

WEST BERKELEY SERVICE CENTER

1900 Sixth St
Berkeley, CA 94710
BID SET - 12.22.2023

City of Berkeley

DEDUCT ALTERNATES AND WORK N.I.C.

Landscape work shown in sheets L1.0, L2.0, L3.0, L4.0, L6.0, L6.1, L9.0, and L9.1 is not in the scope of this contract and will be performed by others. The General Contractor will protect the existing landscaping from damage during the new work.

DEDUCT ALTERNATES

1. All work associated with improvements to Exterior Storage #31 including, but not limited to, new walls, roof structure, roofing, new footings, and new downspouts and drainage to parking lot.
2. All work associated with the installation of new playground fencing including, but not limited to, new foundations, fence structure, and entry gate.
3. All work associated with exterior fabric structure (shade sail) including, but not limited to, the structural support column, attachment to Exterior Storage #31, fabric, and mounting/tensioning hardware.
4. Exterior courtyard canopy at Alcove #17 including, but not limited to, new steel columns, column footings, roof framing, roofing, structural modifications at existing building along line 5, and modifications to existing line 5 gutter.
5. All work associated with courtyard/landscape demolition as needed to install Shade Sail (Deduct Alternate 3) and Playground Area and fencing (Deduct alternate 2).

FIRE SAFETY INFORMATION

Project will comply with 2019 California Fire Code

GENERAL CONTRACTOR AND SUBCONTRACTORS TO COMPLY WITH CFC CHAPTER 33 FOR SAFEGUARDS DURING CONSTRUCTION:

- Smoking shall be prohibited except in designated areas with approved ashtrays. All other areas must have "No Smoking" signage posted around construction areas in accordance with CFC§310. [CFC§3304.1]
- Combustible debris shall not be allowed to accumulate within building. Combustible debris, rubbish and waste material shall be removed from building at the end of each shift of work. [CFC §3304.2]
- Materials susceptible to spontaneous ignition, such as oily rags, shall be stored in a listed disposal container. [CFC §3304.2.4]
- Operations involving the use of cutting and welding shall be done in accordance with Chapter 35. [CFC §3304.6]
- During construction, the construction site or area must be thoroughly cleaned at the end of each work day in order to provide firefighter access in the building in an event of a fire.



PROJECT SUMMARY

THE PROJECT IS A RENOVATION OF AN EXISTING, 9,836 S.F., ONE-STORY, TYPE-V, NON-RATED, WOOD FRAMED BUILDING.

THE PROJECT SCOPE INCLUDES, BUT IS NOT LIMITED TO, NEW ROOFING, UPGRADED ELECTRICAL DISTRIBUTION SYSTEM, UPGRADED MECHANICAL SYSTEMS FOR NEW RESTROOM CONFIGURATION, MINOR INTERIOR MODIFICATIONS REQUIRED FOR ELECTRICAL AND MECHANICAL WORK, REMOVAL OF EXISTING FIRE PLACE, NEW EXTERIOR PORCH STRUCTURE, EXPANDED EXTERIOR STORAGE ENCLOSURE, AND LANDSCAPING IMPROVEMENTS.

CONTRACTOR WILL BE RESPONSIBLE FOR PREPPING ALL AREAS FOR NEW SCOPE OF WORK INCLUDING PATCHING AND REPAIRING EXISTING CONDITIONS WHERE AFFECTED BY ANY AND ALL DEMOLITION WORK.

THE WORK TO BE PERFORMED UNDER THIS CONTRACT INCLUDES THE FURNISHING OF ALL LABOR, MATERIALS, EQUIPMENT, TRANSPORTATION, SERVICES, PERMITS, TEMPORARY CONTROLS AND CONSTRUCTION FACILITIES, AND ALL GENERAL CONDITIONS, SEISMIC REQUIREMENTS, GENERAL REQUIREMENTS AND INCIDENTALS REQUIRED TO COMPLETE THE WORK ON THE PROJECT IN ITS ENTIRETY AS DESCRIBED IN THE CONTRACT DOCUMENTS.

APPLICABLE CODES

THE WORK PERFORMED UNDER THIS CONTRACT SHALL COMPLY WITH 2022 CALIFORNIA BUILDING, RESIDENTIAL, MECHANICAL, ELECTRICAL, PLUMBING, ENERGY, EXISTING, AND GREEN BUILDING STANDARDS CODE AS AMENDED OF THE CITY OF BERKELEY, AS APPLICABLE.

APPROVALS

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1	08.21.2023 Plan Check 1
5	02.21.2024 Bid Addendum

SHEET TITLE

COVER SHEET

SHEET NUMBER

GO.00

Cost Estimator

Leland Saylor Associates
1629 Telegraph Ave
Oakland CA 94612
Tel: (510) 986-1212

Electrical

RIJA
5515 Doyle Street, #7
Emeryville CA 94608
Tel: (415) 730-7994

MEP

EPCE Inc
274 Devonshire Street
Vallejo CA 94591
Tel: (707) 980-4049

**Structural
IDA Structural Engineers
Inc.**

1629 Telegraph Avenue
Suite 300
Oakland CA 94612-2114
Tel: (510) 834-1629

**Landscape
John Northmore Roberts
and Associates**

2927 Newberry Street, Ste B
Berkeley CA 94703
Tel: (510) 843-3666

Civil

BKF Engineers
254 Shoreline Drive Suite
200
Redwood City CA 94065
Tel: (650) 482-6300

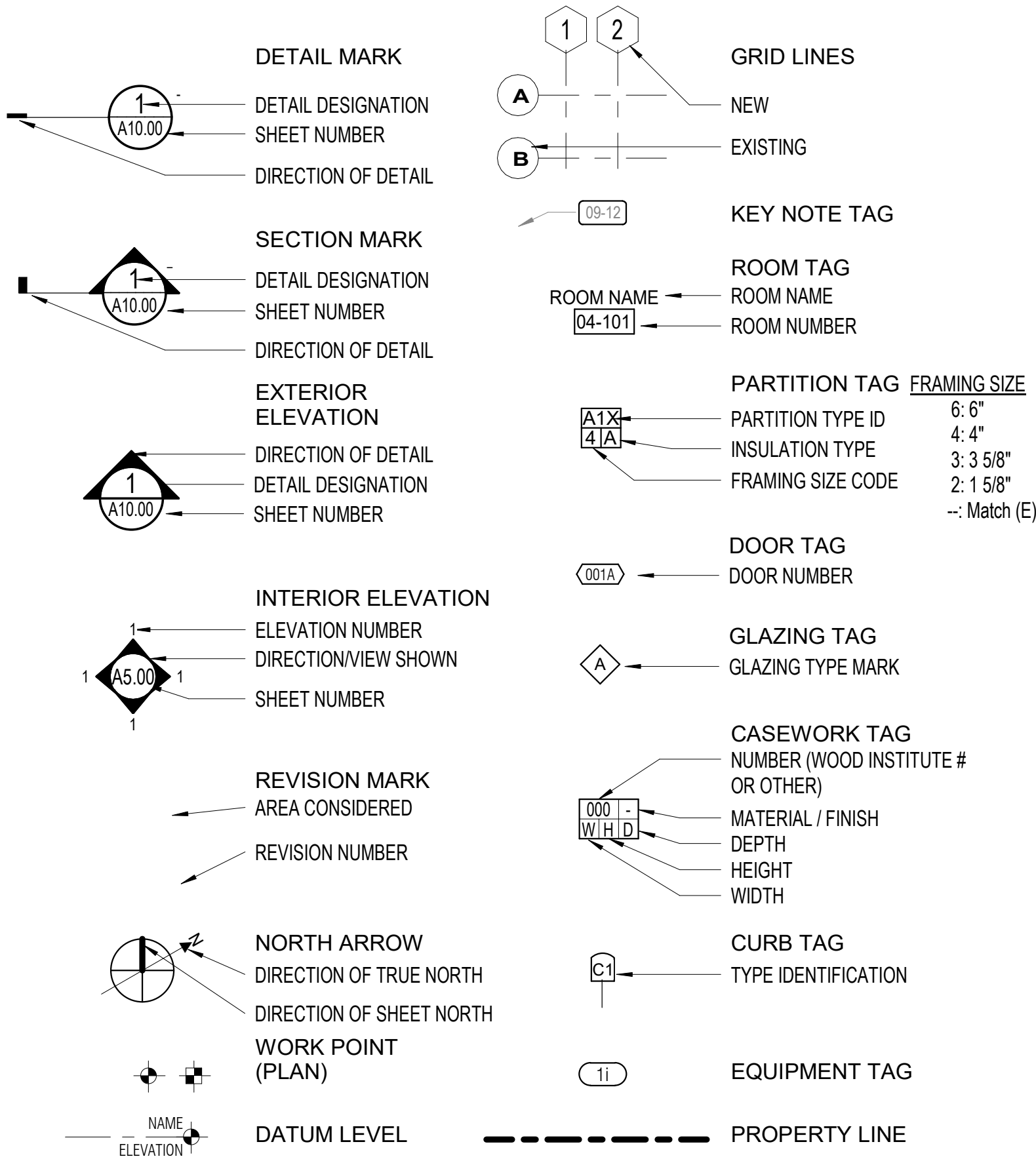
Architect

Noll & Tam Architects
729 Heinz Ave
Berkeley, CA 94710
Tel: 510.542.2200
Fax: 510.542.2201

Client

City of Berkeley
Public Works Department
1947 Center Street, 5th floor
Tel: (510) 981-6435

SYMBOLS LEGEND



GENERAL NOTES

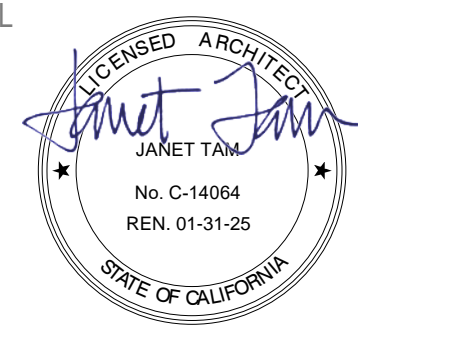
- WORK SHALL MEET OR EXCEED THE MINIMUM STANDARDS OF APPLICABLE CODES AND ORDINANCES AND SHALL NOT BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THOSE CODES.
- CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE PROJECT SPECIFICATIONS.
- VERIFY ALL DIMENSIONS AND INSPECT CONDITION OF IN-PLACE CONSTRUCTION BEFORE STARTING WORK. PROCEEDING WITH THE WORK SHALL CONSTITUTE ACCEPTANCE OF CONDITIONS.
- CONTRACTOR SHALL EXAMINE THE DOCUMENTS AND SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES PRIOR TO THE START OF WORK.
- THE CONTRACTOR AND ALL SUBCONTRACTORS ARE REQUIRED TO VISIT AND INSPECT THE SITE PRIOR TO CONSTRUCTION OR ORDERING ANY MATERIALS.
- ITEMS MARKED "NIC" ARE NOT IN CONTRACT. SUCH ITEMS ARE INCLUDED IN THE DOCUMENTS WHEN CONTRACTOR'S COORDINATION IS REQUIRED OR FOR CLARIFICATION OF PROJECT LIMITS.
- DETAILS MARKED "TYPICAL" SHALL APPLY IN ALL SIMILAR CASES, UON.
- DIMENSIONS
 - IN NO CASE SHALL WORKING DIMENSIONS BE SCALED FROM THE DRAWINGS.
 - ALL DIMENSIONS SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO PROCEEDING WITH CONSTRUCTION.
 - ELEVATION MARKERS REFER TO THE TOP OF THE SLAB ON GRADE DATUM. FLOOR AND ROOF ELEVATIONS NOTED ARE TO TOP OF STRUCTURAL ASSEMBLY, UON. WALL HEIGHT ELEVATIONS ARE TO TOP OF FRAMING, UON.
 - STUD WALLS: ALL DIMENSIONS ARE TO THE FACE OF STUD, UON.
 - CEILING HEIGHT DIMENSIONS: ARE FROM FINISHED FLOOR TO FINISHED FACE OF CEILING, UON.
 - OPENINGS: DOOR DIMENSIONS ARE TO THE EDGE OF DOOR PANEL, UON. LOCATE UNDIMENSIONED DOORS 4" FROM FINISHED FACE OF INTERSECTING PARTITION TO HINGE EDGE OF DOOR PANEL.
 - ALL DIMENSIONS NOTED "CLEAR" OR "CLR" INDICATE DIMENSION FROM FACE OF FINISH TO FACE OF FINISH OR OBJECT, UON AND MUST BE STRICTLY MAINTAINED.
 - ALL DIMENSIONS NOTED "VERIFY" OR "VIF" ARE TO BE CHECKED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY VARIANCE FROM THE REQUIRED DIMENSIONS MUST BE BROUGHT IMMEDIATELY TO THE ARCHITECT'S ATTENTION.
 - COORDINATE WITH EQUIPMENT CONTRACTORS FOR ROUGH-IN DIMENSIONS AND TEMPLATES.
- EXISTING BUILDING AND SITE DOCUMENTATION IS BASED ON AVAILABLE DOCUMENTATION PROVIDED BY THE OWNER AND LIMITED SITE OBSERVATION INVESTIGATIONS. AS BUILT CONDITIONS MAY VARY. CONTRACTOR IS TO USE CAUTION IN DEMOLITION AND IS TO NOTIFY ARCHITECT IMMEDIATELY IF ANY VARIATIONS OR DISCREPANCIES ARE UNCOVERED.
- CONTRACTOR TO MAINTAIN SAFE & COMPLIANT EGRESS FROM OCCUPIED AREAS TO THE PUBLIC WAY OR TO SAFE DISPERSAL AREAS DURING CONSTRUCTION ACTIVITIES.
- PROTECT EXISTING CONDITIONS TO REMAIN. CONFIRM W/ ARCHITECT AND/OR OWNERS REPRESENTATIVE ITEMS TO BE SALVAGED PRIOR TO START OF DEMOLITION.
- PROTECT ALL (E) BUILDING & SITE INFRASTRUCTURE TO REMAIN.
- THE DRAWINGS INDICATE THE GENERAL EXTENT OF CONSTRUCTION NECESSARY FOR THE WORK BUT ARE NOT INTENDED TO BE ALL-INCLUSIVE. ALL DEMO AND NEW WORK NECESSARY FOR A COMPLETED PROJECT IN ACCORDANCE W/ THE CONTRACT DOCUMENTS SHALL BE INCLUDED REGARDLESS OF WHETHER OR NOT SHOWN IN THE CONTRACT DOCUMENTS. THE INTEGRITY AND CONTINUITY OF ALL EXISTING FIRE, THERMAL, ACOUSTIC, & WEATHER BARRIER ASSEMBLIES IS TO BE STRICTLY MAINTAINED. SELECTIVE REMOVAL, REPLACEMENT, PATCHING & REPAIR SHALL BE PROVIDED TO MAINTAIN INTEGRITY OF EXISTING ASSEMBLIES AND FINISHES TO MATCH EXISTING ADJACENT ASSEMBLIES AND FINISHES.
- PROVIDE TEMPORARY BARRIERS FOR SAFETY, SECURITY & CLEANLINESS

SHEET INDEX

GENERAL	A8.64	INTERIOR - SPECIALTY & MISCELLANEOUS DETAILS
G0.00	A9.11	FINISH PLAN - 1ST FLOOR
G0.01	21	
G1.31		STRUCTURAL
G2.11		S1.01 GENERAL NOTES
G3.24		S2.00 FOUNDATION AND FIRST FLOOR PLAN
G3.25		S2.01 ROOF FRAMING PLAN
6		S3.01 TYPICAL FOUNDATION & CONCRETE DETAILS
		S4.01 SECTIONS
		S5.01 TYPICAL WOOD DETAILS
		S6.01 TYPICAL STEEL DETAILS
		7
		PLUMBING
		P1.00 COVER SHEET AND GENERAL NOTES
		P2.00 PLUMBING DEMOLITION PLAN
		P2.10 PLUMBING CONSTRUCTION PLAN
		P3.01 PLUMBING DETAILS
		P3.02 FIXTURE SCHEDULE AND SPECIFICATIONS
		5
		MECHANICAL
		M1.00 COVER SHEET, GENERAL NOTES
		M1.10 HVAC EQUIPMENT SCHEDULE
		M2.00 HVAC DEMOLITION PLAN
		M2.10 HVAC CONSTRUCTION PLAN
		M3.00 HVAC DETAILS
		1
		5
		ELECTRICAL
		E0.1 COVER SHEET
		E1.01 ELECTRICAL FLOOR PLAN
		E2.01 SINGLE LINE DIAGRAM
		E3.01 DETAILS
		E4.01 SPECIFICATIONS
		E4.02 SPECIFICATIONS
		E5.01 ENERGY FORMS
		E5.02 ENERGY FORMS
		E5.03 ENERGY FORMS
		E5.04 ENERGY FORMS
		ED1.01 DEMOLITION PLAN
		11
		ENERGY
		ENV-1 ENERGY COMPLIANCE
		ENV-2 ENERGY COMPLIANCE
		2
		TOTAL SHEETS : 71
		ARCHITECTURE
A1.02		SITE DEMOLITION / REMOVAL PLAN
A1.31		DEMOLITION FLOOR PLAN
A1.41		DEMOLITION RCP- 1ST FLOOR
A2.01		SITE PLAN
A2.31		FLOOR PLAN- 1ST FLOOR
A2.33		ROOF PLAN
A2.41		REFLECTED CEILING PLAN
A2.51		EXTERIOR - DOOR SCHEDULE AND TYPES
A3.11		EXTERIOR ELEVATIONS
A3.12		EXTERIOR ELEVATIONS and BUILDING SECTIONS
A3.13		EXTERIOR ELEVATIONS and BUILDING SECTIONS
A3.31		BUILDING SECTIONS and DETAILS
A4.11		ENLARGED PLANS- RESTROOMS
A4.15		ENLARGED PLANS- RESTROOMS
A5.12		INTERIOR ELEVATIONS
A7.21		PLAY AREA FENCE DETAILS
A7.41		EXTERIOR - ROOF ASSEMBLIES AND DETAILS
A7.43		MISCELLANEOUS DETAILS
A8.63		INTERIOR - SPECIALTY & MISCELLANEOUS DETAILS

NOLL & TAM ARCHITECTS

729 Heinz Avenue
 Berkeley, CA 94710
 tel 510.542.2200
 fax 510.542.2201



APPROVALS

PROJECT TITLE

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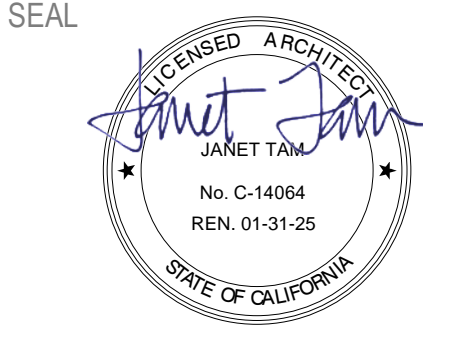
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GENERAL NOTES / SHEET INDEX

SHEET NUMBER

G0.01



ACCESSIBLE PATH OF TRAVEL

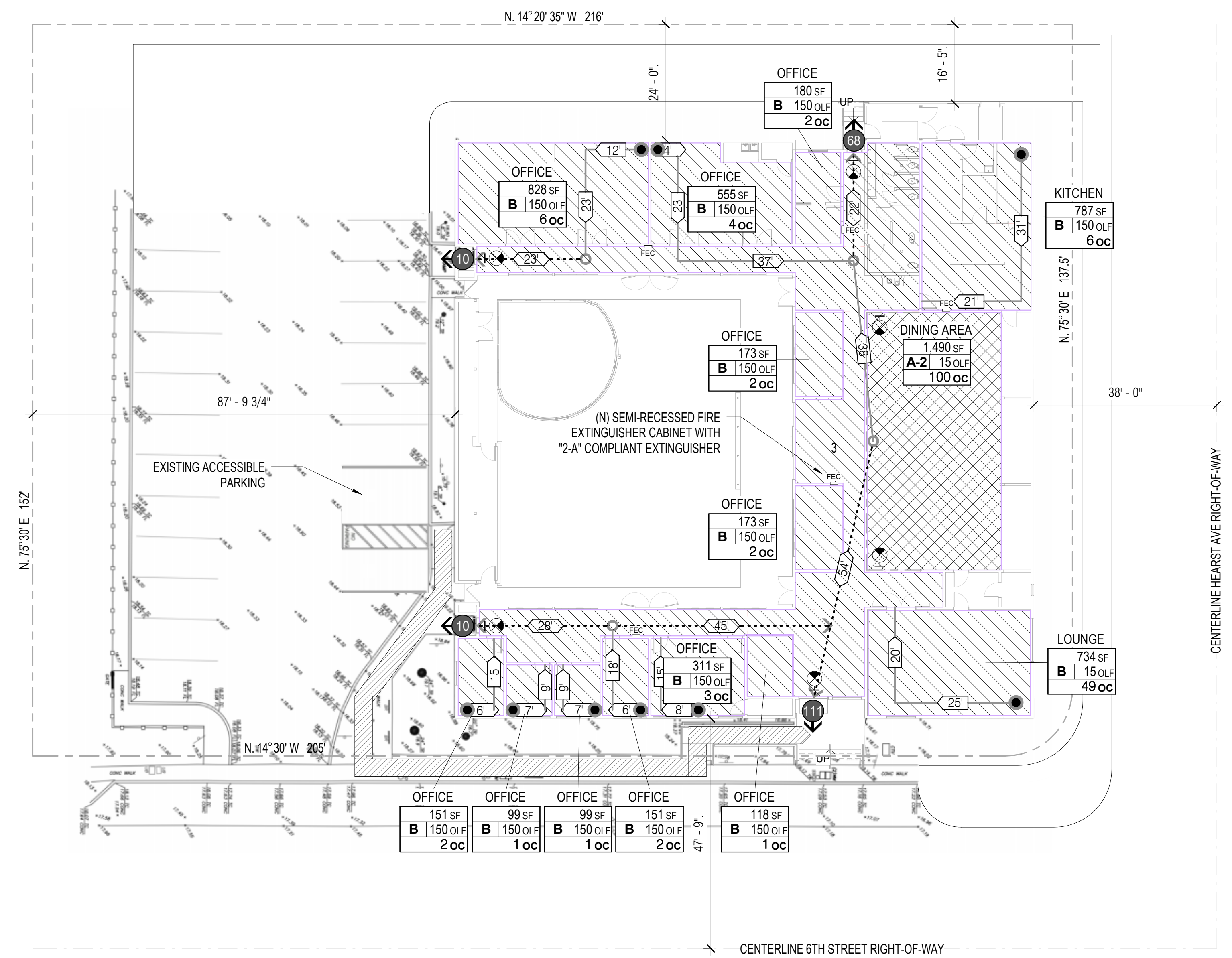
ACCESSIBLE PATH OF TRAVEL AS INDICATED ON PLAN IS A CONTINUOUS, BARRIER FREE ACCESS ROUTE WITHOUT ANY ABRUPT LEVEL CHANGES EXCEEDING 1/2" BEVELED AT 1:2 MAX SLOPE, OR VERTICAL CHANGES NOT EXCEEDING 1/4" MAX AND AT LEAST 44" WIDE PER CBC SECTION 11B-403.5.1. SURFACE IS SLIP RESISTANT, STABLE, FIRM, AND SMOOTH. CROSS SLOPE DOES NOT EXCEED 1:48 AND SLOPE IN THE DIRECTION OF TRAVEL IS LESS THAN 1:20 UNLESS OTHERWISE INDICATED. CONTRACTOR SHALL VERIFY THAT ALL BARRIERS IN THE PATH OF TRAVEL HAVE BEEN REMOVED OR WILL BE REMOVED UNDER THIS PROJECT, AND PATH OF TRAVEL COMPLIES WITH CBC. ALL PATHS OF TRAVEL SHALL BE ACCESSIBLE.

OCCUPANCY TYPE

- ASSEMBLY, UNCONCENTRATED (15 SF/OCC)
- BUSINESS AREA (150 SF/OCC)
- ACCESSORY STORAGE / MECH (300 SF/OCC)

SYMBOL LEGEND

- ASSEMBLY- UNCONCENTRATED → OCCUPANCY TYPE DESCRIPTION
- TOTAL ROOM AREA IN SQUARE FEET
- OCCUPANT LOAD FACTOR PER CBC TABLE 1004.5
- TOTAL OCCUPANT LOAD
- OCCUPANCY GROUP PER CBC, SECTION 302
- COMMON PATH OF EGRESS TRAVEL PER CBC TABLE 1006.2.1
- EXIT ACCESS TRAVEL DISTANCE PER CBC TABLE 1017.2
- 1-HOUR RATED ENCLOSURE
- 2-HOUR RATED ENCLOSURE
- ACCESSIBLE PATH
- EXIT OR EXIT ACCESS, W/ OCCUPANT COUNT
- NUMBER OF OCCUPANTS EXITING A SPACE
- EXISTING ILLUMINATED EXIT SIGNS
- FIRE EXTINGUISHER CABINET
- EGRESS SIZING PER CBC 1005.3.2
- 36" SINGLE DOOR CAPACITY = 168
- 72" DOUBLE DOOR CAPACITY = 342



1 FLOOR 1 OCCUPANCY / EXITING

G1.31 1/16" = 1'-0"

AREA SCHEDULE - OCCUPANT LOAD					
OCC Group Description	OCC Group	Area	OCC Load Factor	Total Occupants	Area Calc
01 - FLOOR					
ASSEMBLY- UNCONCENTRATED	A-2	1490 SF	15 SF	100	
BUSINESS	B	555 SF	150 SF	4	
BUSINESS	B	828 SF	150 SF	6	
BUSINESS	B	180 SF	150 SF	2	
BUSINESS	B	787 SF	150 SF	6	
BUSINESS	B	151 SF	150 SF	2	
BUSINESS	B	99 SF	150 SF	1	
BUSINESS	B	99 SF	150 SF	1	
BUSINESS	B	151 SF	150 SF	2	
BUSINESS	B	311 SF	150 SF	3	
BUSINESS	B	118 SF	150 SF	1	
BUSINESS	B	173 SF	150 SF	2	
BUSINESS	B	173 SF	150 SF	2	
ASSEMBLY- UNCONCENTRATED	B	734 SF	15 SF	49	
		5848 SF		181	

THE PROJECT IS A RENOVATION OF AN EXISTING, 9,836 S.F., ONE-STORY, TYPE-V, NON-RATED, WOOD FRAMED BUILDING ORIGINALLY PERMITTED IN 1976-1977. ANY NEW CONSTRUCTION WILL CONFORM TO THE EXISTING ASSEMBLIES.

THE BUILDING OCCUPANCY IS MIXED, BUT FOR THIS ANALYSIS IS CONSIDERED AS AN A-3 "NONSEPARATED" OCCUPANCY PER CBC 508.3. BUILDING IS CONSIDERED A TYPE V-B PER CBC 602.5. CONSTRUCTION IS NOT-RATED PER CBC TABLE 601.

NO CHANGE OF USE IS PROPOSED.

PER EQUATION 5-3 WITH A FRONTAGE INCREASE THE ALLOWABLE AREA IS 10,500 SF.

THE BUILDING HAS AN EXISTING FIRE-ALARM SYSTEM.

THE BUILDING DOES NOT HAVE AN AUTOMATIC SPRINKLER SYSTEM.

BUILDING HAS NO SPRINKLER SYSTEM

MAX COMMON PATH, PER CBC 1006.2.1
GROUP A,E = 75'
GROUP B = 100'

PER CBC 1017.2. MAXIMUM PATH OF TRAVEL TO EXIT - A+E OCCUPANCIES: 250'
B OCCUPANCY : 300'

PER CBC 1029.2 - ASSEMBLY MAIN EXIT - IF OCC LOAD > 300, THEN 1/2 OF OCC MUST EXIT THRU MAIN ENTRY

PER CBC 303.1.2 - SMALL ASSEMBLY SPACES
ASSEMBLY ROOMS W/ < 50 OCC SHALL BE CLASSIFIED AS GROUP B
ASSEMBLY ROOMS W/ < 750 SF SHALL BE CLASSIFIED AS GROUP B, OR OTHER ACCESSORY OCCUPANCY

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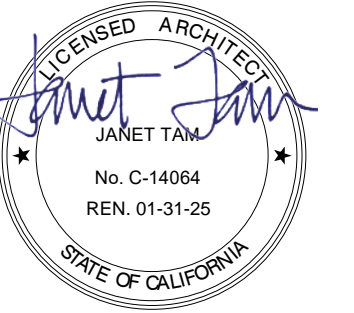
REVISIONS	DATE	DESCRIPTION
2	09.21.2023	Plan Check 2
3	10.24.2023	Plan Check 3

SHEET TITLE
CODE OCCUPANCY & EXIT PLANS

SHEET NUMBER

G1.31

SEAL



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1900 Sixth St
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1 08.21.2023	Plan Check 1

SHEET TITLE

CALGREEN

SHEET NUMBER

G2.11

Form #165

Code Compliance Checklist CALGREEN NON-RESIDENTIAL

Building and Safety Permit Service Center

Projects for new buildings, additions of 1,000 square feet or greater and/or building alterations with a permit valuation of \$200,000 or above are subject to the provisions of the California Green Building Standards Code. This checklist is provided by the City of Berkeley in order to demonstrate compliance with the code and facilitate permit approval.

Instructions:

- Read and understand the requirements of all mandatory measures listed in this checklist.
- Mark all mandatory measures that are applicable to the proposed project.
- Coordinate the construction drawings with the mandatory measures.
- Incorporate this checklist into the submitted set of construction drawings on full sized sheets.

Building and Safety
1947 Center St, 3rd floor
Berkeley, CA 94704
510-981-7440 TTY 6903
buildingandsafety@cityofberkeley.info

Project Information

Project Address: 1900 Sixth Street, Berkeley, CA 94710

Permit Number: B2023-03107

New Building [N] Addition [A] Alteration

Planning and Design

Storm Water

Storm water pollution prevention. Projects which disturb less than one acre of land shall prevent the pollution of stormwater runoff from the construction activities through one of **Civil drawing Sheets C5.01 and C5.02 describe storm water pollution prevention measures.**

- Best management practices (BMP).** Prevent the loss of soil through wind or water erosion by implementing an effective combination of erosion and sediment control and good housekeeping BMP [CGBC 5.106.1.2]
- Grading and paving.** Indicate how site grading or drainage system will manage all surface water flows to keep water from entering buildings. [CGBC 5.106.1.10]

Bicycle Parking [N/A]

Bicycle Parking. Projects adding 10 or more vehicular parking spaces shall comply with the following or meet the applicable City of Berkeley ordinance, whichever is stricter. [CGBC 5.106.4.1]

- Short-term bicycle parking.** Provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5-percent of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack. [CGBC 5.106.4.1.1]
- Long-term bicycle parking.** Provide secure bicycle parking for 5-percent of the tenant vehicular parking spaces being added, with a minimum of one space. [CGBC 5.106.4.1.2]

Vehicle Parking [N/A]

Designated parking. In projects that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles per CALGreen Table 5.106.5.2. Provide parking stall markings as required per CALGreen Section 5.106.5.2.1. [CGBC 5.106.5.2]

Electric Vehicle Charging

Definitions

ELECTRIC VEHICLE (EV) CHARGER. Off-board charging equipment used to charge an electric vehicle.

ELECTRIC VEHICLE CHARGING SPACE (EV SPACE). A space intended for future installation of EV charging equipment and charging of electric vehicles.

ELECTRIC VEHICLE CHARGING SPACE (EV SPACE) RACEWAY EQUIPPED. An EV Space that includes a raceway between any enclosed, inaccessible or concealed areas and the electrical service panel or subpanel. No additional electrical panel capacity is required at the time of construction.

ELECTRIC VEHICLE CHARGING STATION (EVCS). One or more electric vehicle charging spaces served by electric vehicle charger(s) or other

Last Revised 05/06/20

Page 2 of 7

Code Compliance Checklist - CALGREEN NON-RESIDENTIAL

equipment allowing charging of electric vehicles. Electric vehicle charging stations are not considered parking spaces.

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

- Identification.** The service panel or subpanel circuit directory shall identify the overcurrent protective device for future EV charging as "EV CAPABLE" and identify the overcurrent protective devices serving EVCS as "EV CHARGER". Raceway termination locations shall be permanently and visibly marked as "EV CAPABLE". [CGBC 5.106.6.3.4]
- Raceways.** Listed raceways and associated conductors shall be sized to accommodate a dedicated 208/240-volt branch circuit for a future EV charger. The raceway shall not be less than nominal 1-inch inside diameter. Raceways shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or other enclosure in close proximity to the proposed location of an EV charger. Construction documents shall identify the raceway termination point. [CGBC 5.106.5.3.1 and 5.106.5.3.2]

Electric Vehicle Charging Stations

- Single EVCS.** The service panel and/or subpanel shall be provided with a 40 ampere minimum dedicated branch circuit and overcurrent protective device to serve EVSE. [CGBC 5.106.5.3.1]
- Multiple EVCS.** Construction documents shall provide information on amperage of dedicated branch circuits, EVSE, raceway method(s), wiring schematics and electrical load calculations to verify that the electrical panel service capacity and electrical system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all EVs at the full rated amperage of the EVSE. Plan design shall be based upon a 40-ampere minimum branch circuit. [CGBC 5.106.5.3.2]

Accessibility

- Minimum number.** Where EVCS are required, EVCS complying with CBC Section 11B-228.3.1 and 11B-812 shall be provided in accordance with CBC Table 11B-228.3.2.1. Where an EV charger can simultaneously charge more than one vehicle, the number of EV chargers provided shall be considered equivalent to the number of electric vehicles that can be simultaneously charged. [CBC 11B-228.3.2]

EV Spaces [N/A]

- EV charging space calculation.** When 10 or more parking spaces are constructed: [CGBC 5.106.5.3.3]
 - 10 percent of the total number of parking spaces shall be EVCS and equipped with EV chargers. Installation of a Direct Current Fast Charger with the capacity to provide at least 80 kW of output may substitute for up to 10 EV Spaces.
 - 40 percent of the total number of parking spaces shall be EV Spaces Raceway Equipped capable of supporting future EVSE.

Light Pollution

- Light pollution reduction. [N]** Outdoor lighting systems shall be designed and installed to comply with Backlight, Uplight and Glare rating requirements in CALGreen Table 5.106.8 or comply with the City of Berkeley's ordinances, whichever is more stringent [CGBC 5.106.8].

Water Efficiency and Conservation [N/A]

Indoor Water Use: Metering Devices

- New buildings or additions in excess of 50,000 square feet.** Separate sub-meters shall be installed as follows: [CGBC 5.303.1.1]
 - For each individual leased, rented, or other tenant space within the building projected to consume more than 100 gpd/day, including, but not limited to, spaces used for laundry or cleaners, restaurant or food service, medical or dental office, laboratory, or beauty salon or barber shop.
 - Where separate sub-meters for individual building tenants are infeasible, for water supplied to the following subsystems:
 - Makeup water for cooling towers where flow through is greater than 500 gpm.
 - Makeup water for evaporative coolers greater than 6 gpm.
 - C Steam and hot-water boilers with energy input more than 500,000 Btu/h.
- Excess consumption. [N]** A separate sub-meter or metering device shall be provided for any tenant within a new building or within an addition that is projected to consume more than 1,000 gpd/day. [CGBC 5.303.1.2]

Page 5 of 7

Code Compliance Checklist - CALGREEN NON-RESIDENTIAL

- Commissioning team information.
- Commissioning process activities, schedules and responsibilities. Plans for the completion of commissioning shall be included.

- Functional performance testing. [N]** Functional performance tests shall demonstrate the correct installation and operation of each component, system and system-to-system interface in accordance with the approved plans and specifications. Functional performance testing reports shall contain information addressing each of the building components tested, testing methods utilized, and any readings and adjustments made. [CGBC 5.410.2.4]
- Documentation and training. [N]** A systems manual and systems operations training are required, including Occupational Safety and Health Act (OSHA) requirements in California Code of Regulations (CCR), Title 8, Section 5142, and other related regulations. [CGBC 5.410.2.5]
- Commissioning report. [N]** A report of commissioning process activities undertaken through design and construction phases of the building project shall be completed and provided to the owner or representative. [CGBC 5.410.2.6]
- Testing and adjusting.** Testing and adjusting of systems shall be required for newly constructed buildings less than 10,000 square feet, or new systems to serve an addition or alteration, as applicable. [CGBC 5.410.4]
 - HVAC systems and controls.
 - Indoor and outdoor lighting and controls.
 - Water heating systems.
 - Renewable energy systems.
 - Landscaping irrigation systems.
 - Water reuse systems.
- Procedures.** Perform testing and adjusting procedures in accordance with manufacturer's specifications and applicable standards on each system. [CGBC 5.410.4.3]
- HVAC balancing.** In addition to testing and adjusting, before a new space-conditioning system serving a building or space is operated for normal use, balance the system in accordance with the procedures defined by the Testing Adjusting and Balancing Bureau National Standards; the National Environmental Balancing Bureau Procedural Standards; Associated Air Balance Council National Standards or as approved by the City of Berkeley. [CGBC 5.410.3.1]
- Reporting.** After completion of testing, adjusting and balancing, provide a final report of testing signed by the individual responsible for performing these services. [CGBC 5.410.4.4]
- Operation and maintenance (O&M) manual.** Provide the building owner or representative with detailed operating and maintenance instructions and copies of guarantees/warranties for each system. O&M instructions shall be consistent with OSHA requirements in C.R. Title 8, Section 5142, and other related regulations. [CGBC 5.410.4.5]

Environmental Quality

Fireplaces

- Fireplaces.** Install only a direct-vent sealed-combustion gas or sealed wood-burning fireplace, or a sealed woodstove or pellet stove, and refer to residential requirements in the California Energy Code Section 150. [CGBC 5.503.1.1]
- Woodstoves.** Woodstove and pellet stoves shall comply with U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable, and shall have a permanent label indicating they are certified to meet the emission limits. [CGBC 5.503.1.1]

Pollutant Control: Mechanical Systems

- Temporary ventilation.** The permanent HVAC system shall only be used during construction if necessary to condition the building within the required temperature range for material and equipment installation. If the HVAC system is used during construction, use return air filters with a Minimum Efficiency Reporting Value (MERV) of 8, based on ASHRAE 52.2-1999, or an average efficiency of 30-percent based on ASHRAE 52.1-1992. Replace all filters immediately prior to occupancy, or, if the building is occupied during alteration, at the conclusion of construction. [CGBC 5.504.1]
- Covering of duct openings & protection of mechanical equipment during construction.** At the time of rough installation and during storage on the construction site until final startup of the heating, cooling and ventilating equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheetmetal or other methods acceptable to the City of Berkeley to reduce the amount of dust, water and debris

Page 3 of 7

Code Compliance Checklist - CALGREEN NON-RESIDENTIAL

Indoor Water Use: Water Conservation

- Water closets.** The effective flush volume of all water closets shall not exceed 1.28 gallons per flush. Tank-type water closets shall be certified to the performance criteria of the US EPA WaterSense Specification for Tank-type Toilets. [CGBC 5.303.3.1] **See Sheet P3.02 for plumbing fixture schedule**
- Urinals**
 - Wall-mounted urinals.** The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush. [CGBC 5.303.3.2.1]
 - Floor-mounted urinals.** The effective flush volume of floor-mounted or other urinals shall not exceed 0.5 gallons per flush. [CGBC 5.303.3.2.2]
- Showerheads**
 - Single showerhead.** Showerheads shall have a maximum flow rate of not more than 1.8 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the US EPA WaterSense Specification for Showerheads. [CGBC 5.303.3.3.1]
 - Multiple showerheads serving one shower.** When a shower is served by more than one showerhead, the combined flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi, or the shower shall be designed to allow only one shower outlet to be in operation at a time. Note: A hand-held shower shall be considered a showerhead. [CGBC 5.303.3.3.2]
- Faucets and Fountains**
 - Nonresidential lavatory faucets.** Lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi. [CGBC 5.303.3.4.1] **See Sheet P3.02 for plumbing fixture schedule**
 - Kitchen faucets.** Kitchen faucets shall have a maximum flow rate of not more than 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.8 gallons per minute at 60 psi. [CGBC 5.303.3.4.2]
 - Wash fountains.** Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute/20 [rim space (inches) at 60 psi]. [CGBC 5.303.3.4.3]
 - Metering faucets.** Metering faucets shall not deliver more than 0.20 gallons per cycle. [CGBC 5.303.3.4.4]
 - Metering faucets for wash fountains.** Metering faucets for wash fountains shall have a maximum flow rate of not more than 0.20 gallons per cycle/20 rim space (inches) at 60 psi. [CGBC 5.303.3.4.5]
- Commercial Kitchen Equipment [N/A]**
 - Food waste disposers.** Disposers shall either modulate the use of water to no more than 1 gpm when the disposer is not in use (not actively grinding food waste/food) or shall automatically shut off after no more than 10 minutes of inactivity. Disposers shall use no more than 8 gpm of water. [CGBC 5.303.4.1]
- Outdoor Water Use [N/A]**
 - Outdoor potable water use in landscape areas.** Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent. [CGBC 5.304.1]
Note: The Model Water Efficient Landscape Ordinance (MWELO) is located in the California Code of Regulations, Title 23, Chapter 2.7, Division 2.
 - Material Conservation and Resource Efficiency**
 - Low-carbon Concrete**
 - Reduction in cement use.** As allowed by the enforcing agency, cement used in concrete mix design shall be reduced less than 25 percent. Products commonly used to replace cement in concrete mix designs include, but are not limited to fly ash, slag, silica fume, and rice hull ash. [CGBC 5.405.1]
 - Water Resistance and Moisture Management**
 - Sprinklers.** Design and maintain landscape irrigation systems to prevent spray on structures. [CGBC 5.407.2.1]
 - Entries and openings.** Design exterior entries and/or openings subject to foot traffic or wind-driven rain to prevent water intrusion into buildings as follows: [CGBC 5.407.2.2]
 - Exterior door protection.** Primary exterior entries shall be covered to prevent water intrusion by using non-absorbent floor and wall finishes within at least 2 feet around and perpendicular to such openings plus at least one of the following: [CGBC 5.407.2.2.1]
 - An installed awning at least 4 feet in depth.

Page 6 of 7

Code Compliance Checklist - CALGREEN NON-RESIDENTIAL

which may enter the system. [CGBC 5.504.3]

- Filters.** In mechanically ventilated buildings, provide regularly occupied areas of the building with air filtration media for outside and return air that provides at least a Minimum Efficiency Reporting Value (MERV) of 13. MERV 13 filters shall be installed prior to occupancy, and recommendations for maintenance with filters of the same value shall be included in the operation and maintenance manual. Existing mechanical equipment excepted. [CGBC 5.504.5.3]
 - Labeling.** Installed filters shall be clearly labeled by the manufacturer indicating the MERV rating. [CGBC 5.504.5.3.1]
- Environmental tobacco smoke (ETS) control.** Where outdoor areas are provided for smoking, prohibit smoking within 25 feet of building entries, outdoor air intakes and operable windows and within the building as already prohibited by other laws or regulations; or as enforced by ordinances, regulations or policies of the City of Berkeley, whichever are more stringent. When ordinances, regulations or policies are not in place, post signage to inform building occupants of the prohibitions. [CGBC 5.504.7]

Pollutant Control: Finish Material

- Adhesives, sealants and caulks.** Adhesives, sealants and caulks used on the project shall comply with CALGreen Table 5.504.4.1 and 5.504.4.2 for VOC limits. Product units which do not weigh more than 1 pound and do not consist of more than 16 fluid ounces shall comply with statewide VOC standards and California Code of Regulations, Title 17. [CGBC 5.504.4.1]
- Paints and Coatings.** Architectural paints and coatings shall comply with VOC limits in CALGreen Table 5.504.4.3. The VOC content limit for coatings that do not meet the definitions for the specialty coatings categories listed in Table 5.504.4.3 shall be determined by classifying the coating as a Flat, Nonflat or Nonflat-High Gloss coating based on its gloss, as defined in Subsections 4.21, 4.36 and 4.37 of the 2007 California Air Resources Board Suggested Control Measure, and the corresponding Flat, Nonflat or Nonflat-High Gloss VOC limit in CALGreen Table 5.504.4.3 shall apply. [CGBC 5.504.4.3]
- Aerosol paints and coatings.** Aerosol paints and coatings shall meet the PWMIR Limits for ROC in California Code of Regulations, Title 17 and in areas under the jurisdiction of the Bay Area Air Quality Management District additionally comply with the percent VOC by weight of product limits of Regulation 8 Rule 49. [CGBC 5.504.4.3.1]

Carpets

- Carpet systems.** All carpet installed in the building interior shall meet at least one of the following testing and product requirements: [CGBC 5.504.4.4]
 - Carpet and Rug Institute's Green Label Plus Program;
 - Compliant with the VOC-emission limits and requirements specified in the California Department of Public Health Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers, Version 1.1, February 2010 (also known as CDPH Standard Method V1.1 or Specification 01350);
 - NSF/ANSI 140 at the Gold level or higher;
 - Scientific Certifications Systems Sustainable Choice; or
 - Compliant with the California Collaborative for High Performance Schools (CA-CHPS) Criteria Interpretation for EQ 7.0 and EQ 7.1 dated July 2012 and listed in the CHPS High Performance Product Database.
- Carpet cushion.** All carpet cushion installed in the building interior shall meet the requirements of the Carpet and Rug Institute's Green Label program. [CGBC 5.504.4.4.1]
- Carpet adhesive.** All carpet adhesive shall meet the requirements of CALGreen Table 5.504.4.1. [CGBC 5.504.4.4.2]

Composite Wood Products

- Composite wood products.** Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the building shall meet the requirements for formaldehyde as shown in CALGreen Table 5.504.4.5. [CGBC 5.504.4.5]

Environmental Control

- Acoustical control.** Employ building assemblies and components with Sound Transmission Class (STC) values determined in accordance with ASTM E90 and ASTM E413 or Outdoor-Indoor Sound Transmission Class (OITC) determined in accordance with ASTM E 1332, using either the prescriptive or performance method in CGBC Section 5.507.4.1 or 5.507.4.2. [CGBC 5.507.4]

Page 4 of 7

Code Compliance Checklist - CALGREEN NON-RESIDENTIAL

- The door is protected by a roof overhang at least 4 feet in depth.
- The door is recessed at least 4 feet.
- Other methods which provide equivalent protection.

- Flashing.** Install flashings integrated with a drainage plane. [CGBC 5.407.2.2.2]

Construction Waste Reduction, Disposal and Recycling

- Construction waste management plan & excavated soil and land clearing debris.** Recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste and a minimum of 100 percent of excavated soil, land-clearing debris, concrete and asphalt. Provide a completed City of Berkeley Construction Waste Management Plan. [CGBC 5.408.1 and 5.408.3]
- Universal waste. [A]** Additions and alterations to a building or tenant space shall require verification that Universal Waste items such as fluorescent lamps and ballast and mercury containing thermostats as well as other California prohibited Universal Waste materials are disposed of properly and are diverted from landfills. [CGBC 5.408.2]

Building Maintenance and Operation

- Recycling by occupants.** Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals. [CGBC 5.410.1]
- Additions. [A]** All additions conducted within a 12-month period under single or multiple permits, resulting in an increase of 30 percent or more in floor area, shall provide recycling areas on site. [CGBC 5.410.1.1]
- Commissioning. [N]** **N/A** Newly constructed buildings 10,000 square feet and over, building commissioning shall be included as a component of the design and construction process of the project to verify that the building's energy systems and components meet the owner's or owner representative's project requirements. For buildings less than 10,000 square feet, only the Design Phase Design Review requirements (see Section 12.4) and Commissioning Measures Shown in the Construction Documents (see Section 12.5) shall be completed.
- Owner's of the building document**
 - Energy efficiency goals.
 - Indoor environmental quality requirements.
 - Project program, including facility functions and hours of operation, and need for after hours operation.
 - Equipment and systems expectations.
 - Building operation and maintenance (O&M) personnel expectations.
- Basis of Design (BOD). [N]** A written explanation of how the design of the building systems meets the OPR shall be completed at the design phase of the building project. The Basis of Design document shall cover: [CGBC 5.410.2.2]
 - Heating, ventilation, air conditioning systems and controls.
 - Indoor lighting system and controls.
 - Water heating system.
 - Renewable energy systems.
 - Landscaping irrigation systems.
 - Water reuse systems.
- Commissioning plan. [N]** Prior to permit issuance a commissioning plan shall be completed to document how the project will be commissioned. The commissioning plan shall include the following: [CGBC 5.410.2.3]
 - General project information.
 - Commissioning goals.
 - Systems to be commissioned. Plans to test systems and components shall include:
 - An explanation of the original design intent.
 - Equipment and systems to be tested, including the extent of tests.
 - Functions to be tested.
 - Conditions under which the test shall be performed.
 - Measurable criteria for acceptable performance.

12. Building Commissioning Guide

For all newly constructed nonresidential buildings, commissioning shall be included in the design and construction process of the project to verify that the building's energy systems and components meet the owner's or owner representative's project requirements. For buildings less than 10,000 square feet, only the Design Phase Design Review requirements (see Section 12.4) and Commissioning Measures Shown in the Construction Documents (see Section 12.5) shall be completed.

Page 7 of 7

Code Compliance Checklist - CALGREEN NON-RESIDENTIAL

Outdoor Air Quality

- Ozone depletion and greenhouse gas reductions.** Installations of HVAC, refrigeration and fire suppression equipment shall comply with the following: [CGBC 5.508.1]
 - Chlorofluorocarbons (CFCs).** Install HVAC, re-refrigeration & fire suppression equipment that do not contain CFCs. [CGBC 5.508.1.1]
 - Halons.** Install HVAC, refrigeration and fire suppression equipment that do not contain Halons. [CGBC 5.508.1.2]
 - Supermarket refrigerant leak reduction.** New commercial refrigeration systems containing high-global-warming potential refrigerants (GWP of 150 or greater) installed in retail food stores with 8,000 square feet or more of conditioned area, and that utilize either refrigerated display cases, or walk-in coolers or freezers connected to remote compressor units or condensing units shall comply with refrigerant leak reduction measures. [CGBC 5.508.2]

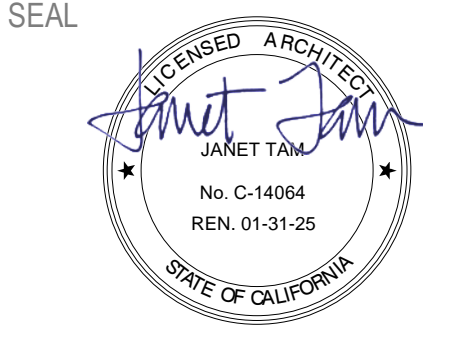
Additional:

I certify that I have read and acknowledged all of the Code Requirements noted above. I accept full responsibility for complying with all of the above requirements, as applicable to my project. I further agree that if I fail to comply with the code requirements, due to error or omission, I will correct all deficiencies prior to final inspection.

Elmar Kepfer	Signature	08.25.2023	Date
Name	Signature		Date

Check One: Contractor Owner Owner's Agent

Note: This form includes the City of Berkeley's amendments to the 2019 California Green Building Standards Code.



APPROVALS

PROJECT TITLE

**City of Berkeley
WEST
BERKELEY
SERVICE
CENTER**

1900 Sixth St
Berkeley, CA 94710

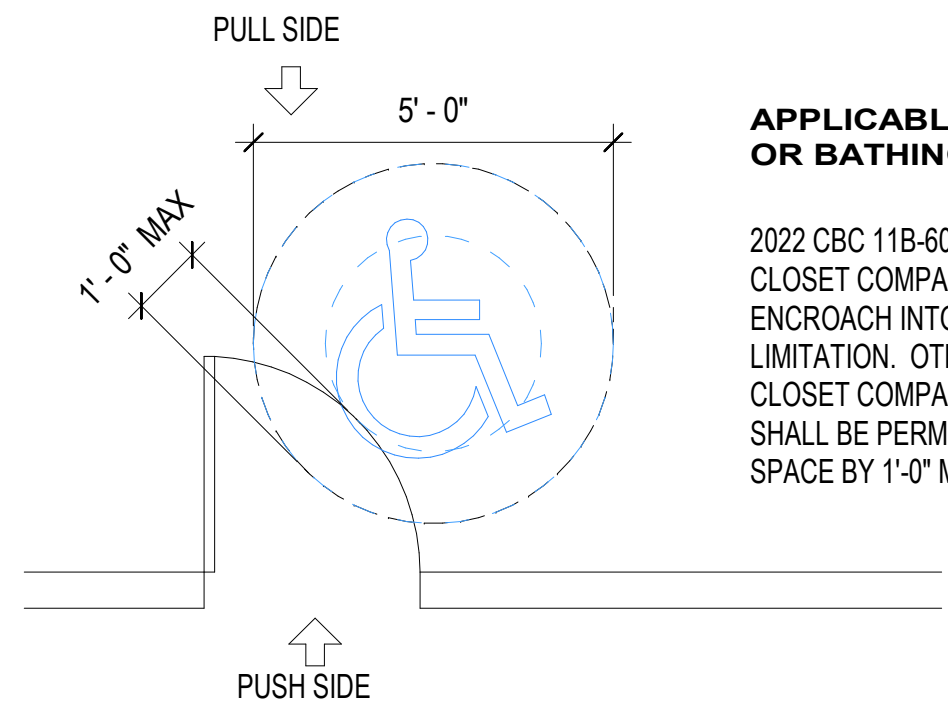
BID SET

ISSUE DATE	12.22.2023
N&T JOB NUMBER	22121
REVISIONS	
DATE	DESCRIPTION

SHEET TITLE
**MOUNTING HEIGHTS /
CODE AND
ACCESSIBILITY
DETAILS**

SHEET NUMBER

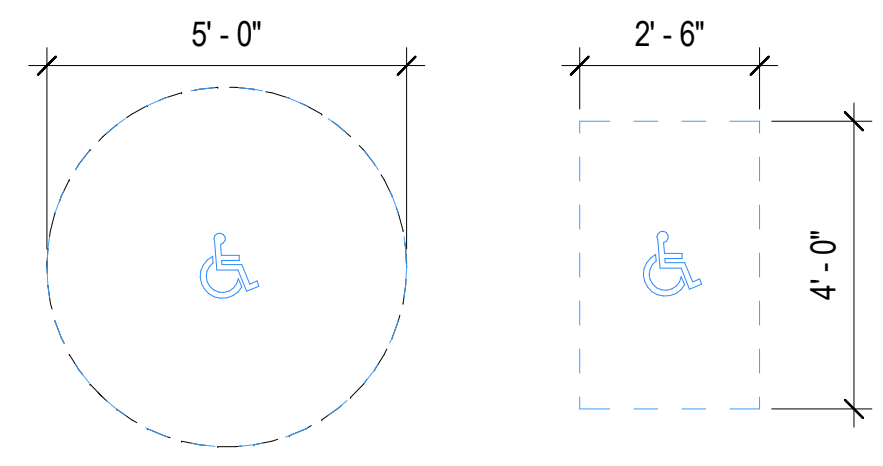
G3.24



8 DOOR SWING ENCROACHMENT (REFERENCE)
G3.24 3/8" = 1'-0"

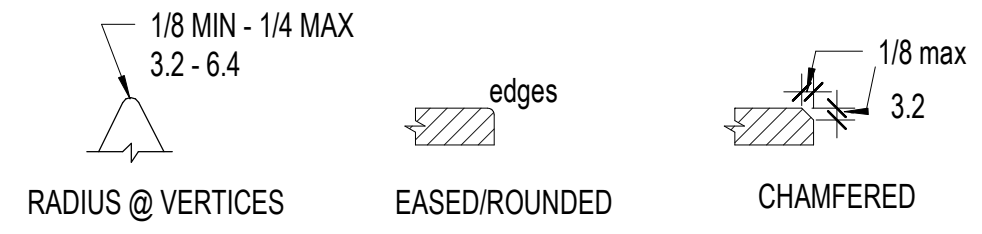
APPLICABLE TO MULTI-STALL TOILET OR BATHING ROOM DOORS ONLY

2022 CBC 11B-603.2.3: DOORS TO ACCESSIBLE WATER CLOSET COMPARTMENTS SHALL BE PERMITTED TO ENCR OACH INTO THE TURNING SPACE WITHOUT LIMITATION. OTHER THAN DOORS TO ACCESSIBLE WATER CLOSET COMPARTMENTS, A DOOR, IN ANY POSITION SHALL BE PERMITTED TO ENCR OACH INTO THE TURNING SPACE BY 1'-0" MAXIMUM.



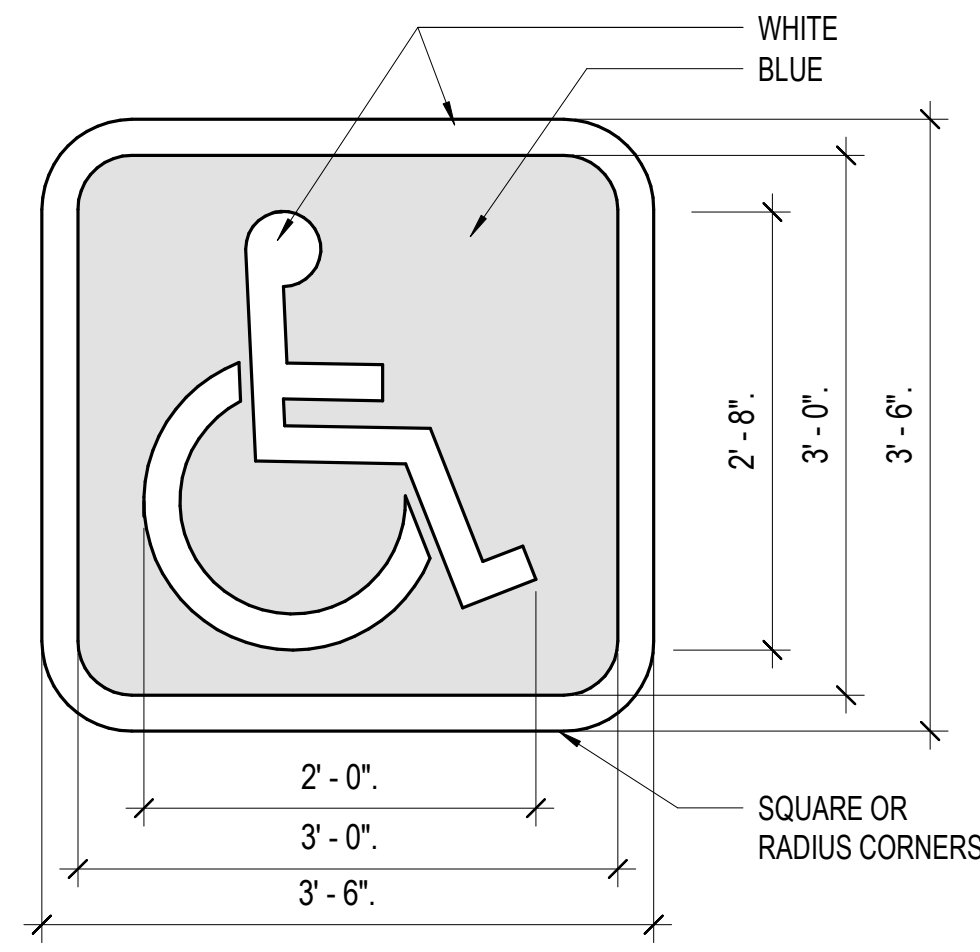
7 ACCESSIBLE SYMBOLS (REFERENCE)
G3.24 3/8" = 1'-0"

11B-703.2.6.4 EDGES AND VERTICES ON GEOMETRIC SYMBOLS. EDGES SHALL BE EASED OR ROUNDED AT 1/16 INCH (1.59 mm) MINIMUM, OR CHAMFERED AT 1/8 INCH (3.2 mm) MAXIMUM. VERTICES SHALL BE RADIUS ED BETWEEN 1/8 INCH (3.2mm) MINIMUM AND 1/4 INCH (6.4mm) MAXIMUM.

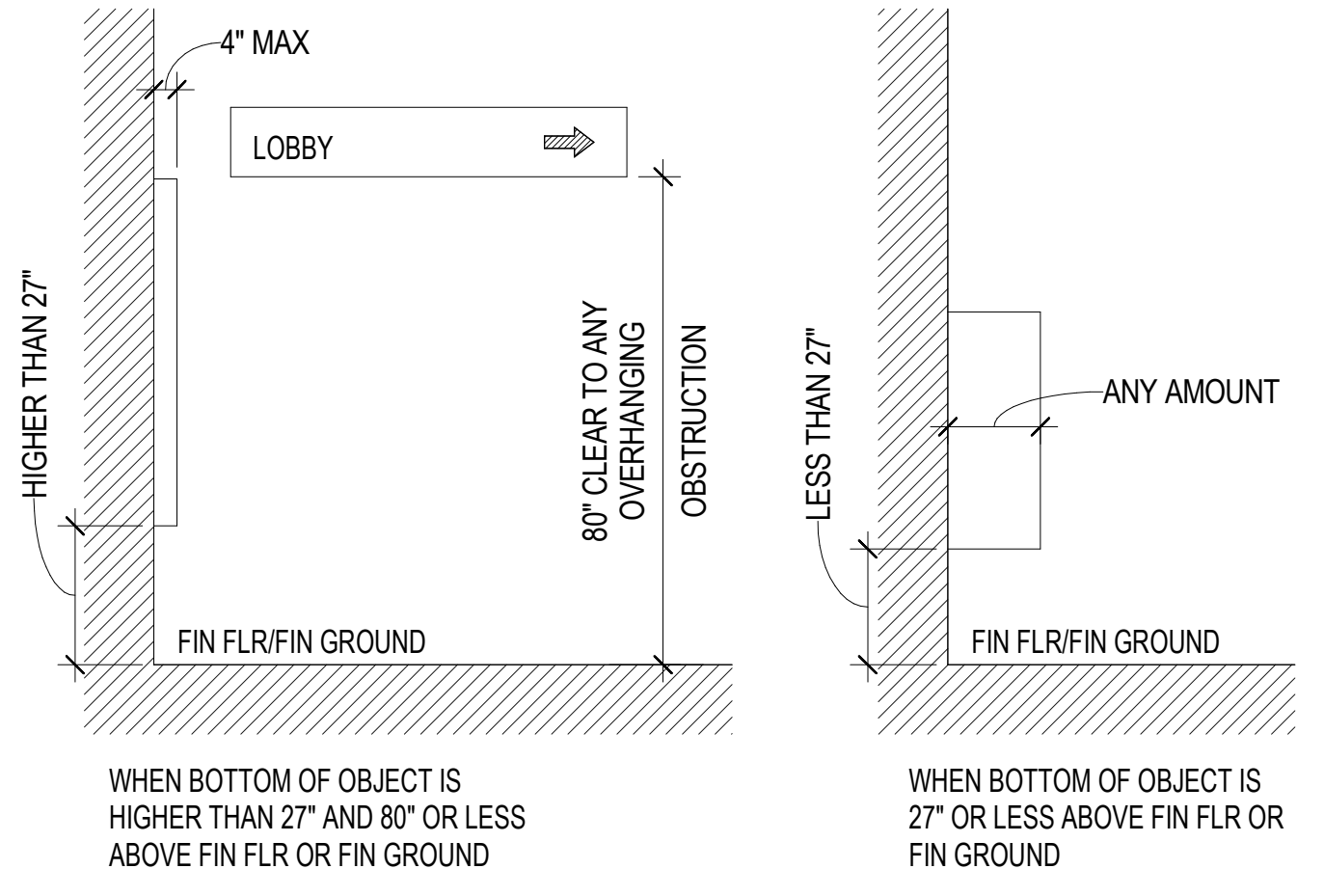


1 ACCESSIBLE SIGN - GEOMETRIC SYMBOLS
G3.24 3" = 1'-0"

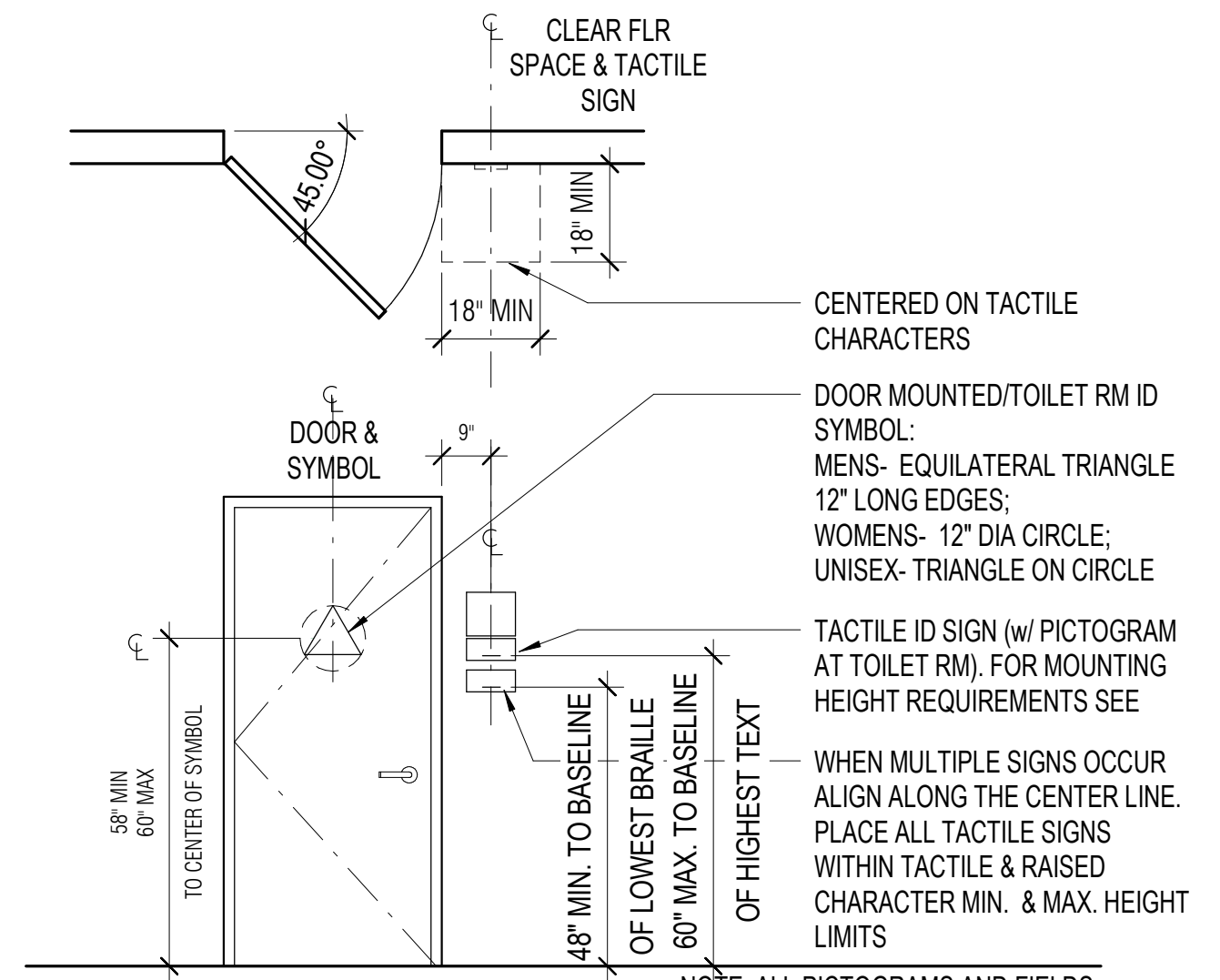
FIGURE 11B-703.2.6.4
EDGES AND VERTICES ON GEOMETRIC SYMBOLS



4 INTERNATIONAL SYMBOL OF ACCESSIBILITY
G3.24 3/4" = 1'-0"



3 PROTRUDING OBJECTS
G3.24 3/8" = 1'-0"



2 SIGNAGE AT DOORS
G3.24 3/8" = 1'-0"

CENTERED ON TACTILE CHARACTERS

DOOR MOUNTED/TOILET RM ID SYMBOL:
MENS- EQUILATERAL TRIANGLE 12" LONG EDGES;
WOMENS- 12" DIA CIRCLE;
UNISEX- TRIANGLE ON CIRCLE

TACTILE ID SIGN (w/ PICTOGRAM AT TOILET RM). FOR MOUNTING HEIGHT REQUIREMENTS SEE

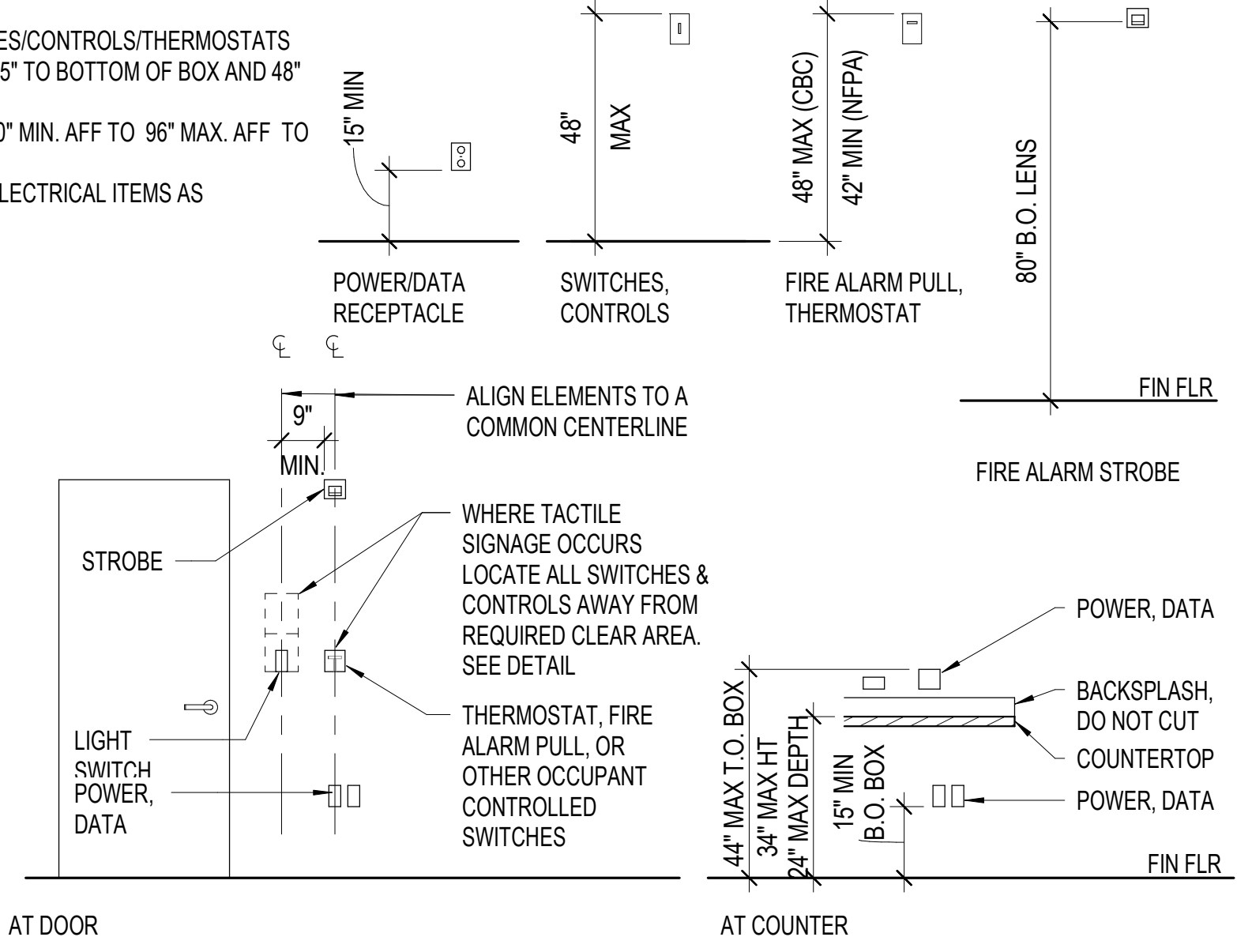
WHEN MULTIPLE SIGNS OCCUR ALIGN ALONG THE CENTER LINE. PLACE ALL TACTILE SIGNS WITHIN TACTILE & RAISED CHARACTER MIN. & MAX. HEIGHT LIMITS

NOTE: ALL PICTOGRAMS AND FIELDS SHALL HAVE NON-GLARE FINISH

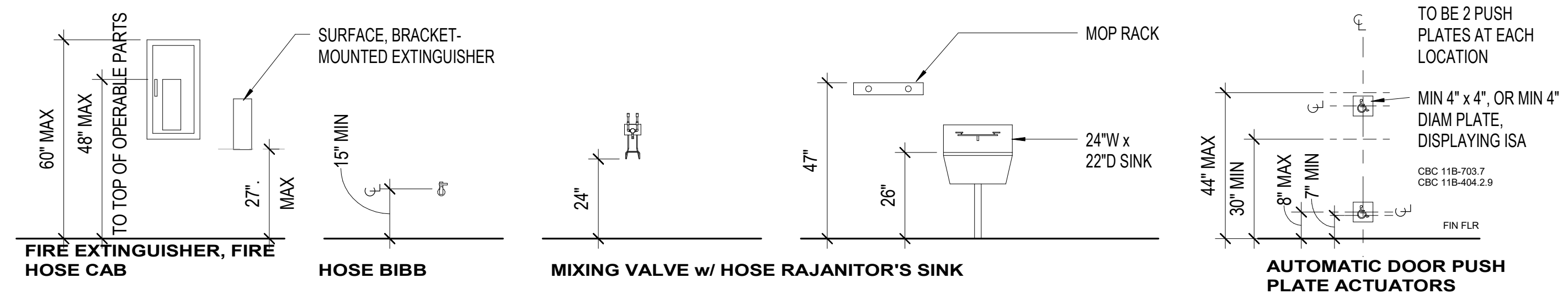
NOTE: REFER TO SIGNAGE DRAWINGS FOR ADDITIONAL INFORMATION

NOTE:

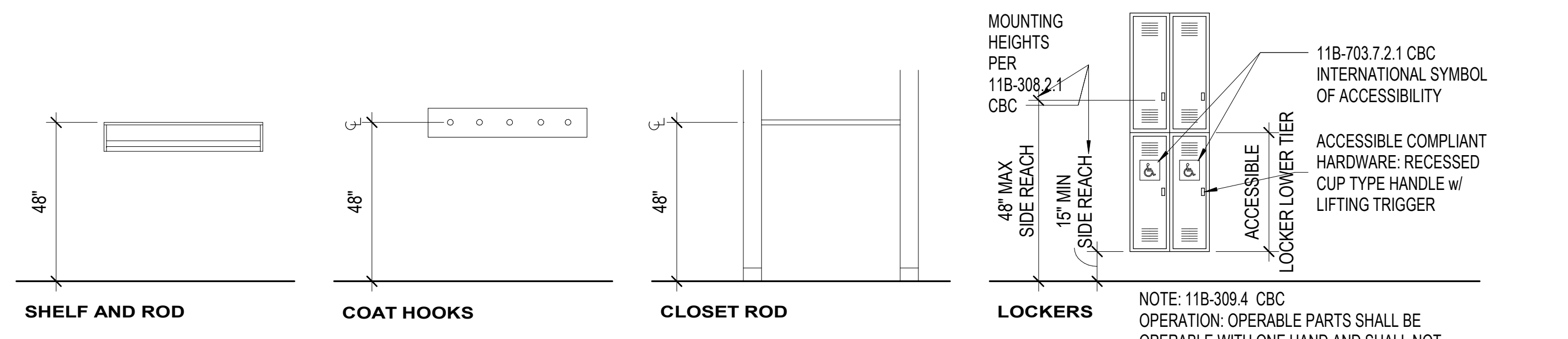
- RECEPTACLES, POWER/DATA, SWITCHES/CONTROLS/THERMOSTATS SHALL BE INSTALLED AT A RANGE OF 15" TO BOTTOM OF BOX AND 48" AFF TO TOP OF BOX.
- FIRE STROBES ARE TO BE MOUNTED 80" MIN. AFF TO 96" MAX. AFF TO BOTTOM OF LENSE, PER NFPA 72-4.4
- UNLESS OTHERWISE NOTED, MOUNT ELECTRICAL ITEMS AS INDICATED.



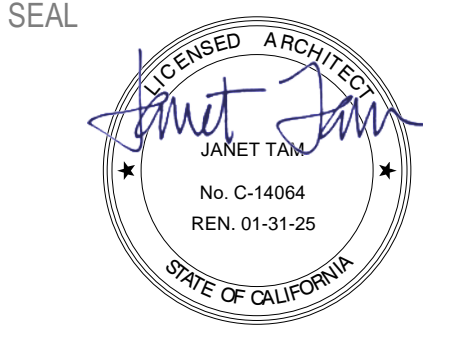
6 ELEC MOUNTING HTS
G3.24 3/8" = 1'-0"



5 TYP MOUNTING HTS (REFERENCE)
G3.24 3/8" = 1'-0"



NOTE: 11B-309.4 CBC OPERATION: OPERABLE PARTS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE OPERABLE PARTS SHALL BE 5 POUNDS MAX.



APPROVALS

PROJECT TITLE

City of Berkeley
WEST BERKELEY SERVICE CENTER

1900 Sixth St
Berkeley, CA 94710

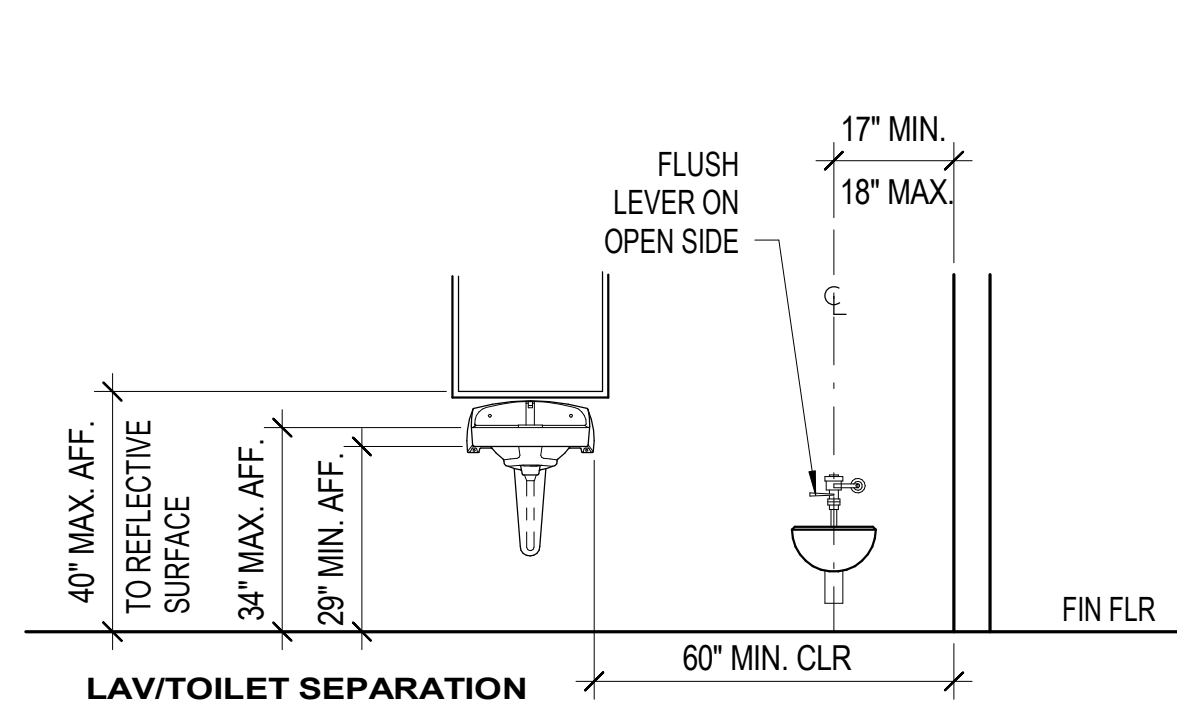
BID SET

ISSUE DATE	12.22.2023
N&T JOB NUMBER	22121
REVISIONS	
1	08.21.2023 Plan Check 1

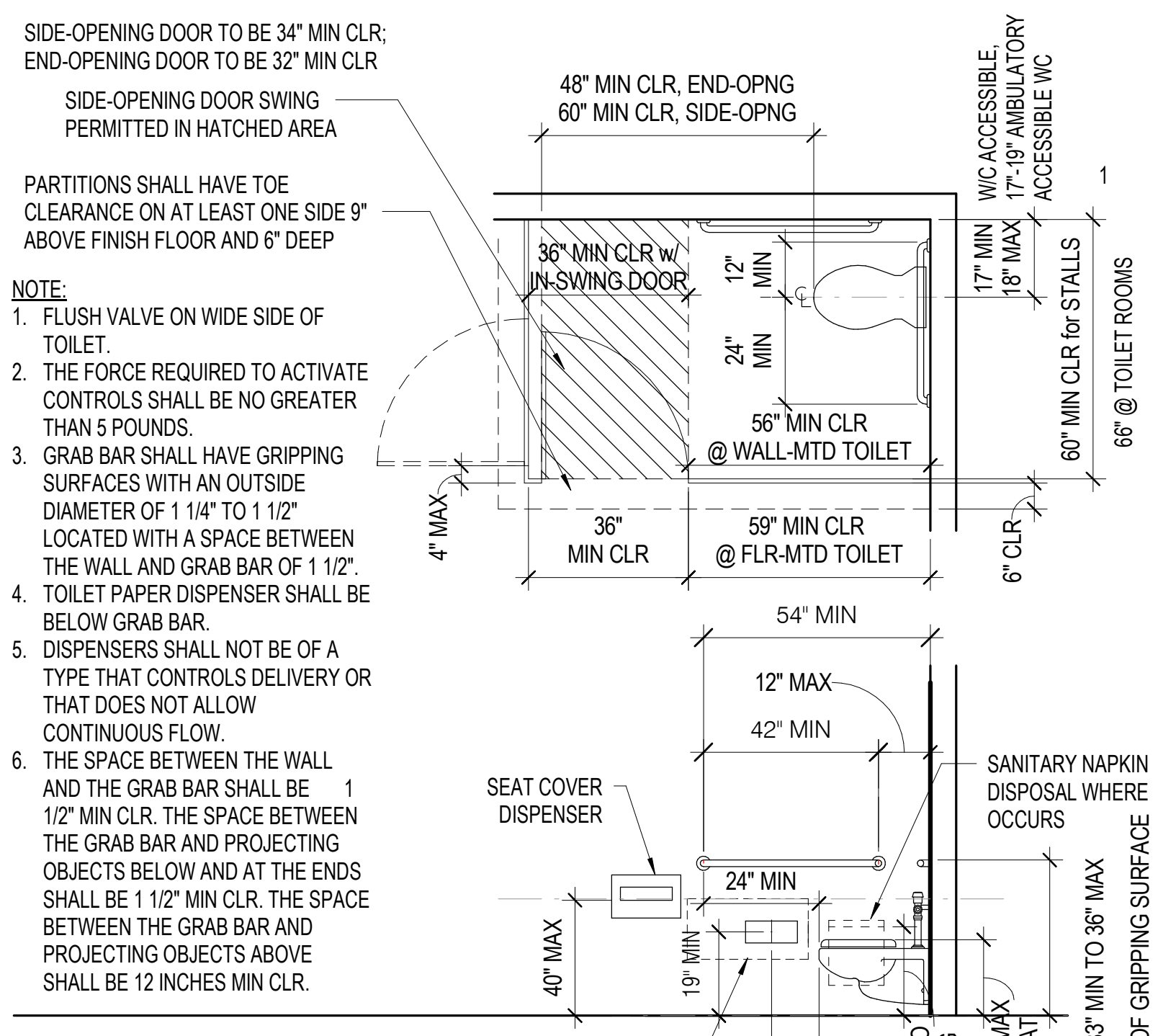
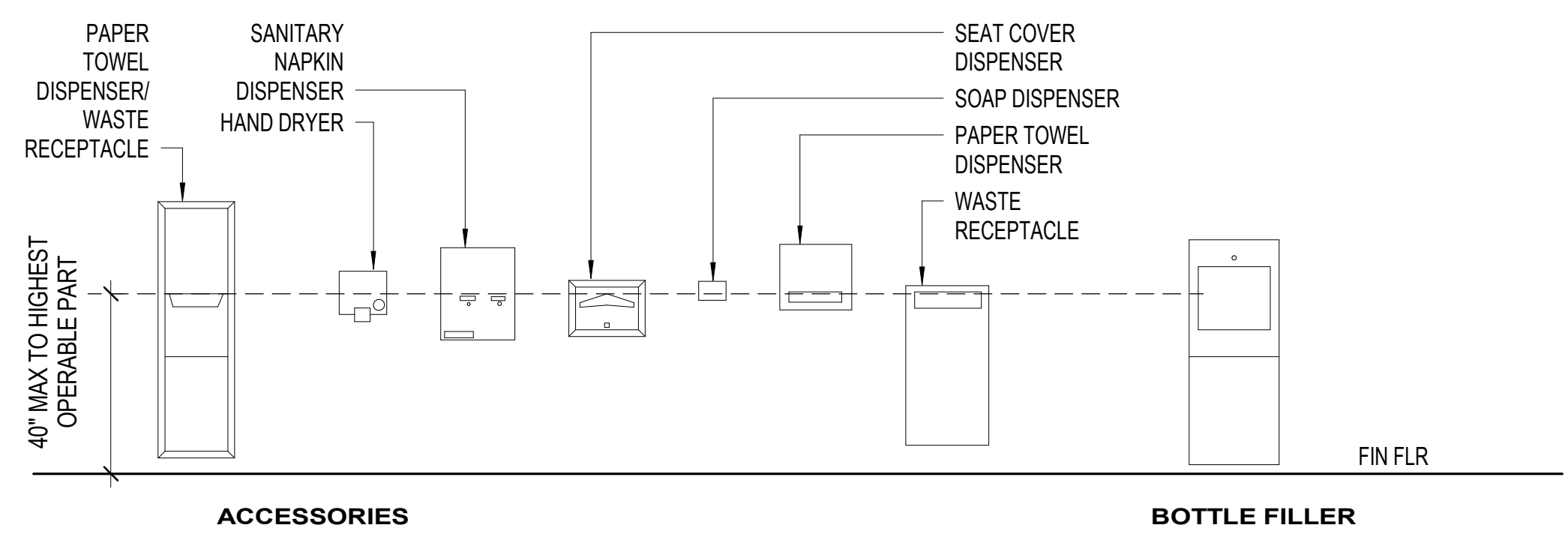
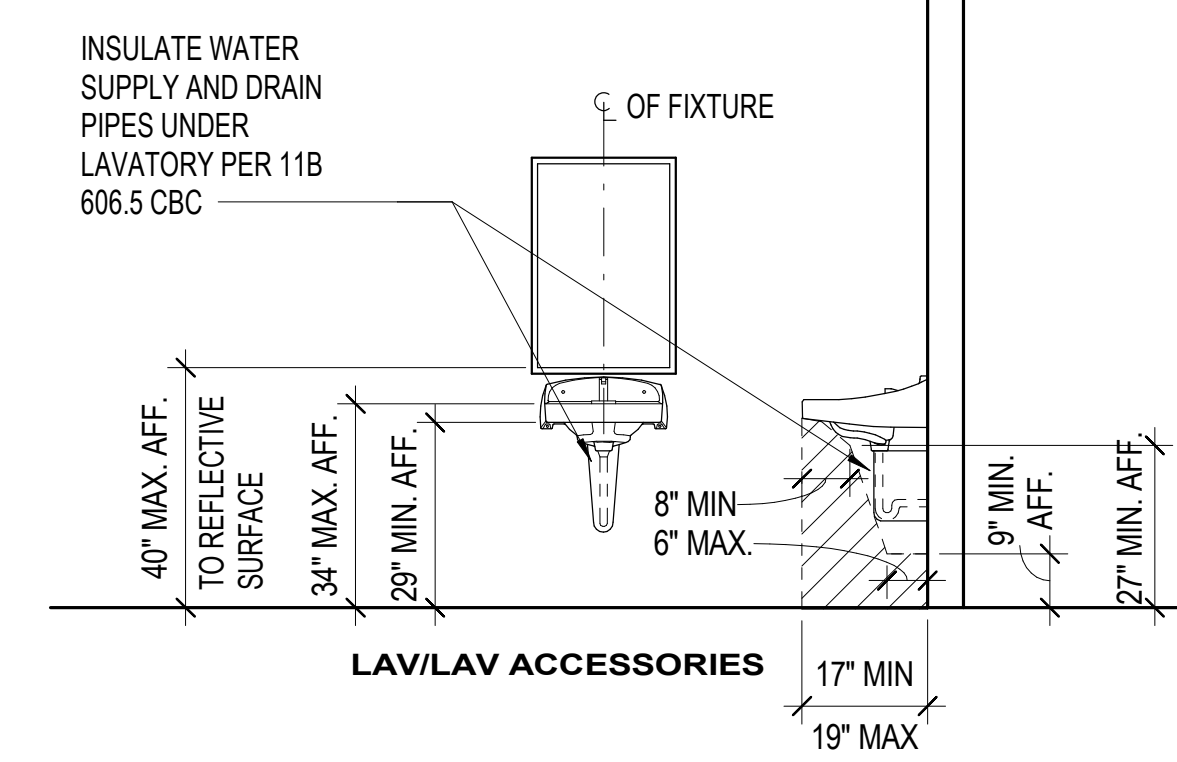
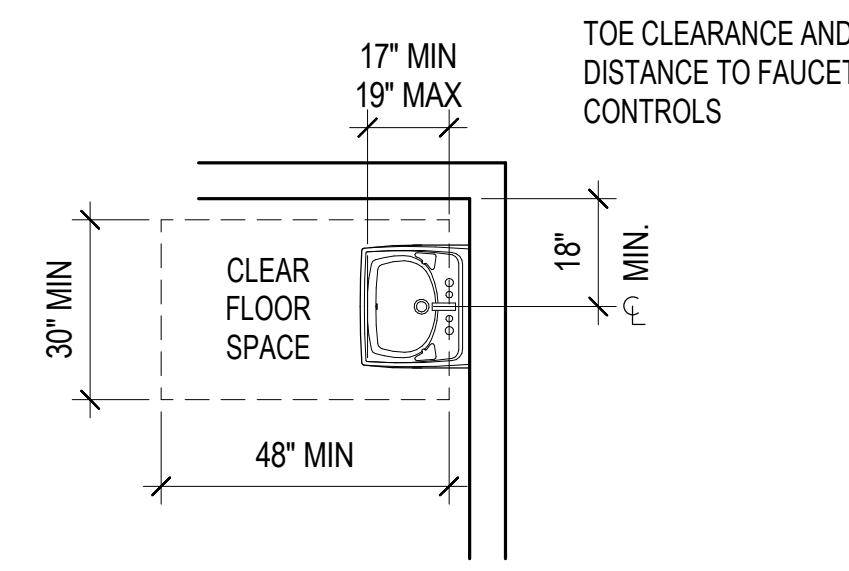
SHEET TITLE
MOUNTING HEIGHTS / CODE AND ACCESSIBILITY DETAILS

SHEET NUMBER

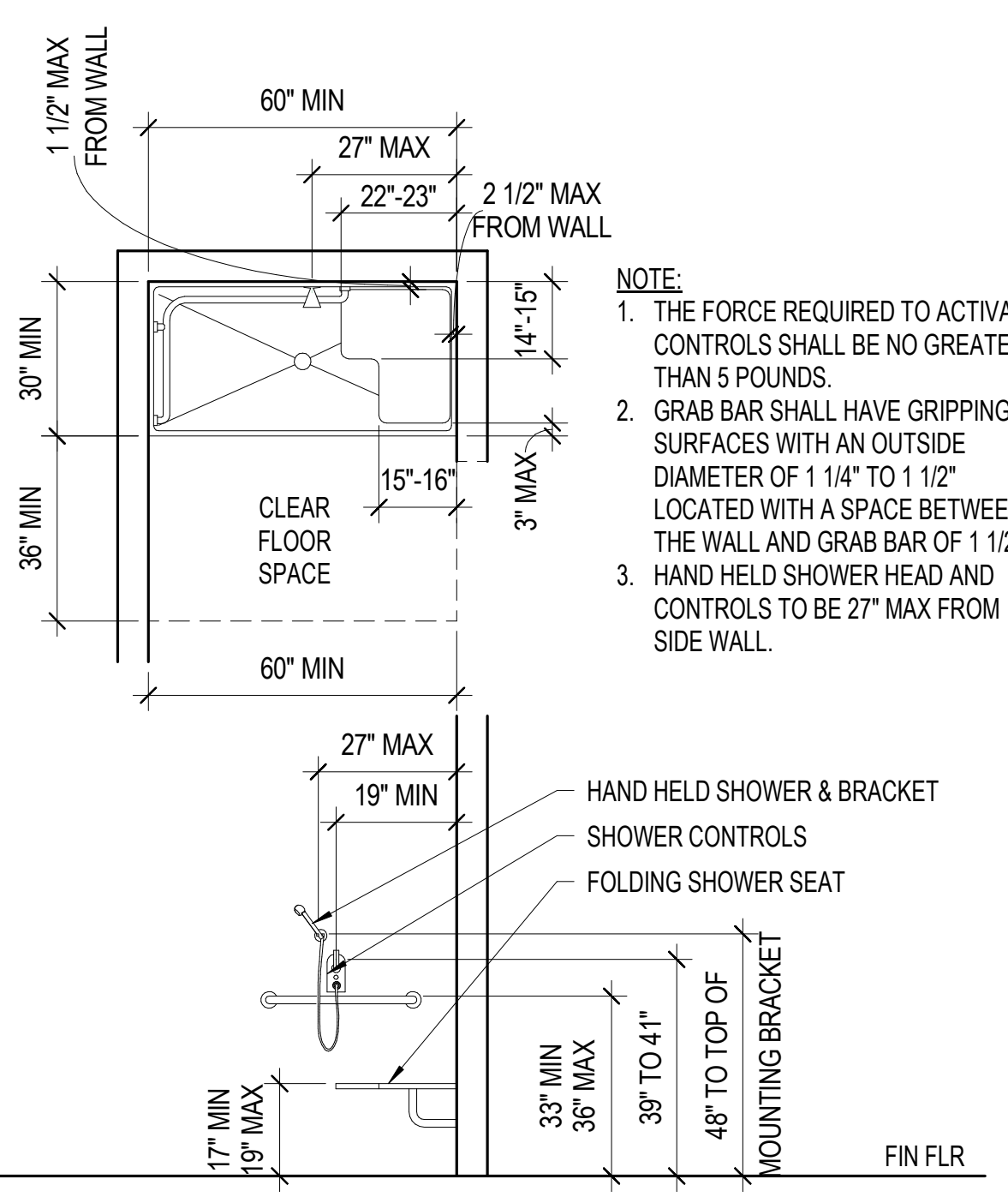
G3.25



NOTE:
1. LAVATORY FAUCET CONTROLS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 POUNDS.
2. IF MIRROR IS NOT OVER A COUNTER OR LAVATORY THEN 36" MAX AFF TO BOTTOM OF REFLECTIVE SURFACE

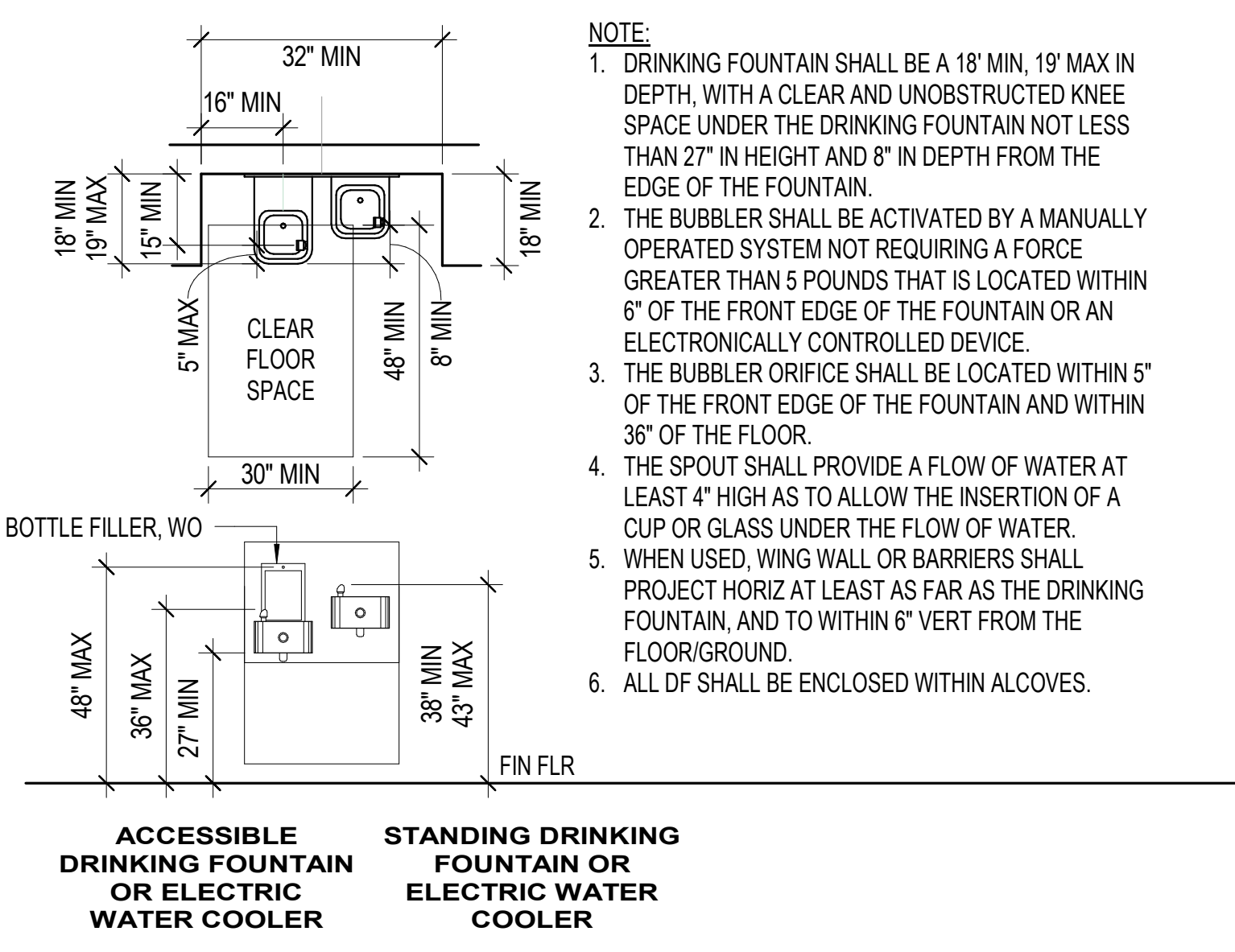


SIDE-OPENING DOOR TO BE 34" MIN CLR; END-OPENING DOOR TO BE 32" MIN CLR
SIDE-OPENING DOOR SWING PERMITTED IN HATCHED AREA
PARTITIONS SHALL HAVE TOE CLEARANCE ON AT LEAST ONE SIDE 9" ABOVE FINISH FLOOR AND 6" DEEP
NOTE:
1. FLUSH VALVE ON WIDE SIDE OF TOILET.
2. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 POUNDS.
3. GRAB BAR SHALL HAVE GRIPPING SURFACES WITH AN OUTSIDE DIAMETER OF 1 1/4" TO 1 1/2" LOCATED WITH A SPACE BETWEEN THE WALL AND GRAB BAR OF 1 1/2".
4. TOILET PAPER DISPENSER SHALL BE BELOW GRAB BAR.
5. DISPENSERS SHALL NOT BE OF A TYPE THAT CONTROLS DELIVERY OR THAT DOES NOT ALLOW CONTINUOUS FLOW.
6. THE SPACE BETWEEN THE WALL AND THE GRAB BAR SHALL BE 1 1/2" MIN CLR. THE SPACE BETWEEN THE GRAB BAR AND PROJECTING OBJECTS BELOW AND AT THE ENDS SHALL BE 1 1/2" MIN CLR. THE SPACE BETWEEN THE GRAB BAR AND PROJECTING OBJECTS ABOVE SHALL BE 12 INCHES MIN CLR.



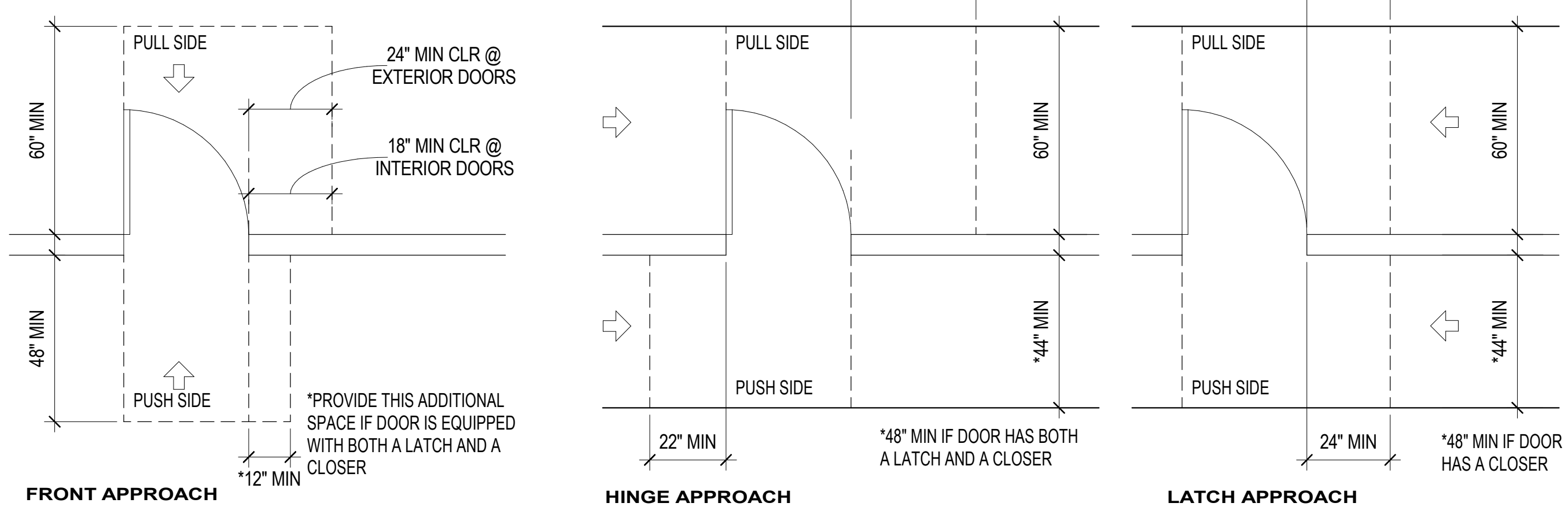
NOTE:
1. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 POUNDS.
2. GRAB BAR SHALL HAVE GRIPPING SURFACES WITH AN OUTSIDE DIAMETER OF 1 1/4" TO 1 1/2" LOCATED WITH A SPACE BETWEEN THE WALL AND GRAB BAR OF 1 1/2".
3. HAND HELD SHOWER HEAD AND CONTROLS TO BE 27" MAX FROM SIDE WALL.

1 TOILET ROOM MOUNTING HTS AND CLEARANCES
G3.25 3/8" = 1'-0"



NOTE:
1. DRINKING FOUNTAIN SHALL BE A 18" MIN, 19" MAX IN DEPTH, WITH A CLEAR AND UNOBSTRUCTED KNEE SPACE UNDER THE DRINKING FOUNTAIN NOT LESS THAN 27" IN HEIGHT AND 8" IN DEPTH FROM THE EDGE OF THE FOUNTAIN.
2. THE BUBBLER SHALL BE ACTIVATED BY A MANUALLY OPERATED SYSTEM NOT REQUIRING A FORCE GREATER THAN 5 POUNDS THAT IS LOCATED WITHIN 6" OF THE FRONT EDGE OF THE FOUNTAIN OR AN ELECTRONICALLY CONTROLLED DEVICE.
3. THE BUBBLER ORIFICE SHALL BE LOCATED WITHIN 5" OF THE FRONT EDGE OF THE FOUNTAIN AND WITHIN 36" OF THE FLOOR.
4. THE SPOUT SHALL PROVIDE A FLOW OF WATER AT LEAST 4" HIGH AS TO ALLOW THE INSERTION OF A CUP OR GLASS UNDER THE FLOW OF WATER.
5. WHEN USED, WING WALL OR BARRIERS SHALL PROJECT HORIZ AT LEAST AS FAR AS THE DRINKING FOUNTAIN, AND TO WITHIN 6" VERT FROM THE FLOOR/GROUND.
6. ALL DF SHALL BE ENCLOSED WITHIN ALCOVES.

3 DRINKING FOUNTAIN HT & CLEARANCES
G3.25 3/8" = 1'-0"



2 LEVEL MANEUVERING CLEARANCES AT DOORS (REFERENCE)
G3.25 3/8" = 1'-0"

NOTE:
1. LEVEL IS DEFINED AS 2% IN ANY DIRECTION.
2. ALL DOORS REQUIRING FULL USER PASSAGE MUST BE 3'-0"x6'-8" MIN OR HUNG TO PROVIDE 32" MIN. CLEAR
3. SYMBOL DENOTING "CLEAR DIRECTION OF APPROACH"



BKF ENGINEERS
2100 FRANKLIN ST, SUITE 4C
OAKLAND, CA 94612
(510) 899-7300

SEAL



APPROVALS

PROJECT TITLE

**City of Berkeley
WEST
BERKELEY
SERVICE
CENTER**

1900 Sixth St
Berkeley, CA 94710

BID SET

ISSUE DATE 12/22/2023

BKF JOB NUMBER 20171034

REVISIONS	DATE	DESCRIPTION

DRAWN BY AP, NF CHECKED BY KW
SHEET TITLE

**EXISTING CONDITIONS
AND DEMOLITION PLAN**

SHEET NUMBER

C1.01

NOTES:

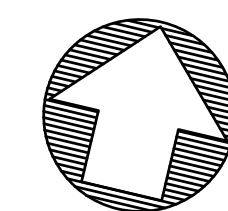
- EXISTING CONDITIONS OBTAINED FROM A TOPOGRAPHIC SURVEY PERFORMED BY BKF ENGINEERS, DATED 11/23/2021.
- INFORMATION TAKEN REGARDING EXISTING SUBSURFACE IMPROVEMENTS AND UTILITIES SHOWN WERE DERIVED FROM RECORD DATA AND/OR SURFACE OBSERVATION AND ARE APPROXIMATE ONLY. FIELD VERIFICATION OF THE ACTUAL LOCATIONS, SIZES, AND ELEVATIONS OF EXISTING SUBSURFACE IMPROVEMENTS AND UTILITIES BY THE CONTRACTOR WILL BE REQUIRED PRIOR TO THE COMMENCEMENT OF WORK.
- IF THE CONTRACTOR FAILS TO INVESTIGATE KNOWN AND UNKNOWN EXISTING SUBSURFACE IMPROVEMENTS PRIOR TO ANY CONSTRUCTION ACTIVITIES AND UNFORESEEN CONDITIONS ARISE, ALL COSTS AND SCHEDULE IMPACTS WILL BE BORNE BY THE CONTRACTOR.
- BASIS OF BEARINGS: SOUTH 13°26'15" EAST, BEING THE LINE BETWEEN TWO FOUND MONUMENTS AT THE INTERSECTIONS OF SIXTH ST., HEARST AVE., AND UNIVERSITY AVE.
- BENCHMARK: CITY OF BERKELEY MONUMENT "B0535" A FOUND 3/8" BRASS PIN IN A MONUMENT WELL AT THE INTERSECTION OF HEARST AVENUE AND 5TH STREET. ELEVATION = 13.85 FEET (CITY OF BERKELEY DATUM).
- CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT (USA) AT (800) 942-2444 AT LEAST TWO (2) WORKING DAYS PRIOR TO COMMENCEMENT OF ANY EXCAVATION OR GRADING WORK.
- EXISTING FEATURES TO REMAIN ARE SHOWN SHADED FOR REFERENCE. EXISTING FEATURES PROPOSED FOR DEMOLITION ARE SHOWN DARK.
- THE LIMITS OF DEMOLITION SHOWN ARE APPROXIMATE ONLY. CONTRACTOR IS RESPONSIBLE FOR MATCHING EXISTING SURROUNDINGS, PAVEMENT SCORE LINES, LANDSCAPE AND OTHER IMPROVEMENTS WITH A SMOOTH TRANSITION IN PAVING, CURBS, GUTTERS, AND SIDEWALKS AND AVOIDING ANY ABRUPT OR APPARENT CHANGES IN GRADES OR CROSS SLOPES OR HAZARDOUS CONDITIONS.
- EXISTING HANDRAIL ON EXISTING STAIRS TO REMAIN SHALL BE REMOVED AND REPLACED IN-KIND.

KEYNOTES:

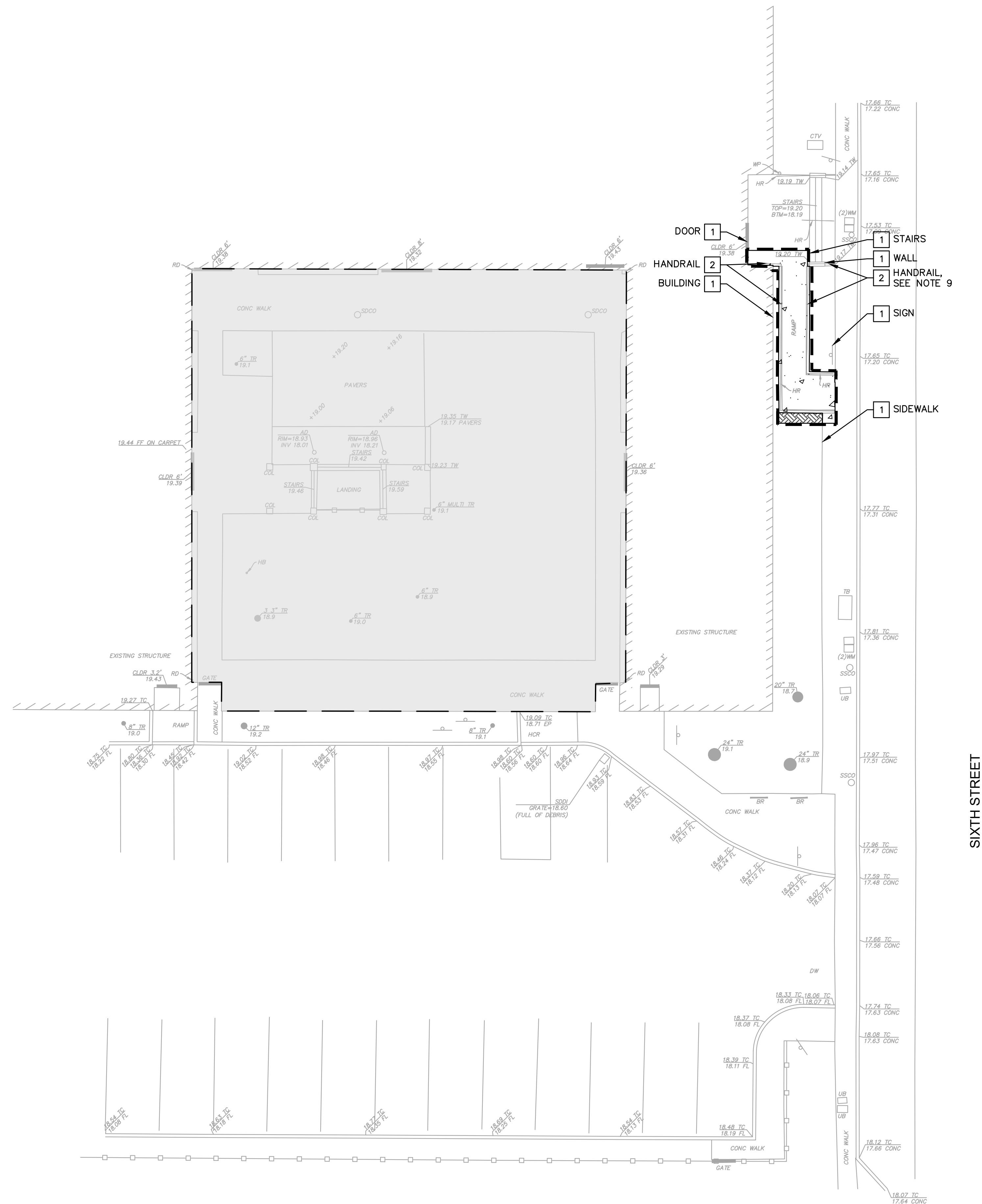
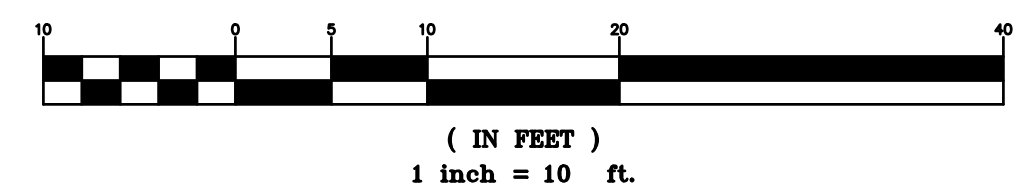
- 1 PROTECT IN PLACE
- 2 REMOVE

LEGEND:

- DEMOLITION LIMITS
- DEMOLISH EXISTING CONCRETE PAVEMENT SECTION TO PROPOSED SUBGRADE
- CLEAR AND GRUB EXISTING LANDSCAPE AREA TO PROPOSED SUBGRADE
- LANDSCAPE SCOPE OF WORK, SEE LANDSCAPE DRAWINGS
- EXISTING STORM DRAIN LINE
- EXISTING SANITARY SEWER LINE
- EXISTING WATER LINE
- EXISTING GAS LINE
- CHAIN LINK FENCE
- WOODEN FENCE
- GUY WIRE
- SIGN
- SIGNAL LIGHT
- SITE LIGHT
- STREET LIGHT
- TELEPHONE POLE



GRAPHIC SCALE



Know what's below.
Call before you dig.



BKF ENGINEERS
2100 FRANKLIN ST, SUITE 4C
OAKLAND, CA 94612
(510) 899-7300

SEAL



APPROVALS

PROJECT TITLE

City of Berkeley
**WEST
BERKELEY
SERVICE
CENTER**

1900 Sixth St
Berkeley, CA 94710

BID SET

ISSUE DATE 12/22/2023

BKF JOB NUMBER 20171034

REVISIONS	DATE	DESCRIPTION
▲		

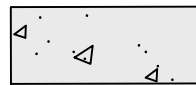
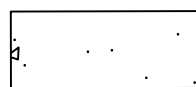

DRAWN BY AP, NF CHECKED BY KW

SHEET TITLE
**HORIZONTAL CONTROL
AND PAVING PLAN**

SHEET NUMBER

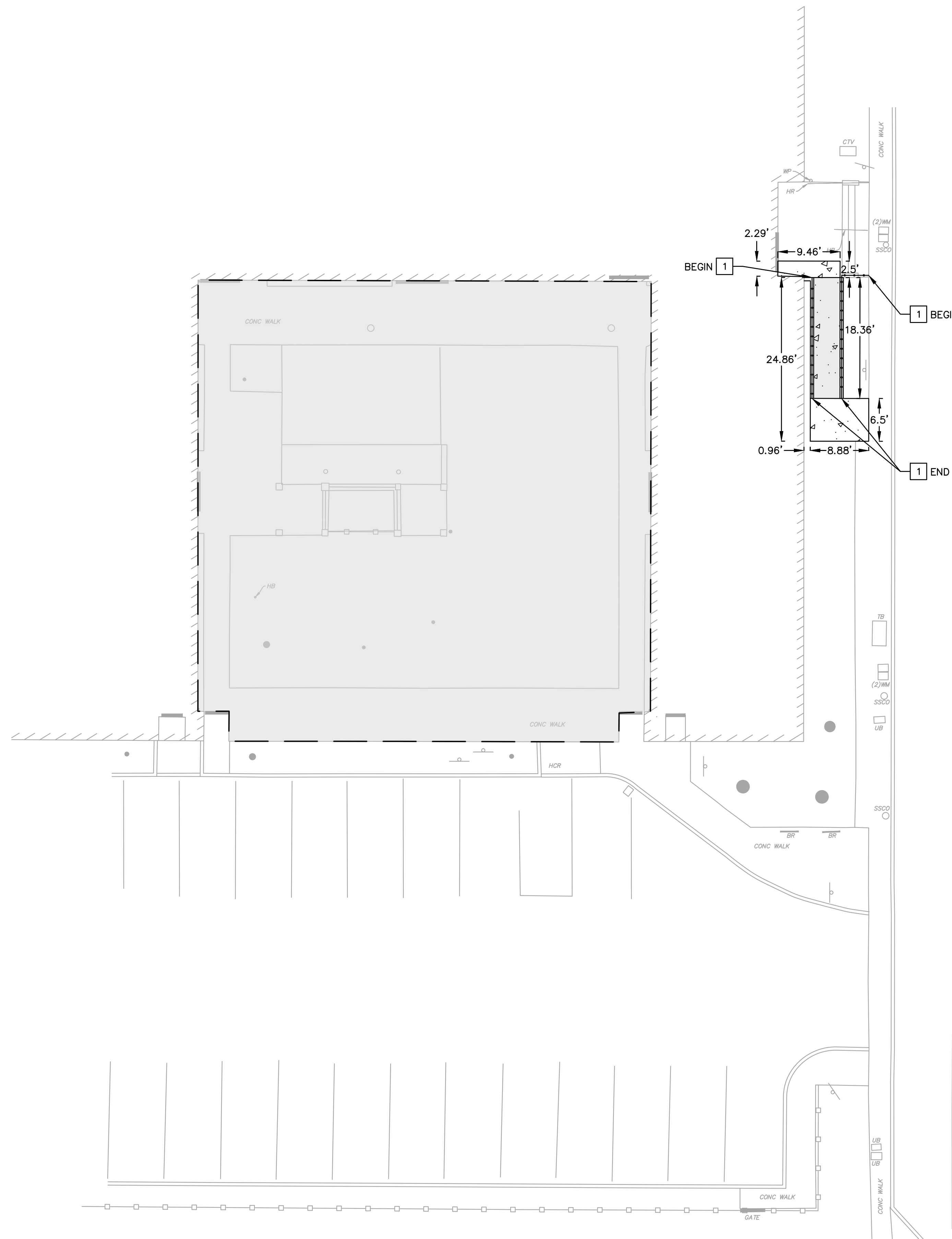
C2.01

LEGEND:

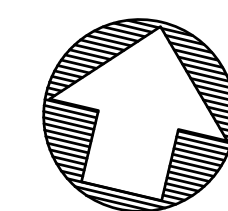
-  PEDESTRIAN RAMP WITH HANDRAIL
4" PCC/4" CLASS II AB
W/#4 BARS AT 24" O.C. E.W. (1/C4.01)
-  PEDESTRIAN CONCRETE PAVEMENT
4" PCC/4" CLASS II AB
W/#4 BARS AT 24" O.C. E.W.
-  LANDSCAPE SCOPE OF WORK,
SEE LANDSCAPE DRAWINGS

KEYNOTES:

-  HANDRAIL (1/C4.01)



SIXTH STREET



GRAPHIC SCALE



(IN FEET)
1 inch = 10 ft.



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SEE PLUMBING DRAWINGS FOR DRAINAGE OF NEW ROOF OVER WATER HEATERS



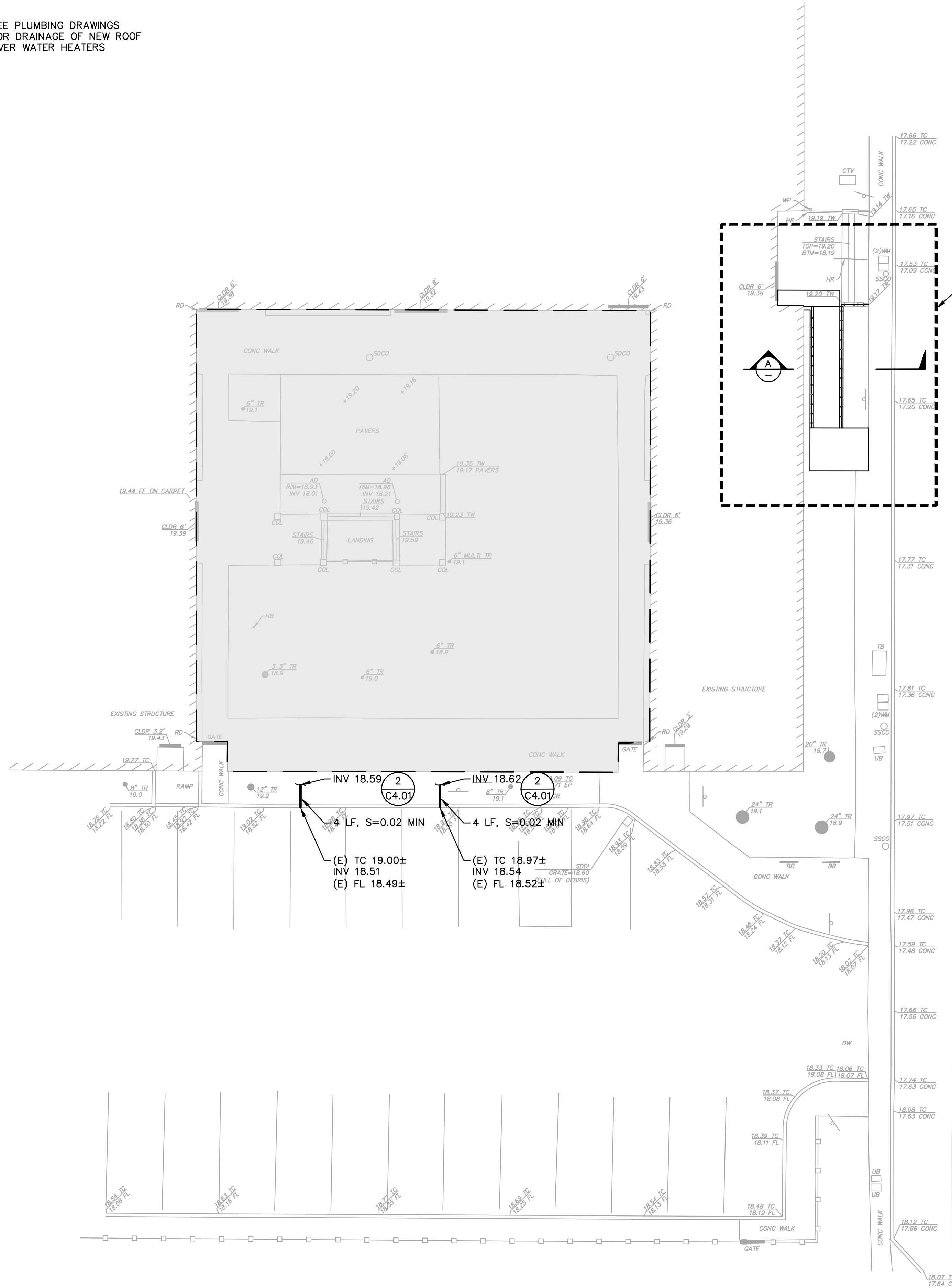
BKF ENGINEERS
2100 FRANKLIN ST, SUITE 4C
OAKLAND, CA 94612
(510) 899-7300

NOTES:

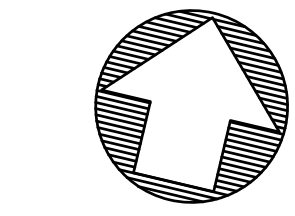
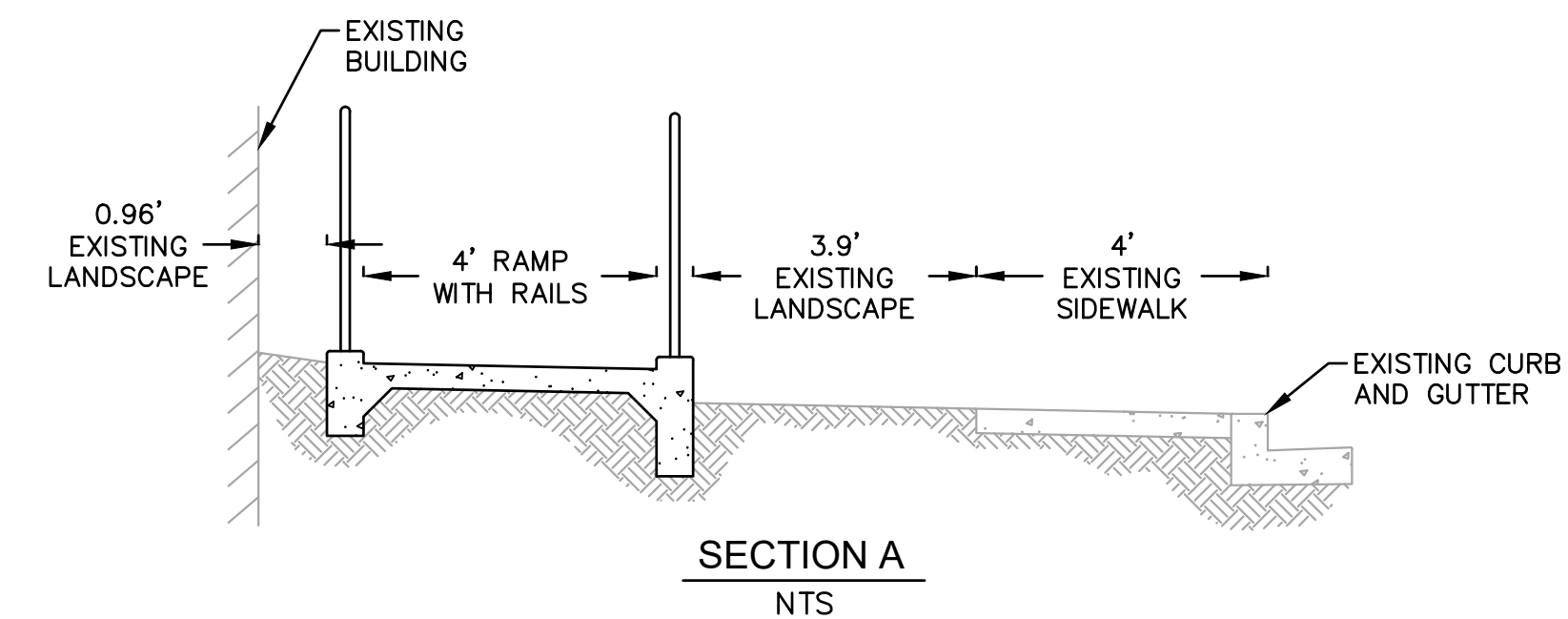
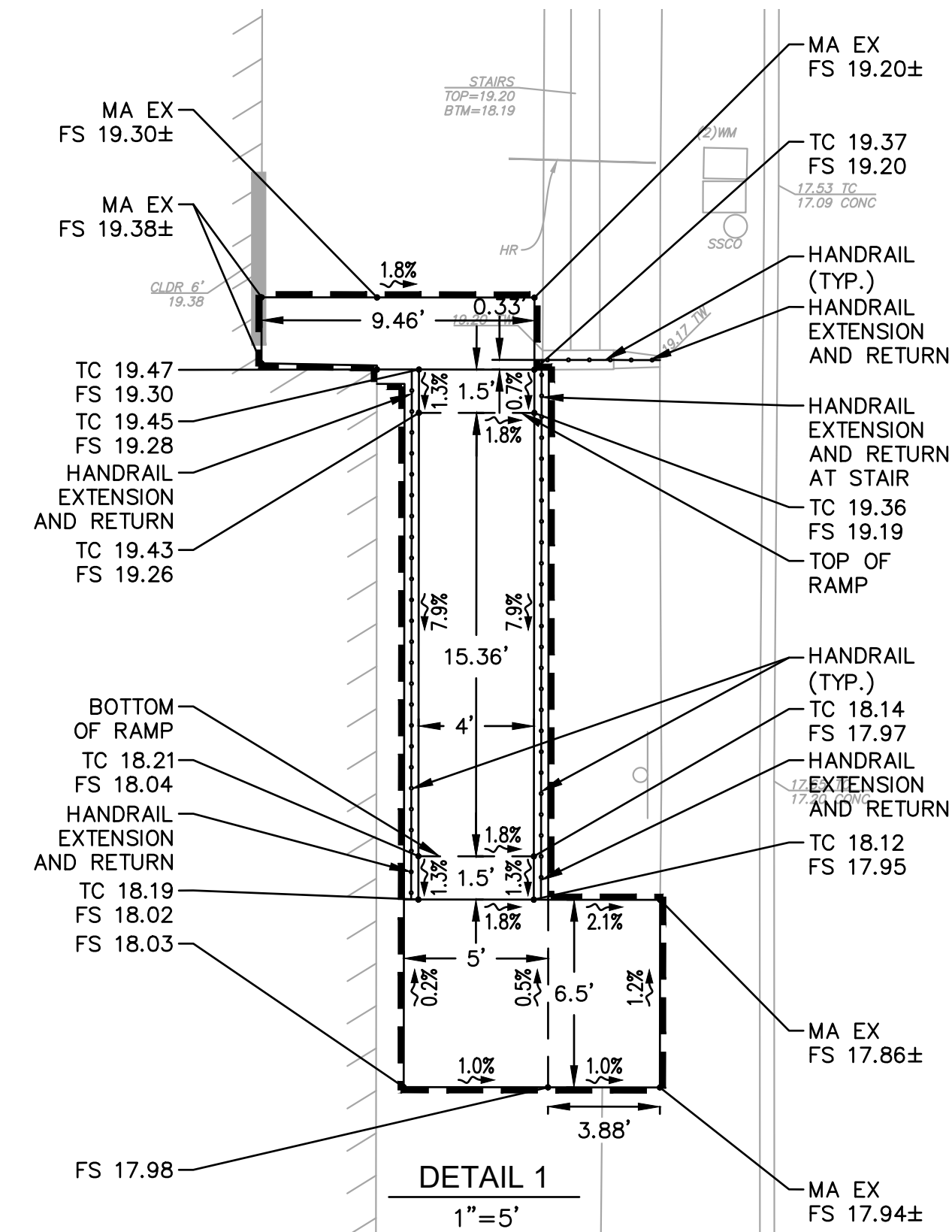
- EXISTING CONDITIONS OBTAINED FROM A TOPOGRAPHIC PERFORMED BY BKF ENGINEERS, DATED 11/23/2021.
- CONTRACTOR SHALL VERIFY AND MATCH EXISTING GRADES ADJACENT TO LIMIT OF WORK. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY SIGNIFICANT DISCREPANCIES FROM WHAT IS SHOWN ON THE APPROVED DRAWINGS.
- ALL SIDEWALK/WALKWAY CROSS SLOPE AND LONGITUDINAL SLOPE NOT TO EXCEED 2% AND 4.99% RESPECTIVELY, UNLESS OTHERWISE NOTED.

LEGEND:

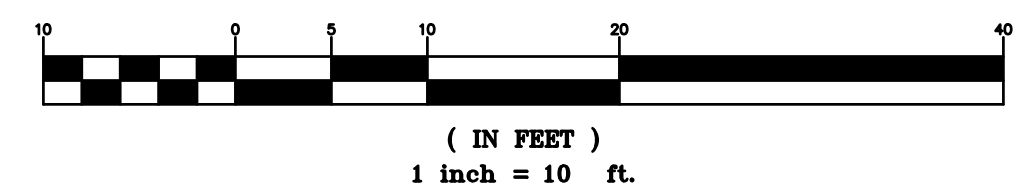
- GRADING LIMITS
- GRADE BREAK
- SLOPE ARROW
- 3" HDPE PIPE (AASHTO M252, TYPE S)
- LANDSCAPE SCOPE OF WORK, SEE LANDSCAPE DRAWINGS



SIXTH STREET



GRAPHIC SCALE



SEAL



APPROVALS

PROJECT TITLE

City of Berkeley
WEST BERKELEY SERVICE CENTER

1900 Sixth St
Berkeley, CA 94710

BID SET

ISSUE DATE 12/22/2023

BKF JOB NUMBER 20171034

REVISIONS	DATE	DESCRIPTION

DRAWN BY AP, NF CHECKED BY KW

SHEET TITLE

GRADING PLAN

SHEET NUMBER

C3.01



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2100 FRANKLIN ST, SUITE 4C
OAKLAND, CA 94612
(510) 899-7300

SEAL



APPROVALS

PROJECT TITLE

City of Berkeley
**WEST
BERKELEY
SERVICE
CENTER**

1900 Sixth St
Berkeley, CA 94710

BID SET

ISSUE DATE 12/22/2023

BKF JOB NUMBER 20171034

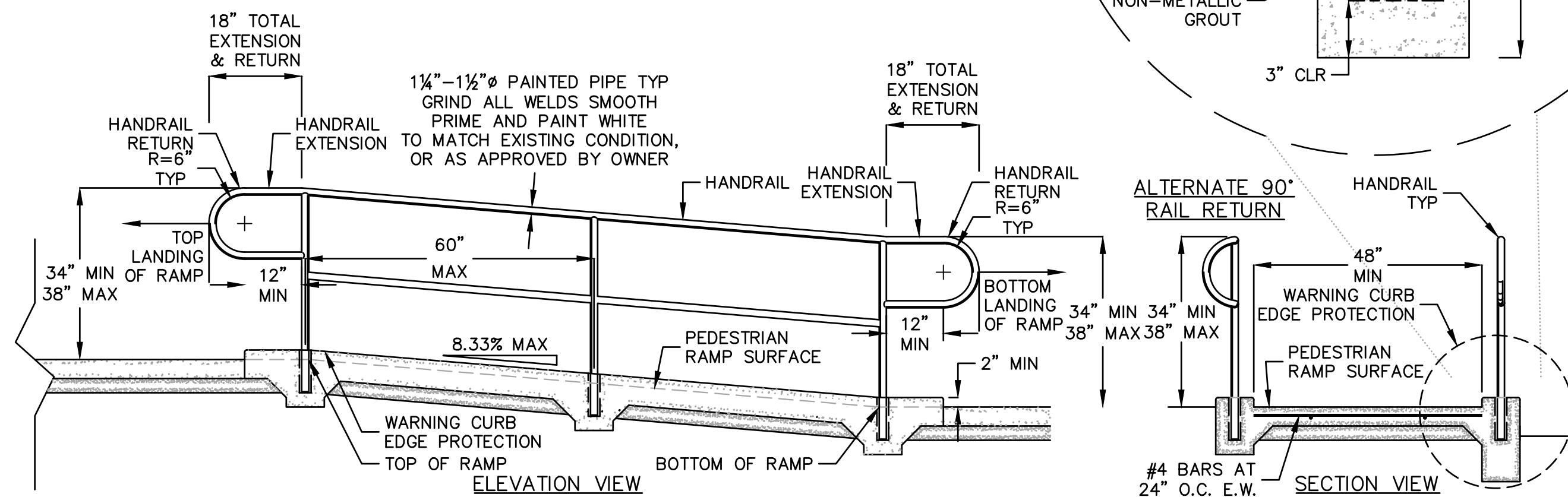
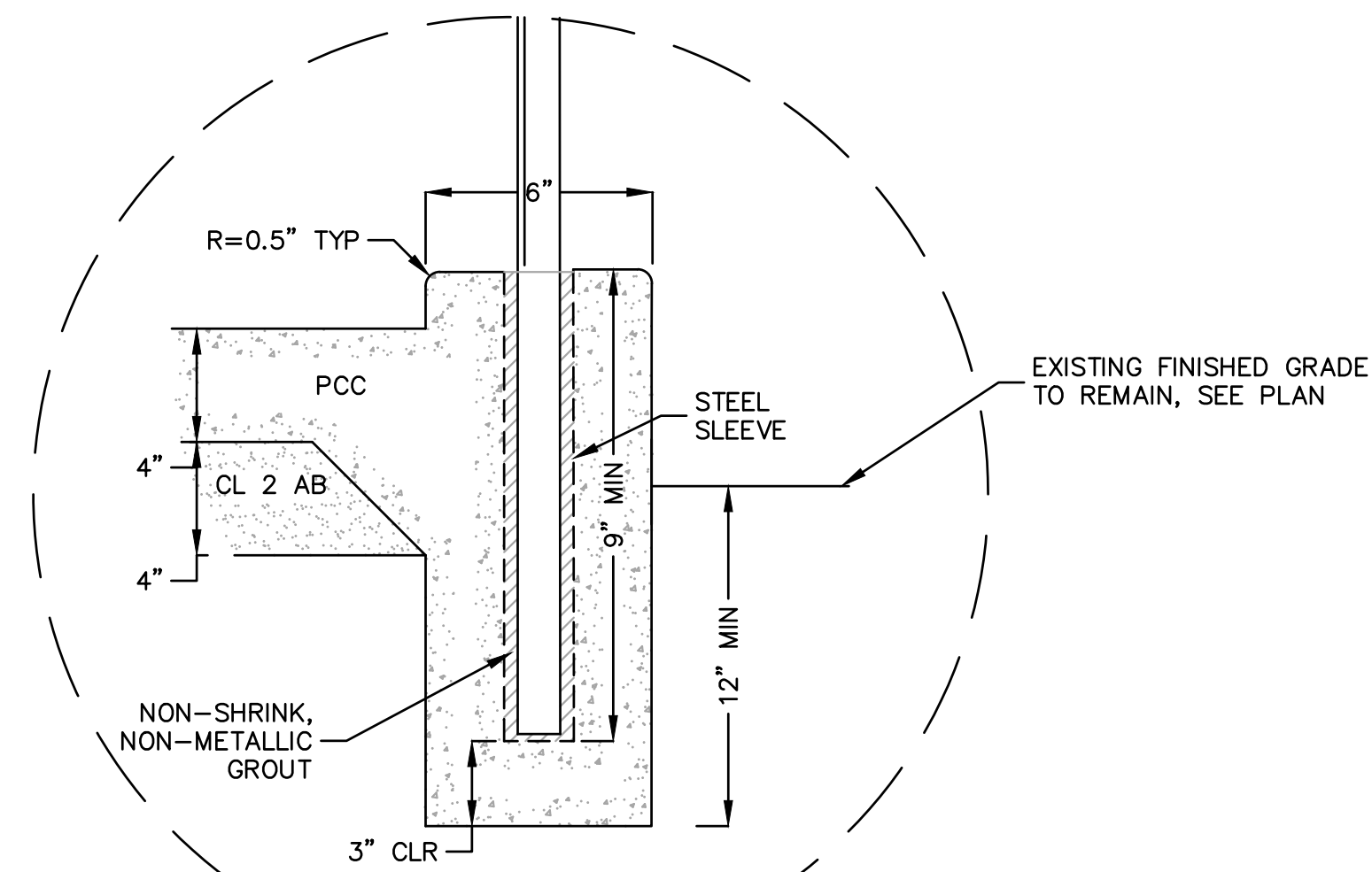
REVISIONS
DATE DESCRIPTION

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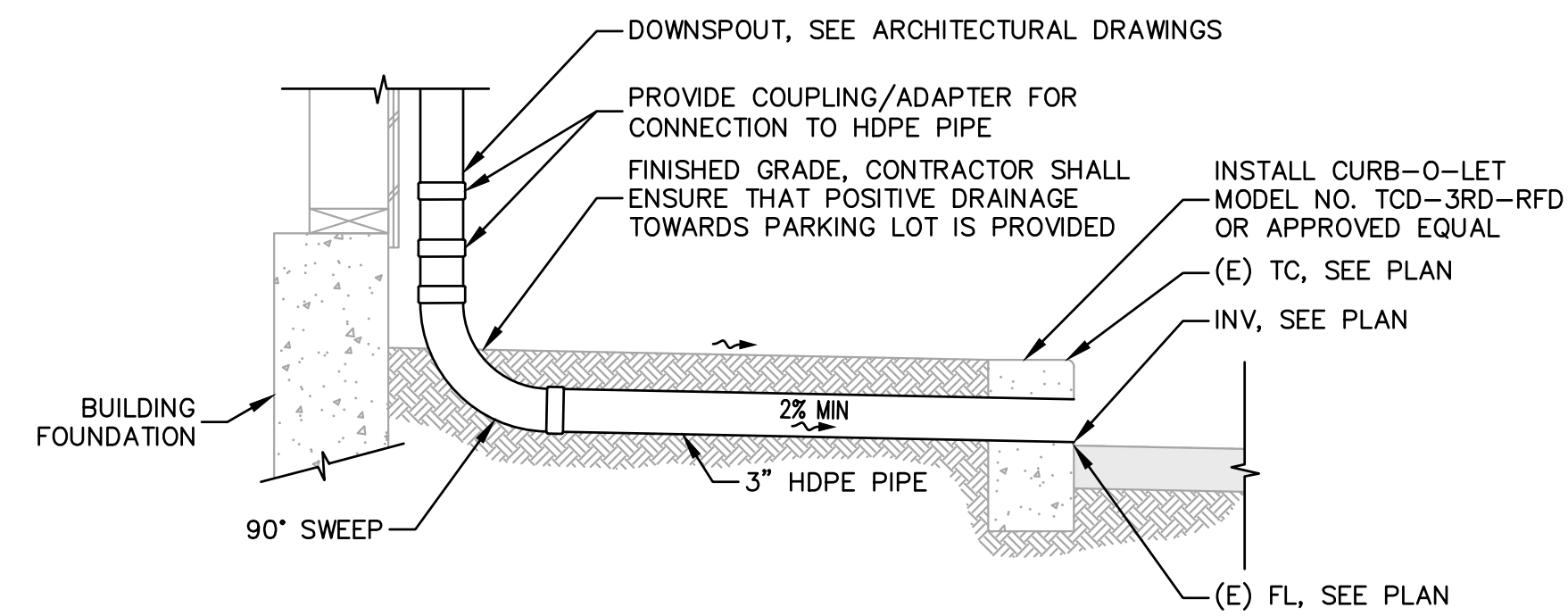
SHEET TITLE
**CONSTRUCTION
DETAILS**

SHEET NUMBER

C4.01



1 PEDESTRIAN RAMP WITH HANDRAIL
NOT TO SCALE



2 DOWNSPOUT CONNECTION TO STORM DRAIN LINE
NOT TO SCALE



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OAKLAND, CA 94612
(510) 899-7300

SEAL



APPROVALS

PROJECT TITLE

City of Berkeley
**WEST
BERKELEY
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1900 Sixth St
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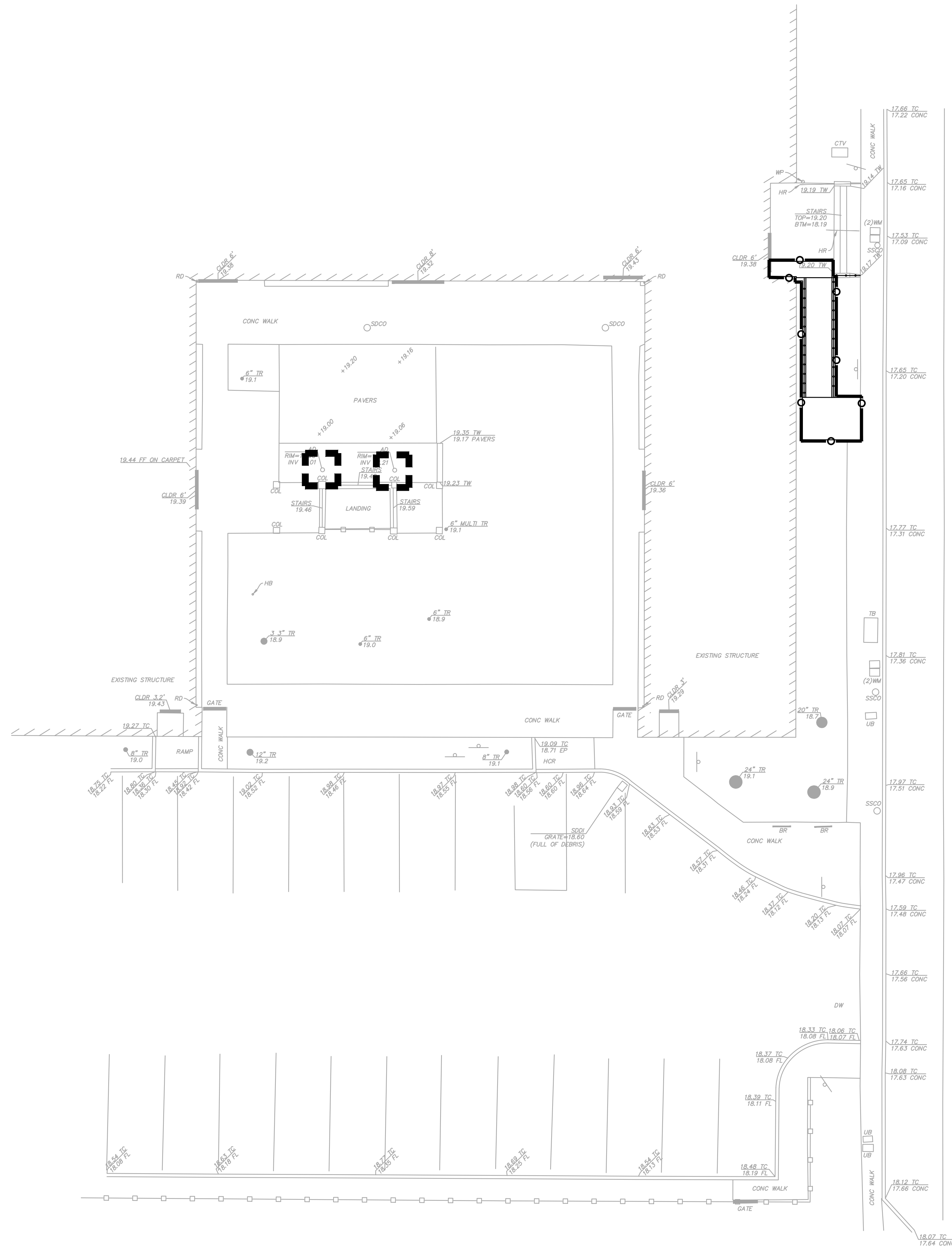
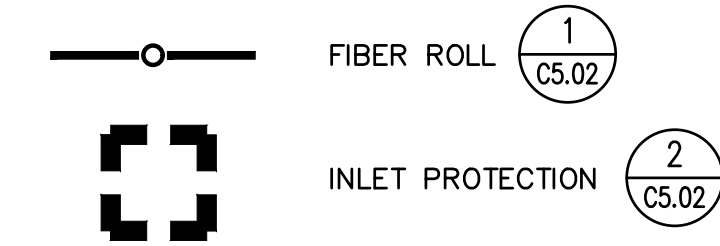
SHEET TITLE
**EROSION CONTROL
NOTES & DETAILS**

SHEET NUMBER

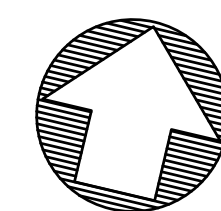
C5.01

NOTES:
SEE SHEET C5.02 FOR EROSION CONTROL NOTES.

LEGEND:



SIXTH STREET



GRAPHIC SCALE



(IN FEET)
1 inch = 10 ft.



Know what's below.
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EROSION AND SEDIMENT CONTROL NOTES:

1. GENERAL CONTRACTOR: TBD

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN CONTROL OF THE ENTIRE CONSTRUCTION OPERATION AND TO KEEP THE ENTIRE SITE IN COMPLIANCE WITH THE SOIL EROSION CONTROL PLAN. THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES FOR CONSTRUCTION ACTIVITIES AS REQUIRED BY THE CITY OF REDWOOD CITY AND/OR CRWQCB.

2. CIVIL ENGINEER: BKF ENGINEERS
2100 FRANKLIN STREET, SUITE 4C
OAKLAND, CA 94612
(510) 899-7300

3. CONSTRUCTION SUPERINTENDENT: TBD

4. THE EROSION CONTROL PLAN IS INTENDED TO BE USED FOR INTERIM EROSION AND SEDIMENT CONTROL ONLY AND IS NOT TO BE USED FOR FINAL ELEVATIONS OR PERMANENT IMPROVEMENTS.

5. OWNER WILL ENSURE THAT ALL EROSION/SEDIMENT MEASURES IDENTIFIED ON THE APPROVED EROSION CONTROL PLAN ARE IN PLACE. IF MEASURES ARE NOT IN PLACE, OWNER SHALL PROVIDE THE CITY WITH A WRITTEN EXPLANATION OF WHY THE MEASURE IS NOT IN PLACE AND WHAT WILL BE DONE TO REMEDY THIS SITUATION.

6. ALL EROSION CONTROL FACILITIES MUST BE MONITORED AS REQUIRED BY THE CITY OF REDWOOD CITY AND/OR THE CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD (CRWQCB). ALL SLOPES SHALL BE REPAIRED AS SOON AS POSSIBLE WHEN DAMAGED.

7. EROSION CONTROL MEASURES SHOWN ON THIS PLAN SHALL BE MAINTAINED, REPAIRED AND REPLACED AFTER EACH SIGNIFICANT RAINFALL OR AS DIRECTED BY THE CITY ENGINEER AND/OR CRWQCB. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BY THE CITY ENGINEER AND/OR THE CRWQCB BASED ON FIELD REVIEWS OF THE SITE.

8. THE CONTRACTOR WILL BE LIABLE FOR ANY AND ALL DAMAGES TO PUBLIC AND/OR PRIVATE OWNED AND MAINTAINED ROADS CAUSED BY THE CONTRACTOR'S GRADING ACTIVITIES, AND WILL BE RESPONSIBLE FOR THE CLEANUP OF ANY MATERIAL SPILLED ON ANY ROAD ON THE HAUL ROUTE. ADJACENT PUBLIC ROADS SHALL BE CLEANED AT THE END OF EACH WORKING DAY.

9. DURING THE RAINY SEASON, ALL PAVED AREAS SHALL BE KEPT CLEAR OF EARTH MATERIAL AND DEBRIS. THE SITE SHALL BE MAINTAINED SO AS TO MINIMIZE SEDIMENT LADEN RUNOFF TO ANY STORM DRAINAGE SYSTEM, INCLUDING EXISTING DRAINAGE SWALES AND WATER COURSES.

10. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION WILL BE MINIMIZED. STATE AND LOCAL LAWS CONCERNING POLLUTION ABATEMENT SHALL BE COMPLIED WITH.

11. THE FACILITIES SHOWN ON THIS PLAN ARE DESIGNED TO CONTROL EROSION AND SEDIMENT DURING THE RAINY SEASON, OCT. 15TH TO APRIL 15TH. FACILITIES ARE TO BE OPERABLE PRIOR TO OCT. 1ST OF ANY YEAR. GRADING OPERATIONS DURING THE RAINY SEASON WHICH LEAVE DENUDE SLOPES SHALL BE PROTECTED WITH EROSION CONTROL MEASURES IMMEDIATELY FOLLOWING GRADING ON THE SLOPES.

12. THIS PLAN COVERS ONLY THE FIRST WINTER FOLLOWING GRADING WITH ASSUMED SITE CONDITIONS AS SHOWN ON THE EROSION CONTROL PLAN. PRIOR TO SEPT. 15TH, THE COMPLETION OF SITE IMPROVEMENTS SHALL BE EVALUATED AND REVISIONS MADE TO THIS PLAN AS NECESSARY WITH THE APPROVAL OF THE CITY ENGINEER. PLANS ARE TO BE RESUBMITTED FOR CITY APPROVAL PRIOR TO SEPT. 1ST OF EACH SUBSEQUENT YEAR UNTIL SITE IMPROVEMENTS ARE ACCEPTED BY THE CITY.

13. CONSTRUCTION ENTRANCES SHALL BE INSTALLED PRIOR TO COMMENCEMENT OF GRADING. ALL CONSTRUCTION TRAFFIC ENTERING ONTO THE PAVED ROADS MUST CROSS THE STABILIZED CONSTRUCTION ENTRANCEWAYS.

14. CONTRACTOR SHALL MAINTAIN STABILIZED ENTRANCE AT EACH VEHICLE ACCESS POINT TO EXISTING PAVED STREETS. ANY MUD OR DEBRIS TRACKED ONTO PUBLIC STREETS SHALL BE REMOVED DAILY AND AS REQUIRED BY THE CITY. ALL TRUCK TIRES SHALL BE CLEANED PRIOR TO EXITING THE PROPERTY.

15. THIS PLAN MAY NOT COVER ALL THE SITUATIONS THAT ARISE DURING CONSTRUCTION DUE TO UNANTICIPATED FIELD CONDITIONS. IN GENERAL, THE CONTRACTOR IS RESPONSIBLE FOR KEEPING ANY SEDIMENT FROM LEAVING THE SITE. FIBER ROLLS AND SAND BAGS SHALL BE USED BY THE CONTRACTOR ON AN AS NEEDED BASIS TO INHIBIT SILT FROM LEAVING THE SITE AND ENTERING THE STORM DRAIN SYSTEM. ALL EXISTING, TEMPORARY, OR PERMANENT CATCH BASINS SHALL USE SEDIMENT BARRIERS.

16. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE OPERABLE YEAR ROUND OR UNTIL VEGETATION IS ESTABLISHED ON LANDSCAPED SURFACES. IF HYDROSEEDING IS NOT USED OR IS NOT EFFECTIVE BY 10/10, THEN OTHER IMMEDIATE METHODS SHALL BE IMPLEMENTED, SUCH AS EROSION CONTROL BLANKETS, OR A THREE-STEP APPLICATION OF 1) SEED, MULCH, FERTILIZER 2) BLOWN STRAW 3) TACKIFIER AND MULCH.

17. BORROW AND TEMPORARY STOCKPILES SHALL BE PROTECTED WITH APPROPRIATE EROSION CONTROL MEASURES (TARPS, FIBER ROLLS, ETC.) TO ENSURE SILT DOES NOT LEAVE THE SITE OR ENTER THE STORM DRAIN SYSTEM.

18. ALL DRAINAGE INLETS WITHIN AND NEAR THE PROJECT SITE SHALL BE PROVIDED WITH SEDIMENT TRAPS OR SEDIMENT BARRIERS AS PER THIS PLAN. INLET PROTECTION SHALL BE INSTALLED AT OPEN INLETS TO PREVENT SEDIMENT FROM ENTERING THE STORM DRAIN SYSTEM. INLETS NOT USED IN CONJUNCTION WITH EROSION CONTROL ARE TO BE BLOCKED TO PREVENT ENTRY OF SEDIMENT.

19. DURING GRADING OPERATIONS THE SITE SHALL BE WATERED ON A DAILY BASIS TO MINIMIZE THE RELEASE OF DUST AND OTHER PARTICULATE MATTER. CONTRACTOR SHALL PROVIDE DUST CONTROL AS REQUIRED BY THE APPROPRIATE FEDERAL, STATE AND LOCAL AGENCY REQUIREMENTS.

20. EARTHWORK SHALL NOT BE PERFORMED DURING UNFAVORABLE CONDITIONS. AFTER INTERRUPTION OF WORK DUE TO HEAVY RAIN, THE GEOTECHNICAL ENGINEER SHALL APPROVE EARTHWORK BEFORE RESUMPTION OF EARTHMOVING OPERATIONS.

21. CONTRACTOR SHALL BE RESPONSIBLE FOR PUTTING IN PLACE THE NECESSARY MEANS AND EXECUTE PROPER METHODS TO PROTECT EARTHWORK AGAINST UNFAVORABLE WEATHER CONDITIONS. CONTRACTOR SHALL NOT BE PAID FOR ANY DELAY OR ADDITIONAL WORK TO REMEDY PREVIOUS EARTHWORK RESULTING FROM THE CONTRACTOR'S NEGLIGENCE TO PROTECT ITS WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS INCURRED WITH ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL MEASURE MAINTENANCE THROUGHOUT THE DURATION OF THE PROJECT.

22. THE BMPS SHOWN ON THIS PLAN ARE SUBJECT TO CHANGE. IF ADDITIONAL EROSION CONTROL MEASURES ARE NEEDED TO PROTECT THE SITE AND NEARBY AREAS, SUCH ADDITIONAL MEASURES SHALL BE INSTALLED AT THE DISCRETION OF THE CITY INSPECTOR.

23. IF CONSTRUCTION IS NOT COMPLETE BY THE START OF THE WET SEASON (OCTOBER 1 THROUGH APRIL 30), IMPLEMENT A WINTERIZATION PROGRAM TO MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENTATION. AS APPROPRIATE TO THE SITE AND STATUS OF CONSTRUCTION, WINTERIZATION REQUIREMENTS SHALL INCLUDE INSPECTING/MAINTAINING/CLEANING ALL SOIL EROSION AND SEDIMENTATION CONTROLS PRIOR TO, DURING, AND IMMEDIATELY AFTER EACH STORM EVENT; STABILIZING DISTURBED SOILS THROUGH TEMPORARY OR PERMANENT SEEDING, MULCHING, MATTING, TARPING OR OTHER PHYSICAL MEANS; ROCKING UNPAVED VEHICLE ACCESS TO LIMIT DISPERSION OF MUD ONTO PUBLIC RIGHT-OF-WAY; AND COVERING/TARPING STORED CONSTRUCTION MATERIALS, FUELS, AND OTHER CHEMICALS. PLANS TO INCLUDE PROPOSED MEASURES TO PREVENT EROSION AND POLLUTED RUNOFF FROM ALL SITE CONDITIONS SHALL BE SUBMITTED FOR APPROVAL BY CDD PRIOR TO BEGINNING CONSTRUCTION. AS SITE CONDITIONS WARRANT, THE CITY ENGINEER MAY DIRECT THE APPLICANT TO IMPLEMENT ADDITIONAL WINTERIZATION REQUIREMENTS.

EROSION AND SEDIMENT CONTROL MAINTENANCE NOTES:

1. MAINTENANCE IS TO BE PERFORMED AS FOLLOWS:

- A. REPAIR DAMAGES CAUSED BY SOIL EROSION OR CONSTRUCTION AT THE END OF EACH WORKING DAY.
- B. SWALES SHALL BE INSPECTED PERIODICALLY AND MAINTAINED AS NEEDED.
- C. SEDIMENT TRAPS, BERMS, AND SWALES ARE TO BE INSPECTED AFTER EACH STORM AND REPAIRS MADE AS NEEDED.
- D. SEDIMENT SHALL BE REMOVED AND SEDIMENT TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT HAS ACCUMULATED TO A DEPTH OF 1 FOOT.
- E. SEDIMENT REMOVED FROM TRAP SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
- F. RILLS AND GULLIES MUST BE REPAIRED.

2. SAND BAG INLET PROTECTION SHALL BE CLEANED OUT WHENEVER SEDIMENT DEPTH IS ONE HALF THE HEIGHT OF ONE SAND BAG.

3. SEDIMENT DAMS AND TRAPS SHALL BE CHECKED FOR SEDIMENT ACCUMULATION AFTER EACH SIGNIFICANT RAINFALL. SEDIMENT SHALL BE REMOVED FROM THESE DEVICES WHEN IT HAS ACCUMULATED TO A DEPTH OF 1 FOOT.

4. DAMAGED EROSION CONTROL DEVICES SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AS SOON AS PRACTICAL AFTER THE DAMAGE OCCURS.

5. DURING PERIODS WHEN STORMS ARE FORECAST -

- A. EXCAVATED SOILS SHOULD NOT BE PLACED IN STREETS OR ON PAVED AREAS.
- B. ANY EXCAVATED SOILS SHOULD BE REMOVED FROM THE SITE BY THE END OF THE DAY.
- C. WHERE STOCKPILING IS NECESSARY, USE A TARPAULIN OR SURROUND THE STOCKPILED MATERIAL WITH FIBER ROLLS OR OTHER RUNOFF CONTROLS.
- D. USE INLET CONTROLS (E.G. FILTER MAT) FOR STORM DRAINS ADJACENT TO STOCKPILED SOIL.
- E. THOROUGHLY SWEEP ALL PAVED AREAS EXPOSED TO SOIL EXCAVATION AND PLACEMENT.

6. DURING PERIODS WHEN STORMS ARE NOT FORECAST -

- A. PREVENT STOCKPILED MATERIAL FROM ENTERING THE STORM DRAIN SYSTEM.
- B. THOROUGHLY REMOVE LOOSE SOIL VIA SWEEPING FOLLOWING REMOVAL OF DIRT.

CONSTRUCTION RELATED AIR QUALITY IMPACTS:

1. ALL EXPOSED SURFACES (E.G., PARKING AREAS, STAGING AREAS, SOIL PILES, GRADED AREAS, AND UNPAVED ACCESS ROADS) SHALL BE WATERED TWO TIMES PER DAY.

2. ALL HAUL TRUCKS TRANSPORTING SOIL, SAND, OR OTHER LOOSE MATERIAL OFF-SITE SHALL BE COVERED.

3. ALL VISIBLE MUD OR DIRT TRACK-OUT ONTO ADJACENT PUBLIC ROADS SHALL BE REMOVED USING WET POWER VACUUM STREET SWEEPERS AT LEAST ONCE PER DAY. THE USE OF DRY POWER SWEEPING IS PROHIBITED.

4. ALL VEHICLE SPEEDS ON UNPAVED ROADS SHALL BE LIMITED TO 15 MPH.

5. ALL ROADWAYS, DRIVEWAYS, AND SIDEWALKS TO BE PAVED SHALL BE COMPLETED AS SOON AS POSSIBLE. BUILDING PADS SHALL BE LAID AS SOON AS POSSIBLE AFTER GRADING UNLESS SEEDING OR SOIL BINDERS ARE USED.

6. IDLING TIMES SHALL BE MINIMIZED EITHER BY SHUTTING EQUIPMENT OFF WHEN NOT IN USE OR REDUCING THE MAXIMUM IDLING TIME TO 5 MINUTES (AS REQUIRED BY THE CALIFORNIA AIRBORNE TOXICS CONTROL MEASURE TITLE 13, SECTION 2485 OF CALIFORNIA CODE OF REGULATIONS [CCR]). CLEAR SIGNAGE SHALL BE PROVIDED FOR CONSTRUCTION WORKERS AT ALL ACCESS POINTS.

7. ALL CONSTRUCTION EQUIPMENT SHALL BE MAINTAINED AND PROPERLY TUNED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. ALL EQUIPMENT SHALL BE CHECKED BY A CERTIFIED VISIBLE EMISSIONS EVALUATOR.

8. A PUBLICLY VISIBLE SIGN SHALL BE POSTED WITH THE TELEPHONE NUMBER AND PERSON TO CONTACT AT THE LEAD AGENCY REGARDING DUST COMPLAINTS. THIS PERSON SHALL RESPOND AND TAKE CORRECTIVE ACTION WITHIN 48 HOURS. THE AIR DISTRICTS PHONE NUMBER SHALL ALSO BE VISIBLE TO HELP ENSURE COMPLIANCE WITH APPLICABLE REGULATIONS.

(o) ADDITIONAL CONSTRUCTION MEASURES FOR CONSTRUCTION ACTIVITIES WITH EMISSIONS ABOVE BAAQMD THRESHOLDS:

9. ALL EXPOSED SURFACES SHALL BE WATERED AT A FREQUENCY ADEQUATE TO MAINTAIN MINIMUM SOIL MOISTURE OF 12 PERCENT. MOISTURE CONTENT CAN BE VERIFIED BY LAB SAMPLES OR MOISTURE PROBE.

10. ALL EXCAVATION, GRADING, AND/OR DEMOLITION ACTIVITIES SHALL BE SUSPENDED WHEN AVERAGE WIND SPEEDS EXCEED 20 MPH.

11. WIND BREAKS (E.G., TREES, FENCES) SHALL BE INSTALLED ON THE WINDWARD SIDE(S) OF ACTIVELY DISTURBED AREAS OF CONSTRUCTION. WIND BREAKS SHOULD HAVE AT MAXIMUM 50 PERCENT AIR POROSITY.

12. VEGETATIVE GROUND COVER (E.G., FAST-GERMINATING NATIVE GRASS SEED) SHALL BE PLANTED IN DISTURBED AREAS AS SOON AS POSSIBLE AND WATERED APPROPRIATELY UNTIL VEGETATION IS ESTABLISHED.

13. THE SIMULTANEOUS OCCURRENCE OF EXCAVATION, GRADING, AND GROUND-DISTURBING CONSTRUCTION ACTIVITIES ON THE SAME AREA AT ANY ONE TIME SHALL BE LIMITED. ACTIVITIES SHALL BE PHASED TO REDUCE THE AMOUNT OF DISTURBED SURFACES AT ANY ONE TIME.

14. ALL TRUCKS AND EQUIPMENT, INCLUDING THEIR TIRES, SHALL BE WASHED OFF PRIOR TO LEAVING THE SITE.

15. SITE ACCESSES TO A DISTANCE OF 100 FEET FROM THE PAVED ROAD SHALL BE TREATED WITH A 6- TO 12-INCH COMPACTED LAYER OF WOOD CHIPS, MULCH, OR GRAVEL.

16. SANDBAGS OR OTHER EROSION CONTROL MEASURES SHALL BE INSTALLED TO PREVENT SILT RUNOFF TO PUBLIC ROADWAYS FROM SITES WITH A SLOPE GREATER THAN ONE PERCENT.

17. THE IDLING TIME OF DIESEL-POWERED CONSTRUCTION EQUIPMENT SHALL BE LIMITED TO TWO MINUTES.

18. THE PROJECT SHALL DEVELOP A PLAN DEMONSTRATING THAT THE OFF-ROAD EQUIPMENT (MORE THAN 50 HORSEPOWER) TO BE USED IN THE CONSTRUCTION PROJECT (I.E., OWNED, LEASED, AND SUBCONTRACTOR VEHICLES) WOULD ACHIEVE A PROJECT-WIDE FLEET-AVERAGE 20 PERCENT NOX REDUCTION AND 45 PERCENT PM REDUCTION COMPARED TO THE MOST RECENT ARB FLEET AVERAGE. ACCEPTABLE OPTIONS FOR REDUCING EMISSIONS INCLUDE THE USE OF LATE-MODEL ENGINES, LOW-EMISSION DIESEL PRODUCTS, ALTERNATIVE FUELS, ENGINE RETROFIT TECHNOLOGY, AFTER-TREATMENT PRODUCTS, ADD-ON DEVICES SUCH AS PARTICULATE FILTERS, AND/OR OTHER OPTIONS AS THEY BECOME AVAILABLE.

19. USE LOW-VOC (I.E., ROG) COATINGS BEYOND THE LOCAL REQUIREMENTS (I.E., REGULATION 8, RULE 3: ARCHITECTURAL COATINGS).

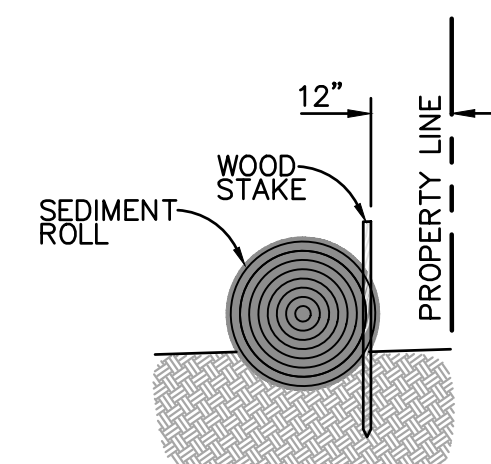
20. ALL CONSTRUCTION EQUIPMENT, DIESEL TRUCKS, AND GENERATORS SHALL BE EQUIPPED WITH BEST AVAILABLE CONTROL TECHNOLOGY FOR EMISSION REDUCTIONS OF NOX AND PM.

21. ALL CONTRACTORS SHALL USE EQUIPMENT THAT MEETS ARB'S MOST RECENT CERTIFICATION STANDARD FOR OFF-ROAD HEAVY-DUTY DIESEL ENGINES.

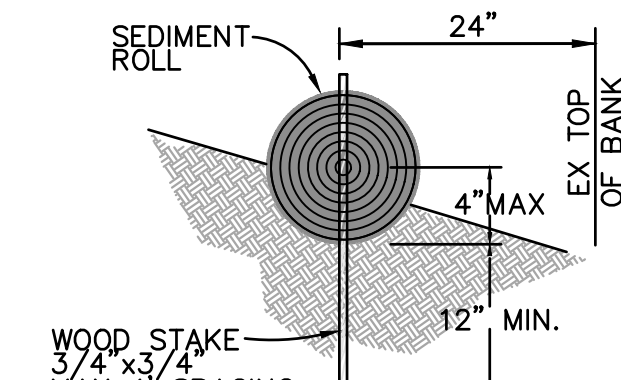
(o) PROJECT-SPECIFIC MEASURES:

22. FOR CONSTRUCTION, OFF-ROAD EQUIPMENT SHALL BE TIER 4 OR SHALL ACHIEVE TIER 4 PARTICULATE MATTER EMISSION LEVELS THROUGH USE OF ONE OR MORE OF THE FOLLOWING: TIER 2/TIER 3 EQUIPMENT WITH DIESEL PARTICULATE FILTERS; ALTERNATIVE FUELS (E.G. BIODIESEL OR LIQUEFIED NATURAL GAS); AND/OR ELECTRIFICATION.

23. FOR EACH PHASE OF PROJECT CONSTRUCTION, THE APPLICANT SHALL MAINTAIN ROG EMISSION BELOW 54 POUNDS PER DAY. THE APPLICANT MAY DEMONSTRATE COMPLIANCE WITH THIS LIMIT THROUGH ONE OR MORE OF THE FOLLOWING: STRATEGIC PROJECT PHASING, USE OF PRE-COATED BUILDING MATERIALS, AND/OR USE OF LOW-VOC COATINGS BEYOND THE REQUIREMENTS OF BAAQMD REGULATION 8, RULE 3. IMPLEMENTATION OF THESE MEASURES WOULD REDUCE PROJECT CONSTRUCTION-RELATED AIR QUALITY IMPACTS. THE MEASURES TO REDUCE LOCALIZED PM10 IMPACTS DUE TO FUGITIVE DUST WOULD BE CONSISTENT WITH BAAQMD CEQA GUIDELINES RECOMMENDATIONS AND WOULD REDUCE PM10 EMISSIONS TO A LESS-THAN-SIGNIFICANT LEVEL. BECAUSE THE ROG PERFORMANCE STANDARD WOULD MAINTAIN ROG EMISSIONS BELOW 54 POUNDS PER DAY, THIS IMPACT WOULD BE LESS-THAN-SIGNIFICANT. THE NOX EMISSIONS FROM CONSTRUCTION OF THE PROJECT WOULD BE REDUCED BY UP TO 20 PERCENT; HOWEVER, THERE IS A POTENTIAL THAT CONSTRUCTION.



**ENTRENCHMENT DETAIL
IN FLAT AREA**

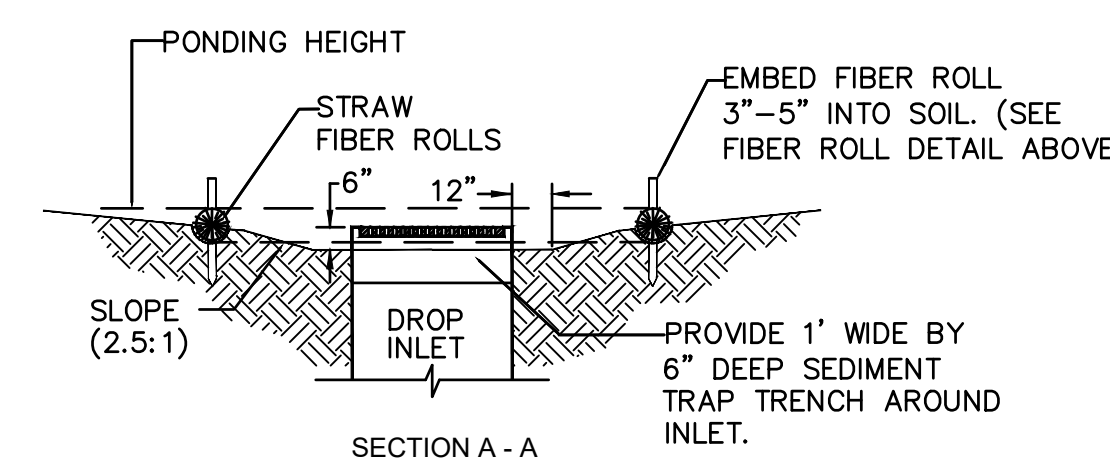
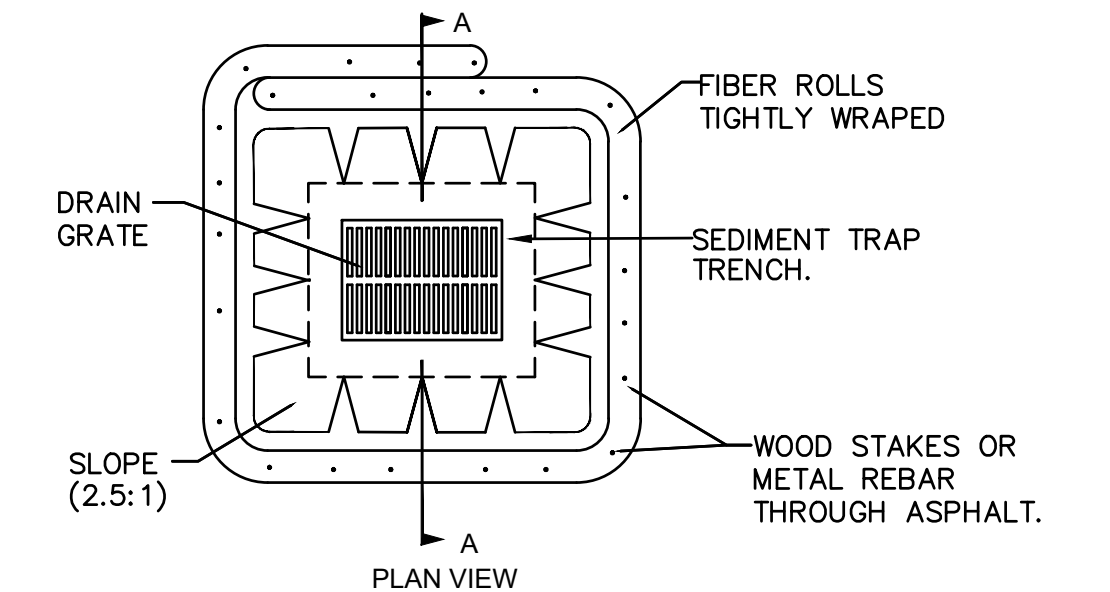


**ENTRENCHMENT DETAIL
IN SLOPE AREA**

INSTALLATION PROCEDURE

1. FIBER ROLLS ARE TUBES MADE FROM POROUS BIODEGRADABLE FIBER STUFFED IN A PHOTO-DEGRADABLE OPEN WEAVE NETTING. THEY ARE APPROX. 8" DIAMETER.
2. FIBER ROLL INSTALLATION REQUIRES THE PLACEMENT AND SECURE STAKING OF THE ROLL IN A TRENCH, 2"-4" DEEP, DUG ON CONTOUR. RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND ROLL. ROLLS SHOULD BE ABUTTED SECURELY TO PROVIDE A TIGHT JOINT, NOT OVERLAPPED.
3. TURN ENDS OF FIBER ROLLS UPSLOPE.
4. SILT BUILD-UP AT THE UPSLOPE SIDE OF FIBER ROLLS SHALL BE REMOVED WHEN THE DEPRESSION BECOMES 50% FULL.
5. ANY PLACE WHERE WATER HAS ERODED UNDER THE FIBER ROLL SHALL BE IMMEDIATELY FILLED AS NECESSARY TO PREVENT RECURRENCE.

1 FIBER ROLL



NOTES:

1. DURING THE DRY SEASON (JUNE 1 TO SEPTEMBER 30) USE INSERTS AT ALL DROP INLETS.
2. INSERTS TO BE INSPECTED AND CLEANED WEEKLY AND AFTER EVERY RAIN EVENT.
3. EMPTY DROP INLET FILTERS WHEN FILTERS APPEAR TO BE HALF FULL.
4. DISPOSE OF TRAPPED SEDIMENT IN ACCORDANCE WITH LOCAL REQUIREMENTS.
5. PLACE FIBER ROLLS AROUND THE INLET CONSISTENT WITH BASIN SEDIMENT BARRIER DETAIL ON THIS SHEET. USE REED & GRAHAM, INC. GEOSYNTHETICS STRAW WATTLE FIBER ROLL (COMES IN 9' X 25' ROLLS) OR EQUIVALENT.
6. FIBER ROLL INSTALLATION REQUIRES THE PLACEMENT AND SECURE STAKING OF THE FIBER ROLL IN A TRENCH, 3"- 5" DEEP, DUG ON CONTOUR. RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND FIBER ROLL.
7. THE TOP OF THE STRUCTURE (PONDING HEIGHT) MUST BE WELL BELOW THE GROUND ELEVATION DOWNSLOPE TO PREVENT RUNOFF FROM BY-PASSING THE INLET. EXCAVATION OF A BASIN ADJACENT TO THE DROP INLET OR A TEMPORARY DIKE ON THE DOWNSLOPE OF THE STRUCTURE MAY BE NECESSARY.

2 DROP INLET SEDIMENT BARRIERS



BKF ENGINEERS
2100 FRANKLIN ST, SUITE 4C
OAKLAND, CA 94612
(510) 899-7300

SEAL



APPROVALS

PROJECT TITLE

**City of Berkeley
WEST
BERKELEY
SERVICE
CENTER**

1900 Sixth St
Berkeley, CA 94710

BID SET

ISSUE DATE 12/22/2023

BKF JOB NUMBER 20171034

REVISIONS	DATE	DESCRIPTION
▲		

DRAWN BY AP,NF CHECKED BY KW

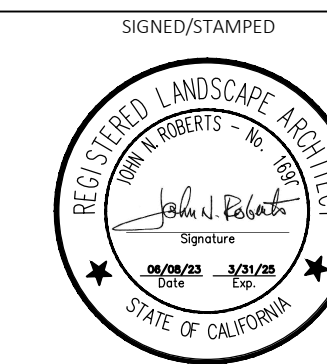
SHEET TITLE
**EROSION CONTROL
NOTES & DETAILS**

SHEET NUMBER

C5.02



Know what's below.
Call before you dig.



PROJECT TITLE
WEST BERKELEY SERVICE CENTER
1900 Sixth Street
Berkeley, CA 94710
APN 057-209700201
Draft
Construction Documents

DATE	DESCRIPTION	REV
	BID SET	
		12.22.2023

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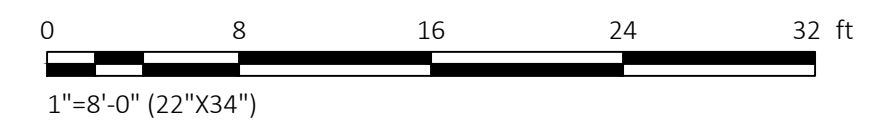
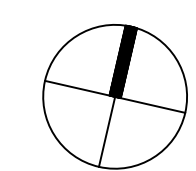
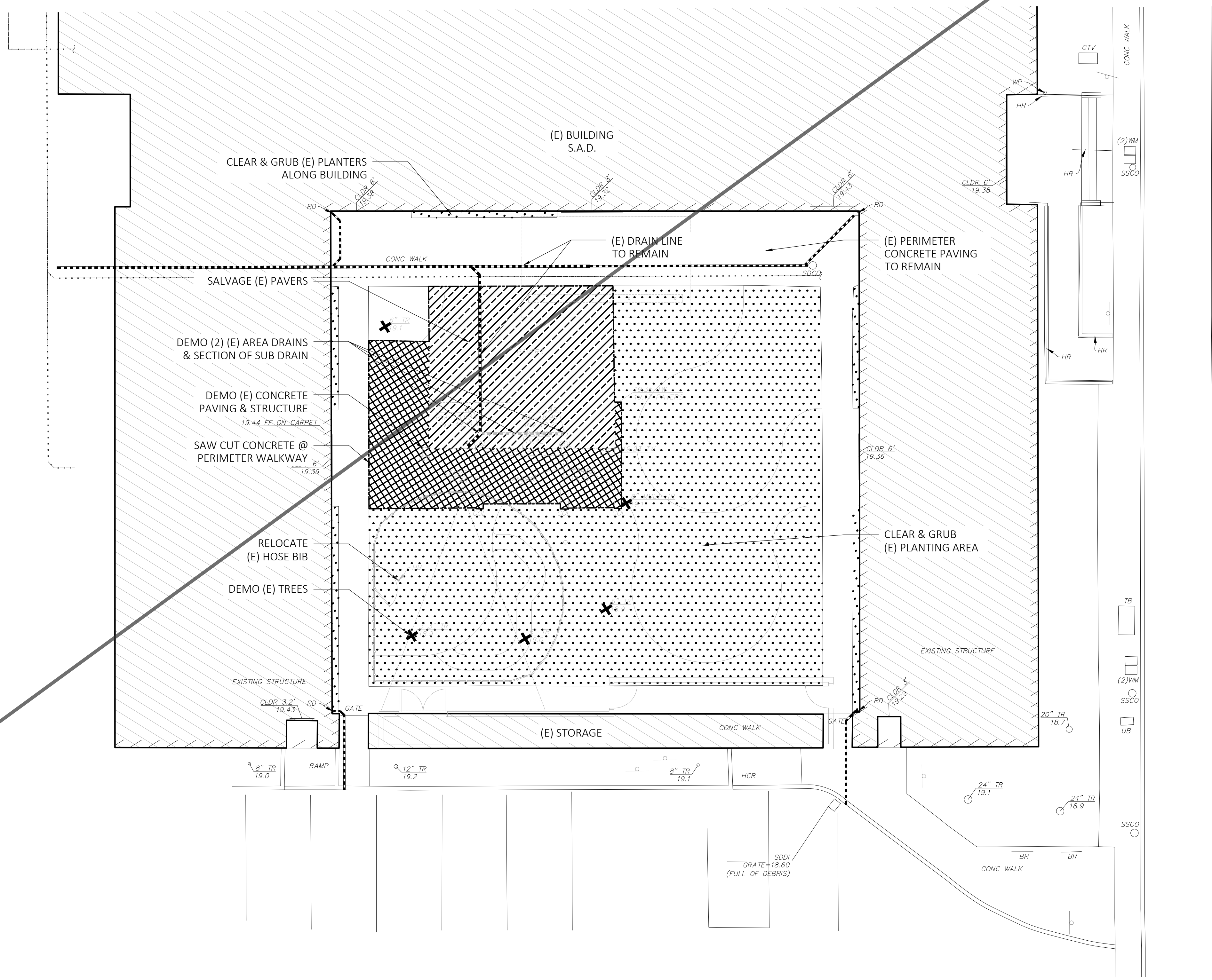
SHEET TITLE
DEMOLITION PLAN

SCALE
AS NOTED. SCALE IN FEET.

DRAWN LR + DC	PROJECT NUMBER 433
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SHEET NUMBER
L1.0
1 OF 8

- LEGEND**
- PAVERS TO BE SALVAGED
 - CONCRETE PAVING TO BE REMOVED
 - EXISTING PLANTING AREAS TO BE CLEARED & GRUBBED
 - EXISTING TREES TO BE REMOVED



SIGNED/STAMPED



PROJECT TITLE

**WEST BERKELEY
SERVICE
CENTER**

1900 Sixth Street
Berkeley, CA 94710

APN 057-209700201

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Construction Documents

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SHEET TITLE

**LAYOUT &
MATERIALS PLAN**

SCALE

AS NOTED. SCALE IN FEET.

DRAWN

LR + DC

PROJECT NUMBER



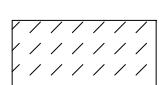



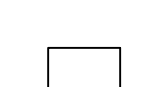


433

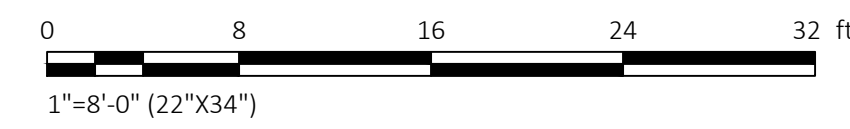
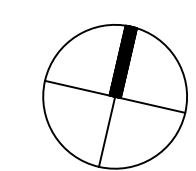
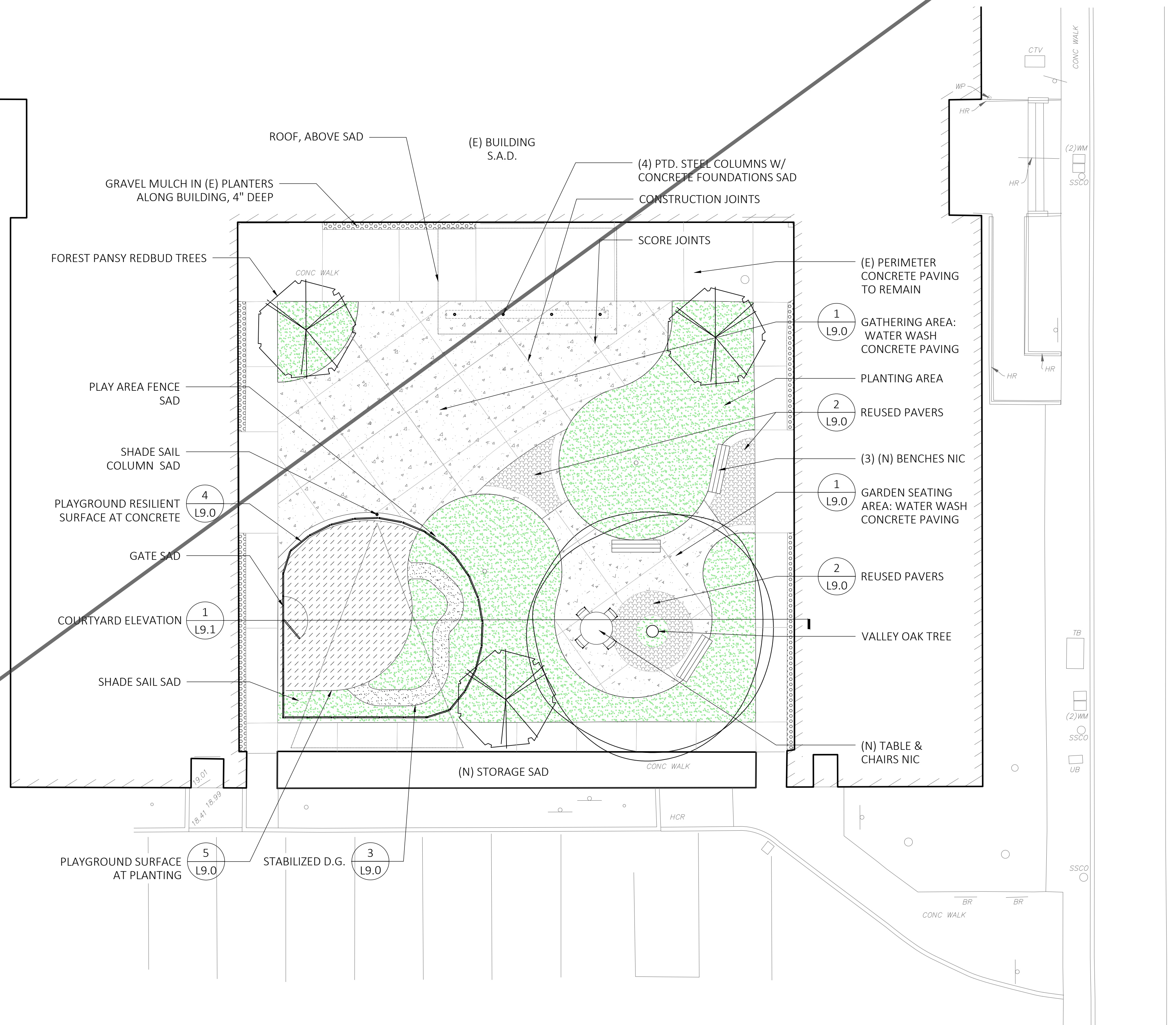
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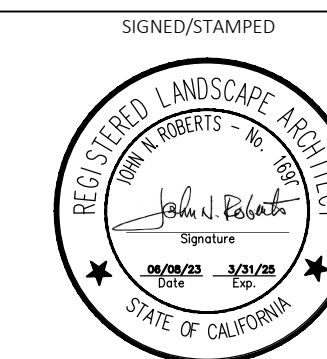
L2.0

2 OF 8

LEGEND

-  NEW CONCRETE PAVING
TOTAL AREA ±1250 SF
-  REUSED PAVERS - SAND SET
TOTAL AREA ±170 SF
-  SYNTHETIC RESILIENT
SURFACE
TOTAL AREA ±313 SF
-  STABILIZED D.G.
TOTAL AREA ±60 SF
-  GRAVEL MULCH - 3/8"
DECORATIVE PEBBLES
TOTAL AREA ±92 SF
-  PLANTING AREAS -
SEE PLANTING PLAN
-  PLAYGROUND FENCE
-  CONCRETE CONTROL JOINT
-  CONCRETE SCORE JOINT





PROJECT TITLE

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SHEET TITLE

DIMENSION PLAN

SCALE

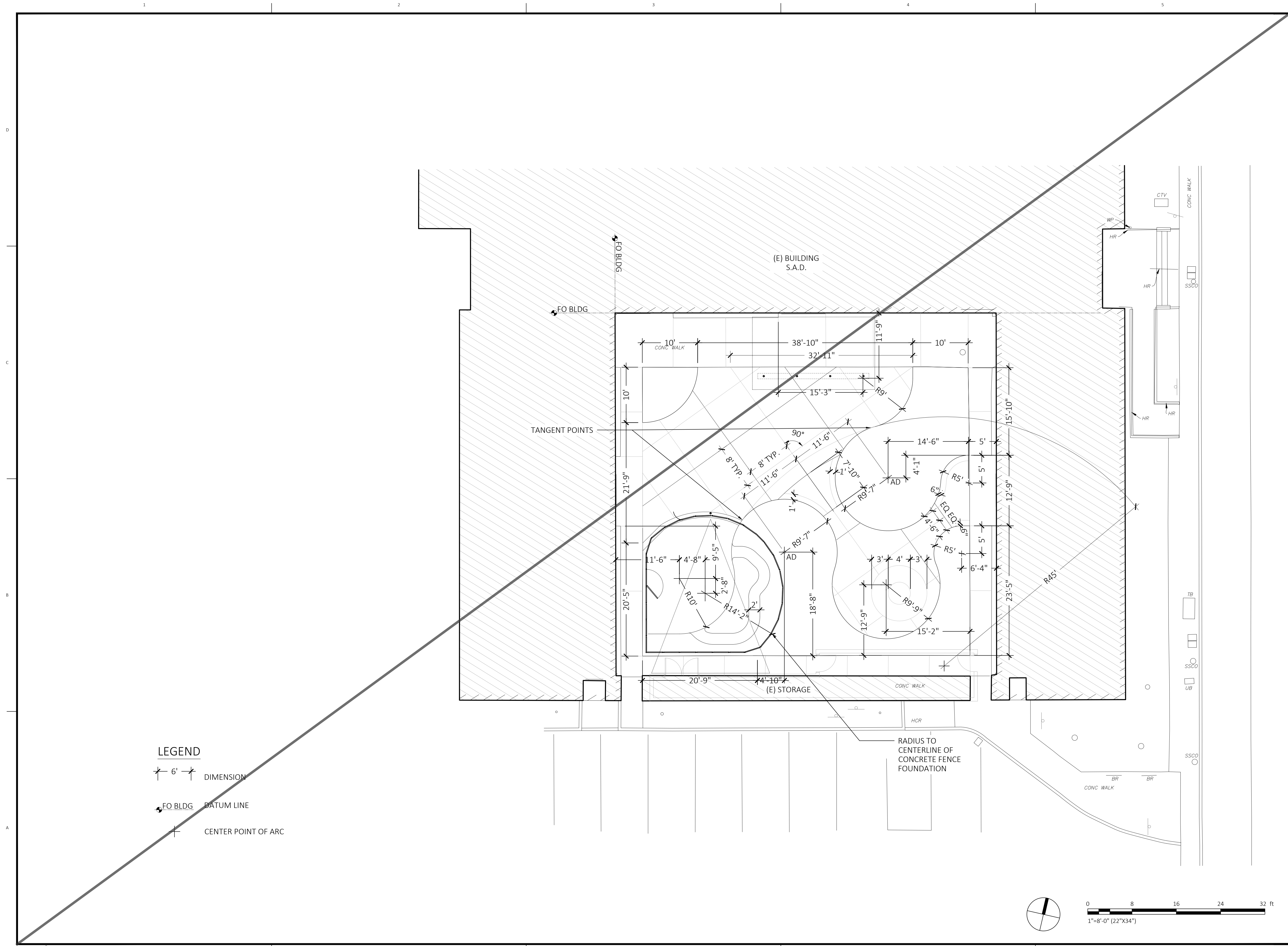
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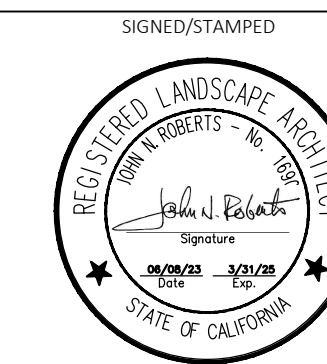
DRAWN LR + DC	PROJECT NUMBER 433
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SHEET NUMBER

L3.0

3 OF 8





PROJECT TITLE
WEST BERKELEY SERVICE CENTER
1900 Sixth Street
Berkeley, CA 94710
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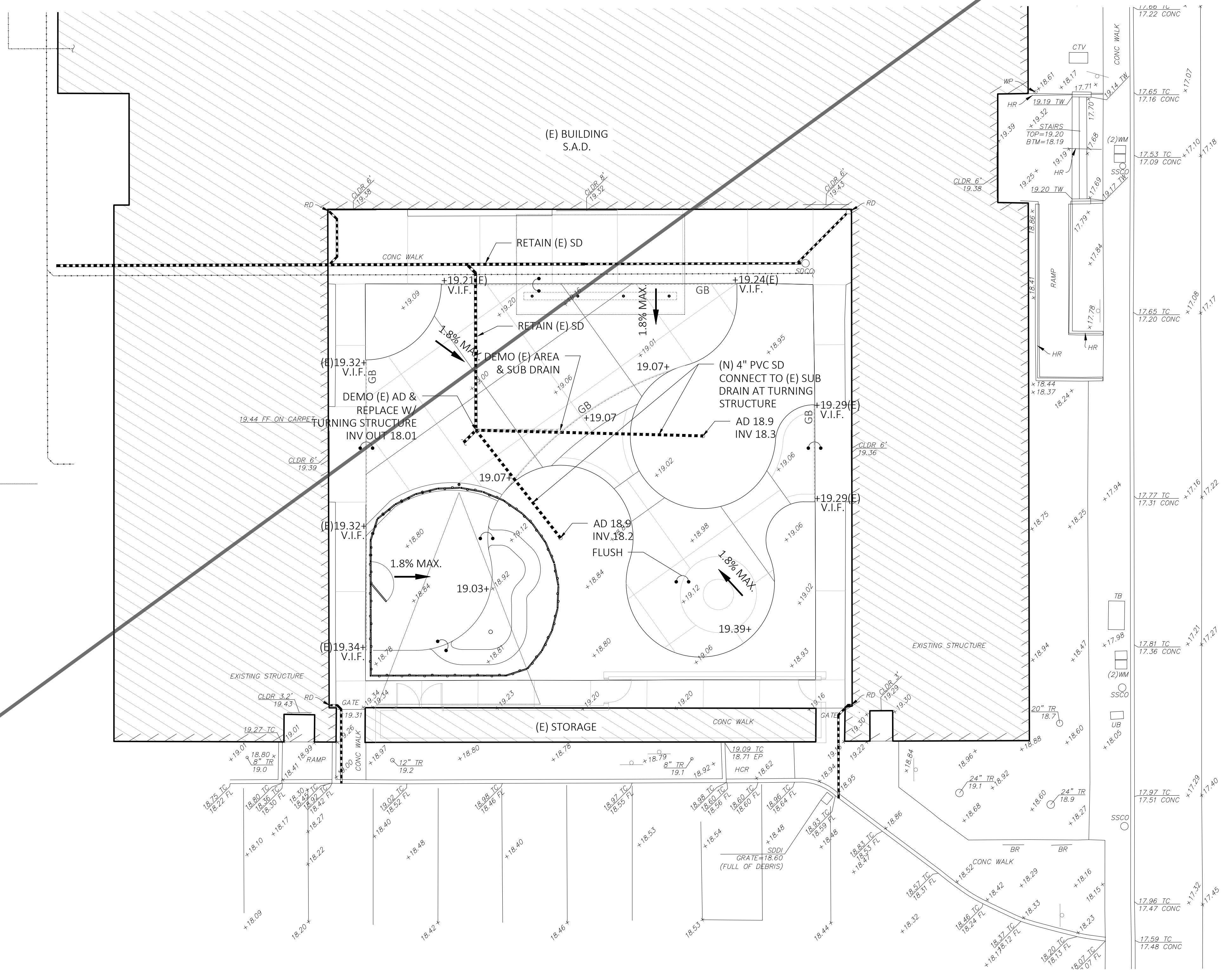
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GRADING PLAN

SCALE
AS NOTED. SCALE IN FEET.

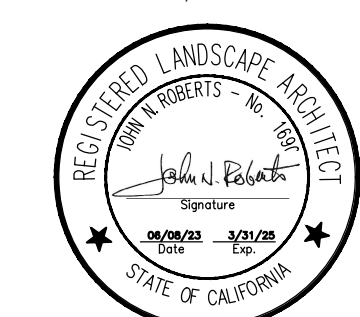
DRAWN LR + DC	PROJECT NUMBER 433
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SHEET NUMBER
L4.0
4 OF 8

- LEGEND**
- 2% → PROPOSED SLOPE
 - +19.07 PROPOSED SPOT ELEVATION
 - +19.07(E) EXISTING SPOT ELEVATION
 - ⊕ FLUSH
 - GB GRADE BREAK
 - NEW 4" SUB DRAIN APPROXIMATE LOCATION



SIGNED/STAMPED



PROJECT TITLE

**WEST BERKELEY
SERVICE
CENTER**

1900 Sixth Street
Berkeley, CA 94710

APN 057-209700201

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SHEET TITLE

**PLANTING
PLAN**

SCALE

AS NOTED. SCALE IN FEET.

DRAWN
LR + DC

PROJECT NUMBER
433

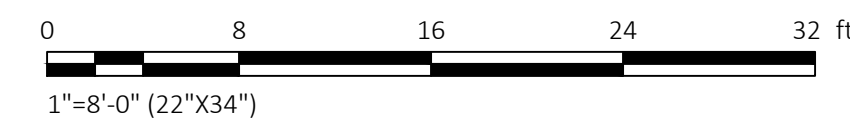
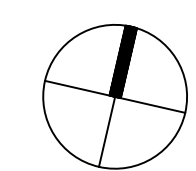
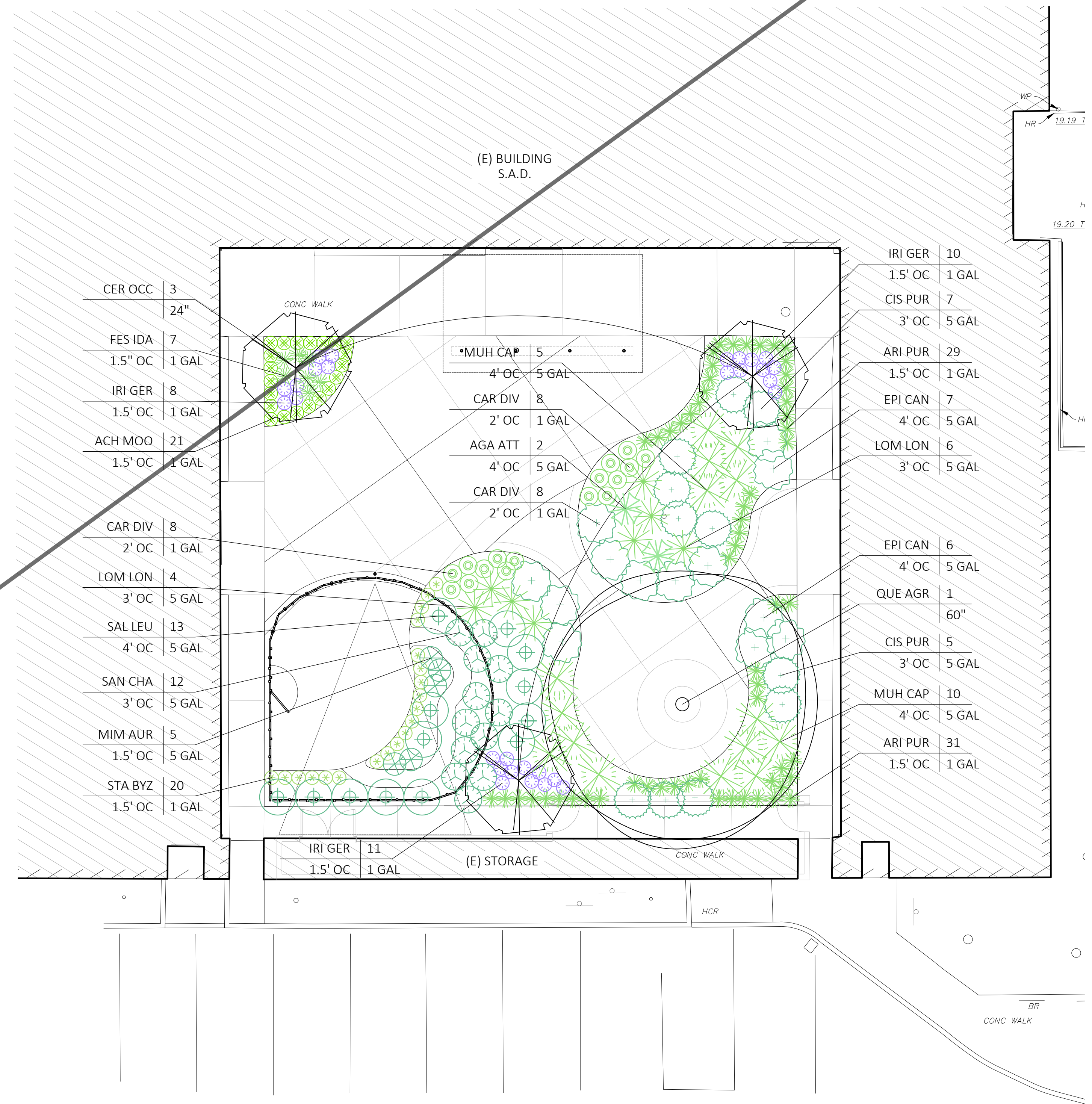
SHEET NUMBER

L6.0

5 OF 8

PLANT SCHEDULE

SYM.	ABBRV	NAME	COMMON NAME	HT (FT)	WT (FT)	SUN	WTR	QUANTITY BY SIZE					TOTAL
								1	5	15	24	60	
TREES													
	CER OCC	CERCIS OCCIDENTALIS	WESTERN REDBUD	15	15	SUN SHD	LOW				3	3	
	QUE AGR	QUERCUS AGRIFOLIA	COAST LIVE OAK	50	50	SUN	LOW				1	1	
SHRUBS													
	CIS PUR	CISTUS X PURPUREUS	PURPLE ROCKROSE	4-6	4-6	SUN	LOW		12			12	
	EPI CAN	EPILOBIUM CANUM 'CATALINA'	CATALINA FUCHSIA	3-4	4-5	SUN	LOW		13			13	
	MIM AUR	MIMULUS AURANTIACUS	STICKY MONKEY-FLOWER	2-3	2-3	SUN SHD	LOW		5			5	
	SAL LEU	SALVIA LEUCOPHYLLA	PURPLE SAGE	3-4	4-6	SUN SHD	LOW		13			13	
	SAN CHA	SANTOLINA CHAMAECYPARISSUS	LAVENDER COTTON	1-2	3-4	SUN	LOW		12			12	
GRASSES													
	ARI PUR	ARISTIDA PURPUREA	PURPLE THREE-AWN	2-3	1-2	SUN	LOW	60				60	
	CAR DIV	CAREX DIVULSA	EUROPEAN GREY SEDGE	1-2	1-2	SUN SHD	LOW	16				16	
	FES IDA	FESTUCA IDAHOENSIS X 'SISKIYOU BLUE'	SISKIYOU BLUE FESCUE	1-2	1-2	SUN SHD	MED	7				7	
	LOM LON	LOMANDRA LONGIFOLIA	SPINY HEADED MAT RUSH	4-5	4-5	SUN SHD	LOW	8				8	
	MUH CAP	MUHLENBERGIA CAPILLARIS	PINK MUHLY GRASS	2-3	2-3	SUN	LOW	15				15	
PERENNIALS													
	ACH MOO	ACHILLEA 'MOONSHINE'	MOONSHINE YARROW	1-2	2-3	SUN	LOW	21				21	
	IRI GER	IRIS GERMANICA 'FREQUENT FLYER'	WHITE TALL BEARDED IRIS	2-3	1-2	SUN	LOW	29				29	
	STA BYZ	STACHYS BYZANTINA	LAMB'S EAR	<1	4-5	SUN SHD	LOW	20				20	
SUCCULENTS													
	AGA ATT	AGAVE ATTENUATA	FOXTAIL AGAVE	4	4	SUN SHD	LOW	2				2	



TREES



QUERCUS AGRIFOLIA
COAST LIVE OAK



CERCIS OCCIDENTALIS
WESTERN REDBUD

SHRUBS



EPILOBIUM CANUM 'CATALINA'
CATALINA FUCHSIA



MIMULUS AURANTIACUS
STICKY MONKEY-FLOWER



CISTUS X PURPUREUS
PURPLE ROCKROSE



SANTOLINA CHAMAECYPARISSUS
LAVENDER COTTON



SALVIA LEUCOPHYLLA
PURPLE SAGE

GRASSES



ARISTIDA PURPUREA
PURPLE THREE-AWN



CAREX DIVULSA
EUROPEAN GREY SEDGE



FESTUCA IDAHOENSIS X
SISKIYOU BLUE FESCUE



LOMANDRA LONGIFOLIA
SPINY HEADED MAT RUSH



MUHLENBERGIA CAPILLARIS
PINK MUHLY GRASS

PERENNIALS



ACHILLEA 'MOONSHINE'
MOONSHINE YARROW



STACHYS BYZANTINA
LAMB'S EAR



IRIS GERMANICA 'FREWHITE TALL
BEARDED IRIS

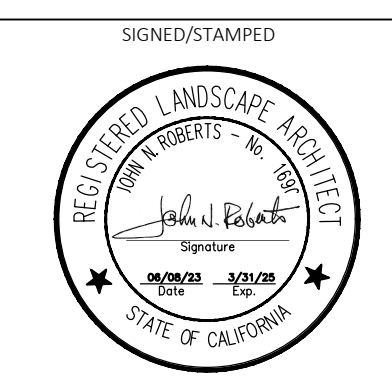


AGAVE ATTENUATA
FOXTAIL AGAVE

PLANT SCHEDULE

SYM.	ABBRV	NAME	COMMON NAME	HT (FT)	WT (FT)	SUN	WTR	QUANTITY BY SIZE					TOTAL
								1	5	15	24	60	
TREES													
	CER OCC	CERCIS OCCIDENTALIS	WESTERN REDBUD	15	15	SUN SHD	LOW				3		3
	QUE AGR	QUERCUS AGRIFOLIA	COAST LIVE OAK	50	50	SUN	LOW					1	1
SHRUBS													
	CIS PUR	CISTUS X PURPUREUS	PURPLE ROCKROSE	4-6	4-6	SUN	LOW			12			12
	EPI CAN	EPILOBIUM CANUM 'CATALINA'	CATALINA FUCHSIA	3-4	4-5	SUN	LOW			13			13
	MIM AUR	MIMULUS AURANTIACUS	STICKY MONKEY-FLOWER	2-3	2-3	SUN SHD	LOW			5			5
	SAL LEU	SALVIA LEUCOPHYLLA	PURPLE SAGE	3-4	4-6	SUN SHD	LOW			13			13
	SAN CHA	SANTOLINA CHAMAECYPARISSUS	LAVENDER COTTON	1-2	3-4	SUN	LOW			12			12
GRASSES													
	ARI PUR	ARISTIDA PURPUREA	PURPLE THREE-AWN	2-3	1-2	SUN	LOW			60			60
	CAR DIV	CAREX DIVULSA	EUROPEAN GREY SEDGE	1-2	1-2	SUN SHD	LOW			16			16
	FES IDA	FESTUCA IDAHOENSIS X 'SISKIYOU BLUE'	SISKIYOU BLUE FESCUE	1-2	1-2	SUN SHD	MED			7			7
	LOM LON	LOMANDRA LONGIFOLIA	SPINY HEADED MAT RUSH	4-5	4-5	SUN SHD	LOW			8			8
	MUH CAP	MUHLENBERGIA CAPILLARIS	PINK MUHLY GRASS	2-3	2-3	SUN	LOW			15			15
PERENNIALS													
	ACH MOO	ACHILLEA 'MOONSHINE'	MOONSHINE YARROW	1-2	2-3	SUN	LOW			21			21
	IRI GER	IRIS GERMANICA 'FREQUENT FLYER'	WHITE TALL BEARDED IRIS	2-3	1-2	SUN	LOW			29			29
	STA BYZ	STACHYS BYZANTINA	LAMB'S EAR	<1	4-5	SUN SHD	LOW			20			20
SUCCULENTS													
	AGA ATT	AGAVE ATTENUATA	FOXTAIL AGAVE	4	4	SUN SHD	LOW			2			2

John Northmore Roberts & Associates
LANDSCAPE ARCHITECTS / LAND PLANNERS
2927 Newbury Street, Suite B
Berkeley, CA 94703
(510) 843-3666
www.JohnNorthmoreRoberts.com



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WEST BERKELEY SERVICE CENTER
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Berkeley, CA 94710
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Draft
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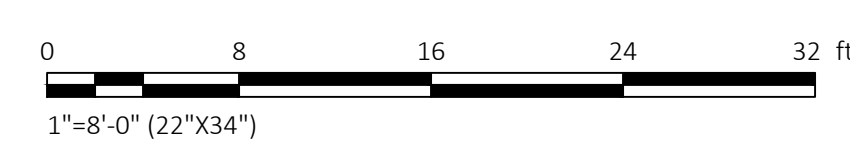
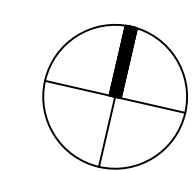
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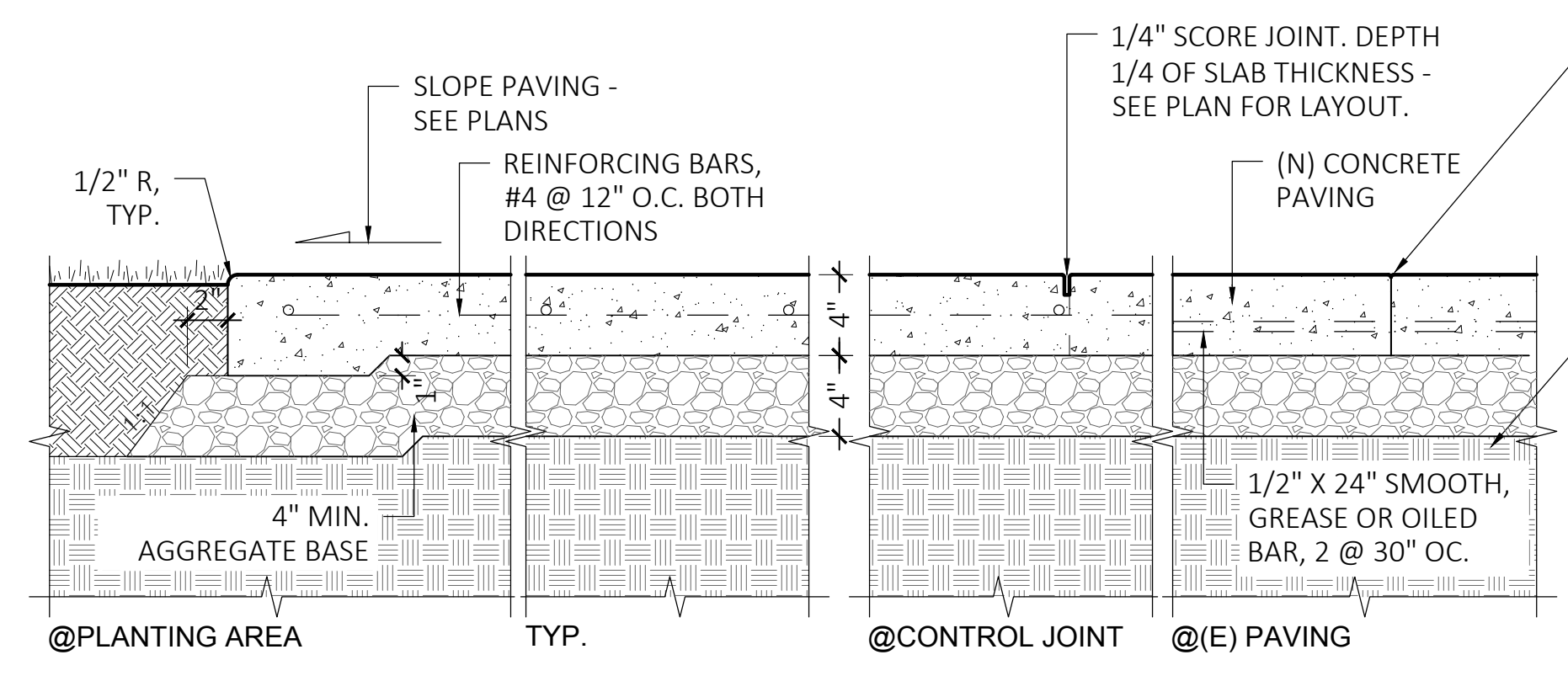
SHEET TITLE
PLANTING PLAN

SCALE
AS NOTED. SCALE IN FEET.

DRAWN PROJECT NUMBER
LR + DC 433

SHEET NUMBER
L6.1
6 OF 8

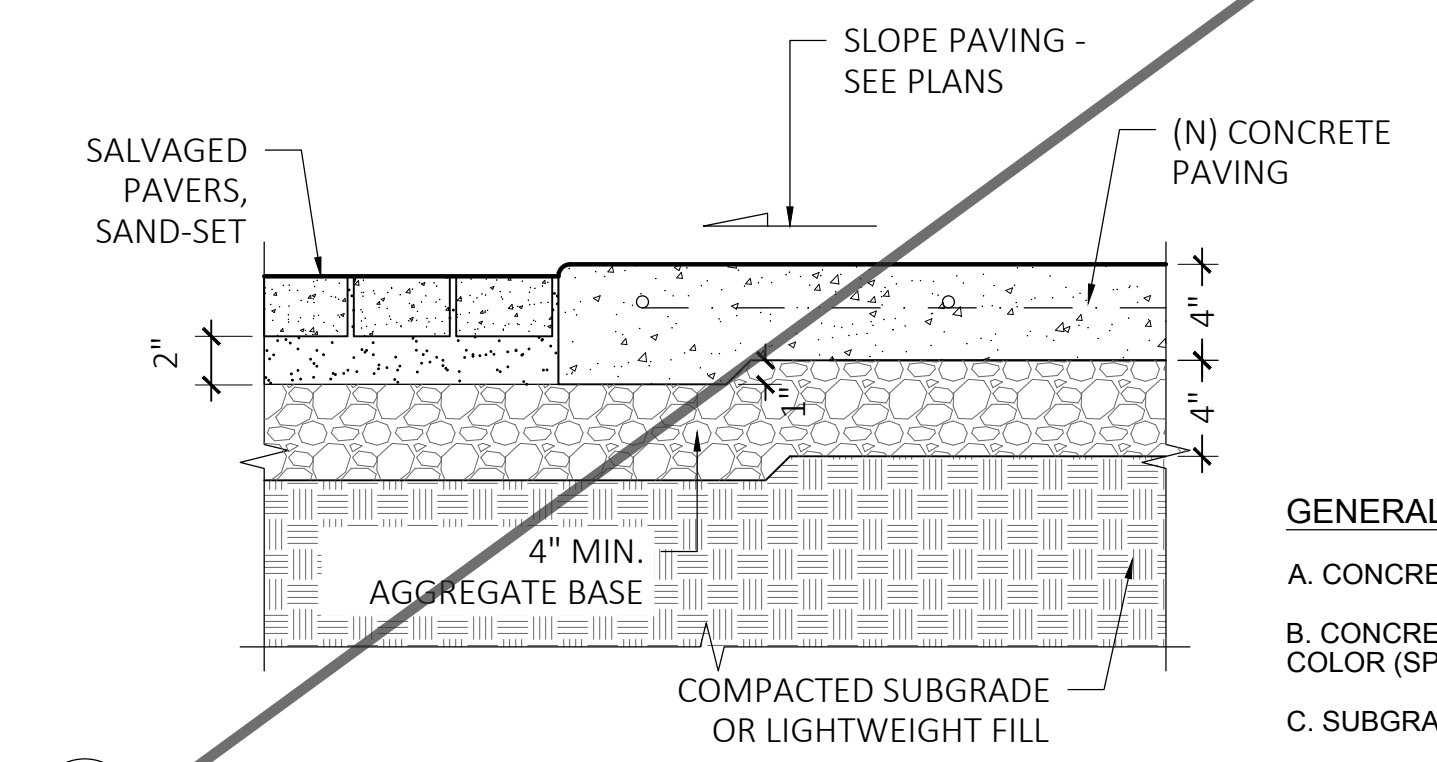




1
L9.0
POURED CONCRETE PAVING
NO SCALE

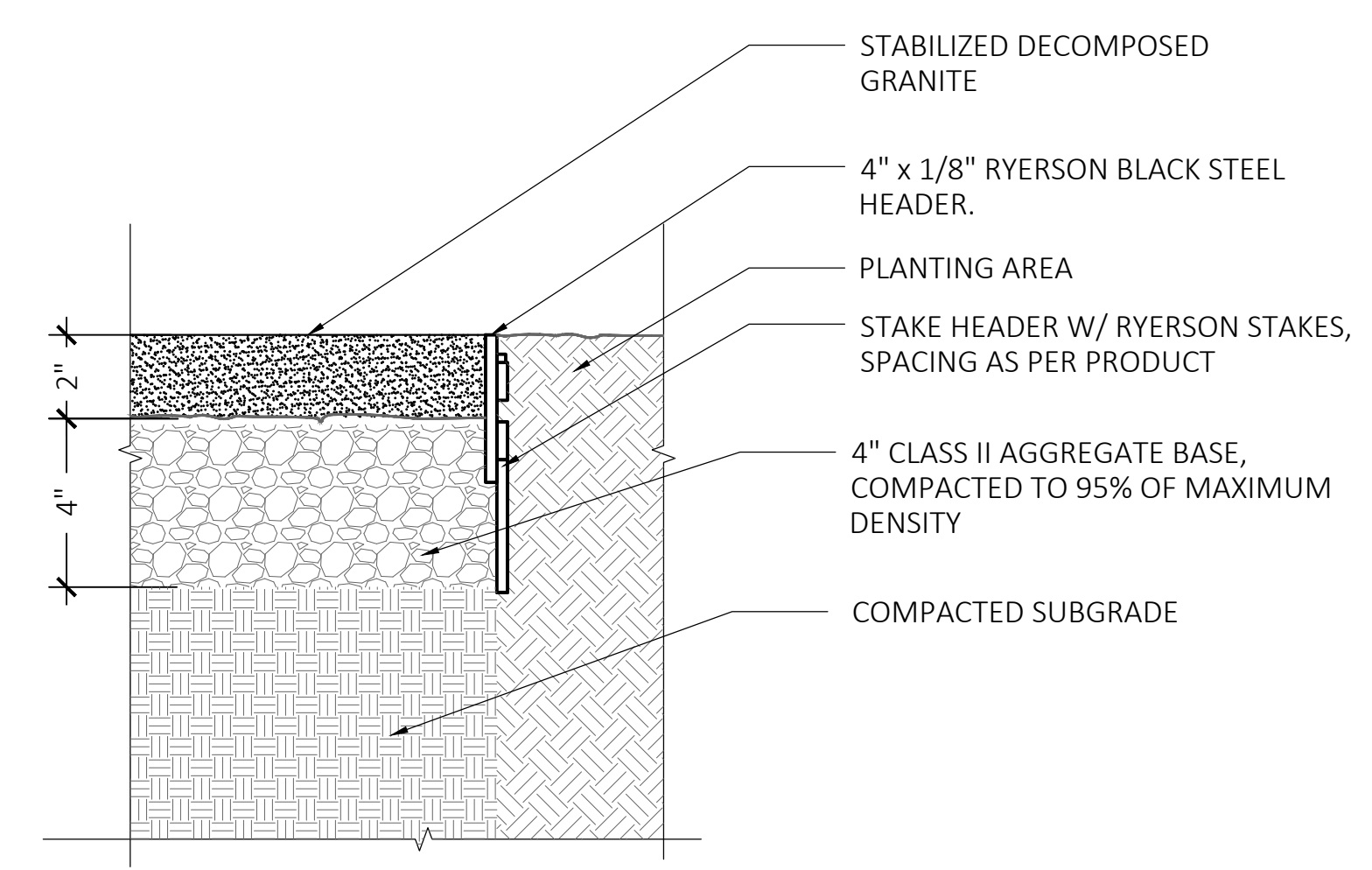
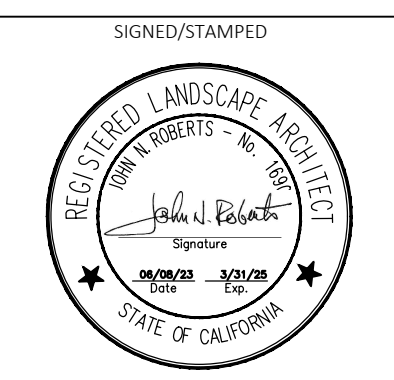
CONSTRUCTION JOINT. 1/8" RADIUS FOR EXPOSED EDGE. SEE PLAN FOR LAYOUT.
 COMPACTED SUBGRADE OR LIGHTWEIGHT FILL

- GENERAL NOTES:**
- A. CONCRETE TO BE WASHED FINISH.
 - B. CONCRETE TO BE GRAY INTEGRAL COLOR (SPEC 03 30 00) TO MATCH (E).
 - C. SUBGRADE TO BE COMPACTED TO 95%

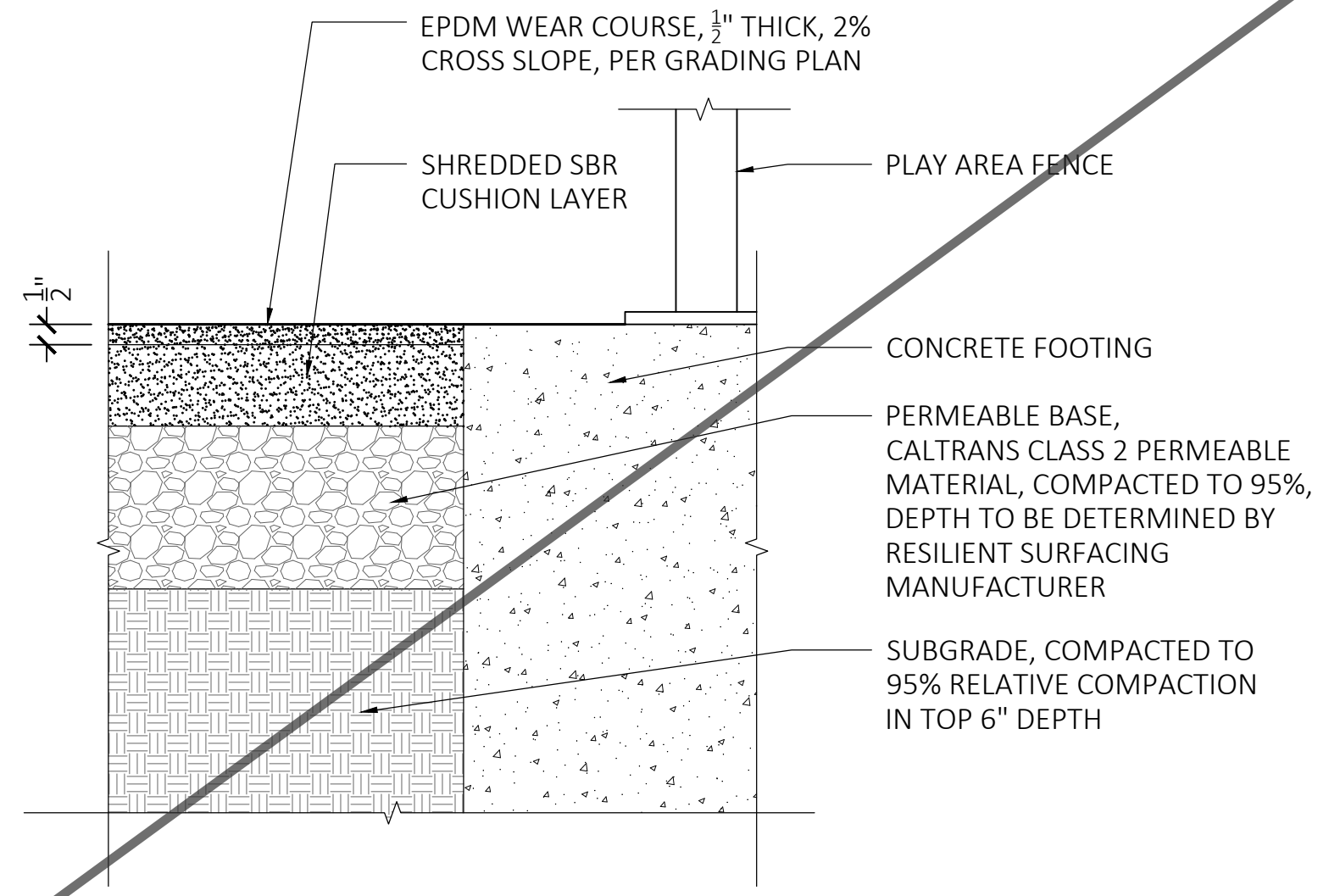


2
L9.0
SALVAGED PAVERS & POURED CONCRETE PAVING
NO SCALE

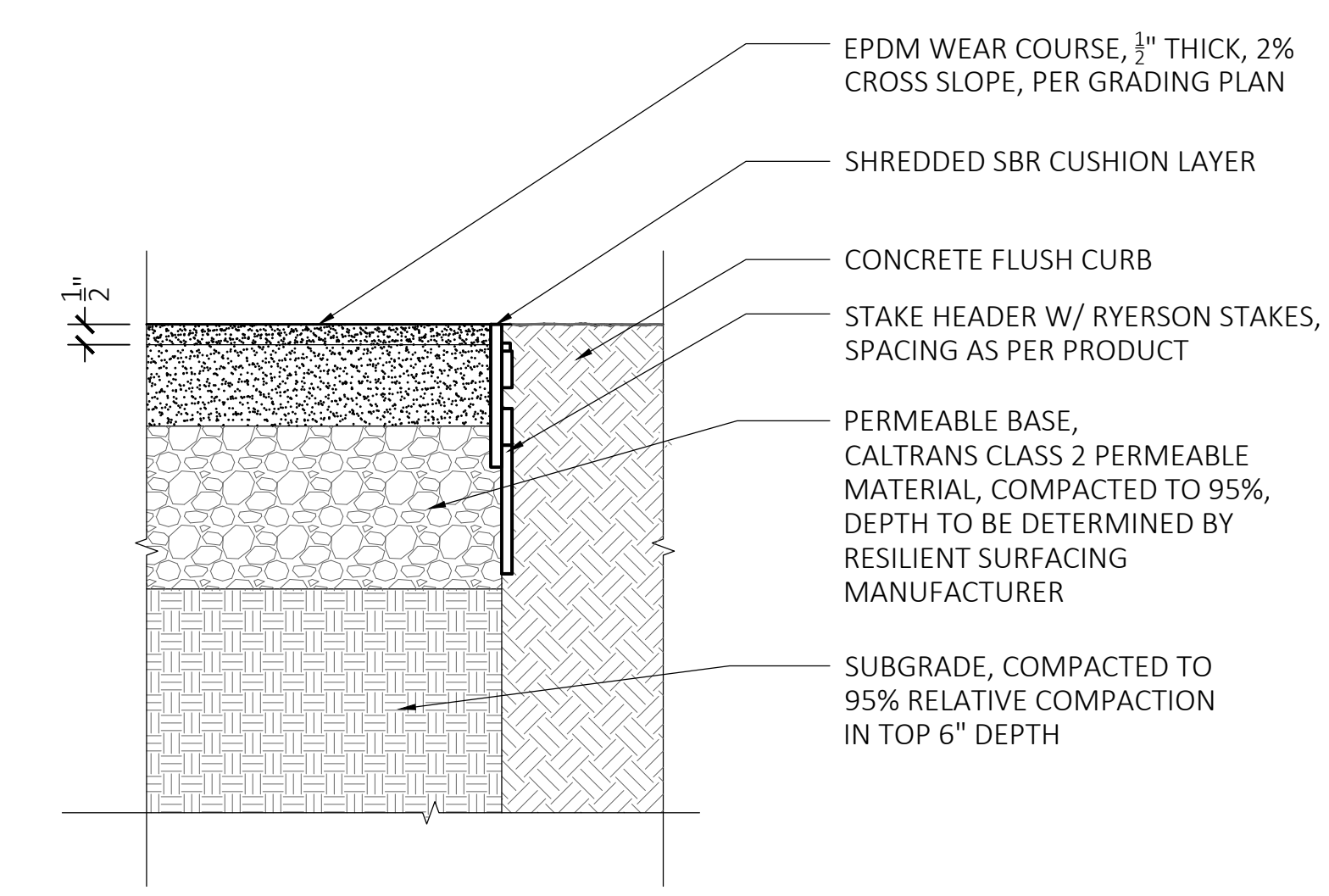
- GENERAL NOTES:**
- A. CONCRETE TO BE WASHED FINISH.
 - B. CONCRETE TO BE GRAY INTEGRAL COLOR (SPEC 03 30 00) TO MATCH (E).
 - C. SUBGRADE TO BE COMPACTED TO 95%



3
L9.0
STABILIZED D.G. PAVING AND METAL HEADER
SECTION 0 1 2 4 IN



4
L9.0
PLAY AREA SYNTHETIC RESILIENT SURFACING
SECTION 0 1 2 4 IN



5
L9.0
PLAY AREA SYNTHETIC RESILIENT SURFACING AT PLANTING
SECTION 0 1 2 4 IN

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 LANDSCAPE WORK IS
 NOT IN SCOPE**

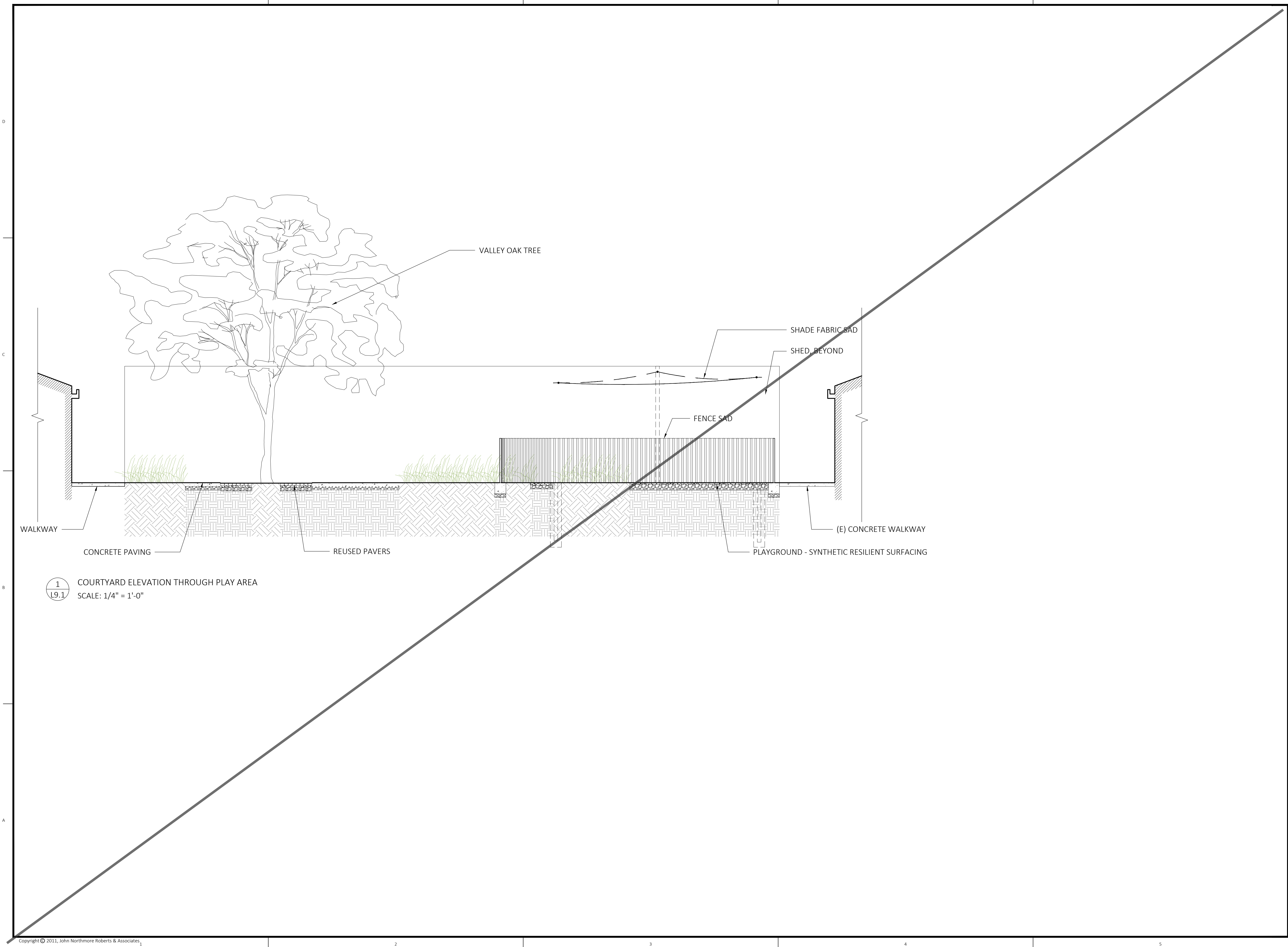
SHEET TITLE
DETAILS

SCALE
 AS NOTED. SCALE IN FEET.

DRAWN
 XX

PROJECT NUMBER
 XXX

SHEET NUMBER
L9.0
 7 OF 8

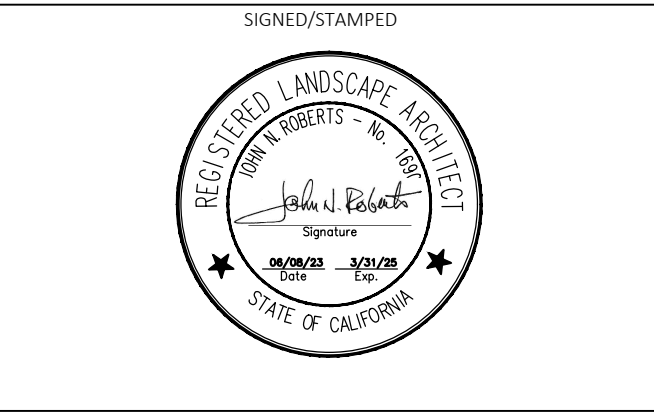


1
L9.1 COURTYARD ELEVATION THROUGH PLAY AREA
SCALE: 1/4" = 1'-0"

John Northmore Roberts & Associates
 LANDSCAPE ARCHITECTS / LAND PLANNERS

2927 Newbury Street, Suite B
 Berkeley, CA 94703

(510) 843-3666
 www.JohnNorthmoreRoberts.com



PROJECT TITLE

**WEST BERKELEY
 SERVICE
 CENTER**

1900 Sixth Street
 Berkeley, CA 94710

APN 057-209700201

Draft
 Construction Documents

DATE	DESCRIPTION	REV
	BID SET	
		12.22.2023

**FOR REFERENCE ONLY
 LANDSCAPE WORK IS
 NOT IN SCOPE**

SHEET TITLE

DETAILS

SCALE

AS NOTED. SCALE IN FEET.

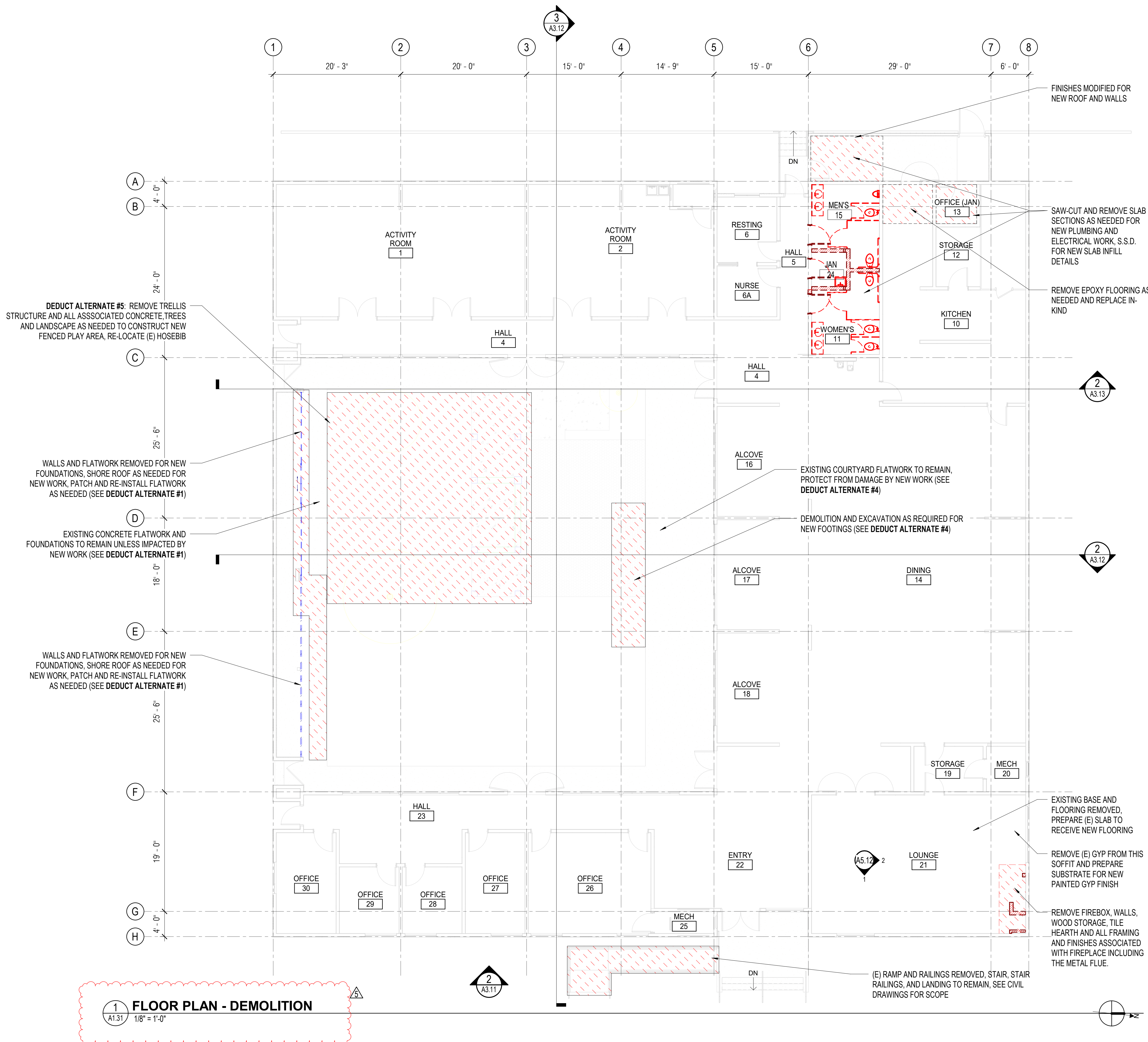
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XX

PROJECT NUMBER
XXX

SHEET NUMBER

L9.1

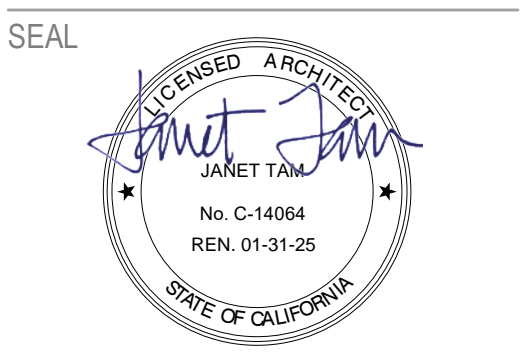
8 OF 8



1 FLOOR PLAN - DEMOLITION
 A1.31 1/8" = 1'-0"

DEMOLITION NOTES

- ALL EXISTING CONDITIONS TO REMAIN UNLESS OTHERWISE NOTED.
- ALL EXISTING MECHANICAL SOFFITS AND ASSOCIATED DUCTING TO REMAIN UNLESS NOTED OTHERWISE.
- REMOVAL OF EXISTING FLOORING AND BASE TO OCCUR THROUGHOUT THE BUILDING. REMOVE FLOORING AND SCRAPE EXISTING SLAB CLEAN TO PREPARE FOR NEW FLOOR FINISH INSTALLATION.
- EXISTING WINDOWS AND DOORS TO REMAIN UNLESS OTHERWISE NOTED.
- VERIFY ALL EXISTING CONDITIONS PRIOR TO BEGINNING WORK. BRING ANY DISCREPANCIES FROM THE DRAWINGS AND SPECIFICATIONS TO THE ATTENTION OF THE OWNER AND ARCHITECT IMMEDIATELY. MINOR CHANGES IN THE SCOPE OF THE DEMOLITION SHALL NOT JUSTIFY ANY ADDITIONAL COST.
- ALL SAW CUTTING AND CHANNELING OF EXISTING BUILDING SHALL BE ACCOMPLISHED IN A NEAT AND WORKMANLIKE MANNER WITHOUT REMOVAL OF EXCESS MATERIALS. THE CONTRACTOR SHALL PATCH AND REPLACE WITH MATERIAL SIMILAR TO ADJACENT CONSTRUCTION.
- WHERE EXISTING PIPING, ELECTRICAL INFRASTRUCTURE AND EQUIPMENT, ETC., THAT ARE TO BE UTILIZED IN THE COMPLETED PROJECT CONFLICT WITH NEW CONSTRUCTION AND THE REQUIRED DEMOLITION, THEY SHALL BE RELOCATED AND RECONNECTED TO MAINTAIN THE DESIRED SERVICE.
- ALL WORK MUST BE COORDINATED AND SCHEDULED WITH THE OWNER AND OCCUPANTS OF THIS BUILDING SO AS TO PROVIDE THE LEAST AMOUNT OF DISRUPTION OF USER ACTIVITIES AS POSSIBLE.
- REFER TO FINISH PLANS AND SCHEDULE FOR EXTENTS OF PAINT AND FINISH SCOPE. TOUCH UP PAINT AT EXISTING WALLS THROUGHOUT WHERE IMPACTED BY NEW WORK.
- PATCH AND REPAIR (E) FLOOR SLABS, WALLS, AND CEILINGS AS REQUIRED TO PROVIDE SMOOTH SURFACE FOR (N) FINISHES.
- WALL THICKNESSES ARE NOMINAL, UON.
- REFER TO SPECIFICATION FOR REQUIREMENTS FOR PATCHING NEW WALLS TO EXISTING WALLS.
- REFER TO MEP AND STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
- ALL MECHANICAL AND ELECTRICAL SYSTEMS TO REMAIN UNLESS OTHERWISE NOTED AND BE PROTECTED FROM DAMAGE DURING NEW WORK.
- UNLESS OTHERWISE NOTED, ALL EXISTING ROOFING, ASSOCIATED UNDERLAYMENT, AND ROOF TILE COMPONENTS ARE TO BE REMOVED AND THE EXISTING SUBSTRATES PREPARED FOR NEW ROOFING INSTALLATIONS.



APPROVALS

PROJECT TITLE

**City of Berkeley
 WEST BERKELEY
 SERVICE CENTER**

1900 Sixth St
 Berkeley, CA 94710

BID SET

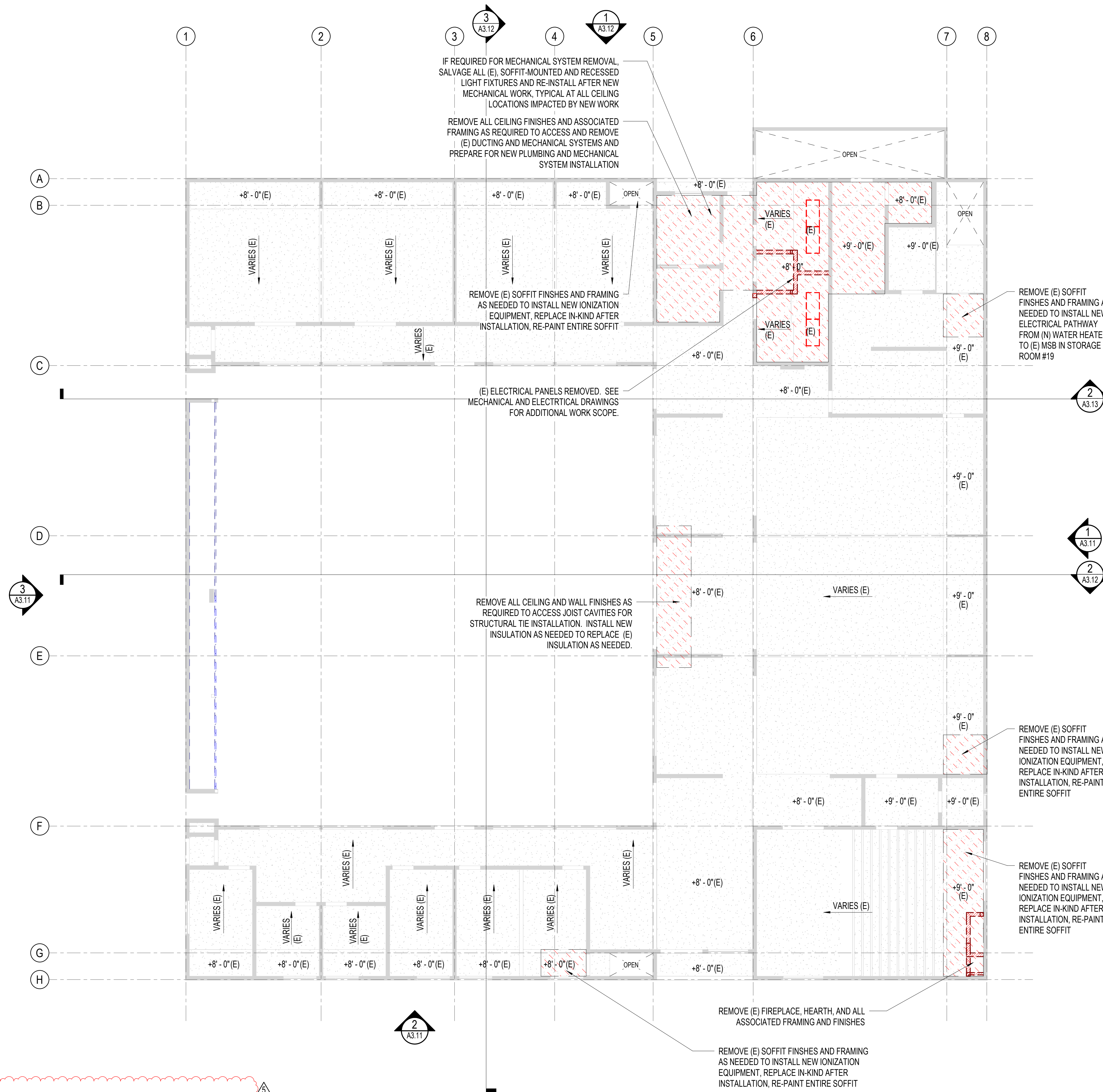
ISSUE DATE	12.22.2023
N&T JOB NUMBER	22121
REVISIONS	
5	02.21.2024 Bid Addendum

SHEET TITLE
DEMOLITION FLOOR PLAN

SHEET NUMBER

A1.31

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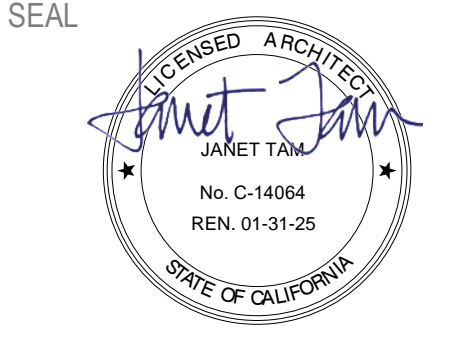


DEMOLITION NOTES

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2. ALL EXISTING MECHANICAL SOFFITS AND ASSOCIATED DUCTING TO REMAIN UNLESS NOTED OTHERWISE.
3. REMOVAL OF EXISTING FLOORING AND BASE TO OCCUR THROUGHOUT THE BUILDING. REMOVE FLOORING AND SCRAPE EXISTING SLAB CLEAN TO PREPARE FOR NEW FLOOR FINISH INSTALLATION.
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7. WHERE EXISTING PIPING, ELECTRICAL INFRASTRUCTURE AND EQUIPMENT, ETC., THAT ARE TO BE UTILIZED IN THE COMPLETED PROJECT CONFLICT WITH NEW CONSTRUCTION AND THE REQUIRED DEMOLITION, THEY SHALL BE RELOCATED AND RECONNECTED TO MAINTAIN THE DESIRED SERVICE.
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10. PATCH AND REPAIR (E) FLOOR SLABS, WALLS, AND CEILINGS AS REQUIRED TO PROVIDE SMOOTH SURFACE FOR (N) FINISHES.
11. WALL THICKNESSES ARE NOMINAL, UON.
12. REFER TO SPECIFICATION FOR REQUIREMENTS FOR PATCHING NEW WALLS TO EXISTING WALLS.
13. REFER TO MEP AND STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
14. ALL MECHANICAL AND ELECTRICAL SYSTEMS TO REMAIN UNLESS OTHERWISE NOTED AND BE PROTECTED FROM DAMAGE DURING NEW WORK.
15. UNLESS OTHERWISE NOTED, ALL EXISTING ROOFING, ASSOCIATED UNDERLAYMENT, AND ROOF TILE COMPONENTS ARE TO BE REMOVED AND THE EXISTING SUBSTRATES PREPARED FOR NEW ROOFING INSTALLATIONS.

NOLL & TAM ARCHITECTS

729 Heinz Avenue
Berkeley, CA 94710
tel 510.542.2200
fax 510.542.2201



APPROVALS

PROJECT TITLE

**City of Berkeley
WEST
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1900 Sixth St
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ISSUE DATE	12.22.2023
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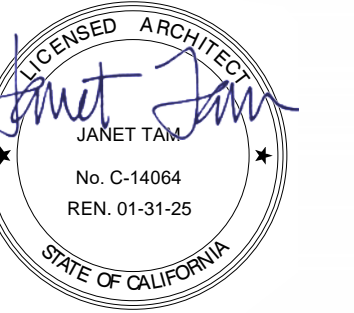
SHEET TITLE
DEMOLITION RCP- 1ST FLOOR

SHEET NUMBER

A1.41

1
A1.41
DEMOLITION CEILING PLAN
1/8" = 1'-0"

SEAL



APPROVALS

PROJECT TITLE

**City of Berkeley
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1900 Sixth St
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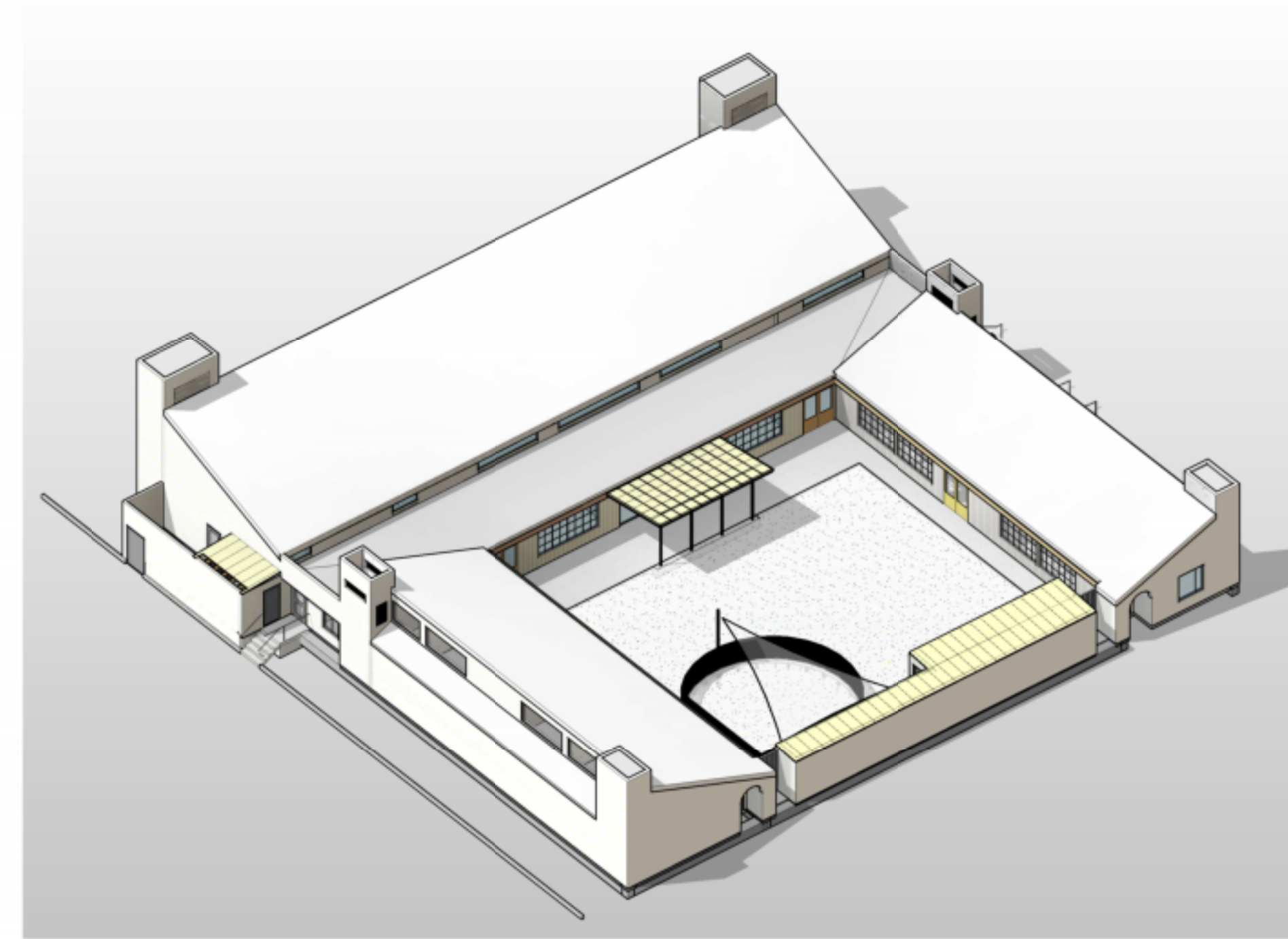
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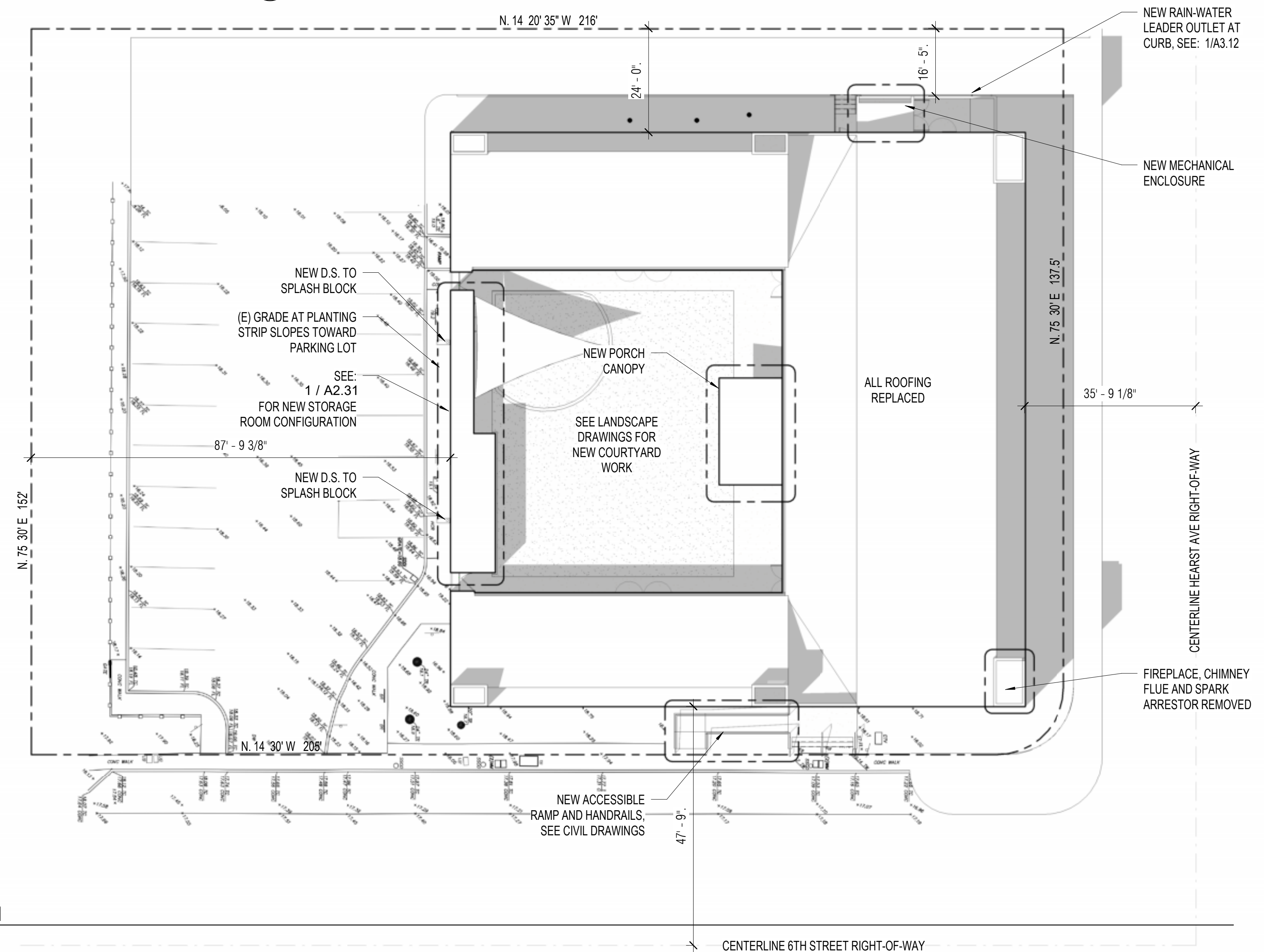
SITE PLAN

SHEET NUMBER

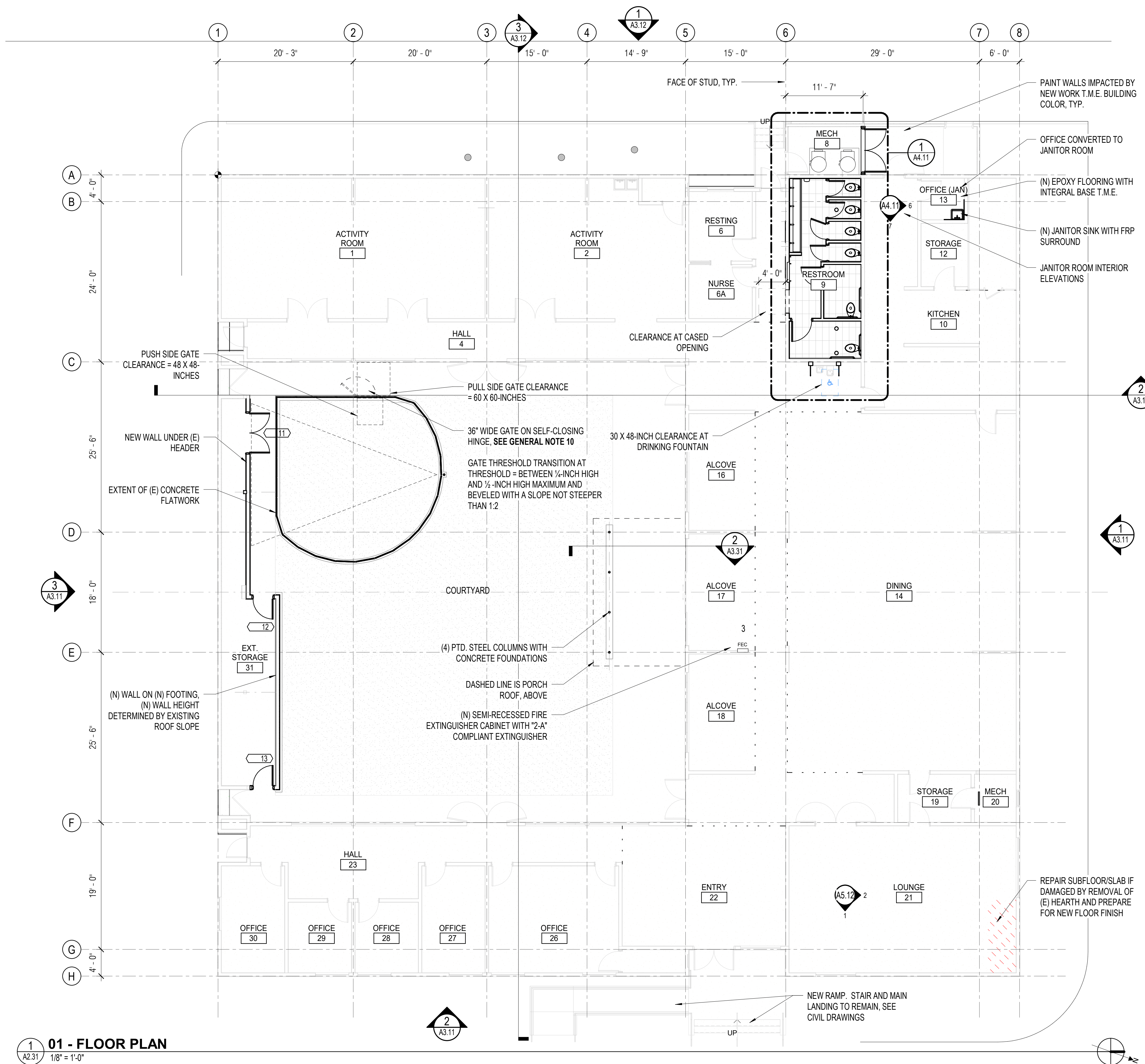
A2.01



2 MODEL VIEW FROM SOUTHWEST



1 SITE PLAN
1/16" = 1'-0"

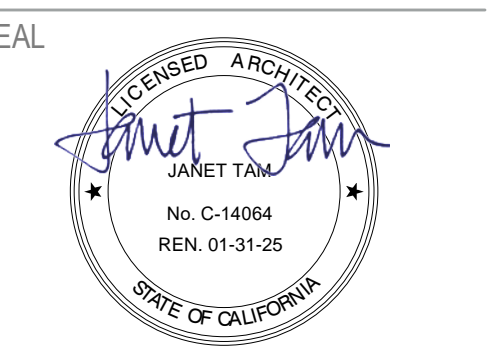


GENERAL NOTES

1. ALL EXISTING CONDITIONS TO REMAIN UNLESS OTHERWISE NOTED.
2. ALL EXISTING MECHANICAL SOFFITS AND ASSOCIATED DUCTING TO REMAIN UNLESS NOTED OTHERWISE.
3. REFER TO FINISH PLANS AND SCHEDULE FOR EXTENTS OF PAINT AND FINISH SCOPE. TOUCH UP PAINT AT EXISTING WALLS THROUGHOUT WHERE IMPACTED BY NEW WORK.
4. PATCH AND REPAIR (E) FLOOR SLABS, WALLS, AND CEILINGS AS REQUIRED TO PROVIDE SMOOTH SURFACE FOR (N) FINISHES.
5. WALL THICKNESSES ARE NOMINAL, UNO.
6. REFER TO SPECIFICATION FOR REQUIREMENTS FOR PATCHING NEW WALLS TO EXISTING WALLS
7. REFER TO MEP AND STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
8. ALL MECHANICAL AND ELECTRICAL SYSTEMS TO REMAIN AND BE PROTECTED FROM DAMAGE DURING NEW WORK.
9. ALL RESTROOM FINISHES REMOVED AND SUBSTRATES PREPARED FOR NEW GYP AND TILE UNLESS NOTED OTHERWISE.
10. PLAY AREA GATE: SINGLE-LEAF, 36" WIDE, SINGLE LEAF ACCESS GATE WITH A SELF-CLOSING AND SELF-LATCHING DEVICE.
 - A. SPRING HINGES SHALL BE ADJUSTED SO THAT FROM THE OPEN POSITION OF 70-DEGREES, THE GATE SHALL MOVE TO THE CLOSED POSITION IN 1.5 SECONDS MINIMUM.
 - B. OPENING FORCE TO BE 5-POUNDS MAXIMUM.
 - C. GATE HARDWARE:
 - a. Hinge closer: Tiger-180; LOX, finish = 630
 - b. Panic Hardware: PA-AX-98-L-BE-06-1609-WH; VON, finish = 626

NOLL & TAM ARCHITECTS

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APPROVALS

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1900 Sixth St
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ISSUE DATE	12.22.2023
N&T JOB NUMBER	22121
REVISIONS	
Δ	DATE DESCRIPTION
1	08.21.2023 Plan Check 1
3	10.24.2023 Plan Check 3

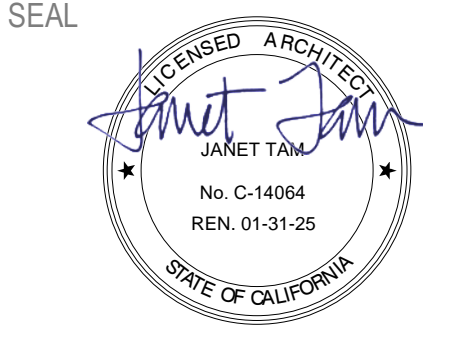
SHEET TITLE

**FLOOR PLAN- 1ST
FLOOR**

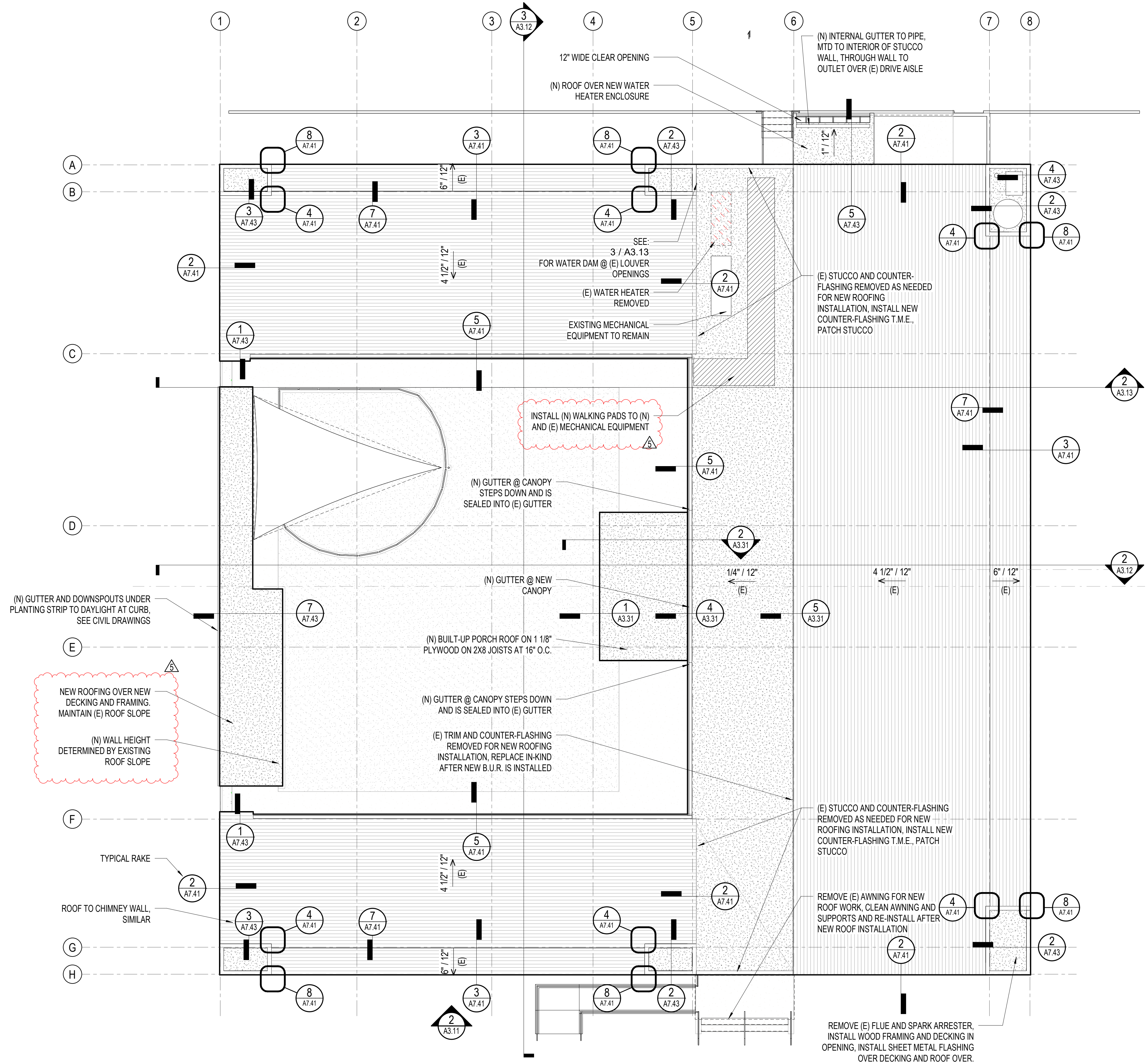
SHEET NUMBER

A2.31

01 - FLOOR PLAN
1/8" = 1'-0"



1. ALL EXISTING ROOFING REMOVED AND REPLACED, UNLESS NOTED OTHERWISE.
2. Flat [low-slope] roof: Minimum Solar Reflectance = 0.63. Install 1.75" R-10 polyiso rigid insulation over existing decking. Slope rigid insulation at roof edges where required for drainage.
3. Existing roofs have R-19 fiberglass insulation installed in the framing cavity. Replace in-kind where impacted by new work.
4. Sloped asphalt shingle roofs: Minimum Solar Reflectance = 0.20.
5. New/replacement Awning windows: 0.58 maximum U-Factor; 0.38 maximum SHGC; 0.44 minimum VT.
6. New/replacement Fixed windows: 0.55 maximum U-Factor; 0.40 maximum SHGC; 0.48 minimum VT.
7. All existing roof penetration flashing to be replaced where impacted by roof replacement.



1 ROOF PLAN
A2.33 1/8" = 1'-0"

SEAL

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PROJECT TITLE

City of Berkeley WEST BERKELEY SERVICE CENTER

1900 Sixth St
Berkeley, CA 94710

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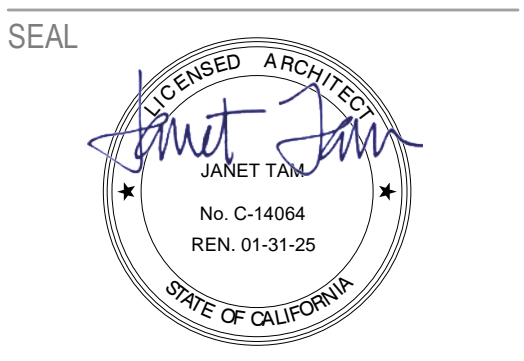
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N&T JOB NUMBER	22121	
REVISIONS		
	DATE	DESCRIPTION
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2	09.21.2023	Plan Check 2
5	02.21.2024	Bid Addendum

SHEET TITLE

ROOF PLAN

SHEET NUMBER

A2.33



APPROVALS

PROJECT TITLE

**City of Berkeley
WEST
BERKELEY
SERVICE
CENTER**

1900 Sixth St
Berkeley, CA 94710

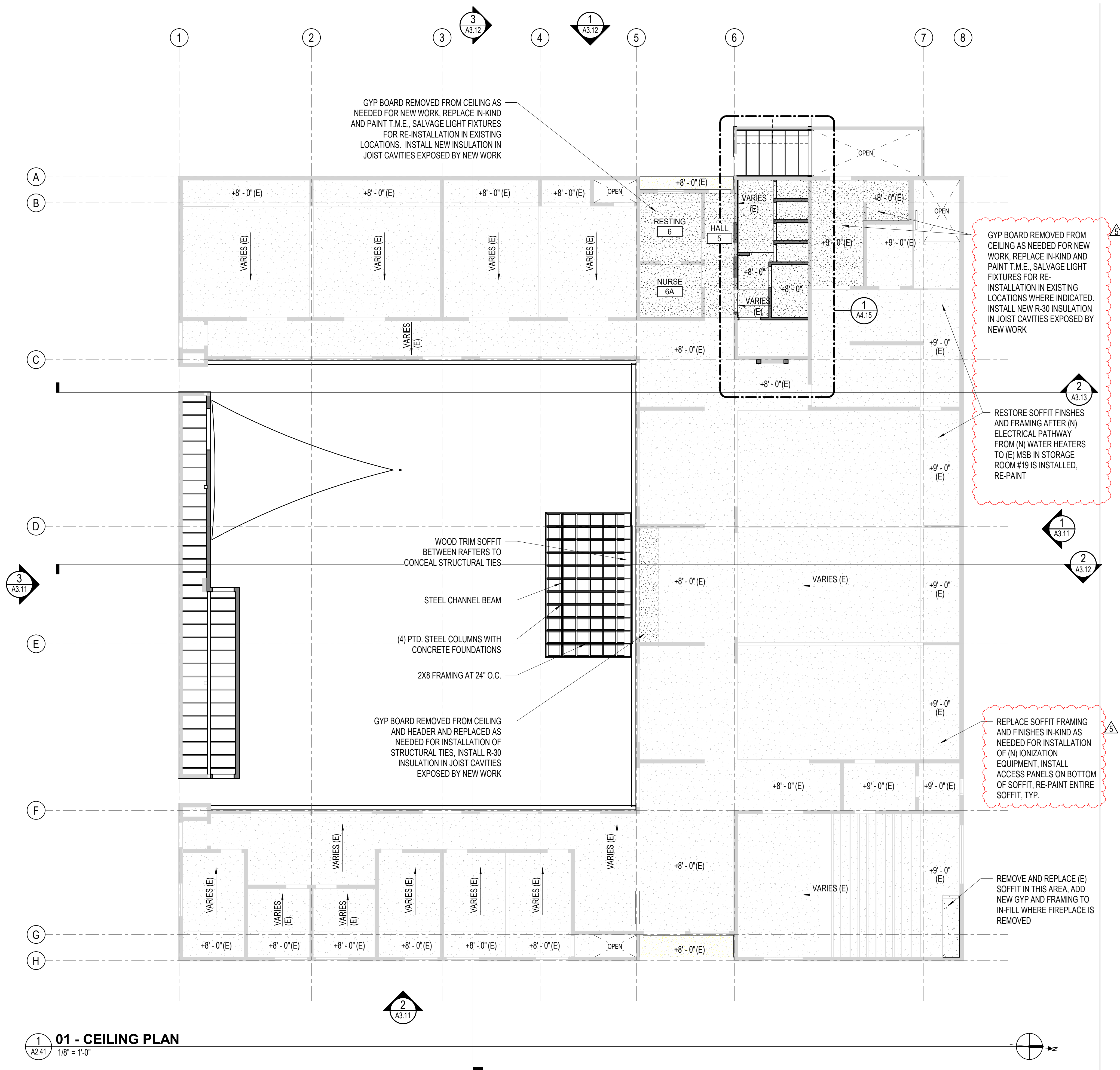
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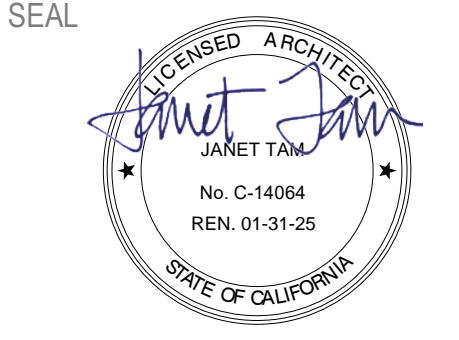
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N&T JOB NUMBER	22121
REVISIONS	
5	02.21.2024 Bid Addendum

SHEET TITLE
**REFLECTED CEILING
PLAN**

SHEET NUMBER

A2.41

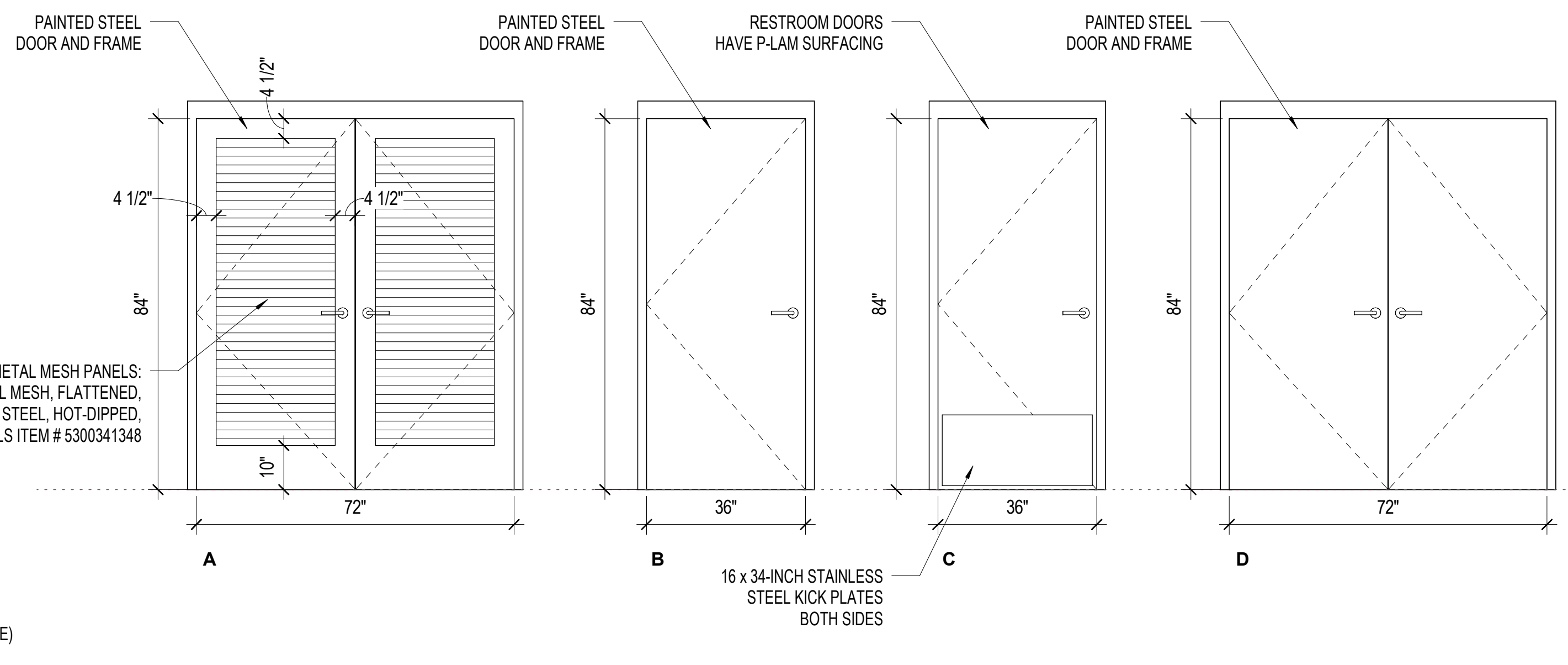
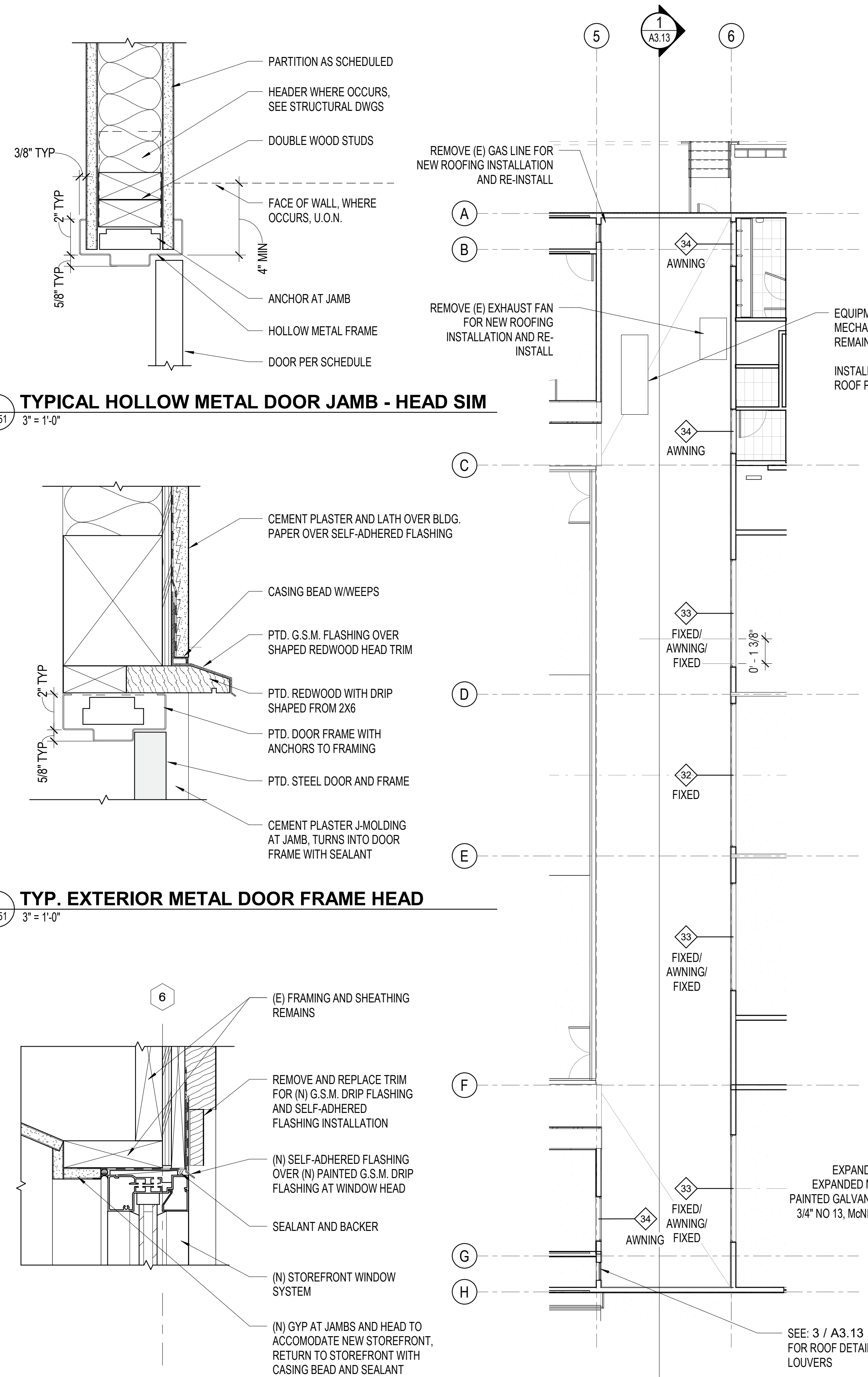




DOOR SCHEDULE													
Door Number	Type	Hardware	Door					Frame		Details			Comments
			Width	Height	Thickness	Material	Finish	Material	Finish	Head Detail	Jamb Detail	Sill Detail	
02	A	02	6'-6"	7'-0"	1 3/4"	STEEL	PAINTED	STEEL	PAINTED	2/A2.51			EXPANDED METAL MESH PANELS
04	C	04	2'-4"	7'-0"	1 3/4"	WOOD	P-LAM	STEEL	PAINTED		6/A8.63		
05	C	04	2'-4"	7'-0"	1 3/4"	WOOD	P-LAM	STEEL	PAINTED		6/A8.63		
06	C	05	2'-4"	7'-0"	1 3/4"	WOOD	P-LAM	STEEL	PAINTED		6/A8.63		
07	C	05	2'-4"	7'-0"	1 3/4"	WOOD	P-LAM	STEEL	PAINTED		6/A8.63		
08	C	05	3'-0"	7'-0"	1 3/4"	WOOD	P-LAM	STEEL	PAINTED	3/A2.51	3/A8.63		
09	C	04	3'-0"	7'-0"	1 3/4"	WOOD	P-LAM	STEEL	PAINTED		3/A8.63		
11	D	03	6'-0"	7'-0"	1 3/4"	STEEL	PAINTED	STEEL	PAINTED	2/A2.51			
12	B	06	3'-0"	7'-0"	1 3/4"	STEEL	PAINTED	STEEL	PAINTED	2/A2.51			
13	B	01	3'-0"	7'-0"	1 3/4"	STEEL	PAINTED	STEEL	PAINTED	2/A2.51			

WINDOW SCHEDULE								
Type Mark	R.O.		Head Height	Material	Finish	Glazing		Comments
	Width	Height				Thickness	Type	
32	16'-0"	1'-6"	3'-3 1/4"	ALUMINUM	CLEAR ANODIZED	1-INCH	DUAL PANE	
33	12'-0"	1'-6"	3'-3 1/4"	ALUMINUM	CLEAR ANODIZED	1-INCH	DUAL PANE	
33	12'-0"	1'-6"	3'-3 1/4"	ALUMINUM	CLEAR ANODIZED	1-INCH	DUAL PANE	
33	12'-0"	1'-6"	3'-3 1/4"	ALUMINUM	CLEAR ANODIZED	1-INCH	DUAL PANE	
34	5'-0"	1'-6"	3'-3 1/4"	ALUMINUM	CLEAR ANODIZED	1-INCH	DUAL PANE	
34	5'-0"	1'-6"	3'-3 1/4"	ALUMINUM	CLEAR ANODIZED	1-INCH	DUAL PANE	
34	5'-0"	1'-6"	3'-3 1/4"	ALUMINUM	CLEAR ANODIZED	1-INCH	DUAL PANE	

1. NEW/REPLACEMENT AWNING WINDOWS: .58 MAXIMUM U-FACTOR; 0.38 MAXIMUM SHGC; 0.44 MINIMUM VT.
2. NEW/REPLACEMENT FIXED WINDOWS: .55 MAXIMUM U-FACTOR; 0.40 MAXIMUM SHGC; 0.48 MINIMUM VT.
3. PROVIDE SAFETY GLAZING WITHIN 24" OF DOORS IN WINDOWS WITHIN 18" OF FLOORS AND IN INDIVIDUAL PANES OF 9 SF.



3 TYPICAL HOLLOW METAL DOOR JAMB - HEAD SIM
A2.51 3" = 1'-0"

2 TYP. EXTERIOR METAL DOOR FRAME HEAD
A2.51 3" = 1'-0"

4 CLERESTORY WINDOW HEAD
A2.51 3" = 1'-0"

1 CLERESTORY PLAN
A2.51 1/8" = 1'-0"

DOOR TYPES
1/2" = 1'-0"

APPROVALS

PROJECT TITLE

**City of Berkeley
WEST
BERKELEY
SERVICE
CENTER**

1900 Sixth St
Berkeley, CA 94710

BID SET

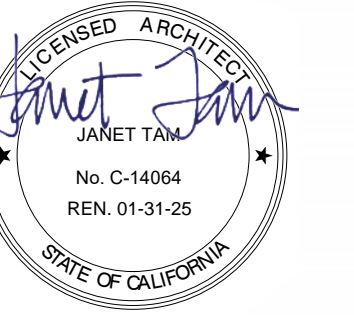
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N&T JOB NUMBER	22121
REVISIONS	
1	08.21.2023 Plan Check 1

SHEET TITLE
**EXTERIOR - DOOR
SCHEDULE AND TYPES**

SHEET NUMBER

A2.51

SEAL



APPROVALS

PROJECT TITLE

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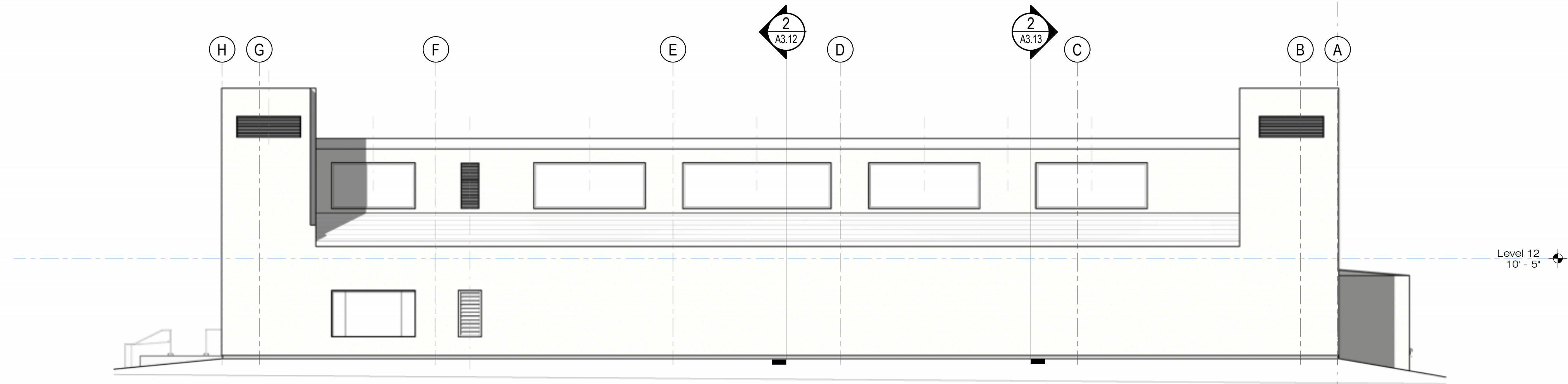
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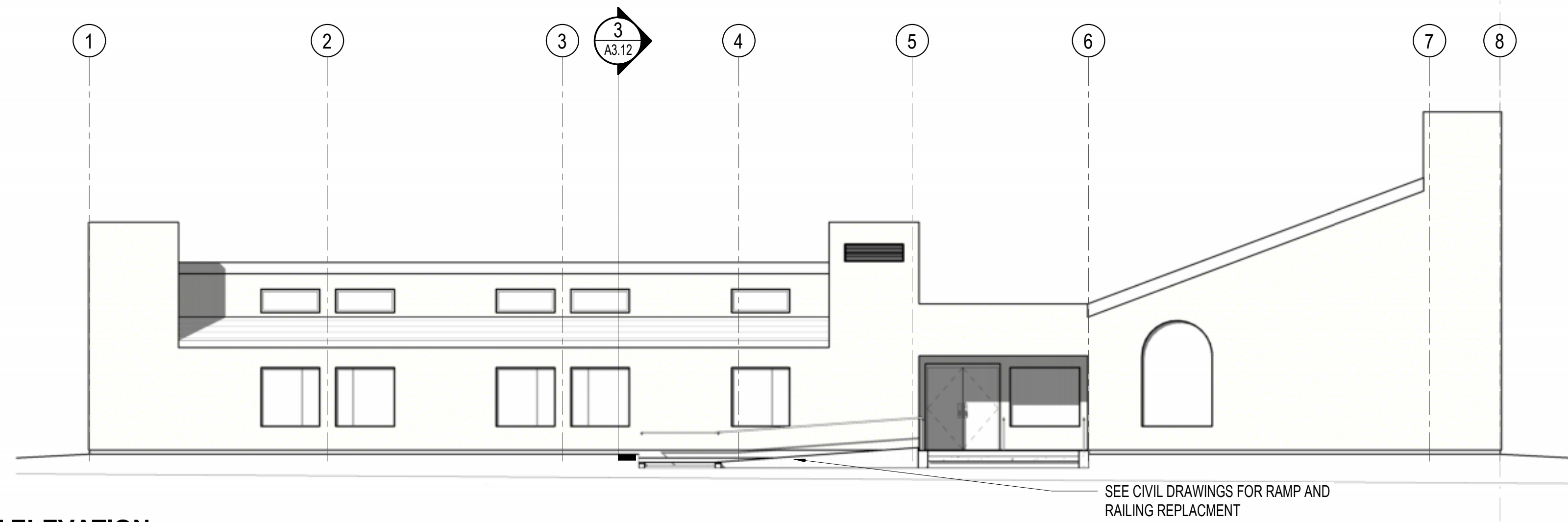
EXTERIOR ELEVATIONS

SHEET NUMBER

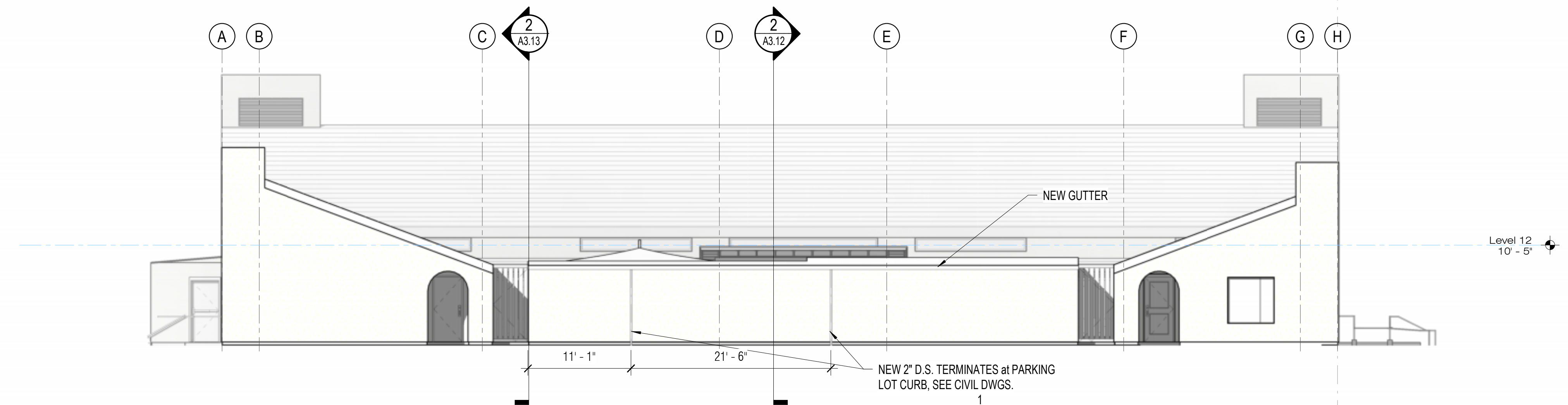
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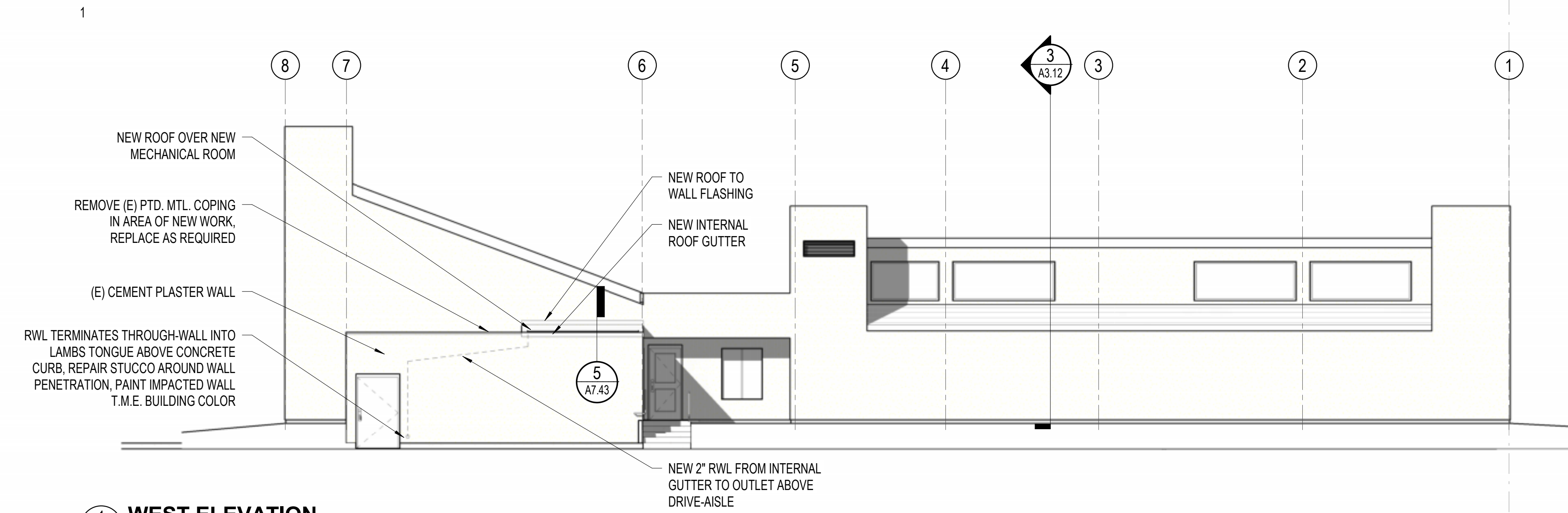
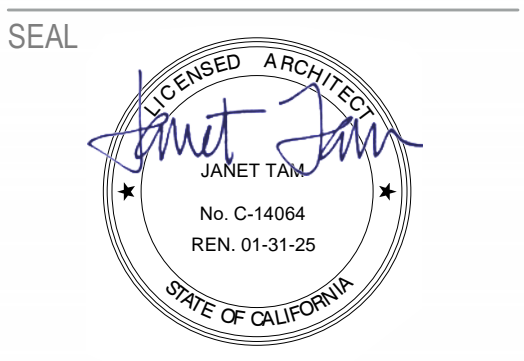
1 NORTH ELEVATION
A3.11 1/8" = 1'-0"



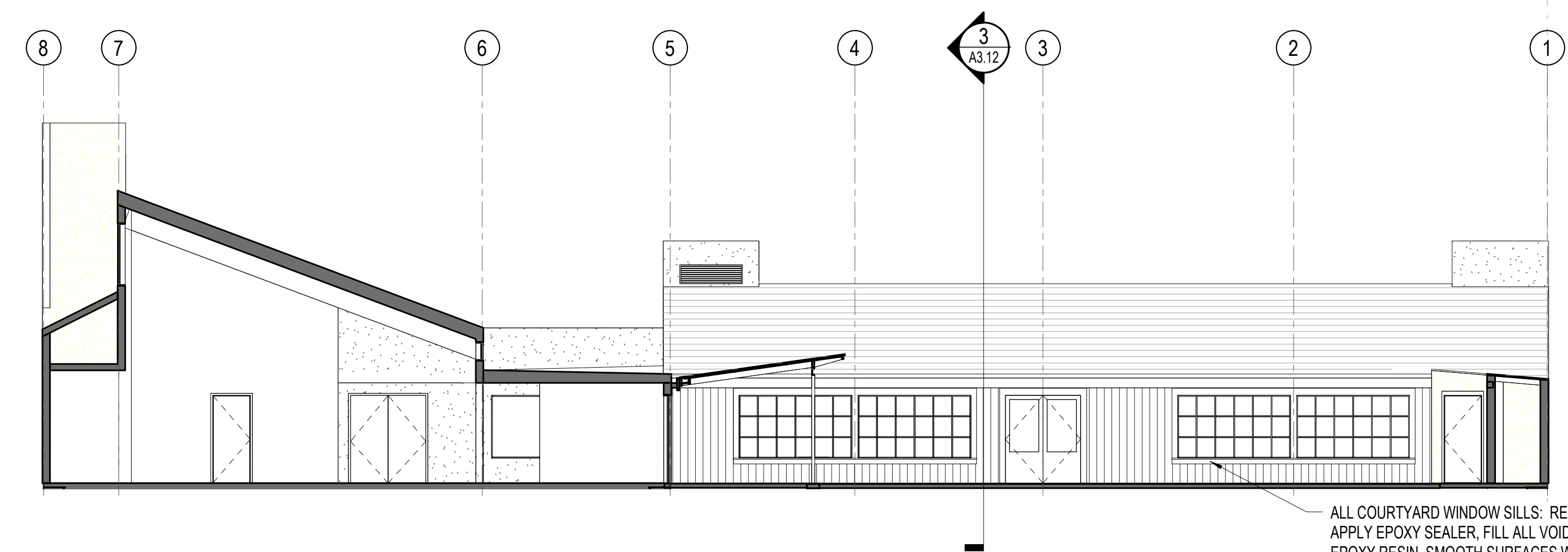
2 EAST ELEVATION
A3.11 1/8" = 1'-0"



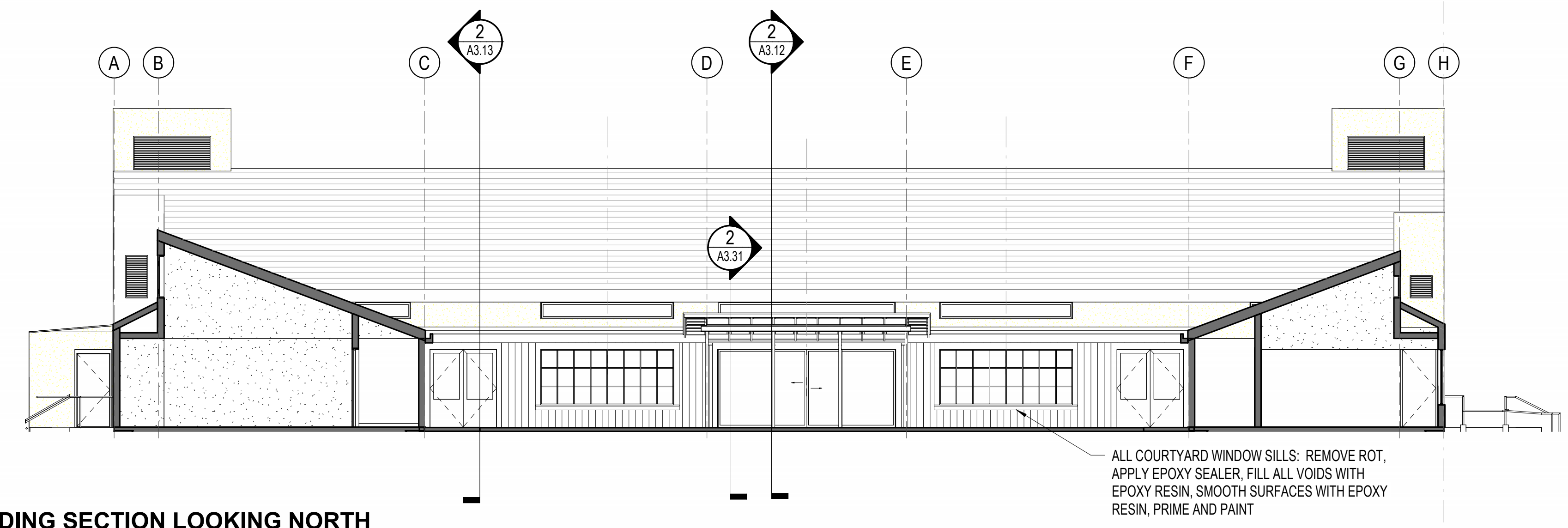
3 SOUTH ELEVATION
A3.11 1/8" = 1'-0"



1 WEST ELEVATION
A3.12 1/8" = 1'-0"



2 BUILDING SECTION LOOKING EAST
A3.12 1/8" = 1'-0"



3 BUILDING SECTION LOOKING NORTH
A3.12 1/8" = 1'-0"

SEAL

APPROVALS

PROJECT TITLE

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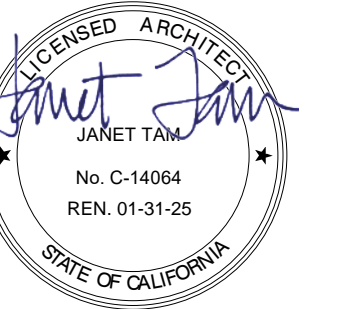
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N&T JOB NUMBER	22121
REVISIONS	
DATE DESCRIPTION	
1 08.21.2023	Plan Check 1

SHEET TITLE
**EXTERIOR ELEVATIONS
and BUILDING
SECTIONS**

SHEET NUMBER

A3.12

SEAL



APPROVALS

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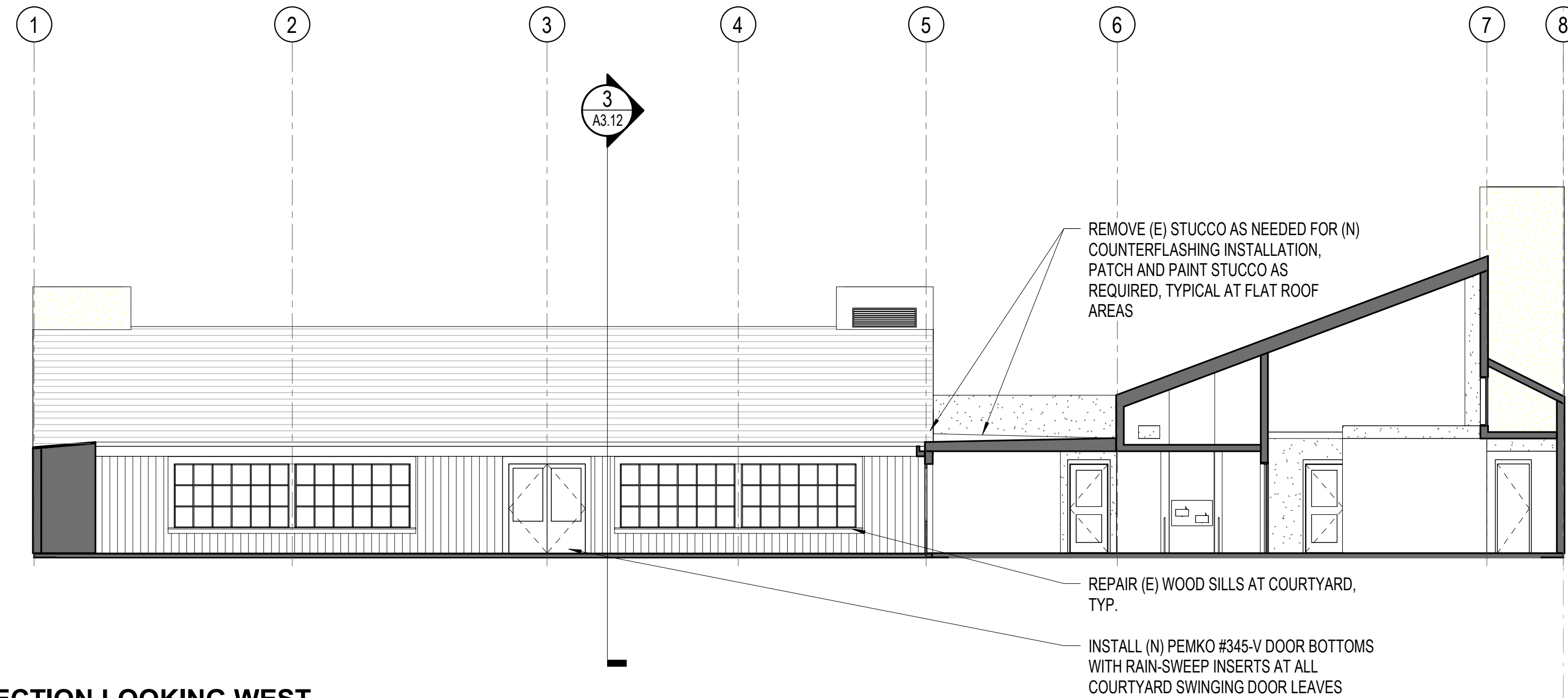
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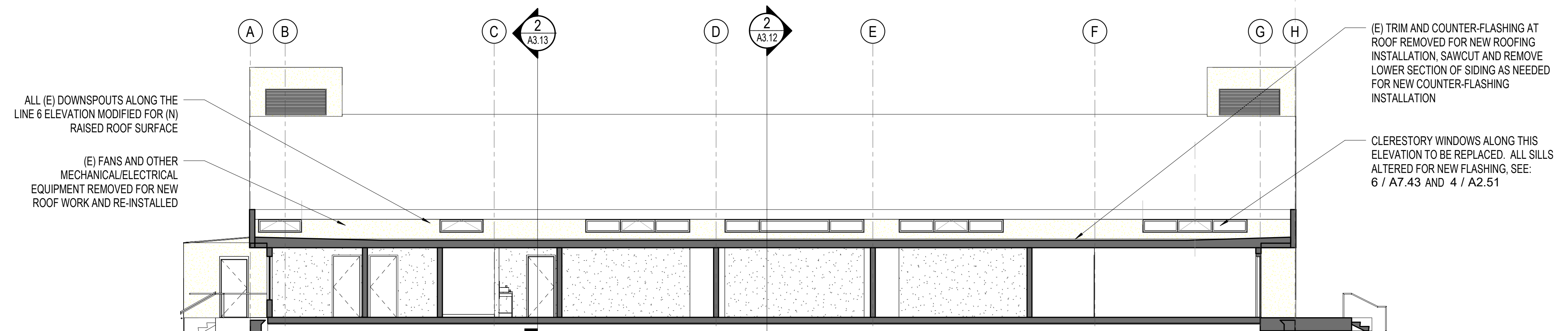
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**EXTERIOR ELEVATIONS
and BUILDING
SECTIONS**

SHEET NUMBER

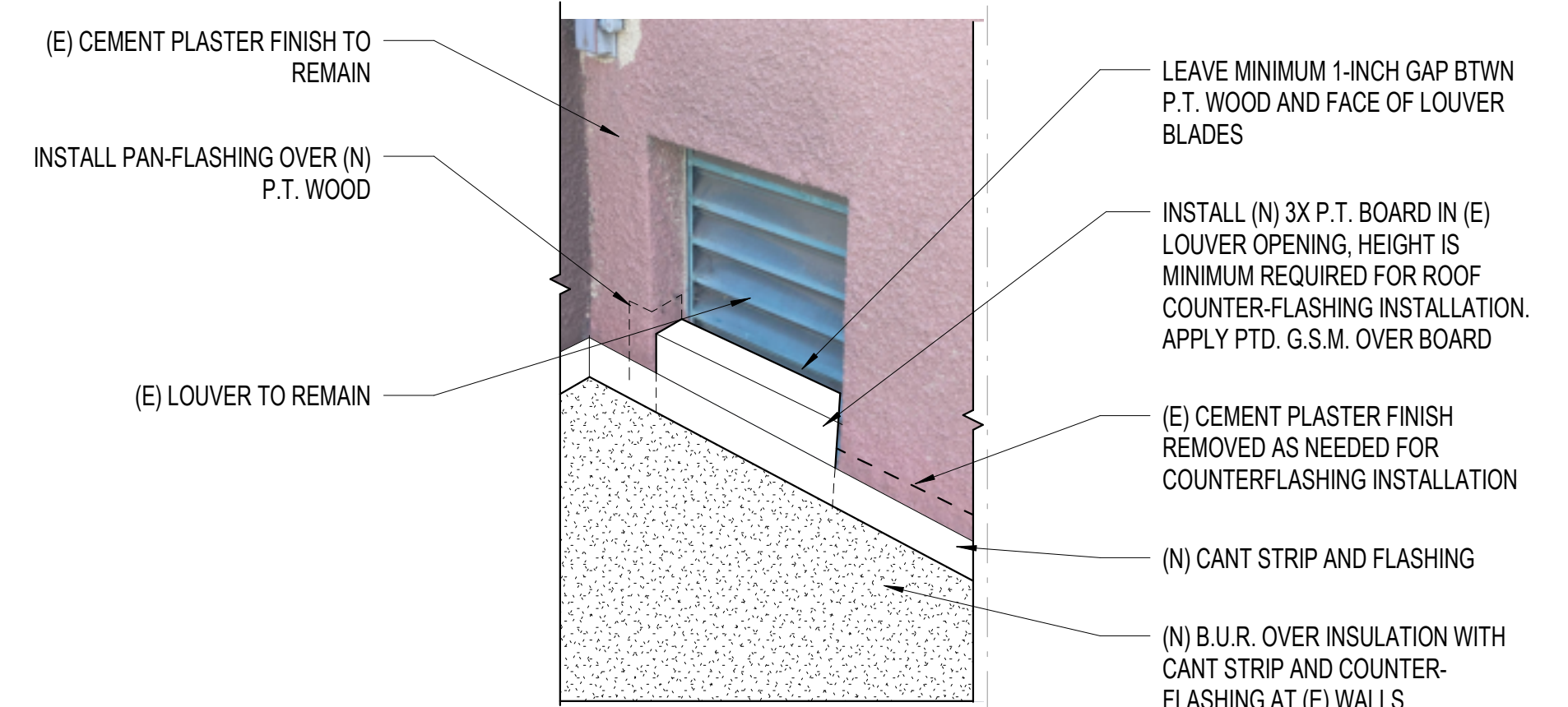
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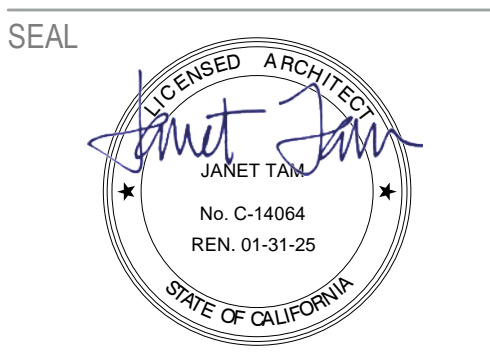
2 BUILDING SECTION LOOKING WEST
A3.13 1/8" = 1'-0"



1 BUILDING SECTION - CLERESTORY WINDOWS
A3.13 1/8" = 1'-0"



3 WATER DAM AT (E) LOUVERS
A3.13 3" = 1'-0"



APPROVALS

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1900 Sixth St
Berkeley, CA 94710

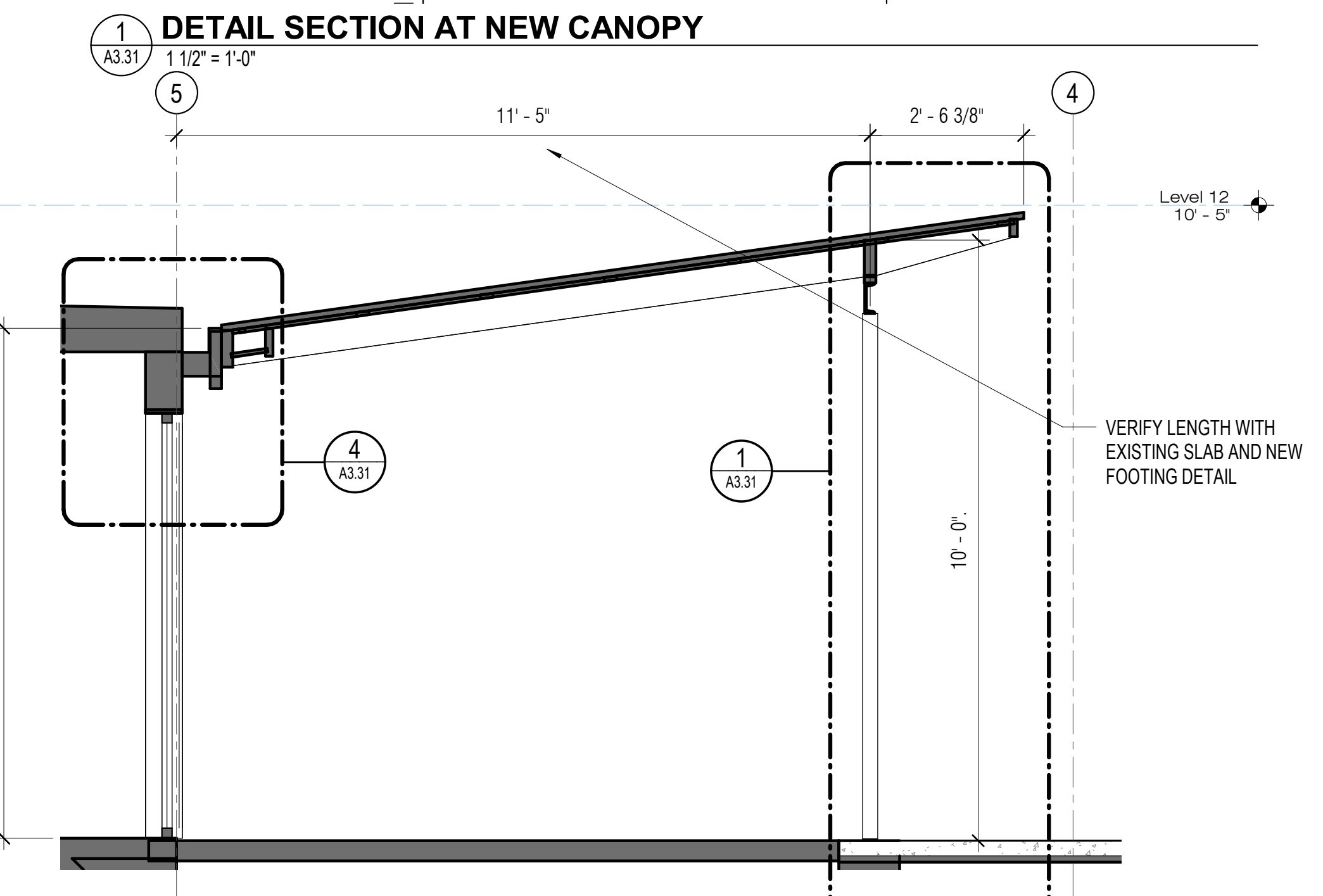
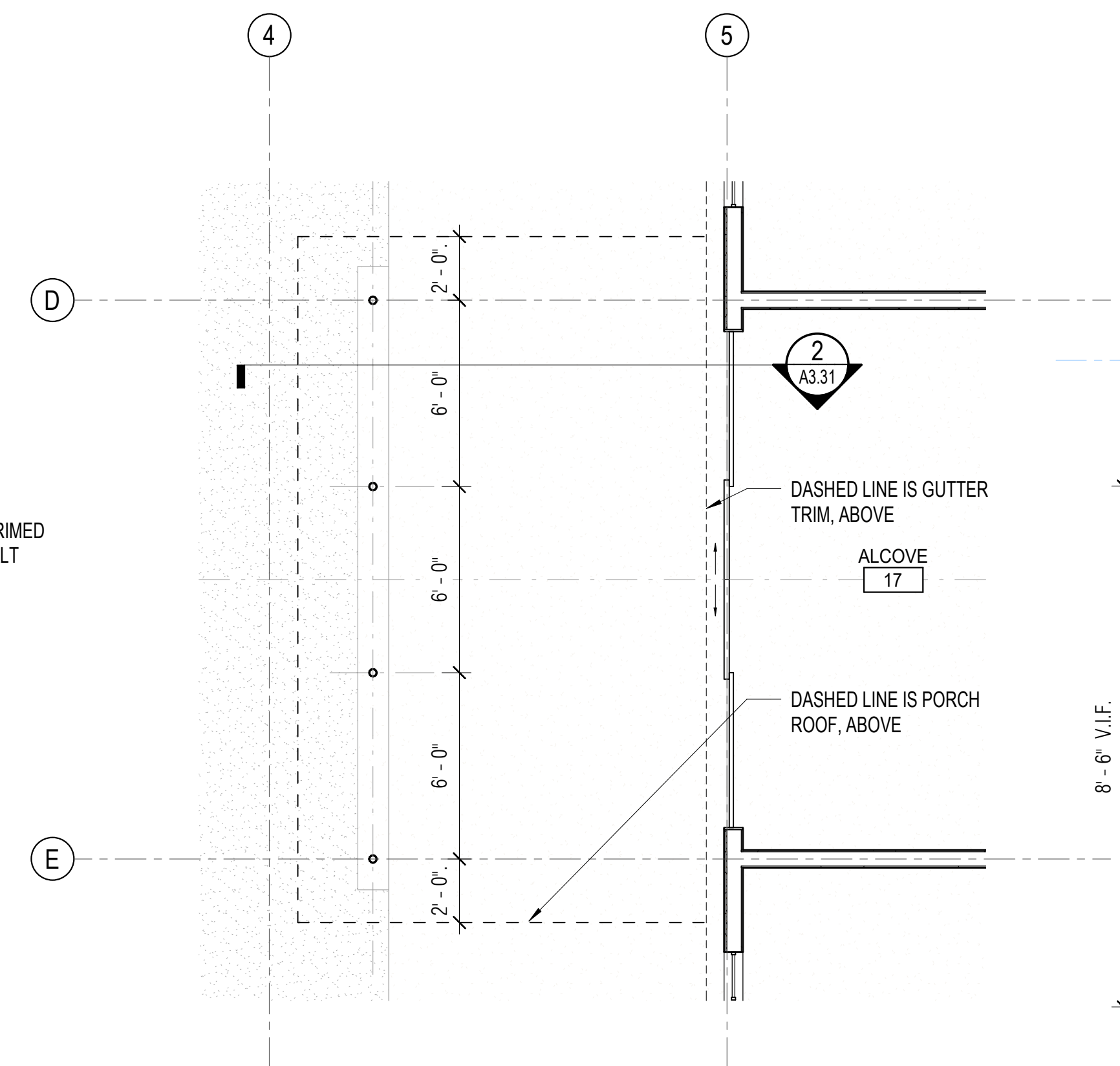
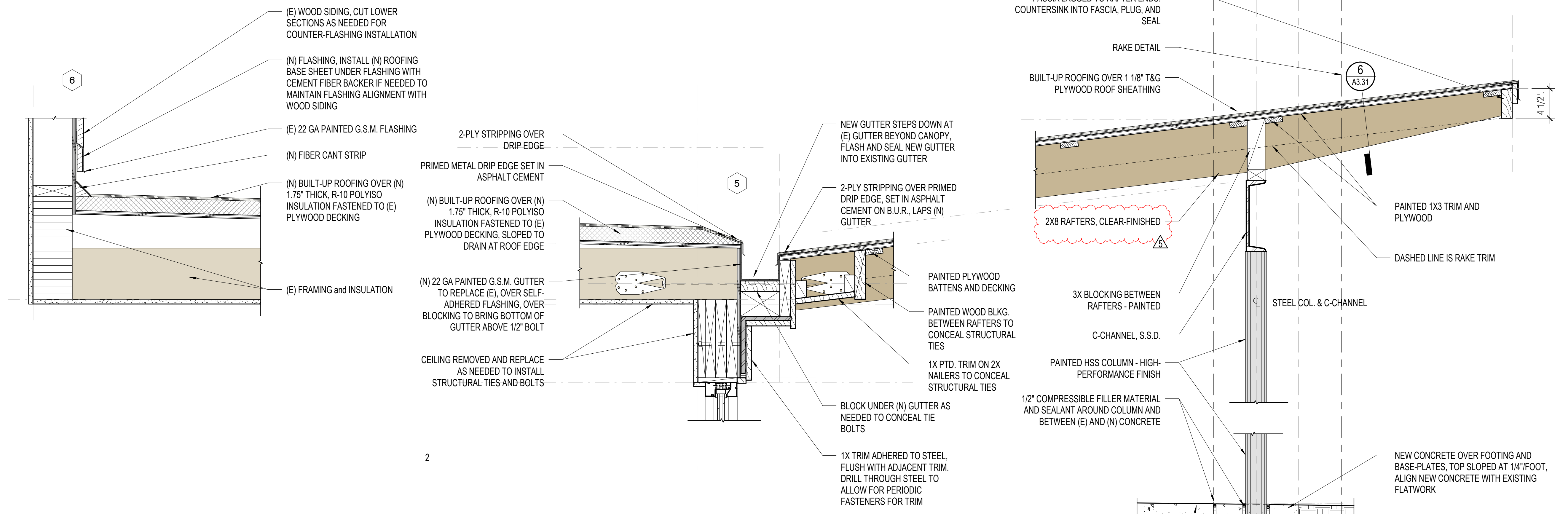
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ISSUE DATE	12.22.2023
N&T JOB NUMBER	22121
REVISIONS	
DATE	DESCRIPTION
09.21.2023	Plan Check 2
02.21.2024	Bid Addendum

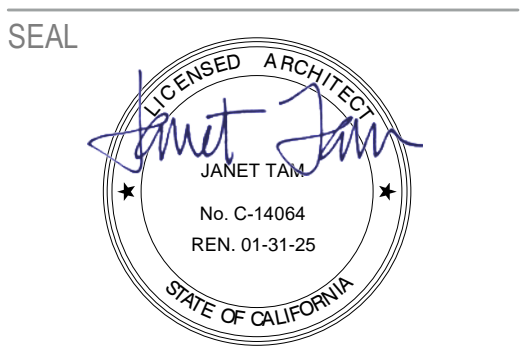
SHEET TITLE
**BUILDING SECTIONS
and DETAILS**

SHEET NUMBER

A3.31



2/20/2024 9:40:55 AM Autodesk Docs://Berkeley West Senior Center/Berkeley West Senior Center.rvt



APPROVALS

PROJECT TITLE

City of Berkeley WEST BERKELEY SERVICE CENTER

1900 Sixth St
Berkeley, CA 94710

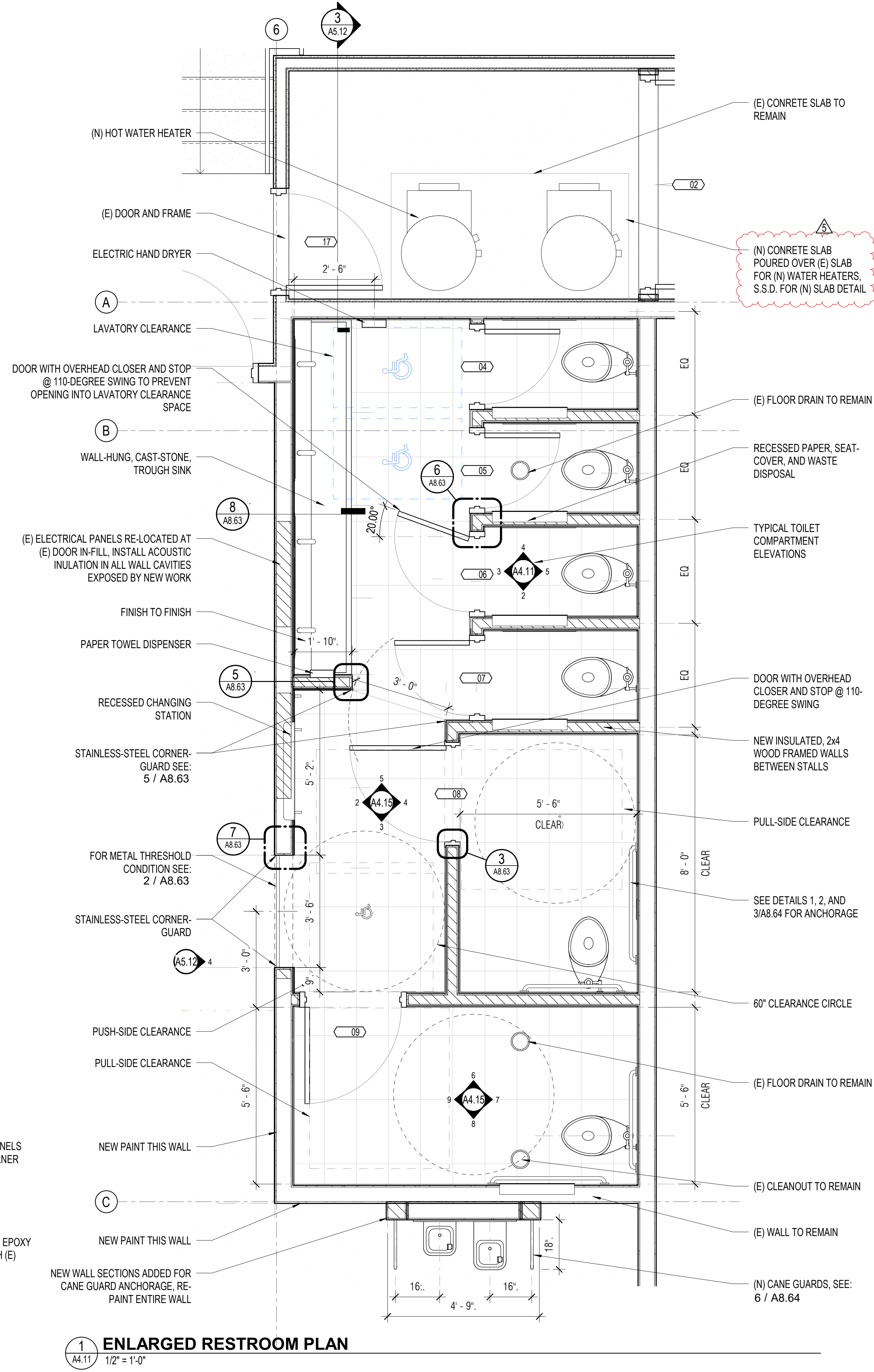
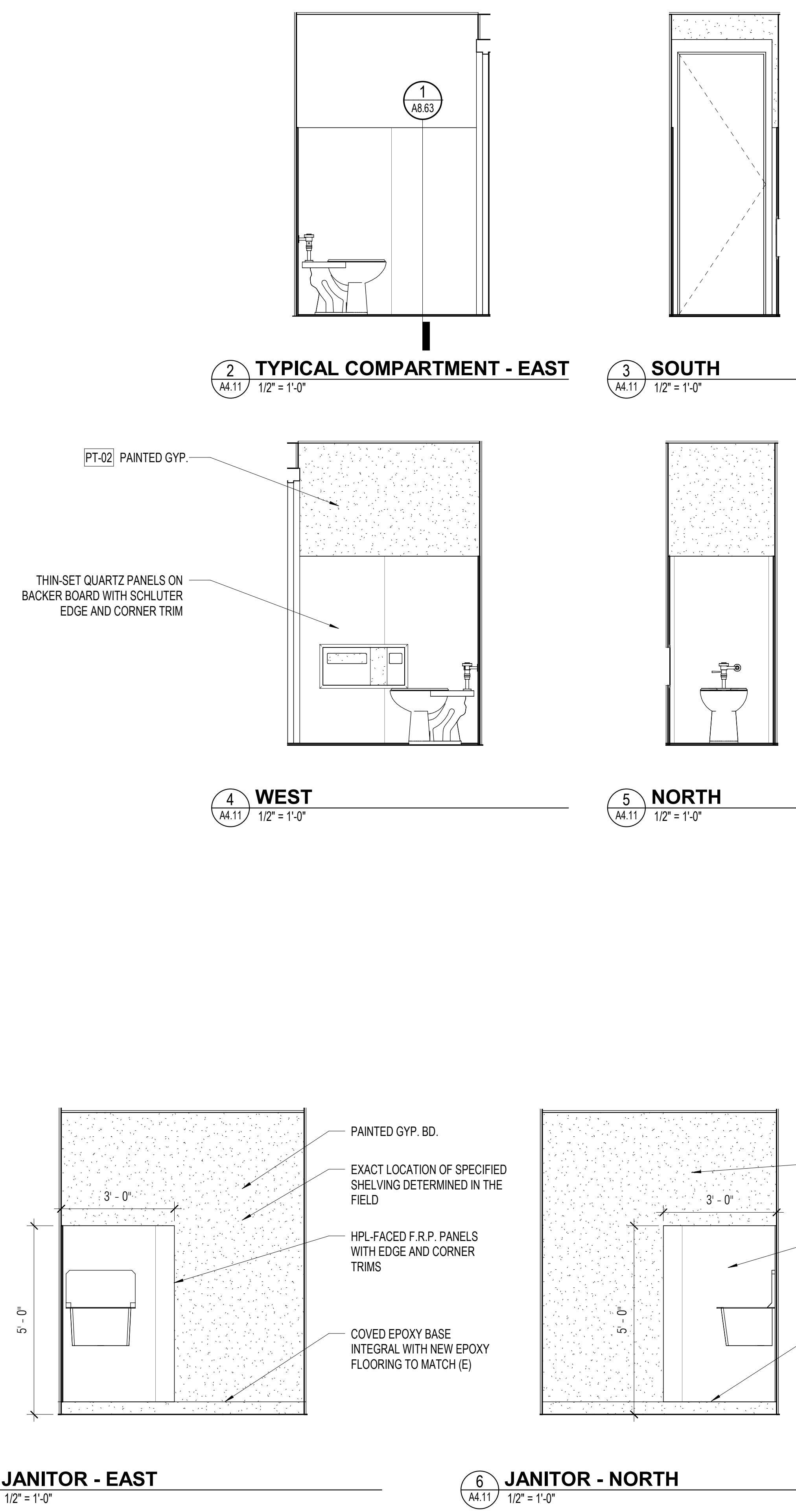
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ISSUE DATE	12.22.2023	
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REVISIONS		
	DATE	DESCRIPTION
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5	02.21.2024	Bid Addendum

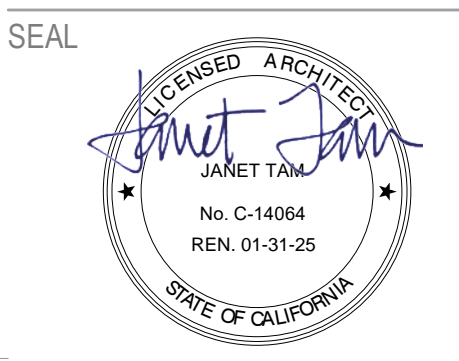
SHEET TITLE ENLARGED PLANS- RESTROOMS

SHEET NUMBER

A4.11



2/20/2024 9:40:58 AM Autodesk Docs://Berkeley West Senior Center/Berkeley West Senior Center.rvt



APPROVALS

PROJECT TITLE

**City of Berkeley
WEST
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SERVICE
CENTER**

1900 Sixth St
Berkeley, CA 94710

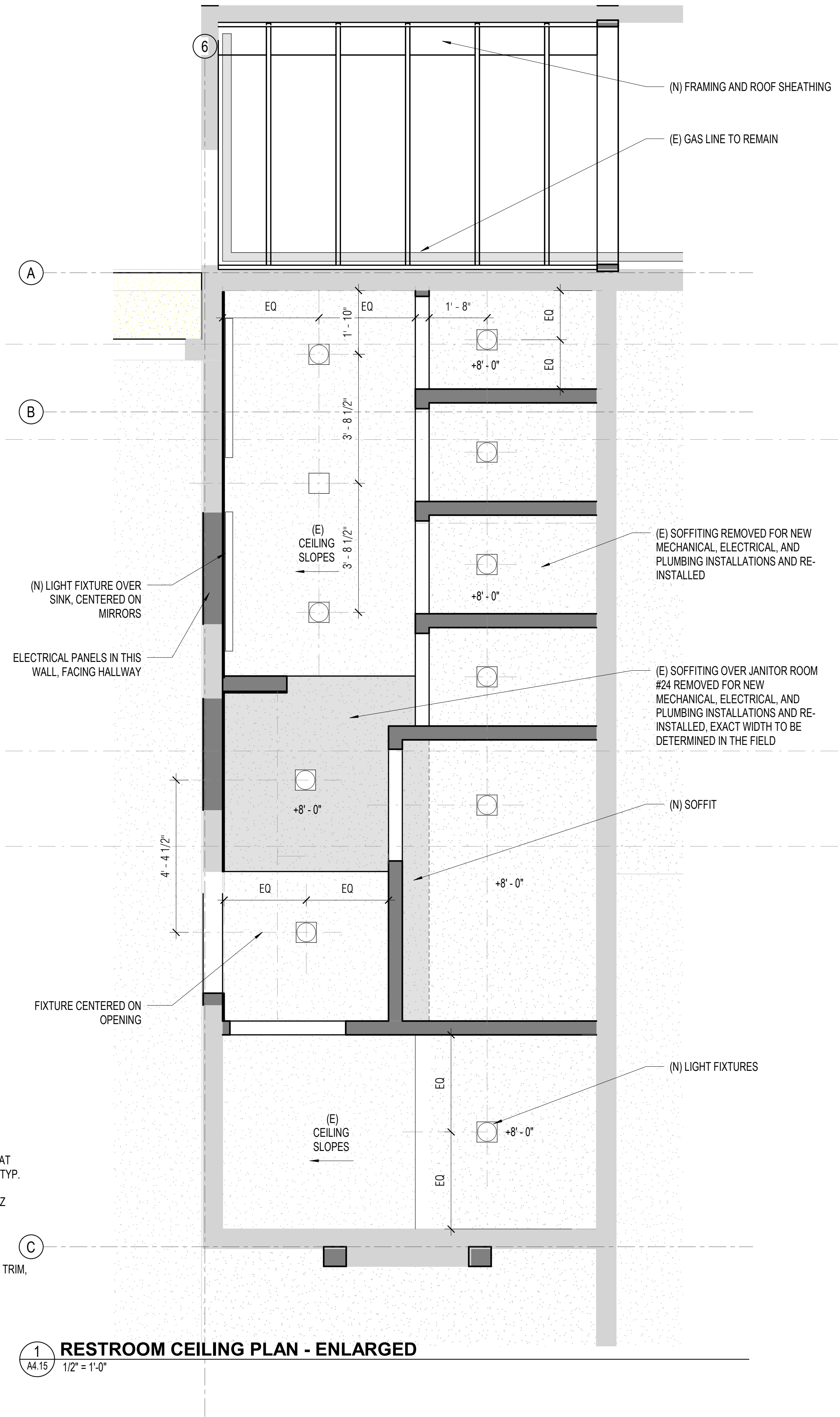
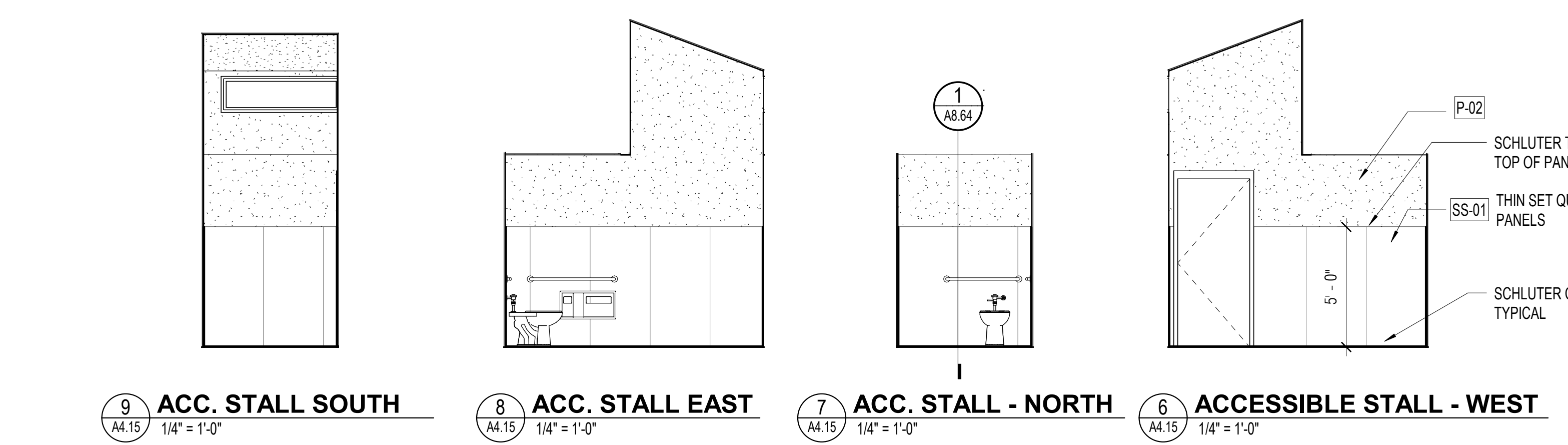
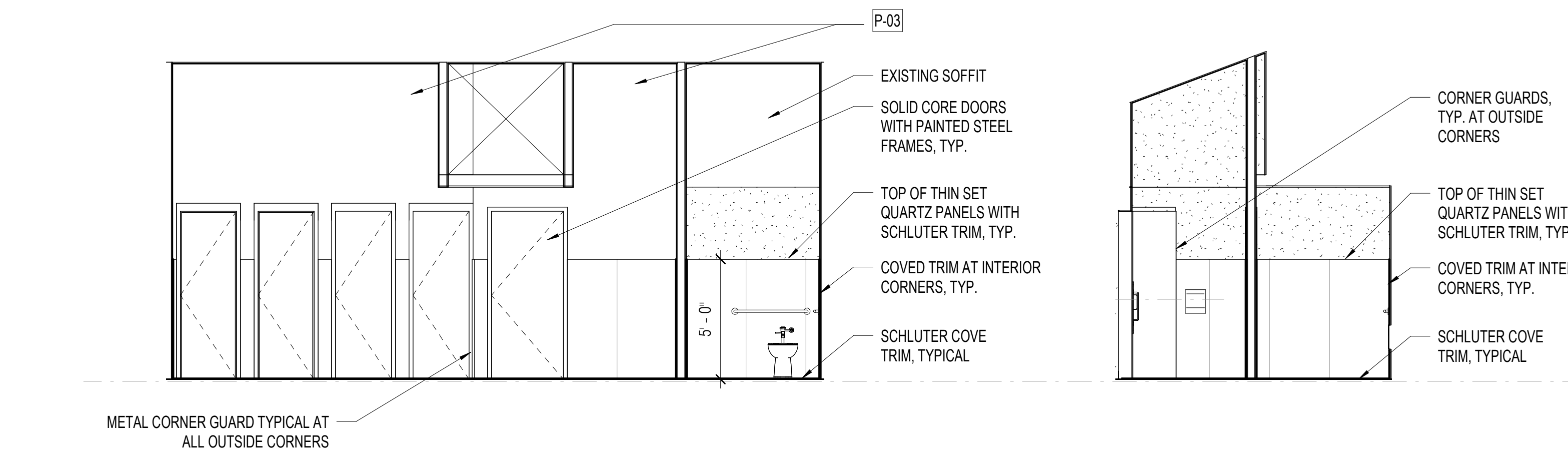
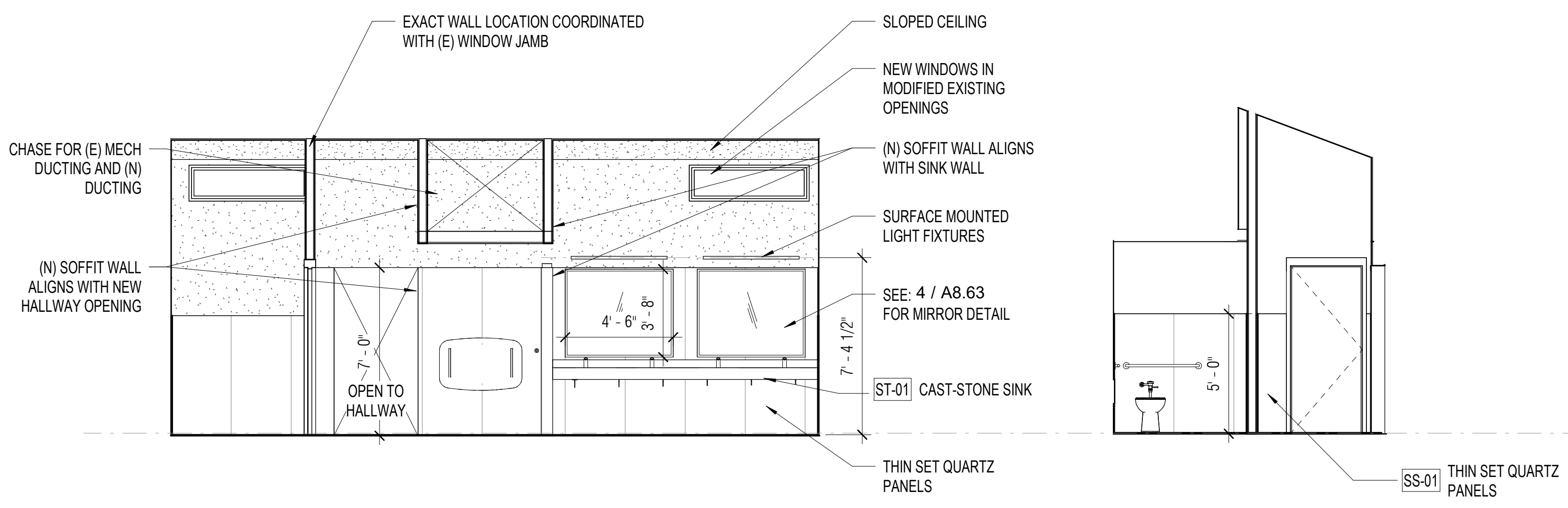
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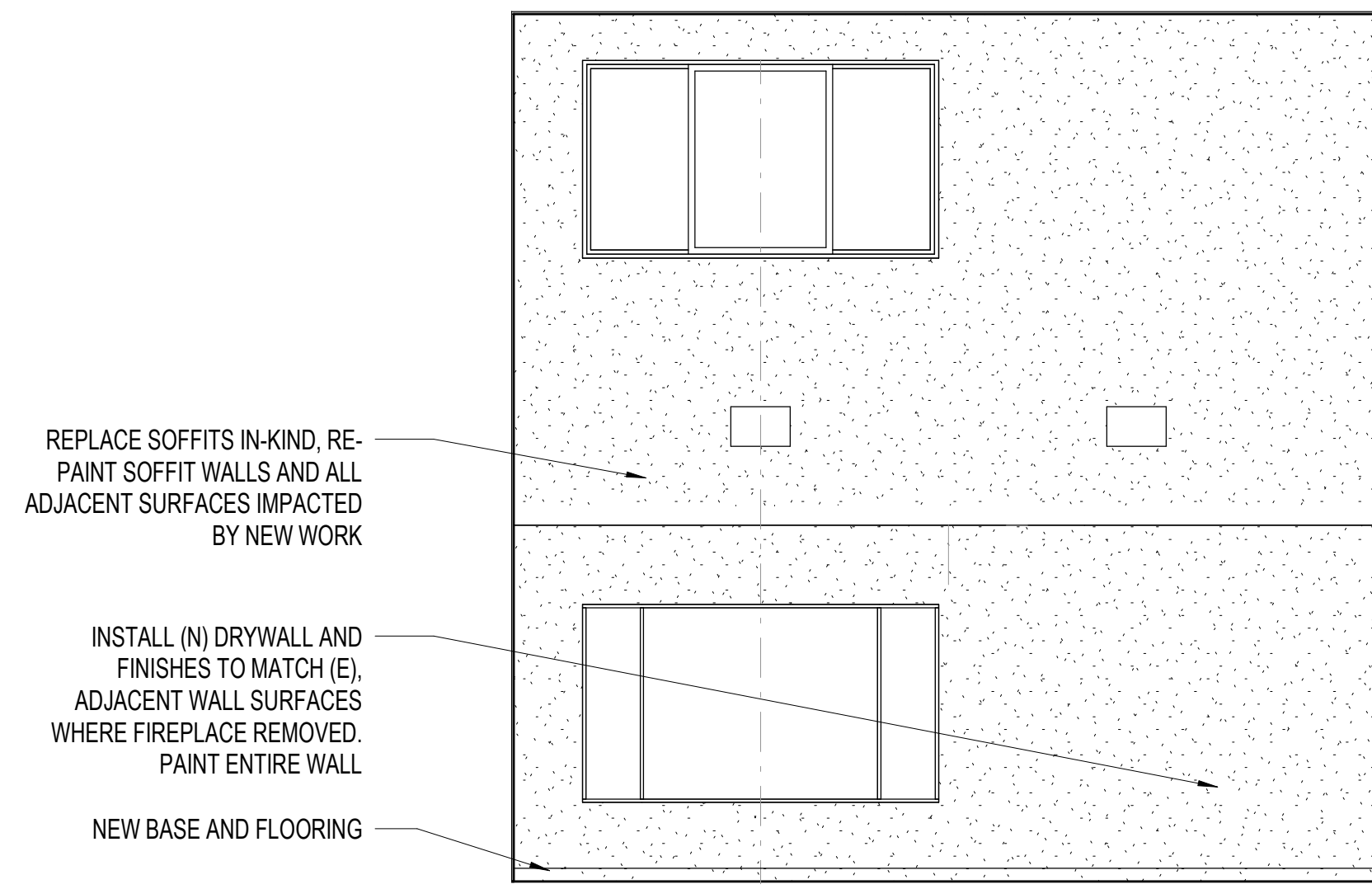
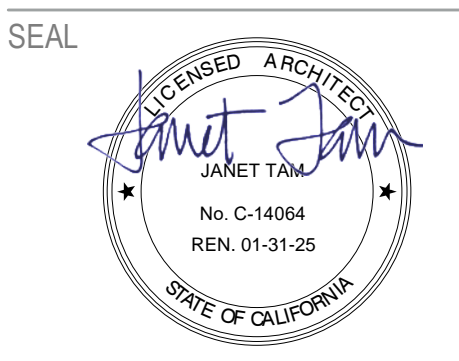
ISSUE DATE	12.22.2023
N&T JOB NUMBER	22121
REVISIONS	
1	08.21.2023 Plan Check 1

SHEET TITLE
**ENLARGED PLANS-
RESTROOMS**

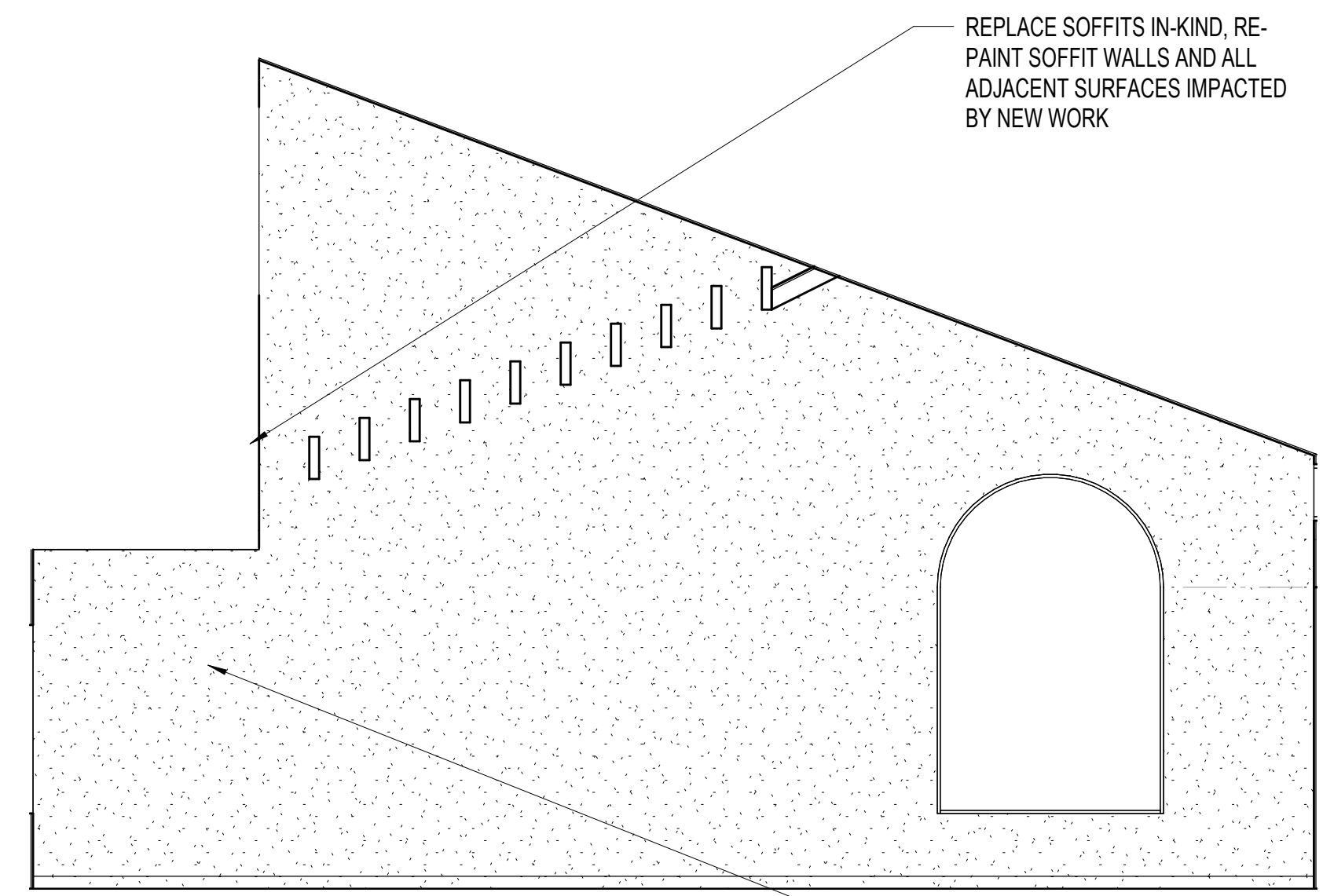
SHEET NUMBER

A4.15





2 LOUNGE 21 - NORTH
A5.12 1/4" = 1'-0"



1 LOUNGE 21 - EAST
A5.12 1/4" = 1'-0"

SEAL

APPROVALS

PROJECT TITLE

**City of Berkeley
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1900 Sixth St
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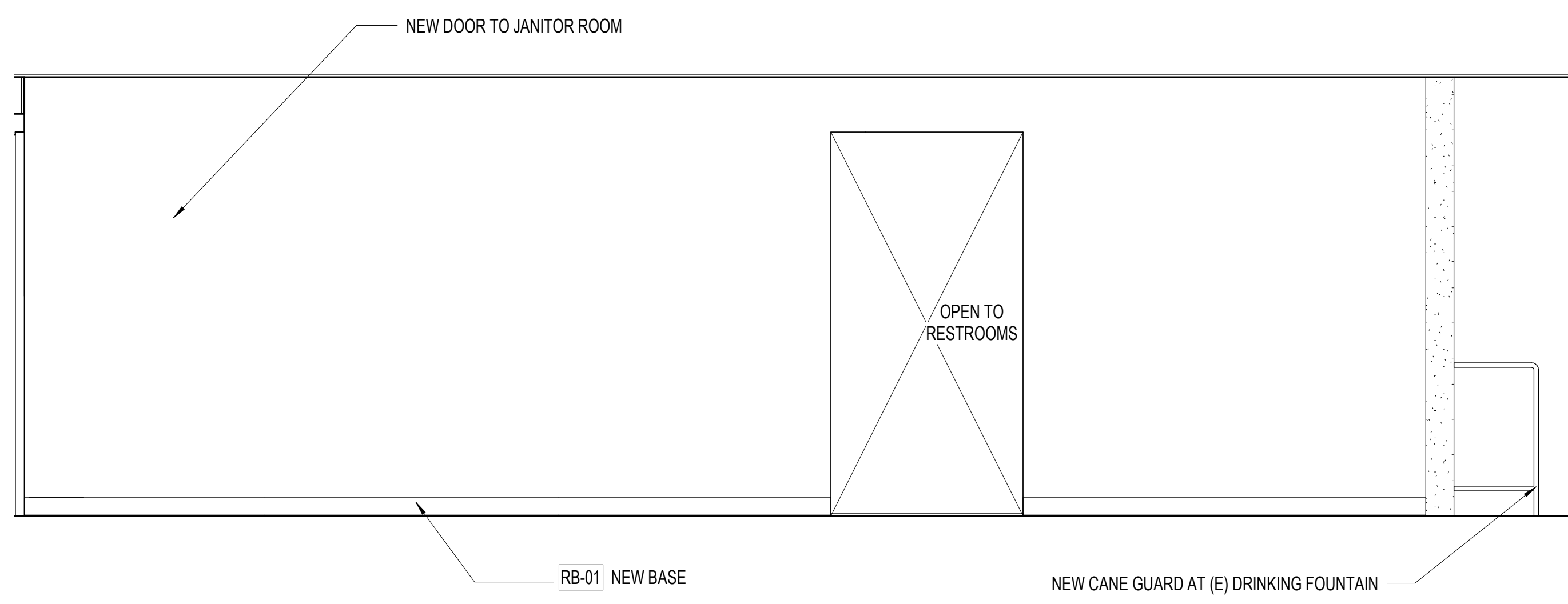
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ISSUE DATE	12.22.2023
N&T JOB NUMBER	22121
REVISIONS	
5	02.21.2024 Bid Addendum

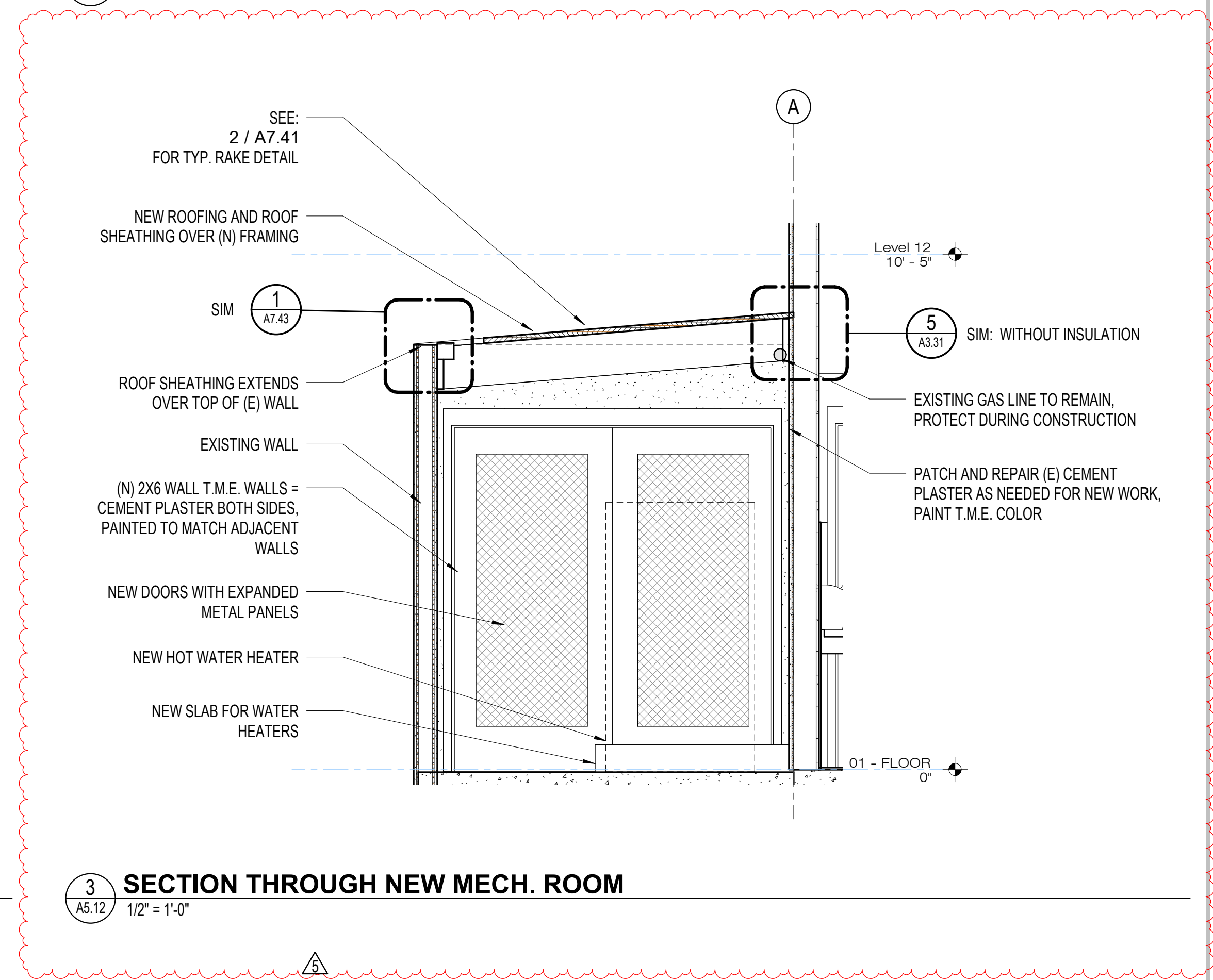
SHEET TITLE
INTERIOR ELEVATIONS

SHEET NUMBER

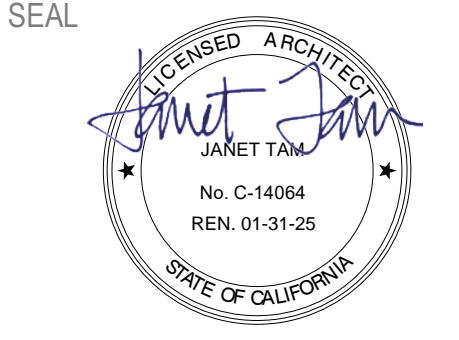
A5.12



4 HALLWAY ELEVATION
A5.12 1/2" = 1'-0"



3 SECTION THROUGH NEW MECH. ROOM
A5.12 1/2" = 1'-0"



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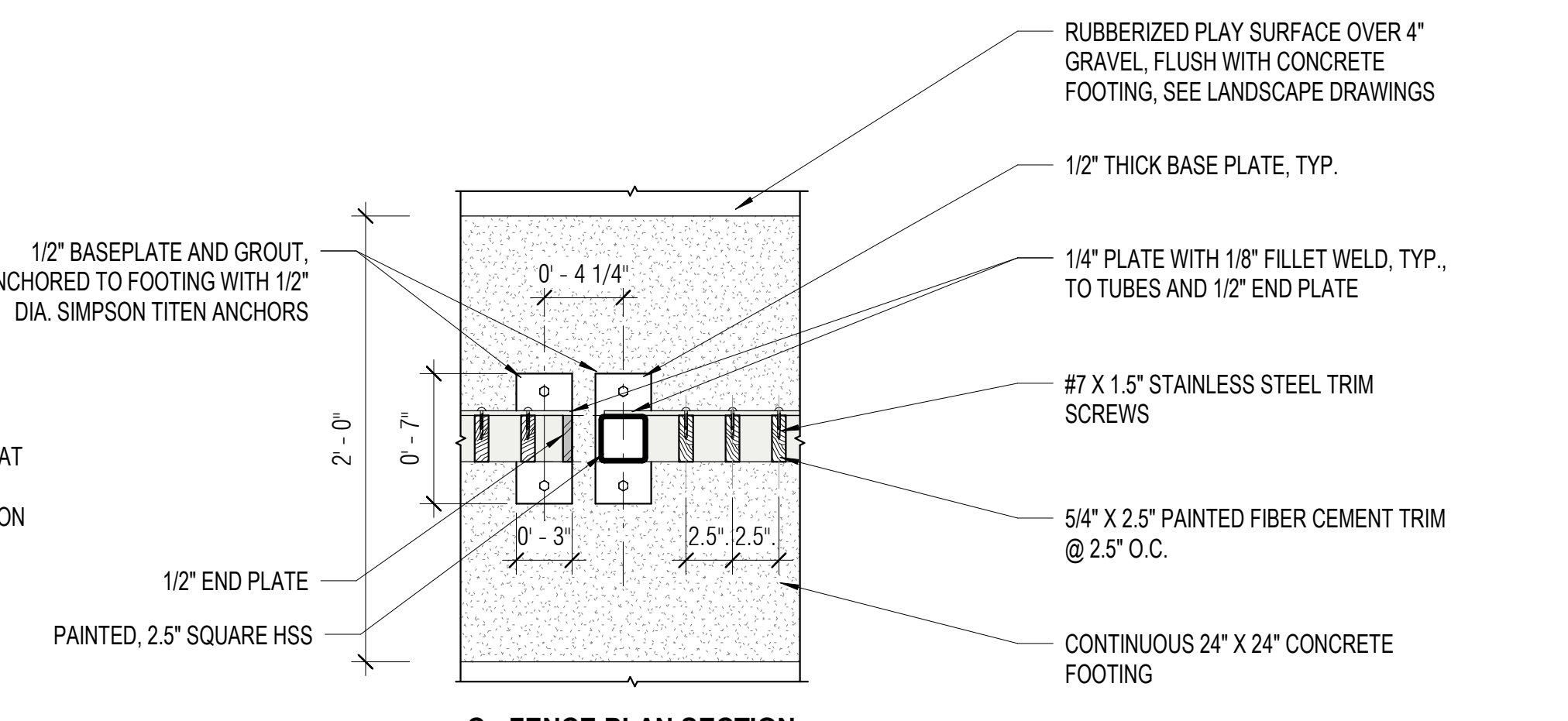
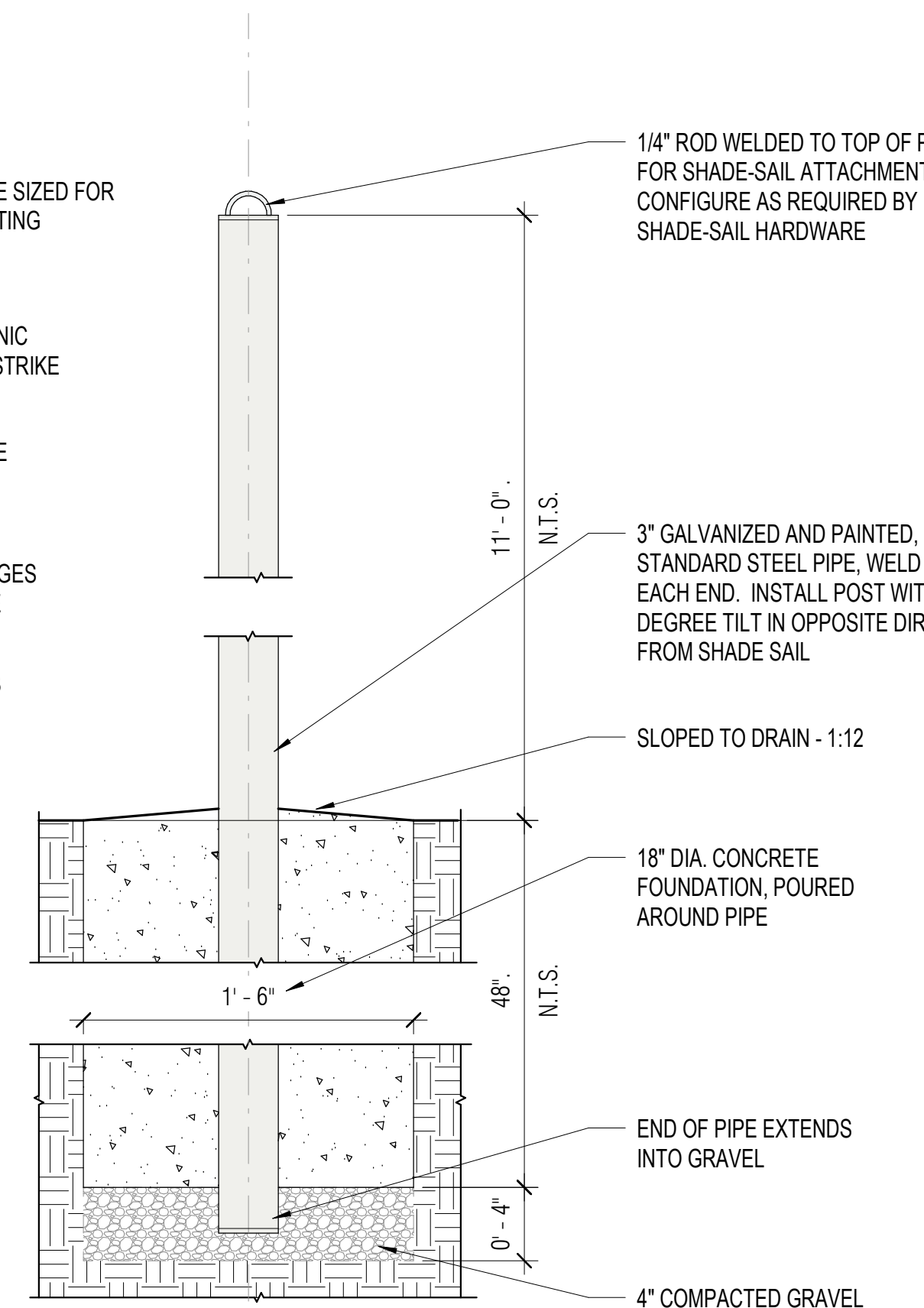
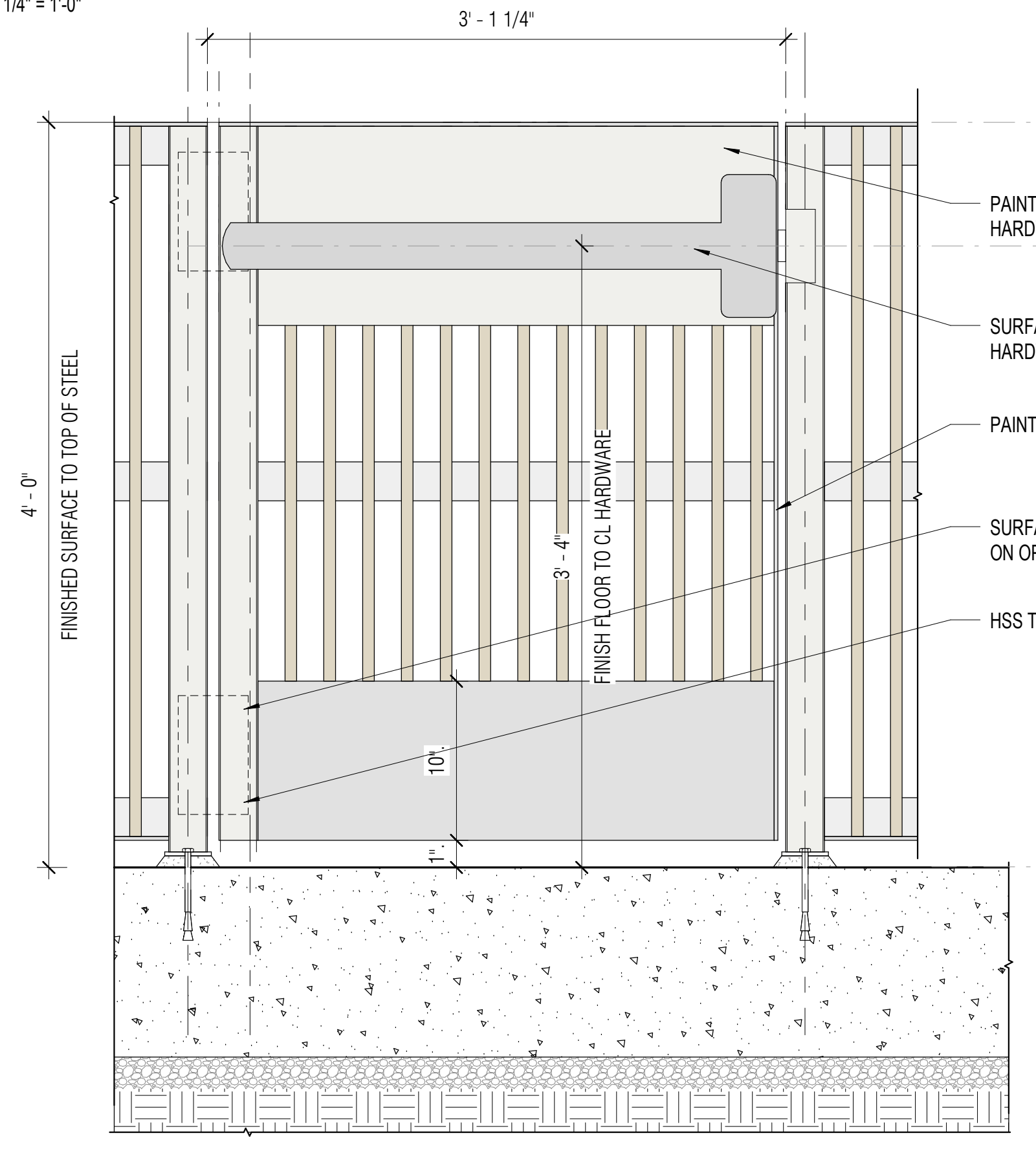
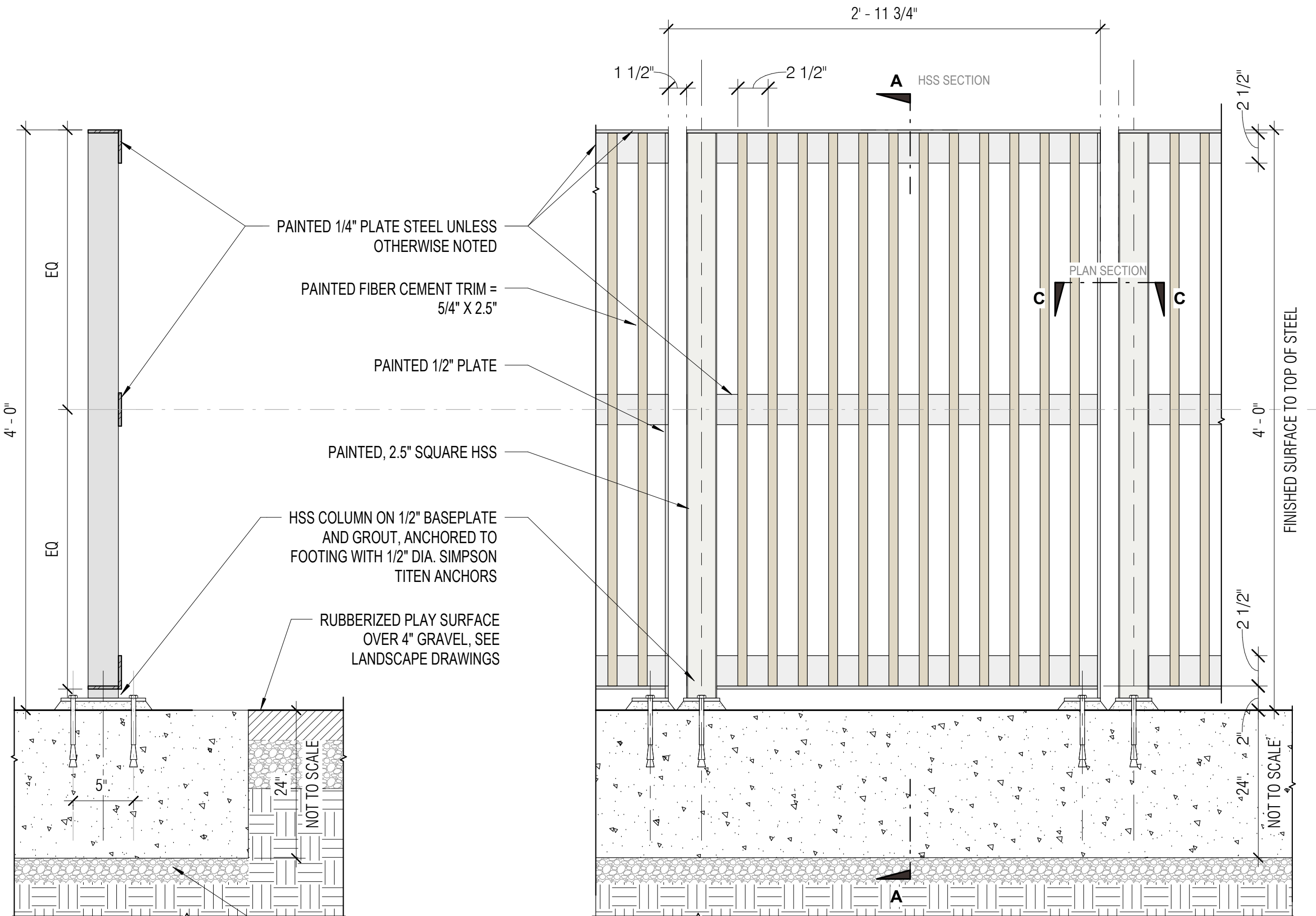
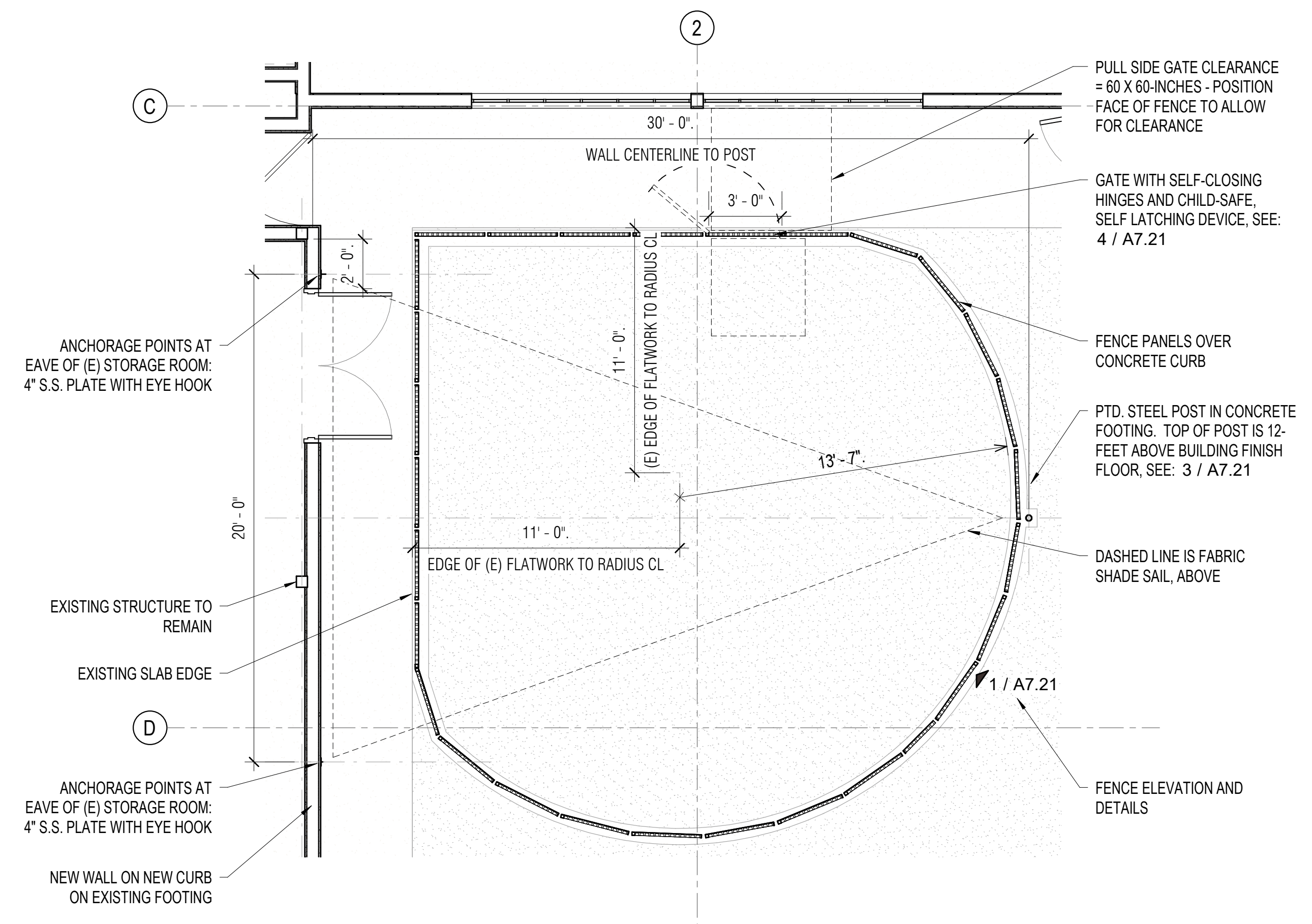
BID SET

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N&T JOB NUMBER	22121
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1	08.21.2023 Plan Check 1

SHEET TITLE
**PLAY AREA FENCE
DETAILS**

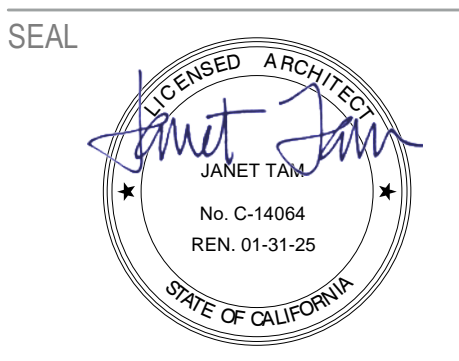
SHEET NUMBER

A7.21



1 PLAY AREA FENCE DETAILS
1 1/2" = 1'-0"

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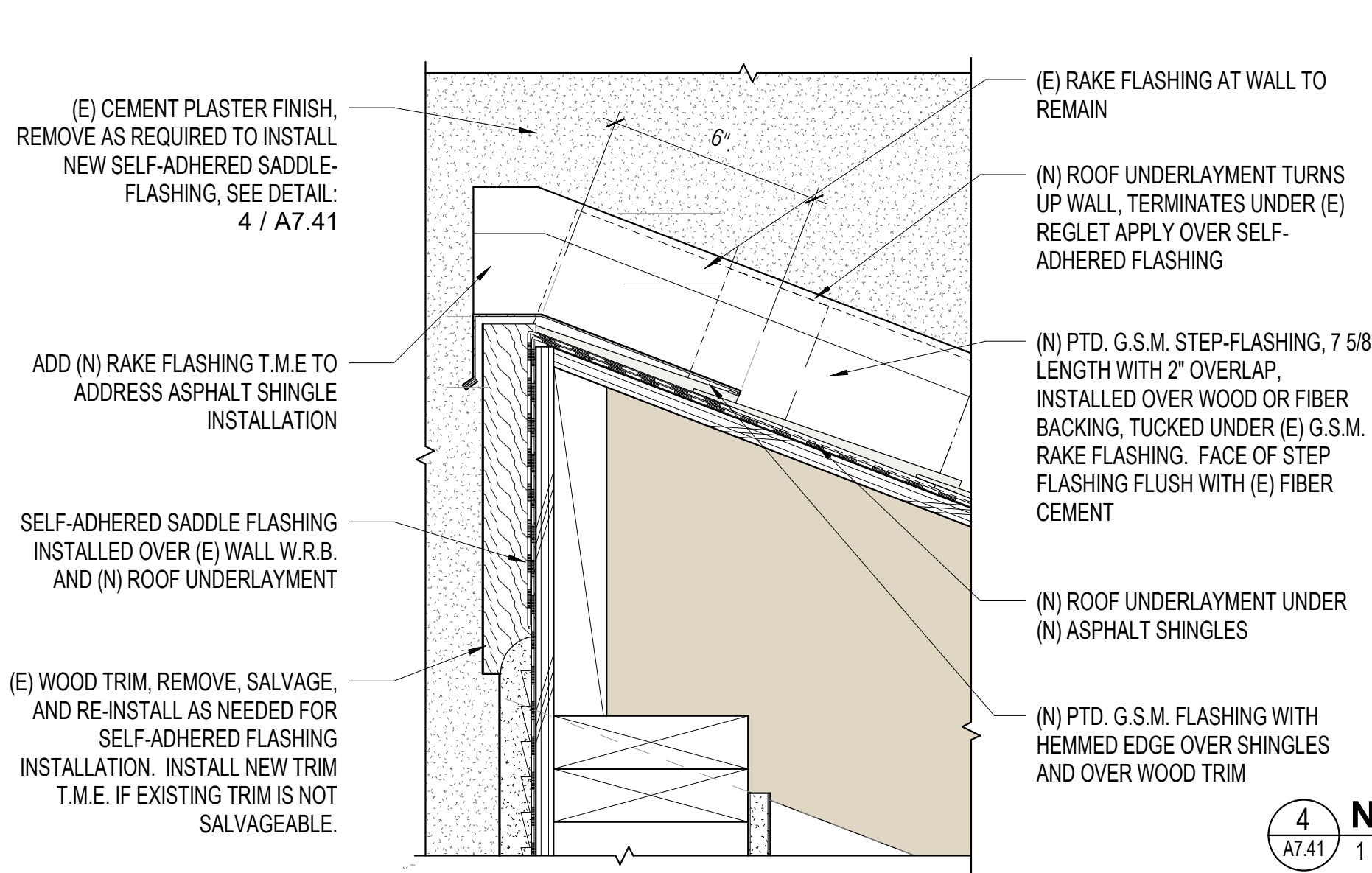
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N&T JOB NUMBER	22121
REVISIONS	
	DATE DESCRIPTION

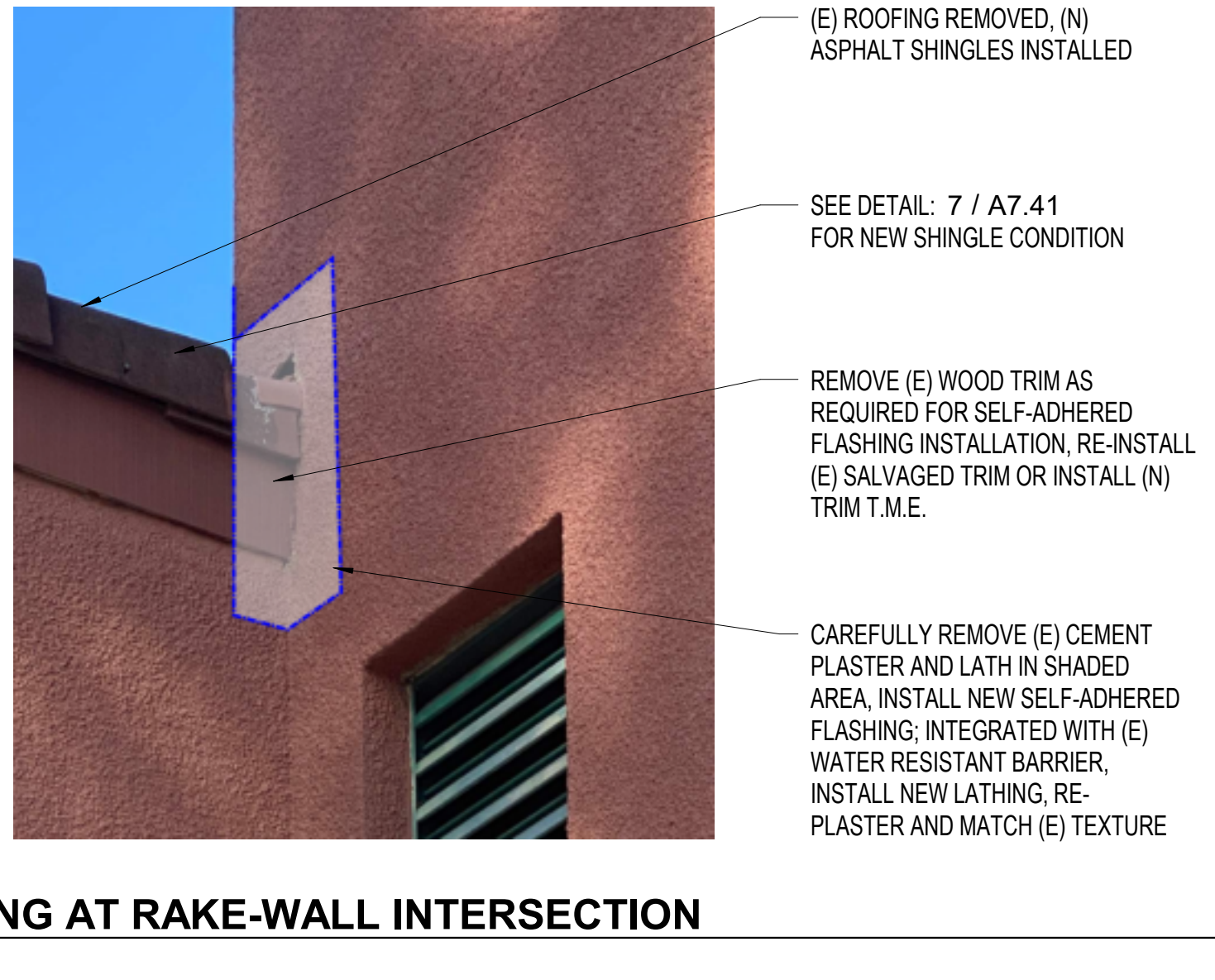
SHEET TITLE
**EXTERIOR - ROOF
ASSEMBLIES AND
DETAILS**

SHEET NUMBER

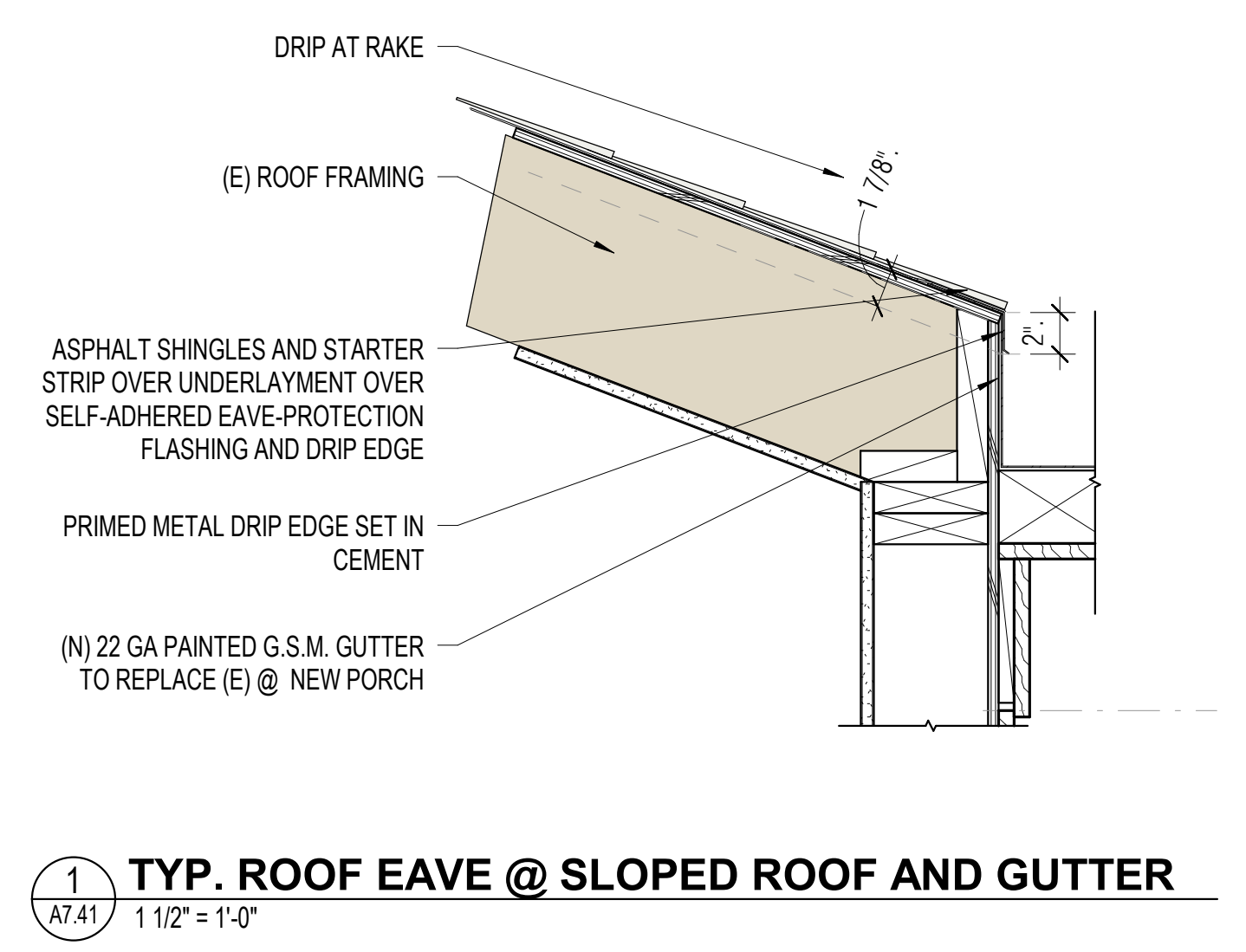
A7.41



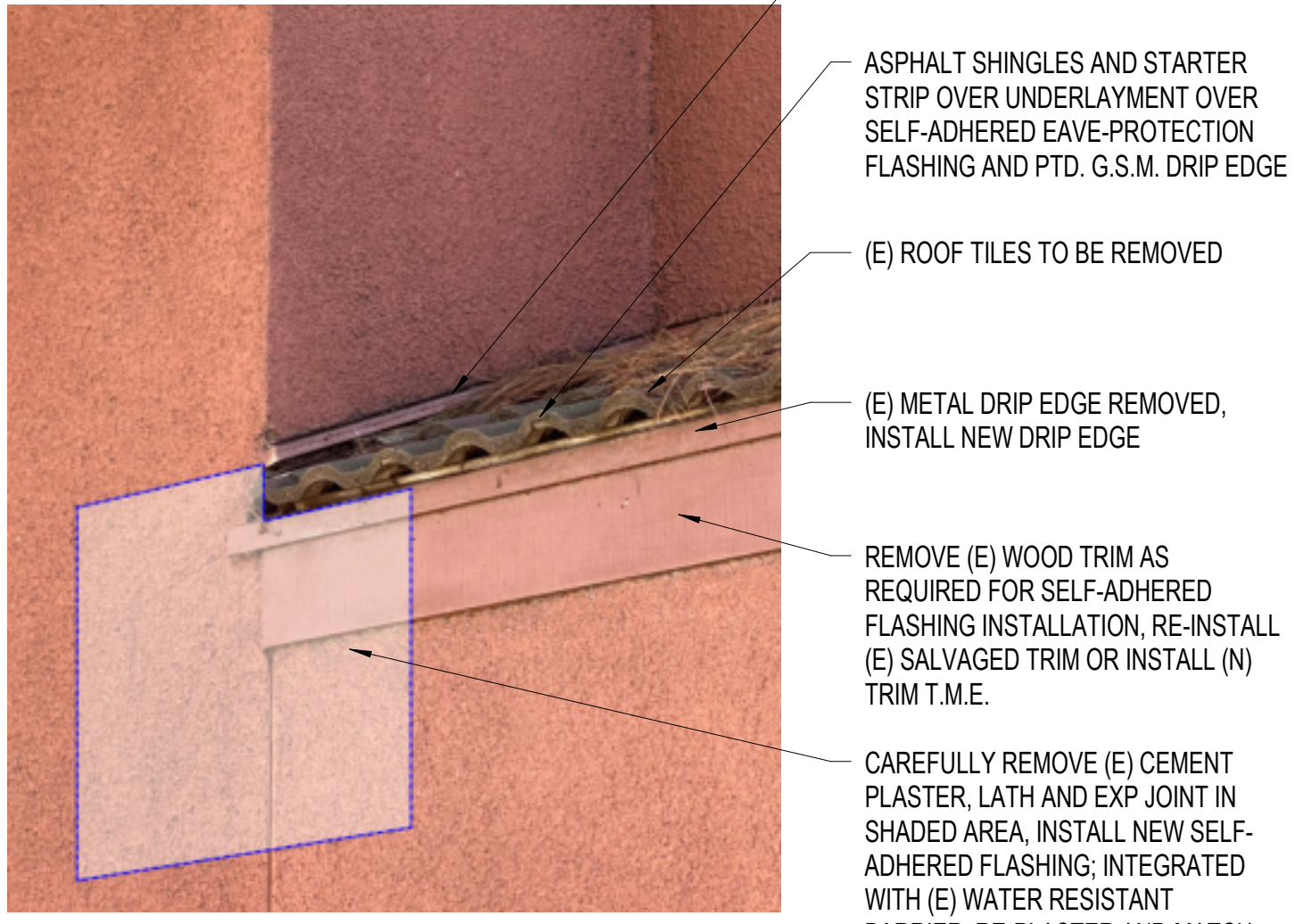
7 SLOPED ROOF PEAK
A7.41 3" = 1'-0"



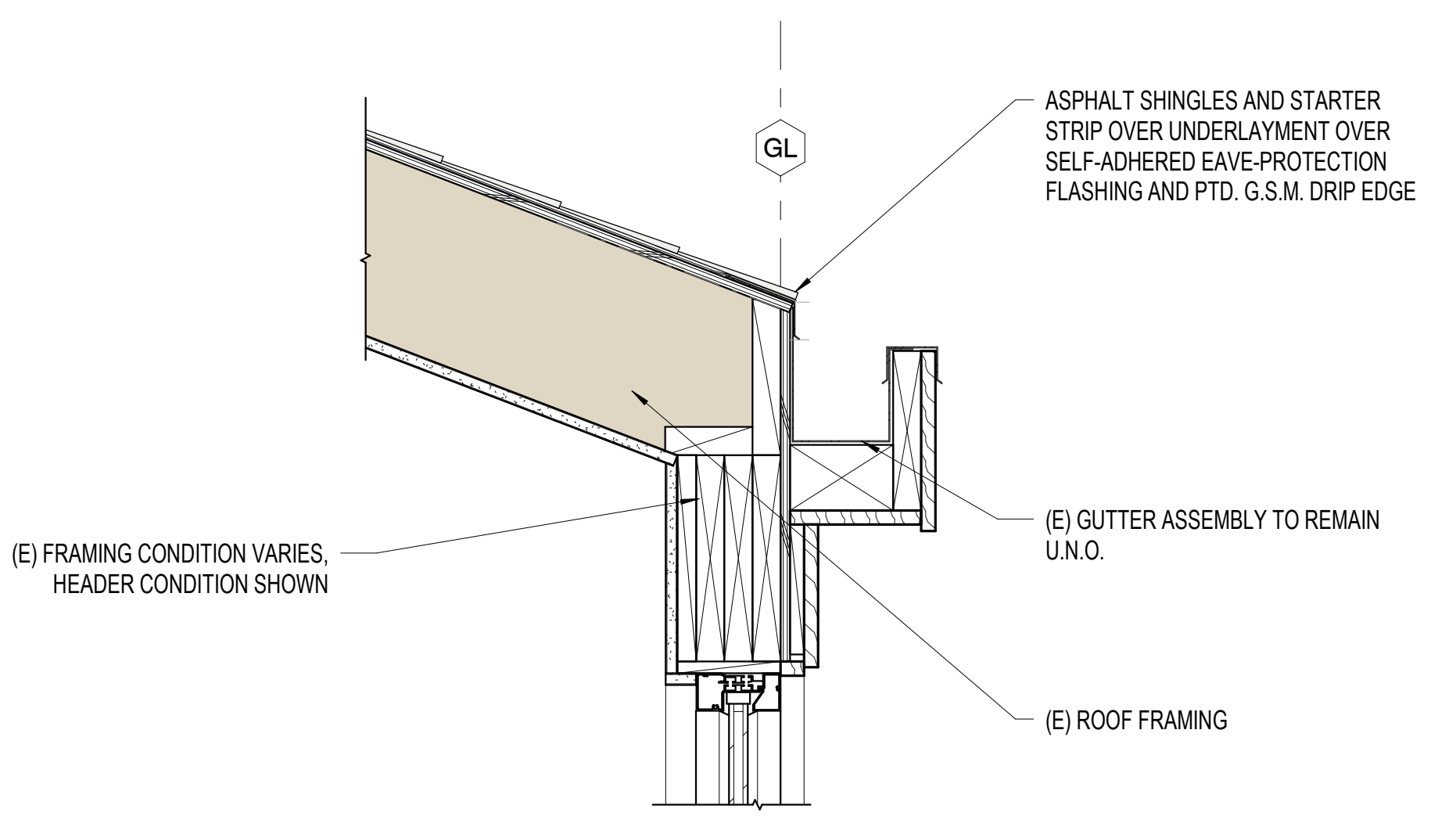
4 NEW FLASHING AT RAKE-WALL INTERSECTION
A7.41 1 1/2" = 1'-0"



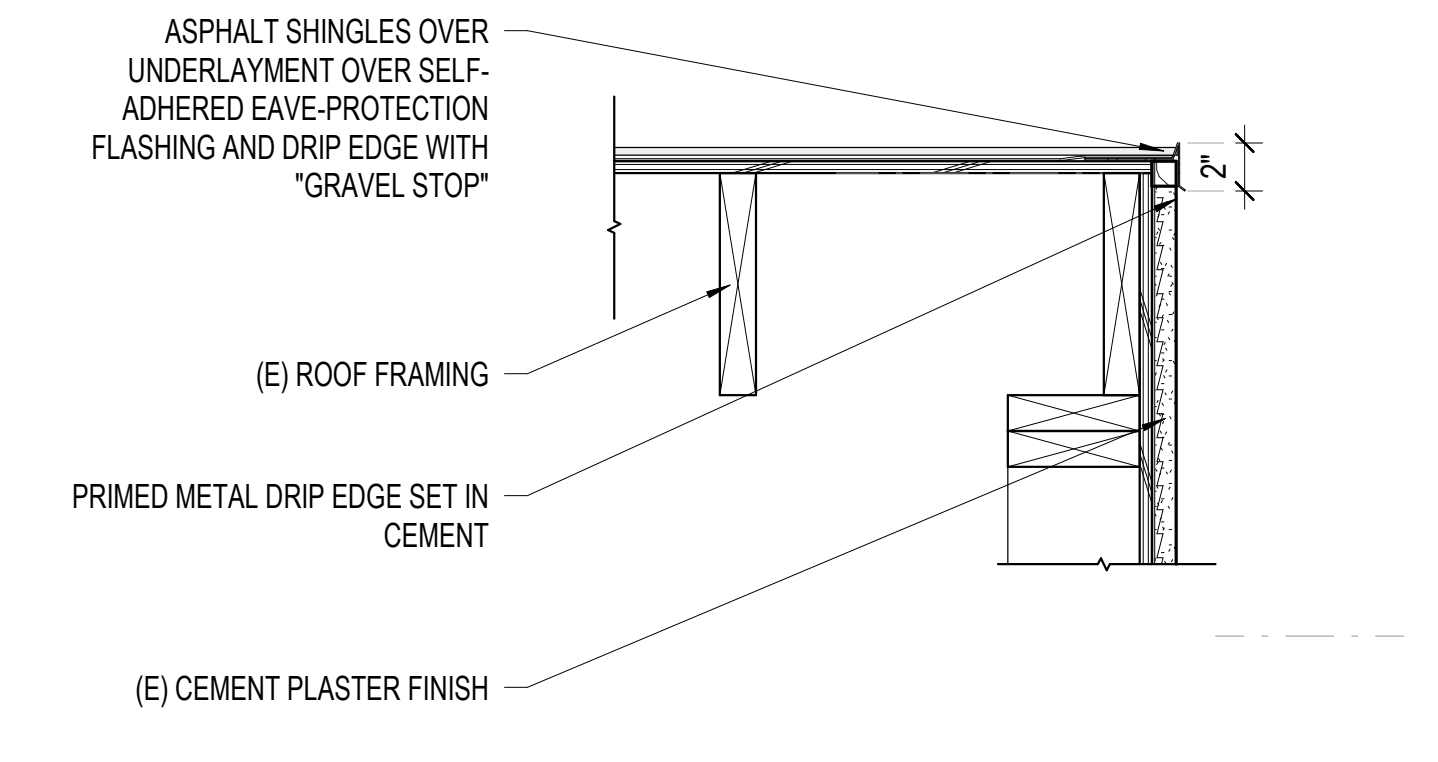
1 TYP. ROOF EAVE @ SLOPED ROOF AND GUTTER
A7.41 1 1/2" = 1'-0"



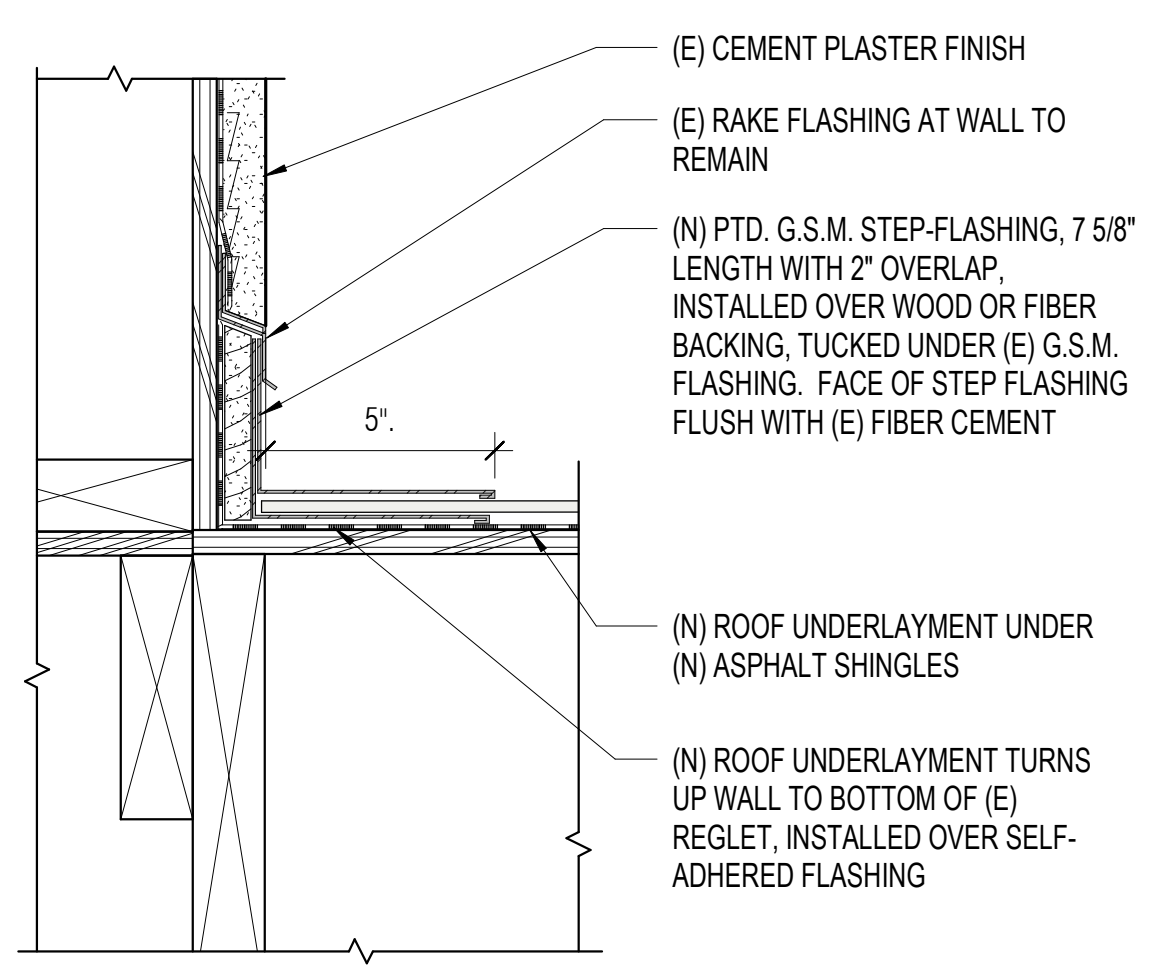
8 NEW FLASHING AT RAKE-WALL
A7.41 1 1/2" = 1'-0"



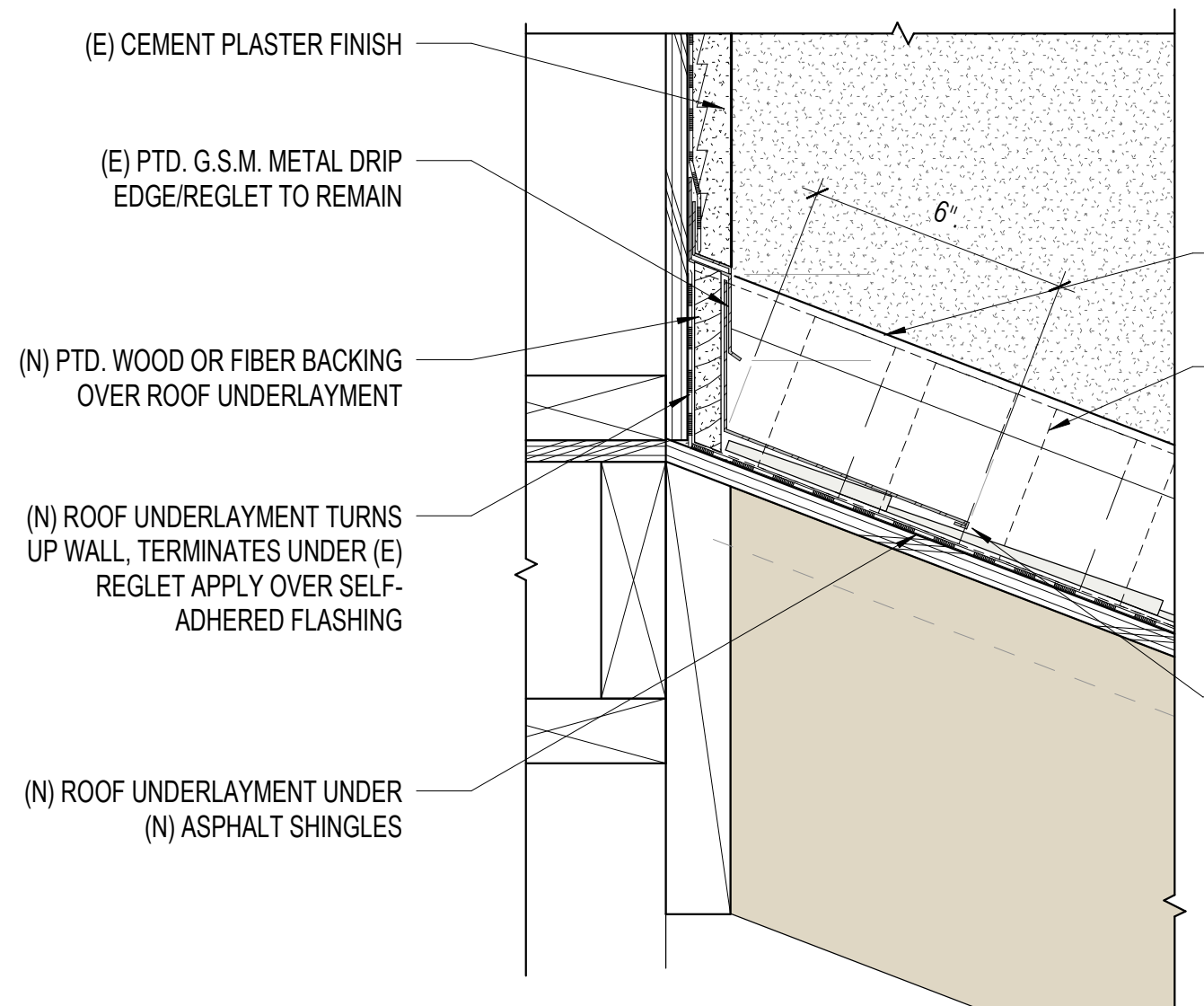
5 SLOPED ROOF AND GUTTER
A7.41 1 1/2" = 1'-0"



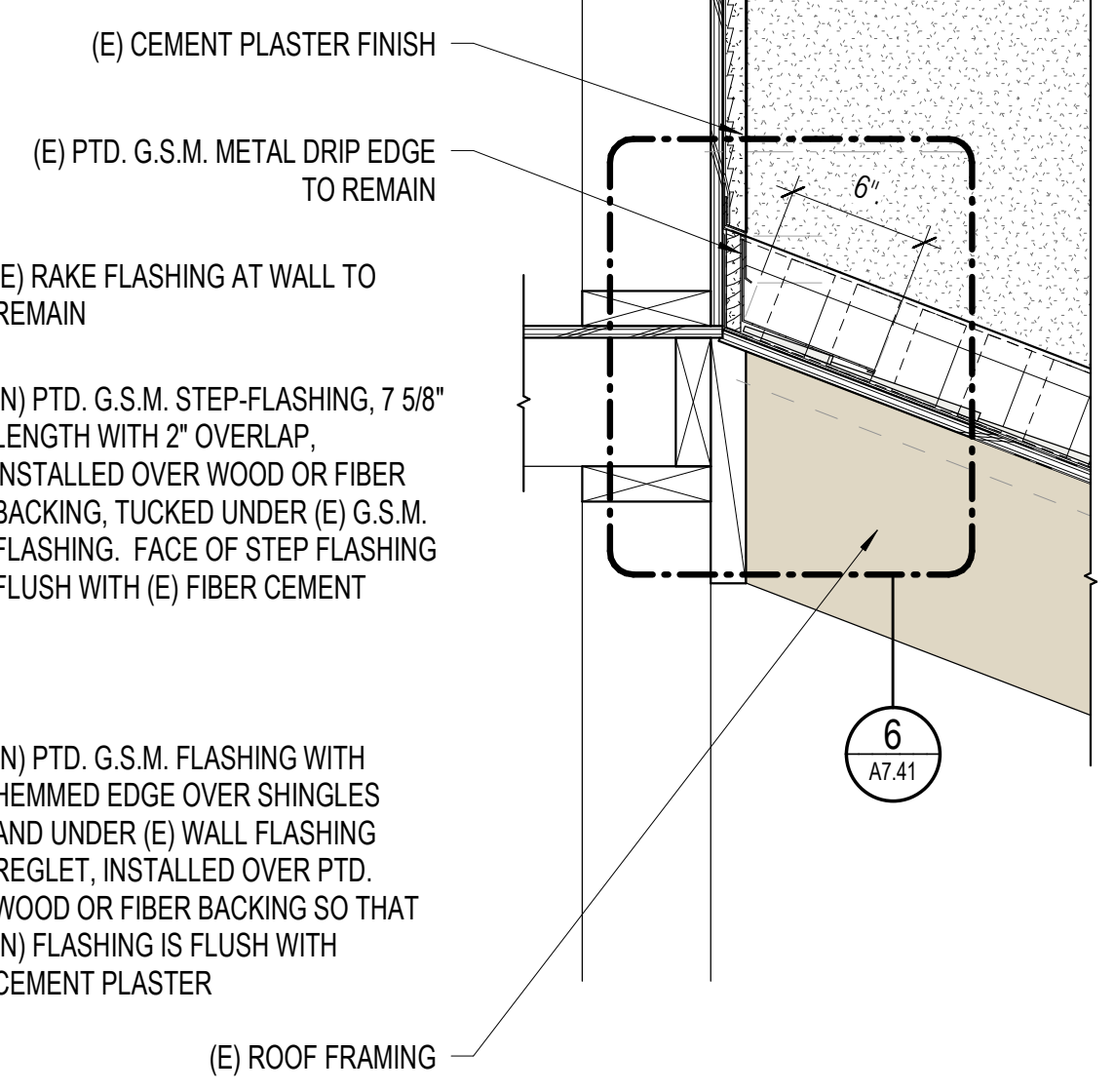
2 TYP. ROOF RAKE
A7.41 1 1/2" = 1'-0"



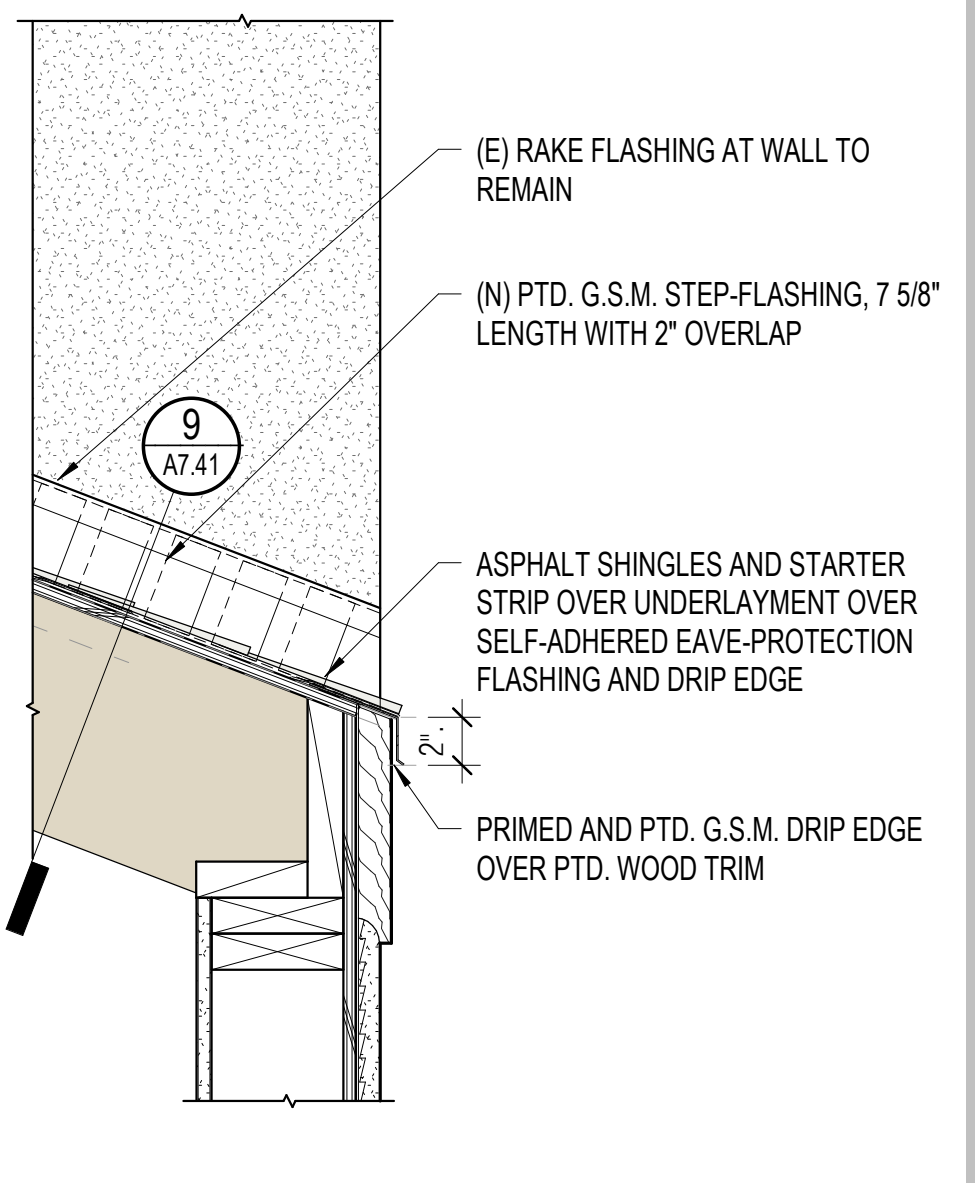
9 ENLARGED WALL TO ROOF STEP FLASHING
A7.41 3" = 1'-0"



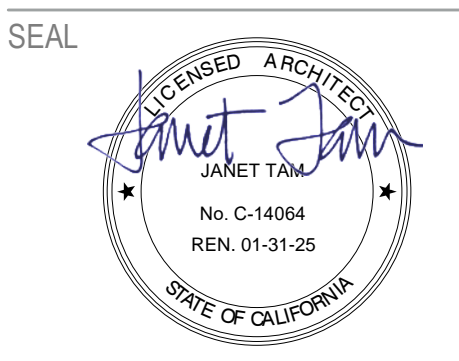
6 ENLARGED WALL TO ROOF FLASHING
A7.41 3" = 1'-0"



3 WALL TO ROOF FLASHING
A7.41 1 1/2" = 1'-0"



9
A7.41



APPROVALS

PROJECT TITLE

**City of Berkeley
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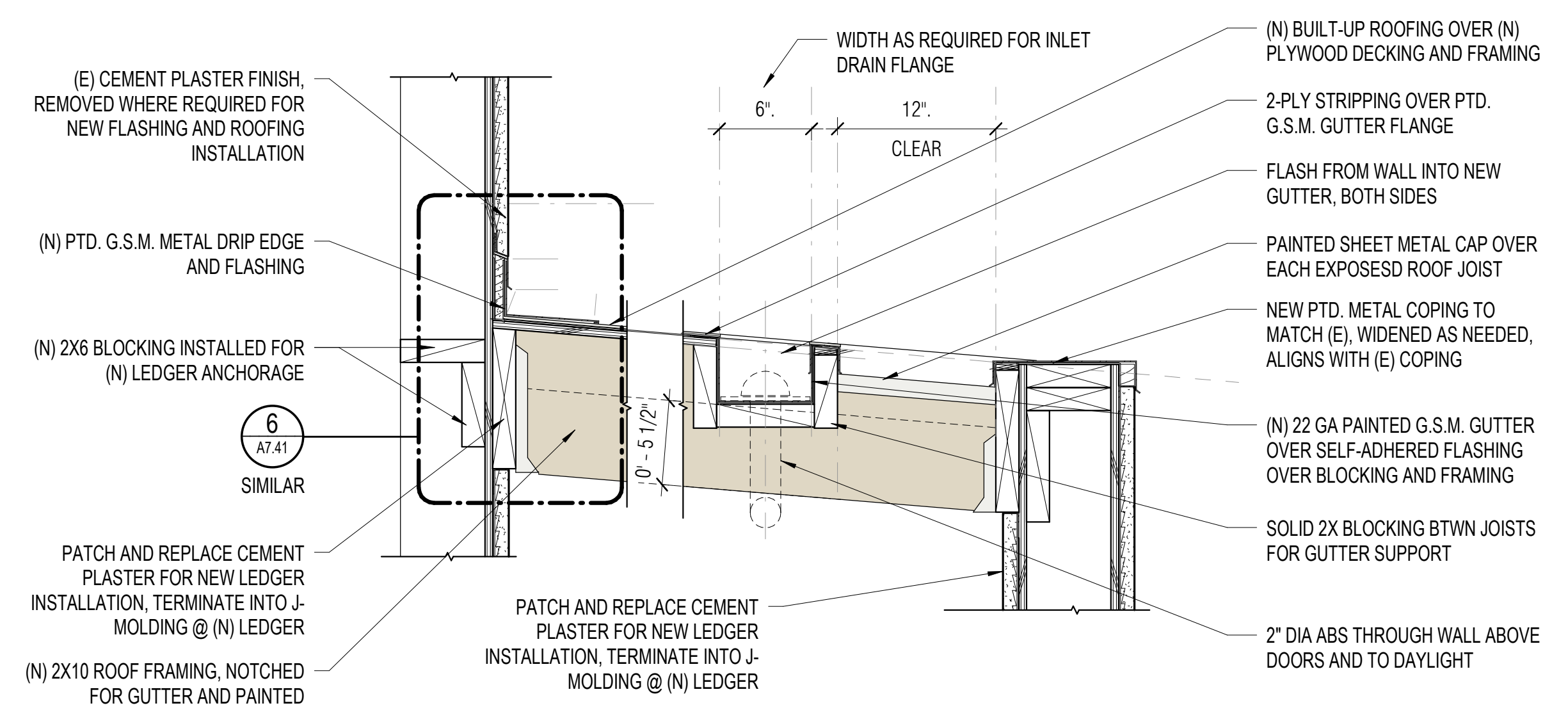
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ISSUE DATE	12.22.2023
N&T JOB NUMBER	22121
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	DATE DESCRIPTION
1	08.21.2023 Plan Check 1
2	09.21.2023 Plan Check 2

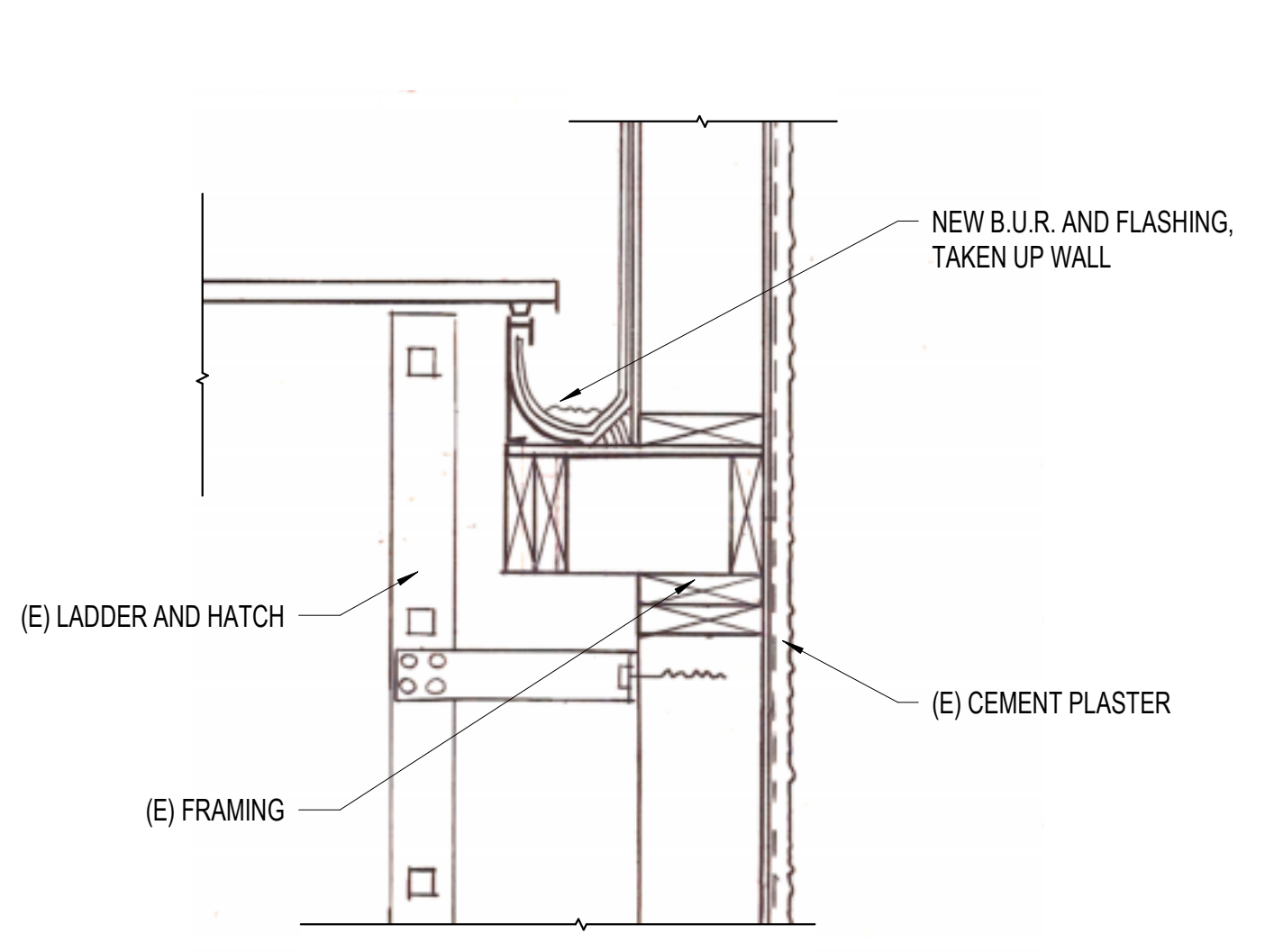
SHEET TITLE
**MISCELLANEOUS
DETAILS**

SHEET NUMBER

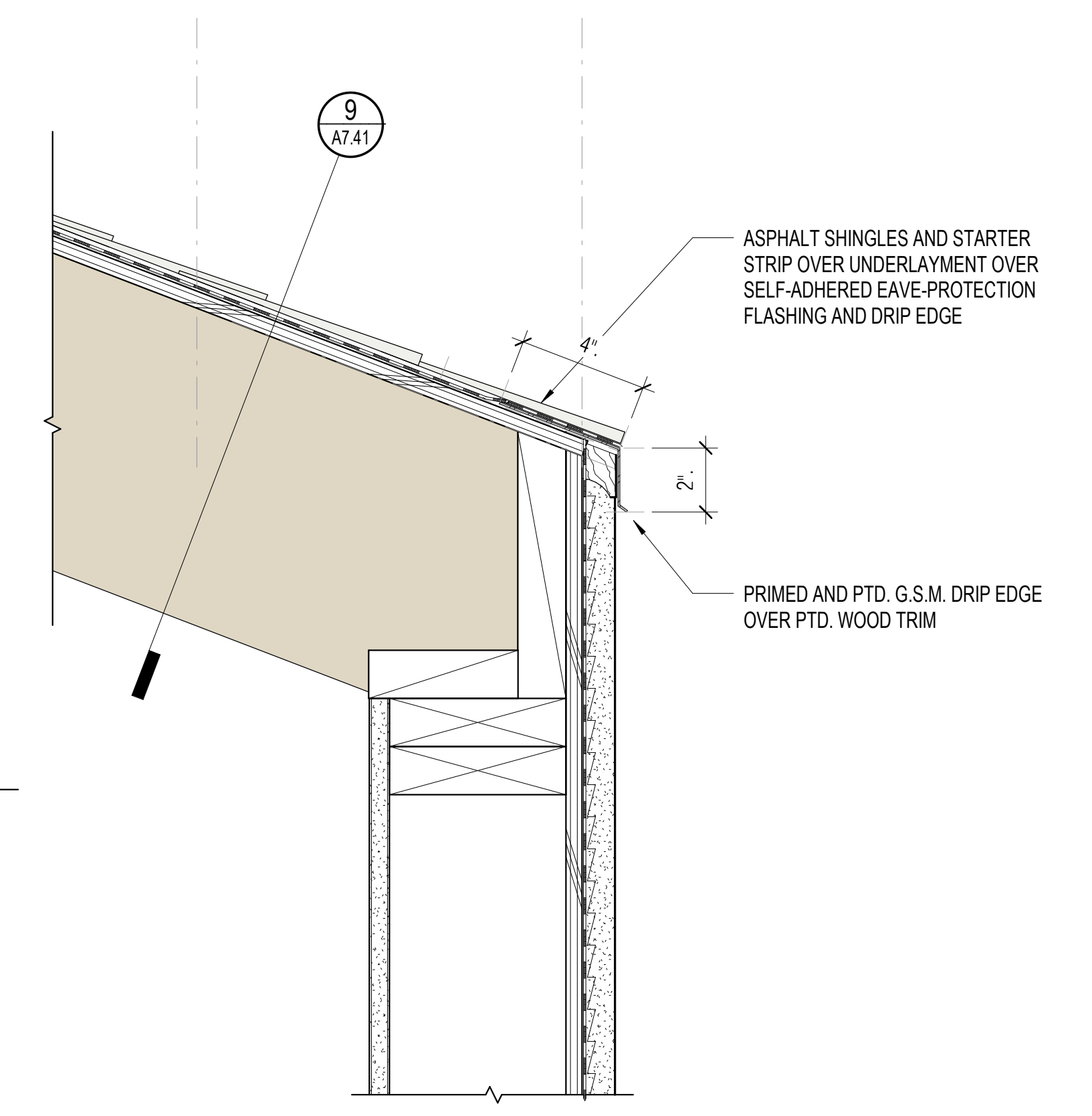
A7.43



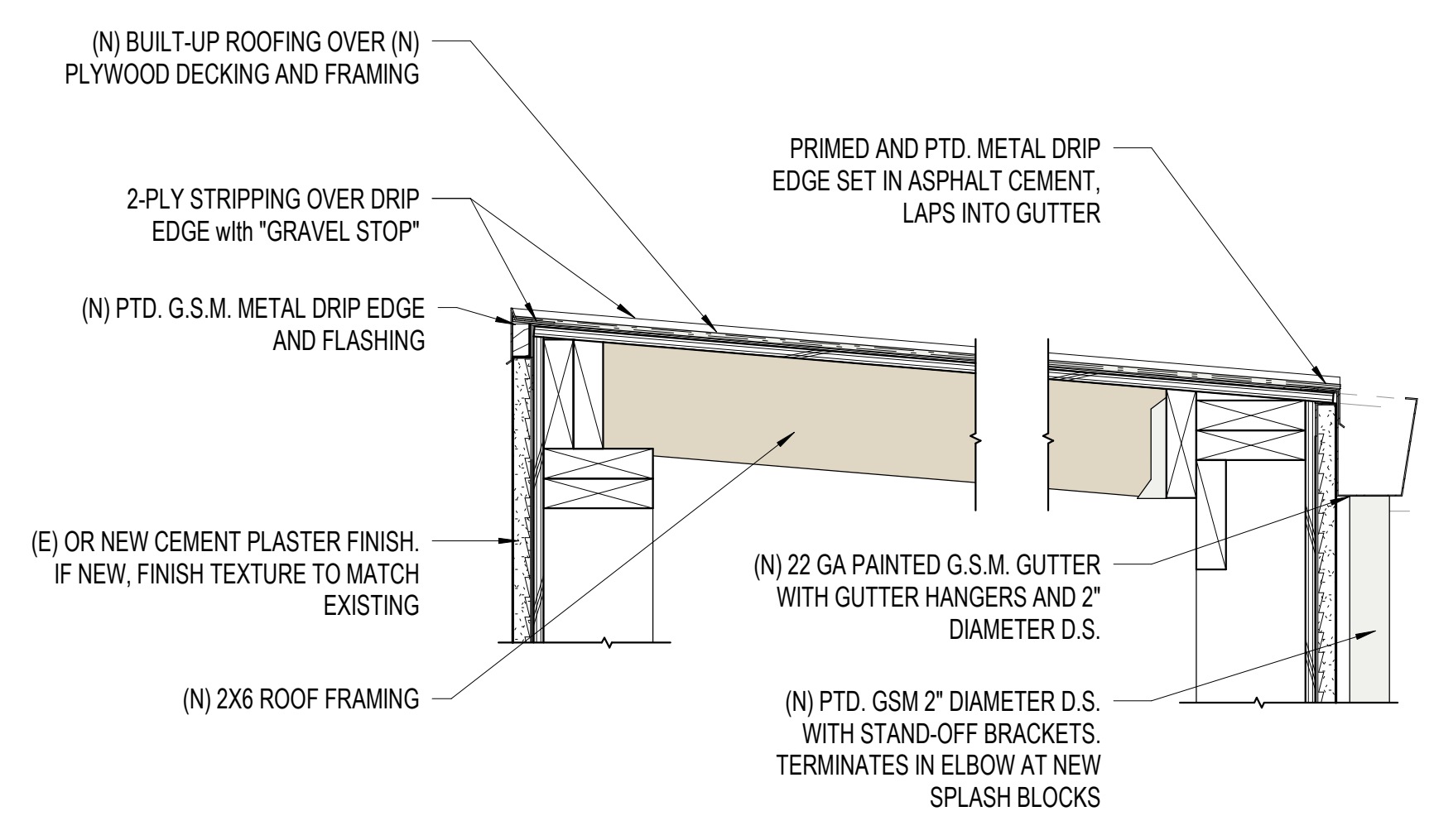
5 NEW ROOF AT MECHANICAL ROOM
A7.43 1 1/2" = 1'-0"



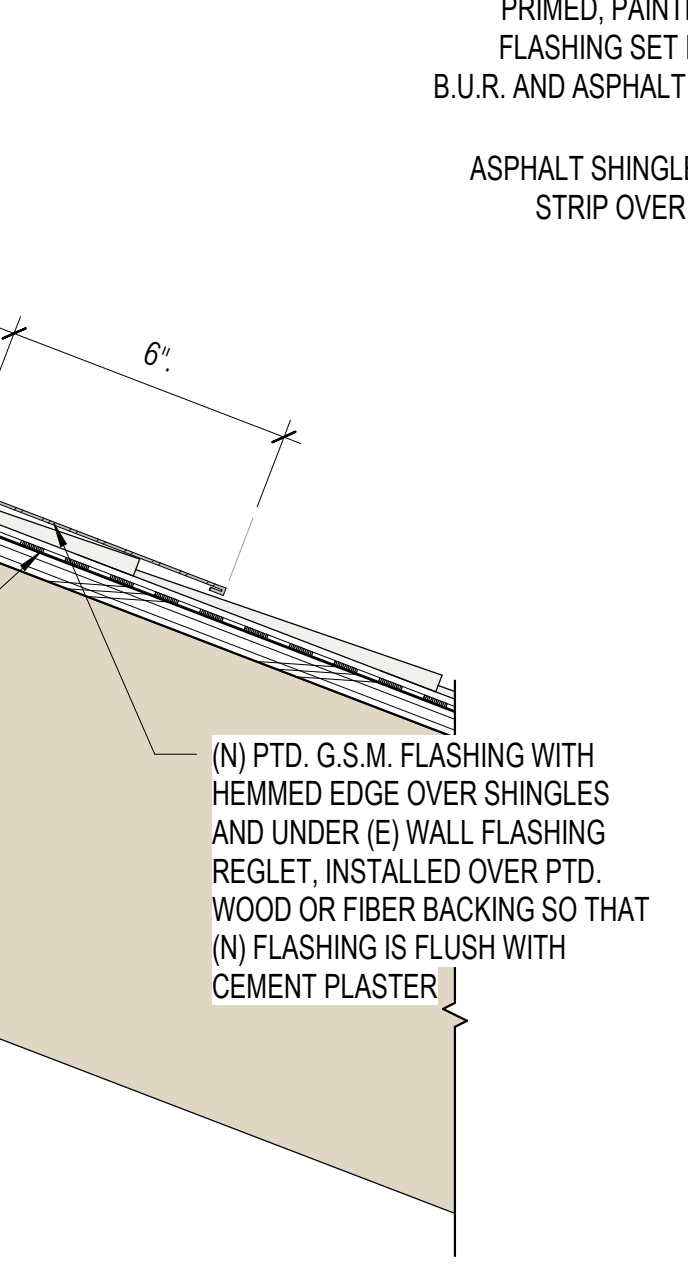
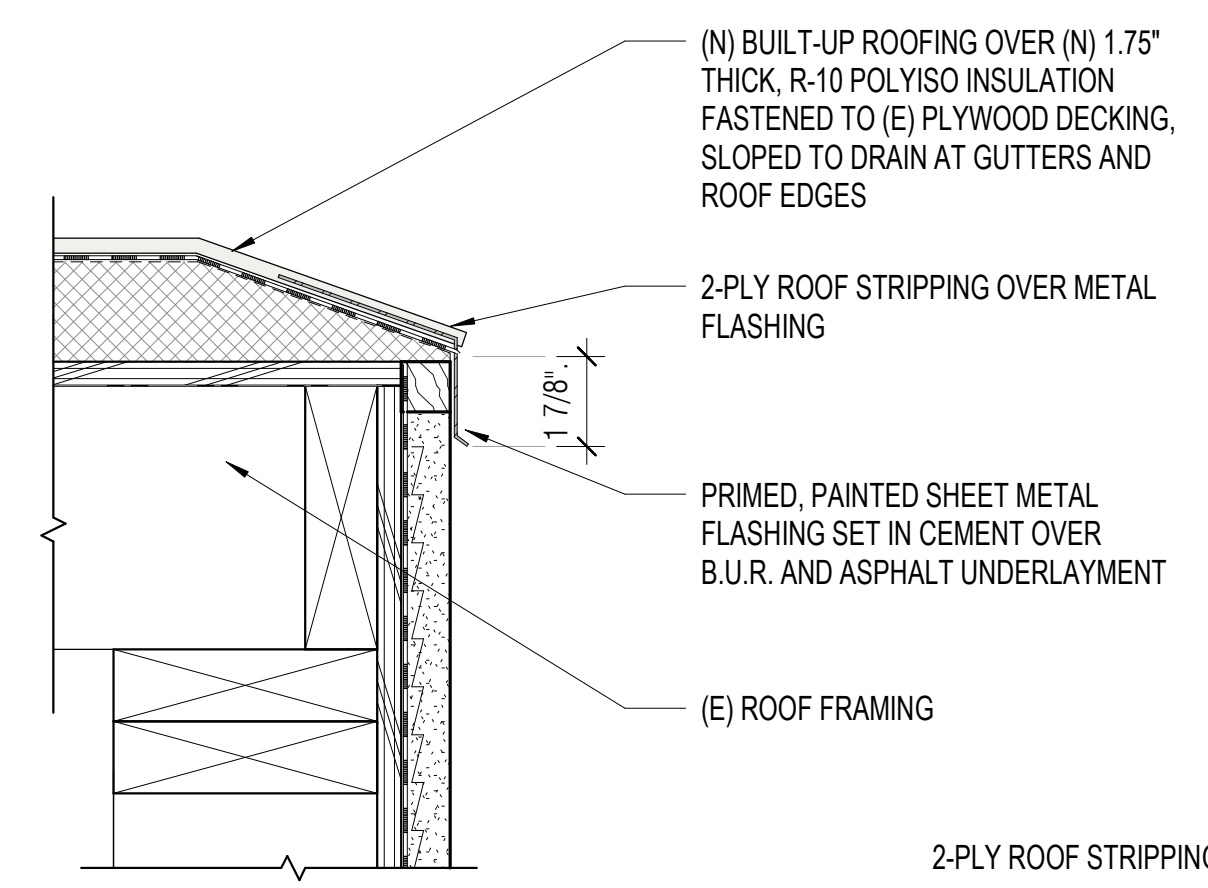
4 ROOF HATCH FLASHING
A7.43 1 1/2" = 1'-0"



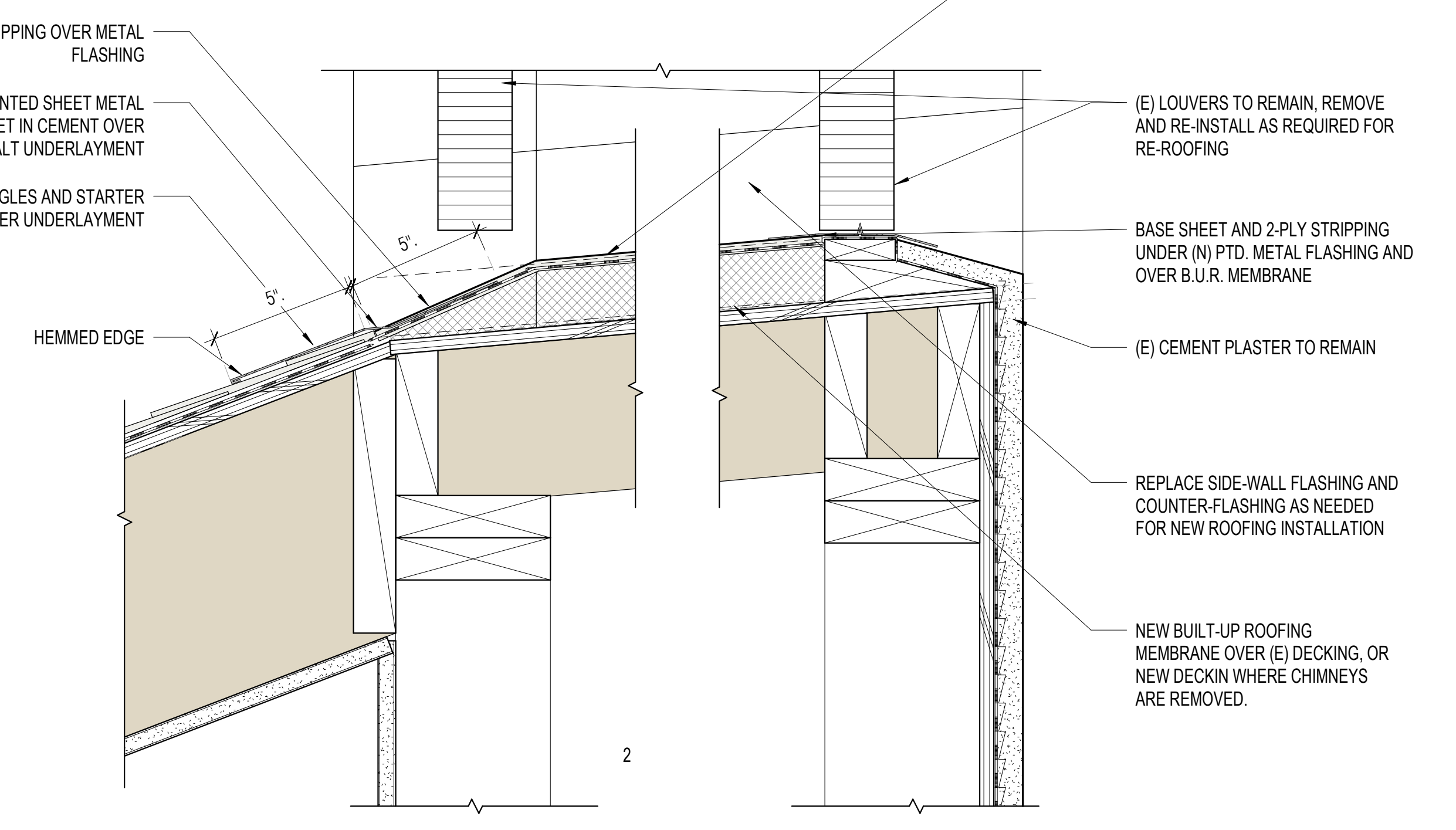
1 NEW ROOFING AT CEMENT PLASTER WALL EAVE
A7.43 3" = 1'-0"



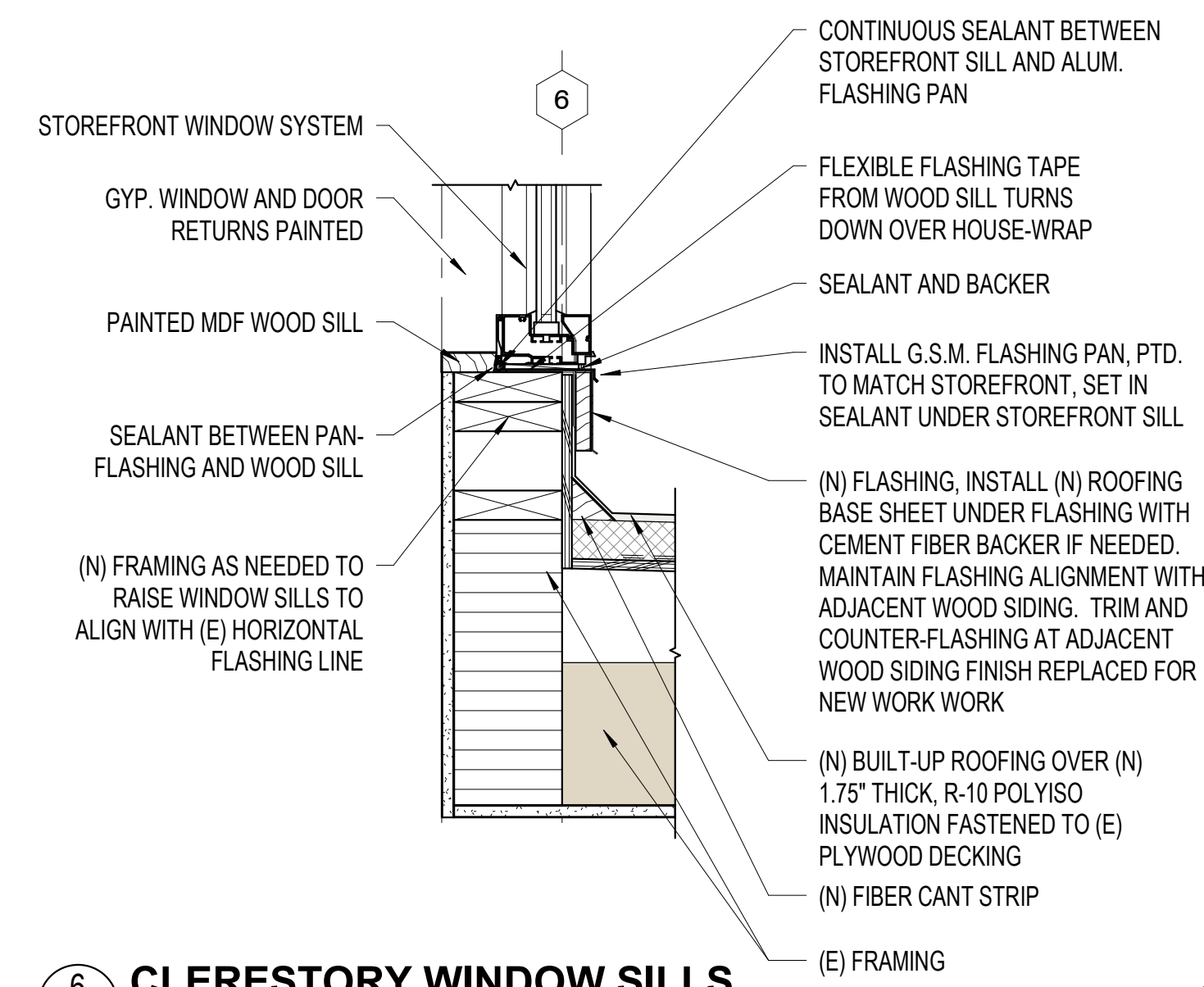
7 NEW ROOF AT STORAGE ROOM
A7.43 1 1/2" = 1'-0"



3 NEW ROOFING AT \"CHIMNEY\" TOPS
A7.43 3" = 1'-0"

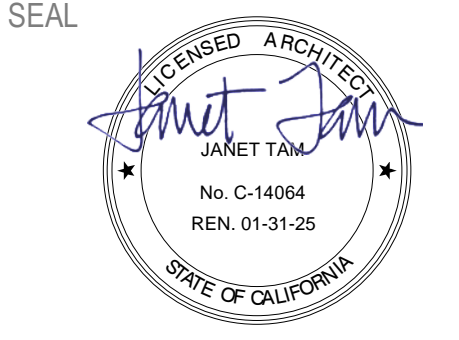


2 NEW ROOFING AT \"CHIMNEY\" AREAS
A7.43 3" = 1'-0"



6 CLERESTORY WINDOW SILLS
A7.43 1 1/2" = 1'-0"

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PROJECT TITLE

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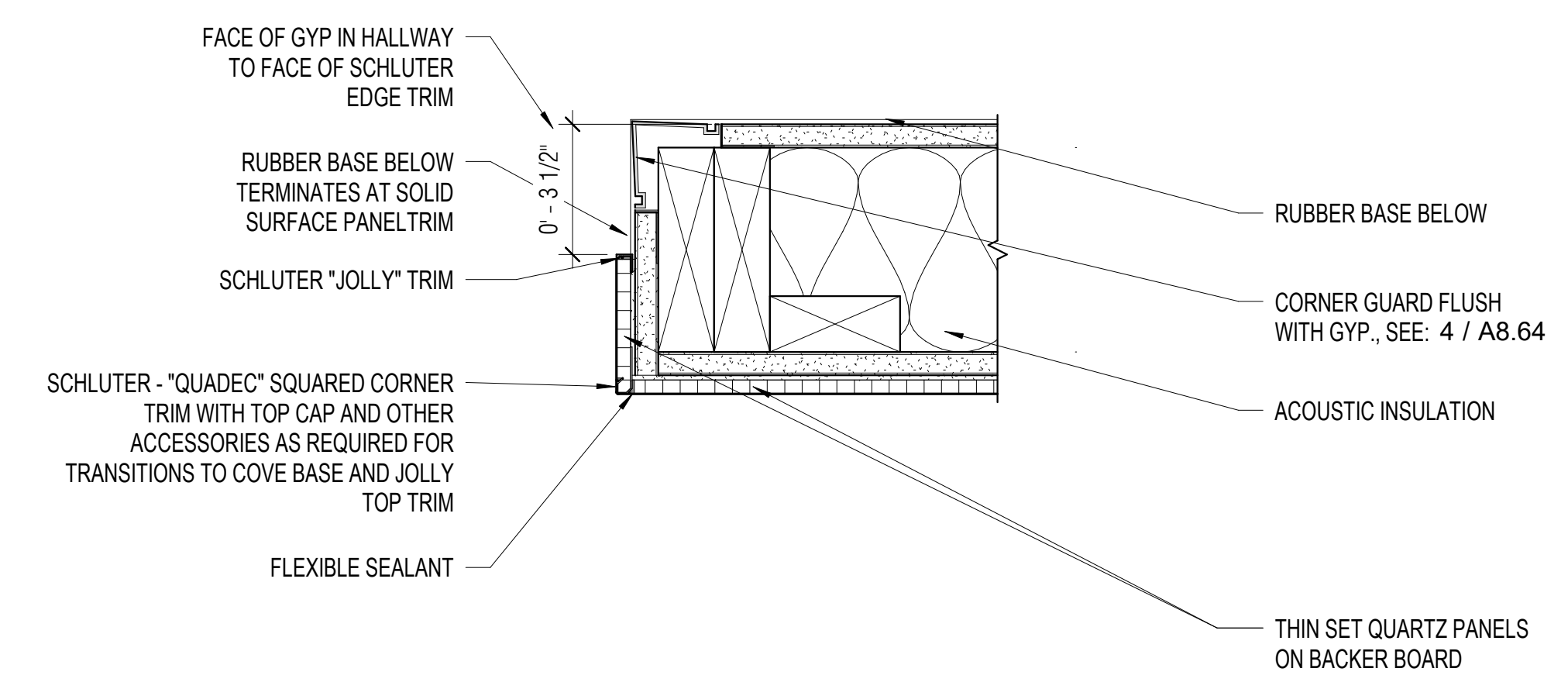
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DATE	DESCRIPTION

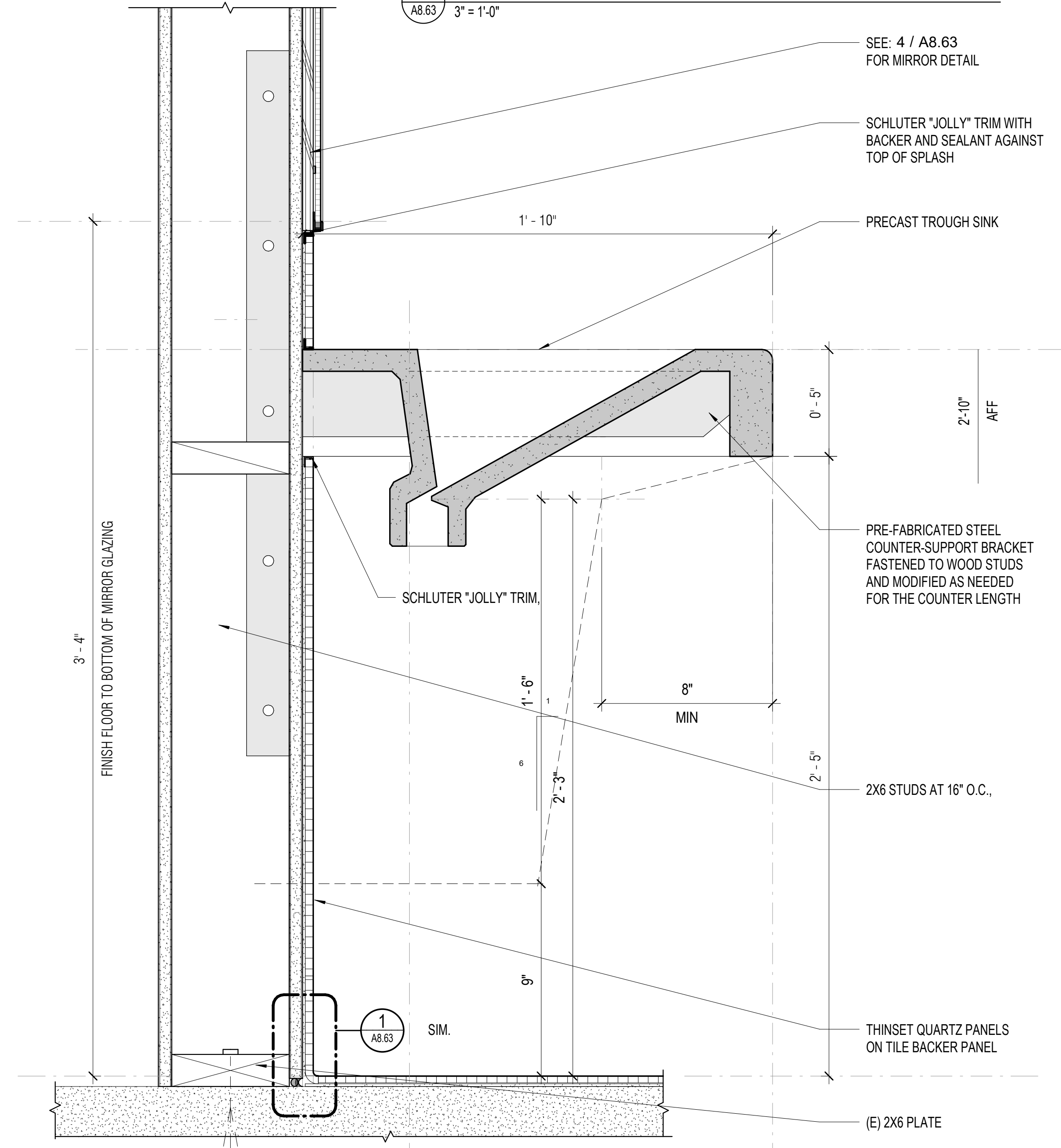
SHEET TITLE
**INTERIOR - SPECIALTY
& MISCELLANEOUS
DETAILS**

SHEET NUMBER

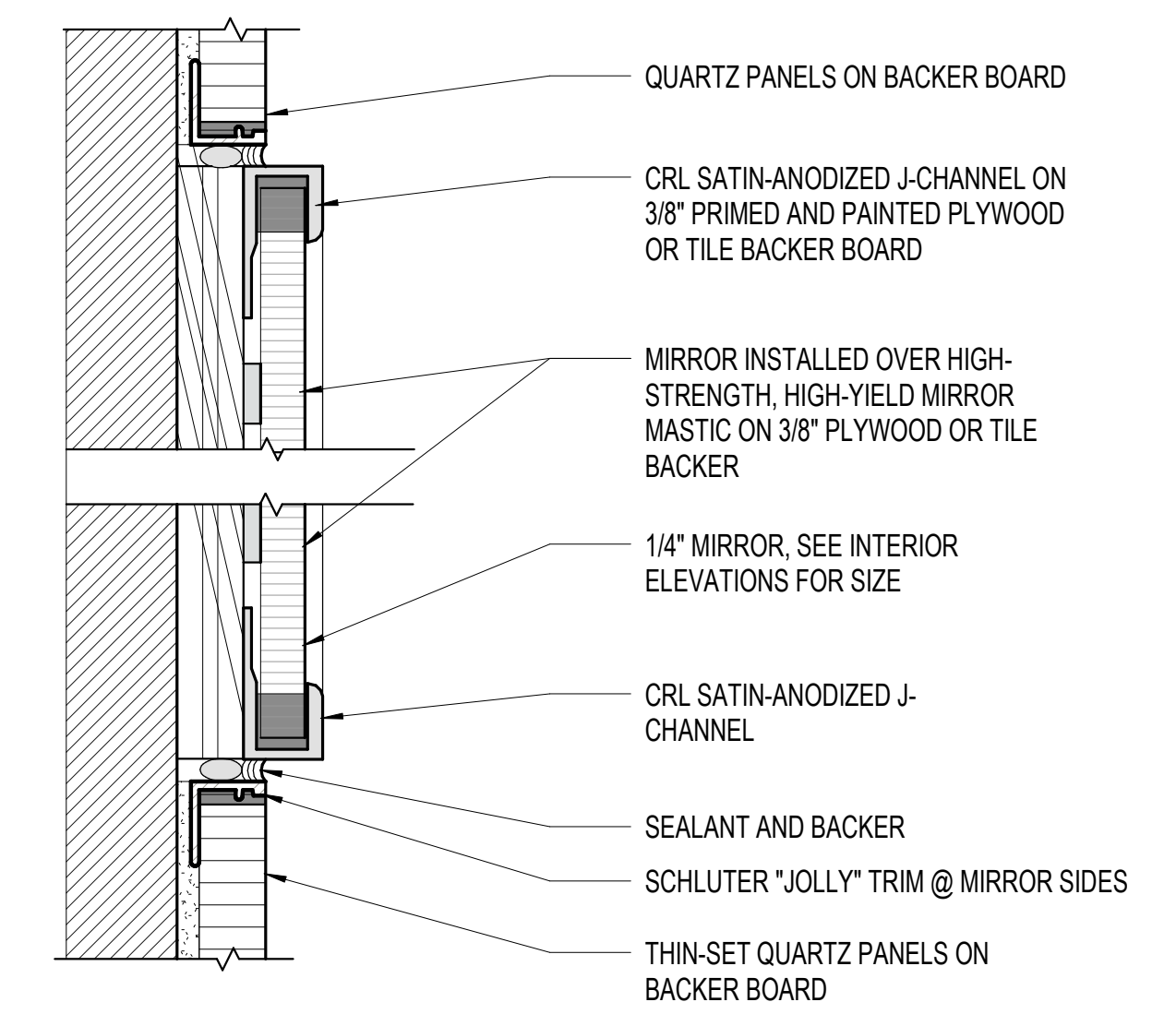
A8.63



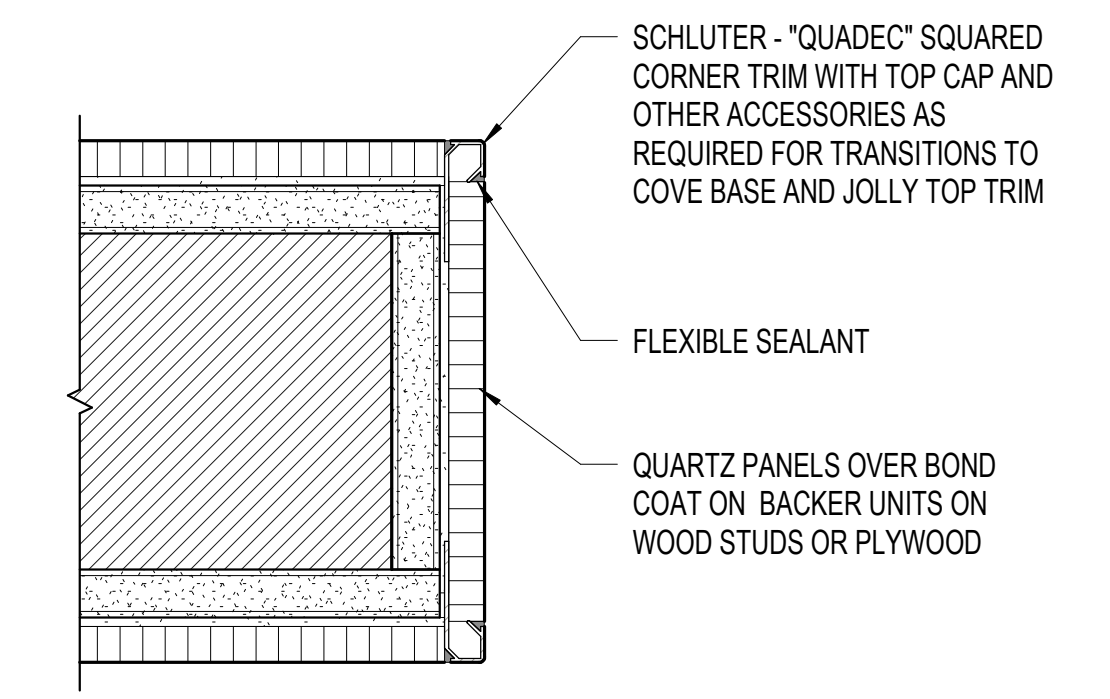
7 CORNER CONDITION AT ENTRY
A8.63 3" = 1'-0"



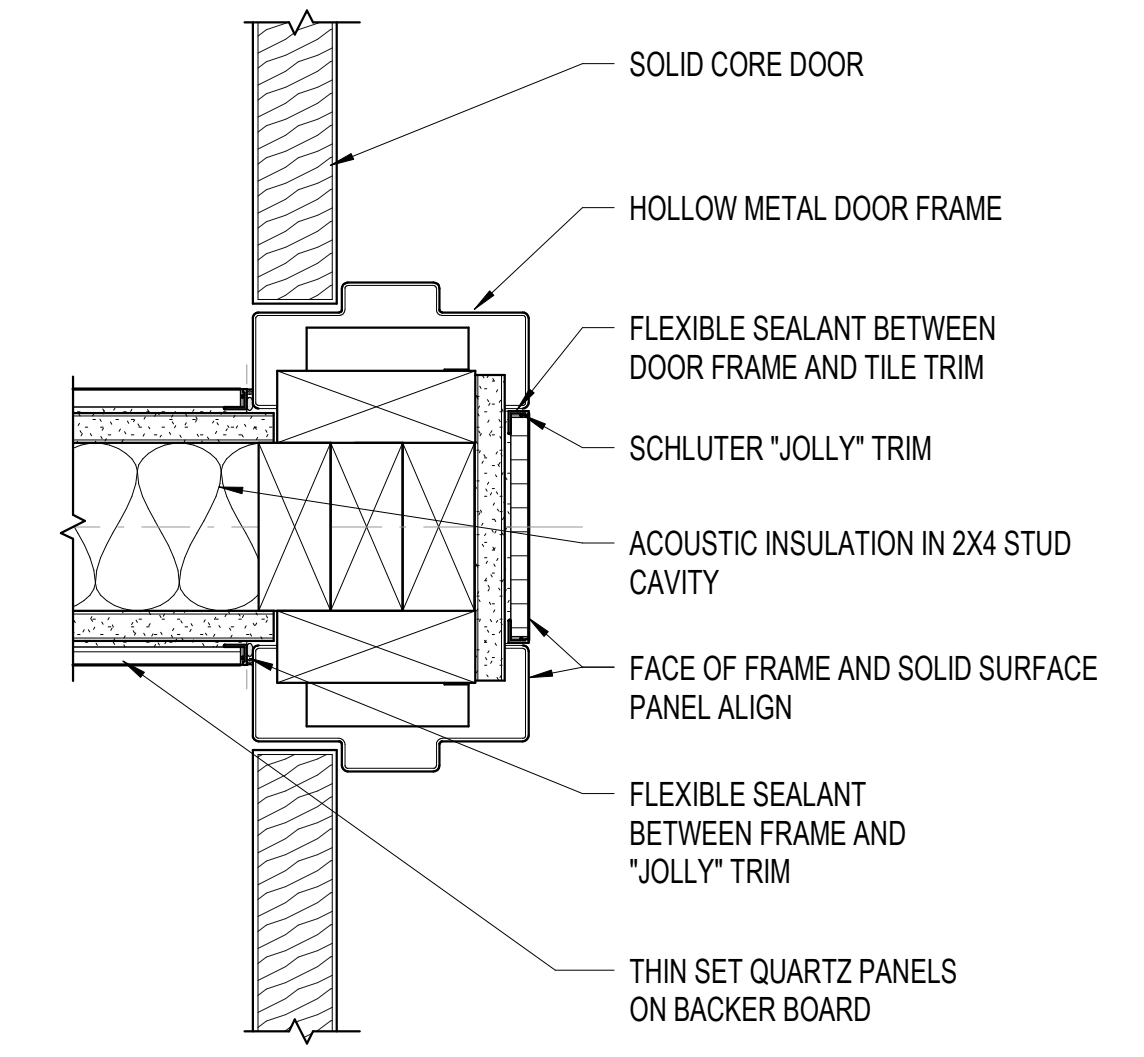
8 SINK COUNTER SECTION
A8.63 3" = 1'-0"



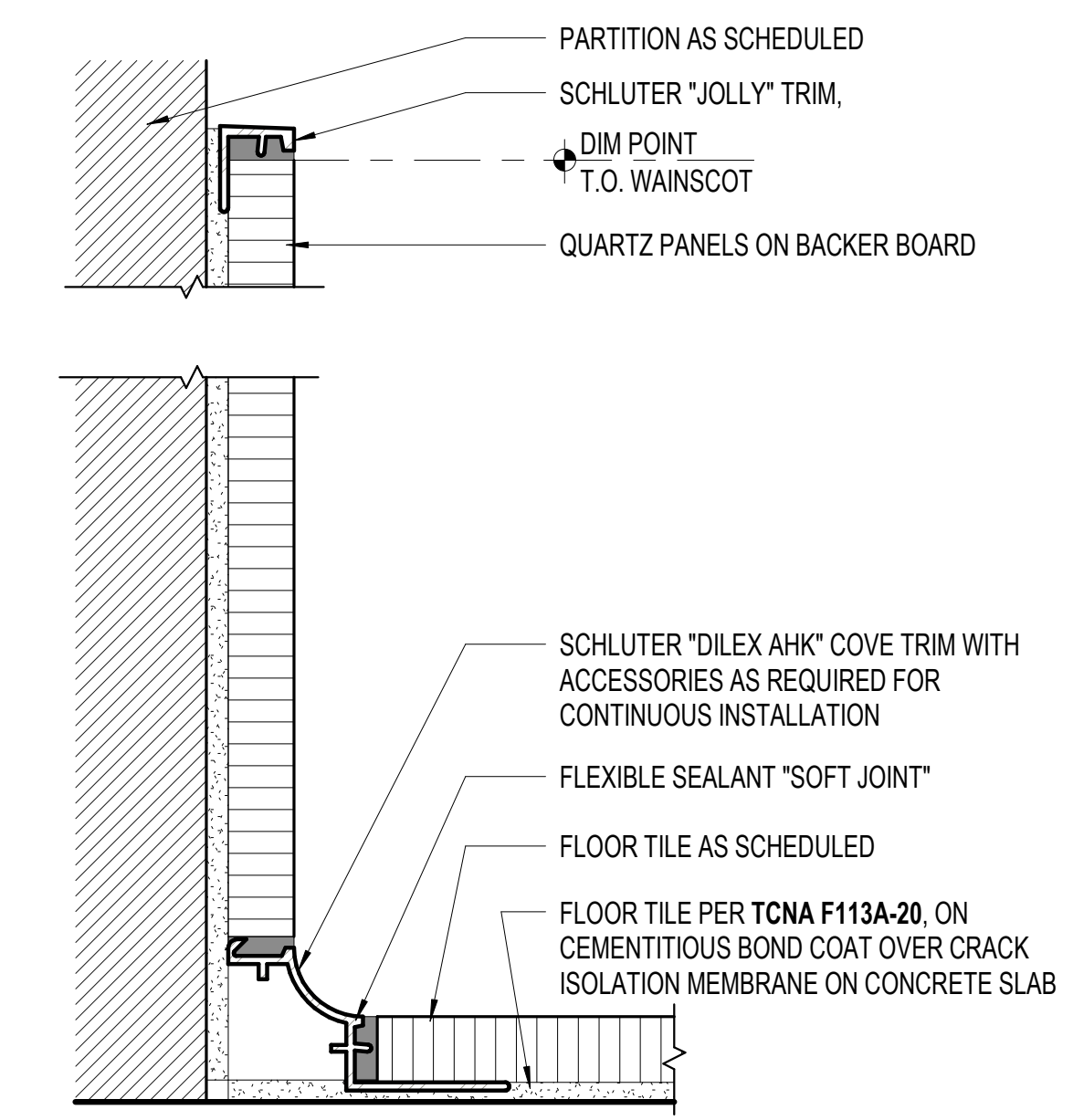
4 MIRROR DETAIL.
A8.63 12" = 1'-0"



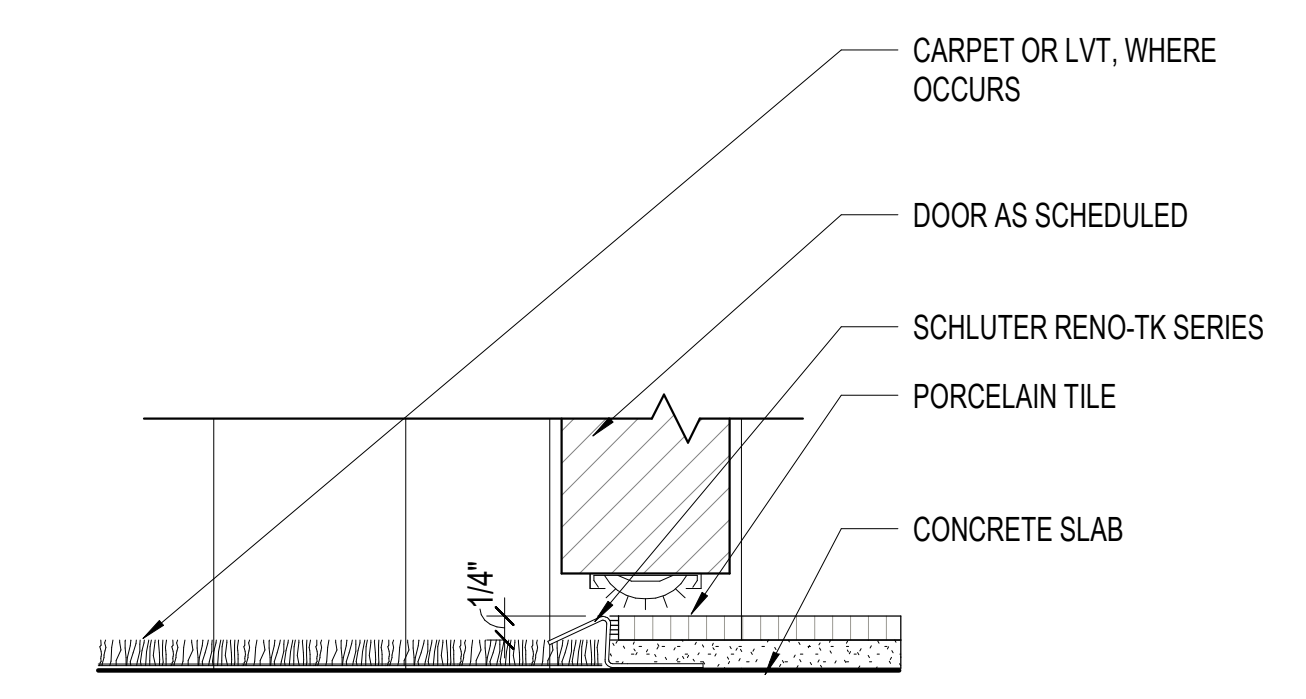
5 TYP. OUTSIDE CORNER IN TILED WAINSCOT
A8.63 6" = 1'-0"



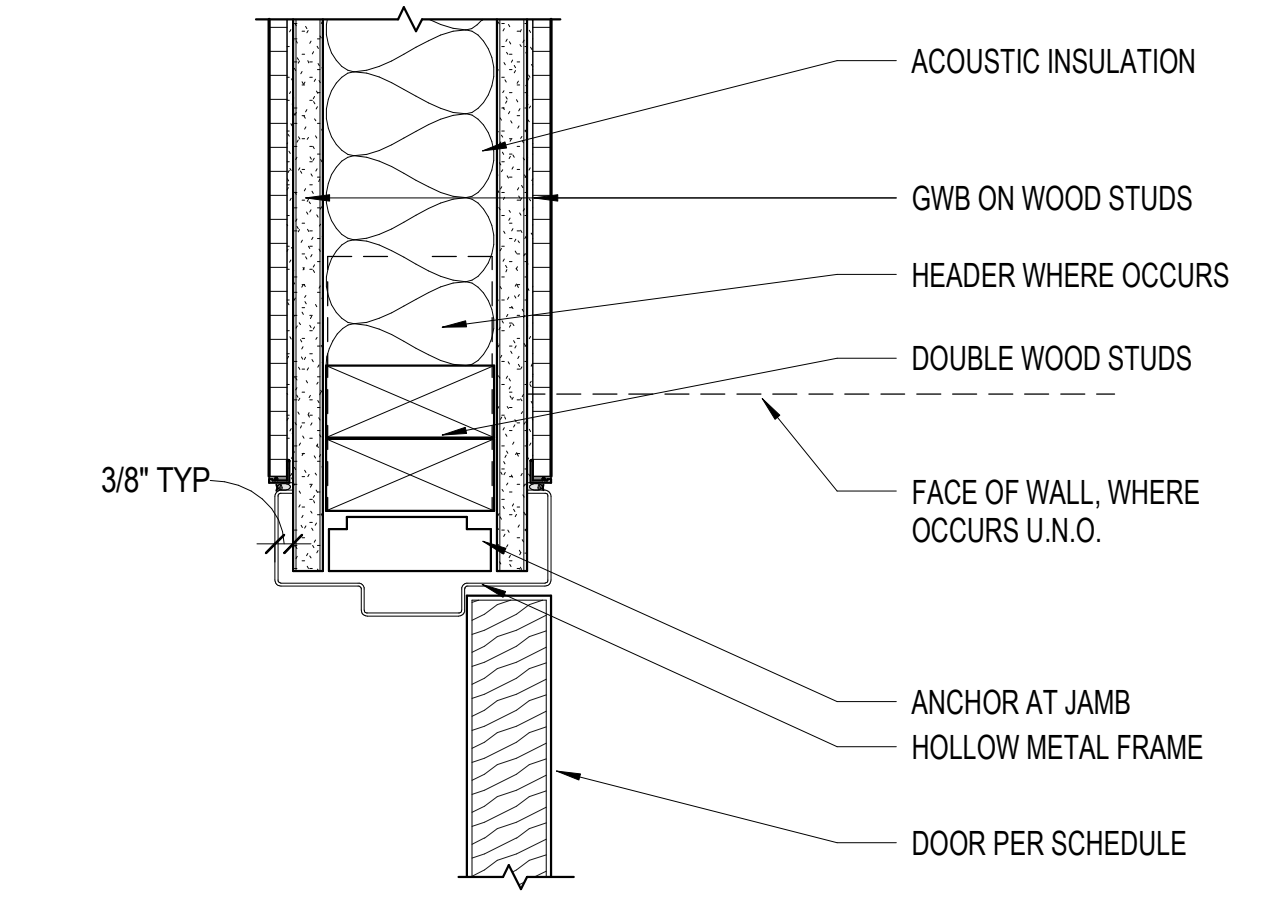
6 DOOR FRAME AT STALL WALLS
A8.63 3" = 1'-0"



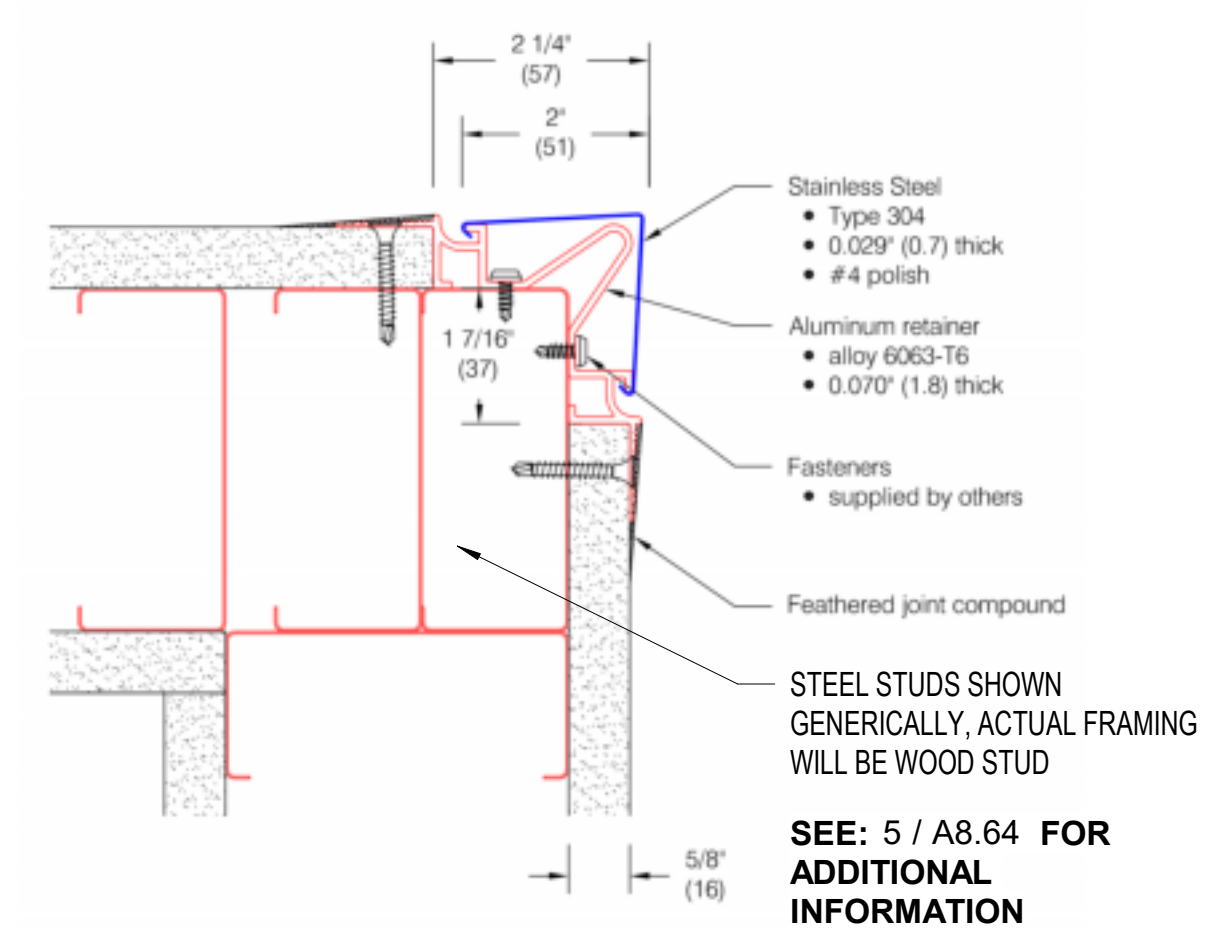
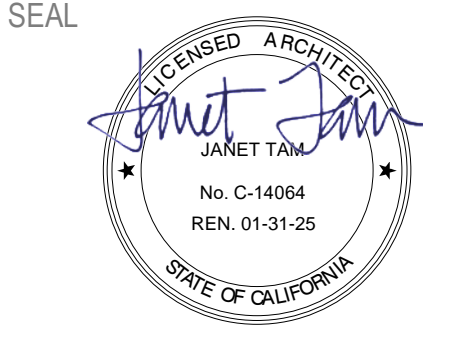
1 RESTROOM TYPICAL TILE COVE AND WAINSCOT
A8.63 12" = 1'-0"



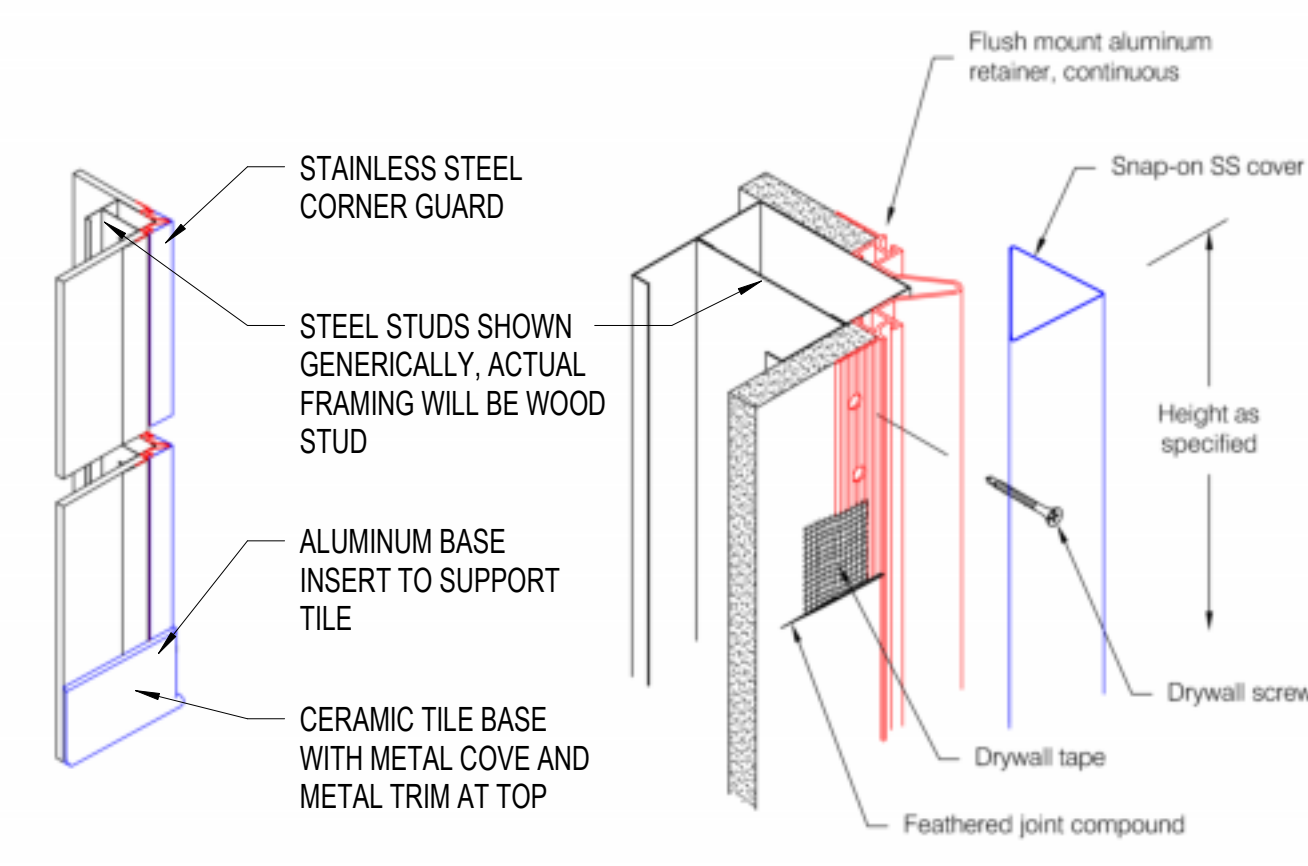
2 CARPET/ PORCELAIN TILE
A8.63 6" = 1'-0"



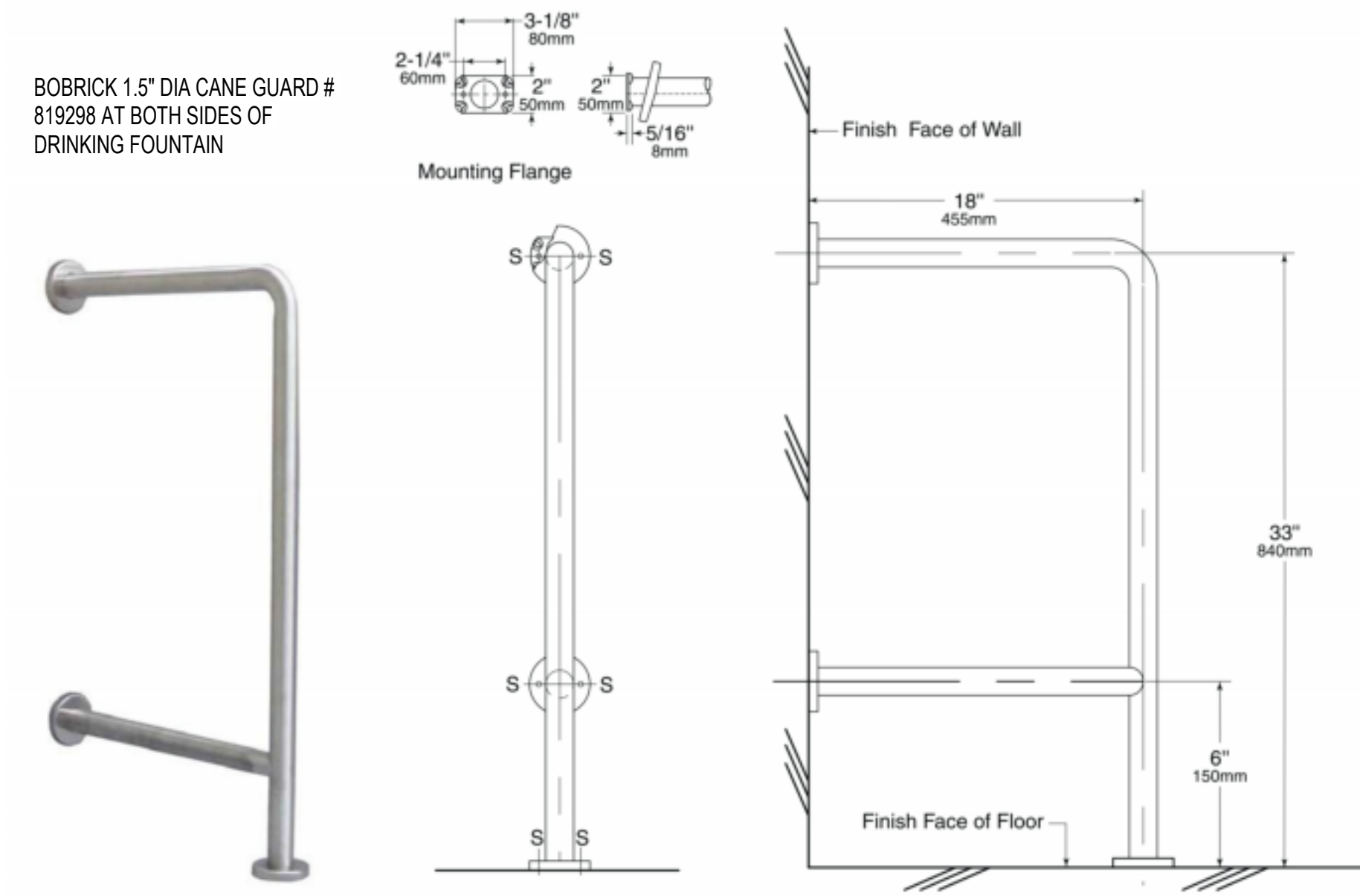
3 INT. HOLLOW METAL DOOR JAMB - HEAD SIM
A8.63 3" = 1'-0"



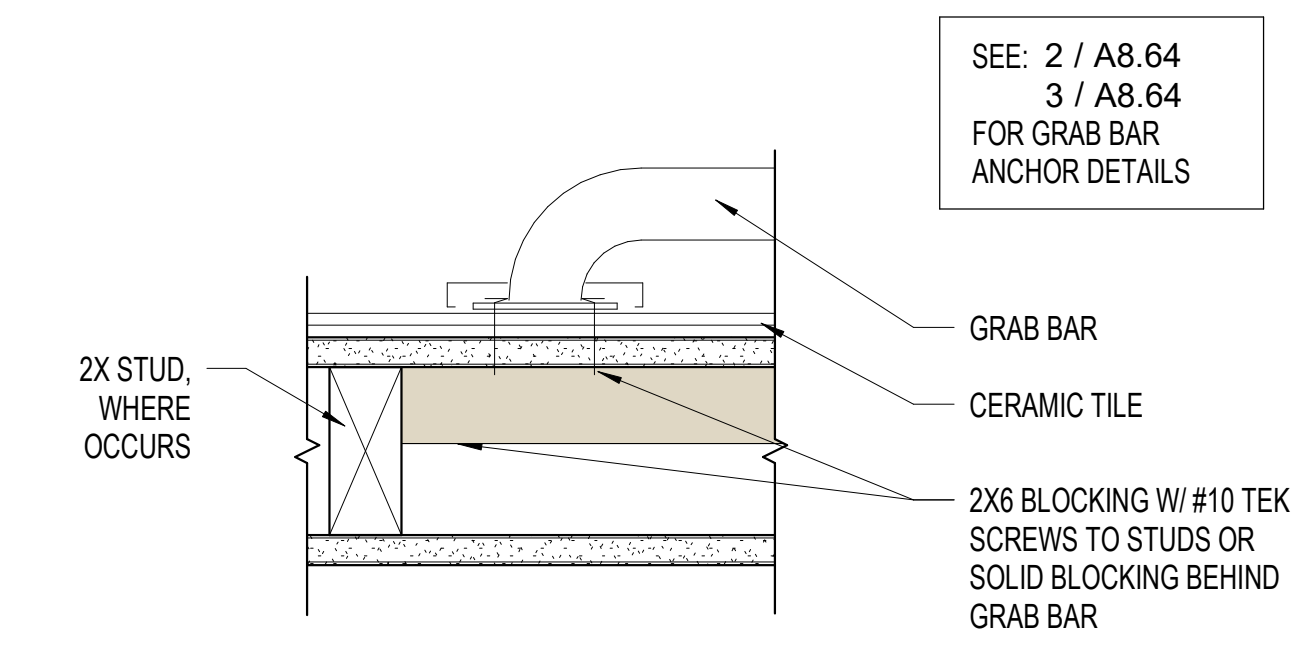
4 CORNER GUARD @ GYP BOARD WALLS
A8.64 6" = 1'-0"



5 CORNER GUARD @ GYP BOARD WALLS ISO
A8.64 6" = 1'-0"

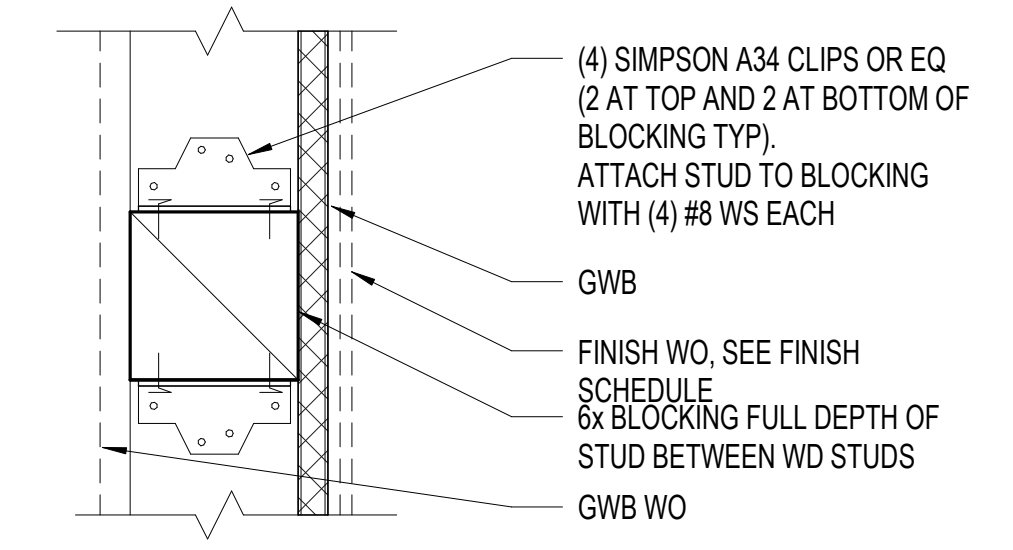


6 CANE GUARDS AT DRINKING FOUNTAIN
A8.64 6" = 1'-0"



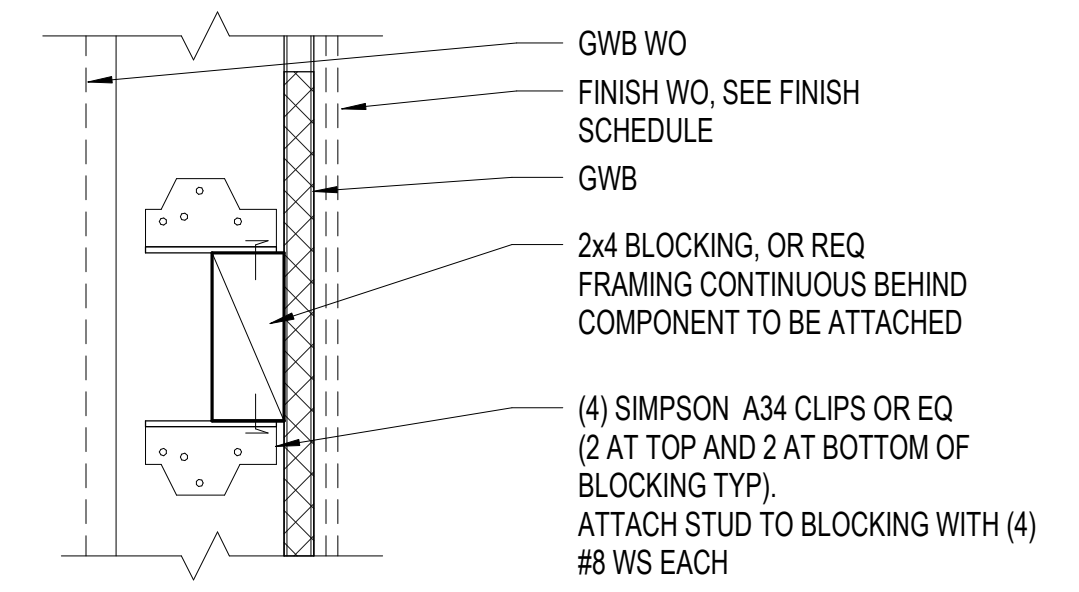
1 GRAB BAR BACKING @ RESTROOMS
A8.64 3" = 1'-0"

- NOTES:**
1. USE FOR GRAB BARS AND EQUIPMENT MAX. WT. 300 LBS/ LIN. FT.
 2. LENGTH, HEIGHT AND LOCATION TO SUIT ITEMS BEING FASTENED. SEE ANCHORAGE DETAIL OF SPECIFIC ITEMS FOR ADDITIONAL INFORMATION.
 3. ATTACH TO THREE STUDS MIN.
 4. USE DBL. STUDS WHEN STUD IS SUPPORTING MORE THAN (2) BLOCKING STUDS



2 ANCHOR DETAIL TYPE 3 - MAX 300 LBS/LF LOAD
A8.64 3" = 1'-0"

- NOTES:**
1. USE FOR MISC ITEMS AS NEEDED MAX. WT. 50 LBS/ LIN. FT.
 2. LENGTH, HEIGHT AND LOCATION TO SUIT ITEMS BEING FASTENED. SEE ANCHORAGE DETAIL OF SPECIFIC ITEMS FOR ADDITIONAL INFORMATION.
 3. ATTACH TO THREE STUDS MIN.
 4. USE DBL. STUDS WHEN STUD IS SUPPORTING MORE THAN (2) BLOCKING STUDS



3 ANCHOR DETAIL TYPE 1 - MAX 50 LBS/LF LOAD
A8.64 3" = 1'-0"

FOR SURFACE MOUNTED MIRRORS, WASTE RECEPTACLES, TOWEL DISPENSERS, WALL MOUNTED DOOR STOPS, ETC. MEETING LOAD MAX

SEAL

APPROVALS

PROJECT TITLE

**City of Berkeley
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SHEET TITLE
**INTERIOR - SPECIALTY
& MISCELLANEOUS
DETAILS**

SHEET NUMBER

A8.64

ROOM FINISH SCHEDULE						
#	Name	Floor Finish	Base Finish	Wall Finish	Ceiling Finish	Comments
1	ACTIVITY ROOM	CPT-01	RB-01	EXISTING TO REMAIN	EXISTING TO REMAIN	
2	ACTIVITY ROOM	LVT-01	RB-01	EXISTING TO REMAIN	EXISTING TO REMAIN	
4	HALL	LVT-01	RB-01	EXISTING TO REMAIN	EXISTING TO REMAIN	
5	HALL	LVT-01	RB-01	EXISTING TO REMAIN	EXISTING TO REMAIN	
6	RESTING	CPT-01	RB-01	EXISTING TO REMAIN	EXISTING TO REMAIN	
6A	NURSE	LVT-01	RB-01	EXISTING TO REMAIN	EXISTING TO REMAIN	
8	STORAGE	CONCRETE	RB-01	PTD. GYP AND FRP WAINSCOT	EXISTING TO REMAIN	REPAIRED, REPLACED AS NEEDED
8	MECH	EXISTING SLAB		EXISTING TO REMAIN	EXPOSED FRAMING	
9	RESTROOM	CT-01	SS-01	PTD. GYP AND CERAMIC TILE	SEE DRAWINGS	
10	KITCHEN	EXISTING FLOORING TO REMAIN	EXISTING TO REMAIN	EXISTING TO REMAIN	EXISTING TO REMAIN	FLOORING REPLACED IN AREA OF NEW WORK
11	WOMEN'S					
12	STORAGE	EXISTING FLOORING TO REMAIN	EXISTING TO REMAIN	EXISTING TO REMAIN	EXISTING TO REMAIN	
13	OFFICE (JAN)	EF-01	EPOXY	EXISTING TO REMAIN	EXISTING TO REMAIN	PLASTIC LAMINATE PANELS AROUND SINK
14	DINING	EXISTING FLOORING TO REMAIN	EXISTING TO REMAIN	EXISTING TO REMAIN	EXISTING TO REMAIN	
16	ALCOVE	CPT-01	RB-01	EXISTING TO REMAIN	EXISTING TO REMAIN	
17	ALCOVE	LVT-01	RB-01	EXISTING TO REMAIN	EXISTING TO REMAIN	CEILING REPLACED IN-KIND IN AREAS OF NEW WORK, PTD ENTIRE CEILING T.M.E.
18	ALCOVE	CPT-01	RB-01	EXISTING TO REMAIN	EXISTING TO REMAIN	
19	STORAGE	EXISTING FLOORING TO REMAIN	RB-01	EXISTING TO REMAIN	EXISTING TO REMAIN	
20	MECH	EXISTING FLOORING TO REMAIN	RB-01	EXISTING TO REMAIN	EXISTING TO REMAIN	
21	LOUNGE	LVT-01	RB-01	EXISTING TO REMAIN	EXISTING TO REMAIN	
22	ENTRY	LVT-01	RB-01	EXISTING TO REMAIN	EXISTING TO REMAIN	
23	HALL	LVT-01	RB-01	EXISTING TO REMAIN	EXISTING TO REMAIN	
25	MECH	EXISTING SLAB	RB-01	EXISTING TO REMAIN	EXISTING TO REMAIN	
26	OFFICE	CPT-01	RB-01	EXISTING TO REMAIN	EXISTING TO REMAIN	
27	OFFICE	CPT-01	RB-01	EXISTING TO REMAIN	EXISTING TO REMAIN	
28	OFFICE	CPT-01	RB-01	EXISTING TO REMAIN	EXISTING TO REMAIN	
29	OFFICE	CPT-01	RB-01	EXISTING TO REMAIN	EXISTING TO REMAIN	
30	OFFICE	CPT-01	RB-01	EXISTING TO REMAIN	EXISTING TO REMAIN	
31	EXT. STORAGE	CONCRETE SLAB				
32	HALL	LVT-01	RB-01			

INTERIOR FINISHES SCHEDULE*

*FOR REFERENCE ONLY, SEE SPECIFICATIONS FOR MORE INFORMATION

SECTION 04 72 00 - ARCHITECTURAL CAST STONE

CAST STONE SINK:

MANUFACTURER: SONOMA STONE
 PRODUCT: NUCRETE CONCRETE
 COLOR: ASH
 LOCATION: RESTROOMS
 CONTACT: SUZANNE SMITH, estimating@sonomastone.com

SECTION 06 41 00 - ARCHITECTURAL WOOD CASEWORK

PLASTIC LAMINATE:

PL-01: MANUFACTURER: LAMINART
 COLOR: AMBER ELM
 FINISH: -
 LOCATION: RESTROOM DOORS

SECTION 09 30 00 - TILING

PORCELAIN FLOOR TILE:

CT-01: MANUFACTURER: CERAMICS TECHNICS
 PRODUCT: FIRENZE DESIGN STONES
 COLOR: TAUPE/DARK IN NATURAL FINISH
 SIZE (NOMINAL): 12" X 24", 10MM THICKNESS
 INSTALLATION PATTERN: ASHLAR
 GROUT COLOR: TBD BY ARCHITECT FROM MANUF. STANDARD LINE
 GROUT JOINT SIZE: MINIMUM SIZE AS RECOMMENDED BY MANUFACTURER
 TRIM: SCHLUTER DILEX AND JOLLY TRIMS WHERE INDICATED;
 REFER TO FINISH TRANSITION DETAILS, SHEET A9.63
 LOCATION: RESTROOM FLOOR
 CONTACT: FUSUN YALCINKAYA, fusun@ceramictechnics.com

SECTION 09 65 10 - RESILIENT FLOORING

LUXURY VINYL TILE

LVT-01: MANUFACTURER: SHAW CONTRACT
 PATTERN: TERRAIN II 20 MIL 5MM
 COLOR: ECHO 00775
 SIZE: 6" X 48", 5MM THICKNESS
 INSTALL METHOD: ASHLAR
 LOCATION: CIRCULATION, LOUNGE, ACTIVITY ROOM
 CONTACT: MEG LIEVERS, meg.lievers@shawcontract.com

SECTION 09 65 00 - RESILIENT FLOORING

RUBBER WALL BASE:

RB-01: MANUFACTURER: ROPPE OR EQUIV.
 PRODUCT/COLOR: T.B.D. FROM MANUFACTURER'S STANDARD
 HEIGHT/PROFILE: 4", STRAIGHT AT CARPET LOCATIONS, COVERED (TOE) AT HARD SURFACE LOCATIONS
 CONTACT: -

SECTION 09 67 23 - RESINOUS FLOORING

EF-01: MANUFACTURER: STONHARD
 PRODUCT: STONCLAD G2 WITH STONEKOTE HT4
 COLOR: COOL SHALE
 THICKNESS: 1/4"
 COMMENTS: PROVIDE INTEGRAL COVERED BASE
 LOCATION: OFFICE 13/JANITOR
 CONTACT: JOHN WAGNER, jwagner@stonhard.com

SECTION 09 68 00 - CARPETING

CARPET TILE:

CPT-01: MANUFACTURER: SHAW CONTRACT
 PATTERN: DIFFUSE ECOWORK
 COLOR: ROAD TRIP 75105
 SIZE: 24" X 24"
 DYE METHOD: 100% SOLUTION DYED
 INSTALL METHOD: ASHLAR
 LOCATION: OFFICES, ACTIVITY ROOM
 CONTACT: MEG LIEVERS, meg.lievers@shawcontract.com

SECTION 09 90 00 - PAINTING

TYPICAL INTERIOR PAINT FINISHES:

CEILINGS & SOFFITS: FLAT
 WALLS: EGG SHELL
 TOILET ROOM, CUSTODIAL ROOM WALLS: SEMI-GLOSS
 PAINTED DOORS & FRAMES: SEMI-GLOSS

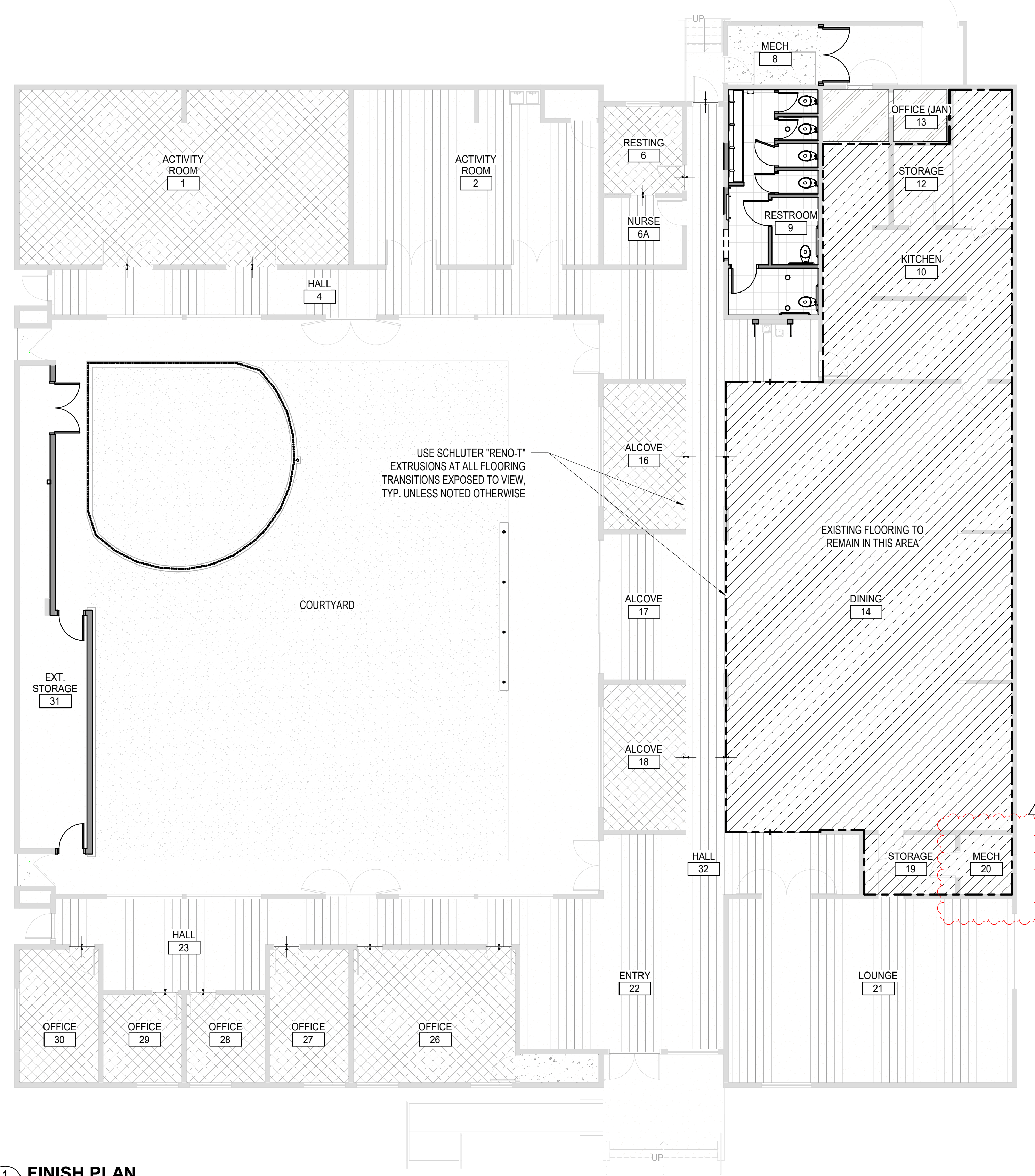
INTERIOR PAINT COLORS:

P-01 (GENERAL): SHERWIN WILLIAMS, TBD
 P-02 (ACCENT): SHERWIN WILLIAMS, SW 9132 ACACIA HAZE
 P-03 (ACCENT): SHERWIN WILLIAMS, SW 6207 RETREAT
 P-05 (CEILINGS): SHERWIN WILLIAMS, SW 7006 EXTRA WHITE

SECTION 12 36 69 - COUNTERTOPS and WALL PANELS

RESIN SOLID SURFACE WALL PANEL:

SS-01: MANUFACTURER: LX HAUSYS HIMACS
 COLOR: LUNAR SAND
 THICKNESS: 12MM
 SIZE: 30" X 145"
 LOCATION: RESTROOM WALLS
 CONTACT: THERESA YOUN, tyoun@lxhausys.com



1
A9.11
1/8" = 1'-0"

FINISH SCHEDULE ABBREVIATIONS

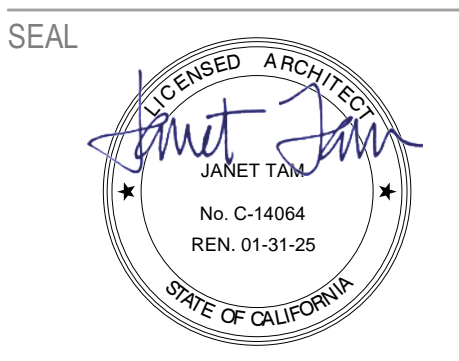
ACT	ACOUSTICAL CEILING TILE	P	PAINT
AWP	ACOUSTIC WALL PANEL	PF	PLASTIC FABRICATION
CONC	CONCRETE	PL	PLASTIC LAMINATE
CT	PORCELAIN TILE	RB	RUBBER BASE
GB	GYPSUM BOARD	RF	RESILIENT FLOORING
OTS	OPEN TO STRUCTURE	SS	SOLID SURFACE
		WD	WOOD

FINISH PLAN LEGEND

	CPT-01, CARPET TILE		(E) CONCRETE
	CT-01, PORCELAIN TILE		(E) FLOORING TO REMAIN
	EF-01, EPOXY		FLOOR FINISH TRANSITION
	LVT-01, LUXURY VINYL TILE		

NOLL & TAM ARCHITECTS

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APPROVALS

PROJECT TITLE

City of Berkeley
 WEST BERKELEY SERVICE CENTER

1900 Sixth St
 Berkeley, CA 94710

BID SET

ISSUE DATE	12.22.2023
N&T JOB NUMBER	22121
REVISIONS	
	DATE DESCRIPTION
5	02.21.2024 Bid Addendum

SHEET TITLE

FINISH PLAN - 1ST FLOOR

SHEET NUMBER

A9.11

GENERAL NOTES

- 1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE 2022 CALIFORNIA BUILDING CODE...
2. THESE NOTES SHALL APPLY TO ALL STRUCTURAL DRAWINGS UNLESS OTHERWISE NOTED OR SHOWN...
3. ALL WORK IS TO BE ASSUMED AS NEW UNLESS SPECIFICALLY STATED OTHERWISE...
4. FEATURES OF CONSTRUCTION SHOWN ARE TYPICAL AND SHALL APPLY GENERALLY THROUGHOUT SIMILAR CONDITIONS...
5. UNLESS SHOWN OTHERWISE, DETAILS SHOWN ON "TYPICAL DETAIL" SHEETS SHALL BE USED WHEREVER APPLICABLE...
6. THE STRUCTURAL DRAWINGS SHOW STRUCTURAL FEATURES. EXACT CONFIGURATION OF INTERIOR PARTITION WALLS IS SHOWN ON ARCHITECTURAL DRAWINGS AND IS NOT NECESSARILY ALL SHOWN ON THE STRUCTURAL DRAWINGS...
7. REFER TO THE ARCHITECTURAL DRAWINGS FOR THE FOLLOWING: FLOOR FINISHES; DEPRESSIONS AND CURBS ON FLOORS; OPENINGS REQUIRED FOR WINDOWS, DOORS, DUCTS, VENTS, PLUMBING, ETC.; FLASHING, INSERTS, ANCHORAGES, HANGERS ETC., EMBEDDED IN OR ATTACHED TO THE STRUCTURE; ROADWAY, WALKS, PAVING, STAIRS, RAMPS, TERRACES; EXTERIOR GRADES, ELEVATIONS OF ROOF SURFACE AND LOCATIONS OF DRAINS AND PARTITION WALLS...
8. THE CONTRACTOR SHALL COMPARE THE STRUCTURAL DRAWINGS WITH ARCHITECTURAL, PLUMBING, MECHANICAL, CIVIL, AND ELECTRICAL DRAWINGS AS TO ALL LAYOUTS, DIMENSIONS AND ELEVATIONS...
9. IN THE EVENT THAT CERTAIN FEATURES OF THE CONSTRUCTION ARE NOT FULLY SHOWN ON THE DRAWINGS OR CALLED FOR IN THE GENERAL NOTES, THEIR CONSTRUCTION SHALL BE OF THE SAME CHARACTER AS SHOWN FOR SIMILAR CONDITIONS...
10. BEAMS, JOISTS AND ANY OTHER STRUCTURAL ELEMENTS SHALL NOT BE CUT OR PENETRATED, EXCEPT AS SHOWN IN STRUCTURAL DETAILS OR AS APPROVED BY THE ARCHITECT AND THE STRUCTURAL ENGINEER...
11. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN FIELD PRIOR TO POURING CONCRETE; ANY DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT BEFORE PROCEEDING WITH THE WORK...
12. FEATURES OF EXISTING CONSTRUCTION SHALL BE VERIFIED BY THE CONTRACTOR IN THE FIELD AND DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT...
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MEANS, METHODS, TECHNIQUES AND SEQUENCES OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PROGRAMS AND PROCEDURES DURING CONSTRUCTION...
14. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ADEQUATELY SHORE AND BRACE EXISTING BUILDING AS REQUIRED DURING CONSTRUCTION...
15. THE CONTRACTOR SHALL FOLLOW ALL INSTRUCTIONS, RECOMMENDATIONS AND SAFETY PRECAUTIONS PROVIDED BY THE MANUFACTURER OR SUPPLIER OF ANY MATERIAL OR PRODUCT NOTED IN GENERAL NOTES OR DRAWINGS...
16. SEE ARCHITECTURAL DRAWINGS FOR DETAILS ON REQUIRED VENTILATION OF ROOF JOISTS, FLOOR JOISTS, AND ATTIC SPACES...
17. CONTRACTOR SHALL FIELD VERIFY EXISTING FRAMING CONDITIONS AND SHALL NOTIFY ARCHITECT OF ANY VARIATION FROM CONDITIONS ASSUMED ON DRAWINGS...
18. GRADES SHOWN ON STRUCTURAL DRAWINGS ARE APPROXIMATE AND FOR GENERAL REFERENCE ONLY...
19. MECHANICAL UNIT LOCATIONS SHOWN ON STRUCTURAL DRAWINGS ARE SCHEMATIC ONLY...
20. DO NOT SCALE DRAWINGS.

DESIGN CRITERIA

- 1. VERTICAL LOADS:
A. DEAD LOADS: ROOF DEAD LOAD: 20 PSF, LIVE LOADS: ROOF LIVE LOAD: 20 PSF
2. LATERAL LOADS:
A. WIND DESIGN LOADS - PER CBC SECTION 1609: BASIC WIND SPEED 95 MPH, EXPOSURE CATEGORY B
B. SEISMIC DESIGN - PER CBC SECTION 1613: RISK CATEGORY II, SEISMIC DESIGN CATEGORY E, SITE CLASS D, FUNDAMENTAL PERIOD T = 0.1 SECONDS, BASIC LATERAL FORCE RESISTING SYSTEM - LIGHT-FRAMED WALLS W/ WOOD STRUCTURAL PANELS: MAPPED SHORT PERIOD ACCELERATION Ss = 1.928 g, SITE COEFFICIENT Fa = 1.2, DESIGN SHORT PERIOD ACCELERATION Sds = 1.542 g, MAPPED ONE SECOND PERIOD ACCELERATION S1 = 0.737 g, SITE COEFFICIENT Fv = 0.6, DESIGN ONE SECOND ACCELERATION Sd1 = 0.76 g, RESPONSE MODIFICATION FACTOR R = 0.5, IMPORTANCE FACTOR I = 1, SEISMIC RESPONSE COEFFICIENT, (SDS*/R) Cs = 0.237
3. ALLOWABLE SOIL PRESSURES: DEAD LOAD 2500 PSF, DEAD + LIVE LOADS 2500 PSF, DEAD + LIVE + LATERAL LOADS 2500 PSF, LATERAL PRESSURE 150 PSF/FT

FOUNDATION NOTES

- 1. FOR BIDDING PURPOSES, THE ELEVATION OF THE BOTTOM OF FOOTINGS SHALL BE AS INDICATED ON THE FOUNDATION PLANS AND ON DETAILS...
2. SOIL BEARING PRESSURES UNDER FOOTINGS AS DESIGNED DO NOT EXCEED ALLOWABLE SOIL PRESSURES DEFINED IN DESIGN CRITERIA ABOVE...
3. WHERE FOUNDATION WALL BACKFILL IS NECESSARY, THE BACKFILL SHALL BE PLACED SIMULTANEOUSLY ON EACH SIDE OF WALL...
4. FOOTINGS SHALL BE CENTERED UNDER BEARING WALLS ABOVE UNLESS OTHERWISE NOTED...
5. SEE ARCHITECTURAL, PLUMBING, MECHANICAL, ELECTRICAL AND ANY OTHER INCLUDED DRAWINGS, AND CONSULT WITH THE RESPECTIVE TRADES FOR VERIFICATION OF ALL ITEMS SHOWN OR NOT SHOWN ON STRUCTURAL PLANS PRIOR TO POURING CONCRETE...
6. VERIFY LOCATIONS FOR OPENINGS OR PENETRATIONS THROUGH CONCRETE, CONCRETE CURBS, FLOOR DEPRESSIONS, FLOOR SLOPES AND DRAINS, INSERTS, ETC.

CONCRETE NOTES

- 1. ALL CONCRETE SHALL BE REINFORCED UNLESS NOTED "NOT REINFORCED"...
2. SEE THE CALIFORNIA BUILDING CODE FOR THE REQUIREMENTS IN THE PRODUCTION, TESTING AND INSTALLATION OF CONCRETE...
3. SEE ARCHITECTURAL DRAWINGS FOR THE LOCATION AND EXTENT OF EXTERIOR WALKS AND PAVEMENTS AND FOR REINFORCEMENT REQUIREMENTS...
4. REINFORCEMENT SHALL BE PER ASTM A615, GRADE 60 WITH BAR MARKS LEGIBLY ROLLED INTO THE SURFACE INDICATING SIZE, TYPE OF STEEL, AND YIELD STRENGTH DESIGNATION...
5. REINFORCEMENT FOR WELDING, FOR SHEAR WALLS, OR FOR MOMENT FRAMES SHALL BE PER ASTM A706, GRADE 60 WITH BAR MARKS LEGIBLY ROLLED INTO THE SURFACE INDICATING SIZE, TYPE OF STEEL, AND YIELD STRENGTH DESIGNATION...
6. CONCRETE SHALL CONFORM TO THE FOLLOWING CLASSES:

Table with 6 columns: CONCRETE CLASS, USE, 28 DAY STRENGTH (PSI), MAX AGGREGATE SIZE (IN), CONCRETE WEIGHT (PCF), MAX W/(C+F+S) RATIO %, MIN/MAX FLYASH OR SLAG %

*(C+F+S) DENOTES TOTAL WEIGHT OF CEMENT, FLYASH AND SLAG

- 7. PORTLAND CEMENT SHALL BE PROPORTIONED IN ACCORDANCE WITH ASTM C94, TYPE I OR II...
8. REPLACE CEMENT CONTENT WITH FLYASH CONFORMING TO ASTM C618 CLASS C OR F, OR GROUND GRANULATED BLAST FURNACE SLAG CONFORMING TO ASTM 989, CLASS 100 OR 120, PER TABLE ABOVE...
9. REINFORCEMENT, ANCHOR BOLTS, PIPE SLEEVES, AND OTHER INSERTS SHALL BE POSITIVELY SECURED IN PLACE BEFORE CONCRETE IS POURED...
10. REINFORCING BARS WELDED TO STRUCTURAL STEEL SHALL BE SUPPLIED BY REINFORCING BAR SUB-CONTRACTOR AND ALL WELDING SHALL BE DONE BY STRUCTURAL STEEL SUB-CONTRACTOR...
11. BAR COVERAGE TO FACE OF BAR, EXCEPT AS OTHERWISE SHOWN, SHALL BE: 3" WHERE CONCRETE IS POURED AGAINST EARTH OR AGAINST GROUNDCONTACT, 2" FOR BARS LARGER THAN #5, WHERE CONCRETE SURFACES ARE EXPOSED TO EARTH OR TO WEATHER AFTER REMOVAL OF FORMS, 1-1/2" FOR #5 BARS OR SMALLER, WHERE CONCRETE SURFACES ARE EXPOSED TO EARTH OR TO WEATHER AFTER REMOVAL OF FORMS, 1-1/2" FOR COLUMN SPIRAL TIES, 1" FOR WALL BARS (DOUBLE MAT), 1" FOR STRUCTURAL SLAB BARS, TOP AND BOTTOM, UNLESS GOVERNED ABOVE BY EXPOSURE OR NOTED ON DETAILS...
12. INTERIOR SLAB ON JOINTS SHALL BE REINFORCED AS SHOWN ON STRUCTURAL PLANS...
13. ALL CONCRETE CURBS ARE 6 INCHES HIGH UNLESS OTHERWISE NOTED...
14. WHERE NEW CONSTRUCTION IS INTEGRATED WITH EXISTING CONCRETE CONSTRUCTION, CARE SHALL BE TAKEN SO AS NOT TO DAMAGE EXISTING REMAINING CONCRETE AND REINFORCING...
15. HOLES FOR GROUTED ANCHORS SHALL BE DRILLED WITH ROTARY HAMMER OR OTHER SUITABLE METHODS TO ENSURE EXISTING REINFORCEMENT IS NOT DAMAGED...
16. TERMINATE ALL BARS IN LAPS, 90 DEGREE BENDS, OR DOWELS INTO FOOTINGS OR PERPENDICULAR WALLS OR COLUMNS...
17. ROUGHEN SURFACES AND KEY JOINTS AT HARDENED CONCRETE...
18. COLUMNS AND JOINTS WITHIN ELEMENTS

SUPPORTING MEMBER FOR PERMANENT APPURTENANCES
1. NATURALLY DURABLE OR PRESERVATIVE-TREATED WOOD SHALL BE UTILIZED FOR THOSE PORTIONS OF WOOD MEMBERS THAT FORM THE STRUCTURAL SUPPORTS OF BUILDINGS, PORCHES OR SIMILAR PERMANENT BUILDING APPURTENANCES WHERE SUCH MEMBERS ARE EXPOSED TO THE WEATHER WITHOUT ADEQUATE PROTECTION FROM A ROOF, EAVE, OVERHANG OR OTHER COVERING TO PREVENT MOISTURE OR WATER ACCUMULATION ON THE SURFACE OF AT JOINTS BETWEEN MEMBERS.

CARPENTRY NOTES

- 1. SILLS ON CONCRETE SHALL BE PRESSURE TREATED DOUGLAS FIR LARCH 3x THICK AT ALL EXTERIOR WALLS AND INTERIOR SHEAR WALLS NOTED ON PLAN...
2. FRAMING LUMBER, DOUGLAS FIR-LARCH, MANUFACTURED AND GRADED IN ACCORDANCE WITH THE WEST COAST LUMBER INSPECTION BUREAU "STANDARD GRADING RULES NO. 17", LATEST EDITION INCLUDING ALL SUPPLEMENTS...
3. ALL FRAMING LUMBER SHALL HAVE A MAXIMUM MOISTURE CONTENT OF 19 PERCENT AT TIME OF INSTALLATION...
4. STUD AND POST SIZES (UNLESS OTHERWISE NOTED) STUDS AT NEW EXTERIOR WALLS: 2x6 @ 16" ON CENTER...
5. BLOCKING AND BRIDGING - PROVIDE AS FOLLOWS: 2x SOLID BLOCKING BETWEEN JOISTS AND RAFTERS OVER SUPPORT...
6. PIPES EXCEEDING ONE-THIRD OF THE PLATE WIDTH SHALL NOT BE PLACED IN PARTITIONS USED AS BEARING OR SHEAR WALLS...
7. LAG SCREWS SHALL BE SCREWED (NOT DRIVEN) INTO PLACE...
8. BOLTS IN WOOD SHALL BE MACHINE BOLTS UNLESS OTHERWISE NOTED...
9. BOLT HOLES IN WOOD AND STEEL SHALL BE THE DIAMETER OF THE BOLT PLUS 1/16"...
10. PROVIDE PLATE WASHER UNDER HEAD AND NUT OF BOLT WHERE BEARING IS AGAINST WOOD...
11. CONNECTORS FOR WOOD CONSTRUCTION NOTED ON PLANS AND DETAILS SHALL BE SIMPSON COMPANY STRONG-TIE CONNECTORS OR APPROVED EQUAL...
12. STUDS SHALL BE ONE PIECE BETWEEN FLOORS AND FROM FLOOR TO ROOF...
13. ALL POSTS SHALL BE FULL HEIGHT FROM FOUNDATION TO ROOF...
14. ALL NON-BEARING PARTITIONS SHALL HAVE DOUBLE JOISTS BELOW WHERE PARTITIONS ARE PARALLEL TO JOISTS...
15. JOISTS SUPPORTING MECHANICAL EQUIPMENT SHALL BE DOUBLE JOISTS (DJ) UNLESS NOTED OTHERWISE.

SHEATHING NOTES

- 1. ROOF, FLOORS, ALL EXTERIOR WALLS AND INTERIOR SHEAR WALLS (WHERE NOTED ON STRUCTURAL PLANS) SHALL BE SHEATHED WITH DOUGLAS FIR SHEATHING WITH EXTERIOR GLUE AS FOLLOWS: ROOF: 5/8" APA STRUCTURAL I RATED PLYWOOD, 40/20, EXPOSURE 1...
2. SHEATHING MAY BE ORIENTED STRAND BOARD OR PLYWOOD UNLESS SPECIFICALLY NOTED AS PLYWOOD...
3. ALL EXTERIOR WALLS SHALL BE SHEATHED...
4. ALL SHEATHING USED STRUCTURALLY SHALL EXTEND CONTINUOUSLY BEHIND ALL FINISH...
5. IN GENERAL, SHEETS SHALL BE 4'-0" x 8'-0". MINIMUM SHEET DIMENSION IS 24 INCHES...
6. SHEATHING SHALL BE ACCURATELY CENTERED ON SUPPORTING ELEMENTS, INCLUDING BLOCKING...
7. SHEATHING SHALL BE UNLOCKED, GLUE FLOOR SHEATHING TO ALL SUPPORTS INCLUDING BLOCKING WITH AN ADHESIVE RECOMMENDED BY THE AMERICAN PLYWOOD ASSOCIATION FOR THIS PURPOSE.

EXPANSION ANCHORS IN HARDENED CONCRETE NOTES

- 1. INSTALLATION: THE ANCHORS MUST BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS GIVEN IN ICCB RESEARCH COMMITTEE RECOMMENDATIONS FOR THE SPECIFIC ANCHOR...
2. HOLES FOR EXPANSION ANCHORS SHALL BE DRILLED WITH ROTARY HAMMER OR OTHER SUITABLE METHODS TO ENSURE EXISTING REINFORCEMENT IS NOT DAMAGED...
3. JOB TESTING AND INSPECTION: CONTINUOUS VISUAL INSPECTION OF ANCHOR INSTALLATION IS REQUIRED...
4. ALL EXPANSION ANCHORS IN CONCRETE SHALL BE HILTI KB-T22 (PER ESR-4266), SIMPSON STRONG-BOLT 2 (PER ESR 3037) OR APPROVED EQUAL...
5. TENSION PROOF LOAD SHALL BE BY AN INDEPENDENT TESTING LABORATORY.

NAILING NOTES

- 1. ALL NAILS SHALL BE COMMON WIRE NAILS. WHERE NAILS TEND TO SPLIT THE WOOD, NAIL HOLES SHALL BE PRE-DRILLED...
2. PROVIDE MINIMUM NAILING REQUIREMENTS AS SET FORTH IN CALIFORNIA BUILDING CODE TABLE 2304.10.1 EXCEPT THAT BOX NAILS SHALL NOT BE USED...
3. AT ROOF: 5/8" PLYWOOD WITH 10d @ 4" ON CENTER ALONG SUPPORTED PANEL EDGES AND WHERE NOTED ON PLANS AND DETAILS...
4. AT WALLS: SEE SHEAR WALL SCHEDULE...
5. MAINTAIN ACCURATE NAIL SPACING AS INDICATED. NAIL SPACING CLOSER THAN SPECIFIED WILL BE CAUSE FOR REJECTION OF THE WORK...
6. RETARDANT TREATED WOOD SHALL BE HOT-DIPPED GALVANIZED PER ASTM A153, CLASS D. NAILS FOR STAINLESS STEEL CONNECTORS SHALL BE STAINLESS STEEL.

STRUCTURAL STEEL NOTES

- 1. STRUCTURAL STEEL SPECIFICATIONS SHALL BE IN ACCORDANCE WITH:

Table with 2 columns: STRUCTURAL STEEL ELEMENTS, SPECIFICATION

- 2. ALL STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS, LATEST EDITION...
3. ALL BOLTED CONNECTIONS STEEL TO STEEL SHALL BE WELDED WITH 1" DIAMETER HIGH STRENGTH (A325) BOLTS UNLESS OTHERWISE NOTED...
4. ALL WELDING SHALL BE DONE BY CERTIFIED WELDERS...
5. ALL TESTING AND INSPECTION OF SHOP AND FIELD WELDING OPERATIONS SHALL BE MADE BY A CERTIFIED WELDING INSPECTOR...
6. ALL WELDS SHALL BE TESTED AND INSPECTED IN ACCORDANCE WITH THE CALIFORNIA BUILDING CODE...
7. ALL WELDS DESIGNATED AS DEMAND CRITICAL SHALL BE MADE WITH A FILLER METAL THAT CAN PRODUCE WELDS THAT HAVE A MINIMUM CHАРRY V-NOTCH TOUGHNESS OF 20 FT-LB AT 0 DEGREES FAHRENHEIT...
8. WHERE CLOSER THAN AISC TOLERANCES ARE NECESSARY, SUCH AS FOR ALIGNMENT OF STEEL STUDS, MULLIONS, GFRC PANELS, ETC., FIELD WELDING WILL BE REQUIRED TO MEET THE NECESSARY TOLERANCES WITH NO ADDITIONAL COSTS TO THE OWNER...
9. WELDING OF REINFORCING STEEL TO STRUCTURAL STEEL SHALL BE DONE BY STRUCTURAL STEEL SUB-CONTRACTOR...
10. BOLT HOLES IN STEEL SHALL BE 1/16" OVERSIZE UNLESS OTHERWISE NOTED...
11. STRUCTURAL STEEL CONTRACTOR SHALL EXCHANGE SHOP DRAWINGS WITH STEEL DECK SUB-CONTRACTOR FOR COORDINATION

EXISTING BUILDING NOTES:

- 1. CONDITION OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS ARE BASED ON EXISTING RECORD DRAWINGS PROVIDED...
2. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE, WORKMEN, AND OTHER PERSONS DURING CONSTRUCTION...
3. THE CONTRACTOR SHALL CAREFULLY CHECK THE STABILITY OF ALL ELEMENTS OF THE EXISTING BUILDING BEFORE COMMENCING WITH ANY WORK...
4. SEWER AND UTILITY LINES ARE NOT INDICATED ON STRUCTURAL DRAWINGS...
5. NO NEW OPENINGS IS ALLOWED WITH AN EXCEPTION OF THE FOLLOWING CONDITION...
6. CONTRACTOR SHALL VERIFY CONSTRUCTION OF ALL STRUCTURAL FLOOR SLABS, AND SHALL NOTIFY ENGINEER IF POST-TENSIONED CONCRETE SLABS ARE PRESENT PRIOR TO ANY WORK COMMENCING AT THOSE LOCATIONS...
7. CONTRACTOR SHALL USE NON-DESTRUCTIVE METHOD TO DETECT LOCATIONS OF REBAR IN EXISTING ELEMENTS TO AVOID DAMAGING AND/OR CUTTING...
8. OTHER THAN THE DRILLED HOLES FOR POST-INSTALLED ANCHORS, DO NOT DAMAGE SURROUNDING EXISTING CONCRETE DURING INSTALLATION AND FOR TESTING OF POST-INSTALLED ANCHORS.

NOLL & TAM ARCHITECTS

729 Heinz Avenue
Berkeley, CA 94710
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SEAL



APPROVALS

PROJECT TITLE

City of Berkeley
WEST BERKELEY SERVICE CENTER

1900 Sixth St
Berkeley, CA 94710

BID SET

Table with 2 columns: ISSUE DATE, IDA JOB NUMBER

REVISIONS

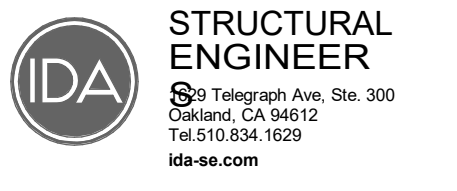
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SHEET TITLE

GENERAL NOTES

SHEET NUMBER

S0.01

SEAL



APPROVALS

PROJECT TITLE

City of Berkeley
WEST
BERKELEY
SERVICE
CENTER

1900 Sixth St
Berkeley, CA 94710

BID SET

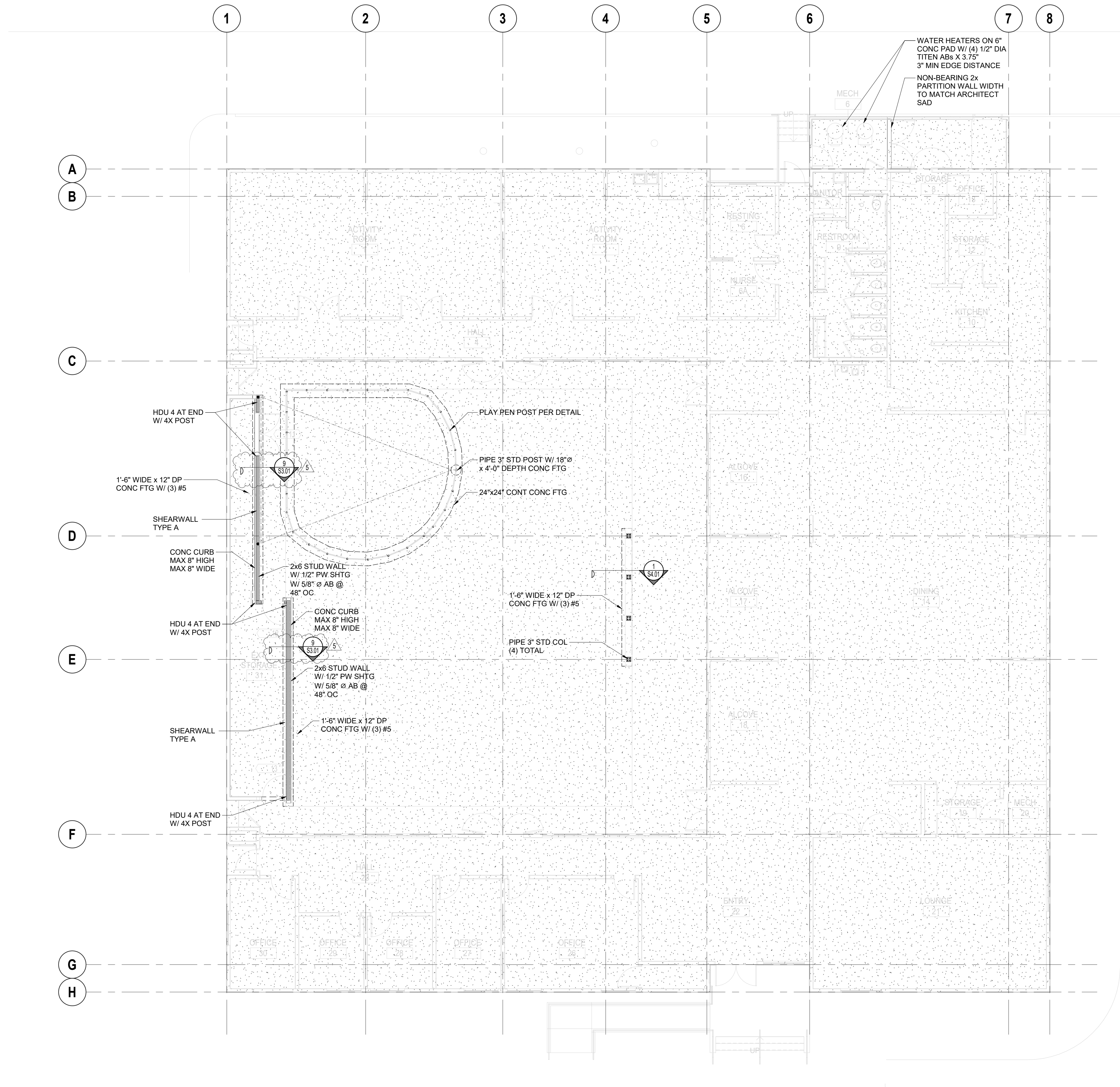
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5	02/20/24 ADDENDUM

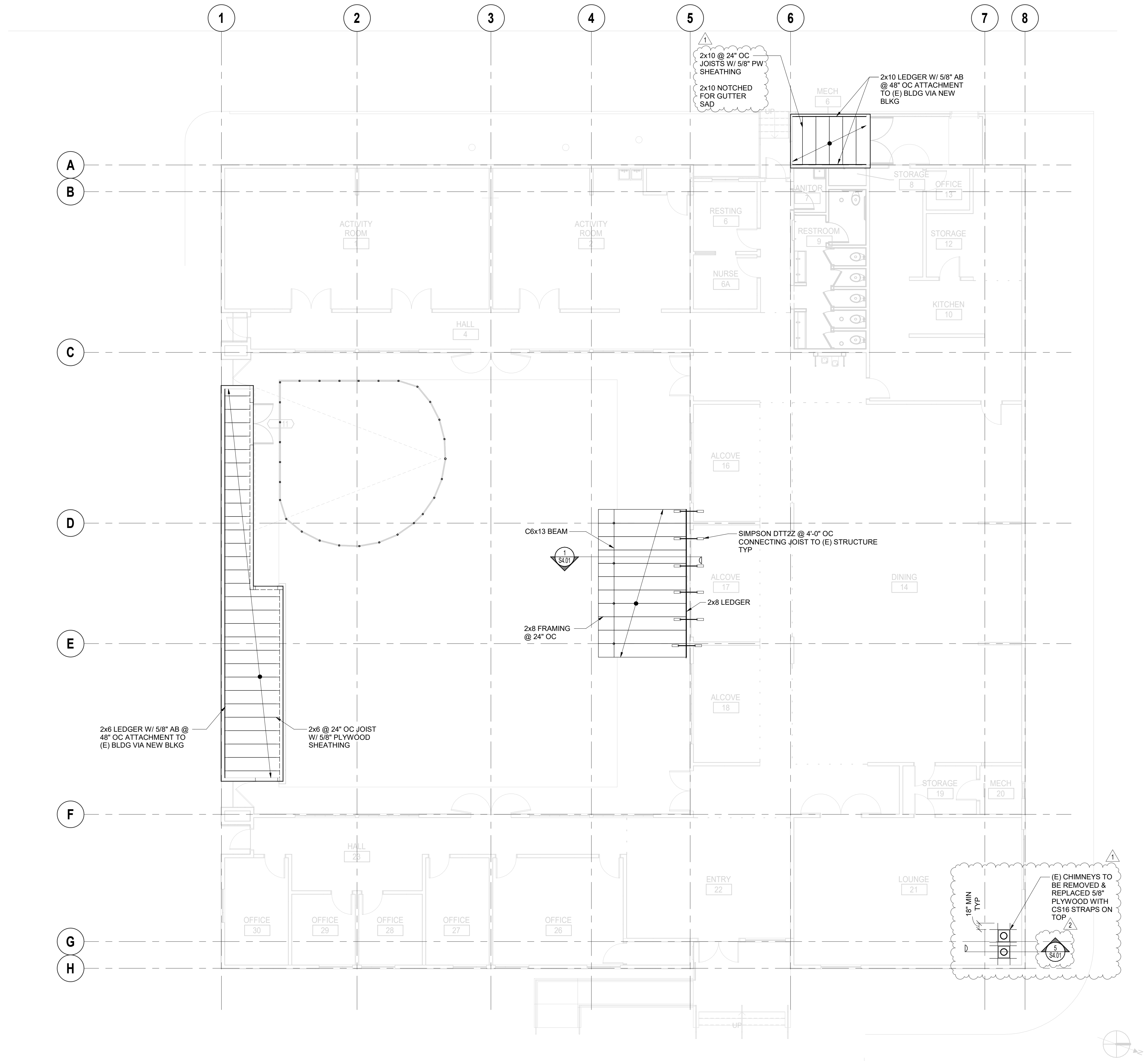
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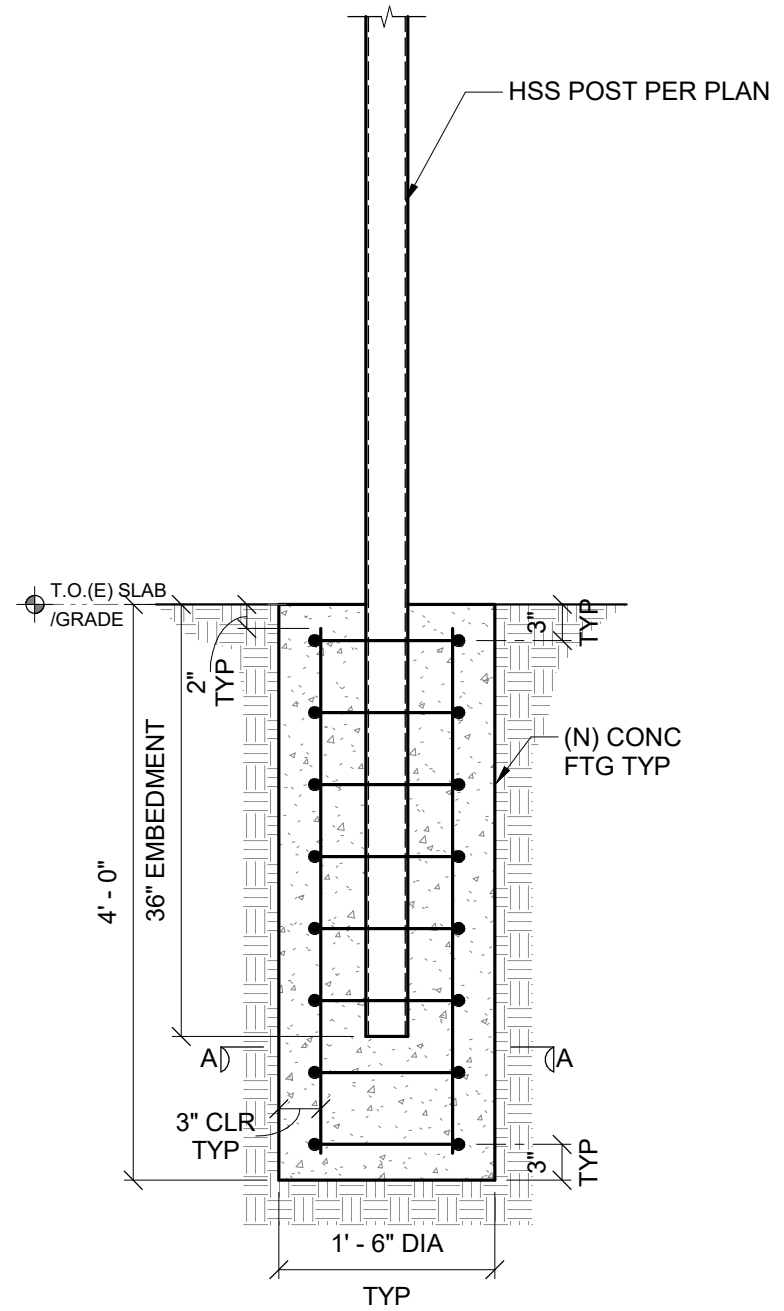
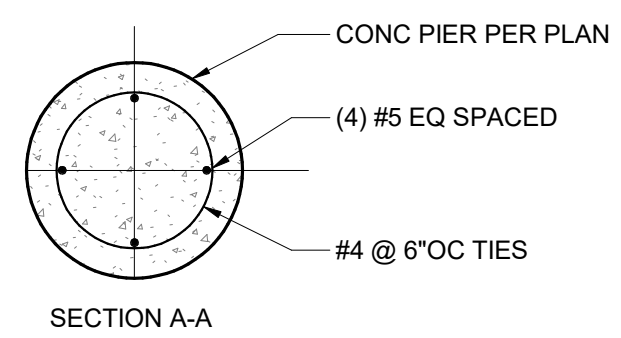
SHEET TITLE
FOUNDATION AND FIRST FLOOR PLAN

SHEET NUMBER

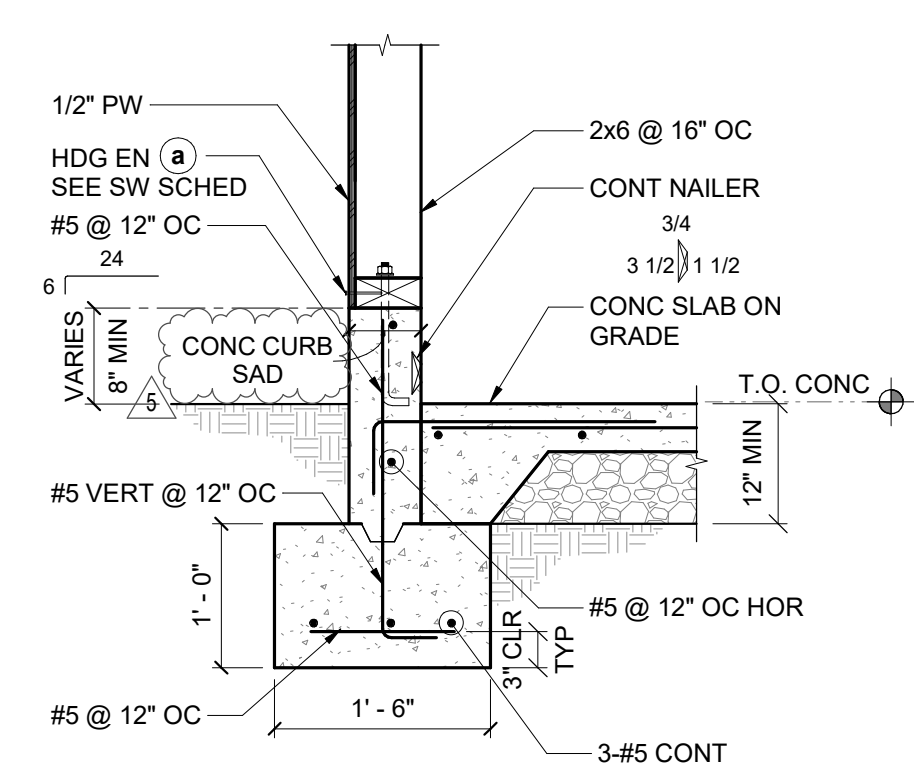
S2.00



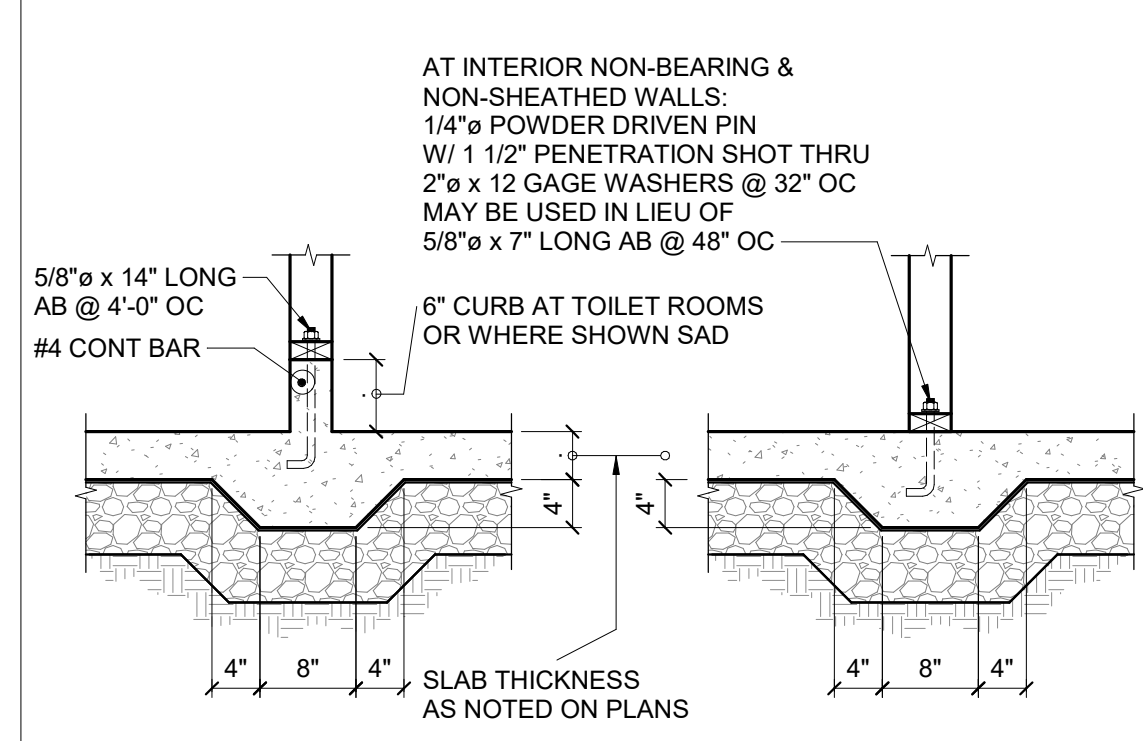




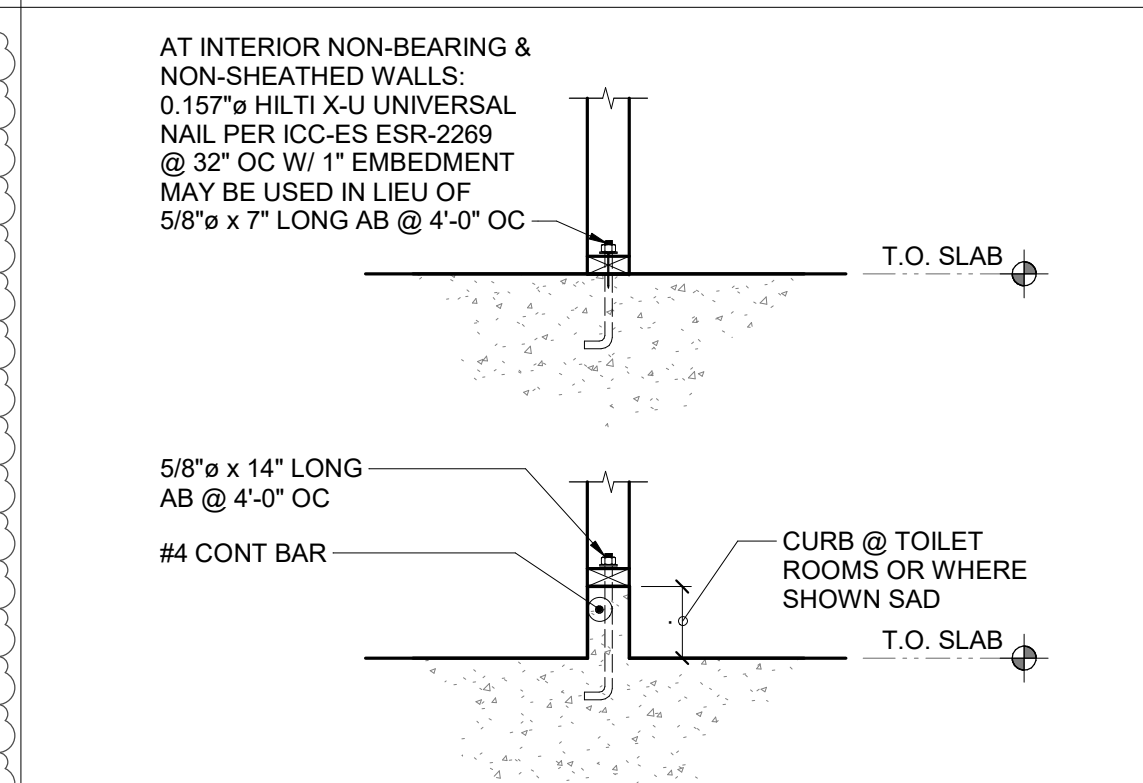
14
S3.01 SAIL POST FOUNDATION PIER
3/4" = 1'-0"



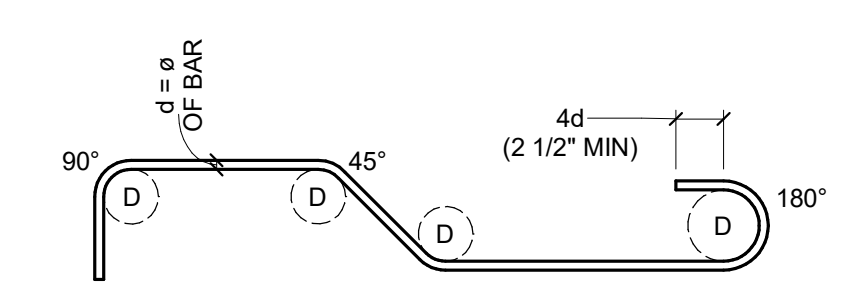
9
S3.01 SECTION
3/4" = 1'-0"



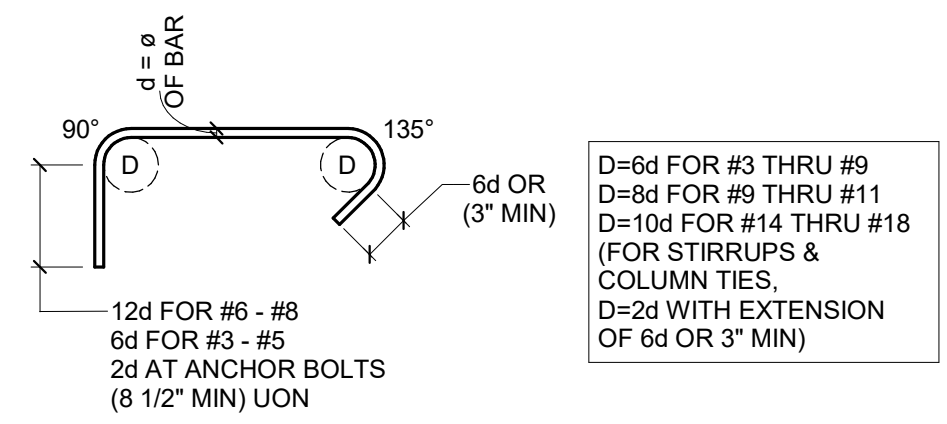
5
S3.01 NON-BEARING STUD WALLS ON SLAB ON GRADE
3/4" = 1'-0"



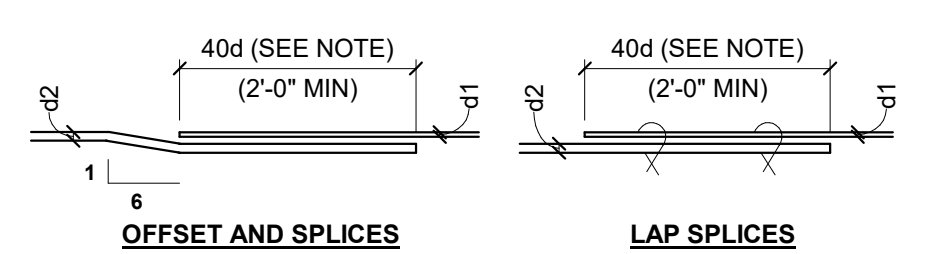
6
S3.01 TYP NON-BEARING STUD WALLS ON CONCRETE SLAB/FILL
3/4" = 1'-0"



STANDARD HOOKS AND BENDS



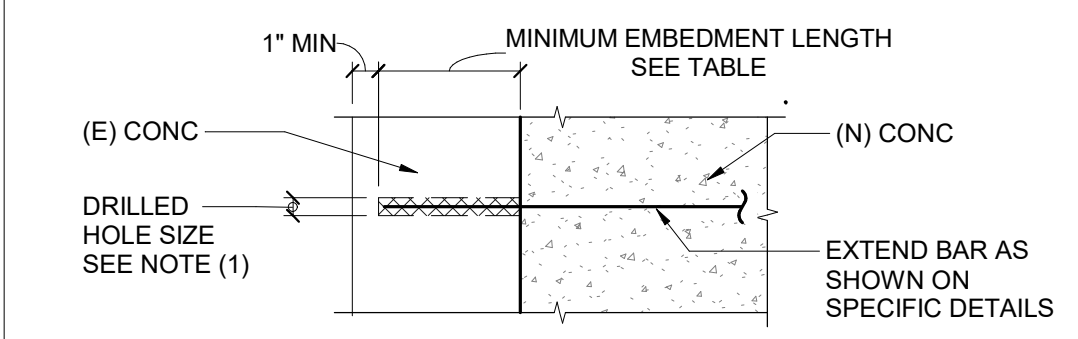
TIES AND STIRRUPS



OFFSET AND SPLICES LAP SPLICES

NOTE:
ALL LAP SPLICES ARE CLASS B LAP SPLICES

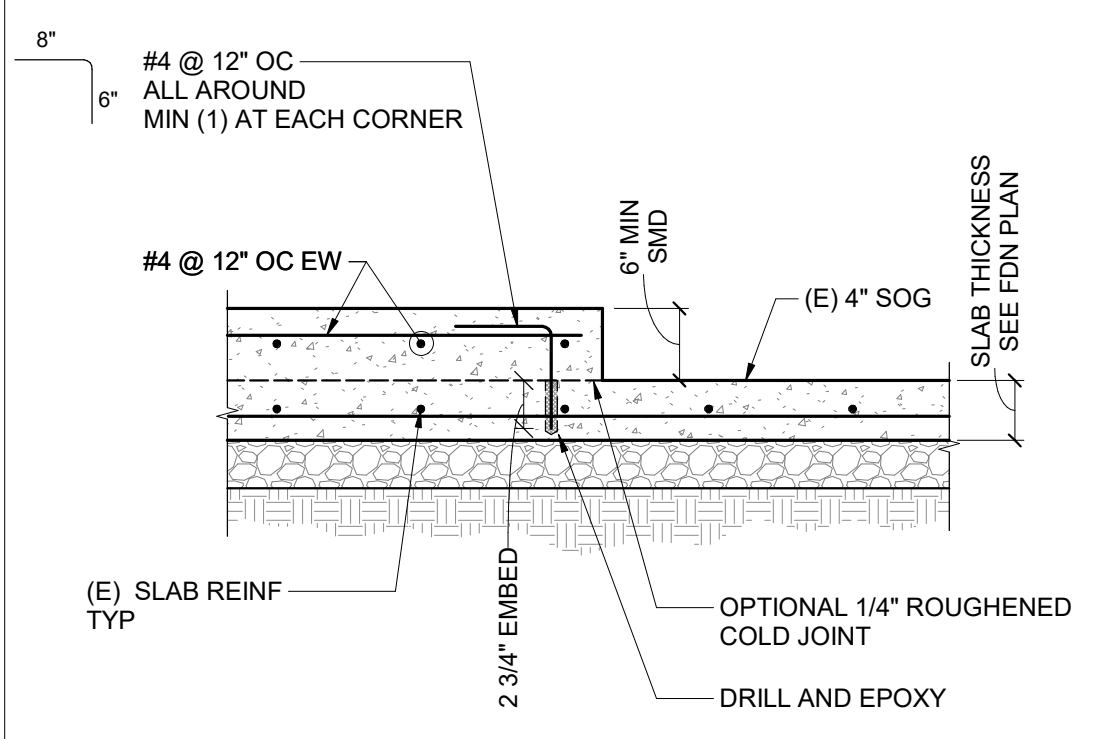
2
S3.01 TYPICAL REINFORCING BAR BENDS
3/4" = 1'-0"



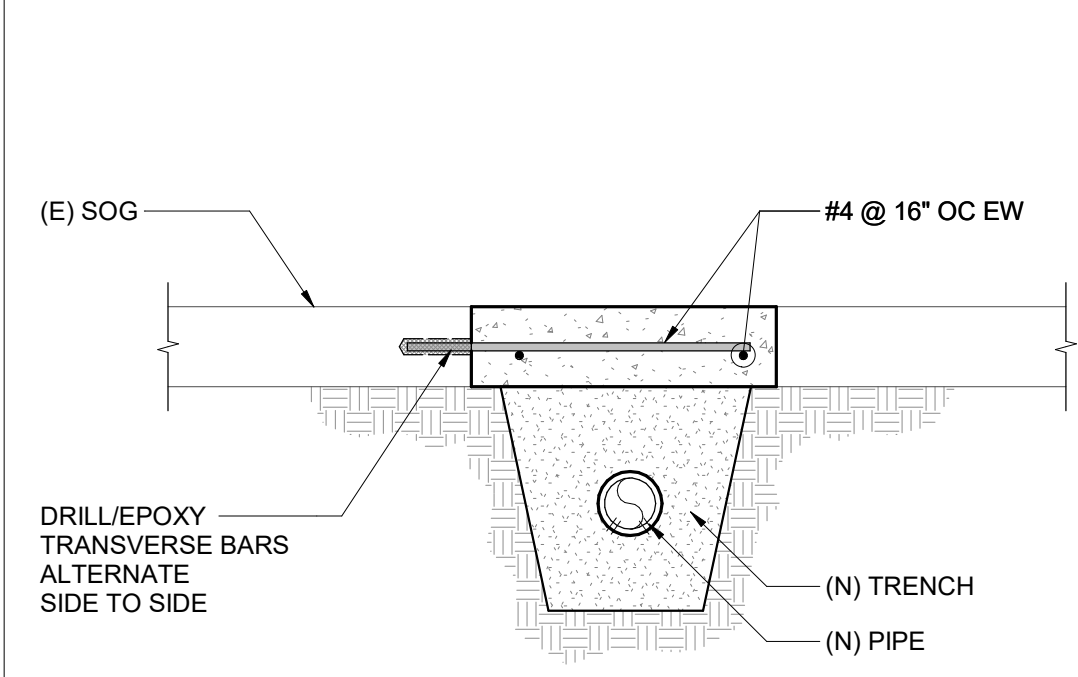
BAR SIZE	THREADED ROD SIZE	MINIMUM EMBEDMENT LENGTH (2), (3)
#3	3/8"	3 1/2"
#4	1/2"	4 1/4"
#5	5/8"	5"
#6	3/4"	6 3/4"
#7	7/8"	7 3/4"
#8	1"	9"

- NOTES:
- FOLLOW SPECIFIC MANUFACTURER GUIDELINES FOR DRILLED HOLE DIAMETER.
 - EMBEDMENT LENGTHS SHOWN ON SPECIFIC DETAILS SUPERCEDE THIS SCHEDULE.
 - ANCHOR EMBEDMENT INTO WALLS AND SLABS SHALL NOT EXCEED THICKNESS (IN DIRECTION OF DRILLING) MINUS ONE INCH. SEE GENERAL NOTES/SPECIFICATIONS FOR GROUT REQUIREMENTS. SUBMIT GROUT TECHNICAL INFORMATION TO STRUCTURAL ENGINEER FOR APPROVAL. THREADED RODS SHALL BE PER ASTM A193, GRADE B7.

11
S3.01 GROUTED ANCHOR SCHEDULE
3/4" = 1'-0"



3
S3.01 MECHANICAL EQUIPMENT PAD ON GRADE
3/4" = 1'-0"

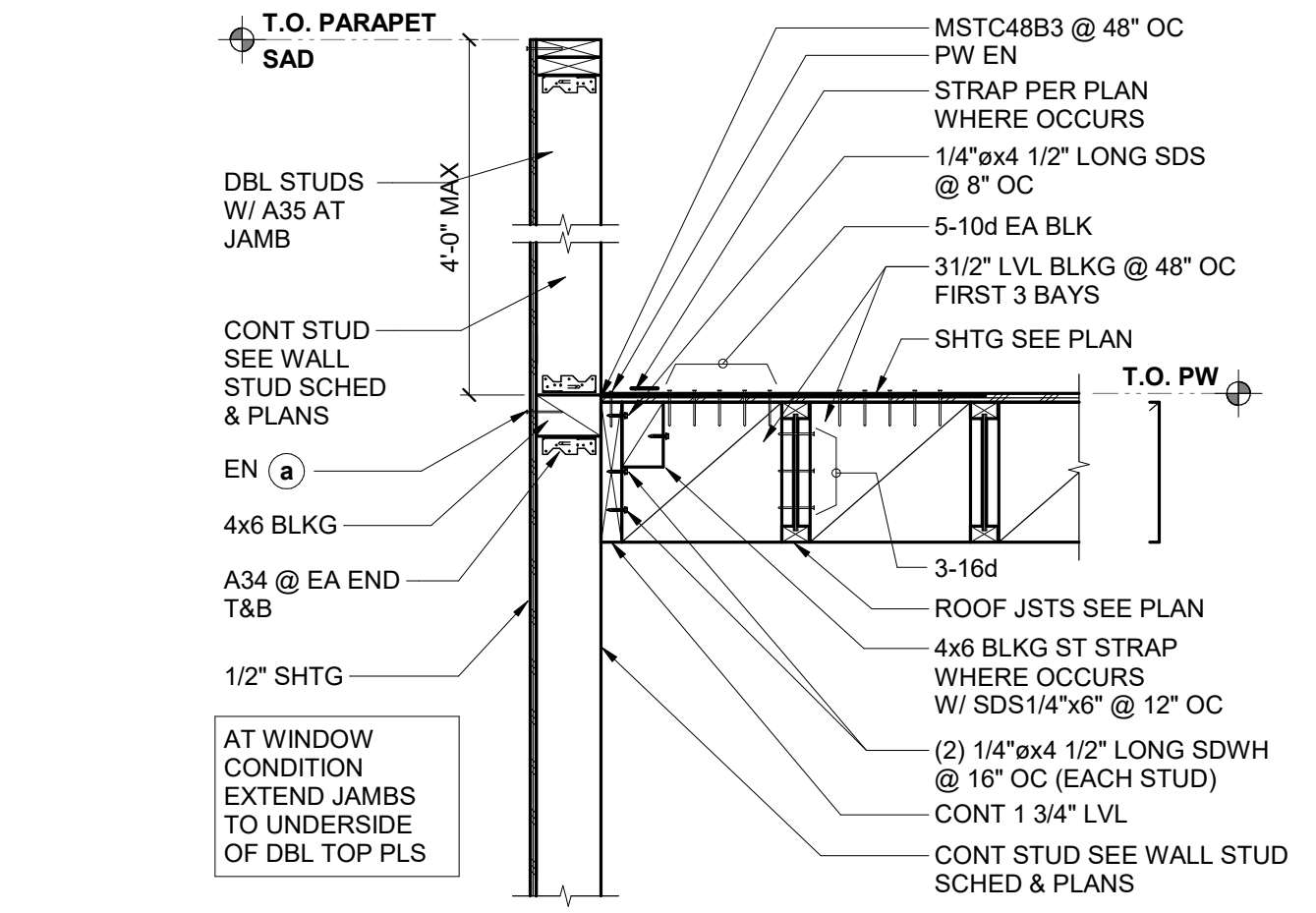


12
S3.01 TYPICAL TRENCH INFILL
1" = 1'-0"

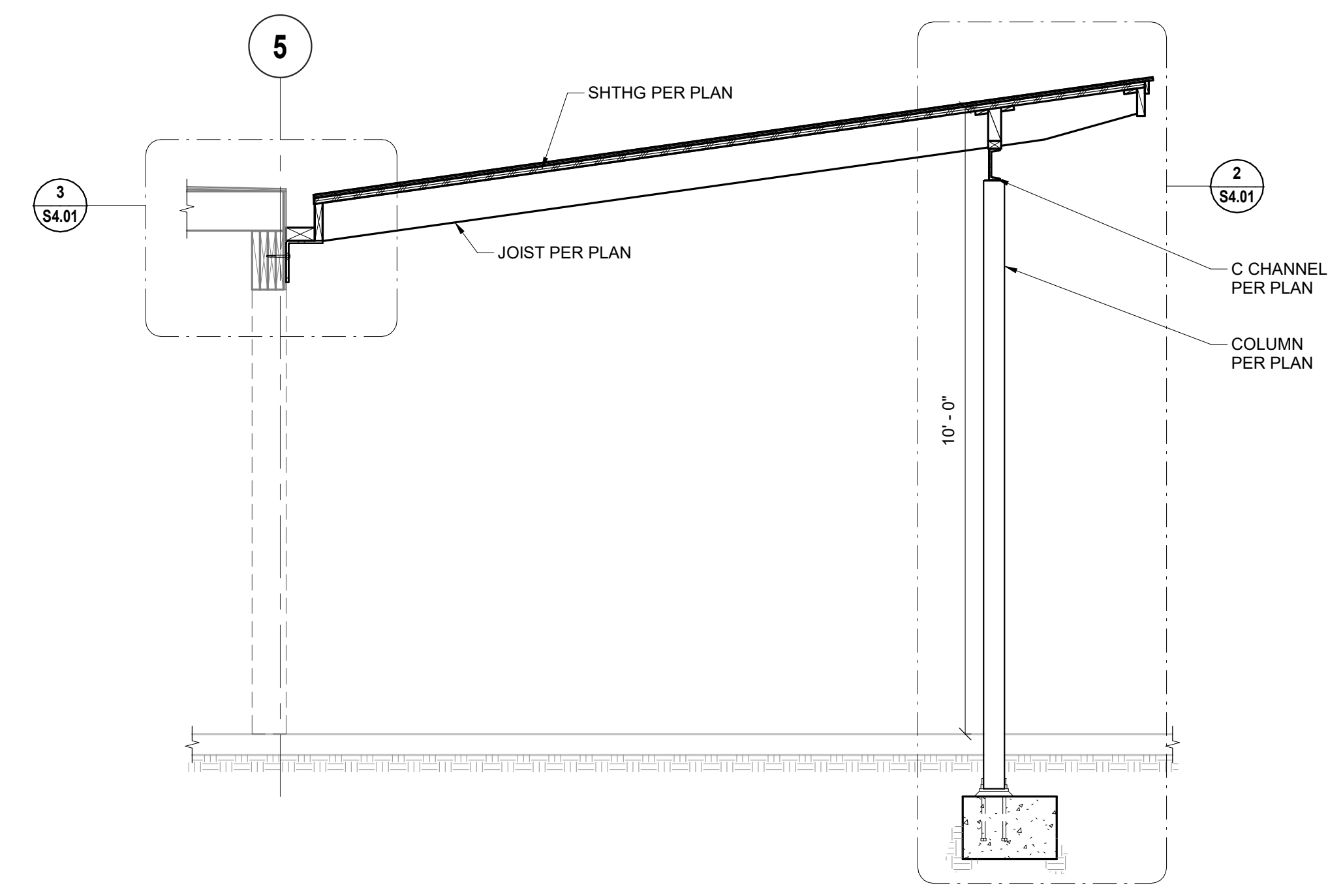
CONCRETE STRENGTH PSI	BAR TYPE	BAR SIZE																	
		#3		#4		#5		#6		#7		#8		#9		#10		#11	
		CLASS	CLASS	CLASS	CLASS	CLASS	CLASS	CLASS	CLASS	CLASS	CLASS	CLASS	CLASS	CLASS	CLASS	CLASS	CLASS	CLASS	
2500	TOP BAR	24	31	32	41	39	51	47	61	69	89	78	102	88	115	100	129	110	143
	ALL OTHER BARS	18	24	24	32	30	39	36	47	53	69	60	78	68	88	77	100	85	110
3000	TOP BAR	22	28	29	37	36	47	43	56	63	81	72	93	81	105	91	118	101	131
	ALL OTHER BARS	17	22	22	29	28	36	33	43	48	63	55	72	62	81	70	91	78	101
4000	TOP BAR	19	24	25	33	31	41	37	49	54	71	62	81	70	91	79	102	87	113
	ALL OTHER BARS	15	19	19	25	24	31	29	37	42	54	48	62	54	70	61	79	67	87
5000	TOP BAR	17	22	23	29	28	36	34	43	49	63	56	72	63	81	70	92	78	102
	ALL OTHER BARS	13	17	17	23	22	28	26	34	38	49	43	56	48	63	54	70	60	78

- NOTES:
- SPLICE LENGTH IN INCHES.
 - USE CLASS B FOR ALL LAP SPLICES EXCEPT CLASS A MAY BE USED FOR NON-STRUCTURAL SLABS ON GRADE.
 - TOP BARS = HORIZONTAL BARS (OTHER THAN IN WALLS) PLACED WITH MORE THAN 12" OF FRESH CONCRETE CAST BELOW BARS.
 - TABLE IS BASED UPON MINIMUM CLEAR COVER GREATER THAN ONE BAR DIAMETER AND MINIMUM CLEAR SPACING GREATER THAN TWO BAR DIAMETERS. WHERE EITHER OF THESE REQUIREMENTS IS NOT MET, INCREASE LAP LENGTH BY 50%.

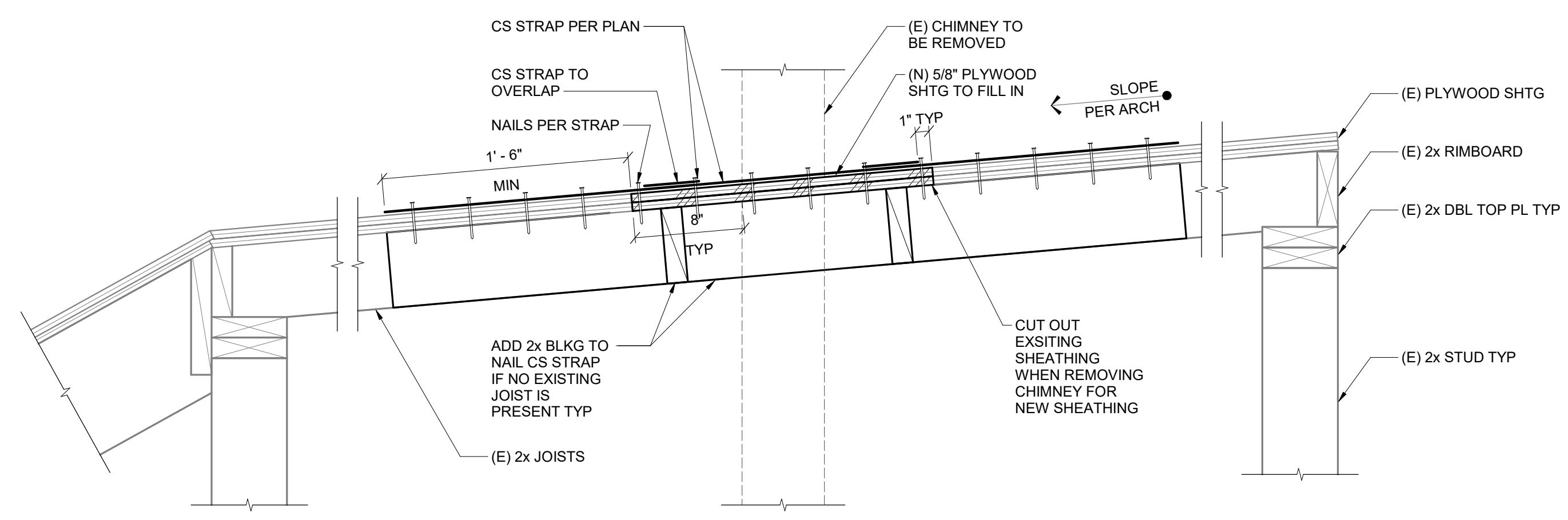
8
S3.01 REINFORCING BAR LAP SPLICE SCHEDULE IN CONCRETE
3/4" = 1'-0"



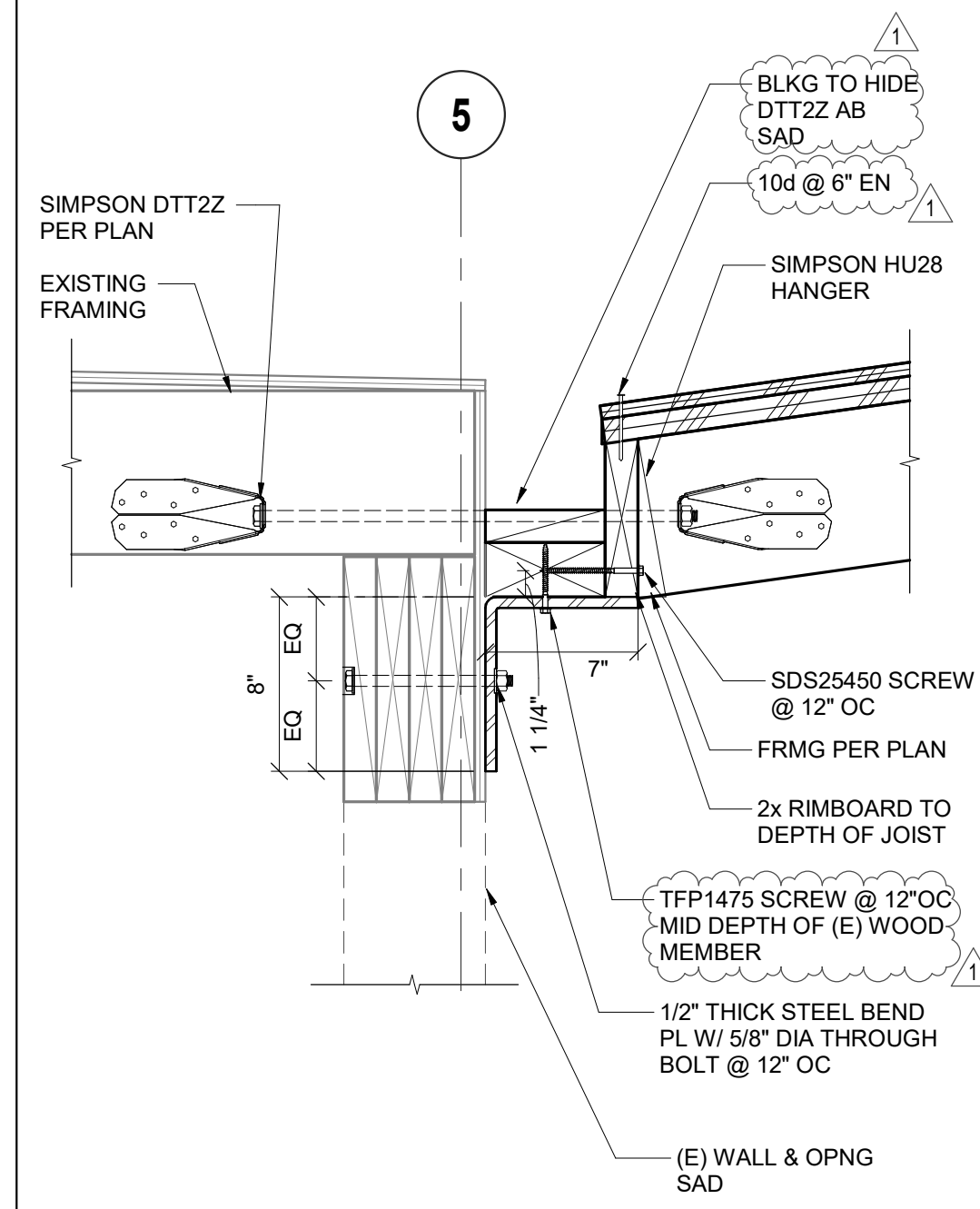
4 EXTERIOR SW SECTION
 3/4" = 1'-0"



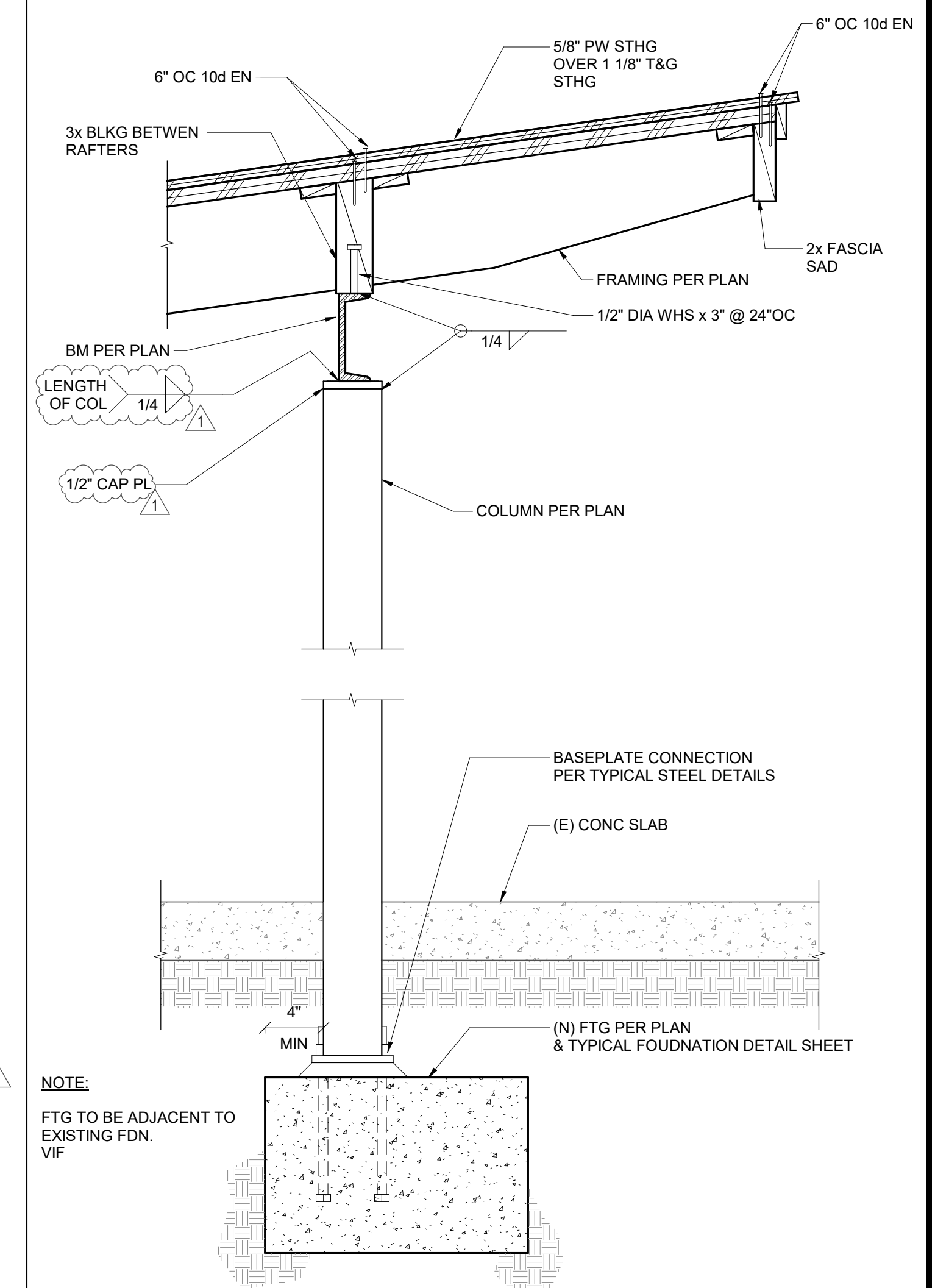
1 SECTION AT NEW CANOPY
 1/2" = 1'-0"



5 CHIMNEY REMOVAL REPAIR
 1 1/2" = 1'-0"



3 CANOPY GUTTER
 1 1/2" = 1'-0"



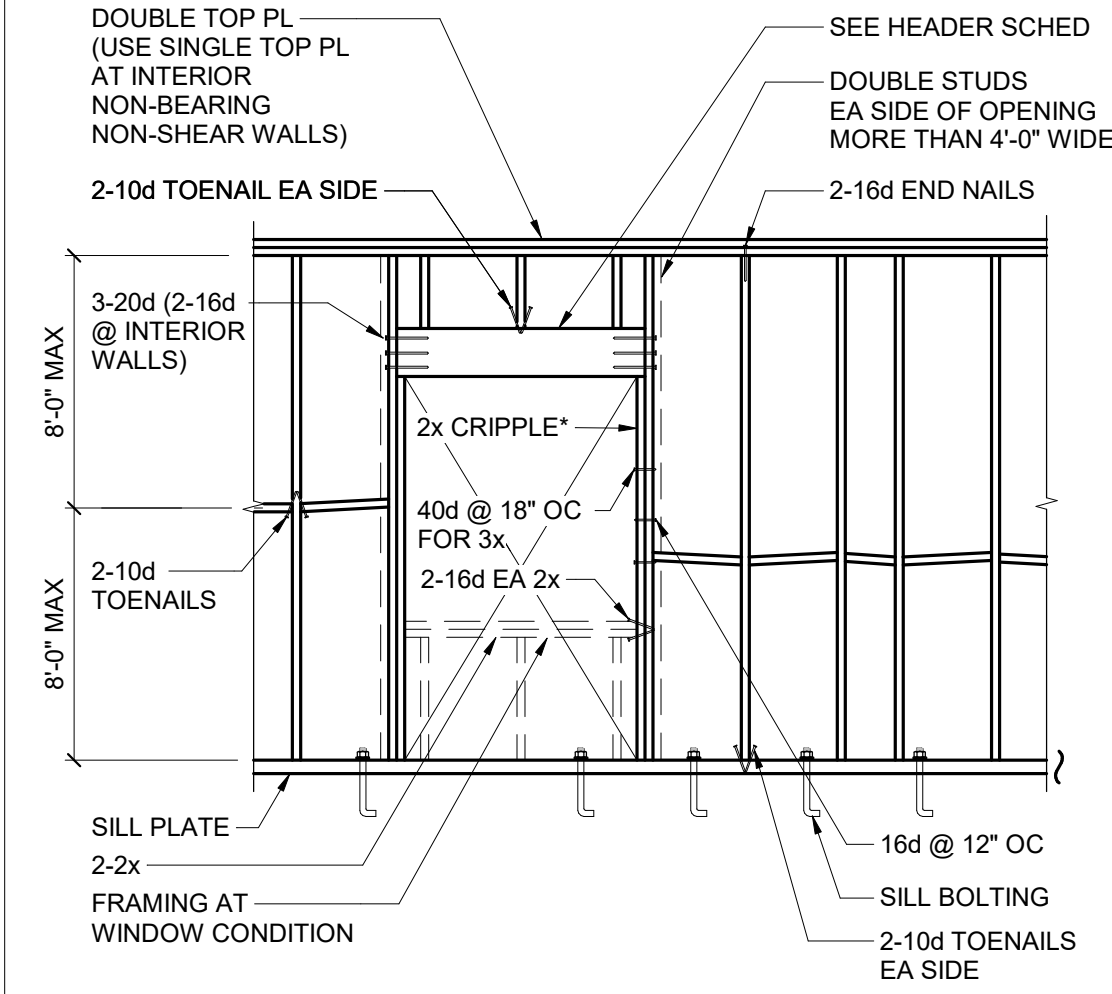
2 CANOPY SUPPORT DETAIL
 1 1/2" = 1'-0"

NOTE:
 FTG TO BE ADJACENT TO EXISTING FDN. VIF

MARK	15/32" WOOD STRUCT 1 PANEL SHEATHING	CONNECTIONS NOTED ON DETAILS						REMARKS	
		(a) NAILING		(b) 2x SOLE PLATE CONNECTION	(c) TOP PLATE CONNECTION	(d) JOIST OR BLKG	(e) 3x PTDF SILL PL W/ AB (SEE NOTE 14) MAXIMUM SPACING		MAX ALLOWABLE SHEAR CAPACITY (plf)
		EDGES	FIELD						
A	1 SIDE	10d @ 6" OC	10d @ 12" OC	16d @ 6" OC STAGGERED	A35 @ 16" OC OR LTP5 @ 16" OC	3x SS OR 1 3/4" LSL	5/8" @ 48" OC	340	
B	1 SIDE	10d @ 4" OC	10d @ 12" OC	16d @ 4" OC STAGGERED	A35 @ 8" OC OR LTP5 @ 8" OC	3x SS OR 1 3/4" LSL	5/8" @ 32" OC	510	USE 3x STUDS @ SHEATHING PANEL JTS
	2 SIDES	10d @ 4" OC	10d @ 12" OC	1/4" x 6" SDS SCREWS @ 4" OC	A35 @ 6" OC OR LTP5 @ 4" OC	3x SS OR 1 3/4" LSL	5/8" @ 16" OC	1020	USE 3x STUDS @ SHEATHING PANEL JTS
C	1 SIDE	10d @ 3" OC	10d @ 12" OC	16d @ 3" OC STAGGERED	A35 @ 8" OC OR LTP5 @ 8" OC	3x SS OR 1 3/4" LSL	5/8" @ 16" OC	665	USE 3x STUDS @ SHEATHING PANEL JTS
	2 SIDES	10d @ 3" OC	10d @ 12" OC	1/4" x 6" SDS SCREWS @ 4" OC	A35 @ 4" OC OR LTP5 @ 4" OC	3x SS OR 1 3/4" LSL	5/8" @ 8" OC	1330	USE 3x STUDS @ SHEATHING PANEL JTS
D	1 SIDE	10d @ 2" OC	10d @ 12" OC	20d @ 3" OC STAGGERED	A35 @ 6" OC OR LTP5 @ 6" OC	3x SS OR 1 3/4" LSL	5/8" @ 16" OC	870	USE 3x STUDS @ SHEATHING PANEL JTS
	2 SIDES	10d @ 2" OC	10d @ 12" OC	1/4" x 6" SDS SCREWS @ 3" OC	A23 @ 6" OC EF OR LTP5 @ 6" OC EF	3x SS OR 1 3/4" LSL	5/8" @ 8" OC	1740	USE 3x STUDS @ SHEATHING PANEL JTS

- NOTES:**
- ALL EXTERIOR WALLS SHALL BE SHEATHED WITH ORIENTED STRAND BOARD (OSB) SHEATHING WITH SHEAR WALL MARK **A** UON.
 - DO NOT LOCATE SHEATHING JOINTS ON THE SAME STUD WHERE SHEATHING OCCURS ON BOTH SIDES, UNLESS 3x STUDS ARE USED. PROVIDE 2 ROWS OF SHEATHING EDGE NAILING (EN) FULL HEIGHT OF ALL POSTS WITH HOLDOWNS.
 - SHEATHING AT SHEAR WALLS SHALL EXTEND FULL LENGTH AND HEIGHT OF WALL.
 - USE 3x SILL PLATES AT ALL SHEAR WALLS AND EXTERIOR WALLS. ANCHOR BOLTS SHALL HAVE 7" MINIMUM EMBEDMENT. EMBEDDED END SHALL HAVE 6" DIAMETER BEND WITH 2 DIAMETER EXTENSION PAST CENTER OF BEND.
 - SOLE PLATE NAILING AND SCREWS SHALL BE STAGGERED 5/8".
 - ANCHOR BOLTS (e) SHALL HAVE CUT WASHER OVER BEARING PLATE * PLATE 3"x3"x1/4" AT 4" WALLS * PLATE 3/8"x3"x5/8" AT 6" WALLS * PLATE 3/8"x3"x7/8" AT 8" WALLS ORIENT LONG DIMENSION OF BEARING PLATE PERPENDICULAR TO WALL. NAILS PENETRATING PRESSURE-PRESERVATIVE TREATED OR FIRE TREATED WOOD SHALL BE HOT-DIPPED GALVANIZED PER ASTM A153, CLASS D AND SDS SCREWS SHALL BE STAINLESS STEEL OR HAVE DOUBLE BARRIER COATING.
 - ANCHOR BOLTS SHALL BE LOCATED A MINIMUM OF 1 3/4" FROM EDGE OF THE CONCRETE PERPENDICULAR TO THE LENGTH OF THE WOOD SILL PLATE.
 - ANCHOR BOLTS SHALL BE LOCATED A MINIMUM OF 9 1/2" FROM EDGE OF THE CONCRETE PARALLEL TO THE LENGTH OF THE WOOD SILL PLATE. WHERE SHEAR TRANSFER IS PROVIDED DIRECTLY BY SHEAR SHEATHING, THE TOP PLATE CONNECTION CLIP MAY BE OMITTED. AT 2 SIDED WALLS, TOP PLATE SHEAR TRANSFER MAY BE PROVIDED BY A COMBINATION OF SHEAR TRANSFER THROUGH SHEAR SHEATHING ON ONE SIDE AND TOP PLATE CONNECTION HARDWARE ON THE OTHER SIDE.
 - FOR CONNECTIONS AT EXTERIOR NON-SHEAR WALLS USE SHEAR WALL MARK **A**.
 - NUMBER OF ANCHOR BOLTS SPECIFIED ON PLAN, WHERE OCCURS, GOVERN OVER SPACING PROVIDED IN TABLE.

3 WOOD SHEAR WALL SCHEDULE
3/4" = 1'-0"



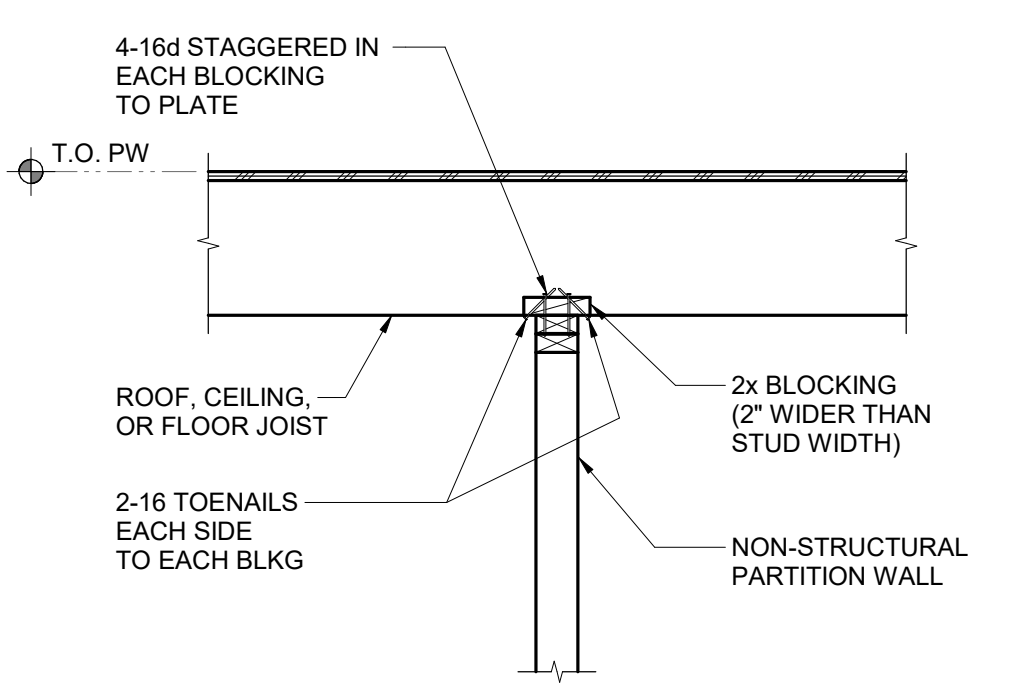
*USE 3x CRIPPLE WHERE SPAN EXCEEDS 6'-0"

SPAN	HEADER SCHEDULE			REMARKS
	3'-0" MAX	4'-0" MAX	6'-0" MAX	
2x4 STUDS	2-2x4 OR 4x4	2-2x4 OR 4x6	4x8	SEE SPECIFIC DETAILS ON DRAWINGS
2x6 STUDS	3-2x6 OR 4x6 FLAT	3-2x6 OR 6x6	3-2x8 OR 6x8	

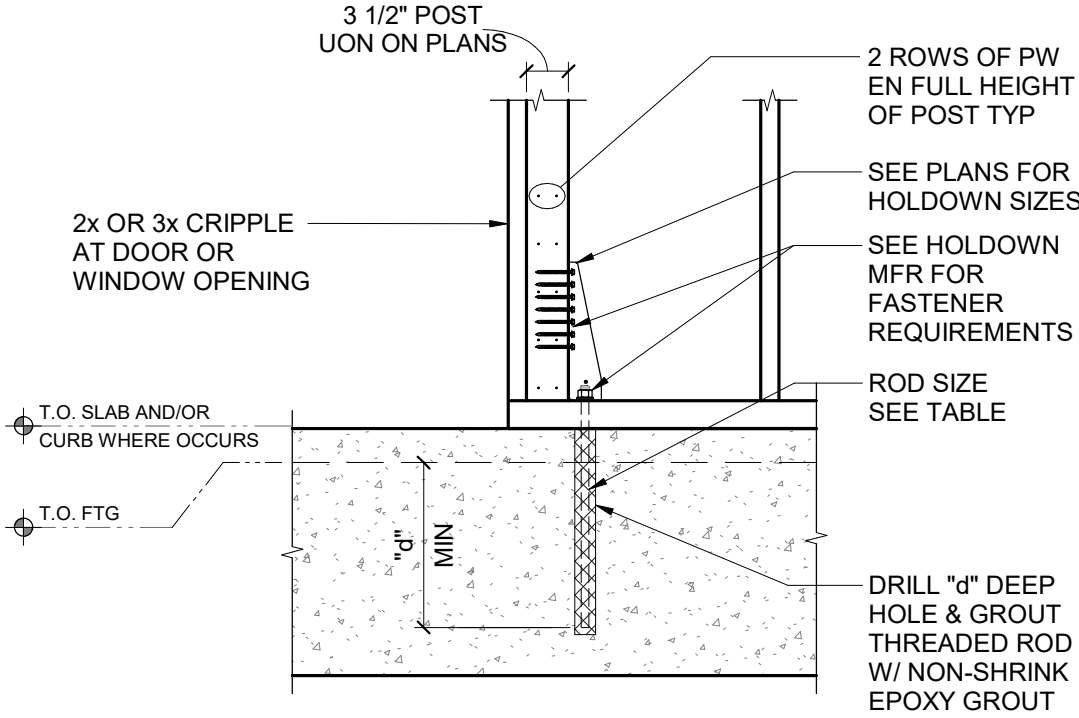
SPAN	HEADER SCHEDULE INTERIOR NON-BEARING WALLS**			REMARKS
	3'-0" MAX	4'-0" MAX	6'-0" MAX	
2x4 STUDS	2x4 FLAT	2-2x4 FLAT	4x6	SEE SPECIFIC DETAILS ON DRAWINGS
2x6 STUDS	2x6 FLAT	2-2x6 FLAT	4x6 FLAT	

- ** NOTE:
- IF MORE THAN 5'-0" OF SOLID WALL OCCURS OVER OPENING, USE BEARING WALL SCHEDULE.
 - OMIT CRIPPLE STUDS AT INTERIOR NON BEARING WALL.

1 TYPICAL FRAMING AT WINDOW / DOOR OPENING
3/4" = 1'-0"



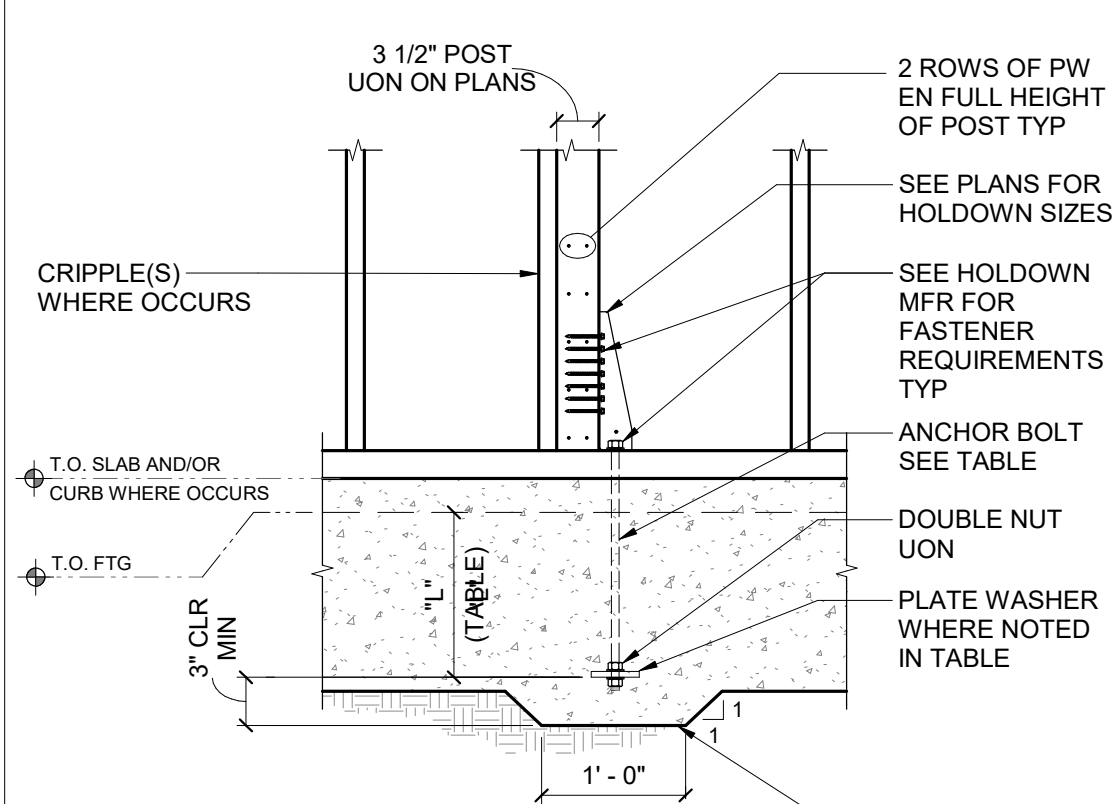
5 PARTITION WALL PERPENDICULAR TO JOIST FRAMING
3/4" = 1'-0"



HOLDOWN SIZE	ROD SIZE	"d"	TENSION TEST LOAD
HDU2	5/8" @	9"	6,509#
HDU4	5/8" @	9"	6,509#
HDU5	5/8" @	12 1/2"	6,509#
HDU8	7/8" @	17 1/2"	13,306#
HDU11	1" @	20"	17,453#
HDU14	1" @	20"	17,453#

- NOTES:**
- ANCHOR BOLT SHALL BE IN ACCORDANCE WITH ASTM F1554 GRADE 36, A36 OR A307.
 - PW SHEATHING NOT SHOWN FOR CLARITY OF DETAIL.

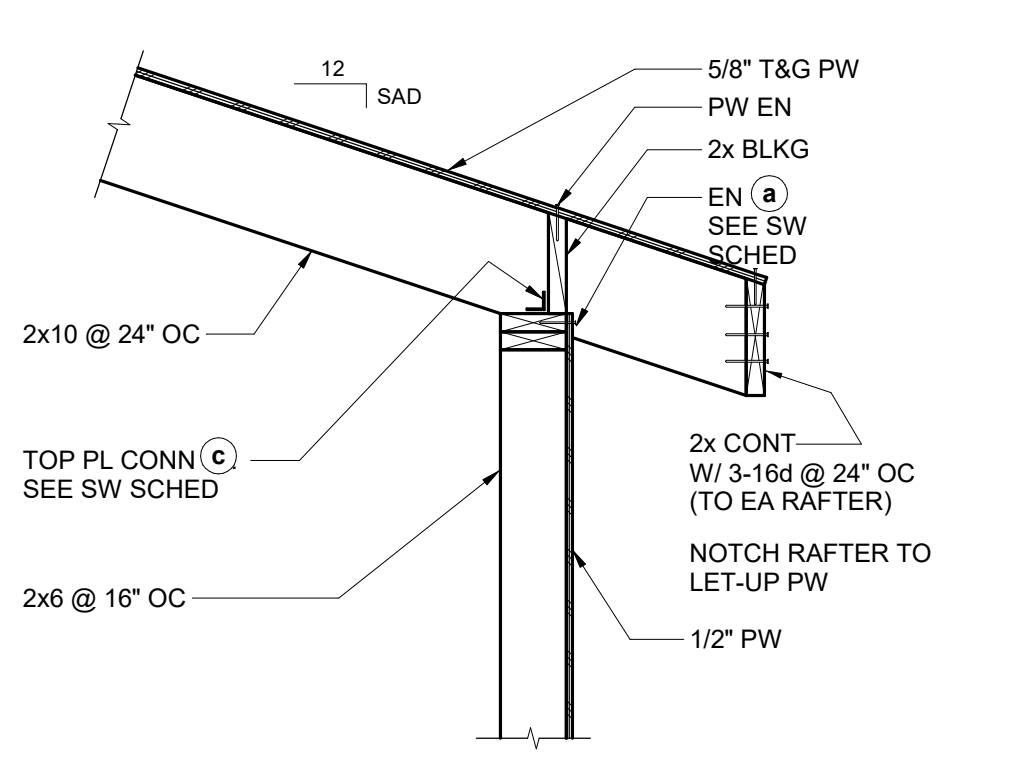
4 HOLDOWN DETAIL TO (E) FTG OR CONCRETE WALL
3/4" = 1'-0"



HOLDOWN SIZE	"L" MIN	ANCHOR BOLT
HDU2 HDU4 HDU5	10 1/2"	PAB5 OR 5/8" @ AB W/ 1 1/2"x1 1/2"x3/8" PLATE WASHER
HDU8	16 1/2"	PAB7 OR 7/8" @ AB W/ 2 1/4"x2 1/4"x3/8" PLATE WASHER
HDU11 HDU14	18"	PAB8 OR 1" @ AB W/ 2 1/2"x2 1/2"x3/8" PLATE WASHER
HD19	21"	PAB9 OR 1" @ AB W/ 2 3/4"x2 3/4"x3/8" PLATE WASHER

- NOTES:**
- ANCHOR BOLT SHALL BE IN ACCORDANCE WITH ASTM F1554 GRADE 36, A36 OR A307.
 - PW SHEATHING NOT SHOWN FOR CLARITY OF DETAIL.

2 TYPICAL HOLDOWN DETAIL
3/4" = 1'-0"



6 SECTION AT EAVE
3/4" = 1'-0"

PROJECT TITLE

City of Berkeley
WEST BERKELEY SERVICE CENTER

1900 Sixth St
Berkeley, CA 94710

BID SET

ISSUE DATE 12.22.2023
IDA JOB NUMBER 23022

REVISIONS

DRAWN BY Author CHECKED BY Checker

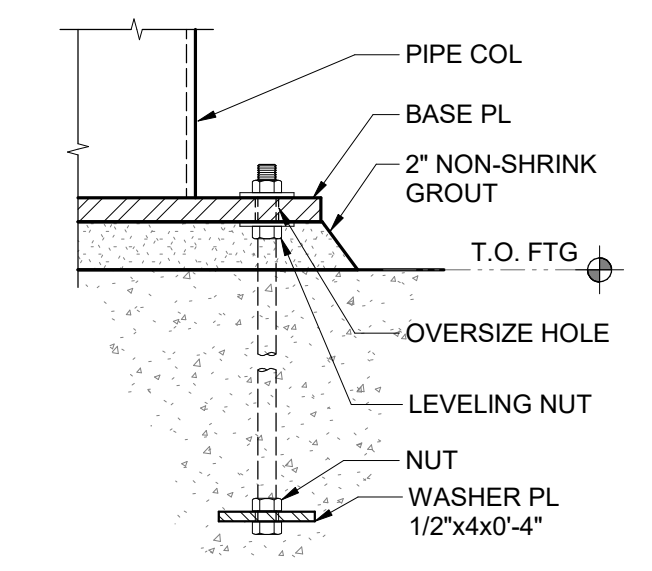
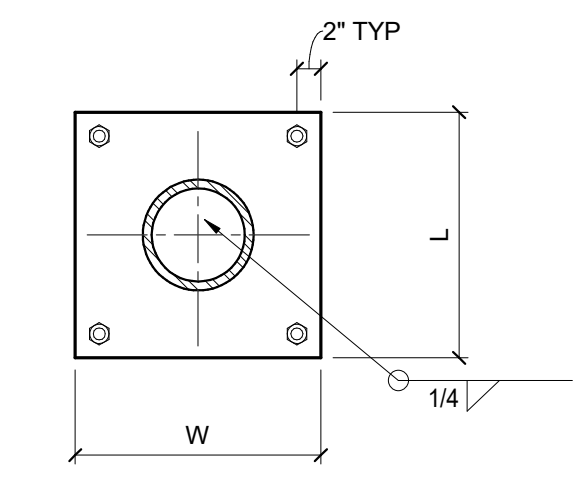
SHEET TITLE

TYPICAL WOOD DETAILS

SHEET NUMBER

S5.01

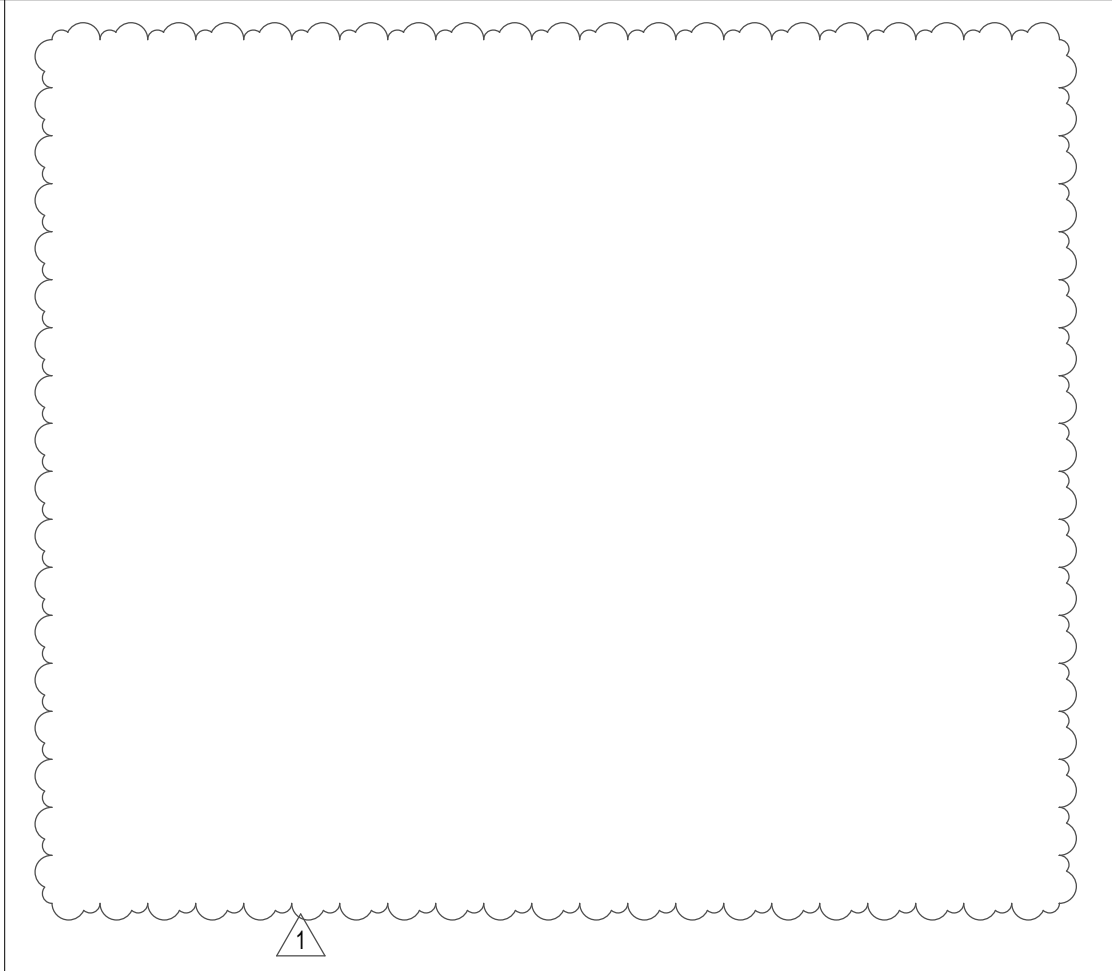
COLUMN BASE PLATE & ANCHOR BOLT SCHEDULE					
TYPE	BASE PLATE SIZE			ANCHOR BOLT	REMARKS
	THICKNESS	WIDTH (W)	LENGTH (L)		
PIPE 3" STD	1/2"	10"	10"	1/2"ø x 9" LONG	



PIPE COL BASE PLATE & ANCHOR BOLT DETAIL

1
S6.01

3/4" = 1'-0"



APPROVALS

PROJECT TITLE

City of Berkeley
 WEST
 BERKELEY
 SERVICE
 CENTER

1900 Sixth St
 Berkeley, CA 94710

BID SET

ISSUE DATE 12.22.2023

IDA JOB NUMBER 23022

REVISIONS
 △ |

DRAWN BY Author CHECKED BY Checker
 SHEET TITLE

TYPICAL STEEL
 DETAILS

SHEET NUMBER

S6.01

PLUMBING LEGEND

SYMBOLS	ABBR	SERVICE
		EQUIPMENT IDENTIFICATION
		DETAIL OR SECTION SHEET NUMBER
		NORTH ARROW (REFERENCE)
		POINT OF CONNECTION (POC) OR EXTENT OF WORK
		POINT OF DEMOLITION
		KEYED NOTE
		FIRE SPRINKLER HEAD
	FP	FLEXIBLE CONNECTION
		(E) PIPE TO BE REMAIN
		(E) PIPE TO BE REMOVED
	(N)	NEW
	(E)	EXISTING
	API/AD	ACCESS PANEL/ACCESS DOOR
	UP	ALL SERVICES
	DN	ALL SERVICES
	VR-VTR	VENT RISE - VENT THRU ROOF
		DIRECTION OF FLOW
	SW	SANITARY OR WASTE
	SD	STORM DRAIN
	FS	FIRE SPRINKLER
	CW	COLD WATER
	HW	HOT WATER
	HWR	HOT WATER RETURN
	V	VENT
	G	GAS
	CD	CONDENSATE DRAIN
	FCO	FLOOR CLEANOUT
		3-WAY CONTROL VALVE
		2-WAY CONTROL VALVE
	BC	BALANCING COCK
		BALANCING VALVE
		BALL VALVE
	BV	BUTTERFLY VALVE
	PRV	PRESSURE REDUCING VALVE
	TCV	TEMPERATURE CONTROL VALVE
	GV	GATE VALVE
	GLV	GLOBE VALVE
	CKV	CHECK VALVE
		STRAINER
	AVA	AIR VENT VALVE-AUTOMATIC
	AVM	AIR VENT VALVE-MANUAL
	PGA	PRESSURE GAUGE
	U	UNION CONNECTION
	PP	PETE'S PLUG
	TP	FLOOR DRAIN TRAP PRIMER
	TH	THERMOMETER
	T	THERMOSTAT
		TEMPERATURE GAUGE
		TEMPERATURE SENSOR
		FLOW SWITCH/SENSOR
		PRESSURE SENSOR/TRANSMITTER
		MAGNETIC STARTER
	DI	DIGITAL INPUT
	DO	DIGITAL OUTPUT
	AI	ANALOG INPUT
	AO	ANALOG OUTPUT
		ELECTRICAL CONTROL WIRING
		PNEUMATIC CONTROL

ABBREVIATIONS

ACU	AIR CONDITIONING UNIT
AFF	ABOVE FINISH FLOOR
AHU	AIR HANDLING UNIT
AP	ACCESS PANEL
BHP	BRAKE HORSEPOWER/BOILER HORSEPOWER
BOP	BOTTOM OF PIPE
CFE	CAP FOR FUTURE
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CLG	CEILING
CTE	CONNECT TO EXISTING
DN	DOWN
(D)	DISPOSE
(E)	EXISTING
EF	EXHAUST FAN
ESP	EXTERNAL STATIC PRESSURE
F	FIRE SPRINKLER
FC	FLEXIBLE CONNECTION
FPM	FEET PER MINUTE
FSD	FIRE SMOKE DETECTOR
HTR	HEATER
HW	HOT WATER
180KHW	180 KITCHEN HOT WATER
HWR	RECIRCULATING HOT WATER
MFR	MANUFACTURER
(N)	NEW
NC	NORMALLY CLOSED
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NO	NORMALLY OPEN
PG	PRESSURE GAUGE
PLBG	PLUMBING
POC	POINT OF CONNECTION
PSI	POUND PER SQUARE INCH
PSIG	POUND PER SQUARE INCH GAUGE
(R)	RELOCATED
RF	RETURN FAN
(R)	RELOCATE
RIO	ROUGH IN ONLY
RPM	REVOLUTION PER MINUTE
(S)	SALVAGE TO BE RE-INSTALLED
SF	SUPPLY FAN
SS	STAINLESS STEEL
STD	STANDARD
STL	STEEL
TH	THERMOMETER
TSP	TOTAL STATIC PRESSURE
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VTR	VENT THRU ROOF
WPD	WATER PRESSURE DROP
WP	WEATHER OR WATER PROOF
WT	WEIGHT

GENERAL NOTES

- ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST APPLICABLE LOCAL AND STATE CODES AND REGULATIONS:
 - CALIFORNIA BUILDING CODE 2022
 - CALIFORNIA MECHANICAL CODE 2022
 - CALIFORNIA PLUMBING CODE 2022
 - CALIFORNIA FIRE CODE 2022
 - CALIFORNIA ELECTRICAL CODE 2022
- ALL PIPING SHOWN ON PLANS ARE DIAGRAMMATIC AND SHALL NOT BE SCALED TO DETERMINE EXACT LOCATION. CERTAIN VERTICAL AND HORIZONTAL DIMENSIONS ARE SHOWN IN DUCTS AND PIPES TO INDICATE THEIR GENERAL POSITION IN RELATIONSHIP TO THE SYSTEMS WITHIN THE SPACE AVAILABLE FOR SYSTEM INSTALLATION. PROVIDE ADDITIONAL PIPING OFFSETS AS REQUIRED, AND TO COORDINATE WITH INSTALLATION REQUIREMENTS OF OTHER SYSTEMS AT NO ADDITIONAL COST TO THE OWNER. ALL DIMENSIONS ARE IN INCHES OR OTHERWISE NOTED.
- WHERE EXISTING CONSTRUCTION IS CUT, DAMAGED, OR REMODELED, PATCH WITH MATERIALS TO MATCH IN KIND, QUALITY, AND PERFORMANCE.
- CONTRACTOR SHALL ASSUME SOLE RESPONSIBILITY FOR SAFETY OF ALL PERSONS IN OR ABOUT THE CONSTRUCTION SITE, IN ACCORDANCE WITH APPLICABLE LAWS AND CODES. GUARD ALL HAZARDS IN ACCORDANCE WITH THE SAFETY PROVISIONS OF THE LATEST MANUAL OF ACCIDENT PREVENTION PUBLISHED BY THE ASSOCIATED GENERAL CONTRACTORS OF AMERICA AND CAL-OSHA.
- REFER TO SMACNA SEISMIC GUIDELINES AND STANDARDS FOR PIPE SUPPORT AND EQUIPMENT SEISMIC BRACINGS.
- COORDINATE WORK WITH THE OWNER AND ALL OTHER TRADES.
- SEAL AIR TIGHT ALL PIPE PENETRATIONS THROUGH WALL. SEALANT SHALL BE 3M BRAND PRODUCTS OR APPROVED EQUAL. BRACE ALL PIPES AND EQUIPMENT TO WITHSTAND FORCES AS REQUIRED BY THE STATE AND LOCAL CODES.
- PROTECT THE PUBLIC FROM INJURY DURING PROGRESS OF WORK BY POSTING WARNING SIGNS, GUARD LIGHTS AND BARRICADES.
- THE CONTRACTOR SHALL PROVIDE DUST BARRIER PLASTIC COVERS, SCREEN AND TENTING AT ALL TIMES TO CONTAIN DUST AND DEBRIS WITHIN THE DESIGNATED WORK AREA. LOCATING AND INSTALLATION OF DUST PROTECTION COVERS AND TENTING TO BE APPROVED BY THE OWNER PRIOR TO INSTALLING. CONTRACTOR SHALL CLEAN WORK AREA AND REMOVE DEBRIS AT THE END OF EACH WORKING DAY. DISPOSAL OF DEBRIS AND EXCESS MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. COVER TO PROTECT ALL DUCTWORK OPENINGS, DIFFUSERS AND REGISTERS, RETURN AIR INLETS ABOVE THE CEILING WITHIN THE CONSTRUCTION AREA FROM DUST AND OTHER AIR CONTAMINANTS. IF THE HVAC SYSTEM IS USED DURING CONSTRUCTION, USE RETURN AIR FILTERS WITH A MERV OF 8. REPLACE ALL FILTERS IMMEDIATELY PRIOR TO OCCUPANCY AS APPLICABLE."
- THE EXISTING MECHANICAL AND ELECTRICAL SYSTEMS SHALL BE MAINTAINED IN OPERATION DURING THE DEMOLITION AND INSTALLATION OF NEW WORK. WHEN A SYSTEM SHUTDOWN IS NECESSARY, OBTAIN A WRITTEN APPROVAL FROM THE OWNER MINIMUM 10 WORKING DAYS PRIOR TO SHUTTING DOWN OF ANY MECHANICAL ELECTRICAL SYSTEMS. IF THE HVAC SYSTEM IS USED DURING CONSTRUCTION, USE RETURN AIR FILTERS WITH A MERV OF 8. REPLACE ALL FILTERS IMMEDIATELY PRIOR TO OCCUPANCY AS APPLICABLE
- VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS. VERIFY DIMENSIONS OF OWNER FURNISHED EQUIPMENT TO ENSURE PROPER COORDINATION WITH CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOUND. NO ALLOWANCE SHALL BE MADE FOR ANY EXPENSE TO WHICH THE CONTRACTOR MAY INCUR DUE TO FAILURE OR NEGLIGENCE ON HIS PART TO MAKE SUCH VERIFICATION.
- ANY ERRORS, OMISSIONS OR CONFLICTS FOUND IN THE VARIOUS PARTS OF THE CONSTRUCTION DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OR ENGINEER AND OWNER BEFORE PROCEEDING WITH THE WORK.
- CUTTING OR PENETRATIONS THROUGH EXISTING CONCRETE WALL, FLOOR OR ROOF SHALL BE VERIFIED FOR STRUCTURAL REINFORCEMENTS. X-RAY ARE REQUIRED TO LOCATE EXISTING REINFORCING BARS PRIOR TO CONCRETE CORE DRILLING OR CUTTING. OBTAIN STRUCTURAL ENGINEER'S WRITTEN APPROVAL PRIOR TO CORE DRILLING AND CUTTING. DRILLING INTO REINFORCING BAR IS PROHIBITED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTION OF WORK AT HIS OWN EXPENSE FOR WORK INSTALLED IN CONFLICT WITH CONSTRUCTION DOCUMENTS.
- CONTRACTOR SHALL LEAVE PREMISES AND ALL AFFECTED AREAS CLEAN AND IN ORDERLY MANNER READY FOR MOVE-IN OR FACILITY OPERATION.
- PROVIDE ADEQUATE CLEARANCE AND ACCESS TO EQUIPMENT FOR SERVICE AND MAINTENANCE. EQUIPMENT CLEARANCES SHALL MEET THE REQUIREMENT OF THE MANUFACTURER AND APPLICABLE BUILDING CODES.
- EXPLORATORY WORK TO SEARCH FOR PIPING, PLUMBING OR DUCT FOR CONNECTIONS TO EXISTING BUILDING SYSTEM INCLUDING POINT OF CONNECTIONS UNDER FLOOR SLAB, IN WALLS AND CEILING SHALL BE INCLUDED AT NO COST TO THE OWNER. CUTTING, PATCHING AND RESTORATION OF FLOORS, WALLS, CEILING AND FINISH SHALL BE INCLUDED IN THIS WORK AT NO COST TO THE OWNER. RESTORATION OF WALL OR FLOOR FINISH SHALL MATCH EXISTING.
- ALL PLUMBING PIPING MATERIAL, PLUMBING FIXTURE, VALVE, FITTINGS AND ACCESSORIES SHALL BE 'LEAD-FREE' IN ACCORDANCE WITH CALIFORNIA REGULATION AB1953. PROVIDE SUBMITTAL FROM MANUFACTURER'S FOR COMPLIANCE.
- THE EXISTING MECHANICAL AND ELECTRICAL SYSTEMS SHALL BE MAINTAINED IN OPERATION DURING THE DEMOLITION AND INSTALLATION OF NEW WORK. WHEN A SYSTEM SHUTDOWN IS NECESSARY, OBTAIN A WRITTEN APPROVAL FROM THE OWNER PRIOR TO SHUTTING DOWN OF ANY MECHANICAL AND ELECTRICAL SYSTEMS.
- CLEANOUTS FOR SANITARY SEWER BRANCH SERVING WATER CLOSET SHALL BE INSTALLED ABOVE THE RIM OF BOWL.
- ALL PIPE PENETRATIONS THROUGH FIRE RATED WALLS AND FLOORS SHALL PROVIDED WITH APPROVED 3M FIRE STOPPING. REFER FOR ARCHITECTURAL DRAWINGS FOR DETAILS.
- CONTRACTOR TO REVIEW SCOPE OF ALTERATION TO THE PLUMBING SYSTEM WITH UCB CAMPUS FIELD INSPECTOR PRIOR TO INSTALLATION FOR DIRECTION ON SIZING, ROUGH-IN AND TESTING REQUIREMENTS.

SCOPE OF WORK

GENERAL: THIS SCOPE OF WORK IS AN OUTLINE OF WORK INVOLVE FOR THIS PROJECT AND IS NOT INTENDED TO DESCRIBE THE COMPLETE SCOPE OF WORK. THE DETAILED REQUIREMENTS ARE INDICATED ON EACH DRAWING AND SPECIFICATION SECTION.

- REMOVE AND DISPOSE EXISTING PLUMBING FIXTURES AS INDICATED.
- PROVIDE NEW PLUMBING FIXTURES AS INDICATED. MODIFY AND EXTEND EXISTING PLUMBING UTILITIES AS REQUIRED.
- PROVIDE NEW JANITOR SINK AS INDICATED. MODIFY AND EXTEND EXISTING PLUMBING UTILITIES AS REQUIRED.
- REMOVE AND DISPOSE EXISTING GAS WATER HEATER LOCATED ON THE ROOF OVER THE RESTING AREA INCLUDING ALL ASSOCIATED STORAGE TANK, ALL PLUMBING, EQUIPMENT PAD SUPPORT AND ANCHORS. REPAIR AND PATCH ROOF TO MATCH EXISTING ROOFING SYSTEM AND MATERIAL.
- PROVIDE NEW HYBRID HEAT PUMP WATER HEATER. MODIFY PLUMBING UTILITIES AS REQUIRED. TEST AND COMMISSION THE OPERATION OF THE WATER HEATER. SUBMIT A WRITTEN REPORT. PROVIDE DATA FOR HOT WATER TEMPERATURE FROM THE WATER HEATER, AMBIENT TEMPERATURE, WATER INLET AND OUTLET PRESSURE, WATER FLOW THROUGH THE WATER HEATER IN GPM, OUTLET WATER TEMPERATURE ON HEAT MODE, ELECTRIC HEATER MODE AND COMBINED MODES, AMPERE DRAW FROM THE WATER HEATER AT THE COMBINED MODE OF OPERATION. PROVIDE TRAINING FOR THE OPERATION OF THE WATER HEATER.
- PROVIDE NEW EMERGENCY EARTHQUAKE SHUT OFF VALVE ON GAS MAIN ADJACENT TO THE EXISTING GAS METER. MODIFY EXISTING GAS PIPING AS NECESSARY. OBTAIN INSPECTION AND ACCEPTANCE FROM THE CITY OF BERKELEY.
- PROVIDE NEW RAIN WATER DRAIN FOR THE NEW ROOF OVER THE NEW WATER HEATERS. TERMINATE THE DRAIN PIPING THROUGH EXISTING WALL WITH DOWNSPOUT NOZZLE. PROVIDE PIPE SUPPORTS.
- PRESSURE TEST ALL PLUMBING PER CPC 2022.
- FLUSH AND DISINFECT ALL WATER PIPING AND EQUIPMENT PER CPC 2022 AND AS SPECIFIED.

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APPROVALS

PROJECT TITLE

**City of Berkeley
WEST
BERKELEY
SENIOR CENTER**

1900 Sixth St
Berkeley, CA 94710

BID SET

ISSUE DATE **12.22.2023**

N&T JOB NUMBER **22121**

REVISIONS	DATE	DESCRIPTION

DRAWING INDEX

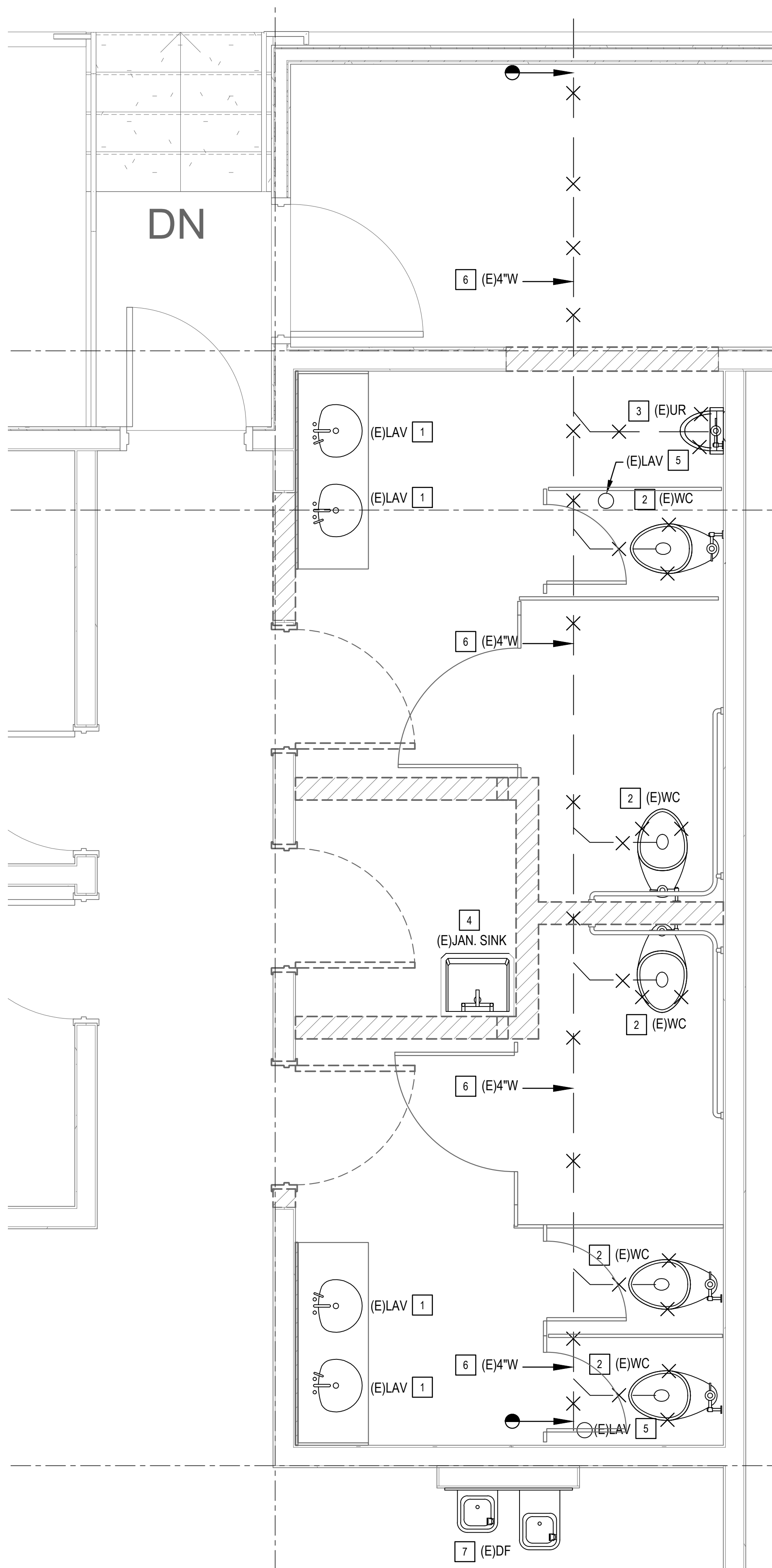
- P1.00 PLUMBING LEGEND, SYMBOLS, ABBREVIATIONS, GENERAL NOTES & SCOPE OF WORK
- P2.00 PLUMBING DEMOLITION PLAN
- P2.10 PLUMBING CONSTRUCTION PLANS
- P3.01 PLUMBING DETAILS
- P3.02 PLUMBING FIXTURE SCHEDULE AND SPECIFICATIONS

DRAWN BY **EPCE** | CHECKED BY **EP**
SHEET TITLE

**PLUMBING LEGEND
SYMBOLS, ABBV.
GENERAL NOTES
& SCOPE OF WORK**

SHEET NUMBER

P1.00



1 PLUMBING DEMOLITION PLAN
 P2.00 scale: 1/2" = 1'-0"

DEMOLITION KEYED NOTES

- 1 REMOVE AND DISPOSE EXISTING (E) LAVATORY AND ASSOCIATED SUPPORTS, ANCHORS. MODIFY PLUMBING FOR SANITARY WASTE & VENT, HOT AND COLD WATER FOR THE NEW LAVATORY. REFER TO P2.10 FOR ALL REQUIRED NEW PLUMBING WORK.
- 2 REMOVE AND DISPOSE EXISTING (E) WATER CLOSET AND ASSOCIATED SUPPORTS, ANCHORS. MODIFY EXISTING PLUMBING FOR SANITARY WASTE & VENT AND COLD WATER SUPPLY FOR THE NEW WATER CLOSET. REFER TO P2.10 FOR ALL REQUIRED NEW PLUMBING WORK.
- 3 REMOVE AND DISPOSE EXISTING (E) URINAL AND ASSOCIATED SUPPORTS, ANCHORS. MODIFY EXISTING PLUMBING FOR SANITARY WASTE & VENT AND COLD WATER SUPPLY FOR THE NEW WATER CLOSET.
- 4 REMOVE AND DISPOSE EXISTING (E) JANITOR SINK AND ASSOCIATED SUPPORTS, ANCHORS. MODIFY EXISTING PLUMBING FOR SANITARY WASTE & VENT AND COLD WATER SUPPLY FOR THE NEW WATER CLOSET. REFER TO P2.10 FOR ALL REQUIRED NEW PLUMBING WORK.
- 5 REMOVE AND DISPOSE EXISTING (E) FLOOR DRAIN. MODIFY PLUMBING FOR SANITARY WASTE & VENT FOR THE NEW FLOOR DRAIN. REFER TO P2.10 FOR ALL REQUIRED NEW PLUMBING WORK.
- 6 REMOVE AND DISPOSE EXISTING SEWER PIPING. CUT CONCRETE FLOOR AND TRENCH FOR REMOVAL OF EXISTING SEWER PIPING. REFER TO P2.10 FOR ALL REQUIRED NEW PLUMBING WORK.
- 7 EXISTING DRINKING FOUNTAIN TO REMAIN.

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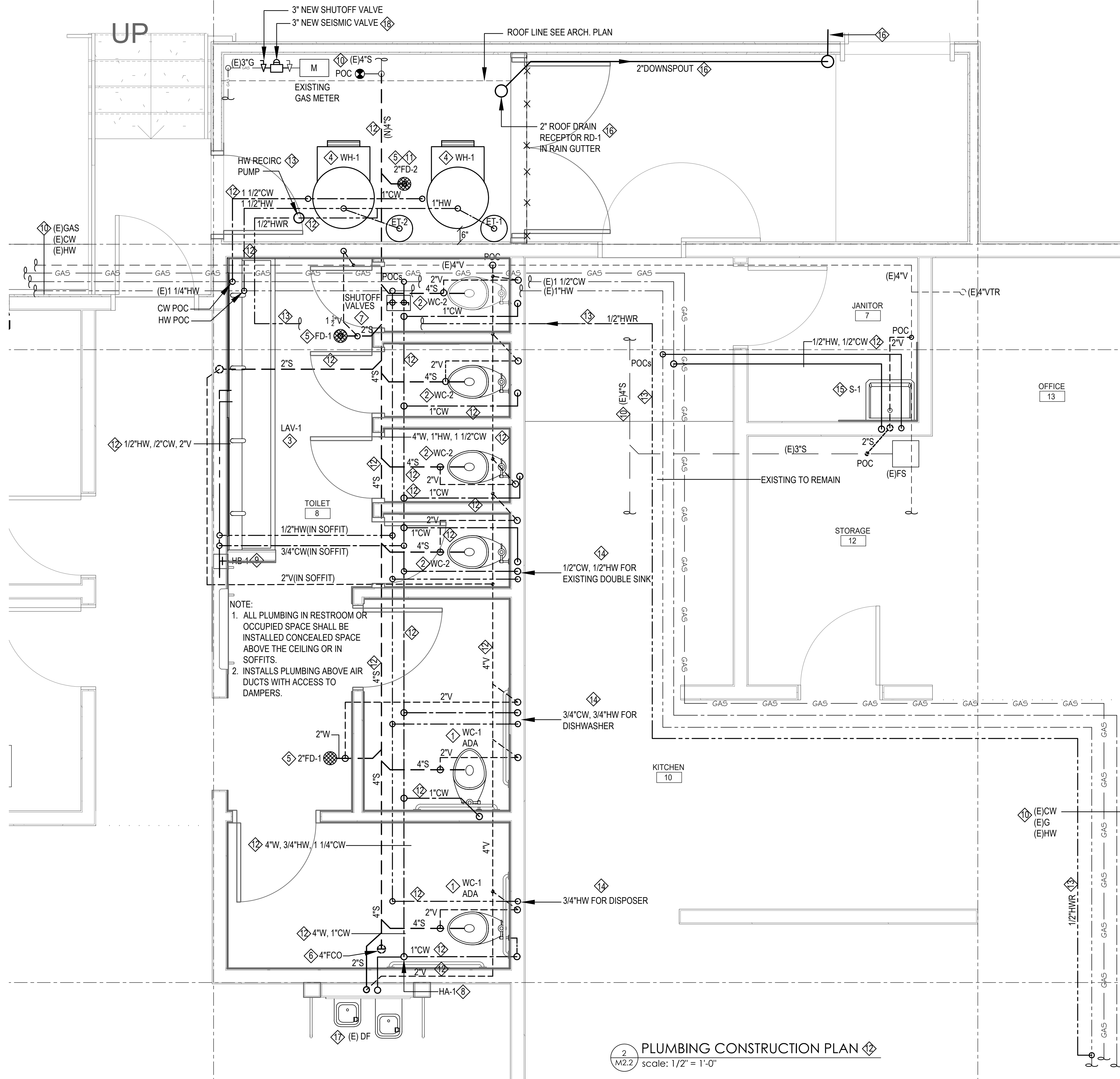
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PLUMBING DEMOLITION PLAN

SHEET NUMBER

P2.00



2 PLUMBING CONSTRUCTION PLAN
 M2.2 scale: 1/2" = 1'-0"

PLUMBING NEW CONSTRUCTION KEYED NOTES:

- 1 PROVIDE NEW FLOOR MOUNTED WATER CLOSET (ADA). PROVIDE NEW PLUMBING AS REQUIRED FOR COLD WATER, SANITARY WASTE DRAIN AND VENTS. VERIFY EXISTING PIPING CONNECTION CONDITION, LOCATION AND SIZES. PROVIDE NEW FIXTURE SUPPORT CARRIER AND ANCHORS. SEE DRAWING P3.02 FOR SCHEDULED REQUIREMENTS AND PIPING CONNECTIONS. REFER TO ARCHITECTURAL DRAWING FOR ADA ACCESSIBILITY EXACT LOCATION AND MOUNTING HEIGHT. ADJUST PIPING AND SUPPORT ACCORDINGLY.
- 2 PROVIDE NEW FLOOR MOUNTED WATER CLOSET. PROVIDE NEW PLUMBING AS REQUIRED FOR COLD WATER, SANITARY WASTE DRAIN AND VENTS. VERIFY EXISTING PIPING CONNECTION CONDITION, LOCATION AND SIZES. PROVIDE NEW FIXTURE SUPPORT CARRIER AND ANCHORS. SEE DRAWING P3.1 FOR SCHEDULED REQUIREMENTS AND PIPING CONNECTIONS. REFER TO ARCHITECTURAL DRAWING FOR EXACT LOCATION AND MOUNTING HEIGHT. ADJUST PIPING AND SUPPORT ACCORDINGLY.
- 3 PROVIDE NEW WALL MOUNTED LAVATORY (ADA). PROVIDE NEW PLUMBING AS REQUIRED FOR COLD WATER, SANITARY WASTE DRAIN AND VENTS. VERIFY EXISTING PIPING CONNECTION CONDITION, LOCATION AND SIZES. PROVIDE NEW FIXTURE SUPPORT CARRIER AND ANCHORS. SEE DRAWING P3.02 FOR SCHEDULED REQUIREMENTS AND PIPING CONNECTIONS. REFER TO ARCHITECTURAL DRAWING FOR ADA ACCESSIBILITY EXACT LOCATION AND MOUNTING HEIGHT. ADJUST PIPING AND SUPPORT ACCORDINGLY.
- 4 PROVIDE NEW HYBRID WATER HEATER AND ASSOCIATED PLUMBING FOR HOT WATER AND COLD WATER, DRAIN, ISOLATION VALVES, EXPANSION TANK, PRESSURE RELIEF DRAIN, SEISMIC BRACE, SUPPORTS AND ANCHORS. REFER TO DETAIL 3/P3.01 FOR DETAILED REQUIREMENTS.
- 5 PROVIDE NEW FLOOR DRAIN WITH SANITARY VENT AND TRAP PRIMER (TP-1). PROVIDE NEW PLUMBING AS REQUIRED SANITARY WASTE DRAIN AND VENTS. VERIFY EXISTING PIPING CONNECTION CONDITION, LOCATION AND SIZES. PROVIDE SEE DRAWING P3.02 FOR SCHEDULED REQUIREMENTS AND PIPING CONNECTIONS. REFER TO ARCHITECTURAL DRAWING FOR EXACT LOCATION AND FLOOR CUTTING AND PATCHING. ADJUST PIPING AND SUPPORT ACCORDINGLY.
- 6 PROVIDE NEW WALL & FLOOR CLEANOUTS WITH ACCESS PANEL. SEE DRAWING P3.1 FOR SCHEDULED REQUIREMENTS.
- 7 PROVIDE NEW SHUTOFF VALVES FOR CW AND HW. PROVIDE NEW 18"x18" ACCESS PANEL. SHUTOFF VALVES.
- 8 HA-1: PROVIDE WATER HAMMER ARRESTORS. PROVIDE 18"x18" ACCESS PANEL. SEE ARCHITECTURAL DRAWINGS FOR DETAILS.
- 9 PROVIDE HOSE BIBB. PROVIDE 12"x12" STAINLESS STEEL HOUSING WITH FRONT ACCESS PANEL WITH VANDAL PROOF KEYED LOCK.
- 10 EXISTING HOT WATER, COLD WATER, SANITARY AND VENT PIPING TO REMAIN. REMOVE AND DISPOSE EXISTING GAS LINE FOR EXISTING GAS WATER HEATER ON THE ROOF. CAP AS INDICATED. OBTAIN WRITTEN APPROVAL FROM THE OWNER.
- 11 PROVIDE FUNNEL DRAIN FOR HYBRID WATER HEATER DRAIN.
- 12 PROVIDE NEW PLUMBING FOR SEWER, SANITARY VENTS, COLD WATER AND HOT WATER FOR THE TOILET FACILITY.
- 13 PROVIDE NEW PLUMBING FOR RECIRCULATING HOT WATER FROM THE REMOTEST PLUMBING FIXTURE IN THE KITCHEN AND BACK TO THE WATER HEATER.
- 14 CONNECT NEW PLUMBING FOR HOT AND COLD WATER FOR ALL EXISTING KITCHEN EQUIPMENT SERVED FROM THE RESTROOM. FIELD VERIFY.
- 15 PROVIDE NEW WALL MOUNTED JANITOR'S SINK. PROVIDE NEW PLUMBING AS REQUIRED FOR COLD WATER, SANITARY WASTE DRAIN AND VENTS. PROVIDE NEW FIXTURE SUPPORT AND ANCHORS. SEE DRAWING P3.02 FOR SCHEDULED REQUIREMENTS AND PIPING CONNECTIONS.
- 16 PROVIDE 2" ROOF DRAIN RECEPTOR IN ROOF GUTTER. ROUTE DRAIN PIPE AS HIGH POSSIBLE AND TERMINATE ON THE PAVEMENT THOUGH EXISTING EXTERIOR WALL 6" FROM THE PAVEMENT. PROVIDE STEEL PIPE SLEEVE THROUGH WALL. ROOF DRAIN SHALL BE ZURN
- 17 EXISTING DRINKING FOUNTAIN TO REMAIN. CONNECT NEW PLUMBING FOR COLD WATER, WASTE AND VENT FOR THE DRINKING FOUNTAIN. FIELD VERIFY.
- 18 PROVIDE NEW 3" SEISMIC VALVE. INSTALL AND TEST PER MANUFACTURER'S INSTRUCTION. OBTAIN APPROVAL FROM CITY INSPECTION. SEISMIC VALVE SHALL BE SEISMIC PACIFIC PRODUCT MODEL 315(60), HORIZONTAL FLOW. SEISMIC VALVE SHALL MEET CALIFORNIA STANDARDS FOR EARTHQUAKE ACTUATED AUTOMATIC GAS SHUT OFF SYSTEM STANDARD NO. 12-12-1, ANSI Z21.21, 2012 AND ASCE 25-06 STANDARDS.

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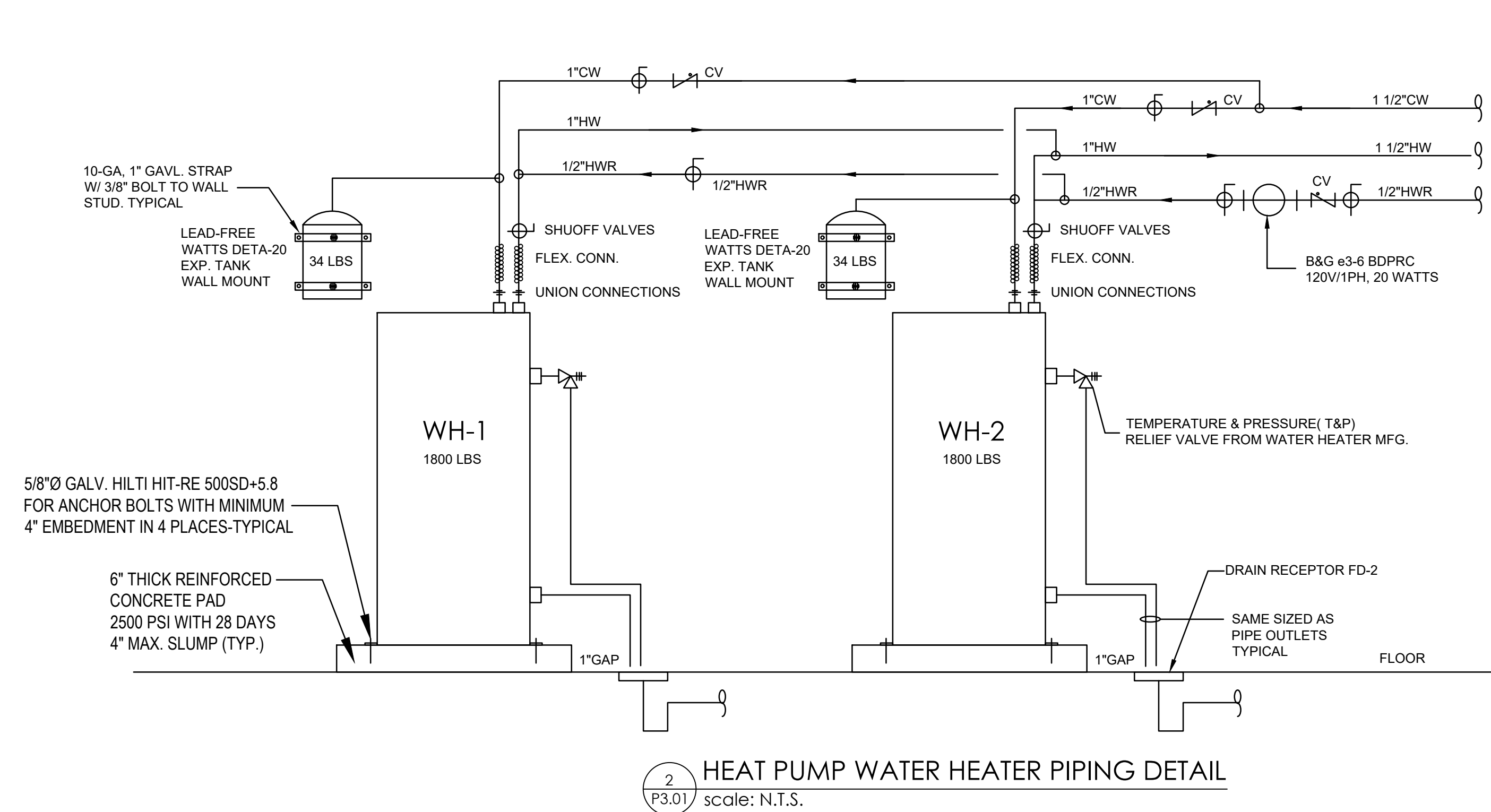
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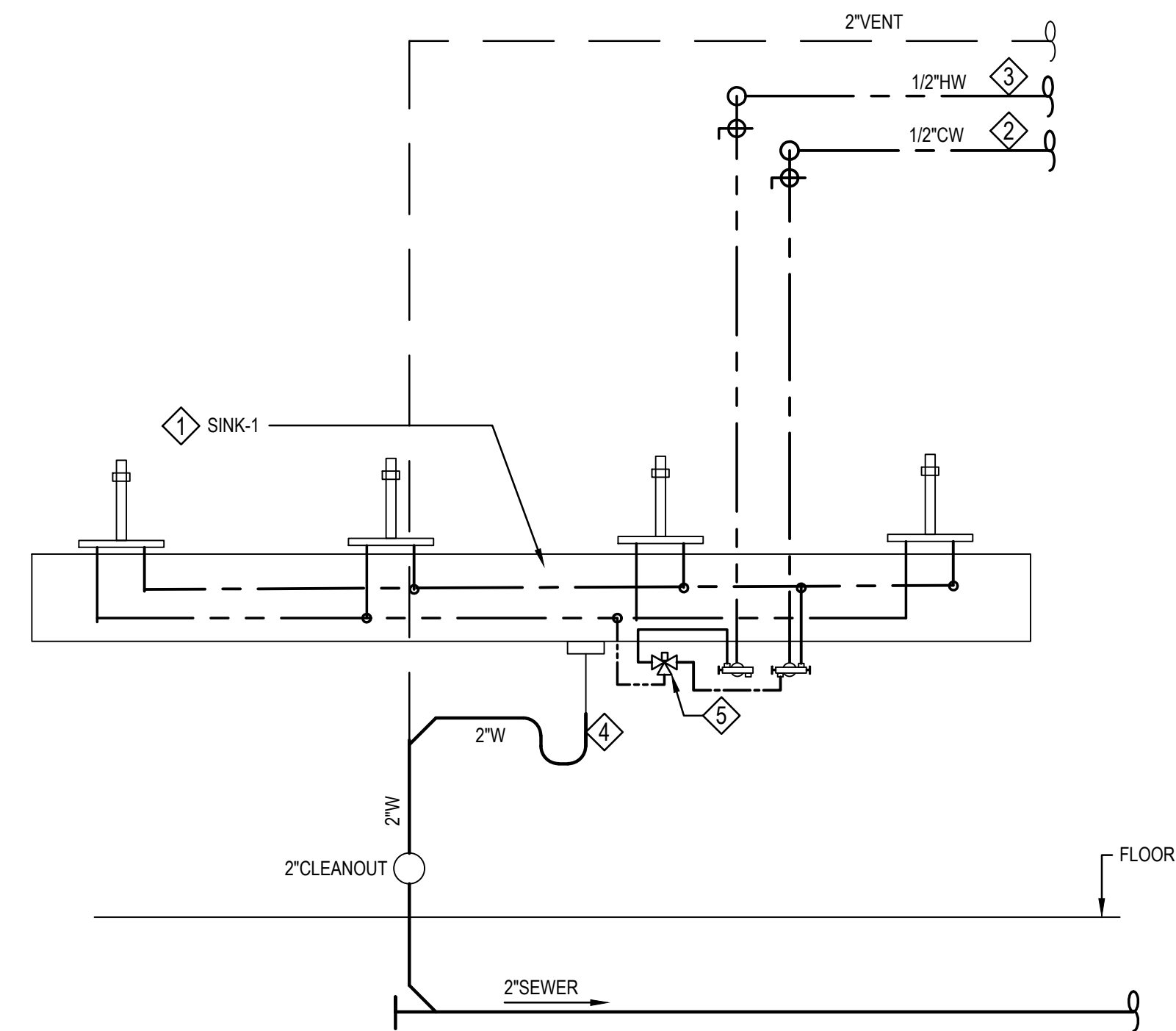
**PLUMBING
 CONSTRUCTION PLAN**

SHEET NUMBER

P2.10



2
P3.01 HEAT PUMP WATER HEATER PIPING DETAIL
scale: N.T.S.



1
M3.01 LAVATORY PLUMBING DETAIL
scale: NTS

- NOTES:
- 1 PROVIDE ADA LAVATORY. PROVIDE HOT AND COLD WATER, SANITARY WASTE DRAIN AND VENTS PLUMBING AS REQUIRED. REFER TO ARCHITECTURAL DRAWING FOR SPECIFICATIONS AND EXACT LOCATION. PLUMBING INSTALLATION SHALL MEET ADA CLEARANCE REQUIREMENTS UNDER THE SINK.
 - 2 1/2" COLD WATER SUPPLY. PROVIDE WATER SUPPLY TO THE NEW SINK. ARRANGE PIPING, INSULATION AND SUPPORTS TO MEET ADA CLEARANCE UNDER THE SINK.
 - 3 1/2" HOT WATER SUPPLY. PROVIDE WATER SUPPLY TO THE NEW SINK. ARRANGE PIPING, INSULATION AND SUPPORTS TO MEET ADA CLEARANCE UNDER THE SINK.
 - 4 PROVIDE INSULATION WITH PVC JACKET FOR SINK P-TRAP AND TAIL PIECE FOR ADA COMPLIANCE.
 - 5 PROVIDE 1/2" HOT WATER THERMOSTATIC CONTROL VALVE WATTS MODEL LFL 1170-M2 SET AT 115°F ADJUSTABLE TO 120°F., LEAD-FREE, BRASS BODY, STAINLESS STEEL SPRINGS, COPPER THERMOSTAT ASSEMBLY EPDM O RING WITH INTEGRAL CHECK VALVE, RATED FOR MAXIMUM PRESSURE OF 150 PSI AND MAXIMUM TEMPERATURE OF 200°F. CSA B125 CERTIFIED, LISTING: ASSE 1017 AND IAPMO UPC.

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PLUMBING DETAILS

SHEET NUMBER

P3.01

SPECIFICATIONS

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE CALIFORNIA PLUMBING CODE 2022.
2. HOT, COLD AND TEMPERED WATER: COPPER TUBE TYPE L, HARD DRAWN ASTM M-88 WITH WROUGHT COPPER FITTINGS WITH 95% TIN. 5% ANTIMONY SOLDER JOINTS. PIPING BELOW GRADE SHALL FACTORY POLYETHYLENE COATED COPPER TYPE K WITH BRAZED JOINTS AS MANUFACTURED BY 'AQUA-SHIELD' OR WITH 'PLUMBEST' 10 MIL PVC PIPE WRAP. TYPE OF COATING SHALL BE PER MANUFACTURER'S RECOMMENDATIONS OR EQUAL.
3. SHUTOFF VALVES: BALL VALVE 600 WOG, TWO-PIECE BRONZE BODY ASTM B-584 WITH TFE SEATS AND SEAL WITH BRONZE TRIM. BALL VALVE SHALL BE NIBCO OR EQUAL. PROVIDE ACCESS PANEL.
4. DIELECTRIC COUPLER: PROVIDE DIELECTRIC COUPLER BETWEEN DISSIMILAR PIPING MATERIAL. COUPLERS SHALL BE RED BRASS NIPPLE, WITH MINIMUM LENGTH OF 6 TIMES PIPE DIAMETER. COUPLER SHALL BE DIELECTRIC WATERWAY STYLE 4 OR EQUAL.
5. PIPE INSULATION: INSULATE BOTH HOT AND COLD WATER WITH 1" THICK FIBERGLASS FOR INDOOR INSTALLATION. PROVIDE 1" THICK FIBERGLASS INSULATION WITH ALUMINUM JACKET FOR OUTDOOR INSTALLATION. INSULATION SHALL BE OWENS CORNING SSLII WITH ASJ OR APPROVED EQUAL. PROVIDED CALCIUM SILICATE INSERTS AT SUPPORT POINTS. INSERTS SHALL BE CLEMENT INSULATED PIPE SUPPORT MODEL HW OR EQUAL.
6. SANITARY WASTE AND VENT PIPING:
 - A. EQUIPMENT WASTE ABOVE GROUND - COPPER DWV. ASTM B-306 WITH DRAINAGE WYE FITTINGS WITH 95% TIN. 5% ANTIMONY SOLDER JOINTS.
 - B. BELOW GRADE - CAST IRON, HEAVY WEIGHT, BELL AND SPIGOT ENDS WITH SEALITE NO.110 CAULKING, NEOPRENE GASKET OR MECHANICAL JOINTS. SUPPORT FROM FLOOR SLAB AT 5 FEET INTERVAL MAXIMUM.
 - C. RAIN WATER - GALVANIZED STEEL PIPE SCHEDULE 40, THREADED JOINTS.
7. PIPE SUPPORT: UNISTRUT, CLAMP AND ANCHORS. SUPPORT WATER PIPING AT 6 FEET ON CENTER; SUPPORT SANITARY SEWER AND VENTS AT 5 FEET ON CENTER.
8. PIPING IDENTIFICATION: LABEL PIPING TO ASME ANSI STANDARDS. LABELS SHALL BE DURAMARK OR EQUAL.
9. WALL CLEANOUT ACCESS PANEL: ZURN Z1441 WALL CLEANOUT, DURA-COATEDCAST IRON BODY, GAS AND WATERTIGHT TAPERED THREAD PLUG, AND ROUND, SMOOTH STAINLESS STEEL ACCESS COVER WITH SECURING SCREW OR EQUAL.
10. ACCESS DOORS
 - A. ACCESS DOORS SHALL BE INSTALLED WHERE VALVES, SWITCHES, DAMPERS, CONTROLLERS OR OTHER SIMILAR EQUIPMENT ARE INSTALLED ABOVE GWB CEILINGS OR BEHIND WALLS OR ANYWHERE THEY BECOME INACCESSIBLE FOR INSPECTION, MAINTENANCE OR SERVICING. ACCESS DOORS SHALL BE 24" BY 24" IN GENERAL AND A MINIMUM OF 10" BY 18", EXCEPT PLUMBING VALVE ACCESS DOORS IN TILE AREAS, SHALL BE 8" X 8" OR 12" X 12" TO MATCH TILE DIMENSIONS UNLESS OTHERWISE INDICATED. ACCESS DOORS SHALL BE SIZED TO SUIT THE ACCESS REQUIREMENT TO SERVICE THE EQUIPMENT AND SHALL BE LOCATED INDIVIDUALLY AND IN A MANNER APPROVED BY THE OWNER'S REPRESENTATIVE AND TO MEET REQUIREMENTS SPECIFIED HERE AND ELSEWHERE, FOR SPECIFIC APPLICATIONS.
 - B. ACCESS DOORS SHALL BE SET SQUARE AND FLUSH. ACCESS PANELS SHALL BE LOCATED IN CLOSETS, STORAGE ROOMS AND/OR OTHER NON-PUBLIC AREAS AND SHALL BE CONSTRUCTED IN A WORKMANLIKE MANNER. DOORS SHALL BE POSITIONED SO THAT THE JUNCTION CAN BE EASILY REACHED. WHERE ACCESS PANELS ARE REQUIRED IN CORRIDORS, LOBBIES OR OTHER HABITABLE AREAS, THEY WILL BE LOCATED AS APPROVED BY THE OWNER'S REPRESENTATIVE WITH KEYED LOCKS.
 - C. ACCESS DOORS SHALL BE CONSTRUCTED OF STEEL WITH PRIMER COAT OF RUST INHIBITIVE PAINT AND SHALL HAVE CONTINUOUS PIANO HINGE, AS MANUFACTURED BY INLAND STEEL PRODUCTS MILCOR, MIAMI, WALSH-HANNON OR EQUAL. DOOR LOCKS SHALL BE SCREWDRIVER OPERATED WITH STAINLESS STEEL CAM AND STUDS.
11. DISINFECTION PROCEDURE:
 - A. DISINFECT ALL NEW DOMESTIC WATER PIPING WORK TO THE POINT OF CONNECTIONS TO EXISTING WATER DISTRIBUTION. PROVIDE ISOLATION VALVE AT THE POINT OF CONNECTION.
 - B. POST SUITABLE WARNING SIGNS AT EACH OUTLET: 'WARNING - DO NOT USE - WATER SYSTEM BEING CHLORINATED'.
 - C. INJECT DISINFECTANT SOLUTION INTO THE SYSTEM THROUGH THE SERVICE COCK BY MEANS OF A PUMP, OR OTHER PRESSURE DEVICE, AT A SLOW CONTINUOUS RATE, SIMULTANEOUS WITH A REDUCED FLOW FROM THE WATER MAIN, UNTIL THE ORTHOTOLIDIN TEST FOR RESIDUAL CHLORINE AT EACH OUTLET SHOWS A CONCENTRATION OF AT LEAST 50PPM, BUT NOT MORE THAN 100 PPM.
 - D. CLOSE ALL OUTLETS AND VALVES, INCLUDING THE SERVICE VALVE AT THE MAIN AND THE INJECTION COCK. RETAIN THE CHLORINATED WATER IN THE SYSTEM FOR 24 HOURS.
 - E. AFTER 24 HOUR HOLDING PERIOD, THE RESIDUAL CHLORINE CONCENTRATION SHALL BE NOT LESS THE 50 PPM AS SHOWN BY THE ORTHOTOLIDIN TEST.
 - F. DRAIN AND FLUSH ENTIRE DOMESTIC WATER SYSTEM UNTIL ORTHOLIDIN TEST SHOW BACKGROUND RESIDUAL CHLORINE CONCENTRATION AT ANY OUTLET.
 - G. ENVIRONMENTAL, HEALTH AND SAFETY (EH&S) WILL DETERMINE WHETHER SAMPLES OF WATER MUST BE COLLECTED AND ANALYZED FOR THE DETERMINATION OF BACTERIOLOGICAL QUALITY.
 - H. STANDARDS NECESSARY FOR APPROVAL:
 - a. THE WATER SYSTEM SHALL BE UNIFORMLY CHLORINATED UNDER THE SUPERVISION OF ENVIRONMENTAL, HEALTH AND SAFETY (EH&S) AS OUTLINED IN THE 'DISINFECTION PROCEDURE'.
 - b. THE RESULT OF WATER SAMPLE ANALYSIS SHALL BE NEGATIVE FOR THE COLIFORM ORGANISM.
 - c. IF THE TEST FOR THE BACTERIOLOGICAL QUALITY OF THE WATER IN THE SYSTEM DOES NOT MEET THE STANDARDS, REPEAT THE DISINFECTION PROCEDURE UNTIL THE SPECIFIED STANDARDS ARE MET.
 - I. FINAL APPROVAL: ENVIRONMENTAL, HEALTH AND SAFETY (EH&S) WILL GIVE WRITTEN APPROVAL TO THE OWNER FOR ACCEPTANCE AND USE OF THE WATER SYSTEM AFTER THE ABOVE PROCEDURES HAVE BEEN SUCCESSFULLY COMPLETED AND THE STANDARDS MET.

PLUMBING FIXTURE SCHEDULE							
FIXTURE TAG	DESCRIPTION	ROUGH - IN					REMARKS
		SS	V	CW	HW	TW	
WC-1 (ADA)	WATER CLOSET	4"	2"	1"	-	-	FLOOR MOUNTED, ADA ACCESSIBLE WHERE INDICATED.
WC-2	WATER CLOSET	4"	2"	1"	-	-	FLOOR MOUNTED
LAV-1	LAVATORY	2"	1 1/2"	1/2"	1/2"	-	WALL HUNG, ADA ACCESSIBLE WHERE INDICATED.
S-1	JANITOR'S SINK	3	-	1/2"	1/2"	-	WALL MOUNTED
FD-1	FLOOR DRAIN	2"	1 1/2"	1/2"	-	-	PROVIDE TRAP PRIMER.
RD-1	ROOF DRAIN	2"	-	-	-	-	PROVIDE GALVANIZED STEEL PIPE, SCHEDULE 40.

1. ALL WATER CLOSETS SHALL USE A MAXIMUM OF 1.28 GALLONS PER FLUSH.
2. ALL LAVATORY FAUCETS SHALL BE FITTED WITH AN APPROVED FLOW CONTROL DEVICE ALLOWING A MAXIMUM OF 0.5 GPM. PUBLIC LAVATORIES SHALL HAVE CONTROLS TO LIMIT THE WATER TEMPERATURE TO 110°F ADJUSTABLE TO 120°F MAXIMUM. PROVIDE THERMOSTATIC MIXER.
3. REFER TO ARCHITECTURAL DRAWING FOR PLUMBING FIXTURE LOCATION AND MOUNTING HEIGHT.

PLUMBING FIXTURES SPECIFICATIONS

1. **WATER CLOSET: WC-1 ADA ACCESSIBLE**
FURNISH AMERICAN STANDARD "MADERA FLOWISE" NO. 2234.128 FLOOR-MOUNT, 16-1/2" HEIGHT, ELONGATED, WHITE, VITREOUS CHINA, TOP SPUD, 1.28 GPF, EVERCLEAN SURFACE. FLUSH VALVE SHALL BE 1" HARDWIRED TOP SPUD, 'SELECTRONIC' SENSOR ACTIVATED FLUSHOMETER WITH OVERRIDE BUTTON AND VICINITY SENSOR HAND FREE OPERATION. NON-HOLD OPEN INTEGRAL SOLENOID OPERATOR WITH NO VISIBLE FASTENERS, BACK-PRESSURE ANGLE VALVE, VANDAL RESISTANT STOP CAP, VACUUM BREAKER. FULLY MANUAL OVERRIDE BUTTON TO FLUSH THE VALVE ON POWER LOSS. FURNISH TOILET SEAT, WHITE COLOR. PROVIDE ACCESS TO FLUSH VALVE CONTROL ON THE WIDE SIDE FOR ACCESSIBLE (ADA) ACCESS. PROVIDE POWER KIT WITH TRANSFORMER.
2. **WATER CLOSET: WC-2**
FURNISH AMERICAN STANDARD "MADERA FLOWISE" NO. 2234.128 FLOOR-MOUNT, 15" HEIGHT, ELONGATED, WHITE, VITREOUS CHINA, TOP SPUD, 1.28 GPF, EVERCLEAN SURFACE. FLUSH VALVE SHALL BE 1" HARDWIRED TOP SPUD, 'SELECTRONIC' SENSOR ACTIVATED FLUSHOMETER WITH OVERRIDE BUTTON AND VICINITY SENSOR HAND FREE OPERATION. NON-HOLD OPEN INTEGRAL SOLENOID OPERATOR WITH NO VISIBLE FASTENERS, BACK-PRESSURE ANGLE VALVE, VANDAL RESISTANT STOP CAP, VACUUM BREAKER. FULLY MANUAL OVERRIDE BUTTON TO FLUSH THE VALVE ON POWER LOSS. FURNISH TOILET SEAT, WHITE COLOR. PROVIDE ACCESS TO FLUSH VALVE CONTROL ON THE WIDE SIDE FOR ACCESSIBLE (ADA) ACCESS. PROVIDE POWER KIT WITH TRANSFORMER.
3. **LAVATORY: LAV-1 (SEE ARCHITECTURAL PLAN FOR DETAILED SPECIFICATIONS);**
PROVIDE SONOMA CAST STONE WALL-HUNG LAVATORY (SINK), FABRICATED FROM COLORED CONCRETE MATERIAL: DOVE. FAUCETS SHALL BE HARD-WIRED AND SHALL BE SENSOR-ACTIVATED SLOAN FAUCET MODEL EFX-277, SENSOR ACTIVATED CONTROLS WITH SOLAR MODULE, FAUCETS SHALL BE RATED FOR 0.5 GPM AT 60 PSI. COPPER SUPPLY TUBE INLETS, COVER PLATE, CHROME FINISH, TAILPIECE, BRASS CRAFT P-TRAP, BRASS, CHROME FLEXIBLE SUPPLIES. PROVIDE LAVATORY COMPLETE WITH MANUFACTURER WALL SUPPORT FRAME AND ANGLEG STAINLESS STEEL ENCLOSURE.
4. **FLOOR DRAIN FD-1 :** JOSAM 30000-E, CAST IRON BODY WITH BOTTOM OUTLET, COMBINATION INVERTIBLE MEMBRANE CLAMP AND ADJUSTABLE COLLAR WITH 1/2" PRIMER TAP, POLISHED NICKEL BRONZE, HEAVY DUTY, INVERTER STRAINER. PROVIDE TRAP PRIMER WITH SLOAN VBF-72-A WITH VACUUM BREAKER FROM CLOSIEST WATER CLOSET FLUSHOMETER.
4. **FLOOR DRAIN FD-2 :** JOSAM 30000-E3, CAST IRON BODY WITH BOTTOM OUTLET, COMBINATION INVERTIBLE MEMBRANE CLAMP AND ADJUSTABLE COLLAR WITH 1/2" PRIMER TAP, POLISHED NICKEL BRONZE, HEAVY DUTY, INVERTER STRAINER WITH INTEGRAL OVAL FUNNEL. PROVIDE TRAP PRIMER WITH SLOAN VBF-72-A WITH VACUUM BREAKER FROM CLOSIEST WATER CLOSET FLUSHOMETER.
5. **WATER HAMMER ARRESTOR (HA-1):** JAY R. SMITH, 5220 SERIES, 1" CONNECTION, PISTON TYPE. WITH EPDM O-RING, LEAD-FREE JOINT, 60 PSIG AIR CHARGE, THREADED TYPE K COPPER, 95-5 SOLDER, RATED AT 212°F, 200 PSIG. UNIT TO COMPLY WITH ANSI 1010 WATER HAMMER ARRESTOR. PROVIDE 12X12 STAINLESS STEEL ACCESS PANEL.
6. REFER TO ARCHITECTURAL DRAWINGS FOR ALL PLUMBING FIXTURE LOCATION AND MOUNTING HEIGHT.
7. PLUMBING FIXTURE CARRIERS OR WALL SUPPORTS SHALL BE ADJUSTABLE J. R. SMITH OR EQUAL. REFER TO ARCHITECTURAL DRAWINGS FOR PLUMBING FIXTURE LOCATION AND MOUNTING HEIGHT.
8. PROVIDE CLEANOUTS WITH BRASS CAPS AND SCREWS SAME SIZE AS PIPE AT THE ENDS OF BRANCHES ON SOIL AND WASTE PIPING, AND IN SUCH OTHER PORTIONS OF THE PIPING WHERE RUN IS OVER 50'-0". BRASS CLEANOUTS SHALL BE SOLID NUT CONSTRUCTION
9. **JANITOR'S SINK S-1:**
WALL MOUNTED JANITOR'S SINK 'AKRON' SERVICE SINK MODEL 7695.008 ENAMELED CAST IRON, 3" OUTLET, WITH WALL SUPPORT HANGER AND RIM GUARD, 24"X20 1/2"X10 1/2" DEEP BOWL, MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS ASME A1112.19.1 FOR CAST IRON PLUMBING FIXTURES. PROVIDE AMERICAN STANDARD MODEL EXPOSED YOKE WALL-MOUNT UTILITY FAUCET 8440.243 WITH VACUUM BREAKER, CERAMIC DISC VALVE, INTEGRAL SUPPLY STOPS, OFFSET SHANKS WITH INTEGRAL CHECK VALVES, VANDAL-RESISTANT, 3/4" THREADED HOSE END, 1/2" NPT FEMALE INLETS, 8" CENTERS FAUCET. 3" STANDARD IRON P-TRAP 7798.030.
10. **HYBRID ELECTRIC HEAP PUMP WATER HEATER WH-1 AND WH-2:**
PROVIDE TWO (2) A.O. SMITH MODEL CAHP-120, FULLY INTEGRATED COMMERCIAL ELECTRIC HEAT PUMP WATER HEATER, RATED FOR 208 VOLT/1PH/ 60 Hz, UL LISTED, SHALL MEET NSF 5 REQUIREMENTS, TOUCH SCREEN LCD ELECTRONIC DISPLAY AND CONTROLS WITH DIAGNOSTIC AND TROUBLESHOOTING INFORMATION, 160 PSI WORKING PRESSURE, EQUIPPED WITH COMMERCIAL GRADE ANODE. ALL INTEGRAL PART OFF THE HEATER EXPOSED TO WATER SHALL BE GLASS-LINED WITH ALKALINE BOROSILICATE COMPOSITION FUSED TO STEEL. THE WATER HEATER SHALL PROVIDE WITH FACTORY TEMPERATURE AND PRESSURE RELIEF VALVE. CAPACITY AND DETAILED REQUIREMENTS AS LISTED BELOW:
 - 119 GALLON WATER STORAGE CAPACITY.
 - RATED 3.05 HP AT 208/1PH/60Hz HEAT PUMP POWER, 22 KW INPUT
 - HEATER ELEMENTS:9 KW TOTAL AT 208 VOLT/1PH/60Hz. UL LISTED, MEETS NSF5 REQUIREMENTS
 - 150°F MAXIMUM WATER TEMPERATURE ON HYBRID MODE, 180°F ON ELECTRIC MODE.
 - MAXIMUM 59 dB OPERATING NOISE,
 - DUAL EVAPORATOR FANS.
 - 182 GALLON PER HOUR (GPH) HEATER RECOVERY
 - 349 GPH FIRST HOUR DELIVERY, 238 GPH 3 HOUR DELIVERY AVERAGE.
 - 150°F MAXIMUM TEMPERATURE HYBRID MODE, 180°F ELECTRIC MODE
 - 3.3 LBS. R 134a REFRIGERANT WITH 4.2 COP,
 - MEETS DOE STAND BY ENERGY LOSS
 - 500 POUNDS WEIGHT
11. **WATER HEATER EXPANSION TANK ET-1 & ET-2:**
WATTS MODEL DETA-20, 8-GALLON, PRE-CHARGED STEEL THERMAL EXPANSION TANK WITH FIXED BUTYL BLADDER. THE TANK SHALL HAVE A BLADDER INTEGRITY MONITOR AND A CHARGING VALVE CONNECTION (STANDARD TIRE VALVE) FOR ON-SITE CHARGING OF THE TANK. THE TANK SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION VIII OF THE ASME BOILER PRESSURE VESSEL CODE. THE TANK SHALL BE PRE-PAINTED AT THE FACTORY.
12. **ROOF DRAIN RECETOR RD-1:**
JOSAM SERIES 24500-90 COATED CAST IRON SILL DRAIN SECURED LOW BRONZE COME CLAMP RING AND SHALLOW SUMP WITH FLASHING FLANGE AND SIDE THREADED OUTLET CONNECTION.
13. **NATURAL GAS SEISMIC VALVE** SHALL BE SEISMIC PACIFIC PRODUCT MODEL 315(60), HORIZONTAL FLOW. SEISMIC VALVE SHALL MEET CALIFORNIA STANDARDS FOR EARTHQUAKE ACTUATED AUTOMATIC GAS SHUT OFF SYSTEM STANDARD NO. 12-12-1, ANSI Z21.21, 2012 AND ASCE 25-06 STANDARDS.

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APPROVALS

PROJECT TITLE

**City of Berkeley
WEST
BERKELEY
SENIOR CENTER**

1900 Sixth St
Berkeley, CA 94710

BID SET

ISSUE DATE **12.22.2023**

N&T JOB NUMBER **22121**

REVISIONS

DATE	DESCRIPTION

DRAWN BY **EPCE** | CHECKED BY **EP**
SHEET TITLE

**PLUMBING FIXTURE
SCHEDULE AND
SPECIFICATIONS**

SHEET NUMBER

P3.02

PLUMBING LEGEND

SYMBOLS	ABBR	SERVICE
		EQUIPMENT IDENTIFICATION
		DETAIL OR SECTION SHEET NUMBER
		NORTH ARROW (REFERENCE)
		POINT OF CONNECTION (POC)
		POINT OF DEMOLITION
		KEYED NOTE
		FIRE SPRINKLER HEAD
	FP	FLEXIBLE CONNECTION
		(E) PIPE TO BE REMAIN
		(E) PIPE TO BE REMOVED
	(N)	NEW
	(E)	EXISTING
	APIAD	ACCESS PANEL/ACCESS DOOR
	UP	ALL SERVICES
	DN	ALL SERVICES
	VR-VTR	VENT RISE - VENT THRU ROOF
		DIRECTION OF FLOW
	W	SANITARY OR WASTE
	SD	STORM DRAIN
	FS	FIRE SPRINKLER
	CW	COLD WATER
	HW	HOT WATER
	HWR	HOT WATER RETURN
	V	VENT
	G	GAS
	CD	CONDENSATE DRAIN
		3-WAY CONTROL VALVE
		2-WAY CONTROL VALVE
	BC	BALANCING COCK
		BALANCING VALVE
		BALL VALVE
	BV	BUTTERFLY VALVE
	PRV	PRESSURE REDUCING VALVE
	TCV	TEMPERATURE CONTROL VALVE
	GV	GATE VALVE
	GLV	GLOBE VALVE
	CKV	CHECK VALVE
		STRAINER
	AVA	AIR VENT VALVE-AUTOMATIC
	AVM	AIR VENT VALVE-MANUAL
	PGA	PRESSURE GAUGE
	U	UNION CONNECTION
	PP	PET'S PLUG
	TH	THERMOMETER
	T	THERMOSTAT
		TEMPERATURE GAUGE
		TEMPERATURE SENSOR
		FLOW SWITCH/SENSOR
		PRESSURE SENSOR/TRANSMITTER
		MAGNETIC STARTER
	DI	DIGITAL INPUT
	DO	DIGITAL OUTPUT
	AI	ANALOG INPUT
	AO	ANALOG OUTPUT
		ELECTRICAL CONTROL WIRING
		PNEUMATIC CONTROL

ABBREVIATIONS

ACU	AIR CONDITIONING UNIT
AFF	ABOVE FINISH FLOOR
AHU	AIR HANDLING UNIT
AP	ACCESS PANEL
BHP	BRAKE HORSEPOWER/BOILER HORSEPOWER
BOP	BOTTOM OF PIPE
CFF	CAP FOR FUTURE
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CLG	CEILING
CTE	CONNECT TO EXISTING
DN	DOWN
(D)	DISPOSE
(E)	EXISTING
EF	EXHAUST FAN
ESP	EXTERNAL STATIC PRESSURE
F	FIRE SPRINKLER
FC	FLEXIBLE CONNECTION
FPM	FEET PER MINUTE
FSD	FIRE SMOKE DETECTOR
GSM	GALVANIZED SHEET METAL
HTR	HEATER
HW	HOT WATER
MFR	MANUFACTURER
(N)	NEW
NC	NORMALLY CLOSED
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NO	NORMALLY OPEN
PG	PRESSURE GAUGE
PLBG	PLUMBING
POC	POINT OF CONNECTION
PSI	POUND PER SQUARE INCH
PSIG	POUND PER SQUARE INCH GAUGE
(R)	RELOCATED
RF	RETURN FAN
(R)	RELOCATE
RIO	ROUGH IN ONLY
RPM	REVOLUTION PER MINUTE
(S)	SALVAGE TO BE RE-INSTALLED
SF	SUPPLY FAN
SH0-1	SHOWER UNIT
SS	STAINLESS STEEL
STD	STANDARD
STL	STEEL
TH	THERMOMETER
TSP	TOTAL STATIC PRESSURE
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VTR	VENT THRU ROOF
WPD	WATER PRESSURE DROP
WP	WEATHER OR WATER PROOF
WT	WEIGHT

GENERAL NOTES

- ALL WORK SHALL BE IN COMPLIANCE WITH THE LATEST APPLICABLE LOCAL AND STATE CODES AND REGULATIONS:
 - CALIFORNIA BUILDING CODE 2022
 - CALIFORNIA MECHANICAL CODE 2022
 - CALIFORNIA PLUMBING CODE 2022
 - CALIFORNIA FIRE CODE 2022
 - CALIFORNIA ELECTRICAL CODE 2022
- ALL PIPING SHOWN ON PLANS ARE DIAGRAMMATIC AND SHALL NOT BE SCALED TO DETERMINE EXACT LOCATION. CERTAIN VERTICAL AND HORIZONTAL DIMENSIONS ARE SHOWN IN DUCTS AND PIPES TO INDICATE THEIR GENERAL POSITION IN RELATIONSHIP TO THE SYSTEMS WITHIN THE SPACE AVAILABLE FOR SYSTEM INSTALLATION. PROVIDE ADDITIONAL PIPING OFFSETS AS REQUIRED, AND TO COORDINATE WITH INSTALLATION REQUIREMENTS OF OTHER SYSTEMS AT NO ADDITIONAL COST TO THE OWNER. ALL DIMENSIONS ARE IN INCHES OR OTHERWISE NOTED.
- WHERE EXISTING CONSTRUCTION IS CUT, DAMAGED, OR REMODELED, PATCH WITH MATERIALS TO MATCH IN KIND, QUALITY, AND PERFORMANCE.
- CONTRACTOR SHALL ASSUME SOLE RESPONSIBILITY FOR SAFETY OF ALL PERSONS ON OR ABOUT THE CONSTRUCTION SITE, IN ACCORDANCE WITH APPLICABLE LAWS AND CODES. GUARD ALL HAZARDS IN ACCORDANCE WITH THE SAFETY PROVISIONS OF THE LATEST MANUAL OF ACCIDENT PREVENTION PUBLISHED BY THE ASSOCIATED GENERAL CONTRACTORS OF AMERICA AND OSHA.
- REFER TO SMACNA SEISMIC GUIDELINES AND STANDARDS FOR DUCT PIPE SUPPORT AND EQUIPMENT SEISMIC BRACING.
- COORDINATE WORK WITH THE OWNER AND ALL OTHER TRADES.
- SEAL AIR AND WATER TIGHT ALL PIPE PENETRATIONS THROUGH WALL. SEALANT SHALL BE 3M BRAND PRODUCTS. BRACE ALL PIPES AND EQUIPMENT TO WITHSTAND FORCES AS REQUIRED BY THE STATE AND LOCAL CODES.
- PROTECT THE PUBLIC FROM INJURY DURING PROGRESS OF WORK BY POSTING WARNING SIGNS, GUARD LIGHTS AND BARRICADES.
- THE CONTRACTOR SHALL PROVIDE DUST BARRIER PLASTIC COVERS, SCREEN AND TENTING AT ALL TIMES TO CONTAIN DUST AND DEBRIS WITHIN THE DESIGNATED WORK AREA. LOCATING AND INSTALLATION OF DUST PROTECTION COVERS AND TENTING TO BE APPROVED BY THE OWNER PRIOR TO INSTALLING. CONTRACTOR SHALL CLEAN WORK AREA AND REMOVE DEBRIS AT THE END OF EACH WORKING DAY. DISPOSAL OF DEBRIS AND EXCESS MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE EXISTING MECHANICAL AND ELECTRICAL SYSTEMS SHALL BE MAINTAINED IN OPERATION DURING THE DEMOLITION AND INSTALLATION OF NEW WORK. WHEN A SYSTEM SHUTDOWN IS NECESSARY, OBTAIN A WRITTEN APPROVAL FROM THE OWNER PRIOR TO SHUTTING DOWN OF ANY MECHANICAL ELECTRICAL SYSTEMS.
- VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS.
- VERIFY DIMENSIONS OF OWNER FURNISHED EQUIPMENT TO ENSURE PROPER COORDINATION WITH CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOUND. NO ALLOWANCE SHALL BE MADE FOR ANY EXPENSE TO WHICH THE CONTRACTOR MAY INCUR DUE TO FAILURE OR NEGLIGENCE ON HIS PART TO MAKE SUCH VERIFICATION.
- ANY ERRORS, OMISSIONS OR CONFLICTS FOUND IN THE VARIOUS PARTS OF THE CONSTRUCTION DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OR ENGINEER AND OWNER BEFORE PROCEEDING WITH THE WORK.
- PENETRATIONS THROUGH EXISTING CONCRETE WALL, FLOOR OR ROOF SHALL BE VERIFIED FOR STRUCTURAL REINFORCEMENTS. X-RAY ARE REQUIRED TO LOCATE REINFORCEMENT PRIOR TO CONCRETE CORE DRILLING OR CUTTING. OBTAIN OWNER'S WRITTEN APPROVAL PRIOR TO CORE DRILLING AND CUTTING.
- CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTION OF WORK AT HIS OWN EXPENSE FOR WORK INSTALLED IN CONFLICT WITH CONSTRUCTION DOCUMENTS.
- CONTRACTOR SHALL LEAVE PREMISES AND ALL AFFECTED AREAS CLEAN AND IN ORDERLY MANNER READY FOR MOVE-IN OR FACILITY OPERATION.
- PROVIDE ADEQUATE CLEARANCE AND ACCESS TO EQUIPMENT FOR SERVICE AND MAINTENANCE. EQUIPMENT CLEARANCES SHALL MEET THE REQUIREMENT OF THE MANUFACTURER.
- INSULATE ALL HOT AND COLD PIPING. PROVIDE SILICATE INSERTS AT SUPPORT POINTS. PROVIDE ALUMINUM JACKETING FOR OUTDOOR INSTALLATION.
- EXPLORATORY WORK TO SEARCH FOR PIPING, PLUMBING OR DUCT FOR CONNECTIONS TO EXISTING BUILDING SYSTEM INCLUDING POINT OF CONNECTIONS UNDER FLOOR SLAB, IN WALLS AND CEILING SHALL BE INCLUDED AT NO COST TO THE OWNER. CUTTING, PATCHING AND RESTORATION OF FLOORS, WALLS, CEILING AND FINISH SHALL BE INCLUDED IN THIS WORK AT NO COST TO THE OWNER. RESTORATION OF WALL OR FLOOR FINISH SHALL MATCH EXISTING.
- ALL PLUMBING PIPING MATERIAL, PLUMBING FIXTURE, VALVE, FITINGS AND ACCESSORIES SHALL BE 'LEAD-FREE' IN ACCORDANCE WITH CALIFORNIA REGULATION AB1953. PROVIDE SUBMITTAL FROM MANUFACTURER'S FOR COMPLIANCE.

SCOPE OF WORK

- GENERAL: THIS SCOPE OF WORK IS AN OUTLINE OF WORK INVOLVE FOR THIS PROJECT AND IS NOT INTENDED TO DESCRIBE THE COMPLETE SCOPE OF WORK. THE DETAILED REQUIREMENTS ARE INDICATED ON EACH DRAWING AND SPECIFICATIONS. MECHANICAL WORK SHALL INCLUDE SCOPE OF WORK DESCRIBED IN ARCHITECTURAL DRAWINGS. MECHANICAL WORK SHALL INCLUDE HVAC AND PLUMBING WORKS.
- REMOVE AND DISPOSE EXISTING WALL MOUNTED TOILET EXHAUST FAN EF-3 LOCATED ON THE ROOF INCLUDING ALL ASSOCIATED EXHAUST DUCT, AIR REGISTERS, SUPPORTS AND ANCHOR.
 - PROVIDE NEW WALL MOUNTED TOILET EXHAUST FAN EF-3 INCLUDING NEW WALL MOUNTING SUPPORT FRAME AND ANCHORS, EXHAUST DUCT, AIR REGISTERS, SUPPORTS AND ANCHORS. PROVIDE NEOPRENE VIBRATION ISOLATORS AS NECESSARY TO ELIMINATE NOISE TO THE OCCUPIED BUILDING SPACE. MODIFY EXISTING WALL OPENING AS NECESSARY. PROVIDE FLASHING AND COUNTER-FLASHING AND WATER PROOFING SEALS FOR THE INSTALLATION OF THE NEW EXHAUST FAN.
 - MODIFY EXISTING SUPPLY AIR TO THE RESTROOM AS INDICATED. INCLUDING ALL ASSOCIATED DUCT DAMPERS, AIR REGISTERS, SUPPORTS AND ANCHOR.
 - PROVIDE DUCT MOUNTED PLASMA AIR IONIZATION FOR EACH EXISTING GAS FURNACE. REFER TO M2.10 FOR LOCATION. PROVIDE 120 VAC POWER, TRANSFORMER AND INTERLOCK FOR IONIZATION UNIT. IONIZATION UNIT SHALL BE ENABLED WHEN THE FURNACE IS IN OPERATION. PROVIDE POWER DISCONNECT. TEST PERFORMANCE OF THE PLASMA IONIZATION UNIT WITH THE MANUFACTURER'S STATED PERFORMANCE. PROVIDE WRITTEN REPORT FOR OWNER'S REVIEW, ACCEPTANCE AND WRITTEN APPROVAL.
 - PERFORM TESTING, ADJUSTING AND BALANCING(TAB) OF EXHAUST FAN EF-3 FOR PERFORMANCE DATA FOR AIRFLOW, TOTAL STATIC PRESSURE, AMPERE DRAW, VOLTAGE AND NOISE. PERFORM TESTING, ADJUSTING AND BALANCING FOR AIRFLOW FOR ALL EXHAUST AIR REGISTERS. SUBMIT A CERTIFIED TEST, ADJUSTING AND BALANCING (TAB) REPORT. PERFORM TEST, ADJUST AND BALANCING FOR ALL AIR REGISTERS. PROVIDE CERTIFIED TAB REPORT FOR REVIEW, ACCEPTANCE AND WRITTEN APPROVAL BY THE OWNER.
 - PERFORM TESTING, ADJUSTING AND BALANCING OF ALL EXISTING GAS FURNACES, AIR DISTRIBUTION INCLUDING SUPPLY AIR, RETURN AIR AND OUTSIDE AIR VENTILATION. MAINTAIN THE OVERALL BUILDING AT POSITIVE PRESSURE OF MINIMUM 0.05 INCH W.C.. MAINTAIN THE TOILET AND KITCHEN AT NEGATIVE PRESSURE. PROVIDE CERTIFIED TAB REPORT FOR REVIEW, ACCEPTANCE AND WRITTEN APPROVAL BY THE OWNER.

DRAWING INDEX

M1.00	LEGEND, SYMBOLS, GENERAL NOTES, SCOPE OF WORK & DRAWING INDEX
M1.10	HVAC SCHEDULES.
M2.00	HVAC DEMOLITION PLAN
M2.10	MECHANICAL CONSTRUCTION PLAN.
M3.00	HVAC DETAILS

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PROJECT TITLE

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BID SET

ISSUE DATE **12.22.2023**

N&T JOB NUMBER **22121**

REVISIONS

DATE	DESCRIPTION

DRAWN BY **EPCE** | CHECKED BY **EP**

SHEET TITLE
**LEGEND, SYMBOLS
GENERAL NOTES
SCOPE OF WORK
DRAWING LIST**

SHEET NUMBER

M1.00

HV X EXISTING GAS FURNACE WITH PLASMA AIR UNIT								
UNIT NUMBER	MODEL NO.	LOCATION	SERVICE	FAN CFM	FILTER	ASHRAE 62.1 REQUIRD MIN. VENTILATION CFM	AIR IONIZER PLASMA AIR MODEL NO. CFM CAPACITY	COMMENTS
HV-1	PAYNE PG8JAA048	EAST MECH. RM.	EAST OFFICES	1100	MERV 13	200	7103	
HV-2	AIRCORAIRE NNE125J20GI	WEST MECH. RM.	ACTIVITY ROOMS	1815	MERV 13	600	7203	
HV-3	PAYNE PG8JAA048	NORTH MECH. RM.	LOUNGE 21	1540	MERV 13	400	7203	
HV-4	PAYNE PG8JAA048	NORTH MECH. RM.	DINING, KITCHEN	2400	MERV 13	2000	7303	

PROVIDE THE FOLLOWING REQUIREMENTS FOR EACH EXISTING GAS FURNACES:

- TEST, ADJUST AND BALANCE TO INDICATED OUTDOOR AIR VENTILATION. FIX OR REPLACE EXISTING VOLUME DAMPERS.
- REPLACE EXISTING FILTERS TO MERV 13.
- PROVIDE PLASMA AIR BI-POLAR AIR IONIZATION ON THE SUPPLY AIR DUCT FOR EACH EXISTING GAS FURNACE AS INDICATED ON M2.10. PROVIDE POWER INTERLOCK FOR THE IONIZATION UNIT TO ENABLE WHEN THE FAN IS ENERGIZED. TEST ACTUAL ION/C/SEC RATE AT EACH FURNACES. SEE BELOW FOR PLASMA AIR SPECIFICATION. INSTALL PLASMA AIR UNIT AS RECOMMENDED BY THE MANUFACTURER.
- PROVIDE PLASMA AIR BI-POLAR AIR IONIZATION 100 VAC/12VDC POWER SUPPLY UNIT. INSTALL IN A JUNCTION BOX AS RECOMMENDED BY THE MANUFACTURER. PROVIDE LOCAL POWER DISCONNECT.
- PROVIDE ONE (1) PLASMA AIR POLAR AIR IONIZATION ION METER WITH 0 TO 20,000 NEGATIVE IONIC.

EF X FAN SCHEDULE																		
UNIT NUMBER	FAN LOCATION	SERVICE	RATED CFM	RATED S.P. (IN. H ₂ O)	FAN RPM	SET FAN CFM	FAN TYPE	MOTOR DATA @ 60 HZ					DRIVE TYPE	MAX. NOISE RATING dBA	MANUFACTURER MODEL NO.	SEE NOTES BELOW FOR ADDITIONAL REQUIREMENTS	WEIGHT POUNDS	
								BHP	MHP	RPM	VOLTS	PHASE						SPEED CONTROL
EF-3	ROOF	RESTROOM EXHAUST	700	0.75	1530	580	B	0.17	1/4	1750	115	1	YES	DIRECT	54	GREENHECK CUE-099-VG		200

FAN SHALL MEET WITH THE FOLLOWING REQUIREMENTS:


- ALL UNITS SHALL HAVE SINGLE POINT ELECTRICAL CONNECTION.
- EXHAUST FAN SHALL BE CENTRIFUGAL TYPE ROOF EXHAUST VENTILATOR, ALUMINUM CONSTRUCTION, WELDED HOUSING WITH VENTED MOTOR ENCLOSURE.
- ALL FANS SHALL BE PROVIDED WITH HEAVY DUTY SELF-ALIGNING BALL OR ROLLER PILLOW BLOCK BEARINGS, POLISHED SOLID STEEL SHAFT AND FULLY WELDED CENTRIFUGAL WHEEL AND ADJUSTABLE PITCH DRIVE.
- UNIT SHALL BE PROVIDED WITH VIBRATION ISOLATORS.
- ALL FANS SHALL BE PROVIDED WITH HIGH EFFICIENCY CLASS B MOTOR MEETS EPACT AND NEMA 1210.
- EXHAUST FAN SHALL BE PROVIDED WITH METAL ROOF CURB WITH STAINLESS STEEL HINGES FOR EASY LIFT ACCESS FOR CLEANING, BACKDRAFT DAMPER WITH ADJUSTABLE BACKDRAFT DAMPER.
- NOISE GENERATED SHALL NOT EXCEED THE INDICATED REQUIREMENTS.
- PROVIDE ON BOARD VARI-GREEN SPEED CONTROLLER AND PREWIRED POWER DISCONNECT.

REQUIRED MAXIMUM FAN UNIT SOUND POWER LEVEL dB re 10⁻¹² WATTS

HZ	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	SONE
EF-3 INLET:	73	71	71	66	62	61	57	48	69	58	8.8

FAN TYPE DESIGNATION
A- CENTRIFUGAL UTILITY FAN
B- WALL MOUNTED CENTRIFUGAL FAN
C- CENTRIFUGAL FAN, CEILING MOUNTED
D- ROOF EXHAUST VENTILATOR

Plasma Air 7100 / 7200 / 7300 / 7400 IONIZATION PRODUCT SUBMITTAL



The Plasma Air 7000 Series Models 7100 / 7200 / 7300 / 7400 needpoint ionizers are rated up to 6000 CFM and produce positive and negative ions neutralizing harmful pathogens, pollutants and odors. They are typically installed in supply ducts utilizing the pre-drilled flange and factory applied gaskets and can also be installed inside an HVAC unit utilizing a contractor supplied mounting bracket. The 7000 series is UL2998 validated for zero ozone emissions.

UL2998 VALIDATED

SPECIFICATIONS:

- Airflow Capacity: Up to 1,400 CFM (7100), 1,401 to 2,800 CFM (7200), 2,801 to 4,200 CFM (7300), 4,201 to 6,000 CFM (7400)
- Pressure Drop: Less than 0.01 In. WG
- Housing Material: .18 Gauge steel powder coated
- Weight: 2 lbs
- Maximum Operating Temperature: 200° F (93°C)
- Electrical:
 - Voltage: 24V AC input (7XX1), 120V AC wall pack (7XX2), 120V/240V AC power supply (7XX3), 277V AC to 12V DC power supply (7XX4)
 - Power Consumption: Less than 2VA per set of outputs
 - Current Draw: 30 mA at 12V DC
 - Frequency: 50/60 hertz
 - Internal Fuse: Auto reset 1 amp
 - BAS Monitoring: Dry contact terminals
- Ionization Output:
 - Mode of Operation: Needlepoint
 - Needle Configuration: Recessed
 - No. of Ionization Modules: 1 (7100), 2 (7200), 3 (7300), 4 (7400)

DIMENSIONS: See Figure 1

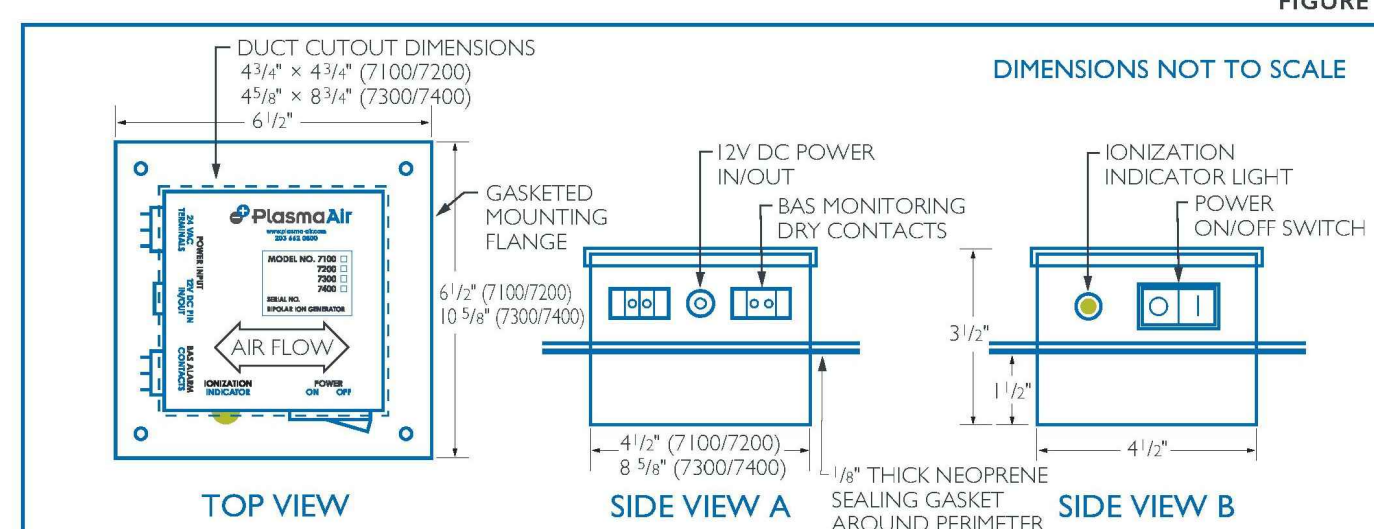
APPROVALS: UL2998, Intertek/ETL Standard UL 867

ORDERING NOMENCLATURE:

7XXX
1 - 24V AC from fan control terminals (standard)
2 - 120V AC to 12V DC wall pack
3 - 120V/240V AC to 12V DC inline power supply
4 - 241V/277V AC to 12V DC inline power supply
0 - Placeholder

FEEDBACK FUNCTIONALITY: The feedback function provides an electronic signal only when the ionizers are operating properly, i.e. when the ionizer is creating ions. The products use this signal to power the LED and initiate a relay that closes dry contacts.

FIGURE 1



DUCT CUTOUT DIMENSIONS
4 3/4" x 4 3/4" (7100/7200)
4 9/8" x 8 1/4" (7300/7400)
6 1/2"

DIMENSIONS NOT TO SCALE

TOP VIEW, SIDE VIEW A, SIDE VIEW B

Labels: GASKETED MOUNTING FLANGE, 12V DC POWER IN/OUT, BAS MONITORING DRY CONTACTS, IONIZATION INDICATOR LIGHT, POWER ON/OFF SWITCH, AIR FLOW, 1/8" THICK NEOPRENE SEALING GASKET AROUND PERIMETER

Plasma Air 35 MELROSE PLACE, STAMFORD, CT 06902
phone 203-662-0800 fax 203-662-0808 www.plasma-air.com info@plasma-air.com
PA-COM-US-SUB-011-REV2

AIR OUTLETS & INLETS SCHEDULE

SYMBOL	DESCRIPTION	DESCRIPTION
S1	CEILING SUPPLY AIR DIFFUSER	"TITUS" OMNI ARCHITECTURAL 24"x24" MODULE SQUARE PANEL, 22-GA FACE PANEL, STEEL CONSTRUCTION, SURFACE MOUNTING FRAME TO MATCH CEILING SYSTEM. SIZE DIFFUSER NOT TO EXCEED 500 FPM NECK VELOCITY AND NOT TO EXCEED NOISE LEVEL OF 30 NC. PROVIDE DIFFUSER WITH WHITE FINISH.
E1	CEILING RETURN AIR REGISTER	"TITUS" OMNI ARCHITECTURAL 12"x12" MODULE SQUARE PANEL, 22-GA FACE PANEL, STEEL CONSTRUCTION, SURFACE MOUNTING FRAME TO MATCH CEILING SYSTEM. SIZE DIFFUSER NOT TO EXCEED 500 FPM NECK VELOCITY AND NOT TO EXCEED NOISE LEVEL OF 30 NC. PROVIDE DIFFUSER WITH WHITE FINISH.

DRAWING NOTATIONS

AIRFLOW IN CFM

TYPE OF AIR OUTLET OR INLET
S - SUPPLY AIR DIFFUSER
R - RETURN AIR REGISTER
E - EXHAUST AIR REGISTER

(E) - EXISTING TO REMAIN
(R) - RELOCATED

SHEET NOTE
FIRE RATED WITH RUSKIN DFSR1 COMBINATION FIRE & SMOKE DAMPER OR SIMILAR FOR RECTANGULAR NECK. PROVIDE POWER/INTERFACE FROM FIRE ALARM SYSTEM

AIR DIFFUSER OR REGISTER NECK SIZE IN INCHES

100-DUCT DIAMETER IN OR INCHES 16X10-RECTANGULAR DUCT SIZE IN INCHES

- COORDINATE CEILING, WALL SUPPLY DIFFUSER AND EXHAUST REGISTER FOR EXACT LOCATION WITH ARCHITECTURAL REFLECTED CEILING PLAN.
- ALL CEILING SUPPLY DIFFUSERS ARE 4-WAY THROW UNLESS OTHERWISE NOTED.
- PROVIDE MANUAL AIR DAMPERS AT EACH BRANCH DUCT TO A SINGLE DIFFUSER, REGISTER OR GRILLE.

ALL VOLUME DAMPER SHALL BE OPPOSED BLADE TYPE. ROUND DUCT DAMPER SHALL BE TITUS AG-75.

NOLL & TAM ARCHITECTS

729 Heinz Avenue
Berkeley, CA 94710
tel 510.542.2200
fax 510.542.2201



EDDIE PADILLA
Consulting Engineers Inc.
274 Devonshire Street
Vallejo, CA 94591
(707) 980-4049

APPROVALS

PROJECT TITLE

City of Berkeley
WEST BERKELEY SENIOR CENTER

1900 Sixth St
Berkeley, CA 94710

BID SET

ISSUE DATE 12.22.2023

N&T JOB NUMBER 22121

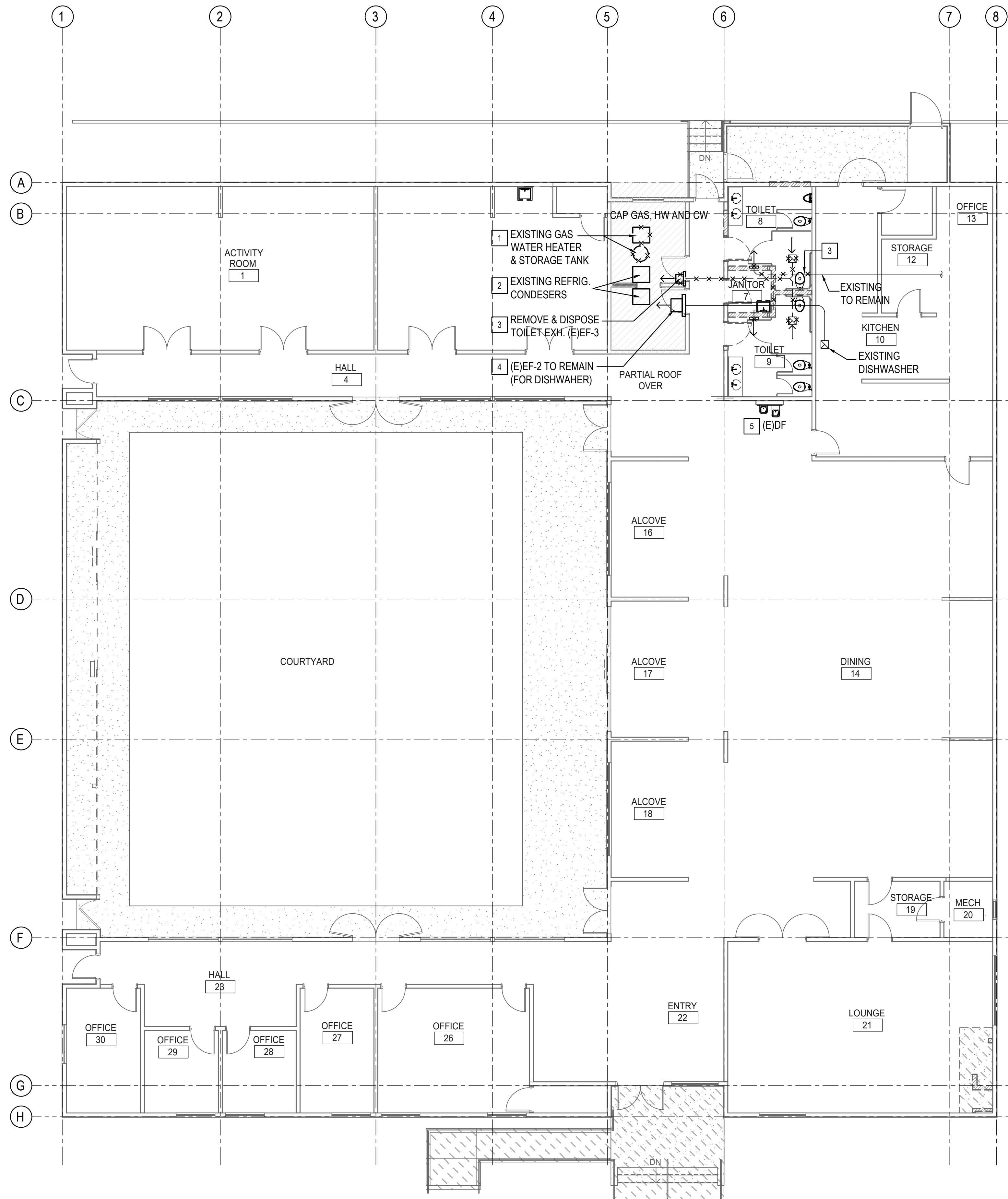
REVISIONS	DATE	DESCRIPTION

DRAWN BY **EPCE** CHECKED BY **EP**
SHEET TITLE

HVAC SCHEDULES

SHEET NUMBER

M1.10



DEMOLITION KEYED NOTES

- 1 REMOVE AND DISPOSE EXISTING GAS WATER HEATER AND ASSOCIATED STORAGE TANK, PIPING, EQUIPMENT PAD ANCHORS AND SUPPORTS. CAP PIPING FOR GAS, COLD WATER, HOT WATER TO BELOW THE ROOF LEVEL. PATCH ROOF TO MATCH EXISTING.
- 2 EXISTING CONDENSING UNITS FOR THE REFRIGERATORS TO REMAIN. REMOVE AND TEMPORARY STORE FOR REINSTALLATION AFTER THE REPLACEMENT OF EXISTING ROOF.
- 3 REMOVE AND DISPOSE EXISTING WALL MOUNTED TOILET EXHAUST FAN AND ASSOCIATED MOUNTING, POWER DISCONNECT, FRAME AND ANCHORS. REMOVE AND DISPOSE ASSOCIATED EXHAUST DUCT, AIR REGISTERS, SUPPORTS AND ANCHORS.
- 4 EXISTING WALL MOUNTED EXHAUST FAN FOR DISHWASHER TO REMAIN.
- 5 EXISTING WALL MOUNTED DRINKING FOUNTAIN TO REMAIN.

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SEAL



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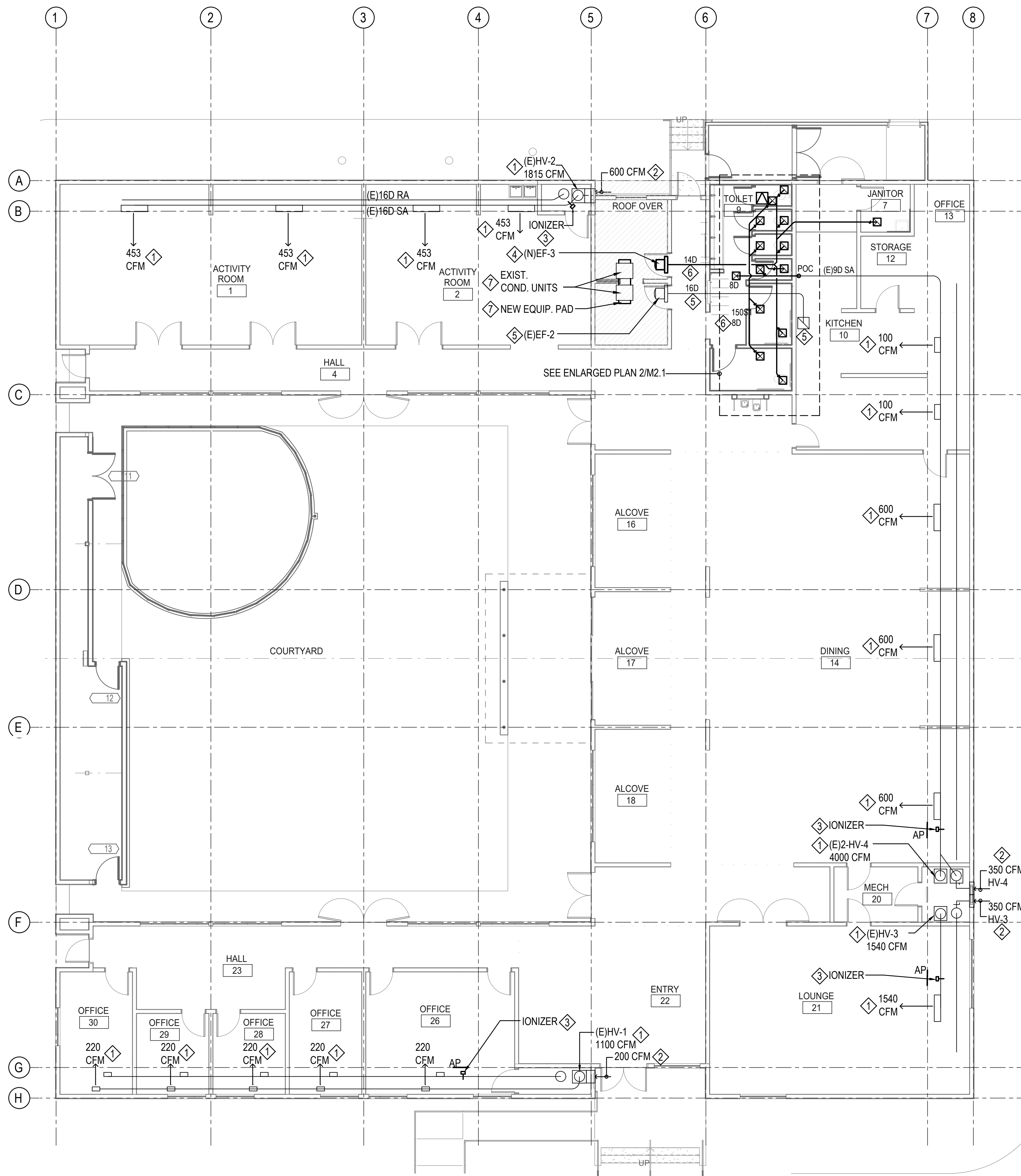
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SHEET TITLE

**HVAC DEMOLITION
PLAN**

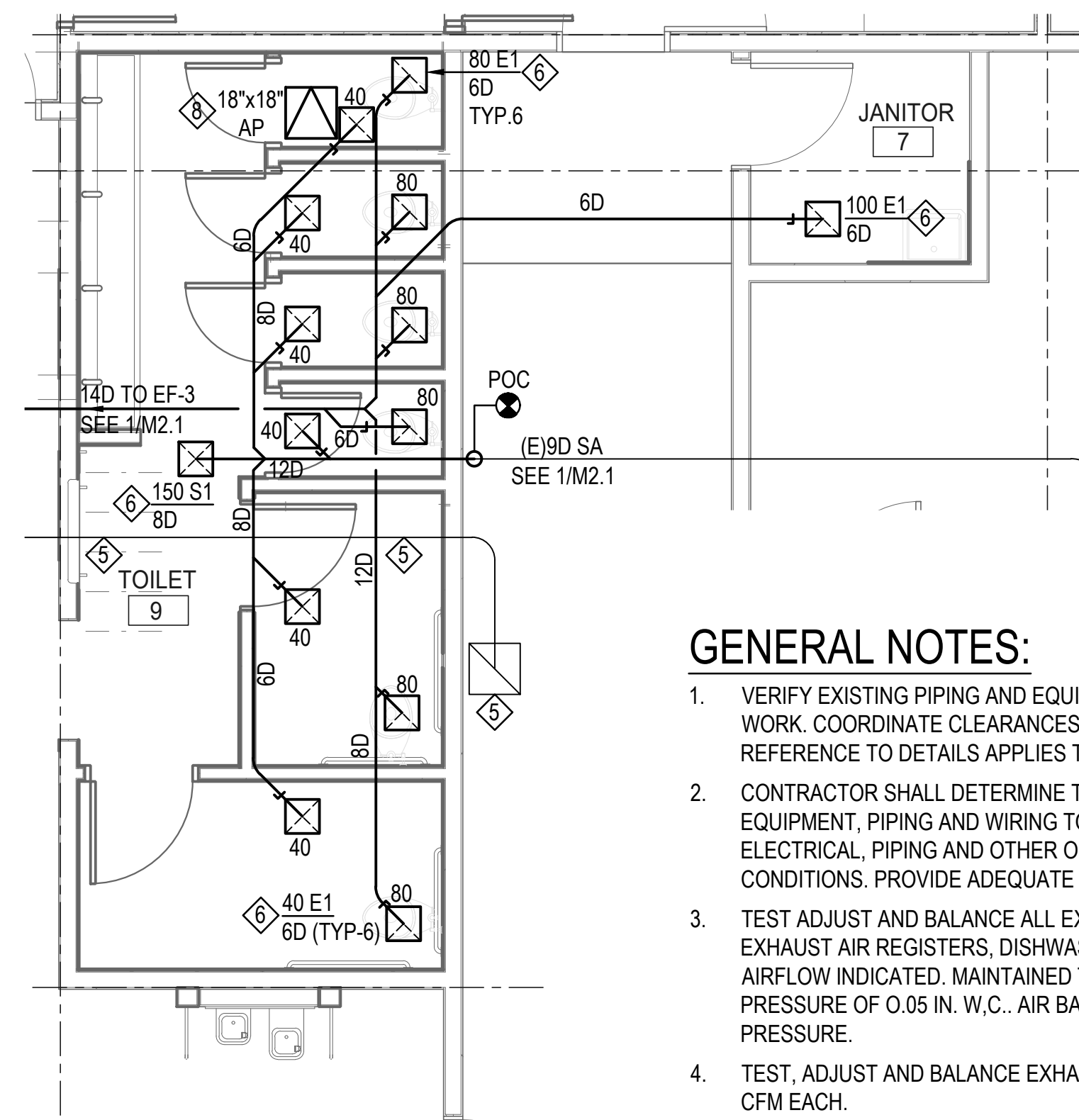
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M2.00

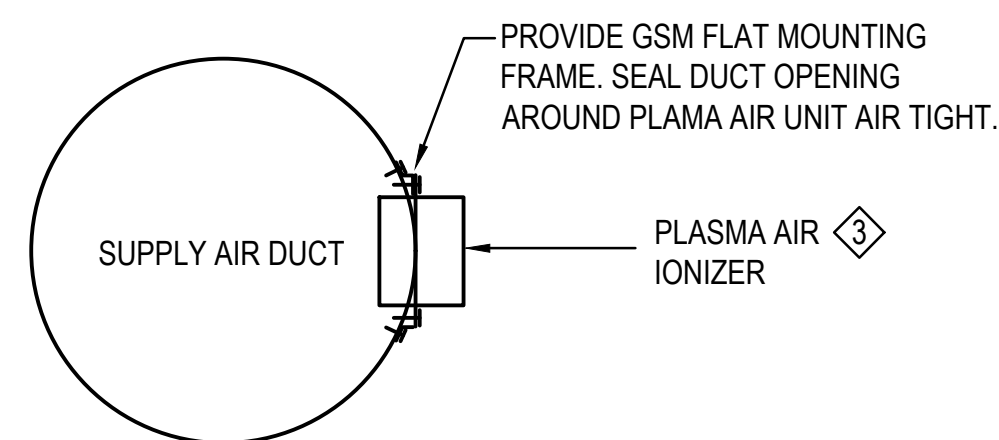
1 HVAC DEMOLITION PLAN
M2.00 scale: 1/8" = 1'-0"



1 HVAC CONSTRUCTION PLAN
scale: 1/8" = 1'-0"



2 ENLARGED HVAC PLAN
scale: 1/4" = 1'-0"



3 PLASMA AIR IONIZATION UNIT DUCT MOUNTING DETAIL
scale: 1/4" = 1'-0"

GENERAL NOTES:

1. VERIFY EXISTING PIPING AND EQUIPMENT LOCATION PRIOR TO INSTALLATION OF NEW WORK. COORDINATE CLEARANCES AND ACCESS WITH ARCHITECTURAL DRAWINGS. REFERENCE TO DETAILS APPLIES TO ALL MECHANICAL WORK.
2. CONTRACTOR SHALL DETERMINE THE FINAL LOCATION OF THE EQUIPMENT. LOCATE EQUIPMENT, PIPING AND WIRING TO CLEAR BUILDING STRUCTURE, EXISTING ELECTRICAL, PIPING AND OTHER OBSTRUCTIONS. VERIFY INSTALLATION WITH EXISTING CONDITIONS. PROVIDE ADEQUATE ACCESS TO FILTERS, MOTORS AND VALVES.
3. TEST ADJUST AND BALANCE ALL EXISTING SUPPLY AIR, RETURN RETURN AIR AND EXHAUST AIR REGISTERS, DISHWASHER EXHAUST HOOD AND GREASE HOOD TO AIRFLOW INDICATED. MAINTAINED THE BUILDING PRESSURIZATION AT POSITIVE PRESSURE OF 0.05 IN. W.C.. AIR BALANCE AIR FOR TOILET AND KITCHEN AT NEGATIVE PRESSURE.
4. TEST, ADJUST AND BALANCE EXHAUST AIR FROM EACH WATER CLOSET AND MINIMUM 80 CFM EACH.

CONSTRUCTION KEYED NOTES:

- 1 EXISTING FLOOR MOUNTED GAS FURNACE TO REMAIN. TEST AND BALANCE EXISTING FURNACE AND ASSOCIATED SUPPLY AIR, RETURN AIR AND OUTSIDE AIR TO AIRFLOW INDICATED. MAINTAIN ROOM PRESSURE AT POSITIVE 0.05"W.C. TO OUTDOOR PRESSURE. PROVIDE TOTAL FAN AIRFLOW FOR SUPPLY AIR, RETURN AIR AND OUTSIDE AIR VENTILATION FOR EACH FURNACE. PROVIDE CERTIFIED TESTING, ADJUSTING AND BALANCING REPORT FOR REVIEW AND APPROVAL.
- 2 TEST AND ADJUST OUTSIDE AIR VENTILATION TO AIRFLOW INDICATED. REPLACE EXISTING AIR VOLUME DAMPER. REPAIR OR REPLACE EXISTING RETURN AIR DAMPER,
- 3 PROVIDE 120 VAC DUCT MOUNTED AIR IONIZER UNIT. AIR IONIZING UNIT FOR EACH GAS HEATING FURNACE AS LISTED BELOW:
HV-1: PLASMA MODEL 7103 FOR 0 TO 1400 CFM RANGE.
HV-2: PLASMA MODEL 7203 FOR 1401 TO 2800 CFM RANGE.
HV-3: PLASMA MODEL 7203 FOR 1401 TO 2800 CFM RANGE.
HV-4: PLASMA MODEL 7303 FOR 1401 TO 2800 CFM RANGE.
PROVIDE POWER INTERLOCKS TO ENABLE THE IONIZING UNIT WHEN THE FURNACE IS ENERGIZED. PROVIDE 18"x18" HINGED ACCESS PANEL (AP) WITH KEYED DOOR LATCH. PROVIDE PERMANENT NAMEPLATE ON DOOR PANEL TO READ 'AIR IONIZING UNIT'. ATTACHED A COPY OF THE PLASMA AIR IONIZER OPERATION AND MAINTENANCE INSTRUCTIONS ON THE BACK OF THE ACCESS DOOR. SEE DETAIL 3/M2.10 FOR DUCT MOUNTING DETAILS.
- 4 PROVIDE NEW EXHAUST VENTILATION FAN EF-3 FOR TOILET AND JANITOR'S ROOM EXHAUST AND ASSOCIATED DUCTWORK, AIR REGISTERS, SUPPORTS AND ANCHORS. TEST, ADJUST AND BALANCE TO AIRFLOW INDICATED. REFER TO FAN SCHEDULE ON DRAWING M1.10 FOR DETAILED REQUIREMENTS.
- 5 EXISTING EXHAUST FAN EF-2 FOR DISHWASHER TO REMAIN.
- 6 PROVIDE NEW AIR DISTRIBUTION DUCTWORK FOR SUPPLY AIR AND EXHAUST AIR, AIR REGISTERS, BALANCING DAMPERS, SUPPORTS, SEISMIC BRACES ASSOCIATED ANCHORS AS INDICATED. TEST, ADJUST AND BALANCE TO AIRFLOW INDICATED. REFER TO M1.10 FOR AIR DIFFUSER AND REGISTER SCHEDULED REQUIREMENTS.
- 7 THE EXISTING ROOF WILL BE REPLACED. REMOVE EXISTING CONDENSING UNITS AND STORE FOR REINSTALLATION WHEN REROOFING IS COMPLETE. PROVIDE NEW EQUIPMENT PAD ON THE NEW ROOF. PROVIDE ANCHORS TO THE EQUIPMENT PAD. RECONNECT EXISTING PIPING AND POWER. FIELD VERIFY FOR PROPER CONNECTIONS FOR PIPING AND POWER. PROVIDE CONDENSATE PIPING TO EXISTING ROOF DRAIN RECEPTOR.
- 8 PROVIDE 18"x18" ACCESS PANEL WITH KEYED LATCH.



SEAL

APPROVALS

PROJECT TITLE

City of Berkeley
WEST BERKELEY SENIOR CENTER

1900 Sixth St
Berkeley, CA 94710

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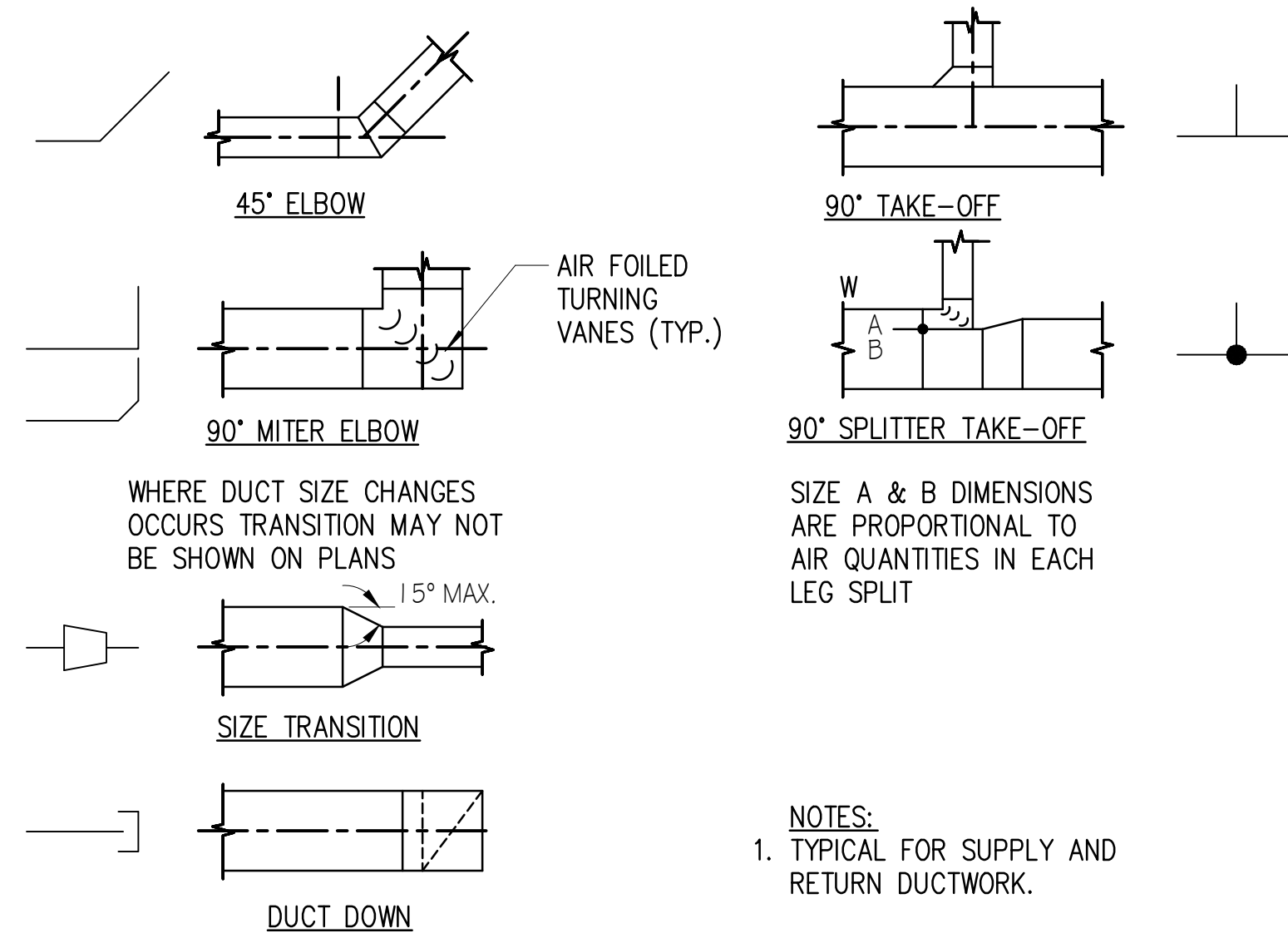
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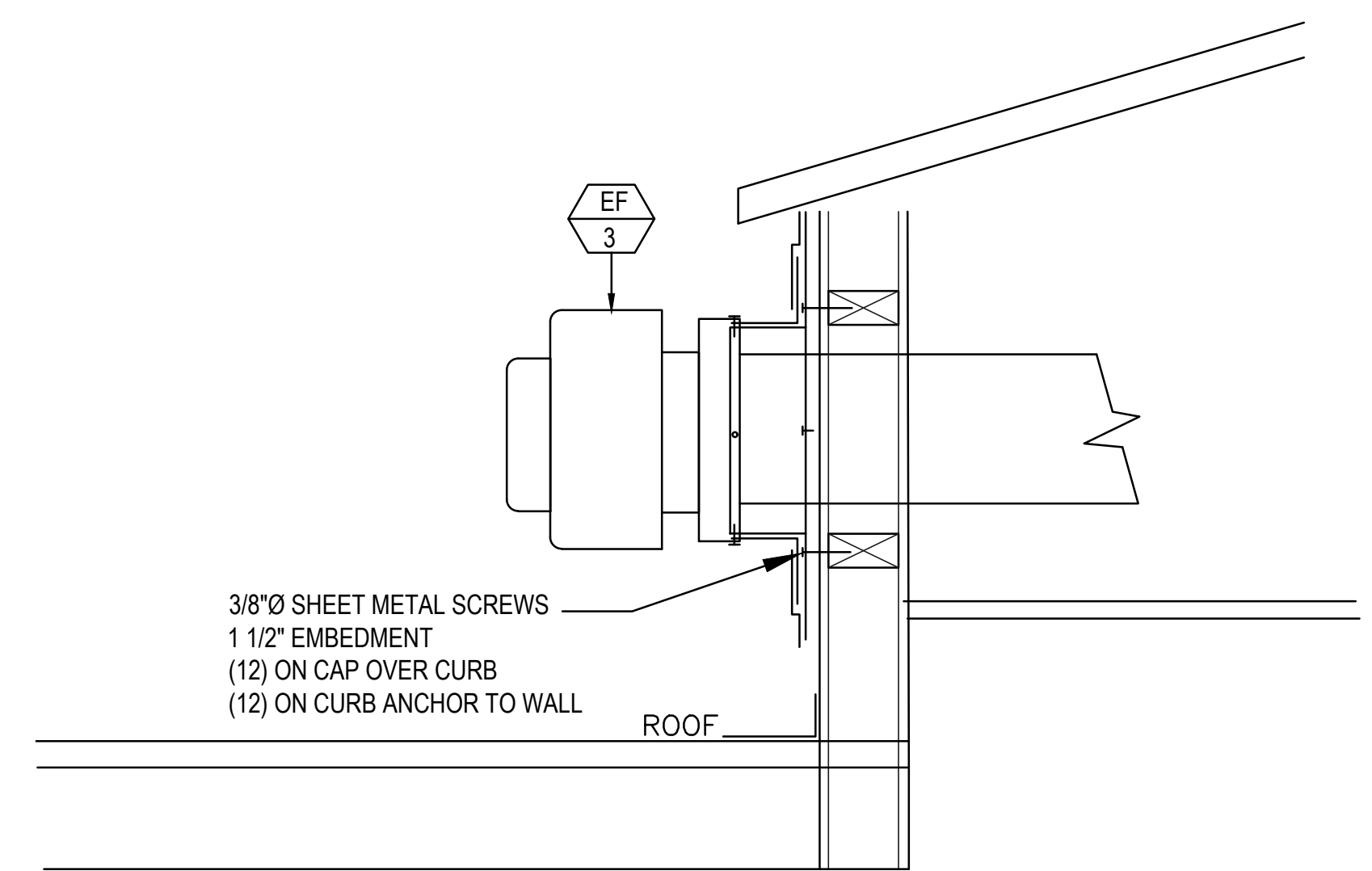
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HVAC CONSTRUCTION PLAN

SHEET NUMBER

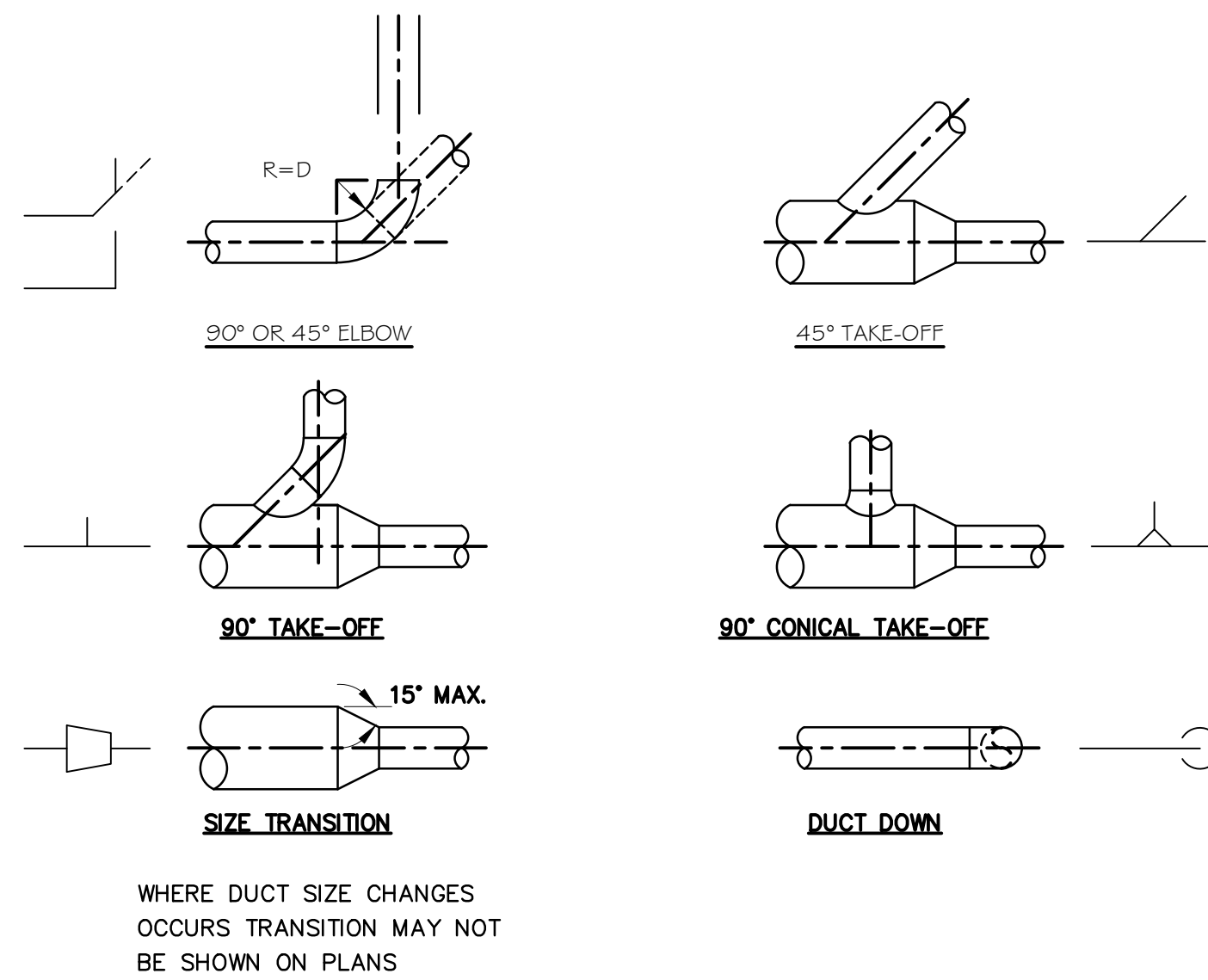
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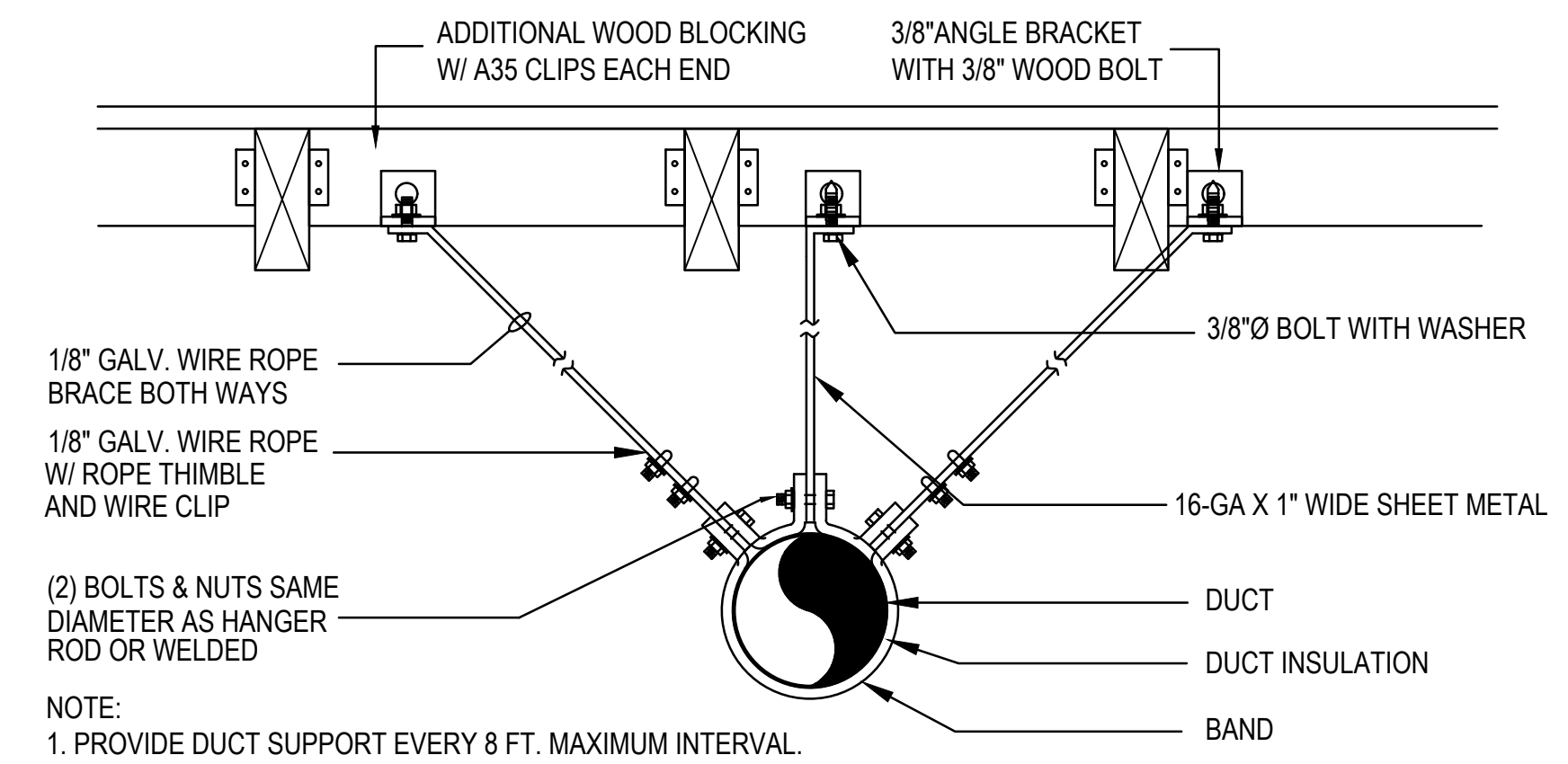
1 RECTANGULAR DUCT DETAILS
scale: N.T.S.



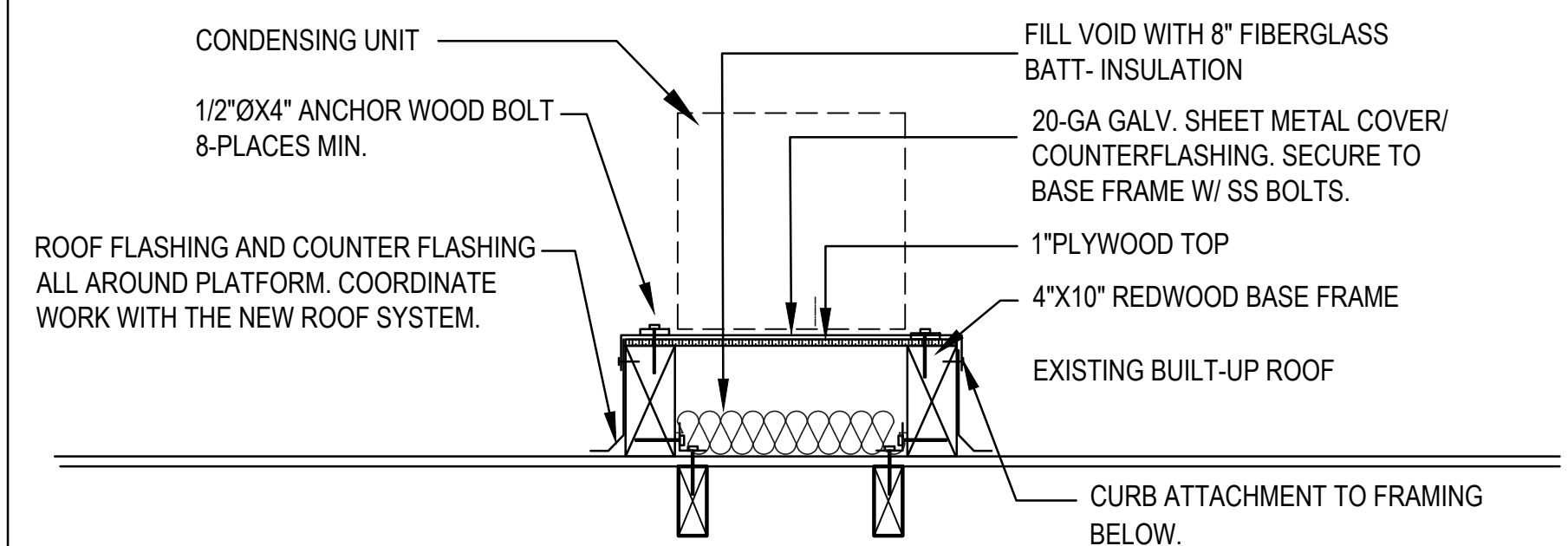
3 TOILET EXHAUST DETAIL
scale: N.T.S.



2 ROUND DUCT DETAILS
scale: N.T.S.



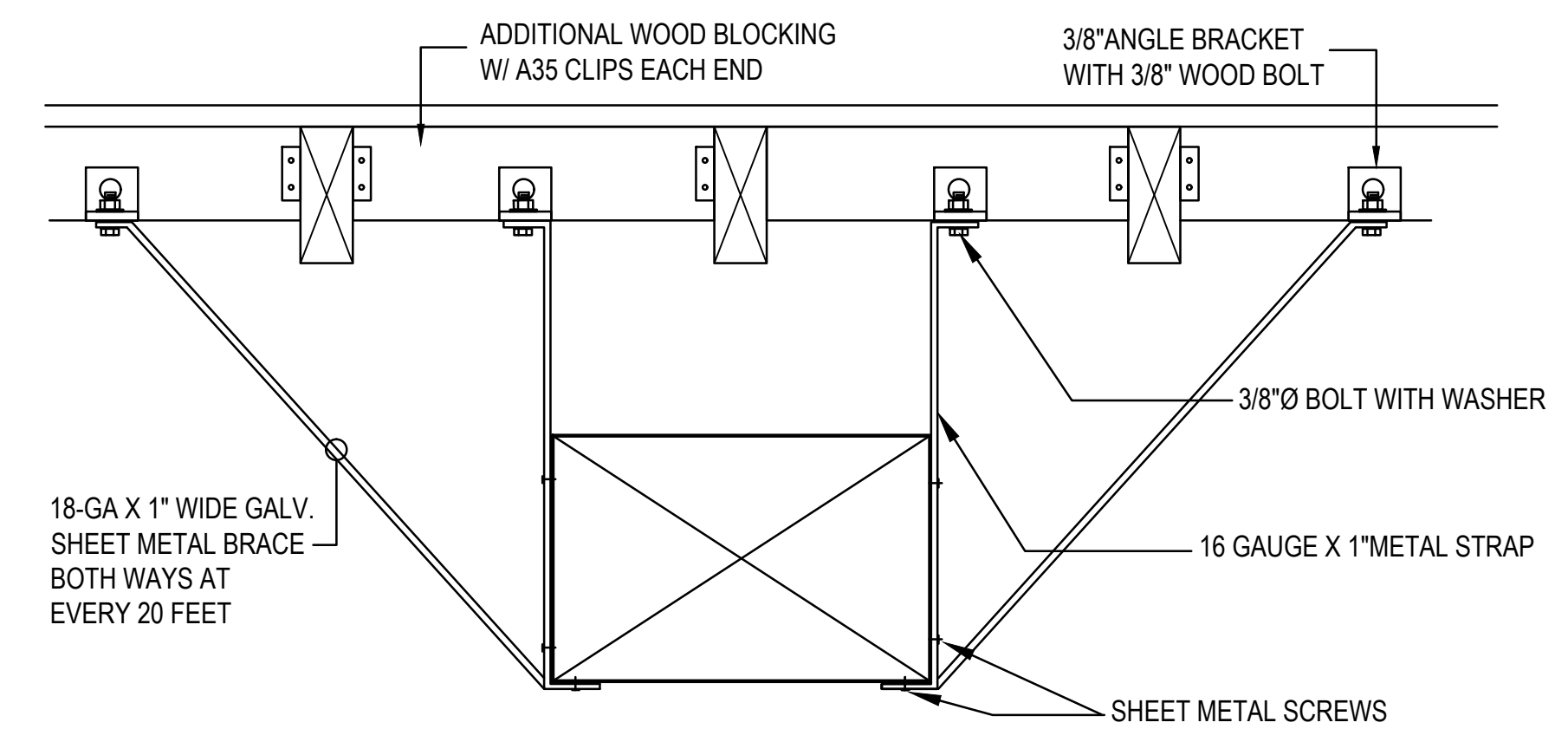
4 ROUND DUCT SUPPORT DETAIL
scale: N.T.S.



NOTE: VERIFY LOCATIONS OF EXISTING ROOF FRAMING FOR CURB ANCHORAGE. ADJUST PAD SIZE AS NEEDED TO CONFORM WITH EXISTING FRAMING.

NOTE: PROVIDE EQUIPMENT PAD SIZED TO ACCOMMODATE TWO (2) EXISTING CONDENSING UNITS AND SPACE TO ANCHOR BOLTS, PIPING AND ELECTRICAL POWER. PROVIDE UNISTRUT FRAME STAND TO THE CONDENSING UNIT POWER DISCONNECTS.

6 EQUIPMENT ROOF PAD SUPPORT DETAIL
scale: N.T.S. (REVISED 2/16/24)



5 RECTANGULAR DUCT SUPPORT DETAIL
scale: N.T.S.

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APPROVALS

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REVISIONS

DATE	DESCRIPTION
02.21.2024	Bid Addendum

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SHEET TITLE

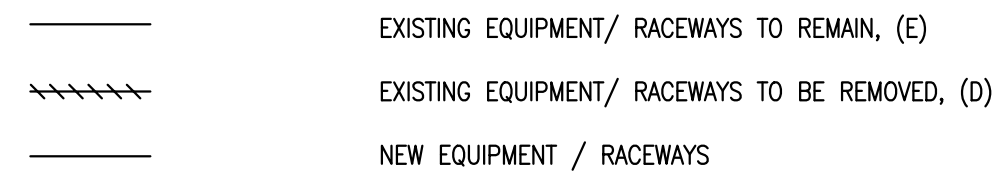
HVAC DETAILS

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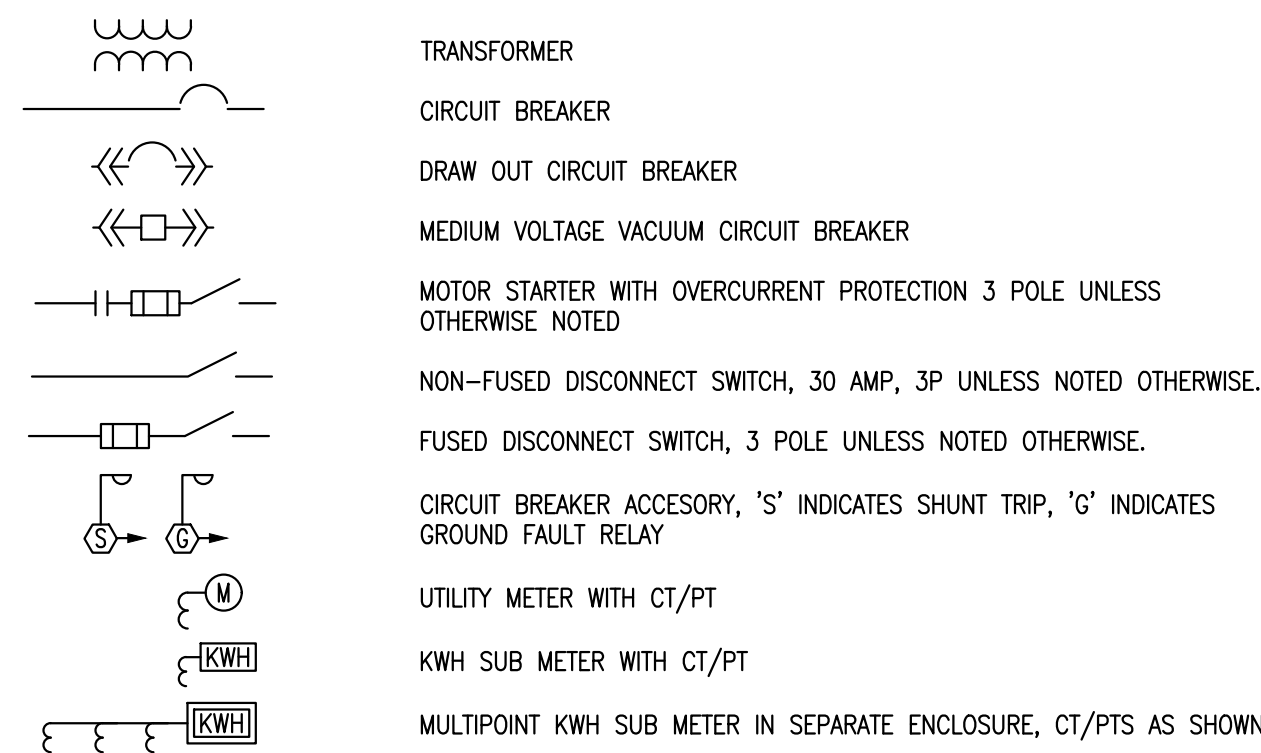
M3.00

SYMBOL LIST (NOT ALL SYMBOLS USED)

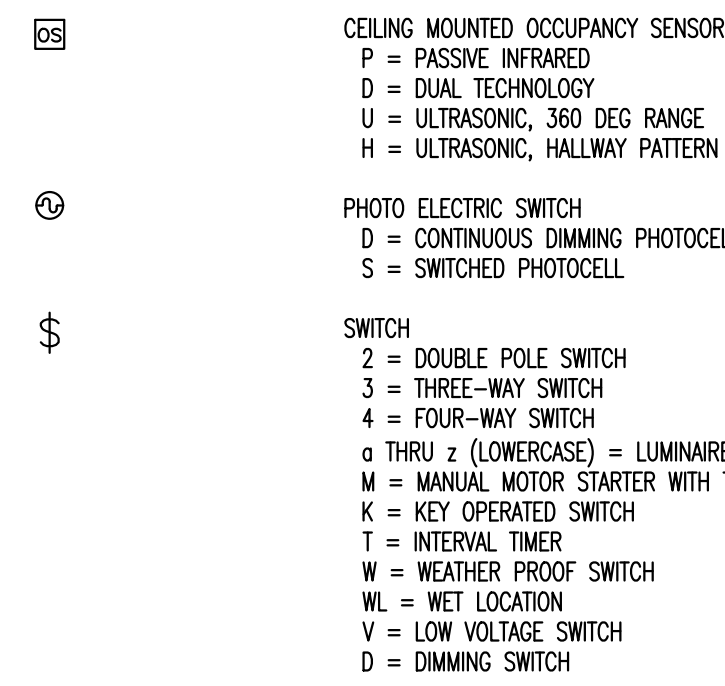
LINE TYPES



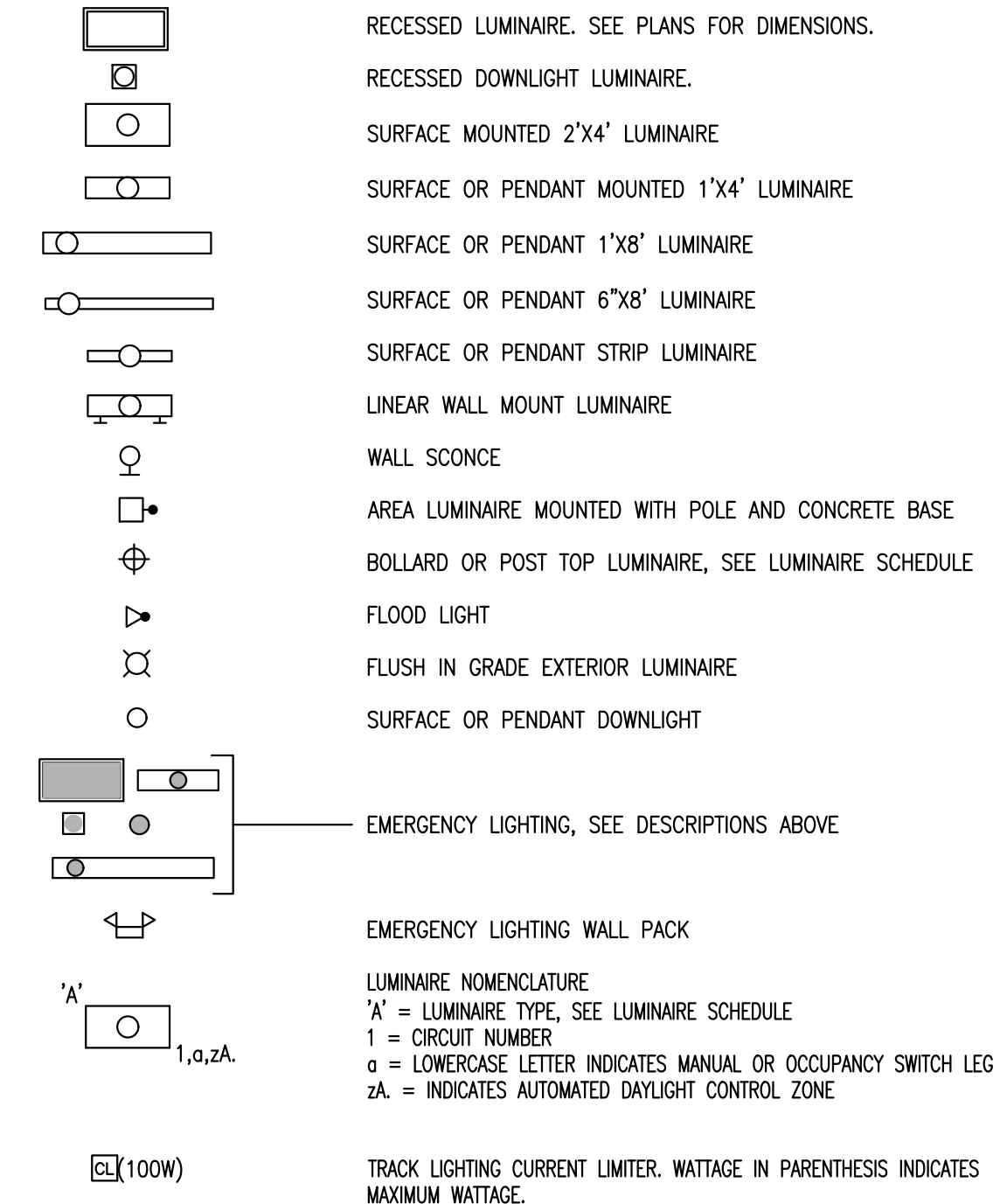
SINGLE LINE DIAGRAM



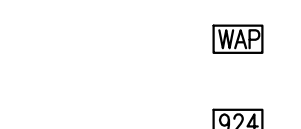
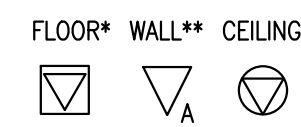
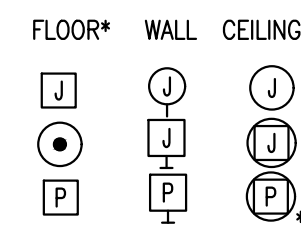
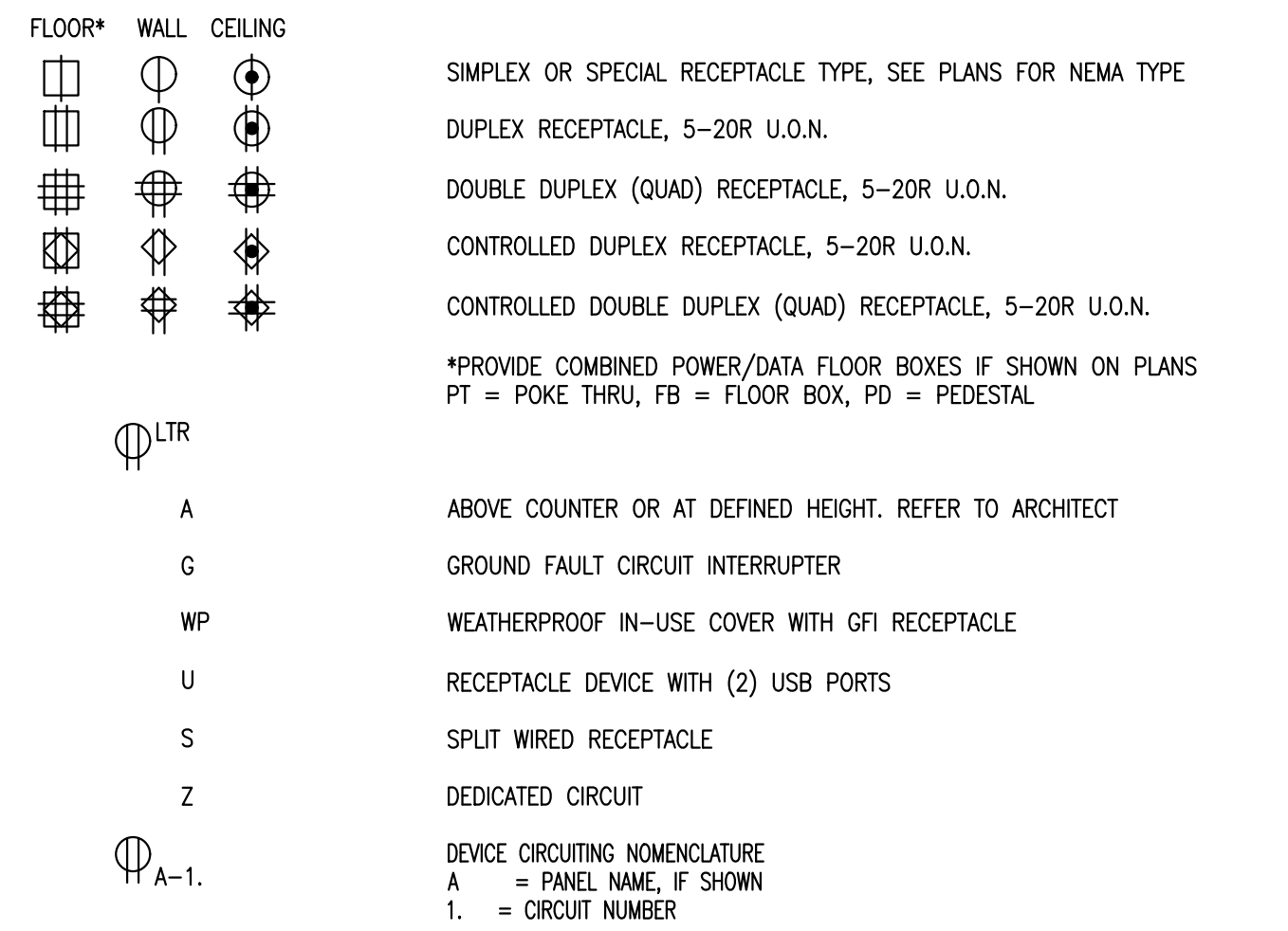
LIGHTING CONTROLS



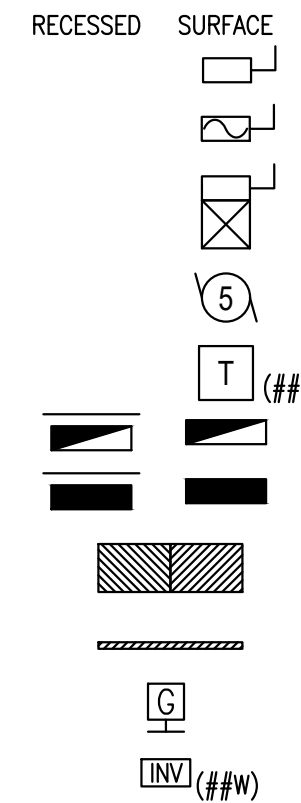
LUMINAIRES



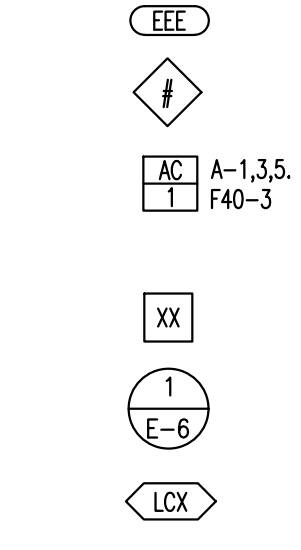
DEVICES



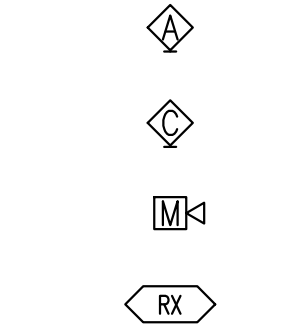
EQUIPMENT



TAGS



SECURITY/ACCESS CONTROL



ABBREVIATIONS

- (E) EXISTING
- (D) DEMOLISH
- (R) RELOCATE
- (RL) NEW LOCATION OF RELOCATED DEVICE
- A AMPERES, AMPER
- AHJ AUTHORITY HAVING JURISDICTION
- AIC AVAILABLE INTERRUPTING CAPACITY
- C CONDUIT, CLOSE, CONTROL
- CA CABLE
- CAT CATEGORY
- CU COPPER
- DA DIAMETER
- DIM DIMENSION
- DV DIVISION
- DN DOWN
- DWG DRAWING
- EA EACH
- FF FINISH FLOOR
- FT FOOT, FEET G,
- GND GROUND
- GFCI GROUND FAULT CIRCUIT INTERRUPTER
- GFI GROUND FAULT INTERRUPTER
- IG ISOLATED GROUND
- KV KILOVOLT
- KVA KILOVOLT AMPERES
- KW KILOWATT
- LV LOW VOLTAGE
- MCA MINIMUM CIRCUIT AMPS
- MISC MISCELLANEOUS
- MOCP MAXIMUM OVERCURRENT PROTECTION
- NEC NATIONAL ELECTRIC CODE
- NTS NOT TO SCALE
- PH PHASE
- QTY QUANTITY
- RM ROOM
- STD STANDARD
- TBD TO BE DETERMINED
- TGB TELECOMMUNICATIONS GROUNDING BUS BAR
- TYP TYPICAL
- UL UNDERWRITERS LABORATORIES
- V VOLTS, VOLTAGE
- WP WEATHERPROOF

CODES & STANDARDS

1. 2022 CALIFORNIA BUILDING CODE
2. 2022 CALIFORNIA ELECTRICAL CODE
3. 2022 CALIFORNIA MECHANICAL CODE
4. 2022 CALIFORNIA PLUMBING CODE
5. 2022 CALIFORNIA ENERGY CODE (TITLE 24)
6. 2022 CALIFORNIA FIRE CODE
7. 2022 CALIFORNIA GREEN CODE
8. CITY OF BERKELEY DESIGN & CONSTRUCTION STANDARDS

DRAWING INDEX

- E0.01 COVER SHEET – ELECTRICAL
- ED1.01 DEMOLITION PLAN – ELECTRICAL
- E1.01 FLOOR PLAN – ELECTRICAL
- E2.01 SINGLE LINE DIAGRAM AND SCHEDULES
- E3.01 DETAILS
- E4.01 SPECIFICATIONS
- E5.01 ENERGY COMPLIANCE FORMS

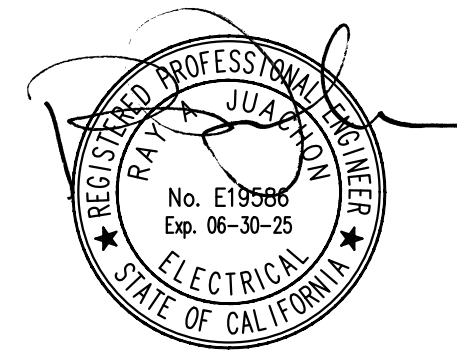
GENERAL ELECTRICAL NOTES

- A. SCHEDULE WORK IN EXISTING BUILDINGS WITH THE OWNER. MINIMIZE DISRUPTION OF NORMAL OPERATIONS.
- B. VISIT THE SITE BEFORE SUBMITTING A BID TO OBSERVE EXISTING CONDITIONS.
- C. DO NOT INSTALL ELECTRICAL BOXES IN RATED WALLS CLOSER THAN 2”-0” TO EACH OTHER. PROVIDE “PADDY” PADS OR EQUIVALENT ON EACH BOX INSTALLED.
- D. PLANS DO NOT GENERALLY INDICATE WIRE COUNTS. FOR EACH 20 AMP, 120 VOLT OR 277 VOLT CIRCUIT, PROVIDE (1) #12 PHASE CONDUCTOR, (1) #12 NEUTRAL CONDUCTOR AND (1) #12 GROUNDING CONDUCTOR. WHERE MULTIPLE CIRCUITS ARE SHOWN, UP TO THREE SEPARATE AND DIFFERENTLY PHASED CIRCUITS (A, B AND C) PROVIDE DEDICATED NEUTRALS UNLESS OTHERWISE NOTED AND A SINGLE GROUNDING CONDUCTOR. WHERE DRAWINGS INDICATE WIRE SIZES/COUNTS, PROVIDE SUCH CIRCUIT, NEUTRAL AND GROUNDING CONDUCTORS FOR THE PORTION OF THE CIRCUIT WHERE SUCH CONDUCTORS SHARE A COMMON CONDUIT. GROUND WIRE INSULATION: GREEN. ALL WORK COMPLY WITH CEC 300.17.
- E. IN ALL CASES AND FOR ALL SYSTEMS AND COMPONENTS, USE ONLY EQUIPMENT IN ACCORDANCE WITH ITS LISTING OR LABELING. [CEC 110.3(B)]
- F. USE ONLY EQUIPMENT MARKED (LISTED/LABELED) AS SUITABLE FOR INSTALLATION AND WITH HIGHER TEMPERATURE RATED CONDUCTORS AT THE AMPACITY OF THE HIGHER RATED CONDUCTORS. REFER TO THE UL ELECTRICAL CONSTRUCTION MATERIAL DIRECTORY FOR CIRCUIT BREAKERS, SWITCHES, PANELBOARDS, SWITCHBOARDS, ETC. [CEC 110.14(C)]
- G. PROVIDE SUFFICIENT ACCESS AND WORKING CLEARANCE ABOUT THE ELECTRICAL EQUIPMENT IN ACCORDANCE WITH CEC 110.26(A).
- H. PROVIDE ACCESS AND ENTRANCES TO AND EGRESS FROM WORKING SPACE ABOUT ELECTRICAL EQUIPMENT IN ACCORDANCE WITH CEC 110.26(C).
- I. INSTALL ONLY RECEPTACLE OUTLETS WITH GROUND-FAULT CIRCUIT INTERRUPTER PROTECTION IN LOCATIONS SPECIFIED AS BATHROOMS, COMMERCIAL AND INSTITUTIONAL KITCHENS, ROOFTOPS AND OUTDOOR PUBLIC SPACES. SEE EXCEPTIONS. [CEC 210.8(B)]
- J. PROVIDE OUTLET DEVICE(S) INSTALLED ON A BRANCH CIRCUIT WITH A RATING IN ACCORDANCE WITH CEC 210.21(B) (SEE EXCEPTIONS, AND REFER TO 210.21(B) TABLE(S)).
- K. DO NOT INSTALL CONDUCTORS OTHER THAN SERVICE CONDUCTORS IN THE SAME SERVICE RACEWAY OR SERVICE CABLE WITH OTHER CONDUCTORS. SEE EXCEPTIONS. [CEC 230.7]
- L. PROVIDE GROUND FAULT PROTECTION OF EQUIPMENT IN ACCORDANCE WITH CEC 230.95 AND 240.13 (SEE EXCEPTIONS).
- M. FOR PVC CONDUIT, PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR RUN WITH THE FEEDER CONDUCTORS AND SIZE PER CEC TABLE 250.122.
- N. FOR PERMANENTLY CONNECTED APPLIANCES RATED NOT OVER 300 VOLTIAMPERES OR 1/8 HORSEPOWER, THE BRANCH-CIRCUIT SWITCH OR CIRCUIT BREAKER SHALL BE PERMITTED TO SERVE AS THE DISCONNECTING MEANS. [CEC 422.31]
- O. KEEP LIFE SAFETY BRANCH WIRING ENTIRELY INDEPENDENT OF ALL OTHER WIRING AND SHALL NOT ENTER THE SAME RACEWAYS, BOXES, OR CABINETS WITH EACH OTHER OR OTHER WIRING. [CEC 517.41(D)] (SEE EXCEPTIONS)]
- P. PROVIDE DEFERRED APPROVAL AND DESIGN BUILD FOR ANY REQUIRED MODIFICATION TO THE EXISTING FIRE ALARM SYSTEM. SUBMIT COMPLETE DRAWINGS TO THE FIRE MARSHALL FOR APPROVAL AND ASSUME FULL RESPONSIBILITY OF THE SYSTEM, DEVICE QUANTITY AND LOCATION, WIRING, PROGRAMMING AND CONTROL PANELS. COORDINATE FINAL DEVICE LOCATIONS WITH THE ARCHITECT PRIOR TO ROUGH-IN.

NOLL & TAM ARCHITECTS

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SEAL



Date Signed:
12/18/23

RIJA

5515 Doyle St., #7
Emeryville, CA 94608
RIJA Project #: 2021055
www.rjainc.com

APPROVALS

PROJECT TITLE

City of Berkeley WEST BERKELEY SERVICE CENTER

1900 Sixth St
Berkeley, CA 94710

BID SET

ISSUE DATE	12.22.2023
N&T JOB NUMBER	22121
REVISIONS	
	DATE DESCRIPTION
1	8/25/23 REV 1 - PLAN CHECK
2	10/20/23 REV 2 - PLAN CHECK

DRAWN BY CAD CHECKED BY RAJ
SHEET TITLE

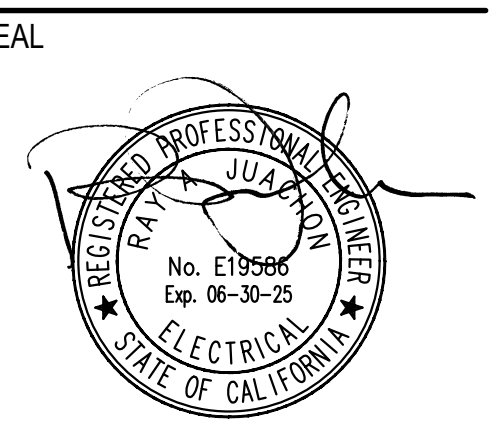
COVER SHEET - ELECTRICAL

SHEET NUMBER

E0.01

NOLL & TAM ARCHITECTS

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Date Signed:
12/18/23

RIJA
5515 Doyle St., #7
Emeryville, CA 94608
RIJA Project #: 2021055
www.rjainc.com

APPROVALS

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REVISIONS	DATE	DESCRIPTION
1	8/25/23	REV 1 - PLAN CHECK
2	10/20/23	REV 2 - PLAN CHECK

DRAWN BY CAD CHECKED BY RAJ

SHEET TITLE
DEMOLITION PLAN - ELECTRICAL

SHEET NUMBER

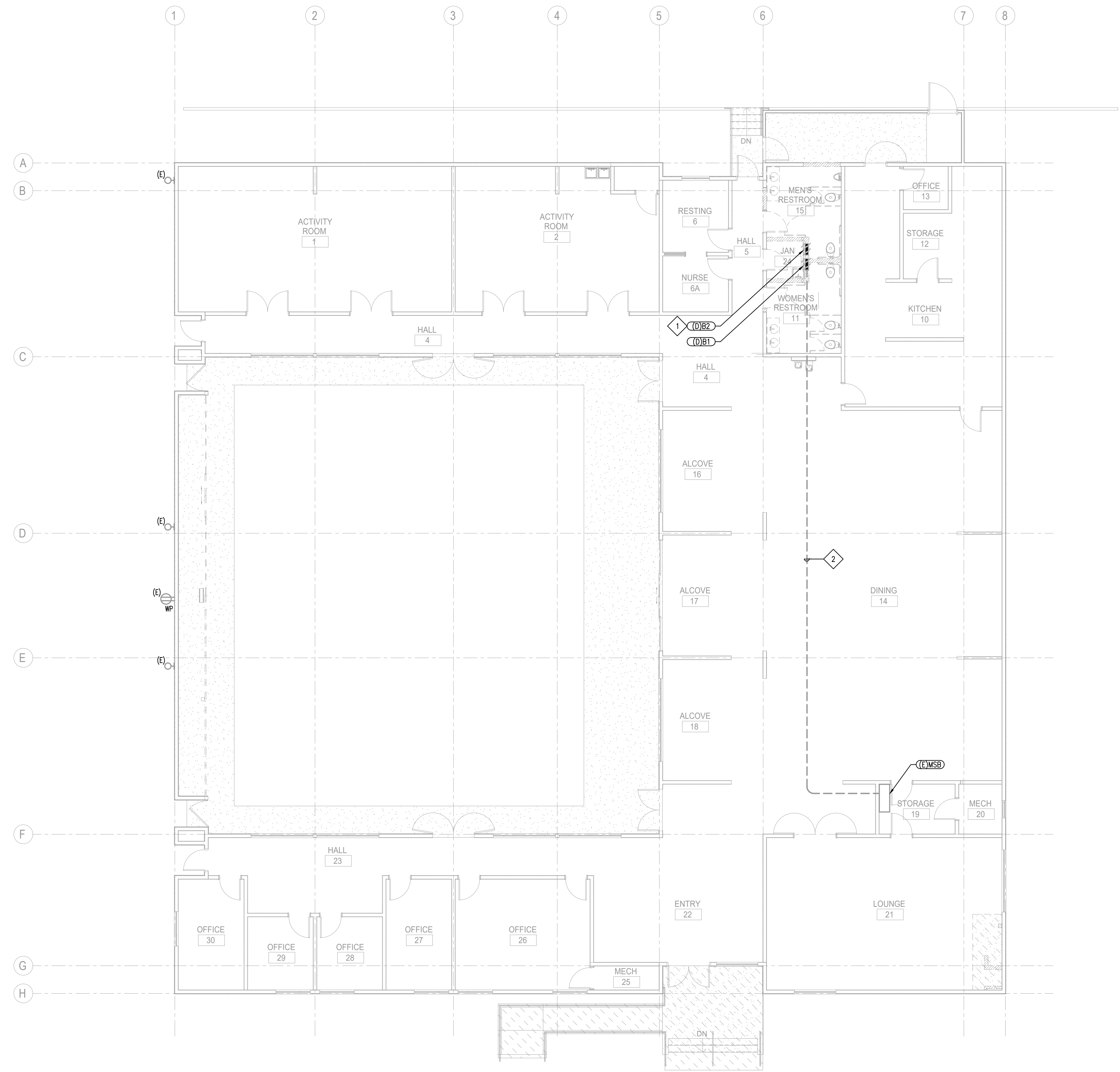
ED1.01

GENERAL SHEET NOTES

- COORDINATE DEMOLITION WORK WITH ARCHITECT AND BUILDING OWNER PRIOR TO COMMENCEMENT OF WORK.
- DEMOLISH EXISTING RECEPTACLES, VOICE/DATA OUTLETS, FEEDERS, ETC., AS REQUIRED TO ACCOMMODATE NEW CONSTRUCTION AND INDICATED WITH CROSSMARKS ON DRAWINGS. REUSE SPARE CIRCUITS AS MUCH AS POSSIBLE FOR NEW WORK. COORDINATE AND SEQUENCE DEMOLITION WORK WITH PROVISIONS OF CONSTRUCTION DOCUMENT DIVISIONS.
- REMOVE EXISTING MATERIALS CONFLICTING WITH REMODEL WORK INDICATED IN THE CONSTRUCTION DOCUMENTS AND SUBJECT TO CONDITIONS INDICATED IN SUCH.
- REMOVE ELECTRICAL MATERIALS MOUNTED IN OR ON WALLS AND CEILING TO BE REMOVED AS INDICATED IN ARCHITECTURAL CONSTRUCTION DOCUMENTS.
- MAINTAIN IN OPERATION EXISTING SYSTEMS NOT INDICATED FOR REMOVAL IN CONSTRUCTION DOCUMENTS.
- PROVIDE UPDATED PANEL SCHEDULES THAT IDENTIFY EXISTING CIRCUITS AND NUMBER OF SPARE CIRCUITS AVAILABLE UPON COMPLETION OF DEMOLITION WORK.
- VERIFY EXISTING CONDITIONS PRIOR TO PROCEEDING WITH WORK. PROVIDE ADDITIONAL SPUR BOXES, ETC., AS REQUIRED FOR COMPLETE AND PROPERLY OPERATING SYSTEM. REUSE IN PLACE EXISTING CONDUIT NOT REMOVED DURING DEMOLITION IF SIZED IN ACCORDANCE WITH LATEST EDITION OF THE C.E.C. (CALIFORNIA ELECTRICAL CODE) AND THOROUGHLY CLEANED AND SWABBED PRIOR TO PULLING NEW WIRES.
- OBTAIN COPY OF EXISTING AS-BUILT DRAWINGS PRIOR TO BID.
- WHERE REMOVAL OF OUTLET(S) INTERRUPT EXISTING CONDUIT AND/OR CIRCUIT, WALL OR PORTION OF THE CIRCUIT AND RESULTS IN LOSS OF CIRCUIT CONTINUITY, REROUTE, EXTEND AND RECONNECT REMAINING CONDUIT AND/OR CIRCUIT AS REQUIRED TO PROVIDE CONTINUITY OF THE CIRCUIT THAT REMAINS IN SERVICE TO OUTLETS AND EQUIPMENT.
- WHERE DRAWINGS INDICATE EXISTING ELECTRICAL EQUIPMENT OR DEVICES TO BE RELOCATED AND/OR REUSED, REFURBISH THEM. THOROUGHLY CLEAN SUCH ITEMS. NOTIFY ARCHITECT OF ANY DEFECTS IN SUCH INSTALLATIONS. REPAIR ANY DAMAGE CAUSED BY DEMOLITION OR CONSTRUCTION PERFORMED UNDER THIS CONTRACT.

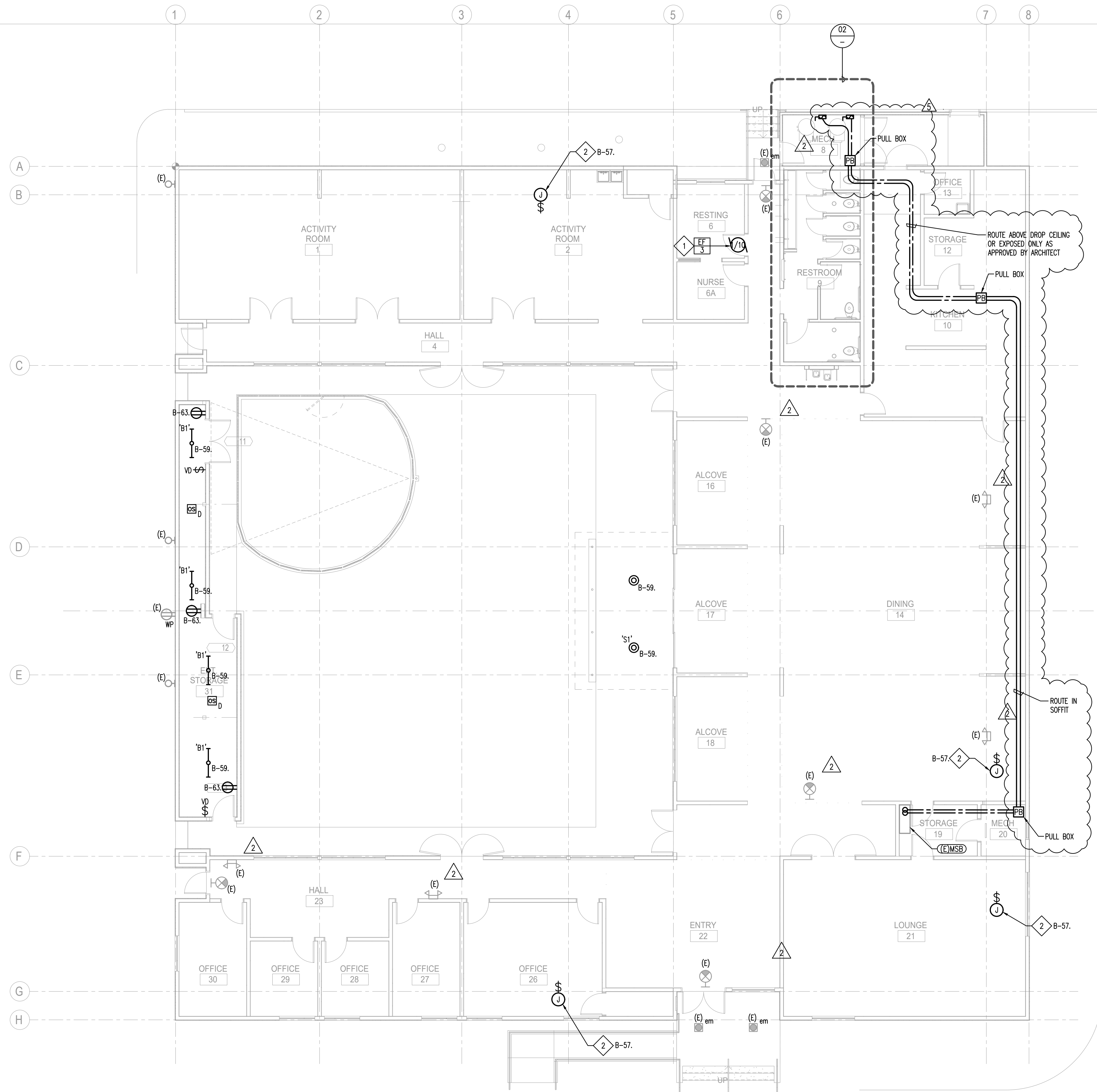
SHEET NOTES #

- EXISTING RELAY CABINET ABOVE PANEL B2 TO BE RELOCATED. REFER TO NEW WORK FOR LOCATION.
- EXISTING FEEDER ASSUMED TO BE ROUTED IN SLAB, TO PANEL B1. FIELD VERIFY.



01 | DEMOLITION PLANS - ELECTRICAL
SCALE: 1/8" = 1'-0"

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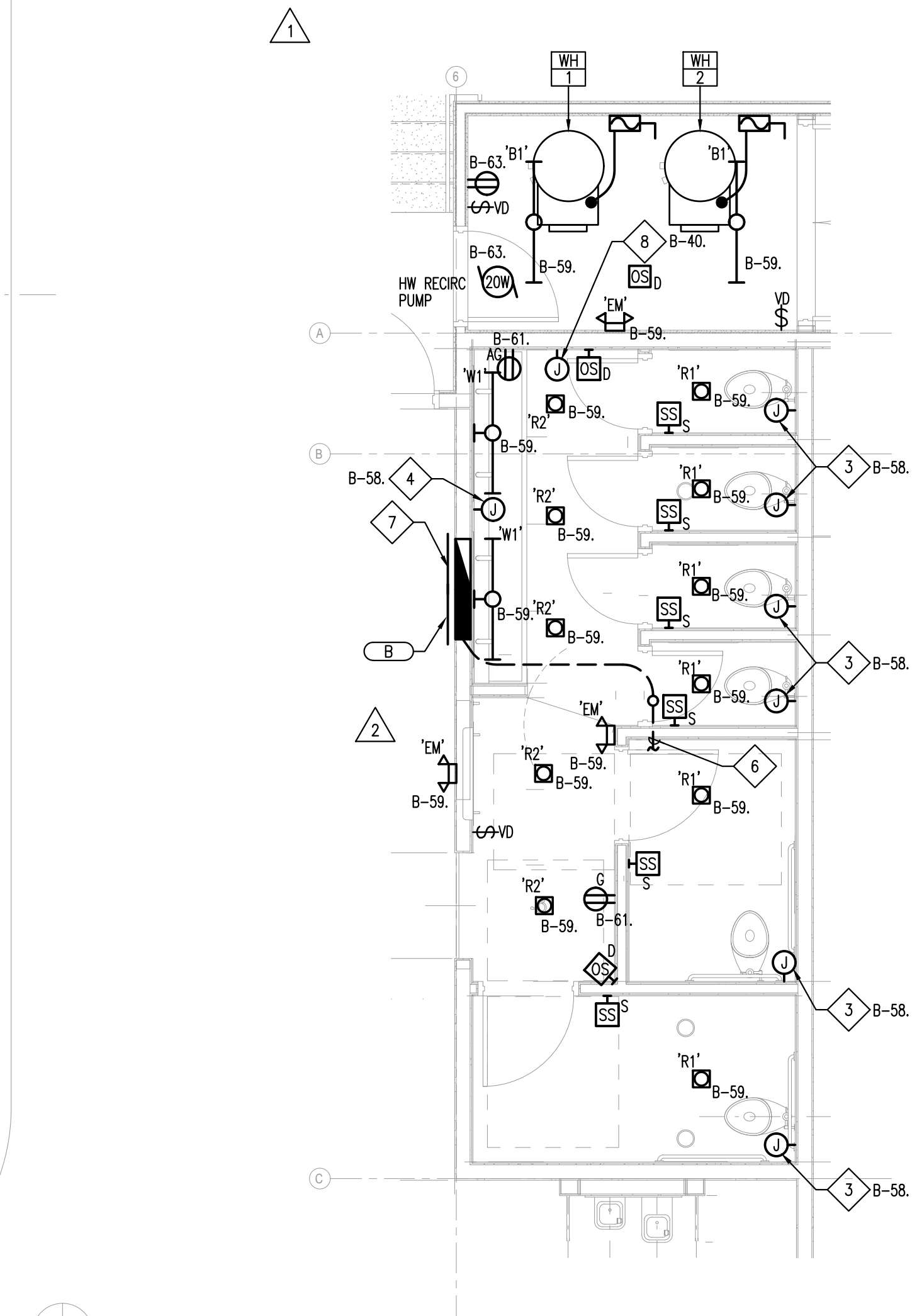
01 FLOOR PLANS - ELECTRICAL
SCALE: 1/8" = 1'-0"

SHEET NOTES

- INTERCEPT AND EXTEND EXISTING CIRCUIT AND CONNECT TO NEW EXHAUST FAN COMPLETE.
- 120V FOR IONIZATION UNIT. PROVIDE LOCAL 20A RELAY DEVICE TO POWER ON IONIZATION UNIT WHEN FURNACE IS RUNNING, AND POWER OFF IONIZATION UNIT WHEN FURNACE IS OFF.
- 120V FOR FLUSH VALVE.
- 120V FOR LAV FAUCET.
- PROVIDE RECESSED JUNCTION BOX FOR INTERCEPT AND SPLICE OF EXISTING BRANCH CIRCUIT CONDUCTORS. JUNCTION BOX SIZED PER CODE. REFER TO SINGLE LINE DIAGRAM FOR ADDITIONAL INFORMATION.
- FIELD VERIFY EXISTING FEEDER IN SLAB. EXTEND EXISTING FEEDER UNDERGROUND TO NEW PANEL B LOCATION. REFER TO SINGLE LINE DIAGRAM AND SCHEDULES FOR ADDITIONAL INFORMATION.
- LOCATION OF RELOCATED RELAY CABINET, RECONNECT COMPLETE TO PLACE BACK INTO SERVICE.
- 120V FOR HAND-DRYER
- NOT USED

GENERAL SHEET NOTES

- COORDINATE EXACT LOCATION AND MOUNTING HEIGHT OF RECEPTACLES, VOICE/DATA OUTLETS AND ELECTRICAL DEVICES WITH ARCHITECT PRIOR TO INSTALLATION.
- IN FINISHED AREAS RUN ALL CONDUITS CONCEALED U.O.N. PAINT ALL EXPOSED CONDUITS AND ELECTRICAL EQUIPMENT, REFER TO ARCHITECT SPECIFICATIONS FOR PAINTING REQUIREMENTS.
- REFER TO SINGLE LINE DIAGRAMS, EQUIPMENT SCHEDULES, AND DETAILS FOR ADDITIONAL INFORMATION.
- SIZE FUSES FOR ALL MECHANICAL EQUIPMENT PER APPROVED MANUFACTURERS SHOP DRAWINGS.
- PULL BOX SIZES SHOWN FOR STRAIGHT PULL APPLICATION ONLY. SIZE PER NEC ARTICLE 314.
- FIELD COORDINATE EXACT ROUTING OF UNDERGROUND INFRASTRUCTURE. PROVIDE ADDITIONAL SPLICE/PULL BOXES AS REQUIRED IF CONDUIT BENDS EXCEED THREE 90 DEGREE BENDS (OR 270 DEGREES TOTAL).

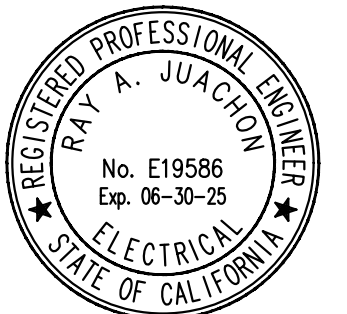


02 ENLARGED PLAN - ELECTRICAL
SCALE: 1/4" = 1'-0"

NOLL & TAM
ARCHITECTS

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SEAL



Date Signed:
2/20/24



5515 Doyle St., #7
Emeryville, CA 94608
RIJA Project #: 2021055
www.rijainc.com

APPROVALS

PROJECT TITLE

City of Berkeley
WEST BERKELEY SERVICE CENTER

1900 Sixth St
Berkeley, CA 94710

BID SET

ISSUE DATE 12.22.2023

N&T JOB NUMBER 22121

REVISIONS	DATE	DESCRIPTION
1	8/25/23	REV 1 - PLAN CHECK
2	10/20/23	REV 2 - PLAN CHECK
5	2/20/24	ADDENDUM

DRAWN BY CAD CHECKED BY RAJ

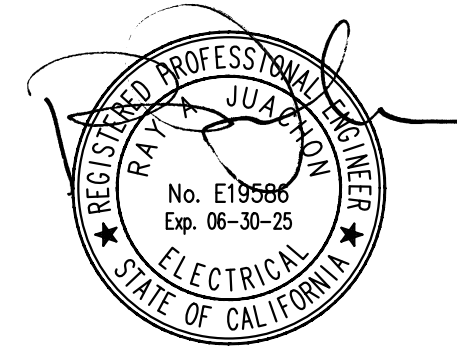
SHEET TITLE

FLOOR PLAN - ELECTRICAL

SHEET NUMBER

E1.01

SEAL



Date Signed:
12/18/23



5515 Doyle St., #7
Emeryville, CA 94608
RIJA Project #: 2021055
www.rjainc.com

APPROVALS

PROJECT TITLE

City of Berkeley
WEST BERKELEY SERVICE CENTER

1900 Sixth St
Berkeley, CA 94710

BID SET

ISSUE DATE: 12.22.2023

N&T JOB NUMBER: 22121

REVISIONS

NO.	DATE	DESCRIPTION
1	8/25/23	REV 1 - PLAN CHECK
2	10/20/23	REV 2 - PLAN CHECK

DRAWN BY: CAD CHECKED BY: RAJ

SHEET TITLE

SINGLE LINE DIAGRAM AND SCHEDULES

SHEET NUMBER

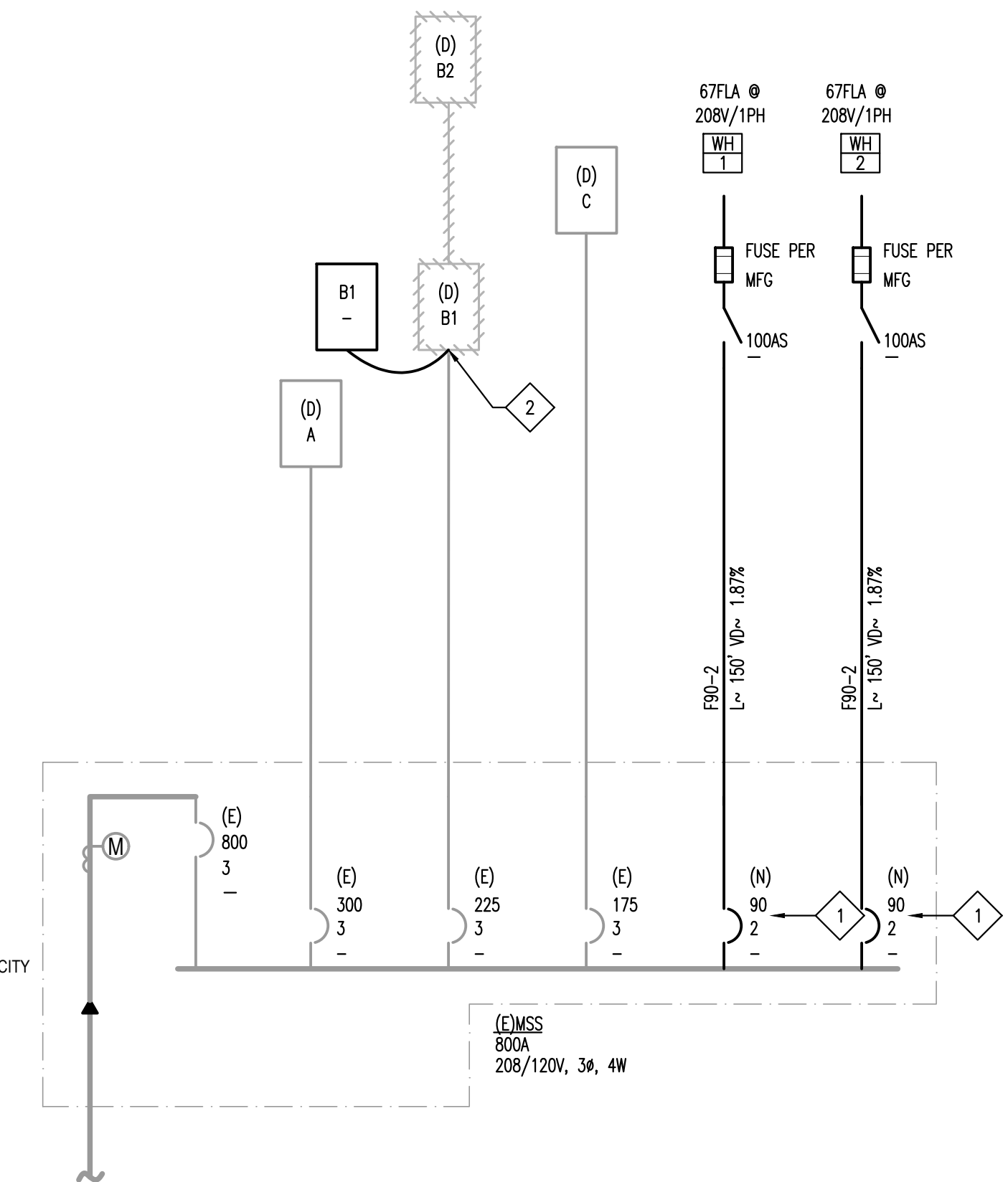
E2.01

GENERAL SHEET NOTES

- A. DERATE WIRE SIZE PER NEC FOR NUMBER OF CURRENT CARRYING WIRES AND FOR AMBIENT TEMPERATURE OF 86F
- B. FEEDERS SHOWN ARE COPPER CONDUCTORS WITH THHN/THWN INSULATION TYPE UNLESS NOTED OTHERWISE.
- C. FEEDER LENGTH AND VOLTAGE DROP CALCULATIONS ARE FOR ESTIMATING VOLTAGE DROP AND SHORT CIRCUIT COORDINATION PURPOSES ONLY. CONTRACTOR SHALL USE ACTUAL FEEDER LENGTHS TO CALCULATE ACTUAL VOLTAGE DROP AND SHORT CIRCUIT VALUES.
- D. THE CONTRACTOR SHALL PROVIDE AND INSTALL PERMANENT ARC FLASH WARNING LABELS FOR ALL NEW POWER DISTRIBUTION EQUIPMENT (CEC 110.16). LABEL SHALL BE FACTORY APPLIED AND MARKED TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRICAL ARC FLASH HAZARDS.

SHEET NOTES

1. NEW CIRCUIT BREAKER TO MATCH EXISTING SWITCHBOARD MANUFACTURER AND AIC RATING.
2. DISCONNECT AND REMOVE EXISTING PANELBOARD. INTERCEPT EXISTING FEEDER AND EXTEND TO NEW PANEL B LOCATION. EXTEND EXISTING BRANCH CIRCUITS TO NEW PANEL B LOCATION.



LOAD VERIFICATION
 SERVICE CAPACITY: 230.4 KW
 PEAK LOAD: 27.52 KW
 DATE RECORDED: 3/1/2019
 125% OF PEAK LOAD: 34.4 KW
 LOAD ADDED: 31.8 KW
 NEW LOAD: 66.2 KW
 LOAD ADDITION DOES NOT EXCEED THE EXISTING SERVICE CAPACITY

01 | SINGLE LINE DIAGRAM
SCALE: NTS

PANEL B		VOLTAGE: 208/120 V		PHASE A: 1500 VA 12.5 A							
		PHASEWIRE: 3 PH 4W		PHASE B: 3400 VA 28.3 A							
		MAIN AMPS: MLD		PHASE C: 430 VA 3.6 A							
		BUS AMPS: 225 A		CONNECTED: 5330 VA 14.8 A							
		AIC RATING: 22000 A		DEMAND: 5438 VA 15.1 A							
		MOUNTING: SURFACE									
NOTES	LOAD DESCRIPTION	Φ	VA	BKR	CKT	CKT	BKR	VA	Φ	LOAD DESCRIPTION	NOTES
1	(EXISTING PANEL B1 LOAD)	A		15/1	1	2	15/1		A	(EXISTING PANEL B1 LOAD)	1
1	(EXISTING PANEL B1 LOAD)	B		15/1	3	4	15/1		B	(EXISTING PANEL B1 LOAD)	1
1	(EXISTING PANEL B1 LOAD)	C		15/1	5	6	15/1		C	(EXISTING PANEL B1 LOAD)	1
1	(EXISTING PANEL B1 LOAD)	A		15/1	7	8	15/1		A	(EXISTING PANEL B1 LOAD)	1
1	(EXISTING PANEL B1 LOAD)	B		15/1	9	10	15/1		B	(EXISTING PANEL B1 LOAD)	1
1	(EXISTING PANEL B1 LOAD)	C		15/1	11	12	15/1		C	(EXISTING PANEL B1 LOAD)	1
1	(EXISTING PANEL B1 LOAD)	A		15/1	13	14	15/1		A	(EXISTING PANEL B1 LOAD)	1
1	(EXISTING PANEL B1 LOAD)	B		15/1	15	16	15/1		B	(EXISTING PANEL B1 LOAD)	1
1	(EXISTING PANEL B1 LOAD)	C		15/1	17	18	15/1		C	(EXISTING PANEL B1 LOAD)	1
1	(EXISTING PANEL B1 LOAD)	A		15/1	19	20	15/1		A	(EXISTING PANEL B1 LOAD)	1
1	(EXISTING PANEL B1 LOAD)	B		15/1	21	22	15/1		B	(EXISTING PANEL B1 LOAD)	1
1	(EXISTING PANEL B1 LOAD)	C		15/1	23	24	15/1		C	(EXISTING PANEL B1 LOAD)	1
1	(EXISTING PANEL B1 LOAD)	A		15/1	25	26	15/1		A	(EXISTING PANEL B1 LOAD)	1
1	(EXISTING PANEL B1 LOAD)	B		15/1	27	28	15/1		B	(EXISTING PANEL B1 LOAD)	1
1	(EXISTING PANEL B1 LOAD)	C		15/1	29	30	15/1		C	(EXISTING PANEL B1 LOAD)	1
1	(EXISTING PANEL B1 LOAD)	A		20/2	31	32	15/1		A	(EXISTING PANEL B1 LOAD)	1
-	-	B		-	33	34	15/1		B	(EXISTING PANEL B1 LOAD)	1
1	(EXISTING PANEL B1 LOAD)	C		20/2	35	36	15/1		C	(EXISTING PANEL B1 LOAD)	1
-	-	A		-	37	38	20/1		A	SPACE	
1	(EXISTING PANEL B1 LOAD)	B		20/2	39	40	20/1	G	1500	B	HAND DRYER
-	-	C		-	41	42			C	SPACE	
2	(EXISTING PANEL B2 LOAD)	A		15/1	43	44	15/1		A	(EXISTING PANEL B2 LOAD)	2
2	(EXISTING PANEL B2 LOAD)	B		15/1	45	46	15/1		B	(EXISTING PANEL B2 LOAD)	2
2	(EXISTING PANEL B2 LOAD)	C		15/1	47	48	15/1		C	(EXISTING PANEL B2 LOAD)	2
2	(EXISTING PANEL B2 LOAD)	A		15/1	49	50	15/1		A	(EXISTING PANEL B2 LOAD)	2
2	(EXISTING PANEL B2 LOAD)	B		15/1	51	52	15/1		B	(EXISTING PANEL B2 LOAD)	2
2	(EXISTING PANEL B2 LOAD)	C		15/1	53	54	15/1		C	(EXISTING PANEL B2 LOAD)	2
2	(EXISTING PANEL B2 LOAD)	A		15/1	55	56	15/1		A	(EXISTING PANEL B2 LOAD)	2
	IONIZATION UNIT	B	500	G	20/1	57					
	NEW LIGHTING	C	430	L	20/1	59					
	R - RESTROOM	A	1500	R	20/1	61					
	R - STORAGE	B	900	R	20/1	63					
	HW CIRC PUMP	C				65					
	SPACE	A				67					
	SPACE	B				69					
	SPACE	C				71					

GENERAL NOTES		SCHEDULE NOTES				
a.		1. REFER TO EXISTING PANEL DIRECTORY B1. PROVIDE NEW				
b.		2. REFER TO EXISTING PANEL DIRECTORY B2. PROVIDE NEW				
c.		3.				
LOAD TYPE	LOAD DESCRIPTION	CONNECTED (KVA)	SUBFED (KVA)	TOTAL BY TYPE (KVA)	DEMAND FACTOR (KVA)	DEMAND BY TYPE (KVA)
G	GENERAL	2.50	0.00	2.50	100%	2.50
L	LIGHTING	0.43	0.00	0.43	125%	0.54
R	RECEPTACLES	2.40	0.00	2.40	100%/50%	2.40
K	KITCHEN	0.00	0.00	0.00	100%	0.00
H	HEATING	0.00	0.00	0.00	100%	0.00
M	MOTORS	0.00	0.00	0.00	125%	0.00
LM	LARGEST MOTOR	0.00	0.00	0.00	125%	0.00
WH	WATER HEATER	0.00	0.00	0.00	125%	0.00
C	CONTINUOUS	0.00	0.00	0.00	125%	0.00

FEEDER SCHEDULE (COPPER)			
FEEDER TAG	WIRE AND CONDUIT	MAXIMUM CIRCUIT BREAKER	ACTUAL FEEDER CAPACITY
2 WIRE + GND			
F20-2	2 #12, 1#12 GND IN 3/4" C	20	20
F30-2	2 #10, 1#10 GND IN 3/4" C	30	30
F40-2	2 #8, 1#10 GND IN 3/4" C	40	40
F50-2	2 #6, 1#8 GND IN 3/4" C	60	55
F70-2	2 #4, 1#8 GND IN 1" C	70	70
F90-2	2 #2, 1#8 GND IN 1" C	90	95
F125-2	2 #1, 1#6 GND IN 1-1/4" C	125	130
3 WIRE + GND			
FEEDER TAG	WIRE AND CONDUIT		
F20-3	3 #12, 1#12 GND IN 3/4" C	20	20
F30-3	3 #10, 1#10 GND IN 3/4" C	30	30
F40-3	3 #8, 1#10 GND IN 1" C	40	40
F50-3	3 #6, 1#8 GND IN 1" C	60	55
F70-3	3 #4, 1#8 GND IN 1-1/4" C	70	70
F90-3	3 #2, 1#8 GND IN 1-1/4" C	90	95
F125-3	3 #1, 1#6 GND IN 1-1/2" C	125	130
F150-3	3 #10, 1#6 GND IN 1-1/2" C	150	150
F175-3	3 #20, 1#6 GND IN 2" C	175	175
F200-3	3 #30, 1#6 GND IN 2" C	200	200
F225-3	3 #40, 1#4 GND IN 2" C	225/250	230
F250-3	3 #250, 1#4 GND IN 2-1/2" C	250/300	255
F300-3	3 #350, 1#4 GND IN 3" C	300/350	310
F350-3	3 #500, 1#2 GND IN 4" C	350/400	380
F400-3	2 SETS (3 #30, 1#2 GND IN 2" C)	400	400
F450-3	2 SETS (3 #40, 1#1 GND IN 2-1/2" C)	450/500	460
F500-3	2 SETS (3 #250, 1#1 GND IN 2-1/2" C)	500/600	510
F600-3	2 SETS (3 #350, 1#1 GND IN 3" C)	600/700	620
F700-3	2 SETS (3 #500, 1#1/0 GND IN 3" C)	700/800	760
F800-3	3 SETS (3 #350, 1#1/0 GND IN 3" C)	800	930
4 WIRE + GND			
FEEDER TAG	WIRE AND CONDUIT		
F20-4	4 #12, 1#12 GND IN 3/4" C	20	20
F30-4	4 #10, 1#10 GND IN 3/4" C	30	30
F40-4	4 #8, 1#10 GND IN 1" C	40	40
F50-4	4 #6, 1#8 GND IN 1-1/4" C	60	55
F70-4	4 #4, 1#8 GND IN 1-1/4" C	70	70
F90-4	4 #2, 1#8 GND IN 1-1/2" C	90	95
F125-4	4 #1, 1#6 GND IN 2" C	125	130
F150-4	4 #10, 1#6 GND IN 2" C	150	150
F175-4	4 #20, 1#6 GND IN 2" C	175	175
F200-4	4 #30, 1#6 GND IN 2-1/2" C	200	200
F225-4	4 #40, 1#4 GND IN 2-1/2" C	225/250	230
F250-4	4 #250, 1#4 GND IN 3" C	250/300	255
F300-4	4 #350, 1#4 GND IN 3" C	300/350	310
F350-4	4 #500, 1#2 GND IN 4" C	350/400	380
F400-4	2 SETS (4 #30, 1#2 GND IN 2-1/2" C)	400	400
F450-4	2 SETS (4 #40, 1#1 GND IN 2-1/2" C)	450/500	460
F500-4	2 SETS (4 #250, 1#1 GND IN 3" C)	500/600	510
F600-4	2 SETS (4 #350, 1#1 GND IN 3" C)	600/700	620
F700-4	2 SETS (4 #500, 1#1/0 GND IN 4" C)	700/800	760
F800-4	3 SETS (4 #350, 1#1/0 GND IN 3" C)	800	930

FEEDER SCHEDULE NOTES:
 A. CONDUIT SIZES ARE MINIMUM.
 B. USE MINIMUM 1" C FOR UNDERGROUND WORK.
 C. ABOVE 86 DEG. F AMBIENT, INCREASE WIRE SIZE PER NATIONAL ELECTRICAL CODE.
 D. DERATE WIRE SIZE PER NEC FOR MORE THAN THREE CURRENT CARRYING WIRES IN CONDUIT.

SUMMARY OF VOLT DROP LIMITS			
CIRCUIT VOLTS (V)	2% VOLTAGE DROP (V)	3% VOLTAGE DROP (V)	TOTAL LOSS (V)
120	2.4	3.6	6.0
208	4.2	6.2	10.4

SUMMARY OF MAXIMUM FEEDER AND BRANCH CIRCUIT LENGTHS					
WIRE (AWG)	CIRCUIT AMPS (A)	MAXIMUM FEEDER LENGTH (ft)		MAXIMUM BRANCH CIRCUIT LENGTH (ft)	
		120V	208V	120V	208V
14	12	39	67	58	101
12	16	46	80	69	120
10	24	48	83	72	125
8	32	57	99	86	149
6	40	73	127	110	190
4	52	89	154	134	232
2	72	103	178	154	267
1/0	96	123	212	184	319
2/0	108	137	238	206	357
4/0	144	163	283	245	425
250	164	170	294	255	441
300	184	181	314	272	471
350	200	195	338	292	506
500	248	224	388	336	582

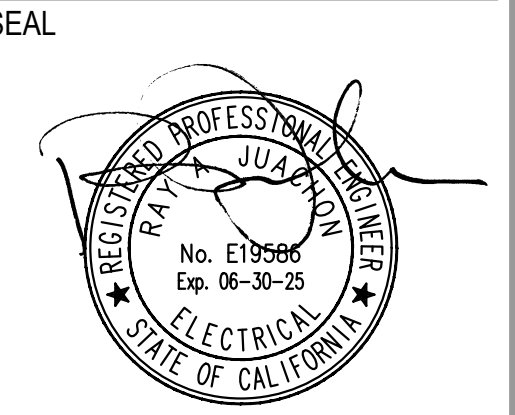
LUMINAIRE SCHEDULE	
A. DIMMING CONTROL PROTOCOL (0-10VDC, LINE VOLTAGE, DALI, ETC.) COMPATIBLE WITH LIGHTING CONTROL SYSTEM AS SPECIFIED AND SHOWN ON DRAWINGS.	
B. COORDINATE ALL CEILING TYPES WITH LUMINAIRE LOCATIONS PRIOR TO ORDERING LUMINAIRES. COORDINATE INSTALLATION WITH REFLECTED CEILING PLAN.	
C. SPECIFIED MANUFACTURERS ARE APPROVED TO SUBMIT BID. INCLUSION DOES NOT RELIEVE MANUFACTURER FROM SUPPLYING PRODUCT AS DESCRIBED.	
D. PROVIDE SUBMITTALS THAT INCLUDE THE LUMINAIRE, LAMP AND BALLAST INFORMATION OF EACH LUMINAIRE, WITH APPLICABLE OPTIONS CLEARLY CHECKED OR HIGHLIGHTED. SUBMITTALS NOT INCLUDING THIS INFORMATION WILL BE RETURNED AS REJECTED BY THE ENGINEER OF RECORD.	
TYPE:	B1
DESCRIPTION:	BACK OF HOUSE LINEAR LED
MOUNTING:	PENDANT OR SURFACE
FINISH:	MATTE BLACK
DRIVER/BALLAST:	0-10V 1% DIM
LED/LAMPS:	4000L, 3500K, 80 CRI
WATTS:	31W
MANUFACTURER:	DAY BRITE #FSS-4-40L-835-UNV-DIM-BK OR APPROVED
NOTES:	
TYPE:	R1
DESCRIPTION:	4" RECESSED LED DOWNLIGHT
MOUNTING:	RECESSED
FINISH:	STANDARD WHITE
DRIVER/BALLAST:	INTEGRAL TRIAC
LED/LAMPS:	908L, 3500K, 80CRI
WATTS:	10W
MANUFACTURER:	LUCIFER FRAXION #4R-FFS-1-WH-WH-80C12A-35-10-X-TR2 OR APPROVED
NOTES:	
TYPE:	R2
DESCRIPTION:	4" RECESSED LED DOWLIGHT SLO

WATTSTOPPER DLM – GENERAL NOTES

- A. BASIS OF DESIGN IS WATTSTOPPER DLM. CONTRACTOR TO PROVIDE ALL PARTS, DEVICES, WIRING, APPURTENANCES, AND ASSOCIATED LABOR FOR A COMPLETE INSTALLATION.
- B. ALL SENSOR LOCATIONS ARE APPROXIMATE AND SHOWN FOR DESIGN INTENT ONLY. LOCATE SENSORS PER MANUFACTURER GUIDELINES AND INSTALLATION MANUAL. PROVIDE QUANTITIES AND LOCATIONS AS REQUIRED FOR PROPER SENSING. FINAL DEVICE LAYOUT SHALL BE SUBMITTED AS A SHOP DRAWING AS PART OF SUBMITTAL REVIEW. SHOP DRAWING APPROVAL IS REQUIRED PRIOR TO PROCUREMENT AND ROUGH-IN.
- C. LOCATE SENSOR MINIMUM 5 FEET FROM ANY AIR SUPPLY AND/OR RETURN REGISTERS.
- D. THE CONTRACTOR SHALL COMMISSION SENSITIVITY AND TIME DELAY SETTINGS AND PROVIDE TITLE 24 COMMISSIONING DOCUMENTS.
- E. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED OCCUPANCY SENSOR POWER PACKS. PROVIDE J-BOXES WITH BLANK FACEPLATES AT CEILING.
- F. ROOM CONTROLLERS SHALL BE MOUNTED IN AN ACCESSIBLE LOCATION, INSIDE A MULTI-GANG J-BOX WITH BLANK FACEPLATE, CONCEALED IN CABINETS, ABOVE DROP CEILING/CLOUD, OR AT A NEARBY REMOTE LOCATION. COORDINATE FINAL LOCATION OF DEVICES WITH ARCHITECT.
- G. ROOM CONTROLLER QUANTITIES SHOWN ON PLANS FOR DESIGN INTENT. PROVIDE QUANTITIES AS REQUIRED FOR A COMPLETE SYSTEM. ONE ROOM CONTROLLER IS REQUIRED FOR EACH LIGHTING CIRCUIT. PROVIDE ROOM CONTROLLER SERIES WITH THE FOLLOWING THREE SWITCHING ZONES (INCLUDING MULTIPLE DAYLIGHT SWITCHING ZONES) AND CONTINUOUS DIMMING CAPABILITIES.
- H. LMRJ SERIES PRE-TERMINATED CABLES OR CATSE IS ACCEPTABLE. MANUFACTURER RECOMMENDS PROVIDING LMRJ SERIES PRE-TERMINATED CABLES FOR EASE OF INSTALLATION.
- I. COORDINATE WITH MANUFACTURER SO THAT DEVICES ALLOW FOR OPEN TOPOLOGY, AND DO NOT REQUIRE ADDITIONAL CLASS 2 0-10V CONTROL WIRING. DEVICES SHALL HAVE NETWORK CAPABILITY FOR FUTURE USE.
- J. COMPATIBILITY WITH THIRD PARTY EQUIPMENT REQUIRES SELECT DEVICES. THIRD PARTY PROJECTION SCREENS REQUIRE #LMDI-101 AND #LMSW-102 TO UTILIZE DLM CONTROL SWITCH. THIRD PARTY SHADES REQUIRE #LMDI-010 AND #LMSW-102 TO UTILIZE DLM CONTROL SWITCH. COORDINATE WITH ARCHITECT AND OWNER FOR SUCH REQUIREMENTS ON THE PROJECT.
- K. ALL PART NUMBERS SHOWN ARE BY WATTSTOPPER. SEE MANUFACTURER'S WEBSITE FOR SUPPORT DOCUMENTATION AND TECHNICAL SUPPORT.
- L. SYSTEM SHALL HAVE NETWORK CAPABILITY FOR AUTOMATIC DEMAND RESPONSE VIA BMS OR THIRD PARTY SIGNALLY DEVICE.
- M. PROVIDE LMCZ-301 CONTROLLER FOR TIMECLOCK CONTROL OF KITCHEN AND DINING AREAS.

NOLL & TAM ARCHITECTS

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Date Signed:
12/18/23



5515 Doyle St., #7
Emeryville, CA 94608
RIJA Project #: 2021055
www.rjainc.com

APPROVALS

PROJECT TITLE

**City of Berkeley
WEST
BERKELEY
SERVICE
CENTER**

1900 Sixth St
Berkeley, CA 94710

BID SET

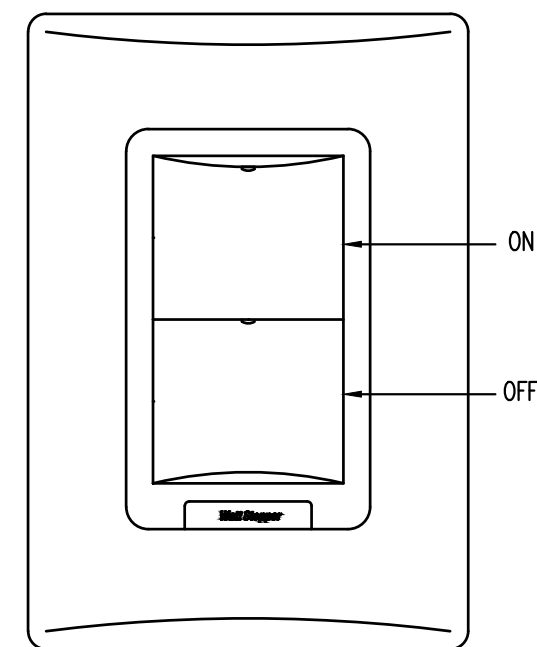
ISSUE DATE	12.22.2023
N&T JOB NUMBER	22121
REVISIONS	
A	DATE DESCRIPTION
1	8/25/23 REV 1 - PLAN CHECK
2	10/20/23 REV 2 - PLAN CHECK

DRAWN BY **CAD** CHECKED BY **RAJ**
SHEET TITLE

DETAILS

SHEET NUMBER

E3.01

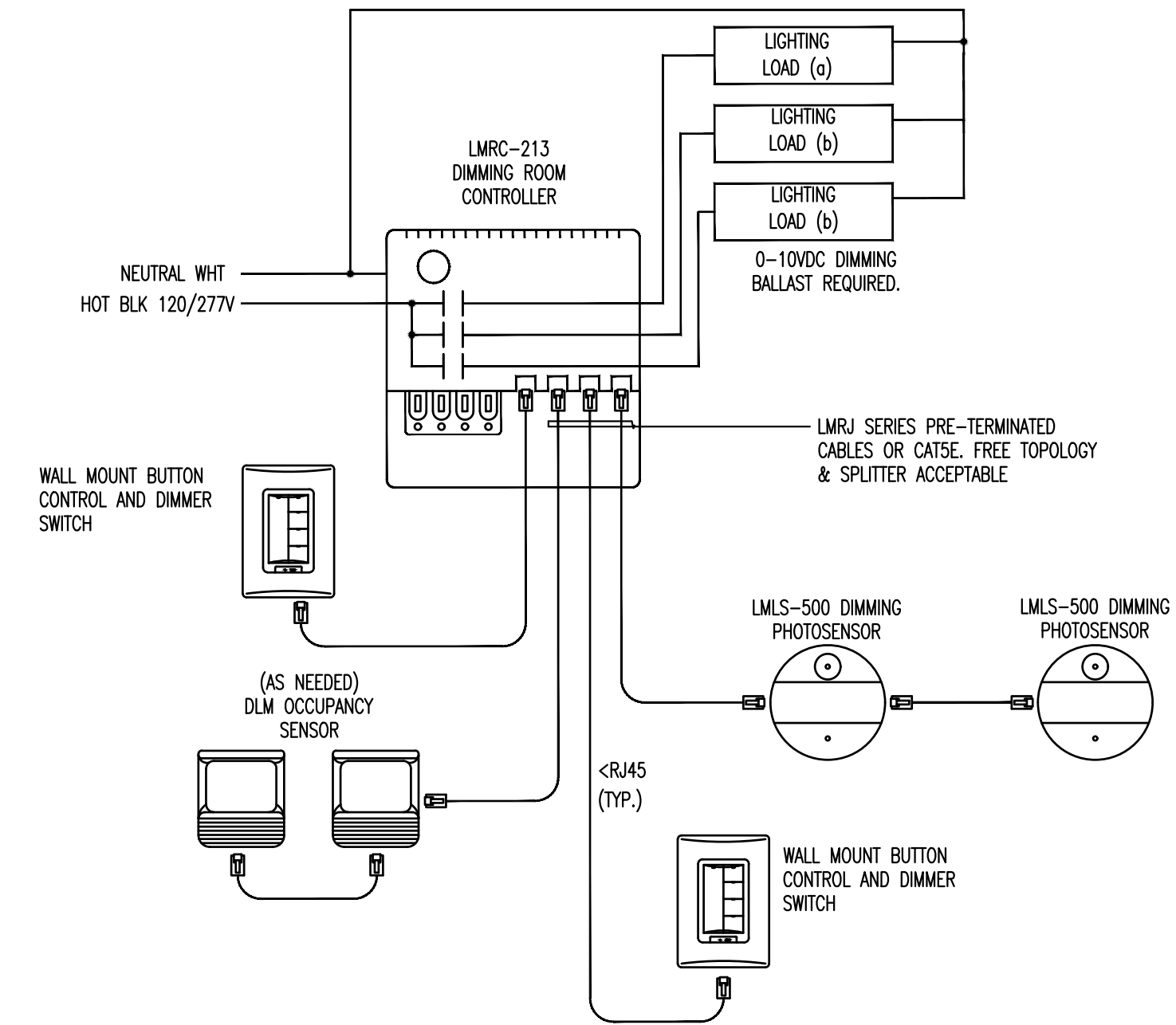


DETAIL NOTES

- A. TYPICAL SWITCHBANK CONFIGURATIONS SHOWN. EACH ZONE SHOWN ON PLAN SHALL HAVE A DEDICATED BUTTON CONTROL.
- B. HOLD BUTTON FOR DIM UP/DOWN.
- C. PROVIDE ENGRAVED LABELING PER CLIENT
- D. PROVIDE # OF BUTTONS AS REQUIRED. UNUSED BUTTONS SHALL BE SPARES.
- E. COORDINATE WITH OWNER AND ARCHITECT FOR ENGRAVING OF BUTTONS AND FACEPLATES. COORDINATE FINAL FINISHES WITH ARCHITECT.
- F. COORDINATE PRESETS WITH CLIENT AND PROVIDE ENGRAVING AS REQUIRED.

2 | TYPICAL SWITCH ELEVATION

SCALE: NTS



1 | DIMMING WIRING DIAGRAM

SCALE: NTS

SECTION 260000 – ELECTRICAL
PART 1 – GENERAL

1.1 SUMMARY

- A. ELECTRICAL SYSTEMS REQUIRED FOR THIS WORK INCLUDES LABOR, MATERIALS, EQUIPMENT, AND SERVICES NECESSARY TO COMPLETE INSTALLATION OF ELECTRICAL WORK SHOWN ON DRAWINGS, SPECIFIED HEREIN OR REQUIRED FOR A COMPLETE OPERABLE FACILITY AND NOT SPECIFICALLY DESCRIBED IN OTHER SECTIONS OF THESE SPECIFICATIONS. AMONG THE ITEMS REQUIRED ARE:
 1. DISTRIBUTION EQUIPMENT SHOWN ON DRAWINGS.
 2. FEEDERS TO DISTRIBUTION PANELS, AND OTHER EQUIPMENT AS DETAILED.
 3. BRANCH CIRCUIT WIRING FROM THE DISTRIBUTION PANELS FOR LIGHTING, RECEPTACLES, MOTORS, SIGNAL SYSTEMS AND OTHER DETAILED CIRCUIT WIRING.
- B. FEES:
 1. OBTAIN AND PAY FOR ELECTRICAL PERMITS, PLAN REVIEW, AND INSPECTIONS FROM LOCAL AUTHORITY HAVING JURISDICTION (AHJ).

1.2 DEFINITIONS

- A. FOLLOWING IS A LIST OF ABBREVIATIONS GENERALLY USED IN THIS DIVISION:
 1. ADA AMERICANS WITH DISABILITIES ACT.
 2. CBC CALIFORNIA BUILDING CODE.
 3. CEC CALIFORNIA ELECTRICAL CODE.
 4. CFC CALIFORNIA FIRE CODE.
 5. CEC T24 CALIFORNIA ENERGY CODE TITLE 24.
 6. HVAC HEATING, VENTILATING AND AIR CONDITIONING.
 7. IEEE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS.
 8. IES ILLUMINATING ENGINEERING SOCIETY
 9. NEMA NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION.
 10. NFPA NATIONAL FIRE PROTECTION ASSOCIATION.
 11. OSHA OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION.
 12. UL UNDERWRITERS LABORATORIES INC.
- B. PROVIDE TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE.
- C. FURNISH SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNPACKING, ASSEMBLY AND INSTALLATION.
- D. INSTALL: INCLUDES UNLOADING, UNPACKING, ASSEMBLING, ERECTING, INSTALLATION, APPLYING, FINISHING, PROTECTING, CLEANING AND SIMILAR OPERATIONS AT THE PROJECT SITE AS REQUIRED TO COMPLETE ITEMS OF WORK FURNISHED BY OTHERS.

1.3 SUBMITTALS

- A. OPERATION AND MAINTENANCE DOCUMENTATION: PROVIDE COPIES OF CERTIFICATES OF CODE AUTHORITY ACCEPTANCE, TEST DATA, PRODUCT DATA, GUARANTEES, WARRANTIES, AND THE LIKE.
- B. SHOP DRAWINGS: PROVIDE SHOP DRAWINGS WHICH INCLUDE PHYSICAL CHARACTERISTICS, ELECTRICAL CHARACTERISTICS, DEVICE LAYOUT PLANS, WIRING DIAGRAMS, AND THE LIKE. PROVIDE PRODUCT SUBMITTALS AND SHOP DRAWINGS IN EITHER PAPER FORMAT OR ELECTRONIC FORMAT. ELECTRONIC FORMAT MUST BE SUBMITTED VIA EMAIL OR FTP SITE. FOR PAPER HARD COPY, PROVIDE ONE COMPLETE BINDER WITH TABBED DIVIDERS CONTAINING A SEPARATE SUBMITTAL FOR EACH SPECIFICATIONS SECTION. FOR ELECTRONIC FORMAT, PROVIDE ONE ZIP FILE PER SPECIFICATION DIVISION CONTAINING A SEPARATE FILE FOR EACH SPECIFICATIONS SECTION. INDIVIDUAL SUBMITTALS SENT PIECEMEAL IN A PER SPECIFICATION SECTION METHOD WILL BE RETURNED WITHOUT REVIEW OR COMMENT. COPY ARCHITECT ON ALL SUBMISSIONS.
 1. IDENTIFY EACH SUBMITTAL IN DETAIL. NOTE WHAT DIFFERENCES, IF ANY, EXIST BETWEEN THE SUBMITTED ITEM AND THE SPECIFIED ITEM. FAILURE TO IDENTIFY THE DIFFERENCES WILL BE CONSIDERED CAUSE FOR DISAPPROVAL. IF DIFFERENCES ARE NOT IDENTIFIED AND/OR NOT DISCOVERED DURING THE SUBMITTAL REVIEW PROCESS, CONTRACTOR REMAINS RESPONSIBLE FOR PROVIDING EQUIPMENT AND MATERIALS THAT MEET THE SPECIFICATIONS AND DRAWINGS.
 2. PROVIDE THE FOLLOWING INFORMATION FOR LIGHTING SUBMITTALS: INCLUDE ELECTRICAL RATINGS, DIMENSIONS, MOUNTING, MATERIAL, REQUIRED CLEARANCES, TERMINATIONS, WIRING AND CONNECTION DIAGRAMS, PHOTOMETRIC DATA, DIFFUSERS, LOUVERS, BALLAST TYPE AND QUANTITIES, LAMP TYPE AND QUANTITIES.
 3. MAXIMUM OF TWO REVIEWS OF COMPLETE SUBMITTAL PACKAGE. ARRANGE FOR ADDITIONAL REVIEWS AND/OR EARLY REVIEW OF LONG-LEAD ITEMS; BEAR COSTS OF THESE ADDITIONAL REVIEWS AT ENGINEER'S HOURLY RATES. INCOMPLETE SUBMITTAL PACKAGES/SUBMITTALS WILL BE RETURNED TO CONTRACTOR WITHOUT REVIEW.
- C. RECORD DRAWINGS: SHOW CHANGES AND DEVIATIONS FROM THE DRAWINGS. INCLUDE WRITTEN ADDENDUM AND CHANGE ORDER ITEMS. MAKE CHANGES TO DRAWINGS IN ELECTRONIC FORMAT. OBTAIN ELECTRONIC COPY FROM ARCHITECT. USE THE SAME VERSION OF AUTOCAD TO PREPARE RECORD DRAWINGS AS WAS USED BY THE ARCHITECT. PROVIDE ELECTRONIC COPY AND HARD COPY TO ARCHITECT FOR REVIEW.

1.4 QUALITY ASSURANCE

- A. CONFORM TO THE LATEST ADOPTED VERSION OF THE CALIFORNIA ELECTRIC CODE (CEC), WITH LOCAL AMENDMENTS.
- B. FURNISH PRODUCTS LISTED BY UNDERWRITERS LABORATORIES INC. (UL) OR OTHER TESTING FIRM ACCEPTABLE TO AHJ.
- C. USE MANUFACTURER'S PUBLISHED TESTING AND ADJUSTING PROCEDURES TO ADJUST SENSORS' TIME DELAY, DAYLIGHT SENSITIVITY, AND PASSIVE INFRARED SENSITIVITY TO SATISFACTION OF THE OWNER.
- D. REGULATORY REQUIREMENTS:
 1. PROVIDE LUMINAIRES ACCEPTABLE TO CODE AUTHORITY FOR APPLICATION AND LOCATION AS INDICATED.
 2. COMPLY WITH APPLICABLE ANSI STANDARDS.
 3. COMPLY WITH APPLICABLE NEMA STANDARDS.
 4. PROVIDE LUMINAIRES AND LAMP HOLDERS THAT COMPLY WITH UL STANDARDS AND HAVE BEEN LISTED AND LABELED FOR LOCATION AND USE INDICATED BY A TESTING AGENCY ACCEPTABLE BY THE AHJ (E.G. UL, ETL, AND THE LIKE).
 5. COMPLY WITH CEC AS APPLICABLE TO INSTALLATION AND CONSTRUCTION OF LUMINAIRES.
 6. COMPLY WITH FALLOUT AND RETENTION REQUIREMENTS OF CBC FOR DIFFUSERS, BAFFLES, AND LOUVERS.
 7. PROVIDE SIMILAR LAMPS AND BALLASTS FROM COMMON MANUFACTURER (E.G. ALL FLUORESCENT LAMPS FROM OSRAM/SYLVANIA, AND ALL MR LAMPS FROM USHIO) UNLESS INDICATED OTHERWISE IN THE LUMINAIRE SCHEDULE.

1.5 SEQUENCING AND SCHEDULING

- A. FOR THE PROPER EXECUTION OF THE WORK, COOPERATE WITH OTHER CRAFTS AND CONTRACTS AS NEEDED.
- B. TO AVOID INSTALLATION CONFLICTS, THOROUGHLY EXAMINE THE COMPLETE SET OF CONTRACT DOCUMENTS. RESOLVE CONFLICTS PRIOR TO INSTALLATION.
- C. PRIOR TO INSTALLATION OF FEEDERS TO EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS, EXAMINE THE MANUFACTURER'S SHOP DRAWINGS, WIRING DIAGRAMS, PRODUCT DATA, AND INSTALLATION INSTRUCTIONS. VERIFY THAT THE ELECTRICAL CHARACTERISTICS DETAILED IN THE CONTRACT DOCUMENTS ARE CONSISTENT WITH THE ELECTRICAL CHARACTERISTICS OF THE ACTUAL EQUIPMENT BEING INSTALLED.

1.6 WARRANTY

- A. GUARANTEE ELECTRICAL WORK AGAINST FAULTY MATERIAL OR WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL COMPLETION BY THE OWNER.
- B. LED WARRANTY: LED SYSTEMS AND COMPLETE LUMINAIRES MUST HAVE MANUFACTURER'S WARRANTY OF 3 YEARS FROM DATE OF SUBSTANTIAL COMPLETION, INCLUDING DRIVERS.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. BASE CONTRACT UPON FURNISHING MATERIALS AS SPECIFIED. MATERIALS, EQUIPMENT, AND FIXTURES USED FOR CONSTRUCTION ARE TO BE NEW, LATEST PRODUCTS AS LISTED IN MANUFACTURER'S PRINTED CATALOG DATA AND ARE TO BE UL APPROVED OR HAVE ADEQUATE APPROVAL OR BE ACCEPTABLE BY STATE, COUNTY, AND CITY AUTHORITIES. EQUIPMENT/FIXTURE SUPPLIER IS RESPONSIBLE FOR OBTAINING STATE, COUNTY, AND CITY ACCEPTANCE ON EQUIPMENT/FIXTURE NOT UL APPROVED OR NOT LISTED FOR INSTALLATION.
- B. INCLUDE SPECIAL FEATURES, FINISHES, ACCESSORIES, AND OTHER REQUIREMENTS AS DESCRIBED IN THE CONTRACT DOCUMENTS REGARDLESS OF THE ITEM'S LISTED CATALOG NUMBER.
- C. PROVIDE INCIDENTALS NOT SPECIFICALLY MENTIONED HEREIN OR NOTED ON DRAWINGS, BUT NEEDED TO COMPLETE THE SYSTEM OR SYSTEMS, IN A SAFE AND SATISFACTORY WORKING CONDITION.
- D. FIRESTOPPING FOAM SEALANT: FOAM SEALANT FOR USE AROUND CONDUIT PENETRATIONS TO PREVENT PASSAGE OF SMOKE, FIRE, TOXIC GAS OR WATER. MAINTAIN SEAL BEFORE, DURING AND AFTER FIRE. IN AND AROUND CONDUIT FOR THERMAL BREAK AT PENETRATION OF BARRIER BETWEEN HEATED AND UNHEATED SPACES. HILTI, 3M, CHASE TECHNOLOGY CORPORATION CTC PR-855, FIRE FOAM, THOMAS & BETTS, OR APPROVED EQUIVALENT.

2.2 RACEWAYS

- A. RIGID METAL CONDUIT (RMC): HOT-DIP GALVANIZED AFTER THREAD CUTTING. MANUFACTURED IN CONFORMANCE WITH UL 6, ANSI C80.1. UNIFORM FINISH COAT WITH CHROMATE FOR ADDED PROTECTION. MANUFACTURERS: ALLIED TUBE & CONDUIT, BECK MANUFACTURING WL, PICOMA, OR APPROVED EQUIVALENT.
- B. ELECTRICAL METALLIC TUBING (EMT): STEEL GALVANIZED TUBING. MANUFACTURED IN CONFORMANCE WITH UL 797, ANSI C80.3. MANUFACTURERS: ALLIED TUBE & CONDUIT, BECK MANUFACTURING WL, PICOMA, OR APPROVED EQUIVALENT.
- C. FLEXIBLE METAL CONDUIT (FMC): INTERLOCKED STEEL CONSTRUCTION. MANUFACTURED IN CONFORMANCE WITH UL 1. MANUFACTURERS: AFC CABLE SYSTEMS INC., ELECTRI-FLEX COMPANY, INTERNATIONAL METAL HOSE, OR APPROVED EQUIVALENT.

- D. FLEXIBLE CONDUIT, PVC COATED (LFMC): INNER CORE MADE FROM SPIRAL WOUND STRIP OF HEAVY GAUGE, HOT DIPPED GALVANIZED LOW CARBON STEEL. 1/2-INCH THROUGH 1-1/4 INCH TRADES SIZES HAVE A SQUARE LOCK CORE AND CONTAIN AN INTEGRAL BONDING STRIP OF COPPER. 1-1/2 INCH AND LARGER HAVE FULLY INTERLOCKED CORE. JACKET MATERIAL IS MOISTURE, OIL, AND SUNLIGHT RESISTANT FLEXIBLE PVC. MANUFACTURED IN CONFORMANCE WITH UL 360. MANUFACTURERS: AFC CABLE SYSTEMS INC., ELECTRI-FLEX COMPANY, INTERNATIONAL METAL HOSE, OR APPROVED EQUIVALENT.
- E. ELECTRICAL POLYVINYL CHLORIDE (PVC): SCHEDULE 40 RIGID PVC. [SCHEDULE 80 RIGID PVC.] MANUFACTURED IN CONFORMANCE WITH UL 651. MANUFACTURERS: AFC CABLE SYSTEMS INC., PW PIPE, INTERNATIONAL METAL HOSE, OR APPROVED EQUIVALENT.

F. CONDUIT FITTINGS:

- 1. BUSHINGS: INSULATED TYPE FOR THREADED RIGID, CONDUIT OR RACEWAY CONNECTORS WITHOUT FACTORY INSTALLED PLASTIC THROAT CONDUCTOR PROTECTION. MANUFACTURERS: THOMAS & BETTS 1222 SERIES, 0-Z GEDNEY B SERIES, OR APPROVED EQUIVALENT.
- 2. GROUND BUSHINGS: INSULATED GROUNDING TYPE FOR THREADED RIGID, CONDUIT OR RACEWAY CONNECTORS. MANUFACTURERS: 0-Z GEDNEY BLG SERIES OR APPROVED EQUIVALENT.
- 3. RACEWAY CONNECTORS AND EMT COUPLINGS:
 - a. STEEL CONNECTORS, COUPLINGS, AND CONDUIT BODIES WITH ZINC ELECTROPLATE.
 - b. CONNECTOR LOCKNUTS ARE ZINC ELECTROPLATED STEEL, WITH THREADS MEETING ASTM TOLERANCES.
 - c. CONNECTOR THROATS HAVE FACTORY INSTALLED PLASTIC INSERTS PERMANENTLY INSTALLED. FOR NORMAL CABLE OR CONDUCTOR EXITING ANGLES FROM RACEWAY, THE CABLE JACKET OR CONDUCTOR INSULATION BEARS ONLY ON PLASTIC THROAT INSERT.
- 4. EXPANSION/DEFLECTION FITTINGS:
 - a. EMT: USE 0_Z GEDNEY TYPE TX, OR APPROVED EQUIVALENT.
 - b. RMC: USE 0_Z GEDNEY TYPE AX, DX AND AIDX, OR APPROVED EQUIVALENT.

2.3 WIRES AND CABLES

- A. COPPER, 600 VOLT RATED THROUGHOUT. CONDUCTORS 14AWG TO 10AWG, SOLID. CONDUCTORS 8AWG AND LARGER, STRANDED. PHASE COLOR TO BE CONSISTENT AT FEEDER TERMINATIONS; A-B-C, TOP TO BOTTOM, LEFT TO RIGHT, FRONT TO BACK. CONDUCTORS 3AWG AND LARGER, MINIMUM INSULATION RATING OF 75C. INSULATION TYPES THWN, THHN OR XHHW. MINIMUM INSULATION RATING OF 90C FOR BRANCH CIRCUITS. MANUFACTURERS: CAROL, GENERAL CABLE, OKONITE, SOUTHWIRE, OR APPROVED EQUIVALENT.

2.4 CONNECTORS

- A. COPPER PADS: DRILLED AND TAPPED FOR MULTIPLE CONDUCTOR TERMINALS.
- B. LUGS: COMPRESSION TYPE FOR USE WITH STRANDED BRANCH CIRCUIT OR CONTROL CONDUCTORS; MECHANICAL LUGS NOT ACCEPTABLE. MANUFACTURERS: ANDERSON, LISCO, PANDUIT, THOMAS & BETTS, 3M, OR APPROVED EQUIVALENT.
- C. CONDUCTOR BRANCH CIRCUITS: WIRE NUTS WITH INTEGRAL SPRING CONNECTORS FOR CONDUCTORS 18 THROUGH 8AWG. PUSH-IN TYPE CONNECTORS WHERE CONDUCTORS ARE NOT REQUIRED TO BE TWISTED TOGETHER ARE NOT ACCEPTABLE. MANUFACTURERS: 3M, IDEAL, OR APPROVED EQUIVALENT.

2.5 BOXES

- A. LUMINAIRE OUTLET: 4-INCH OCTAGONAL BOX, 1-1/2 INCHES DEEP WITH 3/8-INCH LUMINAIRE STUD IF REQUIRED. PROVIDE RAISED COVERS ON BRACKET OUTLETS AND ON CEILING OUTLETS. MANUFACTURER: HUBBELL, THOMAS & BETTS, OR APPROVED EQUIVALENT.
- B. DEVICE OUTLET: INSTALLATION OF ONE OR TWO DEVICES AT COMMON LOCATION, MINIMUM 4-INCH SQUARE, MINIMUM 1-1/2 INCHES DEEP. SINGLE- OR TWO-GANG FLUSH DEVICE RAISED COVER. MANUFACTURER: HUBBELL, THOMAS & BETTS, OR APPROVED EQUIVALENT.
- C. MULTIPLE DEVICES: THREE OR MORE DEVICES AT COMMON LOCATION. INSTALL ONE-PIECE GANG BOXES WITH ONE-PIECE DEVICE COVER, ONE DEVICE PER GANG.
- D. MASONRY BOXES: OUTLETS IN CONCRETE. MANUFACTURER: HUBBELL, THOMAS & BETTS, OR APPROVED EQUIVALENT.
- E. CONSTRUCTION: FOR INTERIOR LOCATIONS, PROVIDE GALVANIZED STEEL OUTLET WIRING BOXES, OF THE TYPE, SHAPE AND SIZE, INCLUDING DEPTH OF BOX, TO SUIT EACH RESPECTIVE LOCATION AND INSTALLATION; CONSTRUCTED WITH STAMPED KNOCKOUTS IN BACK AND SIDES, AND WITH THREADED HOLES WITH SCREWS FOR SECURING BOX COVERS OR WIRING DEVICES. PROVIDE OUTLET BOX ACCESSORIES FOR EACH INSTALLATION, INCLUDING MOUNTING BRACKETS, WALLBOARD HANGERS, EXTENSION RINGS, LUMINAIRE STUDS, CABLE CLAMPS AND METAL STRAPS FOR SUPPORTING OUTLET BOXES, COMPATIBLE WITH OUTLET BOXES BEING USED AND MEETING REQUIREMENTS OF INDIVIDUAL WIRING SITUATIONS.
- F. JUNCTION AND PULL BOXES: ANSI 49 GRAY ENAMEL PAINTED SHEET STEEL JUNCTION AND PULL BOXES, WITH SCREW-ON COVERS; OF THE TYPE SHAPE AND SIZE, TO SUIT EACH RESPECTIVE LOCATION AND INSTALLATION; WITH WELDED SEAMS AND EQUIPPED WITH STEEL NUTS, BOLTS, SCREWS AND WASHERS. INSTALL JUNCTION BOXES ABOVE ACCESSIBLE CEILING FOR DROPS INTO WALLS FOR RECEPTACLE OUTLETS FROM OVERHEAD. INSTALL JUNCTION BOXES AND PULL BOXES TO FACILITATE THE INSTALLATION OF CONDUCTORS AND LIMITING THE ACCUMULATED ANGULAR SUM OF BENDS BETWEEN BOXES, CABINETS AND APPLIANCES TO 270 DEGREES. MANUFACTURER: B-LINE, HOFFMAN, OR APPROVED EQUIVALENT.
- G. BOX EXTENSION ADAPTER: INSTALL OVER FLUSH WALL OUTLET BOXES TO PERMIT FLEXIBLE RACEWAY EXTENSION FROM FLUSH OUTLET TO FIXED OR MOVABLE EQUIPMENT. MANUFACTURER: BELL 940 SERIES, RED DOT IEH4 SERIES, OR APPROVED EQUIVALENT.

2.6 WIRING DEVICES

- A. FINISH: WHITE
- B. WALL SWITCHES: DECORATIVE AC ROCKER SWITCHES CHARACTERISTICS: QUIET ACTING, 20 AMP, 120/277 VOLT, UL LISTED FOR MOTOR LOADS UP TO 80 PERCENT OF RATED AMPERAGE. WHERE SWITCHES ARE GANGED TOGETHER, PROVIDE A SINGLE MULTI-GANG COVERPLATE. COOPER, HUBBELL, LEVITON, PASS & SEYMOUR, OR APPROVED EQUIVALENT.
- C. RECEPTACLES: STRAIGHT PARALLEL BLADE, 125 VOLT, 2 POLE, 3 WIRE GROUNDING.
 1. COMMERCIAL GRADE: RVETED. BACK AND SIDE WIRED. BRASS GROUND CONTACT ON STEEL MOUNTING STRAP. NYLON FACE AND NYLON BASE. 20 AMP. COOPER 5362, HUBBELL 5362, BRYANT 5362, LEVITON 5362S, PASS & SEYMOUR 5362
- D. GROUND FAULT INTERRUPTER (GFI) RECEPTACLE: MEETS OR EXCEEDS UL943 (CLASS A GFI), UL498. FEED THROUGH TYPE, BACK-AND-SIDE WIRED, TAMPER-RESISTANT, WEATHER RESISTANT SELF-TESTING, 20 AMP, 125VAC. HUBBELL GFR5362SB, COOPER WRV920, PASS & SEYMOUR 2095TRWR, OR APPROVED EQUIVALENT.
- E. FINISH PLATES: MATCH BUILDING STANDARD. COMMERCIAL GRADE THERMOPLASTIC, FINISH TO MATCH DEVICE FINISH.

2.7 OCCUPANCY SENSORS

- A. COMBINED OCCUPANCY SENSOR/WALL SWITCHES ("SENSOR/SWITCHES")
 1. COMPLETELY SELF-CONTAINED SENSOR SYSTEM THAT FITS INTO A STANDARD SINGLE GANG BOX. INTERNAL TRANSFORMER POWER SUPPLY, LATCHING DRY CONTACT RELAY SWITCHING MECHANISM COMPATIBLE WITH ELECTRONIC BALLASTS, COMPACT FLUORESCENT, AND INDUCTIVE LOADS. TRIAC AND OTHER HARMONIC GENERATING DEVICES ARE NOT ALLOWED.
 2. PASSIVE INFRARED SENSOR TECHNOLOGY INCLUDES ADVANCED SIGNAL PROCESSING TO REDUCE FALSE TRIGGERS WITHOUT INCREASING SENSITIVITY. LED INDICATOR BLINKS WHEN OCCUPANT SENSED.
 3. RATED TO SWITCH LOADS: 800 WATTS INCANDESCENT OR 120-VOLT BALLAST; 1000 WATTS 277 VOLT BALLAST. ZERO-CROSSING TECHNOLOGY SWITCHES LIGHTING OFF WHEN AC VOLTAGE IS AT ZERO, MINIMIZES CONTACT WEAR.
 4. PROVIDE ADJUSTABLE DAYLIGHT FEATURE THAT HOLDS LIGHTING "OFF" WHEN A DESIRED FOOTCANDLE LEVEL IS PRESENT.
 5. PROVIDE INTEGRAL OFF OVERRIDE SWITCH WITH NO LEAKAGE CURRENT TO THE LOAD OR GROUND.
 6. VANDAL-RESISTANT LENS.
 7. FINISH: WHITE FINISH UNLESS SELECTED OTHERWISE BY ARCHITECT.
 8. ALERTS FOR IMPENDING SHUT-OFF: LIGHT FLASH, AUDIBLE, BOTH OR NONE.
 9. STANDARD SENSOR/SWITCH:
 - a. 180 DEGREE SENSOR RANGE; COVERAGE: 150 SQUARE FEET FOR DESKTOP ACTIVITY.
 - b. MANUFACTURERS: WATTSTOPPER PW-100 SERIES OR APPROVED EQUIVALENT.

2.8 SAFETY DISCONNECTS

- A. TOGGLE TYPE DISCONNECT SWITCHES: 120 VOLT, 1-POLE, 20 AMP, 1 HP MAXIMUM. NEMA 1 ENCLOSURE FOR INDOORS, NEMA 3R ENCLOSURE FOR OUTDOORS.
- B. SAFETY SWITCHES: HEAVY DUTY, FUSIBLE AND NON-FUSIBLE TYPE (AS INDICATED ON DRAWINGS), DUAL RATED, QUICK-MAKE, QUICK-BREAK WITH FUSE REJECTION FEATURE FOR USE WITH CLASS R FUSES ONLY. DEVICE LABELED WITH MAXIMUM VOLTAGE, CURRENT, AND HORSEPOWER. OPERABLE HANDLE INTERLOCKED TO PREVENT OPENING FRONT COVER WITH SWITCH IN 'ON' POSITION AND LOCKABLE IN 'OFF' POSITION. SWITCHES RATED FOR MAXIMUM AVAILABLE FAULT CURRENT. PROVIDE NEMA 1 ENCLOSURE FOR INDOORS, NEMA 3R ENCLOSURE FOR OUTDOORS. MANUFACTURERS: EATON, GENERAL ELECTRIC, SQUARE D, SIEMENS, OR APPROVED EQUIVALENT.

2.9 SUPPORTING DEVICES

- A. HANGERS, SUPPORTS, THREADED ROD AND FASTENERS: CORROSION-RESISTANT MATERIALS OF SIZE AND TYPE ADEQUATE TO CARRY THE LOADS OF EQUIPMENT AND CONDUIT, INCLUDING WEIGHT OF WIRE IN CONDUIT. MANUFACTURERS: B-LINE, KINDORF, SUPERSTRUT, UNISTRUT, OR APPROVED EQUIVALENT.
- B. ANCHORS: CORROSION-RESISTANT MATERIALS OF SIZE AND TYPE ADEQUATE TO CARRY THE LOADS OF EQUIPMENT AND CONDUIT, INCLUDING WEIGHT OF WIRE IN CONDUIT. MANUFACTURERS: ANCHOR IT, EPCON SYSTEM, HILTI-HIT SYSTEM, POWER FAST SYSTEM, OR APPROVED EQUIVALENT.
- C. CONCRETE INSERTS: CAST IN CONCRETE FOR SUPPORT FASTENERS FOR LOADS UP TO 800 LBS. MANUFACTURERS: B-LINE, KINDORF, SUPERSTRUT, UNISTRUT, OR APPROVED EQUIVALENT.
- D. PIPE STRAPS: TWO-HOLE GALVANIZED OR MALLEABLE IRON.
- E. LUMINAIRE CHAIN: CAMPBELL CHAIN 75031 OR APPROVED EQUIVALENT, 90 LB. TEST WITH STEEL HOOKS.

2.10 ELECTRICAL IDENTIFICATION

- A. NAMEPLATES: ENGRAVING STOCK MELAMINE OR LAMICOD PLASTIC LAMINATE, FEDERAL SPECIFICATION L-P-387, IN THE SIZE AND THICKNESSES INDICATED, ENGRAVED WITH ENGRAVER'S STANDARD LETTER STYLE, MINIMUM 1/2-INCH HIGH LETTERS, BLACK WITH WHITE CORE (LETTER COLOR), PUNCHED FOR

- MECHANICAL FASTENING EXCEPT WHERE ADHESIVE MOUNTING IS NECESSARY BECAUSE OF SUBSTRATE. PROVIDE 1/8-INCH THICK MATERIAL. USE SELF TAPPING STAINLESS STEEL SCREWS. MANUFACTURER: B&I NAMEPLATES, INTELLICUM, JBR ASSOCIATES, OR APPROVED EQUIVALENT.
- B. LABELS: ADHESIVE TAPE WITH 18 POINT BLACK LETTERS ON CLEAR BACKGROUND. USE ONLY FOR IDENTIFICATION OF INDIVIDUAL WALL SWITCHES AND RECEPTACLES, CONTROL STATIONS, AND TELECOMMUNICATION OUTLETS. INDICATE DEVICE NAME, SOURCE PANEL, AND SOURCE CIRCUITS. DO NOT PROVIDE DYMO TAPE STYLE LABELS. MANUFACTURER: KROY, BRADY, OR APPROVED EQUIVALENT.
- C. CONDUCTOR NUMBERS: VINYL-CLOTH SELF-ADHESIVE TYPE WIRE MARKERS. EACH CONDUCTOR AT PULLBOXES, PANELBOARDS, OUTLET BOXES, JUNCTION BOXES, AND EACH LOAD CONNECTION BRANCH CIRCUIT OR FEEDER NUMBERS AS INDICATED ON DRAWINGS AND SOURCE PANEL. MANUFACTURER: BRADY, PANDUIT, SLIMITOMO, OR APPROVED EQUIVALENT.
- D. BRANCH CIRCUIT SCHEDULES: PROVIDE BRANCH CIRCUIT IDENTIFICATION SCHEDULES, TYPEWRITTEN, CLEARLY FILLED OUT, TO IDENTIFY LOAD CONNECTED TO EACH CIRCUIT AND LOCATION OF LOAD. NUMBERS TO CORRESPOND TO NUMBERS ASSIGNED TO EACH CIRCUIT BREAKER POLE POSITION.
- E. RELAY PANEL SCHEDULE: PROVIDE TYPEWRITTEN SCHEDULE TO IDENTIFY THE INCOMING CIRCUIT, THE CONTROLLED LOAD, AND THE CONTROLLING DEVICES FOR EACH RELAY.
- F. CIRCUIT BREAKER IDENTIFICATION: PROVIDE PERMANENT IDENTIFICATION NUMBER IN OR ON PANELBOARD DEAD-FRONT ADJACENT TO EACH CIRCUIT BREAKER POLE POSITION. HORIZONTAL CENTERLINE OF ENGRAVED NUMBERS TO CORRESPOND WITH CENTERLINE OF CIRCUIT BREAKER POLE POSITION.

2.11 GROUNDING MATERIALS

- A. GROUNDING CONNECTORS: HYDRAULIC COMPRESSION TOOL APPLIED CONNECTORS OR EXOTHERMIC WELDING PROCESS CONNECTORS OR POWDER ACTUATED COMPRESSION TOOL APPLIED CONNECTORS. MECHANICAL TYPE OF CONNECTORS ARE NOT ACCEPTABLE. MANUFACTURERS: BURNDY HYGROUND COMPRESSION SYSTEM, ERICO/CADWELD, AMP AMPACT GROUNDING SYSTEM OR APPROVED EQUIVALENT.
- B. PIPE GROUNDING CLAMP: MECHANICAL GROUND CONNECTOR WITH CABLE PARALLEL OR PERPENDICULAR TO PIPE. BURNDY GAR SERIES, 0_Z GEDNEY, THOMAS & BETTS OR APPROVED EQUIVALENT.
- C. GROUNDING ELECTRODE CONDUCTOR: SOFT-DRAW BARE STRANDED CONDUCTOR FOR WIRE SIZES LARGER THAN #10 AWG BARE. SOLID COPPER FOR WIRE SIZES #10 AWG AND SMALLER.
- D. EQUIPMENT GROUNDING CONDUCTOR: GREEN INSULATED, INSULATION TYPE TO MATCH THAT OF ASSOCIATED FEEDER OR BRANCH CIRCUIT WIRING, SIZE AS INDICATED ON DRAWINGS.

2.12 DISTRIBUTION PANELBOARD

- A. MANUFACTURERS: SIEMENS, SQUARE D, EATON ELECTRICAL, GENERAL ELECTRIC, OR APPROVED EQUIVALENT.
- B. STANDARDS: COMPLY WITH REQUIREMENTS OF UL 891, NEMA PB2 AND CEC IN CONSTRUCTION OF SWITCHBOARDS. PROVIDE SHORT CIRCUIT CURRENT RATING (INTEGRATED EQUIPMENT RATING, IER) FOR PANELBOARDS.
- C. LUGS: MECHANICAL TYPE.
- D. PANELBOARDS:
 1. ENCLOSURE: NEMA PB1, TYPE 1 OR 3R AS INDICATED ON THE DRAWINGS. CIRCUIT BREAKER TYPE. MAXIMUM ENCLOSURE DEPTH FOR BRANCH CIRCUIT PANELBOARD: 6-INCHES SURFACE MOUNTED, 5-3/4 INCHES FOR FLUSH MOUNTED. MAXIMUM BRANCH CIRCUIT PANELBOARD ENCLOSURE WIDTH: 20 INCHES. PROVIDE GALVANIZED METAL FINISH.
 2. INTERIOR: COPPER BAR WITH SUITABLE ELECTROPLATING (TN) FOR CORROSION CONTROL AT CONNECTION. PROVIDE COPPER GROUND BUS TO ACCOMMODATE SPECIFIED TERMINAL LUGS. PREDRILL BUS FOR BOLT-ON TYPE CIRCUIT BREAKERS. PROVIDE DOUBLE LUGS AND/OR FEED-THROUGH LUGS FOR FEED THROUGH FEEDERS.
 3. PROVIDE FULLY RATED INTEGRATED EQUIPMENT RATING GREATER THAN THE AVAILABLE FAULT CURRENT. SERIES RATED PANELBOARDS ARE NOT ACCEPTABLE. SEE DRAWINGS FOR AVAILABLE FAULT CURRENT. MINIMUM RATING OF 10,000 AMPS FOR 208V PANELBOARDS AND 14,000 AMPS FOR 480V PANELBOARDS.
 4. BRANCH CIRCUIT BREAKERS:
 - a. THERMAL MAGNETIC TRIP CIRCUIT BREAKERS. BOLT-ON TYPE WITH COMMON TRIP HANDLE FOR POLES, UL LISTED. DO NOT USE TANDEM CIRCUIT BREAKERS.
 - b. UL LISTED TO ACCEPT SOLID OR STRANDED, ALUMINUM OR COPPER CONDUCTORS. LUGS SUITABLE FOR 90C RATED WIRE SIZED ACCORDING TO THE 75C TEMPERATURE RATING PER CEC.
 - c. UL LISTED WITH THE FOLLOWING RATINGS:
 - 1) TYPE SWD (SWITCH DUTY) FOR LIGHTING CIRCUITS.
 - 2) TYPE HACR (HEATING, AIR CONDITIONING, AND REFRIGERATION) FOR HVAC EQUIPMENT CIRCUITS.
 5. COVER: CONCEALED HINGED DOOR, METAL DIRECTORY FRAME WITH HEAVY CLEAR PLASTIC PROTECTOR, FLUSH LIFT LATCH AND LOCK, TWO KEYS PER PANEL. KEY BRANCH CIRCUIT PANELBOARDS ALIKE. MEDIUM LIGHT GREY FINISH SUITABLE FOR FIELD PAINTING TO MATCH WALL FINISH.
 6. PROVIDE BOXES WITH REMOVABLE BLANK END WALLS AND INTERIOR MOUNTING STUDS. PROVIDE INTERIOR SUPPORT BRACKET FOR EASE OF INTERIOR INSTALLATION.
 7. ACCESSORIES: PROVIDE WHERE INDICATED: SHUNT TRIP, ARC-FAULT CIRCUIT INTERRUPTION (AFCI), CLASS A GROUND FAULT CIRCUIT INTERRUPTION (GFCI), AUXILIARY SWITCH AND ALARM SWITCH.

2.13 OVERCURRENT PROTECTIVE DEVICES

- A. FUSES: DUAL ELEMENT, TIME DELAY, CURRENT LIMITING, NONRENEWABLE TYPE, REJECTION FEATURE. UL CLASS RK1 1/10 TO 600 AMP, UL CLASS L, ABOVE 600 AMPS. PROVIDE FUSE PULLERS FOR COMPLETE RANGE OF FUSES. MANUFACTURERS: BUSSMANN, GOULD-SHAMMUT, LITTELFUSE, OR APPROVED EQUIVALENT.
- B. MOLDED CASE CIRCUIT BREAKERS:
 1. ONE, TWO OR THREE-POLE BOLT ON, SINGLE HANDLE COMMON TRIP, AS INDICATED ON DRAWINGS.
 2. OVERCENTER TOGGLE-TYPE MECHANISM, QUICK-MAKE, QUICK-BREAK ACTION. TRIP INDICATION IS BY HANDLE POSITION.
 3. CALIBRATE FOR OPERATION IN 40C AMBIENT TEMPERATURE.
 4. 15 TO 150 AMP BREAKERS: PERMANENT TRIP UNIT CONTAINING INDIVIDUAL THERMAL AND MAGNETIC TRIP ELEMENTS IN EACH POLE.
 5. 151 TO 400 AMP BREAKERS: VARIABLE MAGNETIC TRIP ELEMENTS. PROVIDE PUSH-TO-TRIP BUTTON ON COVER ON BREAKER FOR MECHANICAL TRIPPING.
 6. PROVIDE HANDLE MECHANISMS THAT ARE LOCKABLE IN THE OPEN (OFF) POSITION.
 7. MANUFACTURERS: EATON ELECTRICAL, GENERAL ELECTRIC, SIEMENS, SQUARE D, OR APPROVED EQUIVALENT.

2.14 CONTROL DEVICES

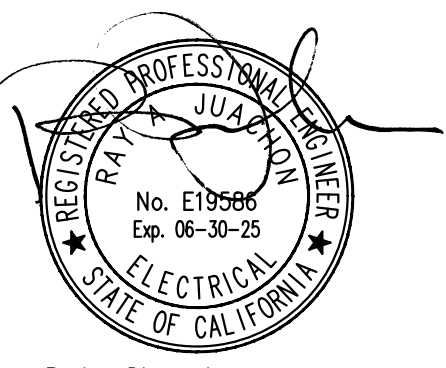
- 2.15 LUMINAIRES
 - A. LUMINAIRES: REFER TO DESCRIPTION AND MANUFACTURERS IN LUMINAIRE SCHEDULE.
 - B. WHERE RECESSED LUMINAIRES ARE INSTALLED IN CAVITIES INTENDED TO BE INSULATED, PROVIDE IC RATED LUMINAIRES OR OTHER CODE APPROVED INSTALLATION.
 - C. UL LABEL LUMINAIRES INSTALLED UNDER CANOPIES, ROOF OR OPEN PORCHES, AND SIMILAR DAMP OR WET LOCATIONS, AS SUITABLE FOR DAMP OR WET LOCATIONS.
 - D. SUSPENDED LUMINAIRES: PROVIDE MINIMUM 24-INCH ADJUSTABILITY IN AIRCRAFT CABLE LENGTH WHERE USED.
 - E. RECESSED LUMINAIRES: FRAME COMPATIBLE WITH CEILING MATERIAL INSTALLED AT PARTICULAR LUMINAIRE LOCATION. PROVIDE PROPER FACTORY TRIM AND FRAME FOR LUMINAIRE TO FIT LOCATION AND CEILING MATERIAL. VERIFY WITH ARCHITECTURAL REFLECTED CEILING PLAN PRIOR TO SUBMITTALS.
 - F. FINISHES: MANUFACTURER'S STANDARD FINISH (UNLESS OTHERWISE INDICATED) OVER CORROSION RESISTANT PRIMER. WHITE OR SPECULAR FINISH WITH NOT LESS THAN 85 PERCENT REFLECTANCE FOR INTERIOR LUMINAIRES.
 - G. LIGHT TRANSMITTING COMPONENTS: PLASTIC DIFFUSERS, MOLDED OR EXTRUDED OF 100 PERCENT VIRGIN ACRYLIC. PRISMATIC ACRYLIC, EXTRUDED, FLAT DIFFUSERS, 0.125-INCH OVERALL THICKNESS, UNLESS OTHERWISE NOTED.
- 2.16 LAMPS
 - A. PROVIDE LAMPS FOR LUMINAIRES. PROVIDE LAMP CATALOGED FOR SPECIFIED LUMINAIRE TYPE.
 - B. MANUFACTURERS: OSRAM/SYLVANIA, GENERAL ELECTRIC, PHILIPS, VENTURE, USHIO (MR ONLY), OR APPROVED EQUIVALENT UNLESS SPECIFIC MANUFACTURER IS INDICATED IN THE LUMINAIRE SCHEDULE.
 - C. LED (LIGHT EMITTING DIODE):
 1. LED MANUFACTURER WILL INCLUDE, BUT NOT BE LIMITED TO, LIGHT SOURCE, LUMINAIRE, POWER SUPPLY AND CONTROL INTERFACE WITH ADDED COMPONENTS AS NEEDED FOR COMPLETE AND FUNCTIONING SYSTEM.
 2. COMPLY WITH ANSI CHROMATICITY STANDARD FOR CLASSIFICATIONS OF COLOR TEMPERATURE. SEE LUMINAIRE SCHEDULE FOR SPECIFIED LED LAMP COLOR AND COLOR TEMPERATURE. UL OR ETL LISTED AND LABELED.
 3. LUMINAIRE TESTING PER ESNA LM-79 AND LM-80 PROCEDURES.
 4. LAMP LIFE FOR WHITE LEDS: 50,000 PLUS HOURS WITH LAMP FAILURE OCCURRING WHEN LED PRODUCES 70 PERCENT OF INITIAL RATED LUMENS.
 5. LAMP LIFE FOR COLOR LEDS: 30,000 PLUS HOURS WITH LAMP FAILURE OCCURRING WHEN LED PRODUCES 50 PERCENT OF ITS INITIAL RATED LUMENS.
 6. PROVIDE SHOP DRAWINGS, WITH LED SYSTEMS BASED ON LUMEN OUTPUT AT 70 PERCENT LUMEN DEPRECIATION FOR WHITE LEDS AND 50 PERCENT LUMEN DEPRECIATION FOR COLOR LEDS. INITIAL LUMENS FOR ALL COLORS OF LEDS MUST BE LISTED INDIVIDUALLY.
 7. LED DRIVERS: REVERSE POLARITY PROTECTION, OPEN CIRCUIT PROTECTION, REQUIRE NO MINIMUM LOAD. MINIMUM 80% EFFICIENCY. CLASS A NOISE RATING.
 8. DIMMING: LED SYSTEM CAPABLE OF FULL AND CONTINUOUS DIMMING.
 9. LED LIGHT SOURCE MANUFACTURERS: NICHIA, CREE, OSRAM/SYLVANIA, GE ILLUMINATION OR APPROVED EQUIVALENT.

PART 3 – EXECUTION

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Date Signed:
12/18/23

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RJA Project #: 2021055
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APPROVALS

PROJECT TITLE

City of Berkeley WEST BERKELEY SERVICE CENTER

1900 Sixth St
Berkeley, CA 94710

BID SET

ISSUE DATE	12.22.2023
N&T JOB NUMBER	22121
REVISIONS	
DATE	DESCRIPTION
1 8/25/23	REV 1 - PLAN CHECK
2 10/20/23	REV 2 - PLAN CHECK

DRAWN BY CAD CHECKED BY RAJ
SHEET TITLE

SPECIFICATIONS

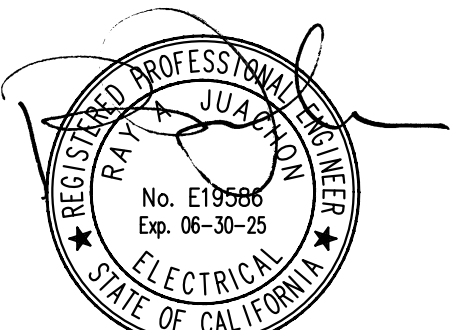
SHEET NUMBER

E4.01

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E4.02

11. PROVIDE TWO 1" SPARE CONDUITS FROM PANEL TO ACCESSIBLE SPACE ABOVE. MAINTAIN FIRE RATING OF WALL.]

0. FUSES: FOR EACH CLASS AND AMPERE RATING OF FUSE INSTALLED, PROVIDE THREE SPARE FUSES.

P. CIRCUIT BREAKERS:

1. PROVIDE GROUND FAULT INTERRUPTER CIRCUIT BREAKERS FOR EQUIPMENT IN DAMP OR WET LOCATIONS.
2. PROVIDE HANDLE GUARDS ON CIRCUITS SUPPLYING CONSTANT LOADS SUCH AS FIRE ALARM, SECURITY, LIGHTING CONTROLS, REFRIGERATORS AND FREEZERS, FIRE PROTECTION, ETC.

Q. OCCUPANCY SENSORS:

1. INSTALL OCCUPANCY SENSORS AS DIRECTED BY MANUFACTURER'S INSTRUCTIONS. PROVIDE CONNECTIONS TO CONTROL CIRCUITS, OCCUPANCY SENSORS, POWER SUPPLY PACK AND LOW VOLTAGE WIRING.
2. DRAWINGS WERE LAID OUT USING WATT STOPPER SENSORS AS THE BASIS OF DESIGN. IF ANOTHER MANUFACTURER IS APPROVED FOR INSTALLATION UNDER THIS CONTRACT, VERIFY WITH MANUFACTURER REPRESENTATIVE THAT SENSORS ARE LAID OUT TO PROVIDE COVERAGE ACROSS ROOM SPACE, ADDING ADDITIONAL SENSORS AS NEEDED.
3. FIELD ADJUST EACH SENSOR TO MAXIMIZE ITS COVERAGE OF ROOM SPACE.
4. FIELD SET TIME DELAY FOR EACH DEVICE AS NOTED BELOW:
 - a. RESTROOMS: 15 MINUTES
 - b. STORAGE ROOMS, JANITOR'S CLOSETS, UNISEX RESTROOMS: 5 MINUTES
 - c. OTHER SPACES: 15 MINUTES.

R. LIGHTING:

1. INSTALL LUMINAIRES SECURELY, IN NEAT AND WORKMANLIKE MANNER.
2. INSTALL LUMINAIRE OF TYPES INDICATED WHERE SHOWN AND AT INDICATED HEIGHTS; IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS AND WITH RECOGNIZED INDUSTRY PRACTICES TO ENSURE THAT LUMINAIRES COMPLY WITH REQUIREMENTS AND SERVE INTENDED PURPOSES.
3. ALIGN, MOUNT AND LEVEL LUMINAIRES UNIFORMLY. USE BALL HANGERS FOR SUSPENDED STEM MOUNTED LUMINAIRES.
4. AVOID INTERFERENCE WITH AND PROVIDE CLEARANCE FOR EQUIPMENT. WHERE THE INDICATED LOCATIONS FOR THE LUMINAIRE CONFLICT WITH LOCATIONS FOR EQUIPMENT, CHANGE LOCATIONS FOR THE LUMINAIRE AS DIRECTED BY ARCHITECT.
5. SUSPENDED LUMINAIRES: MOUNTING HEIGHTS INDICATE CLEARANCES BETWEEN BOTTOM OF LUMINAIRE AND FINISHED FLOORS.
6. SUPPORT LUMINAIRE: ANCHOR SUPPORTS TO STRUCTURAL SLAB OR TO STRUCTURAL MEMBERS WITHIN A PARTITION, OR ABOVE A SUSPENDED CEILING. MAINTAIN LUMINAIRE POSITIONS AFTER CLEANING AND RELAMPING. SUPPORT LUMINAIRE WITHOUT CAUSING CEILING OR PARTITION TO DEFLECT.
7. PROVIDE RECESSED FLOURESCENT LUMINAIRES WITH TWO SUPPORT WIRES AS REQUIRED BY CBC.
8. WIRING:
 - a. RECESSED LUMINAIRES TO BE INSTALLED USING FLEXIBLE METALLIC CONDUIT WITH LUMINAIRE CONDUCTORS SPLICED TO BRANCH CIRCUIT CONDUCTORS IN NEARBY ACCESSIBLE JUNCTION BOX OVER CEILING. JUNCTION BOX FASTENED TO BUILDING STRUCTURAL MEMBER WITHIN 6 FEET OF LUMINAIRE.
 - b. INSTALL LUMINAIRE FOR LIFT OUT AND REMOVAL FROM CEILING PATTERN WITHOUT DISCONNECTING CONDUCTORS OR DEFACING CEILING MATERIALS.
 - c. FLEXIBLE CONNECTIONS WHERE PERMITTED TO EXPOSED LUMINAIRE; NEAT AND STRAIGHT, WITHOUT EXCESS SLACK, ATTACHED TO SUPPORT DEVICE.
 - d. INSTALL JUNCTION BOX, FLEXIBLE CONDUIT AND HIGH TEMPERATURE INSULATED CONDUCTORS FOR THROUGH WIRING OF RECESSED LUMINAIRE.
9. RELAMP LUMINAIRE WHICH HAVE FAILED LAMPS AT SUBSTANTIAL COMPLETION.
10. REPLACE BALLASTS DEEMED AS EXCESSIVELY NOISY BY ARCHITECT, ENGINEER, OR OWNER.
11. INSTALL SUSPENDED LUMINAIRE AND EXIT SIGNS USING PENDANTS SUPPORTED FROM SWIVEL HANGERS. PROVIDE PENDANT LENGTH REQUIRED TO SUSPEND LUMINAIRE AT INDICATED HEIGHT.
12. INSTALL SURFACE MOUNTED LUMINAIRE AND EXIT SIGNS PLUMB AND ADJUST TO ALIGN WITH BUILDING LINES AND WITH EACH OTHER. SECURE TO PREVENT MOVEMENT.
13. MAKE WIRING CONNECTIONS TO BRANCH CIRCUIT USING BUILDING WIRE WITH INSULATION SUITABLE FOR TEMPERATURE CONDITIONS WITHIN LUMINAIRE.
14. WHERE REMOTE BALLASTS OR DRIVERS ARE REQUIRED, INSURE ADEQUATE ACCESSIBILITY. UPSIZE CONDUCTORS BETWEEN LUMINAIRE AND BALLAST/DRIVER TO ACCOMMODATE VOLTAGE DROP.

3.6 FIELD QUALITY CONTROL

- A. TESTS: CONDUCT TESTS OF EQUIPMENT AND SYSTEMS TO DEMONSTRATE COMPLIANCE WITH REQUIREMENTS SPECIFIED IN THIS DIVISION. REFER TO INDIVIDUAL SPECIFICATION SECTIONS FOR REQUIRED TESTS. DOCUMENT TESTS AND INCLUDE IN CLOSEOUT DOCUMENTS. DURING SITE EVALUATIONS BY ARCHITECT, PROVIDE AN ELECTRICIAN WITH TOOLS TO REMOVE AND REPLACE TRIMS, COVERS, DEVICES, AND THE LIKE, SO THAT A PROPER EVALUATION OF THE INSTALLATION CAN BE PERFORMED.
- B. TEST CONDUCTOR INSULATION ON FEEDERS OF 100 AMP AND GREATER FOR CONFORMITY WITH 1000 VOLT MEGOHMMETER. USE INSULATED CABLE ENGINEERS ASSOCIATION TESTING PROCEDURES. MINIMUM INSULATION RESISTANCE ACCEPTABLE IS 1 MEGOHM FOR SYSTEMS 600 VOLTS AND BELOW. NOTIFY ARCHITECT IF INSULATION RESISTANCE IS LESS THAN 1 MEGOHM
- C. VERIFY ELECTRICAL CHARACTERISTICS OF EQUIPMENT PRIOR TO INSTALLATION OF CONDUITS AND WIRING FOR EQUIPMENT.
- D. COORDINATE HVAC VOLTAGE REQUIREMENTS WITH DRAWINGS AND EQUIPMENT SUBMITTALS PRIOR TO ROUGH IN.
- E. WIRING DEVICE TESTS: TEST WIRING DEVICES TO ENSURE ELECTRICAL CONTINUITY OF GROUNDING CONNECTIONS, AND AFTER ENERGIZING CIRCUITRY, TO DEMONSTRATE COMPLIANCE WITH REQUIREMENTS. TEST RECEPTACLES FOR LINE TO NEUTRAL, LINE TO GROUND AND NEUTRAL TO GROUND FAULTS. CORRECT DEFECTIVE WIRING.
- F. USE MANUFACTURER'S PUBLISHED TESTING AND ADJUSTING PROCEDURES TO ADJUST SENSORS TIME DELAY, DAYLIGHT SENSITIVITY, AND PASSIVE INFRARED SENSITIVITY TO SATISFACTION OF THE OWNER.
- G. VERIFICATION OF CONDITIONS: VERIFY CEILING CONSTRUCTION, RECESSING DEPTH AND OTHER CONSTRUCTION DETAILS PRIOR TO RELEASE OF LUMINAIRE FOR SHIPMENT.

3.7 CLEANING

- A. REMOVE DIRT AND DEBRIS CAUSED BY THE EXECUTION OF THE ELECTRICAL WORK. LEAVE THE ENTIRE ELECTRICAL SYSTEM INSTALLED IN CLEAN, DUST-FREE AND PROPER WORKING ORDER.
- B. THOROUGHLY CLEAN EXPOSED PORTIONS OF EQUIPMENT, REMOVING WORKING LABELS AND TRACES OF FOREIGN SUBSTANCES. THROUGHOUT WORK, REMOVE CONSTRUCTION DEBRIS AND SURPLUS MATERIALS ACCUMULATED DURING WORK.
- C. WHERE FINISH OF LUMINAIRE OR ENCLOSURES IS DAMAGED, TOUCH UP FINISH WITH MATCHING PAINT IN ACCORDANCE TO MANUFACTURER'S SPECIFICATIONS AND INSTALLATION INSTRUCTIONS.
- D. CLEAN PAINT SPLATTERS, DIRT, DUST, FINGERPRINTS, AND DEBRIS FROM LUMINAIRE.

END OF ELECTRICAL SPECIFICATIONS

h. SHARP BENDS AND ELBOWS: RMC, EMT USE FACTORY ELBOWS.

i. INSTALL TWO PULL STRINGS/TAPES IN EMPTY RACEWAYS. SECURE PULL STRINGS/TAPES AT EACH END.

j. ELBOW FOR LOW ENERGY SIGNAL SYSTEMS: USE LONG RADIUS FACTORY ELLS WHERE LINKING SECTIONS OF RACEWAY FOR INSTALLATION OF SIGNAL CABLE.

k. FOR MOTORS, RECESSED LUMINAIRE AND EQUIPMENT CONNECTIONS SUBJECT TO MOVEMENT OR VIBRATION, USE FLEXIBLE METALLIC CONDUIT.

l. FOR MOTORS AND EQUIPMENT CONNECTIONS SUBJECT TO MOVEMENT OR VIBRATION AND SUBJECT TO THE FOLLOWING CONDITIONS; EXTERIOR LOCATION, MOIST OR HUMID ATMOSPHERE, WATER SPRAY, OIL OR GREASE: USE PVC COATED LIQUID TIGHT FLEXIBLE METALLIC CONDUIT.

10. BRANCH CIRCUITS: DO NOT CHANGE THE INTENT OF THE BRANCH CIRCUITS OR CONTROLS WITHOUT APPROVAL. HOMERUNS FOR 20 AMP BRANCH CIRCUITS MAY BE COMBINED TO A MAXIMUM OF SIX CONDUCTORS IN A HOMERUN. APPLY DERATING FACTORS. INCREASE CONDUCTOR SIZE AS NEEDED.

G. CONDUIT FITTINGS:

1. USE SET SCREW TYPE FITTINGS ONLY IN DRY LOCATIONS. WHEN SET SCREW FITTINGS ARE UTILIZED, PROVIDE INSULATED CONTINUOUS EQUIPMENT GROUND CONDUCTOR IN CONDUIT, FROM OVER CURRENT PROTECTION DEVICE TO OUTLET.
2. USE COMPRESSION FITTINGS IN DRY LOCATIONS, DAMP AND RAIN-EXPOSED LOCATIONS. MAXIMUM SIZE PERMITTED IN DAMP LOCATIONS AND LOCATIONS EXPOSED TO RAIN IS 2 INCHES IN DIAMETER.
3. USE THREADED TYPE FITTINGS IN WET LOCATIONS, AND DAMP OR RAIN-EXPOSED LOCATIONS WHERE CONDUIT SIZE IS GREATER THAN 2 INCHES.
4. PROVIDE CORROSION-RESISTANT PUNCHED-STEEL BOX KNOCKOUT CLOSURES, CONDUIT LOCKNUTS AND PLASTIC CONDUIT BUSHINGS OF THE TYPE AND SIZE TO SUIT EACH RESPECTIVE USE AND INSTALLATION.
5. USE INSULATED TYPE BUSHINGS WITH GROUND PROVISION AT SWITCHBOARDS, PANELBOARDS, SAFETY DISCONNECT SWITCHES, JUNCTION BOXES AND THE LIKE THAT HAVE FEEDERS 60 AMPERES AND GREATER.
6. PROVIDE CONDUIT EXPANSION FITTINGS AT BUILDING EXPANSION JOINTS AND AT LOCATIONS WHERE CONDUIT IS EXPOSED TO THERMAL EXPANSION AND CONTRACTION.

H. WIRES AND CABLES:

1. CONDUCTOR INSTALLATION: INSTALL CONDUCTORS WITH CARE TO AVOID DAMAGE TO INSULATION. DO NOT APPLY GREATER TENSION ON CONDUCTORS THAN RECOMMENDED BY MANUFACTURER DURING INSTALLATION.
2. CONDUCTOR SIZE AND QUANTITY: INSTALL NO CONDUCTORS SMALLER THAN 12AWG UNLESS OTHERWISE SHOWN. PROVIDE REQUIRED CONDUCTORS FOR A FULLY OPERABLE SYSTEM.

I. BOXES:

1. ANCHORING: SECURE BOXES RIGIDLY TO THE SUBSTRATE UPON WHICH THEY ARE BEING MOUNTED, OR SOLIDLY EMBED BOXES IN CONCRETE OR MASONRY.
2. NOISE CONTROL: PROVIDE ACOUSTIC PUTTY PAD TO BACK SIDE OF EACH OUTLET BOX INSTALLED IN ACOUSTIC RATED WALLS.
3. COORDINATE ELECTRICAL DEVICE LOCATIONS AND ELEVATIONS (SWITCHES AND RECEPTACLES) WITH ARCHITECTURAL DRAWINGS TO PREVENT MOUNTING DEVICES IN MIRRORS, BACK SPLASHES, AND BEHIND CABINETS.
4. PROVIDE WEATHERPROOF OUTLETS FOR LOCATIONS EXPOSED TO WEATHER OR MOISTURE.
5. KNOCKOUT CLOSURES: PROVIDE KNOCKOUT CLOSURES TO CAP UNUSED KNOCKOUT HOLES WHERE BLANKS HAVE BEEN REMOVED.
6. CODE COMPLIANCE: COMPLY WITH CEC AS APPLICABLE TO CONSTRUCTION AND INSTALLATION OF ELECTRICAL BOXES AND FITTINGS AND SIZE BOXES ACCORDING TO CEC, EXCEPT AS NOTED OTHERWISE.
7. MOUNT CENTER OF OUTLET BOXES AS REQUIRED BY AMERICANS WITH DISABILITIES ACT (ADA), OR NOTED ON DRAWINGS, THE FOLLOWING DISTANCE ABOVE THE FLOOR:
 - a. CONTROL SWITCHES: 46 INCHES.
 - b. RECEPTACLES: 18 INCHES.
 - c. WALL PHONES: 46 INCHES.
 - d. TELECOM OUTLETS: 18 INCHES.
 - e. OTHER OUTLETS: AS INDICATED IN OTHER SECTIONS OF SPECIFICATIONS OR AS DETAILED ON DRAWINGS.

J. PROVIDE CEC-REQUIRED DISCONNECT SWITCHES WHETHER SPECIFICALLY SHOWN ON DRAWINGS OR NOT. PROVIDE DISCONNECT SWITCH AT EACH MOTOR LOCATION WITHIN 5 FEET UNLESS OTHERWISE NOTED. LOCATE DISCONNECT MEANS IN VIEW OF AND NOT INSIDE OF EQUIPMENT, SUCH THAT TOOLS ARE NOT NEEDED TO REMOVE COVERS OF ENERGIZED EQUIPMENT TO ACCESS THE DISCONNECTING MEANS. COORDINATE FUSE AMPERE RATING WITH INSTALLED EQUIPMENT. FUSE AMPERE RATING VARIANCE BETWEEN ORIGINAL DESIGN INFORMATION AND INSTALLED EQUIPMENT, SIZE IN ACCORDANCE WITH BUSSMANN FUSETRON 40C RECOMMENDATIONS. DO NOT PROVIDE FUSES OF LOWER AMPERE RATING THAN MOTOR STARTER THERMAL UNITS. PROVIDE ARC FLASH LABELS.

K. SUPPORTING DEVICES:

1. SAFETY FACTOR OF 4 REQUIRED FOR EVERY FASTENING DEVICE OR SUPPORT FOR ELECTRICAL EQUIPMENT INSTALLED. SUPPORT TO WITHSTAND FOUR TIMES WEIGHT OF EQUIPMENT IT SUPPORTS. PROVIDE SEISMIC BRACING PER CBC REQUIREMENTS FOR THIS BUILDING LOCATION.
2. PROVIDE VERTICAL SUPPORT MEMBERS FOR EQUIPMENT AND LUMINAIRE, STRAIGHT AND PARALLEL TO BUILDING WALLS. PROVIDE HORIZONTAL SUPPORT MEMBERS STRAIGHT AND PARALLEL TO CEILINGS OR FINISHED FLOOR, UNLESS OTHERWISE NOTED.
3. PROVIDE INDEPENDENT SUPPORTS TO STRUCTURAL MEMBER FOR LUMINAIRE, ELECTRICAL MATERIALS, OR EQUIPMENT INSTALLED IN OR ON CEILING, WALLS OR IN VOID SPACES OR OVER FURRED OR SUSPENDED CEILINGS.
4. DO NOT USE OTHER TRADE'S FASTENING DEVICES AS SUPPORTING MEANS FOR LUMINAIRE, ELECTRICAL MATERIALS, OR EQUIPMENT.
5. DO NOT FASTEN SUPPORTS TO PIPES, DUCTS, MECHANICAL EQUIPMENT OR CONDUIT.
6. DO NOT USE SUPPORTS OR FASTENING DEVICES TO SUPPORT OTHER THAN ONE PARTICULAR ITEM.
7. SUPPORT CONDUITS WITHIN 18 INCHES OF OUTLETS, BOXES, PANELS, CABINETS AND DEFLECTIONS. MAXIMUM DISTANCE BETWEEN SUPPORTS NOT TO EXCEED 8 FOOT SPACING.
8. SECURELY SUSPEND JUNCTION BOXES, PULL BOXES OR OTHER CONDUIT TERMINATING HOUSINGS LOCATED ABOVE SUSPENDED CEILING FROM THE FLOOR ABOVE OR ROOF STRUCTURE TO PREVENT SAGGING AND SWAYING.
9. PROVIDE SEISMIC BRACING PER CBC REQUIREMENTS.

L. ELECTRICAL IDENTIFICATION:

1. CONDUCTOR IDENTIFICATION: APPLY MARKERS ON EACH CONDUCTOR FOR POWER, CONTROL, SIGNALING AND COMMUNICATIONS CIRCUITS.
2. PROVIDE AN ENGRAVED LABEL ON EACH MAJOR UNIT OF ELECTRICAL EQUIPMENT INDICATING BOTH EQUIPMENT NAME AND CIRCUIT SERVING EQUIPMENT, INCLUDING BUT NOT LIMITED TO THE FOLLOWING ITEMS: DISCONNECT SWITCHES, RELAYS, CONTACTORS, TIME SWITCHES, OVERRIDE SWITCHES, SERVICE DISCONNECTS, DISTRIBUTION SWITCHES, SWITCHBOARDS, BRANCH CIRCUIT PANELBOARDS, AND TRANSFORMERS.
3. INSTALL ENGRAVED LABEL ON THE INSIDE OF FLUSH PANELS, VISIBLE WHEN DOOR IS OPENED. INSTALL LABEL ON OUTSIDE OF SURFACE PANEL. SECURE NAMEPLATES TO INSIDE SURFACE OF DOOR ON PANELBOARD THAT IS RECESSED IN FINISHED LOCATIONS.
4. ON THE FRONT OF RECEPTACLE AND SWITCH FINISH PLATES, PROVIDE LABEL WITH THE CIRCUIT THAT EACH DEVICE IS CONNECTED TO.

M. GROUNDING:

1. PERFORMANCE REQUIREMENTS: SUPPLEMENT THE GROUNDED NEUTRAL OF THE SECONDARY DISTRIBUTION SYSTEM WITH AN EQUIPMENT GROUNDING SYSTEM TO PROPERLY SAFEGUARD THE EQUIPMENT AND PERSONNEL. INSTALL EQUIPMENT GROUNDING SUCH THAT METALLIC STRUCTURES, ENCLOSURES, RACEWAYS, JUNCTION BOXES, OUTLET BOXES, CABINETS, MACHINE FRAMES, PORTABLE EQUIPMENT AND OTHER CONDUCTIVE ITEMS IN CLOSE PROXIMITY WITH ELECTRICAL CIRCUITS OPERATE CONTINUOUSLY AT GROUND POTENTIAL AND PROVIDE A LOW IMPEDANCE PATH FOR POSSIBLE GROUND FAULT CURRENTS.
2. RACEWAY GROUNDING:
 - a. GROUND METALLIC RACEWAY SYSTEMS. BOND TO GROUND TERMINAL WITH CODE SIZE JUMPER EXCEPT WHERE CODE SIZE OR LARGER GROUNDING CONDUCTOR IS INCLUDED WITH CIRCUIT, USE GROUNDING BUSHING WITH LAY-IN LUG.
 - b. CONNECT METAL RACEWAYS, WHICH TERMINATE WITHIN AN ENCLOSURE BUT WITHOUT MECHANICAL CONNECTION TO THE ENCLOSURE, BY GROUNDING BUSHINGS AND GROUND WIRE TO THE GROUNDING BUS.
 - c. WHERE EQUIPMENT SUPPLY CONDUCTORS ARE IN FLEXIBLE METALLIC CONDUIT, INSTALL STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR FROM OUTLET BOX TO EQUIPMENT FRAME.
 - d. INSTALL EQUIPMENT GROUNDING CONDUCTOR, CODE SIZE MINIMUM IN NONMETALLIC AND METALLIC RACEWAY SYSTEMS.
3. BOXES, CABINETS, ENCLOSURES AND PANELBOARDS:
 - a. BOND GROUNDING CONDUCTORS TO ENCLOSURE WITH SPECIFIED CONDUCTORS AND LUGS. INSTALL LUGS ONLY ON THOROUGHLY CLEANED CONTACT SURFACES.
 - b. BOND SECTIONS OF SERVICE EQUIPMENT ENCLOSURE TO SERVICE GROUND BUS.
4. MOTORS, EQUIPMENT AND APPLIANCES: INSTALL CODE SIZE EQUIPMENT GROUNDING CONDUCTOR FROM OUTLET BOX TO (MOTOR) EQUIPMENT FRAME OR MANUFACTURER'S DESIGNATED GROUND TERMINAL.
5. RECEPTACLES: CONNECT GROUND TERMINAL OF RECEPTACLE TO EQUIPMENT GROUND SYSTEM BY NO. 14 CONDUCTOR BOLTED TO OUTLET BOX. SELF GROUNDING NATURE OF RECEPTACLE DEVICES DOES NOT ELIMINATE CONDUCTOR BOLTED TO OUTLET BOX.

N. DISTRIBUTION PANELBOARDS:

1. INSTALL EQUIPMENT COMPLETE AS DIRECTED BY MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. INSTALL EQUIPMENT IN CONFORMANCE WITH WORK SPACE REQUIREMENTS OF CEC. LOCATE EQUIPMENT IN ROOMS OR SPACES DEDICATED TO SUCH EQUIPMENT. 6- FEET 6-INCHES TO TOP OF PANELBOARD. COORDINATE WITH OTHER DIVISIONS OF WORK.
3. FEEDER CONDUCTORS TO ENTER DIRECTLY IN LINE WITH LUG TERMINALS WHEREVER PRACTICAL. FEEDER CONDUCTORS, EXCEPT GROUND AND NEUTRAL, NOT TO EXCEED 45 DEGREE DEFLECTION FROM RACEWAY ENTRY TO FEEDER PHASE LUGS.
4. PROVIDE FILLER PLATES FOR UNUSED SPACES IN PANELBOARDS.
5. PROVIDE TYPED CIRCUIT DIRECTORY FOR EACH PANELBOARD. INCLUDE ALL 'SPACES' AND 'SPARES'. REVISE DIRECTORY TO REFLECT CIRCUITING CHANGES AND AS-INSTALLED CONDITIONS. USE FINAL OWNER DESIGNATED ROOM NAMES AND NUMBERS, AND NOT DESIGNATIONS SHOWN ON DRAWINGS.
6. PROVIDE ARC FLASH LABELS AND ENGRAVED PLASTIC NAMEPLATES ON PANELBOARD ENCLOSURE COVERS.
7. GROUND AND BOND PANELBOARD ENCLOSURE PER CEC.
8. MEASURE STEADY STATE LOAD CURRENTS AT EACH PANELBOARD FEEDER; REARRANGE CIRCUITS IN THE PANELBOARD TO BALANCE THE PHASE LOADS TO WITHIN 20 PERCENT OF EACH OTHER. MAINTAIN PROPER PHASING FOR MULTI-WIRE BRANCH CIRCUITS.
9. FOR BREAKERS ADDED TO EXISTING PANELBOARDS, COORDINATE BREAKER TYPE AND SHORT CIRCUIT RATING WITH EXISTING PANELBOARD. BREAKERS TO MATCH EXISTING IN MANUFACTURER'S TYPE AND ARC RATING. PROVIDE NEW TYPED PANELBOARD DIRECTORY.
10. FLUSH PANELS; VERIFY AVAILABLE RECESSING DEPTH AND COORDINATE WALL FRAMING WITH OTHER DIVISIONS.

3.1 EXAMINATION

A. DRAWINGS ARE DIAGRAMMATIC WITH SYMBOLS REPRESENTING ELECTRICAL EQUIPMENT, OUTLETS, LUMINAIRE, AND WIRING. EXAMINE THE ENTIRE SET OF DRAWINGS TO AVOID CONFLICTS WITH OTHER SYSTEMS. DETERMINE EXACT ROUTE AND INSTALLATION OF ELECTRICAL WIRING AND EQUIPMENT WITH CONDITIONS OF CONSTRUCTION.

B. CLARIFICATION:

1. THE DRAWINGS GOVERN IN MATTERS OF QUANTITY, THE SPECIFICATION IN MATTERS OF QUALITY. IN EVENT OF CONFLICT ON DRAWINGS OR IN THE SPECIFICATIONS, THE GREATER QUANTITY AND THE HIGHER QUALITY APPLY.
2. SHOULD THE ELECTRICAL DOCUMENTS INDICATE A CONDITION CONFLICTING WITH THE GOVERNING CODES AND REGULATIONS, REFRAIN FROM INSTALLING THAT PORTION OF THE WORK UNTIL CLARIFIED BY ARCHITECT.

3.2 MOTORS/APPLIANCE/UTILIZATION BRANCH CIRCUIT WIRING

A. CONNECT EQUIPMENT, WHETHER FURNISHED BY OWNER OR OTHER DIVISIONS OF THE CONTRACT, ELECTRICALLY COMPLETE. DO NOT INSTALL ELECTRICAL EQUIPMENT OR WIRING ON MECHANICAL EQUIPMENT WITHOUT APPROVAL OF ARCHITECT.

B. PROVIDE MOISTURE TIGHT EQUIPMENT WIRING AND SWITCHES IN DUCTS OR PLENUMS USED FOR ENVIRONMENTAL AIR.

C. CONNECT MOTOR BRANCH CIRCUITS COMPLETE FROM PANEL TO MOTOR/EQUIPMENT AS REQUIRED BY CODE.

D. MOTOR STARTERS FOR EQUIPMENT, MOTOR START CONTROL DEVICES, AND WIRING FURNISHED BY OTHER DIVISIONS PROVIDED BY EQUIPMENT INSTALLER FOR INSTALLATION BY THIS DIVISION, UNLESS NOTED ON DRAWINGS.

E. INSTALL FEEDER CIRCUIT TO PACKAGED HVAC EQUIPMENT. TERMINATE FEEDER CONDUCTORS AT LINE TERMINALS AS DIRECTED BY EQUIPMENT MANUFACTURER.

F. APPLIANCE/UTILIZATION EQUIPMENT: PROVIDE APPROPRIATE CABLE AND CORD CAP FOR FINAL CONNECTION UNLESS EQUIPMENT IS PROVIDED WITH SAME. VERIFY SPECIAL PURPOSE OUTLET NEMA CONFIGURATION AND AMPERE RATING WITH EQUIPMENT SUPPLIER PRIOR TO ORDERING DEVICES AND COVERPLATES.

3.3 DEMOLITION

A. COORDINATE WITH OWNER SO THAT WORK CAN BE SCHEDULED NOT TO INTERRUPT OPERATIONS, NORMAL ACTIVITIES, BUILDING ACCESS, ACCESS TO DIFFERENT AREAS. THE OWNER WILL COOPERATE TO THE BEST OF THEIR ABILITY TO ASSIST IN A COORDINATED SCHEDULE, BUT WILL REMAIN THE FINAL AUTHORITY AS TO TIME OF WORK PERMITTED.

B. COORDINATE THE EXACT LOCATION OF EXISTING UTILITIES AND EQUIPMENT PRIOR TO COMMENCEMENT OF WORK. COMPENSATE THE OWNER FOR DAMAGES CAUSED BY THE FAILURE TO LOCATE AND PRESERVE UTILITIES. REPLACE DAMAGED ITEMS WITH NEW MATERIAL TO MATCH EXISTING. VERIFY THAT ABANDONED WIRING AND EQUIPMENT SERVE ONLY ABANDONED FACILITIES.

C. EXECUTION:

1. REMOVE EXISTING LUMINAIRE, SWITCHES, RECEPTACLES, AND OTHER ELECTRICAL EQUIPMENT AND DEVICES AND ASSOCIATED WIRING FROM WALLS, CEILINGS, FLOORS, AND OTHER SURFACES SCHEDULED FOR REMODELING, RELOCATION, OR DEMOLITION UNLESS SHOWN AS RETAINED OR RELOCATED ON DRAWINGS.
2. PROVIDE TEMPORARY WIRING AND CONNECTIONS TO MAINTAIN ELECTRICAL CONTINUITY OF EXISTING SYSTEMS DURING CONSTRUCTION. REMOVE OR RELOCATE ELECTRICAL BOXES, CONDUIT, WIRING, EQUIPMENT, LUMINAIRE, AS ENCOUNTERED IN REMOVED OR REMODELED AREAS IN THE EXISTING CONSTRUCTION AFFECTED BY THIS WORK.
3. REMOVE AND RESTORE WIRING WHICH SERVES USABLE EXISTING OUTLETS CLEAR OF THE CONSTRUCTION OR DEMOLITION
4. IF EXISTING JUNCTION BOXES WILL BE MADE INACCESSIBLE, OR IF ABANDONED OUTLETS SERVE AS FEED THROUGH BOXES FOR OTHER EXISTING ELECTRICAL EQUIPMENT WHICH IS BEING RETAINED, PROVIDE NEW CONDUIT AND WIRE TO BYPASS THE ABANDONED OUTLETS.
5. IF EXISTING CONDUITS PASS THROUGH PARTITIONS OR CEILING WHICH ARE BEING REMOVED OR REMODELED, PROVIDE NEW CONDUIT AND WIRE TO REROUTE CLEAR OF THE CONSTRUCTION OR DEMOLITION AND MAINTAIN SERVICE TO THE EXISTING LOAD.
6. CONCEALED CONDUIT LOCATED IN CONCRETE WALLS OR HARDBOARD CEILING SPACES MAY BE ABANDONED IN PLACE. REMOVE CONDUCTORS AND TAG ABANDONED CONDUITS WITH CORRESPONDING SYSTEM AND TERMINATION POINT. CUT AND CAP ABANDONED FINISHED. DO NOT EXTEND STUDS ABOVE FINISHED FLOOR.
7. EXTEND CIRCUITING AND DEVICES IN EXISTING WALLS TO BE FURRED OUT.
8. PROVIDE TEMPORARY SUPPORT FOR ELECTRICAL SYSTEMS THAT REMAIN IN PLACE.
9. EXISTING ELECTRICAL OUTLETS AND LUMINAIRE ARE INDICATED ON ELECTRICAL DEMOLITION PLANS. VERIFY EXACT LOCATION AND NUMBER OF EXISTING ELECTRICAL OUTLETS AND LUMINAIRE IN THE FIELD. ONLY PARTIAL EXISTING ELECTRICAL SHOWN. LOCATIONS OF ITEMS SHOWN ON DRAWINGS AS EXISTING ARE PARTIALLY BASED ON RECORD AND OTHER DRAWINGS WHICH MAY CONTAIN ERRORS. VERIFY THE ACCURACY OF THE INFORMATION SHOWN PRIOR TO BIDDING AND PROVIDE SUCH LABOR AND MATERIAL AS IS NECESSARY TO ACCOMPLISH THE INTENT OF THE CONTRACT DOCUMENTS.
10. REMOVE ABANDONED WIRING TO SOURCE OF SUPPLY.
11. PROVIDE BLANK COVER PLATE FOR ABANDONED FLUSH OUTLETS.
12. MAINTAIN ACCESS TO EXISTING ELECTRICAL INSTALLATIONS WHICH REMAIN ACTIVE. MODIFY INSTALLATION OR PROVIDE ACCESS PANEL AS APPROPRIATE.
13. PROVIDE UPDATED PANEL SCHEDULES AND DIRECTORIES THAT IDENTIFY EXISTING CIRCUITS AND NUMBER OF SPARE CIRCUITS AVAILABLE UPON COMPLETION OF DEMOLITION WORK.

3.4 CONTINUITY OF SERVICE

A. NO INTERRUPTION OF SERVICES TO ANY PART OF EXISTING FACILITIES WILL BE PERMITTED WITHOUT EXPRESS PERMISSION IN EACH INSTANCE FROM THE OWNER. REQUESTS FOR OUTAGES SHALL STATE THE SPECIFIC DATES AND HOURS AND THE MAXIMUM DURATIONS, WITH THE OUTAGES KEPT TO THESE SPECIFIC DATES AND HOURS AND THE MAXIMUM DURATIONS. OBTAIN WRITTEN PERMISSION FROM THE OWNER FOR ANY INTERRUPTION OF POWER, LIGHTING OR SIGNAL CIRCUITS AND SYSTEMS.

3.5 INSTALLATION

A. INSTALL ELECTRICAL EQUIPMENT COMPLETE AS DIRECTED BY MANUFACTURER'S INSTALLATION INSTRUCTIONS. OBTAIN INSTALLATION INSTRUCTIONS FROM MANUFACTURER PRIOR TO ROUGH-IN OF THE ELECTRICAL EQUIPMENT. EXAMINE THE INSTRUCTIONS THOROUGHLY. WHEN REQUIREMENTS OF INSTALLATION INSTRUCTIONS CONFLICT WITH CONTRACT DOCUMENTS, REQUEST CLARIFICATION FROM ARCHITECT PRIOR TO PROCEEDING WITH INSTALLATION. THIS INCLUDES PROPER INSTALLATION METHODS, SEQUENCING, AND COORDINATION WITH OTHER TRADES AND DISCIPLINES.

B. DELIVERY, STORAGE AND HANDLING: INSPECT AND REPORT CONCEALED DAMAGE TO CARRIER WITHIN THEIR REQUIRED TIME PERIOD. STORE IN A CLEAN, DRY ENVIRONMENT. MAINTAIN FACTORY PACKAGING, AND IF REQUIRED, PROVIDE AN ADDITIONAL HEAVY CANVAS OR HEAVY PLASTIC COVER TO PROTECT ENCLOSURE(S) FROM DIRT, WATER, CONSTRUCTION DEBRIS, AND TRAFFIC.

C. INSTALL EQUIPMENT REQUIRING ACCESS (I.E. JUNCTION BOXES, LUMINAIRE, POWER SUPPLIES, MOTORS, ETC.) SO THAT THEY MAY BE SERVICED, RESET, REPLACED OR RECALIBRATED BY SERVICE PEOPLE WITH NORMAL SERVICE TOOLS AND EQUIPMENT. DO NOT INSTALL ELECTRICAL EQUIPMENT IN OBVIOUS PASSAGES, DOORWAYS, SCUTTLES OR CRAWL SPACES WHICH WOULD IMPEDE OR BLOCK THE INTENDED USAGE.

D. NOISE CONTROL:

1. DO NOT INSTALL OUTLET BOXES BACK TO BACK. DO NOT USE STRAIGHT THROUGH BOXES.
2. DO NOT PLACE CONTACTORS, TRANSFORMERS, STARTERS AND SIMILAR NOISE PRODUCING DEVICES ON WALLS WHICH ARE COMMON TO OCCUPIED SPACES UNLESS SPECIFICALLY CALLED FOR ON DRAWINGS. WHERE SUCH DEVICES MUST BE MOUNTED ON WALLS COMMON TO OCCUPIED SPACES, MOUNT OR ISOLATE IN SUCH A MANNER AS TO EFFECTIVELY PREVENT THE TRANSMISSION OF THEIR INHERENT NOISE TO THE OCCUPIED SPACE.

E. FIRESTOPPING: COORDINATE LOCATION AND PROTECTION LEVEL OF FIRE AND/OR SMOKE RATED WALLS, CEILINGS, AND FLOORS. WHEN THESE ASSEMBLIES ARE PENETRATED, SEAL AROUND CONDUIT AND EQUIPMENT WITH APPROVED FIRESTOPPING MATERIAL. INSTALL FIRESTOPPING MATERIAL COMPLETE AS DIRECTED THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. MEET REQUIREMENTS OF ASTM E814, STANDARD TEST METHOD FOR FIRE TESTS OF THROUGH-PENETRATION FIRE STOPS.

F. CONDUIT:

1. CONDUIT JOINTS: ASSEMBLE CONDUITS CONTINUOUS AND SECURE TO BOXES, PANELS, LUMINAIRE AND EQUIPMENT WITH FITTINGS TO MAINTAIN CONTINUITY. PROVIDE WATERIGHT JOINTS WHERE EMBEDDED IN CONCRETE, BELOW GRADE OR IN DAMP LOCATIONS. SEAL PVC CONDUIT JOINTS WITH SOLVENT CEMENT AND METAL CONDUIT WITH METAL THREAD PRIMER. RIGID CONDUIT CONNECTIONS TO BE THREADED, CLEAN AND TIGHT (METAL TO METAL). THREADLESS CONNECTIONS ARE NOT PERMITTED FOR RMC AND IMC.
2. CONCEAL CONDUITS. EXPOSED CONDUITS ARE PERMITTED ONLY IN THE FOLLOWING AREAS:
 - a. MECHANICAL ROOMS, ELECTRICAL ROOMS OR SPACES WHERE WALLS, CEILINGS AND FLOORS WILL NOT BE COVERED WITH FINISHED MATERIALS.
 - b. EXISTING WALLS THAT ARE CONCRETE OR BLOCK CONSTRUCTION AND WHERE SPECIFICALLY NOTED ON THE DRAWINGS.
3. DO NOT INSTALL CONDUITS ON SURFACE OF BUILDING EXTERIOR, ACROSS ROOF, ON TOP OF PARAPET WALLS, OR ACROSS FLOORS. WHERE EXPOSED CONDUITS ARE PERMITTED, INSTALL PARALLEL AND PERPENDICULAR TO WALLS, TIGHT TO FINISHED SURFACES AND NEATLY OFFSET INTO BOXES.
4. KEEP CONDUITS A MINIMUM OF 12-INCHES AWAY FROM STEAM OR HOT WATER RADIANT HEATING LINES (AT OR ABOVE 104 DEGREES F) OR 3-INCHES AWAY FROM WASTE OR WATER LINES.
5. POWER WIRING INDEPENDENT OF COMMUNICATION SYSTEM WIRING. KEEP EMERGENCY SYSTEM WIRING INDEPENDENT OF OTHER WIRING SYSTEMS.
6. MAXIMUM BENDS: INSTALL NO MORE THAN EQUIVALENT OF THREE 90 DEGREE BENDS BETWEEN ELECTRICAL BOXES. INSTALL NO MORE THAN EQUIVALENT OF TWO 90 DEGREE BENDS BETWEEN TELECOMMUNICATION BOXES. USE CONDUIT BODIES TO MAKE SHARP CHANGES IN DIRECTION, AS AROUND BEAMS.
7. FLEXIBLE CONDUIT: INSTALL 12 INCH MINIMUM SLACK LOOP ON FLEXIBLE METALLIC CONDUIT AND LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT.
8. CONDUIT SIZE: MINIMUM TRADE SIZE 3/4 INCH.
9. CONDUIT USE LOCATIONS:
 - a. UNDERGROUND, IN SLAB ON GRADE, OR IN SLAB ABOVE GRADE: PVC.
 - b. OUTDOOR LOCATIONS ABOVE GRADE: RMC OR IMC.
 - c. WET LOCATIONS: RMC OR IMC.
 - d. DAMP LOCATIONS: RMC, IMC, OR EMT UP TO 2 INCHES IN DIAMETER.
 - e. DRY, PROTECTED: RMC, IMC, EMT.
 - f. IN AREAS EXPOSED TO SEVERE MECHANICAL DAMAGE: RMC.
 - g. CAST-IN-PLACE CONCRETE AND MASONRY: RMC, IMC, AND PVC. HORIZONTAL RUNS OF CONDUIT IN POURED-IN-PLACE CONCRETE SLABS. MAXIMUM DIAMETER OF CONDUIT IS 1 INCH.

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

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

Project Name: West Berkeley Service Center Report Page: (Page 1 of 4)
 Project Address: Date Prepared: 2023-04-28T12:12:21-04:00

A. GENERAL INFORMATION

01	Project Location (city)	Berkeley	02	Climate Zone	3
			03	Occupancy Types Within Project:	School or Classroom Sports Arena

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

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

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

Registration Number: CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance
 Generated Date/Time: Report Version: 2022.0.000 Schema Version: rev 20220101
 Documentation Software: Energy Code Ace
 Compliance ID: 104453-0423-0002
 Report Generated: 2023-04-28 09:12:23

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

CERTIFICATE OF COMPLIANCE
 Project Name: West Berkeley Service Center Report Page: (Page 3 of 4)
 Project Address: Date Prepared: 2023-04-28T12:12:21-04:00

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

Form/Title

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

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

Registration Number: CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance
 Generated Date/Time: Report Version: 2022.0.000 Schema Version: rev 20220101
 Documentation Software: Energy Code Ace
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STATE OF CALIFORNIA
Electrical Power Distribution
 CALIFORNIA ENERGY COMMISSION
 NRCC-ELC-E

CERTIFICATE OF COMPLIANCE
 Project Name: West Berkeley Service Center Report Page: (Page 2 of 4)
 Project Address: Date Prepared: 2023-04-28T12:12:21-04:00

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

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

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

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

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

01	02	03	04	05
Electrical Service Designation/Description	Combined Voltage Drop on Installed Feeder/Branch Circuit Conductors Compliance Method	Location of Voltage Drop Calculations ¹	Sheet Number for Voltage Drop Calculations in Construction Documents	Field Inspector
Existing meter and service	<input checked="" type="checkbox"/> Voltage drop less than 5%	<input type="checkbox"/> Permitted by CA Elec Code (Exception to 130.5(c))*	In construction documents	E2.01

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

Registration Number: CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance
 Generated Date/Time: Report Version: 2022.0.000 Schema Version: rev 20220101
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STATE OF CALIFORNIA
Electrical Power Distribution
 CALIFORNIA ENERGY COMMISSION
 NRCC-ELC-E

CERTIFICATE OF COMPLIANCE
 Project Name: West Berkeley Service Center Report Page: (Page 4 of 4)
 Project Address: Date Prepared: 2023-04-28T12:12:21-04:00

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

Documentation Author Name: Ray Juachon
 Signature Date: [Signature]
 Company: RIJA
 Address: [Address]
 City/State/Zip: [City/State/Zip]

CEA/HERS Certification Identification (if applicable):
 Phone: [Phone]

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

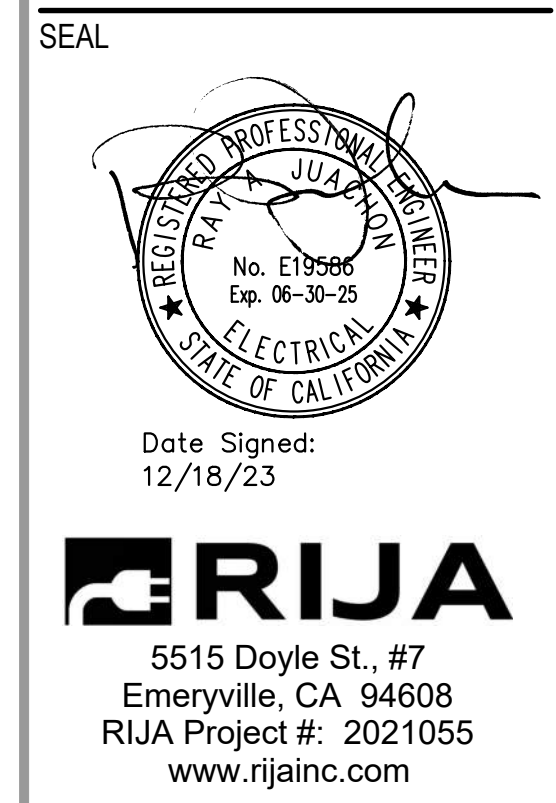
- The information provided on this Certificate of Compliance is true and correct.
- I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
- The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
- The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
- I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Ray Juachon
 Signature Date: [Signature]
 Company: RIJA
 Address: [Address]
 City/State/Zip: [City/State/Zip]

Responsible Designer Signature:
 Date Signed: [Signature]
 License: [License]
 Phone: [Phone]

Registration Number: CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance
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NOLL & TAM ARCHITECTS
 729 Heinz Avenue
 Berkeley, CA 94710
 tel 510.542.2200
 fax 510.542.2201



APPROVALS

PROJECT TITLE

City of Berkeley WEST BERKELEY SERVICE CENTER

1900 Sixth St
 Berkeley, CA 94710

BID SET

ISSUE DATE: 12.22.2023
 N&T JOB NUMBER: 22121

REVISIONS

DATE	DESCRIPTION
1 8/25/23	REV 1 - PLAN CHECK
2 10/20/23	REV 2 - PLAN CHECK

DRAWN BY CAD CHECKED BY RAJ
 SHEET TITLE

ENERGY COMPLIANCE FORMS

SHEET NUMBER

E5.01

STATE OF CALIFORNIA
Indoor Lighting
 NRCC-LTI-E (Created 04/21)
 CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
 This document is used to demonstrate compliance with requirements in §110.9, §110.12(c), §130.0, §130.1, §140.6, and §141.0(b)2 for indoor lighting scopes using the prescriptive path.
 Project Name: WEST BERKELEY SERVICE CENTER Report Page: Page 1 of 7
 Project Address: 1900 Sixth St Berkeley, CA 94710 Date Prepared: 04.28.2023

A. GENERAL INFORMATION

01 Project Location (city)	Berkeley	04 Total Conditioned Floor Area (ft ²)	715
02 Climate Zone	3	05 Total Unconditioned Floor Area (ft ²)	0
03 Occupancy Types Within Project (select all that apply):		06 # of Stories (Habitable Above Grade)	1
<input type="checkbox"/> Office <input type="checkbox"/> Retail <input type="checkbox"/> Warehouse <input type="checkbox"/> Hotel/Motel <input type="checkbox"/> School <input type="checkbox"/> Support Areas		<input type="checkbox"/> Relocatable <input type="checkbox"/> Healthcare <input checked="" type="checkbox"/> Other (write in): Meeting Center	

B. PROJECT SCOPE

Table Instructions: Include any lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.6 or §141.0(b)2 for alterations. WARNING: Changing the Calculation Method in this table will result in the deletion of data previously input. If you need to change the calculation method, please open a new form or use "Save As".

Scope of Work	Conditioned Spaces	Unconditioned Spaces
01	02	03
My Project Consists of (check all that apply):	Calculation Method	Area (ft ²)
<input checked="" type="checkbox"/> New Lighting System	Area Category	715
<input type="checkbox"/> Altered Lighting System		
Total Area of Work (ft²)		715

C. COMPLIANCE RESULTS

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

Lighting in conditioned and unconditioned spaces must not be combined for compliance per §140.6(b)1.	Allowed Lighting Power per §140.6(b) (Watts)					Adjusted Lighting Power per §140.6(a) (Watts)			Compliance Results
	01	02	03	04	05	06	07	08	
	Complete Building §140.6(c)1	Area Category §140.6(c)2	Area Category Additional §140.6(c)2G (+)	Tailored §140.6(c)3 (+)					
	(See Table I)	(See Table I)	(See Table J)	(See Table K)	=	(See Table F)	(See Table P)	=	05 Must be ≥ 08 §140.6
Conditioned:	410.75				=	406		=	406
Unconditioned:					=			=	COMPLIES

Table Continued

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: <http://www.energy.ca.gov/title24/2019standards> April 2021

STATE OF CALIFORNIA
Indoor Lighting
 NRCC-LTI-E (Created 04/21)
 CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
 Project Name: WEST BERKELEY SERVICE CENTER Report Page: Page 3 of 7
 Project Address: 1900 Sixth St Berkeley, CA 94710 Date Prepared: 04.28.2023

H. INDOOR LIGHTING CONTROLS (Not Including PAFs)

Table Instructions: Please include lighting controls for conditioned and unconditioned spaces in this table. When an option having a * is selected, the notes section of this table must be completed. The lighting controls section of the Compliance Summary Table on the first page will show "DOES NOT COMPLY" if the notes are left blank.

Building Level Controls

01 Mandatory Demand Response §110.12(c)	02 Shut-Off Controls §130.1(c)	03 Field Inspector
Not Required ≤ 10,000 SF	See Area/Space Level Controls	Pass Fail

Area Level Controls

04	05	06	07	08	09	10	11	12
Area Description	Complete Building or Area Category Primary Function Area	Area Controls §130.1(a)	Multi-Level Controls §130.1(b)	Shut-Off Controls §130.1(c)	Primary/Skylight Daylighting §130.1(d)	Secondary Daylighting §140.6(d)	Interlocked Systems §140.6(a)1	Field Inspector
								Pass Fail
STORAGE AREA	All Other Space Types	Manual ON/OFF	Dimmer	Occ. Sensor	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>
#9 - RESTROOM	Restroom	Manual ON/OFF	Exempt*	Occ. Sensor	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>
#7-JANITOR	All Other Space Types	Auth. Personnel	Exempt*	Occ. Sensor	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>
#6-MECH	Electrical, Mechanical, Telephone Rooms	Auth. Personnel	Exempt*	Occ. Sensor	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>
#8-STORAGE	All Other Space Types	Auth. Personnel	Exempt*	Occ. Sensor	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>

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

#9 - RESTROOM	RESTROOMS	
#7-JANITOR	<100SF	
#6-MECH	<100SF	
#8-STORAGE	<100SF	

13
 Plan Sheet Showing Daylit Zones:
 N/A

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: <http://www.energy.ca.gov/title24/2019standards> April 2021

STATE OF CALIFORNIA
Indoor Lighting
 NRCC-LTI-E (Created 04/21)
 CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
 Project Name: WEST BERKELEY SERVICE CENTER Report Page: Page 2 of 7
 Project Address: 1900 Sixth St Berkeley, CA 94710 Date Prepared: 04.28.2023

Controls Compliance (See Table H for Details) COMPLIES with Exceptional Conditions
Rated Power Reduction Compliance (See Table Q for Details) Not Applicable

D. EXCEPTIONAL CONDITIONS

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

Table H Indoor Lighting Controls Permit Applicant Notes:
 #9 - RESTROOM: RESTROOMS
 #7-JANITOR: <100SF
 #6-MECH: <100SF
 #8-STORAGE: <100SF

E. ADDITIONAL REMARKS

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

F. INDOOR LIGHTING FIXTURE SCHEDULE

Table Instructions: Include all permanent designed lighting and all portable lighting in offices.

Designed Wattage: Conditioned Spaces

01	02	03	04	05	06	07	08	09	10
Name or Item Tag	Complete Luminaire Description	Modular (Track) Fixture	Small Aperture & Color Change ¹	Watts per luminaire ²	How Wattage is determined	Total number luminaires	Exempt per §140.6(a)3	Design Watts	Field Inspector
									Pass Fail
B1	BACK OF HOUSE LINEAR LED	<input type="checkbox"/>	<input type="checkbox"/>	31	Mfr. Spec ²	8	<input type="checkbox"/>	248	<input type="checkbox"/>
R1	4" RECESSED LED DOWNLIGHT	<input type="checkbox"/>	<input type="checkbox"/>	10	Mfr. Spec ²	6	<input type="checkbox"/>	60	<input type="checkbox"/>
R2	4" RECESSED LED DOWNLIGHT SLOPE	<input type="checkbox"/>	<input type="checkbox"/>	14	Mfr. Spec ²	3	<input type="checkbox"/>	42	<input type="checkbox"/>
W1	DIRECT/INDIRECT LINEAR WALL MOUNTED	<input type="checkbox"/>	<input type="checkbox"/>	28	Mfr. Spec ²	2	<input type="checkbox"/>	56	<input type="checkbox"/>
Total Designed Watts CONDITIONED SPACES:									406

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

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: <http://www.energy.ca.gov/title24/2019standards> April 2021

STATE OF CALIFORNIA
Indoor Lighting
 NRCC-LTI-E (Created 04/21)
 CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
 Project Name: WEST BERKELEY SERVICE CENTER Report Page: Page 4 of 7
 Project Address: 1900 Sixth St Berkeley, CA 94710 Date Prepared: 04.28.2023

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

Table Instructions: Complete the table for each area complying using the Complete Building or Area Category Methods per §140.6(b). Indicate if additional lighting power allowances per §140.6(c) or adjustments per §140.6(a) are being used.

Conditioned Spaces

01	02	03	04	05	06
Area Description	Complete Building or Area Category Primary Function Area	Allowed Density (W/ft ²)	Area (ft ²)	Allowed Wattage (Watts)	Additional Allowances / Adjustment
					Area Category PAF
STORAGE AREA	All Other Space Types	0.4	425	170	<input type="checkbox"/>
#9 - RESTROOM	Restroom	0.65	275	178.75	<input type="checkbox"/>
#7-JANITOR	All Other Space Types	0.4	35	14	<input type="checkbox"/>
#6-MECH	Electrical, Mechanical, Telephone Rooms	0.4	100	40	<input type="checkbox"/>
#8-STORAGE	All Other Space Types	0.4	20	8	<input type="checkbox"/>
TOTAL:			855	410.75	See Tables J or P for detail

J. ADDITIONAL LIGHTING ALLOWANCE: AREA CATEGORY METHOD QUALIFYING LIGHTING SYSTEM

This Section Does Not Apply

K. TAILORED METHOD GENERAL LIGHTING POWER ALLOWANCE

This Section Does Not Apply

L. ADDITIONAL LIGHTING ALLOWANCE: TAILORED WALL DISPLAY

This Section Does Not Apply

M. ADDITIONAL LIGHTING ALLOWANCE: TAILORED FLOOR AND TASK LIGHTING

This Section Does Not Apply

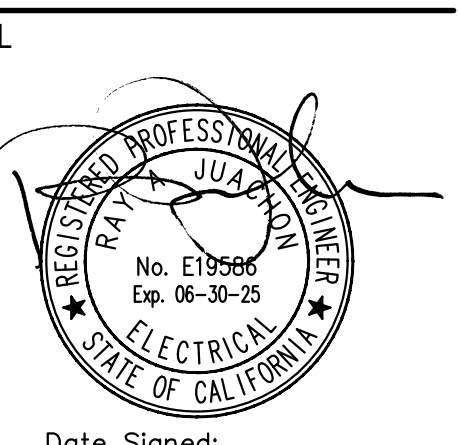
N. ADDITIONAL LIGHTING ALLOWANCE: TAILORED ORNAMENTAL/SPECIAL EFFECTS

This Section Does Not Apply

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: <http://www.energy.ca.gov/title24/2019standards> April 2021

NOLL & TAM
 ARCHITECTS

729 Heinz Avenue
 Berkeley, CA 94710
 tel 510.542.2200
 fax 510.542.2201



Date Signed:
 12/18/23

RIJA
 5515 Doyle St., #7
 Emeryville, CA 94608
 RIJA Project #: 2021055
 www.rjainc.com

APPROVALS

PROJECT TITLE

City of Berkeley
 WEST BERKELEY SERVICE CENTER

1900 Sixth St
 Berkeley, CA 94710

BID SET

ISSUE DATE	12.22.2023
N&T JOB NUMBER	22121
REVISIONS	
DATE	DESCRIPTION
1 8/25/23	REV 1 - PLAN CHECK
2 10/20/23	REV 2 - PLAN CHECK

DRAWN BY CAD CHECKED BY RAJ

SHEET TITLE

ENERGY COMPLIANCE FORMS

SHEET NUMBER

E5.02

STATE OF CALIFORNIA
Indoor Lighting
 NRCC-LTI-E (Created 04/21) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
 Project Name: WEST BERKELEY SERVICE CENTER Report Page: Page 5 of 7
 Project Address: 1900 Sixth St Berkeley, CA 94710 Date Prepared: 04.28.2023

O. ADDITIONAL LIGHTING ALLOWANCE: TAILORED VERY VALUABLE MERCHANDISE
 This Section Does Not Apply

P. POWER ADJUSTMENT: LIGHTING CONTROL CREDIT (POWER ADJUSTMENT FACTOR (PAF))
 This Section Does Not Apply

Q. RATED POWER REDUCTION COMPLIANCE FOR ALTERATIONS
 This Section Does Not Apply

R. 80% LIGHTING POWER FOR ALTERATIONS - CONTROLS EXCEPTIONS
 This Section Does Not Apply

S. DAYLIGHT DESIGN POWER ADJUSTMENT FACTOR (PAF)
 This Section Does Not Apply

T. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION
 Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www2.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

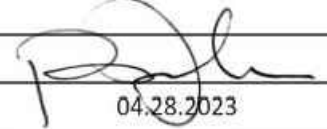
YES	NO	Form/Title	Field Inspector	
			Pass	Fail
<input checked="" type="radio"/>	<input type="radio"/>	NRCI-LTI-01-E - Must be submitted for all buildings	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCI-LTI-02-E - Must be submitted for a lighting control system, or for an Energy Management Control System (EMCS), to be recognized for compliance.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCI-LTI-04-E - Must be submitted for two interlocked systems serving an auditorium, a convention center, a conference room, a multipurpose room, or a theater to be recognized for compliance.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCI-LTI-05-E - Must be submitted for a Power Adjustment Factor (PAF) to be recognized for compliance.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCI-LTI-06-E - Must be submitted for additional wattage installed in a video conferencing studio to be recognized for compliance.	<input type="checkbox"/>	<input type="checkbox"/>

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: <http://www.energy.ca.gov/title24/2019standards> April 2021

STATE OF CALIFORNIA
Indoor Lighting
 NRCC-LTI-E (Created 04/21) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
 Project Name: WEST BERKELEY SERVICE CENTER Report Page: Page 7 of 7
 Project Address: 1900 Sixth St Berkeley, CA 94710 Date Prepared: 04.28.2023

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

Documentation Author Name: Ray A. Juachon, PE Documentation Author Signature: 

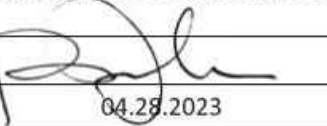
Company: RIJA, Inc. Signature Date: 04.28.2023

Address: 5515 Doyle Street, #7 CEA/ HERS Certification Identification (if applicable):

City/State/Zip: Emeryville, CA 94608 Phone: 415.730.7994

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

- The information provided on this Certificate of Compliance is true and correct.
- I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
- The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
- The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
- I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Ray A. Juachon, PE Responsible Designer Signature: 

Company: RIJA, Inc. Date Signed: 04.28.2023

Address: 5515 Doyle Street, #7 License: E19586

City/State/Zip: Emeryville, CA 94608 Phone: 415.730.7994

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: <http://www.energy.ca.gov/title24/2019standards> April 2021

STATE OF CALIFORNIA
Indoor Lighting
 NRCC-LTI-E (Created 04/21) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
 Project Name: WEST BERKELEY SERVICE CENTER Report Page: Page 6 of 7
 Project Address: 1900 Sixth St Berkeley, CA 94710 Date Prepared: 04.28.2023

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

YES	NO	Form/Title	Field Inspector	
			Pass	Fail
<input type="radio"/>	<input type="radio"/>	NRCA-LTI-02-A - Must be submitted for occupancy sensors and automatic time switch controls.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input type="radio"/>	NRCA-LTI-03-A - Must be submitted for automatic daylight controls.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-LTI-04-A - Must be submitted for demand responsive lighting controls.	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-LTI-05-A - Must be submitted for institutional tuning power adjustment factor (PAF).	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<input checked="" type="radio"/>	NRCA-ENV-03-F - Must be submitted for daylighting design power adjustment factors (PAF).	<input type="checkbox"/>	<input type="checkbox"/>

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: <http://www.energy.ca.gov/title24/2019standards> April 2021

STATE OF CALIFORNIA
Outdoor Lighting
 NRCC-LTO-E (Created 01/21) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
 This document is used to demonstrate compliance with requirements in §110.9, §130.0, §130.2, §140.7, and §141.0(b)(2) for outdoor lighting scopes using the prescriptive path.
 Project Name: WEST BERKELEY SERVICE CENTER Report Page: Page 1 of 6
 Project Address: 1900 Sixth St Berkeley, CA 94710 Date Prepared: 04.28.2023

A. GENERAL INFORMATION

01 Project Location (city) Berkeley 04 Total Illuminated Hardscape Area (ft²)

02 Climate Zone 3

03 Outdoor Lighting Zone per Title 24, Part 1 §10-114 or as designated by Authority Having Jurisdiction (AHJ):

LZ-0: Very Low - Undeveloped Parkland LZ-2: Moderate - Rural Areas LZ-4: High - Must be reviewed by CA Energy Commission for Approval

LZ-1: Low - Developed Parkland LZ-3: Moderately High - Urban Areas

B. PROJECT SCOPE
 Table Instructions: Include any outdoor lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.7 or §141.0(b)(2) for alterations.

My project consists of:

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

* FOOTNOTES: % of Existing Luminaires Being Altered = (Sum Total of Luminaires Being Added or Altered / Existing Luminaires within the Scope of the Permit Application) x 100

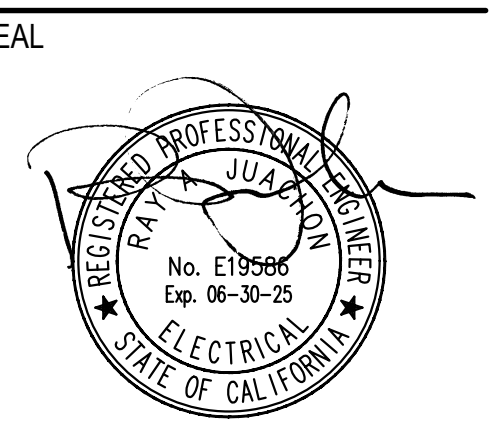
C. COMPLIANCE RESULTS
 Table Instructions: If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

Calculation of Total Allowed Lighting Power (Watts) §140.7 or §141.0(b)(2)						Compliance Results		
01	02	03	04	05	06	07	08	09
General Hardscape Allowance §140.7(d)(1)	Per Application §140.7(d)(2)	Sales Frontage §140.7(d)(2)	Ornamental §140.7(d)(2)	Per Specific Area §140.7(d)(2)	Existing Power §141.0(b)(2) OR	Total Allowed (Watts)	Total Actual (Watts)	07 Must be ≥ 08
(See Table I)	(See Table J)	(See Table K)	(See Table L)	(See Table M)	(See Table N)	382.9	24	COMPLIES
Cutoff Compliance (See Table G for Details)						Not Applicable		
Controls Compliance (See Table H for Details)						COMPLIES		

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: <http://www.energy.ca.gov/title24/2019standards> January 2021

NOLL & TAM ARCHITECTS

729 Heinz Avenue
 Berkeley, CA 94710
 tel 510.542.2200
 fax 510.542.2201



Date Signed: 12/18/23

RIJA
 5515 Doyle St., #7
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 RIJA Project #: 2021055
 www.rjainc.com

APPROVALS

PROJECT TITLE

City of Berkeley
 WEST BERKELEY SERVICE CENTER

1900 Sixth St
 Berkeley, CA 94710

BID SET

ISSUE DATE	12.22.2023
N&T JOB NUMBER	22121
REVISIONS	
A DATE DESCRIPTION	
1 8/25/23	REV 1 - PLAN CHECK
2 10/20/23	REV 2 - PLAN CHECK

DRAWN BY CAD CHECKED BY RAJ

ENERGY COMPLIANCE FORMS

SHEET NUMBER
E5.03

STATE OF CALIFORNIA
Outdoor Lighting
 NRCC-LTO-E (Created 01/21) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
 Project Name: WEST BERKELEY SERVICE CENTER Report Page: Page 2 of 6
 Project Address: 1900 Sixth St Berkeley, CA 94710 Date Prepared: 04.28.2023

D. EXCEPTIONAL CONDITIONS
 This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.
 Total Hardscape Area in Table A does not match the areas entered in Table I. Please review for compliance.

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

F. OUTDOOR LIGHTING FIXTURE SCHEDULE
 Table Instructions: For new or altered lighting systems demonstrating compliance with §140.7 (ie Table I has expanded for input), include all luminaires being installed and any existing luminaires remaining or being moved within the spaces covered by the permit application in the Table below. For altered lighting systems using the Existing Power method per §141.0(b)(2), (ie Table N has expanded for input), include only new luminaires being installed and replacement luminaires being installed as part of the project scope (ie, do not include existing luminaires remaining or existing luminaires being moved).

01	02	03	04	05	06	07	08	09	10
Name or Item Tag	Complete Luminaire Description	Watts per luminaire ^{1,2}	How Wattage is determined	Total number luminaires ³	Luminaire Status ³	Excluded per §140.7(a)	Design Watts	Cutoff Req. ≥ 6,200 initial lumen output §130.2(b) ⁴	Field Inspector
S1	EXTERIOR SURFACE MOUNTED Linear	12	Mfr. Spec ¹	2	New		24	NA: <6,200 lumens	Pass Fail
Total Designed Watts:								24	

* NOTES: Selections with a * require a note in the space below explaining how compliance is achieved.
 EX: Luminaire is lighting a statue; EXCEPTION 2 to §130.2(b).
¹ FOOTNOTES: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per §130.0(c)
² For linear luminaires, wattage should be indicated as W/lf instead of Watts/luminaire. Total linear feet for the luminaire should be indicated in column 05 instead of number of luminaires.
³ Select "New" for new luminaires in a new outdoor lighting project or for added luminaires in an alteration. Select "Altered" for replacement luminaires in an alteration. Select "Existing to Remain" for existing luminaires within the project scope that are not being altered and are remaining. Select "Existing Reinstalled" for existing luminaires which are being removed and reinstalled as part of the project scope
⁴ Compliance with mandatory cutoff requirements is required for luminaires with initial lumen output ≥ 6,200 unless exempted by §130.2(b).

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: <http://www.energy.ca.gov/title24/2019standards> January 2021

STATE OF CALIFORNIA
Outdoor Lighting
 NRCC-LTO-E (Created 01/21) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
 Project Name: WEST BERKELEY SERVICE CENTER Report Page: Page 4 of 6
 Project Address: 1900 Sixth St Berkeley, CA 94710 Date Prepared: 04.28.2023

01	02	03	04	05	06	07	08	09	10
Area Description	Surface Type	Illuminated Area (ft²)	Allowed Density (W/ft²)	Area Allowance (Watts)	Perimeter Length (lf)	Allowed Density (W/lf)	Linear Allowance (Watts)	Total General AWA + LWA (Watts)	
EXTERIOR AREA	Concrete	230	0.03	6.9	65	0.4	26	32.9	

Table Continued

J. LIGHTING ALLOWANCE: PER APPLICATION
 This Section Does Not Apply

K. LIGHTING ALLOWANCE: SALES FRONTAGE
 This Section Does Not Apply

L. LIGHTING ALLOWANCE: ORNAMENTAL
 This Section Does Not Apply

M. LIGHTING ALLOWANCE: PER SPECIFIC AREA
 This Section Does Not Apply

N. EXISTING CONDITIONS POWER ALLOWANCE (alterations only)
 This Section Does Not Apply

O. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION
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YES	NO	Form/Title	Field Inspector
			Pass Fail
<input checked="" type="radio"/>	<input type="radio"/>	NRCC-LTO-01-E - Must be submitted for all buildings.	<input type="checkbox"/> <input type="checkbox"/>
<input checked="" type="radio"/>	<input type="radio"/>	NRCC-LTO-02-E - Must be submitted for a lighting control system; or for an Energy Management Control System (EMCS), to be recognized for compliance.	<input type="checkbox"/> <input type="checkbox"/>

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: <http://www.energy.ca.gov/title24/2019standards> January 2021

STATE OF CALIFORNIA
Outdoor Lighting
 NRCC-LTO-E (Created 01/21) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
 Project Name: WEST BERKELEY SERVICE CENTER Report Page: Page 3 of 6
 Project Address: 1900 Sixth St Berkeley, CA 94710 Date Prepared: 04.28.2023

G. CUTOFF REQUIREMENTS (BUG)
 This Section Does Not Apply

H. OUTDOOR LIGHTING CONTROLS
 Table Instructions: Complete this table demonstrating compliance with controls requirements for all new or altered luminaires installed as part of the permit application. For alteration projects, luminaires which are existing to remain (ie untouched) and luminaires which are removed and reinstalled (wiring only) do not need to be included in this table even if they are within the spaces covered by the permit application. When an option having a * is selected, the notes section of this table must be completed. The lighting controls section of the Compliance Summary Table on the first page will show "DOES NOT COMPLY" if the notes are left blank. For each requirement in columns 02 through 04, do not leave the field blank, instead select NA or Exempt* from the dropdown list to indicate not applicable or an exemption.

01	02	03	04	05
Area Description	Shut-Off §130.2(c)1	Auto-Schedule §130.2(c)2	Motion Sensor §130.2(c)3	Field Inspector
EXTERIOR AREA	Astronomical Timer	Yes	Yes	Pass Fail

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

I. LIGHTING POWER ALLOWANCE (per §140.7)
 Table Instructions: Please complete this table for areas using the allowance calculations per §140.7. General Hardscape Allowance is per Table 140.7.4 while "Use it or lose it" Allowances are per Table 140.7.8. Indicate which allowances are being used to expand sections for user input. Luminaires that qualify for one of the "Use it or lose it" allowances shall not qualify for another "Use it or lose it" allowance.

01	02	03	04	05	06	07	08	09	10
Area Description	Surface Type	Illuminated Area (ft²)	Allowed Density (W/ft²)	Area Allowance (Watts)	Perimeter Length (lf)	Allowed Density (W/lf)	Linear Allowance (Watts)	Total General AWA + LWA (Watts)	
EXTERIOR AREA	Concrete	230	0.03	6.9	65	0.4	26	32.9	

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: <http://www.energy.ca.gov/title24/2019standards> January 2021

STATE OF CALIFORNIA
Outdoor Lighting
 NRCC-LTO-E (Created 01/21) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
 Project Name: WEST BERKELEY SERVICE CENTER Report Page: Page 5 of 6
 Project Address: 1900 Sixth St Berkeley, CA 94710 Date Prepared: 04.28.2023

P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE
 Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: <http://www.energy.ca.gov/title24/atccp/providers.html>

YES	NO	Form/Title	Field Inspector
			Pass Fail
<input checked="" type="radio"/>	<input type="radio"/>	NRCA-LTO-02-A - Must be submitted for all outdoor lighting controls except for alterations where controls area added to ≤ 20 luminaires.	<input type="checkbox"/> <input type="checkbox"/>

STATE OF CALIFORNIA
Outdoor Lighting
 NRCC-LTO-E (Created 01/21) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE
 Project Name: WEST BERKELEY SERVICE CENTER Report Page: Page 6 of 6
 Project Address: 1900 Sixth St Berkeley, CA 94710 Date Prepared: 04.28.2023

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

Documentation Author Name: Ray A. Juachon, PE	Documentation Author Signature:
Company: RIJA, Inc.	Signature Date: 04.28.2023
Address: 5515 Doyle Street, #7	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Emeryville, CA 94608	Phone: 415.730.7994

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

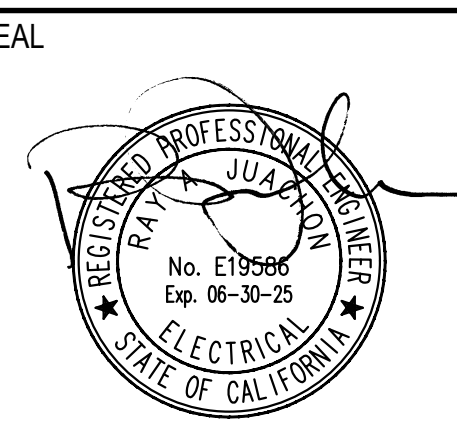
- The information provided on this Certificate of Compliance is true and correct.
- I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
- The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
- The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
- I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Ray A. Juachon, PE	Responsible Designer Signature:
Company: RIJA, Inc.	Date Signed: 04.28.2023
Address: 5515 Doyle Street, #7	License: E19586
City/State/Zip: Emeryville, CA 94608	Phone: 415.730.7994

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: <http://www.energy.ca.gov/title24/2019standards> January 2021

NOLL & TAM ARCHITECTS

729 Heinz Avenue
 Berkeley, CA 94710
 tel 510.542.2200
 fax 510.542.2201



Date Signed: 12/18/23

RIJA

5515 Doyle St., #7
 Emeryville, CA 94608
 RIJA Project #: 2021055
 www.rijainc.com

APPROVALS

PROJECT TITLE

City of Berkeley
WEST BERKELEY SERVICE CENTER

1900 Sixth St
 Berkeley, CA 94710

BID SET

ISSUE DATE	12.22.2023
N&T JOB NUMBER	22121
REVISIONS	
A	DATE DESCRIPTION
1	8/25/23 REV 1 - PLAN CHECK
2	10/20/23 REV 2 - PLAN CHECK

DRAWN BY CAD CHECKED BY RAJ
 SHEET TITLE

ENERGY COMPLIANCE FORMS

SHEET NUMBER

E5.04

Table A: GENERAL INFORMATION. Columns include Project Location (city, Berkeley), Zipcode (94710), Climate Zone (3), Occupancy Types (05, 06, 07, 08), and Total/Unconditioned Floor Area (ft²).

B. PROJECT SCOPE. This table specifies project envelope components within the permit application demonstrating compliance using the prescriptive paths outlined in 140.3/170.2 and 141.0(a)/180.1 and 141.0(b)1 and 2/180.2 for additions and alterations.

Table B: My project consists of (check all that apply). Includes checkboxes for New Construction, Addition of conditioned space, Alteration of conditioned space, and Roof Assembly.

B. PROJECT SCOPE. FOOTNOTE: Doors that are more than 25% glass in area are considered Glazed Doors and should be documented on table K with fenestration.

Table C: COMPLIANCE RESULTS. Results in this table are automatically calculated from data input and calculations in Tables F through L. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D.

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

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

Table F: ROOF ASSEMBLY SCHEDULE. This table demonstrates compliance for prescriptive roof assembly requirements in 140.3(a)18/170.2(a)18 for new construction, 141.0(a)/180.1 for additions, or 141.0(b)2Bii/180.2 for alterations.

Table F: ROOF ASSEMBLY SCHEDULE. Framed Roof Assemblies table with columns for Tag/Plan Detail ID, Name/Description, Status, Exception to Roof Insulation Requirements, and Occupancy Type.

Table G: RATED ROOFING MATERIAL (COOL ROOF). Table with columns for Tag/Plan Detail ID, How Design U-factor was determined, Roof Type & Frame Material, Frame Spacing Depth, Cavity Insulation per Design, Continuous Insulation per Design, Thermal Performance Unit, Required Thermal Performance, U-factor per Design, and Net Area ft².

Table F: ROOF ASSEMBLY SCHEDULE. Table with columns for Tag/Plan Detail ID, How Design U-factor was determined, Roof Type & Frame Material, Frame Spacing Depth, Cavity Insulation per Design, Continuous Insulation per Design, Thermal Performance Unit, Required Thermal Performance, U-factor per Design, and Net Area ft².

FOOTNOTES: If any individual assembly is non-compliant, assemblies may show compliance using an area-weighted calculation. Metal building roofs may not be combined with other roof types.

Table G: RATED ROOFING MATERIAL (COOL ROOF). Table with columns for Tag/Plan Detail ID, How Design U-factor was determined, Roof Type & Frame Material, Frame Spacing Depth, Cavity Insulation per Design, Continuous Insulation per Design, Thermal Performance Unit, Required Thermal Performance, U-factor per Design, and Net Area ft².

FOOTNOTES: If any individual assembly is non-compliant, assemblies may show compliance using an area-weighted calculation. Metal building roofs may not be combined with other roof types.

Table H: WALL ASSEMBLY SCHEDULE. This table demonstrates compliance with prescriptive wall assembly requirements in 140.3(a)/170.2(a) for new constructions, 141.0(a)/180.1 for additions and 141.0(b)18/180.2 for alterations.

Table G: RATED ROOFING MATERIAL (COOL ROOF). Table with columns for Tag/Plan Detail ID, How Design U-factor was determined, Roof Type & Frame Material, Frame Spacing Depth, Cavity Insulation per Design, Continuous Insulation per Design, Thermal Performance Unit, Required Thermal Performance, U-factor per Design, and Net Area ft².

FOOTNOTES: If any individual assembly is non-compliant, assemblies may show compliance using an area-weighted calculation. Metal building roofs may not be combined with other roof types.

Table H: WALL ASSEMBLY SCHEDULE. This table demonstrates compliance with prescriptive wall assembly requirements in 140.3(a)/170.2(a) for new constructions, 141.0(a)/180.1 for additions and 141.0(b)18/180.2 for alterations.

FOOTNOTES: Wall types indicated above as "new only" do not have Title 24, Part 6 requirements for alterations. New construction and additions do have requirements and should be listed above and compliance demonstrated within this table.

Table I: FLOOR ASSEMBLY SCHEDULE. This section does not apply to this project.

K. FENESTRATION AND GLAZED DOOR SCHEDULE. This table demonstrates compliance with prescriptive fenestration requirements in 140.3(a)5/170.2(a)3 for new constructions, 141.0(a)/180.1 for additions, or 141.0(b)2A/180.2 for alterations.

Table K: FENESTRATION AND GLAZED DOOR SCHEDULE. Table with columns for Tag/Plan Detail ID, Fenestration Type, Occupancy & Status, U-factor/(R)SHGC Compliance Method, VT Compliance Method, Calculation Method for Performance Values per Design, Product Performance Unit, Required Product Performance, Product Performance per Design, and Area ft².

FOOTNOTES: Fenestration types indicated above as "new only" do not have Title 24, Part 6 requirements for alterations. New construction and additions do have requirements and should be listed above and compliance demonstrated within this table.

Table L: EXTERIOR DOOR SCHEDULE. This section does not apply to this project.

Table K: FENESTRATION AND GLAZED DOOR SCHEDULE. Vertical Fenestration And Glazed Doors - U-factor, Solar Heat Gain Coefficient (RSHGC/SHGC), Visible Transmittance (VT). Table with columns for Tag/Plan Detail ID, Fenestration Type, Occupancy & Status, U-factor/(R)SHGC Compliance Method, VT Compliance Method, Calculation Method for Performance Values per Design, Product Performance Unit, Required Product Performance, Product Performance per Design, and Area ft².

Table K: FENESTRATION AND GLAZED DOOR SCHEDULE. Vertical Fenestration And Glazed Doors - U-factor, Solar Heat Gain Coefficient (RSHGC/SHGC), Visible Transmittance (VT). Table with columns for Tag/Plan Detail ID, Fenestration Type, Occupancy & Status, U-factor/(R)SHGC Compliance Method, VT Compliance Method, Calculation Method for Performance Values per Design, Product Performance Unit, Required Product Performance, Product Performance per Design, and Area ft².

Table K: FENESTRATION AND GLAZED DOOR SCHEDULE. Vertical Fenestration And Glazed Doors - U-factor, Solar Heat Gain Coefficient (RSHGC/SHGC), Visible Transmittance (VT). Table with columns for Tag/Plan Detail ID, Fenestration Type, Occupancy & Status, U-factor/(R)SHGC Compliance Method, VT Compliance Method, Calculation Method for Performance Values per Design, Product Performance Unit, Required Product Performance, Product Performance per Design, and Area ft².

Documents to be Provided to Owner

§10-103(b).B: Compliance Information. At occupancy, builder/installers shall leave in the building, or with the owner, copies of the completed, signed, and submitted compliance documents for the building.

§10-103(b)2: Operating Information. At occupancy, builder/installers shall leave in the building, or with the owner, operating information for all applicable features, materials, components, and mechanical devices installed in the building.

§10-103(b)3: Maintenance Information. At occupancy, builder/installers shall leave in the building, or with the owner, maintenance information for all features, materials, components, and manufactured devices that require routine maintenance for efficient operation.

Installation forms can be downloaded from appropriate links here: https://energycode.ca.gov/content/get-forms. Please note that this report only states some of the more significant compliance requirements and criteria; it does not purport to state how those requirements can be met, nor what equipment to install.

PROJECT TITLE City of Berkeley WEST BERKELEY SERVICE CENTER 1900 Sixth St Berkeley, CA 94710

Documentation Author: easyTitle24.com Tel: (415) 259-4088 or (925) 671-4789 e-mail: skmeans@easytitle24.com 654 Oakland Avenue, Oakland, CA 94611

California Building Energy Efficiency Certificates of Compliance Filed on the Plans pursuant to California Code of Regulations, Title 24, Part 1, Article 1, Section 10-103(a)2.A.

Project No.: 14723 Sheet No.: 3 ENV.1 Title 24 Envelope Compliance

K. FENESTRATION AND GLAZED DOOR SCHEDULE

Vertical Fenestration And Glazed Doors- U-factor, Solar Heat Gain Coefficient (RSHGC/ SHGC), Visible Transmittance (VT)

04	05	06	07	08	09	10	11	12	13
Tag/Plan Detail ID	Fenestration Type	Occupancy & Status	U-factor/ (R)SHGC Compliance Method	VT Compliance Method	Calculation Method for Performance Values per Design ²	Product Performance Unit	Required Product Performance	Product Performance per Design	Area ft ²
9050	Operable window	Nonresidential/ Relocatable 1 Cz : New	Table 140.3-B/C/D	Table 140.3-B/C/D	<input type="checkbox"/> §110.6 Defaults <input type="checkbox"/> Overhang/ Slats used for RSHGC	U-factor (max) (R)SHGC (max) VT (min)	0.79 0.7 0.84	0.79 0.7 0.84	45

¹ FOOTNOTES: If any individual fenestration product is non-compliant, products may show compliance using an area-weighted calculation. Chromogenic glazing is not included in area-weighted calculations. Area-weighted calculation shown in separate area-weighted table below.
² The NRC Default Calculation can only be used for alterations or dwelling units in buildings with ≤ 3 habitable stories. Alterations are limited to 200ft² of site built glazing and dwelling units are limited to 250ft² or 5% of conditioned floor area. If the fenestration does not meet these conditions, the only options for determining fenestration values are NFRC Certification or the Default Tables in 110.6.
³ Overhangs must extend past the left and right window the same distance as the depth of the overhang or greater to show an effect on the RSHGC. If an overhang does not meet this requirement, the effect of the overhang will be ignored.
⁴ Projecting includes casement and awning windows.

Area-Weighted Average U-factor, SHGC, VT Compliance Calculation for Vertical Fenestration And Glazed Doors

01	02	03	04	05
Product Performance Unit	Total Area of Fenestration (ft ²)	Area-weighted Calculation for Fenestration Required	Designated	Compliance Results Using Area-Weighted Calculation Option
U-Factor	1545.3	0.58	0.573	COMPLIES
(R)SHGC	1545.3	0.41	0.385	COMPLIES
VT	1545.3	0.344	0.45	COMPLIES

L. DAYLIGHT IN LARGE ENCLOSED SPACES
 This section does not apply to this project.

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

Form/Title
 NRCC-ENV-01-E - Must be submitted for all buildings


N. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE
 Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, form user must provide an explanation in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/. Individuals who perform the field testing and verification work, and provide the information required for completion of the fenestration Certificate of Acceptance documentation are not required to be licensed professionals. However, the person who signs the Certificate of Acceptance document to certify compliance with the acceptance requirements shall be licensed as specified in Standards Section 10-103(a)4 and NA7.3.1

Form/Title
 NRCA-ENV-02-F must be submitted for all new, added or altered site built fenestration.

O. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION
 There are no forms required for this project.

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

Documentation Author Name: Steve K. Means, CEA
 Signature Date: 9/14/2023
 Company: EasyTitle24
 Address: 654 Oakland Avenue
 City/State/Zip: Oakland CA 94611

Documentation Author Signature: 
 Signature Date: 9/14/2023
 Address: 654 Oakland Avenue
 City/State/Zip: Oakland CA 94611

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

- The information provided on this Certificate of Compliance is true and correct.
- I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
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Responsible Designer Name: Janet Tam
 Responsible Designer Signature: 
 Company: Noli & Tam Architects
 Date Signed: 2023-07-25
 Address: 729 Heinz Avenue
 City/State/Zip: Berkeley CA 94710
 License: C-14064
 Phone: 510.542.2200

Documentation Author:
easyTitle24.com
 Tel: (415) 259-4068 or (925) 671-4789 e-mail: skmeans@easytitle24.com
 654 Oakland Avenue, Oakland, CA 94611

PROJECT TITLE
**City of Berkeley
 WEST
 BERKELEY
 SERVICE
 CENTER**

1900 Sixth St
 Berkeley, CA 94710

California Building Energy Efficiency
 Certificates of Compliance
 Filed on the Plans pursuant to
 California Code of Regulations,
 Title 24, Part 1, Article 1,
 Section 10-103(a)2.A.

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**CZ
 3**
 Date: 9-14-2023

Project No.: 14723
 Sheet No.: **ENV.2**
 Title 24 Envelope Compliance