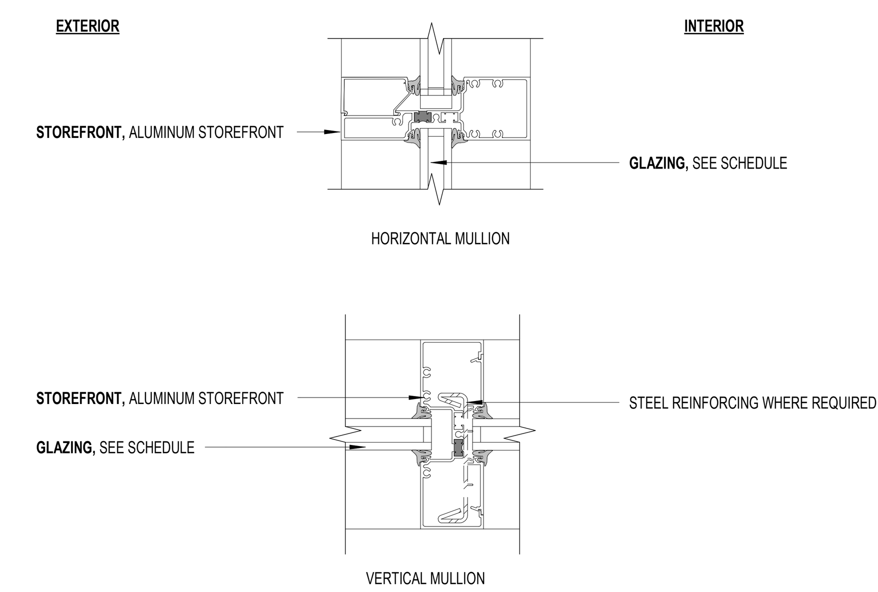
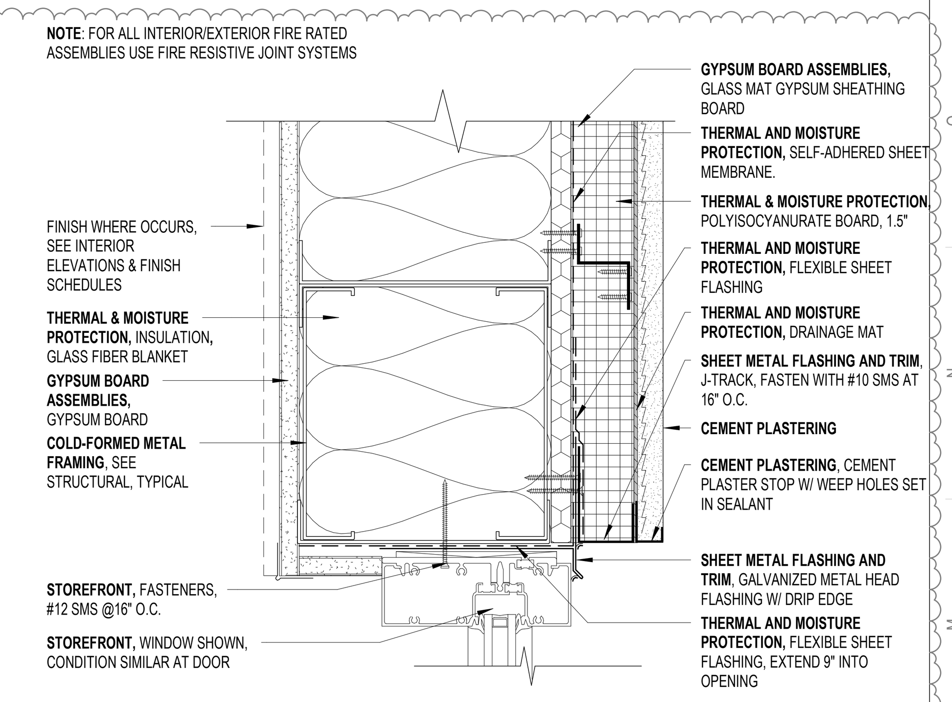
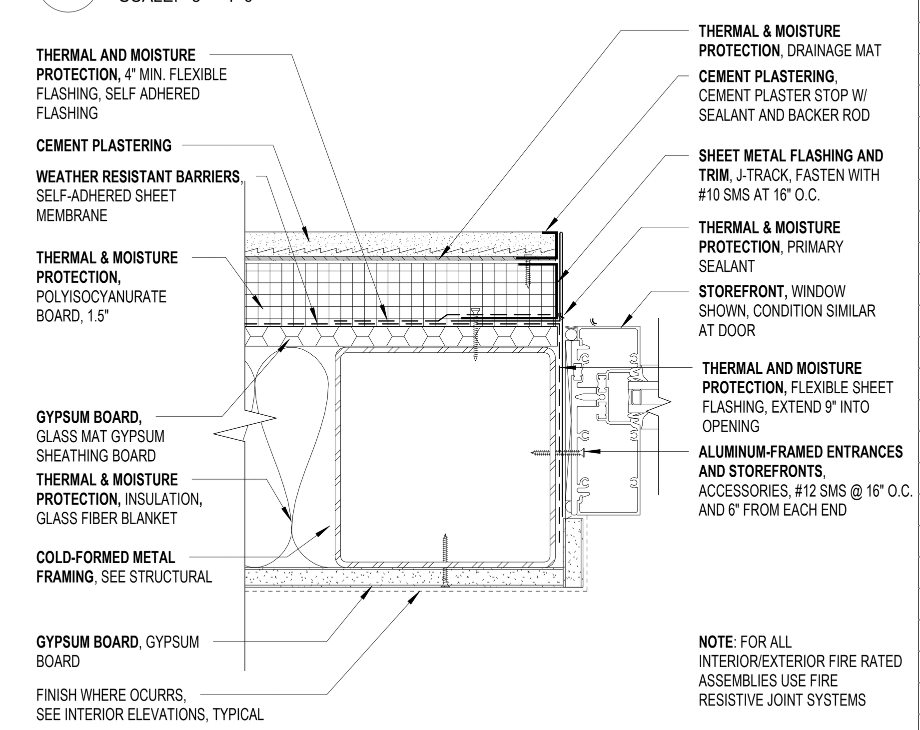


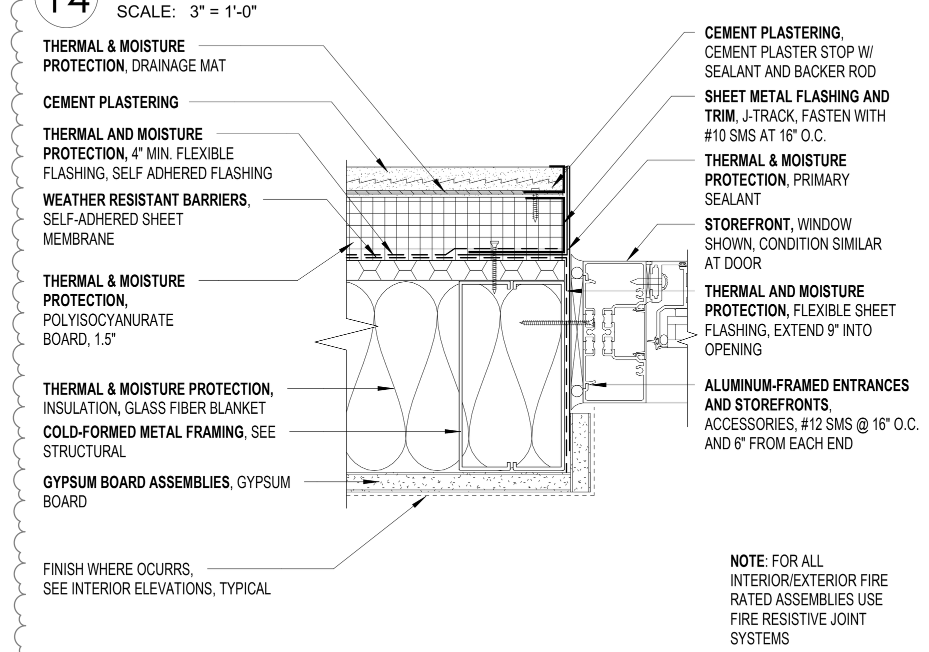
09 ALUMINUM STOREFRONT MULLION
SCALE: 3" = 1'-0"



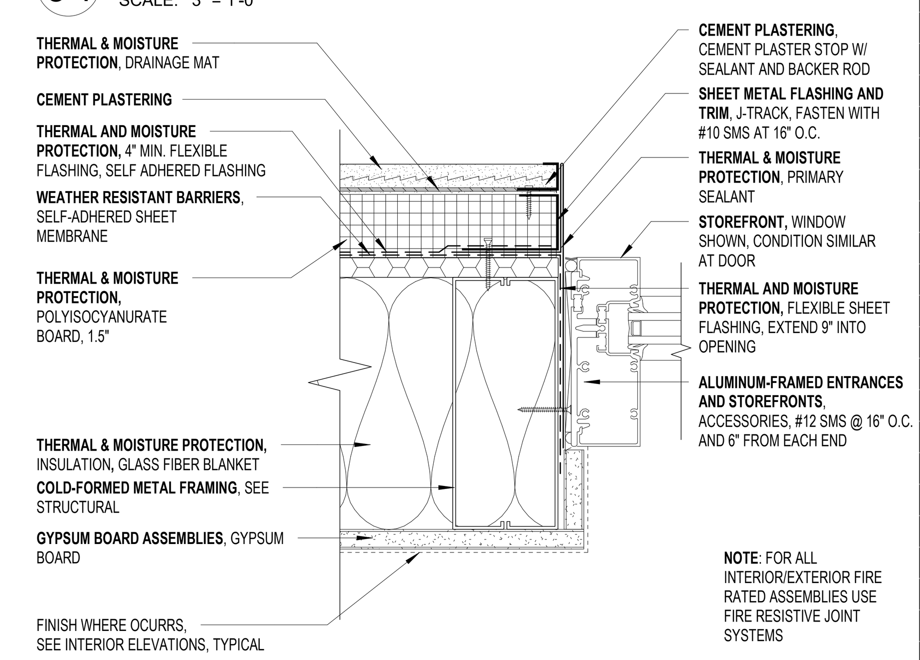
05 ALUMINUM STOREFRONT HEAD @ CP
SCALE: 3" = 1'-0"



04 ALUMINUM STOREFRONT COLUMN CONDITION
SCALE: 3" = 1'-0"



13 PRESSBOX WINDOW - JAMB
SCALE: 3" = 1'-0"



03 ALUMINUM STOREFRONT JAMB @ CP
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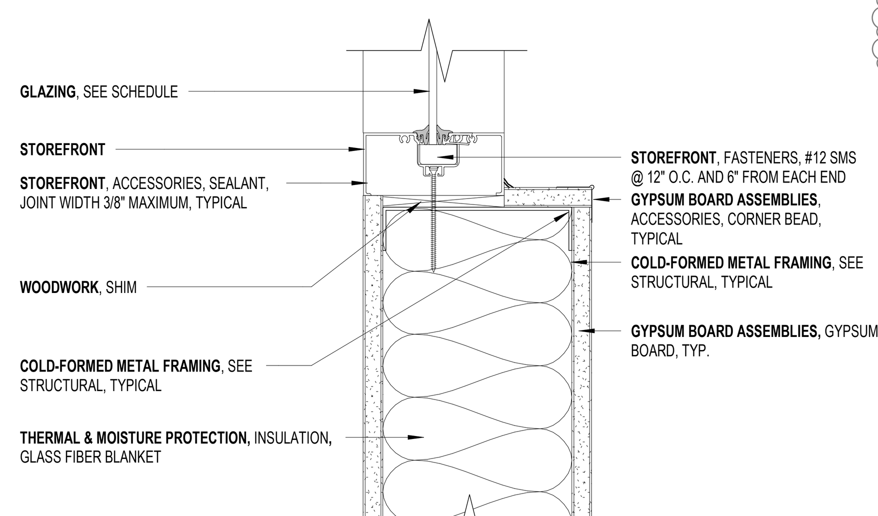
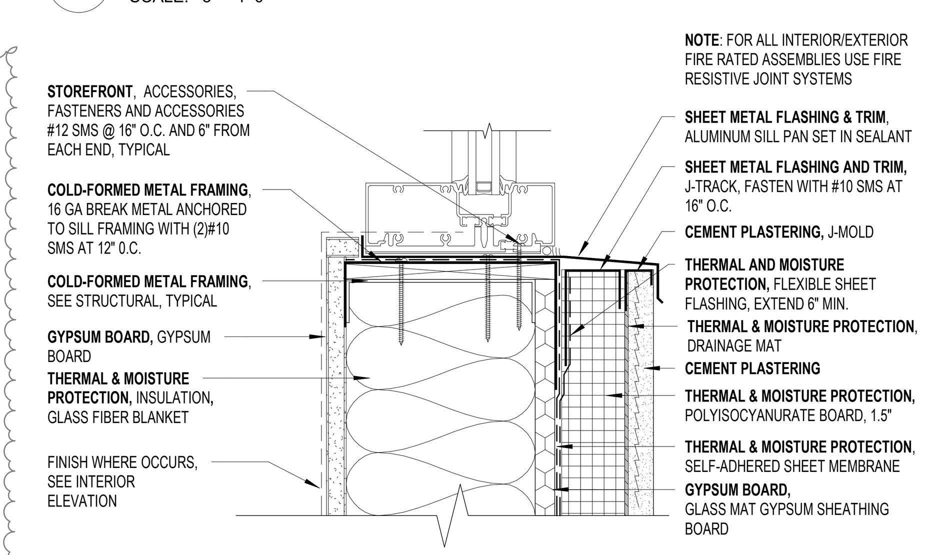


17 INTERIOR ALUMINUM STOREFRONT SILL
SCALE: 3" = 1'-0"



02 ALUMINUM STOREFRONT SILL @ CP
SCALE: 3" = 1'-0"

2

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CONSTRUCTION DOCUMENTS

TYPICAL OPENING DETAILS - STOREFRONT

AX3.2

BIM 360://Madera USD_20-51_MHS Field House/20-51_MHS STADIUM_V21.rvt
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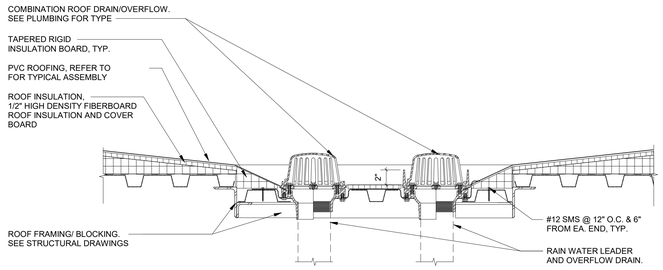
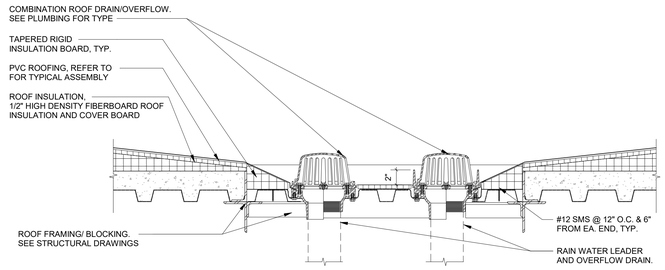


26 ROOF AND OVERFLOW DRAINS

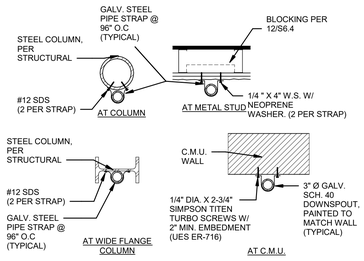
SCALE: 1 1/2" = 1'-0"



NOTE:
SEE 8/AX4.1 FOR ROOF ASSEMBLY

16 ROOF AND OVERFLOW DRAINS AT CONCRETE ROOF

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



6 DOWNSPOUT

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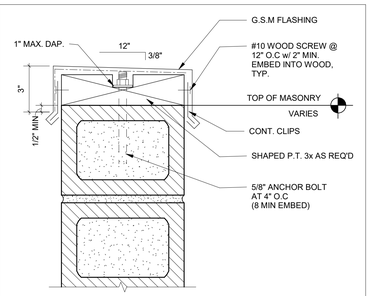
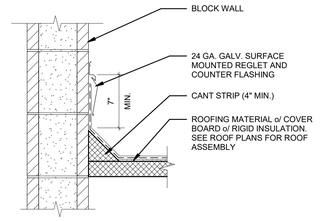


SECTION VIEW

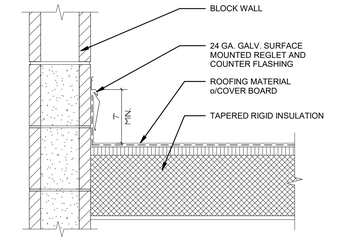
1 CMU @ PARAPET CAP

SCALE: 3" = 1'-0"



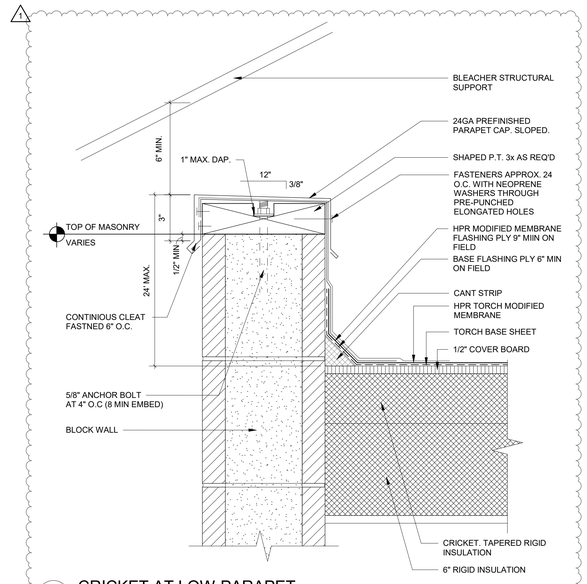
2 CANT STRIP AT MASONRY

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



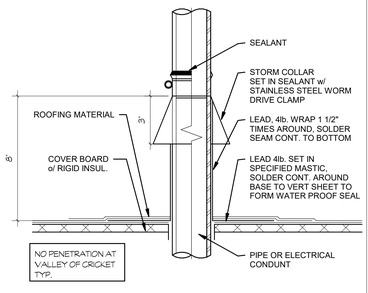
3 CRICKET

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



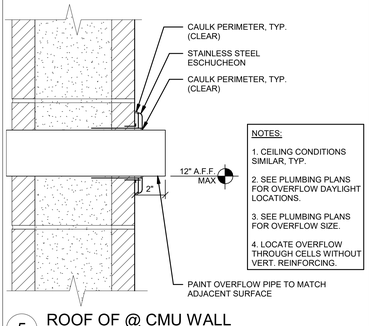
13 CRICKET AT LOW PARAPET

SCALE: 3" = 1'-0"



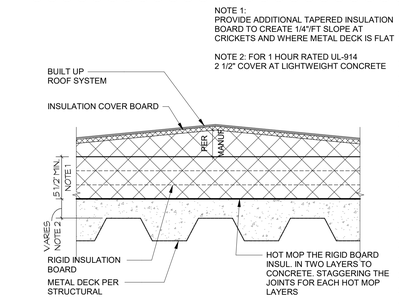
4 ROOF PENETRATION

SCALE: 3" = 1'-0"



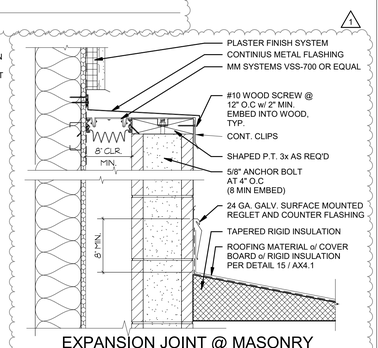
5 ROOF OF @ CMU WALL

SCALE: 3" = 1'-0"



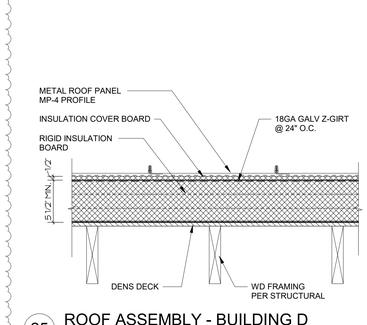
14 RIDGE - BLDG A AND B

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



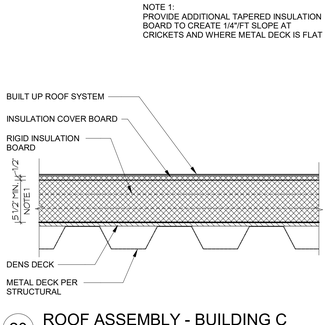
9 EXPANSION JOINT @ MASONRY PARAPET

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



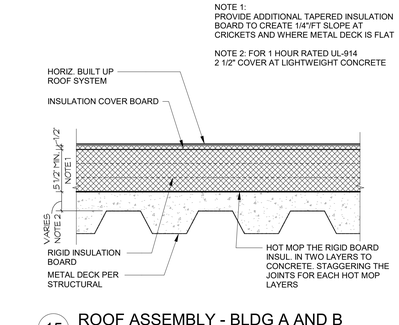
25 ROOF ASSEMBLY - BUILDING D

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



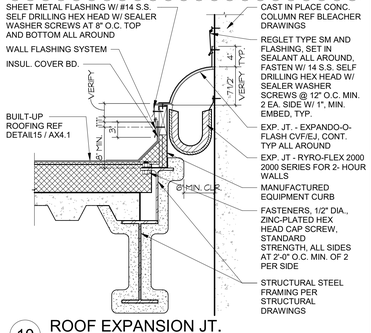
20 ROOF ASSEMBLY - BUILDING C

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



15 ROOF ASSEMBLY - BLDG A AND B

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



10 ROOF EXPANSION JT.

SCALE: 1" = 1'-0"

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MADERA HIGH SCHOOL STADIUM

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

MADERA UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT
MICHAEL R. SCHOEN
No. C-30295
REGISTRATION DATE
FEB 28, 2027
STATE OF CALIFORNIA

PROJECT NUMBER
20-51

DATE
08/12/2024

DSA APPLICATION NO.
02-122784

FILE NO.
20-H3

PTN NO.
65243-154

DRAWN BY
Author

REVISIONS

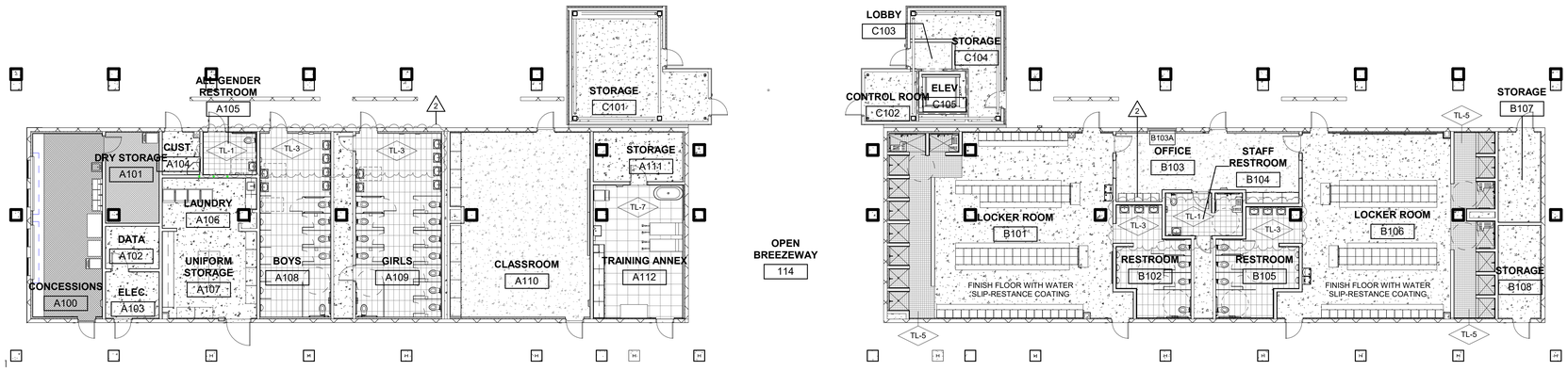
#	DESCRIPTION	DATE
1	ADDENDUM 01	08/18/2025
2	ADDENDUM 02	08/22/2025

CONSTRUCTION DOCUMENTS

ROOF DETAILS

AX4.1

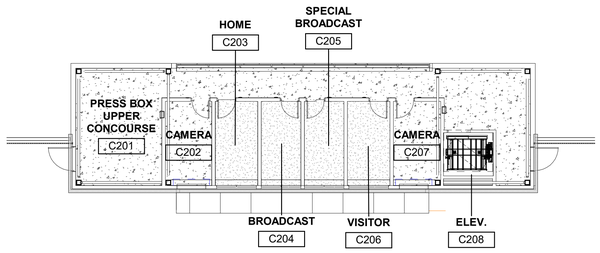
BIM 360://Madera USD_20-51_MHS Field House/20-51_MHS STADIUM_V21.rvt
8/22/2025 9:47:37 AM



1 BUILDING A, B, C - FIRST FLOOR FINISH PLAN

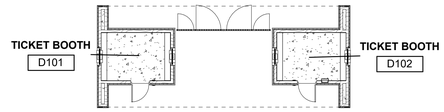
SCALE: 3/32" = 1'-0"

OPEN BREEZEWAY 114



2 BUILDING C - SECOND FLOOR FINISH PLAN

SCALE: 3/32" = 1'-0"



3 BUILDING D - FIRST FLOOR FINISH PLAN

SCALE: 3/32" = 1'-0"

NUMBER	DESCRIPTION	FLOOR	BASE			WALLS								CEILING	REMARKS
						NORTH		EAST		SOUTH		WEST			
		MATERIAL	MATERIAL	FINISH	HEIGHT	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH		
A100	CONCESSIONS	REFER TO SHEET AX8.0	EPF	FF	6"	FRP	FF	FRP	FF	FRP	FP	FRP	FF	REFER TO SHEET AA3.1	
A101	DRY STORAGE	REFER TO SHEET AX8.0	RTB	FF	4"	GB	ESP	GB	ESP	GB	ESP	GB	ESP	REFER TO SHEET AA3.1	
A102	DATA	REFER TO SHEET AX8.0	RTB	FF	4"	GB	ESP	GB	ESP	GB	ESP	GB	ESP	REFER TO SHEET AA3.1	
A103	ELEC.	REFER TO SHEET AX8.0	RTB	FF	4"	GB	ESP	GB	ESP	GB	ESP	GB	ESP	REFER TO SHEET AA3.1	
A104	CUST.	REFER TO SHEET AX8.0	RTB	FF	4"	GB	ESP	GB/FRP	ESP/FF	GB/FRP	ESP/FF	GB	ESP	REFER TO SHEET AA3.1	
A105	ALL GENDER RESTROOM	REFER TO SHEET AX8.0	TSP	FF	-	TL	FF	TL	FF	TL	FF	TL	FF	REFER TO SHEET AA3.1	SCHLUTER TRIM AT BASE PER 13/AX5.2
A106	LAUNDRY	REFER TO SHEET AX8.0	RTB	FF	4"	GB	GP	GB	GP	GB	GP	GB	GP	REFER TO SHEET AA3.1	
A107	UNIFORM STORAGE	REFER TO SHEET AX8.0	RTB	FF	4"	GB	ESP	GB	ESP	GB	ESP	GB	ESP	REFER TO SHEET AA3.1	
A108	BOYS	REFER TO SHEET AX8.0	TSP	FF	-	TL	FF	TL	FF	TL	FF	TL	FF	REFER TO SHEET AA3.1	SCHLUTER TRIM AT BASE AND WALL CORNER PER 12, 13/AX5.2
A109	GIRLS	REFER TO SHEET AX8.0	TSP	FF	-	TL	FF	TL	FF	TL	FF	TL	FF	REFER TO SHEET AA3.1	SCHLUTER TRIM AT BASE AND WALL CORNER PER 12, 13/AX5.2
A110	CLASSROOM	REFER TO SHEET AX8.0	RTB	FF	4"	GB	ESP	VTB-1	FF	GB	ESP	GB	ESP	REFER TO SHEET AA3.1	
A111	STORAGE	REFER TO SHEET AX8.0	RTB	FF	4"	GB	ESP	GB	ESP	GB	ESP	GB	ESP	REFER TO SHEET AA3.1	
A112	TRAINING ANNEX	REFER TO SHEET AX8.0	TL	FF	6"	GB	ESP	GB	ESP	GB	ESP	GB	ESP	REFER TO SHEET AA3.1	
B101	LOCKER ROOM	REFER TO SHEET AX8.0	RTB	FF	4"	GB	ESP	GB	ESP	GB	ESP	GB	ESP	REFER TO SHEET AB3.1	TL2 AT SHOWERS AND LOW WALL
B102	RESTROOM	REFER TO SHEET AX8.0	TSP	-	-	TL	FF	TL	FF	TL	FF	TL	FF	REFER TO SHEET AB3.1	SCHLUTER TRIM AT BASE AND WALL CORNER PER 12, 13/AX5.2
B103	OFFICE	REFER TO SHEET AX8.0	RTB	FF	4"	GB	ESP	GB	ESP	GB	ESP	GB	ESP	REFER TO SHEET AB3.1	
B104	STAFF RESTROOM	REFER TO SHEET AX8.0	TSP	FF	6"	TL	FF	TL	FF	TL	FF	TL	ESP	REFER TO SHEET AB3.1	SCHLUTER TRIM AT BASE AND WALL CORNER PER 12, 13/AX5.2
B105	RESTROOM	REFER TO SHEET AX8.0	TSP	-	-	TL	FF	TL	FF	TL	FF	TL	ESP	REFER TO SHEET AB3.1	SCHLUTER TRIM AT BASE AND WALL CORNER PER 12, 13/AX5.2
B106	LOCKER ROOM	REFER TO SHEET AX8.0	RTB	FF	4"	GB	ESP	GB	ESP	GB	ESP	GB	ESP	REFER TO SHEET AB3.1	TL2 AT SHOWERS AND LOW WALL
B107	STORAGE	REFER TO SHEET AX8.0	RTB	FF	4"	GB	ESP	GB	ESP	GB	ESP	GB	ESP	REFER TO SHEET AB3.1	
B108	STORAGE	REFER TO SHEET AX8.0	RTB	FF	4"	GB	ESP	GB	ESP	GB	ESP	GB	ESP	REFER TO SHEET AB3.1	
C101	STORAGE	REFER TO SHEET AX8.0	RTB	FF	4"	GB	ESP	GB	ESP	GB	ESP	GB	ESP	REFER TO SHEET AC3.1	
C102	CONTROL ROOM	REFER TO SHEET AX8.0	RTB	FF	4"	GB	ESP	GB	ESP	GB	ESP	GB	ESP	REFER TO SHEET AC3.1	
C103	LOBBY	REFER TO SHEET AX8.0	RTB	FF	4"	GB	ESP	GB	ESP	GB	ESP	GB	ESP	REFER TO SHEET AC3.1	
C104	STORAGE	REFER TO SHEET AX8.0	RTB	FF	4"	GB	ESP	GB	ESP	GB	ESP	GB	ESP	REFER TO SHEET AC3.1	
C105	ELEV	REFER TO SHEET AX8.0	RTB	FF	4"	PL	FF	PL	FF	PL	FF	PL	FF	REFER TO SHEET AC3.1	
C201	PRESS BOX UPPER CONCOURSE	REFER TO SHEET AX8.0	RTB	FF	6"	-	-	-	-	-	-	-	-	REFER TO SHEET AC3.1	
C202	CAMERA	REFER TO SHEET AX8.0	RTB	FF	6"	GB	ESP	GB	ESP	GB	ESP	GB	ESP	REFER TO SHEET AC3.1	
C203	HOME	REFER TO SHEET AX8.0	RTB	FF	6"	GB	ESP	GB	ESP	GB	ESP	GB	ESP	REFER TO SHEET AC3.1	
C204	BROADCAST	REFER TO SHEET AX8.0	RTB	FF	6"	GB	ESP	GB	ESP	GB	ESP	GB	ESP	REFER TO SHEET AC3.1	
C205	SPECIAL BROADCAST	REFER TO SHEET AX8.0	RTB	FF	6"	GB	ESP	GB	ESP	GB	ESP	GB	ESP	REFER TO SHEET AC3.1	
C206	VISITOR	REFER TO SHEET AX8.0	RTB	FF	6"	GB	ESP	GB	ESP	GB	ESP	GB	ESP	REFER TO SHEET AC3.1	
C207	CAMERA	REFER TO SHEET AX8.0	RTB	FF	6"	GB	ESP	GB	ESP	GB	ESP	GB	ESP	REFER TO SHEET AC3.1	
C208	ELEV	REFER TO SHEET AX8.0	RTB	FF	4"	PL	FF	PL	FF	PL	FF	PL	FF	REFER TO SHEET AC3.1	
D101	TICKET BOOTH	REFER TO SHEET AX8.0	RTB	FF	4"	GB	ESP	GB	ESP	GB	ESP	GB	ESP	REFER TO SHEET AD3.1	
D102	TICKET BOOTH	REFER TO SHEET AX8.0	RTB	FF	4"	GB	ESP	GB	ESP	GB	ESP	GB	ESP	REFER TO SHEET AD3.1	

COLOR SCHEDULE

MATERIAL	DESIGNATION	MANUFACTURER	SIZE	STYLE	COLOR	REMARKS
CARPET	CPT-1	PATCRAFT	24X24	BIG SPLASH	DIVE-SHEET	1
CONCRETE MASONRY UNIT	CMU-1	BASALITE		PRECISION	S-703	8
CONCRETE MASONRY UNIT	CMU-2	BASALITE		PRECISION	NATURAL	8
CONCRETE MASONRY UNIT	CMU-3	BASALITE		SPLIT FACE	NATURAL	8
EPOXY FLOOR	EPF-1	SHERWIN WILLIAMS		RESUFLOR DECO QUARTZ BC23	METEOR SHOWER	
FIBER REINFORCED PANEL	FRP-1	NUDO		FIBER-LITE LINER PANEL,SMOOTH	WHITE	
GROUT	GRT-1	CUSTOM			#644 SHADOW	
GROUT	GRT-2	CUSTOM			#543 DRIFTWOOD	
LVT (ELEVATOR)	LVT-1	SHAW CONTRACT	9"X48"	0927V, COVE	CASTER	
METAL PANEL	MP-3	AEP SPAN	12"	FLUSH PANEL	CUSTOM BLUE	
METAL PANEL	MP-4	AEP SPAN	16"	SELECT SEAM NARROW BATTEN	CUSTOM BLUE	
PAINT	P-1	BENJAMIN MOORE			OC-9 BALLET WHITE	
PAINT	P-2	SHERWIN WILLIAMS			SW 7017 DORIAN GRAY	
PAINT	P-3	BENJAMIN MOORE			HC-166 KENDALL CHARCOAL	
PAINT	P-4	SHERWIN WILLIAMS			SW 6966 BLUEBLOOD	
PARTITIONS	PRT-1	BOBRICK		SIERRA SERIES	SC04 - FOREST GREEN	
PLASTIC LAMINATE	PL-1	WILSONART		8208K-16	FAWN CYPRESS	2
PLASTIC LAMINATE	PL-2	WILSONART		5057K-18	PEARL ALLOY	2
RUBBER TOPSET BASE	RTB-1	ROPPE			123 CHARCOAL	
SEALED CONCRETE	SC-1					
SOLID SURFACE	SO-1	WILSONART			SILVER SMOKE	
THIN BRICK	TB-1	GLEN-GERY	7 5/8" X 2 1/4" X 1/2"	MODULAR THIN BRICK	STONE GREY KLAYCOAT	
THIN BRICK	TB-2	GLEN-GERY	7 5/8" X 2 1/4" X 1/2"	MODULAR THIN BRICK	BLUE SMOOTH IRONSPOT	
TILE	TL-1	CROSSVILLE	12"X12"	ARGENT	CLEAR SLATE	
TILE	TL-2	DALTILE	4"X12"	COLOR WHEEL LINEAR	MATTE BUISCUIT K775	5
TILE	TL-3	CROSSVILLE	12"x24"	GOTHAM	CLOCK TOWER	
TILE	TL-4	CROSSVILLE	12"X36"	HIDE AND SLEEK	LAPIS	6
TILE	TL-5	CROSSVILLE	3"X3" MOSAIC	COLOR BLOX 2.0	LITTLE BOY BLUE	4
TILE	TL-6	CROSSVILLE	6"X12"	COLOR BLOX 2.0	LITTLE BOY BLUE	6
TILE	TL-7	CROSSVILLE	24"X24"	CIVILIZATION	CURRENCY	
TILE	TL-8	CROSSVILLE	6"X12"	CIVILIZATION	CURRENCY	
TILE	TL-9	CROSSVILLE	12"x24"	CIVILIZATION	CURRENCY	
TREX SIDING	TRX-1	TREX	.94" X 5.5"	TRANSCEND LINEAGE	ISLAND MIST	
VINYL TACKBOARD	VTB-1	WESTERN BUILDING CO. / DECOR MFG LLC			SNOWDRIFT	

FINISH SCHEDULE ABBREVIATIONS

AFF	ABOVE FINISH FLOOR	PO	POLISHED
AL	ALUMINUM	PL	PLASTIC LAMINATE
ANOD	ANODIZED	PLT	PLATE
CLN	CLEAN	PLY	PLYWOOD
CLR	CLEAR	PRT	TOILET PARTITION
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
(E)	EXISTING	SGP	SEMI-GLOSS PAINT
EPF	EPOXY FLOORING	SHGC	SOLAR HEAT GAIN COEFFICIENT
ESP	EGGSHEEL PAINT	SL	SEALED
EXP	EXPOSED STRUCTURE	SO	SOLID SURFACE
F	FIXED	STN	STAINED
FF	FACTORY FINISH	T	TEMPERED
FRP	FIBER REINFORCED PANEL	TL	TILE
GB	GYPSUM BOARD	TNT	TINTED
GP	GLOSS PAINT	TSP	TRANSITION STRIP
HM	HOLLOW METAL	U	U VALUE
LP	PLASTIC LAMINATE	VLT	VISUAL LIGHT TRANSMITTANCE
OP	OPAQUE GLAZING (FILM)	VT	VINYL TILE
P	PAINTED	VTB	VINYL TACK BOARD
		VWC	VINYL WALL COVERING
		WGB	WATER-RESISTANT GYPSUM BOARD

FINISH FLOOR PLAN LEGEND

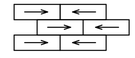
- HATCH INDICATES TILE — TL-1
- HATCH INDICATES TILE — TL-3
- HATCH INDICATES TILE — TL-5
- HATCH INDICATES CARPET — CPT-1
- HATCH INDICATES EPOXY FLOORING — EPF-1
- HATCH INDICATES SEALED CONCRETE

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, 803.1.1 & 803.11
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.
13. ALL CASEWORK TO BE PLASTIC LAMINATE TYPE PL-1 AND COUNTER TOPS TO BE PLASTIC LAMINATE TYPE PL-2 U.N.O.

REMARKS

1. CARPET PATTERN SHALL BE: BRICK



2. RUN PLASTIC LAMINATE VERTICAL.
3. REFER TO RESTROOM ELEVATIONS FOR TILE ACCENT WALLS. SEE TILE PATTERN.
4. 3" X 3" MOSAIC TILE TO BE USED IN SHOWERS ONLY.
5. GROUT COLOR SHALL BE:
   CUSTOM BUILDING PRODUCTS
   COLOR GROUT
   #543 DRIFTWOOD
6. GROUT COLOR SHALL BE:
   CUSTOM BUILDING PRODUCTS
   PRISM SURE COLOR GROUT
   #19 PEWTER
7. GRAPHICS TO BE COORDINATED WITH ARCHITECT.
8. SEE EXTERIOR ELEVATIONS FOR PATTERN.

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MADERA HIGH SCHOOL STADIUM

200 SOUTH "I" STREET
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CONSTRUCTION DOCUMENTS

MADERA UNIFIED SCHOOL DISTRICT 19 66

PROFESSIONAL SEAL

LICENSED ARCHITECT — MICHAEL R. SCHOEN — No. C-28295 — RENEWAL DATE 08.31.2027 — STATE OF CALIFORNIA

PROJECT NUMBER 20-51

DATE 08/12/2024

DSA APPLICATION NO. 02-122784

FILE NO. 20-H3

PTN NO. 65243-154

DRAWN BY Author

REVISIONS

#	DESCRIPTION	DATE
1	ADDENDUM 01	08/16/2025
2	ADDENDUM 02	08/22/2025

CONSTRUCTION DOCUMENTS

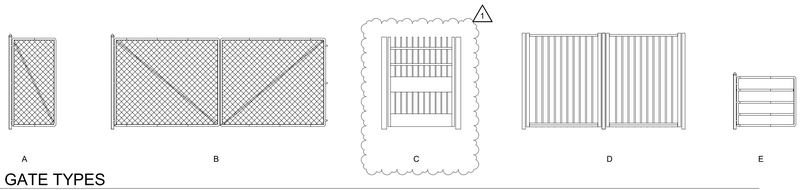
FINISH/COLOR SCHEDULE

AX8.0

BIM 360://Madera USD_20-51_MHS Field House/20-51_MHS STADIUM_V21.rvt
8/22/2025 8:35:52 AM

GATE SCHEDULE

GATE NO.	GATE TYPE	GATE SIZE WIDTH	GATE SIZE HEIGHT	GATE THICKNESS	GATE CONSTRUCTION	GATE FINISH	HARDWARE	REMARKS
G1	D	14' - 0"	6' - 0"	1 3/4"	WI	PT	G03	ORNAMENTAL
G2	D	14' - 0"	6' - 0"	1 3/4"	WI	PT	G03	ORNAMENTAL
G3	C	3' - 0"	6' - 0"	1 3/4"	WI	PT	G01	ORNAMENTAL
G4	C	4' - 6"	6' - 0"	1 3/4"	WI	PT	G01	ORNAMENTAL
G5	C	3' - 0"	6' - 0"	1 3/4"	WI	PT	G01	ORNAMENTAL
G6	E	4' - 0"	3' - 6"	1 3/4"	WI			
G7	I	20' - 0"	3' - 6"	0"	CL			
G8	E	4' - 0"	3' - 6"	1 3/4"	WI	GALV	G02	CHAIN LINK
G9	B	20' - 0"	6' - 0"		CL	GALV	G03	CHAIN LINK
G10	B	20' - 0"	6' - 0"		CL	GALV	G03	CHAIN LINK
G11	E	4' - 0"	3' - 6"	1 3/4"	WI	GALV	G02	CHAIN LINK
G12	E	4' - 0"	3' - 6"	1 3/4"	WI	GALV	G02	CHAIN LINK
G13	B	20' - 0"	6' - 0"		CL	GALV	G03	CHAIN LINK
G14	C	4' - 6"	6' - 0"	1 3/4"	WI	PT	G01	ORNAMENTAL
G15	E	4' - 0"	3' - 6"	1 3/4"	WI	GALV	G02	CHAIN LINK
G16	E	4' - 0"	3' - 6"	1 3/4"	WI	GALV	G02	CHAIN LINK
G17	A	4' - 0"	6' - 0"		CL	GALV	G03	CHAIN LINK
G18	A	4' - 0"	6' - 0"		CL	GALV	G03	CHAIN LINK
G19	A	4' - 0"	6' - 0"		CL	GALV	G03	CHAIN LINK
G20	A	4' - 0"	6' - 0"		CL	GALV	G03	CHAIN LINK
G21	E	4' - 0"	3' - 6"	1 3/4"	WI			
G22	J	14' - 0"	6' - 0"	1 3/4"	WI			
G23	J	14' - 0"	6' - 0"	1 3/4"	WI			
G24	U	8' - 0"	6' - 0"	1 3/4"	WI			



GATE TYPES

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

WINDOW SCHEDULE - BUILDING 'A'

WINDOW No.	Type	WINDOW DIMENSION WIDTH	WINDOW DIMENSION HEIGHT	GLAZING TYPE	GLAZING CLASS	GLAZING FINISH	FRAMES MATERIAL	FRAMES FINISH	FRAMES THICKNESS	FRAMES FIRE RATING	DETAILS HEAD	DETAILS JAMB	DETAILS SILL	REMARKS
A100A	A	3' - 4"	4' - 0"	DL	II	CLR	HM	SGP	2"	-	23 / AX3.1	24 & 25 / AX3.1	23 / AX3.1	
A100B	A	3' - 4"	4' - 0"	DL	II	CLR	HM	SGP	2"	-	23 / AX3.1	24 & 25 / AX3.1	23 / AX3.1	
A100C	A	3' - 4"	4' - 0"	DL	II	CLR	HM	SGP	2"	-	23 / AX3.1	24 & 25 / AX3.1	23 / AX3.1	
A100D	A	3' - 4"	4' - 0"	DL	II	CLR	HM	SGP	2"	-	23 / AX3.1	24 & 25 / AX3.1	23 / AX3.1	

WINDOW SCHEDULE - BUILDING 'B'

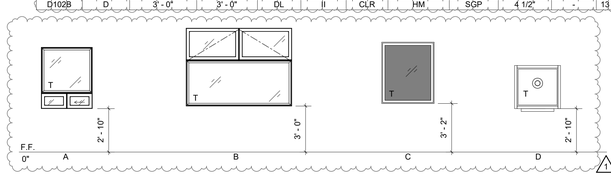
WINDOW No.	Type	WINDOW DIMENSION WIDTH	WINDOW DIMENSION HEIGHT	GLAZING TYPE	GLAZING CLASS	GLAZING FINISH	FRAMES MATERIAL	FRAMES FINISH	FRAMES THICKNESS	FRAMES FIRE RATING	DETAILS HEAD	DETAILS JAMB	DETAILS SILL	REMARKS
B103A	C	3' - 5"	4' - 0"	DL	II	CLR	HM	SGP	2"	-	23 / AX3.1	24 & 25 / AX3.1	23 / AX3.1	
B103B	C	3' - 5"	4' - 0"	S	II	CLR	HM	SGP	2"	-	20 / AX3.2	19 / AX3.2	17 / AX3.2	
B103C	C	3' - 5"	4' - 0"	S	II	CLR	HM	SGP	2"	-	20 / AX3.2	19 / AX3.2	17 / AX3.2	
B103D	louver 12" x 8"	1' - 0"	8"		B20									
B103F	louver 12" x 8"	1'-- 0"	8"		B20									
B103G	louver 12" x 8"	1' - 0"	8"		B20									

WINDOW SCHEDULE - BUILDING 'C'

WINDOW No.	Type	WINDOW DIMENSION WIDTH	WINDOW DIMENSION HEIGHT	GLAZING TYPE	GLAZING CLASS	GLAZING FINISH	FRAMES MATERIAL	FRAMES FINISH	FRAMES THICKNESS	FRAMES FIRE RATING	DETAILS HEAD	DETAILS JAMB	DETAILS SILL	REMARKS
C203A	B	6' - 10 3/4"	5' - 1"	DL	II	CLR	AL	SGP	2"	-	14/AX3.2	13/AX3.2	14/AX3.2	
C204A	B	6' - 10 3/4"	5' - 1"	DL	II	CLR	AL	SGP	2"	-	14/AX3.2	13/AX3.2	14/AX3.2	
C205A	B	6' - 10 3/4"	5' - 1"	DL	II	CLR	AL	SGP	2"	-	14/AX3.2	13/AX3.2	14/AX3.2	
C206A	B	6' - 10 3/4"	5' - 1"	DL	II	CLR	AL	SGP	2"	-	14/AX3.2	13/AX3.2	14/AX3.2	

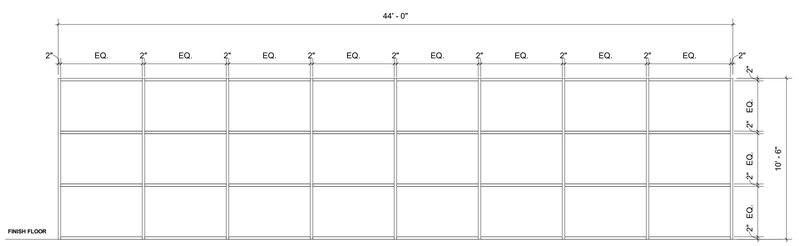
WINDOW SCHEDULE - BUILDING 'D'

WINDOW No.	Type	WINDOW DIMENSION WIDTH	WINDOW DIMENSION HEIGHT	GLAZING TYPE	GLAZING CLASS	GLAZING FINISH	FRAMES MATERIAL	FRAMES FINISH	FRAMES THICKNESS	FRAMES FIRE RATING	DETAILS HEAD	DETAILS JAMB	DETAILS SILL	REMARKS
D101A	D	3' - 0"	3' - 0"	DL	II	CLR	HM	SGP	4 1/2"	-	13 / AX3.1	13/ AX3.1 SIM	14 / AX3.1	
D101B	D	3' - 0"	3' - 0"	DL	II	CLR	HM	SGP	4 1/2"	-	13 / AX3.1	13/ AX3.1 SIM	14 / AX3.1	
D102A	D	3' - 0"	3' - 0"	DL	II	CLR	HM	SGP	4 1/2"	-	13 / AX3.1	13/ AX3.1 SIM	14 / AX3.1	
D102B	D	3' - 0"	3' - 0"	DL	II	CLR	HM	SGP	4 1/2"	-	13 / AX3.1	13/ AX3.1 SIM	14 / AX3.1	



WINDOW TYPES

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



STOREFRONT - BUILDING 'C'

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

DOOR SCHEDULE - BUILDING 'A'

DOOR NO.	DOOR TYPE	DOOR SIZE WIDTH	DOOR SIZE HEIGHT	DOOR THICKNESS	DOOR CONSTRUCTION	DOOR FINISH	FRAME CONSTRUCTION	FRAME FINISH	FIRE RATING	DETAILS (SEE SHEET AX3.1) HEAD	DETAILS (SEE SHEET AX3.1) JAMB	DETAILS (SEE SHEET AX3.1) THRESHOLD	HARDWARE	REMARKS
A100A	F	3' - 0"	7' - 2"	1 3/4"	HM	SGP	HM	SGP	-	6/AX3.1	7/AX3.1	8/AX3.1	02	
A100B	OH	10' - 0"	4' - 8"	3"	SS	SGP	HM	SGP		16/AX3.1	18/AX3.1		11	
A100C	OH	10' - 0"	4' - 8"	3"	SS	SGP	HM	SGP		16/AX3.1	18/AX3.1		11	
A101A	F	3' - 0"	7' - 0"	1 3/4"	SC	SGP	HM	SGP		4/AX3.1	4/AX3.1	8/AX3.1	10	
A102A	F	3' - 0"	7' - 0"	1 3/4"	SC	SGP	HM	SGP		4/AX3.1	4/AX3.1	8/AX3.1	10	
A103A	F	3' - 0"	7' - 2"	1 3/4"	SC	SGP	HM	SGP	45 MIN.	6/AX3.1	7/AX3.1	8/AX3.1	05	
A104A	F	3' - 0"	7' - 0"	1 3/4"	HM	SGP	HM	SGP	-	6/AX3.1	7/AX3.1	8/AX3.1	05	
A105A	F	3' - 0"	7' - 0"	1 3/4"	HM	SGP	HM	SGP	-	6/AX3.1	7/AX3.1	8/AX3.1	04	
A107A	F	4' - 4"	7' - 2"	1 3/4"	HM	SGP	HM	SGP	45 MIN.	6/AX3.1	7/AX3.1	8/AX3.1	06	
A108A	F	3' - 0"	7' - 2"	1 3/4"	HM	SGP	HM	SGP	-	6/AX3.1	7/AX3.1	8/AX3.1	03	
A109A	F	3' - 0"	7' - 2"	1 3/4"	HM	SGP	HM	SGP	-	6/AX3.1	7/AX3.1	8/AX3.1	03	
A109B	F	2' - 8"	7' - 0"	1 3/4"	SC	SGP	HM	SGP		4/AX3.1	4/AX3.1	8/AX3.1	10	
A109C	F	2' - 8"	7' - 0"	1 3/4"	SC	SGP	HM	SGP		4/AX3.1	4/AX3.1	8/AX3.1	10	
A110A	F	3' - 0"	7' - 2"	1 3/4"	HM	SGP	HM	SGP	-	6/AX3.1	7/AX3.1	8/AX3.1	01	
A110B	F	3' - 0"	7' - 0"	1 3/4"	HM	SGP	HM	SGP	-	6/AX3.1	7/AX3.1	8/AX3.1	01	
A111A	F	3' - 0"	7' - 0"	1 3/4"	SC	SGP	HM	SGP	-	4/AX3.1	4/AX3.1	8/AX3.1	10	
A112A	F	3' - 0"	7' - 0"	1 3/4"	HM	SGP	HM	SGP	-	6/AX3.1	7/AX3.1	8/AX3.1	02	

DOOR SCHEDULE - BUILDING 'B'

DOOR NO.	DOOR TYPE	DOOR SIZE WIDTH	DOOR SIZE HEIGHT	DOOR THICKNESS	DOOR CONSTRUCTION	DOOR FINISH	FRAME CONSTRUCTION	FRAME FINISH	FIRE RATING	DETAILS (SEE SHEET AX3.1) HEAD	DETAILS (SEE SHEET AX3.1) JAMB	DETAILS (SEE SHEET AX3.1) THRESHOLD	HARDWARE	REMARKS
B101A	F	3' - 0"	7' - 2"	1 3/4"	HM	SGP	HM	SGP	-	6/AX3.1	7/AX3.1	8/AX3.1	01	
B101B	F	3' - 0"	7' - 2"	1 3/4"	HM	SGP	HM	SGP	-	6/AX3.1	7/AX3.1	8/AX3.1	01	
B103A	F	3' - 0"	7' - 2"	1 3/4"	HM	SGP	HM	SGP	-	6/AX3.1	7/AX3.1	8/AX3.1	02	
B103B	F	3' - 0"	7' - 0"	1 3/4"	SC	SGP	HM	SGP		4/AX3.1	4/AX3.1	8/AX3.1	08	
B103C	F	3' - 0"	7' - 0"	1 3/4"	SC	SGP	HM	SGP		4/AX3.1	4/AX3.1	8/AX3.1	08	
B104A	F	3' - 0"	7' - 0"	1 3/4"	SC	SGP	HM	SGP		4/AX3.1	4/AX3.1	8/AX3.1	09	
B104B	F	2' - 8"	7' - 0"	1 3/4"	SC	SGP	HM	SGP		4/AX3.1	4/AX3.1	8/AX3.1	10	
B106A	F	3' - 0"	7' - 2"	1 3/4"	HM	SGP	HM	SGP	-	6/AX3.1	7/AX3.1	8/AX3.1	01	
B106B	F	3' - 0"	7' - 2"	1 3/4"	HM	SGP	HM	SGP	-	6/AX3.1	7/AX3.1	8/AX3.1	01	
B107A	F	3' - 0"	7' - 2"	1 3/4"	HM	SGP	HM	SGP	-	6/AX3.1	7/AX3.1	8/AX3.1	05	
B108A	F	3' - 0"	7' - 2"	1 3/4"	HM	SGP	HM	SGP	-	6/AX3.1	7/AX3.1	8/AX3.1	05	

DOOR SCHEDULE - BUILDING 'C'

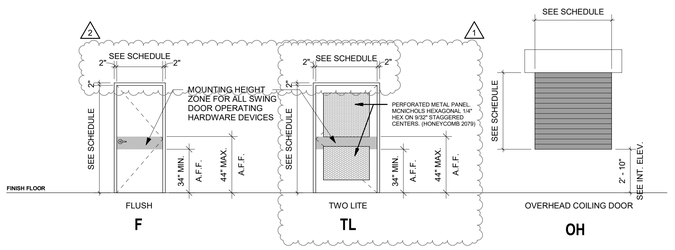
DOOR NO.	DOOR TYPE	DOOR SIZE WIDTH	DOOR SIZE HEIGHT	DOOR THICKNESS	DOOR CONSTRUCTION	DOOR FINISH	FRAME CONSTRUCTION	FRAME FINISH	FIRE RATING	DETAILS (SEE SHEET AX3.1) HEAD	DETAILS (SEE SHEET AX3.1) JAMB	DETAILS (SEE SHEET AX3.1) THRESHOLD	HARDWARE	REMARKS
C101A	F	3' - 0"	7' - 0"	1 3/4"	HM	SGP	HM	SGP		10/AX3.1	10/AX3.1	8/AX3.1	07	
C101B	F	3' - 0"	7' - 0"	1 3/4"	HM	SGP	HM	SGP		15/AX3.1	15/AX3.1	8/AX3.1	07	
C102A	F	3' - 0"	7' - 0"	1 3/4"	HM	SGP	HM	SGP	1 HR	10/AX3.1	10/AX3.1	8/AX3.1	05	
C103A	F	3' - 0"	7' - 0"	1 3/4"	HM	SGP	HM	SGP	1 HR	15/AX3.1	15/AX3.1	8/AX3.1	03	
C104A	F	3' - 0"	7' - 0"	1 3/4"	HM	SGP	HM	SGP		15/AX3.1	15/AX3.1	8/AX3.1	07	
C201A	TL	4' - 0"	7' - 0"	1 3/4"	HM	SGP	HM	SGP		15/AX3.1	15/AX3.1	8/AX3.1	07	PERFORATED METAL PANEL, PANIC HARDWARE
C201B	TL	4' - 0"	7' - 0"	1 3/4"	HM	SGP	HM	SGP		15/AX3.1	15/AX3.1	8/AX3.1	07	PERFORATED METAL PANEL, PANIC HARDWARE
C202A	F	3' - 0"	7' - 0"	1 3/4"	SC	SGP	HM	SGP		4/AX3.1	4/AX3.1	8/AX3.1	08	
C202B	OH	5' - 0"	5' - 0"	3"	SS	SGP	HM	SGP		20/AX3.1	19/AX3.1		11	
C203A	F	3' - 0"	7' - 0"	1 3/4"	SC	SGP	HM	SGP		4/AX3.1	4/AX3.1	8/AX3.1	08	
C204A	F	3' - 0"	7' - 0"	1 3/4"	SC	SGP	HM	SGP		4/AX3.1	4/AX3.1	8/AX3.1	08	
C205A	F	3' - 0"	7' - 0"	1 3/4"	SC	SGP	HM	SGP		4/AX3.1	4/AX3.1	8/AX3.1	08	
C206A	F	3' - 0"	7' - 0"	1 3/4"	SC	SGP	HM	SGP		4/AX3.1	4/AX3.1	8/AX3.1	08	
C207A	F	3' - 0"	7' - 0"	1 3/4"	SC	SGP	HM	SGP		4/AX3.1	4/AX3.1	8/AX3.1	08	
C207B	OH	5' - 0"	5' - 0"	3"	SS	SGP	HM	SGP		20/AX3.1	19/AX3.1		11	

DOOR SCHEDULE - BUILDING 'D'

DOOR NO.	DOOR TYPE	DOOR SIZE WIDTH	DOOR SIZE HEIGHT	DOOR THICKNESS	DOOR CONSTRUCTION	DOOR FINISH	FRAME CONSTRUCTION	FRAME FINISH	FIRE RATING	DETAILS (SEE SHEET AX3.1) HEAD	DETAILS (SEE SHEET AX3.1) JAMB	DETAILS (SEE SHEET AX3.1) THRESHOLD	HARDWARE	REMARKS
D101A	F	3' - 0"	7' - 0"	1 3/4"	HM	SGP	HM	SGP		11/AX3.1	12/AX3.1	8/AX3.1	05	
D102A	F	3' - 0"	7' - 0"	1 3/4"	HM	SGP	HM	SGP		11/AX3.1	12/AX3.1	8/AX3.1	05	

DOOR SCHEDULE - VISITOR BLEACHERS

DOOR NO.	DOOR TYPE	DOOR SIZE WIDTH	DOOR SIZE HEIGHT	DOOR THICKNESS	DOOR CONSTRUCTION	DOOR FINISH	FRAME CONSTRUCTION	FRAME FINISH	FIRE RATING	DETAILS (SEE SHEET AX3.1) HEAD	DETAILS (SEE SHEET AX3.1) JAMB	DETAILS (SEE SHEET AX3.1) THRESHOLD	HARDWARE	REMARKS
VB001	F	8' - 0"	7' - 4"	1 3/4"	HM	SGP	HM	SGP	-	6/AX3.1	7/AX3.1	8/AX3.1	05	
VB002	F	8' - 0"	7' - 4"	1 3/4"	HM	SGP	HM	SGP	-	6/AX3.1	7/AX3.1	8/AX3.1	05	
VB003	F	8' - 0"	7' - 4"	1 3/4"	HM	SGP	HM	SGP	-	6/AX3.1	7/AX3.1	8/AX3.1	05	
VB004	F	8' - 0"	7' - 4"	1 3/4"	HM	SGP	HM	SGP	-	6/AX3.1	7/AX3.1	8/AX3.1	05	



DOOR TYPES

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

DOOR SCHEDULE ABBREVIATIONS

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

DOOR NOTES

DOOR NOTES

DOOR OPEWING 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 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.8. LOCKABLE FROM THE INSIDE PER CBC 1010.2.2
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 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 13 / AX3.1 FOR WINDOW FLASHING INSTALLATION
7. SEE DETAIL 2 / AX3.1 FOR HOLLOW METAL FRAME ANCHORAGE

PBK

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7790 North Palm Avenue
Fresno, CA 93711
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559-448-8467 F
PBK.com

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

MADERA UNIFIED SCHOOL DISTRICT 19 66

PROFESSIONAL SEAL

LICENSED ARCHITECT
MICHAEL R. SCHOEN
No. C-28295
RENEWAL DATE
FEB 28, 2027
STATE OF CALIFORNIA

PROJECT NUMBER 20-51
DATE 08/12/2024
DSA APPLICATION NO. 02-122784
FILE NO. 20-H3
PTN NO. 65243-154
DRAWN BY Author

REVISIONS

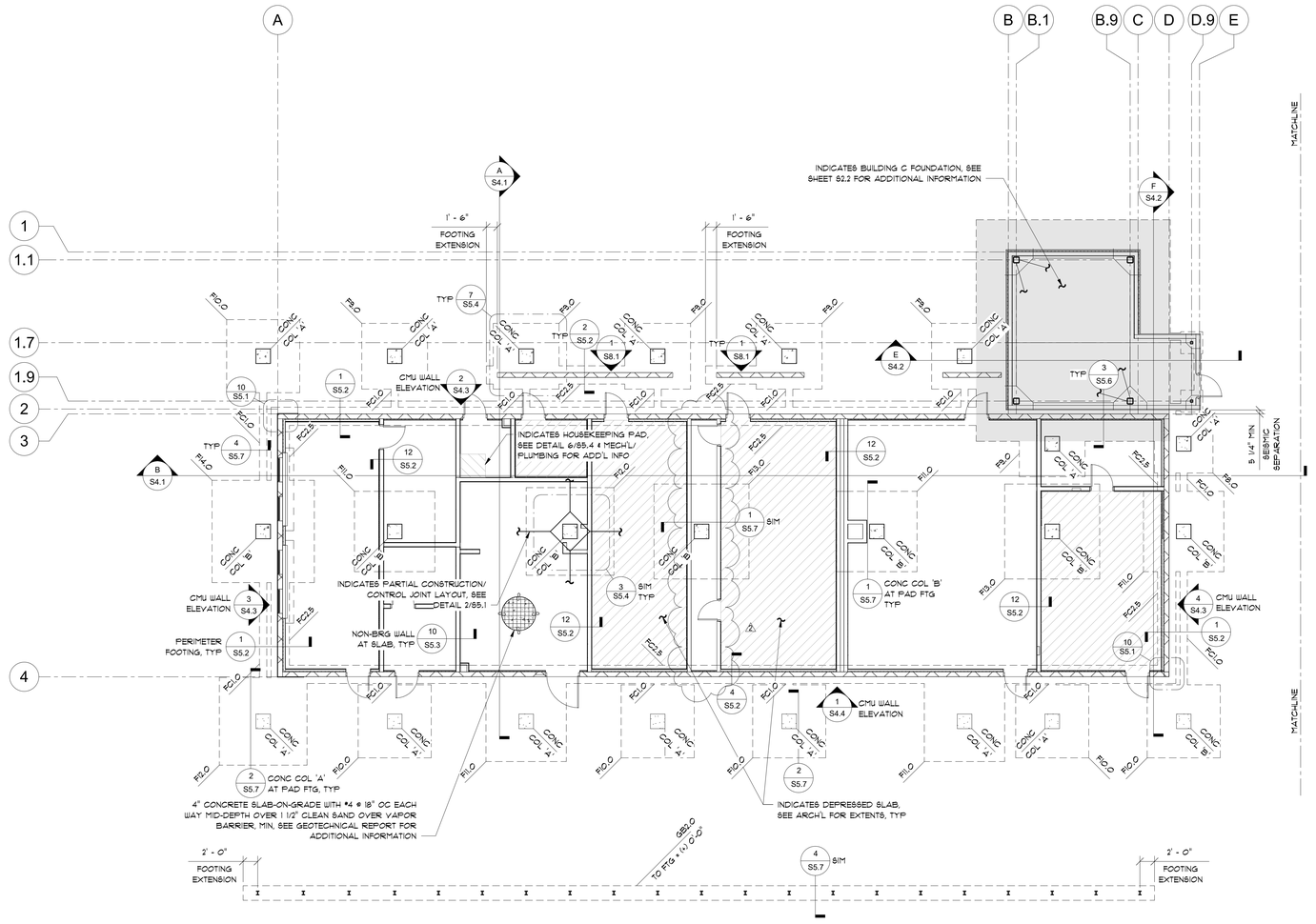
#	DESCRIPTION	DATE
1	ADDENDUM 01	08/18/2025

CONSTRUCTION DOCUMENTS

DOOR & WINDOW SCHEDULE

AX8.1

BIM 360://Madera USD_20-51_MHS Field House/20-51_MHS STADIUM_V21.rvt
8/22/2025 1:45:09 AM



1 FOUNDATION PLAN - BUILDING A
1/8" = 1'-0"

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 METAL STUD WALL FRAMING
5. INDICATES LIMITS OF 8" CMU WALL
6. INDICATES CONCRETE COLUMN TYPE, SEE CONCRETE COLUMN SCHEDULE
7. INDICATES CONT/ISOLATED FOOTING TYPE, SEE FOOTING SCHEDULE
8. INDICATES DEPRESSED SLAB, SEE ARCH'L FOR EXTENTS & 12/S5.2 FOR ADD'L INFO, TYP

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 SEOR 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 DETAILS 5 & 10/S5.1 & 7/S5.4 FOR REINFORCING REQUIREMENTS AT INTERSECTING FOOTINGS
13. REFER TO DETAILS 1 & 2/S5.7 FOR CONC COL REINFORCING REQUIREMENTS

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 SHEETS S4.3 & S4.4
7. ENSURE FIRST HORIZONTAL CMU BLOCK JOINT ALIGNS WITH FINISH FLOOR
8. NO OPENING(S) LARGER THAN 12"ø OR 12" WIDE x 12" 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)

METAL STUD NOTES:

1. PROVIDE 400/600S137-33 METAL STUDS @ 16" OC WITH 400/600T150-43 CONTINUOUS SILL TRACK AT BOTTOM AT ALL INTERIOR WALLS, UNO. SEE ARCH'L WALL LEGEND ON SHEET AX1.0 FOR WALL TYPE & THICKNESS.
2. PROVIDE 5/8"ø AB @ 48" OC MAX AT SILL TRACKS ON CURBS (MIN 2 PER SILL TRACK). SEE DETAIL 10/S5.3 FOR ADDITIONAL INFORMATION.
3. PROVIDE SIMPSON PDPAUL-1SO PAF @ 32" OC STAGGERED WITH 1 1/4" MIN EMBED AT SILL TRACKS AT SLAB-ON-GRADE CONDITIONS, TYP. SEE DETAIL 10/S5.3 FOR ADD'L INFO.
4. PROVIDE 400/600S162T250-43 SLOTTED TRACK AT TOP OF WALLS TO COMPOSITE ROOF DECK. SEE DETAILS 3/S6.3 & 3 & 6/S6.4 FOR ADDITIONAL INFORMATION.
5. SEE DETAIL 1/S6.3 FOR TYPICAL FRAMING AT OPENINGS IN INTERIOR PARTITIONS.
6. SEE DETAILS 13 & 14/S6.4 FOR BRIDGING & BRACING REQUIREMENTS FOR ALL METAL STUD WALLS AND DETAIL 12/S6.4 FOR BACKING/BLOCKING REQUIREMENTS.
7. SEE DETAIL 5/S6.4 FOR INTERIOR NON-BEARING WALL BRACING REQUIREMENTS

ITEM	DESCRIPTION				DETAIL
	W	L	D	REINFORCING	NUMBER
FC1.0	1'-0"	CONT	1'-6"	(2) CONT #5 AT TOP & BOTTOM WITH #3 TIES @ 18" OC	11/S5.1, 1/S5.3 & 4/S5.1
FC2.5	2'-6"	CONT	1'-6"	(5) CONT #5 AT TOP & BOTTOM WITH #5 TRANSVERSE @ 16" OC TOP & BOTTOM	1 & 2/S5.2
GB2.0	2'-0"	CONT	2'-0"	(4) CONT #6 AT TOP & BOTTOM WITH #3 TIES @ 9" OC MAX	4/S5.1
F2.0	2'-0"	2'-0"	1'-6"	(3) #5 EACH WAY AT BOTTOM	2/S5.3
F3.0	3'-0"	3'-0"	1'-6"	(5) #5 AT EACH WAY AT TOP & BOTTOM	4/S5.4
F6.0	6'-0"	6'-0"	2'-0"	(7) #6 EACH WAY AT TOP & (7) #8 EACH WAY AT BOTTOM	1 & 2/S5.1
F7.0	7'-0"	7'-0"	2'-0"	(8) #6 EACH WAY AT TOP & (8) #8 EACH WAY AT BOTTOM	1 & 2/S5.1
F8.0	8'-0"	8'-0"	2'-0"	(9) #6 EACH WAY AT TOP & (9) #8 EACH WAY AT BOTTOM	1 & 2/S5.1
F9.0	9'-0"	9'-0"	2'-0"	(10) #6 EACH WAY AT TOP & (10) #8 EACH WAY AT BOTTOM	1 & 2/S5.1
F10.0	10'-0"	10'-0"	2'-0"	(11) #6 EACH WAY AT TOP & (11) #8 EACH WAY AT BOTTOM	1 & 2/S5.1
F11.0	11'-0"	11'-0"	2'-0"	(12) #6 EACH WAY AT TOP & (12) #8 EACH WAY AT BOTTOM	1 & 2/S5.1
F12.0	12'-0"	12'-0"	2'-0"	(13) #6 EACH WAY AT TOP & (13) #8 EACH WAY AT BOTTOM	1 & 2/S5.1
F13.0	13'-0"	13'-0"	2'-0"	(14) #6 EACH WAY AT TOP & (14) #8 EACH WAY AT BOTTOM	1 & 2/S5.1
F14.0	14'-0"	14'-0"	2'-0"	(15) #6 EACH WAY AT TOP & (15) #8 EACH WAY AT BOTTOM	1 & 2/S5.1

FOOTING SCHEDULE

SEE SHEET S1.0 FOR CONCRETE AND SOIL INFORMATION
TO FOOTING = (-) 1' - 0", UNO
TO MAT SLAB = (-) 1' - 0", UNO

COLUMN	WIDTH	DEPTH	HEIGHT	VERT REINF	TRANSVERSE REINF	DETAIL
A	2'-0"	2'-0"	11'-0" MAX	(8) #8 CONT VERTS	#4 TIES @ 6" OC MAX	2/S5.1
B	2'-0"	2'-0"	11'-0" MAX	(12) #8 CONT VERTS	#4 TIES @ 6" OC MAX	1/S5.1

CONCRETE COLUMN SCHEDULE

NOTES:
1. SEE SHEET S1.0 FOR CONCRETE INFORMATION
2. BO COLUMN = (-) 1'-0"
3. TO COLUMN = (+) 16'-0", MAX, VERIFY WITH ARCH'L & BLEACHER MANUFACTURER
4. SEE DETAILS 1 & 2/S5.1 FOR ADDITIONAL INFORMATION INCLUDING LIMITS OF REDUCED SPACING OF TRANSVERSE REINFORCING

REGISTERED PROFESSIONAL ENGINEER — BRIAN S. BARCUS — S 4487 — STRUCTURAL — STATE OF CALIFORNIA — 11/4/25

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

PBK

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MADERA HIGH SCHOOL STADIUM

200 SOUTH "I" STREET
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CONSTRUCTION DOCUMENTS

MADERA UNIFIED SCHOOL DISTRICT 19 66

PROFESSIONAL SEAL

LICENSED ARCHITECT — MICHAEL R. SCHOEN — No. C-35165 — RENEWAL DATE 12/31/2026 — STATE OF CALIFORNIA

PROJECT NUMBER
24PBK-02

DATE
09/13/2024

DSA APPLICATION NO.
02-122784

FILE NO.
20-H3

PTN NO.
65243-153

DRAWN BY
MRH

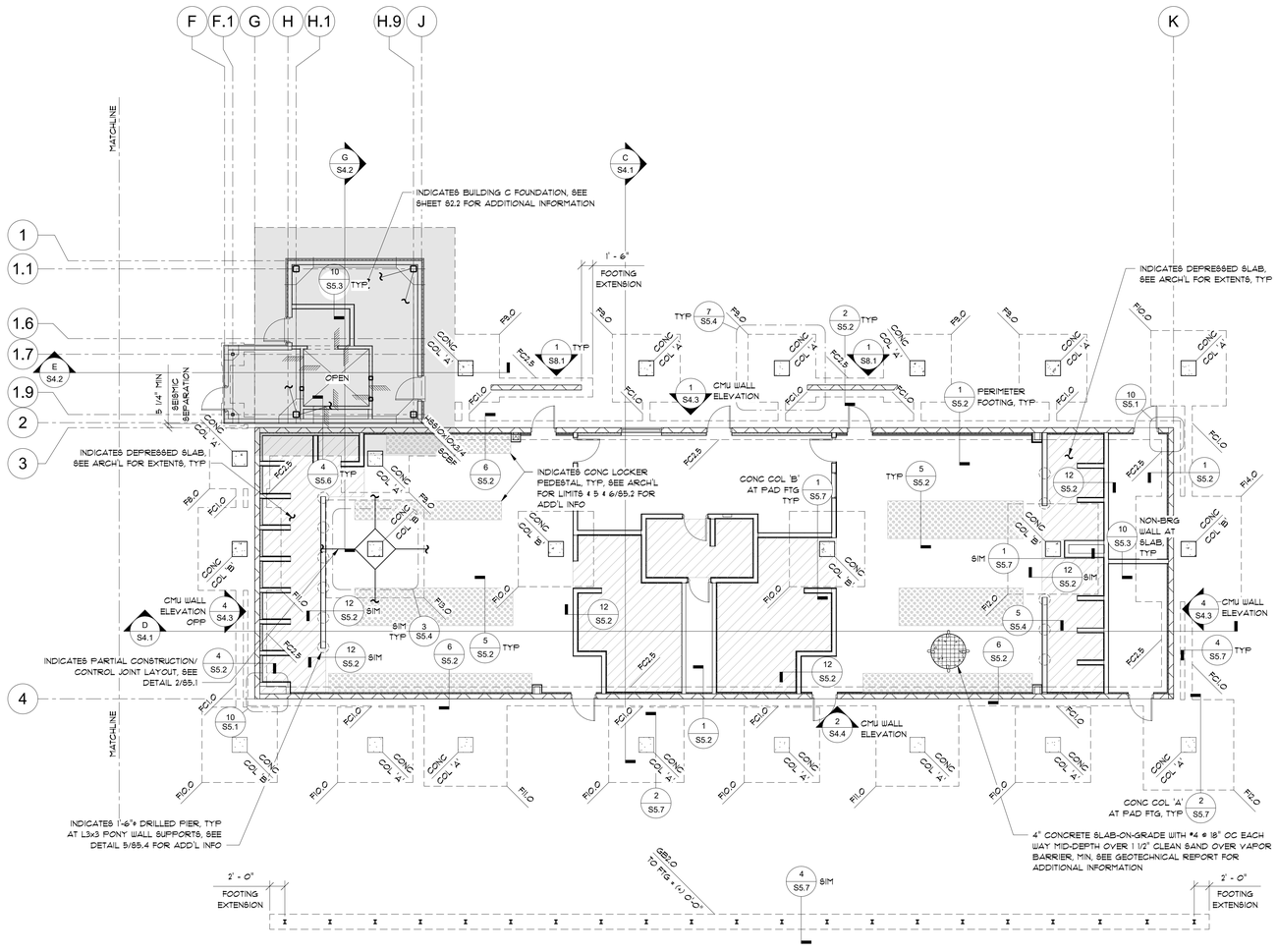
REVISIONS

#	DESCRIPTION	DATE
	DSA SUBMITTAL	09/13/2024
	DSA BACK CHECK	07/17/2025
2	ADDENDUM 02	08/22/2025

CONSTRUCTION DOCUMENTS

FOUNDATION PLAN - BUILDING A

S2.1A



1 FOUNDATION PLAN - BUILDING B
1/8" = 1'-0"

FOUNDATION LEGEND:

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 METAL STUD WALL FRAMING
5. INDICATES LIMITS OF 8" CMU WALL
6. INDICATES CONCRETE COLUMN TYPE, SEE CONCRETE COLUMN SCHEDULE
7. INDICATES CONT/ISOLATED FOOTING TYPE, SEE FOOTING SCHEDULE
8. INDICATES DEPRESSED SLAB, SEE ARCH'L FOR EXTENTS & 12/S5.2 FOR ADD'L INFO, TYP
9. INDICATES CONC LOCKER PEDESTAL TYP, SEE ARCH'L FOR LIMITS & S & 6/S5.2 FOR ADD'L INFO

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 DETAILS 5 & 10/S5.1 & 7/S5.4 FOR REINFORCING REQUIREMENTS AT INTERSECTING FOOTINGS
13. REFER TO DETAILS 1 & 2/S5.1 FOR CONC COL REINFORCING REQUIREMENTS

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 SHEETS S4.3 & S4.4
7. ENSURE FIRST HORIZONTAL CMU BLOCK JOINT ALIGNS WITH FINISH FLOOR
8. NO OPENINGS(S) LARGER THAN 12"ø OR 12" WIDE x 12" 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)

METAL STUD NOTES:

1. PROVIDE 400/600S137-33 METAL STUDS @ 16" OC WITH 400/600T150-43 CONTINUOUS SILL TRACK AT BOTTOM AT ALL INTERIOR WALLS, UNO. SEE ARCH'L WALL LEGEND ON SHEET AX1.0 FOR WALL TYPE & THICKNESS.
2. PROVIDE 5/8"ø AB @ 48" OC MAX AT SILL TRACKS ON CURBS (MIN 2 PER SILL TRACK), SEE DETAIL 10/S5.3 FOR ADDITIONAL INFORMATION.
3. PROVIDE SIMPSON PDPAILL-150 PAF @ 32" OC STAGGERED WITH 1 1/4" MIN EMBED AT SILL TRACKS AT SLAB-ON-GRADE CONDITIONS, TYP. SEE DETAIL 10/S5.3 FOR ADD'L INFO.
4. PROVIDE 400/600SLT250-43 SLOTTED TRACK AT TOP OF WALLS TO COMPOSITE ROOF DECK. SEE DETAILS 3/S6.3 & 3 & 6/S6.4 FOR ADDITIONAL INFORMATION.
5. SEE DETAIL 1/S6.3 FOR TYPICAL FRAMING AT OPENINGS IN INTERIOR PARTITIONS.
6. SEE DETAILS 13 & 14/S6.4 FOR BRIDGING & BRACING REQUIREMENTS FOR ALL METAL STUD WALLS AND DETAIL 2/S6.4 FOR BACKING/BLOCKING REQUIREMENTS.
7. SEE DETAIL 5/S6.4 FOR INTERIOR NON-BEARING WALL BRACING REQUIREMENTS

ITEM	DESCRIPTION				DETAIL
	W	L	D	REINFORCING	NUMBER
FC1.0	1'-0"	CONT	1'-6"	(2) CONT #5 AT TOP & BOTTOM WITH #3 TIES @ 18" OC	11/S5.1, 1/S5.3 & 4/S5.1
FC2.5	2'-6"	CONT	1'-6"	(5) CONT #5 AT TOP & BOTTOM WITH #3 TRANSVERSE @ 16" OC TOP & BOTTOM	1 & 2/S5.2
GB2.0	2'-0"	CONT	2'-0"	(4) CONT #6 AT TOP & BOTTOM WITH #3 TIES @ 9" OC MAX	4/S5.1
F2.0	2'-0"	2'-0"	1'-6"	(3) #5 EACH WAY AT BOTTOM	2/S5.3
F3.0	3'-0"	3'-0"	1'-6"	(5) #5 AT EACH WAY AT TOP & BOTTOM	4/S5.4
F6.0	6'-0"	6'-0"	2'-0"	(7) #6 EACH WAY AT TOP & (7) #8 EACH WAY AT BOTTOM	1 & 2/S5.1
F7.0	7'-0"	7'-0"	2'-0"	(8) #6 EACH WAY AT TOP & (8) #8 EACH WAY AT BOTTOM	1 & 2/S5.1
F8.0	8'-0"	8'-0"	2'-0"	(9) #6 EACH WAY AT TOP & (9) #8 EACH WAY AT BOTTOM	1 & 2/S5.1
F9.0	9'-0"	9'-0"	2'-0"	(10) #6 EACH WAY AT TOP & (10) #8 EACH WAY AT BOTTOM	1 & 2/S5.1
F10.0	10'-0"	10'-0"	2'-0"	(11) #6 EACH WAY AT TOP & (11) #8 EACH WAY AT BOTTOM	1 & 2/S5.1
F11.0	11'-0"	11'-0"	2'-0"	(12) #6 EACH WAY AT TOP & (12) #8 EACH WAY AT BOTTOM	1 & 2/S5.1
F12.0	12'-0"	12'-0"	2'-0"	(13) #6 EACH WAY AT TOP & (13) #8 EACH WAY AT BOTTOM	1 & 2/S5.1
F13.0	13'-0"	13'-0"	2'-0"	(14) #6 EACH WAY AT TOP & (14) #8 EACH WAY AT BOTTOM	1 & 2/S5.1
F14.0	14'-0"	14'-0"	2'-0"	(15) #6 EACH WAY AT TOP & (15) #8 EACH WAY AT BOTTOM	1 & 2/S5.1

FOOTING SCHEDULE

SEE SHEET S1.0 FOR CONCRETE AND SOIL INFORMATION
TO FOOTING = (-) 1' - 0", UNO
TO MAT SLAB = (-) 1' - 0", UNO

COLUMN	WIDTH	DEPTH	HEIGHT	VERT REINF	TRANSVERSE REINF	DETAIL
A	2'-0"	2'-0"	17'-0" MAX	(8) #8 CONT VERTS	#4 TIES @ 6" OC MAX	2/S5.1
B	2'-0"	2'-0"	17'-0" MAX	(12) #8 CONT VERTS	#4 TIES @ 6" OC MAX	1/S5.1

CONCRETE COLUMN SCHEDULE

NOTES:
1. SEE SHEET S1.0 FOR CONCRETE INFORMATION
2. BO COLUMN = (-) 1'-0"
3. TO COLUMN = (+) 18'-0", MAX, VERIFY WITH ARCH'L & BLEACHER MANUFACTURER
4. SEE DETAILS 1 & 2/S5.1 FOR ADDITIONAL INFORMATION INCLUDING LIMITS OF REDUCED SPACING OF TRANSVERSE REINFORCING

PBK

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MADERA HIGH SCHOOL STADIUM

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

MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL R. SCHOEN No. C-35165 RENEWAL DATE: FEB 28, 2027 STATE OF CALIFORNIA

PROJECT NUMBER
24PBK-02

DATE
09/13/2024

DSA APPLICATION NO.
02-122784

FILE NO.
20-H3

PTN NO.
65243-153

DRAWN BY
MRH

REVISIONS

#	DESCRIPTION	DATE
	DSA SUBMITTAL	09/13/2024
	DSA BACK CHECK	07/17/2025
2	ADDENDUM 02	08/22/2025

CONSTRUCTION DOCUMENTS

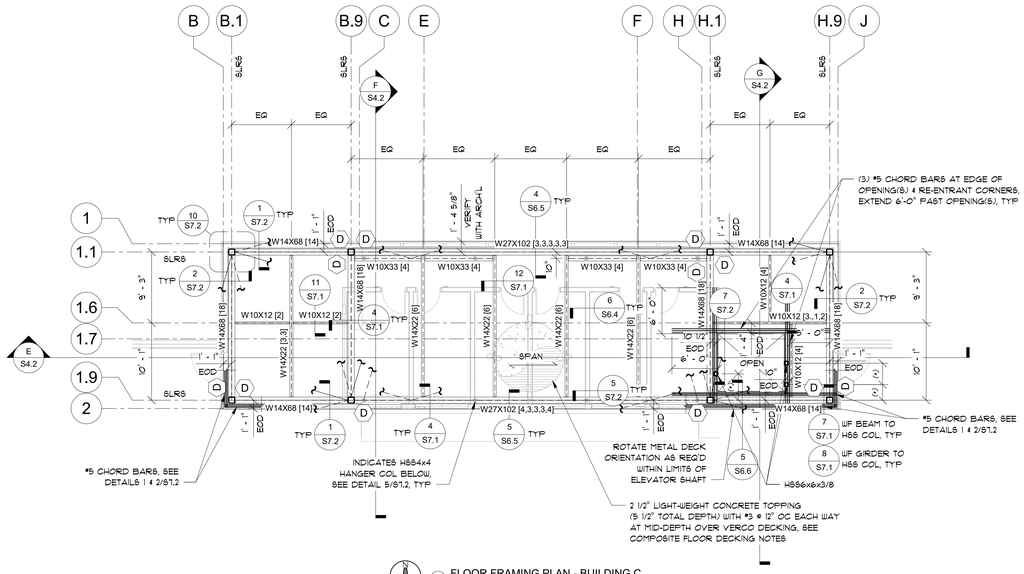
FOUNDATION PLAN - BUILDING B

S2.1B

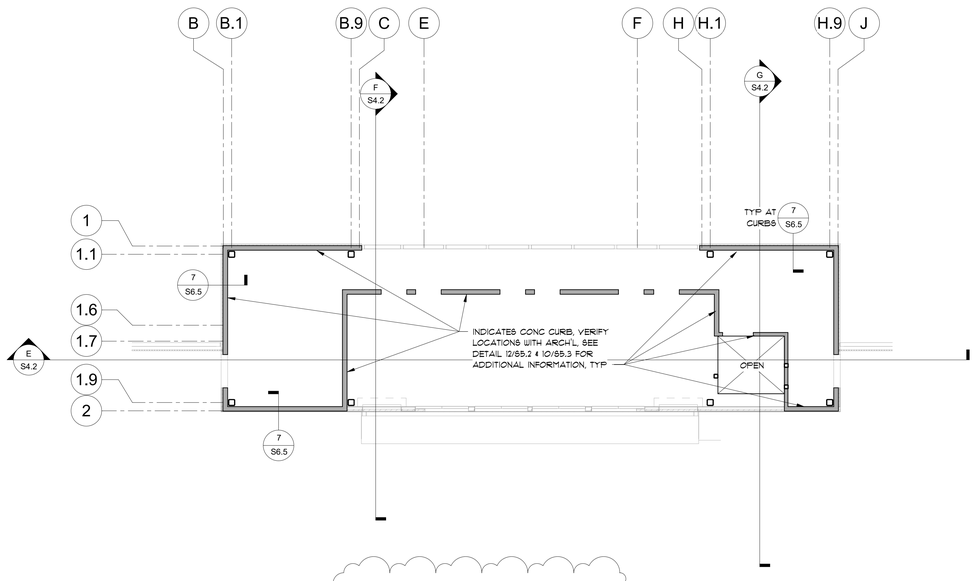
REGISTERED PROFESSIONAL ENGINEER BRYAN S. BARCUS S 4487 STRUCTURAL STATE OF CALIFORNIA 7/9/25

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 FLOOR FRAMING PLAN - BUILDING C
1/8" = 1'-0"



2 FLOOR CURB PLAN - BUILDING C
1/8" = 1'-0"

FLOOR FRAMING LEGEND:

1. SECTION OR DETAIL NUMBER / SHEET NUMBER WHERE SECTION OR DETAIL IS SHOWN
2. INDICATES VIEWING DIRECTION OF PARTIAL WALL ELEVATIONS
3. INDICATES METAL STUD WALL FRAMING
4. INDICATES COLUMN AND ISOLATED FOOTING TYPE OR POST AND BASE
5. INDICATES SCBF ABOVE, SEE FRAME ELEVATIONS ON SHEETS S4.6 & S4.7 & 2/S2.2 FOR ELEVATION KEY PLAN
6. INDICATES SCBF/SOFFIT BRACE BELOW, SEE FRAME ELEVATIONS ON SHEETS S4.6 & S4.7 & 2/S2.2 FOR ELEVATION KEY PLAN
7. INDICATES COLUMN SECTION ABOVE
8. INDICATES BOLTED DOUBLE VERTICAL ROW CONNECTION AT STRUTS THAT ARE PART OF THE SEISMIC FORCE RESISTING SYSTEM. PROVIDE SLIP CRITICAL TYPE CONNECTION, SEE DETAILS 4, 6, 7 & 8/S7.1
9. 5LRS — INDICATES FRAMING ALONG GRIDLINE IS PART OF SEISMIC LATERAL RESISTING SYSTEM
10. INDICATES NUMBER OF 3/4"ø x 4 1/2" END-WELDED HEADED STUDS EVENLY DISTRIBUTED ALONG BEAM LENGTH, SEE DETAIL 3/S7.2
11. INDICATES NUMBER OF 3/4"ø x 4 1/2" END-WELDED HEADED STUDS EVENLY DISTRIBUTED BETWEEN W/F BEAMS ON GIRDERS, SEE DETAIL 3/S7.2
12. (+) INDICATES DIMENSION TO BE SUPPLIED BY ELEVATOR MANUFACTURER
13. INDICATES LIMITS OF CONCRETE CURB(S), VERIFY WIDTHS & EXTENTS WITH ARCH'L & SEE 1/S6.5 FOR ADDITIONAL INFORMATION

2.

FLOOR FRAMING NOTES:

1. REFER TO STRUCTURAL SPECIFICATIONS ON SHEET S1.0
2. CONTRACTOR TO VERIFY ALL DIMENSIONS AND ELEVATIONS SHOWN WITH ARCHITECTURAL SHEETS AND INFORM ARCHITECT AND ENGINEER OF ANY DISCREPANCY
3. VERIFY SIZE AND LOCATION OF ALL OPENINGS WITH ARCHITECT AND MECHANICAL ENGINEER
4. COMPOSITE METAL DECK PENETRATIONS SHALL BE REINFORCED PER DETAIL 1 & 2/S7.1
5. NO MECHANICAL EQUIPMENT, DUCTWORK, PIPING, ETC SHALL BE HUNG FROM METAL DECKING UNLESS APPROVED BY THE SEOR
6. TOP OF FLOOR STEEL ELEVATION = +33'-1 1/2", TYPICAL, UNLESS NOTED OTHERWISE
7. ALL DIMENSIONS ARE TO FACE OF CONCRETE, EDGE OF DECK, OR CENTERLINE OF COLUMN/BEAM, UNLESS NOTED OTHERWISE
8. CONFIRMATION OF LOCATION(S) AND SIZE(S) OF HSS COLUMN(S) SUPPORTING ELEVATOR GUIDE RAIL SYSTEM(S) IS PENDING RECEIPT OF FINAL/APPROVED ELEVATOR SUBMITTAL. REFER TO SHEETS G0.1,0 & S1.0 FOR ADDITIONAL INFORMATION INCLUDING DEFERRED SUBMITTAL/SHOP DRAWING REQUIREMENTS
9. HEAVY EQUIPMENT IS NOT PERMITTED FOR THE FINISHING OR SCREEDING OF CONCRETE PLACED OVER METAL DECK WITHOUT THE APPROVAL OF THE SEOR
10. NO PENETRATIONS FOR PIPING, CONDUIT, OR DUCT-WORK SHALL BE MADE THROUGH THE FRAMING MEMBERS UNLESS APPROVED BY THE SEOR
11. REFER TO DETAILS 1 & 2/S7.1 FOR FRAMING REQUIREMENTS AT SMALL ROUND & LARGE RETANGULAR UNSUPPORTED OPENING(S) IN CONCRETE FILLED DECKING. CONDITION(S) OUTSIDE OF THESE PARAMETERS SHALL BE BROUGHT TO THE ATTENTION OF THE SEOR PRIOR TO PROCEEDING

COMPOSITE FLOOR DECKING NOTES:

1. METAL DECKING SHALL BE "VERCO" 18 GAGE G60 GALVANIZED W3 FORMLOK DECKING, 2 SPANS MINIMUM (10'-0" MAX SPAN) (UES ER-0218)
2. METAL DECKING SHALL BE WELDED TO SUPPORTS AS FOLLOWS:
   a. TRANSVERSE SUPPORTS - PUDDLE WELD EACH FLUTE, (36/4 WELD PATTERN)
   b. PARALLEL SUPPORTS - PUDDLE WELDS @ 1'-0" OC
   c. SIDE SEAMS - TOP SEAM WELDS @ 2'-0"" OC MAX
   d. ALL PUDDLE WELDS TO HAVE 5/8" VISIBLE DIAMETER.
   e. ALL TOP SEAM WELDS TO BE 1 1/2" LONG AND ENGAGE INNER LEG CLINCH THE JOINT PRIOR TO WELDING
3. METAL DECKING SHALL BEAR A MINIMUM OF 2" ON SUPPORTING MEMBERS
4. DECK FLUTES TO RUN PERPENDICULAR TO SUPPORTING MEMBERS UNLESS SHOWN OTHERWISE
5. USE 12 GAGE EDGE FORMS AND 20 GAGE END CLOSURES UNLESS NOTED OTHERWISE
6. SEE DETAIL 9/S7.2 FOR ADDITIONAL INFORMATION
7. THE FIRST SHEET(S) OF STEEL DECKING SHALL BE PLACED ADJACENT TO BOTH GRIDLINES 1.1 & 1.9 AND SHALL BE FULL-WIDTH SHEET(S) PER DSA IR 22-1

METAL STUD NOTES:

1. PROVIDE 600S162-43 METAL STUDS @ 16" OC WITH 600T150-43 CONTINUOUS SILL TRACK AT BOTTOM AT ALL EXTERIOR WALLS, UNO.
2. PROVIDE 400/600S137-33 METAL STUDS @ 16" OC WITH 400/600T150-43 CONTINUOUS SILL TRACK AT BOTTOM AT ALL INTERIOR WALLS, UNO. SEE ARCH'L WALL LEGEND ON SHEET AX1.0 FOR WALL TYPE & THICKNESS.
3. PROVIDE 5/8"ø AB @ 48" OC MAX AT EXTERIOR SILL TRACKS @ SLAB-ON-GRADE CONDITIONS (MIN 2 PER SILL TRACK). SEE DETAIL 11/S5.1 FOR ADDITIONAL INFORMATION. PROVIDE SIMPSON PDPAWL-150 PAF @ 32" OC STAGGERED WITH 1 1/4" MIN EMBED AT INTERIOR SILL TRACKS @ SLAB-ON-GRADE CONDITIONS, TYP. SEE DETAIL 10/S5.3 FOR ADDITIONAL INFORMATION.
4. PROVIDE 1/4"ø TITEN HD SCREW ANCHORS @ 16" OC STAGGERED WITH 1 5/8" MIN NOMINAL EMBED AT EXTERIOR SILL TRACKS TO COMPOSITE FLOOR DECKS. PROVIDE SIMPSON PDPAWL-150 PAF @ 32" OC STAGGERED WITH 1 1/4" MIN EMBED AT INTERIOR SILL TRACKS TO COMPOSITE FLOOR DECKS, TYP. SEE DETAIL 3/S6.5 FOR ADDITIONAL INFORMATION
5. PROVIDE 400/600SLT250-43 SLOTTED TRACK AT TOP OF WALLS TO COMPOSITE FLOOR DECKS & METAL ROOF DECKS. SEE DETAILS 3/S6.3, 3 & 6/S6.4 & 1/S6.5 FOR ADDITIONAL INFORMATION.
6. SEE DETAIL 1/S6.3 FOR TYPICAL FRAMING AT OPENINGS IN EXTERIOR WALLS & INTERIOR PARTITIONS.
7. SEE DETAILS 13 & 14/S6.4 FOR BRIDGING & BRACING REQUIREMENTS FOR ALL METAL STUD WALLS AND DETAIL 12/S6.4 FOR BACKING/BLOCKING REQUIREMENTS.
8. SEE DETAIL 5/S6.4 FOR INTERIOR NON-BEARING WALL BRACING REQUIREMENTS

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MADERA HIGH SCHOOL STADIUM

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

MADERA UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT — MICHAEL R. SCHOEN — No. C-35165 — RENEWAL DATE: SEPTEMBER 28, 2027 — STATE OF CALIFORNIA

PROJECT NUMBER	24PBK-02
DATE	09/13/2024
DSA APPLICATION NO.	02-122784
FILE NO.	20-H3
PTN NO.	65243-153
DRAWN BY	MRH

REVISIONS

#	DESCRIPTION	DATE
	DSA SUBMITTAL	09/13/2024
	DSA BACK CHECK	07/17/2025
2.	ADDENDUM 02	08/22/2025

CONSTRUCTION DOCUMENTS

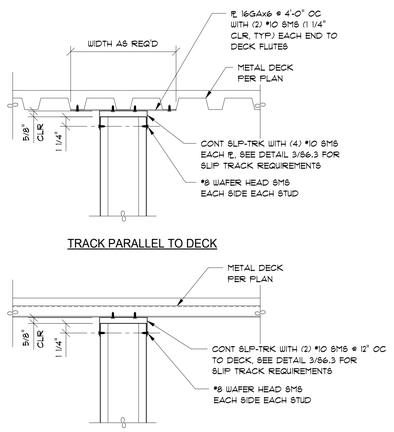
FLOOR FRAMING & CURB LAYOUT PLANS - BULIDING C

S3.4

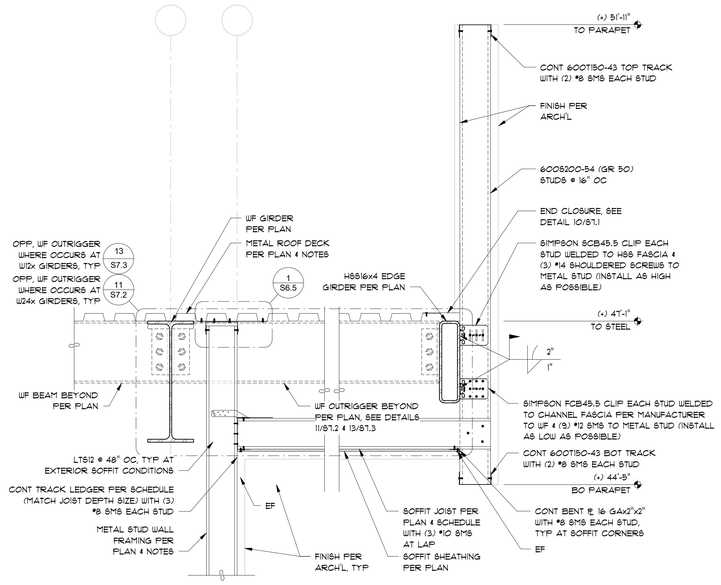
REGISTERED PROFESSIONAL ENGINEER — BRIAN S. BARCUS — S 4487 — STRUCTURAL — STATE OF CALIFORNIA — 7/9/25

7600 North Palm Avenue
Suite 200 / Fresno, CA 93711
office 559.261.8585
fax 559.261.8580
website www.BarcusInc.com

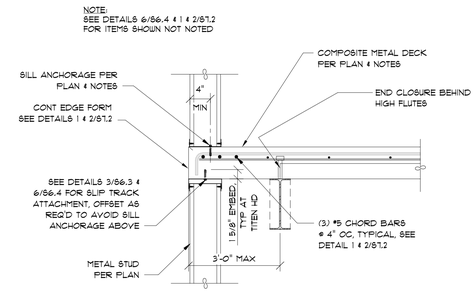
BSE Inc.
BARCUS STRUCTURAL ENGINEERING



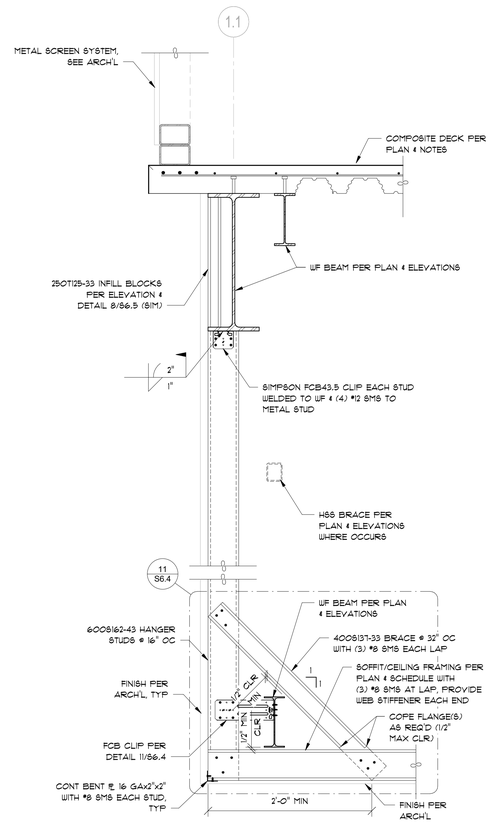
1 SLIP TRACK AT METAL ROOF DECK
1 1/2" = 1'-0"



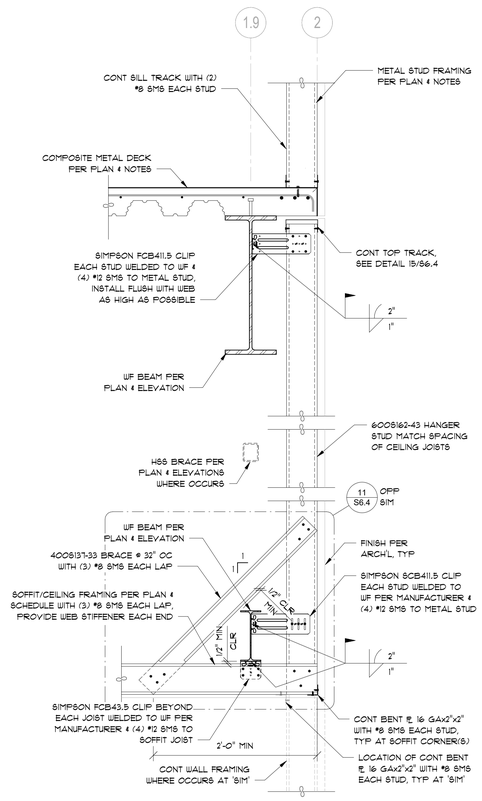
2 PARAPET FRAMING AT TOWER
1" = 1'-0"



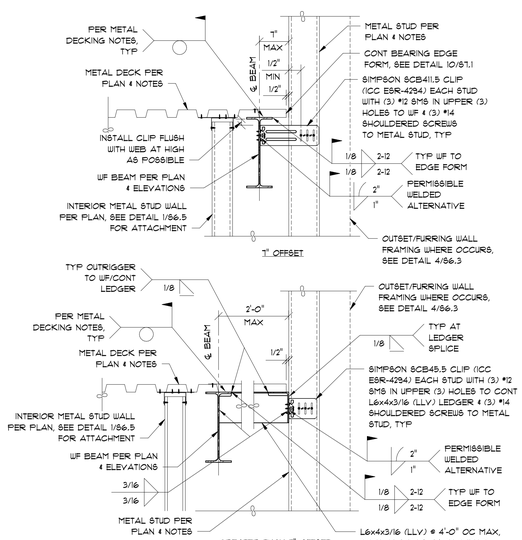
3 METAL STUD AT COMPOSITE DECK
1" = 1'-0"



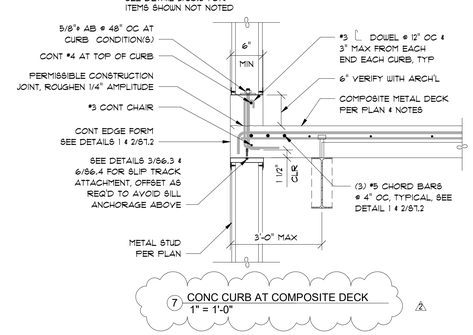
4 SCREEN SYSTEM/SOFFIT BRACE AT WF BEAM(S)
1" = 1'-0"



5 SOFFIT FRAMING AT WF BEAMS
1" = 1'-0"

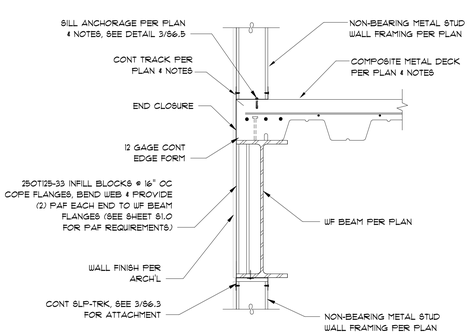


6 BYPASS WALL FRAMING
1" = 1'-0"



7 CONC CURB AT COMPOSITE DECK
1" = 1'-0"

NOTE:
SEE DETAIL 6/S6.4 FOR PARTITION WALL ATTACHEMENT AND DETAILS 1 & 2/S7.2 FOR END CLOSURE REQUIREMENTS



8 COMPOSITE DECK AT INTERIOR SHAFT OPENING
1" = 1'-0"

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MADERA HIGH SCHOOL STADIUM

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

MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL
LICENSED ARCHITECT — MICHAEL R. SCHOEN — No. C-35165 — RENEWAL DATE 1/31/2027 — STATE OF CALIFORNIA

PROJECT NUMBER	24PBK-02
DATE	09/13/2024
DSA APPLICATION NO.	02-122784
FILE NO.	20-H3
PTN NO.	65243-153
DRAWN BY	MRH

REVISIONS

#	DESCRIPTION	DATE
	DSA SUBMITTAL	09/13/2024
	DSA BACK CHECK	07/17/2025
2	ADDENDUM 02	08/22/2025

CONSTRUCTION DOCUMENTS

METAL STUD FRAMING DETAILS

S6.5

REGISTERED PROFESSIONAL ENGINEER — BRIAN S. BARCUS — S 4487 — STRUCTURAL — STATE OF CALIFORNIA — 11/4/25

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website www.BarcusInc.com
BSE Inc. BARCUS STRUCTURAL ENGINEERING

PTAC UNIT SCHEDULE									
DESIGNATION		PTAC 1	PTAC 2	PTAC 3	PTAC 4	PTAC 5	PTAC 6	PTAC 7	PTAC 8
VOLTS/PHASE		230/1	230/1	230/1	230/1	230/1	230/1	230/1	230/1
F.L.A.		4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
MCA / MOP		15 / 20	15 / 20	15 / 20	15 / 20	15 / 20	15 / 20	15 / 20	15 / 20
SEER2 / EER2		15.74 / 11.23	15.74 / 11.23	15.74 / 11.23	15.74 / 11.23	15.74 / 11.23	15.74 / 11.23	15.74 / 11.23	15.74 / 11.23
ERV	OUTSIDE AIR MIN. (CFM)	40	40	40	40	40	40	25	25
	EXT. SP (IN. WC)	0.45"	0.45"	0.45"	0.45"	0.45"	0.45"	0.45"	0.45"
	OSA FILTER RATING	MERV-13	MERV-13	MERV-13	MERV-13	MERV-13	MERV-13	MERV-13	MERV-13
	COOLING RECOVERY (MBH)	500	500	500	500	500	500	350	350
	HEATING RECOVERY (MBH)	800	800	800	800	800	800	550	550
	EXHAUST AIR (CFM)	40	40	40	40	40	40	25	25
COOLING	SENSIBLE (MBH)	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2
	EADB/EAWB (°F)	105 / 75	105 / 75	105 / 75	105 / 75	105 / 75	105 / 75	105 / 75	105 / 75
	DESIGN CFM	200	200	200	200	200	200	200	200
	SPEED	MED.	MED.	MED.	MED.	MED.	MED.	MED.	MED.
	INDOOR FILTER RATING	MERV-3	MERV-3	MERV-3	MERV-3	MERV-3	MERV-3	MERV-3	MERV-3
	REFRIG. TYPE / CLASS	R-32 / A2L	R-32 / A2L	R-32 / A2L	R-32 / A2L	R-32 / A2L	R-32 / A2L	R-32 / A2L	R-32 / A2L
HEATING	TOTAL HEAT @ 47°F (MBH)	17.5	17.5	17.5	17.5	17.5	17.5	15.0	15.0
	AUXILIARY ELEC. (W)	900	910	910	910	910	910	910	910
	NO. OF STAGES	1	1	1	1	1	1	1	1
	HSPF2	8.45	8.45	8.45	8.45	8.45	8.45	8.45	8.45
MANUFACTURER		EPHOCA	EPHOCA	EPHOCA	EPHOCA	EPHOCA	EPHOCA	EPHOCA	EPHOCA
TYPE		WALL MOUNT PRO	WALL MOUNT PRO	WALL MOUNT PRO	WALL MOUNT PRO	WALL MOUNT PRO	WALL MOUNT PRO	WALL MOUNT PRO	WALL MOUNT PRO
MODEL NUMBER		APK10R3H2	APK10R3H2	APK10R3H2	APK10R3H2	APK10R3H2	APK10R3H2	APK10R3H2	APK10R3H2
LOCATION		201	202	203	204	205	206	129	130
OPER. WT (LBS)		135	135	135	135	135	135	135	135
ACCESSORIES		1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3	1 2 3

1 . SINGLE POINT POWER
2 . PROVIDE FACTORY HIGH WINDOW ADAPTER
3 . PROVIDE FACTORY WIRELESS REMOTE (WRCH20)
4 . PROVIDE GOBI-II CONDENSATE PUMP WITH SEPARATE POWER CONNECTION. 2

TITLE 24 ACCEPTANCE TESTING TABLE																							
DESIGNATION		HP 1	HP 2	HP 3	HP 4	HP 5	HP 6	HP 7	IDU 1.1 THRU IDU 1.3	IDU 2	IDU 3	IDU 4	ERV 1	PTAC 1	PTAC 2	PTAC 3	PTAC 4	PTAC 5	PTAC 6	PTAC 7	PTAC 8
FORM / TITLE	NRCA-MCH-02-A OUTDOOR AIR.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	NRCA-MCH-03-A CONSTANT VOLUME SINGLE ZONE HVAC.	X	X	X	X	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	X	X	X	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														
	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.																				
	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 CERTIFED ACCEPTANCE TEST TECHNICIAN TO COMPLY WITH CALIFORNIA ENERGY CODE.
3. SUBMIT ACCEPTANCE FORMS TO PROJECT INSPECTOR & MEOR FOR REVIEW.

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MADERA HIGH SCHOOL STADIUM

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

MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT — MICHAEL R SOKEN — No. C-30788 — RENEWAL DATE 08.31.2025 — STATE OF CALIFORNIA

PROJECT NUMBER
20-51

DATE
08/22/2023

DSA APPLICATION NO.
02-122784

FILE NO.
20-H3

PTN NO.
65243-153

DRAWN BY
XXX

REVISIONS

#	DESCRIPTION	DATE
2	ADDENDUM #2	8/18/2025

CONSTRUCTION DOCUMENTS

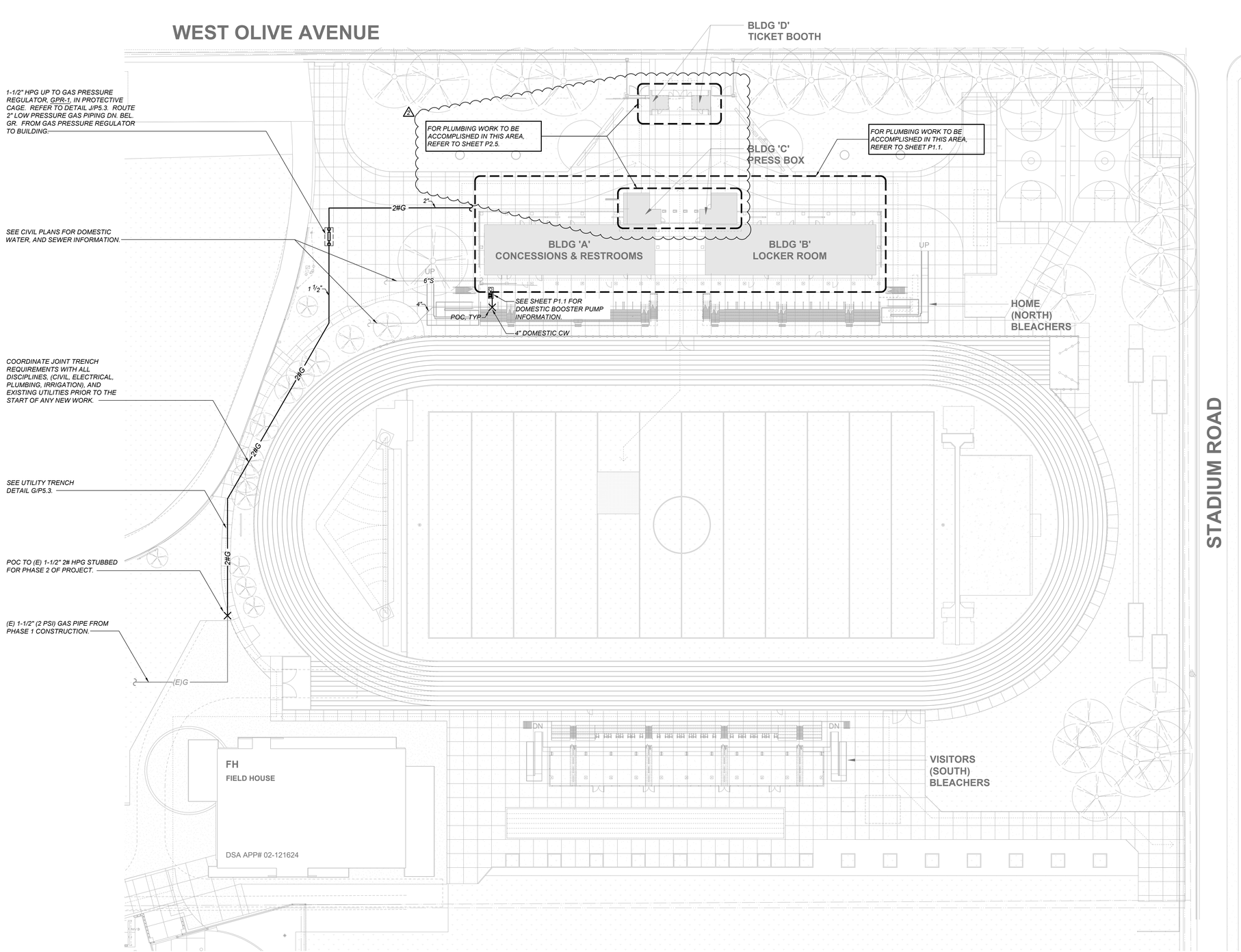
MECHANICAL SCHEDULES

M4.1

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

21 August, 2025 10:35 AM p:\2023\23073 modero usd – modero hs stadium locker addition\4-drawings\4 M\PHASE-2 Stadium\M4.0-4.1 – MECHANICAL SCHEDULES.dwg gustavo



1 PLUMBING SITE PLAN
SCALE: 1" = 30'-0"

	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	-

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200 SOUTH "L" STREET
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CONSTRUCTION DOCUMENTS

MADERA UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT — MICHAEL R. SCHOEN — No. C30755 — RENEWAL DATE 08.31.2025 — STATE OF CALIFORNIA

PROJECT NUMBER 20-51

DATE 08/22/2023

DSA APPLICATION NO. 02-122784

FILE NO. 20-H3

PTN NO. 65243-153

DRAWN BY XXX

REVISIONS

#	DESCRIPTION	DATE
2	ADDENDUM #2	8/18/2025

CONSTRUCTION DOCUMENTS

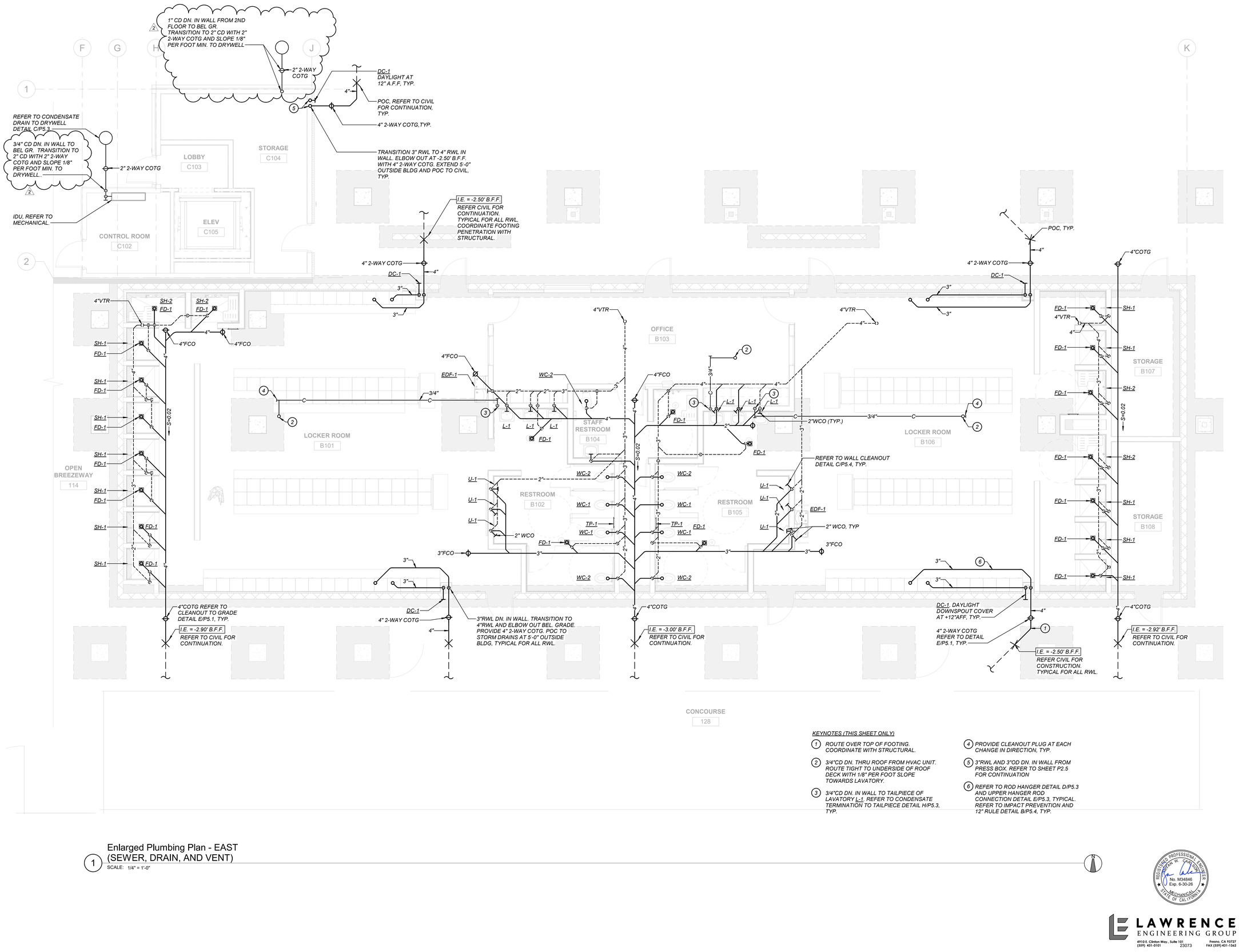
PLUMBING SITE PLAN

PS.1

REGISTERED PROFESSIONAL ENGINEER — JOHN W. CARLSON — No. M34846 Exp. 6-30-26 — MECHANICAL — STATE OF CALIFORNIA

LAWRENCE ENGINEERING GROUP
4910 E. Clinton Way, Suite 101
(559) 431-0101
23073
Fresno, CA 93727
FAX (559) 431-7342

21 August 2025 10:31 AM p:\2023\23073 modera usd – modera hs stadium locker addition\4-drawings\5 PLPHASE-2 Stadium\PS.1 – PLUMBING SITE PLAN.dwg gustavo



KEYNOTES (THIS SHEET ONLY)

1. ROUTE OVER TOP OF FOOTING. COORDINATE WITH STRUCTURAL.
2. 3/4"CD DN. THRU ROOF FROM HVAC UNIT. ROUTE TIGHT TO UNDERSIDE OF ROOF DECK WITH 1/8" PER FOOT SLOPE TOWARDS LAVATORY.
3. 3/4"CD DN. IN WALL TO TAILPIECE OF LAVATORY L-1. REFER TO CONDENSATE TERMINATION TO TAILPIECE DETAIL H/P5.3, TYP.
4. PROVIDE CLEANOUT PLUG AT EACH CHANGE IN DIRECTION, TYP.
5. 3"RWL AND 3"OD DN. IN WALL FROM PRESS BOX. REFER TO SHEET P2.5 FOR CONTINUATION
6. REFER TO ROD HANGER DETAIL D/P5.3 AND UPPER HANGER ROD CONNECTION DETAIL E/P5.3, TYPICAL. REFER TO IMPACT PREVENTION AND 12" RULE DETAIL B/P5.4, TYP.

1 Enlarged Plumbing Plan - EAST (SEWER, DRAIN, AND VENT)
SCALE: 1/4" = 1'-0"

PBK

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MADERA HIGH SCHOOL STADIUM

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

MADERA UNIFIED SCHOOL DISTRICT 19 66

PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL R. SCHOEN No. C-30265 RENEWAL DATE FEB 28, 2025 STATE OF CALIFORNIA

PROJECT NUMBER	20-51
DATE	08/22/2023
DSA APPLICATION NO.	xxx
FILE NO.	20-H3
PTN NO.	65243-153
DRAWN BY	Author

REVISIONS

#	DESCRIPTION	DATE
2	ADDENDUM #2	8/18/2025

CONSTRUCTION DOCUMENTS

ENLARGED PLUMBING PLAN - EAST (SEWER, DRAIN, & VENT)

P2.1

REGISTERED PROFESSIONAL ENGINEER BRENT W. DRAKE No. M34846 Exp. 6-30-26 MECHANICAL STATE OF CALIFORNIA

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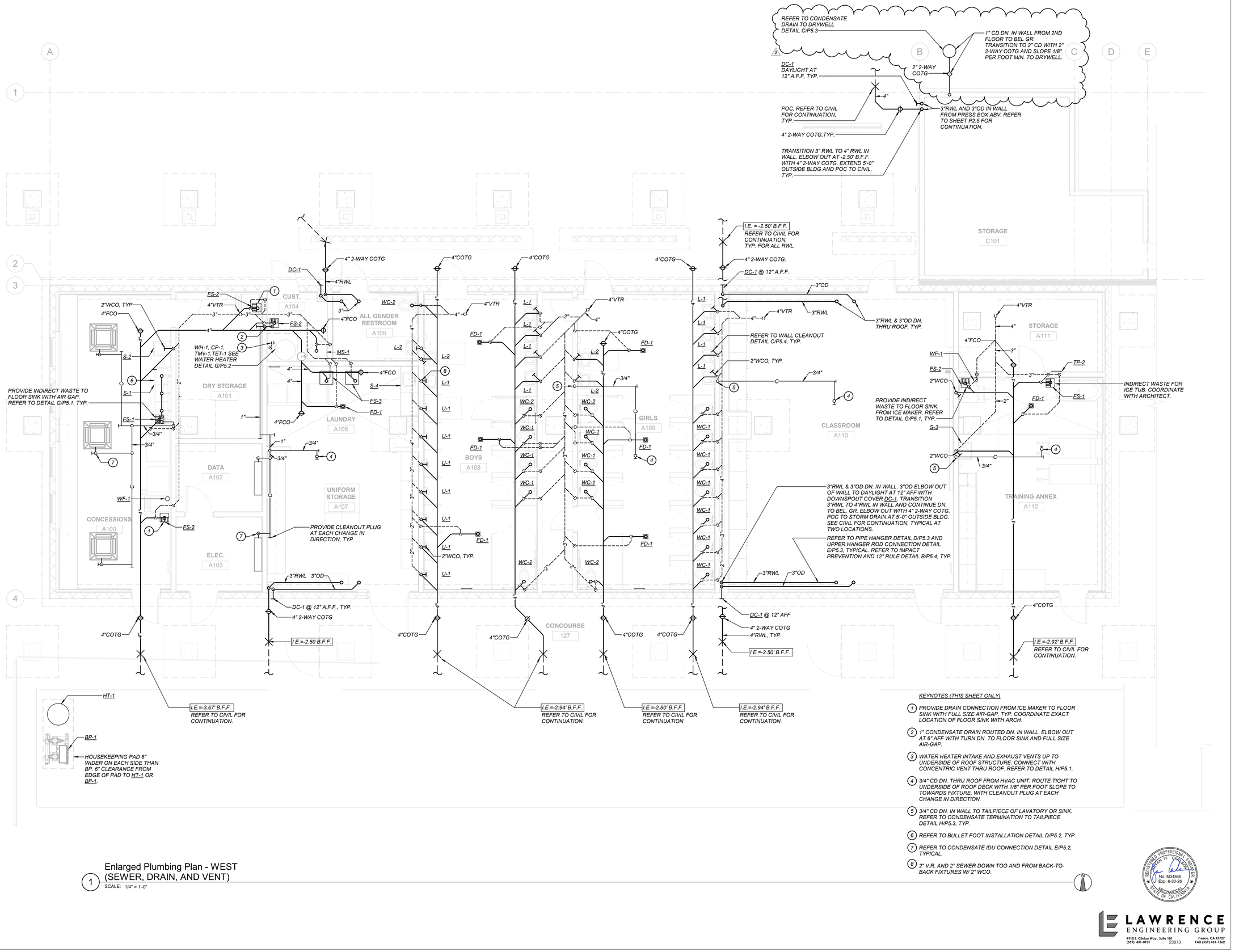

KEYNOTES (THIS SHEET ONLY)

1. PROVIDE DRAIN CONNECTION FROM ICE MAKER TO FLOOR SINK WITH FULL SIZE AIR-GAP, TYP. COORDINATE EXACT LOCATION OF FLOOR SINK WITH ARCH.
2. 1" CONDENSATE DRAIN ROUTED DN. IN WALL. ELBOW OUT AT 6" AFF WITH TURN DN. TO FLOOR SINK AND FULL SIZE AIR-GAP.
3. WATER HEATER INTAKE AND EXHAUST VENTS UP TO UNDERSIDE OF ROOF STRUCTURE. CONNECT WITH CONCENTRIC VENT THRU ROOF. REFER TO DETAIL H/P5.1.
4. 3/4" CD DN. THRU ROOF FROM HVAC UNIT. ROUTE TIGHT TO UNDERSIDE OF ROOF DECK WITH 1/8" PER FOOT SLOPE TO TOWARDS FIXTURE. WITH CLEANOUT PLUG AT EACH CHANGE IN DIRECTION.
5. 3/4" CD DN. IN WALL TO TAILPIECE OF LAVATORY OR SINK. REFER TO CONDENSATE TERMINATION TO TAILPIECE DETAIL H/P5.3, TYP.
6. REFER TO BULLET FOOT INSTALLATION DETAIL D/P5.2, TYP.
7. REFER TO CONDENSATE IDU CONNECTION DETAIL E/P5.2, TYPICAL.
8. 2" V.R. AND 2" SEWER DOWN TOO AND FROM BACK-TO-BACK FIXTURES W/ 2" WCO.

1 Enlarged Plumbing Plan - WEST (SEWER, DRAIN, AND VENT)
SCALE: 1/4" = 1'-0"

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7790 North Palm Avenue
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559-448-8467 F
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MADERA HIGH SCHOOL STADIUM

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

MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL R. SCHOEN No. C-25245 RENEWAL DATE FEB 28, 2025 STATE OF CALIFORNIA

PROJECT NUMBER	20-51
DATE	08/22/2023
DSA APPLICATION NO.	XXX
FILE NO.	20-H3
PTN NO.	65243-153
DRAWN BY	Author

REVISIONS

#	DESCRIPTION	DATE
2	ADDENDUM #2	8/18/2025

CONSTRUCTION DOCUMENTS

ENLARGED PLUMBING PLAN - WEST (SEWER DRAIN & VENT)

P2.2

REGISTERED PROFESSIONAL ENGINEER SHAWN W. LAWRENCE No. M34846 Exp. 6-30-26 MECHANICAL STATE OF CALIFORNIA

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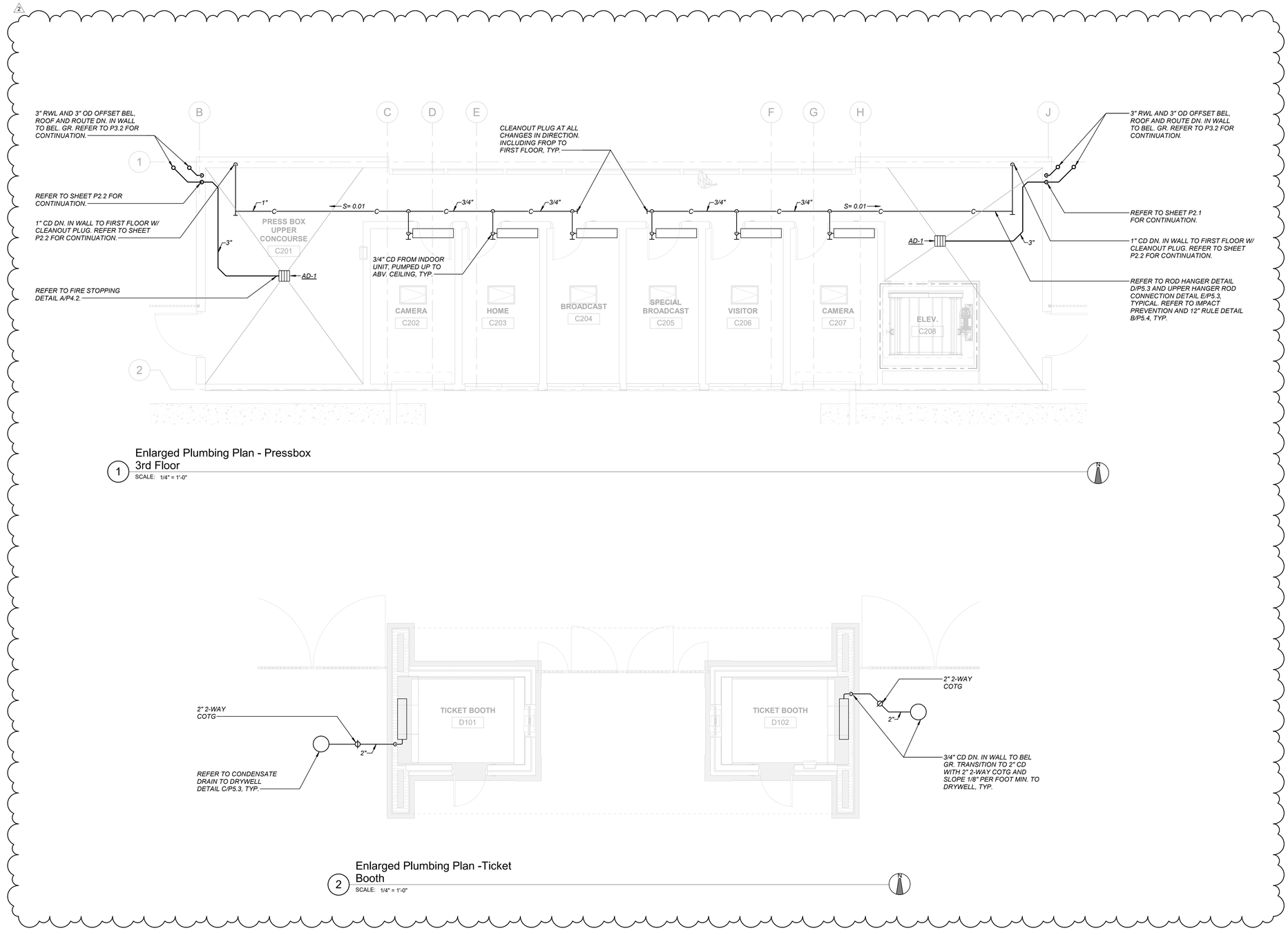
FIRE RATED WALL	
— — — — — —	NEW 1HR RATED WALL



1 Enlarged Plumbing Plan - Pressbox 3rd Floor
SCALE: 1/4" = 1'-0"

2 Enlarged Plumbing Plan -Ticket Booth
SCALE: 1/4" = 1'-0"

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MADERA HIGH SCHOOL STADIUM
200 SOUTH "L" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

MADERA UNIFIED SCHOOL DISTRICT 1966

PROFESSIONAL SEAL

LICENSED ARCHITECT
MICHAEL R. SCHOEN
No. C-26395
RENEWAL DATE
FEB 28, 2025
STATE OF CALIFORNIA

PROJECT NUMBER
20-51

DATE
08/22/2023

DSA APPLICATION NO.
XXX

FILE NO.
20-H3

PTN NO.
65243-153

DRAWN BY
Author

REVISIONS

#	DESCRIPTION	DATE
2	ADDENDUM #2	8/18/2025

CONSTRUCTION DOCUMENTS

ENLARGED PLUMBING PLAN - PRESSBOX

P2.5

REGISTERED PROFESSIONAL ENGINEER
BRIAN W. CARLSON
No. M34846
Exp. 6-30-26
MECHANICAL
STATE OF CALIFORNIA

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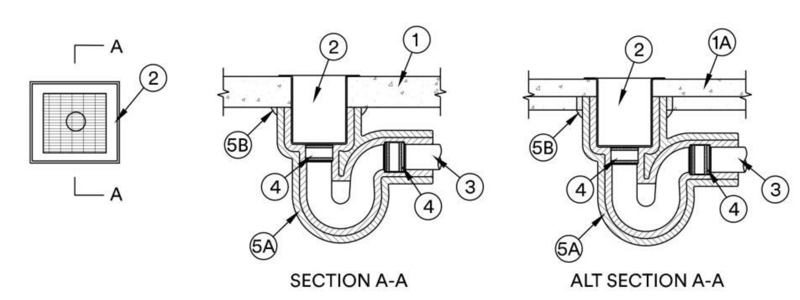
UL System No. F-A-1160
XHEZ.F-A-1160

February 6, 2017

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating – 2 Hr	F Rating – 2 Hr
T Rating – 2 Hr	FT Rating – 2 Hr
	FH Rating – 2 Hr
	FTH Rating – 2 Hr



Through Penetrations

Metallic Pipes

1. **Floor Assembly** – Min 2-1/2 in. (64 mm) thick reinforced lightweight or normal weight (100–150 pcf or 1600–2400 kg/m³) concrete.

1A. **Floor Assembly** – The fire rated protected or unprotected concrete and steel floor shall be constructed of the materials and in the manner specified in the individual D700 or D900 Series designs in the UL Fire Resistance Directory and as summarized below:
   - **A. Concrete** – Min 2-1/2 in. (64 mm) thick reinforced lightweight or normal weight (100–150 pcf or 1600–2400 kg/m³) concrete.
   - **B. Steel Floor and Form Units*** – Composite or non-composite max 2 in. (51 mm) deep galv steel fluted units as specified in the individual Floor-Ceiling Design.
   - **C. Spray-Applied Fire Resistive Material** – (Optional. Not Shown.) – Steel floor units may be sprayed with the type and thickness of fire resistive material indicated in the individual D700 Series Design.

     UNITED STATES MINERAL PRODUCTS CO, DBA ISOLATEK INTERNATIONAL — Type 300

     GCP APPLIED TECHNOLOGIES INC — MK-6/HY+

2. **Floor Sink and Grate** – Max 12 in. wide by 12 in. long by 10 in. (305 by 305 by 254 mm) deep cast iron waste drain floor sink permanently embedded during concrete pour or grouted into concrete assembly. Cast iron floor grating to be installed at top of sink. Metal dome strainer may be used in sink drain. Sink flanges to bear on top plane of floor assembly.
3. **Iron Pipe** – Nom 4 in. (102 mm) diam (or smaller) cast or ductile iron pipe to be secured to outlet of floor sink with no-hub coupling and to be rigidly supported beneath floor away from floor sink with suitable hangers.
4. **Compression Coupling** – Nom 4 in. diam (or smaller) compression type high pressure pipe coupling with elastomeric plastic and a stainless steel shield. Coupling to be secured to pipe with stainless steel hose clamps at any point beyond the bottom of floor.
5. **Firestop System** – The firestop system shall consist of the following:
   - **A. Duct Wrap Materials*** – Two layers of nom 1-1/2 in. (38 mm) thick faced or unfaced duct wrap to be tightly wrapped around sink and drain pipe. Both layers of duct wrap shall extend a minimum of 24 in. (610 mm) beyond the bottom of floor or the valley of the steel floor units and are held in position using wire ties. Duct wrap layers to butt tightly against bottom surface of floor. When fluted steel floor units (Item 1A) are used, the duct wrap layers shall be castle cut to follow the profile of and butt tightly against the fluted deck. Duct wrap held in position using nom 16 ga steel wire ties spaced max 8 in. (203 mm) on center and max 1 in. (25 mm) from ends of layers and bottom of floor or bottom valley of fluted deck.

     3M COMPANY
     3M FIRE PROTECTION PRODUCTS – 3M™ Fire Barrier Duct Wrap 615+
   - **B. Fill, Void or Cavity Material* – Sealant** – Min 1/2 in. (13 mm) bead of fill material applied around periphery of duct wrap floor at interface with bottom surface of floor or steel floor units. Sealant shall be applied to the contour of the steel floor units.

     3M COMPANY
     3M FIRE PROTECTION PRODUCTS – IC 15WB+, CP 25WB+ caulk, FB-3000 WT sealant

*Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively. c UL us

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FA

3M.com/firestop 1-800-328-1687 **F-A-1160 • 1 of 1** **3M Fire Protection Products** Applicators and Specifiers Guide

FIRE STOP DETAIL - THROUGH PENETRATION
SCALE: NONE

A / P4.2

2

DOMESTIC WATER MAIN CALCULATIONS FROM WATER METER TO +5'-0" FROM BLDG:

PEAK CALCULATED GPM DEMAND	= 225 GPM (FIELDHOUSE & STADIUM))
FIELDHOUSE	= 110 GPM
STADIUM	= 115 GPM
CITY WATER PRESSURE AT METER	= 48 PSI
4" WATER METER LOSS	= 4.0 PSI
6" REDUCED PRESSURE BACKFLOW PREVENTER	= 12.0 PSI
6" WATER MAIN TOTAL DEVELOPED LENGTH	= 400 LF.
PSI LOSS (TOTAL DISTANCE OF PIPE @ 225 GPM) TO SUPPLY FIELDHOUSE AND STADIUM BLDG.	= 0.62 PSI
4" WATER MAIN TOTAL DEVELOPED LENGTH	= 520 LF.
PSI LOSS (TOTAL DISTANCE OF PIPE @ 115 GPM) TO SUPPLY STADIUM BLDG.	= 1.69 PSI
TOTAL PRESSURE LOSS (SITE PIPING)	= 18.31 PSI
PRESSURE AVAILABLE AT INLET SIDE OF BOOSTER PUMP. 48.0 PSI - 18.31 PSI	= 29.7 PSI
BOOSTER PUMP PRESSURE	= 10.0 PSI
PRESSURE AVAILABLE AT OUTLET SIDE OF BOOSTER PUMP.	= 40.0 PSI

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

GAS PIPE SIZING:

TOTAL DEMAND:	2,260 CFH	(2,260 MBH)
STADIUM BLDG TOTAL DEMAND (PHASE 2):	550 CFH	(550 MBH)
NEW FIELD HOUSE TOTAL DEMAND (PHASE 1):	250 CFH	(250 MBH)
OLD 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 STADIUM BUILDING:
1300' COLUMN:

A 1-1/2"" GAS PIPE WILL DELIVER:	1,320 CFH	(1,320 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)
DRYERS	150 MBH (EA) X (2) = 300 MBH	(300 CFH)
TOTAL GAS LOAD:	550 MBH	(550 CFH)

PLUMBING FIXTURE AND EQUIPMENT SCHEDULE

MARK	FIXTURE	CONNECTION SIZES				DESCRIPTION
		S or W	V	CW	HW	
S-4	SINK	2"	2"	1/2"	1/2"	JUST #SL1921A-J, DROP IN, 18 GAUGE, (TYPE 304) STAINLESS STEEL, SINGLE COMPARTMENT, (18"x14"x7-1/2" DEEP BOWL SIZE) , CENTER DRAIN, #J-35GS BASKET STRAINER, AND CHICAGO #50-GN8AE35ABCP DECK MOUNT, ECAST FAUCET WITH 8" RIGID/SWING GOOSENECK SPOUT AND PRESSURE COMPENSATING SOFTFLOW AERATOR (1.5 GPM) FLOW OUTLET, VANDAL PROOF LEVER HANDLES.
AD-1	AREA DRAIN	3"	-	-	-	MIFAB #F1510 CAST IRON FLOOR DRAIN WITH DEEP SUMP BODY, 12"x12" SQUARE HEAVY DUTY TRACTOR GRATE. MEMBRANE CLAMP, SEDIMENT BUCKET, UNDERDECK CLAMP, EXTENSION, HEELPROOF GRATE AND NO HUB OUTLET.

2

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. THE MEP DESIGN PROFESSIONAL ENGINEER RESPONSIBLE FOR THE CONTENT OF THESE SHEETS HAS VERIFIED THAT THE DESIGN METHODS IDENTIFIED BELOW ARE IN ACCORDANCE WITH DSA IR 16-13.

   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).

   MP ☐ MD ☐ PP ☐ C. OPTION 3: PLUMBING PIPING (PP) - SHALL COMPLY WITH OPM (OSHPD / HCAI), DEFERRED SUBMITTAL.

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.

REGISTERED PROFESSIONAL ENGINEER — RYAN W. CARLSON — No. M34846 — Exp. 6-30-26 — MECHANICAL — STATE OF CALIFORNIA

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MADERA HIGH SCHOOL STADIUM
200 SOUTH "L" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL
LICENSED ARCHITECT — MICHAEL R. SCHOEN — No. C-35165 — RENEWAL DATE FEB 28, 2025 — STATE OF CALIFORNIA

PROJECT NUMBER	20-51
DATE	08/22/2023
DSA APPLICATION NO.	02-122784
FILE NO.	20-H3
PTN NO.	65243-153
DRAWN BY	XXX

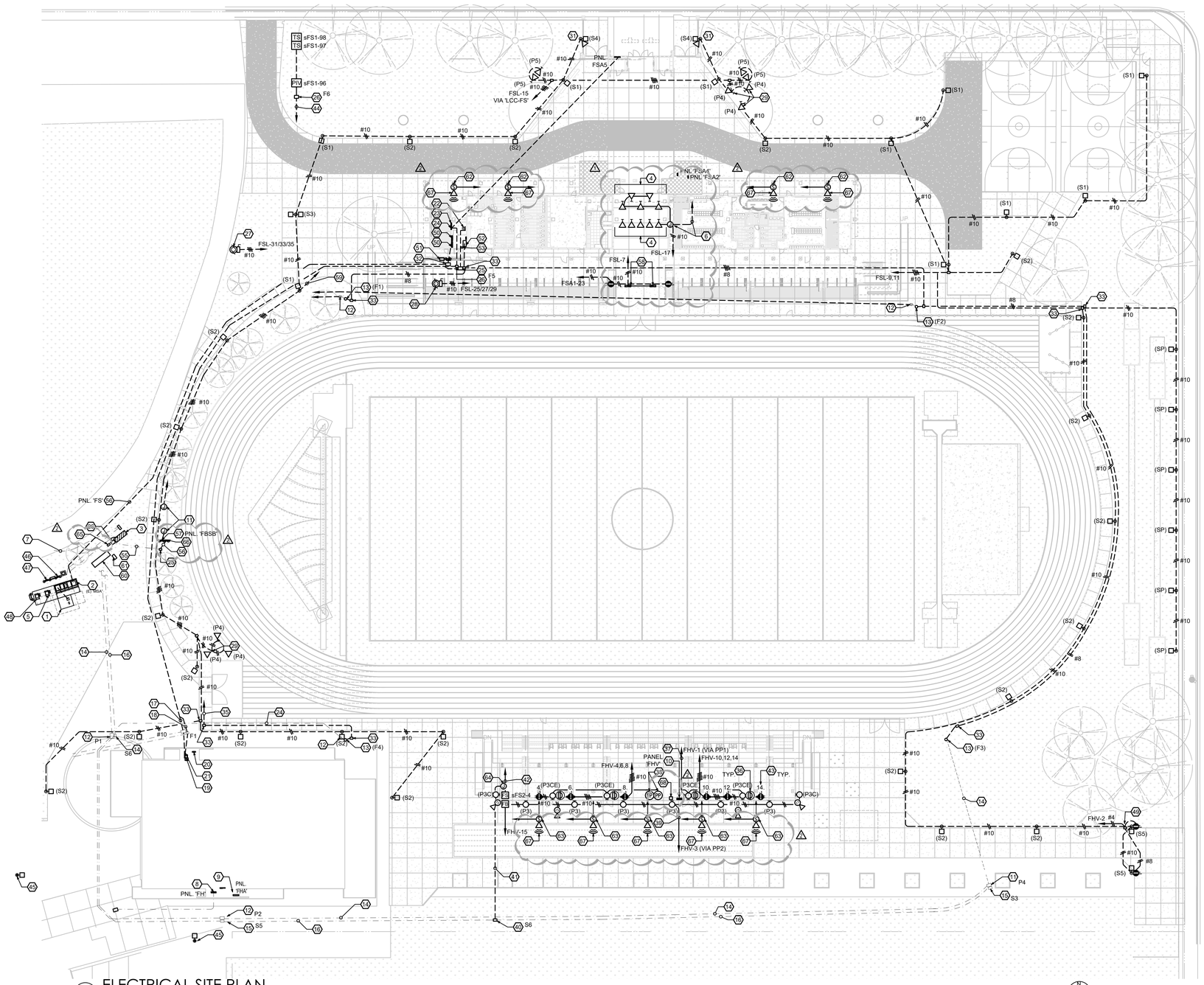
REVISIONS

#	DESCRIPTION	DATE
2	ADDENDUM #2	8/18/2025

CONSTRUCTION DOCUMENTS

PLUMBING NOTES AND CALCS

P4.2



1 ELECTRICAL SITE PLAN
SCALE: 1"=30'-0"

KEYNOTES

1. (E) PAD MOUNTED P.G.&E. TRANSFORMER. DSA #02-121624.
2. (E) PAD MOUNTED MAIN SWITCHBOARD 'MSA'. 2000A BUS/1600A MAIN, 277/480V, 3Ø, 4W, 65kA SCCR FULLY RATED, NEMA 3R, SOLID NEUTRAL. DSA #02-121624.
3. (E) PAD MOUNTED MAIN SWITCHBOARD 'MSB'. DSA #02-108565.
4. (5) FIXTURE TYPE 'P6' MOUNTED TO BLEACHER BEAM OVER ENTRANCE. MOUNT PER DETAIL A10/EX1.1. ROUTE POWER CONDUIT U.G. TO PANEL 'FSL' AND DMX CONTROL CONDUIT TO BUILDING 'C'. SEE SHEET EC3.1 FOR ADDITIONAL INFORMATION. COORDINATE WITH DISTRICT REPRESENTATIVE PRIOR TO INSTALLATION FOR AIMING.
5. (E) BATTERY ENERGY STORAGE SYSTEM, BESS01. DSA #02-121624.
6. PROVIDE DMX JUNCTION BOX TO COMBINE POWER AND DMX CONTROL WIRING INTO SINGLE FIXTURE CABLE. PROVIDE (3) JUNCTION BOXES TO WIRE EACH FIXTURE TO IT'S OWN CABLE ASSEMBLY. ACUITY #254PW3 DPI4W HYD. CONNECT JUNCTION BOX TO DMX CONTROLLER IS BROADCAST BOOTH IN BUILDING 'C', SECOND FLOOR.
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. DSA #02-119152.
8. (E) PANEL 'FH'. DSA #02-121624.
9. (E) PANEL 'FHA'. DSA #02-121624.
10. NEW MINI POWER ZONE 'FHV'. 10KVA, 120/240V, 1Ø, 3W, 10KA SCCR, NEMA 3R MOUNTED TO BLOCK WALL. SEE DETAIL D15/EX2.4.
11. CONNECT NEW SCOREBOARD. SEE DETAIL D5/EX2.4. PROVIDE 2"C TO PRESS BOX BROADCAST ROOM . SUPPLY NEW 8 CONDUCTOR 50 MICRON MULTIMODE FIBER OPTIC CABLE WITH TERMINATIONS PER SCOREBOARD MANUFACTURER'S SPECIFICATIONS FROM THE NEW SCOREBOARD TO PRESS BOX WITH SUFFICIENT LENGTH TO REACH TERMINATION POINT AT FIBER OPTIC CONVERTERS AT SCOREBOARD AND PRESS BOX PLUS 6' OF SERVICE LOOP AT EACH END. SERVICE LOOP MAY BE INSTALLED IN CLOSEST PULL BOX. COORDINATE POWER CONNECTIONS WITH SCOREBOARD SUPPLIER.
1.25"C. PANEL 'FBSB'
NEVCO MODEL #3685-IC, 120V, 8.6A, 2#10
(28) 10MM DISPLAY MODULES, 208V, 2.9A EA, 16#10
F/O CONVERTER, 120V, 0.1A, 2#10
1#10 GRD.
SEE DETAIL D5/EX2.4. PROVIDE AND INTALL J-BOX PER DETAIL L18/EX2.5.
12. (E) SPORTS LIGHTING PULL BOX TO REMAIN. DSA #02-108565.
13. (E) SPORTS LIGHTING POLE TO REMAIN. INSTALL NEW FIXTURES AND AIM PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. FIXTURE POLE DESIGNATIONS COORDINATE TO MUSCO DRAWINGS. PROVIDE ALL NEW WIRING BACK TO SOURCE. RECONNECT CONDUIT AS REQUIRED AND PROVIDE NEW CONDUCTORS (1-1/2"C. 3#6, 1#6 CU GRD. FOR MAIN LIGHTS TO 'MSB' VIA MUSCO CONTROL AND MONITORING CABINET (SEE KEYNOTE 65) FOR COMPLETE AND OPERABLE SYSTEM. PROVIDE 1"C. 2#8, 1#8 CU GRD. TO 'INV-SL' IN NEW BUILDING FOR BLEACHER EGRESS FIXTURE. PROVIDE #2/0 LIGHTNING PROTECTION GROUNDING CONDUCTOR DOWN POLE AND CONNECT TO 3/4" X 10' COPPER CLAD GROUND ROD ADJACENT TO BASE OF LIGHT POLE. BOND TO EGC AT POLE BASE PER MUSCO INSTALLATION INSTRUCTION. DSA #02-108565.
14. (E) SPORTS LIGHTING CONDUITS TO REMAIN. SEE SINGLE LINE DIAGRAM FOR CONDUIT AND CONDUCTOR INFORMATION. DSA #02-108565.
15. (E) SOUND SYSTEM PULL BOX TO REMAIN. DSA #02-108565.
16. (E) SOUND SYSTEM CONDUIT TO REMAIN. RECONNECT AS REQUIRED. PROVIDE NEW SOUND SYSTEM CONDUCTORS AS SHOWN ON RISER. DSA #02-108565.
17. PROVIDE (2)3"C. PROVIDE (1) MAXCELL MXED64283 (3", 3-CELL, DETECTABLE) INNERDUCT IN EACH CONDUIT. INSTALL MAXCELL STRICTLY PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. PROVIDE (1) 12-STR SM FIBER OPTIC CABLE, (1) 25-PAIR CAT3 OSP CABLE TO 'IDF-FS' VIA 'STC-FS'. SEE DETAIL L5/EX2.3.
18. PROVIDE 2"C (1)FAO6W. FOR FIRE ALARM TO 'FACP-FS'. SEE DETAIL L5/EX2.3
19. (E) 'IDF-F'. DSA #02-121624.
20. (E) 'FACP-F'. DSA #02-121624.
21. (E) SIGNAL TERMINAL CABINET 'STC-F'. DSA #02-121624.
22. (N) 'IDF-FS'.
23. (N) 'FACP-FS'
24. (N) SIGNAL TERMINAL CABINET 'STC-FS'.
25. PROVIDE B1730BOX (BOX), B1730-12 (EXTENSION) AND B1730-51JH LID MARKED "COMMUNICATION" AND INTERCEPTION POINT. INSTALL BOX PER DETAIL L13/EX2.3. ORIENT PULL BOX WITH ANY ADJACENT CONCRETE, EDGES, JOINTS, ETC.
26. 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.
27. CONNECT NEW IRRIGATION BOOSTER PUMP. 5HP, 480V, 3Ø. 1"C. 3#10, 1#10 GRD. COORDINATE WITH IRRIGATION PLANS FOR EXACT LOCATION AND IRRIGATION CONTRACTOR.
28. CONNECT NEW DOMESTIC DUPLEX BOOSTER PUMP. 2X2HP, 480V, 3Ø. 1"C. 3#10, 1#10 GRD. COORDINATE WITH PLUMBING CONTRACTOR.
29. PROVIDE NEW FLAGPOLE LIGHTS. COORDINATE WITH FLAGPOLE SUPPLIER.
30. PROVIDE NEW LANDSCAPE TREE UPLIGHTS. COORDINATE WITH LANDSCAPE.
31. AIM POLE TOP FLOOD LIGHT TO ILLUMINATE THE UPPER SIGN PORTION OF THE TICKET BOOTH BUILDING. THE FIXTURE SHALL BE AIMED SO AS TO AVOID GLARE AND BLINDING OF PEOPLE IN AND AROUND THE TICKET BOOTH BUILDING.
32. PROVIDE B2436BOX (BOX), B2436-12 (EXTENSION) & B2436-51JH (LID). MARK LID "ELECTRICAL". INSTALL PER DETAIL L13/EX2.3. ORIENT PULL BOX WITH ANY ADJACENT CONCRETE, EDGES, JOINTS, ETC.
33. PROVIDE B1017BOX (BOX), B1017-12 (EXTENSION) & B1017-51JH (LID). MARK LID "LIGHTING". INSTALL PER DETAIL L13/EX2.3. ORIENT PULL BOX WITH ANY ADJACENT CONCRETE, EDGES, JOINTS, ETC.
34. PROVIDE 1-1/4"C. 4#8, 1#8 GRD. FOR SPORTS POLE BLEACHER EGRESS LIGHTING. SEE DETAIL L9/EX2.3.
35. PROVIDE 1"C. 2#6, 1#8 GRD. FOR SPORTS POLE BLEACHER EGRESS LIGHTING. CONNECT TO DESIGNATED EGRESS LIGHTING FIXTURE AT POLE TOP PER MUSCO DRAWINGS. CONNECT TO CIRCUIT FSL-41, VIA EMERGENCY INVERTER 'INV-SL' AND MUSCO 'ALIC' PANEL IN ELECTRICAL ROOM. SEE DETAIL L9/EX2.3.
36. PROVIDE DIGITAL DIMMING SWITCH UNDER BLEACHERS AT ACCESS DOOR FOR CONTROL OF UNDER BLEACHER LIGHTING. SWITCH SHALL BE NLIGHT #nPODM DX WH LT. PROVIDE WEATHER PROOF BOX WITH CLEAR WEATHERPROOF WHILE-IN-USE COVER TAYMAC MM420C OR EQUAL. PROGRAM CONTROLS FOR MANUAL ON/OFF AND SWEEP OFF PER OWNER.
37. ROUTE CIRCUIT VIA POWERPACK #2. SEE KEYNOTE 36 ABOVE.
38. (2) DIMMING POWERPACK. nLIGHT #nPP16 D EFP LT. ONE POWERPACK SHALL BE FOR THE UNDERBLEACHER LIGHTS AND THE SECOND SHALL BE FOR THE LIGHTS ON THE "EXTERIOR" OF THE UNDERBLEACHER SOUNDWALL. INSTALL POWERPACKS IN WEATHER PROOF ENCLOSURE. CONNECT POWERPACK TO LIGHTING CONTROL CABINET IN FIELDHOUSE. PROVIDE 1"C. (1) CAT5 OUTSIDE PLANT RATED.
39. ROUTE CIRCUIT VIA POWERPACK #1. PROGRAM FOR TIME CLOCK CONTROL TO OPERATE ON THE SAME SCHEDULE AS OTHER EXTERIOR LIGHTING.
40. PROVIDE B1017BOX (BOX), B1017-12 (EXTENSION) & B1017-51JH (LID). MARK LID "ELECTRICAL". INSTALL PER DETAIL L13/EX2.3. ORIENT PULL BOX WITH ANY ADJACENT CONCRETE, EDGES, JOINTS, ETC.
41. PROVIDE 1-1/2"C. FOR STADIUM AUDIO CONDUCTORS.
42. 1"C. (1)DW TO 'FATC-F' VIA F1 PULL BOX. CONNECT TO FLOW FOR UNDERBLEACHER SPRINKLERS.
43. INSTALL RECEPTACLES UNDER BLEACHERS AT +42" A.F.F., TYP.
44. 1"C. (3)DW TO 'FATC-FS' VIA F5 PULL BOX. CONNECT TO FLOW AND TAMPER SWITCHES FOR STADIUM FIRE SERVICE.
45. (E) SITE LIGHTING FIXTURE TO REMAIN. DSA #02-119114.
46. (E) PANEL 'ESSL'. SEE PANEL SCHEDULE, SHEET EX2.2. DSA #02-121624.
47. (E) PANEL 'ESS'. SEE PANEL SCHEDULE, SHEET EX2.2. DSA #02-121624.
48. (N) BATTERY ENERGY STORAGE SYSTEM, BESS-2. SEE SINGLE LINE DIAGRAM, G15/EX2.1 AND SHEET EX2.8. INSTALL ON EXISTING HOUSEKEEPING PAD INSTALLED UNDER APPLICATION #02-121624 PER DETAILS A18/EX2.8. MAINTAIN ALL REQUIRED CLEARANCES AROUND SYSTEM PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. PROVIDE THE FOLLOWING RENEWABLES LABELS 15, 16, 17, 18 & 19. SEE SHEETS EX2.9. 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.
49. PROVIDE B1017BOX (BOX), B1017-12 (EXTENSION) & B1017-51JH (LID). MARK LID "ELECTRICAL" NEAR BASE OF POLE FOR RECEPTACLE POWER INTO AND OUT OF POLE BASE. MAKE SPLICE IN POLE, OR PROVIDE WATERPROOF SPLICE IN PULL BOX. INSTALL PER DETAIL L13/EX2.3. ORIENT PULL BOX WITH ANY ADJACENT CONCRETE, EDGES, JOINTS, ETC.
50. (N) PANEL 'FS'. SEE SINGLE LINE DIAGRAM, SHEET EX2.1 & SCHEDULE , SHEET EX2.2.
51. (N) TRANSFORMER 'TFSA'. SEE SINGLE LINE DIAGRAM, SHEET EX2.1.
52. (N) INVERTER 'INV-SL'. MOUNT PER DETAIL F5/EX1.2.
53. (N) MUSCO 'ALIC' PANEL. MOUNT PER DETAIL K15/EX1.2.
54. (E) TRANSFORMER 'TE' TO REMAIN. 480-120/208V, 3PH, 4W, NEMA 3R. SQUARE D #112T3H. DSA #02-108565.
55. (E) (2)4" CONDUITS. PROVIDE NEW CONDUCTORS IN EXISTING CONDUIT PER SINGLE LINE DIAGRAM, SHEET EX2.1. DSA #02-108565.
56. (N) FEEDER PER SINGLE LINE DIAGRAM, SHEET EX2.1.
57. (N) PANEL 'FBSB' PER SCHEDULE. MOUNT PER DETAIL L8/EX2.5.
58. PROVIDE (2) TYPE 'P7E' FIXTURES UNDER BLEACHERS. SEE DETAIL L10/EX1.3.
59. 1"C. 4#10, 1#10 GRD. FSL-9 (SITE FIXTURES). FSL-15 (FLAG POLE, ROUTE VIA FSL-15 VIA 'LCC-FS').
60. REINSTALL EXISTING GENERATOR ON NEW CONCRETE PAD PER DETAIL H12/EX2.5.
61. REINSTALL EXISTING A.T.S. ON NEW CONCRETE PAD PER DETAIL H18/EX2.5.
62. PROVIDE SOUND SYSTEM SPEAKER ON BLEACHER COLUMN PER DETAIL G11/EX3.1. PROVIDE 3/4"C W/ WESTPENN AQ227 CABLE FROM SOUND SYSTEM SPEAKERS ON BLEACHER COLUMN TO AV RACK IN PRESS BOX.
63. PROVIDE SOUND SYSTEM SPEAKER ON BLEACHER HSS POLE PER DETAIL G11/EX3.1. PROVIDE 3/4"C W/ WESTPENN AQ227 CABLE FROM SOUND SYSTEM SPEAKERS ON BLEACHER POLE TO AV RACK IN PRESS BOX. VERIFY EXACT LOCATION IN FIELD.
64. INSTALL JUNCTION BOX 12X10X6 NEMA 3R (EATON #12106 RTHC NK, 7.7LB) UNDER BLEACHERS FOR STADIUM AUDIO. TRANSITION FROM BLEACHER STRUCTURE TO BLOCK SIMILAR TO DETAIL D8/EX2.5.
65. REPLACE EXISTING MUSCO CONTROL AND MONITORING CABINET ON EXISTING MOUNTING FRAME (DSA #02-108565, DETAIL 5/E-1). PROVIDE NEW 1"C. (1) BELDEN #7937A TO MUSCO COMMUNICATIONS CABINET IN BROADCAST ROOM IN PRESS BOX. PROVIDE 1"C. 4#10 TO ALIC PANEL IN BUILDING 'A' ELECTRICAL ROOM. PROVIDE DEDICATED 20A, 120V CIRCUIT FROM PANEL 'ESSL' FOR CONTROL AND ONE DEDICATED 20A, 120V CIRCUIT FOR 20A, 120V, WEATHER RESISTANT RECEPTACLE WITH WEATHERPROOF WHILE-IN-USE COVER MOUNTED TO SIDE OF CONTROLLER. 1"C. 4#10, 1#10 GRD. ESSL-4,6.
66. INSTALL 400A, 208V, 3P, N3R FUSED DISCONNECT BETWEEN (E) XFMR. AND (N) PANEL 'FBSB' FOR PROTECTION OF PANEL. INSTALL PER DETAIL C13/EX2.3.
67. PROVIDE OUTDOOR WAP CONNECTION POINT BELOW SPEAKER. 3/4"C. (2) CAT6A. COORDINATE EXACT HEIGHT FOR WAP WITH DISTRICT PRIOR TO INSTALLATION.
68. PROVIDE OUTDOOR IDF CABINET WITH 3000BTU AIR CONDITIONER MOUNTED TO BLOCK WALL UNDER VISITOR BLEACHER. INSTALL PER DETAIL B10/EX3.1. HUBBELL #IR222APG WITH #IRAC3 AIR CONDITIONER AND #IREKGB GROUNDING BUSBAR. MAX. WEIGHT: 300 LBS. DIMENSIONS: 24"W x 24"D x 24"H. PROVIDE 3/4"C. 4#12, 1#12 GRD TO PANEL 'FHV-5,7' FOR IDF AIR CONDITIONER AND INTERIOR EQUIPMENT. PROVIDE 2"C. WITH 6-STR SM FIBER TO FIELHOUSE DATA RACK 'IDF-F'.

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

MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL
LICENSED ARCHITECT — MICHAEL R. SCHOEN — No. C-34185 — REGISTERED DATE 03.28.2027 — STATE OF CALIFORNIA

PROJECT NUMBER 20-51
DATE 08/22/2023
DSA APPLICATION NO.
FILE NO. 20-H3
PTN NO. 65243-153
DRAWN BY XXX

REVISIONS

#	DESCRIPTION	DATE
1	ADDENDUM #1	08/18/2025
2	ADDENDUM #2	08/22/2025

CONSTRUCTION DOCUMENTS

ENLARGED ELECTRICAL SITE PLAN

ES1.2

REGISTERED PROFESSIONAL ENGINEER — R.J. HARDIN — No. 9125 — ELECTRICAL — STATE OF CALIFORNIA

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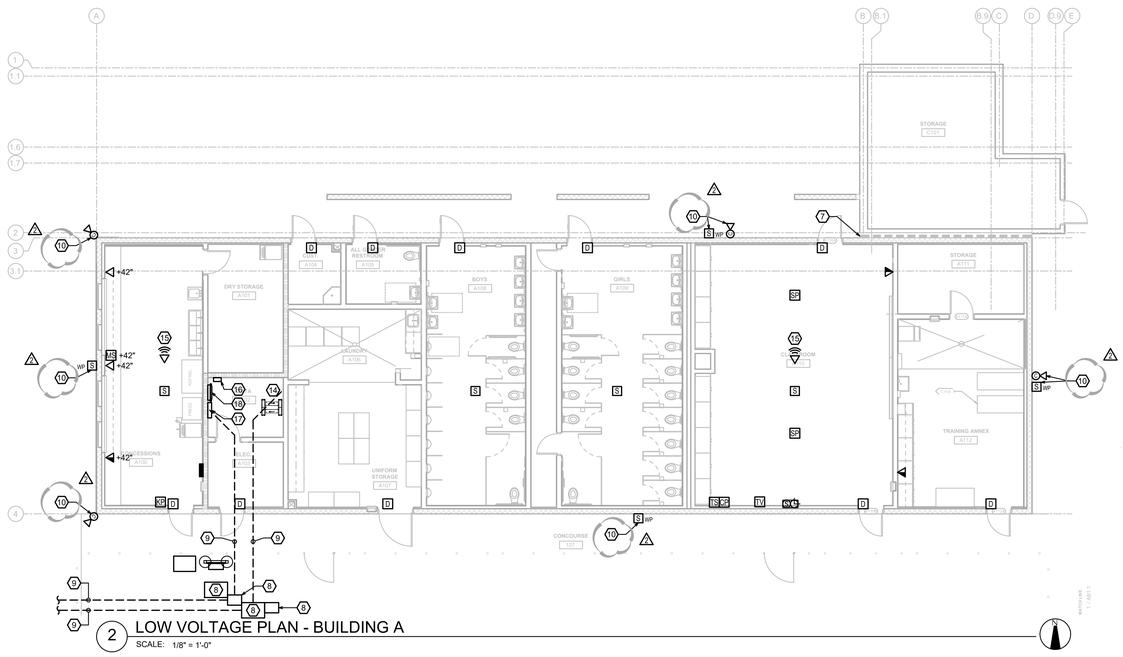


2 LOW VOLTAGE PLAN - BUILDING A

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

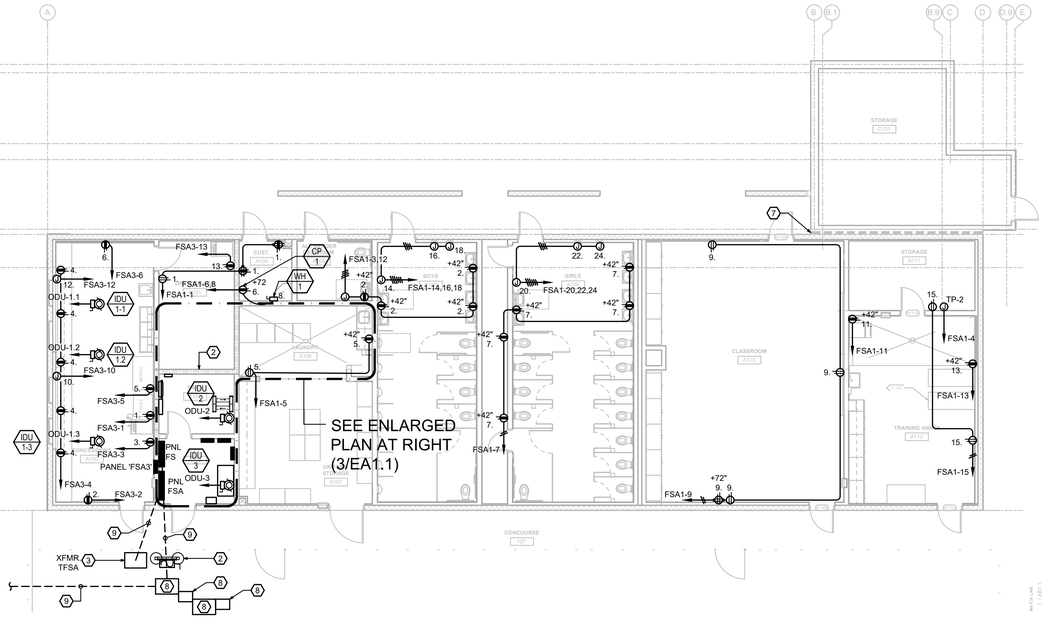
CONDUIT ROUTING NOTES

UNLESS OTHERWISE NOTED, CONDUITS SHALL BE ROUTED AS FOLLOWS:

1. CONDUITS WITH ORIGINS OR TERMINATION AT EXTERIOR OUTLETS ARE TO BE ROUTED IN THE CMU BLOCKS.
2. CONDUITS WITH ORIGINS OR TERMINATIONS AT INTERIOR OUTLETS OF THE EXTERIOR CMU WALL SHALL BE RAN IN THE FURRING.
3. CONDUITS WITH ORIGINS OR TERMINATIONS AT INTERIOR WALLS SHALL BE RUN WITHIN THOSE WALLS.

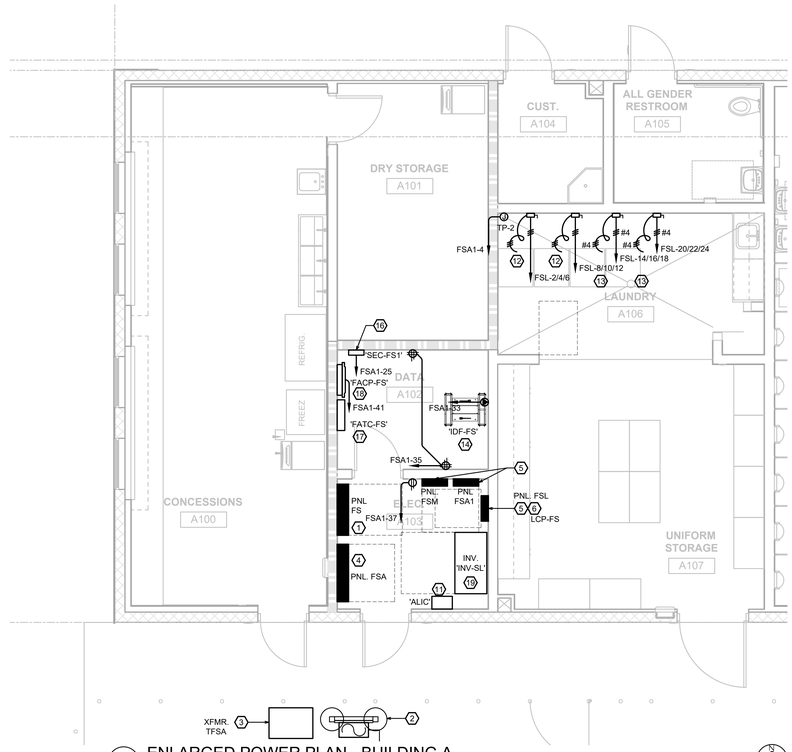
DRAWING KEY NOTES

1. PANELBOARD 'FS'. 600A, 277/480V, 3Ø, 4W, NEMA 1,SURFACE MOUNT. SEE SINGLE LINE DIAGRAM. MOUNT PER DETAIL G13/EX2.3.
2. TRANSFORMER 'TFSA' FUSED DISCONNECT SWITCH. FUSED DISCONNECT SWITCH. SEE SINGLE LINE DIAGRAM, SHEET EX2.1. MOUNT PER DETAIL C13/EX2.3.
3. 480-120/208V, TRANSFORMER "TFSA'. SEE SINGLE LINE DIAGRAM, SHEET EX2.1 MOUNT PER DETAIL C5/EX2.3.
4. PANELBOARD 'FSA'. 800A, 120/208V, 3Ø, 4W, NEMA 1, SURFACE MOUNT. SEE SINGLE LINE DIAGRAM. MOUNT PER DETAIL G13/EX2.3
5. PROVIDE PANELBOARD PER SCHEDULE ON SHEET EX2.2 AND INSTALL PER DETAILG9/EX2.3.
6. PROVIDE LIGHTING CONTROL PANEL PER SCHEDULE ON SHEET EX1.2 AND INSTALL PER DETAIL G9/EX2.3.
7. 1-HOUR RATED WALL. SEE PENETRATION DETAIL A18/EX2.3 AND OUTLET DETAIL E18/EX2.3.
8. PULL BOXES. SEE SHEET ES1.2.
9. CONDUITS AND CONDUCTORS PER SINGLE LINE DIAGRAM, SHEET EX2.1 AND SHEET ES1.2.
10. WHERE OUTLET BOXES ARE LOCATED IN CMU WALL, SEE DETAIL H10/EX2.4.
11. SPORT LIGHTING BLEACHER EGRESS CONTROL PANEL 'ALIC'. PROVIDED WITH MUSCO SPORTS LIGHTING PACKAGE. COORDINATE WITH SUPPLIER. PROVIDE .5 KVA, 277V-120VAC SEALED TRANSFORMER TO STEP DOWN CONTROL POWER FROM INVERTER 277V POWER. CONNECT TRANSFORMER TO 10A/1P CIRCUIT BREAKER IN 'INV-SL'.
12. CONNECT WASHER. 6.3A, 480V, 3Ø, 3W. PROVIDE HEAVY-DUTY, 30A, 480V, 3 POLE, NEMA 1, NON-FUSED DISCONNECT SWITCH. 3/4"C. 3#12, 1#12 GRD.
13. CONNECT DRYER. 45A, 480V, 3Ø, 3W. PROVIDE HEAVY-DUTY 60A, 480V, 3 POLE, NEMA 1, NON-FUSED DISCONNECT SWITCH. 1"C. 3#4, 1#10 GRD.
14. IDF-FS. INSTALL PER DETAIL D5/EX3.1.
15. PROVIDE WAP CONNECTION ABOVE ACCESSIBLE CEILING PER DETAIL L10/EX3.1.
16. INTRUSION DETECTION SYSTEM 'SEC-FS1'. COORDINATE WITH INTRUSION VENDOR.
17. FIRE ALARM TERMINAL CABINET 'STC-FS1'. SEE SHEET EA4.1.
18. FIRE ALARM NETWORK CONTROL PANEL 'FACP-FS'. SEE SHEET EA4.1.
19. SPORTS LIGHTING INVERTER 'INV-SL'. MOUNT PER DETAIL F5/EX1.2.



1 POWER PLAN - BUILDING A

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



3 ENLARGED POWER PLAN - BUILDING A

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

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MADERA HIGH SCHOOL STADIUM

200 SOUTH "I" STREET
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CONSTRUCTION DOCUMENTS

MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT — MICHAEL R. SCHOEN — No. C-30165 — RENEWAL DATE FEB 28, 2027 — STATE OF CALIFORNIA

PROJECT NUMBER	20-51
DATE	08/22/2023
DSA APPLICATION NO.	
FILE NO.	20-H3
PTN NO.	65243-153
DRAWN BY	XXX

REVISIONS

#	DESCRIPTION	DATE
1	ADDENDUM #1	08/18/2025
2	ADDENDUM #2	08/22/2025

CONSTRUCTION DOCUMENTS

POWER & LOW. VOLT. PLANS BUILDING A

EA1.1

REGISTERED PROFESSIONAL ENGINEER — R.J.HARDIN — No. 9125 — ELECTRICAL — STATE OF CALIFORNIA

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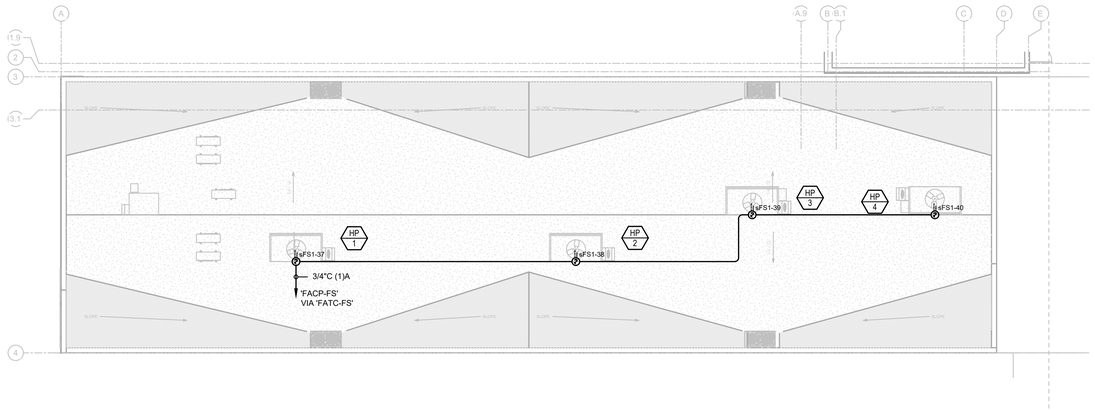
CONDUIT ROUTING NOTES

UNLESS OTHERWISE NOTED, CONDUITS SHALL BE ROUTED AS FOLLOWS:

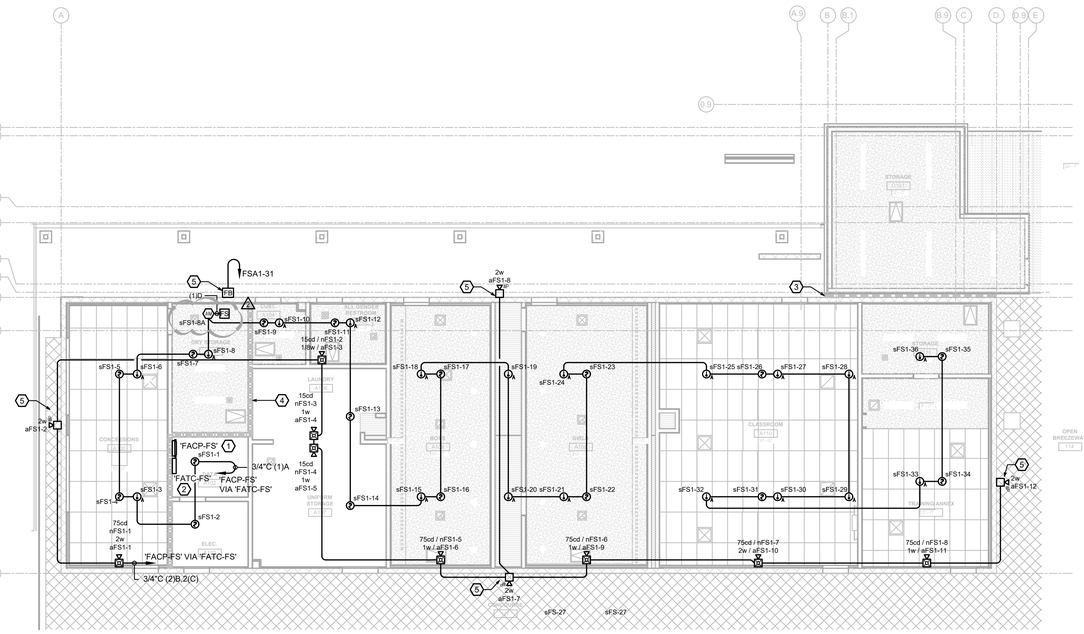
1. CONDUITS WITH ORIGINS OR TERMINATION AT EXTERIOR OUTLETS ARE TO BE ROUTED IN THE CMU BLOCKS.
2. CONDUITS WITH ORIGINS OR TERMINATIONS AT INTERIOR OUTLETS OF THE EXTERIOR CMU WALL SHALL BE RAN IN THE FURRING.
3. CONDUITS WITH ORIGINS OR TERMINATIONS AT INTERIOR WALLS SHALL BE RUN WITHIN THOSE WALLS.

DRAWING KEY NOTES

1. PROVIDE SURFACE MOUNTED FIRE ALARM CONTROL PANEL. INSTALL PER DETAIL A18/EX4.2.
2. PROVIDE SURFACE MOUNTED FIRE ALARM TERMINAL CABINET. INSTALL PER DETAIL A11/EX4.2.
3. SEISMIC EXPANSION JOINT. ALL CONDUITS CROSSING THE EXPANSION JOINT SHALL BE INSTALLED PER DETAIL D8/EX2.5.
4. 1 HOUR RATED WALL. SEE DETAILS A18/EX2.3 AND E18/EX2.3 FOR OUTLET BOXES AND PENETRATIONS.
5. WHERE OUTLET BOXES ARE LOCATED IN CMU WALL, SEE DETAIL H10/EX2.4.



1 FIRE ALARM PLAN - BUILDING A ROOF
SCALE: 1/8" = 1'-0"



1 FIRE ALARM PLAN - BUILDING A
SCALE: 1/8" = 1'-0"

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MADERA HIGH SCHOOL STADIUM

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CONSTRUCTION DOCUMENTS

MADERA UNIFIED SCHOOL DISTRICT 1966

PROFESSIONAL SEAL

LICENSED ARCHITECT
MICHAEL R. SCHOEN
No. C-30155
REGISTRATION DATE
FEB 28, 2027
STATE OF CALIFORNIA

PROJECT NUMBER	20-51
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#	DESCRIPTION	DATE
1	ADDENDUM #1	08/18/2025
2	ADDENDUM #2	08/22/2025

CONSTRUCTION DOCUMENTS

FIRE ALARM PLAN BUILDING A

EA4.1

REGISTERED PROFESSIONAL ENGINEER
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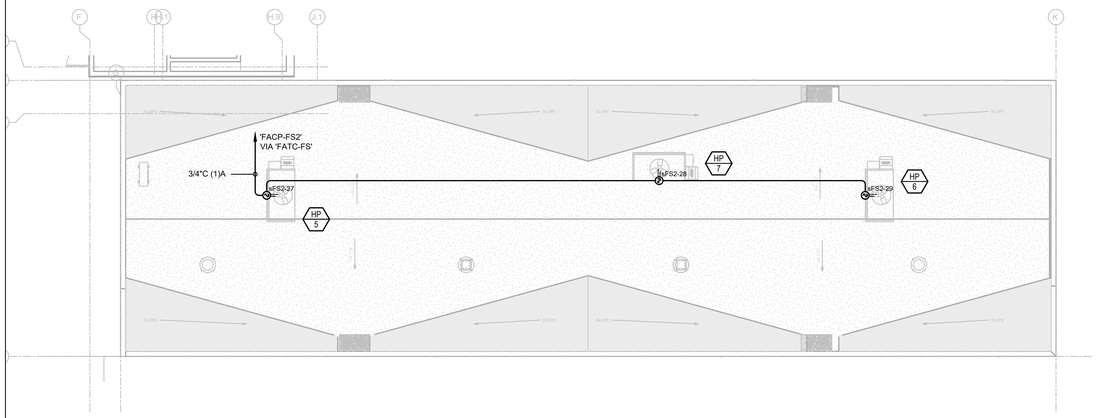
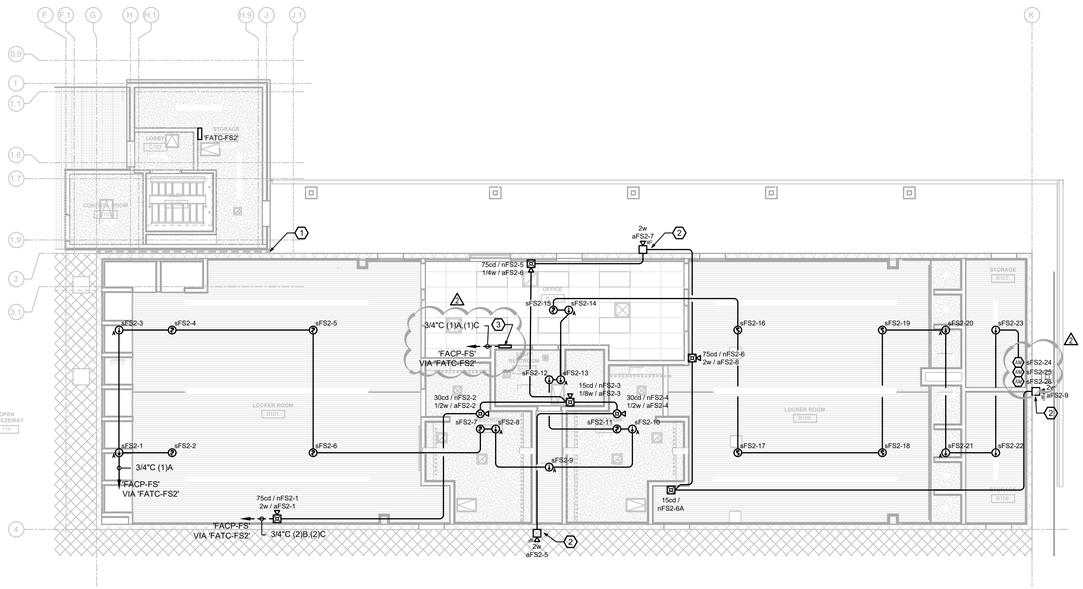


1 FIRE ALARM PLAN - BUILDING B ROOF

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



1 FIRE ALARM PLAN - BUILDING B

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

CONDUIT ROUTING NOTES

UNLESS OTHERWISE NOTED, CONDUITS SHALL BE ROUTED AS FOLLOWS:

1. CONDUITS WITH ORIGINS OR TERMINATION AT EXTERIOR OUTLETS ARE TO BE ROUTED IN THE CMU BLOCKS.
2. CONDUITS WITH ORIGINS OR TERMINATIONS AT INTERIOR OUTLETS OF THE EXTERIOR CMU WALL SHALL BE RAN IN THE FURRING.
3. CONDUITS WITH ORIGINS OR TERMINATIONS AT INTERIOR WALLS SHALL BE RUN WITHIN THOSE WALLS.

DRAWING KEY NOTES (#)

1. SEISMIC EXPANSION JOINT. ALL CONDUITS CROSSING THE EXPANSION JOINT SHALL BE INSTALLED PER DETAIL D8/EX2.5.
2. WHERE OUTLET BOXES ARE LOCATED IN CMU WALL, SEE DETAIL H10/EX2.4.
3. LOCAL OPERATOR'S CONSOLE. DIMENSIONS (RECESSED):19 1/4"W x 10"H x 4 1/4" D. WEIGHT: LESS THAN 20 LBS.

PBK

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MADERA HIGH SCHOOL STADIUM

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

MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT — MICHAEL R. SCHOEN — No. C-30165 — REGISTERED DATE FEB 28, 2027 — STATE OF CALIFORNIA

PROJECT NUMBER	20-51
DATE	08/22/2023
DSA APPLICATION NO.	
FILE NO.	20-H3
PTN NO.	65243-153
DRAWN BY	XXX

REVISIONS

#	DESCRIPTION	DATE
1	ADDENDUM #1	08/18/2025
2	ADDENDUM #2	08/22/2025

CONSTRUCTION DOCUMENTS

FIRE ALARM PLAN BUILDING B

EB4.1

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

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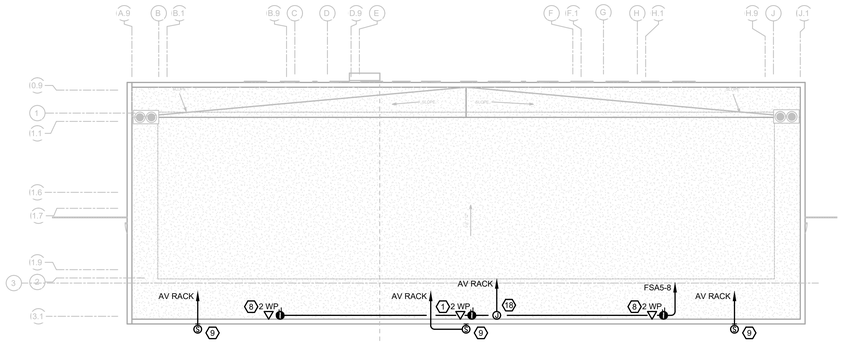


3 ROOF POWER AND DATA PLAN - BUILDING C
SCALE: 1/8" = 1'-0"

CONDUIT ROUTING NOTES

UNLESS OTHERWISE NOTED, CONDUITS SHALL BE ROUTED AS FOLLOWS:

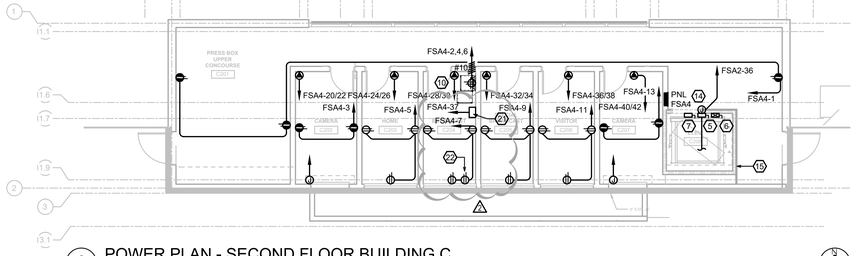
1. CONDUITS WITH ORIGINS OR TERMINATIONS AT WALLS SHALL BE RUN WITHIN THOSE WALLS.

EXCEPTIONS:

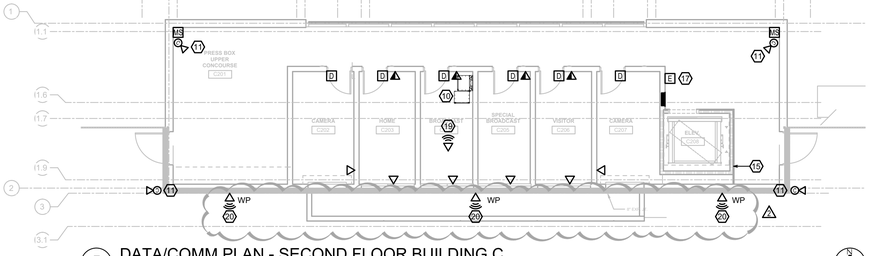
1. WHERE CONDUITS ARE TERMINATING AT SURFACE MOUNT PANELS, THEY MAY BE SURFACE MOUNTED TO THOSE WALLS.
2. WHERE CONDUITS ARE RAN IN THE CAVITY OF THE PRESS BOX STRUCTURE NOT NORMALLY OCCUPIED.

DRAWING KEY NOTES

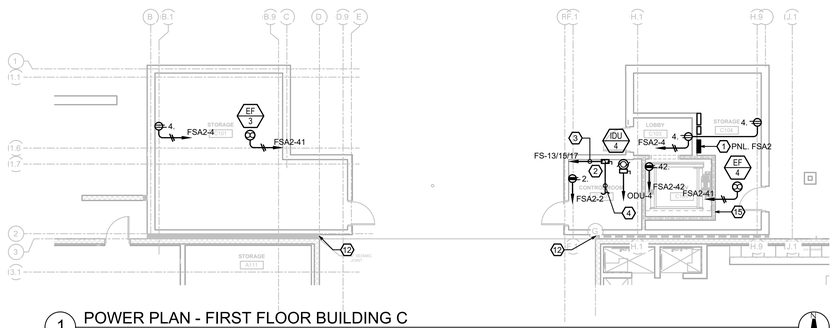
1. PANEL 'FSA2'. SEE SINGLE LINE DIAGRAM ON SHEET EX2.1 AND PANEL SCHEDULE ON SHEET EX2.2. MOUNT PER DETAIL G9/EX2.3.
2. ELEVATOR POWER MODULE SWITCH. SEE SINGLE LINE DIAGRAM, KEYNOTE 4, SHEET EX2.1.
3. 1-1/4" 3#4 CU, 1#4 CU GRD. G.E.C. SHALL BE THE SAME SIZE AS THE PHASE CONDUCTORS PER ELEVATOR MANUFACTURER'S REQUIREMENTS.
4. TO ELEVATOR LOCAL DISCONNECT AT THE TOP OF ELEVATOR SHAFT. SEE SHEET E2.2.
5. LOCAL ELEVATOR DISCONNECT. SEE SHEET E2.1 FOR POWER SOURCE IN EQUIPMENT ROOM.
6. ELEVATOR DRIVE. COORDINATE WITH ELEVATOR SUPPLIER.
7. ELEVATOR CAB DISCONNECT. ROUTE ELEVATOR POWER CKT FSA2-38. 3/4"C. 2#12, 1#12 GRD.
8. PROVIDE WEATHERPROOF WHILE-IN-USE COVER ON DATA OUTLETS ON ROOF FOR FUTURE CAMERA SYSTEM. PROVIDE (2) DATA CABLES AT EACH LOCATION PER SPECIFICATIONS.
9. STADIUM PA SYSTEM SPEAKER MOUNTED TO PRESS BOX SOFFIT. SEE DETAIL B5/EX3.1.
10. STADIUM AV RACK 'IDF-FS2'. SEE DETAIL L5/EX3.1. 1"C. TO AV RACK WITH #12 SPEAKER CABLE.
11. PROVIDE CEILING MOUNTED CCTV OUTLET.
12. SEISMIC EXPANSION JOINT. ALL CONDUITS CROSSING THE EXPANSION JOINT SHALL BE INSTALLED PER DETAIL D8/EX2.5.
13. INTRUSION DETECTION SYSTEM 'SEC-FS2'. COORDINATE WITH INTRUSION VENDOR.
14. PANEL 'FSA4'. SEE SINGLE LINE DIAGRAM ON SHEET EX2.1 AND PANEL SCHEDULE ON SHEET EX2.2. MOUNT PER DETAIL L15/EX2.4.
15. 1 HOUR RATED WALL. SEE DETAILS A18/EX2.3 AND E18/EX2.3 FOR OUTLET BOXES AND PENETRATIONS.
16. MOUNT CAMERA TO UNDERSIDE OF SECOND FLOOR.
17. PROVIDE TWO WAY COMMUNICATIONS SYSTEM FOR ELEVATOR COMPLETE & OPERATING WITH IP CALL BOX, ELEVATOR LANDING SIGNAGE, IP BASE STATION, MASTER THAT ALLOWS STAFF OR 911 CENTER TO RESPOND. UPS, & REQUIRED CABLING. CORNEL SENTINAL AOR, RATH OR APPROVED EQUAL. VERIFY ALL LOCATIONS.
18. ANTENNA LOCATION FOR AV SYSTEM. SEE SPECIFICATIONS FOR ANTENNA CABLING REQUIREMENTS.
19. PROVIDE WAP CONNECTION ABOVE ACCESSIBLE CEILING PER DETAIL L10/EX3.1.
20. PROVIDE WEATHERPROOF WAP CONNECTION. COORDINATE WITH DISTRICT REPRESENTATIVE FOR EXACT LOCATION REQUIREMENTS PRIOR TO INSTALLATION.
21. MUSCO COMMUNICATIONS CABINET. MOUNT PER DETAIL D10/EX2.4. MOUNT 80" TO BOTTOM OF CABINET. 3/4"C 2#12, 1#10 GRD. VERIFY LOCATION WITH DISTRICT REPRESENTATIVE PRIOR TO INSTALLATION.
22. MUSCO CONTROL TOUCHSCREEN. COORDINATE EXACT LOCATION WITH DISTRICT REPRESENTATIVE PRIOR TO INSTALLATION. UNIT PLUGS INTO STANDARD 20A, 120V RECEPTACLE.



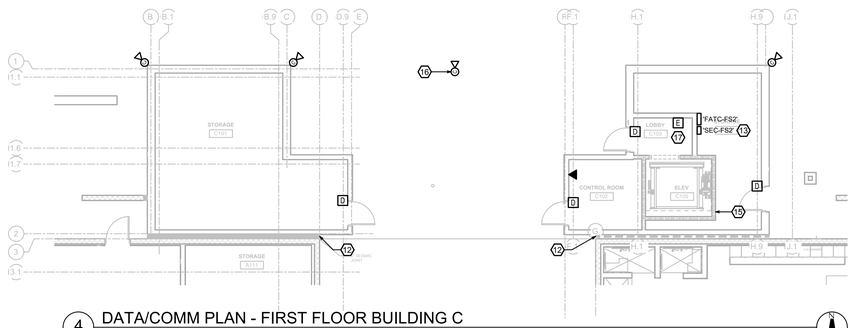
2 POWER PLAN - SECOND FLOOR BUILDING C
SCALE: 1/8" = 1'-0"



5 DATA/COMM PLAN - SECOND FLOOR BUILDING C
SCALE: 1/8" = 1'-0"



1 POWER PLAN - FIRST FLOOR BUILDING C
SCALE: 1/8" = 1'-0"



4 DATA/COMM PLAN - FIRST FLOOR BUILDING C
SCALE: 1/8" = 1'-0"

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CONSTRUCTION DOCUMENTS

ELEC. PLANS BUILDING C

EC1.1

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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559.323.4928 fax

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CONDUIT ROUTING NOTES

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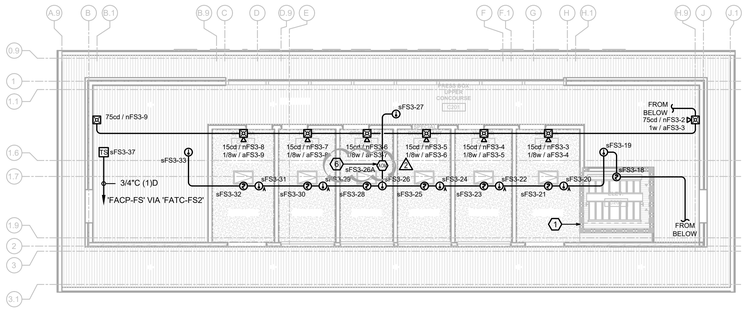
2. WHERE CONDUITS ARE RAN IN THE CAVITY OF THE PRESS BOX STRUCTURE NOT NORMALLY OCCUPIED.

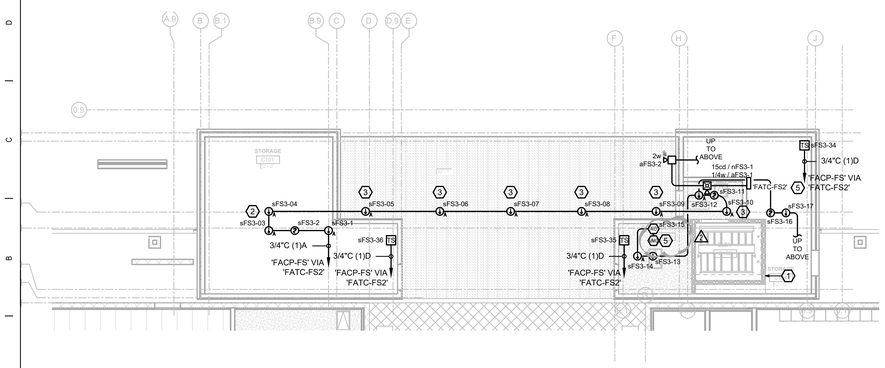
DRAWING KEY NOTES (#)

1. 1 HOUR RATED WALL. SEE DETAILS A18/EX2.3 AND E18/EX2.3 FOR OUTLET BOXES AND PENETRATIONS.
2. INSTALL ATTIC HEAT DETECTORS TO BOTTOM BEAM UNLESS OTHERWISE NOTED.
3. INSTALL ATTIC HEAT DETECTOR TO BOTTOM OF BEAM BELOW PRESS BOX DECK.
4. INSTALL ATTIC HEAT DETECTOR TO BOTTOM OF DECK BELOW PRESS BOX DECK.
5. MULTI-MOD RELAY OUTPUT MODULE. CARD CONTAINS SIX ADDRESSES sFS3-15A THROUGH sFS3-15F. SEE RISER DIAGRAM FOR CONNECTION TO ELEVATOR CONTROLLER.
6. CONNECT RELAY MODULE TO STADIUM AUDIO SYSTEM MUTE.



2 FIRE ALARM PLAN - SECOND FLOOR BUILDING C

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



1 FIRE ALARM PLAN - FIRST FLOOR BUILDING C

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

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CONSTRUCTION DOCUMENTS

FIRE ALARM PLANS BUILDING C

EC4.1

REGISTERED PROFESSIONAL ENGINEER — R. J. HARDIN — No. 9125 — ELECTRICAL — STATE OF CALIFORNIA

Hardin-Davidson Engineering
356 Pollasky Ave.
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Clovis, CA 93612
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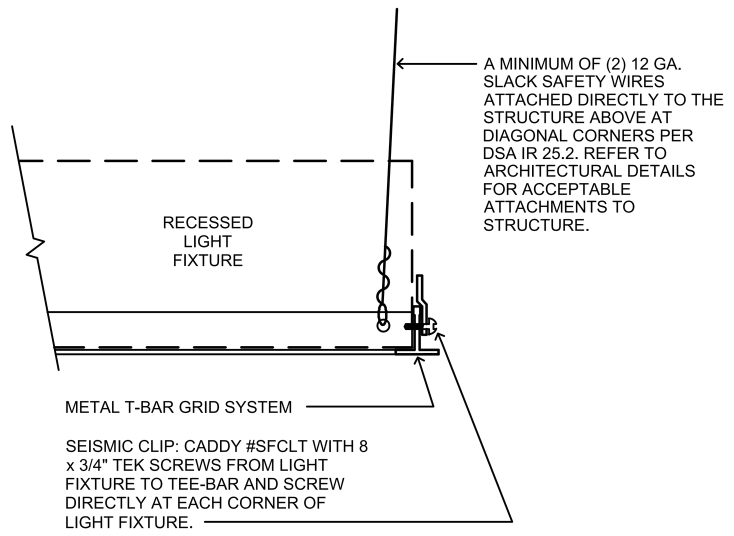
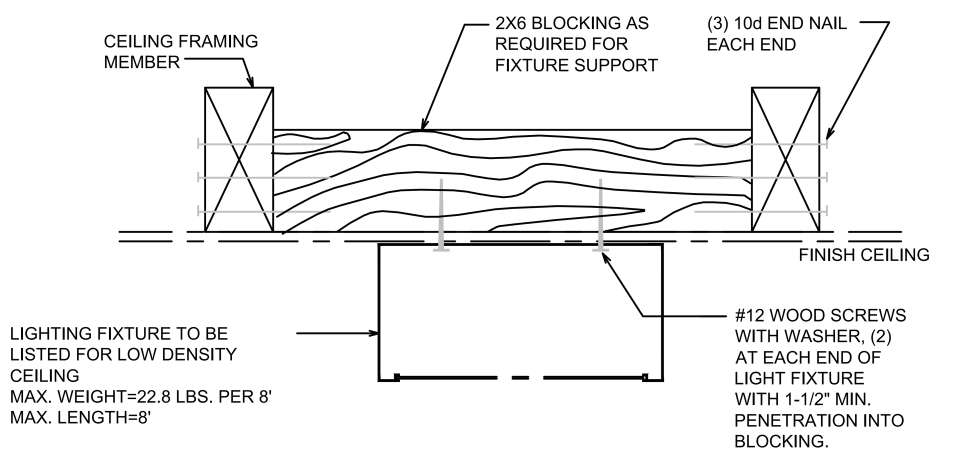
559.323.4928 fax

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

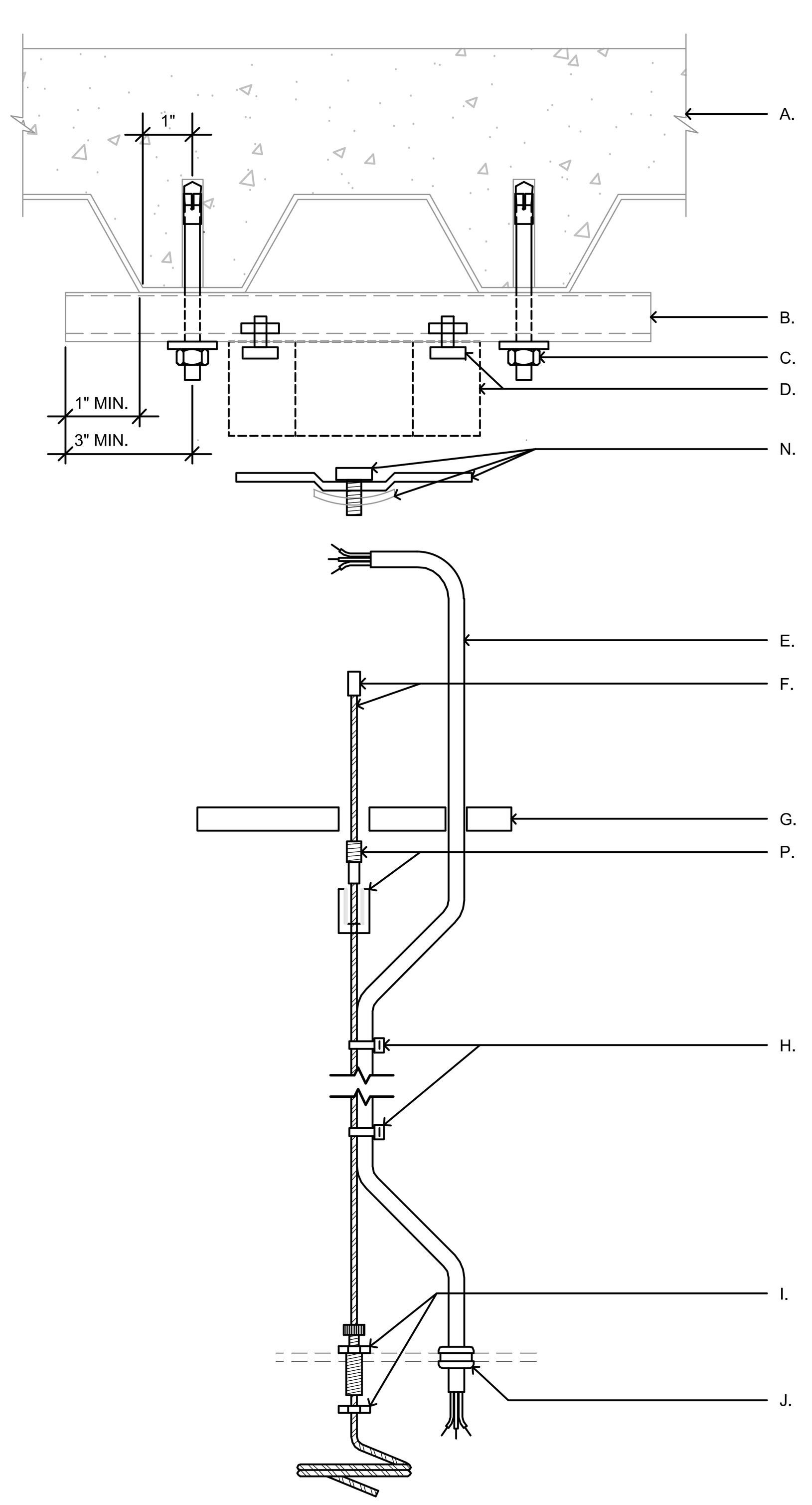
TYPE OF SPACE	MANUAL ON/OFF/OVERRIDE	DIMMING SWITCH	AUTOMATIC DAYLIGHT DIMMING WHEN AVAILABLE	OCCUPANCY SENSOR ON	OCCUPANCY SENSOR ON TO 70%	OCCUPANCY SENSOR REDUCE TO 50% AFTER 10 MIN	OCCUPANCY SENSOR OFF AFTER 20 MIN	GATEWAY OPEN HOURS SCHEDULE ON	GATEWAY CLOSED & HOLIDAY HOURS SCHEDULE OFF	GATEWAY SHADOWS SWITCHES DURING OPEN HOURS	COLOR TOUCHSCREEN WITH AT LEAST 4 SCENES	REMOTE ON/OFF CONTROL OR KEY SWITCH	CONTROLLED POWER RECEPTACLES	DEMAND RESPONSE CAPABLE	ASTRONOMIC TIMECLOCK ON/OFF	ASTRONOMIC TIMECLOCK DIMMING	ASTRONOMIC TIMECLOCK A/B 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				
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	
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
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 @11' A.F.F.	89	A18/EX1.1	W/ BATTERY BACKUP
CA7E	PRUDENTIAL LTG	BPRO5-PER-FLSH-LED35-PROG375LUM-7'-XXX-PFL-WTW-NU-SC-UNV-SUR-X3-DM01-1EMHE	LED	20.0	UNV	RECESSED	25.9	A5/EX1.1	W/ BATTERY BACKUP
CA8E	PRUDENTIAL LTG	BPRO5-PER-FLSH-LED35-PROG375LUM-8'-XXX-PFL-WTW-NU-SC-UNV-SUR-X3-DM01-1EMHE	LED	22.8	UNV	RECESSED	28	A5/EX1.1	W/ BATTERY BACKUP
CA9	PRUDENTIAL LTG	BPRO5-PER-FLSH-LED35-PROG375LUM-R9'-XXX-PFL-WTW-NU-SC-UNV-SUR-X3-DM01	LED	25.7	UNV	RECESSED	31.5	A5/EX1.1	
CA14	PRUDENTIAL LTG	BPRO5-PER-FLSH-LED35-PROG375LUM-R14'-XXX-PFL-WTW-NU-SC-UNV-SUR-X3-DM01	LED	39.9	UNV	RECESSED	44.5	A5/EX1.1	
CA33E	PRUDENTIAL LTG	BPRO5-PER-FLSH-LED35-PROG375LUM-R33'-XXX-PFL-WTW-NU-SC-UNV-SUR-X3-DM01-2EMHE	LED	94.1	UNV	RECESSED	122.3	A5/EX1.1	W/ BATTERY BACKUP
D10	LUMINAIRE	VRDL6 MIN1 NLTAIR2 1000LM MD 35K 80CRI MVOLT CPL AMF	LED	12.0	UNV	RECESSED	14	C5/EX1.2	
D15	LUMINAIRE	VRDL6 MIN1 NLTAIR2 1500LM MD 40K 80CRI MVOLT CPL AMF	LED	18.8	UNV	RECESSED	14	C5/EX1.2	
D15E	LUMINAIRE	VRDL6 MIN1 NLTAIR2 1500LM MD 40K 80CRI MVOLT CPL AMF EMB310T20	LED	18.8	UNV	RECESSED	16.5	C5/EX1.2	W/ BATTERY BACKUP
D15W	LUMINAIRE	VRDL6 MIN1 NLTAIR2 1500LM MD 40K 80CRI MVOLT CPL AMF	LED	18.8	UNV	RECESSED	14	E10/EX1.1	
D15WE	LUMINAIRE	VRDL6 MIN1 NLTAIR2 1500LM MD 40K 80CRI MVOLT CPL AMF EMB310T20	LED	18.8	UNV	RECESSED	16.5	E10/EX1.1	W/ BATTERY BACKUP
D25	LUMINAIRE	VRDL6 MIN1 NLTAIR2 2500LM MD 40K 80CRI MVOLT CPL AMF	LED	31.0	UNV	RECESSED	14	C5/EX1.2	
D25E	LUMINAIRE	VRDL6 MIN1 NLTAIR2 2500LM MD 40K 80CRI MVOLT CPL AMF EMB310T20	LED	31.0	UNV	RECESSED	16.5	C5/EX1.2	W/ BATTERY BACKUP
F4H	LITHONIA	CLX L48 3000LM SEF RDL MVOLT EZ1 35K 80CRI NLTAIR2 RIO WH	LED	18.5	UNV	SURFACE	7.5	H15/EX1.2	
F4HS	LITHONIA	CLX L48 3000LM SEF RDL MVOLT EZ1 35K 80CRI NLTAIR2 RES7 WH	LED	18.5	UNV	SURFACE	7.5	H15/EX1.2	
F4HE	LITHONIA	CLX L48 3000LM SEF RDL MVOLT EZ1 35K 80CRI E10WLCP NLTAIR2 RIO WH	LED	18.5	UNV	SURFACE	7.5	I18/EX1.1	W/ BATTERY BACKUP
F8	LITHONIA	CLX L96 6000LM SEF RDL MVOLT EZ1 35K 80CRI WH ZACVH M100	LED	37.0	UNV	SUSPENDED @11' A.F.F.	14	C15/EX1.2	SUSPEND 24" MAXIMUM
F8H	LITHONIA	CLX L96 6000LM SEF RDL MVOLT EZ1 35K 80CRI NLTAIR2 RIO WH	LED	37.0	UNV	SURFACE	14	H15/EX1.2	
F8HS	LITHONIA	CLX L96 6000LM SEF RDL MVOLT EZ1 35K 80CRI NLTAIR2 RES7 WH	LED	37.0	UNV	SURFACE	14	I18/EX1.1	W/ OCCUPANCY SENSOR
J	LITHONIA	OLVTWM	LED	15.0	UNV	WALL	5	F10/EX1.2	
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 APIREM	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	
LE	LITHONIA	CPANL 1X4 ALO1 SWW7 / DCMK14 / ILBLP CP10 HE SD A	LED	31.0	UNV	SURFACE	9.3	I18/EX1.1	W/ BATTERY BACKUP
O	LITHONIA	CLX L48 5000LM SEF RDL MVOLT GZ10 35K 80CRI E10WLCP WH THCLXWH	LED	31.8	UNV	SURFACE	7.5	F10/EX1.2	W/ BATTERY BACKUP
P1	LITHONIA	WDGE2 LED P1 40K 80CRI T1S MVOLT SRM NLTAIR2 PIR XXXXXX	LED	11.0	UNV	WALL	13.5	F10/EX1.2	
P1E	LITHONIA	WDGE2 LED P1 40K 80CRI T1S MVOLT SRM E10WH NLTAIR2 PIR XXXXXX	LED	11.0	UNV	WALL	13.5	F10/EX1.2	W/ BATTERY BACKUP
P1C	LITHONIA	WDGE2 LED P1 40K 80CRI T1S MVOLT SRM NLTAIR2 PIR XXXXXX	LED	11.0	UNV	WALL	13.5	C10/EX1.2	
P1CE	LITHONIA	WDGE2 LED P1 40K 80CRI T1S MVOLT SRM E10WH NLTAIR2 PIR XXXXXX	LED	11.0	UNV	WALL	13.5	C10/EX1.2	W/ BATTERY BACKUP
P1W	LITHONIA	WDGE2 LED P1 40K 80CRI T1S MVOLT SRM NLTAIR2 PIR XXXXXX	LED	11.0	UNV	WALL	13.5	E5/EX1.1	
P3	LITHONIA	WDGE2 LED P3 40K 80CRI TFTM MVOLT SRM NLTAIR2 PIR XXXXXX	LED	32.0	UNV	WALL	13.5	F10/EX1.2	
P3E	LITHONIA	WDGE2 LED P3 40K 80CRI TFTM MVOLT SRM E10WH NLTAIR2 PIR XXXXXX	LED	32.0	UNV	WALL	15	F10/EX1.2	W/ BATTERY BACKUP
P3C	LITHONIA	WDGE2 LED P3 40K 80CRI TFTM MVOLT SRM NLTAIR2 PIR XXXXXX	LED	32.0	UNV	WALL	13.5	C10/EX1.2	
P3CE	LITHONIA	WDGE2 LED P3 40K 80CRI TFTM MVOLT SRM E10WH NLTAIR2 PIR XXXXXX	LED	32.0	UNV	WALL	15	C10/EX1.2	W/ BATTERY BACKUP
P3W	LITHONIA	WDGE2 LED P3 40K 80CRI TFTM MVOLT SRM NLTAIR2 PIR XXXXXX	LED	32.0	UNV	WALL	13.5	E5/EX1.1	
P4	HYDREL	M9720C SS LED P3 40K MVOLT NSP FLCSR 34B	LED	46.0	UNV	IN GROUND WELL	25	I5/EX1.3	FLAG POLE LIGHT
P5	TARGETTI	KPLM-41-ZM-L2-40 / 15525 / 1DU434412 / 1DU2530	LED	14.0	UNV	IN GROUND WELL	2.5	I5/EX1.3	TREE UPLIGHT
P6	HYDREL	SAF14 LED P1 RGBW4 MVOLT 10DEG CWL KM CSL50 DMX BL / CJB 34S 78C BL	LED	94.0	UNV	SURFACE	34	A10/EX1.1	RGBW FLOOD THEATRICAL
P7E	LITHONIA	VAP 6000LM FST MD 277GZ10 40K 80CRI E15WCP WLFEND2 NLTAIR2 RSBOR10	LED	49.0	277	SURFACE	13.5	L10/EX1.3	W/ BATTERY BACKUP
S1	LITHONIA	RAD1 LED P2 40K ASY MVOLT RPA NLTAIR2 HS DDBXD	LED	38.0	UNV	POLE	29	K5/EX1.2	
	LITHONIA	RSS 12 4B DM19RAD STLHHC DDBXD	--	--	--	12' POLE	85		
S2	LITHONIA	RAD1 LED P2 40K PATH MVOLT RPA NLTAIR2 HS DDBXD	LED	38.0	UNV	POLE	29	K5/EX1.2	
	LITHONIA	RSS 12 4B DM19RAD STLHHC DDBXD	--	--	--	12' POLE	85		
S3	LITHONIA	RAD1 LED P2 40K ASY MVOLT RPA NLTAIR2 HS DDBXD	LED	76.0	UNV	POLE	29	K5/EX1.2	
	LITHONIA	RSS 12 4B DM28RAD STLHHC DDBXD	--	--	--	12' POLE	85		
S4	LITHONIA	RAD1 LED P2 40K ASY MVOLT RPA NLTAIR2 HS DDBXD	LED	38.0	UNV	POLE	29	K10/EX1.2	
	HYDREL	SAF7 LED P3 80CRI 40K MVOLT 15DEG CWL KM CPMSA L3 CSL20 ZT FGS DDB	LED	57.4	UNV	POLE	15		POLE TOP FLOOD LIGHT
	LITHONIA	RSS 12 4B DM19RAD/T20 STLHHC DDBXD	--	--	--	12' POLE WITH TOP TENNON	85		
S5	LITHONIA	RAD1 LED P2 40K PATH MVOLT RPA NLTAIR2 HS DDBXD	LED	38.0	UNV	POLE	29	K5/EX1.2	
	LITHONIA	RSS 12 4B DM19RAD FDL1 STLHHC DDBXD	--	--	--	12' POLE	85		PROVIDE RECEPTACLE FESTOON NEAR POLE BOTTOM
SP	LITHONIA	DSX1 LED P9 40K 70CRI T1S MVOLT RPA NLTAIR2 PIRHN HS DDBXD	LED	279.0	UNV	POLE	34	K5/EX1.2	
	LITHONIA	RSS 12 4B [#8 DRILLING] STLHHC DDBXD	--	--	--	12' POLE	85		
X	LITHONIA	LQC 1 R EL N	LED	0.6	UNV	WALL	4.5	F10/EX1.2	W/ BATTERY BACKUP
INV-SL	IOTA	IIS 8000 277IN 277OUT ST SDC SZM FSREG1 PMA5REG1 5YR OB61P27720AMPON BOBB11P27710AMPBON	--	8000.0	277	FLOOR	2120	F5/EX1.2	EMERGENCY INVERTER FOR STADIUM BLEACHERS
LCP-FS	ACUITY	ARP INTENC08 8FCR MVOLT 1VB HLK SM DTC	--	--	277	WALL	25	D10/EX2.4	MOUNT ABOVE PANEL 'FSL'



DETAIL KEY NOTES:

A. CONCRETE OVER METAL DECK

B. STRUT:
B-LINE B22 SOLID STRUT, LENGTH AS REQUIRED.

C. WEDGE ANCHOR:
'HILTI' KB-TZ2 CARBON STEEL 3/8" DIAMETER ANCHOR WITH MIN. 2-1/2" EMBEDMENT INTO CONCRETE DECK AND MIN. 8" EDGE DISTANCE, 1" MINIMUM EDGE OF FLUTE. (2) BOLTS PER STRUT. TORQUE TO 30 FT. LBS. ICC-ESR-4266 LISTED. WITH STRUT NUT, HEX NUT, 1/4"X1 5/8" SQ. WASHER.

D. J-BOX:
ATTACH BOX TO STRUT (2) 1/4-20X3/4" MACHINE SCREWS WITH LOCK WASHERS AND STRUT NUT.
(ELECTRICAL CIRCUIT AT POWER FEED END OF FIXTURE ONLY).

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. MAXIMUM 96" SPACING.

G. CANOPY:
PROVIDE WITH FIXTURE.

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.

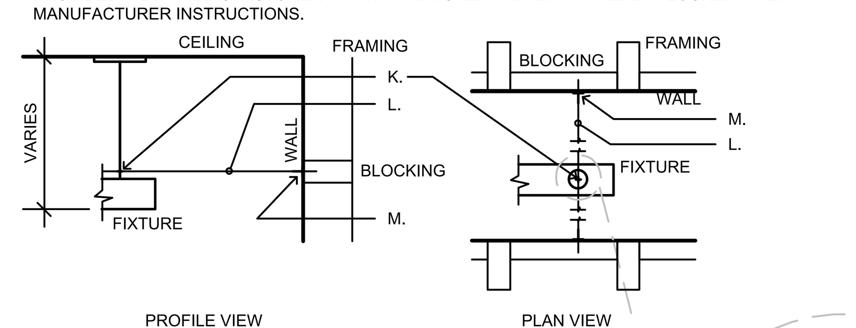
K. 2-CABLE CLAMP:
SECURE TO EACH HANGER CABLE WITHIN 4" OF FIXTURE ATTACHMENT POINT.

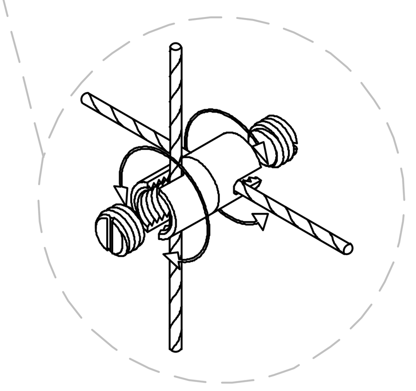
L. LATERAL BRACING CABLE:
3/32" STAINLESS STEEL AIRCRAFT CABLE INSTALLED LONGITUDINALLY ACROSS FIXTURE TO PREVENT SWAYING.

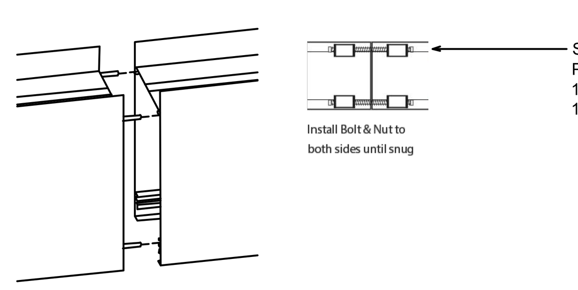
M. WALL CABLE ANCHOR:
GRIPLOCK #25Z-M13-1420-SL SECURED WITH #10 SMS TO WALL FRAMING/BLOCKING WITH 1-1/2" PENETRATION AT EACH END OF FIXTURE.

N. MOUNTING STRAP:
PROVIDED WITH FIXTURE. PRUDENTIAL #19031 WITH 1/4-20X5/8 PAD HEAD BOLT AND SPEED NUT.

P. 1/4-20 COUPLER WITH THREADED RING:
PROVIDED BY MANUFACTURER WITH FIXTURE. APPLY THREAD LOCKER PER MANUFACTURER INSTRUCTIONS.







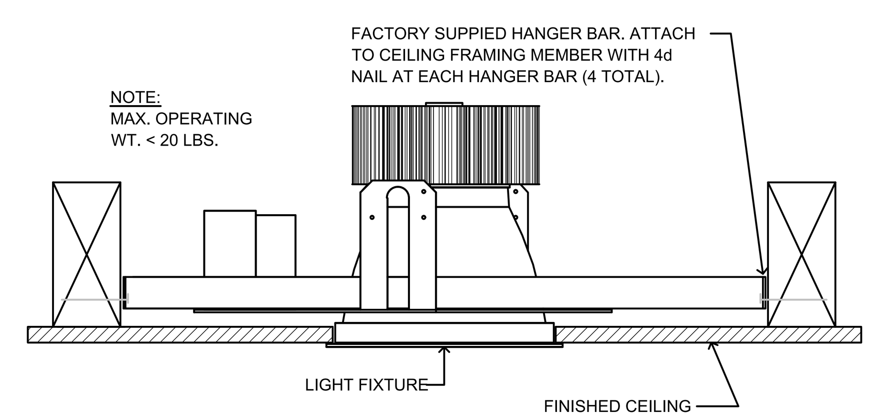
FIXTURE SEGMENT INTERCONNECTION

LINEAR FIXTURE LATERAL SEISMIC BRACING

REQUIRED WHEN FIXTURE CONTACTS OBSTRUCTION WHEN SWINGING 45° FROM VERTICAL.

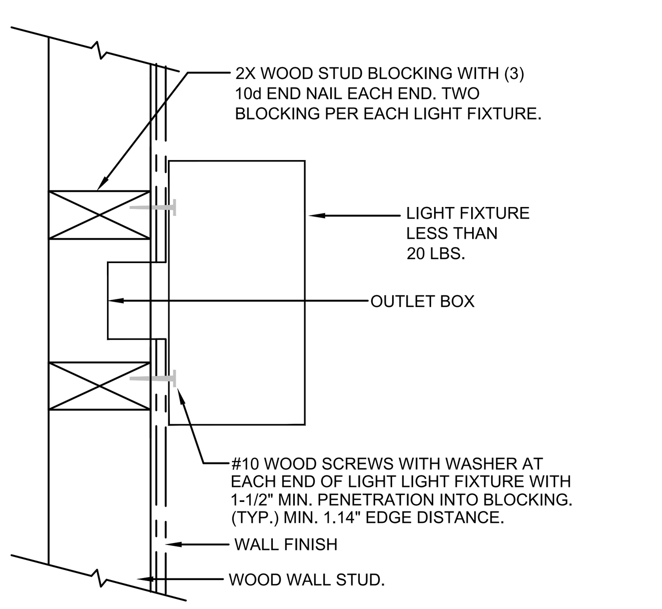
A18 SUSPENDED FIXTURE DETAIL (CONCRETE OVER METAL DECK)

SCALE: NO SCALE



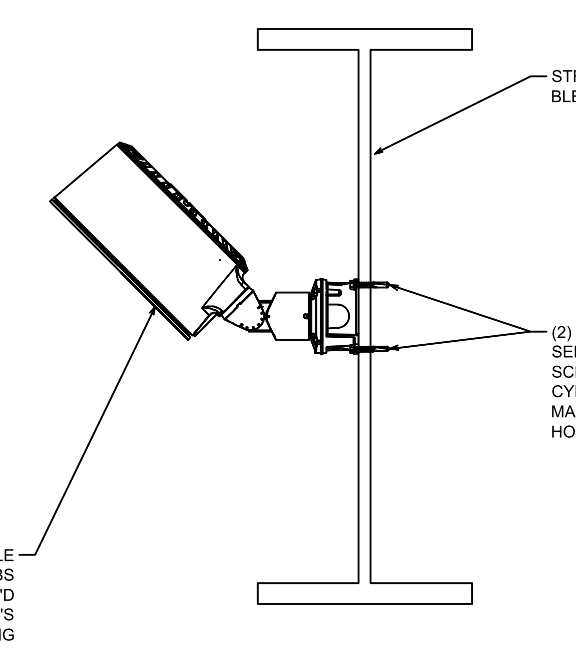
E10 TYPICAL RECESSED LIGHT MOUNTING DETAIL (WOOD FRAMING)

SCALE: NO SCALE



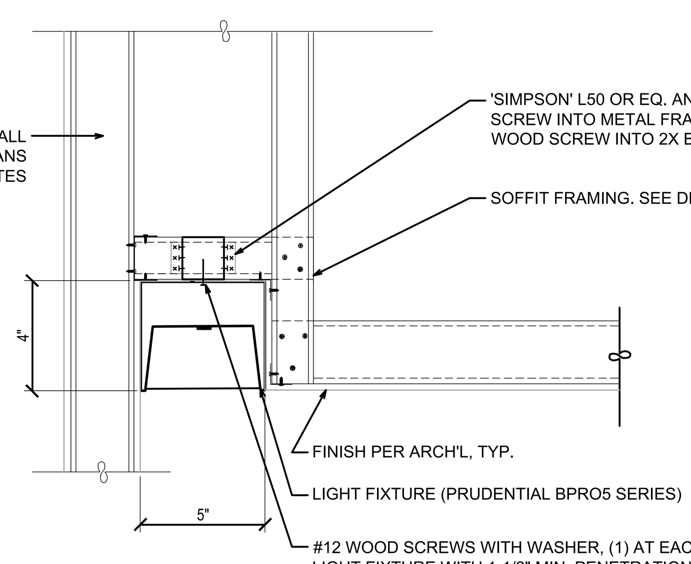
E5 TYPICAL SURFACE WALL LIGHT MOUNTING DETAIL (WOOD FRAMING)

SCALE: NO SCALE



A10 RGBW FLOOD

SCALE: NO SCALE



A5 PERIMETER LIGHT FIXT. MTG DETAIL

SCALE: NO SCALE

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REGISTERED PROFESSIONAL ENGINEER R.J. HARDIN NO. 9125 ELECTRICAL STATE OF CALIFORNIA

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MADERA HIGH SCHOOL STADIUM

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

MADERA UNIFIED SCHOOL DISTRICT 1966

PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL R. SCHOEN No. C-35165 RENEWAL DATE FEB 28, 2027 STATE OF CALIFORNIA

PROJECT NUMBER 20-51

DATE 08/22/2023

DSA APPLICATION NO.

FILE NO. 20-H3

PTN NO. 65243-153

DRAWN BY XXX

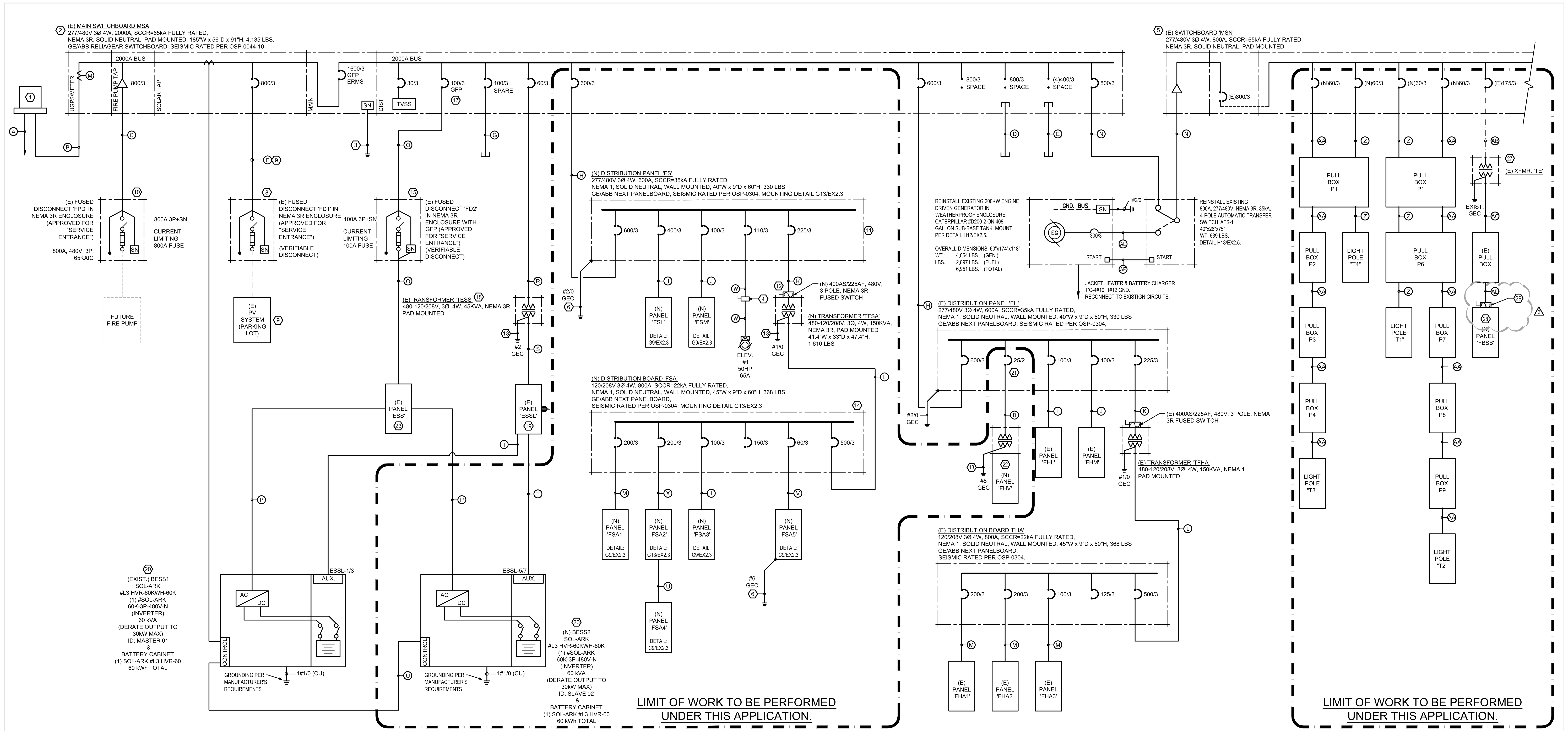
REVISIONS

#	DESCRIPTION	DATE
1	ADDENDUM #1	08/18/2025
2	ADDENDUM #2	08/22/2025

CONSTRUCTION DOCUMENTS

LIGHTING FIXTURE SCHEDULE

EX1.1



G15 SINGLE LINE DIAGRAM

NO SCALE

KEYNOTES

1. (E) PAD MOUNTED P.G.&E. TRANSFORMER.
2. (E) PAD MOUNTED MAIN SWITCHBOARD 'MSA'. 2000A BUS/1600A MAIN, 277/480V, 3Ø, 4W, 65kA SCCR FULLY RATED, NEMA 3R, SOLID NEUTRAL, PAD MOUNTED.
3. ELECTRODE CONDUCTOR PER DETAIL L5/EX2.3.
4. PROVIDE BUSSMAN QUICK-SPEC POWER MODULE SWITCH ELEVATOR DISCONNECT #PS1 T48 R2 K G B F1. CONNECT PER ELEVATOR INSPECTOR'S REQUIREMENTS FOR SHUNT TRIP, RECALL, MAINTENANCE, & BATTERY LOWERING. PROVIDE FUSES PER MANUFACTURER'S REQUIREMENTS. SWITCH PROVIDES SHUNT TRIP OF ELEVATOR POWER.
5. (E) PAD MOUNTED MAIN SWITCHBOARD 'MSB'.
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.
10. (E) 800A FUSED FIRE PUMP DISCONNECT.
11. (N) 600A, 277/480V, 3Ø, 4W, 35KA SCCR FULLY RATED, NEMA 1, DISTRIBUTION BOARD.
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. PROVIDE FUSED DISCONNECT SWITCH ADJACENT TO TRANSFORMER ON WALL. MOUNT PER DETAIL C13/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. (E) PG&E COMPLIANT VERIFIABLE DISCONNECT, 800A, 4-POLE, 277/480V, 200KAIC.
16. NOT USED
17. (E) BATTERY ENERGY STORAGE SYSTEM CIRCUIT BREAKER.
18. (E) 45kVA TRANSFORMER: 480/208/120V 3Ø 4W, 80°C RISE, NEMA 3R, K-1 RATED.
19. (E) 150A, 120/208V, 3Ø, 4W, 10KA SCCR FULLY RATED, NEMA 3R, PANELBOARD 'ESSL'.
20. 60KVA/120KWH, 277/480V, 3Ø, 4W, NEMA 3R BATTERY ENERGY STORAGE SYSTEM. MOUNT PER DETAIL A18/EX2.8.
21. PROVIDE NEW 25A/2P, 35 KAIC, CIRCUIT BREAKER IN EXISTING PANEL 'FH'. PROVIDE ALL REQUIRED DEAD FRONT, FILLER PLATES, ETC. AS REQUIRED.
22. 10KVA MINI POWERZONE: 480V/240/120V 1Ø 3W. WALL MOUNTED PER DETAIL D15/EX2.4.
WEIGHT: 220 LB.
DIMENSIONS: 16"W X 12"D X 41"H
23. (E) 125A, 277/480V, 3Ø, 4W, 35KA SCCR FULLY RATED, NEMA 3R, PANELBOARD 'ESS'.
27. (E) 112.5KVA, 480-120/208V, 3Ø, 4W, NEMA 3R TRANSFORMER TO REMAIN. DSA #02-108565.
28. (N) 400A, 120/208V, 3Ø, 4W, NEMA 3R PANELBOARD. SEE DETAIL L8/EX2.5.
29. (N) 400AS/400AF, 208V, 3 POLE, NEMA 3R FUSED SWITCH. SEE PER DETAIL C13/EX2.3. (2)

VOLTAGE DROP CALCULATIONS

No.	Feeder Origin	Feeder Destination	Potential at Origin (P_i) (Volts)	System	Design Current (Amps)	Raceway Type	Sets of Cond.	Conductor Trade Size	Conductor Cross-Sectional Area (CM)	Conductor Material	DC Conductor Material Constant (K)	Q	Distance (ft)	Voltage Drop (VD) (Volts)	Potential at Load (P_j) (Volts)	Percent Voltage Drop (%VD)
1	(E) MSA	(N) PANEL 'FS'	480	AC 3-Phase	600	PVC	2	350 kCMIL	700000	CU	12.9	1.0354	400	7.93	472.07	1.65
2	(N) PANEL 'FS'	(N) PANEL 'FSL'	472.07	AC 3-Phase	400	PVC	1	500 kCMIL	500000	CU	12.9	1.0465	10	0.19	471.88	1.69
3	(N) PANEL 'FS'	(N) PANEL 'FSM'	472.07	AC 3-Phase	400	PVC	1	500 kCMIL	500000	CU	12.9	1.0465	10	0.19	471.88	1.69
4	(N) PANEL 'FS'	(N) ELEVATOR	472.07	AC 3-Phase	65	PVC	1	4	41740	CU	12.9	1.0000	245	8.52	463.54	3.43
5	(N) PANEL 'FS'	(N) XFMR 'TFSA'	472.07	AC 3-Phase	180	PVC	1	4/0	211600	CU	12.9	1.0197	30	0.58	471.49	1.77
6	(N) XFMR 'TFSA'	(N) PANEL 'FSA'	208.00	AC 3-Phase	416	PVC	1	600 kCMIL	600000	CU	12.9	1.0748	20	0.33	207.67	0.16
7	(N) PANEL 'FSA'	(N) PANEL 'FSA1'	207.67	AC 3-Phase	200	Steel	1	3/0	167800	CU	12.9	1.0313	10	0.27	207.39	0.29
8	(N) PANEL 'FSA'	(N) PANEL 'FSA2'	207.67	AC 3-Phase	200	PVC	1	400 kCMIL	400000	CU	12.9	1.0280	200	2.30	205.37	1.26
9	(N) PANEL 'FSA'	(N) PANEL 'FSA3'	207.67	AC 3-Phase	100	Steel	1	3	52620	CU	12.9	1.0000	15	0.64	207.03	0.47
10	(N) PANEL 'FSA2'	(N) PANEL 'FSA4'	205.37	AC 3-Phase	150	Steel	1	1/0	105600	CU	12.9	1.0000	40	1.27	204.10	1.87
11	(N) PANEL 'FSA'	(N) PANEL 'FSA5'	207.67	AC 3-Phase	60	PVC	1	1	83690	CU	12.9	1.0000	170	2.72	204.94	1.47
12	(E) MSA	(E) PANEL 'FH'	472.07	AC 3-Phase	600	PVC	2	350 kCMIL	700000	CU	12.9	1.0354	315	6.25	465.82	1.32
13	(E) PANEL 'FH'	(N) PANEL 'FHV'	465.82	AC 1-Phase	21	PVC	1	2	66360	CU	12.9	1.0000	325	2.63	463.19	1.88
	20A Outlet Circuit	#12 Max Run 5% Drop	120.00	AC 1-Phase	16	Steel	1	12	6530	CU	12.9	1.0000	55	3.48	116.52	2.90
	20A Outlet Circuit	#10 Max Run 5% Drop	120.00	AC 1-Phase	16	Steel	1	10	10380	CU	12.9	1.0000	90	3.58	116.42	2.98
	20A Outlet Circuit	#8 Max Run 5% Drop	120.00	AC 1-Phase	16	Steel	1	8	16510	CU	12.9	1.0000	140	3.50	116.50	2.92
	20A Outlet Circuit	#6 Max Run 5% Drop	120.00	AC 1-Phase	16	Steel	1	6	26240	CU	12.9	1.0000	225	3.54	116.46	2.95
	20A Outlet Circuit	#4 Max Run 5% Drop	120.00	AC 1-Phase	16	Steel	1	4	41740	CU	12.9	1.0000	360	3.56	116.44	2.97
	FSL-11		272.45	AC 1-Phase	6	Steel	1	10	10380	CU	12.9	1.0000	360	5.41	267.04	1.98
	FSL-41	EGRESS SPORTS POLE	272.45	AC 1-Phase	5.4	PVC	1	8	16510	CU	12.9	1.0000	886	7.50	264.95	2.75
	(E) MSB	SPORTS LT POLE	480.00	AC 3-Phase	25	PVC	1	6	26240	CU	12.9	1.0000	1045	22.25	457.75	3.03

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. 3#3 CU, 1#8 CU GRD.
P. (1)3"C. 4#3 CU, 1#8 CU GRD. (1)3"C SPARE
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. 1-1/4"C. 4#8 CU, 1#10 CU GRD.
U. 1"C. PROVIDE PARALLELING CONTROL CONDUCTORS PER MANUFACTURER.
V. 2"C. 4#1 CU, 1#6 CU GRD.
W. 1"C. 3#4 CU, 1#6 CU GRD.
X. 3"C. 4#400 KCMIL CU, 1#2 CU GRD.
Y. 1-1/4"C. 2#2 CU, 1#2 CU GRD.
Z. 1-1/4"C. 3#6 CU, 1#6 CU GRD.
AA. 1-1/2"C. 3#6 CU, 1#6 CU GRD.
AB. (E) 2"C. 3#2/0 CU, 1#6 CU GRD. DSA #02-108565.
AC. (E) 4"C. (N) 4#500 KCMIL CU, 1#3 CU GRD.
AD. 3-1/2"C. 4#500 KCMIL CU, 1#3 CU GRD.
AE. 4"C. 4#350 KCMIL CU, 1#3 CU GRD.
AF. 1"C. 3#12 (GENERATOR START/STOP

REGISTERED PROFESSIONAL ENGINEER R.J.HARDIN NO. 9125 ELECTRICAL STATE OF CALIFORNIA

Hardin-Davidson Engineering
356 Pollasky Ave.
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MADERA HIGH SCHOOL STADIUM

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

MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL R. SCHOEN [redacted] RENEWAL DATE FEB 28, 2027 STATE OF CALIFORNIA

PROJECT NUMBER
20-51

DATE
08/22/2023

DSA APPLICATION NO.

FILE NO.
20-H3

PTN NO.
65243-153

DRAWN BY
XXX

REVISIONS

#	DESCRIPTION	DATE
1	ADDENDUM #1	08/18/2025
2	ADDENDUM #2	08/22/2025

CONSTRUCTION DOCUMENTS

ELECTRICAL SINGLE LINE DIAGRAM

EX2.1

20-51_MHS STADIUM_V21_detached.rvt
3/18/2024 10:14:46 AM

(E) 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	(E) PANEL 'FH'	100	3	80326	A		400	3	SPACE ONLY	8
9	-----	--	--	78298	B		--	--	-----	10
11	-----	--	--	82222	C		--	--	-----	12
13	(N) PANEL 'FS'	600	3	134476	A		400	3	SPACE ONLY	14
15	-----	--	--	135954	B		--	--	-----	16
17	-----	--	--	141657	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 392159 VA; Φ B 391609 VA; Φ C 401236 VA
CONNECTED LOAD: 1185.0 kVA
MAX CURRENT: 1449 A

BUSING: 2000A CU
MAIN: 1600A
SCCR: 65000 AMPS

(N) PANEL "FS" 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 'FSL'	200	3	35168	A					2
3	--	--	--	36348	B					4
5	--	--	--	43527	C					6
7	PANEL 'FSM'	400	3	52630	A					8
9	--	--	--	52630	B					10
11	--	--	--	52630	C					12
13	ELEVATOR	110	3	17333	A					14
15	--	--	--	17333	B					16
17	--	--	--	17333	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. 'TFSA' (PANEL "FSA")	225	3	29345	A					38
39	-----	--	--	29642	B					40
41	-----	--	--	28167	C					42

LOAD SUMMARY: Φ A 134476 VA; Φ B 135954 VA; Φ C 141657 VA
CONNECTED LOAD: 412.1 kVA
MAX CURRENT: 511 A

BUSING: 600A CU
MAIN: 600A M.C.B.
SCCR: 35000 AMPS

(N) PANEL "FSL" 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 - BLDG 'A' (EM. LTG)	20	1	1413	A	1745	15	1	WASHER 1*	2
3	LTS - BLDG 'B' (EM. LTG)	20	1	1972	B	1745	--	--	--	4
5	LTS - BLDG 'C' (EM. LTG)	20	1	504	C	1745	--	--	--	6
7	LTS - EXTERIOR	20	1	1146	A	1745	15	1	WASHER 2*	8
9	LTS - SITE	20	1	1635	B	1745	--	--	--	10
11	LTS - JUMP PITS	20	1	1674	C	1745	--	--	--	12
13	LIGHTING CTRL. PANEL 'LCP-FS'	20	1	200	A	12465	60	3	DRYER 1*	14
15	LTS - LANDSCAPE, FLAG POLES	20	1	332	B	12465	--	--	--	16
17	LTS - RGBW FLOODS AT HOME BLEACHERS	20	1	940	C	12465	--	--	--	18
19	SPARE	20	1		A	12465	60	3	DRYER 2*	20
21	SPARE	20	1		B	12465	--	--	--	22
23	SPARE	20	1		C	12465	--	--	--	24
25	DOMESTIC BOOSTER PUMP (2x2HP)	20	3	1884	A		20	1	SPACE	26
27	--	--	--	1884	B		20	1	SPACE	28
29	--	--	--	1884	C		20	1	SPACE	30
31	IRRIGATION BOOSTER PUMP (5HP)	20	3	2105	A		20	1	SPACE	32
33	--	--	--	2105	B		20	1	SPACE	34
35	--	--	--	2105	C		20	1	SPACE	36
37	SPARE	20	1		A		20	1	SPACE	38
39	SPARE	20	1		B		20	1	SPACE	40
41	INVERTER 'INV-SL' BLEACHER EGRESS	45	1	8000	C		20	1	SPACE	42

LOAD SUMMARY: Φ A 35168 VA; Φ B 36348 VA; Φ C 43527 VA
CONNECTED LOAD: 115.0 kVA
MAX CURRENT: 157 A

BUSING: 400A CU
MAIN: 400A M.L.O.
SCCR: 35000 AMPS
NOTE: PROVIDE LOCK-OFF DEVICE

(N) PANEL "FSM" 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	35	3	5817	A					2
3	--	--	--	5817	B					4
5	--	--	--	5817	C					6
7	HP-2	50	3	8864	A					8
9	--	--	--	8864	B					10
11	--	--	--	8864	C					12
13	HP-3	40	3	7479	A					14
15	--	--	--	7479	B					16
17	--	--	--	7479	C					18
19	HP-4	35	3	6371	A					20
21	--	--	--	6371	B					22
23	--	--	--	6371	C					24
25	HP-5	50	3	8864	A					26
27	--	--	--	8864	B					28
29	--	--	--	8864	C					30
31	HP-6	50	3	8864	A					32
33	--	--	--	8864	B					34
35	--	--	--	8864	C					36
37	HP-7	35	3	6371	A					38
39	--	--	--	6371	B					40
41	--	--	--	6371	C					42

LOAD SUMMARY: Φ A 52630 VA; Φ B 52630 VA; Φ C 52630 VA
CONNECTED LOAD: 157.9 kVA
MAX CURRENT: 190 A

BUSING: 400A CU
MAIN: 400A M.L.O.
SCCR: 35000 AMPS

(N) PANEL "FSA" 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 'FSA1'*	200	3	10148	A					2
3	--	--	--	11764	B					4
5	--	--	--	12772	C					6
7	PANEL 'FSA2'*	200	3	13115	A					8
9	--	--	--	13629	B					10
11	--	--	--	10144	C					12
13	PANEL 'FSA3'*	100	3	3480	A					14
15	--	--	--	2468	B					16
17	--	--	--	2948	C					18
19	PANEL 'FSA5' (TICKET BOOTH)*	60	3	2601	A					20
21	--	--	--	1781	B					22
23	--	--	--	2303	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 29345 VA; Φ B 29642 VA; Φ C 28167 VA
CONNECTED LOAD: 87.2 kVA
MAX CURRENT: 247 A

BUSING: 600A CU
MAIN: 500A M.L.O.
SCCR: 22000 AMPS
* PROVIDE C.B. LOCK-OFF DEVICE
**

(N) PANEL "FSA1" 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 - DRY STOR. 101, CUST. 104	20	1	900	A	360	20	1	RECEP - ROOF MAINT	2
3	RECEP - ALL GEND. 105, BOYS RR 108	20	1	720	B	480	20	1	TRAP PRIMER	4
5	RECEP - LAUNDRY 106, UNIFORM 107	20	1	360	C	276	20	1	HOT WATER CIRC PUMP	6
7	RECEP - GIRLS 109, UTILITY CHASE	20	1	900	A	240	20	1	WATER HEATER	8
9	RECEP - CLASSROOM 110	20	1	900	B	200	20	1	EMS PANEL	10
11	RECEP - TRAINING 113 ICE MACHINE	20	1	348	C	1500	20	1	HAND DRYER ALL GENDER A105	12
13	RECEP - TRAINING 113 ICE BATH WHIRLPOOL	20	1	828	A	1500	20	1	HAND DRYER BOYS WEST A108	14
15	RECEP - STOR. 112, TRAINING 113	20	1	360	B	1500	20	1	HAND DRYER BOYS NORTH WEST A108	16
17	SPARE	20	1	0	C	1500	20	1	HAND DRYER BOYS NORTH EAST A108	18
19	SPARE	20	1	0	A	1500	20	1	HAND DRYER GIRLS WEST A109	20
21	SPARE	20	1	0	B	1500	20	1	HAND DRYER GIRLS NORTH WEST A109	22
23	RECEP - UNDER BLEACHER ENTRANCE	20	1	360	C	1500	20	1	HAND DRYER GIRLS NORTH EAST A109	24
25	SECURITY PANEL	20	1	200	A	0	20	1	SPARE	26
27	EF-1	20	1	264	B	0	20	1	SPARE	28
29	EF-2	20	1	768	C	0	20	1	SPARE	30
31	FIRE RISER BELL	20	1	200	A	740	20	2	ERV-1	32
33	RECEP - IDF	20	1	2000	B	740	--	--	--	34
35	RECEP - IT ROOM	20	1	720	C	2600	35	2	ODU-1.1	36
37	RECEP - ELECTRICAL ROOM	20	1	180	A	2600	--	--	--	38
39	EMS PANEL	20	1	500	B	2600	35	2	ODU-1.2	40
41	FACP-FS*	20	1	240	C	2600	--	--	--	42
43	SPARE	20	1	0	A	2600	35	2	ODU-1.3	44
45	SPARE	20	1	0	B	2600	--	--	--	46
47	SPARE	20	1	0	C	2226	30	2	ODU-2	48
49	SPARE	20	1	0	A	2226	--	--	--	50
51	SPARE	20	1	0	B	2226	30	2	ODU-3	52
53	SPARE	20	1	0	C	2226	--	--	--	54

LOAD SUMMARY: Φ A 10148 VA; Φ B 11764 VA; Φ C 12772 VA
CONNECTED LOAD: 34.7 kVA
MAX CURRENT: 106 A

BUSING: 200A CU
MAIN: 200A M.L.O.
SCCR: 22000 AMPS (SERIES)
* PROVIDE RED HANDLE C.B. W/ INTEGRAL LOCK-ON DEVICE
** PROVIDE GFCI CIRCUIT BREAKER

(N) PANEL "FSA2" 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 - LOCKER ROOM 119*	20	1	15	A	180	20	1	RECEP - CONTROL RM 115	2
3	DRINKING FOUNTAIN - LOCKER ROOM 124*	20	1	15	B	540	20	1	RECEP - STOR. 111, STOR. 117, LOBBY 118	4
5	DRINKING FOUNTAIN -*	20	1	15	C	900	20	1	RECEP - LOCKER ROOM 119	6
7	TRAP PRIMERS	20	1	480	A	360	20	1	RECEP - RESTROOM 122	8
9	SPARE	20	1	0	B	1800	20	1	RECEP - OFFICE 120	10
11	SPARE	20	1	0	C	360	20	1	RECEP - STAFF RR 121, UTILITY CHASE	12
13	SPARE	20	1	0	A	360	20	1	RECEP - RESTROOM 123	14
15	SPARE	20	1	0	B	1080	20	1	RECEP - LOCKER ROOM 124	16
17	SPARE	20	1	0	C	360	20	1	RECEP - STOR. 125, STOR. 126	18
19	SPARE	20	1	0	A	540	20	1	RECEP - ROOF MAINT	20
21	SPARE	20	1	0	B		20	1	SPACE	22
23	SPARE	20	1	0	C		20	1	SPACE	24
25	SPARE	20	1	0	A		20	1	SPACE	26
27	SPARE	20	1	0	B		20	1	SPACE	28
29	SPARE	20	1	0	C		20	1	SPACE	30
31	PNL. 'FS4'	150	3	8226	A	2226	30	2	ODU-4	32
33	--	--	--	7346	B	2226	--	--	--	34
35	--	--	--	7476	C	638	20	1	ELEVATOR CONTROLLER	36
37	EF-5.1, EF-5.2	20	1	528	A	200	20	1	LTS - ELEVATOR CAB**	38
39	EF-6.1, EF6.2	20	1	528	B	93.6	20	1	LTS - ELEVATOR SHAFT**	40
41	EF-3, EF-4, EF-7	20	1	34	C	360	20	1	RECEP - ELEVATOR SHAFT**	42

LOAD SUMMARY: Φ A 13115 VA; Φ B 13629 VA; Φ C 10144 VA
CONNECTED LOAD: 36.9 kVA
MAX CURRENT: 114 A

BUSING: 200A CU
MAIN: 200A M.C.B.
SCCR: 22000 AMPS (FULLY RATED)
* PROVIDE GFCI BREAKER
**

(N) PANEL "FSA3" 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	900	20	1	RECEP - WEST WALL	4
5	RECEP - REFRIGERATOR	20	1	1908	C	180	20	1	RECEP - NORTH WALL	6
7	ICE MAKER CONDENSER	20	2	720	A	240	20	1	TRAP PRIMER	8
9	--	--	--	720	B	500	20	1	ROLL UP WINDOW SOUTH	10
11	RECEP - EAST WALL	20	1	360	C	500	20	1	ROLL UP WINDOW NORTH	12
13	RECEP - ICE HOLDING	20	1	1200	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 3480 VA; Φ B 2468 VA; Φ C 2948 VA
CONNECTED LOAD: 8.9 kVA
MAX CURRENT: 29 A

BUSING: 100A CU
MAIN: 100A M.L.O.
SCCR: 22000 AMPS (SERIES)
*
**

(N) PANEL "FSA4" 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	REC - PRESS BOX CONCOURSE 200	20	1	540	A	1920	20	1	IDF-FS2	2
3	REC - CAMERA 201	20	1	360	B	1920	20	1	IDF-FS2 (SOUND RACK)	4
5	REC - HOME 202	20	1	540	C	1920	20	1	IDF-FS2 (SOUND RACK)	6
7	REC - BROADCAST 203	20	1	540	A	540	20	1	RECEP - ROOF	8
9	REC - SPEQAL BROADCAST 204	20	1	540	B		20	1		10
11	REC - VISITOR 205	20	1	540	C		20	1		12
13	REC - CAMERA 206	20	1	360	A		20	1		14
15	SPARE	20	1	0	B		20	1		16
17	SPARE	20	1	0	C		20	1		18
19	SPARE	20	1	0	A	1082	15	2	PTAC-1	20
21	SPARE	20	1	0	B	1082	--	--		22
23	SPARE	20	1	0	C	1082	15	2	PTAC-2	24
25	SPARE	20	1	0	A	1082	--	--		26
27	SPARE	20	1	0	B	1082	15	2	PTAC-3	28
29	SPARE	20	1	0	C	1082	--	--		30
31	SPARE	20	1	0	A	1082	15	2	PTAC-4	32
33	SPARE	20	1	0	B	1082	--	--		34
35	SPARE	20	1	0	C	1082	15	2	PTAC-5	36
37	SPARE	20	1	0	A	1082	--	--		38
39	MUSCO COMMUNICATIONS CONTROLLER	20	1	200	B	1082	15	2	PTAC-6	40
41	DMX CONTROLLER	20	1	150	C	1082	--	--		42

LOAD SUMMARY: Φ A 8226 VA; Φ B 7346 VA; Φ C 7476 VA
CONNECTED LOAD: 23.0 kVA
MAX CURRENT: 69 A

BUSING: 200A CU
MAIN: 150A M.C.B.
SCCR: 22000 AMPS (FULLY RATED)
*
**

(N) PANEL "FSA5" 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	LTS - TICKET BOOTH	20	1	0	A	1000	20	1	REC - TICKET BOOTH IDF	2
3	LTS - TICKET BOOTH EXTERIOR	20	1	0	B	540	20	1	REC - TICKET BOOTH 129	4
5	SPARE	20	1	0	C	540	20	1	REC - TICKET BOOTH 130	6
7	SPARE	20	1	0	A	720	20	1	REC - TICKET BOOTH ENTRANCE (SCANNERS)	8
9	SPARE	20	1	0	B	360	20	1	REC - IDF-TB	10
11	SPARE	20	1	0	C	0	20	1	SPARE	12
13					A					14
15					B					16
17					C					18
19					A					20
21					B					22
23					C	881	15	2	PTAC-7	24
25					A	881	--	--		26
27					B	881	15	2	PTAC-8	28
29					C	881	--	--		30

LOAD SUMMARY: Φ A 2601 VA; Φ B 1781 VA; Φ C 2303 VA
CONNECTED LOAD: 6.7 kVA
MAX CURRENT: 22 A

BUSING: 100A CU
MAIN: 100A M.C.B.
SCCR: 10000 AMPS
*
**

PANEL "FHV" SCHEDULE

120/240V 1Φ 3W — OUTDOOR / SURFACE

CKT. NO.	DESCRIPTION	BREAKER AMPS	BREAKER POLE(S)	VA	Φ	VA	BREAKER AMPS	BREAKER POLE(S)	DESCRIPTION	CKT. NO.
1	LTS - UNDER BLEACHERS	20	1	0	A	360	20	1	RECEP - EAST LIGHT POLES	2
3	LTS - EXTERIOR BLEACHER SOUND WALL	20	1	0	B	360	20	1	RECEP - UNDER BLEACHERS #1	4
5	IDF-V AIR CONDITIONER	20	1	720	A	360	20	1	RECEP - UNDER BLEACHERS #2	6
7	IDF-V INTERIOR	20	1	360	B	360	20	1	RECEP - UNDER BLEACHERS #3	8
9	SPARE	20	1	0	A	360	20	1	RECEP - UNDER BLEACHERS #4	10
11	SPARE	20	1	0	B	360	20	1	RECEP - UNDER BLEACHERS #5	12
13	SPARE	20	1	0	A	360	20	1	RECEP - UNDER BLEACHERS #6	14
15	FIRE RISER BELL	20	1	200	B		20	1	SPARE	16

LOAD SUMMARY: Φ A 2160 VA; Φ B 1640 VA
CONNECTED LOAD: 3.8 kVA
MAX CURRENT: 18 A

BUSING: 60A
MAIN: 60A M.C.B.
SCCR: 10000 AMPS
NOTE: 10KVA UNIT SUBSTATION

(E) 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	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	BESS-1 AUXILLARY*	20	2	1500	A	180	20	1	RECEP - SERVICE	2
3	--	--	--	1500	B	180	20	1	RECEP - MUSCO CONTROLLER	4
5	BESS-2 AUXILLARY*	20	2	1500	C	200	20	1	MUSCO CONTROLLER	6
7	--	--	--	1500	A	0	20	1	SPARE	8
9					B	0	20	1	SPARE	10
11					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 3180 VA; Φ B 1680 VA; Φ C 1700 VA
CONNECTED LOAD: 6.6 kVA
MAX CURRENT: 27 A

BUSING: 225A CU
MAIN: 150A M.C.B.
SCCR: 10000 AMPS
NOTES: * PROVIDE CIRCUIT BREAKER LOCK-OFF DEVICE

REGISTERED PROFESSIONAL ENGINEER — R.J. HARDIN — NO. 9125 — ELECTRICAL — STATE OF CALIFORNIA

Hardin-Davidson Engineering
356 Pollasky Ave. Suite 200
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MADERA HIGH SCHOOL STADIUM
200 SOUTH "L" STREET
MADERA, CA 93637
CONSTRUCTION DOCUMENTS

PROFESSIONAL SEAL — LICENSED ARCHITECT — MICHAEL R. SCHOEN — No. C-34186 — REGISTERED DATE 08.28.2021 — STATE OF CALIFORNIA

PROJECT NUMBER 20-51
DATE 08/22/2023
DSA APPLICATION NO.
FILE NO. 20-H3
PTN NO. 65243-153
DRAWN BY XXX

REVISIONS

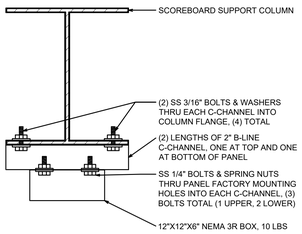
#	DESCRIPTION	DATE
1	ADDENDUM #1	08/18/2025
2	ADDENDUM #2	08/22/2025

CONSTRUCTION DOCUMENTS

PANEL SCHEDULES

EX2.2

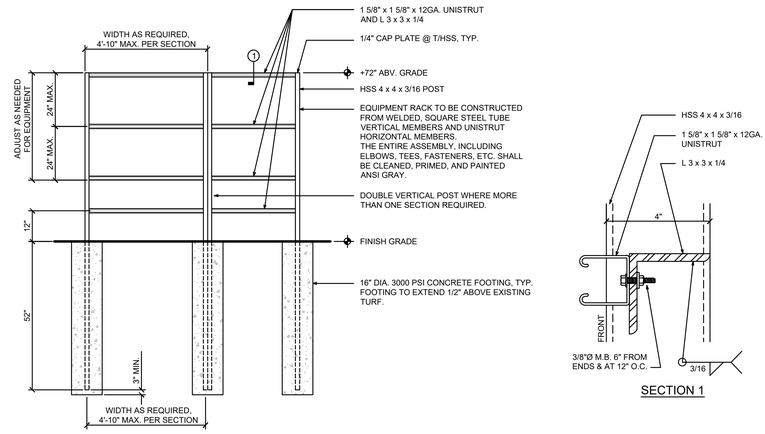
20-51_MHS STADIUM_V21_detached.rvt
3/18/2024 10:14:46 AM



SECTION THROUGH SCOREBOARD SUPPORT COLUMN

L18 TYPICAL EQUIPMENT RACK DETAIL

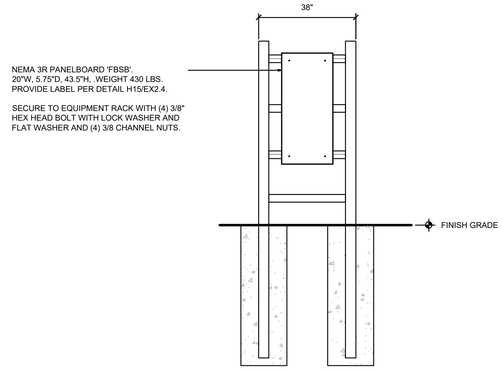
SCALE: NO SCALE



SECTION 1

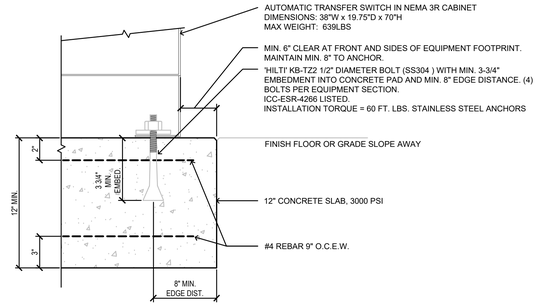
L15 TYPICAL EQUIPMENT RACK DETAIL

SCALE: NO SCALE



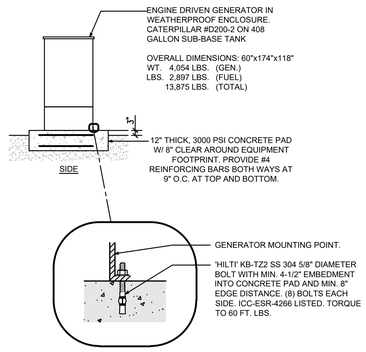
L8 PANEL 'FBSB' MOUNTING DETAIL

SCALE: NO SCALE



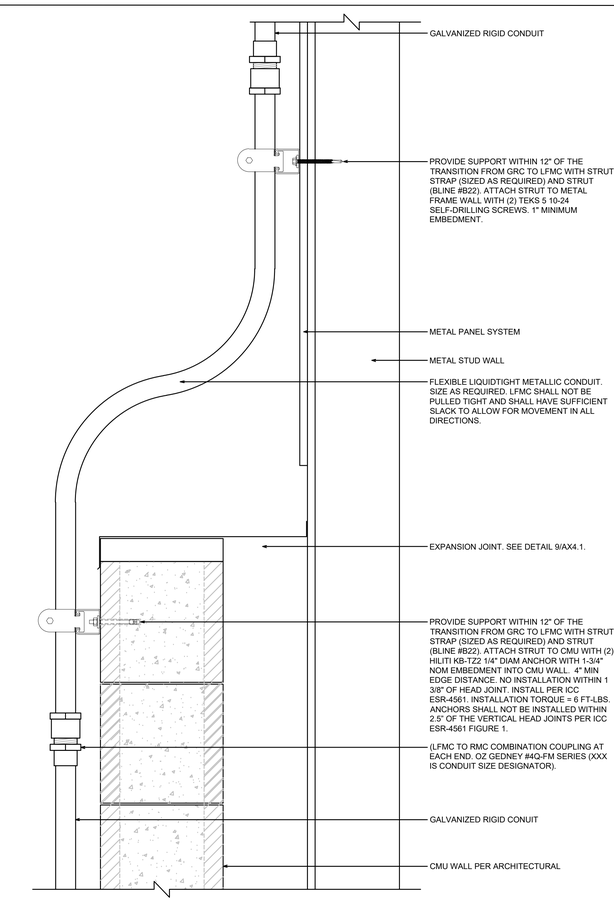
H18 A.T.S. PAD MOUNTING DETAIL

SCALE: NO SCALE



H12 GENERATOR MOUNTING DETAIL

SCALE: NO SCALE



D8 CONDUIT AT EXPANSION JOINT DETAIL

SCALE: NO SCALE

(N) PANEL "FBSB" 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	10MM A1, B1, C1, D1*	20	2	1200	A	180	20	1	REC - SCOREBOARD MAINTENANCE	2
3	--	--	--	1200	B	1200	20	2	10MM A3, B3, C3, D3*	4
5	10MM E1, F1, G1*	20	2	900	C	1200	--	--	--	6
7	--	--	--	900	A	900	20	2	10MM E3, F3, G3*	8
9	10MM A2, B2, C2, D2*	20	2	1200	B	900	--	--	--	10
11	--	--	--	1200	C	1200	20	2	10MM A4, B4, C4, D4*	12
13	10MM E2, F2, G2*	20	2	900	A	1200	--	--	--	14
15	--	--	--	900	B	900	20	2	10MM E4, F4, G4*	16
17	FIBRE CONVERTERS*	20	1	24	C	900	--	--	--	18
19	SCOREBOARD*	20	1	1032	A	0	20	1	SPARE	20
21	SPARE	20	1	0	B	0	20	1	SPARE	22
23	SPARE	20	1	0	C	0	20	1	SPARE	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 6312 VA
Φ B 6300 VA
Φ C 5424 VA
CONNECTED LOAD: 18.0 kVA
MAX CURRENT: 53 A

BUSING: 400A CU
MAIN: 400A M.L.O.
SCCR: 10000 AMPS
NOTE: * PROVIDE LOCK OFF DEVICE ON ALL BREAKERS

⚠1

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 STADIUM

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

MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT — MICHAEL R. SCHOEN — No. C-34165 — REGISTERED — FEB 28, 2027 — STATE OF CALIFORNIA

PROJECT NUMBER 20-51
DATE 08/22/2023
DSA APPLICATION NO.
FILE NO. 20-H3
PTN NO. 65243-153
DRAWN BY XXX

REVISIONS

Δ	DESCRIPTION	DATE
1	ADDENDUM #1	09/18/2025
2	ADDENDUM #2	09/22/2025

CONSTRUCTION DOCUMENTS

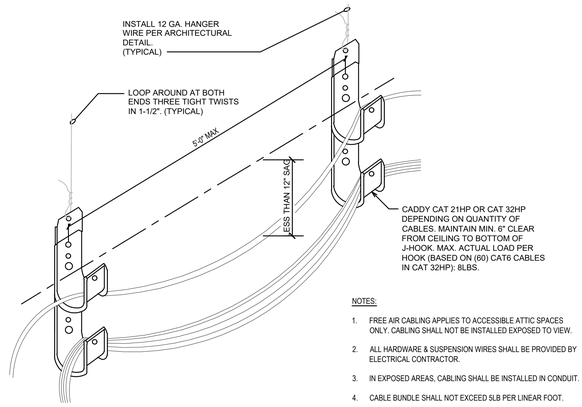
ELECTRICAL DETAILS

EX2.5

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

20-51_MHS STADIUM_V21_detached.rvt
3/18/2024 10:14:46 AM

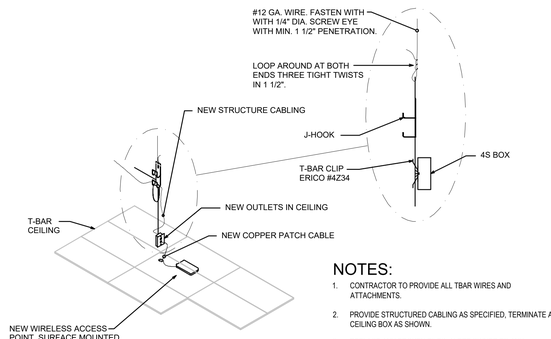


NOTES:

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:

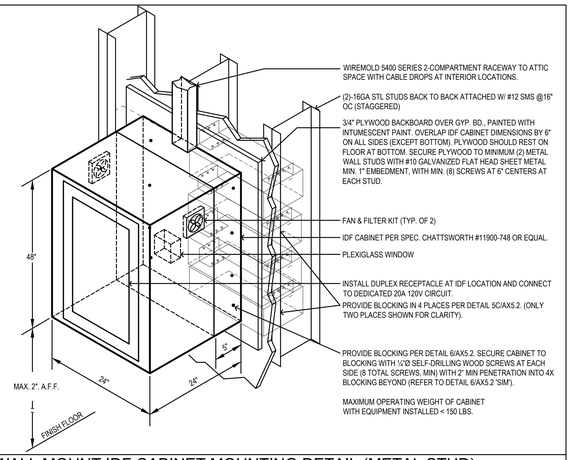


NOTES:

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.

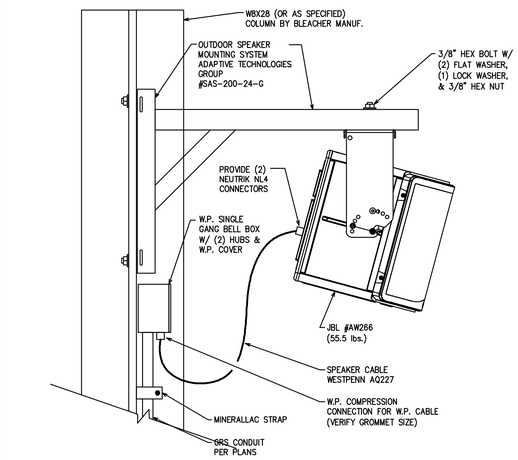
L10 TYPICAL WIRELESS ACCESS POINT AT T-BAR CEILING

SCALE:



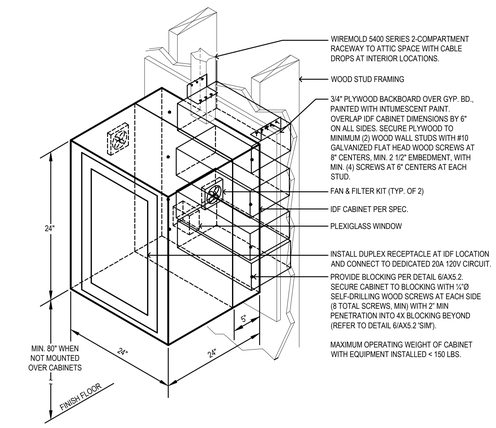
L5 WALL MOUNT IDF CABINET MOUNTING DETAIL (METAL STUD)

SCALE: NO SCALE



G15 OUTDOOR SOUND SYSTEM LOUDSPEAKER MOUNTING DETAIL

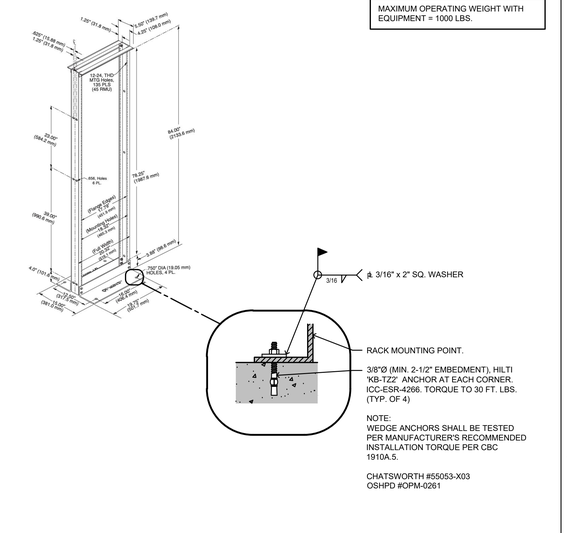
SCALE: NO SCALE



G10 WALL MOUNT IDF CABINET MOUNTING DETAIL

SCALE: NO SCALE

MAXIMUM OPERATING WEIGHT WITH EQUIPMENT = 1000 LBS.

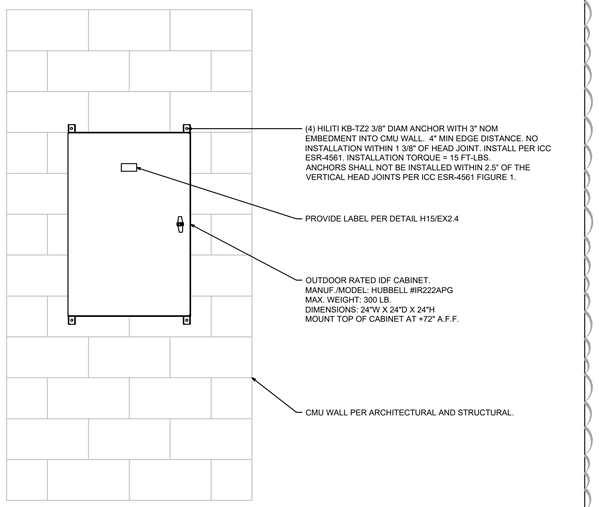


NOTE:
WEDGE ANCHORS SHALL BE TESTED PER MANUFACTURER'S RECOMMENDED INSTALLATION TORQUE PER CBC 1910A.5.

CHATSWORTH #55053-X03
OSHPD #OPM-0261

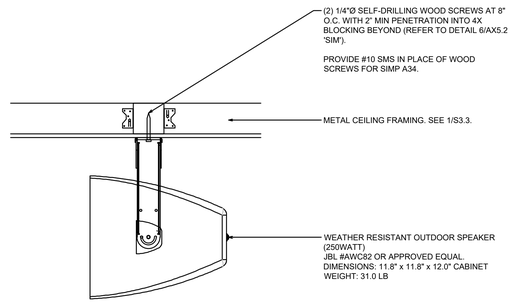
G5 FLOOR MOUNT 2 POST RACK MOUNTING DETAIL

SCALE: NO SCALE



B10 OUTDOOR WALL MOUNT IDF CABINET MOUNTING DETAIL

SCALE: NO SCALE



B5 SPEAKER MOUNTING DETAIL AT PRESS BOX

SCALE: NO SCALE

Hardin-Davidson Engineering
356 Pollasky Ave, Suite 200
Clovis, CA 93612
559.323.4995 tel
559.323.4928 fax

REGISTERED PROFESSIONAL ENGINEER R.J.HARDIN NO. 9125 ELECTRICAL STATE OF CALIFORNIA

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MADERA HIGH SCHOOL STADIUM

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

MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL R. SCHOEN No. C-26195 RENEWAL DATE: FEB 28, 2027 STATE OF CALIFORNIA

PROJECT NUMBER 20-51

DATE 08/22/2023

DSA APPLICATION NO.

FILE NO. 20-H3

PTN NO. 65243-153

DRAWN BY XXX

REVISIONS

#	DESCRIPTION	DATE
1	ADDENDUM #1	08/18/2025
2	ADDENDUM #2	08/22/2025

CONSTRUCTION DOCUMENTS

ELECTRICAL LOW VOLTAGE DETAILS

EX3.1

20-51_MHS STADIUM_V21_detached.rvt
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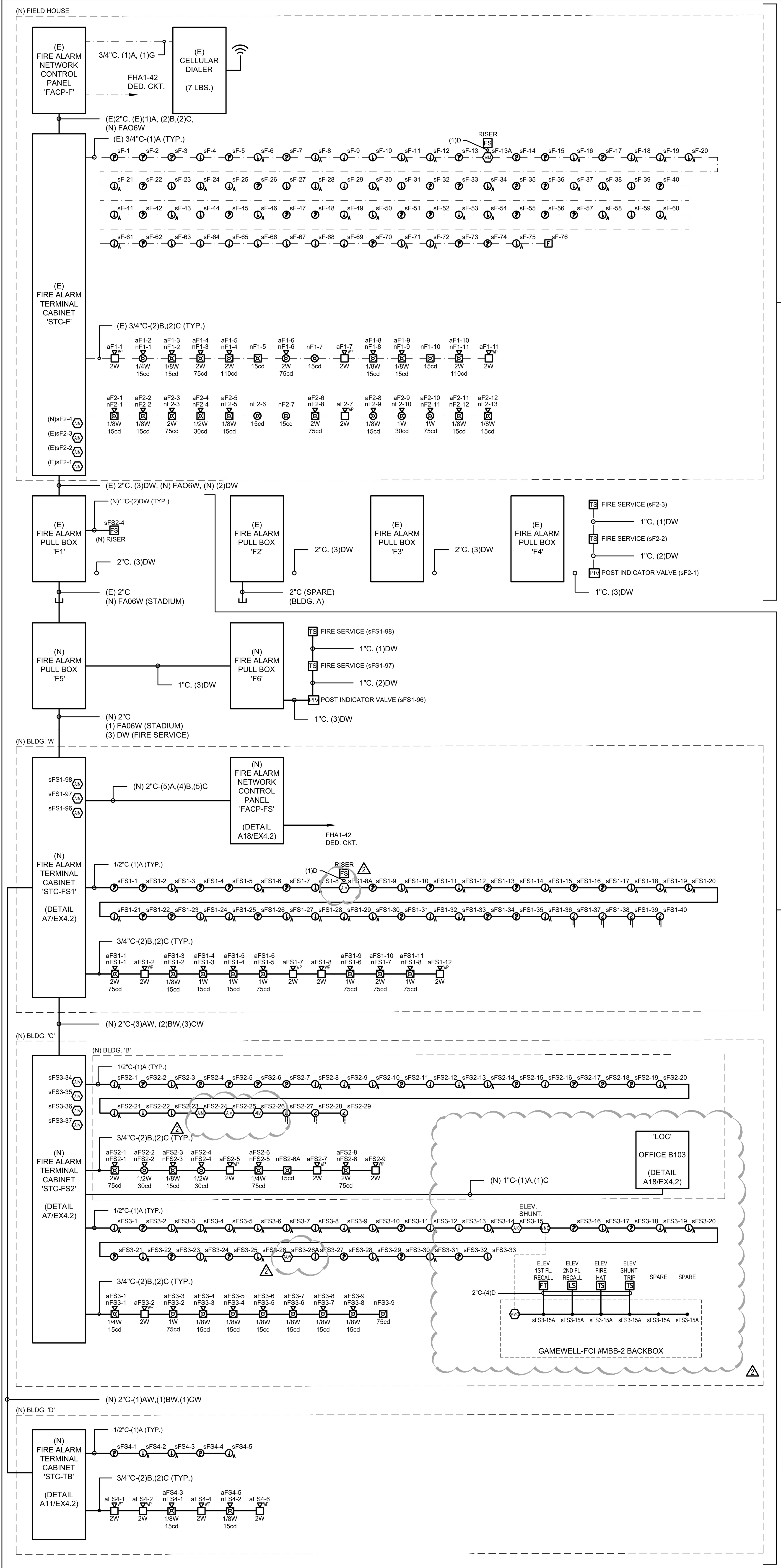


EXISTING FA SYSTEM TO BE INSTALLED UNDER DSA APPLICATION #02-121624

FA SYSTEM ADDITION TO BE INSTALLED UNDER THIS DSA APPLICATION

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 UUJS (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)
43. INSTALL DUCT SMOKE DETECTORS BELOW ROOF.

FIRE ALARM SYMBOLS

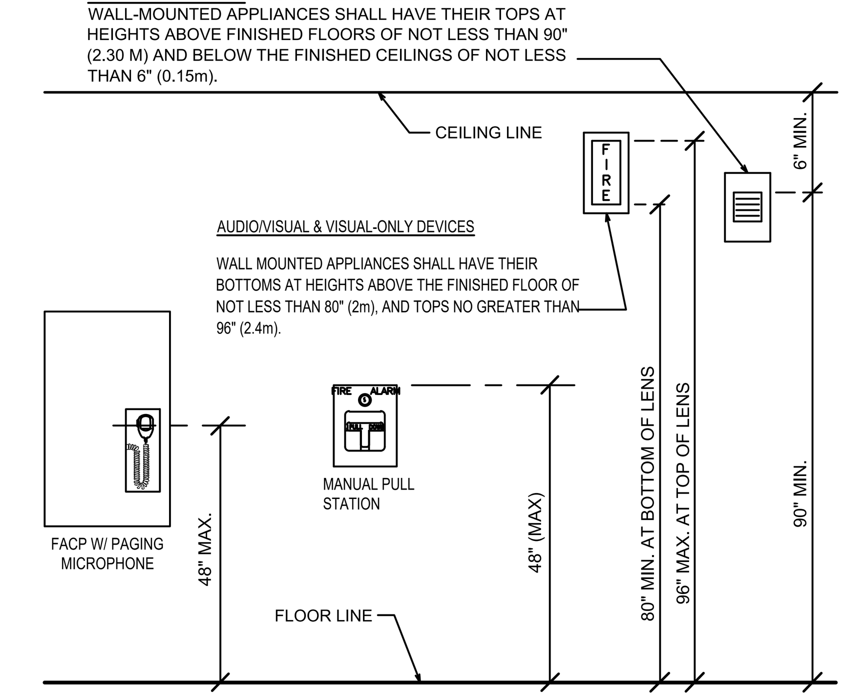
SYMBOL	DESCRIPTION	MANUFACTURER	MODEL NO.	CSFM LISTING
(E) FACP-F	(E) FIRE ALARM NETWORK EVAC PANEL	GAMEWELL/FCI	#E3 SERIES W/ ILI-MB-E3, DACT-E3, LCD-E3, INI-VGC, ASM-16, PM-9, (2)AM-50-70, DACT-E3, INCC-MIC	7165-1703:0125
		GAMEWELL/FCI	FSL-E3	7165-1703:0176
(N) FACP-FS	(N) NETWORK FIRE ALARM EVAC PANEL	GAMEWELL/FCI	E3 W/ILI-MB-E3, INI-VGX, LCD-E3, PM-9, RPT-E3-UTP, (2) AM-50-70, MMO-6SF	7165-1703:0125
		GAMEWELL/FCI	FSL-E3	7165-1703:0176
LOC	LOCAL OPERATING CONSOLE W/ ANNUNCIATOR & PAGING MICROPHONE	GAMEWELL/FCI	GAMEWELL/FCI #E3-LOC W/ NGA, ASM-16, INI-VGC, INCC-MIC	7165-1703:0125
	SMOKE DETECTOR, PHOTOELECTRIC	GAMEWELL/FCI	ASD-PL3	7272-1703:0501
	DETECTOR BASE	GAMEWELL/FCI	B501	7300-1653:0109
	HEAT DETECTOR, CEILING MT'D	GAMEWELL/FCI	ATD-L3	7270-1703:0502
	DETECTOR BASE	GAMEWELL/FCI	B501	7300-1653:0109
	ATTIC HEAT DETECTOR, 190°F	GAMEWELL/FCI	ATD-L3H	7270-1703:0502
	DETECTOR BASE	GAMEWELL/FCI	B501	7300-1653:0109
	DUCT SMOKE DETECTOR, PHOTOELECTRIC	GAMEWELL/FCI	ASD-PL3R	7272-1703:0121
	DETECTOR HOUSING	GAMEWELL/FCI	DNR	7272-1703:0121
	RELAY	GAMEWELL/FCI	AOM-2RF	7300-0694:0178
AIM	MONITOR MODULE	GAMEWELL/FCI	AMM-2F	7300-1703:0102
AOM	RELAY MODULE	GAMEWELL/FCI	AOM-2SF	7300-1703:0102
MMO	MULTI-MOD RELAY OUTPUT MODULE	GAMEWELL/FCI	MMO-6RF	7300-1703-0124
F	MANUAL PULL STATION	GAMEWELL/FCI	MS-7ASF	7150-1703:0170
	SPEAKER/VISIBLE NAC DEVICE, WALL MT'D (WATTS & cd INDICATED ON PLANS)	EATON/WHEELOCK	ELSPSTW	7320-0785:0505
	SPEAKER/VISIBLE NAC DEVICE, CEIL. MT'D (WATTS & cd INDICATED ON PLANS)	EATON/WHEELOCK	ELSPSTWC	7320-0785:0505
	VISIBLE NAC DEVICE, WALL MT'D (cd INDICATED ON PLANS)	EATON/WHEELOCK	ELSTW	7320-0785:0504
	VISIBLE NAC DEVICE, CEIL. MT'D (cd INDICATED ON PLANS)	EATON/WHEELOCK	ELSTWC	7320-0785:0504
WP	EXTERIOR SPEAKER, W.P., WALL MT'D (WATTS INDICATED ON PLANS)	EATON/WHEELOCK	ET-1010-W	7320-0785:0105
TS	TAMPER SWITCH	SPECIFIED BY FIRE PROTECTION ENG.		
FS	FLOW SWITCH	SPECIFIED BY FIRE PROTECTION ENG.		
PIV	POST INDICATOR VALVE	SPECIFIED BY FIRE PROTECTION ENG.		
FB	FIRE BELL	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

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MADERA HIGH SCHOOL STADIUM

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CONSTRUCTION DOCUMENTS

MADERA 19 66 UNIFIED SCHOOL DISTRICT

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RENEWAL DATE FEB 28, 2027
STATE OF CALIFORNIA

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PROJECT NUMBER 20-51

DATE 08/22/2023

DSA APPLICATION NO.

FILE NO. 20-H3

PTN NO. 65243-153

DRAWN BY XXX

REVISIONS

#	DESCRIPTION	DATE
1	ADDENDUM #1	08/18/2025
2	ADDENDUM #2	08/22/2025

CONSTRUCTION DOCUMENTS

FIRE ALARM

EX4.1

20-51_MHS STADIUM_V21_detached.rvt
3/18/2024 10:14:46 AM

BATTERY CALCULATION

F.A. Control Panel 'FACP-FS'

POWER REQUIREMENTS

	CURRENT [A] SUPERVISORY	ALARM
ILI-MB-E3 (SLCs at max. output)	0.0810	0.1500
LCD-E3 (Panel Display)	0.0240	0.2800
PM-9 (Power Supply)	0.0500	0.0500
RPT-E3-UTP (Network Repeater)	0.0160	0.0170
FSL-E3 (SM FO Module)	0.0790	0.0790
INI-VG (Voice Gateway)	0.1500	0.1500
(2) AM-50-70 (Amp, Speakers at max output)	0.0980	4.6000
MMO-6SF (Multi-MOD Output Module)	0.0023	0.0400
INI-VGC (Voice Gateway - LOC)	0.1500	0.1500
INCC-MIC (Paging Microphone - LOC)	0.0010	0.0010
ASM-16 (Panel Switches - LOC)	0.0110	0.1550
NAC Circuits	-	0.9680
TOTALS	0.6623	6.6400

BATTERY CAPACITY

SUPERVISORY POWER (24 HOURS)	= 24 Hr * 0.66225A	=	15.894 AHr
ALARM POWER (15 MINUTES)	= 0.25 Hr * 6.64A	=	1.660 AHr
	TOTAL POWER REQUIREMENT	=	17.554 AHr
	MINIMUM BATTERY CAPACITY (includes 25% safety factor)	=	22 AHr

VOLTAGE DROP CALCULATION

NAC Circuit 'nFS1'

VD = Voltage Drop [V]
I = Current [A] (0.366A)
K = 12.9 (Copper Constant)
L = Distance to Load [ft.] (290')
CM = Circular Mils (#12 AWG = 6530)
V = Voltage [V] (24VDC)

$VD = \frac{K * I * 2L}{CM} = \frac{12.9 * 0.366 * 2 * 290'}{6530} = 0.419\ V$

$VD\% = \frac{VD}{24} = 1.7\%$

VOLTAGE DROP CALCULATION

NAC Circuit 'nFS3'

VD = Voltage Drop [V]
I = Current [A] (0.274A)
K = 12.9 (Copper Constant)
L = Distance to Load [ft.] (305')
CM = Circular Mils (#12 AWG = 6530)
V = Voltage [V] (24VDC)

$VD = \frac{K * I * 2L}{CM} = \frac{12.9 * 0.274 * 2 * 305'}{6530} = 0.330\ V$

$VD\% = \frac{VD}{24} = 1.4\%$

VOLTAGE DROP CALCULATION

NAC Circuit 'nFS2'

VD = Voltage Drop [V]
I = Current [A] (0.284A)
K = 12.9 (Copper Constant)
L = Distance to Load [ft.] (495')
CM = Circular Mils (#12 AWG = 6530)
V = Voltage [V] (24VDC)

$VD = \frac{K * I * 2L}{CM} = \frac{12.9 * 0.284 * 2 * 495'}{6530} = 0.555\ V$

$VD\% = \frac{VD}{24} = 2.3\%$

VOLTAGE DROP CALCULATION

NAC Circuit 'nFS4'

VD = Voltage Drop [V]
I = Current [A] (0.044A)
K = 12.9 (Copper Constant)
L = Distance to Load [ft.] (200')
CM = Circular Mils (#12 AWG = 6530)
V = Voltage [V] (24VDC)

$VD = \frac{K * I * 2L}{CM} = \frac{12.9 * 0.044 * 2 * 200'}{6530} = 0.035\ V$

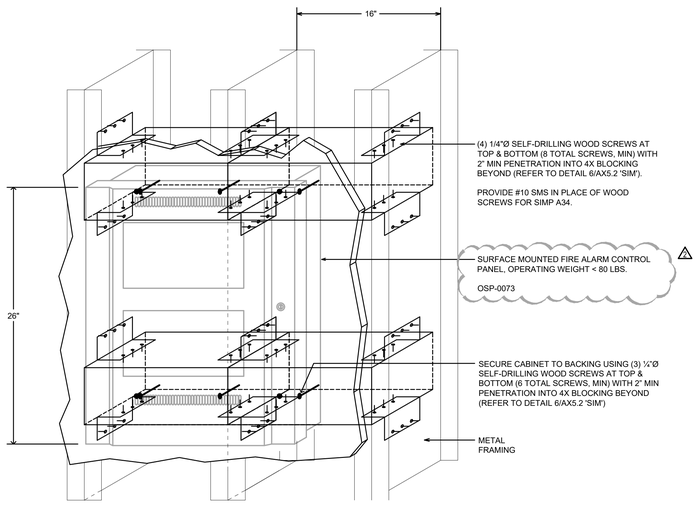
$VD\% = \frac{VD}{24} = 0.1\%$

VOICE EVACUATION SPEAKER VOLTAGE DROP

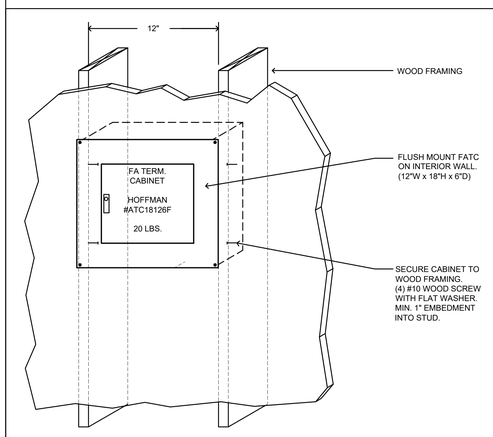
Volt Drop Common Parameters

Volts 70.7 Volts
Wire Size 14 AWG
Wire Resistance 3.26 ohm/Kft

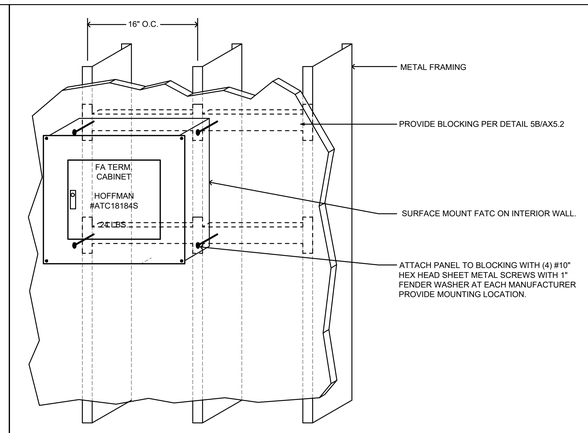
	INDOOR					OUTDOOR				CIRCUIT LENGTH		
Type / Wattage Tap	1/8 W	1/4 W	1/2W	1W	2W	1W	2W	4W	8W	Total Watts	Max Length	Actual Length
aFS1	2			5	2		4			17.25	5266	290
aFS2	1	1	2		2		3			11.375	7987	465
aFS3	6			1						1.75	51912	305
aFS4	2						4			8.25	11012	200



A18 FA PANEL MOUNTING DETAIL
SCALE: NO SCALE



A11 FIRE ALARM TERM. CAB. MOUNTING DETAIL (WOOD)
SCALE: NO SCALE



A7 FIRE ALARM TERM. CAB. MOUNTING DETAIL (METAL)
SCALE: NO SCALE

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CONSTRUCTION DOCUMENTS

MADERA 19 66 UNIFIED SCHOOL DISTRICT

PROFESSIONAL SEAL

LICENSED ARCHITECT MICHAEL R. SCHOEN RENEWAL DATE SEP 28, 2027 STATE OF CALIFORNIA

PROJECT NUMBER 20-51
DATE 08/22/2023
DSA APPLICATION NO.
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PTN NO. 65243-153
DRAWN BY XXX

REVISIONS

#	DESCRIPTION	DATE
1	ADDENDUM #1	08/18/2025
2	ADDENDUM #2	08/22/2025

CONSTRUCTION DOCUMENTS

FIRE ALARM CALCS & DETAILS

EX4.2

20-51_MHS STADIUM_V21_detached.rvt
3/18/2024 10:14:46 AM

GEOTECHNICAL ENGINEERING INVESTIGATION REPORT

PROPOSED NEW BLEACHERS AT MADERA HIGH SCHOOL
MADERA HIGH SCHOOL STADIUM
800-820 W OLIVE AVENUE
MADERA, CALIFORNIA 93637

BSK PROJECT G00001118

PREPARED FOR:

MADERA UNIFIED SCHOOL DISTRICT
1902 HOWARD ROAD
MADERA, CALIFORNIA 93637

JULY 14, 2023

GEOTECHNICAL ENGINEERING INVESTIGATION REPORT

PROPOSED NEW BLEACHERS AT MADERA HIGH SCHOOL
MADERA HIGH SCHOOL STADIUM
800-820 W OLIVE AVENUE
MADERA, CALIFORNIA 93637

Prepared for:

Madera Unified School District
1902 Howard Road
Madera, California 93637

BSK Project: G00001118

July 14, 2023

Prepared by:

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DISTRIBUTION: Ms. Rosalind Cox, Madera USD (pdf)

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Figures

Figure 1: Site Vicinity Map
Figure 2: Boring Location Map

Appendices

Appendix A: Field Exploration
Appendix B: Laboratory/Field Testing

1 INTRODUCTION

1.1 General

This report presents the results of our Geotechnical Engineering Investigation for the proposed bleachers to be located at the stadium within Madera High School in Madera, California, as shown on the Site Vicinity Map, Figure 1. The geotechnical engineering investigation was conducted in general accordance with the scope of services outlined in BSK Proposal G00001118, dated May 1, 2023. The proposed improvements and exploratory borings are shown on Figure 2, Boring Location Map.

Previous geotechnical investigations were performed at the site (BSK Project Number G2115811F, dated June 10, 2021) and referenced for this investigation.

In the event that significant changes occur in the design or location of the proposed structure, the conclusions and recommendations presented in the report will not be considered valid unless the changes are reviewed by BSK and the conclusions and recommendations are modified or verified in writing, as necessary.

1.2 Project Description

BSK understands that the project consists of the development of two new bleacher structures and another small structure at the Madera High School Stadium in Madera, California. We understand, based on the provided site plan and on email correspondence, that the bleachers are planned to occupy approximately 17,700 square feet and 8,300 square feet respectively. The building is anticipated to occupy approximately 7,200 square feet. Floor slab loads were not provided but anticipated to be less than 2,000 psf with minimal grading. A berm is anticipated to be removed at the south end of the site, adjacent to the existing and future bleachers. Other improvements are anticipated to include underground utilities, hardscaping, and landscaping.

1.3 Purpose and Scope of Services

The purpose of the geotechnical investigation is to assess soil conditions at the project site and provide geotechnical engineering recommendations for use by the project designers during preparation of the project plans and specifications for the proposed improvements. The scope of the investigation included a field exploration, laboratory testing, engineering analysis, and report preparation. It is understood new geologic and site hazards investigation were not required for the proposed improvements.

2 FIELD INVESTIGATION AND LABORATORY TESTING

2.1 Field Exploration

The field exploration, conducted on June 23, 2022, consisted of a site reconnaissance, and drilling six (6) exploratory test borings from depths of 10 to 21.5 feet bgs. The borings were drilled within or adjacent to the proposed improvement areas using a truck-mounted drill rig equipped with hollow stem augers and hand auger equipment. The borings were advanced to a maximum depth of 21.5 feet below ground surface (bgs). The approximate boring locations are presented on Figure 2. Details of the field exploration and the boring logs are provided in Appendix A.

2.2 Laboratory Testing

Laboratory testing of selected soil samples were performed to evaluate certain physical, chemical, and engineering characteristics and properties. The testing program included: in-situ moisture and density, gradation, shear strength, collapse potential, and corrosion potential. The in-situ moisture and dry density test results are presented on the boring logs in Appendix A. Descriptions of the laboratory test methods and test results are provided in Appendix B.

3 SITE CONDITIONS

3.1 Site Description

The project site is situated at the existing Madera High School stadium southwest of Olive Avenue and Stadium Road in Madera, California. The project site was bounded to the west by athletic fields with Coyote Lane beyond, to the south by residences, to the east by Stadium road with Madison Elementary School beyond, and by Olive Avenue to the North. The berm at the south end of the site was approximately 12 feet high and was covered with grasses and landscaping on the south side. The topmost portion of the berm and the north side consisted on concrete walkways and the existing bleachers.

3.2 Subsurface Conditions

The subsurface soil generally consisted of sandy silt and silty sand to the maximum depth of exploration (21.5 bgs.). The boring logs in Appendix A provide a more detailed description of the soils encountered in each boring, including the applicable Unified Soil Classification System symbols. The approximate locations of the soil borings are shown on the Boring Location Map (Figure 2).

Soils encountered had low potential for collapse and non-expansive, see Appendix B for laboratory testing results.

3.3 Groundwater

Groundwater was not encountered within the borings to the maximum depth explored, 21.5 feet bgs. Historical groundwater data near the site indicates a maximum groundwater height at more than 50 feet bgs. However, fluctuations in the groundwater level or the presence of perched groundwater may occur due to variations in rainfall, irrigation, seasonal factors, pumping from wells and other factors that were not evident at the time of our investigation.

To ascertain groundwater levels for the area during other time periods, groundwater elevation data from the California Department of Water Resources (DWR) were obtained for the period 1935 to 1976. The water level hydrograph from well 11S17E26A001M is presented on Figure 2 in the previous report. The hydrograph indicates that the highest historic groundwater elevation in the general area of the site was approximately 244 feet in 1945. Using a Site elevation of 262 feet, the shallowest historic depth to groundwater was approximately 18 feet bgs.

4 CONCLUSIONS AND RECOMMENDATIONS

4.1 General

Based upon the data collected during this investigation and from a geotechnical engineering standpoint, it is our opinion that there are no soil conditions that would preclude the construction of the proposed improvements provided that the recommendations presented in this report are incorporated into the project design and construction. The planned improvements may be supported on shallow reinforced isolated or continuous concrete spread footings.

4.2 Soil Corrosivity

A surface soil sample obtained from the Site was tested to provide a preliminary screening of the potential for concrete deterioration or steel corrosion due to attack by soil-borne soluble salts. The test results are presented in Appendix B.

Based on test results, on-site near-surface soils have low soluble sulfates, low chloride contents and a low minimum resistivity, and are alkaline. Thus, the on-site soils are considered to have a low corrosion potential with respect to buried concrete and a corrosive potential for unprotected metal in contact with the soil.

BSK recommends that a Type II cement be used in the formulation of concrete and that buried reinforcing steel protection be provided with a minimum concrete cover required by the American Concrete Institute (ACI) Building Code for Structural Concrete, ACI 318, Chapter 20. Buried metal conduits must have protective coatings in accordance with the manufacturer's specifications. If detailed recommendations for corrosion protection are desired, a corrosion specialist should be consulted.

4.3 Seismic Design Criteria

There are no known active fault zones within the vicinity of the project site. In accordance with Section 1613.2.2 of the 2022 California Building Code (CBC) and Table 20.3-1 of ASCE 7-16, the site can be classified as Site Class D (stiff soil profile).

Use of the 2022 California Building Code (CBC) seismic design criteria is considered appropriate and the following parameters are considered applicable for the structural design of foundations.

Table 1: Seismic Design Parameters

Seismic Design Parameter	2022 CBC Value		Reference
MCE Mapped Spectral Acceleration (g)	S_S = 0.602	S_1 = 0.235	USGS Mapped Value
Amplification Factors (Site Class D)	F_a = 1.319	F_v = null[1](2.130)[2]	ASCE Table 11.4
Site Adjusted MCE Spectral Acceleration (g)	S_{MS} = 0.793	S_{M1} = null[1](0.501)[2]	ASCE Equations 11.4.1-2
Design Spectral Acceleration (g)	S_{DS} = 0.529	S_{D1} = null[1] (0.334)[2]	ASCE Equations 11.4.1-4
Geometric Mean PGA (g)	PGA_M = 0.348		Section 11.8.3, ASCE 7-16
Site Short Period – T_s (seconds)	T_s = 0.631		$T_s = S_{D1}/S_{DS}$
Site Long Period – T_L (seconds)	T_L = 12		USGS Mapped Value

Notes: [1] Requires site-specific ground motion procedure or exception as per ASCE 7-16 Section 11.4.8.

[2] Values from ASCE 7-16 supplement shall only be used to calculate T_s. Values provided based on use of exception, as provided in Section 11.4.8.2 to Site-Specific Ground Motion Procedures and assumes the value of the seismic response coefficient C_s is determined by Eq. 12.8-2 for values of $T \leq 1.5T_s$ and taken as equal to 1.5 times the value computed in accordance with either Eq. 12.8-3 for $T_L \geq T > 1.5T_s$ or Eq. 12.8-4 for $T > T_L$.

The long period design spectral response acceleration coefficient, S_{D1}, is greater than 0.2, therefore the Site lies in Seismic Design Category D as specified in Section 1613.2.5 of the 2022 CBC. In accordance with the 2022 CBC, each structure shall be assigned to the more severe seismic design category in accordance with Table 1613.2.5(1) or 1613.2.5(2), irrespective of the fundamental period of vibration of the structure.

4.4 Site Preparation and Earthwork Construction

The following procedures must be implemented during site preparation for the proposed improvements. It should be noted that references to maximum dry density, optimum moisture content, and relative compaction are based on ASTM D1557 (latest test revision) laboratory test procedures.

1. Prior to any site grading, all miscellaneous surface obstructions must be removed from the improvement area. Near surface soils containing vegetation, roots, organics, or other objectionable material must be stripped to a depth of at least 3-inches to expose a clean soil surface. Where trees or bushes are to be removed, the associated roots are expected to extend 3 feet or more below existing grade, as such, deeper excavation may be necessary for root removal. Roots larger than ½-inch in diameter must be removed. Surface strippings must not be incorporated into engineered fill unless the organic content is less than 3 percent by weight (ASTM D2974).

2. Within the area of the planned improvements, remove existing concrete curbs, sidewalks, underground utilities, and debris to expose a clean soil surface free of deleterious material.

   Existing utilities or irrigation pipes must be removed to a point at least 5-feet horizontally outside the proposed building area. Resultant cavities must be backfilled with engineered fill. Abandoned pipelines to remain that are less than 2 inches in diameter must be capped at the cutoff point, while pipelines greater than 2 inches in diameter must be filled with a 1-sack sand-cement slurry.

   Existing concrete may be crushed and used as base material, provided it sufficiently crushed to less than 3 inch diameter.

3. Soil disturbed as a result of demolition, undocumented fill deemed to possess inadequate compaction or uniformity, debris, and abandoned underground structures must be excavated to expose undisturbed native soil or suitable fill.

4. Following the required demolition, stripping, and/or removal of underground structures, the exposed soil surface in areas to support fill or proposed improvements must be over-excavated a minimum of 12 inches below existing site grade or 12 inches below the proposed foundations, which ever depth is greater. The exposed subgrade must be proof-rolled under the observation of a BSK field representative to detect soft or pliant areas. Soft or pliant areas must be over-excavated to firm native soil. Earthwork must extend at least 5-feet laterally beyond the outside edge of proposed improvements and areas to receive fill.

5. Non-expansive excavated soils, free of deleterious substances (organic matter, demolition debris, tree roots, etc.) and with less than 3 percent organic content by weight, may be returned to the excavations as engineered fill. Engineered fill must be placed in uniform layers not exceeding 8-inches in loose thickness, moisture-conditioned to at or above optimum moisture content and compacted to at least 90 percent of the maximum dry density. The upper 12 inches of engineered fill placed as backfill under pavement sections must be compacted to at least 95 percent of the maximum dry density. Acceptance of engineered fill placement must be based on both moisture content at time of compaction and relative compaction.

6. Imported fill materials must be free of deleterious substances and have less than 3 percent organic content by weight. The project specifications must require the contractor to contact BSK for review of the proposed import fill materials for conformance with these recommendations at least two weeks prior to importing to the site, whether from on-site or off-site borrow areas.

Imported fill soils must be non-hazardous and be derived from a single, consistent soil type source conforming to 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
Low Corrosion Potential:	
Soluble Sulfates:	< 1,500 mg/kg
Soluble Chlorides:	< 300 mg/kg
Soil Resistivity:	> 2,000 ohm-cm

Grading operations must be scheduled as to avoid working during periods of inclement weather. Should these operations be performed during or shortly following periods of inclement weather, unstable soil conditions may result in the soils exhibiting a "pumping" condition. This condition is caused by excess moisture, in combination with compaction, resulting in saturation and near zero air voids in the soils. If this condition occurs, the affected soils must be over-excavated to the depth at which stable soils are encountered and replaced with suitable soils compacted as engineered fill. Alternatively, the Contractor may proceed with grading operations after utilizing a method to stabilize the soil subgrade, which must be subject to review by BSK prior to implementation.

The Department of Toxic Substance Control (DTSC) has detailed guidelines for the testing of import soils to school sites. These guidelines take into account the past and present land usage at a borrow pit, the acreage of the borrow pit and the volume of import soil to establish the amount of chemical testing of import fill recommended. BSK must be contacted for review and analytical testing of proposed import fill materials for conformance with these recommendations at least 15 days prior to transporting fill to the site.

4.5 Shallow Foundations

The proposed building and retaining walls may be supported on reinforced concrete spread footings bearing on subgrade soil and engineered fill. The allowable bearing pressure applies to the dead load plus live load (DL + LL), and is presented for lighter and maximum loading, and may be increased by 1/3 for short duration wind or seismic loads. The foundation must be designed with reinforcing steel as recommended by the project Structural Engineer. The allowable bearing capacity presented below considers a safety factor of 3. Footing design must follow the criteria listed below:

TABLE 2 SHALLOW FOOTING BEARING CAPACITY				
Footing Embedment [1] (inches)	Minimum Footing Width (inches)		Allowable Bearing Capacity (psf)	
	Continuous Footing	Isolated Spread Footing	Continuous Footing	Isolated Spread Footing
12	12	24	3,000	3,000

Note (1) – Measure with respect to the lowest adjacent subgrade surface

The estimated total and differential settlement for the recommended spread footings shown below assumes maximum wall and column loads of 2 kip/ft and 14 kips, respectively.

TABLE 3 ANTICIPATED SETTLEMENT			
Footing Type	Post-Construction Settlement (inches)	Differential Settlement (inches)	Angular Distortion
Continuous	1.0	--	0.005
Isolated	1.0	0.5	--

Isolated footing differential settlement is based on adjacent similarly loaded footings spaced at 30-feet. The settlement values given above are applicable to the maximum loading conditions. For loads other than the design maximum loads, the settlements can be adjusted proportionally. Due to the nature of the foundation soils, a significant fraction of the settlement is expected to occur following the end of construction as the design building loads area applied.

4.6 Lateral Earth Pressures and Frictional Resistance

Lateral loads applied against foundations may be resisted by a combination of passive resistance against the vertical faces of the foundations and friction between the foundation bottom and the supporting subgrade. The parameters shown in the table below are for drained conditions of select engineered fill or undisturbed native soil.

TABLE 4 Recommended Lateral Earth Pressures	
Lateral Pressure Condition	Equivalent Fluid Density
Active Pressure (psf/ft)	45
At-Rest Pressure (psf/ft)	66
Passive Pressure (psf/ft)	270
Dynamic Increment (psf) (H=Height)	9.5H

An unfactored coefficient of friction of 0.24 may be used between soil subgrade and the precast foundation bottom, or an unfactored coefficient of friction of 0.51 between the soil subgrade and the cast in-place foundation bottoms. The coefficient of friction and passive earth pressure values given above represent ultimate soil strength values. BSK recommends that a safety factor consistent with the design conditions be included in their usage. For resistance against lateral sliding that is countered solely by the passive earth pressure against footings or friction along the bottom of footings, a minimum safety factor of 1.5 is recommended. For stability against lateral sliding that is resisted by combined passive pressure and frictional resistance, a minimum safety factor of 2.0 is recommended. For lateral resistance against seismic loading conditions, a minimum safety factor of 1.2 is recommended. We based these lateral resistance values on the assumption that the concrete for the foundations is either placed directly against undisturbed soils or that the voids created from the use of forms are backfilled with engineered fill or other approved materials, such as lean concrete. Passive resistance in the upper foot of soil cover below finished grades should be neglected unless the ground surface is confined by concrete slabs, pavements, or other such positive protection.

4.7 Concrete Slabs-on-Grade

Non-structural concrete slab-on-grade must be a minimum of 4-inches thick and must be supported on a compacted subgrade prepared in accordance with the "Site Preparation and Earthwork Construction" section of this report. Existing onsite surface soils are considered to have a low expansion potential for design purposes. In order to regulate cracking of the slabs, construction joints and/or saw-cut control joints must be provided in each direction at a maximum spacing of 10 feet on centers along with steel reinforcement as recommended by the project's Structural Engineer. Control joints must have a minimum depth of one-quarter of the slab thickness. It is recommended that steel reinforcement used in concrete slabs-on-grade consist of steel rebar. Structural concrete slabs-on-grade may be designed using an unadjusted long-term Modulus of Subgrade Reaction (Ks) of 150 pounds per cubic inch (pci) constructed on a properly compacted subgrade or engineered fill. This value is based on the correlations to soil strength using one foot by one foot plate-load tests and should therefore be scaled (adjusted) to the actual slab width. For sandy soils, the adjusted Ks value can be obtained by multiplying the value provided above by $[(B+B_1)/(2B)]^2$, where B is the slab width in feet and B_1 is 1 foot (width of a one foot by one foot plate-load test apparatus).

Interior concrete slabs must be successively underlain by: 1-½ inches of washed concrete sand; a durable vapor retarder; and a smooth, compacted subgrade surface. The vapor retarder must meet the requirements of ASTM E1745 Class A and have a water vapor transmission rate (WVTR) of less than or equal to 0.012 Perms as tested by ASTM E96. Examples of acceptable vapor retarder products include: Stego Wrap (15-mil) Vapor Barrier by STEGO INDUSTRIES LLC; W.R. Meadows Premoulded Membrane with Plasmatic Core; and Zero-Perm by Alumiseal. Because of the importance of the vapor retarder, joints must be carefully spliced and taped.

If migration of subgrade moisture through the slab is not a concern, then the use of a vapor retarder and overlying sand may be reconsidered. The slab subgrade must be kept in a moist condition until the vapor retarder or concrete slab is placed. BSK's representative must be called to the site to review soil and moisture conditions immediately prior to placing the vapor retarder or concrete slab.

As indicated in the PCA Engineering Bulletin 119, Concrete Floors and Moisture, and applicable ACI Committee reports (see ACI 360R-06, Design of Slabs-on-Ground, dated October 2006 and ACI 302.1R-04, Guide for Concrete Floor and Slab Construction, dated June 2004), the sand layer between the vapor retarder and concrete floor slab may be omitted. The advantage of this option is that it can reduce the amount of moisture that can be transmitted through the slab (especially if the sand layer becomes moist or wet prior to placing the concrete); however, the risk of slab "curling" is much greater. The "curling" may result from a sharp contrast in moisture-drying conditions between the exposed slab surface and the surface in contact with the membrane. As recommended in the referenced ACI Committee reports, measures must be taken to reduce the risk of "curling" such as reducing the joint spacing, using a low shrinkage mix design, and reinforcing the concrete slab. In order to regulate cracking of the slab, we recommend that full depth construction joints and control joints be provided in each direction with slab thickness and steel reinforcing recommended by the structural engineer.

Excessive landscape water or leaking utility lines could create elevated moisture conditions under concrete slabs, which could result in adverse moisture or mildew conditions in floor slabs or walls. Accordingly, care must be taken to avoid excess irrigation around the structures, as well as to periodically monitor for leaking utility lines. Likewise, positive surface drainage must be provided around the perimeter of the structures as discussed in the "Surface Drainage Control" Section 4.10.

The adverse effects of moisture vapor transmission on flooring materials can be substantially reduced by the use of a low porosity concrete. This can be achieved by specifying a low water-cement ratio (0.45 or less by weight) a minimum compressive strength of 4,000 psi at 28 days, and a minimum of 7 days wet-curing.

4.8 Excavation Stability

Soils encountered within the upper 5-feet are generally Type C soil in accordance with OSHA (Occupational Safety and Health Administration). Temporary excavations for the project construction must be left open for as short a time as possible and must be protected from water runoff. Slope height, slope inclination, and excavation depths (including utility trench excavations) must in no case exceed those specified in local, state, or federal safety regulations (e.g., OSHA Health and Safety Standards for Excavations 29 CFR Part 1926, or successor regulations). These excavation recommendations are based on soil characteristics derived from the borings. Variations in soil conditions will likely be encountered during excavation. At the time of construction, BSK must be afforded the opportunity to observe and document sloping and shoring conditions, and the opportunity

to provide review of actual field conditions to account for condition variations not otherwise anticipated in the preparation of these recommendations.

4.9 Utility Trench Excavation and Backfill

Pipes and conduits must be bedded and shaded in accordance with the requirements of the pipe manufacturer. Where no specific requirements exist, we recommend a minimum of 6-inches of sand bedding material for pipe installations 12 to 24-inches in diameter. For pipe diameters smaller than 12-inches, the bedding thickness may be reduced to 4-inches. The bedding material and envelope (up to 6-inches above the pipe) must consist of sand (Sand Equivalent greater than 30), be placed in loose lifts not exceeding 8-inches in thickness, compacted to at least 90 percent of the maximum dry density, and moisture conditioned to within 2 percent of optimum moisture content. Water jetting to attain compaction must not be allowed.

Adequate excavation width must be provided to permit uniform compaction on both sides of utility lines installed within the trench. The trench backfill material may consist of engineered fill. Trench backfill outside the building footprint must be placed in loose lifts not to exceed 8-inches in loose thickness, compacted to at least 90 percent of the maximum dry density, and moisture conditioned to within 2 percent of optimum moisture content. The upper 12-inches of trench backfill below pavement sections must be compacted to at least 95 percent of the maximum dry density. Conduits extending through or below footings must be “sleeved” as determined by the Project Structural Engineer. Utility trench backfill beneath the building areas must be backfilled in accordance with Section 4.3 (Site Preparation and Earthwork Construction).

4.10 Surface Drainage Control

Final grading around site improvements must provide for positive and enduring drainage. Ponding of water must not be allowed on or near the building or paved surfaces. Saturation of the soils immediately adjacent to or below the building area must not be allowed. Irrigation water must be applied in amounts not exceeding those required to offset evaporation, sustain plant life, and maintain a relatively uniform moisture profile around and below, site improvements.

5 PLANS AND SPECIFICATIONS REVIEW

BSK recommends that it be retained to review the draft plans and specifications for the project, with regard to foundations, and earthwork, prior to their being finalized and issued for construction bidding.

6 CONSTRUCTION TESTING AND OBSERVATIONS

Geotechnical testing and observation during construction is a vital extension of this geotechnical investigation. BSK recommends that it be retained for those services. Field review during site

preparation and grading allows for evaluation of the exposed soil conditions and confirmation or revision of the assumptions and extrapolations made in formulating the design parameters and recommendations. BSK's observations must be supplemented with periodic compaction tests to establish substantial conformance with these recommendations. BSK must also be called to the site to observe foundation excavations, prior to placement of reinforcing steel or concrete, in order to assess whether the actual bearing conditions are compatible with the conditions anticipated during the preparation of this report. BSK must also be called to the site to observe placement of foundation and slab concrete.

If a firm other than BSK is retained for these services during construction, that firm must notify the owner, project designers, governmental building officials, and BSK that the firm has assumed the responsibility for all phases (i.e., both design and construction) of the project within the purview of the geotechnical engineer. Notification must indicate that the firm has reviewed this report and any subsequent addenda, and that it either agrees with BSK's conclusions and recommendations, or that it will provide independent recommendations.

7 LIMITATIONS

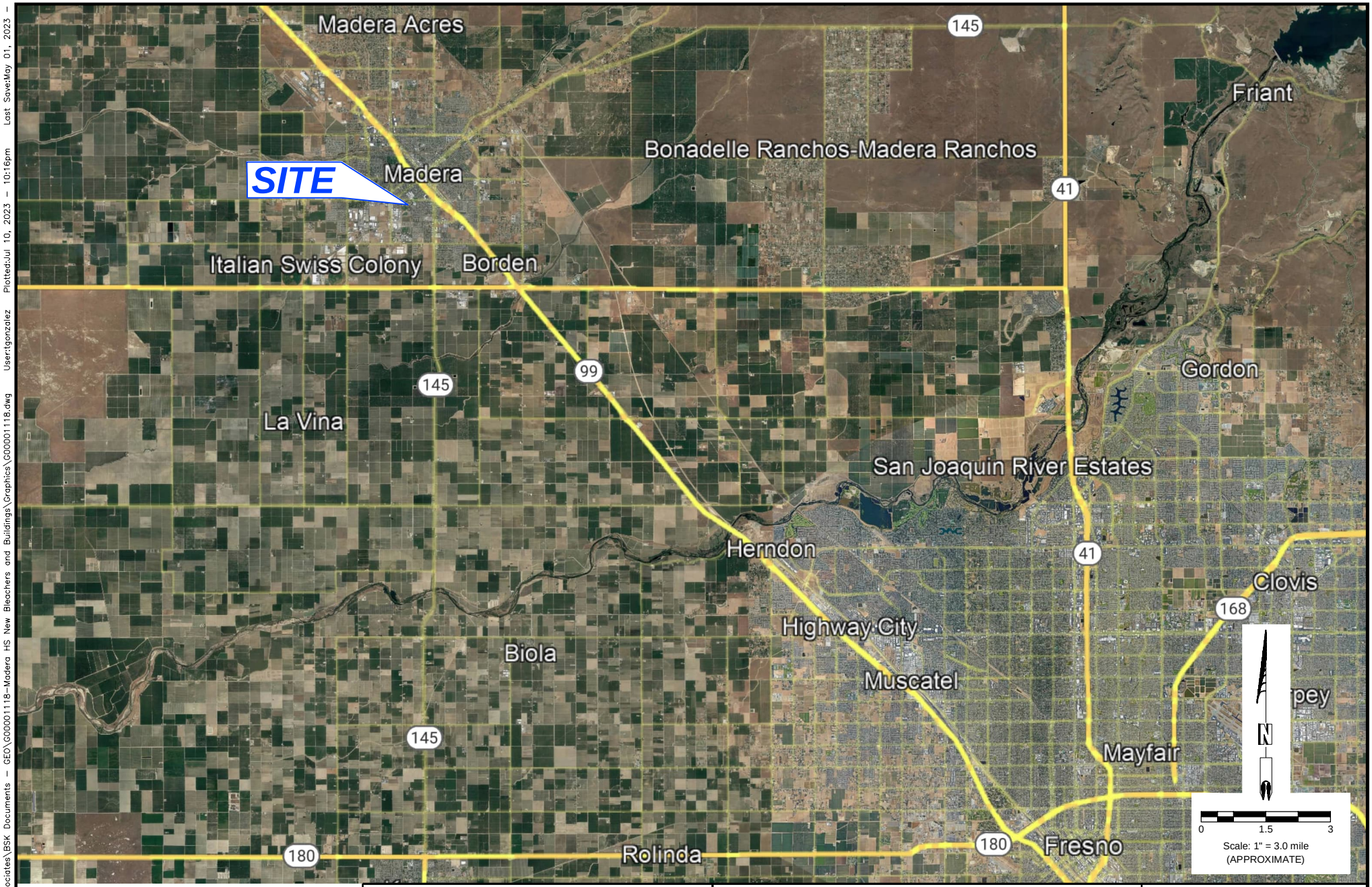
The analyses and recommendations submitted in this report are based upon the data obtained from the test borings performed at the locations shown on Figure 2. The report does not reflect variations which may occur between or beyond the borings. The nature and extent of such variations may not become evident until additional exploration and testing is performed or construction is initiated. If variations then appear, a re-evaluation of the recommendations of this report will be necessary after performing on-site observations during the excavation period and noting the characteristics of the variations.

The validity of the recommendations contained in this report is also dependent upon an adequate testing and observation program during the construction phase. BSK assumes no responsibility for construction compliance with the design concepts or recommendations unless it has been retained to perform the testing and observation services during construction as described above.

The findings of this report are valid as of the present. However, changes in the conditions of the site can occur with the passage of time, whether caused by natural processes or the work of man, on this property or adjacent property. In addition, changes in applicable or appropriate standards may occur, whether they result from legislation, governmental policy or the broadening of knowledge.

BSK has prepared this report for the exclusive use of the Client and members of the project design team. The report has been prepared in accordance with generally accepted geotechnical engineering practices which existed in Madera County at the time the report was written. No other warranties either express or implied are made as to the professional advice provided under the terms of BSK's agreement with Client and included in this report.

FIGURES



REFERENCE IMAGE: Google Earth

BSK ASSOCIATES
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Fresno, California 93727
Tel. (559) 497-2880

SITE VICINITY MAP

Madera High School
New Bleachers and Buildings
W Olive Avenue
Madera, California

FIGURE 1

JOB NO. G00-001-118
DATE July 10, 2023
DR. BY TG
CH. BY NP
SCALE AS SHOWN
SHEET NO. 1
OF 1 SHEETS

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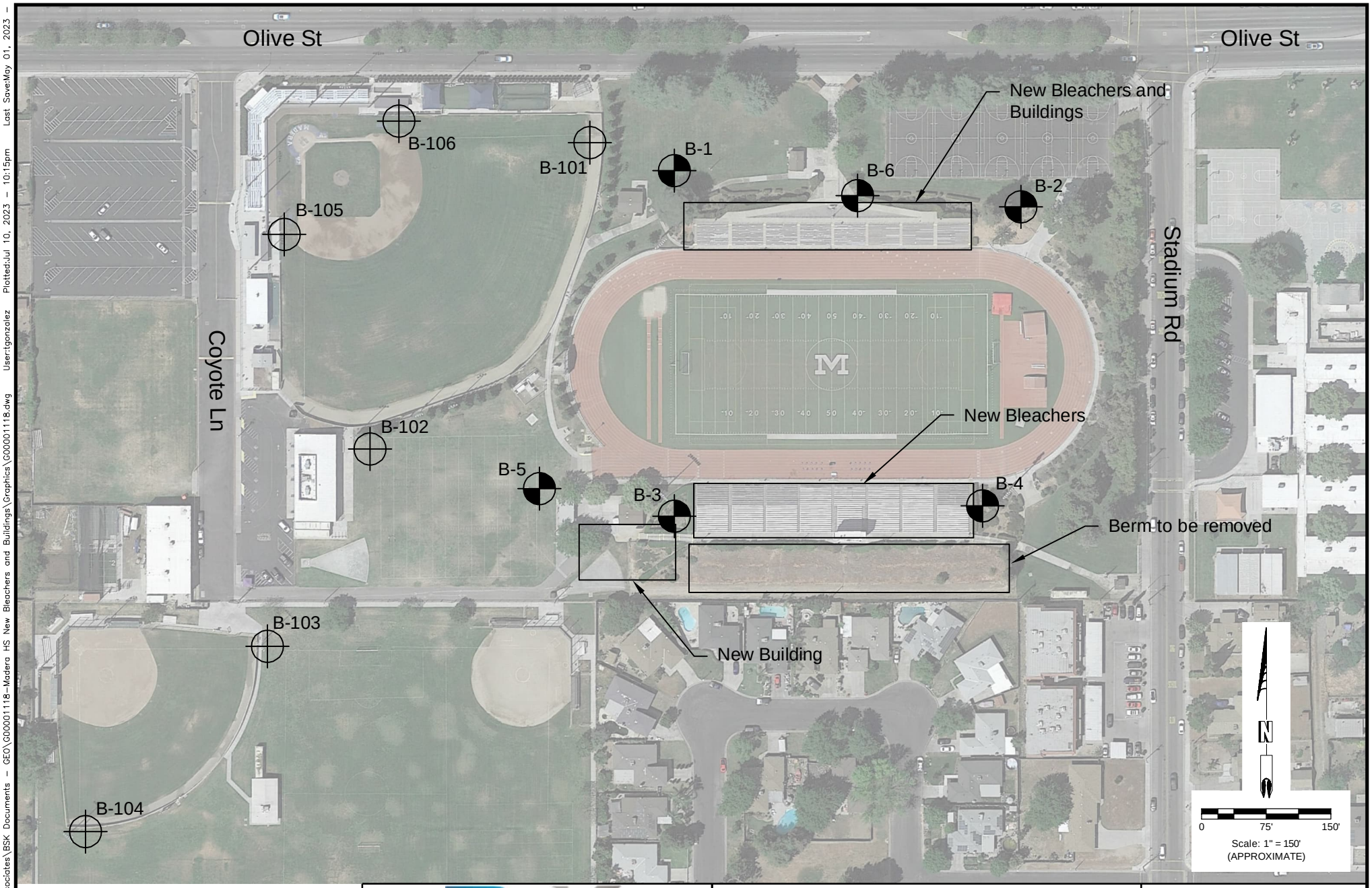

LEGEND:

B-6 APPROXIMATE BORING LOCATIONS

B-106 APPROXIMATE PREVIOUS BORING LOCATIONS

REFERENCE IMAGE: Google Earth

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BORING LOCATION MAP

Madera High School
New Bleachers and Buildings
W Olive Avenue
Madera, California

FIGURE 2

JOB NO. G00-001-118
DATE July 10, 2023
DR. BY TG
CH. BY NP
SCALE AS SHOWN
SHEET NO. 1
OF 1 SHEETS

C:\Users\tgonzalez\BSK Associates\BSK Documents - GEO\G00001118-Madera HS New Bleachers and Buildings\Graphics\G00001118.dwg User:tgonzalez Plotted:Jul 10, 2023 - 10:15pm Last Saved:May 01, 2023 - 11:35ar

APPENDIX A

FIELD EXPLORATION

APPENDIX A
Field Exploration

The field exploration, conducted on June 23, 2022, consisted of a site reconnaissance, and drilling six (6) exploratory test borings from depths of 10 to 21.5 feet bgs. The borings were drilled within or adjacent to the proposed improvement areas using a truck-mounted drill rig equipped with hollow stem augers and hand auger equipment. The borings were advanced to a maximum depth of 21.5 feet below ground surface (bgs). The approximate boring locations are presented on Figure 2.

The soil materials encountered in the test borings were visually classified in the field, and the logs were recorded during the drilling and sampling operations. Visual classification of the materials encountered in the test borings was made in general accordance with the Unified Soil Classification System (ASTM D 2488) and further verified by ASTM D2487 for selected samples. A soil classification chart is presented herein. Boring logs are presented herein and should be consulted for more details concerning subsurface conditions. Stratification lines were approximated by the field staff based on observations made at the time of drilling, while the actual boundaries between soil types may be gradual and soil conditions may vary at other locations.

Subsurface samples were obtained at the successive depths shown on the boring logs by driving samplers which consisted of a 2.5-inch inside diameter (I.D.) California Sampler or a 1.4-inch I.D. Standard Penetration Test (SPT) Sampler. The samplers were driven 18 inches using a 140-pound, automatic hammer dropping 30 inches. The number of blows required to drive the last 12 inches was recorded as the blow count (blows/foot) on the log of borings. The relatively undisturbed soil core samples were capped at both ends to preserve the samples at their natural moisture content. Disturbed soil samples were obtained using the Split-Spoon Sampler (marked X in logs) and were placed and sealed in polyethylene bags. At the completion of the field exploration, the test borings were backfilled with the excavated soil cuttings, as set forth in BSK's proposal.

It should be noted that the use of terms such as "loose", "medium dense", "dense" or "very dense" to describe the consistency of a soil is based on sampler blow count and is not necessarily reflective of the in-place density or unit weight of the soils being sampled. The relationship between sampler blow count and consistency is provided in the following Tables A-1 and A-2 for coarse grained (sandy and gravelly) soils and fine grained (silty and clayey) soils, respectively.

Table A-1: Density of Coarse-Grained Soil versus Sampler Blow Count		
Consistency	**SPT Blow Count Blows / Foot)**	**2.5" I.D. Cal. Sampler (Blows / Foot)**
Very Loose	<4	<6
Loose	4 – 10	6 – 15
Medium Dense	10 – 30	15 – 45
Dense	30 – 50	45 – 80
Very Dense	>50	>80

Table A-2: Consistency of Fine-Grained Soil versus Sampler Blow Count		
Consistency	**SPT Blow Count (Blows / Foot)**	**2.5" I.D. Cal. Sampler (Blows / Foot)**
Very Soft	<2	<3
Soft	2 – 4	3 – 6
Medium Stiff	4 – 8	6 – 12
Stiff	8 – 15	12 – 24
Very Stiff	15 – 30	24 – 45
Hard	>30	>45

MAJOR DIVISIONS				TYPICAL NAMES
COARSE GRAINED SOILS More than Half > #200 sieve	GRAVELS MORE THAN HALF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE	CLEAN GRAVELS WITH LITTLE OR NO FINES	GW	WELL GRADED GRAVELS, GRAVEL-SAND MIXTURES
			GP	POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES
		GRAVELS WITH OVER 15% FINES	GM	SILTY GRAVELS, POORLY GRADED GRAVEL-SAND-SILT MIXTURES
			GC	CLAYEY GRAVELS, POORLY GRADED GRAVEL-SAND-CLAY MIXTURES
	SANDS MORE THAN HALF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE	CLEAN SANDS WITH LITTLE OR NO FINES	SW	WELL GRADED SANDS, GRAVELLY SANDS
			SP	POORLY GRADED SANDS, GRAVELLY SANDS
		SANDS WITH OVER 15% FINES	SM	SILTY SANDS, POOORLY GRADED SAND-SILT MIXTURES
			SC	CLAYEY SANDS, POORLY GRADED SAND-CLAY MIXTURES
FINE GRAINED SOILS More than Half < #200 sieve	SILTS AND CLAYS LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS, OR CLAYEY SILTS WITH SLIGHT PLASTICITY
			CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
			OL	ORGANIC CLAYS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACIOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS
			CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
			OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS			Pt	PEAT AND OTHER HIGHLY ORGANIC SOILS

■	Modified California	RV	R-Value
⊠	Standard Penetration Test (SPT)	SA	Sieve Analysis
☒	Split Spoon	SW	Swell Test
◪	Pushed Shelby Tube	TC	Cyclic Triaxial
▯	Auger Cuttings	TX	Unconsolidated Undrained Triaxial
✋	Grab Sample	TV	Torvane Shear
⊘	Sample Attempt with No Recovery	UC	Unconfined Compression
CA	Chemical Analysis	(1.2)	(Shear Strength, ksf)
CN	Consolidation	WA	Wash Analysis
CP	Compaction	(20)	(with % Passing No. 200 Sieve)
DS	Direct Shear	▽	Water Level at Time of Drilling
PM	Permeability	▼	Water Level after Drilling(with date measured)
PP	Pocket Penetrometer		

SOIL CLASSIFICATION CHART AND LOG KEY

Figure A-1

BSK ASSOCIATES

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Project: Madera HS New Bleachers and Buildings

Location: 800-820 W Olive Avenue, Madera, CA

Project No.: G00-001-118

Logged By: D. Ferrer

Checked By: N. Popenoe

Boring: **B-1**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1–4								ML	**Sandy SILT** - brown, moist, fine to coarse grained sand	
3	■		6	108.9	14.3					
5–9								SM	**Silty SAND** - brown, moist, fine to coarse grained sand	
6	■		10	102.0	13.8					
10–14										
11	■		27	117.0	12.4					
15–16									Boring terminated at approximately 16.5 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings.	
16	▼		15							
17–29										

Drilling Contractor: Baja Exploration
Drilling Method: Mobile B-61
Drilling Equipment: Hollow Stem Auger
Date Started: 6-23-23
Date Completed: 6-23-23

Surface Elevation:
Sample Method: 2.5" Modified Cal & 1.5" I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 16.5 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

GEO BORING LOGS.GPJ BSK.GDT 7-7-23

BSK Associates
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Fresno, CA 93727
Telephone: (559) 497-2880

Project: Madera HS New Bleachers and Buildings

Location: 800-820 W Olive Avenue, Madera, CA

Project No.: G00-001-118

Logged By: D. Ferrer

Checked By: N. Popenoe

Boring: **B-2**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1–29								SM	**Silty SAND** - brown, moist, fine to coarse grained sand	
3	■		12	111.0	5.3					
6	■		15	107.8	6.6					
11	■		48	119.3	8.4					
16	⧗		71							
19								SP	**Poorly Graded SAND** - yellowish brown, moist, fine to coarse grained sand	
21	■		14							
									Boring terminated at approximately 21.5 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings.	

Drilling Contractor: Baja Exploration
Drilling Method: Mobile B-61
Drilling Equipment: Hollow Stem Auger
Date Started: 6-23-23
Date Completed: 6-23-23

Surface Elevation:
Sample Method: 2.5" Modified Cal & 1.5" I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 21.5 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

GEO BORING LOGS.GPJ BSK.GDT 7-7-23

BSK Associates
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Fresno, CA 93727
Telephone: (559) 497-2880

Project: Madera HS New Bleachers and Buildings

Location: 800-820 W Olive Avenue, Madera, CA

Project No.: G00-001-118

Logged By: D. Ferrer

Checked By: N. Popenoe

Boring: **B-3**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1–10				96.1	5.9			SM	**Silty SAND** - brown, moist, fine to coarse grained sand, fine grained gravel	Hand Auger Difficulty: Medium
10									Boring terminated at approximately 10 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings.	

Drilling Contractor: BSK Associates
Drilling Method: Hand Auger
Drilling Equipment: Hand Auger
Date Started: 6-23-23
Date Completed: 6-23-23

Surface Elevation:
Sample Method: 2.5" Modified Cal & 1.5" I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 10 Feet
Borehole Diameter: 4"

* See key sheet for symbols and abbreviations used above.

GEO BORING LOGS.GPJ BSK.GDT 7-7-23

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Project: Madera HS New Bleachers and Buildings

Location: 800-820 W Olive Avenue, Madera, CA

Project No.: G00-001-118

Logged By: D. Ferrer

Checked By: N. Popenoe

Boring: **B-4**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1–10								SM	**Silty SAND** - brown, moist, fine to coarse grained sand, fine grained gravel	Hand Auger Difficulty: Medium
3				96.5	7.0					
10									Boring terminated at approximately 10 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings.	

Drilling Contractor: BSK Associates
Drilling Method: Hand Auger
Drilling Equipment: Hand Auger
Date Started: 6-23-23
Date Completed: 6-23-23

Surface Elevation:
Sample Method: 2.5" Modified Cal & 1.5" I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 10 Feet
Borehole Diameter: 4"

* See key sheet for symbols and abbreviations used above.

GEO BORING LOGS.GPJ BSK.GDT 7-7-23

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Project: Madera HS New Bleachers and Buildings

Location: 800-820 W Olive Avenue, Madera, CA

Project No.: G00-001-118

Logged By: D. Ferrer

Checked By: N. Popenoe

Boring: **B-5**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1–10								SM	**Silty SAND** - brown, moist, fine to coarse grained sand	
3	■		11	112.4	7.3					
6	■		12	109.6	8.3					
10–13								ML	**Sandy SILT** - brown, moist, fine to coarse grained sand	
14–20								SM	**Silty SAND** - yellowish brown, mosit, fine to coarse grained sand	
16	■		20	113.9	6.8					
21	■		22							
22									Boring terminated at approximately 21.5 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings.	

Drilling Contractor: Baja Exploration
Drilling Method: Mobile B-61
Drilling Equipment: Hollow Stem Auger
Date Started: 6-23-23
Date Completed: 6-23-23

Surface Elevation:
Sample Method: 2.5" Modified Cal & 1.5" I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 21.5 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

GEO BORING LOGS.GPJ BSK.GDT 7-7-23

BSK Associates
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Fresno, CA 93727
Telephone: (559) 497-2880

Project: Madera HS New Bleachers and Buildings

Location: 800-820 W Olive Avenue, Madera, CA

Project No.: G00-001-118

Logged By: D. Ferrer

Checked By: N. Popenoe

Boring: **B-6**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1–2								SM	**Silty SAND** - brown, moist, fine to coarse grained sand	
3	■		9	117.5	8.6					
4–5										
6	■		10	110.9	7.9					
7–9										
10	■									
11	■		53	113.2	17.4					
12–15										
16	⧓		12							
17–29									Boring terminated at approximately 16.5 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings.	

Drilling Contractor: Baja Exploration
Drilling Method: Mobile B-61
Drilling Equipment: Hollow Stem Auger
Date Started: 6-23-23
Date Completed: 6-23-23

Surface Elevation:
Sample Method: 2.5" Modified Cal & 1.5" I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 16.5 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

GEO BORING LOGS.GPJ BSK.GDT 7-7-23

BSK Associates
Engineers & Laboratories

BSK Associates
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Fresno CA 93650
Telephone: 559-497-2880
Fax: 559-497-2886

Project: Madera HS Lighting Improvements
Location: Madera, California
Project No.: G14-113-11F
Logged By: J. Frank
Checked By: L. Suehiro

Boring: B-101

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1–4			8	97.5	15.4			SM	**Silty SAND** Brown, fine to medium-grained, moist, slightly plastic, micaceous	Baseball field
5–7			8	94.5	14.8				...increase in sands	
8–14			57	105.2	19.6			SC	**Clayey SAND** Brown, fine to medium-grained, moist, very dense	
15–19			44							
20–24			48	107.0	5.7			SP	**SAND** Light brown, fine to coarse-grained, moist, dense, some silt	
25–26			34					CL	**Silty CLAY** Red orange, mottled green, hard, moist, some fine sands	
26–30								SM	**Silty SAND** Red brown, fine to medium-grained, moist, dense	
30–31			48					SC	**Clayey SAND** Gray moist, very dense	
31–34									Boring terminated at 31.5-feet bgs Borehole backfilled with soil cuttings Groundwater not encountered	

Drilling Contractor: Dave's Drilling
Drilling Method: Hollow Stem Auger
Drilling Equipment: Mobile BK-81
Date Started: 7/21/14
Date Completed: 7/21/14

Surface Elevation:
Sample Method: 2.4-inch I.D. Modified & 1.5-inch I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 31.5 Feet
Borehole Diameter: 8-inch

* See key sheet for symbols and abbreviations used above.

GEO BORING LOGS G14-113-11F 101 104 GPJ BSK.GDT 8/5/14

BSK Associates
Engineers & Laboratories

BSK Associates
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Telephone: 559-497-2880
Fax: 559-497-2886

Project: Madera HS Lighting Improvements
Location: Madera, California
Project No.: G14-113-11F
Logged By: J. Frank
Checked By: L. Suehiro

Boring: B-102

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1–4								SM	**Silty SAND** Brown, fine to medium-grained, moist, organics, medium dense	Baseball field
2–3			21							
5–8			20	104.4	3.0					
9–14			50-5"					SC	**Clayey SAND** Red orange, moist, very dense, slight cementation	
14–24			13	43	111.8	19.6		SM	**Silty SAND** Brown, fine to medium-grained, moist, trace mica ...gray brown, moist, hard, fine grained	
24–28			28					SP	**SAND** Light brown, fine to medium-grained, moist, medium dense, trace coarse	
28–31			49					SM	**Silty SAND** Red orange, fine to medium-grained, trace clay, very dense ...gray brown, moist, trace clay	
31–34									Boring terminated at 31.5-feet bgs Borehole backfilled with soil cuttings Groundwater not encountered	

Drilling Contractor: Dave's Drilling
Drilling Method: Hollow Stem Auger
Drilling Equipment: Mobile BK-81
Date Started: 7/21/14
Date Completed: 7/21/14

Surface Elevation:
Sample Method: 2.4-inch I.D. Modified & 1.5-inch I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 31.5 Feet
Borehole Diameter: 8-inch

* See key sheet for symbols and abbreviations used above.

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Project: Madera HS Lighting Improvements
Location: Madera, California
Project No.: G14-113-11F
Logged By: J. Frank
Checked By: L. Suehiro

Boring: B-103

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1–14								SM	**Silty SAND** Brown, fine to medium-grained, moist, trace organics	Softball field
3			15	104.3	4.9				...medium dense	
6			16	109.9	3.8				...trace coarse	
11			26						...increase in clay content	
14–15								SP	**SAND** Light brown, fine to medium-grained, moist	
16			57					SM	**Silty SAND** Red orange, mottled gray, fine to medium-grained, trace clay, moist, very dense	
21			26					ML	**Sandy SILT** Gray, fine-grained, moist, trace clay, very stiff, mica	
24–25								SP	**SAND** Light brown, fine to coarse-grained, moist, medium dense	
26			28						Boring terminated at 26.5-feet bgs Borehole backfilled with soil cuttings Groundwater not encountered	
27–34										

Drilling Contractor: Dave's Drilling
Drilling Method: Hollow Stem Auger
Drilling Equipment: Mobile BK-81
Date Started: 7/21/14
Date Completed: 7/21/14

Surface Elevation:
Sample Method: 2.4-inch I.D. Modified & 1.5-inch I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 26.5 Feet
Borehole Diameter: 8-inch

* See key sheet for symbols and abbreviations used above.

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Project: Madera HS Lighting Improvements
Location: Madera, California
Project No.: G14-113-11F
Logged By: J. Frank
Checked By: L. Suehiro

Boring: B-104

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1–4			10	102.2	9.3			SM	**Silty SAND** Brown, fine to medium-grained, moist, coarse ...loose	Softball field
5–9			9							
10–14			14	107.5	16.4				...medium dense	
15–16			24					SC	**Clayey SAND** Brown, fine to medium-grained, moist, very stiff	
17–21			50-6"						...olive brown, mottled orange, very dense	
22–25			27					ML	**Sandy SILT** Gray, moist, very stiff	
26–34									Boring terminated at 26.5-feet bgs Borehole backfilled with soil cuttings Groundwater not encountered	

Drilling Contractor: Dave's Drilling
Drilling Method: Hollow Stem Auger
Drilling Equipment: Mobile BK-81
Date Started: 7/21/14
Date Completed: 7/21/14

Surface Elevation:
Sample Method: 2.4-inch I.D. Modified & 1.5-inch I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 26.5 Feet
Borehole Diameter: 8-inch

* See key sheet for symbols and abbreviations used above.

GEO BORING LOGS G14-113-11F 101 104.GPJ BSK.GDT 8/5/14

BSK Associates
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Fresno CA 93650
Telephone: 559-497-2880
Fax: 559-497-2886

Project: Proposed Bleachers, Backstop and Restroom

Location: Madera, CA

Project No.: G16-128-11F

Logged By: S. Demmers

Checked By: H. Ngo

Boring: **B-105**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1								SM	**Silty SAND** - dark brown, moist, loose, fine to medium grained	
2						48				
3			11	105.1	9.3				. . . orange brown, medium dense	
4										
5										
6			17	105.1	11.9					
7										
8										
9								CL	**Silty CLAY** - orange brown, moist, hard	
10										
11			47							
12										
13										
14										
15										
16			48	116.7	15.9			SC	**Clayey SAND** - orange brown, moist, dense, fine to medium grained	
17										
18										
19								SM	**Silty SAND** - light brown, moist, medium dense, fine to coarse grained, trace fine gravel	
20										
21			29							
22									Boring terminated at approximately 21.5 feet Borehole backfilled with soil cuttings No groundwater encountered	
23										
24										

Drilling Contractor: Dave's Drilling
Drilling Method: HSA
Drilling Equipment: Mobile 61
Date Started: 7/7/16
Date Completed: 7/7/16

Surface Elevation:
Sample Method: 2.5-inch I.D. Modified & 1.5-inch I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 20 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

GEO BORING LOGS G16 128 11F.GPJ BSK.GDT 7/18/16

BSK Associates
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Fresno CA 93650
Telephone: 559-497-2880
Fax: 559-497-2886

Project: Proposed Bleachers, Backstop and Restroom

Location: Madera, CA

Project No.: G16-128-11F

Logged By: S. Demmers

Checked By: H. Ngo

Boring: **B-106**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1			44	114.8	5.0			ML	**Sandy SILT** - light brown, moist, very stiff, fine grained sand, trace clay	
2										
3										
4										
5								SM	**Silty SAND** - orange brown, moist, medium dense, fine to medium grained, with clay	
6			24							
7										
8										
9										
10									. . . light brown, no clay	
11			29	114.7	16.3			CL	**Sandy Clay** - orange brown, moist, very stiff	
12										
13										
14										
15										
16			26						. . . trace fine gravel, weakly cemented	
17										
18										
19								SP	**Poorly Graded SAND** - light brown, moist, dense, fine to coarse grained, trace fine gravel	
20										
21			50	119.8	4.3					
22									Boring terminated at approximately 21.5 feet Borehole backfilled with soil cuttings No groundwater encountered	
23										
24										

Drilling Contractor: Dave's Drilling
Drilling Method: HSA
Drilling Equipment: Mobile 61
Date Started: 7/7/16
Date Completed: 7/7/16

Surface Elevation:
Sample Method: 2.5-inch I.D. Modified & 1.5-inch I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 20 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

APPENDIX B

LABORATORY TESTING

APPENDIX B
Laboratory Testing

The results of laboratory testing performed in conjunction with this project are contained in this Appendix. The following laboratory tests were performed on soil samples in general conformance with applicable standards.

In-Situ Moisture and Density

The field moisture content and in-place dry density determinations were performed on relatively undisturbed samples obtained from the test borings. The field moisture content, as a percentage of dry weight of the soils, was determined by weighing the samples before and after oven drying in accordance with ASTM D2216 test procedures. Dry densities, in pounds per cubic foot, were also determined for undisturbed core samples in accordance with ASTM D2937 test procedures. Test results are presented on the boring logs in Appendix A.

Direct Shear Test

Two (2) direct shear tests were performed on test specimens trimmed from a selected soil sample. The three-point shear test was performed in general accordance with ASTM D3080, Direct Shear Test for Soil under Consolidated Drained Conditions. The test specimens, each 2.42 inches in diameter and 1 inch in height, were saturated then subjected to shear along a plane at mid-height after allowing for pore pressure dissipation. The test results are presented on Figure B-1 and Figure B-2.

Collapse Potential Test

One (1) Collapse Potential Test was performed on a relatively undisturbed soil sample to evaluate collapse potential characteristics. The test was performed in general accordance with ASTM D5333. The sample was initially loaded under as-received moisture content to a selected stress level, loaded to a load of 2000 psf, saturated, and lastly loaded to a maximum load of 4000 psf. The test results are presented on Figure B-3.

Soil Corrosivity

The results of chemical analyses performed on a bulk soil sample using California Test Method (CT) 643 (for minimum resistivity and pH) and CT 417 and 422 (for soluble sulfate and chlorides, respectively) are presented in Table B-1.

TABLE B-1
SUMMARY OF CHEMICAL TEST RESULTS

Test Boring	Sample Depth	pH	Sulfate (mg/kg)	Chloride (mg/kg)	Minimum Resistivity (ohms-cm)
B-1	0 - 5'	7.61	Not Detected	Not Detected	4,300

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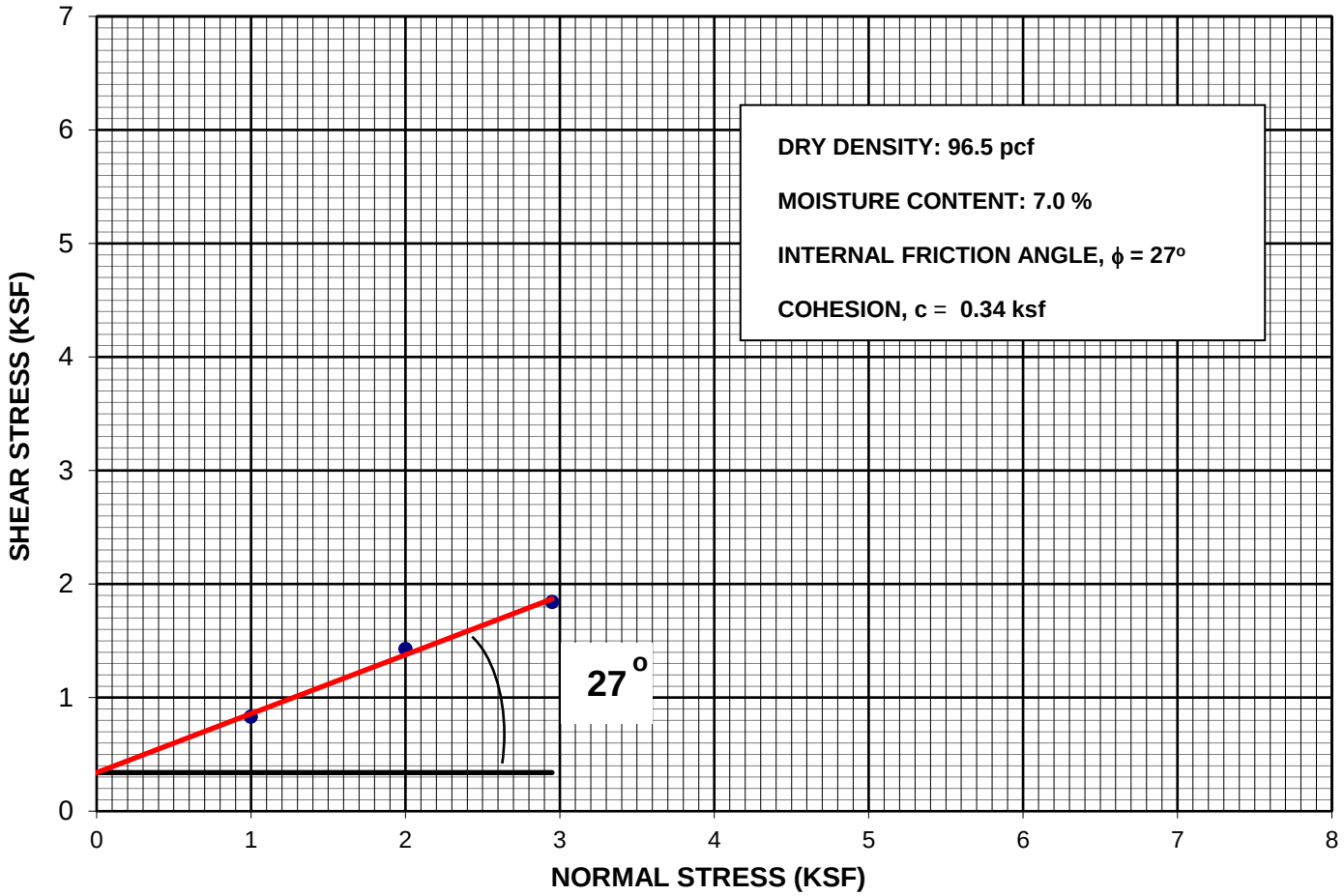
Direct Shear Test

ASTM D-3080

FIGURE B-1

Project Name:	Madera HS	**Sampled By:**	D. Ferrer	**Sample Date:**	6/26/23
		Tested By:	D. Messfin	**Test Date:**	6/28/23
Project Number:	G00001118	**Lab Tracking ID:**	N/A	**Report Date:**	07-07-23
Sample Location:	B-4 @ 3'	**Sample Description:**	Silty Sand - brown, moist, fine to coarse grained sand, fine grained gravel		

SHEAR STRENGTH DIAGRAM



ASSOCIATES

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Fresno, CA 93727
Ph: (559) 497-2880

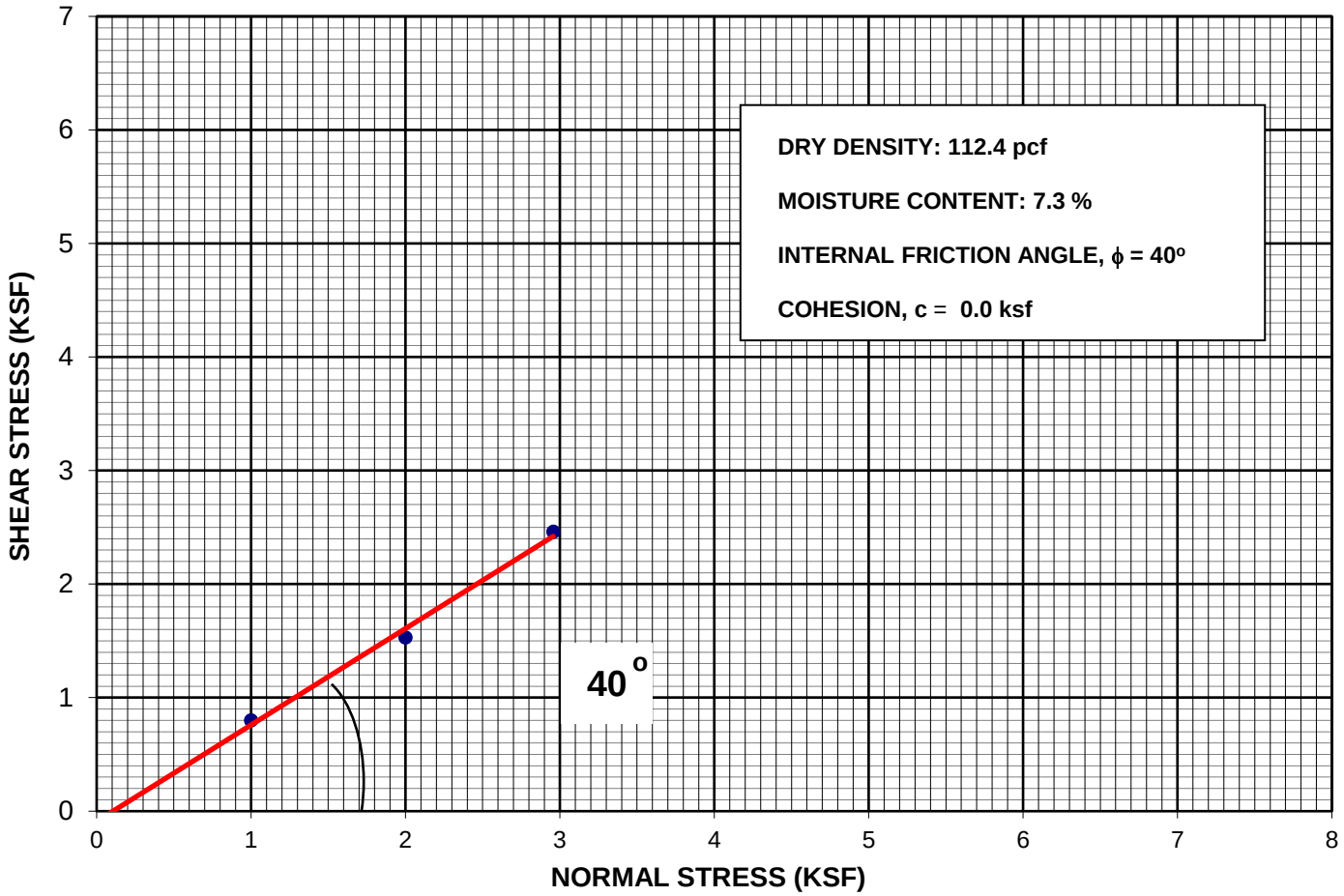
Direct Shear Test

ASTM D-3080

FIGURE B-2

Project Name:	Madera HS	**Sampled By:**	D. Ferrer	**Sample Date:**	6/26/23
		Tested By:	D. Messfin	**Test Date:**	6/28/23
Project Number:	G00001118	**Lab Tracking ID:**	N/A	**Report Date:**	07-07-23
Sample Location:	B-5 @ 3'	**Sample Description:**	Silty Sand - brown, moist, fine to coarse grained sand		

SHEAR STRENGTH DIAGRAM



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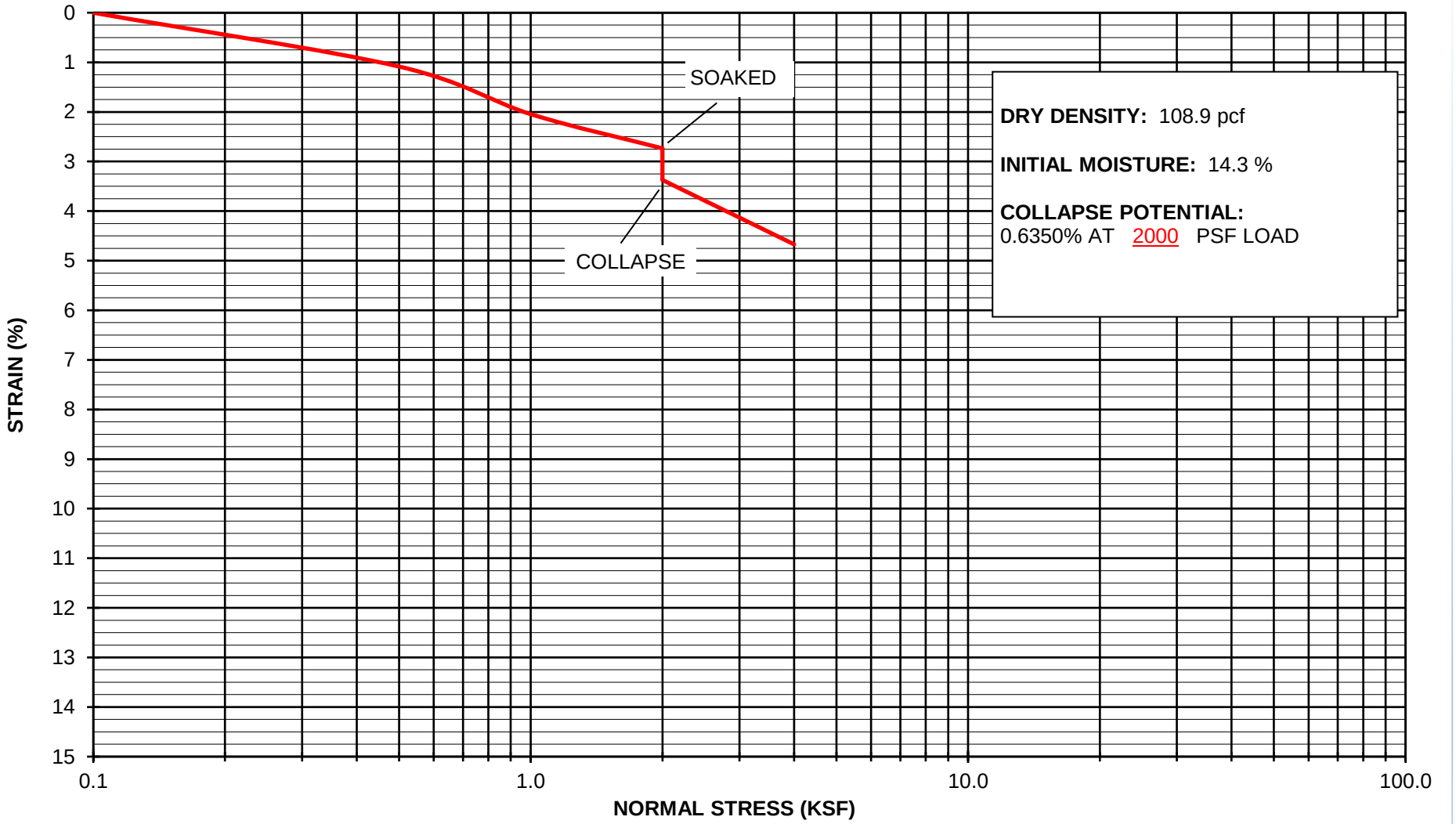
Ph: (559) 497-2880

COLLAPSE POTENTIAL
ASTM D-5333

FIGURE B-3

Project Name:	Madeera USD Bleachers	**Sampled By:**	D.F	**Sample Date:**	6-23-23
		Tested By:	D.Messfin	**Test Date:**	6-26-23
Project Number:	G000011118	**Lab Tracking ID:**	N/A	**Report Date:**	7-7-23
Sample Location:	B-1 @ 3'	**Sample Description:**	Sandy Silt - brown, moist, fine to coarse grained sand		



Memorial Stadium Modernization: Bid No. 073025
Pre-Bid RFI Log

ADDENDUM	ISSUED
ADDENDUM 01	8/19/2025
ADDENDUM 02	8/22/2025
ADDENDUM 03	
ADDENDUM 04	
ADDENDUM 05	

	Question	Response	Submitted by	Posted	Notes
1	Can the bid time be revised to 2:00 PM or 3:00 PM?	Yes, bids are due at 2:00PM	Ardent General	8/19/2025	
2	RFI Description: General Requirements 01 57 15 Integrated Pest Management - Attached is Section 01 57 15 Integrated Pest Management. Is integrated pest management really required fo this project? I have searched the Central Valley and could not find anyone interested in bidding for this work nor anyone or firm that is IPM Star Certified. Is this just for the Stadium and not the Fieldhouse or the entire site during construciton for the full 548 calendar days?	No pest control needed.	Ardent General	8/19/2025	
4	Are there any allowances or contingencies i.e. rebar or steel that are to be carried in the bid amount? Sometimes they are buried in the plans and specs?	It is the responsibility of the Contractor to read through all the Specifications and Plans. Irrigation Plans ask for $8000.00 allowance for the stadium project. The specs ask to provide 10% of the total reinforced steel tonnage in addition to the quanitities. These are some examples, G.C. to verify and include as part of the bid documents.	Harris Construction	8/19/2025	
5	Article 11 of the Notice to Bidders makes reference to Tidal Wave and Earthquake Insurance. Are those insurances a requirement of this bid?	No tidal wave insurance is needed. Other coverages should be included in the builder's risk policy.	Harris Construction	8/19/2025	
6	How many calendar days are we to hold our bid? I could not find that requirement in the specs.	Bids should be held for 90 days.	Harris Construction	8/19/2025	
7	Section 019113 General Commissioning Requirements mentions a commissioning agent. Is the intent of the spec for the GC to provide a third party commissioning agent or can the subcontractor perform that duty?	No commissioning is required.	Harris Construction	8/19/2025	
8	Section 024100 Site Demolition Hazardous Materials Item 3.4.B.1 states to “Identify chemicals, gases, explosives, acids, flammables, or other dangerous materials before proceeding with demolition operations, and notify such jurisdictional agencies as may be required. Collect and legally dispose of such materials at official disposal locations away from the site.” Will these hazardous materials be identified in the plans and specs for the GC to quantity and include a cost in their bid amount?	See Addendum 01 for hazardous materials report.	Harris Construction	8/19/2025	
9	There are 2 Notice Inviting Bid documents. One is loose and one is in the Notice to Bidders. One states to refer to George Cummings via email for questions the other states to refer to Susan Harautuneian via email for questions. Please clarify who we send RFI questions to.	Please send all requests for information to George Cummings at georgecummings@maderausd.org.	Harris Construction	8/19/2025	

10	I'm reaching out regarding the MUSD Memorial Stadium Modernization project. Could you please confirm whether this project requires a PLA or a PSA?	This project does not require a PLA or a PSA.	Escon Builders	8/19/2025	
11	The bid time of 10am is not typical for hard bids. Can that time be changed to 2pm.	Yes, see Addendum 01	Harris Construciton	8/19/2025	
12	EX4.1 Calls out EST as the Fire Alarm System Brand, However the district standard is Gamewell FCI. Can we substitute the EST system for a Gamewell FCI system?	Yes, Gamewell is the district standard. See revised schedule on addendum 02 for stadium and addendum 03 for fieldhouse.	Magnetar	8/19/2025	
13	I was wondering if there was an asbestos or lead report for the Madera HS Stadium Modernization project? I've looked on the Builders Exchange Website and in your plan room but did not find one.	See Addendum 01	E.T. Abatement	8/19/2025	
14	I would like to ask if the pre-qualification window can either be extended for our subcontractors or that an electronic submission will be accepted in lieu of the mail in requirement. Thank you for your time and consideration.	We do not plan to extend the prequalification window.	BCI	8/19/2025	
15	Can we email the prequel application to you, or does it need to be mailed?	Applications can be emailed, make sure to include the financials.	Binns Plumbing	8/19/2025	
16	In reviewing the bid instructions for the Memorial Stadium Modernization project, we see the current bid receipt time is 10:00 a.m. PT on 09/04/25. Would you consider moving the bid time to 2:00 p.m. PT on 09/04/25?	Please See Addendum 01	Soltek Pacific	8/19/2025	
17	In the "Bid Forms – Memorial Stadium Modernization" document, item 13 states: "No responses to a Contractor Questionnaire are required to be submitted with a bid on this Contract" and this section is completely crossed out. However, under item 14, letter I, it states: "I. Responses to Contractor Questionnaire (if required; see above)." Based on this, my understanding is that the Contractor Questionnaire is required. Could you please confirm? If so, could you also clarify which document or form number contains this questionnaire?		Soltek Pacific		
18	I am reaching out regarding the "Bid Forms – Memorial Stadium Modernization" document, specifically item 14, which summarizes the documents required to be submitted at the time of bid. The CARB Compliance Declaration is not listed among the required documents. However, the CARB Compliance Declaration form itself states: "The bidder must fully execute this document and submit it, including required attachments, with its bid for the above-captioned project." For the benefit of all bidders and to allow adequate time for the collection of the necessary documentation, we respectfully request that this form not be required at the time of bid but instead be submitted after bid opening if the bidder is determined to be the apparent low bidder. Could you please confirm whether this adjustment can be made for the 09/04/25 bid submission?	The form must be turned in and signed with the certificates for any vehicles that will be on site during construction for the General Contractor. Certificates for subs, would need to be turned in prior to the award of the contract.	Soltek Pacific		
19	Drawing EX2.1, Single Line Diagram, reference new utility transformer and primary / secondary feeders with note 1, stating in part "per PG&E requirments and Rule 16 drawings". Drawing ES1.3, Construction Notes #6, depict similar statements which reference PG&E or utility drawings for pertinent information. Please provide, approved / preliminary, PG&E utility drawings. - Thank you.	Provided PG&E Rule 16 Docs (HDE, 2025-08-20). See Addendum 02	Howe Electric		

20	Page C6.1 Field House. Are the 8" F and 6" W lines intended to be in a joint trench? Only the 6" water line has construction notes. What are the connection requirements for the 8" Fire Line?	Refer to sheet FS.1 for the fire line connection requirements (BCF 08/20/25)	Harris Construction		
21	Page C6.1 and C6.2 Field House. All the existing area for the new 6" Water line from the street to the field house is not shown. Will there be another site plan showing the existing conditions so a patching cost can be quantified so it can be included in the bid amount?	Refer to the keymap on Sheets C6.1 and C6.2 for reference. Sheet C6.1 displays an aerial image to scale of the existing conditions where the new 6" water line is routed from the street to the Fieldhouse shown on Sheet C6.2. Sheet C6.1 contains limits of patching for the work on the street to meet requirements noted in the legend. (BCF 08/20/25)	Harris Construction		
22	Where is the soils report?	Soils Report to be provided in Addendum 02 (PBK 08/20/25)	Harris Construction		
23	Page AS.1 Field House. Are the any existing street improvements required at Coyote Lane to meet the fire lane requirements?	No improvements required at Coyote Lane to meet the fire lane requirements. (PBK 08/20/25)	Harris Construction		
24	What are the temp floor protection requirements prior to the installation of the sealed and epoxy flooring? Polished Concrete also if shown on drawings?	G.C. to follow manufactuer temp and protection requirements. (PBK 08/20/25)	Harris Construction		
25	Page AS.3 Field House. What is to be built at the lower left corner of the field house site? It looks like maybe a concrete bench designation?	See sheet C3.1 for additional information and detail callout. (PBK 08/20/25)	Harris Construction		
26	Detail 6/AX1.1 Field House. What model number is the skate deterrent? Where is it specified?	See detail 7/AX1.1 for Skate deterrent. UseThe Cylinder GrinderMinder model. (PBK 08/20/25)	Harris Construction		
27	Detail 16/AX5.2 Field House. Where is the moisture barrier specified? What type of material is it?	See cast-in-place concrete spec for Moisture barrier. In addition, see revised Metal Locker Spec provided in Addendum 02 (PBK 08/20/25)	Harris Construction		
28	Page EX2.8 Field House. Why is there reference to Solar if the solar is called out as future in the roof plan?	Solar is existing to remain. The calculations shown are required calculations. The Sol-Ark inverter shown is the BESS inverter. (HDE, 2025-08-20)	Harris Construction		
29	Page G0.01 Stadium Scope if Work Item 2. Can you please be more specific on what is required to be included in the bid amount for the track work to be done by the GC. It reads that the owner is to remove the existing track surface and install a new track surface. The GC I think is responsible for "Remediation and or rehab of existing track substrate that may be deemed unfit". Can you please tell me what that means? A detail of the work would be very helpful.	The District is contracting with Beynon Sports to resurface the all weather track. Beynon with remove existing track surface and assess the condition of the asphalt substrate. The GC will be responsible for rehabbing any asphalt areas that are deemed unfit to support the new track surface. Bidders shall include a rehab allowance of $40,000 for these rehab efforts. This rehab allowance shall not be used for any areas of asphalt that are disturbed by construction activity in the performance of the scope of this contract. (MUSD 8/20/2025)	Harris Construction		

30	Can steel subcontractors with Los Angeles City Certification be used in lieu of AISC Certification? This certification meets or exceeds AISC quality safety standards.	In order to wave AISC Certification contractor should futher explain/prove how LA City Certification meets or exceeds AISC Certification standards and requirments.	BCI		
31	Specification Section 11 40 00 Food Service Equipment specificaitons seem to be in conflict with the plans. The specifications call for items that are not shown on the plans. See attached list. Please clarify.	See revised Food Service equipment Spec on Addendum 02 (PBK 08/21/25)	Ardent General		
32	Can the following requirement be waived? Or can another certification be sufficient to meet this requirement? Per specification 05 12 13 (page 2) Fabricator Qualifications: A qualified fabricator that participates in the AISC Quality Certification Program and is designated an AISC-Certified Plant, Category STD, or is accredited by the IAS Fabricator Inspection Program for Structural Steel (AC 172).	In order to wave AISC Certification contractor should futher explain/prove how a proposed Certification meets or exceeds AISC Certification standards and requirments.	AMG		
33	I am not able to locate any specs on the transaction windows.		San Joaquin Glass		
34	Above the transaction windows it is calling out for a speak hole in a dual pane unit. We are not able to provide a speak hole in a dual pane unit. Please advise the glass make-up required to accommodate a speak hole or if we are to eliminate the speak hole.	No speaker hole required on transaction windows. Transaction window spec to be provided in upcoming addendum. (PBK 08/22/25)	San Joaquin Glass		
35	I see a mention in the 08800-2 spec sheet 2.E that says to refer to spec section 08 87 13 for Solar Control Film. I don't see this spec section included.	See Solar Control Film provided in Addendum 02	San Joaquin Glass		
36	**Stadium**: The exterior elevation legend on AC1.1 calls for Masonry Tile Pavers (MTP-1). Can you please provide the product information and where this tile occurs.	See AC5.1 for exterior finsihes. Legend on AC1.1 has been removed. See addendum 02	HSL Constructors		
37	**Stadium**: The exterior elevation legend on AC1.1 calls for Masonry Tile Pavers (MTP-1). Can you please provide the product information and where this tile occurs.	See AC5.1 for exterior finsihes. Legend on AC1.1 has been removed. See addendum 02	HSL Constructors		
38	**Stadium**: Wall type EC-X on AX1.0 calls for adhered thin brick veneer that are mechanically fastened. Please confirm that the thin brick is just adhered and not mechanically fastened. If not, please provide the full anchor/fastener product information.	Thin Brick to be adhered to cement plaster base not mechanically fastened (PBK 08/20/25)	HSL Constructors		
39	**Stadium**: There is a CMU sound wall shown per 6/S6.7. It is not called out in the plans. Please confirm the location(s) and extent of this wall. Please also provide the height and color/finish.	See Addendum 02 sheets AS.1, AS.3, and AS.5 (PBK 08/20/25)	HSL Constructors		
40	**Stadium**: The screen walls at buildings A and B (keynote 04.A31 on AA1.1 & AB1.1) are not shown on the building elevations for clarity. Please confirm that these walls follow the CMU pattern of the building. If so, is the split face block finish required on both sides of the wall?	Yes this walls follow the building pattern. Split face block finish to be required on both side of screen wall.	HSL Constructors		
41	**Stadium**: The visitor stadium walls per 2/AS.3 reference 2/S5.2, which only provides a maximum wall height. Please provide the desired height for this wall.	See Addendum 02 sheets AS.1, AS.3, and AS.5 (PBK 08/20/25)	HSL Constructors		

42	**Stadium**: There are no masonry control joint requirements or details in the plans. Are masonry control joints required? If, please provide spacing and a detail.		HSL Constructors		
43	**Fieldhouse**: The exterior elevation legend per A5.1 shows CMU-1 up to 4'-8" (7 courses). The actual elevations only show 6 courses of CMU-1. Please confirm which is correct.	See Addendum 02 sheet A5.1 (PBK 08/21/25)	HSL Constructors		
44	**Specifications for both**: Section 042200-2.2-C-1-b calls for a CMU compressive strength of 2,150psi. The structural masonry notes on S1.0 call for a CMU f'm strength of 2,000psi. The manufacturer's typical CMU is 2,000psi and will meet the f'm 2,000psi requirement. Please confirm that a CMU compressive strength of 2,000psi is acceptable.	CMU shall have compressive strengths of 2000 psi per S1.0 (Barcus Structural Engineering 08/19/25)	HSL Constructors		
45	**Specifications for both**: Section 042200-2.2-C-1-c calls for lightweight CMU unless otherwise indicated. The structural masonry notes on S1.0 call for medium weight CMU. The specified integral CMU color (Basalite S-701) is a lightweight color and lightweight CMU is the typical weight produced by the manufacturer. Please confirm it is acceptable for all CMU to be lightweight.	CMU may be medium weight per Sheet S1.0. However, we have no structural objections to using light weight CMU. (Barcus Structural Engineering 08/19/25)	HSL Constructors		
46	Electrical Site plan drawing ES1.3 shows PG&E conduit run from utility pole to new "MSA". During site visit it was mentioned that a portion of this work was already completed. Please advise the extent of work that has been completed for the new ulitity service. - Thank you.		Howe Electric		
47	Electrical Single Line Diagram, Sheet EX2.1, shows install of new "(N) Solar Fused Disconnect FD1". This disconnect is also referenced by Key Note 8 which states in part that disconnect is existing (E) to remain. Subject drawing also shows new "(N) PV System (Parking Lot)", referenced by Key Note 9 which identifies (E) Existing Photovoltaic System to remain. Please confirm disconnect FD1 and Parking Lot PV System are existing and shall be connected to new Main Switchboard MSA. - Thank you.	Solar is existing to remain. (HDE, 2025-08-20). See addendum 02	Howe Electric		
48	Electrical Single Line Diagram, Sheet EX2.1, shows Fire Pump disconnect "FDP" as existing. This disconnect is also referenced by Key Note #10 which states in part that disconnect is New. Sheet ES1.3, Key Note #10, also referenced Fire Pump Disconnect as New. Please Confirm disconnect "FDP" is new and to be furnished and installed by contractor. - Thank you.	'FPD' is new. (HDE, 2025-08-20). See Addendum 02	Howe Electric		
49	Electrical Single Line Diagram, Sheet EX2.1, shows install of new 100A 3P fused disconnect "FD2". This disconnect is also referenced by Key Note #15 which calls for a "PG&E compliant verifiable disconnect 800A 4Pole". Please confirm that note is not intended for this disconnect and disconnect size shall be 100A. - Thank you.	Provide 100A 3P Fused Disconnect. (HDE, 2025-08-20)	Howe Electric		
50	Enlarged Electrical Site Plan, Sheet ES1.3, Key Note #39, states in part to provide a 1"C between pull boxes F2, F3, and F4. Fire Alarm Plan, Sheet EX4.1, Riser Diagram, indicates a 2"C between subject pull boxes. Please confirm conduit size and quantity between pull boxes F2, F3 and F4. - Thank You	Provide 2"C. (HDE, 2025-08-20)	Howe Electric		
51	Drawing page A2.2, Color Schedule calls for CMU-1 to be Precision S-701 and CMU-2 to be Precision Natural. These two colors in Precision are almost identical. Please confirm this is the intent or provide direction.	CMU-1 will be revised to S-703 in a forthcoming addendum.	Dorfmeier Masonry		

52	Detail 2/A5.1 has a note stating the plaster is to match the paint colors of the CMU. Is the CMU going to be painted?	No, CMU will not be painted. (PBK 08/21/25)	Dorfmeier Masonry		
53	Details 35 and 37 on page A7.3 show exposed CMU in Room 110 – Electrical. Is the Split Face CMU (CMU-3) to have Split Face on the interior of the Room 110?	No split face on the interior of the Room 110 (PBK 08/20/25)	Dorfmeier Masonry		
54	The instructions state that at the time of bid, we are required to provide the following information: trade, name of company, location, CSLB number, and DIR number Could you please confirm whether we are also required to include the expiration dates for the CSLB license and DIR registration at the time of bid?	Expiration dates of DIR and CSLB Licenses for subs, must be valid. They do not need to be listed at the time of turn in, but they must be valid. These will be checked by staff as part of the bid packet review process	Soltek Pacific		
55	There is no mention of CMU crack control joints in the plans or specs. Are CMU crack control joints required? If so, please provide a detail and spacing.		Dorfmeier Masonry		
56	Spec section 042200, 2.2.C.1.b calls for the CMU to have a compressive strength of 2,150 psi. CMU is not manufactured with a compressive strength of 2,150 psi; it is manufactured with a compressive strength of 2,000 or 2,600 psi. Is 2,000 psi CMU acceptable if the f'm of 2,000 is met?	CMU shall have compressive strengths of 2000 psi per S1.0 (Barcus Structural Engineering 08/19/25)	Dorfmeier Masonry		
57	Spec section 042200, 2.2.C.1.c calls for Lightweight CMU. Drawing Page S1.0, Structural Specifications, Structural Masonry note calls for Medium Weight CMU. Are both Lightweight and Medium Weight CMU acceptable?	CMU may be medium weight per Sheet S1.0. However, we have no structural objections to using light weight CMU. (Barcus Structural Engineering 08/19/25)	Dorfmeier Masonry		
58	On the mechanical plans, detail H/M5.0 shows the ODU's mounted to a metal frame. On the architectural plans, detail 28/AX4.1 shows mechanical platforms made from a built-up wood frame with a sheet metal cap. Please clarify which detail to follow for mounting the ODU's on buildings A and B.	ODU should be mounted per detail H/M5.0, detail 28/AX4.1 has been removed from plans. See revised sheet on Addendum 02	Strategic Mechanical		
59	Electrical Single Line Diagram, Sheet EX2.1, identifies a (N) Main 800A breaker at (E) Main Switch Board "MSN". Is subject breaker replacing an existing breaker? If not, does bussing / hardware provisions exist to accept a new breaker? Please advise - Thank you.	The (E) 800A/3P Main CB is to remain in 'MSN'. Provide metering bypass connection if required by removal of PG&E metering equipment. (HD Engineres 08/22/2025)	Howe Electric		
60	Spec Section 10 51 13 states, "Athletic lockers: 2 tier and 6 tier configurations as indicated on drawings." However, the drawings only provide a total locker count and do not specify the quantities of 2 tier versus 6 tier lockers. Please provide the required quantities for both the 2 tier and 6 tier lockers.	See revised locker spec on Addendum 02	Soltek Pacific		
61	For the coiling doors, @ the field house, door # 101B and 101C - the specs have two different series of doors, the Series 600 (non insulated) and the series 625 (insulated). Please advise as to which series they would like for these two doors.		Davis Moreno		
62	For the counter doors at both the field house and the stadium, can we please get some specifications on these.		Davis Moreno		
63	Is earthquake and flood insurance required. Article 11 Insurance is not clear?		Harris Construction		
64	Stadium. Page AB9.1. It looks like Building B is metal studs at the interior walls. What is the purpose of detail B/AB9.1 as it relates to the wood on that detail?	Detail has been removed. See revised sheet on Addendum 02	Harris Construction		
65	Stadium. Page AC7.2 Elevation C201C. What is the wall finish designation? I don't see that designation on any legends.	Refer to Addendum 01 (PBK 08/21/25)	Harris Construction		
66	Stadium. Page AD4.1. What is the roofing type designation shown? It is not on the roof legend.	Legend has been revised. See revised sheet AD4.1 on Addendum 2 (PBK 08/21/25)	Harris Construction		
67	Stadium. Detail 6/AX3.2. Please confirm there is no caulking required at the expansion joint filler. It looks like caulking is drawn but it is not called out in the detail.	Detail has been removed. See revised sheet on Addendum 02	Harris Construction		

68	Stadium Plans. Where is keynote 11.A1B on page AA1.1 Physical Treatment Gurney specified?	Physical Treatment Gurney to be OFCI	Harris Construction		
69	Stadium Plans Detail 10/AX4.1. Where is the sprayed on fireproofing shown on the beams specified? There is a 07823 Intumescent Fireproofing spec but I don't see this type of fire proofing in that spec?		Harris Construction		
70	Stadium Plans. Keynote 11.C02 page AA1.1 states refrigerator as "NIC". Interior elevation A100A on page AA7.1 states refrigerator is "OFCI". Which is correct?	Refridgerator and Freezer to be CFCI see revised sheet and Food service equipment spec on Addendum 02	Harris Construction		
71	Stadium Plans. Is the Ice Machine shown on page AA7.1 specified in section 11400 Food Service Equipment?	See Adendum 02 for revised Spec Section 11 40 00 for both Stadium and Fieldhouse (PBK 08/21/25)	Harris Construction		
72	Stadium Plans. Keynote 11.E14 on page AA7.2 calls out a "Sports Ice Tub". Where is this product specified?		Harris Construction		
73	Regarding the subcontractor listing requirements which include the subcontractor name, scope of work, location business, DIR #, and License #. To limit mistakes on the bid form due to last second changes is it ok if the DIR # and License # be turned in 24 hours after bid day.		Harris Construction		
74	Stadium Mod demolition note RO states to return shipping container to district. Can you please provide a location so shipping costs can be quantified.	See sheet C2.4 for location of Shipping container.	Harris Construction		

HOWE Electric
Construction, Inc.
License # 898737 Class B, C10, C46

Request For Direction

RFD Number: 001

To: **Madera Unified School District**
1902 Howard Rd, Madera, CA 93637
georgecummings@maderausd.org

Attn: **George Cummings**

Date: **08/15/25**
Project Name: **Madera USD Memorial Stadium Modernization**

Priority: [ ] Normal [X] Expedite [ ] Urgent

Request Due To:

[ ] Direction Not Given In Contract Documents
[X] Interpretation of Contract Documents
[ ] Conflict in Contract Documents

Drawing Reference: **EX2.1**, **ES1.3**
Specification Reference:

Subject: Pacific Gas and Electric Rule 16 and 20 Drawings

Drawing EX2.1, Single Line Diagram, reference new utility transformer and primary / secondary feeders with note 1, stating in part "per PG&E requirments and Rule 16 drawings". Drawing ES1.3, Construction Notes #6, depict similar statements which reference PG&E or utility drawings for pertinent information. Please provide, approved / preliminary, PG&E utility drawings. - Thank you.

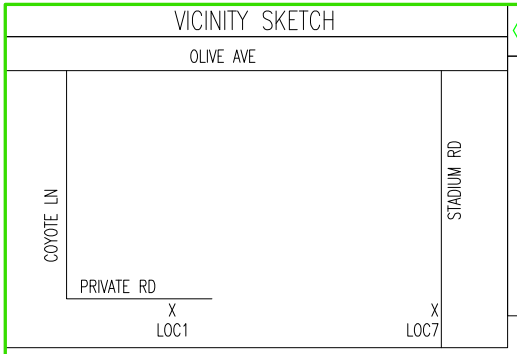
Submitted By:	Possible Cost Impacts:	Possible Time Impacts:
Josh Freeman	**Yes**	**Yes**

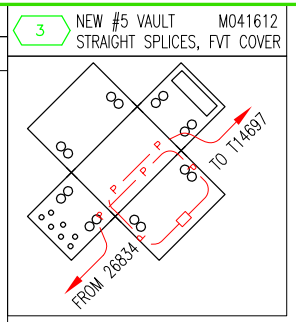
Reply:

There are two PG&E applications that apply to this project. The Rule 16 documents are attached for both. The first one is the undergrounding of the existing medium voltage primary line from the pole line south of the stadium and the second is the upgrade of the service switchboard. The work for upgrading the service will need to be coordinated with the District representative as it will involve the temporary removal of the transformer for work to be performed. Per the PG&E documents, the transformer will stay in the same location and not be relocated. Coordinate a location for the transformer to be temporarily set aside while work as done at the pad location.

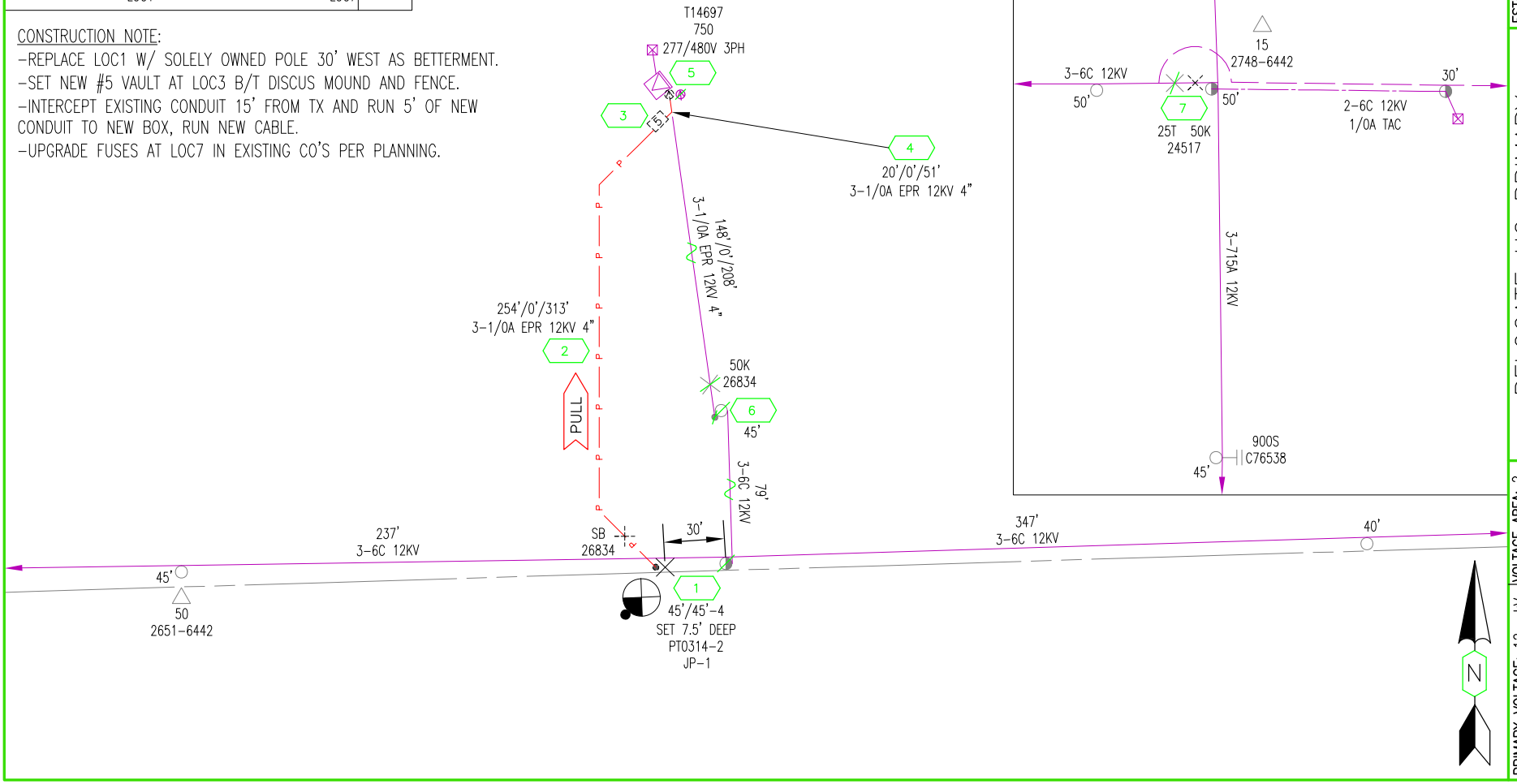
Reply By: Patrick May, Project Manager
Hardin-Davidson Engineering
Date: 08/20/2025

VICINITY SKETCH





CONSTRUCTION NOTE:
-REPLACE LOC1 W/ SOLELY OWNED POLE 30' WEST AS BETTERMENT.
-SET NEW #5 VAULT AT LOC3 B/T DISCUS MOUND AND FENCE.
-INTERCEPT EXISTING CONDUIT 15' FROM TX AND RUN 5' OF NEW CONDUIT TO NEW BOX, RUN NEW CABLE.
-UPGRADE FUSES AT LOC7 IN EXISTING CO'S PER PLANNING.



EST: JOSEPH BELLO 209-913-0462
ADE: RAMIRO CEJA 209-247-4213
SUPV: DAVID TREVINO 559-341-5931
REP: KIRK ATHERTON 559-706-6584
PLNR: DEREK NILSEN 209-275-7864

RELOCATE UG PRIMARY
1000 W OLIVE AVE
MADERA

JPA#: PG2450761N
NOTIF: 128498928
SCALE: 1"=50'
DATE: 07/16/2024
PM: 35550390
SHEET: 1 OF 1 REV. 0

NO ENVIRONMENTAL ISSUES
NEAR LOC: N/A
811 Know what's below. Call before you dig.
GAS CONFLICT: NO

PRIMARY VOLTAGE: 12 kV
LATITUDE: 36.95103
SOURCE SIDE DEVICE: FUSE 24517
SUB & CIRCUIT: MADERA 1114
DSGN SAG: LIGHT
LOADING AREA: LIGHT
CORROSION AREA: NON
EXEMPT EQUIP INST.: N/A

VOLTAGE AREA: 2
LONGITUDE: -120.067618
RAPTOR ZONE: YES
ARRESTER DIST: 2
INSULATION DIST: B
FIRE AREA: LRA-TIER 1

Estimator:	J54D	**Electric Underground Specifications**	Notification#	128498928
ADE:	RGCA		PM Order#	35550390
Rep:	KDA9		D&C #	
Supervisor:	D6GL		Date:	**7/30/2024**

Applicant: MADERA UNIFIED SCHOOL DISTRICT
Location: 1000 W OLIVE AVE, MADERA

1 Service Voltage | Main Size | 1ph.Load: ____ kva. | 3ph.Load: ____ kva.

SC Amps Sym.

Primary Cable: Number: 3 Size: 1/0 AL. **EPR - CONC - ENCAP - PE 25KV**

Service Cable: Number | Hot legs number and size | Number | Neutral number and size

Applicant to Provide and InstallConduit, Trench, and Substructures
(As indicated below and/or on the attached drawing)

Primary: Conduit--Size	4"	No.	1	Bend--Radius	36"/60"	Degrees	90/45
Secondary: Conduit--Size		No.		Bend--Radius		Degrees	
Service: Conduit--Size		No.		Bend--Radius		Degrees	
Streetlight: Conduit--Size		No.		Bend--Radius		Degrees	

Primary Trench: Overall Depth "	42"	Minimum Cover	36"
Secondary Trench: Overall Depth: "	3	Minimum Cover	
Service Trench: Overall Depth: "	3	Minimum Cover	
Streetlight Trench: Overall Depth: "	3	Minimum Cover	

	Type / Style:	Size:	Code:	
Transformer Pad: (Type, Size, and Code)				**Barrier Post Req.** ☐
Primary J-Box Pad: (Type, Size, and Code)				

	Type / Style:	Size:	Traffic Load:	Code:
Primary Pull Box: (Type, Size, and Code)	Equip./ Splice	3'x 5'x 3'.6"	FVT.	041612
Sec. / Svc. Box / Ped: (Type, Size, Code)				

All Applicant Installations must pass PG&E inspection, do not backfill* the trench until it has been inspected and approved.

Call the construction Department at **209-726-6373** 48 hours in advance for inspection.

Cost of PG&E supplied materials are subject to change if this design is altered by the applicant.

Please contact **KDA9** at **559-706-6584** of any changes or need for additional information.

[X] **Please Call USA 800-642-2444 at least 48 hours prior to excavating this area:**

[X] All existing facility locations are approximate, verify with hand tool excavation.

1 Mains 201 Amp and above, lugs to be supplied by pg&e.

2 Conduit to be direct burial (DB), PVC marked ASTM F512 DB120PVC or schedule 40 marked UL Approved 90°C. Conduit above ground level to meet Engr. Standard Dwgs. *All conduits shall be proven free and clear of dirt, rocks, etc. by means of a mandrel, wire brush, etc. A polyester pulling tape shall be installed in all conduits and attached to an end cap. (No manufactured bends or use of heat shall be used to obtain conduit sweeps.)

3 Conduit depths are shown as minimums and may need to be increased when entering or leaving secondary splice boxes

REFERENCE DRAWINGS are available via the PG&E web site at: http://www.pge.com/greenbook. Refer to the Electric and Gas Service Requirements (Green Book) Section 3, Electric Service - Underground. Or you may contact your PG&E representative for copies of the following.

[X]	Corrosion Resistant Ground Rods and Ground Rod Clamps	013109
[ ]	Secondary Enclosures for Electric Underground (secondary service)	028028
[ ]	Concrete Pad for Three-Phase, Loop Style Pad-Mounted Transformers	045292
[ ]	Loc, Clearance, and Mechanical Details for Pad-Mounted and Subsurface Equipment.	051122
[ ]	Terminating UG. Electric Service 0-600 Volt in Customer-Owned Facilities.	058817
[ ]	Landscape Screen for Pad-Mounted Transformers	063422
[ ]	Methods and Requirements for Installing Res. UG. Elec. Service 0-600V.	063927
[ ]	Methods and Requirements for Installing Comm. UG. Elec. Service 0-600V.	063928
[ ]	Requirements for Bus Duct Entrance Termination Unit for Use With P/M Transformers.	063929
[ ]	Installation of Pad-Mounted, Load-Break Junction.	066212

Applicant Notes

Refer to Electric & Gas Service Requirements (Green Book) or Separate PG&E Standard Drawings.
Contact Your PG&E Representative for Copies, or Accsess https://www.pge.com/greenbook.

☑ Conduit, Trenching and Backfill:

1	All dimensions and locations are estimated, approximate and may be superseded by a JOINT TRENCH or COMPOSITE DRAWING.
2	Applicant to provide and install all underground facilities shown on this drawing in accordance with PG&E engineering standards and the following.
3	Applicant to provide all TRENCHING, SHADING, BACKFILL, AND COMPACTION.
4	4" of sand is required above and below conduit if native soil is not free of rocks, hardpan, etc. Backfill shall meet approval of PG&E Inspector
5	Service Conduit: 063927, Page 2 Tbl.1 & 2 (Residential.)
	Service Conduit: 063928, Page 3 Tbl.1, 2 , & 3 (Commercial / Industrial)
6	Distribution Conduit: PG&E Drawing 062288, Pages 1-14.
7	Provide long conduit sweeps where indicated. Recommended sweep radius (10' OF RADIUS PER INCH OF CONDUIT DIAMETER) Example: 4" CONDUIT = 40' RADIUS.
8	Manufactured bends or application of heat shall not be used to obtain long conduit sweeps. Do not exceed 300 degrees of bends including feed location.
9	All conduits shall be proven FREE and CLEAR, and a POLYESTER PULLING TAPE installed
	Manufactured bends are not to be CUT, SHORTENED, or ALTERED in any way.
11	Install: a) Temporary caps on conduits stubbed at riser poles, pads, and boxes
	b) Permanent caps on buried conduits ends
	c) End Bell Fittings are required for all conduits entering an enclosure knockout or pad window (they must be grouted)
	d) 36" minimum bend radius for primary conduit.
	e) 24" minimum bend radius for service and secondary conduit.
12	Identify ends of buried conduit with a vertical conduit scrap installed from ridged cap to ground level.
13	Conduits entering primary boxes shall be at a right angle to the window or wall.

☑ Subsurface Transformers and enclosures / sec. Boxes and Pedestals:

15	**Single Phase Horizontal Transformer: PG&E drawing 060578, Pages 12 0f 12**
16	**Primary Underground Enclosures: PG&E drawing 062000, Pages 1-14**
17	**Substructure Clearance: 051122, Pages 1-25**
18	**Secondary Pedestals and Splice boxes: 028028, Pages 1-14**

☐ Padmounted Transformers, Switches, and Junction Boxes:

☑ Grounds, Barrier Protection, and Landscape:

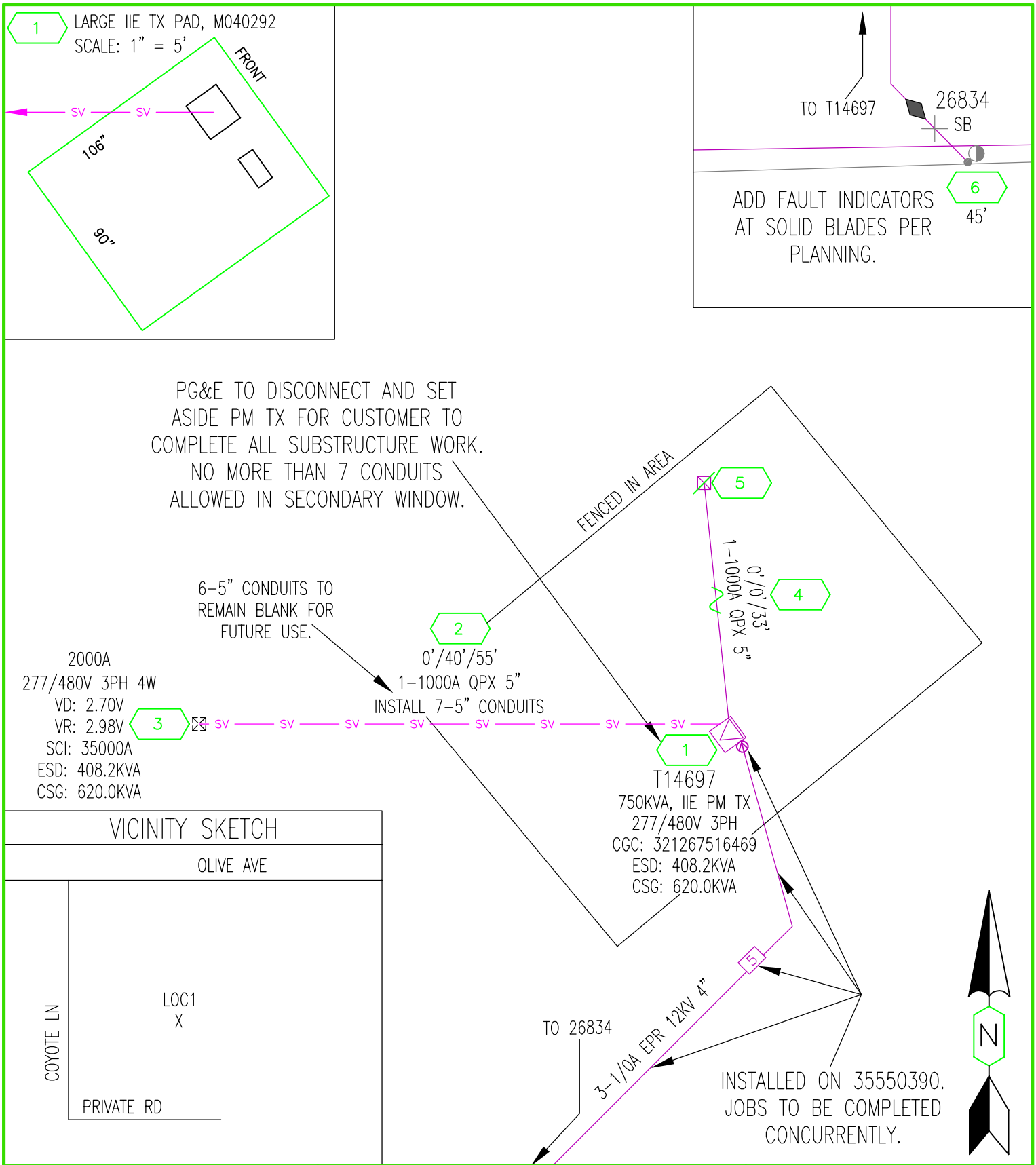
25	**Ground Rods: 013109, Pages 1-3.**
26	Applicant to install all ground rods and interconnecting wire between grounds.
27	**Protection (BARRIER POST) for padmounted equipment: 051122, Pages 8-25**
28	Final determination of barrier post installation and number will be by PG&E Inspector.
29	**Landscape Screening: 063422, Pages 1-12**

☑ Safety & Workmanship:

30	Notify USA 48 hours prior to digging for underground locating. *(see phone number above)*
31	48 hour notice required for underground inspections. *(see phone number above)*
32	Materials and Workmanship shall be first quality in every respect, plumb and true, and according to the specific requirements of the drawings and the above applicable notes and specifications.
33	The Applicant is to verify all proposed installations, conditions & specifications prior to commencing with any portion of work. Any discrepancies, deletions or inconsistencies are to be reported to the PG&E Representative immediately. The applicant shall comply with all applicable specifications. Any unapproved variations from PG&E plans or specifications relieves PG&E from all responsibility for the Substructure Design.

☐ Insert Drawing:

EST:	J54D	MADERA UNIFIED SCHOOL DISTRICT		CO:	
ADE:	RGCA			SD:	
SUPV:	D6GL			NOTIF:	128498928
REP:	KDA9	1000 W OLIVE AVE, MADERA		OTHER:	
PLNR:				SHT:	
Scale:	DATE:	PACIFIC GAS & ELECTRIC COMPANY		35550390	
	7/30/2024				



PRIMARY VOLTAGE: 12 kV	VOLTAGE AREA: 2	UPGRADE UG COMM SVC 1000 W OLIVE AVE MADERA	EST: JOSEPH BELLO 209-913-0462
LATITUDE: 36.95169	LONGITUDE: -120.06760		ADE: RAMIRO CEJA 209-247-4213
SOURCE SIDE DEVICE: FUSE 26834			SUPV: DAVID TREVINO 559-341-5931
SUB & CIRCUIT: MADERA 1104			REP: KIRK ATHERTON 559-706-6584
DSGN SAG: N/A	RAPTOR ZONE: YES		PLNR: NICK GARGANO 559-304-1299
LOADING AREA: LIGHT	ARRESTER DIST: 2	Know what's below. Call before you dig.	NO ENVIRONMENTAL ISSUES
CORROSION AREA: NON	INSULATION DIST: B		JPA#: N/A SCALE: 1"=10'
EXEMPT EQUIP.INST.: N/A	FIRE AREA: LRA-TIER 1	GAS CONFLICT: NO	NEAR LOC: N/A NOTIF: 128498429 DATE: 10/10/2024
			PM: 35581728 SHEET: 1 OF 1 REV. 0

HOWE Electric
Construction, Inc.
License # 898737 Class B, C10, C46

Request For Direction

RFD Number: 002

To: **Madera Unified School District**
1902 Howard Rd, Madera, CA 93637
georgecummings@maderausd.org

Attn: **George Cummings**

Date: **08/19/25**
Project Name: **Madera USD Memorial Stadium Modernization**

Priority: [ ] Normal [X] Expedite [ ] Urgent

Request Due To:

[ ] Direction Not Given In Contract Documents
[X] Interpretation of Contract Documents
[ ] Conflict in Contract Documents

Drawing Reference: **ES1.3**
Specification Reference:

Subject: Pacific Gas and Electric Utility Service

Electrical Site plan drawing ES1.3 shows PG&E conduit run from utility pole to new "MSA". During site visit it was mentioned that a portion of this work was already completed. Please advise the extent of work that has been completed for the new ulitity service. - Thank you.

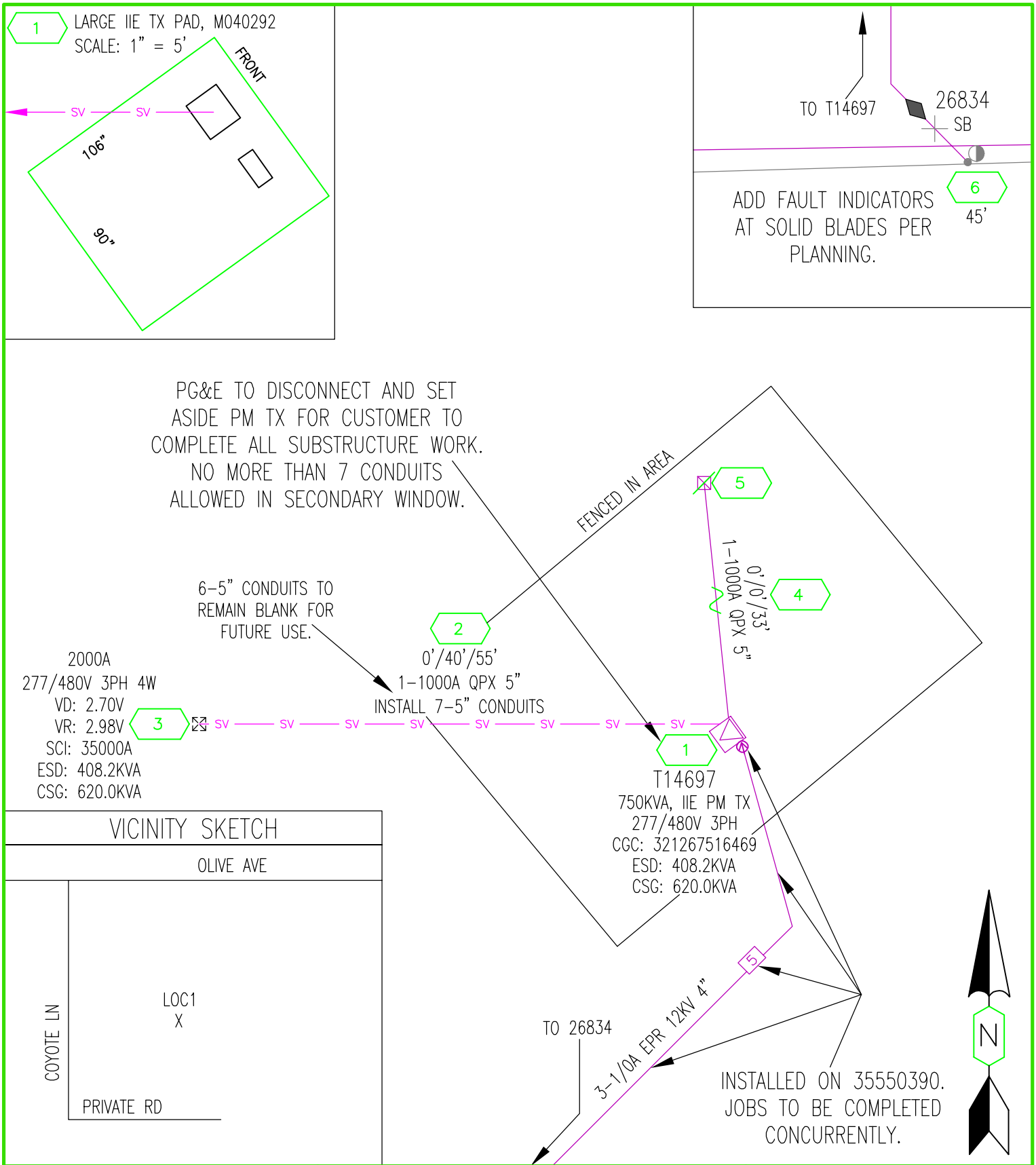
Submitted By:	Possible Cost Impacts:	Possible Time Impacts:
Josh Freeman	**Yes**	**Yes**

Reply:

The first phase of the PG&E work has been completed which was the underground of the primary conductors to the transformer. The second phase which is the installation of new main switchboard and connection of the new service from the PG&E transformer is the remaining part to be performed. Provide new conduit from the existing pad location. See drawings 35581728 attached. Contractor shall coordinate with the District representative as well as PG&E for this scope to schedule service downtime with the least impact to school functions.

Reply By: Patrick May, Project Manager
Hardin-Davidson Engineering

Date: 08/20/2025



PRIMARY VOLTAGE: 12 kV	VOLTAGE AREA: 2	UPGRADE UG COMM SVC 1000 W OLIVE AVE MADERA	EST: JOSEPH BELLO 209-913-0462
LATITUDE: 36.95169	LONGITUDE: -120.06760		ADE: RAMIRO CEJA 209-247-4213
SOURCE SIDE DEVICE: FUSE 26834			SUPV: DAVID TREVINO 559-341-5931
SUB & CIRCUIT: MADERA 1104			REP: KIRK ATHERTON 559-706-6584
DSGN SAG: N/A	RAPTOR ZONE: YES		PLNR: NICK GARGANO 559-304-1299
LOADING AREA: LIGHT	ARRESTER DIST: 2	Know what's below. Call before you dig.	NO ENVIRONMENTAL ISSUES
CORROSION AREA: NON	INSULATION DIST: B		JPA#: N/A SCALE: 1"=10'
EXEMPT EQUIP.INST.: N/A	FIRE AREA: LRA-TIER 1	GAS CONFLICT: NO	NEAR LOC: N/A NOTIF: 128498429 DATE: 10/10/2024
			PM: 35581728 SHEET: 1 OF 1 REV. 0

HOWE Electric
Construction, Inc.
License # 898737 Class B, C10, C46

Request For Direction

RFD Number: 003

To: **Madera Unified School District**
1902 Howard Rd, Madera, CA 93637
georgecummings@maderausd.org

Attn: **George Cummings**

Date: **08/19/25**

Project Name: **Madera USD Memorial Stadium Modernization**

Priority: [ ] Normal [X] Expedite [ ] Urgent

Request Due To:

[ ] Direction Not Given In Contract Documents

[ ] Interpretation of Contract Documents

[X] Conflict in Contract Documents

Drawing Reference: **EX2.1**

Specification Reference:

Subject: Solar System

Electrical Single Line Diagram, Sheet EX2.1, shows install of new "(N) Solar Fused Disconnect FD1". This disconnect is also referenced by Key Note 8 which states in part that disconnect is existing (E) to remain. Subject drawing also shows new "(N) PV System (Parking Lot)", referenced by Key Note 9 which identifies (E) Existing Photovoltaic System to remain. Please confirm disconnect FD1 and Parking Lot PV System are existing and shall be connected to new Main Switchboard MSA. - Thank you.

Submitted By:	Possible Cost Impacts:	Possible Time Impacts:
Josh Freeman	**Yes**	**Yes**

Reply:

The PV system is existing and will not be modified under these projects. Existing FD1 will remain in it's existing location. Disconnect from the existing service and reconnect to the new service.

Reply By: Patrick May, Project Manager
Hardin-Davidson Engineering

Date: 08/20/2025

HOWE Electric
Construction, Inc.
License # 898737 Class B, C10, C46

Request For Direction

RFD Number: 004

To: **Madera Unified School District**
1902 Howard Rd, Madera, CA 93637
georgecummings@maderausd.org

Attn: **George Cummings**

Date: **08/19/25**
Project Name: **Madera USD Memorial Stadium Modernization**

Priority: [ ] Normal [X] Expedite [ ] Urgent

Request Due To:

	Direction Not Given In Contract Documents	Drawing Reference:	**EX2.1**
			ES1.3
	Interpretation of Contract Documents		
		Specification Reference:	
X	Conflict in Contract Documents		

Subject: Future Fire Pump

Electrical Single Line Diagram, Sheet EX2.1, shows Fire Pump disconnect "FDP" as existing. This disconnect is also referenced by Key Note #10 which states in part that disconnect is New. Sheet ES1.3, Key Note #10, also referenced Fire Pump Disconnect as New. Please Confirm disconnect "FDP" is new and to be furnished and installed by contractor. - Thank you.

Submitted By:	Possible Cost Impacts:	Possible Time Impacts:
Josh Freeman	**Yes**	**Yes**

Reply:

The fire pump disconnect is new under the Fieldhouse portion of the project. Contractor is to furnish and install.

Reply By: Patrick May, Project Manager
Hardin-Davidson Engineering

Date: 08/20/2025

HOWE Electric
Construction, Inc.
License # 898737 Class B, C10, C46

Request For Direction

RFD Number: 005

To: **Madera Unified School District**
1902 Howard Rd, Madera, CA 93637
georgecummings@maderausd.org

Attn: **George Cummings**

Date: **08/19/25**
Project Name: **Madera USD Memorial Stadium Modernization**

Priority: [ ] Normal [X] Expedite [ ] Urgent

Request Due To:

[ ] Direction Not Given In Contract Documents
[ ] Interpretation of Contract Documents
[X] Conflict in Contract Documents

Drawing Reference: **EX2.1**
Specification Reference:

Subject: Disconnect FD2

Electrical Single Line Diagram, Sheet EX2.1, shows install of new 100A 3P fused disconnect "FD2". This disconnect is also referenced by Key Note #15 which calls for a "PG&E compliant verifiable disconnect 800A 4-Pole". Please confirm that note is not intended for this disconnect and disconnect size shall be 100A. - Thank you.

Submitted By: **Josh Freeman**
Possible Cost Impacts: **Yes**
Possible Time Impacts: **Yes**

Reply:

Provide 100A/3P disconnect.

Reply By: Patrick May, Project Manager
Hardin-Davidson Engineering
Date: 08/20/2025

4682 E. OLIVE AVE. FRESNO, CA 93702 (559) 255-8992 FAX (559) 255-9745

HOWE Electric
Construction, Inc.
License # 898737 Class B, C10, C46

Request For Direction

RFD Number: 006

To: **Madera Unified School District**
1902 Howard Rd, Madera, CA 93637
georgecummings@maderausd.org

Attn: **George Cummings**

Date: **08/19/25**
Project Name: **Madera USD Memorial Stadium Modernization**

Priority: [ ] Normal [X] Expedite [ ] Urgent

Request Due To:

	Direction Not Given In Contract Documents	Drawing Reference:	**ES1.3**
			EX4.1
	Interpretation of Contract Documents		
		Specification Reference:	
X	Conflict in Contract Documents		

Subject: Site Fire Alarm Conduit Between Pull Boxes F2, F3 and F4

Enlarged Electrical Site Plan, Sheet ES1.3, Key Note #39, states in part to provide a 1"C between pull boxes F2, F3, and F4. Fire Alarm Plan, Sheet EX4.1, Riser Diagram, indicates a 2"C between subject pull boxes. Please confirm conduit size and quantity between pull boxes F2, F3 and F4. - Thank You

Submitted By:	Possible Cost Impacts:	Possible Time Impacts:
Josh Freeman	**Yes**	**Yes**

Reply:

Provide 2"C.

Reply By: Patrick May, Project Manager
Hardin-Davidson Engineering

Date: 08/20/2025