



ADDENDUM NO. 01

Elkhorn Elementary School Modular Classrooms Inc 2 Project #0915-8215-470-36

Issued November 21, 2025

This addendum issued on the above date sets forth changes to published drawings and basis of designs for this project; included informational testing reports.

Questions regarding the following listed changes should be directed to: Marc Karim;
mkarim@lodiused.net.

See attached documents & drawings



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Note: This document is part of the modular building bid set. Scope related to the existing building renovation and site work has been crossed out.

0 PROJECT OVERVIEW

SCOPE:

Modular Building: A new modular single-story classroom building to be erected at Elkhorn Elementary School in Stockton, California. All costs of transportation and installation to be included in the Bid price.

~~Renovation & Site Improvements: Renovation of Building F to turn 3 existing classrooms into a Library and Administration Office. Light Modernization (Finish Replacement) of Building A and Building D. Demolish building C (classrooms/admin) and the music buildings. And all associated site work.~~

The specifications and requirements documented below are to be the same for the modular building and the renovations unless specifically noted for one part of the work. See Responsibility Matrix (Exhibit A) for division of responsibilities between the Modular Contractor and Site/Renovations Contractor. All work under the Modular Contractor column shall be covered by modular contractor. All work under the Site/Renovation GC column shall be covered by the renovation and site contractor.

RELATED DOCUMENTS

Schematic Drawings, Responsibility Matrix, Geotechnical Report, ~~Landscape Cost Options, Multi-Purpose existing drawings, Lodi USD Technology Standards, Preliminary Phasing Plan.~~



MODULAR SUBMITTALS	Provide complete submittal to DSA for plan review and approval process as well as the following: 1. From NTP date provide within (2) weeks the final floor plan CAD file. 2. 50% Design Development phase submittal to the District for general intent review. 3. 50% Construction Documents phase submittal to the District for general intent review. 4. DSA submittal set for their initial review to be no later than March 31, 2026
ALTERNATES AND TIERS	~~Add Alt 1 Provide a cost to renovate the student restrooms at Building F (new fixture and fixture locations, new finishes, lighting, accessories etc.)~~ ~~Add Alt 2 Exterior paint the multi – purpose room. See Exhibit (B) Building A Finish Cost Options. See Building A Drawings Landscape Cost Options: See Landscape Cost Options (Exhibit C)~~
EXISTING CONDITIONS	SITE PREP / GEOTECHNICAL INFO See geotechnical report for more information. (Exhibit D) HAZARDOUS MATERIALS Hazardous materials will be addressed by the District, and so the LPA scope assumes the site is “clean.”
1 PROJECT INFO	PROJECT ADDRESS Elkhorn Elementary School 10505 Davis Road, CA 95209 DELIVERY Lease-leaseback. The District’s construction agreement and requirements are in progress at this time. CONSTRUCTION SCHEDULE/PHASING Phase 1 Modular Building Target construction start is Spring/Summer 2026, with target completion in July 2027 for occupancy of the new building. A total construction time of 12-14 months is estimated. ~~Phase 2 Building A, D, & F Renovation + Site Improvements~~ ~~Target construction start is Spring/Summer 2027, with target completion in July 2028 for occupancy of the renovated building. A total construction time of 12-14 months is estimated.~~ Note: The campus will be operational during construction. An accessible path of travel must be maintained to all occupied buildings throughout construction.

APPLICABLE CODES AND STANDARDS

2022 California Administrative Code, Part 1, Title 24, CCR
2022 California Building Code, Part 2, Title 22, 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 Energy Code, Part 6, Title 24, CCR
2022 California Fire Code, Part 9, Title 24, CCR
2022 California Green Building Standards Code, Part 11, Title 24, CCR (CALGreen)
2022 California Referenced Standards Code, Part 12, Title 24, CCR

OFI / OFCI

OWNER-FURNISHED/OWNER-INSTALLED ITEMS

Per District, the following items are OFOI: Furniture, Refrigerator, Network switches, Wireless Access points, Phones, Cameras, Intrusion Alarm

OWNER-FURNISHED/CONTRACTOR-INSTALLED ITEMS

The following items are assumed to be OFCI: Site furnishings, HVAC Controls, Display Screens, Card Readers, Keyways

CODE ANALYSIS

Reference the General Information Sheets

DEMOLITION

Reference the Demolition Sheets.

MODULAR BUILDING DESIGN REQUIREMENTS

MODULAR BUILDING TYPE

Modular building shall consist of portions of new prefabricated modules or panels, including roof, walls, windows, electrical, plumbing, and mechanical services. Each module or panel system shall be mounted on a reinforced foundation system to be engineered by the Contractor or modular manufacturer.

Components of the "Hybrid or Modular" layout must conform to the architectural design appearance shown on the schematic design document and requirements specified hereinafter.

Dimensions as shown on plans may deviate slightly (upon Owner's approval) to accommodate fabrication / transportation and obtain DSA approved modular system.

The building contractor/modular manufacturer shall provide drawings and calculations acceptable to the Owner, meeting the provisions of the California Code of Regulations. Building Contractor or modular manufacturer shall bear all costs for production of drawings and all associated architectural (complying with DSA 1-MR form), engineering design / calculations. Building Contractor or modular manufacturer shall make all revisions and corrections to those documents required by the Division of the State Architect and shall resubmit as required to obtain approvals. Owner's

Architect will provide the following design services on the building and will be DSA's architect of record:

- A. Low Voltage
- B. Fire Alarm
- C. Electrical (From site to building main panel on electrical room)
- D. Site lighting
- E. Site improvements

Owner will pay applicable processing fees to the Department of General Services, Division of the State Architect (DSA), State of California. Contractor or modular manufacturer shall make all changes or corrections required by DSA and will deliver to Owner's Architect all digital full-size drawings as required for the approved drawings and calculations. All modular drawings and specifications shall be signed by Contractor's California Licensed Architect / Engineer as required by the DSA and County Health Department.

The modular manufacturer / building contractor is responsible for submission and approval to CGS for the new modular building. Owner will pay applicable processing fees to CGS.

The Owner's Architect decision about the product aesthetics shall be binding on the Contractor.

FABRICATION CRITERIA

Provide modular or panelized building systems as produced by a Contractor who is regularly engaged in fabrication and erection of modular structures of type and quality indicated.

Design prefabricated components and necessary field connections required for erection to permit easy assembly.

INSTALLATION AT SITE

Once delivery of modules or panels on site is made, erection shall commence immediately and be pursued in a timely manner until complete. All modules or panels called for at that site shall be scheduled for delivery and erection in one continuous time frame.

The Contractor shall furnish materials, articles and equipment in ample quantities and at such time as to assure uninterrupted progress of the work. Failure to provide adequate working force, or material of proper quality, or failure in any other respect to execute the work with diligence and force specified herein are grounds for declaring a default on the contract.

Modular building Contractor shall coordinate with all site construction activities with site Contractor(s) under separate

contract with District.

UTILITY HOOK-UP

All utility connections shall be provided within 5' of building perimeter (except for the electrical to main panel) to accommodate hook-up at the site. Utilities connections will be done by the Site Contractor.

ARCHITECTURAL/ INTERIORS

CONCRETE

CONCRETE

Concrete slabs-on-grade, refer to Structural. Slabs on grade shall be underlaid by an ASTM E1745, Class A, 15-mil vapor barrier, Stego or similar.

SEALED CONCRETE FLOOR FINISH

Where service spaces do not require flooring, sealed concrete floor finish is identified. Provide PROSOCO Consolideck LS/CS lithium densifier or equal, and polish to a matte to medium gloss finish.

MASONRY

N/A

METALS

STRUCTURAL STEEL

All structural steel exposed to the exterior to be shop primed with a zinc-rich primer equal to Tnemec 90-97 Tneme-Zinc, and field painted with a high-performance coating. Exterior concealed steel to be hot-dip galvanized unless fireproofing is required. Structural steel exposed at interiors to be painted (see PAINT).

PIPE AND TUBE RAILINGS

~~Site ramp shall have top, middle & bottom rails as a minimum with hot dipped galvanized, schedule 40, no paint. Specify complete dipped sections of railings. No site fabricated railings (it is acceptable to splice welded railings in the field).~~

METAL MECHANICAL SCREENS

Exposed fastener panels Style-Rib by Centria, 18-gage G90 galvanized steel, 1-1/2-inch depth, 36-inch wide, prefinished with Superior Performance Organic Coating (Kynar), with structural steel substructure to include HSS tube vertical and horizontal supports, shop primed, painted with high-performance field coating (see PAINT) consistent with Structural Steel.

WOOD, PLASTICS AND COMPOSITES

COUNTERTOPS

Plastic laminate or epoxy resin chemical resistant countertops as noted in schedule and drawings. Waterfall front edge, deck set backsplash with square top (radius corners), eased corners. Provide backsplash 4" in height.

ARCHITECTURAL WOOD CASEWORK

Millwork to be WI-certified, custom, style A frameless finished with rapidly renewable resources, such as bamboo or recycled materials and certain Plastic Laminates; heavy-duty hardware. Plastic laminate veneer. Keying and locking to be provided, coordinate requirements with Owner.

SHEATHING

All plywood backing shall be ½" minimum APA or comparable rated exterior type. Each panel shall be identified with the grade mark of the grading association and shall meet the requirements of Product Standards PS 183.

THERMAL AND MOISTURE PROTECTION/SHEET WATERPROOFING

THERMAL INSULATION

Wall insulation shall have a rating of R19 minimum. Roof insulation shall have a rating of R30 minimum. Minimum flame spread classification of 25 or less and a smoke developed rating of 50 or less. On Modular Building, provide more insulation where required by Contractor's energy modeling and calculations.

SHEET WATERPROOFING

Site retaining/planter walls to receive Grace Construction Products Bituthene 4000 self-adhered, modified bitumen waterproofing, with drainage panels, and perforated pipe foundation / retaining wall subdrain system piped to site storm drainage system.

WEATHER BARRIERS

On outside surface of sheathing of exterior walls beneath PORTLAND CEMENT PLASTER assembly provide one layer Grade D building paper, Fortifiber Super Jumbo Tex 60 Minute, over fluid-applied air barrier, Parex USA WeatherSeal Spray and Roll-on.

SINGLE PLY MEMBRANE ROOFING

Roofing shall be equivalent to a Class A roofing system. Roofing material to be TPO single ply, 60 mils minimum, with 1/4" thick Densdeck board. Provide a 20-year minimum warranty (2 years for labor), manufactured by GAF or equivalent.

Design and installation of the deck and/or roof substrate shall result in the roof draining freely and shall have a pitch for positive drainage. Areas where water ponds for more than 24 hours are unacceptable and shall be corrected by the manufacturer.

Roof service walk mats shall be provided from roof hatch to all mechanical / plumbing areas to be serviced / maintained.

SHEET METAL FLASHING AND TRIM

Provide roof flashings, counter-flashings, gutters and downspouts, etc. Sheet metal to meet SMACNA standards, and be galvanized steel and pre-finished with Superior Performance Organic Coating (Kynar or Duranar) where exposed to view. Unless otherwise indicated, provide 24-gauge galvanized.

ROOF ACCESSORIES

Roof hatches to be 36 inch by 42 inch insulated steel, single leaf, by Bilco or equal; standard shop finish.

Roof ladders to be prefabricated aluminum, LaneAire or equal, custom powder coat.

OPENINGS

DOORS AND FRAMES

Where doors occur in exterior and interior aluminum storefront or curtain wall, they shall be Aluminum Entrances with single or paired wide-stile, continuous-hinge, heavy-duty doors (7'-0" high x 3'-0" wide per leaf typical for exterior), thermally broken.

All exterior and interior doors not shown as storefront or where doors are isolated on an exterior wall (without transoms or sidelights) to be Hollow Metal level 2/B, heavy duty, 14 gage full flush steel, with 16 gage galvanized, shop primed, fully-welded hollow metal frames (knock down/KD frames are only permitted where doors have continuous hinges); field paint with high performance field coating at exterior; use standard interior latex paint at interior doors and frames. Manufactured by Ceco Doors or equivalent.

Weather stripping at all exterior doors – jamb and head.

ALUMINUM STOREFRONT AND ENTRANCES

Aluminum storefront system, thermally-broken, captured 1" glass, offset glazed, 2-1/4-inches x 6-inches mullion size; finish to be Superior Performance Organic Coating (Kynar or Duranar); Arcadia TC670 Series as basis of design. Entrances as discussed in DOORS AND FRAMES above. Include operable vents as shown on drawings shall be Arcadia Inc. T200STC Series thermal Awning with insect screens and accessible Cam Handle and Roto Operator.

INTERIOR WINDOWS

N/A

DOOR HARDWARE

All door hardware shall meet ADA requirements and shall have a brushed or satin nickel finish.

Lock sets, keys and cylinders: Schlage

Push bar exiting devices: Von Duprin

Door closer: LCN

All thresholds to be ADA compliant.

GLAZING

Exterior glass to be 1" insulated low-E glazing typically; all layers to be tempered safety glass; Vitro Solarban 70 or IGU Climaguard 62/67 as basis of design; U-Factor: 0.30 or less; SHGC 0.30 or less; VLT no less than 50%

Interior glass to be ¼" clear tempered safety glass.

Fire-rated glass to be by Saftifirst or TGP Technical Glass Products (no wire glass permitted) in proprietary steel frame (at interior) or proprietary aluminum-clad steel frame (at exterior) by the same manufacturer UL tested and listed as assembly; interior frames to be painted; exterior frames to have Superior Organic Coating to match storefront.

FINISHES

PORTLAND CEMENT PLASTER

ASTM C926, Type I, custom color integral finish coat, standard 7/8" thick, 3-coat acrylic-modified system with acrylic smooth trowel finish, Parex USA, Inc.

ACOUSTICAL TILE CEILING

Suspended System and Grid shall be subject to DSA approval, and shall comply with applicable portions of Title 24, California Code of Regulations, and the California Building Code.

ACT-1: 24"x48" by Armstrong – School Zone Fine Fissured or approved equivalent lay in grid. NRC:0.70, CAC:40

ACT-ALT Modernization Classrooms ONLY: 24" x 48" by Armstrong – Invisacoustics direct attached A mounting 70 NRC or approved equivalent

Grid: 1 1/2" x 1" steel suspended tee-bar grid system, heavy duty white. Manufactured by Armstrong Prelude XL or equivalent. Use Berc2 clips.

RESILIENT FLOORING

Patcraft/ Wood + Weald – 2.5 mm. Color: TBD

RESILIENT BASE & ACCESSORIES

6" rubber topset base and accessories by Burke or Johnsonite.

EPOXY FLOORING /WALL

Dur-A-Flex Inc./ Dur-A-Quartz or equivalent. Epoxy based seamless flooring system and integral cove base. Non-gloss, slip resistant coefficient of friction of 0.6 minimum. Integral cove base up wall as shown in interior elevations 5'-0" AFF if not shown Color: TBD

CARPET

Mohawk (Walkoff Carpet) – First Step II 24" x 24", Color: Obsidian 898

Patcraft (Carpet Tile)– Inclusion Color, Gemscape, Color: Marble 00535

TACKABLE WALL PANELS

Koroseal, School or Spellbound collection, or approved equivalent 1-½" fabric-wrapped panels. Walls in classroom / science lab shall be full height tackable surface with ½" gypsum board or 3/8" plywood minimum. Vinyl coating shall weigh a min. of 8 oz. per square yard. Vinyl all covering to have a Class I flame spread rating and the fabricated panel shall have a Class II rating.

ACOUSTICAL WALL PANELS

Lamvin Sonic Standard fabric wrapped 1-½" thick. Z-clip installation.

FIBER REINFORCED PLASTIC PANELS

Nudo or approved equivalent.

Class A requirements for interior walls & ceilings; plastic trim Install at janitor/custodial rooms; provide 4'-0" panels, .090 nominal thickness.

PAINT

Field paint exterior metals (ferrous & galvanized) with zero-VOC urethane over zinc-rich primer (high performance field coating); Interior paint for gypsum board, interior trim, and doors to be 100% acylic semi-gloss. Interior paint to be Sherwin Williams or Dulux.

SPECIALTIES

ROLLER SHADES

Manufactured by Lutron, 5% perforation, manual operation.

MARKERBOARDS

Claridge, model LCS3

SIGNAGE



Exterior signs shall be zinc or aluminum metal; interior signs shall be standard acrylic plaques for code-required room identification, door and exit signage.

TOILET PARTITIONS

Toilet and urinal partitions shall be ASI Global Partitions HDPE or equivalent. Black Confetti finish.

TOILET ACCESSORIES

Grab Bars 36" and 48": Bobrick, B-5806 Series, Stainless Steel

Hand Soap Dispenser on each lavatory: Bobrick, N-2111, Stainless Steel

Mirror 18" x 24" on each lavatory: Bobrick B-165 1824, Stainless Steel

Hand Dryer: Manufactured by World Dryer, SLIMdri, electric heat, aluminum brush chrome (two on each multiuser restroom and one on unisex).

Toilet Seat Cover Dispenser/Toilet Paper Dispenser - Partition Mount: Bobrick, B-347, Stainless Steel

Toilet Seat Cover Dispenser/Toilet Paper Dispenser/Sanitary Napkin Disposal - Partition Mount: Bobrick, B-357, Stainless Steel

Toilet Seat Cover Dispenser/Toilet Paper Dispenser – Wall Mount: Bobrick, B-3474, Stainless Steel

Toilet Seat Cover Dispenser/Toilet Paper Dispenser/Sanitary Napkin Disposal - Wall Mount: Bobrick, B-3574, Stainless Steel

INTERIOR FINISH SCHEDULE
 (SEE DRAWINGS FOR
 ADDITIONAL INFORMATION)

TYPICAL CEILING HEIGHTS
 Varies, See Building Reflected Ceiling Plans

MODERNIZATION - BUILDING F: REFERENCE FINISH PLANS

MODERNIZATION - BUILDING A&D: REFERENCE FINISH PLANS

MODULAR: TYPICAL CLASSROOM

Flooring	10% Walk-off Carpet, 90% Resilient
Walls	85% Tackable wall panels, 15% Drywall – Paint,
Ceilings	ACT-1
Casework	Plastic laminate countertops and plastic laminate lower storage cabinets as shown in the plan.

Equipment	N/A
Furnishings	Manual shades

STEM CLASSROOM

Flooring	10% Walk-off carpet, 90% polished concrete
Walls	85% Tackable wall panels, 15% Drywall – Paint
Ceilings	Exposed – infrastructure (ducts, conduits etc) painted
Casework	Epoxy countertops and plastic laminate lower & upper storage cabinets as shown in the plan.
Equipment	N/A
Furnishings	Manual shades

SCIENCE CLASSROOM

Flooring	Epoxy
Walls	85% Tackable wall panels, 15% Drywall – Paint
Ceilings	Exposed – infrastructure (ducts, conduits etc) painted
Casework	Epoxy countertops and plastic laminate lower & upper storage cabinets as shown in the plan.
Equipment	See equipment list
Furnishings	Manual shades

PREP ROOM

Flooring	Epoxy
Walls	85% Tackable wall panels, 15% Drywall – Paint
Ceilings	ACT -1
Casework	Epoxy countertops and plastic laminate lower & upper storage cabinets as shown in the plan.
Equipment	See equipment list
Furnishings	Manual shades

SUPPOR SPACES

Flooring	Sealed concrete
Walls	Paint – FRP At Mop Sink walls to 8' AFF
Ceilings	Exposed UNO in RCP
Casework	Epoxy countertops and plastic laminate lower & upper storage cabinets as shown in the plan.
Equipment	See equipment list
Furnishings	Manual shades

15 CONVEYING

N/A



STRUCTURAL

PROJECT DESCRIPTION

The project involves a proposed new single-story classroom structure. The new classroom structure will be modular construction.

The building shall be reinforced concrete slab-on-grade. Minimum footings as required as outlined in the District provided Geotechnical Report. Foundations shall be designed to meet Title 24 Part 1 & DSA. requirements and additional loading requirements as indicated in the Geotechnical Report provided for this project.

BASIC DESIGN LOADS

Basic design loads, as well as auxiliary and collateral loads, are as follows:

- A. Exterior walls shall be designed to withstand wind loads perpendicular to wall plane wind speed to meet code requirements. This requirement applies to all exterior walls of building section even though present configuration of building may be such that some of these walls are not exposed to wind. All buildings are required to meet all current requirements of Title 24, Parts 1 & 2 and DSA Interpretations of Regulations.
- B. Roofs: Design shall include live load of 20 psf minimum, incorporate all Calgreen provisions. All roofs shall be designed as diaphragms as required for resisting applied horizontal loads. Roof shall be sloped to drain with pitches as needed to provide positive drainage.
- C. Design each member to withstand stresses resulting from combinations of loads that produce maximum percentage of actual to allowable stress in that member.
- D. It is important that the new modular building exterior design and aesthetics be the same as the elevations provided reflecting the ideas of the new classroom building.
- E. The successful winning modular building Manufacturer shall work with the Owner's Architect to refine design and materials to meet the needs of the Owner. Modular manufacturer shall attend user group meetings as needed to finalize design.

FIRE PROTECTION

Reference Standards

- NFPA (National Fire Protection Agency) -13, 2022 Edition
- NFPA-24, 2022 Edition
- Classrooms – Light Hazard.
- Utility and Storage rooms – Ordinary Hazard.

PHASE 1: Modular Classroom Building

Provide fire service stub-out for connection by the plumbing contractor.

An exterior double detector check valve assembly and an exterior post indicator valve assembly shall be provided by the plumbing contractor as required, location TBD.

Fire riser and hub drain assembly will be located in fire sprinkler room as on plans.

Provide hydraulically calculated wet pipe fire sprinkler systems for the new modular building. Fire protection design to be reviewed and permitted by the California Division of the State Architect (DSA).

Provide fire sprinkler shop drawings complete with hydraulic calculations.

Provide control valve assembly with inspector's test and drain assembly.

Fire sprinkler drain piping shall terminate over a sanitary sewer hub drain assembly. Hub drain assembly provided under the plumbing section of work.

Provide two fire department pumper connections at building or at appropriate locations (one standard connection and one Storz connection). Each connection shall include a dedicated line size check valve.

~~PHASE 2: Building F Renovation~~

~~Modify existing wet pipe fire sprinkler systems, as required, for new ceiling and space conditions, in Building F. Fire protection design to be reviewed and permitted by the California Division of the State Architect (DSA).~~

~~Provide fire sprinkler shop drawings complete with hydraulic calculations.~~

PLUMBING

GENERAL PLUMBING DESIGN CRITERIA

Domestic water piping will be sized to maintain the water velocity at maximum 8 feet per second for cold water. Hot water recirculation lines will be sized for 5 feet per second velocity.

Provide hose bibs supplied with domestic cold water, wall-mounted in each new restroom. Provide recessed wall-mounted, freeze-less hose bibbs on exterior walls with spacing not to exceed 100'. All hose bibs will have an integral non-removable backflow prevention device.

Expansion tank will be provided at tank-type water heater.

Hot water recirculating pumps will be located to allow the clearance required by California Electrical Code.

Disinfect all domestic hot and cold-water systems in accordance with code Standards.

Provide trap primer valve assembly to provide trap priming to each floor drain, floor sink, and hub drain.

Provide a separate dedicated isolation valve to serve each new restroom.

Water hammer arrestors (shock absorbers) will be provided and located in all water lines serving quick closing valves and at restroom flush valves.

Access panels will be provided for isolation valve and trap primer access.

All water lines exposed to ambient outdoor temperatures will be insulated with the required insulation prescribed by the California Energy Code. All hot water and hot water return piping will be insulated.

All piping, fittings, valves, flux, solder, etc. used in systems conveying or dispensing water for human consumption will be lead-free certified.

WATER CONSERVATION

Provide fixtures that meet or exceed water efficiency standards of 2025 California Plumbing Code (CPC) and 2025 California Green Building Code (Cal Green) requirements.

Provide a separate dedicated isolation valve to serve each washroom.

FIXTURE WATER EFFICIENCY

Water closets:	1.28 GPF
Urinals:	0.125 GPF
Lavatories:	0.35 GPM metering
Classroom sinks:	1.5 GPM manually operated faucets

PLUMBING FIXTURES

Water Closets	Kohler, floor mounted, Sloan Manual Flush Valve.
Urinals	Kohler, wall mounted, Sloan Manual Flush Valve.
Student Lavatories	Undercounter mount with Moen 8884, 0.5 GPM, manually operated, metering cold-water faucet
Staff Lavatories	Undercounter mount with Moen 8886, 0.5 GPM, manually operated, metering, hot and cold-water faucet.
Service Sinks	Kohler corner floor mount, Chicago 2.2 GPM wall mounted hot and cold-water faucets.
Art Sinks	Just Mfg., wall mounted, stainless steel, multi-station, trough type sink, with backsplash mounted Chicago 1.5 GPM, hot and cold-water faucets and soap dispensers.
Art Sink (Accessible)	Just Mfg., wall mounted, stainless steel, single station, with Chicago 1.5 GPM, hot and cold-water faucet with soap dispenser.
Classroom Sinks	Just Mfg., counter mount, stainless steel, Chicago 1.5 GPM gooseneck faucets.
Fixture Carriers	Zurn or equal
Floor Drains	Zurn or equal
Recessed Hose Bibb	Acorn or equal

ROOFS

Freeze-less Roof Hydrant:	Woodford #RHY1-MS.
Roof and Overflow Drains:	Zurn Roof/Overflow drain combo unit #Z163 with cast iron dome strainers.

EXTERIOR FIXTURES

Freeze-less, recessed hose bibbs:	Acorn #8160
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COMMON FIXTURES AND PLUMBING EQUIPMENT

Drinking Fountains:	Haws 1119.14 Wall Mount Fountain, with Haws 1920 Bottle Filler and drip tray for connecting to fountain
Sprinklr Riser Hub Drain	6-inch round x 2-foot-high cast iron standpipe hub drain with 4-inch p-trap.
Tank Type Electric Domestic Water Heaters:	Bock – nDurance 19 gallon
Point of Use Water Heaters:	EEMax Lavadvantage
Hot Water Recirculation Pumps:	Grundfos UPS Series Pumps
Floor Drains:	ZURN #Z415BZ
Floor Sinks:	ZURN #Z1900

DOMESTIC COLD-WATER SYSTEM

The campus utility mains will supply the water requirements for the Phase 1 new modular building. The flow requirements will be based on 2025 CPC requirements and building demands.

The water distribution piping system inside the building will be type L copper above grade and type K copper for underground.

Hot and cold-water piping shall be installed overhead and not under the concrete slab

DOMESTIC HOT WATER SYSTEM

Provide instantaneous (tankless) point-of-use electric water heaters, AO Smith or approved equal, to serve single sinks and restrooms that are far from hot water circulating system.

Provide a dedicated hot water supply and return piping system complete with an electric commercial grade storage type water heater, expansion tank, domestic hot water circulating pump, aqua-stat, and time clock to serve new restrooms, janitors closet, and classroom sinks in the Phase 1 Modular classroom building. Provide electric tank type water heater, AO Smith or approved equal.

Insulate all hot water supply and return piping in its entirety to each point of use.

Provide domestic hot water for staff restrooms only.

CONDENSATE DRAINAGE SYSTEM

Condensate from rooftop or interior HVAC equipment will be drained to the sanitary waste system. Condensate drain lines will be terminated into the nearest roof receptor, floor sink, or mop sink including an indirect connection with an air gap. Minimum size for condensate pipes is 3/4".

Indoor condensate drain piping will be insulated with the required insulation prescribed by the California Energy Code to prevent condensation.

SANITARY DRAINAGE SYSTEM

Phase 1 Modular building will include a new 4" sanitary sewer connection that carries waste from all plumbing fixtures, equipment drains, floor sinks, and floor drains to the campus sanitary sewer system. All fixtures will be trapped and vented to the atmosphere.

Provide a floor drain in each new restroom. Provide trap primer valve in wall, behind lockable access panel.

Provide an end of the line wall cleanout on each branch main line of underground waste piping not to exceed 100' or 135 degree change in direction.

Provide wall cleanout/floor cleanout to serve each washroom.

Waste and vent systems above grade will consist of service weight hub-less cast iron soil pipe with heavy-duty compression type neoprene gaskets in compliance with FM 1680 Class 1 (for waste), and stainless steel mechanical joints and neoprene gaskets (for vent). Waste and vent piping below ground, inside buildings, will consist of service weight hub and plain end soil cast iron pipe with heavy-duty

compression type neoprene gaskets in compliance with FM 1680 Class 1.

The campus soil may be mildly corrosive pending the geotechnical report. Any direct buried cast iron piping will be wrapped in polyethylene sleeves or anti-corrossion coatings.

All sanitary waste piping will be sloped at minimum $\frac{1}{4}$ -inch per foot.

RAINWATER DRAINAGE SYSTEM

Storm drainage will be provided by downspouts located on exterior walls. Transition fittings with cleanouts will be provided at the downspout base.

Alternately, roof drains and overflow drains will be provided, and storm drain piping will be routed through ceiling space to connect to campus storm drainage system.

PIPE MATERIALS

SANITARY SOIL, WASTE AND VENT

No-Hub cast iron pipe and fittings ASTM A888 or CISPI 301 sourced from American foundry with heavy-duty 4-band (minimum) couplings.

STORM DRAIN

No-Hub cast iron pipe and fittings ASTM A888 or CISPI 301 sourced from American foundry with heavy-duty 4-band (minimum) coupling.

PVC Standard Dimension Ration (SDR) 35 piping ASTM D 3034 with solvent welded fittings acceptable for underground storm drain piping.

CONDENSATE DRAIN PIPING

Copper Tube and Fittings – Hard copper tube, ASTM B88, Type L water tube, wrought-copper solder-joint fittings, ASME B16.22, wrought-copper fittings.

DOMESTIC HOT WATER AND COLD WATER

Copper Tube and Fittings – Hard copper tube, ASTM B88, Type L or Type K water tube, wrought-copper solder-joint fittings, ASME B16.22, wrought-copper fittings.

MECHANICAL

GENERAL SCOPE

Classrooms in the Phase 1 Modular Classroom Building will each be served by an independent packaged rooftop heat pump air conditioning unit.

New IT and electrical rooms in the Phase 1 Modular Classroom Building will be served by either packaged terminal heat pump units or dedicated ductless, wall-mounted, split system heat pump units.

Restrooms and janitor closets will be exhausted and ventilated only, with no active heating and cooling.

New rooftop HVAC and exhaust equipment will be grouped to leave the roof area for 50% of the classrooms free for solar panels.

~~For the Phase 2 renovations in Building F, existing HVAC systems serving the spaces will remain. Ductwork distribution, diffusers and grilles, and HVAC controls in the interior will be replaced or modified, as necessary, to meet the new space conditions. Existing HVAC systems will be rebalanced for the new space conditions.~~

HVAC DESIGN CONDITIONS

HVAC design criteria for this project shall be:

- Address: 10505 Davis Rd, Stockton, CA 95209
- California Climate Zone: 12
- Location: CA 38° Lat, 121.3° Long, 20 ft elevation
- Cooling Design Temps (0.4%): 98°F DB, 69°F MCWB
- Heating Design Temps (0.4%): 30°F
- Indoor Design Temps: 70°F (heating), 74°F (cooling)
- Ventilation: 2025 California Mechanical Code, Chapter 4 & 2025 California Energy Code

Design ventilation and exhaust rates will meet or exceed 2025 California Mechanical Code, Part 4, Title 24, CCR, Chapter 4, which is based on ASHRAE Standard 62.1-2016. Design ventilation rates shall be not less than 0.15 cfm/sf in any space.

Exhaust rates shall be per the following:

- Restrooms: 100 cfm/fixture exhaust
- Janitor / Utilities: 1.0 cfm/sf exhaust
- Storage: 0.5 cfm/sf exhaust

HVAC EQUIPMENT CONTROLS

Energy Management System (EMS) shall be BACnet system per Lodi Unified School District standards.

New zone temperature sensors shall be installed with user control override for up to +/- 2F from predefined setpoints.

New outdoor HVAC units and split system units will be provided with EMS controllers. Except where otherwise noted, all HVAC equipment installed for the project will be controlled by and connected to the Campus / District EMS.

COMMON WORK RESULTS

Common Work Results for HVAC, including piping materials, transition fittings, dielectric fittings, sleeves, escutcheons, grout, demolition, motors, painting and finishing, concrete bases, vibration isolation, identification, meters and gauges, valves, supports and anchorages, will be per Owner standards and Project specifications.

TESTING, ADJUSTING AND BALANCING

Testing, adjusting, and balancing agent will be certified by AABC or NEBB and will perform TAB procedures per Owner standards and Project specifications.

AIR CONDITIONING AND HEATING UNIT (CLASSROOMS)

- Location: Roof mounted
- Type: Packaged heat pump air conditioning units.
- Manufacturer: Lennox, Trane or approved equal.
- Model: As required to meet performance criteria.
- Supply air and return air to be ducted through ceiling diffusers with ductwork located above the ceilings.
- Air Conditioning Units to provide heating and cooling to each space in accordance with the requirements of Title 24 for non-residential building and equipment design. Each bidder shall furnish complete specification details regarding manufacturer's model number, and capacity to the items, which are furnished.
- Provide programmable thermostats for heating and cooling and day and night operation. Thermostat to be compatible with HVAC unit and EMS.
- Filters: Manufactured by Tridem (no substitution allowed).

PACKAGED TERMINAL HEAT PUMP (IT/ELECTRICAL ROOMS)

- Location: Through exterior wall
- General: Self-contained unit. Factory assembled and tested.
- Manufactured by Lennox, Trane, or approved equal.
- Cabinet: 18 gage chassis and wall sleeve with corrosion resistant finish. Cabinet shall be High Impact Polystyrene. Provide polycarbonate adjustable louvers. Color shall be selected by Architect.
- Refrigeration: Compressor shall be fully hermetic, rotary type, internally isolated within a steel shell and externally isolated on combination spring and rubber isolators.
- Tubing connections to compressor shall be looped to further isolate vibration. Expansion valve. Coils shall be

seamless copper tubing mechanically expanded into aluminum plate fins. Tested at 600 psi.

- Condensate Removal: Provide condensate pump, as required
- Motors: Separate motors for the evaporator and condenser fans. Permanent split capacitor.
- Controls: Remote wall mounted thermostat. Adjustable outside air damper with EMS controller card.
- Operational mode switch behind hinged panel to provide the following functions: Low fan, High fan, High and Low Cool.

SPLIT SYSTEM HEAT PUMP (IT/ELECTRICAL ROOMS)

- Location: Roof mounted exterior unit, Wall mounted interior unit
- Factory assembled and tested.
- Manufactured by Lennox.
- Refrigeration: Compressor shall be fully hermetic, rotary type, internally isolated within a steel shell and externally isolated on combination spring and rubber isolators.
- Condensate Removal: Provide condensate pump, as required
- Controls: Remote wall mounted thermostat with EMS controller card.
- Operational modes: Low fan, High fan, Temperature setpoint.

DUCTWORK AND ACCESSORIES

Comply with SMACNA HVAC Duct Construction Standards, Metal and Flexible (SMACNA), Third Edition, 2005 and NFPA 90A.

Ductwork shall be galvanized steel with G-90 zinc coating, ASTM A 653, minimum 26 gages, unless otherwise noted. Acoustically lined duct minimum 20 feet from fans and/or sound traps will be specified where required. Duct elbows will have smooth radius curves or turning vanes.

Concealed, indoor supply ductwork will be insulated with fiberglass blanket and FSK jacket.

HVAC louvers, backdraft dampers, relief dampers, manual volume dampers, control dampers, combination fire / smoke dampers, duct connectors, silencers, turning vanes, access doors, and flexible duct shall meet Owner standards and Project specifications.

SEISMIC RESTRAINTS

HVAC piping and ductwork support shall comply with the current version of the SMACNA Seismic Restraint Manual, Guidelines for Mechanical Systems.

EXHAUST FANS

Restrooms and Custodian Rooms will be ventilated with mechanical exhaust, utilizing roof-mounted up-blast exhaust fans ducted to exhaust registers. Fans are monitored and controlled by the EMS. Basis of Design is Greenheck, Cook, or Penn.

GRILLES AND DIFFUSERS

General ceiling supply diffusers to be steel, plaque face. Return and exhaust grille to be steel, louver face. Diffusers and grilles to be compatible with ceiling and wall conditions, filed painted where required to match custom wall colors.

All diffusers and grilles to be provided with manual dampers, or remote balancing dampers, unless otherwise indicated.

INSTALLATION OF HVAC AND EXHAUST EQUIPMENT

Install units and thermostats complete with all accessories, all required exhausts and registers as per manufacturer's written instruction.

Complete all wiring to load center. Disconnect switch shall be located within the unit.

Ductwork to be Class 1 insulated duct, MHP 25 R8

Condensate shall drain to sanitary system or drywell. Coordinate with Plumbing and Civil Drawings.

The completed job shall be demonstrated by the Heating and Ventilating Contractor to the Owner's maintenance representative to function in accordance with the manufacturer's design, and to the complete satisfaction of the Owner.

The Contractor shall provide a test and balance report for all conditioned building areas. Adjust systems as needed to perform as designed and per code.

The Contractor shall replenish all refrigerant and oil lost for a period of one (1) year without charge to the Owner.

ELECTRICAL

GENERAL SCOPE

The capacity and condition of the PG&E utility electrical service to the existing school is to be confirmed. Phase 1 Modular Classroom building may require a new utility electrical service or an increase in the service capacity for the school.

Phase 1 New modular classroom building will include a complete electrical. Lighting, and addressable fire alarm system, including a rooftop photovoltaic system and a battery energy storage system consistent with California Energy Code requirements.

~~Phase 2 Interior improvements at Building F will require electrical and fire alarm system modifications to meet revised space conditions, as well as new interior lighting systems.~~

ELECTRICAL SYSTEM CRITERIA

The following criteria shall govern; all exceptions are to be cleared with the Architect, Engineer and district Standards prior to proceeding.

All design, equipment and installations of electrical systems shall comply with:

- a. 2025 California Electrical Code (CEC).
- c. 2025 California Building Code (CBC).
- d. 2025 California Energy Code Title 24.
- e. California Fire Code.
- f. Americans with Disabilities Act (ADA).
- g. Institute of Electrical and Electronic Engineers (IEEE).
- h. American National Standards Institute (ANSI).
- i. National Electrical Manufacturer's Association (NEMA).
- j. Underwriters' Laboratories, Inc. Listing Service (U.L).
- k. National Fire Protection Association (NFPA).
- l. American Society of Testing and Materials (ASTM).
- m. IES Handbook 10th Ed. (for lighting / egress lighting).

Furnish and install all electrical conduit, outlets, wire, and switches, panel board, fixtures, lamps, services and appurtenances, including wiring and electrical connections to heating and ventilating equipment.

Panel boards: Panel boards in the building shall be plug-in "NPAB" circuit breaker type flush mount with hinged door and lock, sized with circuit breakers as required by C.E.C. to serve lighting, receptacle, A/C and other load circuits and shall include automatic main circuit breaker. Panels shall be furnished complete with service extension to weatherproof pull/splice junction box where shown on plan with a 10' coiled, taped, and tagged pigtail.



Conductors: Shall all be insulated copper. For #12 and #10 use solid copper. For #8 and larger, use stranded copper. All wires to be type THHN.

Conduit: Shall be PVC or armored MC cable for branch circuits where permitted by code in lieu of rigid raceway. MC Cable shall be installed within walls or other concealed locations.

Electrical Outlets: Shall be in locations indicated on drawings and as needed based on occupancy of the room.

Grounding and testing / reports of all building components shall be done by modular manufacturer.

Modular manufacturer will install all power conduit and wiring to the electrical outlets in all rooms and to the outside GFCI boxes. This includes all pathways, raceways, boxes and conduits for all the low voltage scope including the fire alarm, clocks, AV, speakers, intercom, voice, data, cable, cameras, security, IDF and pull strings in all locations. The site contractor will be responsibly for all low voltage wiring for fire alarm, AV, speakers, intercom, voice, data, cable, cameras. District contractor will install security system wiring and devices. Clocks are battery powered.

JOB CONDITIONS

Contractors shall install new work and connect to existing infrastructure with minimum interference to existing facilities. Temporary shut-down of existing services shall be made at times not to interfere with normal operation of existing facility and shall be done with written consent of District. Fire alarm, emergency systems, and call center shall not be interrupted at any time.

ELECTRICAL DESIGN CRITERIA

Load Calculation:

• Lighting	1.0W/SQF.
• Power	2.0W/SQF.
• Mechanical	4.0W/SQF.
• Plumbing	1.0W/SQF.
• Misc Loads	1.0W/SQF.
Total W/SQF.	9.0W/SQF.

DESIGN VOLTAGES

- 480/277Vf, 3 phase, 4 wire for power distribution to building
- 208V, 3 phase, 3 wire for all motor loads 1HP or larger
- 120/208V, single and three phases for motors 3/4HP or smaller

- 120V for receptacles
- 120V for lighting

POWER DISTRIBUTION & ELECTRICAL SERVICE

Confirm and verify that the existing school main electrical switchboard and service has space and capacity to serve the new modular building electrical loads in addition to existing campus loads.

A new power service or upgraded power service may be required from PG&E

The new modular classroom building will be served from the new 800A 120/208V 3Ph, 4W switchgear "MSB-1" located at the building near the main electric room. Main circuit breaker should be 100% rated.

Distribution panel boards will be located in the main electrical room.

All cables and wiring will be routed in conduits concealed in all public spaces and finished areas.

Minimum conduit size will be 3/4" except for buried conduits which shall be a minimum of 1".

All 120V power receptacle for general use will be rated 20-ampere with ground connection and Stainless-steel cover plate in all storages/utilities areas except the public areas where a plastic cover plate with proper color finish can be utilized.

All cover plates to be provided with an engraved phenolic nameplate which identifies the panel and circuit number feeding the device.

Circuits shall be arranged as follows:

1. No more than (6) general use duplex receptacles on one circuit.
2. No more than (4) computer duplex receptacles on one circuit.
3. No more than 12A load in a 20A lighting circuit (120V)
4. Special equipment shall be circuited per their specific requirements. User to provide all electrical data needed for special equipment.
5. Controlled receptacles will be provided per T-24 requirements, where applicable.

All mechanical and plumbing equipment shall be circuited per Manufacturer's recommendations.

Loads will be disaggregated for discrete metering of such as lighting, HVAC, and receptacles and miscellaneous loads.

PHOTOVOLTAIC AND BATTERY SYSTEM

The new modular classroom building will be provided with a new photovoltaic (PV) power system, located on the roof and Battery Energy Storage System (BESS) located at grade exterior to the building. PV and BESS system shall be sized per 2025 California Energy Code prescriptive requirements for a school in climate zone 12.

The output of the PV system as well as BESS system shall be connected at MSB-1 in the new modular classroom building. Visible blade disconnects shall be provided between the output of the PV system and MSB-1, for safe disconnection of solar system from switchboard.

ELECTRICAL/MECHANICAL DISTRIBUTION SYSTEM

The new building will have new power distribution and power panels. New branch circuits will be provided where required for receptacles and equipment. A 208V, 3-phase feeder will be provided for the elevator. New mechanical equipment will be served as follows:

- Rooftop Units 208V 3-pole feeders
- Split Systems 208V 3-pole feeders or 208V 1-pole feeder
- Exhaust fans 120V 1-pole feeders
- Fractional HP motors 120V 1-pole feeders

FIRE ALARM SYSTEM

New addressable fire alarm system will be provided for the new Classroom Building conforming to the requirements of the latest California Fire Code, DSA and NFPA 72 standards – manufacturer shall match existing school district system standards. New fire alarm system will utilize individual addressable manual pull stations, photoelectric smoke detectors, heat detectors, and addressable monitor & control modules, and provide complete notification appliances coverage consisting of speakers and strobes. The fire alarm system will monitor all sprinklers supervisory and water flow switches and interface with HVAC and smoke fire dampers. The fire alarm system shall be an extension of the existing campus system by tying into the existing school fire alarm system.

DSA and the State Fire Marshal shall approve Fire Alarm System prior to installation, modular manufacturer to anticipate in the bid proposal pathway for all fire alarm devices.

Fire Alarm to be Honeywell Gamewell-FCI. No alternative products will be accepted.

LIGHTING DESIGN

GENERAL

The lighting design for this project shall meet code standards and shall be designed with the best interest of the children, teachers and facility team in mind. Standards shall be developed based on design ideas and goals generated during the schematic and design development phases to achieve agreed upon aesthetic and budgetary goals. The lighting is one component of a cohesive whole that needs to act in harmony with all the other elements of the building.

EXTERIOR LIGHTING

Exterior lighting and controls will be provided as follows:

- All exterior lighting fixtures shall be dimmable, static white LED, with a color temperature of 4000K, a minimum CRI of 80; and be verified with District Standards (if supplied).
- Fixtures will be selected for efficiency, durability and maintenance ease.
- Mounting requirements to be coordinated with Architect.
- All required hardware for complete installation shall be provided.
- Finishes as selected by Architect.
- Illumination levels shall be designed in accordance with The Lighting Handbook, 10th Edition, published by the Illuminating Engineering Society of North America (IESNA).
- Lighting power densities shall comply with the 2025 California Energy Code T24 and any other applicable local city codes.

SAFE DISPERSAL & EMERGENCY EGRESS PATHS

~~High performance, multi-head floodlights with various beam distribution options, 360° rotation and full adjustability, mounted on 30-foot poles, spaced to achieve a minimum maintained light level of 1.0fc at grade (BEGA "77653" fixture head + "2908FR" pole or similar).~~

EXISTING BUILDINGS (A, D & F)

~~Replace existing wall mounted lights one for one, utilizing existing power locations (BEGA "28 383 " or similar).~~

EXISTING SHIPPING CONTAINERS

~~Provide one wall mounted area light on the exterior wall facing the emergency egress path, extending power from nearest available location (BEGA "28 383 " or similar).~~

NEW L-SHAPED MODULAR BUILDING (EXTERIOR CANOPIES)

Surface mounted adjustable cylinder floodlights mounted to sloped canopy, aimed straight down (B-K LIGHTING "Denali" or similar).

GENERAL EXTERIOR LIGHTING CONTROLS

All exterior site and building mounted light fixtures installed as part of the new construction, the renovation of existing buildings and

adjacent site improvements, shall be controlled by a new digital network lighting control system (nLight or similar). Controls shall provide the ability to automatically reduce light levels based on night-time occupancy per the latest Title 24 requirements. Lighting control panel shall be provided with module for interface with building/campus energy management system, as required.

INTERIOR LIGHTING

Interior lighting and controls will be provided as follows:

- All interior lighting fixtures shall be dimmable, static white LED, with a color temperature of 3500°K, a minimum CRI of 80, and be verified with District Standards (if supplied).
- Fixtures will be selected for efficiency, durability, and maintenance ease.
- Mounting requirements to be coordinated with Architect.
- All required mounting hardware for complete installation shall be provided.
- Finishes as selected by Architect.
- Illumination levels shall be designed in accordance with The Lighting Handbook, 10th Edition, published by the Illuminating Engineering Society of North America (IESNA).
- Lighting power densities shall comply with 2025 California Energy Code T24, CHPS program requirements and any other applicable local city codes.

EXISTING BUILDING F RENOVATION

- ~~ACT Ceilings: Recessed 2x4 "flat panel" type fixtures (LITHONIA "EPANL" or similar).~~
- ~~Exposed Ceilings (Reception & Corridor): Pendant mounted direct/indirect cylinders (SENSO "Leto 11 Suspended Up/Down" or similar).~~
- ~~Gyp Ceilings (Restrooms): Recessed 4" general downlights (PORTFOLIO "LD4C" or similar).~~
- ~~Back-of-House Spaces: 4' pendant or wall mounted lensed light strips (LITHONIA "CLX" or similar).~~

NEW L-SHAPED MODULAR CLASSROOM BUILDING

- ACT Ceilings: Recessed 2x4 "flat panel" type fixtures (LITHONIA "EPANL" or similar).
- Exposed Ceiling (STEM Classroom): Pendant mounted decorative industrial high bay (Luminis "Hollowcore HC1610" or similar).

EXIT SIGNS

Recessed, pendant, or wall mounted edge-lit exit signs (Sure-lites "ES" or similar) shall be connected to the emergency inverter for emergency back-up. Coordinate with architectural drawings for locations and chevron direction. Exit signs shall be Title 20 compliant.

LIGHTING LEVEL DESIGN TARGETS

Classrooms: 30-35 fc
Corridors/Hallways: 10-20 fc
Lobby: 15-25 fc
Admin: 35-40 fc
Restrooms: 15-20 fc
Electrical/Mechanical Rooms: 20-30 fc
Storage/Janitor Closet: 10-20 fc
Elevator Pit: 10 fc
Exterior Pedestrian Walkways: 1 fc minimum

INTERIOR LIGHTING CONTROLS

Lighting controls will be provided through a digital network lighting control system in conformance with T24, and in support of Campus function, as follows:

- Controls will be digital and addressable, with software that will permit web interface and remote control.
- All lighting controls will be networked for overall control and programmability.
- All rooms shall utilize local manual dimming control in conjunction with occupancy sensors.
- Rooms with skylights and vertical glazing (daylight) shall be provided with automatic daylight sensors. (nLight or similar).
- Daylight zones will be provided with automatic photocell dimming to maintain overall light levels taking advantage of available sun light, also referred to as day light harvesting.
- Classrooms will be provided with multi-scene lighting capabilities programmed for each specific classroom function. A lighting control station will be located at the room entry as well as at the teacher's station.
- Corridors shall be provided with dimming to allow uniform dimming during non-peak operational hours. On/off control (keyed switches) and occupancy sensors to be supplied, as well.
- Restrooms will be provided with on/off control (keyed switches) and occupancy sensors.
- All support areas (i.e. building support, custodial closets, storage areas, etc.) shall be equipped with local dimming and occupancy sensor control, per T24.
- Mechanical/electrical/IDF/MDF rooms to be local toggle on/off control only, per T24 requirements.
- A lighting controls relay panel will be located in the Main Electrical Room, which can tie into the building's Energy Management System.
- Lighting power densities will be minimized to help contribute to Overall Building energy performance, as well as meet or exceed the California Energy Code.

Lighting controls to be manufactured by Pelican, Watt Stopper, GE, or approved equal.

EMERGENCY LIGHTING SYSTEMS

Emergency lighting will be provided for the existing buildings, new building and adjacent site improvements, where required, via a central lighting inverter located in the Electrical Room. This inverter panel will be sized with adequate battery capacity (standard 10-year battery life, 5-year warranty) to power the fixtures required to achieve a minimum maintained light level of 1.0 footcandle at grade, along all identified paths of egress during normal power, and an average of 1.0 footcandle at grade during emergency power. Emergency lighting will be provided with UL924 devices to allow dimmed lights to come on at full output in the event of a power outage.

LOW VOLTAGE AND TECHNOLOGY

CODES AND GUIDELINES

The communications, networking clock/bell, security and audio visual systems for the new Classroom Building scope at will be designed in accordance with the applicable governing codes and regulations as listed below as a minimum including:

- Lodi Unified School District Standards.
- California Code of Regulations (CCR) 2025
- California Department of General Services, Division of the State Architect – Access Compliance (DSA)
- Office of the State Fire Marshal (SFM)
- National Fire Protection Association (NFPA-13)
- Federal and State Occupational Safety and Health requirements
- BICSI Standards
- EIA/TIA Standards

ADDITIONAL REFERENCED STANDARDS AND GUIDELINES

- NEMA (National Electrical Manufacturers' Association) ANSI (American National Standards Institute)
- ASTM (American Society for Testing and Materials) ICEA (Insulated Cable Engineers Association)
- IEEE (Institute of Electrical and Electronic Engineers)
- ANSI/TIA/EIA Commercial Building Telecommunications Cabling Standard 568 B.1 & B.1 1, B.2 & B.2 2, B.3
- ANSI/TIA/EIA Customer Owned Outside Plant Telecommunications Cabling Standard 758 & 758 1
- ANSI/TIA/EIA Commercial Building Standard for Telecommunications Pathways and Spaces 569 A and Addenda 1 through 7
- ANSI/TIA/EIA 606A Administration Standard for the Telecommunications Infrastructure of Commercial Buildings, 2002
- Occupational Safety and Health Act Standards (OSHA)
- NFPA 70 National Electrical Code (NEC) (Unless superseded by local codes)

A. Technology Distribution Systems

1. Telecommunications Utility Distribution

- a. Provide (2) 4" conduits per utility provider (AT&T or similar TBD), including additional requirements of the local telecommunications utility provider in Stockton, CA to the relocated MPOE located in existing Building A.

2. Technology Systems Backbone Distribution

- a. Underground technology distribution system shall be 4" underground conduits. Fill ratios shall not exceed 40% fill or exceed minimum bend radius. Conduit must not include more than three 90-degree bends (270-degree maximum) without a pull box, hand-hole, or manhole. Bends must be sweeping bends with a radius not less than 10 times the inside diameter of the 4-inch conduit. All outside plant backbone cables shall be labeled at each end and in each maintenance hole and/or handhole that they

pass through. Labels shall be metal tags and waterproof, so they do not decay when exposed to the elements. All labels shall be visible at point of access. All labels shall be in accordance with ANSI/TIA-606-B standards. Place outside plant fiber cabling to allow for service loops in the cable as follows: one loop in each maintenance hole and 10' at each TR end.

- b. Backbone distribution for technology systems will be located in joint trenches but utilize separate maintenance holes and/or handholes.

- 1) Telecommunications conduit:

- (a) ISP to Main Data room (ER/MDF): two (2) ea. 4" conduit per utility provider.

- (b) MDF to IDF room(s) (TR/IDF): Four (5) ea. 2" conduits.

- 2) Telecommunications cabling:

- (a) ISP to Main Data room: Cable by utility service provider.

- (b) Main Data room to TR/IDF rooms (TR/IDF): One (1) ea. 12-strand OM4 fiber optic cable.

B. Structured Cabling System (SCS)

- 1. Backbone Cabling – Fiber Optics (FO)

- a. The ER's network equipment will have connectivity to each TR within the facility with a tight buffered indoor/outdoor rated 12 strand 50-micron OM4 multi-mode fiber optic backbone cable. Fiber optic backbone cables will be routed for protection and identification within (1) 1" corrugated innerduct to the point of termination on both ends (i.e. ER/MDF, TR/IDF) Fiber optic strands will be terminated by means of a fusion spliced ceramic LC connector and configured in a 12-port coupler panel in rack-mounted fiber optic termination unit (FTU). All unused slots within the FTU will be cover by a blank panel by the same manufacture as the FTU.

- 2. Backbone Cabling – Copper (Cu)

- a. Shall be Category 5e and installation must be in compliance with all EIA/TIA standards.
 - b. The number of available wire pairs to each IDF must account for a minimum of 2 pairs per classroom. A minimum of 25 pairs of cable shall be used to any building encompassing an office. Each pathway, upon the population of cable, shall have enough wire pairs to accommodate all existing and future IDF's in that pathway's route.
 - c. Cable must be rated for environment that it will be installed in, such as plenum, riser or outdoor rated.

- d. Only Category 5e 110 punch blocks will be allowed for terminations. Backbone pairs shall be terminated at the top left of the blocks installed in the IDF.
 - e. Each copper backbone cable shall be machine labeled and printed EIA/TIA 606 Section 8 compliant at each end with its respective IDF number/letter. All binder groups shall be tied off with their respective identifying ribbon at every breakout point.
 - 3. Horizontal (Hz.) Category Cabling General Requirements
 - a. The ER/MDF & TR/IDF(s) rooms are configured to provide digital switching for LAN/WLAN infrastructures, to source distribution cabling Work Area Outlets (WAO) to VoIP telephones, personal computers (PC), Wireless Access Points (WAP), network printers, security surveillance cameras (IPCCTV), and any IP enabled device within the campus. The SCS Hz. Category cable will be category 6A minimum to each of these WAO locations. Cabling, jack, and faceplate manufacturer shall be Panduit.
 - 1) Blue Category 6A type 4 to each WAO location. Jack color: White.
 - 2) Two (2) purple Category 6A and one (1) grey Category 6A cable to each workstation.
 - 3) Green Category 6A cables to intercom Speakers/Horns and IDF/MDF. Jack color: Green
 - 4) Yellow Category 6A cables to each camera or access control devices and IDF/MDF location. Jack color: Yellow.
 - 5) Purple Category 6A cables to each Promethean Boards/LCD Displays location. Jack color: Beige.
- C. Telecommunications Spaces
 - 1. Equipment Room ER/MDF and TR/IDF
 - a. The MDF will house both the Entrance Facility/MPOE and the ER/MDF equipment rack.
 - b. The ER/MDF rooms will consist of two (2) Middle Atlantic SR-40-28 floor standing relay rack, 28" depth. Relay racks are typically installed for the termination of horizontal data cabling, fiber optics and Owner Furnished/Owner Installed (OFOI) network equipment (e.g. LAN, WLAN, etc.) Ensure the required clearance around the racks provided for the equipment installed.
 - c. Racks shall have vertical lacing bar Middle Atlantic Lace-44LP. Equipped with Accessory Quiet fan for cabinet Middle Atlantic QFAN.

- d. Rack shall have Panduit Paint piercing ground washer kit, ground strip kit, and 24" jumpers: RGW-100-1Y, RGS134-1Y, RGEJ624PHY.
- e. A horizontal wire management will be provided above and below each patch panels and below fiber termination unit.
- f. Provide two (2) ea. 120VAC/20A outlets or (1) ea. 120VAC/30A outlet above rack(s).
- g. Provide two (2) ea. rack mounted UPS up to 5KVA per equipment rack (30-minute runtime minimum).
- h. Use of zip-ties is prohibited. All cable bundles or strapping shall utilize velco.
- i. All equipment rooms shall have dedicated cooling unit with an average room setting of 68-degree Fahrenheit.
- j. Rooms shall have a laminated print that shows one-line connectivity to field device locations. Print shall include all device labels.
- k. All fiber optic and category cabling shall be tested (Fluke or equal) and provide narrative / PDF summary.

2. General Room Requirements

- a. The designated rooms shall be equipped with A/C grade, 3/4"-thick plywood mounted to all walls, and painted with two coats of white fire-retardant overcoat. Wall space will be utilized for, wall-mounted punch down blocks to establish a terminal area/cross-connect for analog communications, and a telecommunications grounding busbar interconnected with #2AWG copper bond conductor to the building ground electrode system as developed at the building distribution board/transformer facility. Power receptacles will be included for signal processing, uninterruptible power supply (UPS) loads.

3. Grounding and Bonding

- a. All Telecommunications Spaces racking shall be grounded & bonded in accordance with ANSI/TIA-607-C standards.

4. Conduit - Underground

- a. Contractor will use PVC schedule 40 underground, with rigid 90-degree elbows tracer tape placed 6" to 12" over the top of the PVC portions. Elbows shall have a radius of at least 10 times the diameter of the conduit used.
- b. See NEC for appropriate depths and pull box sizes.
- c. Should be next to existing underground where possible.
- d. All new underground conduits shall be (2) 4" plus (1) 4" spare, PVC to support data/voice/intercom/PA. All

new underground conduits shall be 2" PVC to support fire alarm.

- e. Areas near tree roots and other underground utilities will need to be hand dug. LUSD will identify those areas. Pull boxes are to have traffic lid covers (that say Data). The bottom will be grooved with drains installed. LUSD will provide diagrams upon request.
- 5. Conduit - Aboveground
 - f. All roof penetrations shall be approved by LUSD, before actual penetration is made.
 - g. All exterior conduit that is accessible shall be in rigid conduit.
 - h. A pull rope will be installed in all new and existing conduits used, including underground and interior conduit.
 - i. Firewall penetrations will extend through the wall a minimum of 12 inches.
 - o Shall be sealed around the outside with firecaulk.
 - o Shall be sealed around the inside with firecaulk duct seal (the depth shall be 50% diameter of the conduit).
 - o No innerduct shall be installed in a firewall penetration.
 - j. Conduit size to be determined by EIA/TIA Standards leaving room for future expansion.
 - k. EMT conduit shall be used in the following interior areas:
 - o Gyms.
 - o Multi-Purpose rooms.
 - o Industrial Arts buildings.
 - l. LB's shall not be used in new and existing conduit for data applications.
 - m. All exterior boxes/mud rings shall be protected by a weather-proof cover.
 - n. Data/Voice conduits shall service LUSD's voice and managed IP network only.
- 6. Portable Classrooms
 - o. All conduits to be installed on the exterior of a portable will be approved by LUSD personnel before installation.
 - p. The center beam of a portable shall not be penetrated.
- 7. Promethean Boards
 - q. Wall mounted Promethean Boards shall be installed in all classrooms
 - r. HDMI cabling shall be from Promethean Board to the teaching station with a CAT6A connection. An additional HDMI connections shall be installed directly below the board with a CAT6A connection mounted in an accessible location behind the board. HDMI cables mounted in raceway must be able to

pass a clean digital signal, with an allowance for a standard quality user patch cable to span 35 feet.

o For example: If the user connects a 35-foot cable to the user interface/wall plate and the length of the infrastructure cable between the wall plate and the projector is 10 feet, then the total length of digital transmission is 45 feet; therefore, the installer must demonstrate that the infrastructure cable can deliver a clear picture while being extended with a 35-foot HDMI male-to-male patch cable. Sound must also be demonstrated through jacks in faceplates.

- a. User connection interface/wall plate will contain, one VGA, one HDMI, and one 1/8 stereo audio jack. Active faceplates will be used for VGA/HDMI connection.
 - b. User connection interface/wall plate will contain one VGA, one HDMI, and one 1/8 stereo audio jack. Active faceplates will be used for VGA connection. Power will be installed high on the wall within two feet of the projector.
8. Clocks
- c. Clocks are American Time battery powered PT#E56BAQD304-J20.
9. Intercom
- d. Intercom speakers – Pathways will be installed by Site Contractor. District contractor will provide and install wiring and devices.
 - e. Exterior Intercom speakers shall be Algo PoE SIP Ceiling Speakers recessed 8188.
 - f. Interior Intercom speakers shall be Algo 8180 at Classrooms.
10. Intrusion Alarm
- g. Security System – Pathways will be installed by the Site Contractor. District contractor will provide and install wiring and devices.
 - h. The system is based on Ademco panels, keypads, and devices.
 - i. Telco Interconnect:
 - Shall be clearly identified by the CSID noted on the keypad for each COM panel.
 - Each new COM panel shall have a dedicated Measured Business Line.
 - 3-pair 66 block style biscuit-blocks are preferred at point of termination for COM panel phone lines (No RJ31X's).
 - LUSD will only test Measured Business Line to 66 block style biscuit-block.
 - j. Wiring
 - Shall be supported by D rings, Velcro, or J hooks.
 - Pathways should not be shared with data cabling.

- When overriding existing voice or data cables in a box or conduit, Technology Services must be contacted and give approval to do so.

11. Access Control & Video Safety

- a. Access control devices and security cameras will be: Connected directly on the LUSD network. Operations, VLAN 99.
- b. All access control nodes should be fed from the MDF, when the run is within EIA/TIA specifications.
- c. NVR will be housed in the Data Center and rack mounted.
- d. Access control card readers and other access devices will be:
 - o Connected directly on the LUSD network. Operations, VLAN 99.
 - o Powered by LUSD POE switches.
- e. All locks shall be configured for "Fail Secure" wiring.
- f. Security cameras – Pathways will be installed by the Site Contractor. District contractor will provide and install wiring and devices.
- g. Security cameras shall be WiseNet QNV-8080R – 5 Megapixel H.265 Dome IP Camera for both exterior and interior.
- h. Security cameras will be placed on their own private network.
- i. The installation location of the NVR is to be coordinated with Technology Services. Ideally,
- j. the NVR will be installed in the MDF where security and environmental conditions are monitored.
 - o NVR's are to have two NICs
- k. One placed on the private network
- l. The other on LUSD's Operations network.

SITE CONSTRUCTION – CIVIL / LANDSCAPE

GENERAL

Proposed site improvements for Elkhorn School are concentrated around the new classroom buildings, the existing hardcourts, and the existing / proposed outdoor spaces. Improvements adjacent to the buildings consist of pedestrian paving, seating areas, and landscaping. Additional improvements are proposed at the existing drop-off zone in the parking lot and new parking lot striping. The existing approved fire lane layout will be revised to incorporate the layout of the new building.

Elkhorn School's scope will require the extension of a City sewer main from the intersection of Whistler Way and Davis Road, approximately 0.2 miles south of the site. Per the City of Stockton's requirements, the project scope will also include construction of full roadway improvements (extension of asphalt driving lanes, concrete curb gutter and sidewalk, vehicular driveway, and other utility improvements) along the school's frontage. No improvements will be required for the opposite (eastern) side of Davis Road along the school's frontage.

The site will be designed to comply with the latest edition of the applicable codes recognized in the California State Building Codes and Lodi Unified School District Standards.

FEMA map no. 06077C0315F indicates that Elkhorn School is within Zone X (0.2% annual chance flood hazard). Minor grading and earthwork will be provided to support improvements around the exterior of the improvements.

DEMOLITION

Demolition will include portions of the existing asphalt hard court area, decomposed granite playing field area, landscaped areas, grass/turf areas, and portable classroom building removal. All existing utilities and improvements not impacted by the development will be protected.

GRADING, EARTHWORK AND ACCESSIBILITY

The existing site has gentle slopes, with a grade change of roughly 2 feet from Davis Road to the western property lines. Most on-site areas slope out to the existing grass field areas to the west and south of existing buildings and hardscape areas. New site areas will be graded to generally follow existing site contours where possible.

Planting areas adjacent to buildings shall be sloped 5% minimum away from the building. Hardscape areas adjacent to building shall be sloped 2% away from building. Along accessible paths-of-travel, longitudinal grades shall not exceed 5%, and cross slopes shall not exceed 2%. Accessible pedestrian ramps shall have a 2% maximum cross slope and an 8.3% maximum slope along the path-of-travel.

PAVING

Asphalt concrete (AC) shall be Type A, 1/2" maximum medium hot mix conforming to Section 39 of the State Specifications. Aggregate base (AB) shall be Class II conforming to Section 26 of the State Specifications compacted to 95% relative compaction. Pavement sections shall be as specified in the Geotechnical Report for the project.

Paving will be provided for utility trench restoration, construction of new hardscapes, playground/basketball courts, fire lane, minor surface restoration of existing accessible stall areas (following striping removal), and parking adjustments for the drop-off area. Thirty days after placement of AC pavement, a seal coat shall be applied to the entire pavement areas to improve the life expectancy of the pavement, and thereby limiting future maintenance costs. Following seal coat placement, play court striping and drop-off zone area striping shall be applied.

UTILITIES

STORM WATER SYSTEMS AND MANAGEMENT

The majority of site drainage runoff flows overland to the grass field area, a portion of which flows eventually to a roadside ditch located to the south of the school along Davis Road. There are several smaller inlets located among the existing buildings which appear to pick up roof drainage from downspouts directed onto the pavement. Several of these inlets appear to connect directly to inlets located within the Davis Road right-of-way. Based on available as-builts, there is a 21-inch diameter storm drain lateral extended to the site at the southeast corner of the southern parking lot. Limited information was available at the time of the BOD regarding on-site storm drain piping layouts.

As a part of storm drainage improvements, a new 12-inch diameter storm drain line will be constructed connecting to this 21-inch lateral. On-site drainage will be directed to a series of underground inlets, and into a series of bioretention basins. New inlets will be installed where required to pick up roof drainage from existing buildings. Initial reviews of the storm drain as-builts indicate that the 21-inch storm drain lateral will be deep enough such that the on-site storm drain system will not require a lift station.

Means and methods for storm water treatment shall be per the City of Stockton requirements. As part of the improvements, two bioretention basins will be placed to the northwest and south of the new building, to collect and bio-treat runoff from the new building and hardscape areas. The bioretention basins will be sized for new improvements only, and located to avoid saturation at building foundations. Treated runoff will discharge into the off-site storm drainage system located within Davis Road. Additional stormwater mitigation for surface improvements will be provided by self-treating landscaped areas.

Storm drain pipes shall be PVC (SDR 35) for pipes 4 inches through 15 inches in diameter. Area drain inlets shall be precast concrete and will range in size from 12-inch square to 18-inch square grates. Planter drains shall be 6-inch or 8-inch round black atrium drains. Storm drain cleanouts shall be installed at changes in pipe direction and at intervals of 100 feet maximum. Storm drain manholes shall be 36 to 48 inches in diameter.

SANITARY SEWER

Campus sewage is currently captured in a series of septic tanks which lead to two on-site leach field systems. As a part of the on-site

improvements, all leach fields and septic tanks will be removed. A new 8-inch sewer line will be constructed to capture new building drainage; additional laterals will be routed through the center of the site to provide sewer service to existing buildings.

Currently, there is no sewer service in Davis Road. As a part of offsite improvements, a new 12-inch sewer line will be constructed from the intersection of Whistler Way and Davis Road, and extended through Davis Road up to the northern property boundary of the site. Initial reviews of the sewer as-builts indicate that the new sewer line to be placed in Davis Road will be deep enough such that the on-site sewer system will not require a lift station.

Sanitary sewer pipes shall be PVC installed with slopes equal to or greater than 1 percent minimum. Sewer cleanouts on site shall be installed at changes in pipe direction and at intervals of 100 feet maximum. Sewer manholes shall be either 36 or 48 inch diameter as required.

DOMESTIC WATER

Domestic water is supplied to the site via a 4-inch lateral with backflow preventer, located to the northwest of the site, which is connected to the City water main in Davis Road. As a part of site improvements, the new building water supply will be connected to the on-site water system.

At the time of this BOD, limited information was available regarding water demand for the building, as well as known on-site water line sizes. Based on similar building designs, a 3-inch water line size has been estimated for domestic water service. Further investigation will be required to determine the final water point of connection based on available line sizes.

Domestic water service laterals 3 inches and smaller shall be PVC (schedule 80). Domestic water service laterals larger than 3 inches and smaller than 8 inches shall be PVC C-900 Class 200.

FIRE WATER

There is currently no fire water system located on-site; the nearest hydrant is located just south of the existing vehicular access to the southern parking area. This hydrant is served off of a main located within Davis Road.

As a part of site and building improvements, a new 8-inch fire water line will be supplied to the site to provide sprinkler service to the building, and two new fire hydrants. No fire flow tests were available at the time of this BOD; line sizes and locations will be verified when this is made available.

At the time of this BOD, limited information was available regarding water demand for the building. Based on similar building designs, a 6-inch fire water line size has been estimated for the fire sprinkler systems.

Fire water lines shall be PVC C-900 Class 200. On-site fire protection shall include new fire hydrants, post indicator valves, fire department connections, check valves and thrust blocks as required.

GAS SYSTEMS

Refer to section 18.

ELECTRICAL SYSTEMS

Refer to section 20.

LOW VOLTAGE AND TECHNOLOGY SYSTEMS

Refer to section 21.

CONSTRUCTION STORMWATER MANAGEMENT

The amount of site disturbance, including new and replaced pervious/impervious areas, is expected to exceed 1.0 acres. Construction Site BMP's (Best Management Practices) and erosion protection will be implemented via a Storm Water Pollution Prevention Plan (SWPPP) prepared in accordance with the latest California General Permit.

EXTERIOR IMPROVEMENTS

PORTLAND CEMENT CONCRETE PAVING

General pedestrian & Vehicular paving thickness is to be per the Geotech report. For pricing purpose, provide 4" thick concrete w/ #4 rebar at 18" on-center both ways for pedestrian paving, 6" thick concrete w/ #4 rebar at 18" on-center both ways for vehicular.. Provide sawcut joints at 8'-0" max. spacing and expansion joints at 20'-0" max. spacing. Finish on concrete to be broom. Natural gray concrete. Speed dowels from Greenstreak. Provide thickened edge adjacent to planting areas.

PORTLAND CEMENT CONCRETE MOW BAND

6-inches wide x 8-inch deep. Provide (1) #4 rebar continuous. Provide sawcut joints at 10'-0" max. spacing and at corner conditions. Finish to be smooth trowel or match adjacent concrete paving finish.

TRUNCATED DOME PAVERS

Truncated domes are to be pre-cast 24x36 cast in place pavers by Access Tile, in-set in concrete paving.

PLAYGROUND STRIPING ON ASPHALT PAVING

Outline striping at playground elements: thermoplastic paint system. 3-inch wide. White color.

Price as alternate:

Infill colors: Streetbond SB 120 epoxy acrylic paint system. Colors vary.

CAST IN PLACE (CIP) CONCRETE FREESTANDING WALLS

18-inches wide x 18-inch high from finish grade, with chemical retarders on all exposed surfaces. Natural gray concrete. Required footing and reinforcing. Refer to plan for locations.

TUBE STEEL FENCE

Black powdercoat finish. Height per plans, 7'-0" min. No climb. 4-inch square end and corner posts; 8'-0" max. post to post spacing. Provide required fittings for a fully functional fence system.

TUBE STEEL GATES

Black powdercoat finish. Gates to be 6'-0" in height. 8'-0" wide double pedestrian swing gate within panic hardware, self-closing hinges, kick-plate, and associated hardware. 4'-0" wide single swing with panic hardware, self-closing hinges, kick-plate, and associated hardware. Hinge side post to be 4-inch square. Knox box mounted on hinge post, 3'-0" high from finish grade. Provide required fittings for a fully functional gate system.

LUNCH SHELTER

Metal PC lunch shelter. 30' x 60' eight post shelter by ICON. Color TBD

PLAY EQUIPMENT

Play structure to be IONIX or PowerScape by GameTime and include integral shade structure. Age group to be 5-12 years.

Basketball goals and tetherball posts to be by Porter Athletic. Refer to Site furnishings legend L0.01 for model numbers. Counts and locations per plans.

RESILIENT PLAYGROUND SURFACING

Poured in place rubberized surfacing by Surface America. Subgrade to be compacted aggregate base Colors TBD.

SITE LIGHTING

Refer to the Lighting Design section for detailed information. Light bollards in landscape areas to receive a concrete pad matching adjacent paving. 18"x18" size for pricing purposes.

SITE FURNISHINGS

Refer to site furnishings legend on L0.01 for product information. Locations and quantity shown on plans. Anchoring per manufacturer's recommendation.

Price as alternate:

Custom 36" diameter x 14" tall hexagonal precast pedestals by QCP.

Total: 40

Custom 16' long precast concrete picnic table by QCP, based on the model "Standard Picnic Table." Total: 1

LANDSCAPE IRRIGATION SYSTEM

Irrigation system for the entire campus is to be an ET Weather based control in compliance with California state requirements of the Model Water Efficiency Landscape Ordinance and applicable Santa Clara County or other agency with landscape, water, or storm water requirements. Remote control valve assemblies will be controlled using a two-wire system, if a new controller is required. Pop-up heads with stream bubbler nozzles for all trees; provide two (2) per tree. Pressure compensated spray heads for bioretention basins. Rotors for turf areas at head-to-head coverage. Drip tubing with built-in check valves will be used for all other planting areas. Spring check valves used when elevation difference exists between valves and zones, check valves shall also be used as required to prevent low head and low area drainage. Dri-Splice wire connectors for all wire connections. Provide and install a new electrical power pedestal if the existing controller is unable to accommodate new valves. Quick coupler valves every 50'. Valve box with stamped ID #. Modifying and adjusting the existing irrigation system to accommodate the new site design will be required. Use only Rainbird components.

ROCK MULCH AND COBBLE

Provide grouted cobble at downspouts as indicated on plans. Cobble to be grouted 4x8 rounded river cobble from local source (within 50 miles).

LANDSCAPE PLANTING

Plant sizes will be 1 to 5-gallon size groundcovers, and 5 to 15-gallon size shrubs; trees to be 36" box size. Sod for natural grass areas near student areas. Hydroseed at the softball field demolition areas. Root barriers from Deep Root- UB24-2 for all trees within 10' of hardscape. 3" dia. lodge pole stakes, 2 per tree. Small fir bark mulch from local source; minimum of 3-inch thickness in depth. Amended topsoil to 12" depth. Import topsoil as required to meet finish grade. Provide 90-day maintenance period and 1-year plant warranty. Provide area drains in each planting area.

EXISTING TREES PROTECTION

Protect in place designated trees to remain. Provide a temporary 6-foot-tall chain-link protective barrier at dripline during construction. Provide bark mulch or mat root protection where required so as not to compact root zone. Air spade excavation under driplines of trees only, or as directed project arborist. Provide temporary irrigation during construction.



END OF BASIS OF DESIGN

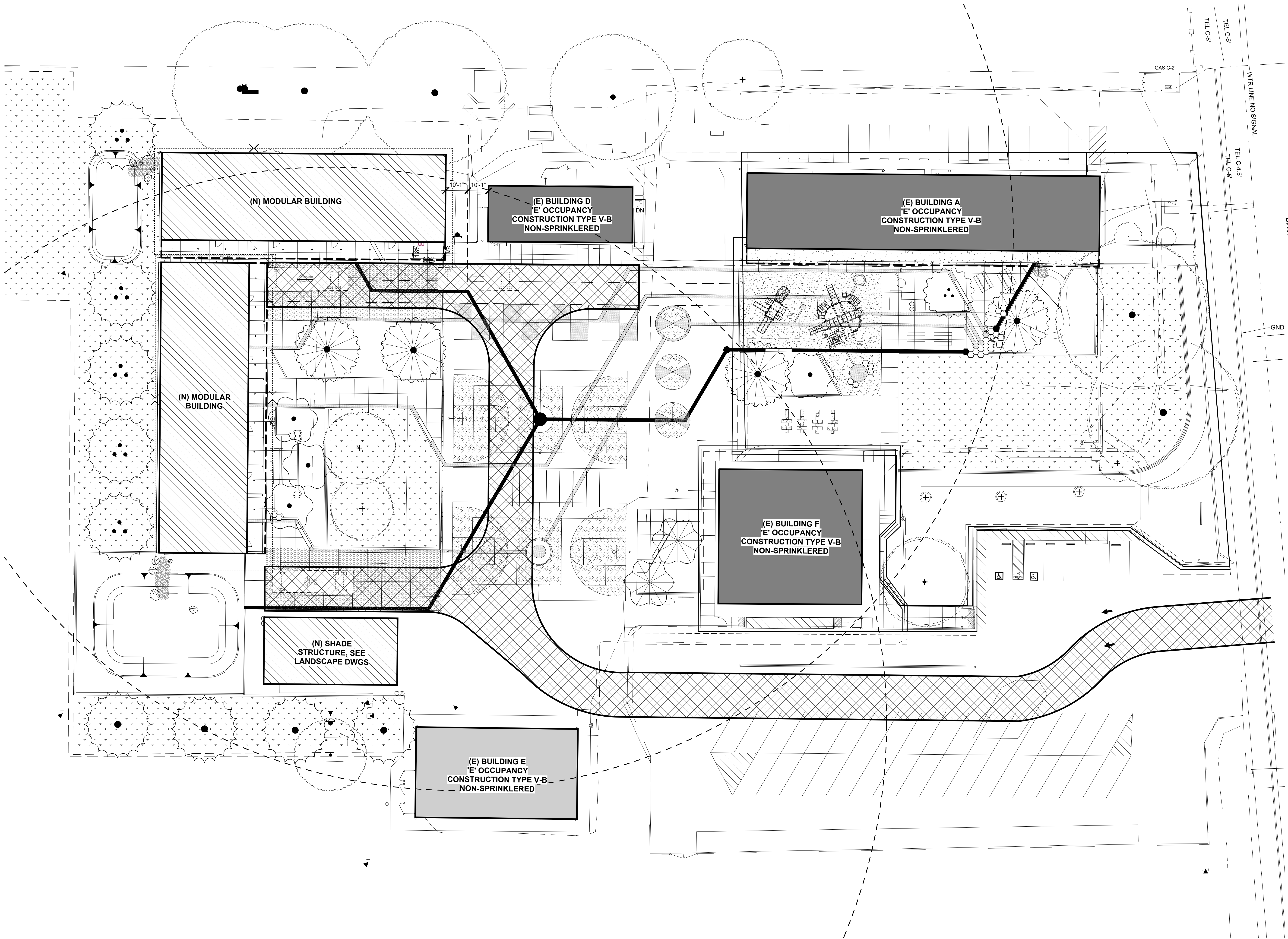
ELKHORN ELEMENTARY SCHOOL CAMPUS MODERNIZATION

10505 DAVIS ROAD, STOCKTON, CA 95209



PROJECT NUMBER
31942

Submittal	Date
100% SCHEMATIC DESIGN	08/29/2025
BID DOCUMENTS	11/21/2025



KEYNOTES

LEGEND

- NEW BUILDING UNDER SCOPE OF WORK
- EXISTING BUILDING TO BE MODIFIED UNDER SCOPE OF WORK
- EXISTING BUILDING NOT UNDER SCOPE OF WORK
- PROPOSED FIRE ACCESS LANE, 20'-0"W U.N.O., 20'-0" MIN. INSIDE RADIUS U.N.O.
- FIRE TRUCK
- FIRE HYDRANT, REFER TO CIVIL
- 150'-0" MAX. LENGTH HOSE PULL
- 250'-0" RADIUS FROM FIRE HYDRANT

GENERAL NOTES

- FOR ADDITIONAL INFORMATION ON SITE SCOPE, REFER TO CIVIL AND LANDSCAPE DRAWINGS.



ARCHITECTURE ENGINEERING INTERIOR DESIGN
LANDSCAPE ARCHITECTURE PLANNING
949-261-1001 Office
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ELKHORN ELEMENTARY SCHOOL CAMPUS MODERNIZATION

10505 DAVIS ROAD, STOCKTON, CA 95209

Developed for
LODI UNIFIED SCHOOL DISTRICT

Date

Revision

Date

Submitted
100% SCHEMATIC DESIGN
BID DOCUMENTS

Job Number

31942

Checked By

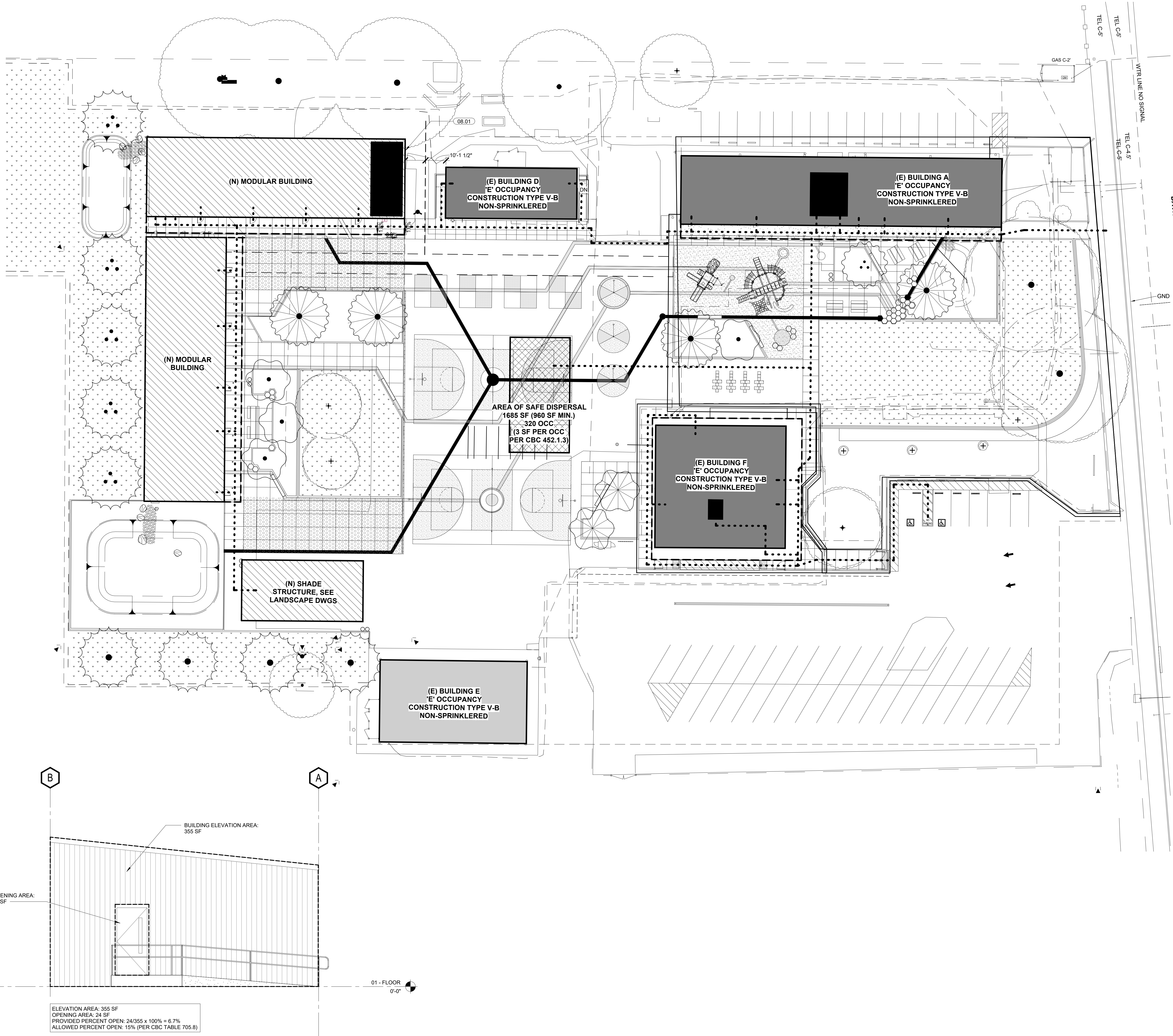
Checker

Scale

As indicated

FIRE ACCESS SITE PLAN

G1.01



KEYNOTES

08.01	NO OPENINGS ON THIS ELEVATION
-------	-------------------------------

LEGEND

- NEW BUILDING UNDER SCOPE OF WORK
- EXISTING BUILDINGS TO BE MODIFIED UNDER SCOPE OF WORK
- EXISTING BUILDINGS NOT UNDER SCOPE OF WORK
- SAFE DISPERSAL AREA
- ACCESSIBLE RESTROOMS UNDER SCOPE OF WORK
- ASSUMED PROPERTY LINE
- ACCESSIBLE PATH OF TRAVEL

CAMPUS PLUMBING ANALYSIS

MINIMUM NUMBER OF REQ PLUMBING FIXTURES (CPC TABLE 422.1)

CAMPUS POPULATION:	400 --> 200 MALE / 200 FEMALE
STUDENTS:	20 --> 10 MALE / 10 FEMALE
STAFF:	

REQUIRED (STUDENTS):	WATER CLOSET	URINALS	LAVATORIES
MEN	4	2	5
WOMEN	7	-	5
PROVIDED (STUDENTS):	WATER CLOSET	URINALS	LAVATORIES
MEN (MOD)	3	2	3
MEN (BLDG A)	1	3	2
TOTAL	4	5	5
WOMEN (MOD)	5	-	3
WOMEN (BLDG A)	4	-	2
TOTAL	9	-	5

REQUIRED (STAFF):	WATER CLOSET	URINALS	LAVATORIES
MEN	1	1	1
WOMEN	1	-	1
PROVIDED (STAFF):	WATER CLOSET	URINALS	LAVATORIES
MEN	1	1*	1
WOMEN	1	-	1

*URINAL COUNTS INCLUDE TOILETS AT GENDER NEUTRAL RESTROOMS.

REQUIRED DRINKING FOUNTAINS:	4
PROVIDED DRINKING FOUNTAINS:	4

GENERAL NOTES

- FOR ADDITIONAL INFORMATION ON SITE SCOPE, REFER TO CIVIL AND LANDSCAPE DRAWINGS.



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ELKHORN ELEMENTARY SCHOOL CAMPUS MODERNIZATION

10505 DAVIS ROAD, STOCKTON, CA 95209

Developed for
LODI UNIFIED SCHOOL DISTRICT

Date

Revision

Date

Submit

100% SCHEMATIC DESIGN

BID DOCUMENTS

Job Number

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Scale

As Indicated

CODE ANALYSIS SITE
PLAN

G1.02

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ELKHORN ELEMENTARY SCHOOL CAMPUS MODERNIZATION INCREMENT 3

10505 DAVIS ROAD, STOCKTON, CA 95209

Developed for

[illegible][illegible]

Job Number	31942
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Scale	1/8" = 1'-0"

CODE ANALYSIS PLAN -
MODULAR

G2.01

LEGEND

Room Name

###	ROOM NUMBER
## SF	SQUARE FOOTAGE
Occ-Load OCC	OCCUPANT LOAD
# 1:OLF	OCCUPANCY LOAD FACTOR
	OCCUPANCY GROUP

REQUIRED	0"	EGRESS WIDTH REQUIRED
PROVIDED	0"	EGRESS WIDTH PROVIDED

	FIRE EXTINGUISHER CABINET
	1-HOUR RATED WALL ASSEMBLY
	INDIVIDUAL ROOM OCCUPANCY LOAD
	COMBINED ROOM OCCUPANCY LOAD
	PATH OF TRAVEL/TRAVEL DISTANCE

CODE ANALYSIS

BUILDING USE:	CLASSROOMS
CONSTRUCTION CLASSIFICATION (CBC 602):	TYPE V-B
OCCUPANCY CLASSIFICATION (CBC 302 & 508.3):	E - EDUCATIONAL
NECESSARY OCCUPANCY (CBC 508.2):	S-2 - STORAGE
INCIDENTAL USES (CBC 509):	NONE
FIRE PROTECTION:	SPRINKLERED
ALLOWABLE BUILDING HEIGHT (CBC 504 & TABLE 504.3):	40' - 0" (WITHOUT HEIGHT INCREASE)
ALLOWABLE NUMBER OF STORIES (CBC 504 & TABLE 504.4):	1 STORY (WITHOUT HEIGHT INCREASE)
ALLOWABLE BUILDING AREA (CBC 506.2.3 & TABLE 506.2):	38,000 SF (WITHOUT FRONTAGE INCREASE)
ADJUSTED ALLOWABLE BUILDING AREA:	16,125 SF (WITH FRONTAGE INCREASE)
ACTUAL BUILDING HEIGHT:	14'-0" - OK
ACTUAL NUMBER OF STORIES:	1 STORY - OK
ACTUAL BUILDING AREA:	12,250 SF - OK

* BUILDING AREAS INCLUDE HORIZONTAL PROJECTIONS OF THE ROOF OR FLOOR ABOVE BUT EXCLUDE VENT SHAFTS & COURTS. (CBC 202)

FIRE-RESISTANCE RATING REQ FOR BLDG ELEMENTS (CBC TABLE 601)

FIRE-RESISTANCE RATING REQ FOR BLDG ELEMENTS (CBC TABLE 601)

STRUCTURAL FRAME:	0 HOUR
EXTERIOR BEARING WALLS:	0 HOUR
INTERIOR BEARING WALLS:	0 HOUR
EXTERIOR NONBEARING WALLS:	REFER TO RATING REQ BELOW
INTERIOR NONBEARING WALLS:	0 HOUR
FLOOR CONSTRUCTION:	0 HOUR
ROOF CONSTRUCTION:	0 HOUR**

**FIRE PROTECTION OF MEMBERS OTHER THAN THE PRIMARY STRUCTURAL FRAME SHALL NOT BE REQ. INCLUDING PROTECTION OF THE ROOF FRAMING & DECKING WHERE EVERY PART OF CONSTRUCTION IS 20 FT OR MORE ABOVE ANY FLOOR IMMEDIATELY BELOW (CBC 601 EXCEPTION B)

FIRE-RESISTANCE RATING REQ FOR EXTERIOR WALLS (CBC TABLE 705.5):

1-HR PROTECTED:	< 10'-0"
NO PROTECTION REQ:	≥ 10'-0"

MAX FLOOR AREA ALLOWANCES PER OCCUPANT (CBC TABLE 1004.5) :

1:20 NET = EDUCATIONAL: CLASSROOM AREA

MEANS OF EGRESS SIZING (CBC 1005):
DOOR EXITS: # OCCUPANTS X 0.2 = EGRESS WIDTH

PROVIDE 2 EXITS IN ALL ROOMS WITH OCCUPANT LOADS ABOVE 49

MAXIMUM COMMON PATH OF TRAVEL (CBC TABLE 1006.2.1)

E OCCUPANCY: 75'-0"
S-2 OCCUPANCY: 100'-0"

MAXIMUM EXIT ACCESS TRAVEL DISTANCE (CBC TABLE 1017.2)	
E OCCUPANCY:	200'-0"
S-2 OCCUPANCY:	300'-0"

ABBREVIATIONS

AB	AGGREGATE BASE	MIN	MINIMUM
AC	ASPHALT CONCRETE PAVEMENT	MOC	MIDDLE OF CURVATURE
AE	ACCESS EASEMENT	N	NORTH
ASFH	ASPHALT PAVING	NG	NATURAL GRADE
ASB	BEGIN CURVATURE	NTS	NOT TO SCALE
BCR	BEGIN CURB RETURN	OC	ON CENTER
BFP	BACK FLOW PREVENTER	(P)	PROPOSED, NEW
BI	BOX INLET	PA	PLANTING AREA
BM	BENCHMARK	PBC	PULL BOX CABLE
BOP	BOTTOM OF PIPE	PBE	PULL BOX ELECTRIC
BOR	BOTTOM OF RAMP	PBT	PULL BOX TELEPHONE
BS	BOTTOM OF STAIRS	PBW	PULL BOX WATER
BVC	BEGIN VERTICAL CURVATURE	PCC	POINT OF COMPOUND CURVATURE
BW	BOTTOM OF WALL	PE	PEDESTRIAN EASEMENT
C&G	CURBS AND GUTTER	PI	POINT OF INTERSECTION
CL, CLC	CENTER LINE	PVC	POINT OF INTERSECTION VERTICAL CURVATURE
CB	CATCH BASIN	PL	PROPERTY LINE
CON	CONSTRUCT	POC	POINT OF CONNECTION
CUR	CURB RETURN	PP	POWER POLE
CT	CURT	PRC	POINT OF REVERSE CURVATURE
CT	CULVERT	PVC	POLYVINYL CHLORIDE
DI	DROP INLET	PVM	PAVEMENT
DIP	DUCTILE IRON PIPE	R	RADIUS
DW	DOMESTIC WATER	RCM	REINFORCED CONCRETE PIPE
DW	DRIVEWAY	RC	TOP RIM OF STRUCTURE
DE	DRAINAGE EASEMENT	ROW	HIGHWAY EASEMENT
DR	DRIVE	RT	RIGHT
(E)	EXISTING	RW	RECLAIMED WATER
E	EAST	R/W	RIGHT OF WAY
EC	END CURVATURE	S	SOUTH OF CURVE
ECR	END CURB RETURN	SB	SETBACK EASEMENT
EE	EXISTING GRADE	SCO	SANITARY SEWER CLEANOUT
ELEV	ELEVATION	SD	STORM DRAIN
EOC	EDGE OF CONCRETE	SDMH	STORM DRAIN MANHOLE
EP	EDGE OF PAVEMENT	SF	SQUARE FEET
EQ	EQUAL	SHT	SHEET
ESMT	EASEMENT	STA	STATION
EVC	END OF VERTICAL CURVATURE	SMH	SANITARY SEWER MANHOLE
FF	FINISHED FLOOR	SS	SANITARY SEWER
FFE	FINISHED FLOOR ELEVATION	SWPPP	STORM WATER POLLUTION PREVENTION PLAN
FG	FINISHED GRADE	SW	SIDEWALK
FH	FIRE HYDRANT	T	TANGENT
FL	FLOW LINE	TB	TOP OF BERM
FS	FINISHED SURFACE	TBC	TOP BACK OF CURB
FW	FIRE PROTECTION SERVICE WATER	TBW	TOP BACK OF WALK
GB	GRADE BREAK	TC	TOP OF CURB
GFL	GUTTER FLOWLINE	TF	TOP OF FOOTING
GBL	LIMITS OF GRAVITY SEWER	TG	TOP OF GRADE
GR	GRATE	TOE	TOE OF SLOPE
GV	GAS VALVE	TOP	TOP OF PIPE
HB	HOSE BIB	TOR	TOP OF RAMP
HP	HIGH POINT	TOS	TOP OF SLOPE
IOV	IRRIGATION CONTROL VALVE	TP	TOP OF PLANTER
INTX	POINT OF INTERSECTION	TS	TOP OF STAIRS
INV	INVERT	TW	TOP OF WALL
JP	JOINT POLE	TYP	TYPICAL
LE	LANDSCAPE EASEMENT	TP	TELEPHONE POLE
LF	LINEAR FEET	VC	VERTICAL CURVATURE
LP	LIP OF GUTTER	W	WEST
LP	LOW POINT	WM	WATERSHED
LT	LEFT	WV	WATER VALVE
MAX	MAXIMUM		
MH	MANHOLE		

LEGEND	
SYMBOL	DESCRIPTION
	ROOF DRAIN POC 5' FROM BUILDING
	GAS POC 5' FROM BUILDING
	FIRE WATER POC 5' FROM BUILDING
	DOMESTIC WATER POC 5' FROM BUILDING
	SANITARY SEWER POC 5' FROM BUILDING
	STORM DRAIN MANHOLE
	SANITARY SEWER MANHOLE
	DRAIN INLET
	AREA DRAIN
	TRENCH DRAIN
	CLEANOUT
	BLOW OFF
	FIRE HYDRANT
	VALVE
	POST INDICATOR VALVE (PIV)/CHECK VALVE (CHK VLV)/FIRE DEPARTMENT CONNECTION (FDC) CHECK VALVE (CHK VLV)
	FIRE DEPARTMENT CONNECTION (FDC)
	DOUBLE DETECTOR CHECK (DBL CHK)
	REDUCED PRESSURE (BFP)
	POST INDICATOR VALVE (PIV)
	THRUST BLOCK
	BENDS, TEE AND CROSS
	WATER METER

LINE TYPE	DESCRIPTION
	APPROXIMATE PROJECT LIMITS
	RIGHT OF WAY/ PROPERTY LINE
	FENCE
	REMOVE EXISTING UTILITY
	EXISTING SEWER LINE
	EXISTING WATER LINE
	EXISTING STORM DRAIN LINE
	EXISTING DEDICATED PRIVATE FIRE SERVICE
	EXISTING NATURAL GAS SERVICE
	EXISTING ELECTRICAL LINE / CONDUIT
	EXISTING TELECOMMUNICATIONS LINE / CONDUIT
	SANITARY SEWER LINE
	PERFORATED STORM DRAIN LINE
	DEDICATED PRIVATE FIRE SERVICE
	NATURAL GAS LINE
	GRADE BREAK LINE
	FLOW LINE
	DAYLIGHT LINE

GENERAL EROSION AND SEDIMENT CONTROL NOTES

1. CONTRACTOR SHALL ENSURE THAT THE CONSTRUCTION SITE IS PREPARED PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR SHALL HAVE ALL EROSION AND SEDIMENT CONTROL MEASURES IN PLACE AT ALL TIMES DURING CONSTRUCTION.
2. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED UNTIL DISTURBED AREAS ARE STABILIZED.
3. THIS PLAN MAY NOT COVER ALL THE SITUATIONS THAT ARISE DURING CONSTRUCTION DUE TO UNANTICIPATED FIELD CONDITIONS.
4. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED BEFORE AND AFTER ALL STORMS TO ENSURE MEASURES ARE FUNCTIONING PROPERLY.
5. CONTRACTOR SHALL MAINTAIN A LOG AT THE SITE OF ALL INSPECTIONS OR MAINTENANCE OF BMPs, AS WELL AS, ANY CORRECTIVE CHANGES TO THE BMPs OR EROSION AND SEDIMENT CONTROL PLAN.
6. IN AREAS WHERE SOIL IS EXPOSED, PROMPT REPLANTING WITH NATIVE COMPATIBLE, DROUGHT-RESISTANT VEGETATION SHALL BE PERFORMED. NO AREAS WILL BE LEFT EXPOSED OVER THE WINTER SEASON.
7. THE CONTRACTOR SHALL INSTALL THE STABILIZED CONSTRUCTION ENTRANCE PRIOR TO COMMENCEMENT OF GRADING. LOCATION OF THE ENTRANCE MAY BE ADJUSTED BY THE CONTRACTOR TO FACILITATE GRADING OPERATIONS. ALL CONSTRUCTION TRAFFIC ENTERING THE PAVED ROAD MUST CROSS THE STABILIZED CONSTRUCTION ENTRANCE.
8. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE SWEEPED AT THE END OF EACH WORKING DAY OR MORE OFTEN AS NECESSARY.
9. CONTRACTOR SHALL PLACE GRAVEL/SAND BAGS AROUND ALL NEW DRAINAGE STRUCTURE OPENINGS IMMEDIATELY AFTER THE STRUCTURE OPENING IS CONSTRUCTED. THESE GRAVEL/SAND BAGS SHALL BE MAINTAINED AND REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETED.
10. CONTRACTOR SHALL IMPLEMENT HOUSEKEEPING PRACTICES AS FOLLOWS:
 - A. SOLID WASTE MANAGEMENT:
PROVIDE DESIGNATED WASTE COLLECTION AREAS AND CONTAINERS. ARRANGE FOR REGULAR REMOVAL AND DISPOSAL. CLEAR SITE OF TRASH INCLUDING ORGANIC DEBRIS, PACKAGING MATERIALS, SCRAP OR SURPLUS BUILDING MATERIALS AND DOMESTIC WASTE DAILY.
 - B. MATERIAL DELIVERY AND STORAGE:
PROVIDE A DESIGNATED MATERIAL STORAGE AREA WITH SECONDARY CONTAINMENT SUCH AS BERMING. STORE MATERIAL ON PALLETS AND PROVIDE COVERING FOR SOLUBLE MATERIALS. RELOCATE STORAGE AREA INTO BUILDING SHELL WHEN POSSIBLE. INSPECT AREA WEEKLY.
 - C. CONCRETE WASTE:
PROVIDE A DESIGNATED AREA FOR A TEMPORARY PIT TO BE USED FOR CONCRETE. TRUCK WASH-OUT, CONCRETE WASH-OUT CANNOT BE WITHIN 50' MINIMUM OF DRAIN INLETS. DISPOSE OF HARDENED CONCRETE OFF-SITE. AT NO TIME SHALL A CONCRETE TRUCK DUMP ITS WASTE AND CLEAN ITS TRUCK INTO THE STORM DRAINS VIA CURB AND GUTTER. INSPECT DAILY TO CONTROL RUNOFF, AND WEEKLY FOR REMOVAL OF HARDENED CONCRETE.
 - D. PAINT AND PAINTING SUPPLIES:
PROVIDE INSTRUCTION TO EMPLOYEES AND SUBCONTRACTORS REGARDING REDUCTION OF POLLUTANTS FROM PAINTING, STORAGE, USE, AND CLEAN UP. INSPECT SITE WEEKLY FOR EVIDENCE OF IMPROPER DISPOSAL.
 - E. VEHICLE FUELING, MAINTENANCE AND CLEANING:
PROVIDE A DESIGNATED FUELING AREA WITH SECONDARY CONTAINMENT SUCH AS BERMING. DO NOT ALLOW MOBILE FUELING OF EQUIPMENT. PROVIDE EQUIPMENT WITH DRIP PANS. RESTRICT ONSITE MAINTENANCE AND CLEANING OF EQUIPMENT TO A MINIMUM. INSPECT AREA WEEKLY.
 - F. HAZARDOUS WASTE MANAGEMENT:
PREVENT THE DISCHARGE OF POLLUTANTS FROM HAZARDOUS WASTES TO THE DRAINAGE SYSTEM THROUGH PROPER MATERIAL USE, WASTE DISPOSAL AND TRAINING OF EMPLOYEES. HAZARDOUS WASTE PRODUCTS COMMONLY FOUND ON-SITE INCLUDE BUT ARE NOT LIMITED TO PAINTS & SOLVENTS, PETROLEUM PRODUCTS, FERTILIZERS, HERBICIDES & PESTICIDES, SOIL STABILIZERS, STABILIZATION PRODUCTS, ASPHALT PRODUCTS AND CONCRETE CURING PRODUCTS.
11. CONTRACTOR SHALL HYDROSEED ALL GRADED SLOPES. NATIVE SEED MIX SHALL BE 20% LANA PUBESCENS WHEAT GRASS, 40% BLANDO BROME, AND 40% ANNUAL RYE GRASS AND SHALL BE APPLIED AT A RATE OF 200 POUNDS PER ACRE. SOIL BINDING AGENT SHALL BE VERDOL, SENTINEL, OR EQUAL, APPLIED AT A RATE OF 10 POUNDS PER ACRE. MULCH SHALL BE SILVER-FIBER, CONIVED, OR EQUAL, APPLIED AT A RATE OF 1,000 POUNDS PER ACRE. FERTILIZER SHALL BE AGRI-FORM 16-7-12, BEST 16-6-8, OR EQUAL, APPLIED AT A RATE OF 50 POUNDS PER ACRE. THE CONTRACTOR SHALL WATER SEEDED AREAS OR RESEED AS NECESSARY TO ENSURE SUFFICIENT PLANT DEVELOPMENT FOR EROSION CONTROL.
12. NO GRADING SHALL BE DONE UNTIL SITE- AND SEASON-SPECIFIC SOIL LOSS AND HOUSEKEEPING STORMWATER BMPs HAVE BEEN APPROVED BY THE INSPECTOR. THE CONTRACTOR SHOULD EMPLOY THE DESIGN BMPs AND ANY OTHERS NEEDED AS SITUATIONS ARISE. CONTRACTOR SHOULD CONDUCT SITE INSPECTIONS BEFORE, DURING AND AFTER EACH EXTENDED STORM EVENT TO IDENTIFY CONDITIONS THAT MAY CONTRIBUTE TO EROSION AND SEDIMENT PROBLEMS OR ANY OTHER POLLUTANT DISCHARGES. IF ADDITIONAL CONTROL MEASURES ARE NEEDED, CONTRACTOR SHOULD IMPLEMENT THEM IMMEDIATELY.

POLLUTION PREVENTION NOTES

IN ORDER TO MEET THE REQUIREMENTS OF THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PROGRAM FOR CONSTRUCTION, CONSTRUCTION CONTRACTORS SHALL INSTALL AND MAINTAIN APPROPRIATE BEST MANAGEMENT PRACTICES (BMPs), AS SHOWN IN THE EROSION CONTROL PLAN AND IN ACCORDANCE WITH THE SWPPP (STORMWATER POLLUTION PREVENTION PLAN), ON ALL CONSTRUCTION PROJECTS. BMPs SHALL BE INSTALLED IN ACCORDANCE WITH INDUSTRY RECOMMENDED STANDARDS, AND/OR IN ACCORDANCE WITH ANY GENERAL CONSTRUCTION PERMIT ISSUED BY THE STATE FOR THE PROJECT TO PREVENT ANY DISCHARGES FROM THE PROJECT SITE OR INTO ANY STORM DRAIN FACILITIES. ALL SEDIMENTS, CONSTRUCTION MATERIALS, DEBRIS AND WASTES, AND OTHER POLLUTANTS MUST BE RETAINED ON SITE AND MAY NOT BE TRANSPORTED FROM THE SITE VIA SHEET FLOW, SWALES, AREA DRAINS, NATURAL DRAINAGE COURSES, WIND, OR VEHICLE TRACKING. UNDER DIRECTION OF THE ENGINEER OF RECORD, EROSION AND/OR SEDIMENT CONTROL DEVICES SHALL BE MODIFIED AS NEEDED AS THE PROJECT PROGRESSES TO ENSURE EFFECTIVENESS.

BMP MAINTENANCE NOTES

1. FOLLOWING OWNER ACCEPTANCE OF CONSTRUCTION WORK, POST CONSTRUCTION BEST MANAGEMENT PRACTICE (BMP) MEASURES SHALL BE MAINTAINED BY THE PROPERTY OWNER, INCLUDING BUT NOT LIMITED TO:
 - 1.1. ANNUAL INSPECTION, REPLACEMENT, AND/OR SEDIMENTATION REMOVAL OF VEGETATED SWALES, TREATMENT PONDS, AND OTHER SURFACE STORMWATER TREATMENT MEASURES AS REQUIRED WITH AN INCREASED FREQUENCY BASED ON SITE CONDITIONS.
 - 1.2. MAINTENANCE SERVICE AGREEMENT(S) OF STORMWATER TREATMENT VAULTS, INLETS, MANHOLES, AND OTHER DEVICES BASED ON MANUFACTURER'S RECOMMENDATIONS AND FREQUENCY.
 - 1.3. ANNUAL INSPECTION OF PERMEABLE PAVEMENT AND REMOVAL OF SEDIMENT AS NEEDED.
 - 1.4. ANNUAL INSPECTION OF STORMWATER INLETS AND MAINTENANCE AS REQUIRED TO CLEAR GRATES AND INLETS OF DEBRIS.
 - 1.5. THE PROJECT STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AND WATER QUALITY MANAGEMENT PLAN (WQMP) MAY CONTAIN ADDITIONAL OR MORE STRINGENT MAINTENANCE REQUIREMENTS.
2. BMP DETAILS MAY BE FOUND IN APPENDIX K OF THE PROJECT SWPPP DOCUMENT. BMP DETAILS PER CALIFORNIA STORMWATER QUALITY ASSOCIATION (CASQA) AND ARE AVAILABLE AT www.casqa.org.
3. FOR PROJECTS GREATER THAN 1 ACRE, THE CONTRACTOR SHALL VERIFY THE STATUS OF THE SWPPP/NOI/WDID PRIOR TO EARTHMOVING ACTIVITIES. A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) SHALL BE PREPARED AND A NOTICE OF INTENT (NOI) SHALL BE FILED WITH THE STATE WATER RESOURCES CONTROL BOARD (SWRCB) IN ACCORDANCE WITH THE REQUIREMENTS OF CALIFORNIA GENERAL PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY (PERMIT NO. CAS000002) FOR ALL OPERATIONS ASSOCIATED WITH THESE PLANS. THE CONTRACTOR SHALL KEEP A COPY OF THE SWPPP ON SITE AND AVAILABLE FOR REVIEW.

AREA SUMMARY

TOTAL DISTURBED AREA = 3.72± ACRES

DEMOLITION NOTES

1. THE INTENT OF THE DEMOLITION PLAN IS TO DESCRIBE IN GENERAL THE DEMOLITION AREAS AFFECTED BY THE PROJECT CONSTRUCTION. IT IS NOT INTENDED AS A DETAILED DESCRIPTION OF EXISTING ITEMS OR ELEMENTS TO BE REMOVED. THE CONTRACTOR SHALL VISIT THE SITE AND REVIEW ANY AVAILABLE RECORD DOCUMENTS TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS AND SHOULD INCLUDE THE REMOVAL OF ALL ITEMS NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK. THE CONTRACT DOCUMENTS ARE COMPLEMENTARY, AND WHAT IS REQUIRED BY ORAL SHALL BE REQUIRED BY AS REQUIRED BY THE TO THE EXTENT THAT IT IS REASONABLY INFERRABLE FROM THEM AS BEING NECESSARY TO PRODUCE THE INTENDED RESULTS.
2. REMOVE EXISTING BUILDINGS, FOUNDATIONS AND SERVICE UTILITIES AS INDICATED ON PLANS. CAP ALL UTILITIES AT APPROPRIATE POINTS. ALL EXISTING ELECTRICAL / TELEPHONE / CATV UTILITIES SHALL BE REMOVED AS INDICATED OR BACK TO THE POINT WHERE THE SPECIFIC UTILITY SYSTEM ENTERS THE WORK AREA. COORDINATE DEMOLITION OF ALL UTILITIES WITH THE OWNER. ALL UTILITIES CONNECTED TO EXISTING BUILDINGS TO REMAIN SHALL CONTINUE TO BE OPERATIONAL DURING THE DEMOLITION PROCESS. DOMESTIC AND FIRE SERVICE WATER AND NATURAL GAS SHALL BE REMOVED TO A POINT OUTSIDE THE PERIMETER OF PROPOSED NEW CONSTRUCTION TO EXISTING VALVES OR SIMILAR SHUT-OFF DEVICES. IF A SHUT-OFF DEVICE IS NOT REASONABLY ADJACENT TO THE PERIMETER OF THE PROPOSED NEW CONSTRUCTION, PROVIDE A SHUT-OFF DEVICE IN BELOW-GRADE YARD BOX. CONFIRM LOCATION OF NEW DEVICES WITH OWNER PRIOR TO INSTALLATION. SANITARY SEWER AND STORM DRAINAGE SHALL BE CAPPED TO A POINT OUTSIDE THE PERIMETER OF THE PROPOSED NEW CONSTRUCTION. OTHER UTILITIES NOT SPECIFICALLY IDENTIFIED IN THESE DOCUMENTS AND NOT ANTICIPATED FOR REUSE SHALL BE REMOVED IN ENTIRETY.
3. FOR ALL EXISTING MATERIALS THAT CAN BE SALVAGED, OWNER HAS FIRST RIGHT OF REFUSAL. FOR REMOVED ITEMS THAT MAY HAVE RESIDUAL COMMERCIAL OR HISTORIC VALUE INCLUDING HARDWARE, GLASS, CORNER STONES, TIME CAPSULES, LIGHT STANDARDS, SIGNS, FENCING, BENCHES, WATER FOUNTAINS, TRASH CONTAINERS, ETC. SHALL REMAIN AS PROPERTY OF THE OWNER. ALL ITEMS TO BE SALVAGED FOR REUSE/REINSTALLATION MUST MEET CURRENT CODE REQUIREMENTS. COORDINATE ITEMS TO BE RETAINED WITH OWNER AND REMOVE FROM CONSTRUCTION SITE TO A LOCATION APPROVED BY OWNER. REMOVED MATERIALS, NOT INDICATED OR DIRECTED TO BE SALVAGED FOR THE OWNER'S BENEFIT ARE DEBRIS AND BECOME THE CONTRACTOR'S PROPERTY UPON REMOVAL.
4. THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY SEARCH OF THE AVAILABLE RECORDS AND FIELD SURVEYS. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT, UTILITY COMPANIES, AND/OR FIELD VERIFY AND LOCATE ALL UTILITIES BEFORE PROCEEDING WITH WORK. THE CONTRACTOR IS ALSO REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN AND ANY OTHER LINES NOT OF RECORD OR NOT SHOWN ON THESE PLANS. NOTIFY THE ENGINEER IF ADDITIONAL UTILITIES ARE LOCATED OR IF CONFLICTS ARE FOUND WITH EXISTING CONDITIONS.
5. ALL TREES TO BE REMOVED SHALL BE MARKED BY CONTRACTOR AND APPROVED FOR REMOVAL BY THE OWNER OR OWNER'S REPRESENTATIVE PRIOR TO REMOVING OR CUTTING TREE(S). EXISTING ROOTS SHALL BE GRINDED TO A DEPTH OF APPROXIMATELY 3-FEET. USE CAUTION WHILE GRINDING WHEN EXISTING UTILITIES ARE IN CLOSE PROXIMITY TO TREES. ALL TREES TO REMAIN WITHIN THE LIMIT OF WORK SHALL BE PROTECTED AND MAINTAINED PER SPECIFICATIONS AND DETAILS.
6. SAWCUT EXISTING CONCRETE AND ASPHALT TO AN EXISTING CONTROL JOINT WHERE POSSIBLE. MINIMUM TO A NEAREST 3/4" INCH. STEEL SHALL BE HAULING OFF-SITE TO A LEGAL DUMPING SITE OR SALVAGED FOR REUSE ON PROJECT AS NOTED.
7. WORK WITHIN CITY, COUNTY, OR STATE RIGHT-OF-WAY REQUIRES A SEPARATE ENCLOSURE DESIGNATED FUELING AREA WITH SECONDARY CONTAINMENT PRIOR TO STARTING WORK WITHIN RIGHT-OF-WAY.
8. CONTRACTOR TO COORDINATE UTILITY DEMOLITION WITH DRAINAGE AND UTILITY WORK SHOWN IN THIS PLAN SET. ALL UTILITY SHUTDOWNS SHALL BE COORDINATED PER PROJECT SPECIFICATIONS.
9. EXISTING DRY UTILITIES SHOWN FOR DEMOLITION ARE SHOWN FOR COORDINATION ONLY. REFER TO OTHER DISCIPLINES FOR LIMITS AND DETAILS OF DEMOLITION.
10. THE CONTRACTOR SHALL RECYCLE CONSTRUCTION DEBRIS: ASPHALT, AND CONCRETE GENERATED FROM REMOVALS REQUIRED TO CONSTRUCT THE PROJECT. THE CONTRACTOR IS OBLIGATED, UNDER THIS CONTRACT, TO RECYCLE THE WASTE MATERIAL THROUGH AN APPROVED RECYCLING PLANT.
11. A LIST OF FACILITIES THAT ACCEPT CONSTRUCTION & DEMOLITION DEBRIS CAN BE FOUND ON THE CALRECYCLE WEBSITE AT: [HTTPS://WWW.CALRECYCLE.CA.GOV/CONDEMO](https://www.calrecycle.ca.gov/CONDEMO)
12. CONTRACTOR IS RESPONSIBLE FOR PROTECTING EXISTING BUILDING FINISHES DURING DEMOLITION. ANY FINISH THAT IS DAMAGED DURING DEMOLITION SHALL BE REPAIRED OR REPLACED IN-KIND OR BETTER.

GENERAL NOTES TO CONTRACTOR

1. THE CONTRACTOR SHALL CONTACT THE RESPECTIVE UTILITY OWNERS FOR LOCATION, REMOVAL, AND/OR RELOCATION OF ANY UTILITY SERVICES AFFECTED BY CONSTRUCTION. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONARY MEASURES TO PROTECT UNDERGROUND OR OVERHEAD STRUCTURES WHETHER OR NOT THEY ARE SHOWN ON THESE DRAWINGS.
2. THE CONTRACTOR SHALL NOTIFY THE PROJECT INSPECTOR AND THE RESPECTIVE UTILITY OWNERS AND OTHER AGENCIES AT LEAST TWO WORKING DAYS PRIOR TO START OF CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR EXPOSING, VERIFYING LOCATIONS (BOTH HORIZONTAL AND VERTICAL), AND MAINTAINING ALL EXISTING UNDERGROUND UTILITIES, BOTH SHOWN ON THE PLANS AND/OR NOT SHOWN ON THE PLANS DURING CONSTRUCTION. REPAIR DAMAGED UTILITIES TO THE SATISFACTION OF THE ENGINEER. THE CONTRACTOR SHALL LOCATE EXISTING UNDERGROUND UTILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS BECAUSE OF LOCATIONS OF EXISTING FACILITIES AND SHALL REPORT ALL DISCREPANCIES TO THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.
4. THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITIES AND/OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS. APPROVAL OF THESE PLANS DOES NOT CONSTITUTE A REPRESENTATION AS TO THE ACCURACY OR COMPLETENESS OF THE LOCATION OR THE EXISTENCE, OR NON-EXISTENCE OF ANY UTILITY AND/OR STRUCTURE WITHIN THE LIMITS OF THIS PROJECT. THE CONTRACTOR IS REQUIRED TO TAKE ALL DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES OF RECORD AND/OR NOT OF RECORD SHOWN OR NOT SHOWN AND ANY OTHER LINE(S) OR STRUCTURE(S) NOT SHOWN ON THESE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF, AND/OR DAMAGE TO THESE LINE(S) AND/OR STRUCTURE(S).
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY SHORING AT PROPOSED BUILDING FOUNDATIONS, FOOTINGS, AND WALLS TO PROTECT EXISTING UTILITIES IN PLACE.
6. UNAUTHORIZED CHANGES AND USES - CAUTION: THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.
7. THE CONTRACTOR SHALL MAINTAIN THE EXISTING ACCESSIBLE ROUTE CLEAR OR PROVIDE AN ALTERNATE ACCESSIBLE ROUTE OF TRAVEL DURING DEMOLITION AND/OR CONSTRUCTION.
8. THE CONTRACTOR SHALL MAINTAIN THE EXISTING FIRE EXITS AND STAIRS CLEAR AND USABLE OR PROVIDE ALTERNATE FIRE EXITS DURING DEMOLITION AND/OR CONSTRUCTION.

EARTHWORK NOTES

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW THE GRADING PLANS AND SOILS REPORT THOROUGHLY PRIOR TO SITE MOBILIZATION. IT IS ALSO THE GRADING CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE CIVIL AND SOILS ENGINEERS IF ON-SITE DISCREPANCIES ARE OBSERVED THAT WOULD AFFECT THE EARTHWORK QUANTITIES.
2. THE EXISTING TOPOGRAPHY AS DELINEATED ON THESE DRAWINGS SHALL BE UTILIZED AS THE BASIS FOR ALL EARTHWORK COMPUTATIONS. SAID TOPOGRAPHY SHALL BE PRESUMED TO BE ACCEPTABLE TO ALL INTERESTED PARTIES UNLESS A DEVIATION IS FOUND PRIOR TO THE START OF GRADING IN ANY SPECIFIC AREAS. ANY DEVIATION SO DETERMINED SHALL BE PROMPTLY TRANSMITTED TO ALL INTERESTED PARTIES.
3. THE CONTRACTOR IS REQUIRED TO ESTIMATE THE QUANTITIES OF GRADING WORK TO BE DONE AND INCLUDE ALL COSTS THEREFROM WITH HIS BID, AS NO ADDITIONAL ALLOWANCE WILL BE MADE WITHOUT PRIOR CONSENT FROM THE OWNER.
4. OVER-EXCAVATION AND/OR EXCESS BACKFILLING OR DUPLICATION OF GRADING ACTIVITIES IS NOT A BASIS FOR ADDITIONAL COMPENSATION. THIS ALSO APPLIES WHERE MATERIAL IS TO BE REMOVED AND REPLACED TO REDUCE MOISTURE CONTENT.
5. OFF-SITE DISPOSAL OF EXCAVATION MATERIAL IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE INCLUDED IN THE BID. THE CONTRACTOR SHALL HOLD THE OWNER AND ENGINEER HARMLESS AS A RESULT OF ANY CLAIMS ARISING FROM THE ACTIONS ENROUTE OR AWAY FROM THE SITE.
6. EARTH VOLUMES SHOWN HEREON ARE ESTIMATES BASED UPON THE GEOTECHNICAL ANALYSIS PERFORMED BY THE NAMED SOILS ENGINEER AND TOPOGRAPHIC SURVEY OF THE EXISTING GROUND SURFACE AT THE TIME OF PLAN PREPARATION. EARTHWORK VOLUMES ARE COMPUTED BY METHODS COMMONLY USED IN STANDARD ENGINEERING PRACTICE, AND ARE INTENDED FOR USE IN ESTABLISHING GOVERNING AGENCY FEES. ACTUAL FIELD CONDITIONS MAY VARY FROM OBSERVED OR MEASURED CONDITIONS AT THE TIME OF PLAN PREPARATION. EARTHWORK QUANTITIES MAY VARY AS A RESULT.
7. ANY EXPORT OR IMPORT REQUIRED TO BALANCE THE SITE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
8. PAVEMENT AND SUBGRADE RECOMMENDATIONS RELATED TO OVER-EXCAVATION, PAVEMENT SUBGRADE, ETC., PER GEOTECHNICAL REPORT.

GEOTECHNICAL INFORMATION

FOR SITE PREPARATION, OVEREXCAVATION, FOUNDATION RECOMMENDATIONS, PAVEMENT, SUBGRADE, AND GRADATION REQUIREMENTS SEE GEOTECHNICAL INVESTIGATION REPORT ENTITLED:

"GEOLOGIC HAZARDS AND GEOTECHNICAL ENGINEERING REPORT
ELKHORN ELEMENTARY SCHOOL
NEW CLASSROOM BUILDING AND REMODELING"

PREPARED BY: MID PACIFIC ENGINEERING, INC.
840 EMBARCADERO DRIVE
SUITE 20
WEST SACRAMENTO, CA 95605

PROJECT NO: 06317-03

DATED: JUN 06, 2025

EARTHWORK QUANTITIES

APPROXIMATE CUT: XXXX CY
APPROXIMATE FILL: XXXX CY

NOTE:
EARTHWORK QUANTITIES INDICATED ARE FOR REFERENCE ONLY (NOT FOR BID OR PAYMENT). THE CONTRACTOR IS RESPONSIBLE FOR ACTUAL QUANTITIES.

HAUL ROUTE TO BE DETERMINED AT PRE-GRADE MEETING AND ALL NECESSARY PERMITS SHALL BE OBTAINED BY THE GENERAL CONTRACTOR

BENCHMARK

SAN JOAQUIN COUNTY BRASS DISK IN MONUMENT WELL MARKING THE EAST ONE - QUARTER (1/4) CORNER OF SECTION 5, TOWNSHIP 2 NORTH, RANGE 6 EAST, DAVIS RD. BRASS DISK MARKS COS IN-9.

DATUM STATEMENT

THE COORDINATES RELATING TO THIS DIGITAL FILE ARE DERIVED FROM _____

BASIS OF BEARINGS

THE BOUNDARY LINES SHOWN HEREON ARE BASED UPON MAP FILED IN JULY 1959 IN VOL. 2197 PAGE 284.

LEGAL DESCRIPTION

XXXXX
XXXXX
XXXXX

FIRE PROTECTION SYSTEM NOTES

1. PRIOR TO INSTALLATION, ALL PLANS AND SPECIFICATIONS SHALL BE APPROVED BY GOVERNING AGENCY.
2. INSPECTIONS ARE REQUIRED:
 - 1) PRIOR TO POURING THRUST BLOCKS
 - 2) FOR HYDROSTATIC TESTING
 - 3) FOR FLUSH
3. INSTALLATION, INSPECTION, AND TESTING SHALL CONFORM TO 2022 NFPA 13 AND 2022 NFPA 24.
4. PRIVATE FIRE HYDRANTS SHALL BE APPROVED WET BARREL STYLE WITH A MINIMUM OF ONE 2" AND ONE 4" OUTLET. THE 4" OUTLET SHALL FACE THE FIRE DEPARTMENT ACCESS ROAD. ALL OUTLETS SHALL BE PROVIDED WITH NATIONAL STANDARD THREADS (NST).
5. FIRE HYDRANT SUPPLY PIPING SHALL BE A MINIMUM OF SIX INCHES IN DIAMETER. THE LOWEST OPERATING NUT SHALL BE MINIMUM OF 18" ABOVE GRADE AND THE FIRE HYDRANT FLANGE SHALL BE A MINIMUM OF 2" ABOVE GRADE.
6. FIRE HYDRANTS SHALL BE A MINIMUM OF 40 FEET FROM ALL STRUCTURES. A KEVED GATE VALVE SHALL BE PROVIDED FOR EACH FIRE HYDRANT IN AN ACCESSIBLE LOCATION. VALVES SHALL NOT BE LOCATED IN PARKING STALLS.
7. ALL PIPES SHALL BE APPROVED FOR USE IN FIRE SERVICE SYSTEMS (CLASS 900 DR-18 MINIMUM). CLASS 900 DR-14 PIPES SHALL BE USED WHERE THE PRESSURES MAY EXCEED 150 PSI.
8. ALL FERROUS PIPE AND FITTINGS SHALL BE PROTECTED WITH LOOSE 8-MIL POLYETHYLENE TUBE. THE ENDS OF THE TUBE AND ANY SPLICES MADE FOR T's OR OTHER PIPING COMPONENTS SHALL BE SEALED WITH 2" TAPE. APPROVED FOR UNDERGROUND USE. ALL BOLT JOINTS SHALL BE CLEANED AND THOROUGHLY COATED WITH ASPHALT OR OTHER CORROSION RETARDING MATERIAL AFTER ASSEMBLY AND PRIOR TO POLY-TUBE INSTALLATION.
9. A BED OF CLEAN FILL SAND SHALL BE PROVIDED ABOVE AND BELOW THE PIPE, A MINIMUM OF 12" ABOVE AND 6" BELOW.
10. ALL BOLTS USED FOR UNDERGROUND CONNECTIONS SHALL BE STAINLESS STEEL.
11. A MINIMUM OF 30" OF COVER, FROM FINISHED GRADE TO THE TOP OF THE PIPE SHALL BE PROVIDED. WHEN SURFACE LOADS ARE EXPECTED, A MINIMUM OF 36" COVER SHALL BE PROVIDED.
12. THRUST BLOCKS, OR OTHER APPROVED METHOD OF THRUST RESTRAINT, SHALL BE PROVIDED WHEREVER PIPE CHANGES DIRECTION.
13. THE TRENCH SHALL BE EXCAVATED FOR THRUST BLOCKS AND INSPECTED PRIOR TO POUR. ALL CORROSION PROTECTION SHALL BE IN PLACE.
14. A HYDROSTATIC TEST (200 PSI FOR TWO HOURS OR 50 PSI OVER MAXIMUM STATIC PRESSURE, WHICHEVER IS GREATER) SHALL BE PERFORMED. BACKFILL BETWEEN THE JOINTS TO PREVENT MOVEMENT OF THE PIPE.
15. THE SYSTEM SHALL BE THOROUGHLY FLUSHED BEFORE CONNECTION IS MADE TO OVERHEAD PIPING. FLOW SHALL BE THROUGH A MINIMUM 4" HOSE PIPE.
16. PRIVATE HYDRANTS, SPRINKLER CONTROL VALVES, DETECTOR CHECK ASSEMBLIES, POST INDICATING VALVES AND FIRE DEPARTMENT CONNECTIONS SHALL BE PAINTED OSHA RED, UNLESS NOTED OTHERWISE.
17. THE CONTROL VALVES SHALL BE LOOKED IN THE OPEN POSITION. VALVES SHALL BE MONITORED IF THEY SERVE 6 OR MORE SPRINKLER HEADS.

FIRE WATER GENERAL NOTES:

1. FIRE WATER PIPE, FITTINGS, AND APPURTENANCES SHALL COMPLY WITH NFPA 24 INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
 - 1.1. FIRE DEPARTMENT CONNECTIONS (FDC) SHALL BE PER NFPA 24-5.9.
 - 1.2. FDC LOCATION AND SIGNAGE SHALL BE PER NFPA 24-5.9.5.

IMPORTANT NOTICE

1. ALL ASBESTOS CEMENT PIPE TO BE REMOVED SHALL BE SNAPPED, ENCAPSULATED, AND DISPOSED OF PER LOCAL, STATE, AND FEDERAL REGULATIONS.
2. DOMESTIC WATER SERVICE AND FIRE PROTECTION SHALL BE MAINTAINED DURING CONSTRUCTION. PROVIDE BYPASS LINES DURING CONSTRUCTION INCLUDING TIE-IN. COORDINATE ALL SHUT DOWNS OF WATER AND POWER WITH OWNER PRIOR TO CONSTRUCTION.
3. PURSUANT TO CALIFORNIA ASSEMBLY BILL 1953 ALL PIPE, FITTINGS, AND FIXTURES INTENDED TO CONVEY OR DISPENSE WATER FOR HUMAN CONSUMPTION THROUGH DRINKING WATER OR COOKING SHALL BE "LEAD FREE" AS OF JANUARY 1, 2010.

DEDICATED FIRE ACCESS

PORTIONS OF DEMOLITION MAY REQUIRE BLOCKING AND/OR OBSTRUCTING THROUGH ACCESS TO EMERGENCY / FIRE ACCESS VEHICLES. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE A FIRE WATCH SPECIALIST SERVICE FOR THE DURATION OF TIME THAT EMERGENCY / FIRE ACCESS VEHICLES ARE BLOCKED AND/OR OBSTRUCTED DURING CONSTRUCTION UNLESS EQUIVALENT ALTERNATE MEASURES ARE TAKEN TO ENSURE CONTINUOUS ACCESS TO EMERGENCY / FIRE ACCESS VEHICLES. CONTRACTOR TO COORDINATE THROUGH ACCESS TO EMERGENCY / FIRE ACCESS VEHICLES WITH THE LOCAL FIRE AUTHORITY HAVING JURISDICTION.

SITE FIRE FLOW AVAILABLE WATER PRESSURE

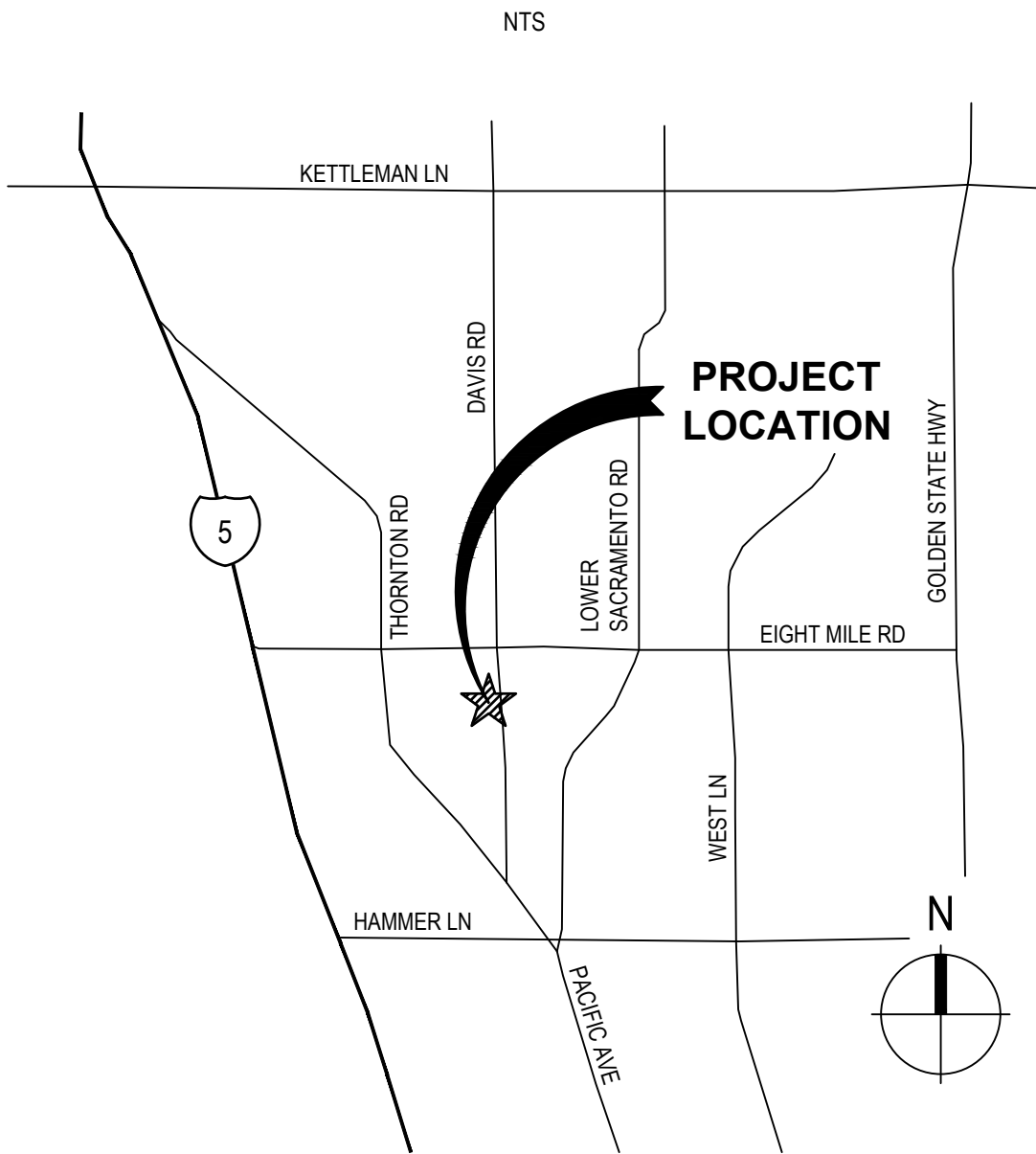
STATIC: XXX P.S.I.

FLOW: XXXX G.P.M. @ XX P.S.I.

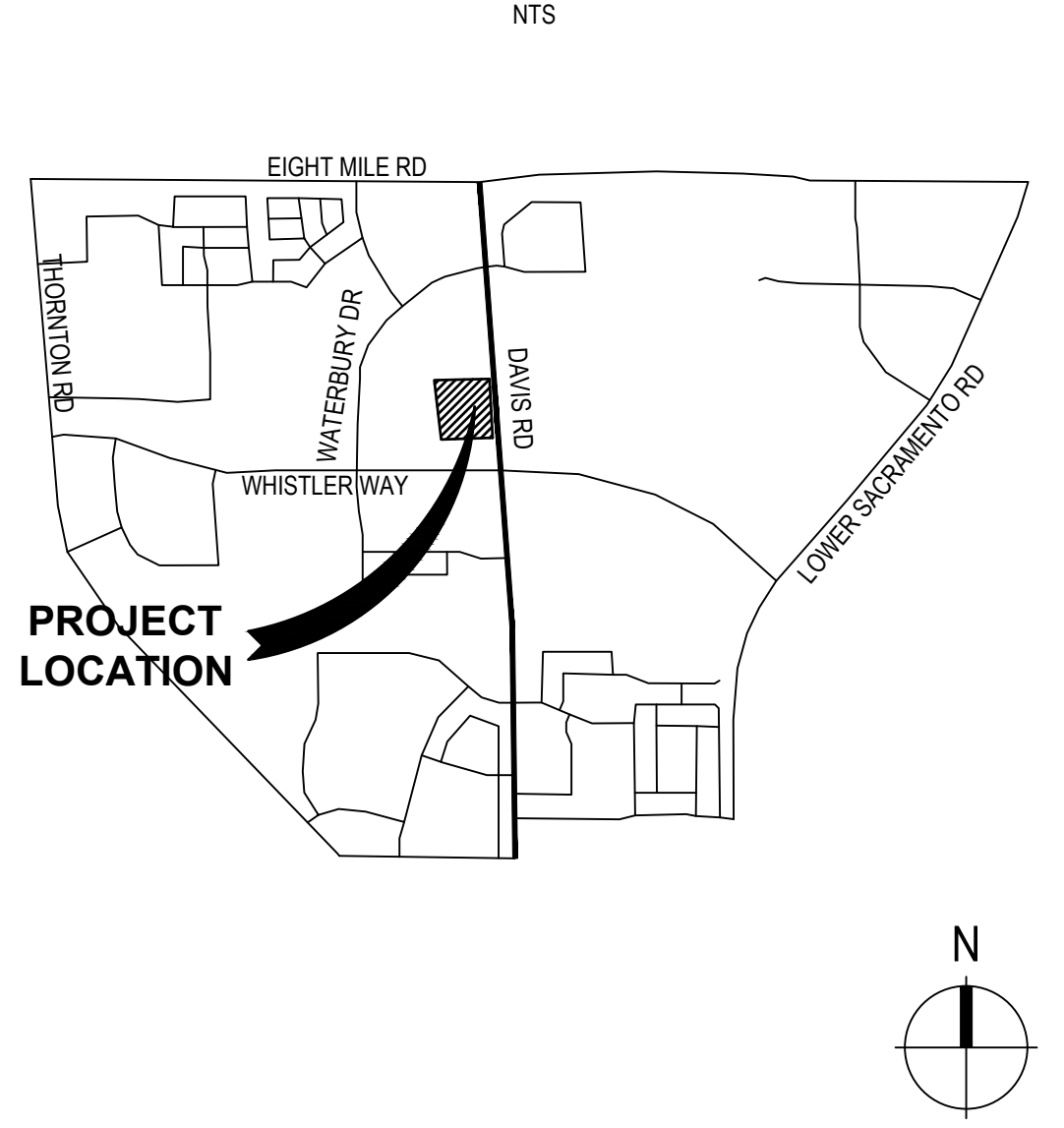
LOCATION: XXXX

TEST DATE: XX-XX-XXXX

VICINITY MAP



LOCATION MAP



CIVIL SHEET INDEX

C0.01	CIVIL NOTES
C0.02	EXISTING CONDITIONS
C1.01	DEMOLITION PLAN
C2.01	GRADING PLAN
C4.01	STORM DRAIN AND UTILITY PLAN

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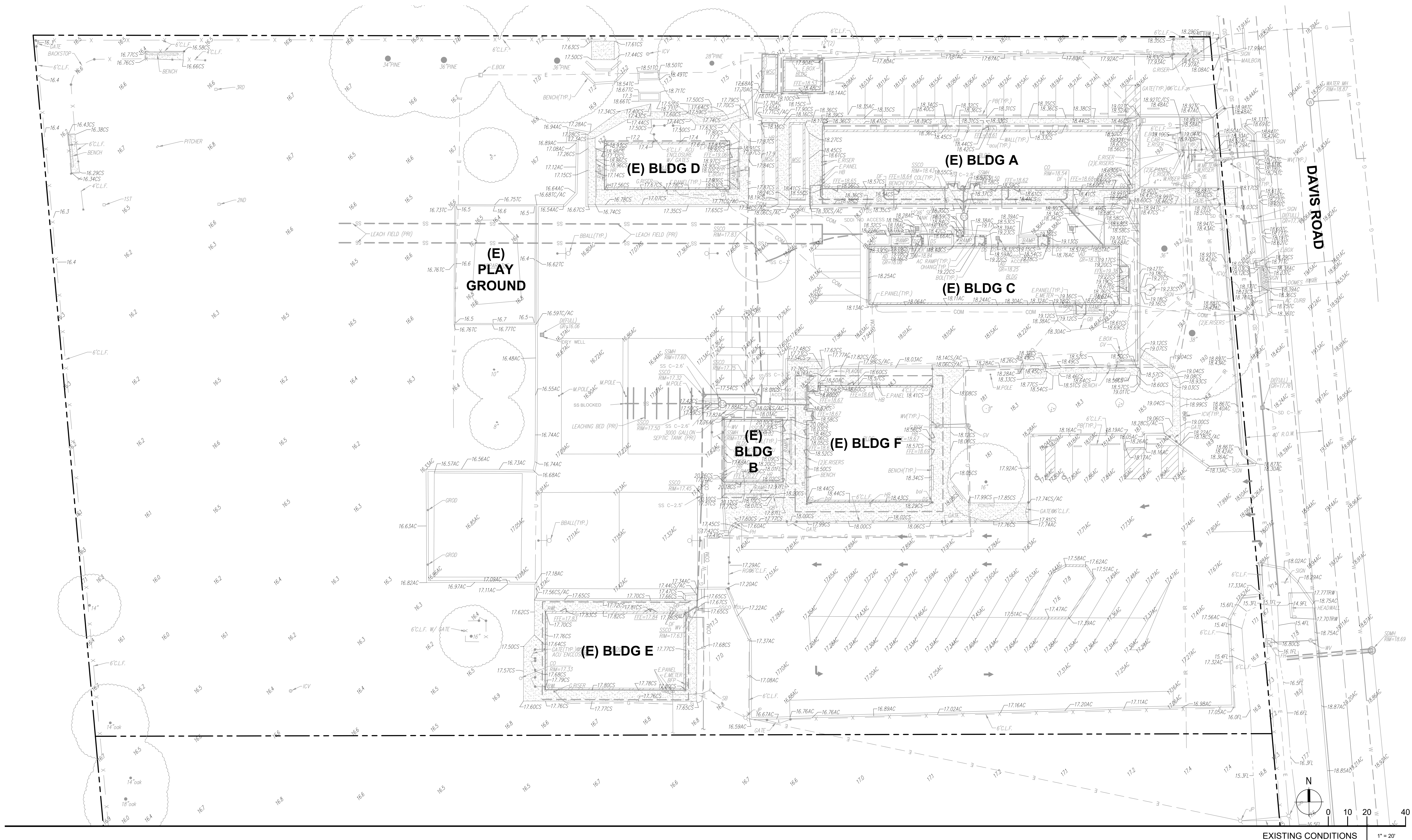
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Revision	

Submital	Date	75% SCHEMATIC DESIGN	100% SCHEMATIC DESIGN
	08/27/2025		08/28/2025

Job Number	31942
Checked By	CD
Scale	1" = 20'

EXISTING
CONDITIONS

C0.02





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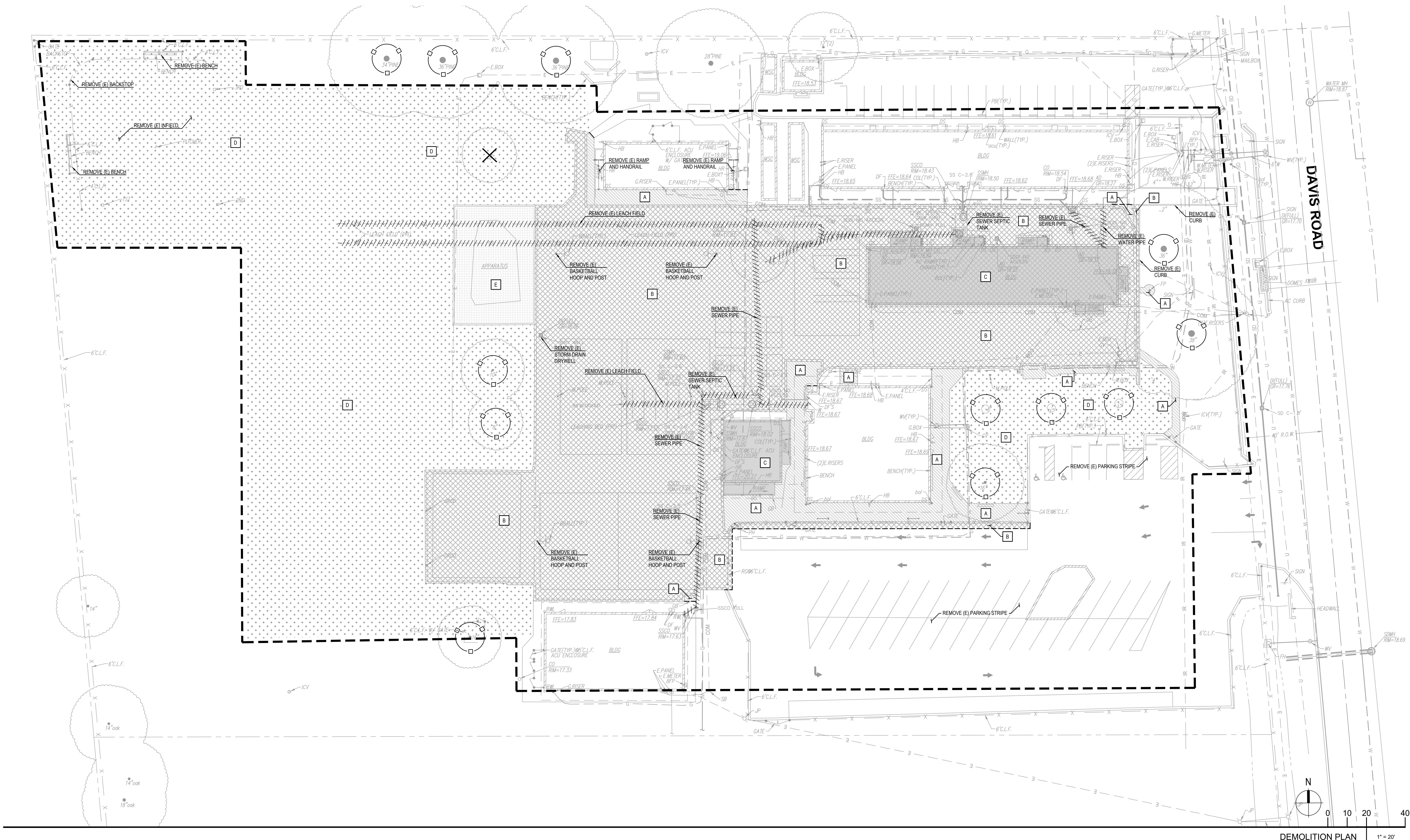
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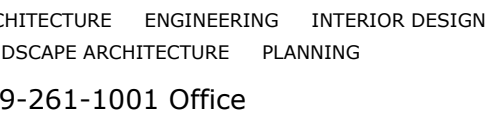
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DEMOLITION PLAN





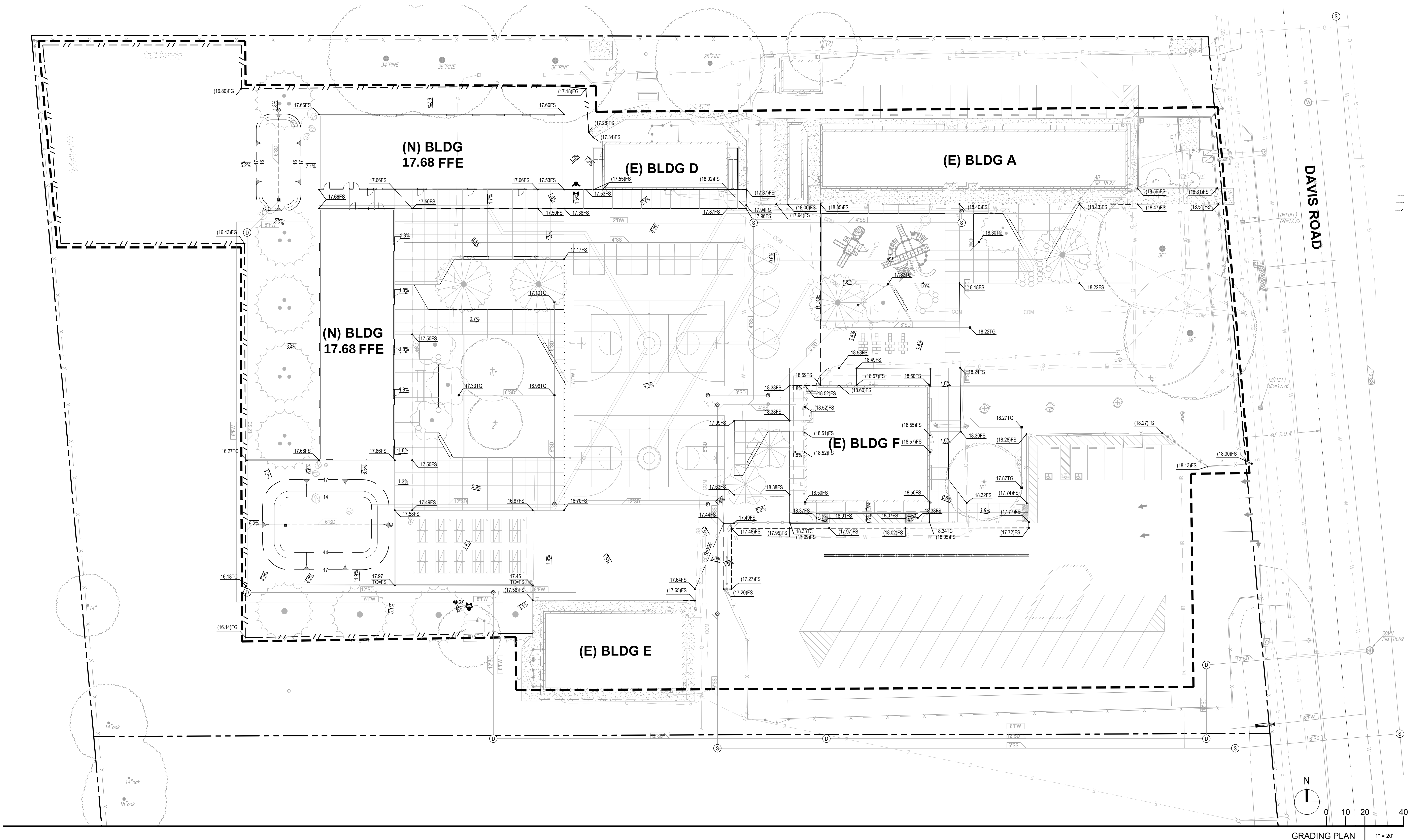
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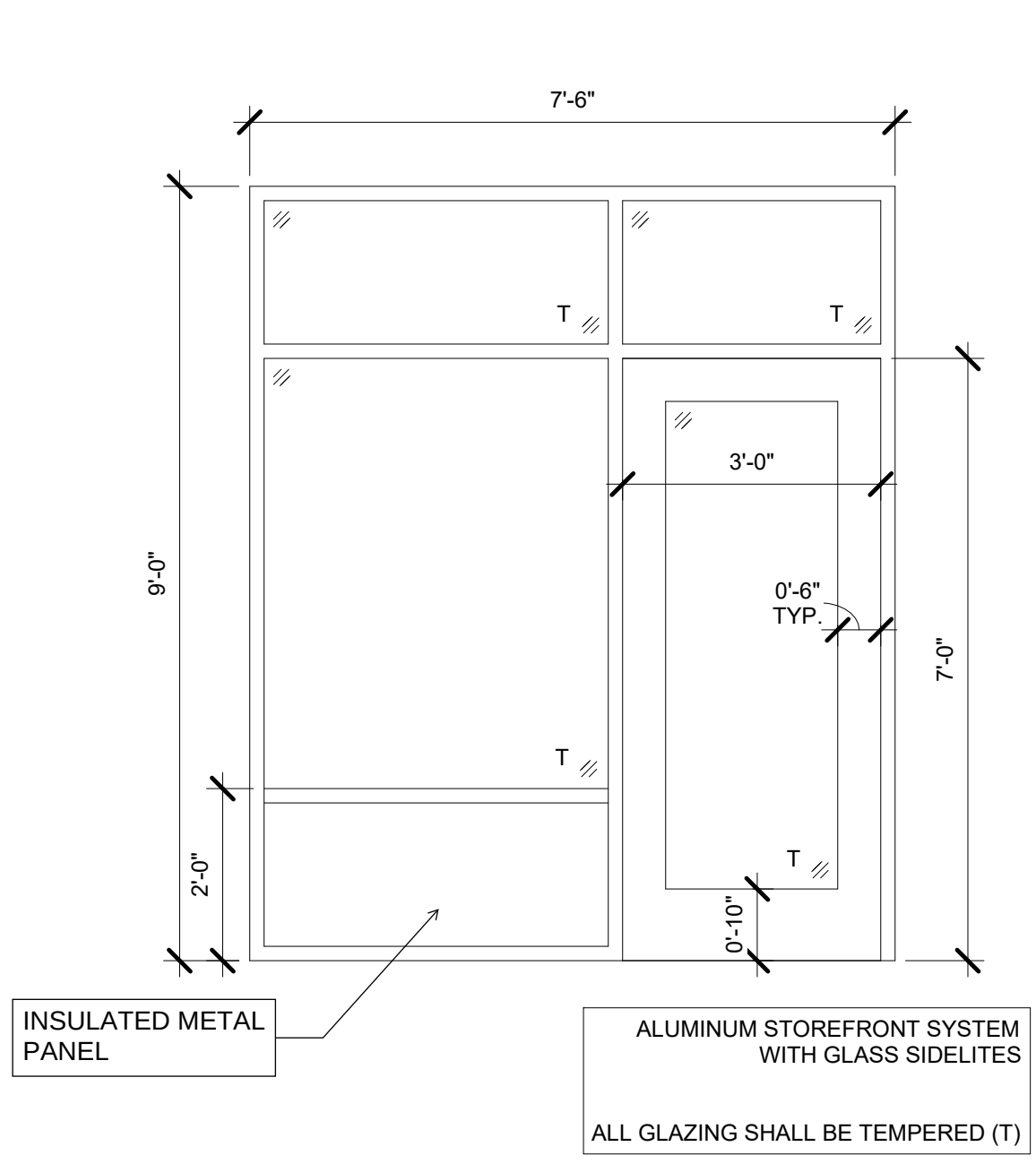


LUSD ELKHORN ELEMENTARY SCHOOL
RENOVATIONS

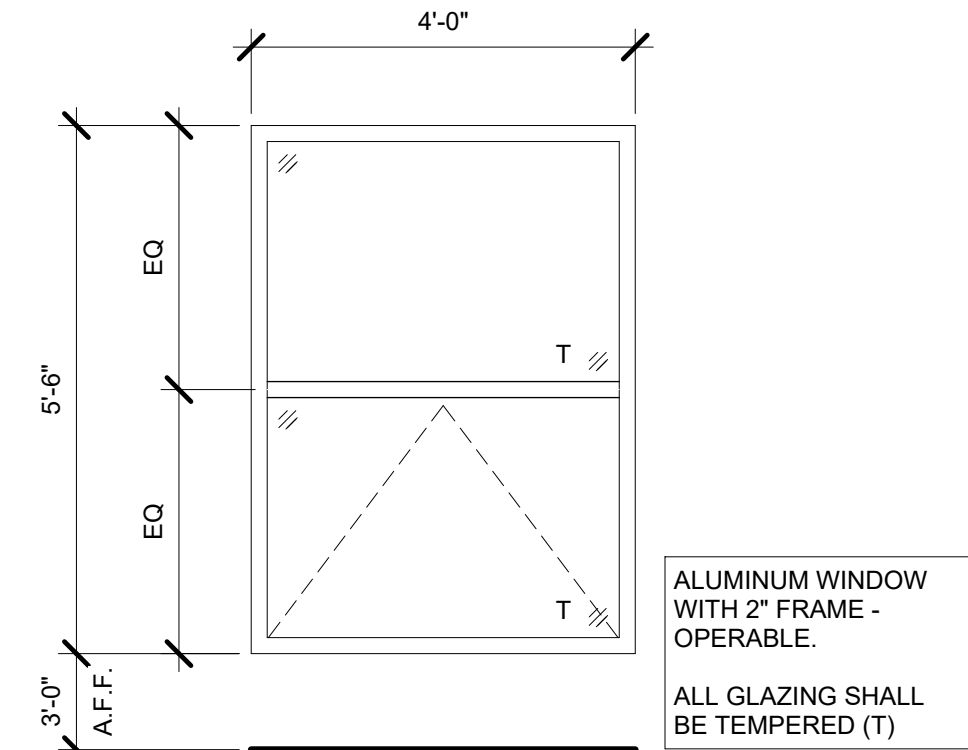
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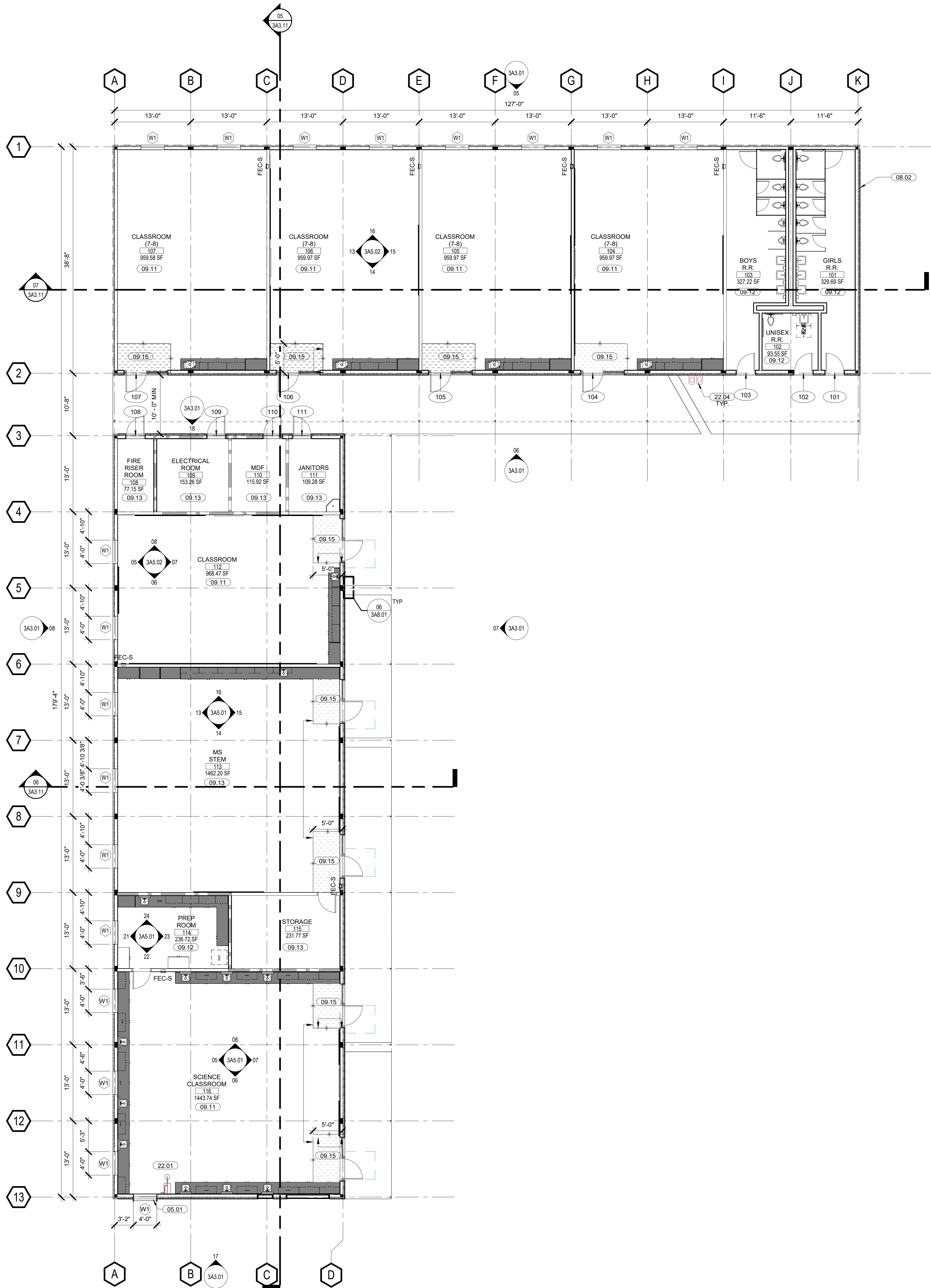
STORM DRAIN AND UTILITY PLAN



TYP. CLASSROOM/STEM/SCIENCE DOOR ELEVATION 1/2" = 1'-0" 3A2.01 24



WINDOW TYPE W1 ELEVATION 1/2" = 1'-0" 3A2.01 23



FLOOR PLAN - MODULAR 1/8" = 1'-0" 3A2.01 05

KEYNOTES

- 05.01 METAL PLATE SURROUND ALL SIDES OF WINDOW OPENING WITH CONTINUOUS, MITERED CORNERS, PAINTED.
- 08.02 NO OPENINGS ON THIS ELEVATION
- 09.11 FLOOR FINISH: RESILIENT
- 09.12 FLOOR FINISH: EPOXY FLOOR COVE BASE AND UP WALL TO 5'-0" AFF
- 09.13 FLOOR FINISH: SEALED CONCRETE
- 09.15 FLOOR FINISH: WALK-OFF CARPET, C-2
- 22.01 EYE WASH SHOWER
- 22.04 DRINKING FOUNTAIN AND BOTTLE FILLER

LEGEND

- DENOTES MILLWORK - REFER TO INTERIOR ELEVATIONS
- OVERHEAD ELEMENT, SEE REFLECTED CEILING PLAN - 3A2.02
- COLUMN, SEE DETAIL
- SEMI-RECESSED FIRE EXTINGUISHER CABINET
- 1-HOUR RATED WALL ASSEMBLY
- DOOR
- SINK
- TYP. DOOR TAG, SEE DETAIL 24/3A2.01
- WINDOW TAG, SEE DETAIL 23/3A2.01

GENERAL NOTES

- PROVIDE 6" HIGH CONCRETE CURBS @ ALL RESTROOMS, CUSTODIAL CLOSETS, WATER HEATER CLOSETS
- PROVIDE MOISTURE RESISTANT GYP BD IN ALL WET LOCATIONS, UNO.
- PROVIDE CEMENTITIOUS BACKER BOARD @ ALL TILE WALL LOCATIONS, UNO
- REFER TO G0 52 FOR TYP CLEARANCE @ DOOR LOCATIONS.
- REFERENCE INTERIOR ELEVATIONS FOR WALL FINISHES.

FINISH SCHEDULE		
TAG	DESCRIPTION	SPECIFICATION
ACT-1	ACOUSTICAL CEILING TILE	MFR. ARMSTRONG STYLE: SCHOOL FINE FISSURED COLOR: WHITE NOTES: MFR. BURKE OR JOHNSONITE STYLE: COLOR: BLACK NOTES: 6" STRAIGHT AT CARPET
B-1	RUBBER BASE	MFR. MOHAWK FIRST STEP II COLOR: 989 OBSIDIAN SIZE 24" X 24"
C-2	WALK-OFF CARPET TILE	INSTALLATION: TBD
EP-1	EPOXY FLOORING	MFR. DUR-A-FLEX INC. COLLECTION: DUR-A-QUARTZ COLOR: TBD FINISH: NON-GLOSS, SLIP RESISTANT
EPC-1	EPOXY COUNTER	NOTES: INTEGRAL COVE BASE MFR. CHEM TOPS COLOR: GRAPHITE NOTES: INTEGRAL BACKSPLASH
P-1	PAINT	MFR. SHERWIN WILLIAMS COLOR: COLOR MATCH KELLY MOORE BONE
P-2	ACCENT PAINT	MFR. SHERWIN WILLIAMS COLOR: FRANK BLUE SW 6967
P-3	PAINT DOORS & FRAMES	MFR. SHERWIN WILLIAMS COLOR: COLOR MATCH KELLY MOORE PEWTER CAST
PL-1	PLASTIC LAMINATE	MFR. WILSONART COLLECTION: STANDARD LAMINATE COLOR: NATURAL RIFT 7954-38 FINISH: FINE VELVET FINISH
PL-2	PLASTIC LAMINATE	MFR. WILSONART COLLECTION: STANDARD LAMINATE COLOR: LAPIS BLUE D417-60 FINISH: MATTE FINISH
PL-3	PLASTIC LAMINATE COUNTER	MFR. WILSONART COLLECTION: STANDARD LAMINATE COLOR: GRAY GLACE 4142-60 FINISH: MATTE FINISH
RF-1	RESILIENT FLOORING	MFR. PATCRAFT COLLECTION: WOOD + WEALD COLOR CYPRESS V-2 00750 THICKNESS: 2.2 MM
T-1	TILE	MFR. DALTILE COLLECTION: COLORWHEEL COLOR TBD SIZE: 6x6
WP-1	VINYL TACKABLE WALL PANEL	MFR. DÉCOR STYLE: BULLETIN BOARD COLOR: OYSTER NOTES:
WP-2	VINYL TACKABLE ACOUSTICAL WALL PANEL	MFR. KOROSEAL STYLE: LINSEY PVC FREE COLOR: ABACA NOTES: 1 1/8" THICK MICRO PERF PERFORMANCE PLUS PANELS



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ELKHORN ELEMENTARY SCHOOL CAMPUS MODERNIZATION
INCREMENT 3

10505 DAVIS ROAD, STOCKTON, CA 95209

Developed for
LODI UNIFIED SCHOOL DISTRICT

Submit	100% SCHEMATIC DESIGN BID DOCUMENTS	Date		Revision	
		02/26/2025	11.21.25		
Job Number	31942				
Checked By	Checker				
Scale	As indicated				

FLOOR PLAN -
MODULAR

A2.01



REFLECTED CEILING PLAN - MODULAR

05

05.01	METAL PLATE SURROUND ALL SIDES OF WINDOW OPENING WITH CONTINUOUS, MITERED CORNERS, PAINTED.
12.01	MANUAL WINDOW SHADES

9'-0"
XXX-1 → **TYP CLO HEIGHT, UNO**
TYP CLO TYPE, UNO, SEE FINISH SCHEDULE 3A-01

EQ **EQ**
EQ **EQ**

CL

EXP-1
EXP-2

GWB

GYPSUM WALLBOARD

EXP-3
EXP-4

EXP-5
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1. FOR ALL LIGHTING SPECIFICATIONS, REFER TO LIGHTING & ELECTRICAL DWGS.
2. CONFIRM MTG HEIGHTS W/ ARCHITECT IN FIELD PRIOR TO INSTALLATIONS FOR ALL NON-RECESSED FIXTURES.
3. REFER TO MECHANICAL DWG FOR SUPPLY & RETURN AIR SPECIFICATIONS.
4. PROVIDE MANUAL WINDOW SHADES AT ALL GLAZING RE: BOD AND DISTRICT STANDARDS.
5. REFERENCE SHEET 3A2.01 FOR CEILING TYPES AS LISTED IN FINISH SCHEDULE.



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Developed for
LODI UNIFIED SCHOOL DISTRICT

Submittal	Date	Revision	Date
100% SCHEMATIC DESIGN	08/30/2025		
BID DOCUMENTS	11.21.25		
Job Number	31942		
Checked By	Checker		
Scale	1/8" = 1'-0"		

REFLECTED CEILING
PLAN - MODULAR

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05.01	METAL PLATE SURROUND ALL SIDES OF WINDOW OPENING WITH CONTINUOUS, MITERED CORNERS, PAINTED.
07.01	METAL GUTTER - 16" H X 10" W, PAINTED

LEGEND

SINGLE PLY ROOFING

GENERAL NOTES

1. MIN. SLOPE AT VALLEY BETWEEN INTERFACING ROOF PLANES OR CRICKETS IS 1/4 INCH PER FOOT.
2. MECHANICAL EQUIPMENT NOT SHOWN. REFER TO BASIS OF DESIGN FOR ADDITIONAL INFORMATION.

ELKHORN ELEMENTARY SCHOOL CAMPUS MODERNIZATION

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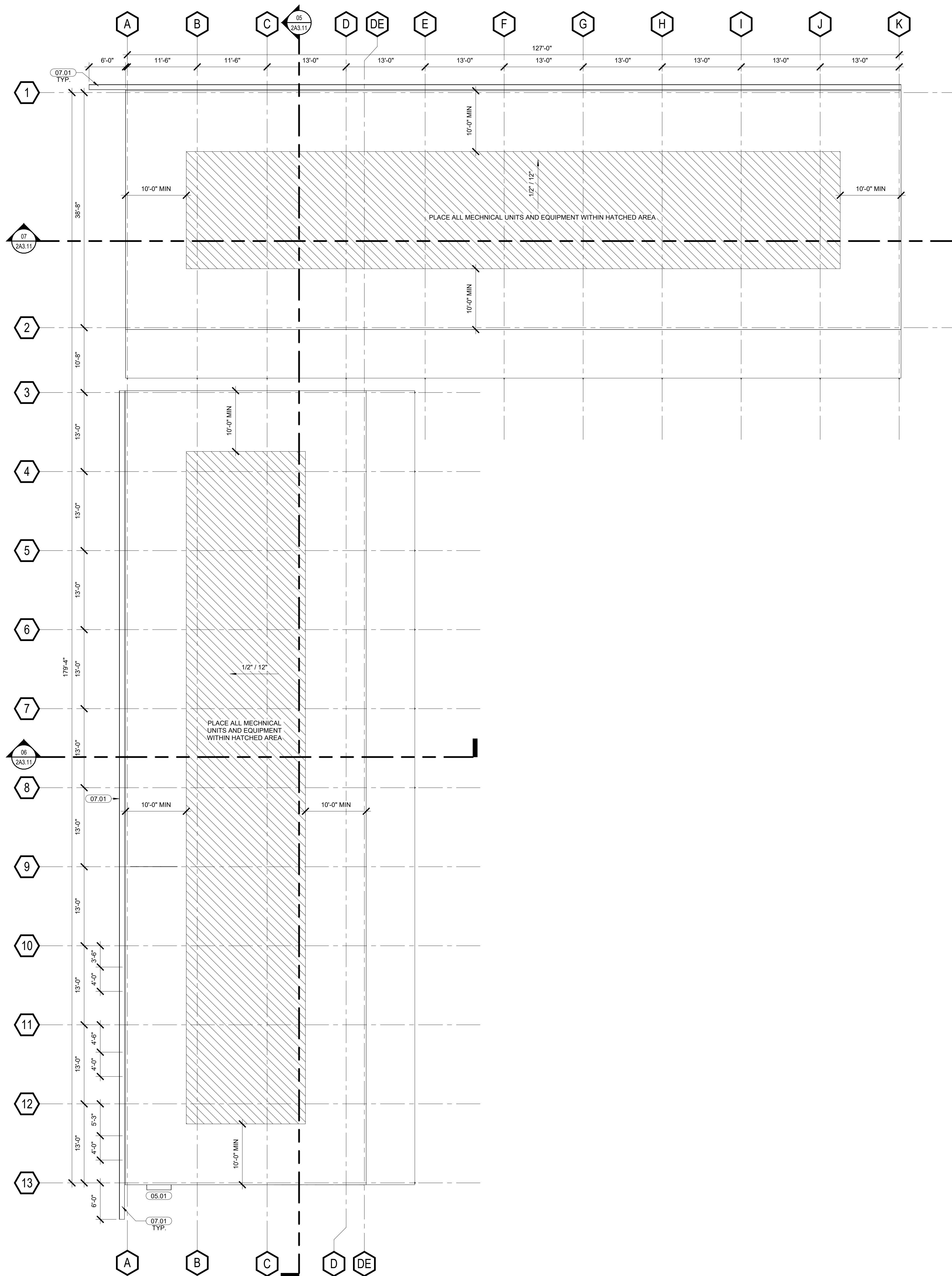
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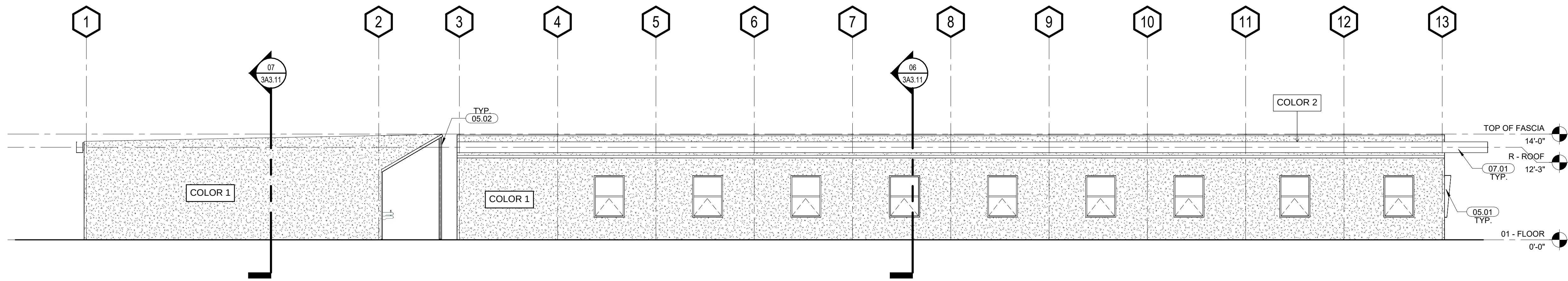
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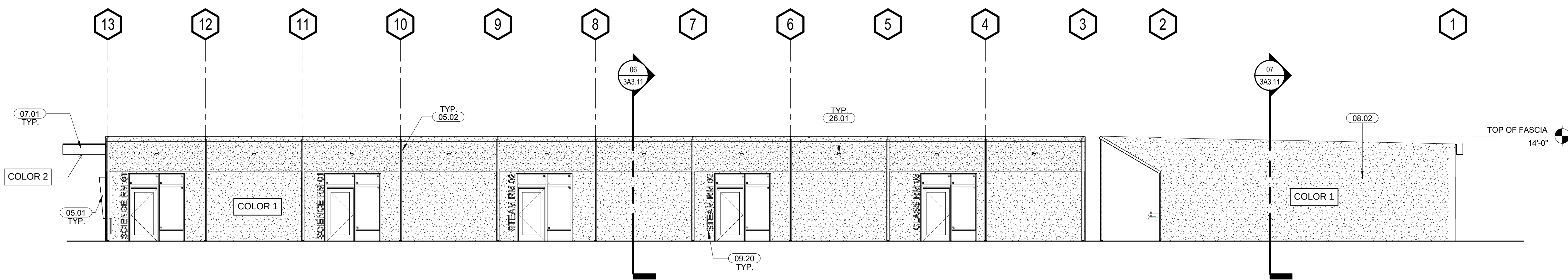
ROOF PLAN - MODULAR

A2.03

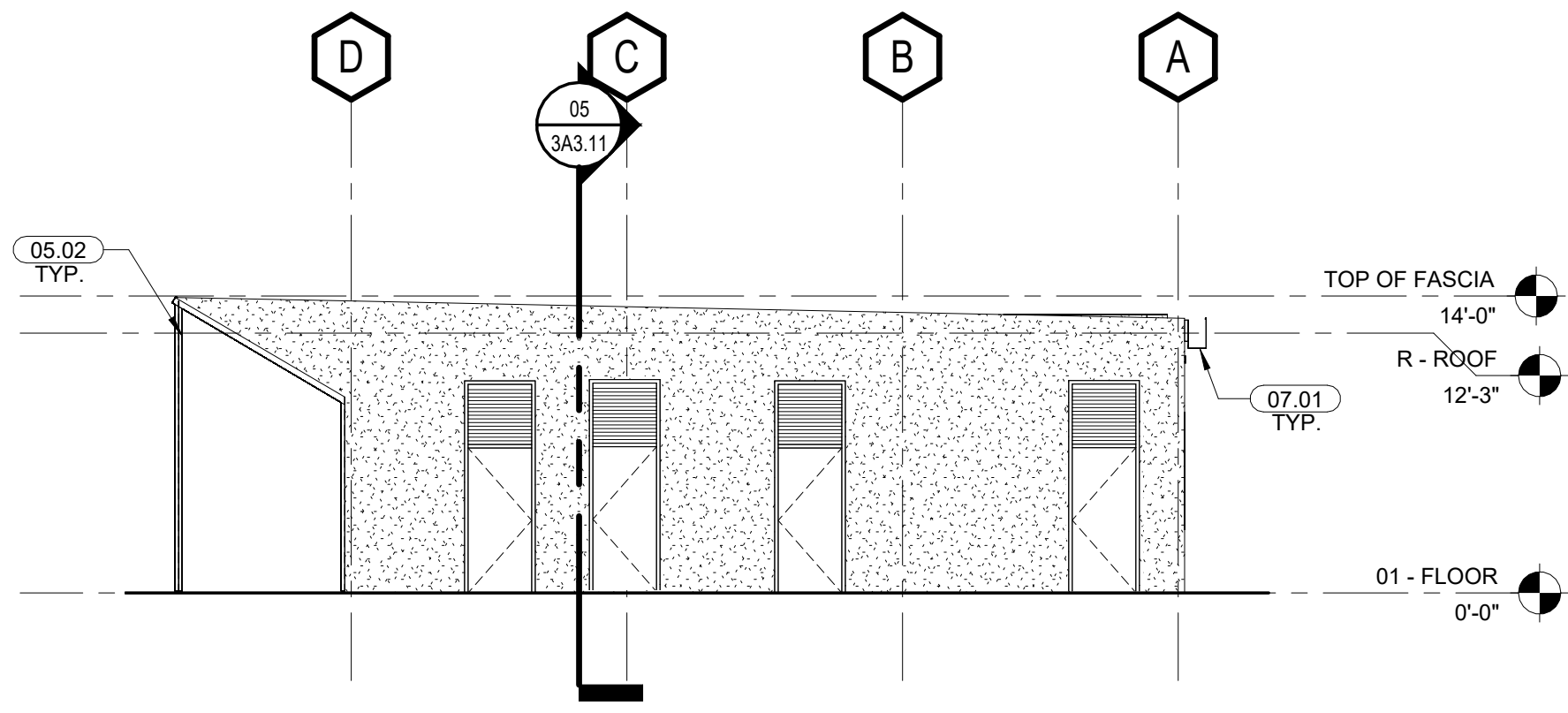




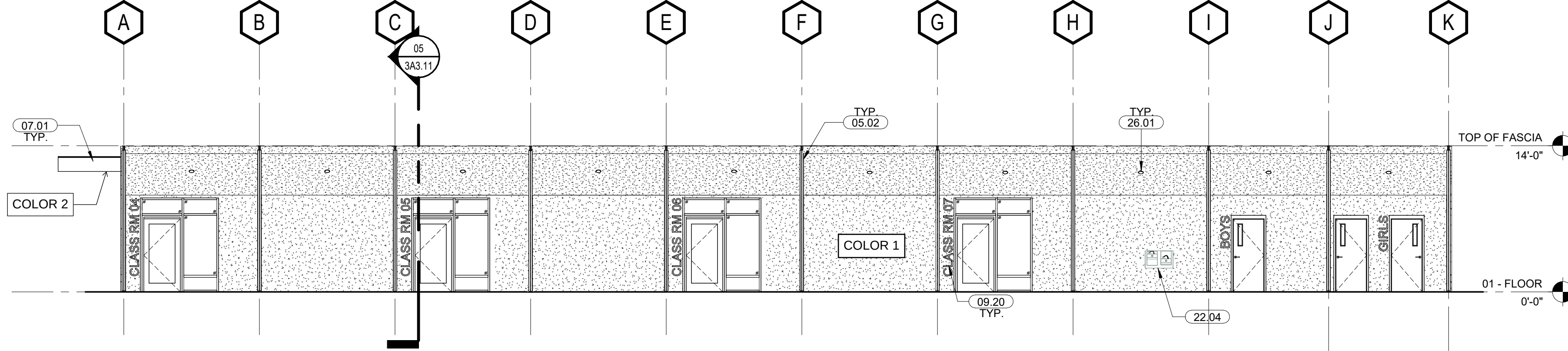
EXT ELEVATION - WEST 1/8" = 1'-0" 3A3.01 08



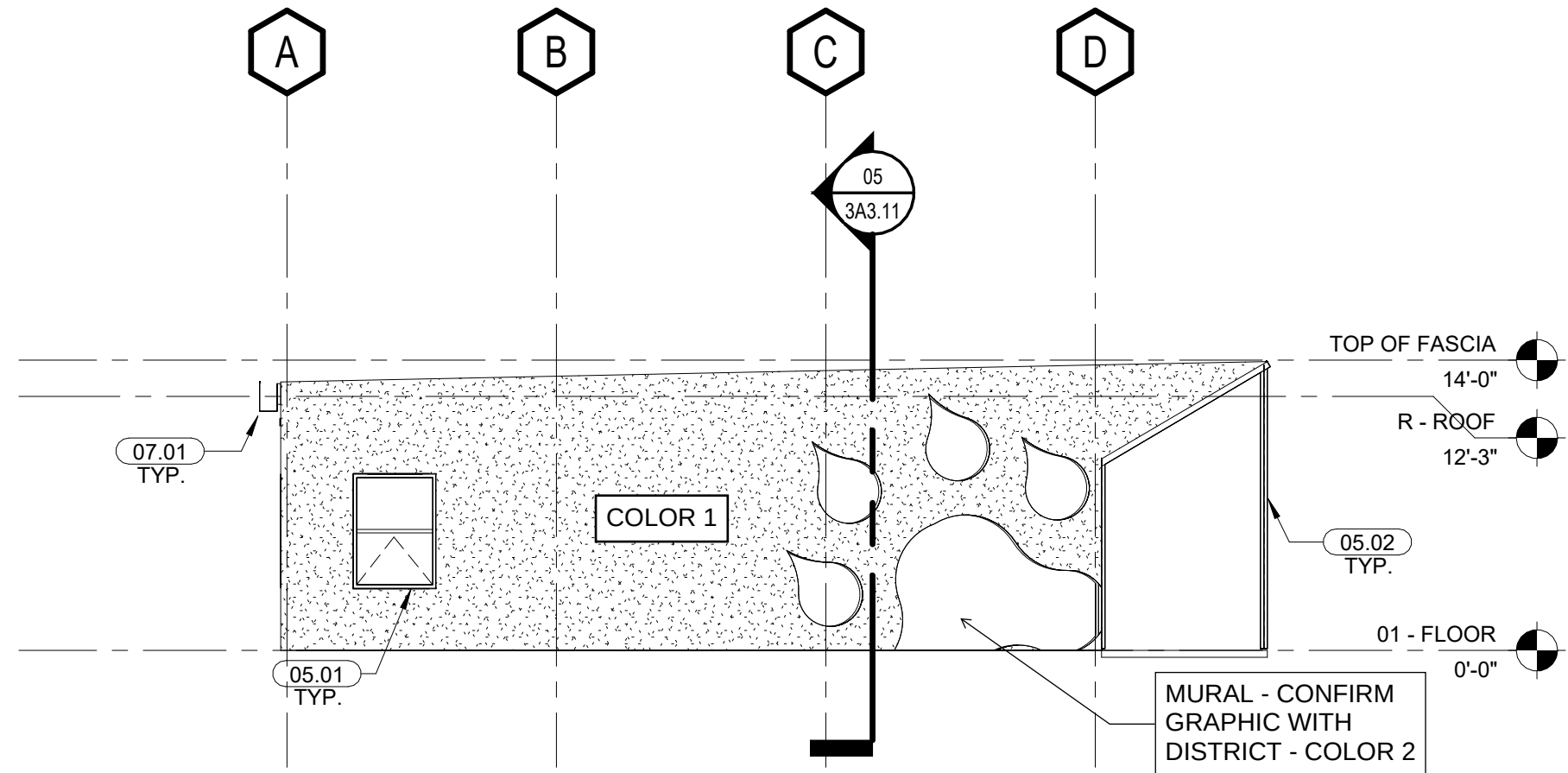
EXT ELEVATION - EAST 1/8" = 1'-0" 3A3.01 07



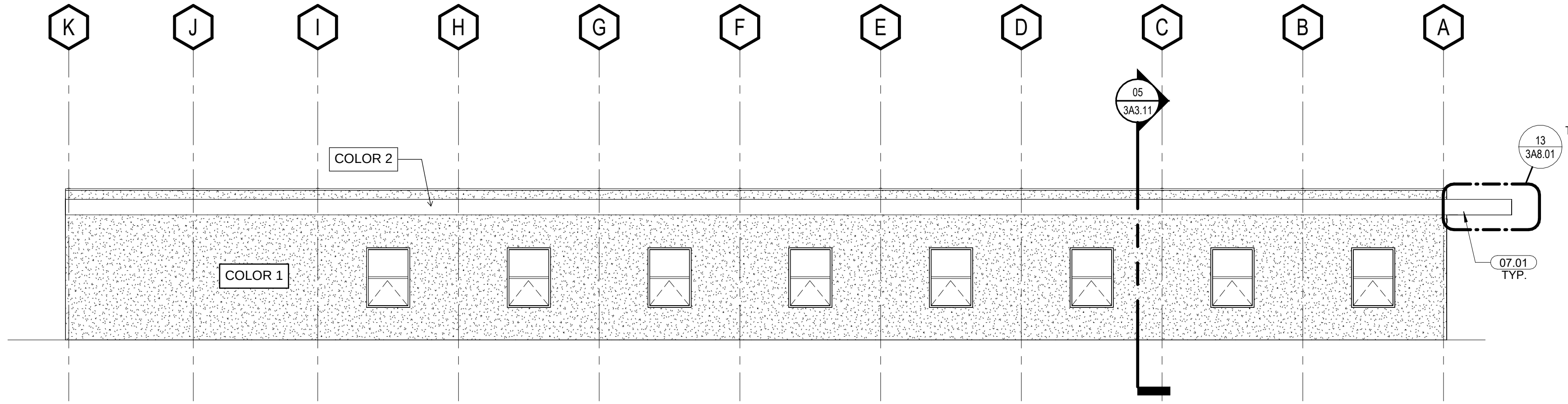
PARTIAL EXT ELEVATION - NORTH 1/8" = 1'-0" 3A3.01 18



EXT ELEVATION - SOUTH 1/8" = 1'-0" 3A3.01 06



PARTIAL EXT ELEVATION - SOUTH 1/8" = 1'-0" 3A3.01 17



EXT ELEVATION - NORTH 1/8" = 1'-0" 3A3.01 05

KEYNOTES

05.01	METAL PLATE SURROUND ALL SIDES OF WINDOW OPENING WITH CONTINUOUS, MITERED CORNERS, PAINTED: COLOR 2
05.02	STEEL COLONNADE: COLOR 2
07.01	METAL GUTTER - 16" H X 10" W, PAINTED
08.02	NO OPENINGS ON THIS ELEVATION
09.20	ROOM NAME AND NUMBER PAINTED ON BUILDING IN ACCENT COLOR - LETTER SIZE 10" MIN COLOR 2
22.04	DRINKING FOUNTAIN AND BOTTLE FILLER
26.01	LIGHT FIXTURE, SEE REFLECTED CEILING PLAN

LEGEND

	EXTERIOR PLASTER
	EXTERIOR LIGHT FIXTURE, SEE BASIS OF DESIGN

GENERAL NOTES

1. ALUMINUM DOORS, WINDOWS, ALUMINUM STOREFRONT MULLIONS TO BE FINISHED PER BASIS OF DESIGN.
2. PAINT ALL EXPOSED STRUCTURAL STEEL, HOLLOW METAL DOORS, DOOR FRAMES WITH HIGH PERFORMANCE COATING TO MATCH XXX.
3. PRE-FINISH ALL COPING, TRIM, AND GLASSING TO MATCH XXX.

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ELKHORN ELEMENTARY SCHOOL CAMPUS MODERNIZATION
INCREMENT 3

10505 DAVIS ROAD, STOCKTON, CA 95209

Developed for
LODI UNIFIED SCHOOL DISTRICT

Date	
Revision	

Date	02/29/2025
Submitted	100% SCHEMATIC DESIGN BID DOCUMENTS
11.11.25	

Job Number	31942
Checked By	Checker
Scale	1/8" = 1'-0"

EXTERIOR ELEVATIONS
- MODULAR

KEYNOTES

26.01 LIGHT FIXTURE, SEE REFLECTED CEILING PLAN



ARCHITECTURE ENGINEERING INTERIOR DESIGN
LANDSCAPE ARCHITECTURE PLANNING

916-287-2400 Office

LPADesignStudios.com

431 I Street, Suite 107
Sacramento, California 95814

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ELKHORN ELEMENTARY SCHOOL CAMPUS MODERNIZATION

10505 DAVIS ROAD, STOCKTON, CA 95209

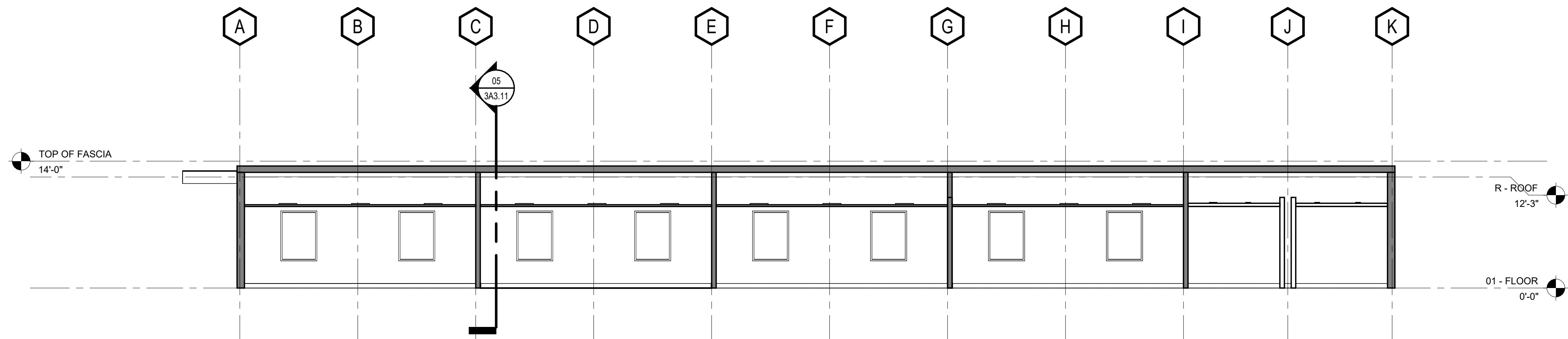
Developed for
LODI UNIFIED SCHOOL DISTRICT

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Job Number	31942
Checked By	Checker
Scale	1/8" = 1'-0"

BUILDING SECTIONS - MODULAR

A3.11

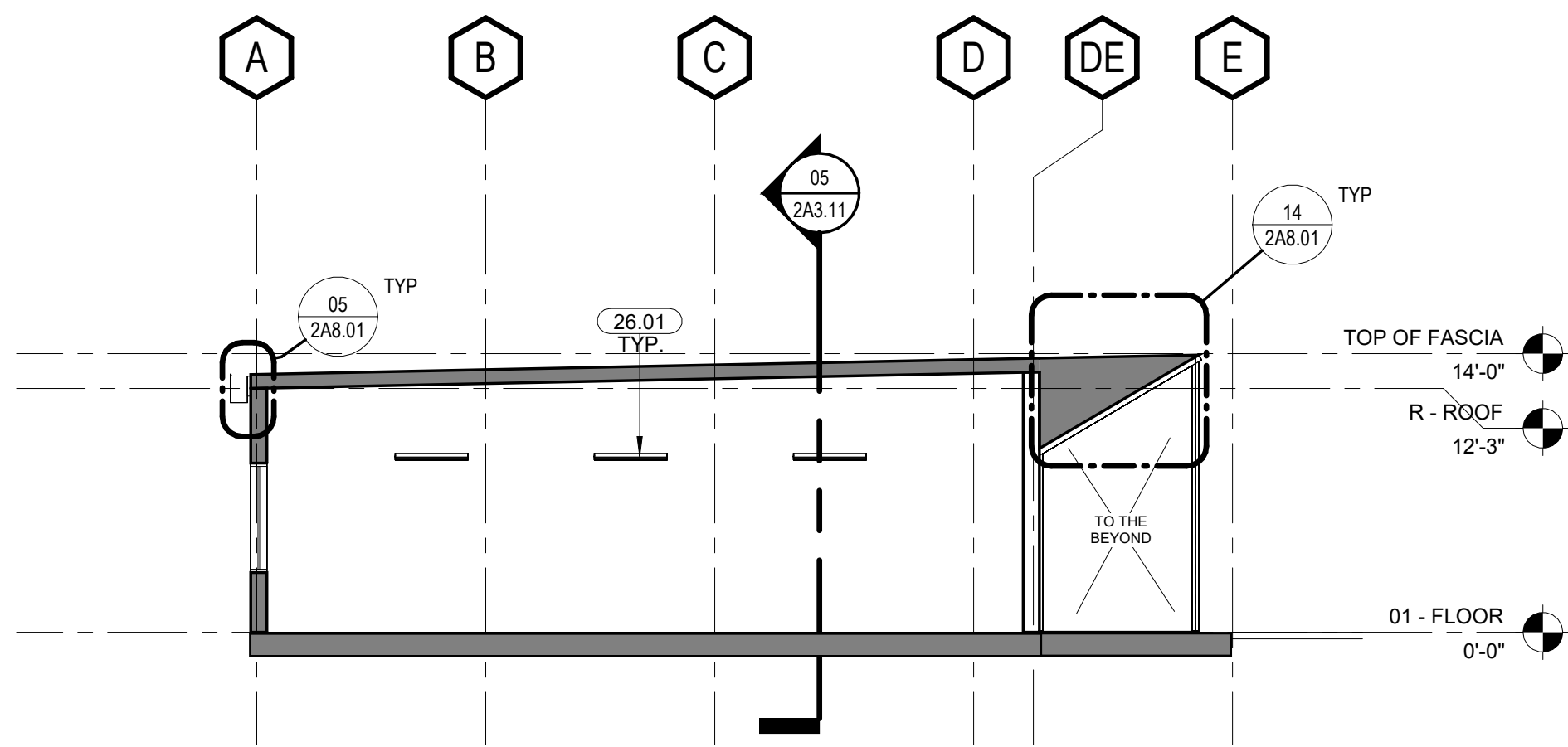


NORTH - BUILDING SECTION

1/8" = 1'-

243.11

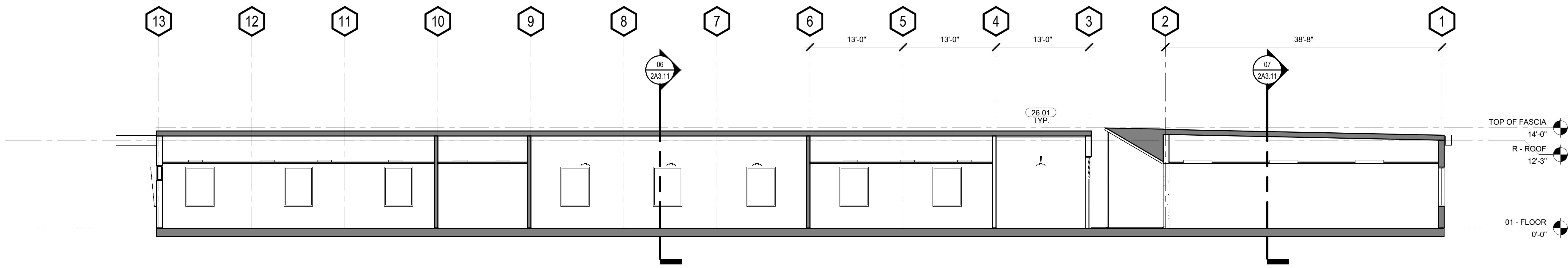
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SOUTH - BUILDING SECTION

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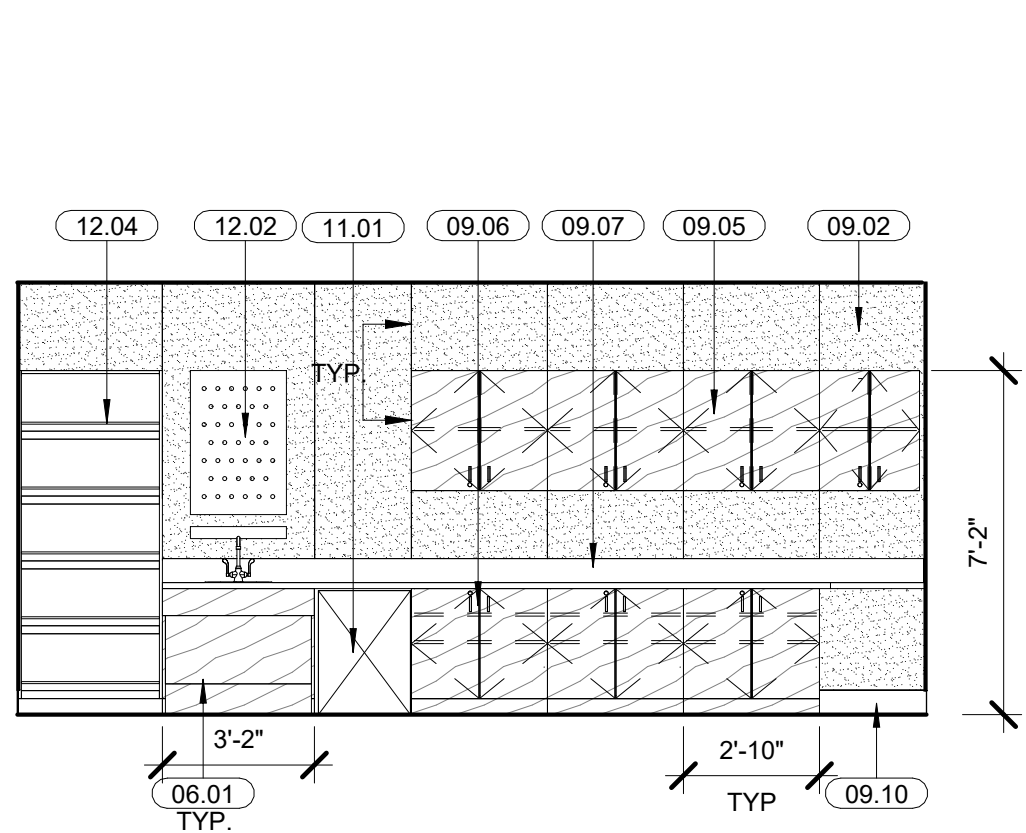
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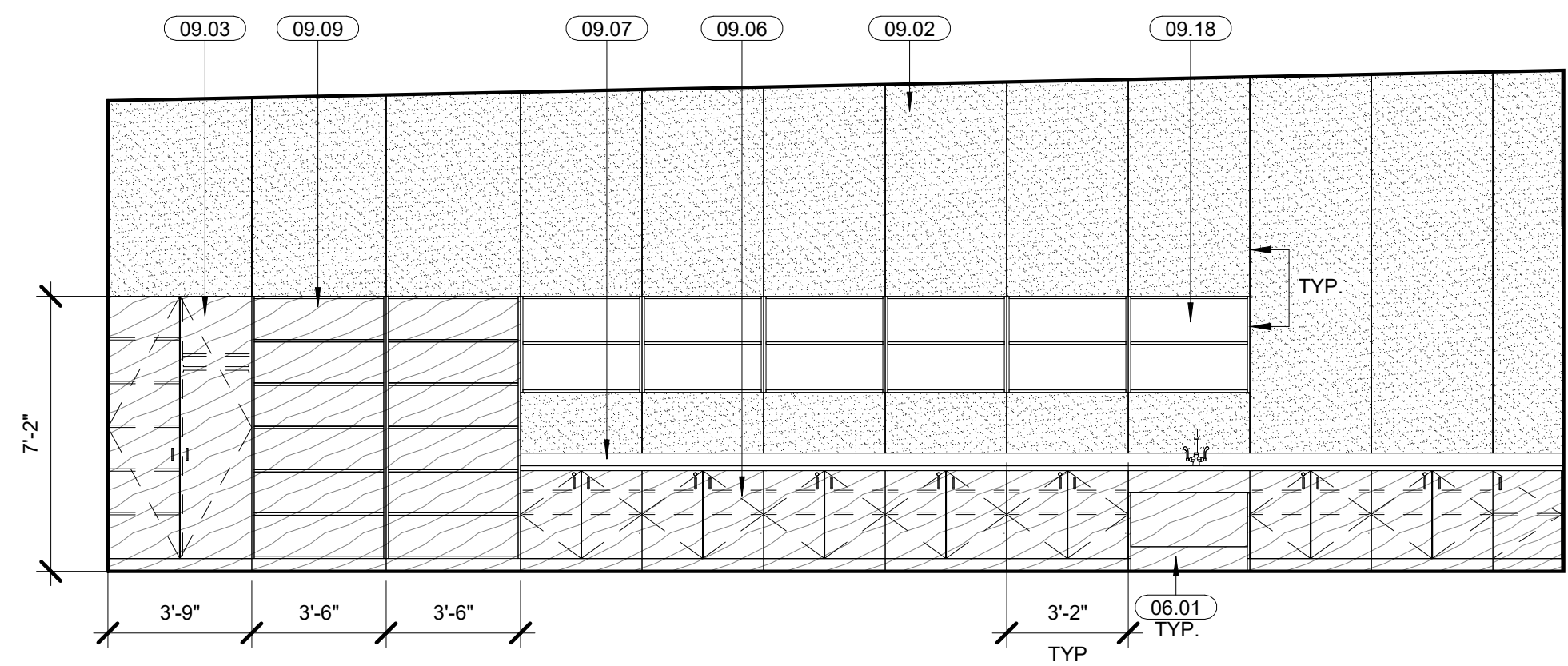
WEST - BUILDING SECTION

202.11

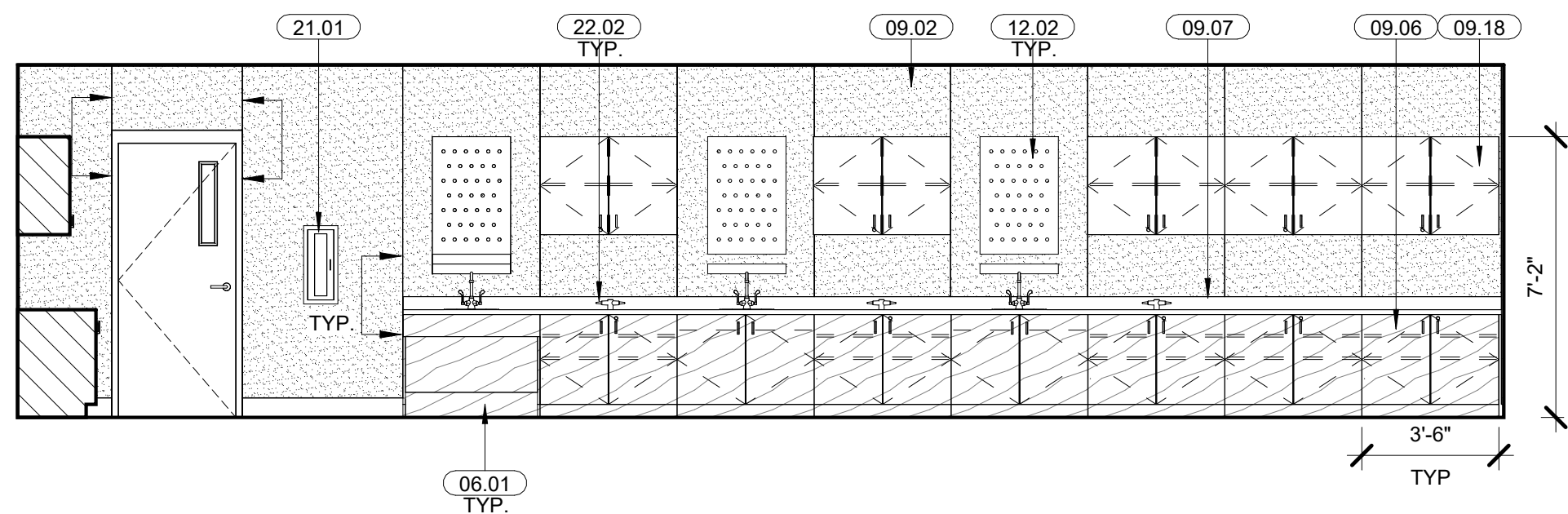
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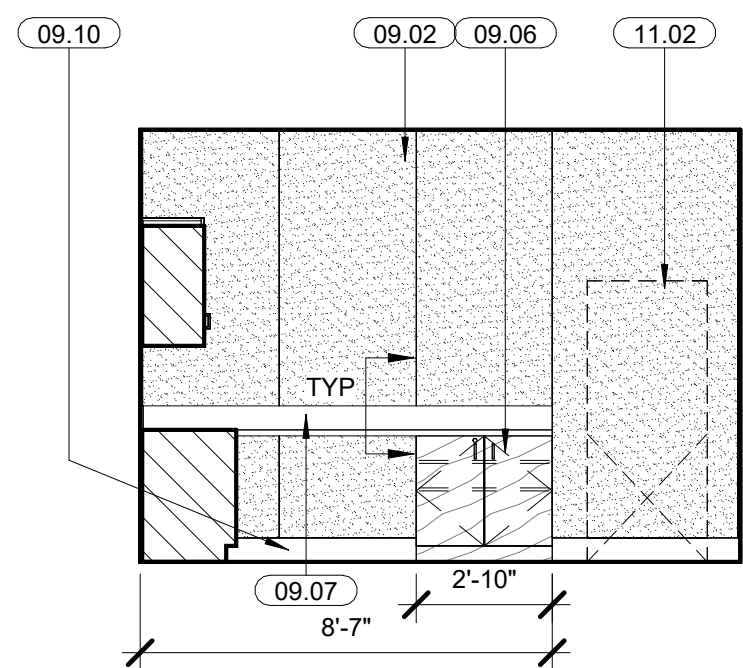
PREP - NORTH
1/4" = 1'-0"
2A5.01
24



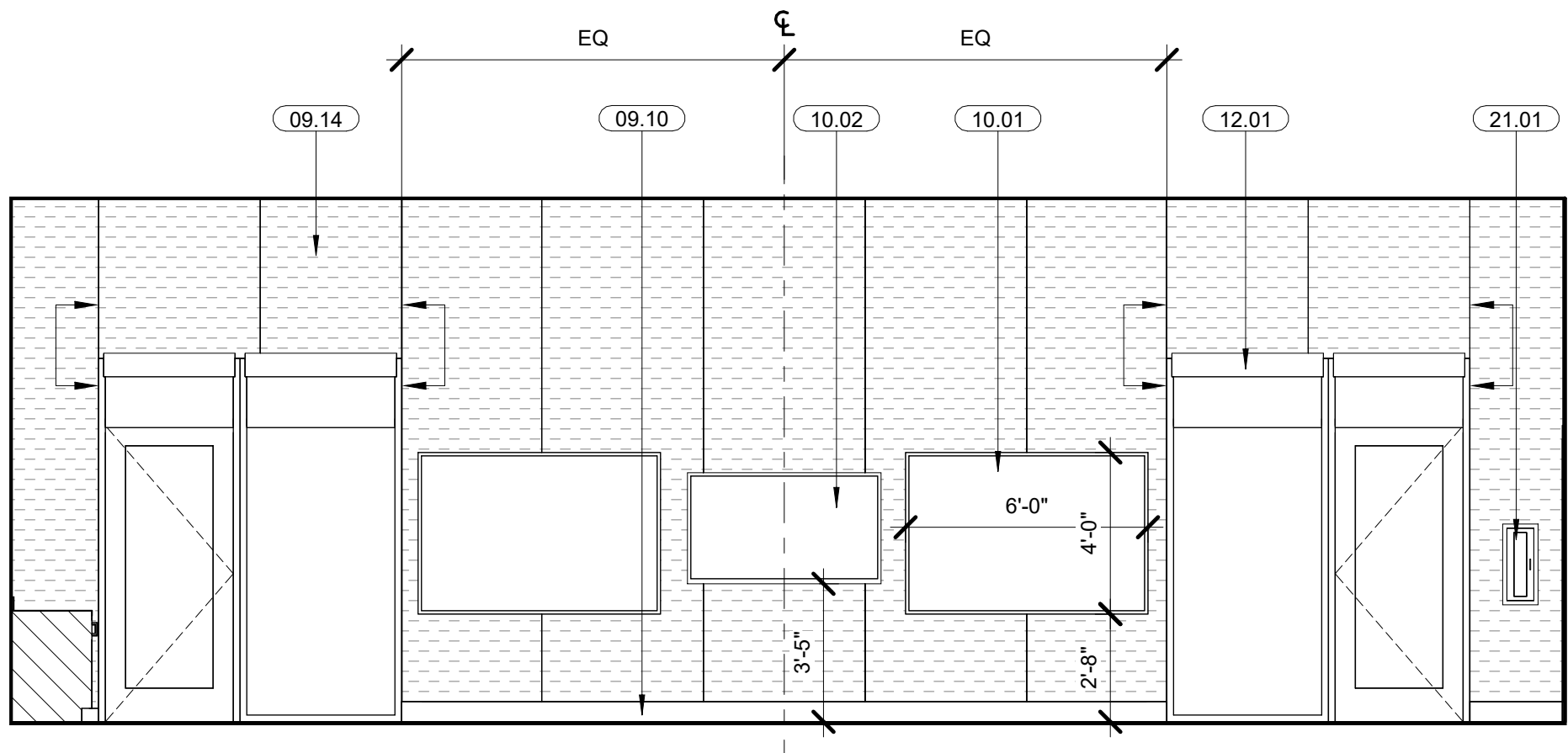
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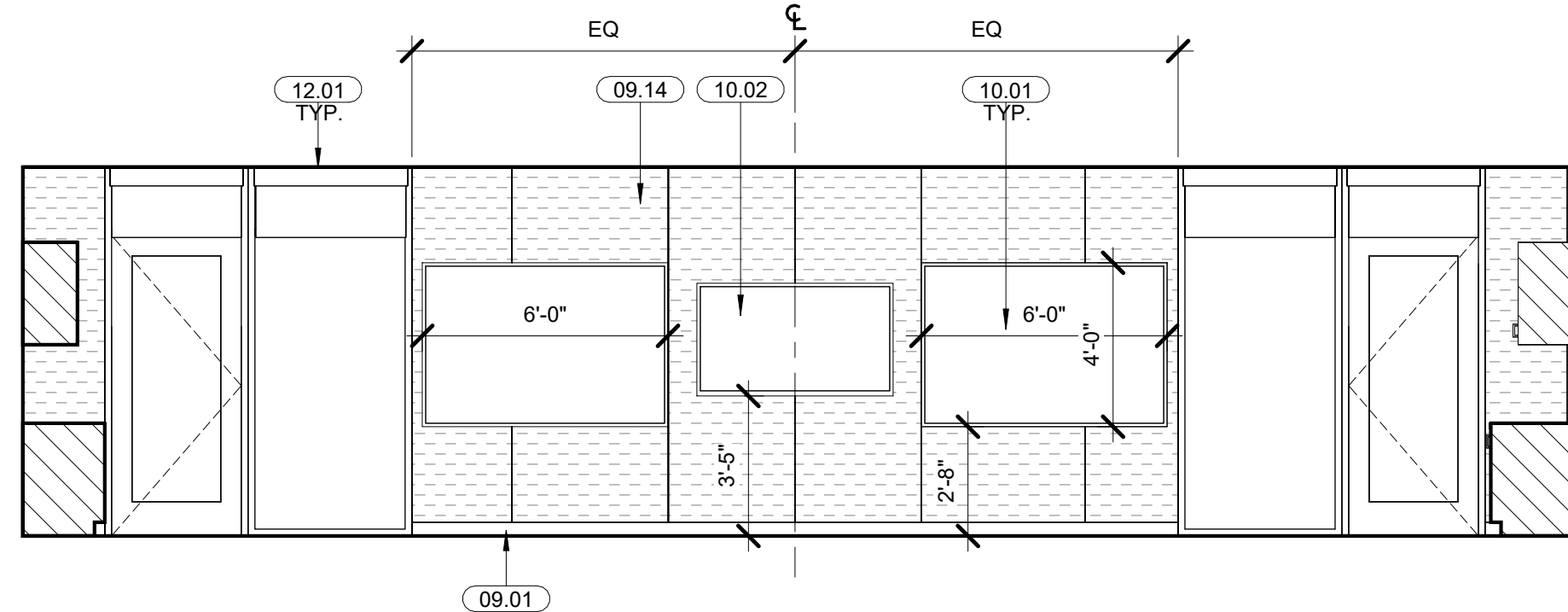
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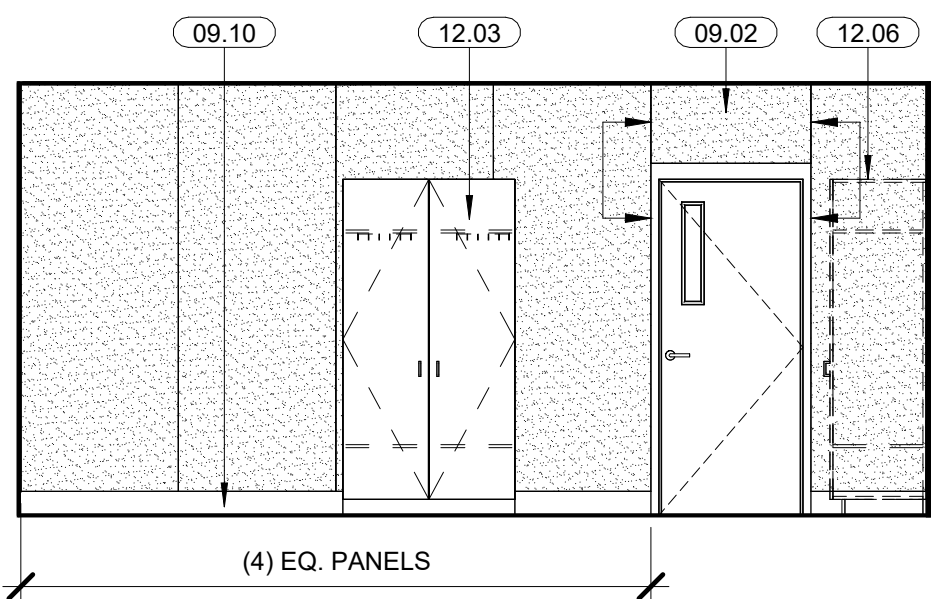
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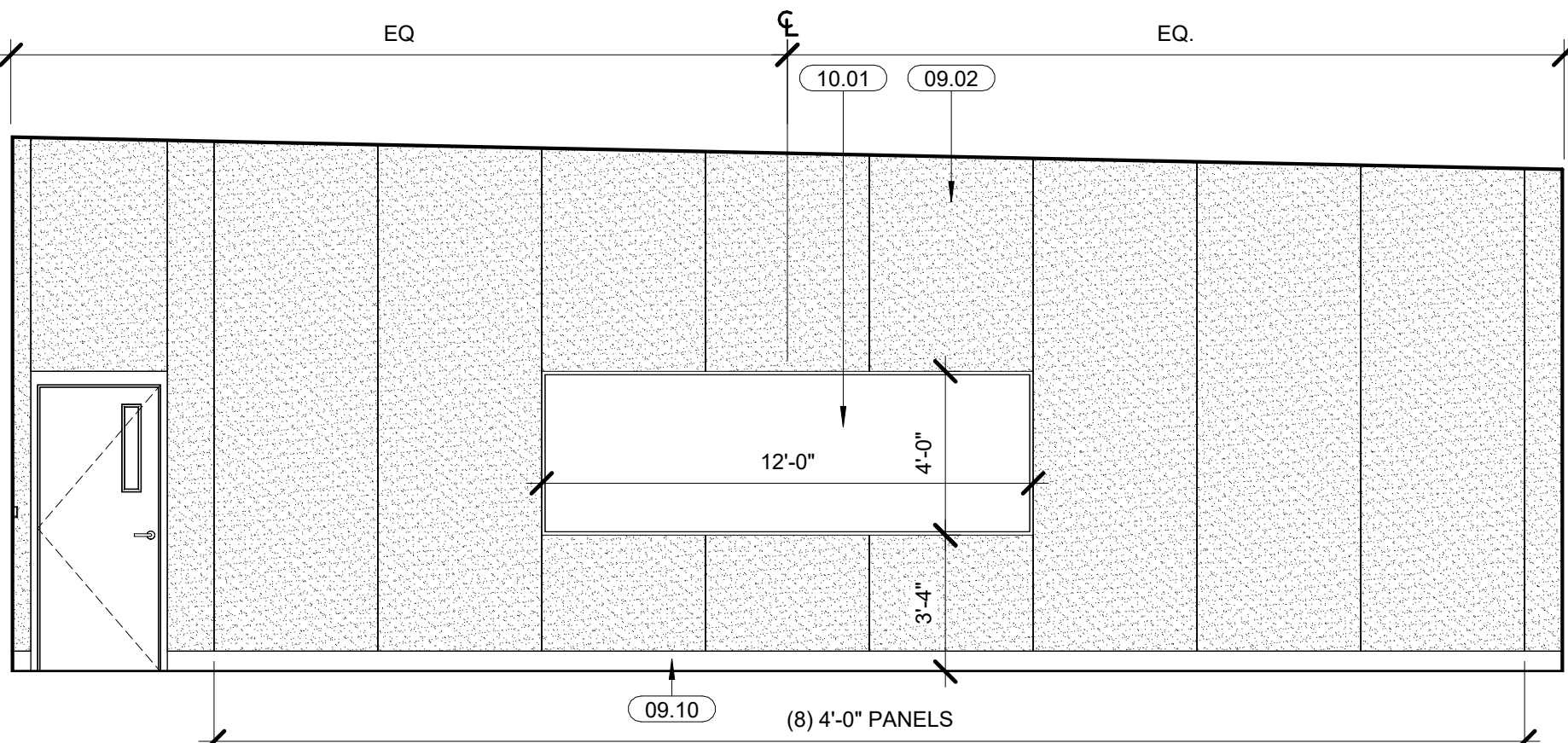
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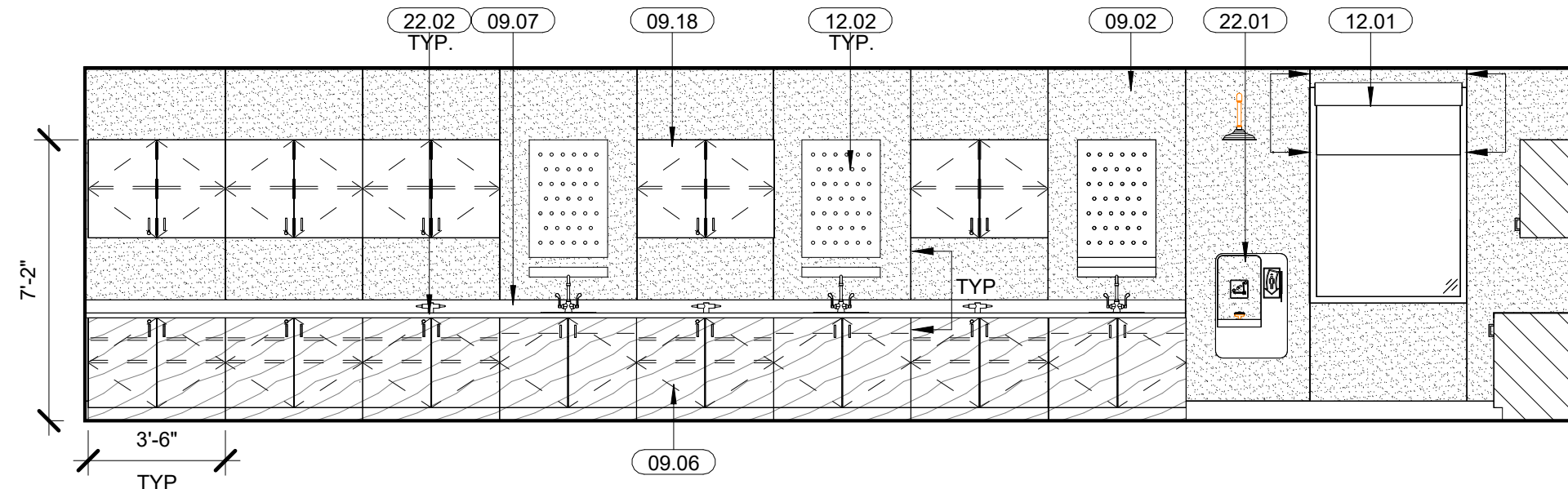
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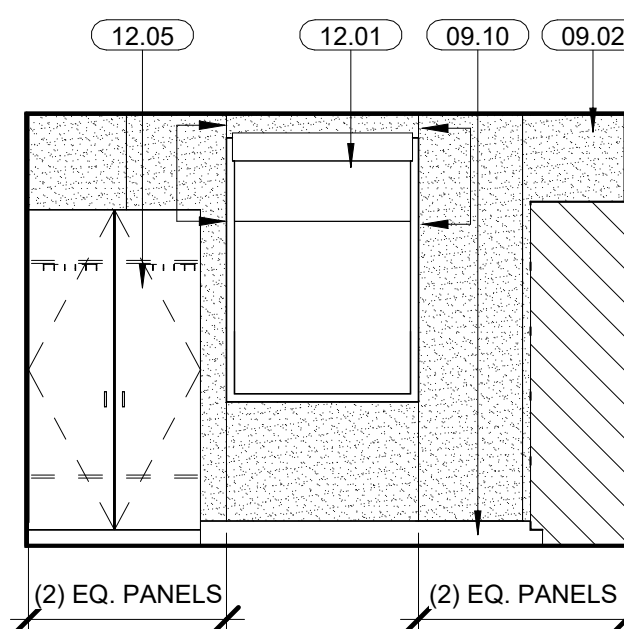
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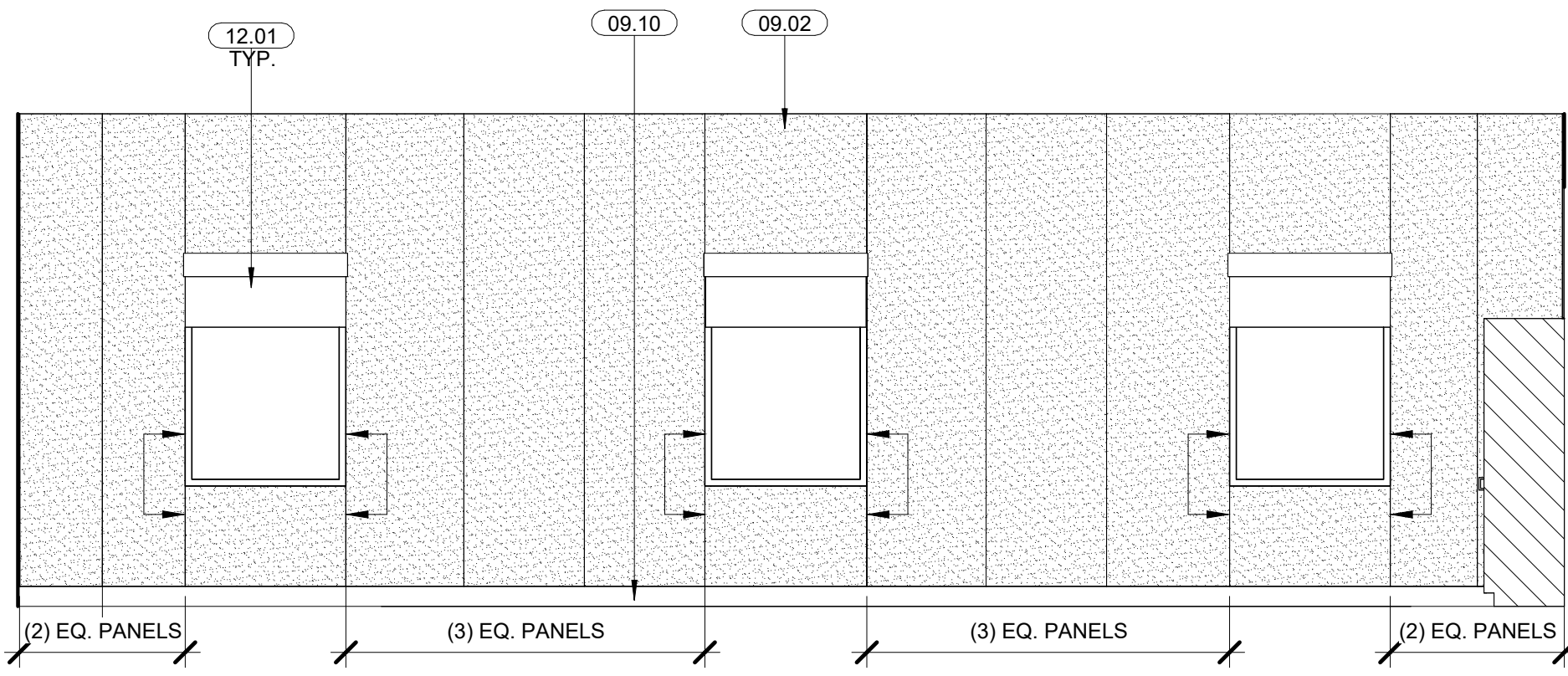
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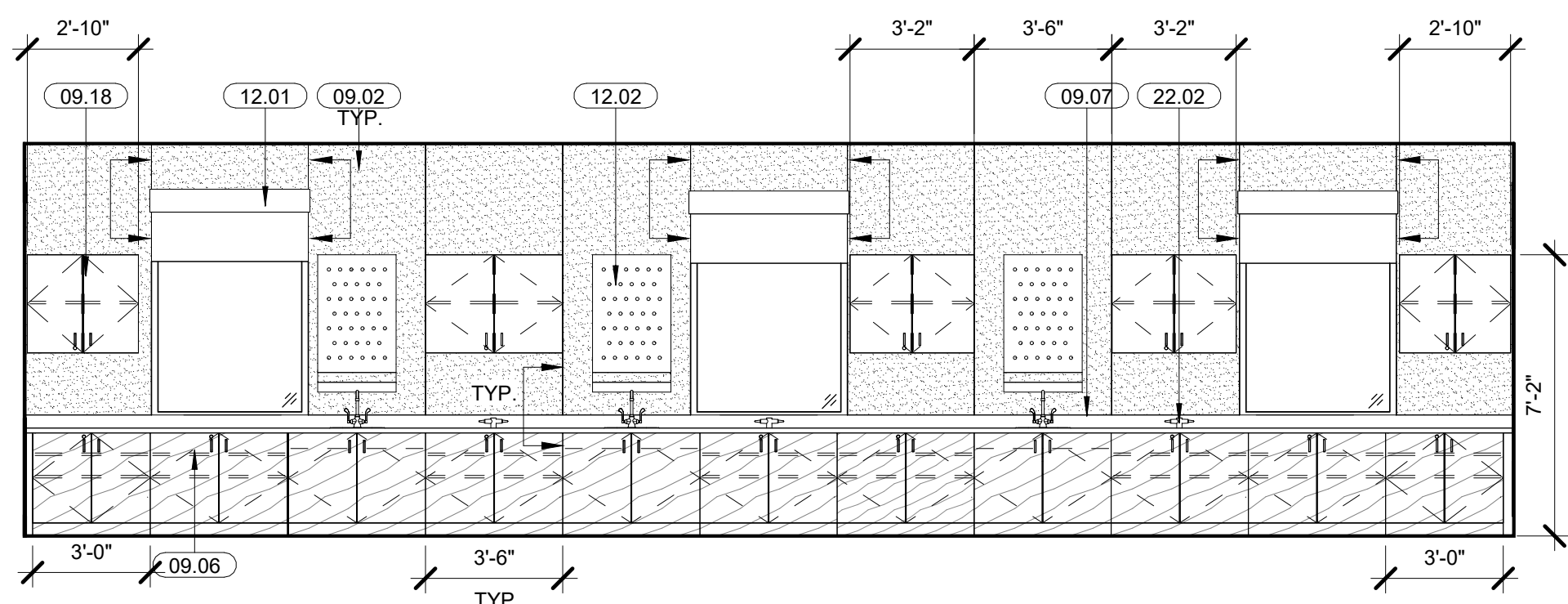
SCIENCE LAB - SOUTH
1/4" = 1'-0"
2A5.01
06



PREP - WEST
1/4" = 1'-0"
2A5.01
21



STEM - WEST
1/4" = 1'-0"
2A5.01
13



SCIENCE LAB - WEST
1/4" = 1'-0"
2A5.01
05

KEYNOTES

- 06.01 ACCESSIBLE SINK AND BASE CABINET
- 09.01 6" RUBBER BASE
- 09.02 VINYL WRAPPED TACK PANELS -WP-1
- 09.03 PLASTIC LAMINATE TEACHER'S STORAGE
- 09.05 PLASTIC LAMINATE UPPER STORAGE CABINETS, PL-1
- 09.06 PLASTIC LAMINATE LOWER STORAGE CABINETS, PL-1
- 09.07 EPOXY RESIN CHEMICAL RESISTANT COUNTERTOPS WITH BACKSPLASH, TYP.
- 09.09 TALL PLASTIC LAMINATE ADJUSTABLE SHELVING, PL-1
- 09.10 6" EPOXY COVE BASE
- 09.14 VINYL WRAPPED TACK PANELS -WP-2
- 09.18 UPPER PLASTIC LAMINATE CABINETS, PL-2
- 10.01 MARKERBOARD
- 10.02 DIGITAL DISPLAY
- 11.01 SCIENCE GRADE DISHWASHER
- 11.02 REFRIGERATOR
- 12.01 MANUAL WINDOW SHADES
- 12.02 WALL MOUNT DRYING RACK, TYP.
- 12.03 ACID STORAGE CABINET
- 12.04 SCIENCE GLASSWARE SHELVING
- 12.05 FLAMMABLES STORAGE CABINET
- 12.06 PREFAB CABINET
- 21.01 FIRE EXTINGUISHER CABINET
- 22.01 EYE WASH SHOWER
- 22.02 GAS TURRET

GENERAL NOTES

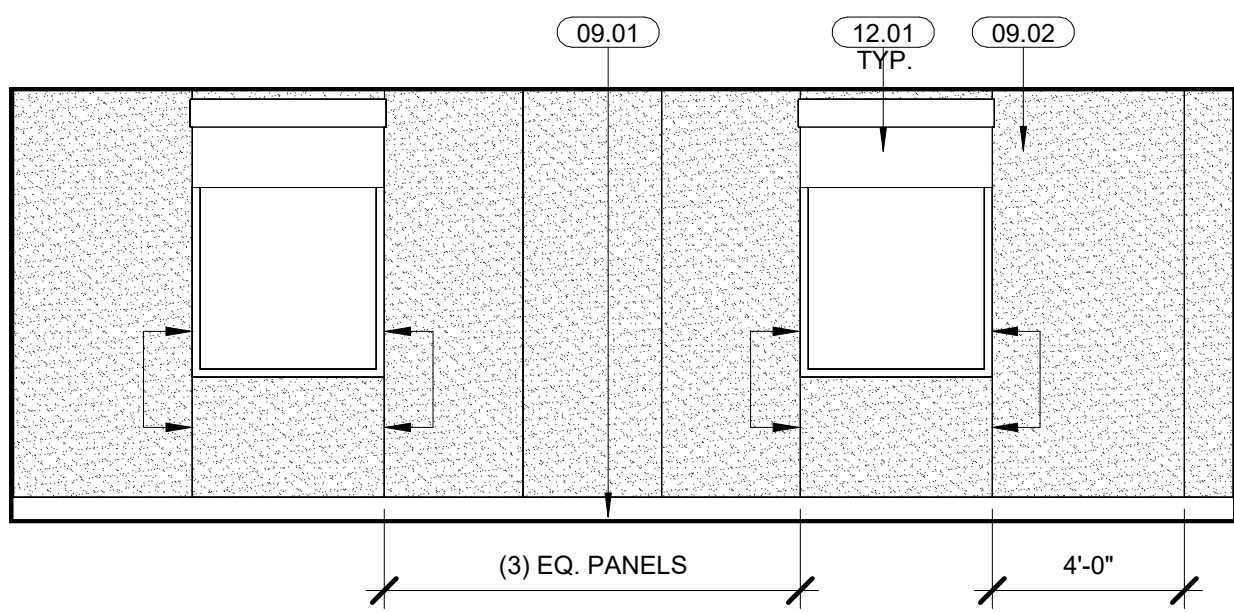
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2. ALL CASEWORK MUST MEET WIC CASEWORK STANDARDS CERTIFICATIONS.
3. REFERENCE SHEET 2A2.01 FOR FINISH SCHEDULE.

KEYNOTES

- 06.01 ACCESSIBLE SINK AND BASE CABINET
- 09.01 6" RUBBER BASE
- 09.02 VINYL WRAPPED TACK PANELS -WP-1
- 09.03 PLASTIC LAMINATE TEACHER'S STORAGE
- 09.04 PLASTIC LAMINATE COUNTERTOP WITH BACKSPLASH
- 09.05 PLASTIC LAMINATE UPPER STORAGE CABINETS, PL-1
- 09.06 PLASTIC LAMINATE LOWER STORAGE CABINETS, PL-1
- 09.16 ACCENT PAINT AND ACCENT BLUE CASEWORK ON THIS WALL
- 10.01 MARKERBOARD
- 10.02 DIGITAL DISPLAY
- 12.01 MANUAL WINDOW SHADES
- 21.01 FIRE EXTINGUISHER CABINET

GENERAL NOTES

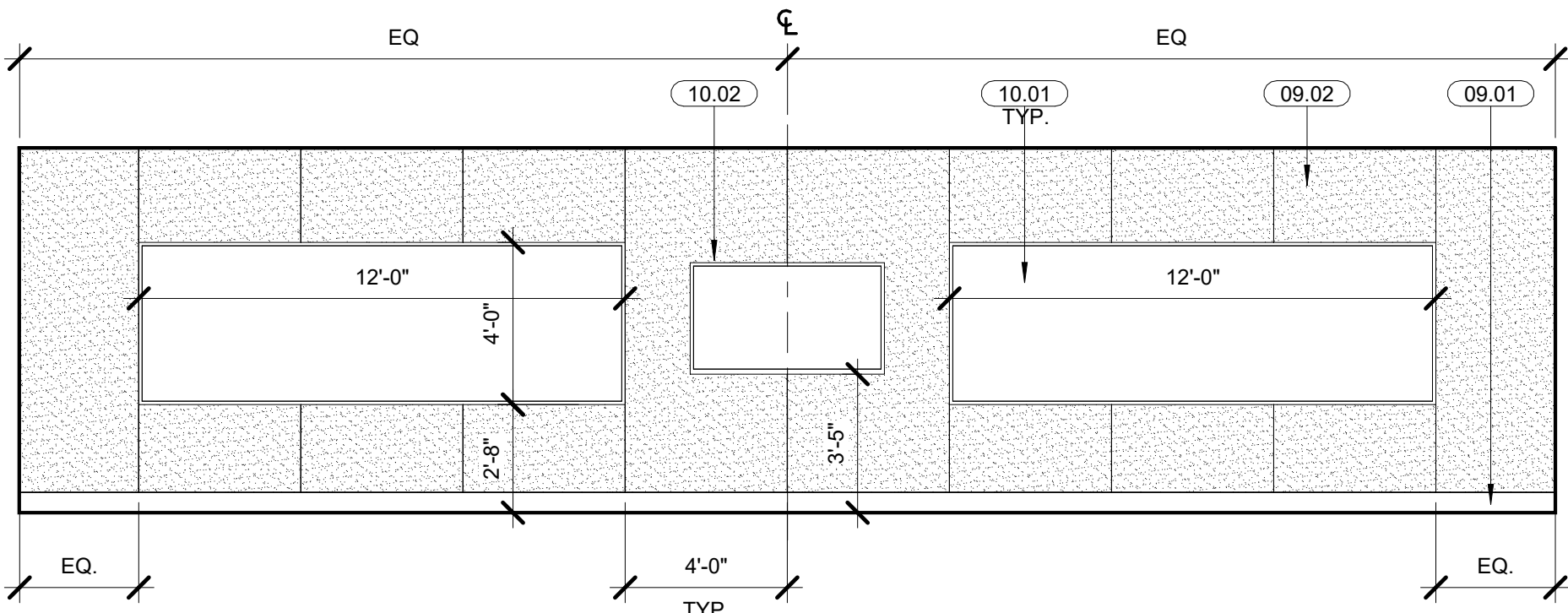
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2. ALL CASEWORK MUST MEET WIC CASEWORK STANDARDS CERTIFICATIONS.
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TYPICAL CLASSROOM - NORTH

1/4" = 1'-0"
2A5.02

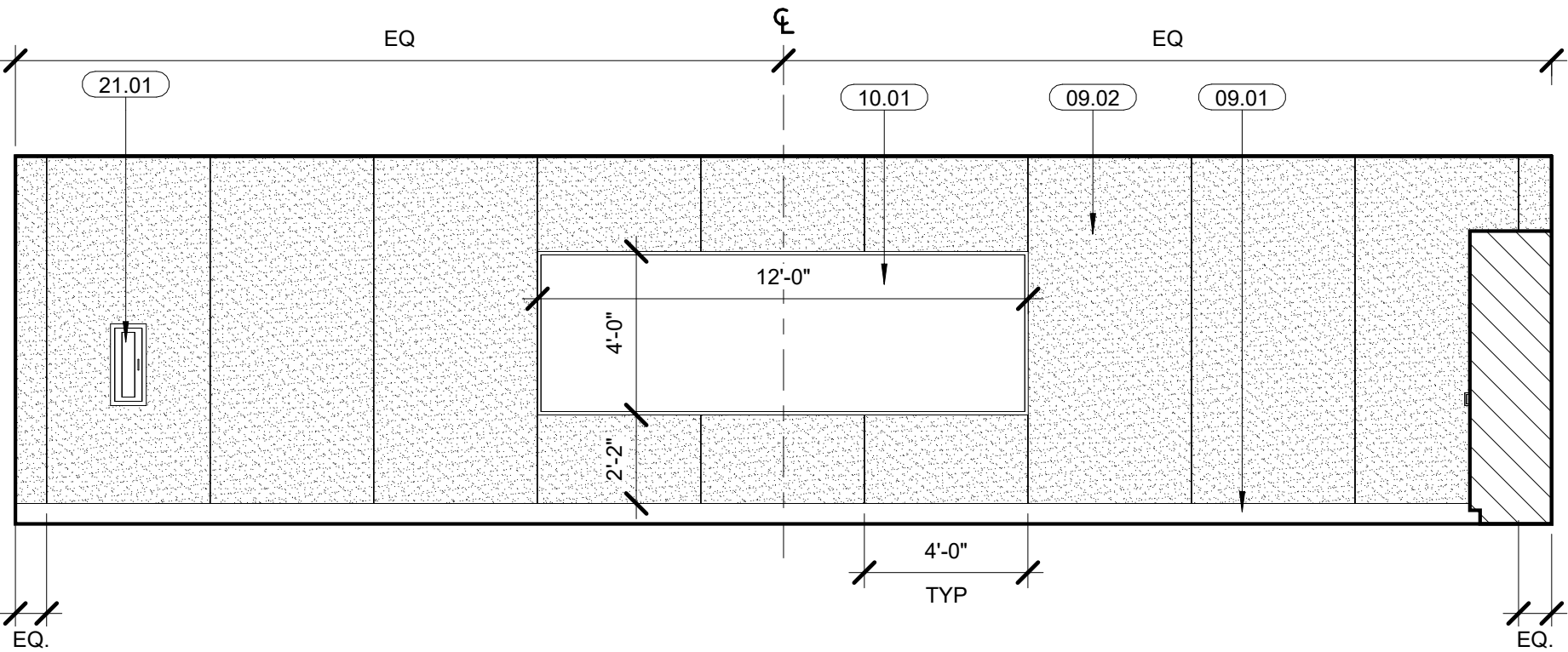
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MATH CLASSROOM - NORTH

1/4" = 1'-0"
2A5.02

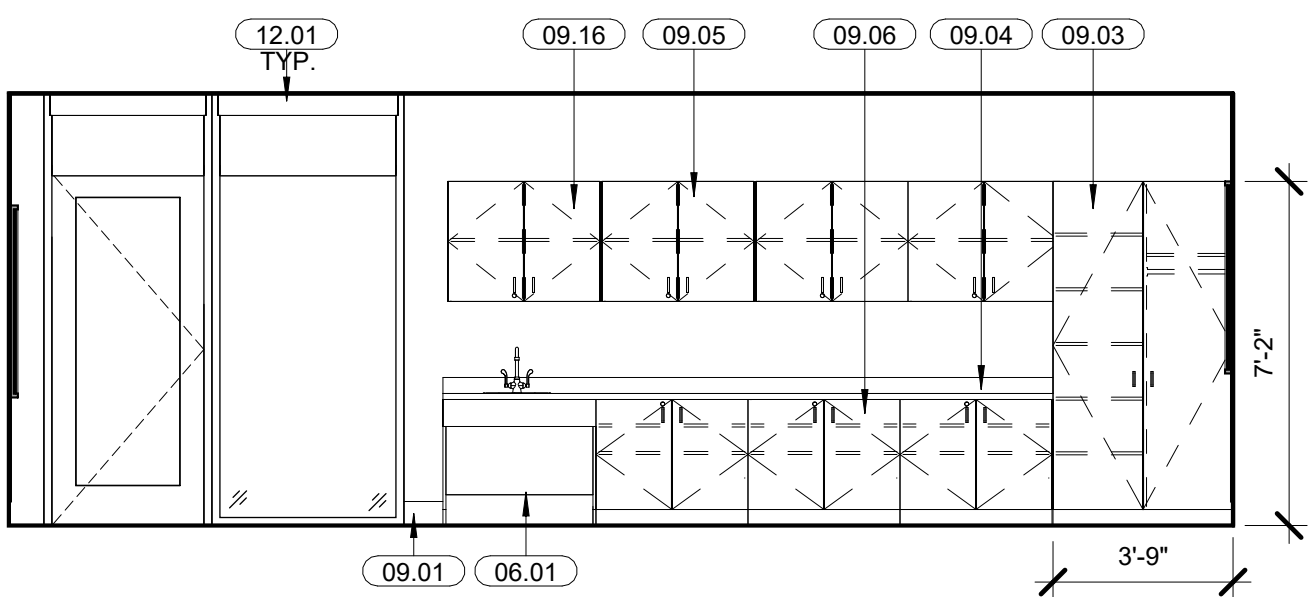
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2A5.02

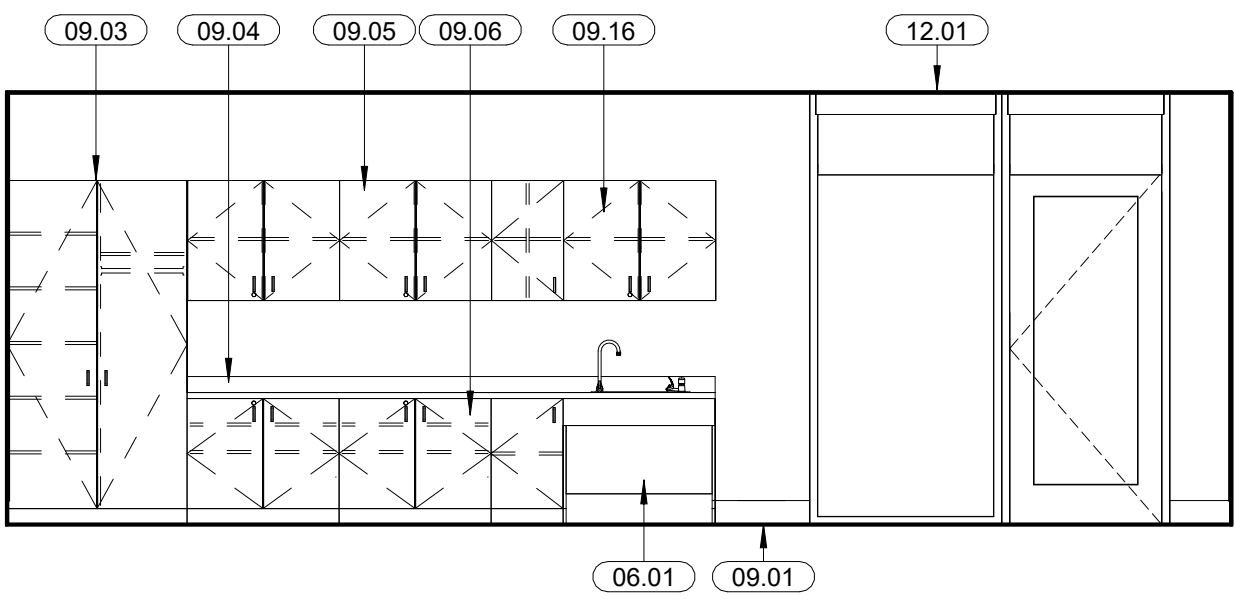
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MATH CLASSROOM - EAST

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2A5.02

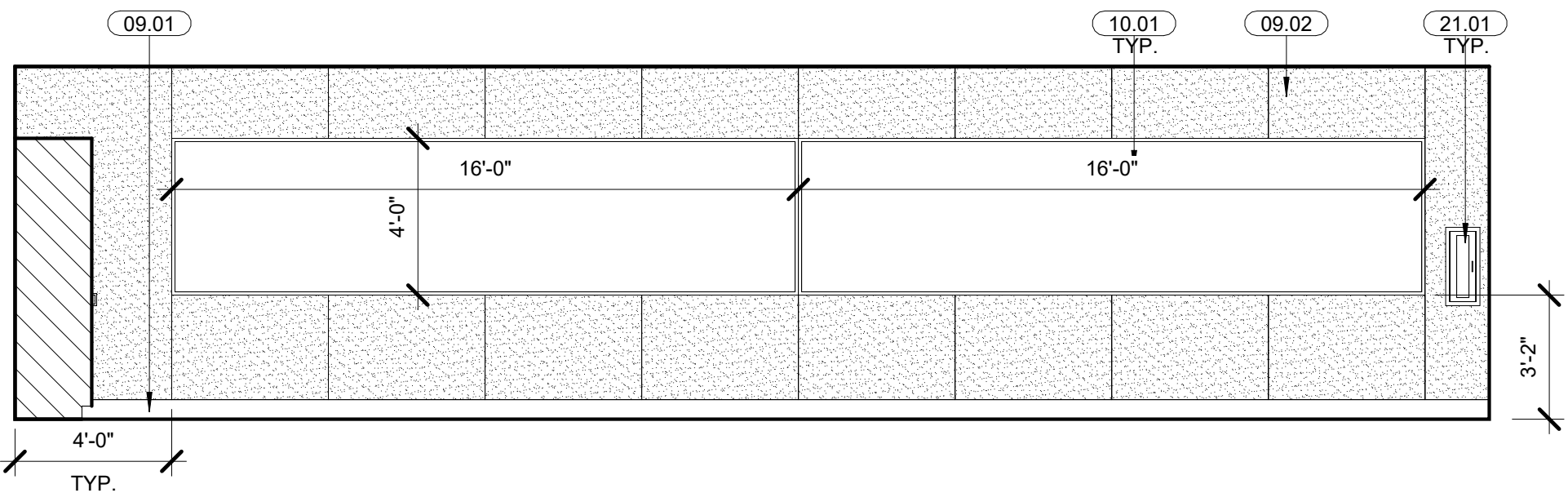
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2A5.02

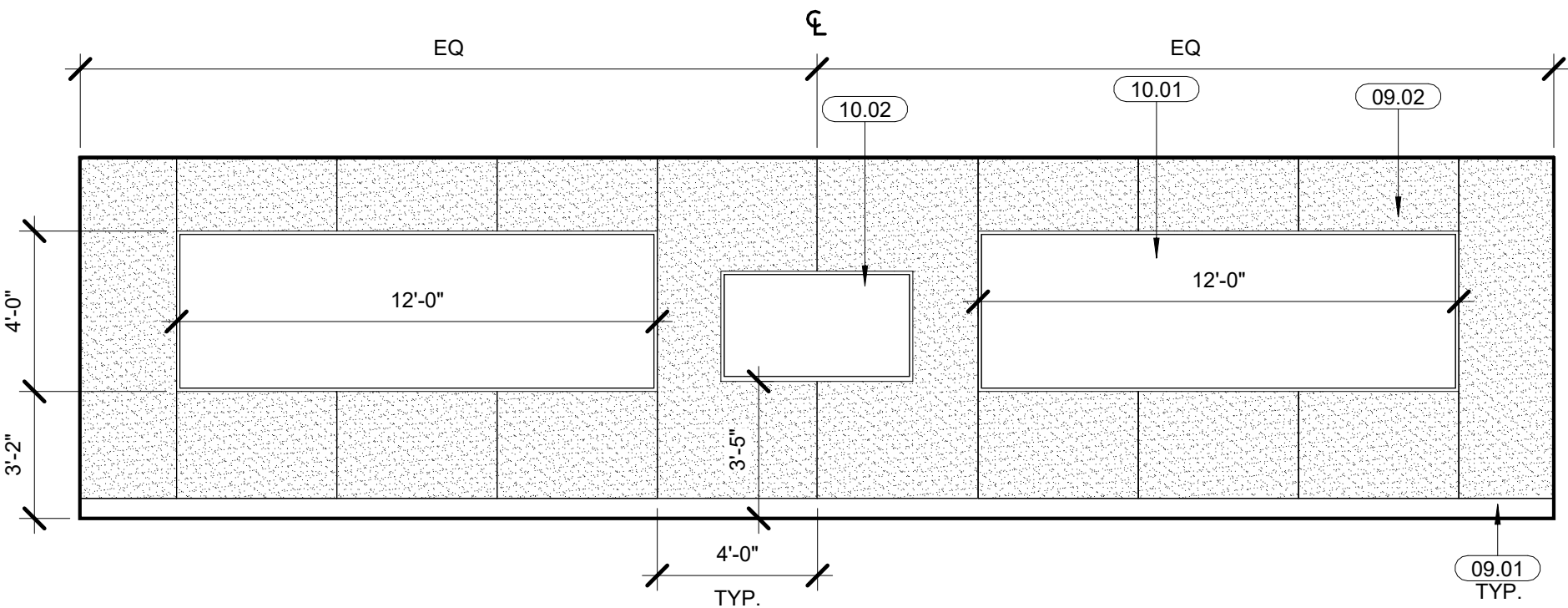
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MATH CLASSROOM - SOUTH

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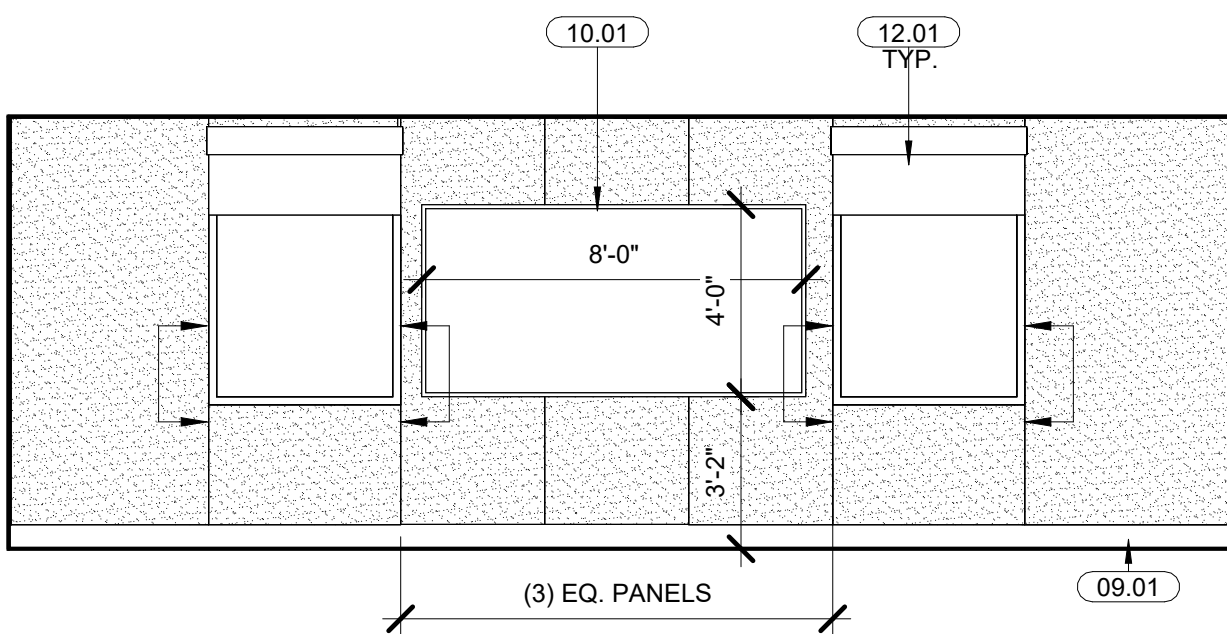
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TYPICAL CLASSROOM - WEST

1/4" = 1'-0"
2A5.02

13



MATH CLASSROOM - WEST

1/4" = 1'-0"
2A5.02

05



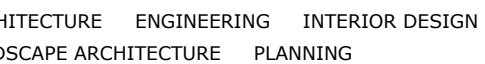
A, Inc.

Developed for
LODI UNIFIED SCHOOL DISTRICT

Job Number	31942
Checked By	Checker
Scale	As indicated

A8.01





5-287-2400 Office

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A. Inc.

ELKHORN ELEMENTARY SCHOOL CAMPUS MODERNIZATION

10305 DAVIS ROAD, STOCKTON, CA 95209

Developed for
LODI UNIFIED SCHOOL DISTRICT

[illegible][illegible]

Job Number	31942
Checked By	Checker
Scale	As indicated

CONCEPT RENDERINGS





TYPICAL CLASSROOM | 12" = 1'-0" 02
2A9.02



SCIENCE CLASSROOM | 12" = 1'-0" 01
2A9.02

Submittal	100% SCHEMATIC DESIGN BID DOCUMENTS	Date	Revision										Date										
		08/29/2025																					
		10/24/2025																					
Job Number		31942																					
Checked By		Checker																					
Scale		12" = 1'-0"																					

Limited Abatement Specifications

Elkhorn Elementary School
Classroom Building
10505 Davis Road
Stockton, California

October 1, 2019

Terracon Project No. R1197841

Prepared for:

Lodi Unified School District
Lodi, California

Prepared by:

Terracon Consultants, Inc.
Emeryville, CA



Prepared by: William Frieszell

Senior Industrial Hygienist

CIH #10471, CSP #23644, CAC #12-4853

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Geotechnical ■ Environmental ■ Construction Materials ■ Facilities

SECTION 02 08 00

ASBESTOS AND LEAD ABATEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 SUMMARY

- A. The general scope of work includes the removal and disposal of identified asbestos containing materials from a single classroom building located on the Elkhorn Elementary School Campus located at 10505 Davis Road in Stockton, California.
- B. In addition, numerous types of paint have been determined to contain lead in concentrations above the laboratory method detection limit. All demolition work impacting lead-containing materials must be conducted in accordance with the OSHA Lead in Construction standard 8 CCR 1532.1.
- C. The Contractor is responsible for conducting a thorough site visit and for reviewing the information in this specification as well as reviewing application local, state and federal regulations as they pertain to hazardous materials abatement.
- D. This document includes minimum requirements for asbestos and lead abatement activities including, but not limited to:
 - 1. Handling and disposal of asbestos-containing building materials (ACBM).
 - 2. Handling and disposal of lead-containing building materials.
 - 3. Criteria for abatement zone clearance testing.
 - 4. Criteria for clearance.

1.2 RELATED DOCUMENTS

- A. The General Conditions and Division I General Requirements shall be considered as part of this Section.
- B. Examine all other Sections of the Specifications for requirements therein affecting the work of this Section of the Specifications.

1.3 COMPLIANCE AND INTENT

- A. The Contractor is responsible for repair, to the satisfaction of the District, of surfaces not scheduled for demolition that become damaged as a result of abatement or demolition activities. All unscheduled repair work shall be at no increase to contract price.
- B. Contractor shall coordinate removal with all site requirements related to protection of existing finishes. Water and encapsulants used during abatement work must not migrate beyond established regulated work area barriers. All protection work must be completed prior to work the start of abatement work on each floor and any pathways of travel on other floors.
- C. This project involves the abatement of known asbestos and lead containing materials within the interiors and exteriors of aforementioned classroom structure. During all work, provide monitoring and worker protective equipment in accordance with the California Occupational Safety and Health Administration (Cal-OSHA) and as required by this specification. Where there is conflict, the most stringent requirement shall apply.

- D. The work covered by this specification includes the handling, removal, and proper disposal of ACMs and limited lead containing materials. All hazardous materials shall be removed and disposed of according to all federal, state and local regulations. The Contractor shall determine if additional hazardous materials will be impacted by the scope of the abatement work.
- E. The abatement workers shall receive EPA-accredited training and be certified for asbestos abatement work. Any contractors involved in the demolition of surfaces containing lead shall conduct all work in accordance with DOSH's lead construction standard, Title 8 CCR 1532.1.
- F. Furnish all labor, materials, facilities, equipment, services, employee training, medical monitoring, permits and agreements necessary to perform the work required for asbestos abatement in accordance with this specification.
- G. Comply with all federal, state, and local regulations pertaining to asbestos and lead removal, storage, transportation and disposal; employee health and safety; Contractor certifications; and all licenses, permits, and training.
- H. Work on the premises shall be confined to areas designated in the Contract Documents. Materials and equipment shall be stored within areas designated by the District. Should additional space be required, the Contractor shall request permission for additional space and shall adequately safeguard occupants from associated health and safety hazards.
- I. Perform all work specified herein with competent persons trained, knowledgeable and qualified in state-of-the-art techniques relating to asbestos and lead abatement, handling, and the subsequent cleaning of contaminated areas.
- J. During removal activities, the Contractor shall protect against contamination of soil, water, plant life, sensitive building finishes, adjacent building areas, and shall ensure that there is no airborne release of dusts. The District may collect air samples in the building and in adjacent areas to evaluate the Contractor's performance. Evidence of settled dust or airborne levels of contaminants above background will require the implementation of additional controls at no increase to contract price.
- K. It is the Contractor's responsibility to determine the quantities of ACMs and lead materials and surfaces that will require removal or other impact prior to commencement of the project. The Contractor shall conduct a site visit to determine exact locations of materials that will require abatement.
- L. This section provides appropriate protocols for handling and disposal of asbestos and lead containing materials. All hazardous materials shall be removed according to the procedures outlined in this specification. If additional suspect ACMs are discovered during the course of the abatement work, immediately notify the District and/or the District's Environmental Consultant.
- M. The work of this section shall be performed by an entity that holds a current, valid asbestos handling license issued by the California State Contractor's Licensing Board (SCLB) and a current valid Certificate of Registration for Asbestos-Related Work issued by the California Department of Industrial Relations-Division of Occupational Safety and Health (Cal-OSHA), unless other specified. Display copies of CSLB license and Cal-OSHA Registration in a visible place at the job-site.

- N. Asbestos and lead containing materials removed during the abatement activities shall be disposed of in an approved manner complying with all applicable federal, state, and local regulations. Appropriate waste manifests or letters of salvage shall be furnished to the District thereby limiting the District's liability for improperly salvaged items. Materials are conveyed to the Contractor "as is," without any warranty, expressed or implied, including but not limited to, any warranty to marketability or fitness for a particular purpose, or any purpose.
- O. All interior asbestos abatement work shall be conducted using a negative pressure enclosure and three stage decontamination units unless otherwise specified. The removal of exterior asbestos and lead containing materials shall be conducted in a regulated area with poly drop sheets and appropriate warning signs. Exterior ACM removed using mechanical methods or aggressive methods that render the material friable must be removed in a negative-pressure enclosure. The removal of asbestos-containing roofing materials shall be removed using wet methods and allowing no visible emissions or runoff to storm drains. Evidence of the release of asbestos above the background level will necessitate additional controls including but not limited to an enclosure.

1.4 DEFINITIONS

- A. The following definitions pertain to work of this section.
 - 1. Abatement: Process of controlling fiber release from ACMs including encapsulation, enclosure, controlled renovation procedures, removal, clean-up and disposal.
 - 2. ACM: Asbestos-containing material
 - 3. Action Level - Lead: Employee exposure without regard to the use of respirators, to an airborne concentration of 30 micrograms per cubic meter of air (30 $\mu\text{g}/\text{m}^3$) calculated as an 8-hour time-weighted average (TWA).
 - 4. Activity Class/Category - Lead: The designation assigned to work activities specified for removal of lead by pressure blasting, grinding, scraping, needle-gunning, chiseling, hammering, or wire brushing. Activity Classes I through III determine the minimum surveillance measures and exposure controls of the Contractor(s).
 - 5. Aggressive Sampling: Air sampling either during or following the agitation of the air.
 - 6. AHERA: Asbestos Hazard Emergency Response Act (40 CFR Part 763).
 - 7. Airlock: A system for permitting ingress and egress with minimum air movement between a contaminated area and uncontaminated areas. Typically consists of two curtained or gasketed doorways separated by a distance of at least six feet such that one passes through one doorway into the airlock, allowing the doorway to close off the opening. This airlock must be maintained in uncontaminated condition at all times.
 - 8. Ambient Air Quality: The quality of air (in terms of airborne fiber/lead content) that is present in a given space.
 - 9. Area Monitoring: Sampling of airborne asbestos fiber/lead concentrations within the work area and outside the work area. Sampling shall represent airborne concentrations that may reach the breathing zone.
 - 10. Asbestos Fibers: Refers to asbestos fibers having an aspect ratio of 3:1, and those fibers longer than five (5) microns.
 - 11. Asbestos Permissible Exposure Limit (PEL): A level of airborne fibers specified by OSHA as an occupational exposure standard for asbestos. This level represents the 8-hour time-weighted average of 0.1 fibers per cubic centimeter of air as measured by Phase Contrast Microscopy (PCM) analytical method.

12. Asbestos-Containing Material (ACM): Those manufactured products and construction materials including structural and mechanical building materials, as well as packings and gaskets that contain more than one percent (1.0%) asbestos by weight.
13. Asbestos: Asbestos includes asbestiform varieties of serpentinite (chrysotile), riebeckite (crocidolite), cummingtonite-gunerite (amosite), anthophyllite, tremolite, and actinolite. For the purposes of determining worker respiratory protection, both the asbestiform and non-asbestiform of the above minerals, and any chemically treated or altered materials shall be considered as asbestos.
14. Authorized Visitor: Designated employees or consultants for the District and representatives of any federal, state or local regulatory or other agency having jurisdiction over the project.
15. Baseline: Refers to the background levels of asbestos monitored before abatement.
16. Breathing Zone: A hemisphere forward of the shoulders and head with a radius of approximately six to nine inches.
17. Breach: A rift or gap in the critical or secondary barriers that allow egress of air from the containment to outside, or vice versa.
18. Bridging Encapsulant: An encapsulant that forms a discrete layer on the surface of an in-situ asbestos matrix.
19. Cal-OSHA: State of California, Occupational Safety & Health Administration.
20. CDPH: California Department of Public Health
21. Chain-of-Custody: A legal concept involving documentation of the physical possession of a sample(s) from the moment it is collected, transported, analyzed, and ultimately stored in an archive.
22. Change Rooms: Refers to the two chambers in the decontamination area used to change into and out of protective clothing.
23. Certified Industrial Hygienist (CIH): A person certified by the American Board of Industrial Hygiene.
24. Clean Room: An uncontaminated area or room that is part of the worker decontamination enclosure system, with provisions for storage of workers' street clothes and protective equipment.
25. Clearance Level: Clearance level for samples analyzed by PCM will be less than 0.01 fibers per cubic centimeter of air and for TEM will be less than 70 structures per square millimeter ($<70 \text{ s/mm}^2$). Samples may be collected by aggressive or non-aggressive sampling methods and the minimum air volume shall be 1,200 liters.
26. Competent Person: One who is capable of identifying existing and predictable hazards and who has the authority to take prompt corrective measures to eliminate them.
27. Critical Barrier: A unit of temporary construction that provides the only separation between asbestos work area and an adjacent potential occupied space. This includes the decontamination unit, perimeter walls, ceilings, penetrations and any temporary critical barriers between the work area and the uncontaminated environment.
28. CSLB: Contractors State Licensing Board
29. Decontamination Area: Area which is constructed to provide the means for workers to store clothing, equipment and other articles, and to properly remove contamination upon concluding work activities that result in exposure to these hazardous materials.

30. DOP: Dioctylphthalate, the challenge aerosol used to perform on-site leak testing of HEPA filtration equipment.
31. DOT: Federal Department of Transportation.
32. DOSH: Division of Occupational Safety & Health (see also Cal-OSHA)
33. Decontamination Unit: Refers to system of airlocks used to decontaminate personnel, waste bags, equipment, etc. when exiting the work area. A decontamination unit shall be set up for each containment area.
34. Demolition: The wrecking or taking out of any load-supporting structural member of a facility together with any related handling operations or the intentional burning of any facility.
35. Disposal Bag: Minimum six (6) mil thick leak-tight plastic bags used for transporting asbestos waste from a work area to disposal or shipping container. Each disposal bag must have required labels per Title 8 CCR 1529 (Cal-OSHA asbestos rule), 5194 (HAZCOM). RACM waste must be additionally labeled according to 49 CFR 171-179 (USDOT), and 40 CFR 61 Subpart M (NESHAP). Hazardous waste disposal bags must be labeled with generator's name, address, site location, generator number, and the following information:

CONTAINS ASBESTOS FIBERS
 AVOID CREATING DUST
 CANCER AND LUNG DISEASE HAZARD
 AVOID BREATHING AIRBORNE ASBESTOS
 RQ WASTE ASBESTOS, 9 NA 2212 PG III
 (Class 9 placard)
 HAZARDOUS WASTE
 STATE AND FEDERAL LAW
 PROHIBITS IMPROPER DISPOSAL
 IF FOUND, CONTACT THE NEAREST
 POLICE OR PUBLIC SAFETY
 AUTHORITY OR THE CALIFORNIA
 DEPARTMENT OF TOXIC SUBSTANCES CONTROL

36. District: Lodi Unified School District
37. District's Environmental Consultant: Environmental Consulting firm and its representatives retained to provide compliance oversight and monitoring for the Contractor's asbestos abatement work activities.
38. Encapsulant: A liquid material that can be applied to ACMs that controls the possible release of asbestos fibers from the material either by creating a membrane over the surface (bridging) or by penetrating into the material and binding its components together (penetrating encapsulant).
39. Encapsulation: A specified procedure necessary to coat ACMs or asbestos contaminated surfaces with an encapsulant to control the possible release of asbestos fibers into the ambient air.
40. Enclosure: The construction of an airtight, impermeable, permanent barrier surrounding the ACM to prevent the release of asbestos fibers into the air.
41. Equipment Decontamination Enclosure System: A decontamination enclosure system for materials and equipment, typically in a designated area of the work area, and including a washroom, a holding area, and an uncontaminated area.

42. Equipment Room: A contaminated area or room that is part of the worker decontamination enclosure system, with provisions for storage of contaminated clothing and equipment. The equipment room shall be kept clean from asbestos-containing debris at all times.
43. Excursion Limit: A California Code of Regulations (Title 8 CCR 1529) requirement that ensures no employee exposed to airborne concentrations of asbestos in excess of 1.0 fibers per cubic centimeter of air as averaged over a sampling period of thirty (30) minutes.
44. Filter: A media component used in respirators to remove solid or liquid particles from the inspired air.
45. Fixed Object: A unit of equipment or furniture in the work area that cannot be removed from the work area.
46. Friable Asbestos-Containing Material: Material that contains more than 1.0% asbestos by weight, and that can be crumbled, pulverized or reduced to powder by hand pressure when dry.
47. Foreman: An individual who typically fulfills the duties of "competent person" as defined by Title 8 CCR 1529. This individual must supply documentation of a passing grade in a Cal-OSHA accredited course in Asbestos Contractor/Supervisor training. The foreman must be on-site during all abatement work.
48. Glove Bag: A polyethylene bag with two inward projecting long sleeve gloves, designed to enclose an object from which an ACM is to be removed. Bags shall be seamless at the bottom, have a minimum thickness of 6 mils, and shall be labeled appropriately.
49. Glove Bag Technique: A method for removing ACM from heating, ventilation and air conditioning (HVAC) ducts, piping runs, valves, joints, elbows, and other non-planar surfaces. The glove bag is constructed and installed in such a manner that it surrounds the object or material to be removed and contains all asbestos fibers released during the process. Secondary containment shall be provided for all glove bag work unless otherwise noted.
50. Gross or Full Abatement: Designated rooms, spaces, or areas of the project that have been totally sealed, contained in polyethylene, equipped with decontamination enclosure systems, and placed under negative pressure.
51. HEPA: High Efficiency Particulate Air filter capable of filtering out airborne particulate 0.3 microns or greater in diameter at 99.97 percent efficiency.
52. Lead: Toxic metallic element of atomic number 82, or any other materials, substances or compounds that may contain lead. Note for metal painted surfaces lead is often found in combination with chromates. For the purposes of this specification, lead also refers to lead-chromate paints.
53. Lead Hazardous Waste: Paint, sludge, debris or cleaning materials are to be treated as a hazardous waste if laboratory results indicate a lead (Pb) concentration of 5 milligrams per liter (mg/l) or greater using the EPA approved Toxicity Characteristic Leaching Procedure (TCLP) test. The waste will also be classified as hazardous waste if the Total Threshold Limit Concentration (TTLC) of measured lead is greater than 350 mg/kg or if the Soluble Threshold Limit Concentration (STLC) of measured lead is greater than or equal to 5 mg/l.
54. Manifest: The document authorized by both Federal and State authorities for tracking the movement of ACMs.

55. Movable Object: A unit of equipment or furniture in the work area that can be removed from the work area (e.g., smoke detectors, lights, etc.)
56. Negative Pressure Respirator: A respirator in which the air pressure inside the respiratory inlet covering is positive during exhalation in relation to the air pressure of the outside atmosphere, and negative during inhalation in relation to the air pressure of the outside atmosphere.
57. Negative Pressure: Air pressure lower than surrounding areas, generally caused by exhausting air from a sealed space (work area).
58. NESHAP: National Emission Standard for Hazardous Air Pollutants – EPA Regulation 40 CFR Subpart M, Part 61.
59. NIOSH: National Institute for Occupational Safety and Health: Sets test standards, analytical methods, and certifies performance of various respirator designs (research institute within Federal OSHA).
60. NIST: National Institute of Standards and Technology: Administers the NVLAP Program.
61. NOA: Naturally Occurring Asbestos. Found in soil, fill and concrete.
62. NVLAP: National Voluntary Laboratory Accreditation Program – evaluates and certifies laboratories doing PLM and TEM analyses.
63. Passive Sampling: Refers to air sampling with no air agitation.
64. Permissible Exposure Limits (PELs) - Asbestos: A level of airborne fibers specified by OSHA as an occupational exposure standard for asbestos. This level represents the 8-hour time-weighted average of 0.1 fibers per cubic centimeter of air and 30-minute excursion limit of 1.0 fibers per cubic centimeter of air as measured by Phase Contrast Microscopy (PCM) analytical method.
65. Permissible Exposure Level (PEL) - Lead: An eight-hour time weighted average concentration of 50 micrograms of lead per cubic meter of air (50 µg/m³).
66. Personal Monitoring: Sampling for asbestos and lead concentrations within the breathing zone of an employee.
67. Phase Contrast Microscopy (PCM): Technique using a light microscope equipped to provide enhanced contrast between the fibers and the background. Filters are cleared with a chemical solution and viewed through the microscope at a magnification of approximately 400X. This method does not distinguish between fiber types and only counts those fibers longer than 5 microns and wider than approximately 0.25 microns. Because of these limitations, fiber counts by PCM typically provide only an index of the total concentration of airborne asbestos in the environment monitored.
68. Polarized Light Microscopy (PLM): An optical microscope technique used to identify asbestos content and distinguish between different types of asbestos fibers by their shape and unique optical properties.
69. Powered Air Purifying Respirator (PAPR): A full facepiece respirator that has the breathing air powered to the wearer after it has been purified through a filter.
70. Protection Factor: The ratio of the ambient concentration of an airborne substance to the concentration of the substance inside the respirator at the breathing zone of the wearer. The protection factor is a measure of the degree of protection provided by a respirator to the wearer.

71. Remodel: Replacement or improvement of an existing building or portion thereof where exposure to airborne asbestos may result. Remodel includes, but is not limited to, installation of materials, demolition, cutting, patching, and removal of building materials.
72. Respirator: A device designed to protect the wearer from the inhalation of harmful atmospheres.
73. Soluble Threshold Limit Concentration (STLC): A material is considered as hazardous waste if laboratory test result indicate Soluble Threshold Limit Concentration of measured lead are greater than or equal to 5 milligrams per liter (mg/l).
74. Shower Room: A room between the clean room and the equipment room in the work decontamination enclosure system. This room contains hot and cold or warm running water and soap suitably arranged for complete showering during decontamination. The shower room comprises an airlock between contaminated and clean areas.
75. Surfactant: A chemical wetting agent added to water to improve penetration, this reducing the quantity of water required for a given operation or area.
76. Transmission Electron Microscopy (TEM): Asbestos structure analysis for a specified volume of air. TEM is a technique that focuses an electron beam onto a thin sample. As the beams transmits through certain areas of the sample, an image resulting from varying densities of the sample is projected onto a fluorescent screen. TEM is the state-of-the-art analytical method for identifying asbestos fibers collected in air samples in non-industrial settings. TEM microscopes equipped with selected area electron diffraction (SAED) capabilities also can provide information on the crystal structure of an individual particle.
77. Toxicity Characteristic Leaching Procedure (TCLP): Test developed by U.S. Environmental Protection Agency (USEPA) to simulate landfill conditions and the potential for a waste to leach hazardous materials (40 CFR 261 - Appendix 2).
78. Total Threshold Limit Concentration (TTLC): A material is considered as hazardous waste if laboratory test result indicate Total Threshold Limit Concentration of measured lead are greater than or equal to 350 milligrams per kilogram (mg/kg).
79. Visible Emissions: Any emission containing particulate material that is visually detectable without the aid of instruments. This does not include condensed uncombined water vapor.
80. Visual Inspection: A visual inspection by District's Environmental Consultant, of the work area under adequate lighting to ensure that the work area is free of visible PCB material, debris, and dust.
81. Washroom: A room between the work area and the holding area in the equipment decontamination enclosure system equipped with water for decontamination of equipment and sealed waste containers. The washroom or shower room comprises one airlock.
82. Water Filtration: Refers to water filtration to as small a particulate size as technically feasible, but not more than 5 microns.
83. Wet Cleaning: The process of eliminating asbestos contamination from building surfaces and objects by using cloths, mops, HEPA vacuuming, or other cleaning utensils dampened with amended water and afterward thoroughly decontaminated or disposed of as asbestos contaminated waste.
84. Work Area: The area where asbestos removal is performed and that is defined or isolated to prevent the spread of asbestos fibers, dust or debris, and entry by

unauthorized personnel. Work area is a regulated area as defined by Title 8 CCR 1529.

85. Zinc Protoporphyrin (ZPP) Test: Biological test for lead exposure that measures the amount of zinc protoporphyrin in blood.

1.5 SCOPE OF WORK

- A. Provide the removal of ACMs as specified in this section. Reference all other sections of the Specifications and other documents included in the contract documents for information and requirements that affect the work of this Section.
- B. Table 1 below provides estimated quantities of ACMs requiring removal. A 10% variance of quantity of actual ACM shown in the Table and estimated ACM is not considered a changed condition. The Contractor is responsible for field verifying quantities of ACMs and difficulty in abating the same.

Table I - Asbestos Containing Materials

Material Description	General Material Locations	Waste Category	Asbestos Type	Estimated Quantity
Interior Wall System - Drywall with Joint Compound	Material is Limited to Ceiling and Perimeter Walls of the Affected Structure	Not Applicable	Drywall: None Detected Joint Compound: <1% Chrysotile Asbestos	4,500 sf
Roof Penetration Mastic - Grey	Material is Sporadically Present throughout Main Roofing Field Area	Cat. I	9% Chrysotile Asbestos	~10 sf

NA = Not Applicable, sf = square feet, RACM = Regulated asbestos containing material (friable), Cat. I = Non-friable (note ACM must be reclassified as a RACM if rendered friable during removal),

- C. The following materials can be disposed of as Category I Non-friable ACMs if not rendered friable during removal: asphalt roofing mastics.
- D. Non-textured drywall with associated joint compound, brown acoustic wall tile mastic and window putty that contains less than 1.0 percent (<1.0%) asbestos by point count method may be disposed of as construction debris.
- E. Table II below lists various materials with known lead content. Due to the array of varying lead concentrations reported, all disturbances of paints and surfaces at the affected sites should be performed in accordance with applicable lead related construction regulations.

Table II - Lead Sample Results

Sample Number	Material Description and Location	Results mg/kg (ppm)
Pb-01	Clear Glazing Compound on Wooden Hardwood Flooring Systems at Main Classroom Area	0.81
Pb-02	White Paint on Wooden Interior Wall Systems at Main Classroom Area	97.8
Pb-03	White Paint on Wooden Interior Window Framing Assembly at Main Classroom Area	144
Pb-04	Tan Coating on Wooden Rampway Texture Coating at Exterior Northern Ramp	0.06
Pb-05	Blue Paint on Wooden Trim Piece at Exterior Western Side of Building	273
Pb-06	Tan Paint on Wooden Siding at Exterior Western Side of Building	0.21
Pb-07	Exterior Soil Composite at Building Drip Line/Foundation Area	0.80

mg/kg= Milligram per kilogram, ppm = parts per million, ND< = Not Detected

1.6 REFERENCES

The publications listed below form a part of this specification by reference. The publications are referred to in the text by basic designation only. If there is a conflict between any of the listed regulations or standards, then the most stringent or restrictive shall apply.

A. American National Standards Institute (ANSI) and American Society for Testing and Materials (ASTM)

1. ANSI Z9.2-2018 Fundamentals Governing the Design and Operation of Local Exhaust Systems
2. ANSI Z87.1-2015, Occupational and Educational Eye and Face Protection
3. ANSI Z88.2-2015, Respiratory Protection
4. ANSI/ISEA Z89.1-2014, Requirements for Protective Headgear for Industrial Workers
5. ANSI Z88.6, 1984, Respiratory Protection – Respiratory Use Physical Qualifications for Personnel
6. ASTM C 732-2017, Aging Effects of Artificial Weathering on Latex Sealants
7. ASTM D 522-2017, Mandrel Bend Test of Attached Organic Coatings
8. ASTM D 1331 - 2014, Solutions of Surface-Active Agents
9. ASTM D 2794 - 1993 (Revised 2019), Resistance of Coatings to the Effects of Rapid Deformation (Impact)
10. ASTM E 84 - 2007, Surface Burning Characteristics of Building Materials
11. ASTM E 96 - 2016, Water Vapor Transmission of Materials
12. ASTM E 119 - 2018, Fire Tests of Building Construction and Materials
13. ASTM E 736 - 2017, Cohesion/Adhesion of Sprayed Fire-Resistive Materials Applied to Structural Members
14. ASTM E 1368 - 2014, Visual Inspection of Asbestos Abatement Projects

15. ASTM E1494 - 2018, Standard Practice for Testing Physical Properties of Friable Surfacing Materials
16. ASTM F2412/F2413 - 2005, Personal Protection - Protective Footwear

B. California Assembly Bills (CAB)

C. California Assembly Bills (CAB)

1. CAB 040, Yearly Registration of Contractors

D. California Code of Regulations (CCR)

1. Title 8 CCR 5208, General Industry – Asbestos
2. CCR CARS, Carcinogen and Asbestos Registration Sections 340-344.53, 341.6 Amended, and 341.9 Amended Through 341.14
3. CCR ESO, Electrical Safety Orders, Chapter 4, Subchapter 5
4. CCR 1523, Illumination
5. CCR 1529, Asbestos in the Construction Industry
6. CCR 1531, Construction Respiratory Protective Equipment
7. CCR 1532.1, Lead in Construction
8. CCR 3203, Injury and Illness Prevention Program
9. CCR 3204, Access to Employee Exposure and Medical Records
10. CCR 3220, Emergency Action Plan
11. CCR 3221, Fire Prevention Plan
12. CCR 5144, Respiratory Protection Equipment Standard
13. CCR 5194, Hazard Communication Standard
14. CCR 6003, Accident Prevention Signs
15. Title 22, Division 4, Minimum Standards for Management of Hazardous and Extremely Hazardous Waste

E. California Health Services (CHS) Titles 22 and 23, California Administrative Code Disposal Requirements

1. CHS 25123, Section 25123
2. CHS 25124, Section 25124
3. CHS 25143, Section 25143
4. CHS 25163, Section 25163
5. CHS 66508, Section 66508
6. CHS 66510, Section 66510
7. CHS DIV 4, Division 4, Commencing with Section 66000, "Disposal"

F. California Health and Safety Code (CHSC)

1. CHSC 20, Division 20, Commencing with Section 24200

G. California Labor Code (CLC)

1. CLC DIVISION 5, Part 1, commencing with 6300

H. California Propositions (CP)

1. CP 65, Proposition 65
- I. California State Board of Equalization (CSBE)
 1. CSBE ETU, Excise Tax Unit
- J. California State License Board (CSLB)
 1. CSLB CBPC, California Business and Professional Code Sections 7058.5 and 7058.7, "Certification"
- K. Code of Federal Regulations (CFR)
 1. 29 CFR 1910.134, Respiratory Protection
 2. 29 CFR 1910.141, Sanitation
 3. 29 CFR 1910.145, Accident Prevention Signs and Tags
 4. 29 CFR 1926.21, Safety Training and Education
 5. 29 CFR 1926.55, Gases, Vapors, Fumes, Dusts, and Mists
 6. 29 CFR 1926.62, Lead Exposure in Construction
 7. 29 CFR 1926.65, Hazardous Waste Operations and Emergency Response
 8. 29 CFR 1926.59, Hazard Communication
 9. 29 CFR 1910.1000, Air Contaminants
 10. 29 CFR 1926.1101, Asbestos
 11. 40 CFR 61-SUBPART A, General Provisions
 12. 40 CFR 61-SUBPART M, National Emission Standard for Asbestos
 13. 40 CFR 260, Hazardous Waste Management Systems: General
 14. 40 CFR 745, Lead; Requirements for Lead-Based Paint Activities
 15. 40 CFR 763, Asbestos Containing Material in Schools
 16. 49 CFR 178, Shipping Container Specifications
- L. National Fire Protection Association (NFPA)
 1. Standard 10, Fire Extinguishers
 2. Standard 70, National Electric Code
 3. Standard 701, Small Scale Fire Test for Flame Resistant Textiles
- M. State and Local Regulations
 1. Rule 4002, San Joaquin Valley Air Pollution Control District
- N. U.S Department of Housing and Urban Development (HUD)
 1. Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing
- O. Underwriters Laboratories, Inc. (UL)
 1. UL 586-96, 1996 Test Performance of High-Efficiency Particulate Air Filter Units

1.7 SUBMITTALS PRIOR TO START OF WORK

- A. The reviews by the District or District's Environmental Consultant are intended to be only for general conformance with the requirements. The District or District's Environmental Consultant assumes no responsibility for permits, licenses, notices, materials and methods, equipment or temporary construction required to execute the work described in this Section of the Specification or in other Sections of the Specification or in other documents included in the contract documents.
- B. Before commencing work involving the abatement of asbestos, submit the following for review by the District or District's Environmental Consultant.
1. Detailed work plan that includes water and electrical power supply at the site, wastewater discharge from showers and inside the work area; construction, location and number of containments and decontamination units; etc. Schedule showing milestone dates for activities such as mobilization, work area preparation, ACM and lead removal, ACM and lead waste load-out, final clearance evaluations, completion dates, etc. Also, submit variances received from regulatory agencies as applicable.
 2. Provide an asbestos and lead site safety plan prior to project initiation. The site safety plan shall deal with, at a minimum: site safety and health hazards; fiber release incidents; control of water leakage or discharge within and/or from the work area; medical emergency; asbestos handling procedures; fall protection; electrical safety; Contractor's internal administrative and inspection procedures; earthquakes and/or fire emergency procedures; protocol for responding to complaints or questions from interested parties; 24-hour emergency telephone numbers for company officers with authority to respond to emergencies.
 3. Competent Person (as defined by Title 8 CCR 1529): Demonstrate education and specialized training with successful completion of a Cal-OSHA accredited asbestos training course along with CDPH accredited lead training.
 4. Submit current certificates (less than 11 months) signed by each employee and trainer that the employee has received proper training in the handling of materials that contain asbestos and/or lead. Include documentation showing that the worker understands the following; health implications and risks involved (including the illnesses possible from exposure to airborne asbestos fibers), the use and limits of the respiratory equipment to be used, and the results of monitoring of airborne quantities of asbestos concerning health and respiratory equipment.
 5. Proof of Respirator Fit Testing: Provide proof of respirator fit testing. Fit testing records must be less than eleven (11) months old and document testing on the type of respiratory protective equipment used for this project. Fit testing records must be signed by the Competent Person.
 6. Foreman Training: Submit evidence that the foreman to be used on the job fulfills the qualifications detailed in this specification and has experience in similar jobs.
 7. Medical Examinations: Submit evidence signed by a physician that each employee used on the job has received an appropriate medical examination as detailed in Title 8 CCR 1529 and 1532.1. The submitted document must be less than eleven (11) months old.
 8. Written Notification to Fire and Police Departments: Provide documentation showing notification to local fire and police departments of the abatement three (3) days before commencement.
 9. Rental Equipment: When rental equipment is to be used in the abatement areas or to transport hazardous waste, the Contractor shall provide written notification regarding intended use of the rental equipment to the rental agency before use, with copies to the District's Environmental Consultant.

10. Certificates of Compliance: Submit manufacturer's certification that vacuums, ventilation equipment, and other equipment required to contain airborne asbestos fibers conform to ANSI Z9.2. Submit results of onsite DOP testing of all HEPA-filtered ventilation equipment.
11. Satisfactory proof that written notification and subsequent updates have been provided to the San Joaquin Valley Air Pollution Control District, in accordance with local rules, and Title 40 CFR Part 61 Subparts A&M, National Emission Standards for hazardous Air Pollutant, U.S. EPA.
12. Licenses: Submit copies of state and local licenses, evidence of Cal-OSHA registration and permits necessary to carry out the work of this contract.
13. Notification of Other Contractors: If other contractors are working at the job site, before beginning any work the Contractor must inform all other contractors in writing regarding the location, nature, and requirements of the work areas.
14. Material Safety Data Sheets/Specification Sheets: The Contractor shall submit Material Safety Data and Specification Sheets for all chemicals, encapsulants, etc. to be used for this project.

1.8 SUBMITTALS AT THE COMPLETION OF THE PROJECT

- A. Upon completion of on-site work, Contractor shall provide a detailed project summary that will include each of the items listed below. The project Summary shall be submitted and approved by the District prior to acceptance of final pay request and shall include the following:
 1. Copies of the Security and Safety Logs showing names of persons entering the workspace. The logs shall include date and time of entry and exit, supervisor's record of any accident (detailed description of accident).
 2. Chain of custody documentation and laboratory reports for all analyses performed.
 3. Emergency evacuations and any other safety or health incident.
 4. Submit uniform hazardous and non-hazardous waste manifests prepared, signed and dated by an agent of the landfill. The manifest must certify the amount of hazardous materials delivered to the landfill. The manifest must be provided to the District or District's Environmental Consultant within ten working days after delivery.
 5. Hazardous waste must be tested (TTLC/STLC/TCLP) and categorized for purposes of disposal. The Contractor shall submit written evidence of approved testing (including copy of the actual chain-of-custody forms) and disposal of hazardous wastes within five (5) days following the completion of each phase of the project.
 6. Personal air sample results.
 7. Pressure differential strip chart readings for each differential recording device on the site.
 8. Project Summary:
 - a. Abatement contractor's name and address, certification number (CSLB), registration number (DOSH) and Tax ID number.
 - b. Hazardous waste hauler certifications (DOT).
 - c. Name, address and registration number of hazardous waste hauler.
 - d. Laboratory performing analyses (NVLAP).

- e. Contract number and name of project.
- f. Specific inventory (including locations and approximate quantities) of the hazardous materials which were removed or handled.
- g. Number of employees working on the project.
- h. Dates of commencement and completion of on-site work.
- i. Work method employed (i.e., glove bag, mini-containment, full containment with negative air and decontamination enclosure system, etc.)
- j. Name, location, telephone number and EPA registration of waste disposal site(s) used.
- k. DOP testing results.

1.9 QUALITY ASSURANCE

A. Qualifications:

- 1. Asbestos Abatement Work: Only qualified persons shall engage in asbestos abatement activities. Work involving asbestos-containing materials exceeding 100 square feet (SF) or 100 linear feet (LF) shall be completed by a Contractor holding a valid asbestos handling license issued by the California State Contractors Licensing Board (SCLB) and a valid current Certificate of Registration for Asbestos-Related Work as issued by the California Department of Industrial Relations - Division of Occupational Safety and Health (Cal/OSHA). Work shall be completed under the on-site supervision of a Competent Person as defined by OSHA Regulation 29 CFR Part 1926.1101 (8 CCR 1529 in California). All abatement workers shall have AHERA training with annual 8-hour refresher training, current medical exams for the use of respiratory protection, and current fit test of appropriate respirators.

B. Regulatory Requirements: The Contractor shall be alerted to and familiar with the following laws and regulations regarding the hazards, control measures, management, characterizing, transport and disposal of hazardous wastes:

- 1. Asbestos and Lead Abatement Work: All labor, materials, facilities, equipment, services, employees and training, and testing necessary to perform the work required for asbestos abatement and disposal of waste shall be in accordance with these Specifications and the most current regulations, including but not limited to:
 - a. Environmental Protection Agency NESHAP and AHERA regulations (40 CFR Part 763, as applicable).
 - b. Occupational Safety and Health Administration (inclusive of OSHA 29 CFR 1926.1101)
 - c. California Department of Occupational Safety and Health (inclusive of Cal/OSHA 8 CCR 1529)
 - d. California Environmental Protection Agency (Cal/EPA).
 - e. Local Air Quality Management District or Air Pollution Control District Rules
 - f. San Francisco Lead Ordinance for the Removal of Lead from Exterior Surfaces
 - g. Other applicable federal, state, and local governmental regulations pertaining to asbestos-containing materials (ACM) and asbestos waste.

1.10 CONTRACTOR MONITORING

- A. The District or District's Environmental Consultant reserves the right to perform air sampling in selected areas during the course of the project. District or District's Environmental Consultant reserves the right to stop work within in an area if in the course of performing monitoring, the District or District's Environmental Consultant observes instances of substantial non-conformance with this Section or other Sections of the Specification presenting health hazards to workers, the general public or the surrounding areas. Work shall not resume until the corrective measures have been enforced. Instances of substantial non-conformance shall include, but not be limited to, the following:
1. Activities or misconduct imperiling worker's safety and health.
 2. Airborne fiber concentrations as measured by PCM outside of the containment area exceeding background or 0.01f/cc whichever is greater. Airborne concentrations as measured by TEM outside of the containment area exceeding background or 70 S/mm², whichever is greater.
 3. Loss of negative pressurization for more than two minutes.
 4. Breaches in containment resulting in potential release of asbestos to non-work areas.
- B. All asbestos and lead containing materials abatement work shall be conducted using good work practices to prevent the release of fibers or dust outside the work area. If poor work practices are observed, the Owner's Consultant shall direct the Contractor to make the necessary corrections. Generally, airborne fiber concentrations measured by PCM inside the regulated areas exceeding 0.2 fibers/cc will be viewed as an indication of poor work practices unless the concentration is a direct result of design or external circumstances anticipated in the project specification.
- C. If appropriate conditions are not made after two (2) warnings, or if an immediate threat exists that asbestos fibers or lead dust could be released outside the work area, all abatement work will be stopped. The decision to stop work shall be made jointly by the District's Consultant and the District.
- D. The District's Consultant may perform baseline air sampling in selected work areas of the building before the start of abatement work to establish the background total asbestos fiber and lead dust concentrations.
- E. The background total fiber concentration (or a total fiber concentration greater than 0.01 f/cc) shall not be exceeded outside the work area during abatement work. If the total fiber concentration exceeds either background or 0.01 f/cc, the Owner's Consultant is authorized to act in accordance with the above provisions to stop work. The Contractor shall perform any and all necessary corrective actions to reduce the fiber concentrations.
- F. The District's Environmental Consultant may perform air sampling inside and outside the hazardous materials work area during all phases of the work. The Contractor shall cooperate fully with the District's Environmental Consultant and ensure the cooperation of his workers during collection of air samples and work area inspections.
- G. When visual inspections or air monitoring are specified, the Contractor shall notify the District or District's Environmental Consultant in writing 24 hours in advance of the day and time when the Contractor will be ready for such inspections or monitoring. Such requests shall be initiated by the Contractor's Competent Person or Foreman indicating that the work area has been previously inspected and is ready for inspection/testing.
- H. Air monitoring generated by the District or District's Environmental Consultant shall not be used by the Contractor to represent compliance with regulatory agency requirements for

monitoring of workers' exposure to airborne asbestos, nor shall any other activity on the part of the District or District's Environmental Consultant be construed to meet the Contractor's compliance with applicable health and safety regulations.

PART 2 - PRODUCTS

2.1 SIGNS AND LABELS

- I. Provide labeling in accordance with State and Federal EPA requirements. Provide the required signs, labels, warnings, placards or posted instructions for containers used to transport hazardous material to the landfill.
- J. Location of Caution Signs and Labels: Provide bilingual caution signs at all approaches to work areas in languages used by the Contractor's employees. Locate signs at such a distance that personnel may read the sign and take the necessary protective steps required before entering the area. Provide labels and affix to all asbestos-containing materials, scrap, waste, debris, and other products contaminated with hazardous materials.
- K. Warning Sign Format: Vertical format conforming to Title 8 CCR 1529:

DANGER
ASBESTOS
CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED IN THIS AREA

- L. Warning Label Format: Provide labels that comply with Title 8 CCR 1529 of sufficient size to be clearly legible, displaying the following legend:

DANGER
CONTAINS ASBESTOS FIBERS
MAY CAUSE CANCER
DO NOT BREATHE DUST
AVOID CREATING DUST

- M. Warning Sign Format: Vertical format conforming to Title 8 CCR 1532.1:

WARNING
LEAD WORK AREA
POISON
NO SMOKING OR EATING

- N. Wherever the treatment process is reasonably expected to impact any lead-containing substances:
 - 1. Post a sign 14" by 14" that includes the phrase, "Caution Lead Hazard. Keep Out" in bold lettering at least 2" inches high.
 - 2. Postings shall be in English and Spanish, and in any language used by any of the Contractor's employees as the primary language of communication.

2.2 ENCAPSULANTS

- A. Encapsulants shall be U.L. Listed, in full-scale E-119 fire test.

- B. Average depth of penetration shall meet manufacturer's recommendations.
- C. Dry mil thickness of bridging encapsulating systems (if used) shall be as indicated in the specific treatment instructions included in this specification, and as recommended by the manufacturer.
- D. Performance Requirements: Classification - penetrating encapsulant; spray applied and brushable. Product shall be tested and listed by EPA and possess the following characteristics:
 - 1. Flame resistance/flame spread ~25 (ASTM E162) V6.
 - 2. Fire classification - UL Class A approved in the specific or similar assembly to its intended application.
 - 3. Product shall be tested and rated non-toxic and non-irritating under the Federal Hazardous Substances Control Act and contain no methylene chloride.
 - 4. Material shall be tinted sufficiently to provide a readable contrast to background color to which it is applied.

2.3 PLASTIC SHEETING

- A. Use fire-retardant (FR) polyethylene (poly) film.
 - 5. Thickness - 6-mil, minimum, NO EXCEPTIONS.
 - 6. Flame Resistance/Flame Spread Rate <25.
 - 7. Conforms to NFPA #701 and Tested in accordance with ASTM E-84.

2.4 TAPE, ADHESIVE, SEALANTS

- A. Tape, 2" or wider, shall be capable of sealing joints of adjacent sheet of polyethylene and shall attach polyethylene sheet to finished or unfinished surfaces or similar materials. Tape shall be capable of adhering under dry and wet conditions, including use of amended water. Taping to critical or sensitive surfaces shall be completed using preservation sealing tape.
- B. Spray adhesive for sealing polyethylene to polyethylene shall contain no methylene chloride or methyl chloroform (1,1,1-trichloroethane) compounds.

2.5 STRIP CHART RECORDER(S)

- A. Where interior work areas are required, each shall have a minimum differential pressure of 0.025 inches water gage at all times. Fluctuations below 0.025 inches of water column are unacceptable and may require temporary cessation of work until conditions are corrected.
- B. Multiple manometers shall be used to document the level of pressure difference between the containment space and all other spaces as deemed necessary by the District or District's Environmental Consultant. Defective or non-operating instrumentation may require temporary cessation of work until instrumentation is repaired or replaced.
- C. The manometers will be checked a minimum of four times per day by a person familiar with the operation.

- D. Differential air pressure systems shall be in accordance with Appendix J of EPA's "Guidance for Controlling Asbestos-Containing Materials in Buildings, EPA 560/5-85-024. The Differential pressure system shall be continuously monitored by the Contractor using a recording instrument. The recording instrument shall be connected to an audible alarm that will activate at a pressure differential of -0.025 inches water gauge air pressure.

2.6 VACUUM EQUIPMENT

- A. All vacuum equipment used in the work area shall use HEPA filtration systems and be of the wet-dry type. The Contractor shall provide on-site independent DOP testing to document the effectiveness of the vacuum units. The test results shall be signed by the individual performing the testing. Repeat DOP testing every thirty (30) days after initial testing. Provide documentation to the District or District's Environmental Consultant with 24 hours of DOP testing.

2.7 LOCAL EXHAUST SYSTEM

- A. Where containments are required, sufficient High Efficiency Particulate Absolute (HEPA) ventilation units shall be used to maintain the negative pressure in each interior work area at 0.025 inches of water column and a minimum of four (4) air changes per hour.
- B. The ventilation system shall remain in operation 24 hours a day until the work area has passed the specified clearance criteria. HEPA filtered air which is exhausted to maintain negative pressure shall be exhausted from the building at locations approved by the District or District's Environmental Consultant. Exhausted air shall not be near or adjacent to other building intake vents or louvers or at entrances to buildings. Other HEPA units shall operate within the enclosure to circulate air and control fiber counts.
- C. The Contractor shall provide on-site independent DOP testing to document the effectiveness of the air filtration units. The test results shall be signed by the individual performing the testing. Repeat testing if the unit or the air filtration units have been repaired or replaced. Repeat DOP testing after thirty (30) days after initial testing. Provide documentation to the District or District's Environmental Consultant with 24 hours of DOP testing.

2.8 HOURS OF OPERATION FOR HEPA FILTRATION UNITS

- A. The ventilation system shall remain in operation 24 hours a day until the work area has passed the specified clearance criteria. HEPA filtered air necessary to maintain pressure differential shall be vented to non-contaminated areas outside the building. Other HEPA units shall operate within the enclosure to circulate air and control fiber counts.

2.9 RESERVE EQUIPMENT

- A. Contractor shall have the following equipment on site: two reserve, functioning and DOP-tested HEPA Filter Vacuum Cleaning Units, two reserve and DOP-tested HEPA area filtration units for every four containments. Contractor shall also have sufficient polyethylene (poly), respirators, protective equipment, tape, tools, decontamination enclosure systems for each work area.
- B. Provide authorized visitors requiring access to the work area with suitable protective clothing, headgear, eye protection, as described in this specification, whenever the visitor must enter the work area. The Contractor shall have available and maintain at all times a minimum of

three (3) suits and other suitable protective equipment for this purpose. All protective equipment shall be new and for the exclusive use of visitors.

- C. The Contractor shall document that each visitor has been trained and fit-tested prior to entering an abatement area.

2.10 TRANSPORTATION EQUIPMENT

- A. Transportation equipment, as required, shall be lockable and suitable for loading, temporary storage, transit and unloading of contaminated waste without exposure to persons or property. Any vehicle used to transport asbestos waste shall be properly registered with all applicable controlling agencies.

2.11 CONNECTIONS TO WATER SUPPLY

- A. Contractor shall assure that all connections to the site's water system shall include backflow protection. Valves shall be temperature and pressure rated for operation of the temperatures and pressures encountered. After use, connections and fittings shall be removed without damage or alteration to existing water piping and equipment. Leaking or dripping valves shall be piped to the nearest drain or located over an existing sink or grade where water shall not damage existing finishes or equipment.
- B. Employ heavy-duty abrasion-resistant hoses with a pressure rating greater than the maximum pressure of the water distribution system in each work area. Provide fittings as required to allow for connection to existing wall hydrants or spouts.

2.12 WATER HEATER

- A. The hot water supply must be adequate to allow for 15 minutes of continuous usage while maintaining a water temperature of 85 F °. At minimum provide UL rated 40-gallon electric water heater to supply hot water for the decontamination unit shower. Provide relief valve compatible with water heater operation; pipe relief valve down to drip pan on floor with type L copper. Drip pans shall consist of a 24 inch X 24 inch X 6 inch deep pan, made of 19 gauge galvanized steel with handles. Drip pan shall be securely fastened to the water heater with bailing wire or similar material. Wiring of the water heater shall comply with NEMA, NEC and UL standards.

2.13 OTHER TOOLS AND EQUIPMENT

- A. The Contractor shall provide other suitable tools for the stripping, removal and disposal activities.
- B. Prohibited Equipment: The following equipment is prohibited from use on this project unless accepted in writing by the District or District's Environmental Consultant:
 - 1. High or low pressure water blasting equipment for hosing of work areas.
 - 2. Bead blasting or other uncontained abrasive blasting methods.
 - 3. Vacuum-powered removal or collection equipment located outside the asbestos work area, such as a "Vacu-Loader".
 - 4. Gasoline, propane, diesel or other fuel powered equipment inside the building, unless previously approved in writing by the District or District's Environmental Consultant.

5. Equipment that creates excessive noise or vibration that would affect the safety of the building or generate complaints from neighboring building occupants. No equipment shall exceed an A-weighted sound level of 85 dB as measured at 3 ft. from the radiating source without written permission of the District or District's Environmental Consultant.
6. Metal wire-brushes.
7. Flammable solvents with a flash point below 140 degrees F or materials containing ethylene glycol ether, methylene chloride, ethyl chloroform (1,1,1-trichloroethane), or other hazardous substances.
8. Non-fire retardant polyethylene sheeting.
9. Polyurethane spray foam for application in fire-rated assemblies, including but not limited to penetrations into stairwells, mechanical rooms, electrical closets, rated floor-to-floor assemblies, etc.

PART 3 - EXECUTION

3.1 INITIAL AREA ISOLATION - ASBESTOS AND LEAD

- A. The District or District's Environmental Consultant reserves the right to inspect and approve all containment setups before any abatement is undertaken.
- B. If a containment area is breached (failure of polyethylene seals, visible dust emission, fiber counts above background level, etc.), the Contractor shall take immediate action to control the breach and clean the area to the satisfaction of the District or District's Environmental Consultant.
- C. If sample results indicate that conditions have exceeded the baseline or clearance criteria, as determined by the District or District's Environmental Consultant, all work shall cease. Work shall not recommence until the condition(s) causing the increase have been corrected.
- D. Verify that all electrical power, gas, sewage, water, phone lines, fire life safety lines and sprinkler systems to the work area have been shut down and disconnected so that there is no possibility of reactivation and electrical shock.
- E. Provide all connections for temporary utilities in the work area needed throughout abatement. Temporary electrical power shall be according to OSHA and the National Electrical Code for Wet Environments.
- F. Contractor shall conform to the District's lockout requirements, and secure the work area at all times. Area entrances and exits shall be secured by the Contractor throughout the abatement phase. Unauthorized visitors are strictly prohibited. Only the Contractor, District or District's designative representatives are permitted at the job site. Contractor shall ensure that all doors, gates, windows, and potential entrances to the work areas and the designated waste location areas are secured and locked at the end of each workday.
- G. Contractor shall store all materials, equipment, and supplies for the project inside the building or in areas designated by the District and in accordance with District's requirements.
- H. As required, establish designated limits for the abatement work area with continuous barriers. Use barrier tape (3-inch) with a pre-printed asbestos warning throughout exterior asbestos abatement activities. Provide signs around the perimeter of all the interior works areas per the EPA and Cal-OSHA.

- I. Contractor shall provide temporary sanitary services of adequate capacity to handle the maximum estimated crew size plus an additional twenty percent. Contractor shall maintain the temporary facilities throughout the duration of the project.
- J. The Contractor shall be responsible for identifying all HVAC components (if applicable) that lead into or out of the work areas. All components shall be disconnected and sealed airtight for the duration of the abatement work. All openings shall be sealed with two (2) layers of 6 mil polyethylene secured with duct tape, as applicable.
- K. Pre-clean the work area and fixed objects in the work area using HEPA filtered vacuums and/or wet cleaning methods. Protect fixed objects with protective barriers (as appropriate) and cover with 6 mil poly sealed with tape.

3.2 CONTAINMENT SET-UP PROCEDURES - ASBESTOS AND LEAD

- A. Containment is not required for exterior work including removal of asphaltic roofing mastics if removed in a non-friable state. However, all work shall be conducted within an asbestos regulated area as required by Cal-OSHA. Contractor shall seal operable windows and air intakes within 50 feet of the work area with 6-mil polyethylene sealed with tape.
- B. Contractor shall construct a full negative pressure containment for the removal of known asbestos-containing interior materials including drywall with ACM joint compound. Install critical barriers consisting of one layer of 6-mil poly on windows and doors. Cover floor and wall surfaces with 6-mil poly sealed with tape (as appropriate). Cover floors first so that plastic extends up the walls at least 12 inches, then cover walls with 6-mil poly to the floor level, thus overlapping the floor material by a minimum of 12 inches. The work area(s) shall be placed under negative pressure as outlined in this specification throughout the abatement work period.
- C. Any disturbance of ACMs must be performed within a regulated area. If dust or debris is generated from asbestos related activity, work must be performed in a mini-enclosure with negative pressure or critical barrier containment.
- D. To permit the inspector to view the majority of the work area, the Contractor shall provide easily accessible viewing ports from the clean space into each abatement area. Viewing ports must be a minimum of 2' x 2', clear-see-through plastic with no scratches, tape or glue marks.
- E. Pressure differential recorders with strip charts are required to monitor the pressure differential in the work area. The recorders must be calibrated prior to arriving on site.
- F. A three-chambered decontamination unit shall be required during the abatement work conducted in full containment. The unit shall be located immediately outside the contained area. A pre-fabricated unit is acceptable. Chambers shall be arranged as follows: (1) a clean/change room shall be the first chamber entered from outside the work area, (2) a shower shall be located between the clean/change room and the dirty/change room, and (3) a dirty/change room shall be the last chamber before entering the work area.
 - 1. The clean/change room of the worker decontamination unit shall be of sufficient size to accommodate the work crew and their belongings. It shall include a respirator storage area and be fully equipped with reserve equipment and materials such as clean suits, towels, soap, tape, and respirator filters.
 - 2. Worker decontamination unit walls shall be a minimum of two layers of 6-mil fire retardant poly and floors shall be constructed with a minimum of three layers of fire

retardant poly. All entry and exit doorways shall consist of at least two sheets of overlapping, fire resistant poly. At no time shall the flapped doors be taped open in order to expedite material or personnel load-out.

- G. All water from the shower and bag wash area shall be filtered to the technically feasible limit but not more than five (5) microns before disposal. In addition, the Contractor shall comply with all current local, state and federal codes relating to waste water release. All water connections must be verified leak for leaks and turned-off at the conclusion of each shift. All shower water shall be drained from the shower pan at the end of each shift.
- H. Contractor shall construct an equipment decontamination enclosure system consisting of a washroom, holding area and clean room separated by airlocks.
- I. Approved fire extinguishers (Class ABC, multi-purpose, dry chemical type, rated: 4A; 60BC) shall be readily available to workers (maximum travel distance of 50 feet) inside and adjacent to work area(s). Personnel and emergency exits shall be clearly indicated on the inside of the containment area. The emergency exit plan shall be approved by the District's Environmental Consultant prior to the set up of any work areas.
- J. A decontamination area shall be established on the roof for abatement of asphalt roofing materials and immediately adjacent to all exterior regulated work areas. Decontamination areas shall include a wash area. All wash water shall be captured and disposed or filtered as specified above.

3.3 PERSONNEL PROTECTION

A. Informed Workers:

- 1. All workers shall be informed of the hazards of ACMs, lead and any other hazardous materials exposure. Workers shall also be instructed in the use and fitting of respirators, protective clothing, decontamination procedures, and all other aspects associated with the abatement work.

B. Personal Hygiene Practices:

- 1. The Contractor shall enforce and follow good personal hygiene practices during the abatement of hazardous materials. These practices will include but not be limited to the following: no eating, drinking, smoking or applying cosmetics in the work area. The Contractor shall provide a clean space, separated from the work area, for these activities.
- 2. Workers shall remove street clothes in the clean room and put on a respirator and clean protective clothing before entering the work area. Upon exiting the work area, remove gross contamination from clothing before leaving the work area; proceed to the change room and remove clothing except respirators; proceed to the shower; clean the outside of the respirator with soap and water while showering; remove respirator and thoroughly wash. Following showering, proceed directly to the clean room and dress in street clothes. Do not wear disposable clothing outside the decontamination enclosure system.
- 3. If data gathered by the District or District's Environmental Consultant in areas adjacent to the work areas shows exposure to airborne asbestos or other hazardous materials exceeding Cal-OSHA criteria, that area will become regulated and workers must wear protective clothing and approved respirators and must have a shower facility provided to them.

C. Respirators:

1. Establish a respiratory protection program as outlined by ANSI and required by Cal-OSHA. Select respirators from those approved by the National Institute for Occupational Safety and Health (NIOSH). Respirators selected must be approved by the Competent Person. Submit program for review a minimum of five (5) working days prior to the commencement of abatement activities.
2. Provide workers with approved and personally-issued respirators with replaceable filters. Provide sufficient quantity of filters approved by NIOSH for use in asbestos environments so that workers can change filters as required by the manufacturer.
3. At a minimum, provide each employee with the following respiratory protection for each work phase:
 - a. Pre-cleaning, containment set-up, and containment removal work: NIOSH-approved, half-face respirators with HEPA cartridges.
 - b. Asbestos abatement of drywall with asbestos containing joint compound, asphalt roofing products as well as disturbance of surfaces with known or unknown lead concentrations: half-face respirators with HEPA cartridges and organic vapor cartridges (as necessary).
4. At all times, respiratory protection selected shall, at a minimum, meet the requirements of the Table 1 below.

Table 1 – Respiratory Protection

<u>Airborne Concentration of Asbestos</u>	<u>Required Respirator</u>
Not in excess of 1.0 f/cc (10 X PEL)	Half-mask air purifying respirator other than a disposable respirator, equipped with high efficiency filters
Not in excess of 5.0 f/cc (50 X PEL)	Full facepiece air purifying respirator equipped with high efficiency filters
Not in excess of 100 f/cc (1000 X PEL)	Any powered air purifying respirator equipped with high efficiency filters or any supplied air respirator operated in continuous flow mode
Not in excess of 100 f/cc (1,000 X PEL)	Full facepiece supplied air respirator operated in pressure demand mode
Greater than 100 f/cc or unknown concentration	Full facepiece supplied air respirator operated in pressure demand mode, equipped with an auxiliary positive pressure self-contained breathing apparatus

5. Provide Type C continuous flow or pressure-demand, supplied-air respirators if the average airborne concentration of asbestos exceeds 100 times the permissible exposure limit; i.e., 8-hour time-weighted average (TWA) and ceiling limit. Use the respirators presented in Title 8 CCR 1529 that afford adequate protection at such upper concentrations of airborne asbestos. When Type C Respirators are required provide the following:
 - a. The air supply system shall provide Grade D breathing air that conforms to OSHA and ANSI Commodity Specification for Air.
 - b. Compressed Air System for Type C Respirators shall be high pressure, with a compressor capable of satisfying the respirator manufacturer's recommendations. The compressed air system shall have compressor failure alarm, high temperature alarm, and a carbon monoxide alarm. It also shall have

suitable in-line air purifying absorbent beds and filters to assure Grade D breathing air.

- c. Use of Belt: Type C respirators shall be worn with belt to minimize possibility of dislodging face mask when hose is snagged in the work area.

D. Protective Clothing:

1. Provide personnel exposed to asbestos fibers with fire retardant disposable protective whole body clothing, head coverings, gloves, and foot coverings. Provide appropriate gloves to protect workers hands from exposure to hazardous materials. Make sleeves secure at the wrists and make foot coverings secure at the ankles with tape. Ensure that all personnel entering and leaving the work area follow this procedure. Suits shall be of adequate size to accommodate the largest employee. Foot covers may be part of the coveralls. Non-disposable footwear shall be left in the work area until it is decontaminated or disposed of at the completion of the job.
2. Protective clothing will be worn inside the work area after the area passes pre-abatement inspection and shall remain in use until the area passes final clearance inspection.
3. For all work conducted outside of a fully contained work area, such as activities performed at exterior elevations and roof levels, all workers shall don dark blue Tyvek (or equivalent) suits at all times.

- E. Eye Protection: Provide safety glasses or goggles to personnel removing or handling asbestos-containing materials and waste.

- F. Shower Requirements: Contractor shall assure that all employees and visitors use protective equipment and the shower or wash down facility following each entry into the containment area after the start of the asbestos abatement.

G. Emergency Precautions and Procedures:

1. Establish emergency and fire exits from the work area. Display necessary signage at exits and paths to exits with representative visual aids. A diagram of all emergency and fire exits shall be posted in a conspicuous area proximate to the entrance to each work area.
2. The Contractor's supervisor/competent person shall be trained and certified in first aid and CPR, and be prepared to administer first aid to injured personnel after decontamination. Seriously injured personnel shall be treated immediately or evacuated without delay for decontamination. When an injury occurs, the Contractor shall implement fiber reduction techniques until the injured person has been removed from the work area.
3. In the event of a loss of negative pressure to the work area, work shall stop immediately and entrances to the work area sealed tight. The Contractor shall also institute fiber reduction controls until negative pressure is re-established to acceptable levels.

3.4 CONTAINMENT AND DECONTAMINATION AREAS/SYSTEMS

- A. Prior to each work shift and continuously throughout the project, each containment and decontamination enclosure shall be inspected and repaired as needed.
- B. Ambient asbestos fiber levels outside each work area shall not exceed 0.01 f/cc (PCM) or 70 s/mm² (TEM). If the asbestos fiber concentrations outside each work area should exceed

those levels shown above, then abatement must stop and operations be reviewed and modified until the fiber count can be reduced to within the acceptable limits.

3.5 ASBESTOS AND LEAD REMOVAL (GROSS REMOVAL TECHNIQUE)

- A. The Contractor shall abate all ACMs and lead containing materials identified in this specification that will be impacted during the performance of construction activities.
- B. The Contractor shall continuously apply wetting agent throughout the removal process. The wetting agent shall be applied with a low-pressure fine spray to minimize fiber releases. The materials shall be thoroughly saturated so that there is no detectable fiber release. All ACM and lead containing debris shall be immediately packaged in leak-tight containers following removal.
- C. Minimize removal activities of ACMs and lead containing materials (LCMs) that generate airborne particulate. To the extent feasible, score or cut-out ACMs and/or LCMs in sections, wetting along the scoring line continually, and misting the air with an airless sprayer to knock down suspended particulate. After completion of removal work, surfaces from which asbestos has been removed shall be wet cleaned to remove all visible material and residue.
- D. Wet clean the exterior surfaces of waste containers in the equipment decontamination enclosure system prior to removal from the work area. Ensure that workers do not enter from uncontaminated areas into contaminated areas in the equipment decontamination enclosure system. The Contractor shall transport asbestos-containing waste bags to the waste debris box at designated hours approved by the District or District's Environmental Consultant.
- E. Non-friable waste shall be packaged in clear, leaktight containers and properly labeled while stored on-site.
- F. All drywall debris with ACM joint compound shall be stored in clear, leaktight containers and properly labeled while stored on-site.
- G. Asbestos/lead containing debris and contaminated water shall be cleaned from the work area at the end of each work shift. The Contractor shall clean the work area using wet methods and HEPA vacuum equipment.

3.6 ROOFING ASBESTOS REMOVAL

- A. Establish a regulated area consisting of barrier tape and asbestos warning signs at least 10 feet from the work area. The edge of the roof can be considered one such barrier if sufficient controls have been established to prevent loss of roofing debris from the roof.
- B. Provide a decontamination area at the point of entry/exit to the regulated exterior or roof work area.
- C. Seal off openings within 50 feet of the work area including ducts, grills, and windows.
- D. Utilize fall protection and safety devices at all times during roof work whenever exposed to falls greater than six feet including at perimeter, shafts or skylights.
- E. Weather conditions should be dry and wind conditions less than 15 mph for roof and other exterior abatement activities. Establish a waste storage area where sealed bags of roofing materials are stored during removal. Line the storage area with a layer of 6-mil polyethylene

sheeting. Dampen the surfaces with a fine spray of amended water before proceeding with removal. Keep ACMs damp throughout the removal process. Cut, peel, and scrape the roofing materials as required to remove the largest pieces possible in layers. Continue the removal until the roof decking is reached. Remove contaminated sleepers, flashing, and counter flashing as applicable.

- F. Place all removed asbestos roofing mastics in waste bags or containers. All waste shall be removed from exterior and roofing regulated work areas by the end of each workday. In no case shall waste disposal containers be dropped or thrown. All ACM waste disposal containers shall be handled in a careful manner to prevent spills.
- G. Acceptable clearance criteria for exterior and roofing removal shall be no visible three-dimensional residue at removal locations. The District or District's Environmental Consultant reserves the right to conduct visual inspections at the completion of the work.

3.7 DECONTAMINATION - ASBESTOS AND LEAD

- A. Following the abatement work, all reusable, contaminated equipment, such as masks, hard hats, boots, etc. shall be thoroughly decontaminated through wet cleaning methods before removal from the work area.
- B. No accumulation of debris or standing water will be permitted following the initial decontamination. All visible asbestos debris on soil will be removed to baseline concentrations.

3.8 WASTE LOAD OUT PROCEDURES

- A. Ensure that polyethylene bags are sealed air-tight. All bags shall be wet cleaned prior to removing them from the equipment decontamination unit.
- B. Ensure all disposal containers are properly labeled in accordance with 8 CCR 1529, 5194 (HAZCOM), 49 CFR 171-179 (USDOT), 40 CFR 61 Subpart M (NESHAP), and any local regulations and state regulations as required by this specification.

3.9 REGULATED AREA MONITORING

- A. Prior to each work shift and continuously throughout the project, each containment and decontamination enclosure system shall be inspected and repaired as needed.
- B. Ambient asbestos fiber levels outside each work area shall not exceed 0.01 f/cc (PCM) or 70 s/mm² (TEM) or background whichever is greater. If the asbestos fiber concentrations outside work areas exceed those levels shown above, then abatement must stop and operations be reviewed and modified until the fiber count can be reduced to within the acceptable limits.

3.10 AIR MONITORING

- A. The purpose of any air monitoring that may be conducted by the District or District's Environmental Consultant will be to detect possible release of fibers or dusts (asbestos or lead) emanating from the work areas.
- B. All PCM air sample analysis shall comply with NIOSH Method 7400. All TEM analysis shall be consistent with modified-AHERA protocols or NIOSH 7402.

- C. The District or District's Environmental Consultant reserves the right to perform and / or observe final clearance inspection and sampling.
- D. The method of analysis for pre-abatement and clearance air samples shall be via Phase Contrast Microscopy (PCM). The method of analysis for in-progress asbestos air samples shall be PCM and TEM at the option of the District or District's Environmental Consultant.
- E. The Contractor shall be responsible for all personal air sampling. These samples shall be taken each shift and for each distinct crew operation, and shall be used to verify adequacy of fiber control and respiratory protection. Personal breathing zone air sampling shall be in accordance with the Cal-OSHA asbestos standard. A minimum of 25% of the workforce shall be monitored during each shift. All sample results shall be available on-site within 24-hours of sample collection. If two consecutive shifts of non-compliant or overloaded samples are noted, the contractor shall hire a CAC/CSST at their own expense to assist in compliance with the specifications.

3.11 CLEARANCE INSPECTIONS - ASBESTOS AND LEAD

- A. The District or District's Environmental Consultant reserves the right to conduct visual inspections. Contractor shall notify the District or District's Environmental Consultant when the decontamination process in each containment area is complete. Evidence of debris will require additional clean up by the Contractor. Contractor shall be responsible for re-cleaning all areas found to be deficient.
- B. If the District or District's Environmental Consultant determines that the work area is sufficiently clean, the Contractor may proceed. If the District or District's Environmental Consultant determines that certain areas require additional cleaning, the Contractor shall re-clean the work area and request a second inspection of the recleaned area. All costs incurred by the District or District's Environmental Consultant for inspections required after the second inspection will be charged to the Contractor.
- C. Once the initial visual is passed, the Contractor shall remove all but the containment critical barriers.
- D. Following the visual inspection, the Contractor shall provide a coating of non-diluted encapsulant in the work area. The Contractor shall allow the encapsulant to dry for the period specified by the manufacturer.
- E. Asbestos Clearance Testing: Following encapsulation and drying time, the Contractor shall conduct air clearance sampling. Clearance air sampling shall not take place until all encapsulant is dry. The District or District's Environmental Consultant reserves the right to approve the initiation of clearance sampling.

3.12 ASBESTOS CLEARANCE CRITERIA:

- A. The District's Consultant will conduct a final inspection of each work area. Any remaining asbestos containing materials or debris found shall be cleaned by the Contractor and any repairs to existing conditions shall be made at no additional cost to the District or Environmental Consultant. When the area is clean, the Owner's Consultant shall provide the Contractor with a written notice of acceptance.
- B. Multiple samples will be collected depending on the size and configuration of the work areas. Typically, a minimum of five (5) samples will be collected per area.

- C. The clearance level per containment shall be less than 0.01 fibers per cubic centimeter via phase contrast microscopy (PCM) or less than 70 structures per square millimeter via transmission electron microscopy (TEM). Aggressive air sampling shall be used for clearance purposes. Multiple samples shall be collected in large containment areas.
- D. If air samples do not pass the required clearance criteria, the area shall be recleaned and new samples shall be collected by the District or District's Environmental Consultant. The Contractor shall be responsible for all costs associated with re-sampling and re-analyses. This amount will be deducted by the District from the Contractor's final payment.
- E. The District or District's Environmental Consultant shall notify the Contractor in writing of acceptable asbestos fiber concentrations. The Contractor shall then remove all the remaining barriers in the work area.

3.13 HAZARDOUS MATERIALS DISPOSAL

- A. It is the responsibility of the Contractor to determine current waste handling, labeling, transportation and disposal regulations for the work site and for each waste disposal landfill. The Contractor must comply fully with these Specifications, local, state, and federal regulations and provide documentation of the same.
- B. Ensure all disposal containers are properly labeled per 8 CCR 1529, 5194 (HAZCOM), 49 CFR 171-179 (USDOT), 40 CFR 61 Subpart M (NESHAP), and any local regulations and state regulations as required by this specification.
- C. Filter all wastewater to the technically feasible limit, but not more than five (5) microns before disposal. Comply with all current local, state and federal codes relating to waste water release.
- D. Asbestos-containing waste that is properly labeled and sealed may be temporarily stored in areas approved by the District. Areas must be made secure before storing the waste. Waste is not to remain in temporary storage area for longer than one (1) week before final load-out of materials.
- E. All lead related waste streams and waste categories shall be considered hazardous until proven otherwise through testing by the Contractor. If the Contractor allows different waste stream to become co-mingled, the waste will be classified as hazardous if any single component waste stream is hazardous.
- F. Each lead related waste produced shall be placed in properly segregated, labeled and sealed, impervious containers.
- G. Each category of waste, except components with intact paint, will be tested and characterized by the Design Build Entity's Observation Service using one or more of the following testing protocols:
 - 1. Total Threshold Limit Concentration (TTLC): 1,000 ppm lead.
 - 2. Soluble Threshold Limit Concentration (STLC): 5 µg/L lead.
 - 3. Toxicity Characteristic Leaching Procedure (TCLP): 5 µg/L lead.
- H. Based on the testing protocols, any waste greater than TTLC, STLC or TCLP concentrations listed above shall be considered a hazardous waste.

- I. All vehicles used to transport hazardous waste must be registered with the Department of Toxic Substances Control and Department of Transportation and maintain proper registration and with vehicle at all times.
- J. All vehicles and containers used to transport waste are subject to inspection and approval of District prior to departure from site.
- K. Contractor shall not throw bags into the truck in a way that may cause the bags to burst open.
- L. Contractor shall provide at minimum one (1) day advance notification to the District when signatures are required on manifest(s). The Contractor shall ensure that the Hazardous Waste Manifest is correctly filled out. The Contractor shall give the appropriate copies to the District and shall also instruct the District in writing that they must send the appropriate copy to the Department of Toxic Substances Control.
- M. If a debris box is used, the Contractor shall make all necessary arrangement with the District including obtaining all appropriate permits.
- N. Contractor is responsible for all coordination with the waste disposal site and with the waste hauling company.
- O. Debris box shall be constructed with minimum 20-gauge steel with no windows or openings other than the door. Debris box for hazardous waste shall be fully lined with a double layer of polyethylene sheeting and must be locked at all times when unattended. Once the debris box is filled and the manifest is signed, Contractor must transport the debris box off the job site.
- P. Disposal shall be in a District approved landfill that meets EPA requirements.

END OF SECTION 02 08 00



February 28, 2020

Ms. Vicki Brum
Lodi Unified School District
1305 East Vine Street
Lodi, CA 95240

Re: Asbestos and Lead Pre-Demolition Survey
Elkhorn Elementary School
Former Classroom Portable
10505 Davis Road
Stockton, California

Dear Ms. Brum:

Terracon Consultants, Inc. (Terracon) conducted a limited asbestos and lead survey at the referenced location on behalf of the Lodi Unified School District. The survey was performed in order to identify potential asbestos and lead containing materials that may be impacted by the planned demolition of the affected structure. William Frieszell, Certified Asbestos Consultant (CAC) and California Department of Public Health (CDPH) Certified Lead Inspector/Assessor, conducted the sampling on September 13, 2019.

During the survey, a total of fourteen (14) homogeneous suspect asbestos-containing material (ACMs) were identified and sampled throughout the affected structure.

All samples were transported under chain of custody procedures to EMLab P&K (EMLab) in Phoenix, Arizona. The asbestos samples were analyzed by polarized light microscopy (PLM) techniques in accordance with methodology approved by the U.S. Environmental Protection Agency (EPA). As set forth in the Code of Federal Regulations, 40 CFR Part 763, Appendix A to Subpart F, Section 1.2 and 1.7.2.4, the lower limit of reliable detection for asbestos using the PLM method is approximately one percent (1%) by volume. EMLab is accredited by the National Institute of Standards and Technology's National Voluntary Laboratory Accreditation Program (NVLAP) for bulk asbestos analysis. Copies of the laboratory reports and chain of custody documentation are provided as attachments to this report.

Of the materials sampled, none were reported positive for asbestos in concentrations exceeding the laboratory method limit of detection. Table I below provides a summary of the asbestos sample results.

Terracon Consultants, Inc. 1466 66th Street Emeryville, CA 94608
P (510) 547-7771 www.terracon.com



TABLE I
ASBESTOS SAMPLE RESULTS

Material Description	General Sample Location(s)	Asbestos Content
Interior Wall/Ceiling Systems - Drywall and Joint Compound	Classroom Building, Interior - Northeastern Class Room Area at Southwestern Entry Classroom Building, Interior - Northeastern Class Room Area at Southern Wall Classroom Building, Interior - Southeastern Storage Room Area at Southwestern Corner Classroom Building, Interior - Northeastern Class Room Area at Southern Ceiling	Drywall: None Detected Joint Compound: <1% Chrysotile Asbestos Composite: 0.25% Chrysotile Asbestos by 400 Point Count
Roof Penetration Mastic - Grey	Classroom Building, Roof Level - Main Roofing Field Area at Northeastern Corner	9% Chrysotile Asbestos
Drywall Texturing Material - "Knock Down" Style	Classroom Building, Interior - Northeastern Class Room Area at Southern Wall Classroom Building, Interior - Southeastern Storage Room Area at Northern Wall Classroom Building, Interior - Southeastern Storage Room Area at Central Partition	None Detected
Wall/Ceiling Tile System - 1'x2' White with Pinhole Pattern	Classroom Building, Interior - Main Classroom Area at Northeastern Wall Classroom Building, Interior - Main Classroom Area at Southwestern Corner Classroom Building, Interior - Southeastern Storage Room Area at Central Ceiling	None Detected
Cove Base Adhesive - Brown on 4" Brown Cove	Classroom Building, Interior - Northeastern Class Room Area at Northern Wall Classroom Building, Interior - Southeastern Storage Room Area at Eastern Wall	None Detected
Ceiling Tile Mastic - Brown	Classroom Building, Interior - Southeastern Storage Room Area at Southern Ceiling Classroom Building, Interior - Southeastern Storage Room Area at Southern Ceiling	None Detected
Wood Vapor Barrier Systems - Brown Paper	Classroom Building, Interior - Main Classroom Area at Southeastern Entry Way Floor Classroom Building, Exterior - Northeastern Corner of Building at Exterior Wall	None Detected
Main Roofing Field System - Brown Cascading Shingles	Classroom Building, Roof Level - Main Roofing Field Area Above Northern Entry Way Classroom Building, Roof Level - Main Roofing Field Area at Northeastern Corner Classroom Building, Roof Level - Main Roofing Field Area at Southwestern Corner	None Detected

Material Description	General Sample Location(s)	Asbestos Content
Rampway Texture Coating - Tan	Classroom Building, Exterior - Northern Side Entry Rampway at Eastern Side Classroom Building, Exterior - Northern Side Entry Rampway at Western Side	None Detected
Exterior Paints	Classroom Building, Exterior - Southwestern Corner of Building at Blue Trim Classroom Building, Exterior - Western Side of Building at Exterior Wall Classroom Building, Exterior - Northeastern Corner of Building at Exterior Wall	None Detected
Building Corner Seam Caulking - White	Classroom Building, Exterior - Northeastern Corner of Building Classroom Building, Exterior - Southwestern Corner of Building	None Detected
Building Concrete Materials	Classroom Building, Exterior - Northwestern Corner of Building at Foundation Classroom Building, Exterior - Southwestern Corner of Building at Foundation Classroom Building, Exterior - Northwestern Corner of Building at Ramp Landing	None Detected
Asphalt Paving Materials - Black	Classroom Building, Exterior - Southwestern Corner of Building Classroom Building, Exterior - Southern Side of Building at Drain	None Detected
Stair Texturing Material - Red	Classroom Building, Exterior - Southern Side of Building at Entryway Stairs Classroom Building, Exterior - Southern Side of Building at Entryway Stairs	None Detected

Confirmed ACM wall and ceiling systems were re-analyzed as a composite sample following 400 point count methodologies in order to direct future disposal of wastes. Upon analysis, this material was reported to contain less than 0.25 percent asbestos, which allows for disposal as a general construction debris waste stream.

In addition to asbestos bulk sampling, five (5) painted surfaces, one (1) wood glazing compound, and dripline area soils were sampled and analyzed for the presence of lead. Of the materials sampled, all were reported to be positive for lead content in concentrations exceeding the laboratory method limit of detection. All site activities should be performed in accordance with the Cal-OSHA Lead in Construction Standard (CCR Title 8, Section 1532.1). Table II below provides a summary of the lead sample results.

TABLE II
LEAD SAMPLE RESULTS

Sample No.	Description	General Sample Location	Result (ppm)
Pb-01	Clear Glazing Compound on Hardwood Flooring System	Material Sampled within the Classroom Building at the Main Classroom Area	0.807
Pb-02	White Paint on Wooden Interior Wall System	Material Sampled within the Classroom Building at the Main Classroom Area	97.8
Pb-03	White Paint on Wooden Window Framing	Material Sampled within the Classroom Building at the Main Classroom Area	144
Pb-04	Tan Texturing on Wooden Rampway Area	Materials Sampled at Classroom Building Exterior at Northern Ramp	0.057
Pb-05	Blue Paint on Wooden Exterior Trim	Materials Sampled at Classroom Building Exterior at Western Side	273
Pb-06	Tan Paint on Wooden Exterior Siding	Materials Sampled at Classroom Building Exterior at Western Side	0.209
Pb-07	Composite Soil Sample	Material Sampled from Multiple Locations at the Building Exterior Drip Line	0.798

ppm – parts per million

The paint samples were transported under chain of custody to QuanTEM Laboratories (QuanTEM) in Oklahoma City, Oklahoma for total lead analysis. QuanTEM is accredited by the American Industrial Hygiene Association's (AIHA's) Environmental Lead Laboratory Accreditation Program (ELLAP) for the analysis of lead in paint chips, dust wipes, and/or soil. The paint sample was analyzed for lead content using inductively coupled plasma (ICP) in accordance with EPA Method 6010C.

It should be noted that only the materials specifically mentioned within this report have been surveyed by Terracon. Any additional suspect materials identified during the course of construction related activities should be assumed to be hazardous in nature until sampling is conducted to determine hazardous material content.

Terracon appreciates this opportunity to provide our consulting services to the Lodi Unified School District. If you have any questions or need additional information, please feel free to call me at (510) 458-6979.

Respectfully,

Asbestos and Lead Pre-Demolition Survey
Elkhorn Elementary School ■ Stockton, CA
February 28, 2020 ■ Terracon Project No. R1197841



Terracon Consultants, Inc.

A handwritten signature in black ink, reading "William Frieszell". The signature is fluid and cursive, with the first name "William" and last name "Frieszell" clearly distinguishable.

William Frieszell, CAC #12-4853, CDPH Lead I/A
Senior Industrial Hygienist

Steffen Steiner, CAC #92-0850, CDPH Lead I/A

Attachments: Laboratory Reports and Chain of Custody, Inspector Certifications

Report for:

William Frieszell
Terracon Consultants, Inc. - Emeryville
1466 66th Street
Emeryville, CA 94608

Regarding: Project: R1197841; Elkhorn Elementary School, Classroom Building Haz Mat Survey, 10505 Davis Road,
EML ID: 2256836

Approved by:

Dates of Analysis:
Asbestos PLM: 09-23-2019



Approved Signatory
Renee Luna-Trepczynski

Service SOPs: Asbestos PLM (EPA 40CFR App E to Sub E of Part 763 & EPA METHOD 600/R-93-116, SOP EM-AS-S-1267)

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. The results relate only to the samples as received. The results include an inherent uncertainty of measurement associated with estimating percentages by polarized light microscopy. Measurement uncertainty data for sample results with >1% asbestos concentration can be provided when requested.

Eurofins EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

Client: Terracon Consultants, Inc. - Emeryville
C/O: William Frieszell
Re: R1197841; Elkhorn Elementary School,
Classroom Building Haz Mat Survey, 10505 Davis
Road,

Date of Sampling: 09-13-2019
Date of Receipt: 09-19-2019
Date of Report: 09-23-2019

ASBESTOS PLM REPORT

Total Samples Submitted: 37

Total Samples Analyzed: 37

Total Samples with Layer Asbestos Content > 1%: 2

**Location: 1A, Interior Wall Systems;Drywall And Joint Compound;Classroom Building,
Interior;Northeastern Class Room Area At Southwestern Entry**

Lab ID-Version‡: 10732799-1

Sample Layers	Asbestos Content
White Compound with White Paint	ND
Cream Tape	ND
White Joint Compound	ND
White Drywall with Brown Paper	ND
Composite Non-Asbestos Content:	15% Cellulose < 1% Glass Fibers
Sample Composite Homogeneity:	Poor

**Location: 1B, Interior Wall Systems;Drywall And Joint Compound;Classroom Building,
Interior;Northeastern Class Room Area At Southern Wall**

Lab ID-Version‡: 10732800-1

Sample Layers	Asbestos Content
White Compound with White Paint	ND
Cream Tape	ND
White Joint Compound	ND
White Drywall with Brown Paper	ND
Composite Non-Asbestos Content:	15% Cellulose < 1% Glass Fibers
Sample Composite Homogeneity:	Poor

**Location: 1C, Interior Wall Systems;Drywall And Joint Compound;Classroom Building,
Interior;Southeastern Storage Room Area At Southwestern Corner**

Lab ID-Version‡: 10732801-1

Sample Layers	Asbestos Content
White Compound with White Paint	ND
White Drywall with Brown Paper	ND
Composite Non-Asbestos Content:	10% Cellulose < 1% Glass Fibers
Sample Composite Homogeneity:	Moderate

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‡ A "Version" indicated by "-x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

Client: Terracon Consultants, Inc. - Emeryville
 C/O: William Frieszell
 Re: R1197841; Elkhorn Elementary School,
 Classroom Building Haz Mat Survey, 10505 Davis
 Road,

Date of Sampling: 09-13-2019
 Date of Receipt: 09-19-2019
 Date of Report: 09-23-2019

ASBESTOS PLM REPORT

**Location: 1D, Interior Wall Systems; Drywall And Joint Compound; Classroom Building,
 Interior; Northeastern Class Room Area At Southern Ceiling**

Lab ID-Version‡: 10732802-1

Sample Layers	Asbestos Content
Off-White Compound with Green Paint	< 1% Chrysotile
Cream Tape	ND
Off-White Joint Compound	< 1% Chrysotile
White Compound	ND
Off-White Compound with Brown Paint	ND
White Drywall with Brown Paper	ND
Composite Non-Asbestos Content:	15% Cellulose < 1% Glass Fibers
Sample Composite Homogeneity:	Poor

**Location: 2A, Drywall Texturing Material; "Knock Down" Style; Classroom Building,
 Interior; Northeastern Class Room Area At Southern Wall**

Lab ID-Version‡: 10732803-1

Sample Layers	Asbestos Content
White Texture with White Paint	ND
Sample Composite Homogeneity:	Good

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C/O: William Frieszell
Re: R1197841; Elkhorn Elementary School,
Classroom Building Haz Mat Survey, 10505 Davis
Road,

Date of Sampling: 09-13-2019
Date of Receipt: 09-19-2019
Date of Report: 09-23-2019

ASBESTOS PLM REPORT

**Location: 2B, Drywall Texturing Material;"Knock Down" Style;Classroom Building,
Interior;Southeastern Storage Room Area At Northern Wall**

Lab ID-Version‡: 10732804-1

Sample Layers	Asbestos Content
White Texture with White Paint	ND
Sample Composite Homogeneity:	Good

**Location: 2C, Drywall Texturing Material;"Knock Down" Style;Classroom Building,
Interior;Southeastern Storage Room Area At Central Partition**

Lab ID-Version‡: 10732805-1

Sample Layers	Asbestos Content
White Texture with White Paint	ND
Sample Composite Homogeneity:	Good

**Location: 3A, Wall/Ceiling Tile System;1'x2' White With Pinhole Pattern;Classroom
Building,Interior;Main Classroom Area At Northeastern Wall**

Lab ID-Version‡: 10732806-1

Sample Layers	Asbestos Content
Brown Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	90% Cellulose
Sample Composite Homogeneity:	Good

**Location: 3B, Wall/Ceiling Tile System;1'x2' White With Pinhole Pattern;Classroom
Building,Interior;Main Classroom Area At Southwestern Corner**

Lab ID-Version‡: 10732807-1

Sample Layers	Asbestos Content
Brown Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	90% Cellulose
Sample Composite Homogeneity:	Good

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C/O: William Frieszell
Re: R1197841; Elkhorn Elementary School,
Classroom Building Haz Mat Survey, 10505 Davis
Road,

Date of Sampling: 09-13-2019
Date of Receipt: 09-19-2019
Date of Report: 09-23-2019

ASBESTOS PLM REPORT

Location: 3C, Wall/Ceiling Tile System;1'x2' White With Pinhole Pattern;Classroom Building,Interior;Southeastern Storage Room Area At Central Ceiling

Lab ID-Version‡: 10732808-1

Sample Layers	Asbestos Content
Brown Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	90% Cellulose
Sample Composite Homogeneity:	Good

Location: 4A, Cove Base Adhesive;Brown On 4" Brown Cove;Classroom Building, Interior;Northeastern Class Room Area At Northern Wall

Lab ID-Version‡: 10732809-1

Sample Layers	Asbestos Content
Brown Baseboard	ND
Yellow Mastic	ND
Brown Mastic	ND
Sample Composite Homogeneity:	Poor

Location: 4B, Cove Base Adhesive;Brown On 4" Brown Cove;Classroom Building, Interior;Southeastern Storage Room Area At Eastern Wall

Lab ID-Version‡: 10732810-1

Sample Layers	Asbestos Content
Brown Baseboard	ND
Yellow Mastic	ND
Brown Mastic	ND
Sample Composite Homogeneity:	Poor

Location: 5A, Ceiling Tile Mastic;Brown;Classroom Building,Interior;Southeastern Storage Room Area At Southern Ceiling

Lab ID-Version‡: 10732811-1

Sample Layers	Asbestos Content
Brown Mastic	ND
Sample Composite Homogeneity:	Good

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C/O: William Frieszell
Re: R1197841; Elkhorn Elementary School,
Classroom Building Haz Mat Survey, 10505 Davis
Road,

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Date of Report: 09-23-2019

ASBESTOS PLM REPORT

**Location: 5B, Ceiling Tile Mastic;Brown;Classroom Building,Interior;Southeastern
Storage Room Area At Southern Ceiling**

Lab ID-Version‡: 10732812-1

Sample Layers	Asbestos Content
Brown Mastic	ND
Sample Composite Homogeneity: Good	

**Location: 6A, Wood Vapor Barrier Systems;Brown Paper;Classroom Building,Interior;
Main Classroom Area At Southeastern Entry Way Floor**

Lab ID-Version‡: 10732813-1

Sample Layers	Asbestos Content
Brown Paper	ND
Composite Non-Asbestos Content:	95% Cellulose
Sample Composite Homogeneity: Good	

**Location: 6B, Wood Vapor Barrier Systems;Brown Paper;Classroom Building,Interior;
Main Classroom Area At Southeastern Entry Way Floor**

Lab ID-Version‡: 10732814-1

Sample Layers	Asbestos Content
Brown Paper	ND
Composite Non-Asbestos Content:	95% Cellulose
Sample Composite Homogeneity: Good	

**Location: 6C, Wood Vapor Barrier Systems;Brown Paper;Classroom Building,Exterior;
Northeastern Corner Of Building At Exterior Wall**

Lab ID-Version‡: 10732815-1

Sample Layers	Asbestos Content
Brown Paper	ND
Composite Non-Asbestos Content:	95% Cellulose
Sample Composite Homogeneity: Good	

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C/O: William Frieszell
Re: R1197841; Elkhorn Elementary School,
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Road,

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ASBESTOS PLM REPORT

**Location: 6D, Wood Vapor Barrier Systems;Brown Paper;Classroom Building,Exterior;
Northeastern Corner Of Building At Exterior Wall**

Lab ID-Version‡: 10732816-1

Sample Layers	Asbestos Content
Brown Paper	ND
Composite Non-Asbestos Content:	95% Cellulose
Sample Composite Homogeneity:	Good

**Location: 7A, Main Roofing Field System;Brown Cascading Shingles;Classroom
Building,Roof Level;Main Roofing Field Area Above Northern Entry Way**

Lab ID-Version‡: 10732817-1

Sample Layers	Asbestos Content
Black Roofing Shingle with Multicolored Pebbles	ND
Black Roofing Felt	ND
Composite Non-Asbestos Content:	15% Glass Fibers
Sample Composite Homogeneity:	Moderate

**Location: 7B, Main Roofing Field System;Brown Cascading Shingles;Classroom
Building,Roof Level;Main Roofing Field Area At Northeastern Corner**

Lab ID-Version‡: 10732818-1

Sample Layers	Asbestos Content
Black Roofing Shingle with Multicolored Pebbles	ND
Composite Non-Asbestos Content:	15% Glass Fibers
Sample Composite Homogeneity:	Good

**Location: 7C, Main Roofing Field System;Brown Cascading Shingles;Classroom
Building,Roof Level;Main Roofing Field Area Southwestern Corner**

Lab ID-Version‡: 10732819-1

Sample Layers	Asbestos Content
Black Roofing Shingle with Multicolored Pebbles	ND
Black Roofing Felt	ND
Composite Non-Asbestos Content:	15% Glass Fibers 2% Cellulose
Sample Composite Homogeneity:	Moderate

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Classroom Building Haz Mat Survey, 10505 Davis
Road,

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ASBESTOS PLM REPORT

**Location: 8A, Roof Penetration Mastic; Grey; Classroom Building, Roof Level; Main
Roofing Field Area At Northeastern Corner**

Lab ID-Version‡: 10732820-1

Sample Layers	Asbestos Content
Gray Roofing Mastic	9% Chrysotile
Sample Composite Homogeneity: Good	

**Location: 8B, Roof Penetration Mastic; Grey; Classroom Building, Roof Level; Main
Roofing Field Area At Northeastern Corner**

Lab ID-Version‡: 10732821-1

Sample Layers	Asbestos Content
Gray Roofing Mastic	9% Chrysotile
Sample Composite Homogeneity: Good	

**Location: 9A, Rampway Texture Coating; Tan; Classroom Building, Exterior; Northern
Side Entry Rampway At Eastern Side**

Lab ID-Version‡: 10732822-1

Sample Layers	Asbestos Content
Tan Texture Coating	ND
Composite Non-Asbestos Content:	80% Cellulose
Sample Composite Homogeneity: Good	

**Location: 9B, Rampway Texture Coating; Tan; Classroom Building, Exterior; Northern
Side Entry Rampway At Western Side**

Lab ID-Version‡: 10732823-1

Sample Layers	Asbestos Content
Tan Texture Coating	ND
Composite Non-Asbestos Content:	80% Cellulose
Sample Composite Homogeneity: Good	

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Client: Terracon Consultants, Inc. - Emeryville
C/O: William Frieszell
Re: R1197841; Elkhorn Elementary School,
Classroom Building Haz Mat Survey, 10505 Davis
Road,

Date of Sampling: 09-13-2019
Date of Receipt: 09-19-2019
Date of Report: 09-23-2019

ASBESTOS PLM REPORT

Location: 10A, Exterior Paints; Classroom Building, Exterior; Southwestern Corner Of Building At Blue Trim

Lab ID-Version‡: 10732824-1

Sample Layers	Asbestos Content
Multicolored Paint Layers	ND
Sample Composite Homogeneity: Good	

Location: 10B, Exterior Paints; Classroom Building, Exterior; Western Side Of Building At Exterior Wall

Lab ID-Version‡: 10732825-1

Sample Layers	Asbestos Content
White Paint	ND
Sample Composite Homogeneity: Good	

Location: 10C, Exterior Paints; Classroom Building, Exterior; Northeastern Corner Of Building At Exterior Wall

Lab ID-Version‡: 10732826-1

Sample Layers	Asbestos Content
White Paint	ND
Sample Composite Homogeneity: Good	

Location: 11A, Building Corner Seam Caulking; White; Classroom Building, Exterior; Northeastern Corner Of Building

Lab ID-Version‡: 10732827-1

Sample Layers	Asbestos Content
Transparent Caulk with White Paint	ND
Sample Composite Homogeneity: Good	

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C/O: William Frieszell
Re: R1197841; Elkhorn Elementary School,
Classroom Building Haz Mat Survey, 10505 Davis
Road,

Date of Sampling: 09-13-2019
Date of Receipt: 09-19-2019
Date of Report: 09-23-2019

ASBESTOS PLM REPORT

**Location: 11B, Building Corner Seam Caulking; White; Classroom Building, Exterior;
Southwestern Corner Of Building**

Lab ID-Version‡: 10732828-1

Sample Layers	Asbestos Content
Transparent Caulk with White Paint	ND
Sample Composite Homogeneity: Good	

**Location: 12A, Building Concrete Materials; Classroom Building, Exterior; Northwestern
Corner Of Building At Foundation**

Lab ID-Version‡: 10732829-1

Sample Layers	Asbestos Content
Gray Concrete	ND
Sample Composite Homogeneity: Good	

**Location: 12B, Building Concrete Materials; Classroom Building, Exterior; Southwestern
Corner Of Building At Foundation**

Lab ID-Version‡: 10732830-1

Sample Layers	Asbestos Content
Gray Concrete with White Paint	ND
Sample Composite Homogeneity: Good	

**Location: 12C, Building Concrete Materials; Classroom Building, Exterior; Northwestern
Corner Of Building At Ramp Landing**

Lab ID-Version‡: 10732831-1

Sample Layers	Asbestos Content
Gray Concrete	ND
Sample Composite Homogeneity: Good	

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Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.

‡ A "Version" indicated by "-x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

Client: Terracon Consultants, Inc. - Emeryville
 C/O: William Frieszell
 Re: R1197841; Elkhorn Elementary School,
 Classroom Building Haz Mat Survey, 10505 Davis
 Road,

Date of Sampling: 09-13-2019
 Date of Receipt: 09-19-2019
 Date of Report: 09-23-2019

ASBESTOS PLM REPORT

**Location: 13A, Asphalt Paving Materials;Black;Classroom Building,Exterior;
 Southwestern Corner Of Building**

Lab ID-Version‡: 10732832-1

Sample Layers	Asbestos Content
Black Asphalt	ND
Sample Composite Homogeneity: Good	

**Location: 13B, Asphalt Paving Materials;Black;Classroom Building,Exterior;Southern
 Side Of Building At Drain**

Lab ID-Version‡: 10732833-1

Sample Layers	Asbestos Content
Black Asphalt	ND
Sample Composite Homogeneity: Good	

**Location: 14A, Stair Texturing Material;Red;Classroom Building,Exterior;Southern
 Side Of Building At Entryway Stairs**

Lab ID-Version‡: 10732834-1

Sample Layers	Asbestos Content
Red Texture	ND
Sample Composite Homogeneity: Good	

**Location: 14B, Stair Texturing Material;Red;Classroom Building,Exterior;Southern
 Side Of Building At Entryway Stairs**

Lab ID-Version‡: 10732835-1

Sample Layers	Asbestos Content
Red Texture	ND
Sample Composite Homogeneity: Good	

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Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.

‡ A "Version" indicated by "-x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

Terracon

1466 66th Street, Emeryville, California

002256836

ACM BULK SAMPLE DATA SHEET

* PLM Analysis

Page 1 of 3☐ Stop Analysis at First Positive☒ Analyze All Samples☐ Point Count Analysis (400-point)

☒ PM - W. Frieszell wmfrieszell@terracon.com	PM - K. Schroeter Karin@rgaenv.com	PM - K. Pignim Ken@rgaenv.com
PM - T. Kattchee Tedd@rgaenv.com	PM - S. Steiner steff@rgaenv.com	PM - W. Frieszell wmfrieszell@terracon.com

Project Name/Address	Elkhorn Elementary School, Classroom Building Haz Mat Survey, 10505 Davis Road, Stockton, CA					
Terracon Project Number	R1197841	Sampled By	W. Frieszell	Sampling Date	September 13, 2019	
Laboratory	EMLab	☒ Other	Turn Around Time	48 Hrs	☒ Other (Specify)	

***FAX OR E-MAIL REPORT TO: SEE ABOVE PROJECT MANAGER (PM) ***

HM# 1	Material Description: Interior Wall Systems - Drywall and Joint Compound	
Sample ID	Sample Location & Material Location	Quantity:
1 A	Classroom Building, Interior - Northeastern Class Room Area at Southwestern Entry	
1 B	Classroom Building, Interior - Northeastern Class Room Area at Southern Wall	
1 C	Classroom Building, Interior - Southeastern Storage Room Area at Southwestern Corner	
1 D	Classroom Building, Interior - Northeastern Class Room Area at Southern Ceiling	
Material Location:		
HM# 2	Material Description: Drywall Texturing Material - "Knock Down" Style	
Sample ID	Sample Location & Material Location	Quantity:
2 A	Classroom Building, Interior - Northeastern Class Room Area at Southern Wall	
2 B	Classroom Building, Interior - Southeastern Storage Room Area at Northern Wall	
2 C	Classroom Building, Interior - Southeastern Storage Room Area at Central Partition	
Material Location:		
HM# 3	Material Description: Wall/Ceiling Tile System - 1'x2' White with Pinhole Pattern	
Sample ID	Sample Locations	Quantity:
3 A	Classroom Building, Interior - Main Classroom Area at Northeastern Wall	
3 B	Classroom Building, Interior - Main Classroom Area at Southwestern Corner	
3 C	Classroom Building, Interior - Southeastern Storage Room Area at Central Ceiling	
Material Location:		
HM# 4	Material Description: Cove Base Adhesive - Brown on 4" Brown Cove	
Sample ID	Sample Location & Material Location	Quantity:
4 A	Classroom Building, Interior - Northeastern Class Room Area at Northern Wall	
4 B	Classroom Building, Interior - Southeastern Storage Room Area at Eastern Wall	
Material Location:		
HM# 5	Material Description: Ceiling Tile Mastic - Brown	
Sample ID	Sample Location & Material Location	Quantity:
5 A	Classroom Building, Interior - Southeastern Storage Room Area at Southern Ceiling	
5 B	Classroom Building, Interior - Southeastern Storage Room Area at Southern Ceiling	
C		
Material Location:		

NAME:	SIGNATURE:	COMPANY:	DATE:
Relinquished By: William Frieszell		Terracon Consultants	September 18, 2019
Received By: Fedex 945			9/19/19
Relinquished By:			
Received By:			

Terracon

1466 66th Street, Emeryville, California

002256836

ACM BULK SAMPLE DATA SHEET

Page 2 of 3

* PLM Analysis

___ Stop Analysis at First Positive

☒ Analyze All Samples

___ Point Count Analysis (400-point)

☒ PM - W. Frieszell wmfrieszell@terracon.com	PM - K. Schroeter Karin@rgaenv.com	PM - K. Pilgrim Ken@rgaenv.com
PM - T. Kattchee Tedd@rgaenv.com	PM - S. Steiner steff@rgaenv.com	PM - W. Frieszell wmfrieszell@terracon.com

Project Name/Address	Elkhorn Elementary School, Classroom Building Haz Mat Survey, 10505 Davis Road, Stockton, CA						
Terracon Project Number	RI197841	Sampled By	W. Frieszell	Sampling Date	September 13, 2019		
Laboratory	EMLab	☒ Other	Turn Around Time	48 Hrs	☒ Other (Specify)		

FAX OR E-MAIL REPORT TO: SEE ABOVE PROJECT MANAGER (PM)

SEE ABOVE PROJECT MANAGER (PM) ***

HM# 6	Material Description: Wood Vapor Barrier Systems - Brown Paper		
Sample ID	Sample Location & Material Location	Quantity:	
6 A	Classroom Building, Interior - Main Classroom Area at Southeastern Entry Way Floor		
6 B	Classroom Building, Interior - Main Classroom Area at Southeastern Entry Way Floor		
6 C	Classroom Building, Exterior - Northeastern Corner of Building at Exterior Wall		
6 D	Classroom Building, Exterior - Northeastern Corner of Building at Exterior Wall		
Material Location:			
HM# 7	Material Description: Main Roofing Field System - Brown Cascading Shingles		
Sample ID	Sample Location & Material Location	Quantity:	
7 A	Classroom Building, Roof Level - Main Roofing Field Area Above Northern Entry Way		
7 B	Classroom Building, Roof Level - Main Roofing Field Area at Northeastern Corner		
7 C	Classroom Building, Roof Level - Main Roofing Field Area at Southwestern Corner		
Material Location:			
HM# 8	Material Description: Roof Penetration Mastic - Grey		
Sample ID	Sample Locations	Quantity:	
8 A	Classroom Building, Roof Level - Main Roofing Field Area at Northeastern Corner		
8 B	Classroom Building, Roof Level - Main Roofing Field Area at Northeastern Corner		
Material Location:			
HM# 9	Material Description: Rampway Texture Coating - Tan		
Sample ID	Sample Location & Material Location	Quantity:	
9 A	Classroom Building, Exterior - Northern Side Entry Rampway at Eastern Side		
9 B	Classroom Building, Exterior - Northern Side Entry Rampway at Western Side		
C			
Material Location:			
HM# 10	Material Description: Exterior Paints		
Sample ID	Sample Location & Material Location	Quantity:	
10 A	Classroom Building, Exterior - Southwestern Corner of Building at Blue Trim		
10 B	Classroom Building, Exterior - Western Side of Building at Exterior Wall		
10 C	Classroom Building, Exterior - Northeastern Corner of Building at Exterior Wall		
Material Location:			

NAME:

Relinquished By:	NAME: William Frieszell	SIGNATURE:	COMPANY: Terracon Consultants	DATE: September 18, 2019
Received By:	Fedex 945			9/19/19
Relinquished By:				
Received By:				

Terracon

1466 66th Street, Emeryville, California

002256836

ACM BULK SAMPLE DATA SHEET

* PLM Analysis

Page 3 of 3☐ Stop Analysis at First Positive☒ Analyze All Samples☐ Point Count Analysis (400-point)

☒ PM - W. Frieszell wmfrieszell@terracon.com	PM - K. Schroeter Karin@rgaenv.com	PM - K. Pilgrim Ken@rgaenv.com
PM - T. Kattchee Tedd@rgaenv.com	PM - S. Steiner steff@rgaenv.com	PM - W. Frieszell wmfrieszell@terracon.com

Project Name/Address	Elkhorn Elementary School, Classroom Building Haz Mat Survey, 10505 Davis Road, Stockton, CA						
Terracon Project Number	R1197841	Sampled By	W. Frieszell	Sampling Date	September 13, 2019		
Laboratory	EMLab	☒ Other	Turn Around Time	48 Hrs	☒ Other (Specify)		

***FAX OR E-MAIL REPORT TO: SEE ABOVE PROJECT MANAGER (PM) ***

HM# 11	Material Description: Building Corner Seam Caulking - White	
Sample ID	Sample Location & Material Location	Quantity:
11 A	Classroom Building, Exterior - Northeastern Corner of Building	
11 B	Classroom Building, Exterior - Southwestern Corner of Building	
C		
Material Location:		
HM# 12	Material Description: Building Concrete Materials	
Sample ID	Sample Location & Material Location	Quantity:
12 A	Classroom Building, Exterior - Northwestern Corner of Building at Foundation	
12 B	Classroom Building, Exterior - Southwestern Corner of Building at Foundation	
12 C	Classroom Building, Exterior - Northwestern Corner of Building at Ramp Landing	
Material Location:		
HM# 13	Material Description: Asphalt Paving Materials - Black	
Sample ID	Sample Locations	Quantity:
13 A	Classroom Building, Exterior - Southwestern Corner of Building	
13 B	Classroom Building, Exterior - Southern Side of Building at Drain	
C		
Material Location:		
HM# 14	Material Description: Stair Texturing Material - Red	
Sample ID	Sample Location & Material Location	Quantity:
14 A	Classroom Building, Exterior - Southern Side of Building at Entryway Stairs	
14 B	Classroom Building, Exterior - Southern Side of Building at Entryway Stairs	
C		
Material Location:		
HM#	Material Description:	
Sample ID	Sample Location & Material Location	Quantity:
A		
B		
C		
Material Location:		

Relinquished By:	NAME: William Frieszell	SIGNATURE:	COMPANY: Terracon Consultants	DATE: September 18, 2019
Received By:	Fedex 945			9/19/19
Relinquished By:				
Received By:				



Report for:

William Frieszell
Terracon Consultants, Inc. - Emeryville
1466 66th Street
Emeryville, CA 94608

Regarding: Project: R1197841; Elkhorn Elementary School, Classroom Building Haz Mat Survey, 10505 Davis Road,
EML ID: 2256836

Approved by:

Dates of Analysis:
Asbestos-EPA 400 point count: 10-02-2019



Approved Signatory
Renee Luna-Trepczynski

Service SOPs: Asbestos-EPA 400 point count (EPA 40CFR App E to Sub E of Part 763 & EPA METHOD 600/R-93-116, SOP EM-AS-S-1262)

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank correction of results is not applied. The results relate only to the samples as received.

Eurofins EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

Client: Terracon Consultants, Inc. - Emeryville
 C/O: William Frieszell
 Re: R1197841; Elkhorn Elementary School,
 Classroom Building Haz Mat Survey, 10505 Davis
 Road,

Date of Sampling: 09-13-2019
 Date of Receipt: 09-19-2019
 Date of Report: 10-02-2019

ASBESTOS POINT COUNT REPORT

Location:	1D Interior Wall Systems;Drywall And Joint Compound;Classroom Building,Interior;Northeastern Class Room Area At Southern Ceiling		
Total Points Counted:	400		
Lab ID-Version‡:	10775944-1		
Sample Layers	Asbestos Type	Asbestos Points Counted	Asbestos Concentration (%)
White Drywall / Joint Compound Composite	Chrysotile	1	0.25
Layer Totals:		1	0.25

The analytical sensitivity is 1 asbestos point. The limit of detection is 1 asbestos point divided by the total number of points counted and multiplied by 100.

The results relate only to the items tested. Interpretation is left to the company and/or persons who conducted the field work. The test report shall not be reproduced except in full, without written approval of the laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by any agency of the federal government.

All samples were received in acceptable condition unless otherwise noted. Eurofins EMLab P&K reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.

‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".



2033 HERITAGE PARK DR, OKLAHOMA CITY, OK 73120 | 1.800.822.1650

Environmental Chemistry Analysis Report

Quantem Set ID: 314738
Date Received: 09/19/19
Received By: Christiana Younge
Date Sampled:
Time Sampled:
Analyst:
Date of Report: 09/23/19
AIHA-LAP, LLC: 101352

Client: Terracon Consultants, Inc.
1466 66th Street
Emeryville, CA 94608
Acct. No.: C018
Project: Elkhorn Elementary School
Location: 10505 David Road, Stockton CA
Project No.: RII97841/Classroom Bldg Hazmat Survey

Quantem ID	Client ID	Matrix	Parameter	Results	Reporting Limits	Units	Date/Time Analyzed	Method
001	Pb-01	Bulk	Lead	0.807	0.0100	ppm	09/21/19 0:00	EPA 6010C
002	Pb-02	Paint	Lead	97.8	1.00	ppm	09/21/19 0:00	EPA 6010C
003	Pb-03	Paint	Lead	144	1.00	ppm	09/21/19 0:00	EPA 6010C
004	Pb-04	Paint	Lead	0.0569	0.0100	ppm	09/21/19 0:00	EPA 6010C
005	Pb-05	Paint	Lead	273	1.00	ppm	09/21/19 0:00	EPA 6010C
006	Pb-06	Paint	Lead	0.209	0.0100	ppm	09/21/19 0:00	EPA 6010C
007	Pb-07	Soil	Lead	0.798	0.0100	ppm	09/21/19 0:00	EPA 6010C

Analysis performed by ETI in Oklahoma City, OK (NELAP Lab No.10002 / ODEQ Lab No. 2018-167).
Reporting Limits = to their PQL

Authorized Signature: _____

Chanell Alaniz, Chemist

Note: Sample results have not been corrected for blank values.

This report applies only to the standards or procedures indicated and to the specific samples tested. It is not indicative of the qualities of apparently identical or similar products or procedures, nor does it represent an ongoing assurance program unless so noted. These reports are for the exclusive use of the client and are not to be reproduced without specific written permission. Quantem is not responsible for user-supplied data used in calculations. Customer provided data such as volumes, areas, etc., cannot be verified by Quantem Laboratories, LLC.

Unless otherwise noted, upon receipt the condition of the sample was acceptable for analysis.

Wipe materials must meet ASTM E1792 criteria. Method detection limits and resultant reporting limits may not be valid for non-ASTM E1792 wipe material.

EPA Method 7000B (1) = EPA 600/R-93/200 Preparation Modified. EPA 7000B Analysis Modified

EPA Method 7082 (2) = EPA 600/R-93/200 Preparation Modified. EPA 7082 Analysis Modified

Environmental Chemistry Supplemental QC/QA Report

QuanTEM Lab: 314733, 734, 736,737,738,740,742

Date Received:09/23/2019

Received by: Chanell Alaniz (Chemist)

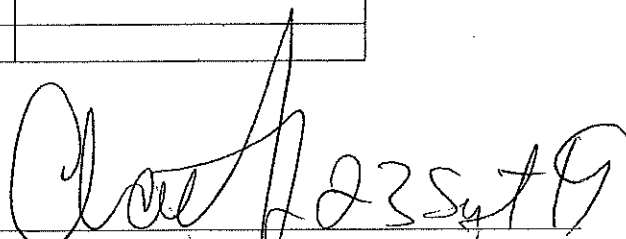
Date of Report:09/23/2019

AIHA Lab ID: 101352

<u>Analyst</u>	<u>Batch #</u>	<u>Method</u>	<u>Matrix</u>	<u>Date Approved</u>	<u>QA ID</u>
LSB	E910424	EPA 6010C 2007	Multi	23Jun19	n/a

<u>Standards Data</u>	<u>Low Limit</u>	<u>Obtained</u>	<u>High Limit</u>
RLVS	0.05	0.1	0.15
LCS	1.5	1.7	2.3
LCSD	1.5	2.0	2.3
Blank		0.0	
			

<u>Recovery Data Run</u>			


Chanell Alaniz Chemist

314738

Terracon 1466 66th Street, Emeryville, California			LEAD PAINT SAMPLE DATA SHEET		
	PM - S. Steiner Steff@rgaenv.com Fax: 510.899.7051		PM - K. Schroeter Karin@rgaenv.com Fax: 510.899.7063		PM - K. Pilgrim Ken@rgaenv.com Fax: 510.899.7053
	PM - T. Kattchee Tedd@rgaenv.com Fax: 510.899.7070	✓	PM - W. Frieszell wmfrieszell@terracon.com		PM - M. Bryant marlin.bryant@rgaenv.com Fax: 510.899.7062
* Lead Analysis — Flame AA (EPA 7420) — TTLC					
Page <u>1</u> of <u>1</u>					

Project Name/Address		Elkhorn Elementary School, Classroom Building Haz Mat Survey, 10505 Davis Road, Stockton, CA									
Terracon Project Number		R1197841		Sampled By		W. Frieszell		Sampling Date		September 13, 2019	
Laboratory		QuanTEM		X		Other		Turn Around Time		48 Hrs	
				X						Other (Specify)	

Sample ID	Paint Description and Sample Location						Condition (I/F/P)
Pb-01	Paint Color:	Clear	Substrate:	Wood	Component:	Hardwood Flooring	I
	Bldg:	Classroom Building	Unit:	Interior	Room:	Main Classroom Area	
Pb-02	Paint Color:	White	Substrate:	Wood	Component:	Interior Wall System	I
	Bldg:	Classroom Building	Unit:	Interior	Room:	Main Classroom Area	
Pb-03	Paint Color:	White	Substrate:	Wood	Component:	Window Framing	I
	Bldg:	Classroom Building	Unit:	Interior	Room:	Main Classroom Area	
Pb-04	Paint Color:	Tan	Substrate:	Wood	Component:	Rampway Texturing	I
	Bldg:	Classroom Building	Unit:	Exterior	Room:	Northern Ramp	
Pb-05	Paint Color:	Blue	Substrate:	Wood	Component:	Trim	I
	Bldg:	Classroom Building	Unit:	Exterior	Room:	Western Side	
Pb-06	Paint Color:	Tan	Substrate:	Wood	Component:	Exterior Siding	I
	Bldg:	Classroom Building	Unit:	Exterior	Room:	Western Side	
Pb-07	Paint Color:		Substrate:		Component:	Exterior Soil	I
	Bldg:	Classroom Building	Unit:	Exterior	Area:	Foundation/Drip Line Area at Surface	

NAME:

SIGNATURE:

COMPANY:

DATE:

Relinquished By:	William Frieszell	<i>William Frieszell</i>	Terracon Consultants	September 18, 2019
Received By:	<i>Choung</i>	<i>W. Frieszell</i>	<i>QuanTEM</i>	<i>9-19-19 9:45am</i>
Relinquished By:				
Received By:				

State of California
Division of Occupational Safety and Health
Certified Asbestos Consultant

William M Frieszell

Name



Certification No. **12-4853**

Expires on **02/15/21**

This certification was issued by the Division of Occupational Safety and Health as authorized by Sections 7180 et seq. of the Business and Professions Code.



STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC HEALTH



LEAD-RELATED CONSTRUCTION CERTIFICATE

INDIVIDUAL:



William Frieszell

CERTIFICATE TYPE:

Lead Inspector/Assessor

NUMBER:

LRC-00003666

EXPIRATION DATE:

12/11/2020

Disclaimer: This document alone should not be relied upon to confirm certification status. Compare the individual's photo and name to another valid form of government issued photo identification. Verify the individual's certification status by searching for Lead-Related Construction Professionals at www.cdph.ca.gov/programs/clppb or calling (800) 597-LEAD.