

Office of the City Manager

CONSENT CALENDAR
February 25, 2025

To: Honorable Mayor and Members of the City Council
From: Paul Buddenhagen, City Manager
Submitted by: Terrance Davis, Director, Public Works Department
Subject: Contract: Mark Lee and Yong Kay, Inc., DBA Bay Construction Co. for Fire Station #2 Improvements Project

RECOMMENDATION

Adopt a Resolution:

1. Approving plans and specifications for Fire Station #2 Improvements (Project), Specification No. 23-11575-C; and
2. Accepting the bid of Mark Lee and Yong Kay, Inc., DBA Bay Construction Co. as the lowest, responsive and responsible bidder; and
3. Authorizing the City Manager to execute a contract and any amendments, extensions, or change orders until the Project is completed in accordance with the approved plans and specifications for an amount not to exceed \$1,104,000, which includes a contingency of \$184,000.

FISCAL IMPACTS OF RECOMMENDATION

Funding for this project is available in the Fiscal Year 2025 budget in the Capital Improvement, and Measure T1 Funds.

Low bid by Bay Construction Co.	\$920,000
20% Contingency	\$184,000
Total Construction Cost NTE	\$1,104,000

Fiscal Year 2025 Funding:

- Measure T1 Phase 2 Fund: \$920,000
- Capital Improvement Fund:..... \$184,000

CURRENT SITUATION AND ITS EFFECTS

The Project was advertised for bids on October 29, 2024, and opened on December 17, 2024. The City received seven (7) bids ranging from \$920,000 to \$1,468,600. The lowest responsive and responsible bidder was determined to be Mark Lee and Yong

Kay, Inc., DBA Bay Construction Co. Staff recommends that a construction contract for the Project be awarded to Mark Lee and Yong Kay, Inc., DBA Bay Construction Co.

Fire Station #2 is located in District 4 at 2029 Berkeley Way; it consists of a two-story main building and an annex building. The first floor of the main building has a kitchen, common area, fire apparatus parking, and sleeping quarters for fire chiefs. The second floor has additional sleeping quarters, food storage, roof access, and critical electrical equipment. The annex is primarily a storage area with two additional sleeping quarters. The station was built in 1965 and has undergone various maintenance and upgrades throughout its history.

Currently, the building is not equipped with a cooling system. As an interim solution, a combination of window air conditioning units and portable units are used to cool the space, but this solution is not permanent and created various inconveniences for staff. Window cooling units can damage building facades over time due to uncollected condensate, while portable units are less energy-efficient, noisy, and occupy considerable space in sleeping quarters.

All the electrical equipment in the building is from 1996 and past its estimated useful life. All panels are already fully loaded to meet the current demands of the station and do not have the capacity for any new required equipment.

This project will replace existing gas furnaces with energy-efficient electric heat pumps and fan coil units to provide heating and cooling to the main building and annex. An energy recovery ventilator will be provided to exchange, filter, and precondition outside air and further reduce energy use and improve indoor air quality. Additional work includes new kitchen and laundry exhaust fans, new electrical subpanels, provisions for electric vehicle charging, and ancillary work.

Fire Station #2 Improvements is a Strategic Plan Priority Project, advancing our goal to provide state-of-the-art, well-maintained infrastructure, amenities, and facilities.

BACKGROUND

Fire Station #2 was constructed in 1965 and seismically renovated in 1998. It is comprised of apparatus storage and living quarters for Fire Department staff. The renovation project is a Measure T1 Phase 2 project.

Public Works engaged the services of an architectural consultant to assess the condition of various city buildings in 2021. After building deficiencies were cataloged, Public Works engaged an architectural consultant in March 2022, to help identify the scope for improvements and begin design of the project. In June 2024, permit documents were approved and the project was advertised for public bid in October, 2024.

ENVIRONMENTAL SUSTAINABILITY AND CLIMATE IMPACTS

This project will address the City's sustainability and climate goals by increasing energy efficiency, reducing greenhouse gas emissions, and strengthening community resilience to adapt to the effects of climate change. The addition of EV charging supports the city's fleet electrification initiative. There are no anticipated negative environmental effects of this action.

RATIONALE FOR RECOMMENDATION

Contracted services are required for this project as the City does not have the in-house expertise to complete this specialized work.

ALTERNATIVE ACTIONS CONSIDERED

None. The City can elect not to construct the project; however, deferring the work will lead to deterioration of the existing electrical system and continued discomfort for the fire department. Furthermore, the City may not meet its fleet electrification goals if the charging station is not constructed.

CONTACT PERSON

Wahid Amiri, Deputy Director, Department of Public Works (510) 981-6396
Ronald Nevels, Manager of Engineering, Department of Public Works (510) 981-6439
Elmar Kapfer, Supervising Civil Engineer, Department of Public Works (510) 981-6435

Attachment:

- 1: Resolution
- 2: Abstract of Bids

RESOLUTION NO. ##,###-N.S.

CONTRACT: MARK LEE AND YONG KAY, INC, DBA BAY CONSTRUCTION CO.
FOR FIRE STATION #2 IMPROVEMENTS; SPECIFICATION NO. 23-11575-C, AT
2029 BERKELEY WAY

WHEREAS, the project consists of HVAC and electrical upgrades of Fire Station #2 per Plans and Specifications No. 23-11575-C; and

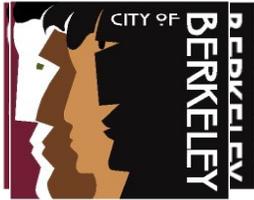
WHEREAS, The City has neither the labor nor the equipment necessary to undertake this project; and

WHEREAS, an invitation for bids (Plans and Specifications No.23-11575-C) was duly advertised in October of 2024, and Mark Lee and Yong Kay, INC, DBA Bay Construction Co. was determined to be the lowest responsive and responsible bidder.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the Plans and Specifications No. 23-11575-C for Fire Station #2 Improvements are approved.

BE IT FURTHER RESOLVED that the Council of the City of Berkeley accepts the bid of Mark Lee and Yong Kay, INC, DBA Bay Construction Co. as the lowest responsive and responsible bidder.

BE IT FURTHER RESOLVED that the Council of the City of Berkeley authorizes the City Manager to execute a contract and any amendments, extensions or change orders, until completion of the project in accordance with the approved plans and specifications with Mark Lee and Yong Kay, INC, DBA Bay Construction Co. for the Fire Station #2 Improvements in an amount not to exceed \$1,104,000, which includes a contingency in the amount of \$184,000. A record signature copy of the agreement and any amendments will be on file in the Office of the City Clerk.



City of Berkeley
Abstract of Bid Worksheet

Finance Department
General Services Division

Bid Date: 12/17/2024
Spec. # [23-11575-C](#)

FOR: [Fire Station #2 Improvements](#)

required w/ bid

	Bidders	Base Bid	Addenda (2)	Bid Bond	Reg / Exp	Subcontractors	Non-Collusion	CERTS	
1	MARK LEE & YONG KAY, INC BBA BAY CONSTRUCTION	\$ 920,000.00	X	X	X	X	X	X	
2	S&H CONSTRUCTION	\$ 1,468,600.00	X	X	X	X	X	X	
3	VANTIS	\$ 1,270,000.00	X	X	X	X	X	X	
4	MAR CON BUILDERS	\$ 1,458,371.00	X	X	X	X	X	X	
5	GECO, INC	\$ 1,230,000.00	X	X	X	X	X	X	
6	EVRA CONSTRUCTION	\$ 1,210,000.00	X	X	X	X	X	X	
7	ANGOTTI & REILLY INC	\$ 1,231,291.00	X	X	X	X	X	X	
8									
9									
10									

Bid Recorder: Talia Stewart 
Talia Stewart (Dec 30, 2024 15:25 PST)

Date 12/30/2024

Bid Opener: Roop Soorma 
Roopreet Soorma (Dec 31, 2024 10:55 PST)

Date 12/31/2024

Project Manager: Priya Chopra 

Date 12/30/2024

FIRE STATION NO.2 REMODEL

2029 BERKELEY WAY

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CITY OF BERKELEY
DEPARTMENT OF PUBLIC WORKS
1947 CENTER ST. 4TH FLOOR

PROJECT NUMBER: 201320.31
CITY SPECIFICATION NUMBER: 23-11575-C

ISSUE FOR PERMIT
OCTOBER 30, 2023

**els architecture+
urban design**
2040 Addison St, Berkeley, CA 94704
510.549.2929 | elsarch.com

REVISION		
NUMBER	DATE	DESCRIPTION
1	03/08/2024	PLAN CHECK 1
2	08/27/2024	REVISION 1

ISSUE FOR PERMIT



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: 1. Read and understand the requirements of all mandatory measures listed in this checklist. 2. Mark all mandatory measures that are applicable to the proposed project.

3. Coordinate the construction drawings with the mandatory measures. 4. 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 buildingsandsafety@cityofberkeley.info

Code Compliance Checklist CALGREEN NON-RESIDENTIAL

Project Information

Project Address: 2029 Berkeley Way Permit Number: B2023-05800

New Building [N] Addition [A] Alteration [X]

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 or more of the following measures. [CGBCS 5.106.1] Stormwater management. Comply with the Stormwater management and erosion control requirements per Title 17 of the City of Berkeley Municipal Code. [CGBCS 5.106.1.1] 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. [CGBCS 5.106.1.2] Grading and paving. Include how site grading or drainage system will manage all surface water flows to keep water from entering buildings. [CGBCS 5.106.1.10]

Bicycle Parking

- 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. [CGBCS 5.106.4.1] Short-term bicycle parking. Provide permanently anchored bicycle racks within 200 feet of the visitor's 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. [CGBCS 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. [CGBCS 5.106.4.1.2]

Vehicle Parking

- 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. [CGBCS 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

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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". [CGBCS 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. [CGBCS 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. [CGBCS 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. [CGBCS 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

- EV charging space calculation. When 10 or more parking spaces are constructed: [CGBCS 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 [CGBCS 5.106.8].

Water Efficiency and Conservation

Indoor Water Use: Metering Devices

- New buildings or additions in excess of 50,000 square feet. Separate sub-meters shall be installed as follows: [CGBCS 5.303.1.1] For each individual leased, rented, or other tenant space within the building projected to consume more than 100 gal/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 unfeasible, for water supplied to the following subsystems: a. Makeup water for cooling towers where flow through is greater than 500 gpm. b. 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 gal/day. [CGBCS 5.303.1.2]

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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. [CGBCS 5.303.3.1]

Urinals

- Wall-mounted urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush. [CGBCS 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. [CGBCS 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. [CGBCS 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. [CGBCS 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. [CGBCS 5.303.3.4.1] Kitchen faucets. Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.8 gallons per minute at 60 psi. [CGBCS 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]. [CGBCS 5.303.3.4.3] Metering faucets. Metering faucets shall not deliver more than 0.20 gallons per cycle. [CGBCS 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]. [CGBCS 5.303.3.4.5]

Commercial Kitchen Equipment

- 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/noload) or shall automatically shut off after no more than 10 minutes of inactivity. Disposers shall use no more than 8 gpm of water. [CGBCS 5.303.4.1]

Outdoor Water Use

- 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. [CGBCS 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 not 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. [CGBCS 5.405.1]

Water Resistance and Moisture Management

- Sprinklers. Design and maintain landscape irrigation systems to prevent spray on structures. [CGBCS 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: [CGBCS 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: [CGBCS 5.407.2.2.1] a. An installed awning at least 4 feet in depth.

SHEET A001 DEF. ITEM

SHEET A001 GEN. NOTES

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- The door is protected by a roof overhang at least 4 feet in depth. c. The door is recessed at least 4 feet. d. Other methods which provide equivalent protection. Flashing. Install flashings integrated with a drainage plane. [CGBCS 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 non-hazardous 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. [CGBCS 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. [CGBCS 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. [CGBCS 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. [CGBCS 5.410.1.1]

- Commissioning. [N] For newly constructed buildings 10,000 square feet and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements. Commissioning shall be performed by trained personnel with experience on projects of comparable size and complexity. All building operating systems covered by Title 24, Part 6, California Energy Code as well as process equipment and controls, and renewable energy systems shall be included in the scope of the commissioning requirements. [CGBCS 5.410.2]

- Owner's or Owner representative's Project Requirements (OPR). [N] The expectations and requirements of the building appropriate to its phase shall be documented before the design phase of the project begins. This documentation shall include the following: [CGBCS 5.410.2.1] Environmental and sustainability goals. 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 occupant and 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: [CGBCS 5.410.2.2] Heating, ventilation, air conditioning systems and controls. Indoor lighting system and controls. Water heating system. Renewable energy systems. Landscape 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: [CGBCS 5.410.2.3] General project information. Commissioning goals. Systems to be commissioned. Plans to test systems and components shall include: a. An explanation of the original design intent. b. Equipment and systems to be tested, including the extent of tests. c. Functions to be tested. d. Conditions under which the test shall be performed. e. Measurable criteria for acceptable performance.

SEE MECH. DWGS AND SPECS

SEE SHEET A302 SHEET NOTES

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- 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. [CGBCS 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. [CGBCS 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. [CGBCS 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. [CGBCS 5.410.4] HVAC systems and controls. Indoor and outdoor lighting and controls. Water heating systems. Renewable energy systems. Landscape irrigation systems. Water reuse systems.

- Procedures. Perform testing and adjusting procedures in accordance with manufacturer's specifications and applicable standards on each system. [CGBCS 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. [CGBCS 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. [CGBCS 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 warranties/warranties for each system. O&M instructions shall be consistent with OSHA requirements in CCR, Title 8, Section 5142, and other related regulations. [CGBCS 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. [CGBCS 5.503.1]

- 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. [CGBCS 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. [CGBCS 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

SEE MECH. DWGS AND SPECS

SEE SHEET A302 SHEET NOTES

SEE MECH. DWGS AND SPECS

Code Compliance Checklist - CALGREEN NON-RESIDENTIAL Page 6 of 7

- which may enter the system. [CGBCS 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. [CGBCS 5.504.5.3] Labeling. Installed filters shall be clearly labeled by the manufacturer indicating the MERV rating. [CGBCS 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. [CGBCS 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. [CGBCS 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. [CGBCS 5.504.4.3]

- Aerosol paints and coatings. Aerosol paints and coatings shall meet the PVMIR 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. [CGBCS 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: [CGBCS 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. [CGBCS 5.504.4.4.1]

- Carpet adhesive. All carpet adhesive shall meet the requirements of CALGreen Table 5.504.4.1. [CGBCS 5.504.4.2]

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. [CGBCS 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 CGBCS Section 5.507.4.1 or 5.507.4.2. [CGBCS 5.507.4]

SEE MECH. DWGS AND SPECS

SEE SHEET A302 SHEET NOTES

Code Compliance Checklist - CALGREEN NON-RESIDENTIAL Page 7 of 7

Outdoor Air Quality

- Ozone depletion and greenhouse gas reductions. Installations of HVAC, refrigeration and fire suppression equipment shall comply with the following: [CGBCS 5.508.1] Chlorofluorocarbons (CFCs). Install HVAC, re-refrigeration & fire suppression equipment that do not contain CFCs. [CGBCS 5.508.1.1] Halons. Install HVAC, refrigeration and fire suppression equipment that do not contain Halons. [CGBCS 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. [CGBCS 5.508.2]

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.

Name Signature Date

Check One: Contractor Owner Owner's Agent

ISSUE: ISSUE FOR PERMIT

DATE: OCTOBER 30, 2023

STAMP:

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



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PROJECT:

FIRE STATION NO.2 REMODEL

2029 BERKELEY WAY BERKELEY, CA 94704

PROJECT NUMBER: 201320.31

CITY SPEC. NUMBER: 23-11575-C

CLIENT: CITY OF BERKELEY 1947 CENTER ST. 4TH FLOOR BERKELEY, CA 94704

PROJECT TEAM: ARCHITECT: ELS ARCHITECTURE AND URBAN DESIGN 2040 Addison Street Berkeley, CA 94704 P: 510.549.2929

MECHANICAL AND PLUMBING CANYON CONSULTING ENGINEERS 3260 Blume Drive, Suite 240 Richmond, CA 94806 P: 510.243.5987

ELECTRICAL ENGINEER: RUA INC. 5515 Doyle Street, #7 Emeryville, CA 94608 P: 415.730.7994

STRUCTURAL ENGINEER: IDA STRUCTURAL ENGINEERS, INC. 1629 Telegraph Avenue, #300 Oakland, CA 94612 P: 510.834.1629

REVISION

Table with 3 columns: NUMBER, DATE, DESCRIPTION. Row 1: 1, 03/08/2024, PLAN CHECK 1

ISSUE: ISSUE FOR PERMIT

DATE: OCTOBER 30, 2023

STAMP:

SHEET TITLE: CALGREEN NON-RESIDENTIAL CODE COMPLIANCE

SHEET NUMBER: A002

SHEET NOTES

- 1. THE CODE SECTIONS RELEVANT TO THE ADDITIONS AND ALTERATIONS SHALL ONLY APPLY TO THE PORTIONS OF THE BUILDING BEING ADDED OR ALTERED WITH THE SCOPE OF THE PERMIT WORK.

REVISION		
NUMBER	DATE	DESCRIPTION
1	03/08/2024	PLAN CHECK 1

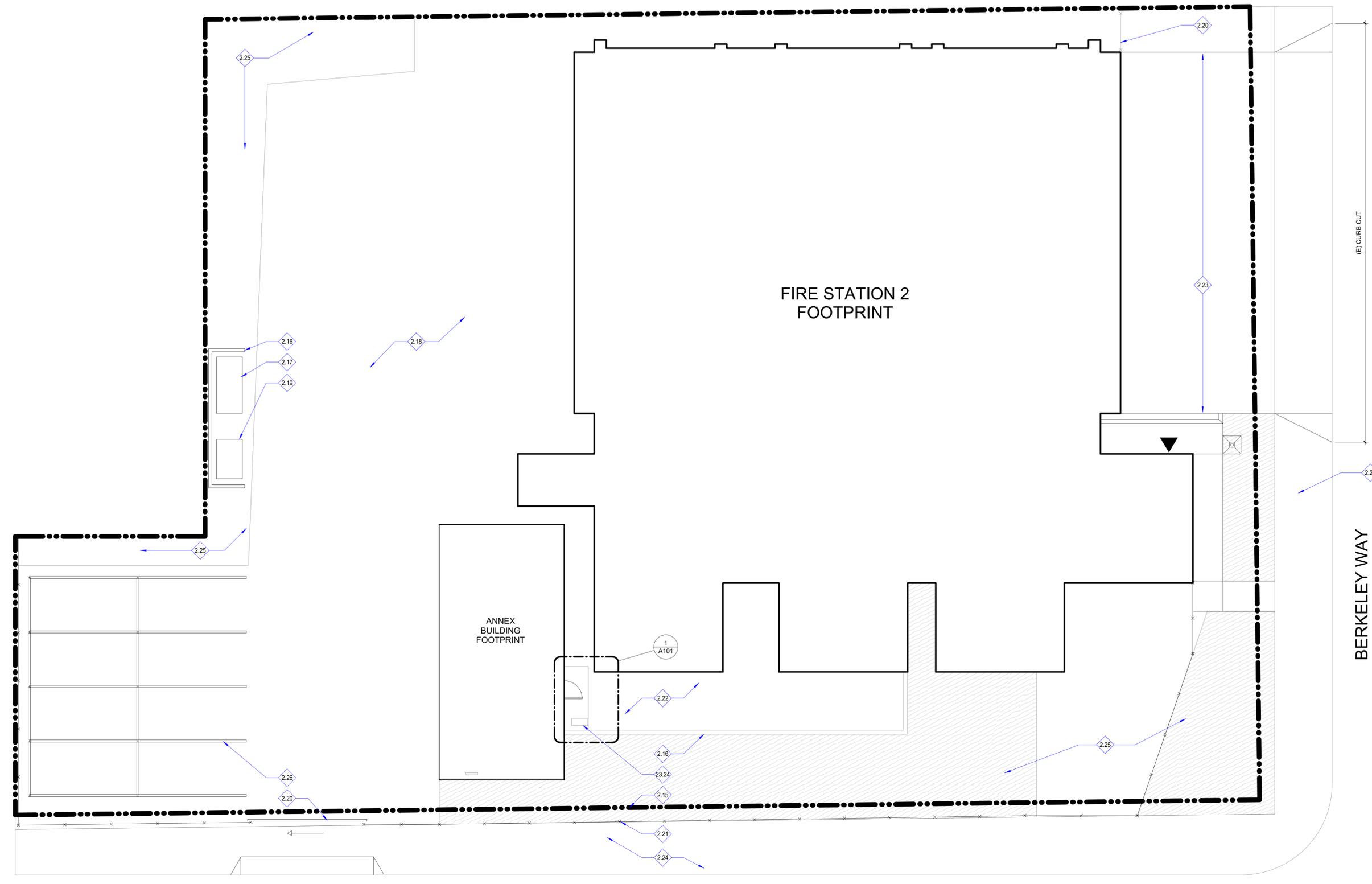
ISSUE:
ISSUE FOR PERMIT

DATE:
OCTOBER 30, 2023

STAMP:

SHEET TITLE:
SITE PLAN

SHEET NUMBER:
A100



1 EXISTING SITE PLAN
1/8" = 1'-0"

KEYNOTE
2.15 (E) PROPERTY LINE
2.16 (E) CMU RETAINING WALL
2.17 (E) GENERATOR
2.18 (E) CONG. & ASPHALT VEHICLE ACCESS
2.19 (E) FUEL TANK
2.20 (E) GATE
2.21 (E) FENCE
2.22 (E) CONG. PAVING
2.23 (E) FIRE DEPARTMENT DRIVE WAY, TYP.
2.24 (E) SIDEWALK, TYP.
2.25 (E) LANDSCAPE

KEYNOTE
2.26 (E) PARKING
23.24 OUTDOOR HEAT PUMP, SED, SMD

SHEET NOTES

1. PROVIDE GAS SHUT-OFF VALVE.

2. PROVIDE SEWER LATERAL REQUIREMENTS FOR OBTAINING SEWER LATERAL CERTIFICATE.

SHEET LEGEND
PROPERTY LINE
MAIN ENTRY DOOR LOCATION

SHEET NOTES

1. SMD AND SED FOR MORE INFORMATION.
2. ALL DIMENSIONS SHOWN NOTED AS (E) ARE PROVIDED FOR REFERENCE ONLY AND ARE TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR.
3. FOR AREAS AFFECTED BY THE WORK, PATCH AND REPAIR WALLS, CEILINGS AND FLOORS TO MATCH EXISTING FINISH.
4. ALL EXPOSED CONDUIT FOR NEW AND FUTURE USE SHALL BE TIGHT TO STRUCTURE AND FASTENED APPROPRIATELY. NEW CONDUIT AT INTERIOR AND EXTERIOR SHALL BE PAINTED TO MATCH ADJACENT SURFACE.
5. ALL PENETRATIONS THROUGH (E) BLDG. MATERIALS SHALL BE CORE-DRILLED AND CLEAN-EDGED. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS WITH VERIFIED LOCATIONS OF PENETRATIONS MARKED ON FLOOR PLANS, ELEVATIONS, ETC. SUBMITTAL SHALL BE REVIEWED BY ARCHITECT AND RETURNED WITHOUT EXCEPTION BEFORE PROCEEDING WITH WORK.

KEYNOTE

2.16	(E) CMU RETAINING WALL
2.22	(E) CONC. PAVING
2.25	(E) LANDSCAPE
2.42	(E) CONCRETE LANDING
23.24	OUTDOOR HEAT PUMP, SED, SMD

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urban design**

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PROJECT:

**FIRE STATION NO.2
REMODEL**

**2029 BERKELEY WAY
BERKELEY, CA 94704**

PROJECT NUMBER:

201320.31

CITY SPEC. NUMBER:

23-11575-C

CLIENT:

**CITY OF BERKELEY
1947 CENTER ST, 4TH FLOOR
BERKELEY, CA 94704**

PROJECT TEAM:

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REVISION

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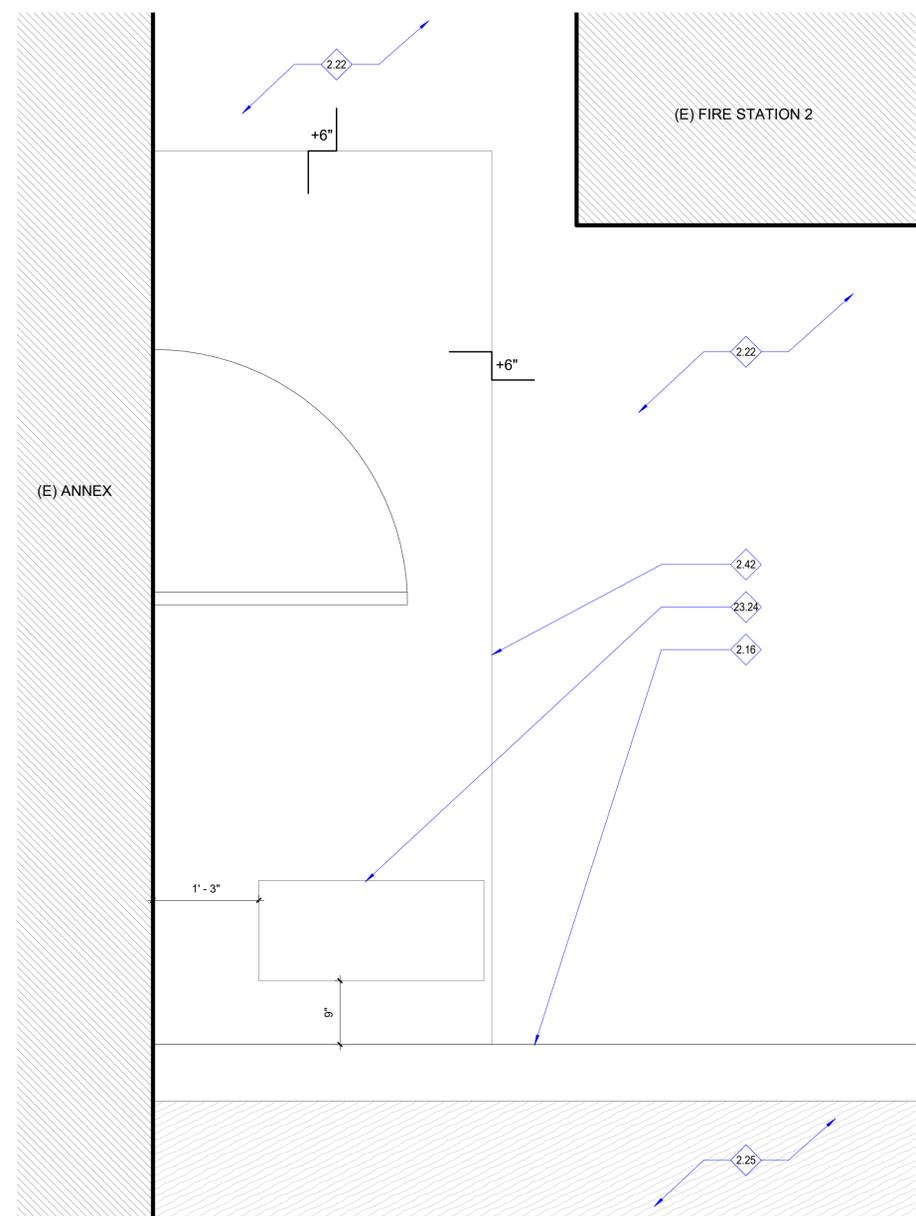
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SHEET TITLE:

**PARTIAL SITE PLAN
AND DETAILS**

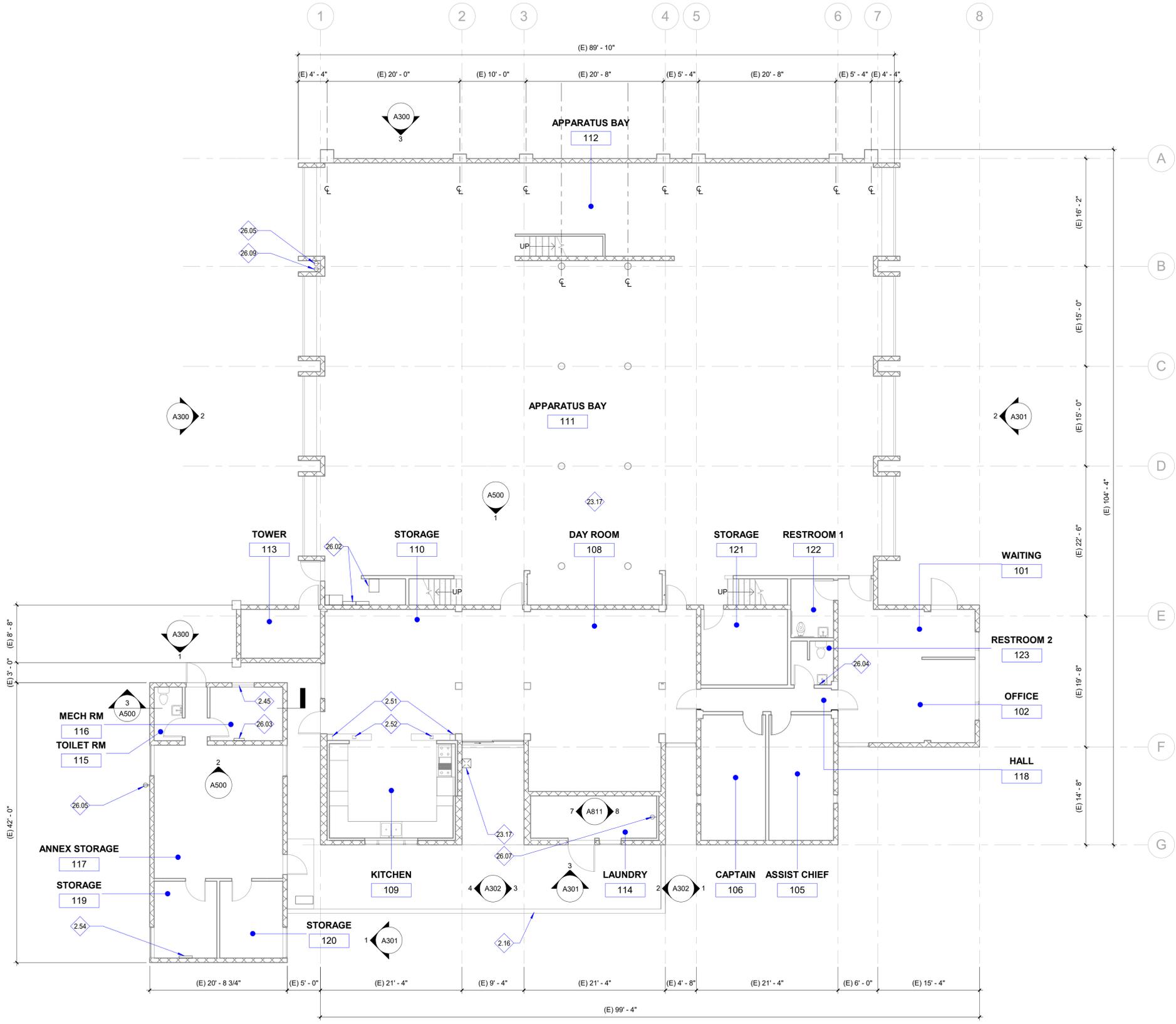
SHEET NUMBER:

A101



1 ENLARGED SITE PLAN
1" = 1'-0"





SHEET NOTES

1. SMD AND SED FOR MORE INFORMATION.
2. ALL DIMENSIONS SHOWN NOTED AS (E) ARE PROVIDED FOR REFERENCE ONLY AND ARE TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR.
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KEYNOTE

2.16	(E) CMU RETAINING WALL
2.45	(E) METAL LOUVER
2.51	(E) STRUCTURAL POST
2.52	(E) STRUCTURAL BRACED FRAME
2.54	(E) DATA PANEL
23.17	EXHAUST DUCT TO ROOF EXHAUST FAN, SMD
26.02	REPLACE (E) PANEL, SED
26.03	NEW PANEL, SED
26.04	EXHAUST FAN SWITCH, SED
26.05	WEATHER RESISTANT J-BOX WITH WIRE, SED
26.07	J-BOX WITH CONDUIT FOR FUTURE WIRE, SED
26.09	WEATHER RESISTANT J-BOX WITH CONDUIT FOR FUTURE WIRE, SED



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**FIRE STATION NO.2
REMODEL**

2029 BERKELEY WAY
BERKELEY, CA 94704

PROJECT NUMBER:
201320.31

CITY SPEC. NUMBER:
23-11575-C

CLIENT:
CITY OF BERKELEY
1947 CENTER ST. 4TH FLOOR
BERKELEY, CA 94704

PROJECT TEAM:
ARCHITECT:
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REVISION

NUMBER	DATE	DESCRIPTION
1	03/08/2024	PLAN CHECK 1

ISSUE:
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DATE:
OCTOBER 30, 2023

STAMP:

LEGEND

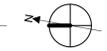
- NEW ITEM
- (E) ITEM TO REMAIN
- XXXXXX (E) CMU WALL
- (E) 1-HR FIRE-RATED WALL
- ⊠ ⊡ MECH. DUCT, SMD
- ⊕ GFCI SINGLE RECEPTACLE, SED
- ⊖ GFCI DUPLEX RECEPTACLE, SED

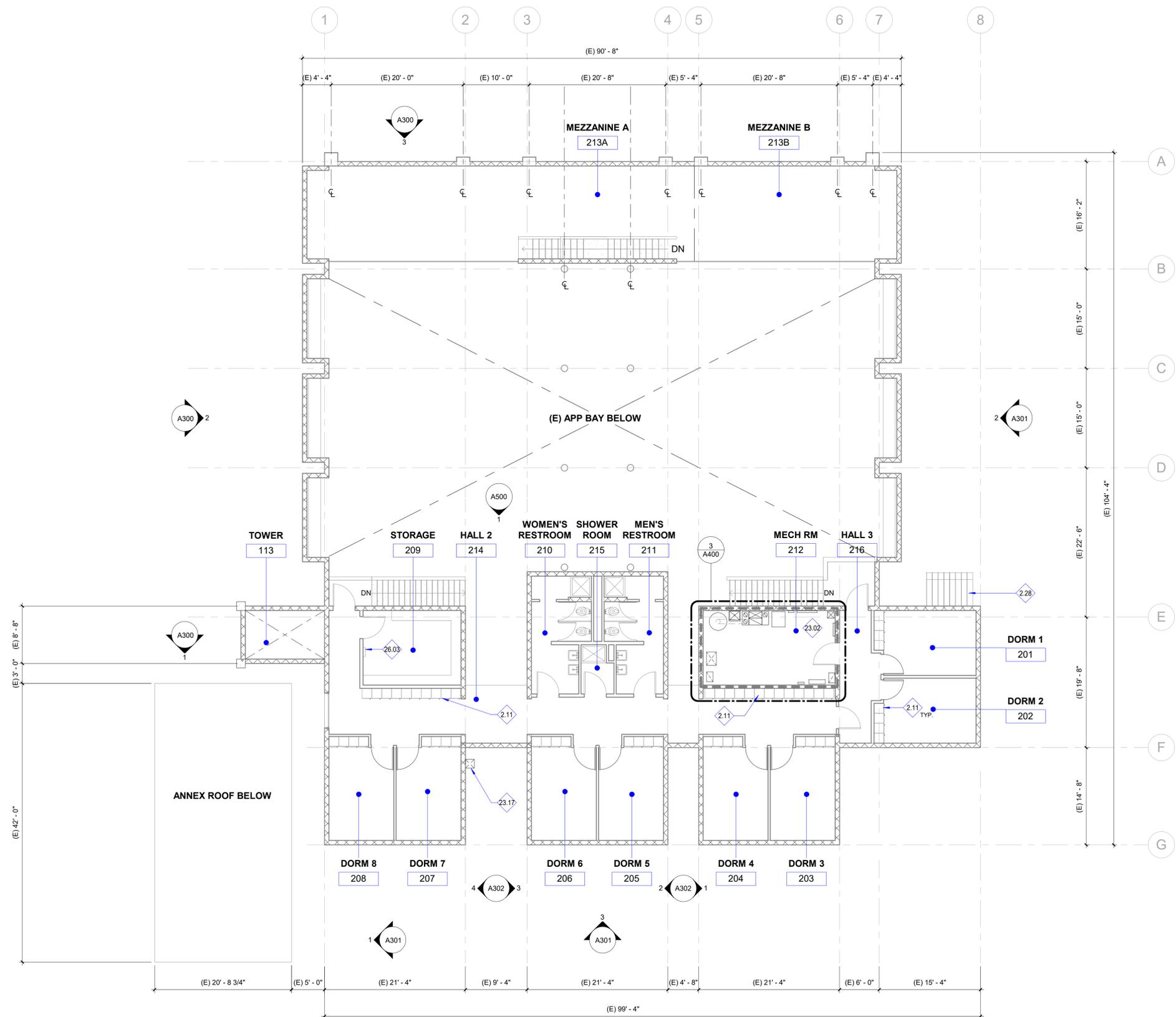
SHEET TITLE:
GROUND FLOOR PLAN

SHEET NUMBER:

A201

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





SHEET NOTES

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KEYNOTE

2.11	(E) METAL LOCKERS
2.28	(E) CANOPY OVER MAIN ENTRY BELOW
23.02	REPLACE (E) MECH. EQUIP. AND DUCTS IN MECH. ROOM. SMD
23.17	EXHAUST DUCT TO ROOF EXHAUST FAN. SMD
26.03	NEW PANEL. SED

LEGEND

- NEW ITEM
- (E) ITEM TO REMAIN
- XXXXXXXXXX (E) CMU WALL
- (E) 1-HR FIRE-RATED WALL
- ⊠ ⊠ MECH. DUCT, SMD
- ⊕ GFCI SINGLE RECEPTACLE, SED
- ⊕ GFCI DUPLEX RECEPTACLE, SED

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PROJECT:
FIRE STATION NO.2 REMODEL
 2029 BERKELEY WAY
 BERKELEY, CA 94704

PROJECT NUMBER:
 201320.31
CITY SPEC. NUMBER:
 23-11575-C

CLIENT:
CITY OF BERKELEY
 1947 CENTER ST. 4TH FLOOR
 BERKELEY, CA 94704

PROJECT TEAM:
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REVISION

NUMBER	DATE	DESCRIPTION
1	03/08/2024	PLAN CHECK 1

ISSUE:
ISSUE FOR PERMIT

DATE:
OCTOBER 30, 2023

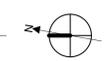
STAMP:

SHEET TITLE:
SECOND FLOOR PLAN

SHEET NUMBER:

A202

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



SHEET NOTES

1. SMD AND SED FOR MORE INFORMATION.
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6. SMD FOR LOCATION OF PIPING AND CONDENSATE LINES. FOR ALL EXPOSED PIPING AND CONDUIT, COORDINATE ROUTING WITH OWNER AND ARCHITECT PRIOR TO INSTALLATION.

2

KEYNOTE

2.02	(E) ROOF DRAIN, TYP
2.03	(E) SKYLIGHT, TYP.
2.05	(E) OVERFLOW DRAIN, TYP
2.08	(E) ROOF HATCH
2.09	(E) SINGLE-PLY ROOFING, TYP.
2.10	(E) ROOF SLEEPERS COVERED BY (N) SINGLE-PLY ROOFING, TYP OF FIVE (5)
2.12	(E) ROOF EXHAUST VENT, TYP
2.13	(E) ROOF VENTILATION LOUVERS
2.14	(E) ROOF WALKWAY PADS, TYP
2.28	(E) CANOPY OVER MAIN ENTRY BELOW
2.55	(E) STRUCTURAL BRACE
23.14	VRF ROOFTOP UNIT, SMD
23.16	EXHAUST FAN W/CURB, SMD
23.17	EXHAUST DUCT TO ROOF EXHAUST FAN, SMD

LEGEND

- NEW ITEM
- (E) ITEM TO REMAIN
-  (E) SKYLIGHT
-  (E) ROOF HATCH

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PROJECT:

FIRE STATION NO.2 REMODEL

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REVISION

NUMBER	DATE	DESCRIPTION
2	08/27/2024	REVISION 1

ISSUE:

ISSUE FOR PERMIT

DATE:

OCTOBER 30, 2023

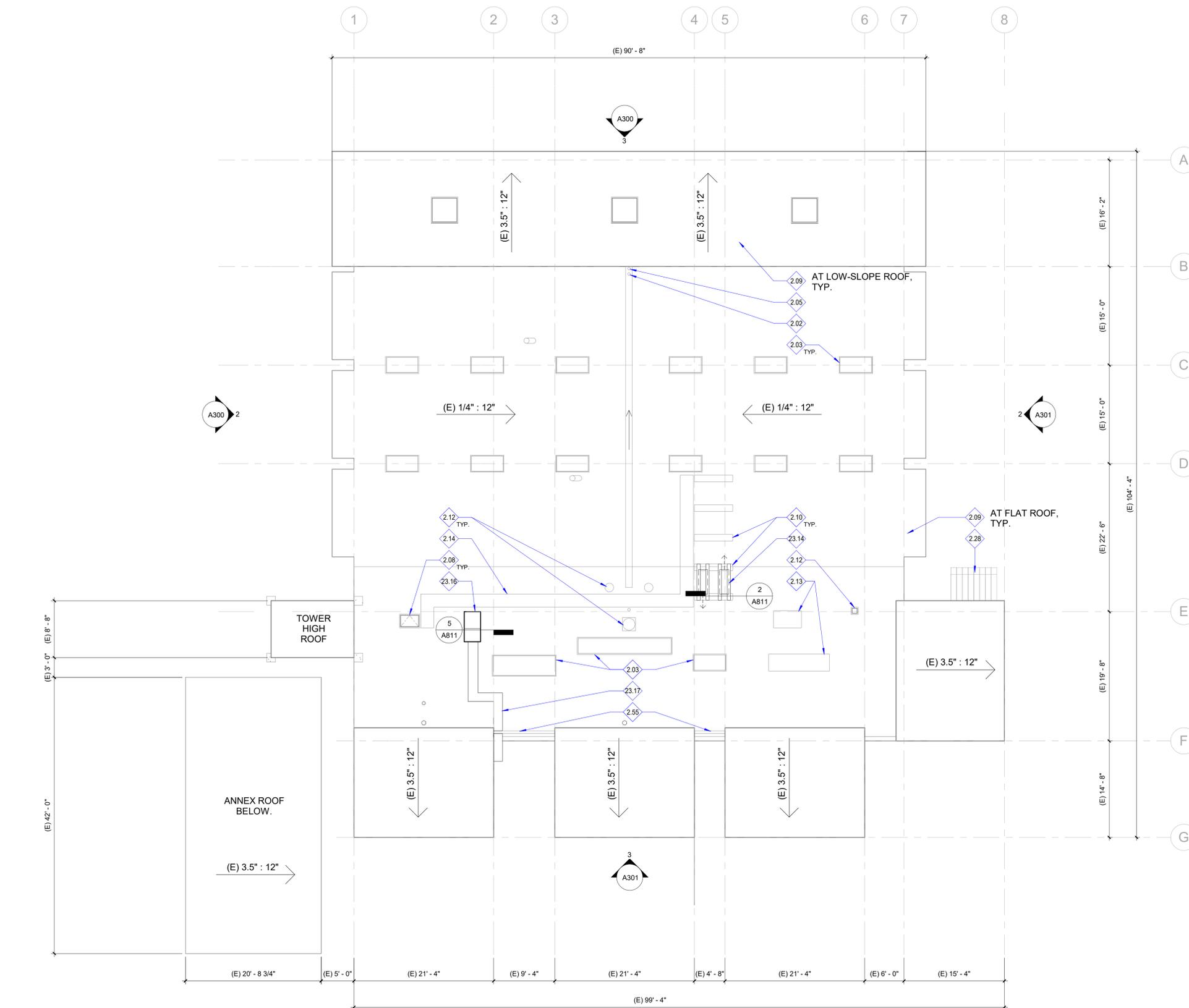
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SHEET TITLE:

ROOF PLAN

SHEET NUMBER:

A203



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



SHEET NOTES

1. ALL PENETRATIONS THROUGH (E) BLDG. MATERIALS SHALL BE CORE-DRILLED AND CLEAN-EDGED. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS WITH VERIFIED LOCATIONS OF PENETRATIONS MARKED ON FLOOR PLANS, ELEVATIONS, ETC. SUBMITTAL SHALL BE REVIEWED BY ARCHITECT AND RETURNED WITHOUT EXCEPTION BEFORE PROCEEDING WITH WORK.
2. NEW EXPOSED INTERIOR AND EXTERIOR PIPING AND CONDUIT SHALL BE PAINTED TO MATCH ADJACENT SURFACE.
3. SMD FOR LOCATION OF PIPING AND CONDENSATE LINES. FOR ALL EXPOSED PIPING AND CONDUIT, COORDINATE ROUTING WITH OWNER AND ARCHITECT PRIOR TO INSTALLATION.

2

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PROJECT:

**FIRE STATION NO.2
REMODEL**

2029 BERKELEY WAY
BERKELEY, CA 94704

PROJECT NUMBER:

201320.31

CITY SPEC. NUMBER:

23-11575-C

CLIENT:

CITY OF BERKELEY
1947 CENTER ST. 4TH FLOOR
BERKELEY, CA 94704

PROJECT TEAM:

ARCHITECT:
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P: 510.549.2929

MECHANICAL AND PLUMBING
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ELECTRICAL ENGINEER:

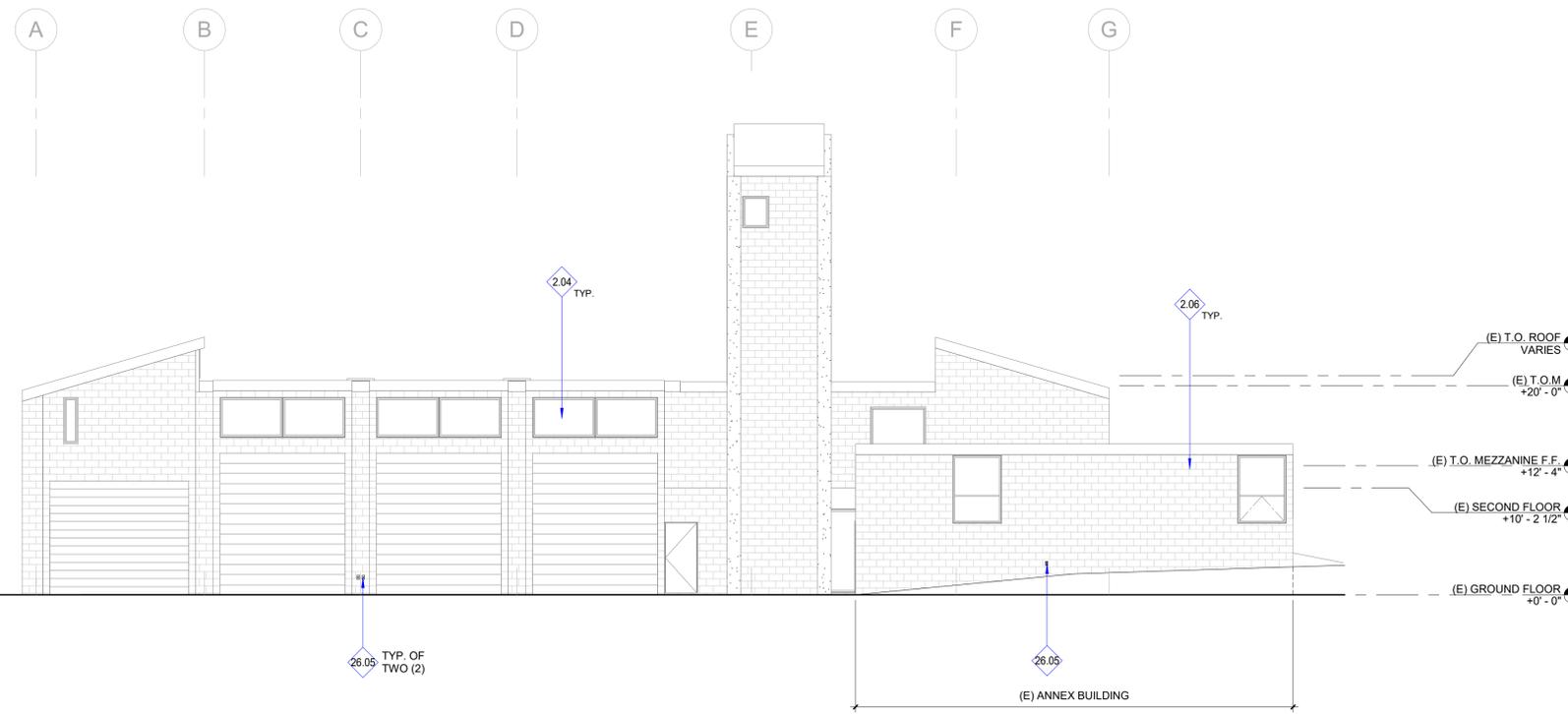
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P: 415.730.7994

STRUCTURAL ENGINEER

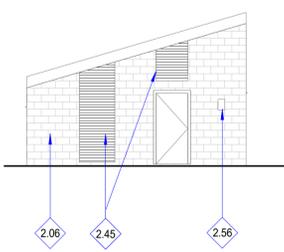
IDA STRUCTURAL ENGINEERS, INC.
1629 Telegraph Avenue, #300
Oakland, CA 94612
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KEYNOTE

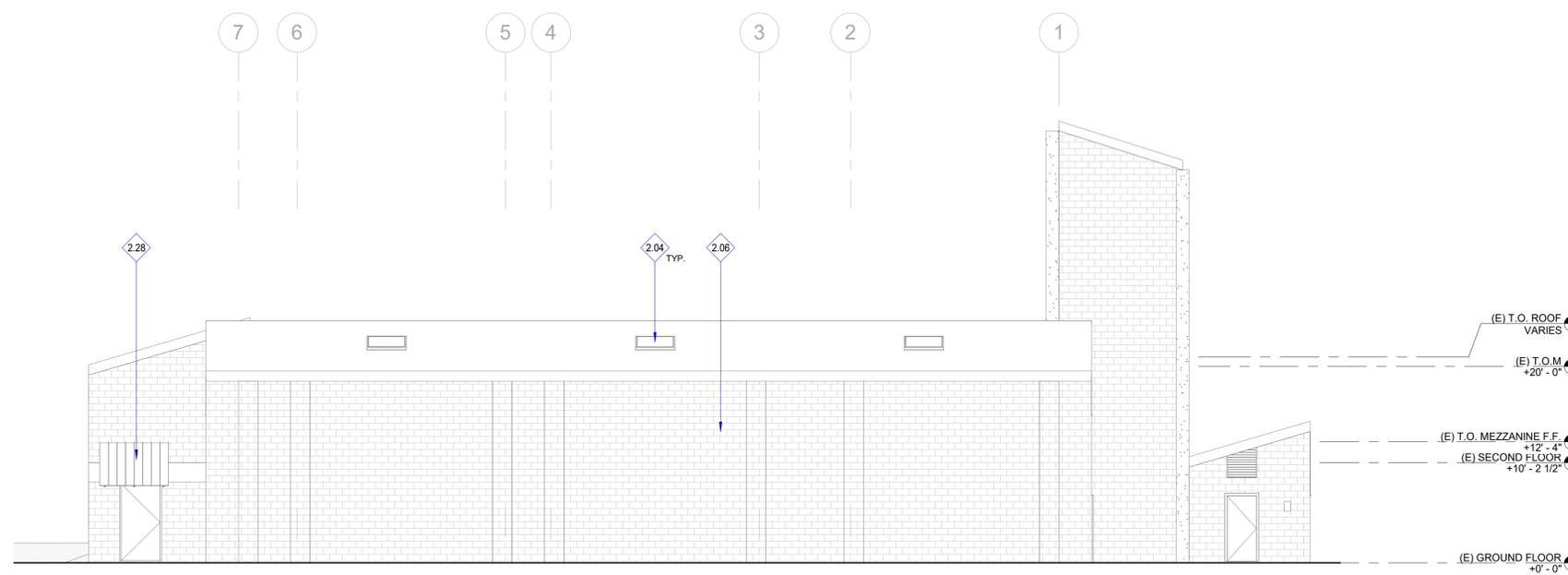
2.04	(E) WINDOW, TYP.
2.06	(E) 8-INCH NOM THICK CMU WALL, TYP.
2.28	(E) CANOPY OVER MAIN ENTRY BELOW
2.45	(E) METAL LOUVER
2.56	(E) EXHAUST WALL CAP
26.05	WEATHER RESISTANT J-BOX WITH WIRE, SED



2 EXTERIOR NORTH ELEVATION
1/8" = 1'-0"



1 ANNEX BUILDING
EAST ELEVATION
1/8" = 1'-0"



3 EXTERIOR EAST ELEVATION
1/8" = 1'-0"

REVISION

NUMBER	DATE	DESCRIPTION
2	08/27/2024	REVISION 1

ISSUE:

ISSUE FOR PERMIT

DATE:

OCTOBER 30, 2023

STAMP:

SHEET TITLE:

**EXTERIOR
ELEVATIONS**

SHEET NUMBER:

A300

SHEET NOTES

1. ALL PENETRATIONS THROUGH (E) BLDG. MATERIALS SHALL BE CORE-DRILLED AND CLEAN-EDGED. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS WITH VERIFIED LOCATIONS OF PENETRATIONS MARKED ON FLOOR PLANS, ELEVATIONS, ETC. SUBMITTAL SHALL BE REVIEWED BY ARCHITECT AND RETURNED WITHOUT EXCEPTION BEFORE PROCEEDING WITH WORK.
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3. SMD FOR LOCATION OF PIPING AND CONDENSATE LINES. FOR ALL EXPOSED PIPING AND CONDUIT, COORDINATE ROUTING WITH OWNER AND ARCHITECT PRIOR TO INSTALLATION.

2

KEYNOTE

2.04	(E) WINDOW, TYP.
2.06	(E) 8-INCH NOM THICK CMU WALL, TYP.
2.07	(E) STL ROLL UP DOOR & JAMBS, TYP.
2.27	(E) CONC. BEAM
2.28	(E) CANOPY OVER MAIN ENTRY BELOW
2.55	(E) STRUCTURAL BRACE
2.57	(E) CONC. BEAM
23.15	EXHAUST DUCT, SECURE TO (E) CMU WALL MAX. 4'-0" O.C. VERT, SMD
23.24	OUTDOOR HEAT PUMP, SED, SMD
23.26	REFRIGERANT LINE, SMD



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PROJECT:
FIRE STATION NO.2 REMODEL

2029 BERKELEY WAY
BERKELEY, CA 94704

PROJECT NUMBER:
201320.31

CITY SPEC. NUMBER:
23-11575-C

CLIENT:
CITY OF BERKELEY
1947 CENTER ST. 4TH FLOOR
BERKELEY, CA 94704

PROJECT TEAM:
ARCHITECT:
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MECHANICAL AND PLUMBING
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ELECTRICAL ENGINEER:
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STRUCTURAL ENGINEER
IDA STRUCTURAL ENGINEERS, INC.
1629 Telegraph Avenue, #300
Oakland, CA 94612
P: 510.834.1629

REVISION		
NUMBER	DATE	DESCRIPTION
2	08/27/2024	REVISION 1

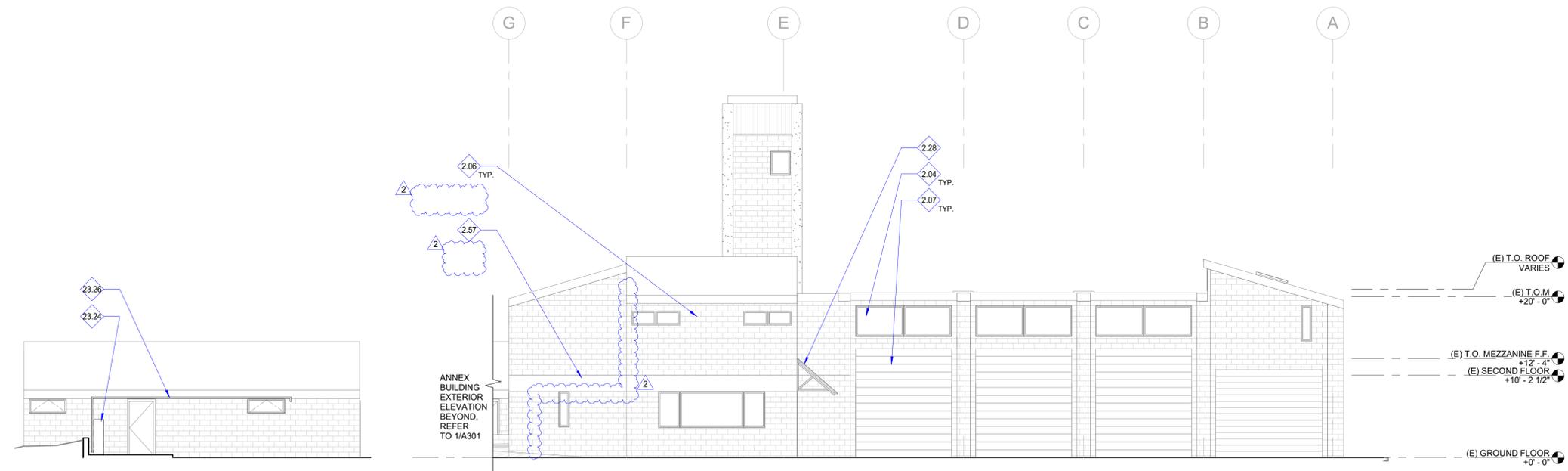
ISSUE:
ISSUE FOR PERMIT

DATE:
OCTOBER 30, 2023

STAMP:

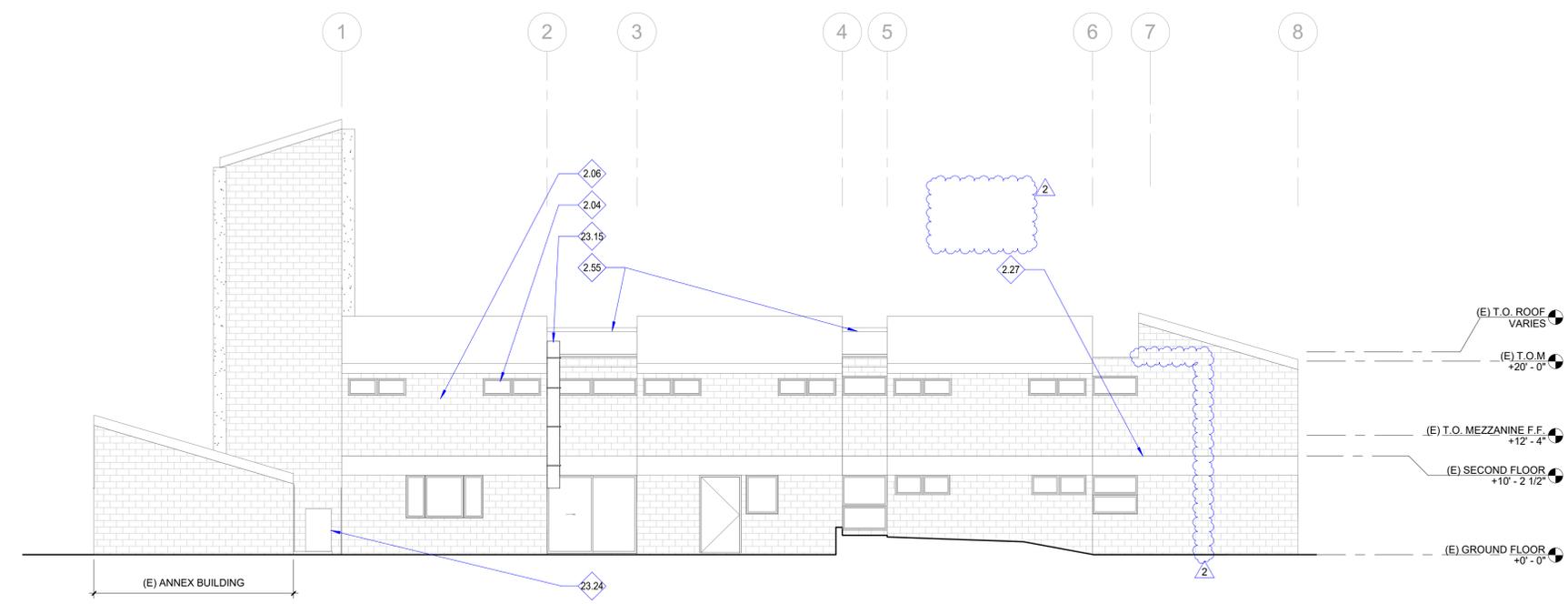
SHEET TITLE:
EXTERIOR ELEVATIONS

SHEET NUMBER:
A301



1 ANNEX BUILDING SOUTH ELEVATION
1/8" = 1'-0"

2 EXTERIOR SOUTH ELEVATION
1/8" = 1'-0"



3 EXTERIOR WEST ELEVATION
1/8" = 1'-0"

SHEET NOTES

1. ALL PENETRATIONS THROUGH (E) BLDG. MATERIALS SHALL BE CORE-DRILLED AND CLEAN-EDGED. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS WITH VERIFIED LOCATIONS OF PENETRATIONS MARKED ON FLOOR PLANS, ELEVATIONS, ETC. SUBMITTAL SHALL BE REVIEWED BY ARCHITECT AND RETURNED WITHOUT EXCEPTION BEFORE PROCEEDING WITH WORK.

2. NEW EXPOSED INTERIOR AND EXTERIOR PIPING AND CONDUIT SHALL BE PAINTED TO MATCH ADJACENT SURFACE.

3. 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-HIGHGLOSS COATING, BASED ON ITS GLOSS, AS DEFINED IN SUBSECTIONS 4.21, 4.36 AND 4.37 OF THE 2007 CALIFORNIA AIR RESOURCES OARD, SUGGESTD CONTROL MEASURE, AND THE CORRESPONDING FLAT, NONFLAT OR NONFLAT-HIGH GLOSS VOC LIMIT IN CALGREEN TABLE 5.504.4.3 SHALL APPLY. [CGBSC 5.504.4.3]

4. SMD FOR LOCATION OF PIPING AND CONDENSATE LINES. FOR ALL EXPOSED PIPING AND CONDUIT, COORDINATE ROUTING WITH OWNER AND ARCHITECT PRIOR TO INSTALLATION.

2

KEYNOTE

2.04	(E) WINDOW, TYP.
2.06	(E) 8-INCH NOM THICK CMU WALL, TYP.
2.25	(E) LANDSCAPE
2.27	(E) CONC. BEAM
2.31	(E) S.S. WALL PANEL
2.55	(E) STRUCTURAL BRACE
23.17	EXHAUST DUCT TO ROOF EXHAUST FAN, SMD
23.21	WALL LOUVER WITH BIRDSCREEN, POSITION TWO CMU ROWS BELOW CONCRETE BEAM, REFER TO INTERIOR ELEVATION FOR LOCATION. SMD.

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PROJECT:

**FIRE STATION NO.2
REMODEL**

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BERKELEY, CA 94704**

PROJECT NUMBER:

201320.31

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NUMBER	DATE	DESCRIPTION
1	03/08/2024	PLAN CHECK 1
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OCTOBER 30, 2023

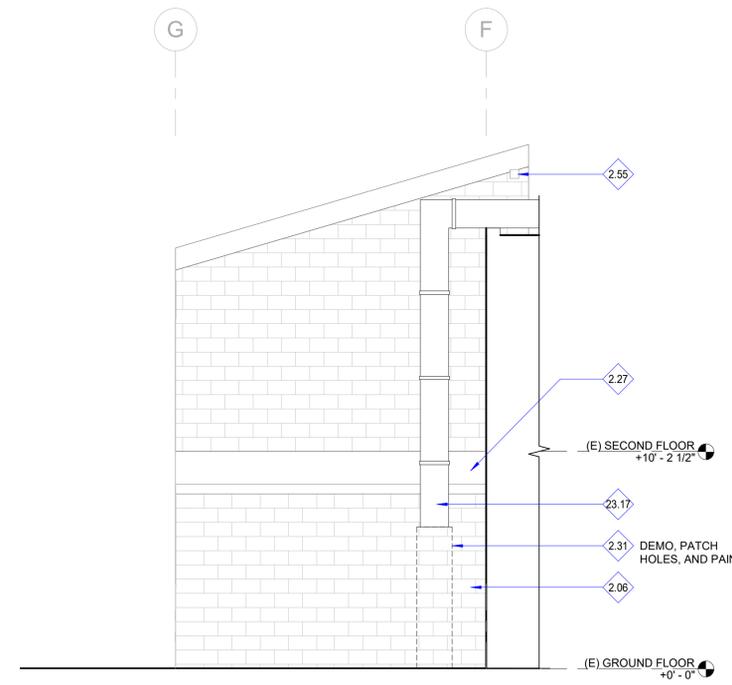
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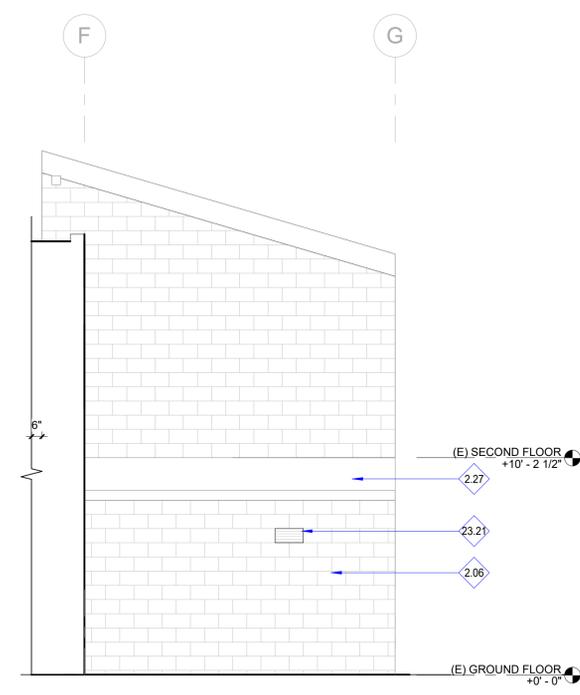
**EXTERIOR
ELEVATIONS**

SHEET NUMBER:

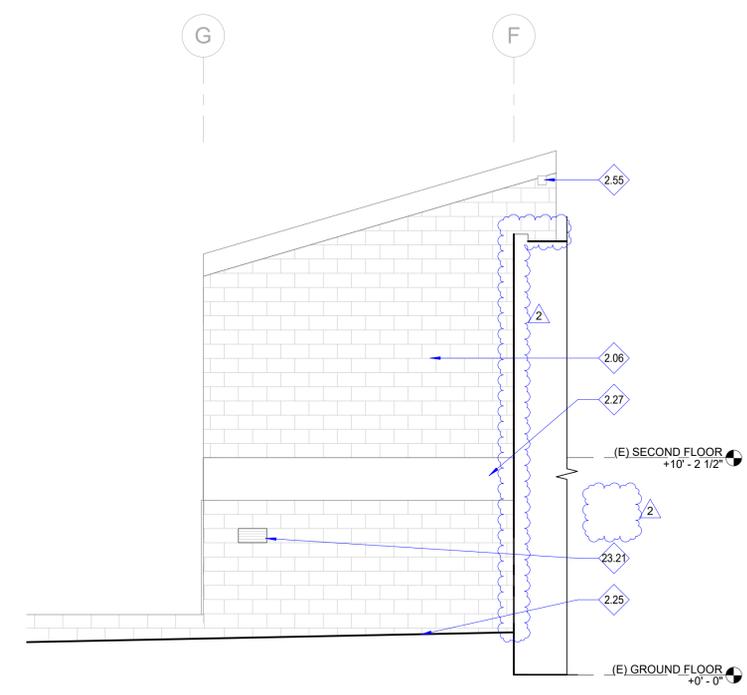
A302



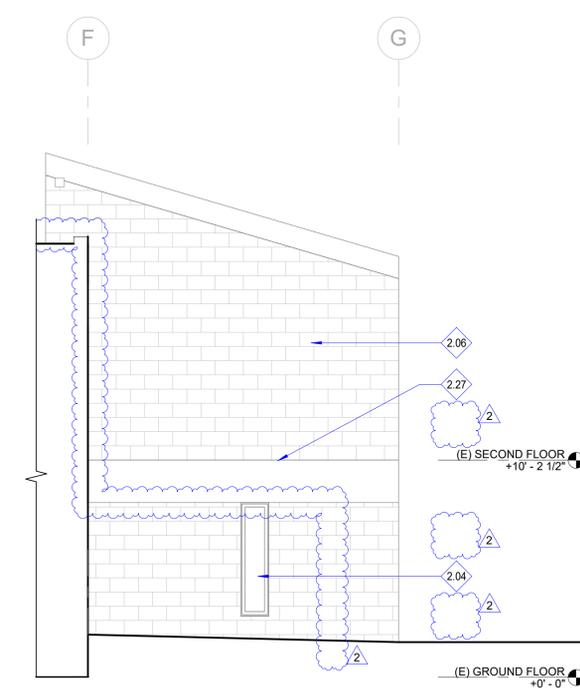
4 EXTERIOR PARTIAL SOUTH ELEVATION 2
1/4" = 1'-0"



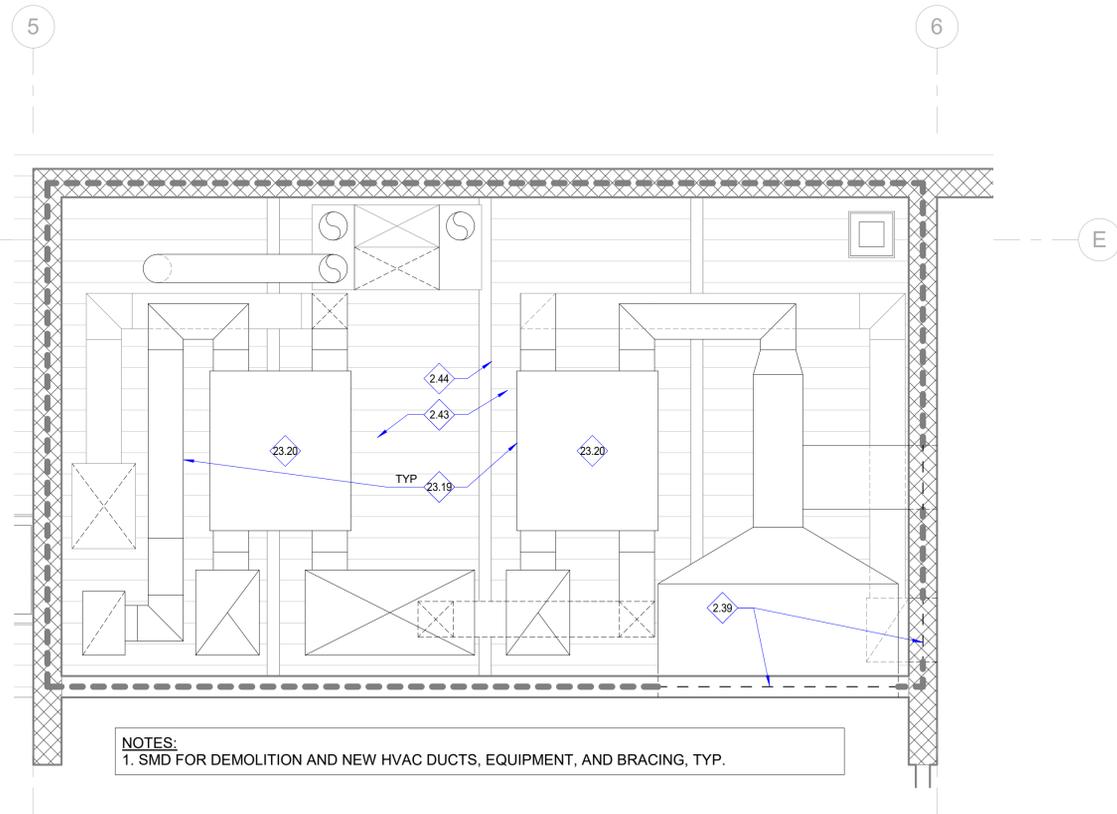
3 EXTERIOR PARTIAL NORTH ELEVATION 2
1/4" = 1'-0"



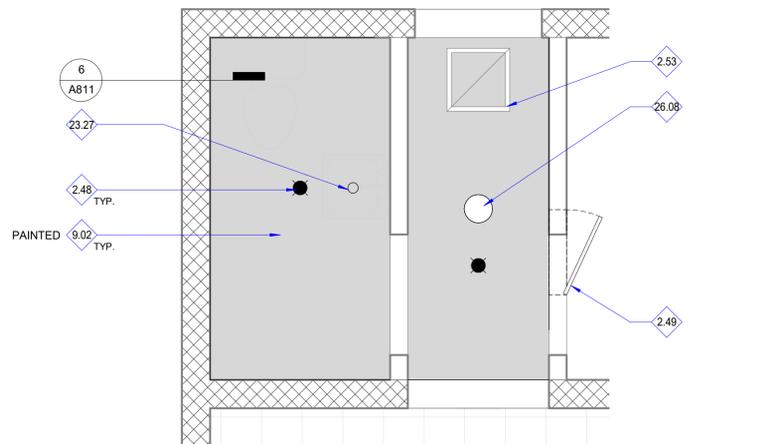
2 EXTERIOR PARTIAL SOUTH ELEVATION 1
1/4" = 1'-0"



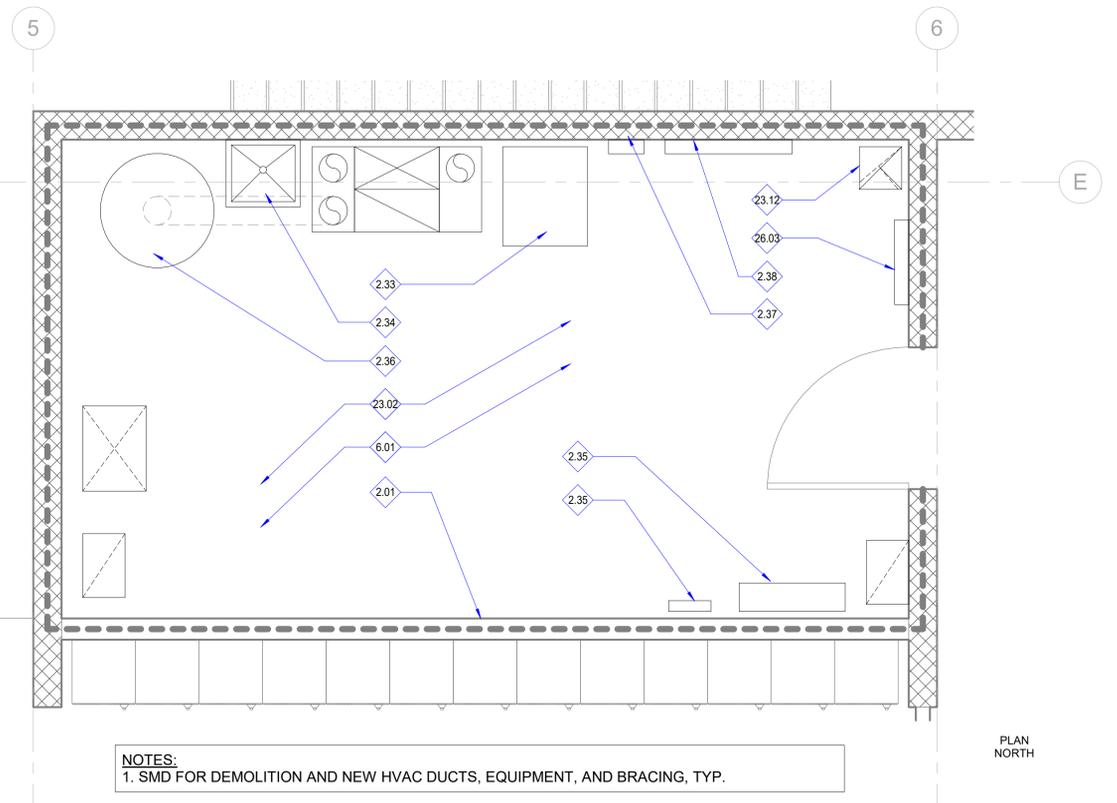
1 EXTERIOR PARTIAL NORTH ELEVATION 1
1/4" = 1'-0"



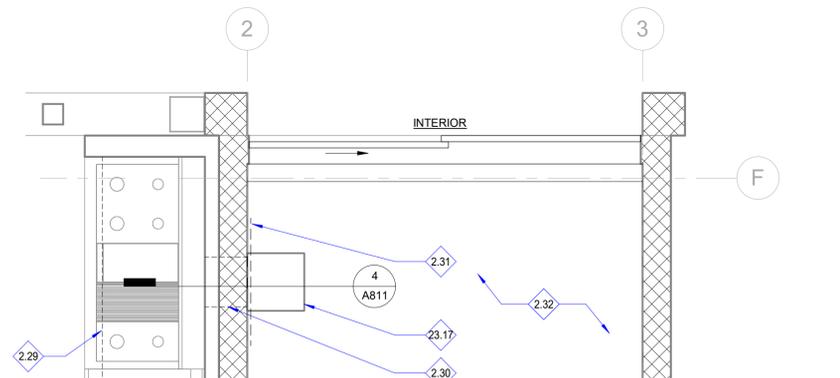
4 MECHANICAL ROOM 212 REFLECTED CEILING PLAN
1/2" = 1'-0"



2 ENLARGED ANNEX RESTROOM RCP
1/2" = 1'-0"



3 MECHANICAL ROOM 212
1/2" = 1'-0"



1 KITCHEN EXHAUST FAN
1/2" = 1'-0"

SHEET NOTES

1. LOCATE AND RETAIN EXISTING FIRE DAMPERS IN MECHANICAL ROOM.

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PROJECT:
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201320.31

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STRUCTURAL ENGINEER
IDA STRUCTURAL ENGINEERS, INC.
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Oakland, CA 94612
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KEY NOTES

- 2.01 (E) 1-HR. FIRE-RATED WALL AT MECH RM, TYP
- 2.29 (E) GREASE HOOD AT KITCHEN TO REMAIN
- 2.30 (E) THRU-WALL DUCT AND ELECTRICAL CONDUIT TO REMAIN
- 2.31 (E) S.S. WALL PANEL
- 2.32 (E) EXTERIOR CONCRETE PAVING BELOW
- 2.33 (E) TELECOM EQUIP
- 2.34 (E) SERVICE SINK, S.P.D.
- 2.35 (E) EQUIPMENT
- 2.36 (E) WATER HEATER
- 2.37 (E) ALARM PANEL
- 2.38 (E) WIRING AND PANELS
- 2.39 (E) FIRE DAMPER
- 2.43 (E) EXPOSED WOOD DECKING
- 2.44 (E) 4X10 ROOF JOISTS
- 2.48 (E) FIRE SPRINKLER TO REMAIN
- 2.49 (E) ATTIC ACCESS
- 2.53 (E) CEILING RETURN GRILLE
- 6.01 REPAIR DAMAGED FLOOR AFTER HVAC DEMO, PROVIDE BLOCKING, MATCH (E) PLYWOOD, AND PAINT
- 9.02 GYP. BD. CLG. FASTENED TO JOISTS
- 23.02 REPLACE (E) MECH. EQUIP. AND DUCTS IN MECH. ROOM, SMD
- 23.12 (E) ROOF EXHAUST VENT
- 23.17 EXHAUST DUCT TO ROOF EXHAUST FAN, SMD
- 23.19 GALV. MTL. SEISMIC BRACING AT DUCTS AND EQUIP., SMD
- 23.20 ENERGY RECOVERY VENTILATOR, SMD
- 23.27 FAN COIL SECONDARY DRAIN WITH ESCUTCHEON, SMD
- 26.03 NEW PANEL, SED
- 26.08 REPLACE EXISTING DOWNLIGHT

REVISION

NUMBER	DATE	DESCRIPTION
1	03/08/2024	PLAN CHECK 1

ISSUE:
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DATE:
OCTOBER 30, 2023

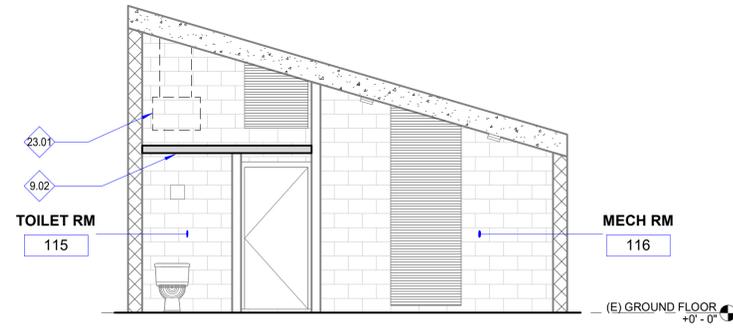
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LEGEND

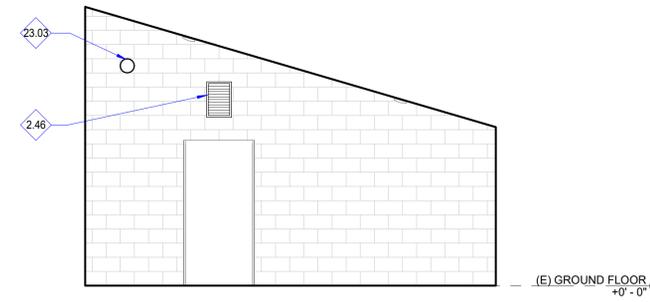
- NEW ITEM
- (E) ITEM TO REMAIN
- - - (E) ITEM ABOVE OR BEHIND
- XXXXXX (E) CMU WALL
- (E) OR (N) WALL PENETRATION FOR MECH.
- (E) 1-HR FIRE-RATED WALL
- ⊗ SUPPLY DUCT RISER, SMD
- ⊗ SUPPLY DUCT DROP, SMD
- ⊗ RETURN DUCT RISER, SMD
- ⊗ RETURN DUCT DROP, SMD
- ⊗ EXHAUST RISER, SMD
- ⊗ EXHAUST DROP, SMD
- ⊗ FLUE, SMD

SHEET TITLE:
ENLARGED PLANS

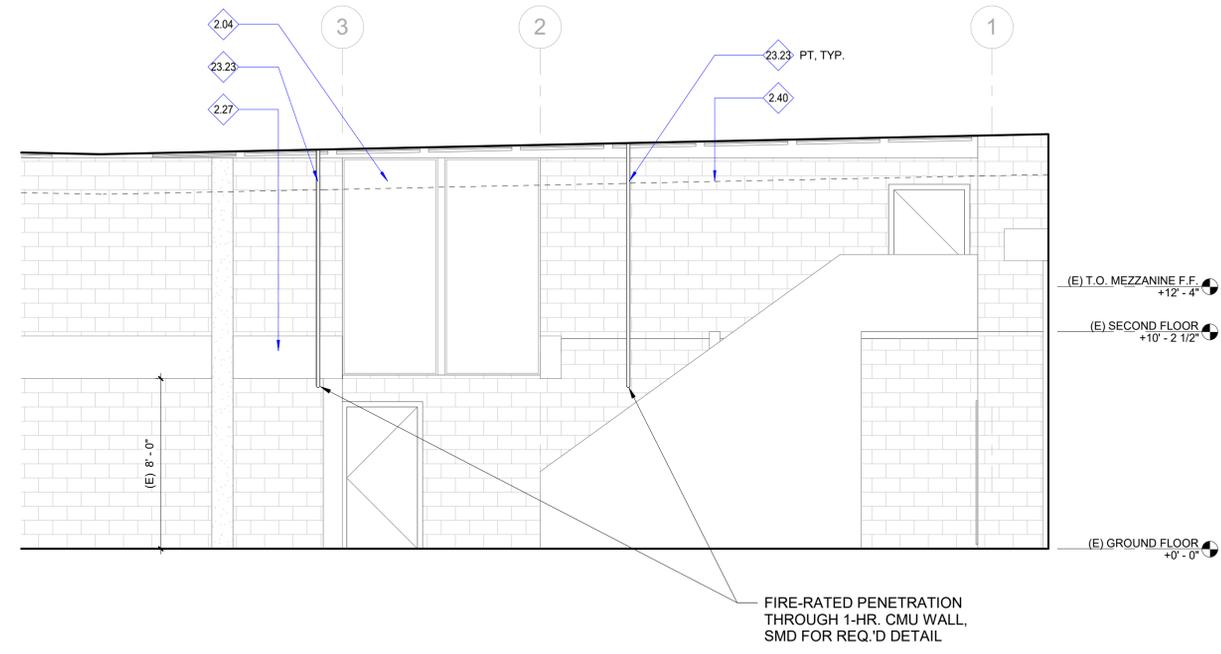
SHEET NUMBER:
A400



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



2 ANNEX STORAGE EAST INTERIOR ELEVATION
1/4" = 1'-0"



1 APP. BAY INTERIOR ELEVATION
1/4" = 1'-0"

SHEET NOTES

1. SMD AND SED FOR MORE INFORMATION.
2. ALL DIMENSIONS SHOWN NOTED AS (E) ARE PROVIDED FOR REFERENCE ONLY AND ARE TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR.
3. FOR AREAS AFFECTED BY THE WORK, PATCH AND REPAIR WALLS, CEILINGS AND FLOORS TO MATCH EXISTING FINISH.
4. ALL PENETRATIONS THROUGH (E) BLDG. MATERIALS SHALL BE CORE-DRILLED AND CLEAN-EDGED. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS WITH VERIFIED LOCATIONS OF PENETRATIONS MARKED ON FLOOR PLANS, ELEVATIONS, ETC. SUBMITTAL SHALL BE REVIEWED BY ARCHITECT AND RETURNED WITHOUT EXCEPTION BEFORE PROCEEDING WITH WORK.
5. NEW EXPOSED INTERIOR AND EXTERIOR PIPING AND CONDUIT SHALL BE PAINTED TO MATCH ADJACENT SURFACE.
6. SMD FOR LOCATION OF PIPING AND CONDENSATE LINES. FOR ALL EXPOSED PIPING AND CONDUIT, COORDINATE ROUTING WITH OWNER AND ARCHITECT PRIOR TO INSTALLATION.

2

KEYNOTE

2.04	(E) WINDOW, TYP.
2.27	(E) CONC. BEAM
2.40	(E) GLU-LAM BEAM IN FOREGROUND
2.46	(E) INDOOR GRILLE, S.M.D. FOR REUSE OF GRILLE
9.02	GYP. BD. CLG. FASTENED TO JOISTS
23.01	FAN COIL UNIT HUNG FROM CLG., SMD
23.03	EXPOSED DUCT, S.M.D.
23.23	PIPE FROM ROOF TO PENETRATE CMU WALL, SMD

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PROJECT:
**FIRE STATION NO.2
REMODEL**

2029 BERKELEY WAY
BERKELEY, CA 94704

PROJECT NUMBER:
201320.31

CITY SPEC. NUMBER:
23-11575-C

CLIENT:
CITY OF BERKELEY
1947 CENTER ST. 4TH FLOOR
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PROJECT TEAM:
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REVISION		
NUMBER	DATE	DESCRIPTION
2	08/27/2024	REVISION 1

ISSUE:
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DATE:
OCTOBER 30, 2023

STAMP:

SHEET TITLE:
**INTERIOR
ELEVATIONS &
BUILDING
SECTIONS**

SHEET NUMBER:
A500

SHEET NOTES

1. SMD AND SED FOR MORE INFORMATION.
2. ALL DIMENSIONS SHOWN NOTED AS VIF ARE PROVIDED FOR REFERENCE ONLY AND ARE TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR.
3. FOR AREAS AFFECTED BY THE WORK, PATCH AND REPAIR WALLS, CEILINGS AND FLOORS TO MATCH EXISTING FINISH.
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KEYNOTE

2.27	(E) CONC. BEAM
2.36	(E) WATER HEATER
2.41	(E) LIGHT FIXTURE
2.50	(E) FIRE SPRINKLER LINE
23.04	DUCTLESS WALL-MOUNTED FC UNIT, SMD
23.21	WALL LOUVER WITH BIRDSCREEN, POSITION TWO CMU ROWS BELOW CONCRETE BEAM, REFER TO INTERIOR ELEVATION FOR LOCATION, SMD.
23.22	EXHAUST FAN, LOCATED TWO CMU COURSE BELOW CONC. BEAM, SEE INT ELEVS FOR LOCATION, SMD

LEGEND

	HEIGHT OF (E) CLG. ABOVE FINISHED FLOOR
	NEW ITEM
	(E) ITEM TO REMAIN
	(E) CMU WALL
	(E) 1 X 1 ACOUSTIC CEILING PANEL ON CLIP SYSTEM
	(E) GYPSUM BOARD CEILING
	(E) EXPOSED WOOD DECKING
	GYP. BOARD CEILING
	(E) OR (N) HVAC DUCT, SMD
	(E) ROOF HATCH ACCESS PANEL
	WALL MTD. FAN COIL UNIT, SMD

REVISION

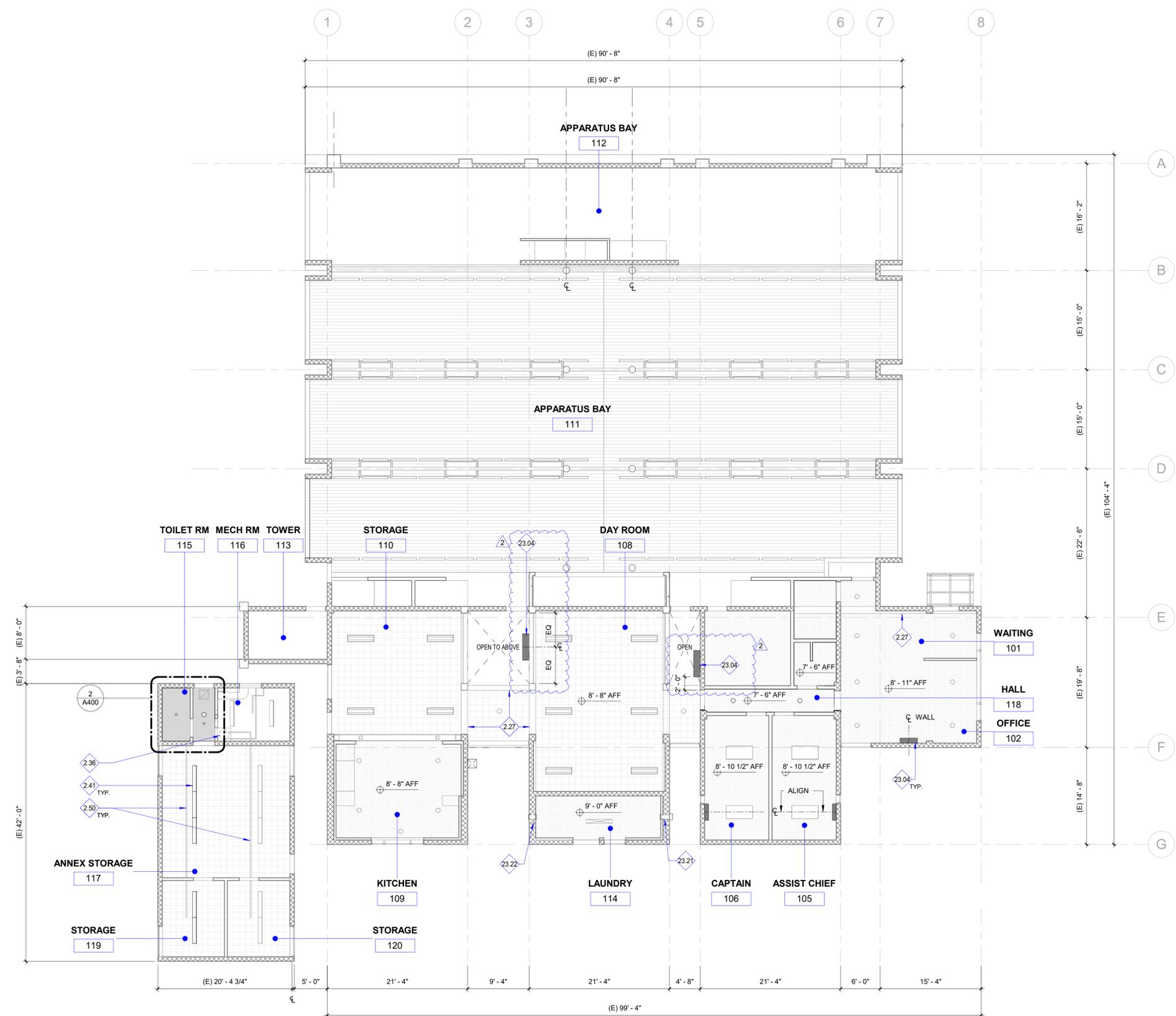
NUMBER	DATE	DESCRIPTION
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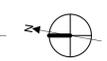
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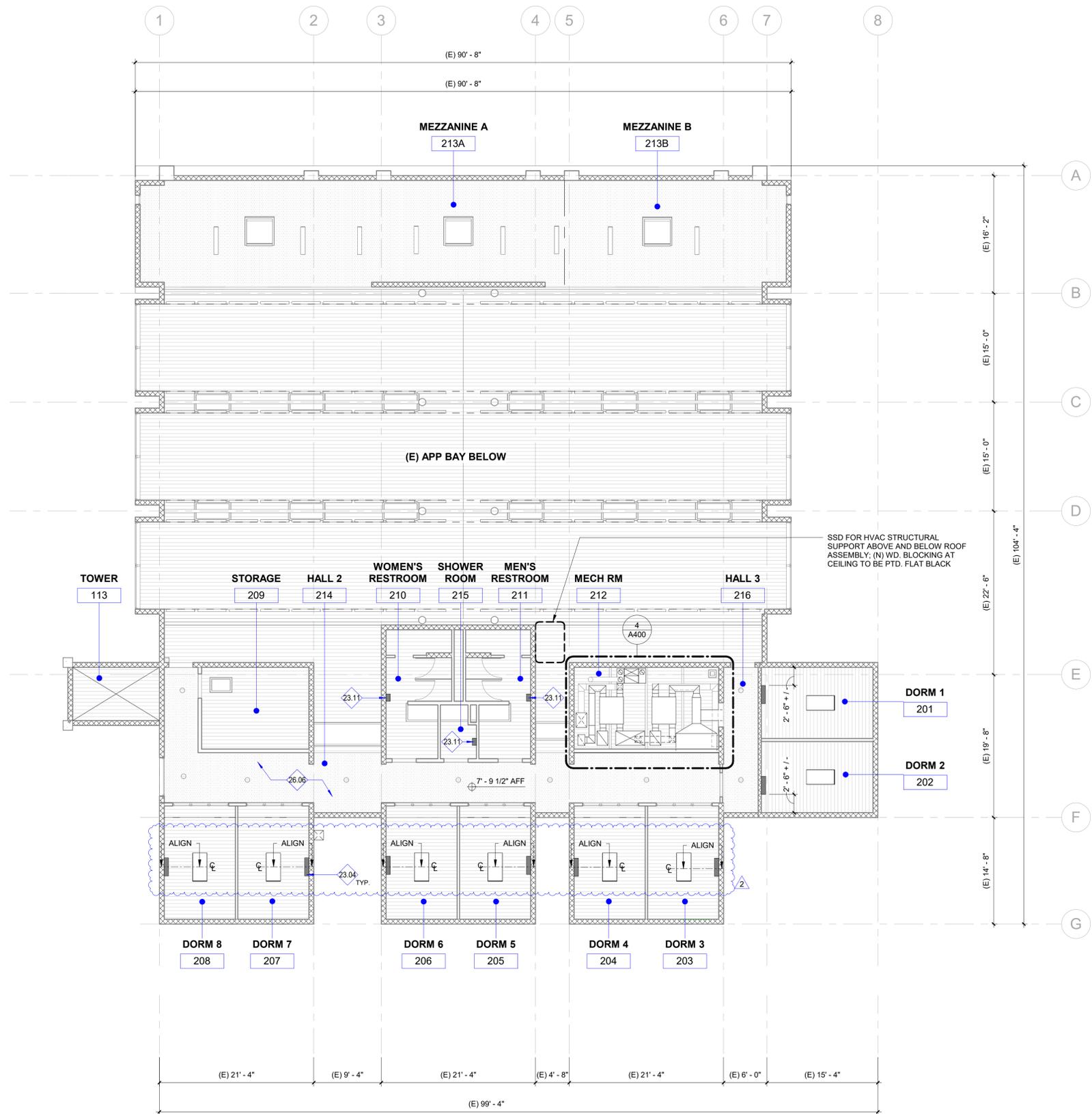
SHEET TITLE:
**REFLECTED
GROUND FLOOR
CEILING PLAN**

SHEET NUMBER:
A601



1 REFLECTED GROUND FLOOR CEILING PLAN
1/8" = 1'-0"





SHEET NOTES

1. SMD AND SED FOR MORE INFORMATION.
2. ALL DIMENSIONS SHOWN NOTED AS VIF ARE PROVIDED FOR REFERENCE ONLY AND ARE TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR.
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5. SMD FOR LOCATION OF PIPING AND CONDENSATE LINES. FOR ALL EXPOSED PIPING AND CONDUIT, COORDINATE ROUTING WITH OWNER AND ARCHITECT PRIOR TO INSTALLATION.

KEYNOTE

23.04	DUCTLESS WALL-MOUNTED FC UNIT, SMD
23.11	PANEL HEATER, SMD
26.06	SURFACE MTD. CONDUIT AT CLG FOR WIRING TYP. SED

LEGEND

\ominus	X'-X" AFF	HEIGHT OF (E) CLG. ABOVE FINISHED FLOOR
—		NEW ITEM
—		(E) ITEM TO REMAIN
XXXXXX		(E) CMU WALL
□		(E) 1 X 1 ACOUSTIC CEILING PANEL ON CLIP SYSTEM
□		(E) GYPSUM BOARD CEILING
□		(E) EXPOSED WOOD DECKING
□		GYP. BOARD CEILING
□		(E) OR (N) HVAC DUCT, SMD
□		(E) ROOF HATCH ACCESS PANEL
□		WALL MTD. FAN COIL UNIT, SMD

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ISSUE:
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SHEET TITLE:
REFLECTED SECOND FLOOR CEILING PLAN

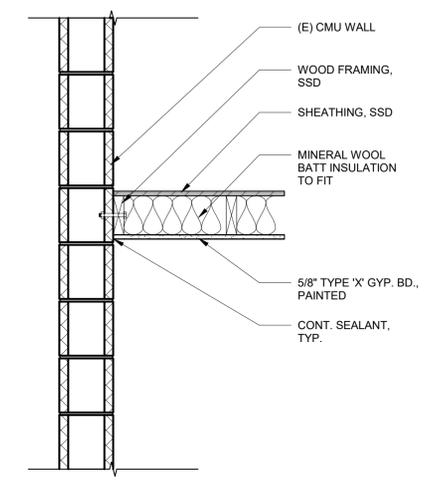
SHEET NUMBER:

A602

1 REFLECTED SECOND FLOOR CEILING PLAN
1/8" = 1'-0"



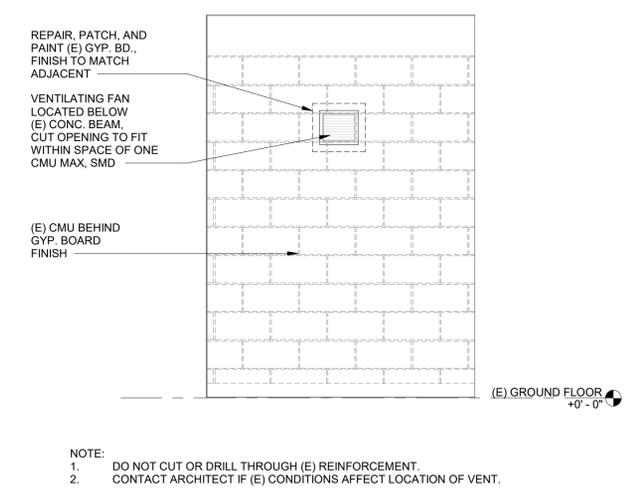
6 CEILING AT ANNEX BLDG
1" = 1'-0"



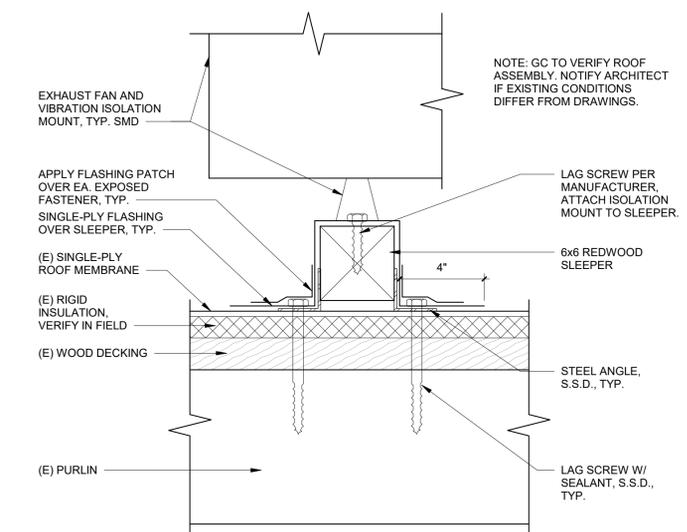
3 DTL. VIEW PIPE PENETRATION AT DORM WALL
1/8" = 1'-0"



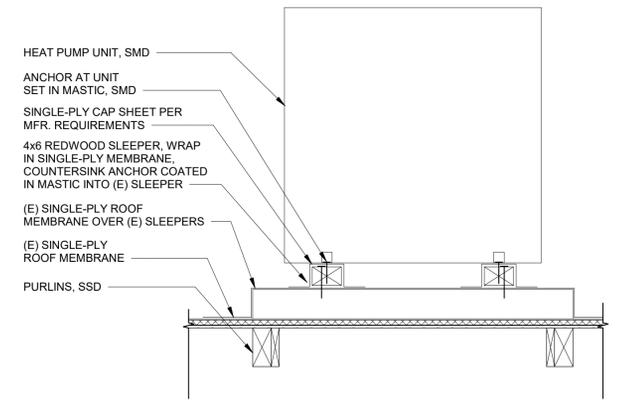
8 LAUNDRY ROOM SOUTH INTERIOR ELEVATION
1/2" = 1'-0"



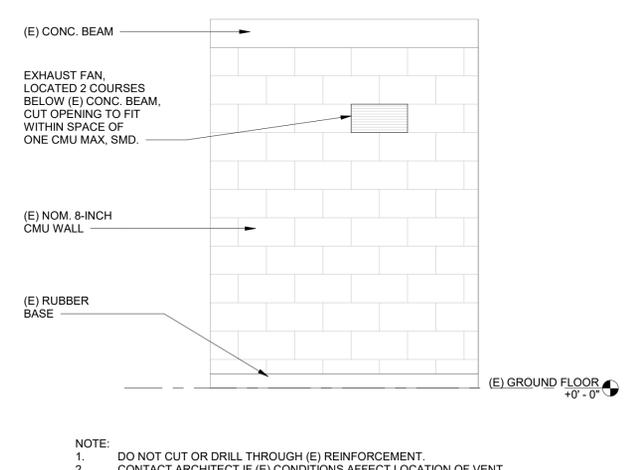
5 EXHAUST FAN CURB DETAIL
3" = 1'-0"



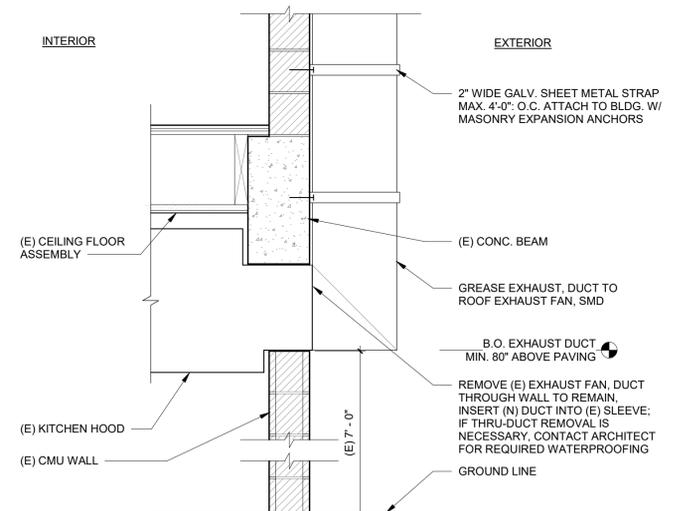
2 SECTION AT ROOFTOP HEAT PUMP
3/4" = 1'-0"



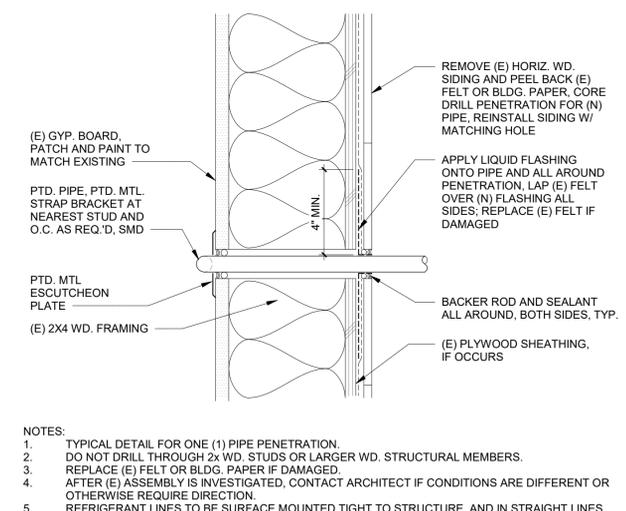
7 LAUNDRY ROOM NORTH INTERIOR ELEVATION
1/2" = 1'-0"



4 GREASE EXHAUST DUCT PENETRATION DETAIL SECTION
3/4" = 1'-0"



1 REFRIGERANT LINE PENETRATION DETAIL
3" = 1'-0"



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SHEET TITLE:
EXTERIOR AND INTERIOR DETAILS

SHEET NUMBER:

A811

GENERAL NOTES

- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE 2022 CALIFORNIA BUILDING CODE.
- THESE NOTES SHALL APPLY TO ALL STRUCTURAL DRAWINGS UNLESS OTHERWISE NOTED OR SHOWN.
- FEATURES OF CONSTRUCTION SHOWN ARE TYPICAL AND SHALL APPLY GENERALLY THROUGHOUT SIMILAR CONDITIONS. ALL DETAILS REFERENCED, AND DETAILS NOT REFERENCED ON PLANS, SHALL BE CONSIDERED TYPICAL AND APPLY TO ALL SIMILAR CONDITIONS OF THE CONSTRUCTION UNLESS SHOWN OTHERWISE. DETAILS SHOWN ON "TYPICAL DETAIL" SHEETS SHALL BE USED WHEREVER APPLICABLE. SPECIFIC DETAILS ON THE STRUCTURAL DRAWINGS TAKE PRECEDENCE OVER "TYPICAL DETAILS". SPECIFIC NOTES ON STRUCTURAL DRAWINGS TAKE PRECEDENCE OVER NOTES SHOWN IN "GENERAL NOTES".
- 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.
- REFER TO THE ARCHITECTURAL DRAWINGS FOR THE FOLLOWING: OPENINGS REQUIRED FOR DUCTS, VENTS, PLUMBING, ETC.; FLASHING, INSERTS, ANCHORAGES, HANGERS ETC. EMBEDDED IN OR ATTACHED TO THE STRUCTURE; AND ELEVATIONS.
- THE CONTRACTOR SHALL COMPARE THE STRUCTURAL DRAWINGS WITH ARCHITECTURAL, PLUMBING, MECHANICAL AND ELECTRICAL DRAWINGS AS TO ALL LAYOUTS, DIMENSIONS AND ELEVATIONS. ANY DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT FOR PROPER ADJUSTMENT BEFORE PROCEEDING WITH THE WORK.
- 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.
- 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.
- FEATURES OF EXISTING CONSTRUCTION SHALL BE VERIFIED BY THE CONTRACTOR IN THE FIELD AND DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT.
- 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.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ADEQUATELY SHORE AND BRACE EXISTING BUILDING AS REQUIRED DURING CONSTRUCTION. ALL SHORING SHALL CONFORM TO FEDERAL AND LOCAL JURISDICTION OSHA REQUIREMENTS. SHORING DESIGN SHALL BE DESIGNED AND STAMPED BY AN ENGINEER RETAINED BY CONTRACTOR AND REGISTERED IN THE LOCAL JURISDICTION.
- 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.
- CONTRACTOR SHALL FIELD VERIFY EXISTING FRAMING CONDITIONS AND SHALL NOTIFY ARCHITECT OF ANY VARIATION FROM CONDITIONS ASSUMED ON DRAWINGS. CONTRACTOR SHALL VERIFY THAT EXISTING FRAMING IS RE-SUPPORTED AND ALL LOADS ARE TRANSFERRED TO NEW OR EXISTING FOOTINGS. CONTRACTOR SHALL CONSULT WITH THE STRUCTURAL ENGINEER AS REQUIRED.
- DO NOT SCALE DRAWINGS.

DESIGN CRITERIA

- VERTICAL LOADS:
 - A. DEAD LOADS:
 - ROOF DEAD LOAD: 12 PSF
 - B. LIVE LOADS:
 - ROOF LIVE LOAD: 20 PSF
- LATERAL LOADS:
 - A. SEISMIC DESIGN - PER CBC SECTION 1613
 - RISK CATEGORY IV
 - SEISMIC DESIGN CATEGORY D
 - SITE CLASS D - DEFAULT
 - MAPPED SHORT PERIOD ACCELERATION $S_s = 2.189 g$
 - SITE COEFFICIENT $S_a = 1.2$
 - DESIGN SHORT PERIOD ACCELERATION $S_{s1} = 1.751 g$
 - MAPPED ONE SECOND PERIOD ACCELERATION $S_{s2} = 0.845 g$
 - COMPONENT AMPLIFICATION FACTOR $a_p = 2.5$
 - COMPONENT RESPONSE MODIFICATION FACTOR $R_p = 2.5$
 - COMPONENT IMPORTANCE FACTOR $I_p = 1.0$

EXISTING BUILDING NOTES:

- CONDITION OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS ARE BASED ON EXISTING RECORD DRAWINGS PROVIDED. THE CONTRACTOR SHALL VERIFY FRAMING CONDITIONS PRIOR TO START OF WORK. IF CONDITIONS DIFFER IN ANY SIGNIFICANT WAY FROM THAT SHOWN, NOTIFY ARCHITECT/STRUCTURAL ENGINEER.
- THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE, WORKMEN, AND OTHER PERSONS DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING AND/OR SCAFFOLDING.
- THE CONTRACTOR SHALL CAREFULLY CHECK THE STABILITY OF ALL ELEMENTS OF THE EXISTING BUILDING BEFORE COMMENCING WITH ANY WORK.
- SEWER AND UTILITY LINES ARE NOT INDICATED ON STRUCTURAL DRAWINGS. REFER TO CIVIL, PLUMBING AND ELECTRICAL DRAWINGS FOR THEIR LOCATION, PROFILE AND DETAILS. ANY INTERFERENCE BETWEEN SEWER AND UTILITY LINES SHALL BE NOTIFIED TO THE ARCHITECT/STRUCTURAL ENGINEER BEFORE PROCEEDING FURTHER WITH THE CONSTRUCTION.
- PRIOR TO DRILL HOLES FOR POST-INSTALLED ANCHORS/DOWELS, CONTRACTOR SHALL USE NON-DESTRUCTIVE METHOD TO DETECT LOCATIONS OF REBAR IN EXISTING ELEMENTS TO AVOID DAMAGING AND/OR CUTTING. NOTIFY ARCHITECT AND STRUCTURAL ENGINEER WHERE CONFLICT ARE FOUND IN FIELD.
- OTHER THAN THE DRILLED HOLES FOR POST-INSTALLED ANCHORS, DO NOT DAMAGE SURROUNDING EXISTING CONCRETE DURING INSTALLATION AND FOR TESTING OF POST-INSTALLED ANCHORS.

CARPENTRY NOTES

- ALL LUMBER SHALL BE DOUGLAS FIR-LARCH NO. 1, MANUFACTURED AND GRADED IN ACCORDANCE WITH THE WEST COAST LUMBER INSPECTION BUREAU "STANDARD GRADING RULES NO. 17", LATEST EDITION INCLUDING ALL SUPPLEMENTS. ALL LUMBER IN EXTERIOR APPLICATIONS SHALL BE PRESSURE TREATED.
- ALL FRAMING LUMBER SHALL BE HAVE A MAXIMUM MOISTURE CONTENT OF 19 PERCENT AT TIME OF INSTALLATION.
- LAG SCREWS SHALL BE SCREWED (NOT DRIVEN) INTO PLACE. DRILL HOLES SAME DIAMETER AND DEPTH AS SHANK. THEN DRILL HOLE 60-70% OF DIAMETER AT BASE OF THREAD FOR THE THREADED PORTION. USE STEEL PLATE WASHERS AS REQUIRED FOR THE SAME BOLT SIZE.
- BOLTS IN WOOD SHALL BE MACHINE BOLTS UNLESS OTHERWISE NOTED. ALL MACHINE BOLTS SHALL HAVE CUT THREADS.
- BOLT HOLES IN WOOD AND STEEL SHALL BE THE DIAMETER OF THE BOLT PLUS 1/16".
- PROVIDE PLATE WASHER UNDER HEAD AND NUT OF BOLT WHERE BEARING IS AGAINST WOOD. LENGTH OF THREAD SHALL BE SUCH THAT THREADS DO NOT BEAR AGAINST WOOD. ALL NUTS SHALL BE TIGHTENED WHEN PLACED AND RE-TIGHTENED AT COMPLETION OF THE JOB IMMEDIATELY BEFORE CLOSING WITH FINISH CONSTRUCTION.
- SHEATHING MAY BE ORIENTED STRAND BOARD OR PLYWOOD UNLESS SPECIFICALLY NOTED AS PLYWOOD.

FASTENER NOTES

- CONNECTORS FOR WOOD CONSTRUCTION NOTED ON PLANS AND DETAILS SHALL BE SIMPSON COMPANY STRONG-TIE CONNECTORS OR APPROVED EQUAL.
- ALL NAILS SHALL BE COMMON WIRE NAILS. WHERE NAILS TEND TO SPLIT THE WOOD, NAIL HOLES SHALL BE PRE-DRILLED.
- SHEATHING SHALL BE NAILED WITH 10d @ 4" ON CENTER ALONG SUPPORTED PANEL EDGES AND WHERE NOTED ON PLANS AND DETAILS AS EDGE NAILING (EN) AND 10d @ 12" ON CENTER ALONG INTERMEDIATE FRAMING MEMBERS.
- FASTENERS PENETRATING PRESSURE-PRESERVATIVE TREATED AND FIRE-RETARDANT TREATED WOOD SHALL BE HOT-DIPPED GALVANIZED PER ASTM A153, CLASS D.
- ALL CONNECTORS FOR PRESSURE-PRESERVATIVE TREATED AND FIRE-RETARDANT TREATED WOOD SHALL BE STAINLESS STEEL. ALL NAILS, SCREWS, BOLTS, ETC. FOR SUCH CONNECTORS SHALL BE STAINLESS STEEL.

STRUCTURAL STEEL NOTES

- STRUCTURAL STEEL SHALL BE ASTM A36 UNLESS OTHERWISE NOTED. ALL W AND WT SHAPES SHALL BE ASTM A992.
- ALL STRUCTURAL STEEL SHALL BE FABRICATED AND ERRECTED IN ACCORDANCE WITH AISC SPECIFICATIONS, LATEST EDITION.
- BOLT HOLES IN STEEL SHALL BE 1/16" OVERSIZE UNLESS OTHERWISE NOTED.
- STRUCTURAL STEEL WHERE EXPOSED TO WEATHER SHALL BE GALVANIZED AND PAINTED.

TESTS, INSPECTIONS AND OBSERVATIONS NOTES

- TESTS AND INSPECTIONS SHALL BE PROVIDED FOR ALL ITEMS AS REQUIRED BY THE CALIFORNIA BUILDING CODE.
- SEE STATEMENT OF SPECIAL INSPECTIONS, WHEN INCLUDED, FOR SPECIAL INSPECTION REQUIREMENTS.
- THE FOLLOWING ITEMS SHALL HAVE SPECIAL INSPECTION.
 - A. POST INSTALLED ANCHORS IN CONCRETE - EXPANSION ANCHORS, EPOXY ANCHORS, ETC.
- THE OWNER SHALL BE RESPONSIBLE FOR RETAINING AN INDEPENDENT TESTING AND INSPECTION LABORATORY TO PERFORM ALL REQUIRED TESTING AND INSPECTIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE TESTING AND INSPECTION LABORATORY WITH CONSTRUCTION SCHEDULES TO ENSURE PROPER COORDINATION OF WORK.

THE CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER OR INSPECTOR A MINIMUM OF 48 HOURS (EXCLUDING WEEKEND DAYS) PRIOR TO THE TIME OF A REQUIRED INSPECTION.

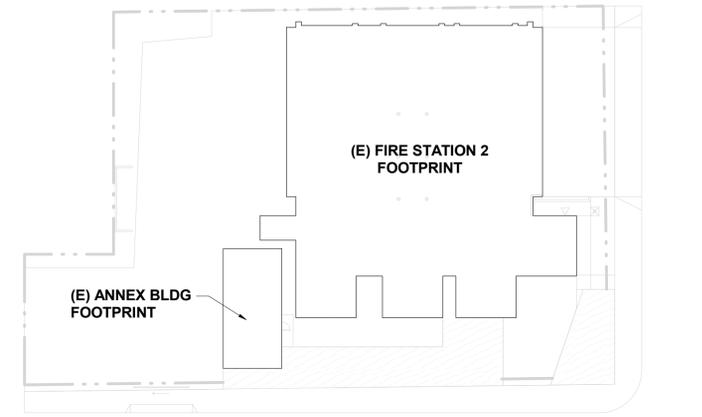
SYMBOLS AND ABBREVIATIONS

SYMBOLS AND ABBREVIATIONS	DESCRIPTION	SYMBOLS AND ABBREVIATIONS	DESCRIPTION
ANSI 1	SECTION A ON DRAWING S2.1	ID	INSIDE DIAMETER
@	AND	IF	INSIDE FACE
&	DEGREE	INT	INTERIOR
Ø OR DIA	DIAMETER	JST	JOIST
#	NUMBER OR POUND	JT(S)	JOINT(S)
(E)	EXISTING	K	KIPS (1000 LBS)
(N)	NEW	LBS	POUNDS
AB	ANCHOR BOLT	LG	LONG
ADBL	ADDITIONAL	LL	LIVE LOAD
ADJ	ADJACENT	LLH	LONG LEG HORIZONTAL
AFF	ABOVE FINISH FLOOR	LLV	LONG LEG VERTICAL
ALT	ALTERNATE	LT	LIGHT
APPROX	APPROXIMATE	LTWT	LIGHTWEIGHT
ARCH	ARCHITECT OR ARCHITECTURAL	MATL	MATERIAL
ATTN	ATTENTION	MAX	MAXIMUM
BD	BOARD	MB	MACHINE BOLT
BLDG	BUILDING	MECH	MECHANICAL
BLK	BLOCK	MFR	MANUFACTURER
BLKG	BLOCKING	MIN	MINIMUM
BM	BEAM	MISC	MISCELLANEOUS
BO	BOTTOM OF	MTL	METAL
BOT	BOTTOM	NIC	NOT IN CONTRACT
BS	BOTH SIDES	NOM	NOMINAL
BTWN	BETWEEN	NTS	NOT TO SCALE
CBC	CALIFORNIA BUILDING CODE	OSB	ORIENTED STRAND BOARD
CL	CENTERLINE	OC	ON CENTER
CLG	CEILING	OD	OUTSIDE DIAMETER
CLR	CLEAR	OH	OPPOSITE HAND
CMU	CONCRETE MASONRY UNIT	OPNG	OPENING
COL	COLUMN	OPP	OPPOSITE
CONC	CONCRETE OR CONCENTRATED	PL	PLATE
COND	CONDITION	PSF	POUNDS PER SQUARE FEET
CONN	CONNECTION	PSI	POUNDS PER SQUARE INCH
CONT	CONTINUOUS	PT	POINT
CP	COMPLETE PENETRATION WELD	PTDF	PRESSURE TREATED DOUGLAS FIR LUMBER
CTSK	COUNTERSINK	PW	STRUCTURAL PLYWOOD
		PW EN	PLYWOOD EDGE NAILING
d	PENNY	RAD	RADIUS
D	DEPTH	RDP	REGISTERED DESIGN PROFESSIONAL
DBL	DOUBLE	REF	REFERENCE
DEMO	DEMOLISH	RECT	RECTANGULAR
DET	DETAIL	REINF	REINFORCING
DF	DOUGLAS FIR	REQD	REQUIRED
DIAG	DIAGONAL	RET WALL	RETAINING WALL
DIM(S)	DIMENSION(S)	SAD	SEE ARCHITECTURAL DRAWING
DJ	DOUBLE JOIST	SCD	SEE CIVIL/SITE DRAWINGS
DL	DEAD LOAD	SCHED	SCHEDULE
DN	DOWN	SEC	SECTION
DO	DOWN	SED	SEE ELECTRICAL DRAWINGS
DP	DEEP	SHT	SHEET
DTLS	DETAILS	SHTG	SHEATHING
DWG(S)	DRAWING(S)	SIM	SIMILAR
EA	EACH	SLD	SEE LANDSCAPE DRAWINGS
EB	EXPANSION BOLT	SLRS	SEISMIC LOAD RESISTING SYSTEM
EE	EACH END	SMD	SEE MECHANICAL DRAWINGS
EF	EACH FACE	SMS	SHEET METAL SCREW
EL	ELECTRICAL	SOG	SLAB ON GRADE
ELEC	ELECTRICAL	SOP	SEE PLUMBING DRAWINGS
EMBED	EMBEDMENT	SPEC(S)	SPECIFICATION(S)
EN	EDGE NAILING	SQ	SQUARE
ENGR	ENGINEER	SS	SOLID SAWN
EQ	EQUAL	STAG	STAGGERED
EQUIP	EQUIPMENT	STD	STANDARD
ES	EACH SIDE	STL	STEEL
ETC	ETCETERA	STRUCT	STRUCTURAL
EW	EACH WAY	SYM	SYMMETRICAL
EXC	EXCAVATE	T&B	TOP & BOTTOM
EXT	EXTERIOR	T&G	TONGUE & GROOVE
FDN	FOUNDATION	THK	THICK
FF	FINISH FLOOR	THRU	THROUGH
FIN	FINISH	TN	TONGUE
FL	FACE	T.O.	TOP OF
FOC	FACE OF CONCRETE	TOC	TOP OF CONCRETE
FOM	FACE OF MASONRY	TOF	TOP OF FOOTING
FS	FAR SIDE	TO PW	TOP OF PLYWOOD
FT	FEET	TYP	TYPICAL
FTG	FOOTING	UON	UNLESS OTHERWISE NOTED
GA	GAGE, GAUGE	VENT	VENTILATION
GALV	GALVANIZED	VERT	VERTICAL
GLM	GLUED LAMINATED	VIF	VERIFY IN FIELD
HD	HOLDOWN	W/	WITH
HDG	HOT-DIPPED GALVANIZED	WD	WOOD
HDR	HEADER	WF	WIDE FLANGE
HGR	HORIZONTAL	W/O	WITHOUT
HOR	HORIZONTAL	WT	WEIGHT
HSB	HIGH STRENGTH BOLT		
HSS	HOLLOW STEEL SECTION		
HT	HEIGHT		

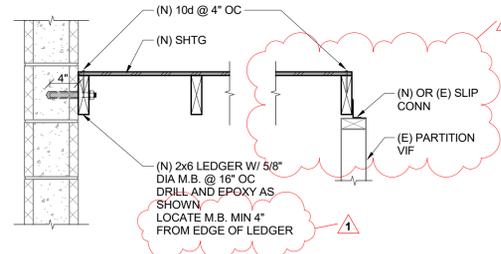
STRUCTURAL SHEET LIST	
SHEET NO.	SHEET NAME
S001	GENERAL NOTES AND TYPICAL DETAILS
S203	ROOF FRAMING PLAN

SYMBOLS LIST

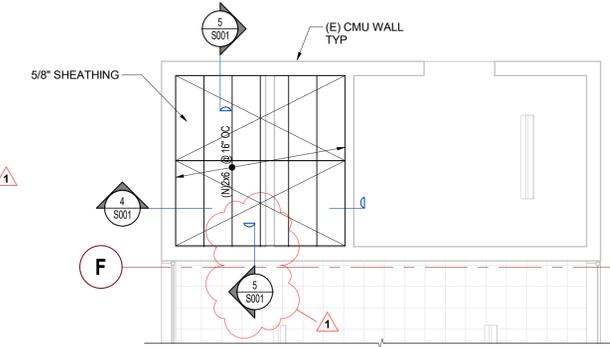
- CONTINUOUS WOOD MEMBER IN SECTION
- NON-CONTINUOUS WOOD MEMBER IN SECTION
- (E) CONTINUOUS WOOD MEMBER IN SECTION
- (E) NON-CONTINUOUS WOOD MEMBER IN SECTION
- (E) CMU WALL IN PLAN



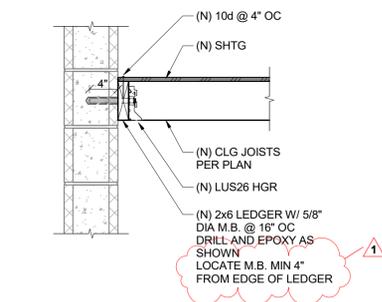
1 SITE
1" = 30'-0"



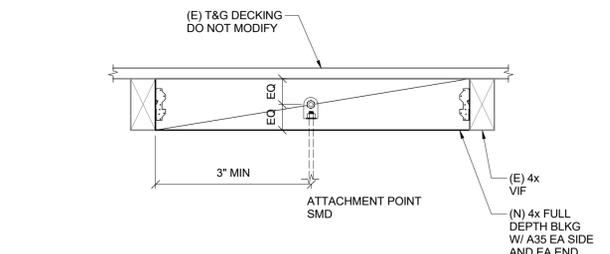
4 (N) CEILING AT ANNEX BLDG
1" = 1'-0"



2 ANNEX BUILDING CEILING FRAMING PLAN
1/4" = 1'-0"



5 (N) CEILING AT ANNEX BLDG
1" = 1'-0"



3 (N) BLKG FOR LIGHTWEIGHT UNIT OR DUCT SUPPORT
1" = 1'-0"



2040 Addison St. Berkeley, CA 94704
510.549.2929 | elsarch.com

PROJECT:

BERKELEY FIRE STATION NO. 2 REMODEL

PROJECT NUMBER:
23048

CLIENT:

PROJECT TEAM:

ARCHITECT:
ELS ARCHITECTURE AND URBAN DESIGN
2040 Addison Street
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P: 510.549.2929

MECHANICAL AND PLUMBING
CANYON CONSULTING ENGINEERS
3260 Blume Drive, Suite 240
Richmond, CA 94806
P: 510.243.5987

ELECTRICAL ENGINEER:
RIJA INC.
1620 Montgomery Street
San Francisco, CA 94111
P: 415.730.7994

STRUCTURAL ENGINEER
IDA STRUCTURAL ENGINEERS, INC.
1629 Telegraph Avenue, #300
Oakland, CA 94612
P: 510.834.1629



STRUCTURAL ENGINEERS

1629 Telegraph Ave
Suite 300
Oakland, CA 94612
tel: 510.834.1629
ida-se.com

REVISION

NUMBER	DATE	DESCRIPTION
1	03/08/2024	PLAN CHECK 1

ISSUE:

ISSUE FOR PERMIT

DATE:

OCTOBER 30, 2023

STAMP:

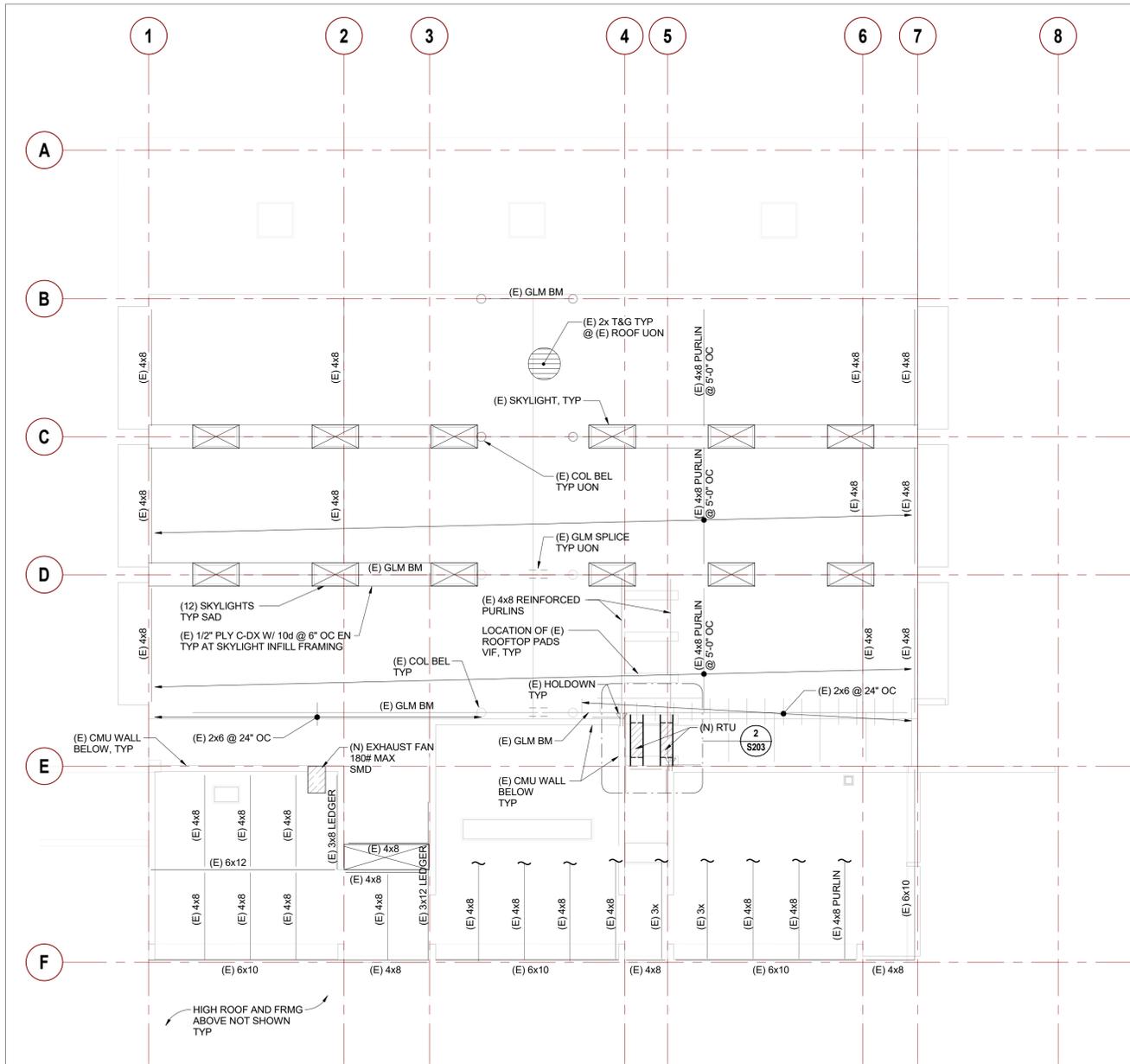


SHEET TITLE:

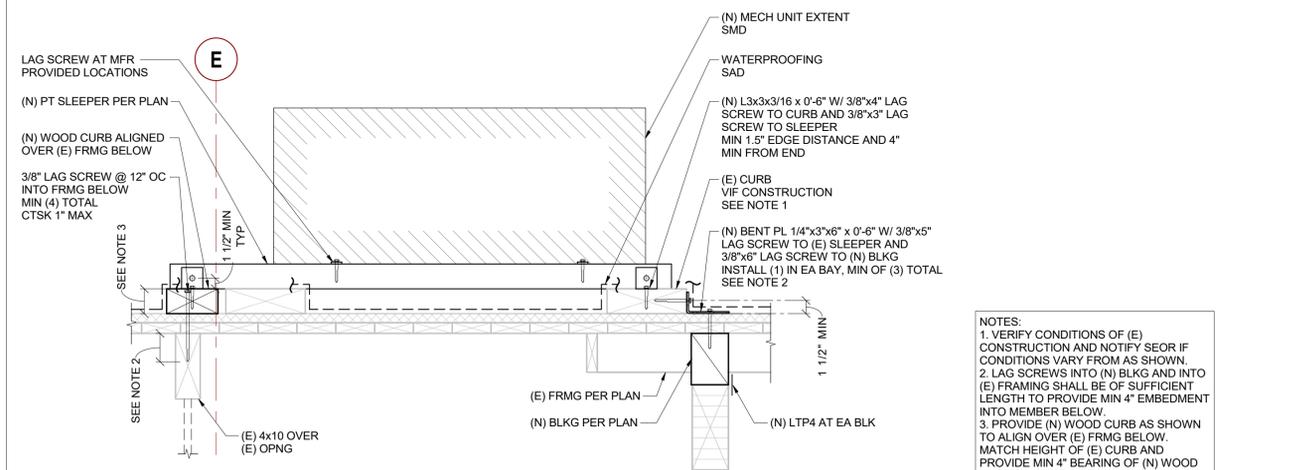
GENERAL NOTES AND TYPICAL DETAILS

SHEET NUMBER:

S001

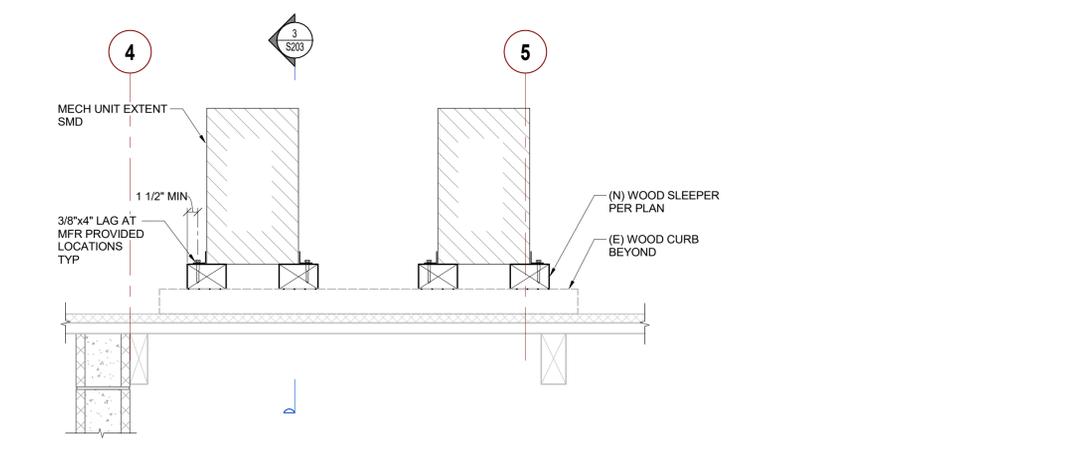


1 ROOF FRAMING PLAN
1/8" = 1'-0"



3 SECTION
1" = 1'-0"

2 ENLARGED ROOF FRAMING PLAN AT (N) MECH UNITS
1" = 1'-0"



4 SECTION
1" = 1'-0"

SHEET NOTES:

- SEE GENERAL NOTES ON S001 FOR ADDITIONAL INFORMATION NOT SHOWN HEREIN
- DO NOT CUT ANY (E) FRAMING MEMBERS FOR ROOF PENETRATIONS. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS IN AREAS OF PLANNED WORK AND SHALL NOTIFY ARCHITECT AND ENGINEER OF ALL EXCEPTIONS AND / OR DISCREPANCIES BEFORE PROCEEDING WITH WORK.
-

els architecture+
urban design

2040 Addison St, Berkeley, CA 94704
510.549.2929 | elsarch.com

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REVISION		
NUMBER	DATE	DESCRIPTION

ISSUE:
ISSUE FOR PERMIT

DATE: **OCTOBER 30, 2023**

STAMP:



SHEET TITLE:
ROOF FRAMING PLAN

SHEET NUMBER:

S203

VRF SYSTEM SCHEDULE

INDOOR FAN COIL UNIT

SYSTEM TAG	EQUIPMENT TAG	MANUFACTURER	MODEL	SERVICE	CFM	COOLING CAPACITY (MBH)	HEATING CAPACITY (MBH)	WEIGHT (LBS.)	ELECTRICAL					REMARKS
									VOLT	HZ	PH	MCA	MOCP	
H-1	FC-1-1	MITSUBISHI	PKFY-P18NLMU-E	DINING ROOM	430	18	20	28	208/230	60	1	0.2	15	SEE NOTES 1-5
	FC-1-2	MITSUBISHI	PKFY-P18NLMU-E	DAY ROOM	430	18	20	28	208/230	60	1	0.2	15	SEE NOTES 1-5
	FC-1-3	MITSUBISHI	PKFY-P06NLMU-E	CAPTAIN'S ROOM	190	6	6.7	25	208/230	60	1	0.24	15	SEE NOTES 1-5
	FC-1-4	MITSUBISHI	PKFY-P06NLMU-E	ASSISTANT CHIEF'S ROOM	190	6	6.7	25	208/230	60	1	0.24	15	SEE NOTES 1-5
	FC-1-5	MITSUBISHI	PKFY-P12NLMU-E	OFFICE	290	12	13.5	25	208/230	60	1	0.24	15	SEE NOTES 1-5
H-2	FC-2-1	MITSUBISHI	PKFY-P06NLMU-E	DORM 1	190	6	6.7	25	208/230	60	1	0.24	15	SEE NOTES 1-5
	FC-2-2	MITSUBISHI	PKFY-P06NLMU-E	DORM 2	190	6	6.7	25	208/230	60	1	0.24	15	SEE NOTES 1-5
	FC-2-3	MITSUBISHI	PKFY-P06NLMU-E	DORM 3	190	6	6.7	25	208/230	60	1	0.24	15	SEE NOTES 1-5
	FC-2-4	MITSUBISHI	PKFY-P06NLMU-E	DORM 4	190	6	6.7	25	208/230	60	1	0.24	15	SEE NOTES 1-5
	FC-2-5	MITSUBISHI	PKFY-P06NLMU-E	DORM 5	190	6	6.7	25	208/230	60	1	0.24	15	SEE NOTES 1-5
	FC-2-6	MITSUBISHI	PKFY-P06NLMU-E	DORM 6	190	6	6.7	25	208/230	60	1	0.24	15	SEE NOTES 1-5
	FC-2-7	MITSUBISHI	PKFY-P06NLMU-E	DORM 7	190	6	6.7	25	208/230	60	1	0.24	15	SEE NOTES 1-5
	FC-2-8	MITSUBISHI	PKFY-P06NLMU-E	DORM 8	190	6	6.7	25	208/230	60	1	0.24	15	SEE NOTES 1-5
H-3	FC-3	MITSUBISHI	PVA-A18AA7	ANNEX STORAGE	700	18	19	113	208/230	60	1	3.0	-	SEE NOTES 1-7

NOTES:

- COOLING CAPACITY IS BASED ON 95°F DB EAT AND 80°F DB/67°F WB LAT. HEATING CAPACITY IS BASED ON 47°F DB/43°F WB EAT AND 70°F DB LAT.
- DISCONNECT/STARTER BY DIV. 16.
- R-410A REFRIGERANT.
- WALL-MOUNTED THERMOSTAT.
- INSTALL PER MANUFACTURER'S RECOMMENDATION AND SUPPLIED MOUNTING KIT.
- PROVIDE WITH MERV-13 FILTER.
- POWER TO THE INDOOR UNIT WILL COME FROM THE OUTDOOR CONDENSING UNIT.

OUTDOOR CONDENSING UNIT

SYSTEM TAG	EQUIPMENT TAG	MANUFACTURER & MODEL	LOCATION	COP	EER	SEER	CAPACITY (TONS)	COMBINED COOLING CAPACITY (MBH)	COMBINED HEATING CAPACITY (MBH)	WEIGHT (LBS.)	ELECTRICAL			REMARKS
											VOLT/Ø/HZ	MCA	MOCP	
H-1	CU-1	MITSUBISHI PUMY-P60NKMU3	ROOF	4.1	13.3	20.0	5	60	66	302	208/230V/1/60	36	45	SEE NOTES 1-7
H-2	CU-2	MITSUBISHI PUMY-P60NKMU3	ROOF	4.1	13.3	20.0	5	60	66	302	208/230V/1/60	36	45	SEE NOTES 1-7
H-3	CU-3	MITSUBISHI PUZ-A18NKA7	OUTDOOR	3.78	11.4	20.2	1.5	18	19	100	208/230V/1/60	11	28	SEE NOTES 1-7

NOTES:

- R-410A REFRIGERANT.
- COOLING CAPACITY AT 95°F AMBIENT.
- TEMPERATURE OPERATING RANGE: COOLING: 5°F TO 115°F DB HEATING: -13°F TO 59°F DB
- PROTECTION DEVICES: HIGH-PRESSURE SENSOR, HIGH PRESSURE SWITCH; OVERHEAT PROTECTION, THERMAL SWITCH; OVERHEAT AND OVERCURRENT PROTECTION.
- DRAIN SOCKET ASSEMBLY.
- SIZE REFRIGERANT PER MANUFACTURER'S RECOMMENDATIONS.
- SINGLE POINT OF CONNECTION AT OUTDOOR HEAT PUMP UNIT. COORDINATE POWER SUPPLY WITH ELECTRICAL.

ENERGY RECOVERY VENTILATOR SCHEDULE

MARK	MANUFACTURER & MODEL	SYSTEM SERVICE	AIRFLOW, CFM	E.S.P. IN. WG.	TEMP. RECOVERY, %	ENTH. RECOVERY, %		ELECTRICAL DATA			WEIGHT LBS.	REMARKS
						HEATING	COOLING	V/Ø/HZ	MCA	MOCP		
ERV-1	MITSUBISHI LOSSNAY LGH-F470RVX2-E	H-1	470	1.0	84.5	83	72	208/230/1/60	5.1	15	110	SEE NOTES 1-2
ERV-2	MITSUBISHI LOSSNAY LGH-F470RVX2-E	H-2	470	1.0	84.5	83	72	208/230/1/60	5.1	15	110	SEE NOTES 1-2

NOTES:

- ENTERING AIR TEMPERATURE OPERATING RANGE: 14°F TO 104°F AT 80% RH OR LESS.
- PROVIDE WITH STAND ALONE REMOTE CONTROLLER (PZ-62DR-E), MERV-14 FILTER (PZ-80RFP-E) AND MOTOR STARTERS.

GREASE EXHAUST FAN SCHEDULE

MARK	MANUFACTURER & MODEL	SERVICE	CFM	E.S.P.	RPM	BHP	TYPE	ELECTRICAL				OPERATING WEIGHT, LBS	REMARKS
								POWER	VOLTS	Ø	FLA		
GEF-1	COOK 150 CPA	GREASE EXHAUST	1800	2	1632	0.867	SINGLE WIDTH UTILITY UPBLAST	1 HP	230	1	8	185	SEE NOTES 1-5

NOTES:

- COMPLIES WITH UL762 LISTING.
- BELT DRIVE MOTOR, ARRANGEMENT 10, CLASS 1, CLOCKWISE UPBLAST DISCHARGE.
- PROVIDE UNIT STARTER AND DISCONNECT SWITCH. COORDINATE W/ ELECTRICAL CONTRACTOR.
- PROVIDE WITH ALUMINUM DRAIN, HINGED ACCESS DOOR, AND CURB MOUNTED GREASE TROUGH.
- PROVIDE WITH BASE RAIL AND 1" SPRING ISOLATOR.

LEGEND AND ABBREVIATIONS

LEGEND AND ABBREVIATIONS

LINED DUCT
 SUPPLY DIFFUSER WITH FLEXIBLE DUCT CONNECTION (ARROW-DIRECTION OF THROW)
 EXHAUST
 AIR QUANTITY (CFM)
 DIFFUSER/REGISTER TYPE (WHEN SHOWN)
 NECK SIZE (INCHES)
 EQUIPMENT MARK/ZONE NO.
 THERMOSTAT
 EQUIPMENT TAG
 EQUIPMENT NO.
 REMOVE UNLESS OTHERWISE NOTED
 EXISTING TO REMAIN
 BALANCE OR VOLUME DAMPER
 CONCENTRIC TRANSITION, RECTANGULAR OR ROUND
 90° RADIUSED ELBOW
 SUPPLY ROUND DUCT DROP
 RETURN ROUND DUCT DROP
 SUPPLY ROUND DUCT RISER
 ROUND DUCT RISER (RETURN, OR EXHAUST)
 RETURN RECTANGULAR DUCT DROP
 EXHAUST RECTANGULAR DUCT DROP
 ROUND DUCT WITH 45° ROUND BRANCH
 RECTANGULAR MAIN WITH ROUND BRANCH

(E) EXISTING
(N) NEW
F DEGREE FAHRENHEIT
CD CONDENSATE DRAIN
CFM CUBIC FEET PER MINUTE
IN. OR " INCH
LBS POUNDS
MBH THOUSAND BTUH
O.A. OUTSIDE AIR
RL REFRIGERANT LIQUID
RS REFRIGERANT SUCTION
SS STAINLESS STEEL
TYP. TYPICAL
V/Ø/HZ VOLTAGE/PHASE/HERTZ

GENERAL NOTES

- ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST APPLICABLE LOCAL AND STATE CODES AND REGULATIONS.
- CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED FEES, PERMITS AND INSPECTIONS.
- BEFORE SUBMISSION OF A BID, THE CONTRACTOR SHALL PERFORM A FIELD SURVEY OF THE SITE CONDITIONS AND FEATURES. ANY SITE CONDITIONS, WHICH MAY CAUSE SIGNIFICANT DEVIATION FROM THE DESIGN DRAWINGS, SHALL BE BROUGHT TO THE ATTENTION OF ARCHITECT/ENGINEER OF RECORD FOR CLARIFICATION PRIOR TO SUBMISSION OF THE CONTRACTORS BID. IF APPLICABLE, VERIFY DIMENSIONS OF ALL OWNER-FURNISHED EQUIPMENT TO ENSURE PROPER COORDINATION WITH CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR SHALL SUBMIT BID THAT INCLUDES ALL LABOR AND MATERIALS REQUIRED TO PROVIDE FOR COMPLETE AND SATISFACTORILY OPERATING SYSTEMS IN THE BID.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THE EXACT REQUIREMENTS GOVERNED BY ACTUAL JOB CONDITIONS. EXISTING INFORMATION SHOWN ON PLANS IS FROM ORIGINAL RECORD DRAWINGS AND CURSORY NONDESTRUCTIVE FIELD SURVEY. THE CONTRACTOR SHALL VERIFY AND ACCOUNT FOR ALL EXISTING CONDITIONS IN THE FIELD AFFECTING THE WORK.
- MECHANICAL CONTRACTOR SHALL BE COGNIZANT WITH BUILDING STRUCTURE AND CEILING SPACE. ALLOW FOR INSTALLATION OF EQUIPMENT PRIOR TO BID AND FROM PRICING AND ADDITIONAL OFFSETS OF DUCTS AND PIPING THAT ARE NOT SHOWN ON DRAWING. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND PROVIDING ALL CEILING ACCESS, PATCHING AND REPAIR REQUIRED IN THE IMMEDIATE AREA OF THE WORK AND ANY ACCESS OUTSIDE THE IMMEDIATE AREA OF THE WORK REQUIRED TO PROVIDE COMPLETE AND PROPERLY FUNCTIONING SYSTEMS.
- ABSOLUTE ACCURACY OF DRAWINGS IS NOT GUARANTEED. REPORT DISCREPANCIES OR INCONSISTENCIES BETWEEN THE SPECIFIED DESIGN AND EXISTING CONDITIONS IN THE FIELD TO THE ARCHITECT/ENGINEER FOR CLARIFICATION AND DIRECTION PRIOR TO BID AND COMMENCEMENT OF THE WORK.
- ALL DUCT DIMENSIONS ARE SHOWN IN INCHES. ALL DIMENSIONS ARE CLEAR INSIDE SIZES. FIRST FIGURE OF DUCT SIZE INDICATES DIMENSION OF FACE SHOWN OR INDICATED.
- ALL DUCTWORK AND PIPING SHOWN ON PLANS ARE DIAGRAMMATIC AND SHALL NOT BE SCALED TO DETERMINE EXACT LOCATION.
- ADVISE OWNER'S REPRESENTATIVE IN WRITING IN EVENT OF DISCREPANCIES BETWEEN CONTRACT DOCUMENTS PRIOR TO BID.
- 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.
- DUCTWORK SHALL BE SHEET METAL GALVANIZED STEEL. FABRICATE, INSTALL AND SUPPORT DUCTWORK AS PER LATEST SMACNA STANDARD.
- MECHANICAL DRAWING IS DIAGRAMMATIC. CONTRACTOR SHALL DETERMINE FINAL PIPING AND DUCT ROUTING PER ACTUAL OR EXISTING FIELD/CEILING CONDITION.
- SHEET METAL DUCT JOINTS SHALL BE AIRTIGHT AND SEALED IN ACCORDANCE WITH CEC BUILDING STANDARD REGULATION, TITLE 24, AND CMC SECTION 1102(C). DUCTWORK SHALL BE INSULATED PER LATEST EDITION OF CEC TITLE 24 (R-8).
- INSTALL WALL-MOUNTED ROOM THERMOSTATS 4'-FEET ABOVE FINISHED FLOOR UNLESS DIRECTED OTHERWISE COORDINATE INSTALLATION LOCATION AND HEIGHT PRIOR TO THERMOSTAT ROUGH-IN.
- COORDINATE WORK WITH ALL OTHER TRADES.
- PROTECT THE PUBLIC FROM INJURY DURING PROGRESS OF WORK BY POSTING WARNING SIGNS, GUARD LIGHTS AND BARRICADES. ALL DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE.
- FURNISH AND INSTALL ALL MATERIALS EQUIPMENT AND LABOR AS SHOWN AND AS NECESSARY FOR COMPLETE WORKABLE SYSTEMS.
- PERFORM TEST AND AIR BALANCING OF HVAC SYSTEM. SUBMIT A CERTIFIED TEST AND AIR BALANCE REPORT TO ENGINEER FOR REVIEW AND APPROVAL.
- DO NOT CUT ANY STRUCTURAL MEMBERS WITHOUT THE REVIEW AND APPROVAL OF THE STRUCTURAL ENGINEER.
- WHERE EXISTING PIPES, CONDUITS AND/OR DUCTS WHICH ARE TO REMAIN PREVENT INSTALLATION OF NEW WORK, RELOCATE, OR ARRANGE FOR RELOCATION OF THESE ITEMS TO FACILITATE NEW WORK.
- ALL MATERIALS AND WORKMANSHIP ARE SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT/ENGINEER. ANY PORTION OF THE WORK FOUND TO BE DEFECTIVE SHALL BE REPLACED BY THE CONTRACTOR AS PART OF THIS CONTRACT AT NO ADDITIONAL COST TO THE OWNER.
- ANY PIPING OFFSETS REQUIRED AS RESULT OF EXISTING JOB CONDITIONS, OR COORDINATION WITH OTHER TRADES, SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO OWNER AND IS SUBJECT TO REVIEW BY THE ARCHITECT/ENGINEER.
- FOR PIPES PENETRATING WALLS, PROVIDE ESCUTCHEONS FOR FINISH COVER OF EXPOSED PENETRATIONS.

LAUNDRY EXHAUST FAN SCHEDULE

MARK	SERVICE	LOCATION	MANUFACTURER & MODEL	TYPE	CFM	S.P.	RPM	AMPS	ELECTRICAL			OPER. WT. LBS.	REMARKS
									POWER	VOLTS	Ø		
LEF-1	LAUNDRY EXHAUST FAN	LAUNDRY ROOM 114	PANASONIC FV-08WQ1	WALL	70	0.03	660	0.20	18 WATTS	120	1	12	SEE NOTES 1-3

NOTES:

- FAN SHALL HAVE A WALL SWITCH (MANUAL SWITCH) WITH HUMIDITY SENSOR, SMART ACTION MOTION SENSOR WITH UP TO 60 MINUTES TIME DELAY.
- INCLUDED WITH GRILLE AND EXTERIOR WALL CAP (WITH BUILT-IN BACKDRAFT DAMPER AND BIRD SCREEN).
- INSTALL AND WIRE PER MANUFACTURER'S INSTRUCTION.

MISCELLANEOUS EQUIPMENT SCHEDULE

MARK	MANUFACTURER & MODEL	DESCRIPTION	WATTS	AMPS	V/Ø/HZ	WEIGHT LBS



2040 Addison St. Berkeley, CA 94704
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PROJECT:

FIRE STATION NO.2 REMODEL

2029 BERKELEY WAY

BERKELEY, CA 94704

PROJECT NUMBER:

201320.31

CITY SPEC. NUMBER:

23-11575-C

CLIENT:

CITY OF BERKELEY

1947 CENTER ST. 4TH FLOOR

BERKELEY, CA 94704

PROJECT TEAM:

ARCHITECT:
ELS ARCHITECTURE AND URBAN DESIGN
2040 Addison Street
Berkeley, CA 94704
P: 510.549.2929

MECHANICAL AND PLUMBING
CANYON CONSULTING ENGINEERS
3260 Blume Drive, Suite 240
Richmond, CA 94806
P: 510.243.5987

ELECTRICAL ENGINEER:
RIJA INC.
5515 Doyle Street, #7
Emeryville, CA 94608
P: 415.730.7994

STRUCTURAL ENGINEER
IDA STRUCTURAL ENGINEERS, INC.
1629 Telegraph Avenue, #300
Oakland, CA 94612
P: 510.834.1629

REVISION

NUMBER	DATE	DESCRIPTION
1	03/08/2024	PLAN CHECK 1
2	08/27/2024	REVISION 1

ISSUE:

ISSUE FOR PERMIT

DATE:

AUGUST 27, 2024

STAMP:



SHEET TITLE:

MECHANICAL GEN. NOTES, LEGEND & SCHEDULES

SHEET NUMBER:

M001

STATE OF CALIFORNIA
Mechanical Systems
 CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE NRCC-MCH-E
 Project Name: FIRE STATION NO. 2 REMODEL Report Page: (Page 3 of 8)
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F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)
 Dry System Equipment Sizing (includes air conditioners, condensers, heat pumps, VRF, furnaces and unit heaters and DOAS systems)

01	02	03	04	05	06	07	08	09	10	11		
Name or Item Tag	Equipment Category per Tables 110.2, 140.4(a)2 and 170.2(c)3a1	Equipment Type per Tables 110.2 and Title 20	Smallest Size Available ¹ 140.4(a) and 170.2(c)1	Heating Output ^{2,3}		Cooling Output ^{2,3}		Load Calculations ^{3,4}				
				Per Design (kBtu/h)	Rated (kBtu/h)	Supp. Heating Output (kBtu/h)	Sensible Per Design (kBtu/h)	Rated (kBtu/h)	Total Heating Load (kBtu/h)	Total Sensible Cooling Load (kBtu/h)		
				H-1	Variable Refrigerant Flow	VRF heat pump, air cooled	Yes	66	66	0	60	60
H-2	Variable Refrigerant Flow	VRF heat pump, air cooled	Yes	66	66	0	60	60	66	60		
H-3	Variable Refrigerant Flow	VRF heat pump, air cooled	Yes	19	19	0	18	18	19	18		

¹FOOTNOTES: Equipment shall be the smallest size, within the available options of the desired equipment line, necessary to meet the design heating and cooling loads of the building per 140.4(a) and 170.2(c)1. Healthcare facilities are exempted.
²It is common practice to show rated output capacity on the equipment schedule. Sensible cooling output comes from specification sheet tables.
³If equipment is heating only, leave cooling output and load blank. If equipment is cooling only, leave heating output and load blank.
⁴Authority Having Jurisdiction may ask for load calculations used for compliance per 140.4(b) and 170.2(c).

Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP), DX-DOAS and Dual Fuel Heat Pumps)

01	02	03	04	05	06	07	08	09
Name or Item Tag	Size Category (Btu/h)	Rating Condition (°F)	Efficiency Unit	Heating Mode		Cooling Mode		
				Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency
H-1	<65,000	47 °Fdb/ 43 °Fwb OSA	HSPF	7.7	12	SEER	13	20
H-2	<65,000	47 °Fdb/ 43 °Fwb OSA	HSPF	7.7	12	SEER	13	20

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STATE OF CALIFORNIA
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A. GENERAL INFORMATION

01 Project Location (city)	BERKELEY	04 Total Conditioned Floor Area	4122
02 Climate Zone	3	05 Total Unconditioned Floor Area	1980
03 Occupancy Types Within Project:		06 # of Stories (Habitable Above Grade)	2

• All Other Occupancies

B. PROJECT SCOPE
 This table includes mechanical systems or components that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.4, 170.2(b) or 141.0(b)2 and 180.2(b)2 for alterations.

01	02	03
Air System(s)	Wet System Components	Dry System Components
<input checked="" type="checkbox"/> Heating Air System	<input type="checkbox"/> Water Economizer	<input type="checkbox"/> Air Economizer
<input checked="" type="checkbox"/> Cooling Air System	<input type="checkbox"/> Pumps	<input type="checkbox"/> Electric Resistance Heat
<input type="checkbox"/> Mechanical Controls	<input type="checkbox"/> System Piping	<input type="checkbox"/> Fan Systems
<input type="checkbox"/> Mechanical Controls (existing to remain, altered or new)	<input type="checkbox"/> Cooling Towers	<input checked="" type="checkbox"/> Ductwork (existing to remain, altered or new)
	<input type="checkbox"/> Chillers	<input type="checkbox"/> Ventilation
	<input type="checkbox"/> Boilers	<input type="checkbox"/> Zonal Systems/ Terminal Boxes

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F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)
 Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP), DX-DOAS and Dual Fuel Heat Pumps)

01	02	03	04	05	06	07	08	09
Name or Item Tag	Size Category (Btu/h)	Rating Condition (°F)	Efficiency Unit	Heating Mode		Cooling Mode		
				Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency
H-3	<65,000	47 °Fdb/ 43 °Fwb OSA	HSPF	7.7	10.4	SEER	13	20.2

G. PUMPS
 This section does not apply to this project.

H. FAN SYSTEMS & AIR ECONOMIZERS
 This section does not apply to this project.

I. SYSTEM CONTROLS
 This table is used to demonstrate compliance with mandatory controls in 110.2 and 120.2 and prescriptive controls in 140.4(f) and (n), 170.2(c)4D 170.2(c)4L or requirements in 141.0(b)2E 180.2(b)2 for altered space conditioning systems.

01	02	03	04	05	06	07	08	09
System Name	System Zoning	Conditioned Floor Area Being Served (ft²)	Thermostats 110.2(b) & (c)¹, 120.2(a) 160.3(a)2A or 141.0(b)2E & 180.2(b)2	Shut-Off Controls 120.2(e) & 160.3(a)2D	Isolation Zone Controls 120.2(g) & 160.3(a)2F	Demand Response 110.12 120.2(b) & 160.3(a)2B	Supply Air Temp. Reset 140.4(f) & 170.2(c)4D	Window Interlocks per 140.4(n) & 170.2(c)4D
H-1/H-2/H-3	Single zone	<= 25,000 ft²	Setback	Auto Timer Switch	NA: Serves < 25k ft²	NA: PTAC, PTHP, Rm AC, HP	NA: Single Zone	NA: Alteration Project

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C. COMPLIANCE RESULTS
 Table C will indicate if the project data input into the compliance document is compliant with mechanical requirements. This table is not editable by the user. If this table says "DOES NOT COMPLY" or "COMPLIES WITH EXCEPTIONAL CONDITIONS" refer to Table D., or the table indicated as not compliant for guidance.

01	02	03	04	05	06	07	08	09
System Summary	Pumps 140.4(k), 170.2(c)4I	Fans/Economizers 140.4(c), 140.4(e), 170.2(c)	System Controls 110.2, 120.2, 140.4(f), 170.2(c)	Ventilation 120.1, 160.2	Terminal Box Controls 140.4(d), 170.2(c)4B	Distribution 120.3, 140.4(i), 160.2, 160.3	Cooling Towers 110.2(e)2	Compliance Results
(See Table F)	(See Table G)	(See Table H)	(See Table I)	(See Table J)	(See Table K)	(See Table L)	(See Table M)	COMPLIES
Yes	AND	AND	AND	Yes	AND	AND	Yes	COMPLIES

Mandatory Measures Compliance (See Table Q for Details) COMPLIES

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

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

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)
 Space Conditioning System Information

01	02	03	04	05	06
System Name	Quantity	System Serving	System Status	Space Type	Utilizing Recovered Heat
H-1	1	Single zone	New/ Addition	All Other Occupancies	<input type="checkbox"/>
H-2	1	Single zone	New/ Addition	All Other Occupancies	<input type="checkbox"/>
H-3	1	Single zone	New/ Addition	All Other Occupancies	<input type="checkbox"/>

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PROJECT:
FIRE STATION NO.2 REMODEL
 2029 BERKELEY WAY
 BERKELEY, CA 94704

PROJECT NUMBER:
201320.31
 CITY SPEC. NUMBER:
23-11575-C

CLIENT:
CITY OF BERKELEY
 1947 CENTER ST. 4TH FLOOR
 BERKELEY, CA 94704

PROJECT TEAM:
ARCHITECT:
 ELS ARCHITECTURE AND URBAN DESIGN
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MECHANICAL AND PLUMBING
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 Richmond, CA 94806
 P: 510.243.5987

ELECTRICAL ENGINEER:
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 Emeryville, CA 94608
 P: 415.730.7994

STRUCTURAL ENGINEER
 IDA STRUCTURAL ENGINEERS, INC.
 1629 Telegraph Avenue, #300
 Oakland, CA 94612
 P: 510.834.1629

REVISION

NUMBER	DATE	DESCRIPTION
1	03/08/2024	PLAN CHECK 1
2	08/27/2024	REVISION 1

ISSUE:
ISSUE FOR PERMIT
 DATE: **AUGUST 27, 2024**



SHEET TITLE:
MECHANICAL TITLE 24 FORMS

SHEET NUMBER:
M002

STATE OF CALIFORNIA
Mechanical Systems CALIFORNIA ENERGY COMMISSION
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N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION
 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://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NR/C/

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

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

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

Q. MANDATORY MEASURES DOCUMENTATION LOCATION
 This table is used to indicate where mandatory measures are documented in the plan set or construction documentation.

01	02
Compliance with Mandatory Measures documented through MCH Mandatory Measures Note Block	Yes Plan sheet or construction document location M001, M201, M202, M203, M301, M401, M402, M403

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I. SYSTEM CONTROLS
²FOOTNOTES: Gravity gas wall heaters, gravity floor heaters, gravity room heaters, non-central electric heaters, fireplaces or decorative gas appliances, wood stoves are not required to have setback thermostats.

J. VENTILATION AND INDOOR AIR QUALITY
 This section does not apply to this project.

K. TERMINAL BOX CONTROLS
 This section does not apply to this project.

L. DISTRIBUTION (DUCTWORK and PIPING)
 This table is used to show compliance with mandatory pipe insulation requirements found in 120.3 and mandatory requirements found in 120.4(g) for duct sealing.

01			
<input type="checkbox"/>	Insulation shall be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather shall be installed with a cover suitable for outdoor service. Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space shall have a Class I or Class II vapor retarder. All penetrations and joints of which shall be sealed.	ERV-1/ERV-2/FC-3	NR/ Common Use: Duct leakage testing shall not exceed 15% per NA7.5.3 required for these systems? No

Duct Leakage Testing
 The answers to the questions below apply to the following duct systems:

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STATE OF CALIFORNIA
Mechanical Systems CALIFORNIA ENERGY COMMISSION
CERTIFICATE OF COMPLIANCE NRCC-MCH-E
 Project Name: FIRE STATION NO. 2 REMODEL Report Page: (Page 8 of 8)
 Project Address: 2029 BERKELEY WAY, BERKELEY, CA 94704 Date Prepared: 2023-10-09T17:30:39-04:00

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

Documentation Author Name: GEORGE L. ARELLANO
 Signature Date: 2023-10-24
 Address: 3260 Blume Dr., Ste. 240
 City/State/Zip: Richmond, CA 94806
 Phone: 510-243-5987

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 enforcement agency at occupancy.

Responsible Designer Name: George Arellano
 Signature Date: 2023-10-24
 Address: 3260 Blume Dr., Ste. 240
 City/State/Zip: Richmond, CA 94806
 License: M29691
 Phone: 510-243-5987

Generated Date/Time: Documentation Software: Energy Code Ace
 Report Version: 2022.0.000 Compliance ID: 131657-1023-0003
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STATE OF CALIFORNIA
Mechanical Systems CALIFORNIA ENERGY COMMISSION
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L. DISTRIBUTION (DUCTWORK and PIPING)

11	No	The scope of the project includes only duct systems serving healthcare facilities
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.
13	Yes	The space conditioning system serves less than 5,000 ft ² of conditioned floor area.
14	Yes	The combined surface area of the ducts is more than 25% of the total surface area of the entire duct system:
15	No	The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.
16	No	The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.
17	Yes	All Ductwork and plenums with pressure class ratings shall be constructed to Seal Class A
18	Yes	All ductwork is an extension of an existing duct system
19	No	Ductwork serving individual dwelling unit
20	No	< 25 ft of new or replacement space conditioning ducts installed
21	R-0.0	Duct Insulation R-value
22	Yes	Ductwork Existing To Remain
23	Yes	Duct System Connected To Altered Space Conditioning System

M. COOLING TOWERS
 This section does not apply to this project.

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 Report Version: 2022.0.000 Compliance ID: 131657-1023-0003
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PROJECT:
**FIRE STATION NO.2
 REMODEL**

**2029 BERKELEY WAY
 BERKELEY, CA 94704**

PROJECT NUMBER:
201320.31
 CITY SPEC. NUMBER:
23-11575-C

CLIENT:
**CITY OF BERKELEY
 1947 CENTER ST. 4TH FLOOR
 BERKELEY, CA 94704**

PROJECT TEAM:
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 P: 510.549.2929**

**MECHANICAL AND PLUMBING
 CANYON CONSULTING ENGINEERS
 3260 Blume Drive, Suite 240
 Richmond, CA 94806
 P: 510.243.5987**

**ELECTRICAL ENGINEER:
 RIJA INC.
 5515 Doyle Street, #7
 Emeryville, CA 94608
 P: 415.730.7994**

**STRUCTURAL ENGINEER
 IDA STRUCTURAL ENGINEERS, INC.
 1629 Telegraph Avenue, #300
 Oakland, CA 94612
 P: 510.834.1629**

REVISION

NUMBER	DATE	DESCRIPTION
1	03/08/2024	PLAN CHECK 1
2	08/27/2024	REVISION 1

ISSUE:
ISSUE FOR PERMIT

DATE:
AUGUST 27, 2024

STAMP:



SHEET TITLE:
**MECHANICAL
 TITLE 24 FORMS**

SHEET NUMBER:

M003

PROJECT:

**FIRE STATION NO.2
REMODEL**

**2029 BERKELEY WAY
BERKELEY, CA 94704**

PROJECT NUMBER:

201320.31

CITY SPEC. NUMBER:

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CLIENT:

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PROJECT TEAM:

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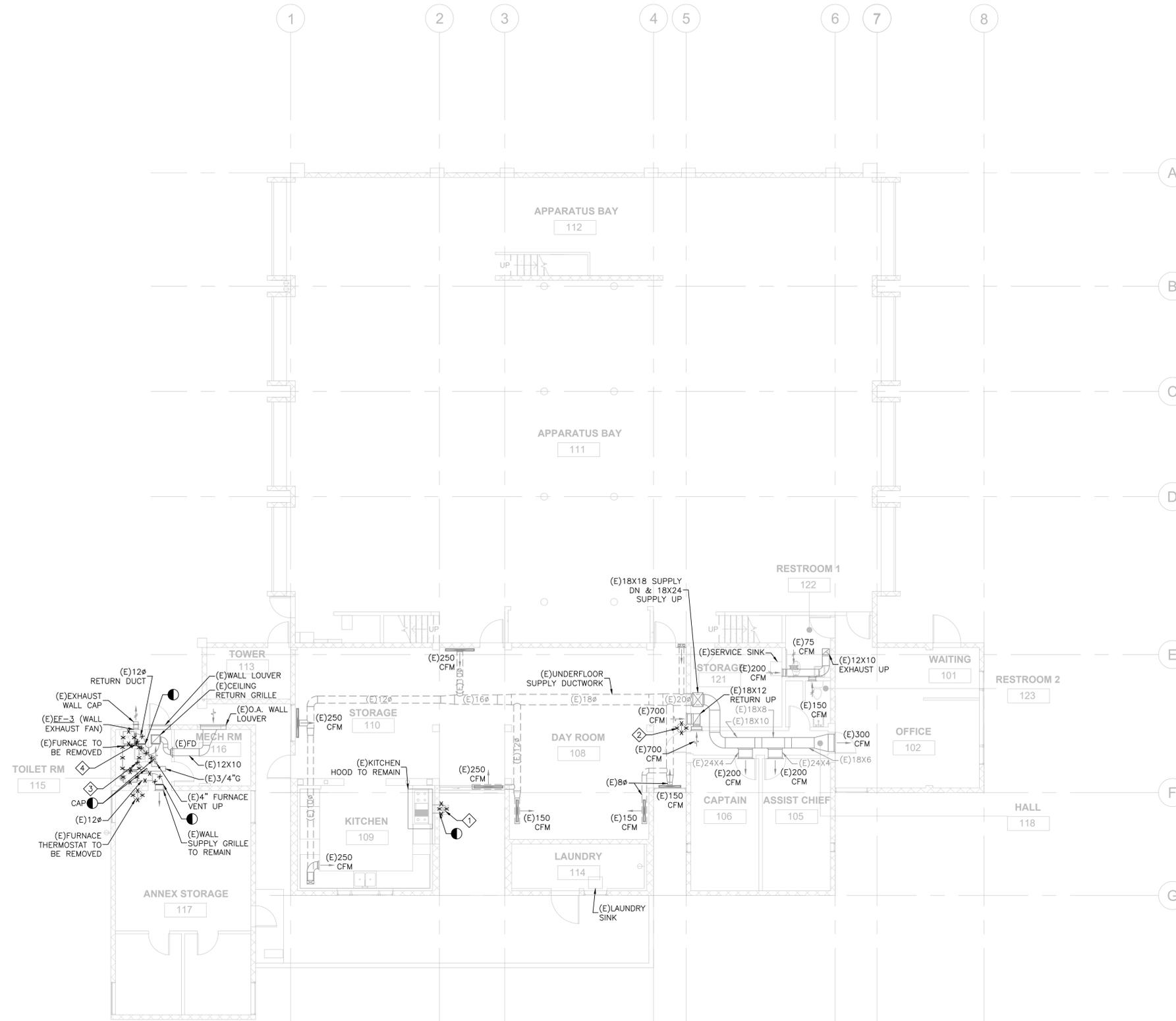
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DEMOLITION SHEET NOTES:

- ① (E)WALL-MOUNTED GREASE EXHAUST FAN TO BE REMOVED & REPLACED.
- ② (E)THERMOSTAT (E-1) TO BE REMOVED.
- ③ (E)3/4" G CONNECTION TO (E)FURNACE TO BE REMOVED. CAP (E)3/4" G DOWNSTREAM OF (E)SHUTOFF VALVE.
- ④ (E)FURNACE FLUE VENT TO BE REMOVED. CAP TO WHERE SHOWN.



1 GROUND FLOOR MECHANICAL DEMOLITION PLAN
SCALE: 1/8"=1'-0"

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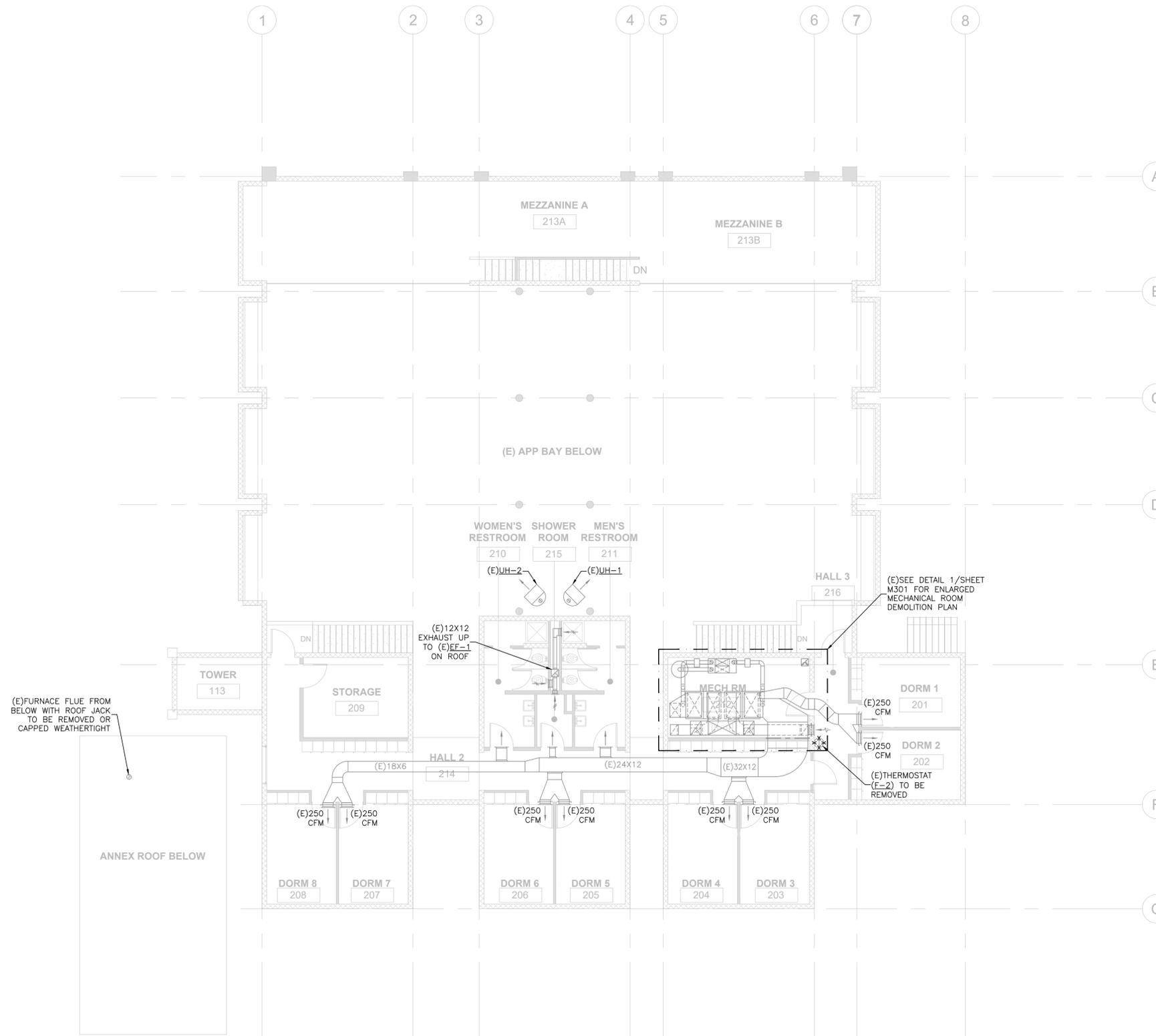
SHEET TITLE:

**GROUND FLOOR
MECHANICAL
DEMOLITION PLAN**

SHEET NUMBER:

M101





1 SECOND FLOOR MECHANICAL DEMOLITION PLAN
SCALE: 1/8"=1'-0"

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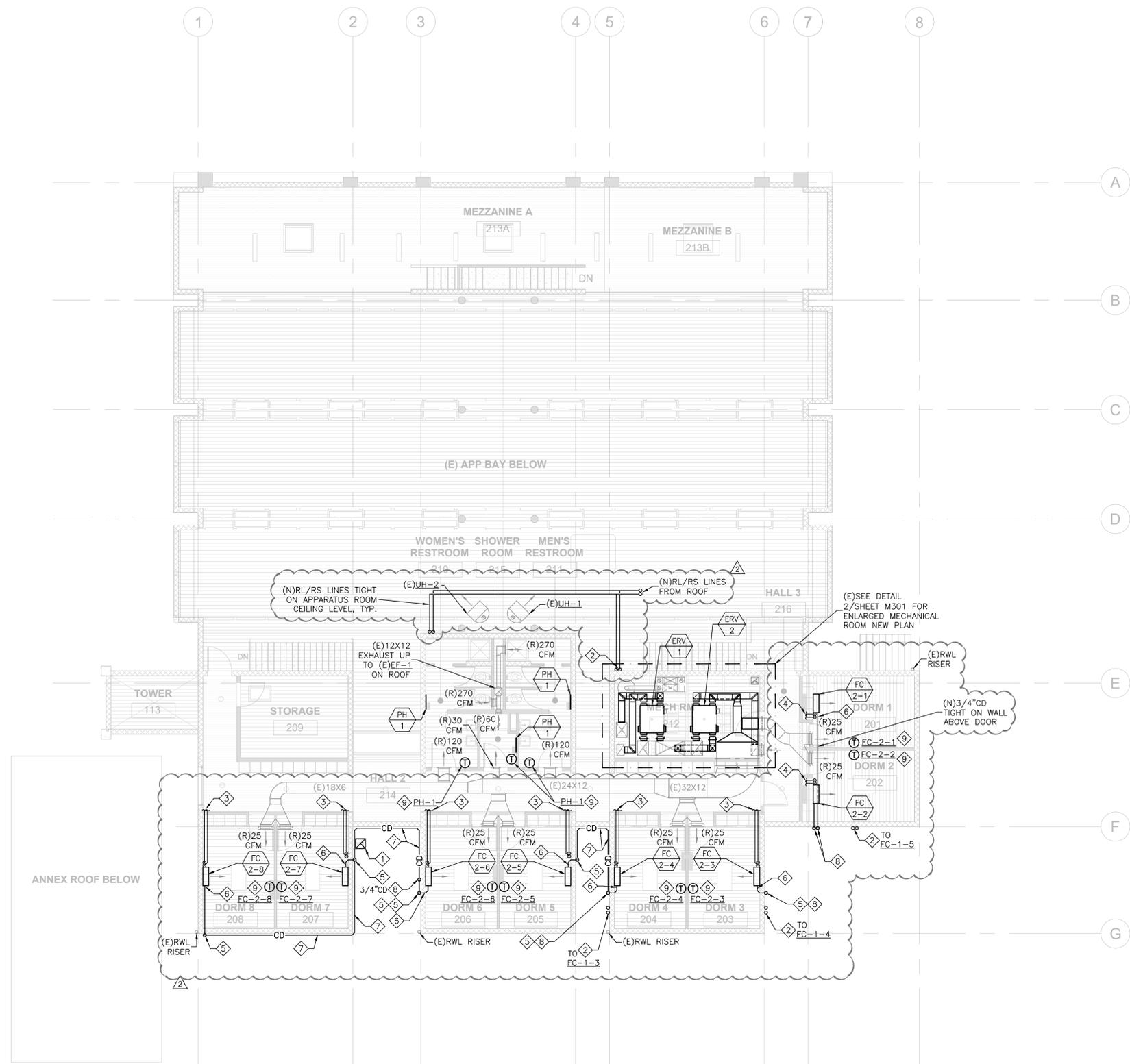
SHEET TITLE:

**SECOND FLOOR
MECHANICAL
DEMOLITION PLAN**

SHEET NUMBER:

M102





- GENERAL NOTES:**
- PERFORM TEST AND BALANCE OF GEF-1, ERV-1, ERV-2, FC-3, AND ALL ASSOCIATED AIR REGISTERS AND KITCHEN HOODS WITHIN PROJECT AREAS, TO SHOWN AIR QUANTITIES.
 - SUBMIT TEST AND BALANCE (TAB) REPORT FOR REVIEW AND APPROVAL.
 - GREASE DUCTS SHALL COMPLY WITH CMC 510.5.
 - SLOPE ALL CONDENSATE AT 1% MINIMUM.
- MECHANICAL SHEET NOTES:**
- (N)16X16 GREASE EXHAUST ON WALL FROM BELOW & UP TO ROOF.
 - (N)RL/RS LINES FROM ROOF ON WALL & DN TO FIRST FLOOR.
 - (N)RL/RS LINES FROM ROOF & ON WALL TO FC UNIT. SEE SHEET M203 FOR CONTINUATION.
 - (N)RL/RS FROM ROOF & TO FC UNIT. SEE SHEET M203 FOR CONTINUATION.
 - (N)3/4"CD TO EXTERIOR WALL.
 - (N)3/4"CD FROM INDOOR FC UNIT.
 - (N)3/4"CD TIGHT ON EXTERIOR WALL.
 - (N)3/4"CD ON EXTERIOR WALL AND DOWN.
 - COORDINATE LOCATION OF (N)THERMOSTAT WITH ARCHITECTURAL DRAWINGS.

FIRE STATION NO.2 REMODEL

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BERKELEY, CA 94704

PROJECT NUMBER:
201320.31

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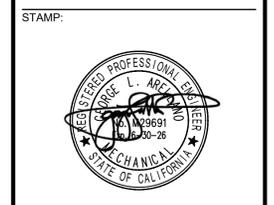
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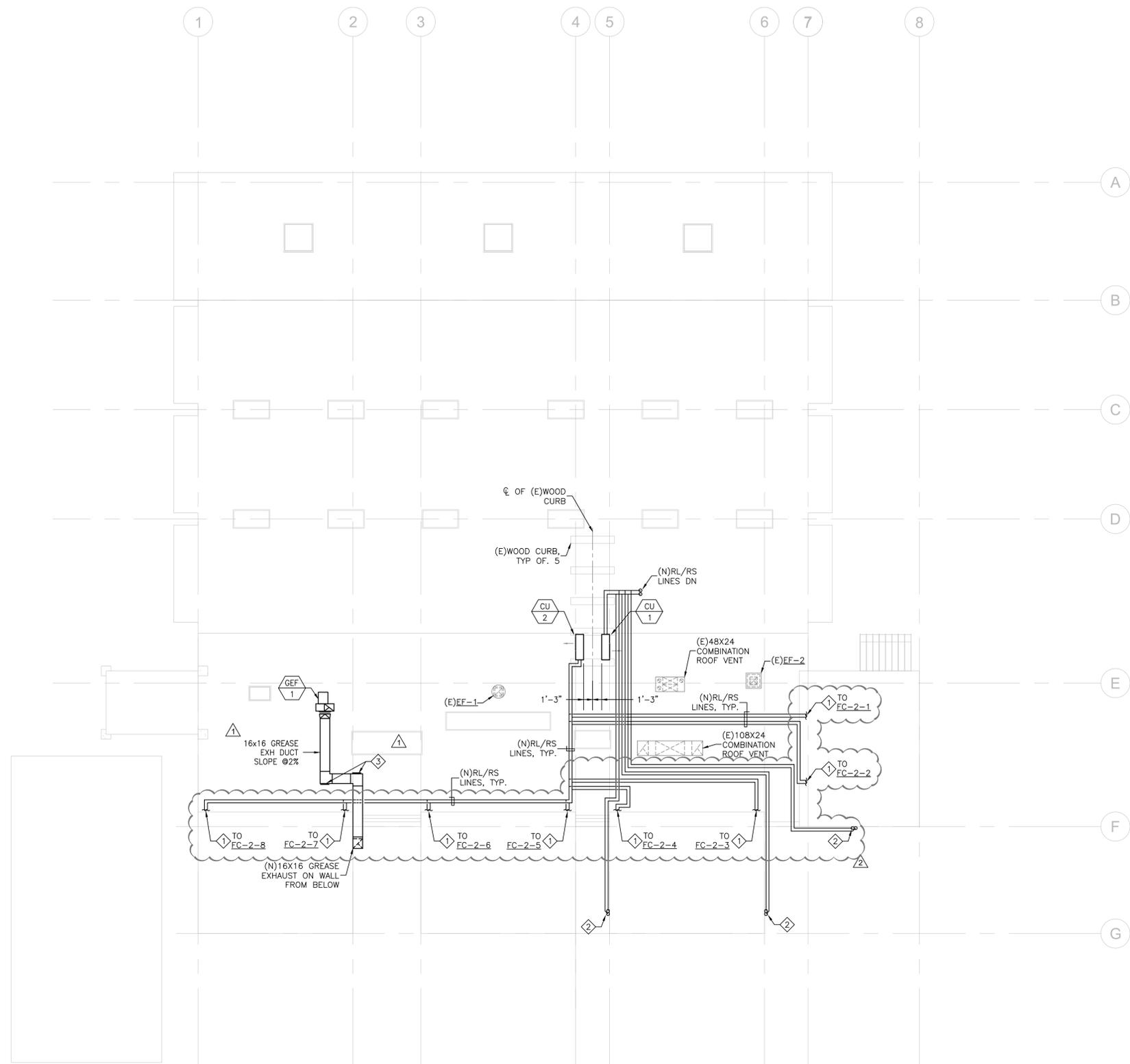


SHEET TITLE:
SECOND FLOOR MECHANICAL NEW PLAN

SHEET NUMBER:
M202

1 SECOND FLOOR MECHANICAL NEW PLAN
SCALE: 1/8"=1'-0"





1 ROOF MECHANICAL NEW PLAN
SCALE: 1/8"=1'-0"

- GENERAL NOTES:**
- PERFORM TEST AND BALANCE OF GEF-1, ERV-1, ERV-2, AND ALL ASSOCIATED AIR REGISTERS AND KITCHEN HOODS WITHIN PROJECT AREAS, TO SHOWN AIR QUANTITIES.
 - SUBMIT TEST AND BALANCE (TAB) REPORT FOR REVIEW AND APPROVAL.
 - SLOPE CONDENSATE DRAIN AT 2% MIN.
 - GREASE DUCTS SHALL COMPLY WITH CMC 510.5.
- MECHANICAL SHEET NOTES:**
- ⬠ (N)RL/RS LINES TO FC UNIT IN SECOND FLOOR DORMITORIES. SEE SHEET M202 FOR CONTINUATION.
 - ⬠ (N)RL/RS LINES DN & ON EXTERIOR WALL.
 - ⬠ EXHAUST DUCT ACCESS CLEANOUT.

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201320.31
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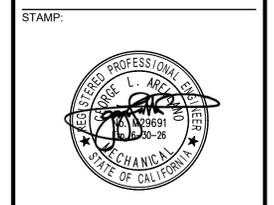
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SHEET TITLE:
ROOF MECHANICAL NEW PLAN

SHEET NUMBER:
M203



GENERAL NOTES:

- PERFORM TEST AND BALANCE OF GEF-1, ERV-1, ERV-2, AND ALL ASSOCIATED AIR REGISTERS AND KITCHEN HOODS WITHIN PROJECT AREAS, TO SHOWN AIR QUANTITIES.
- SUBMIT TEST AND BALANCE (TAB) REPORT FOR REVIEW AND APPROVAL.

MECHANICAL SHEET NOTES:

- BALANCE OUTSIDE AIR TO 470 CFM.
- BALANCE EXHAUST AIR TO 470 CFM.
- CONNECT (N)10X10 SUPPLY DUCT TO (E)18X24 SUPPLY DUCT.
- CONNECT (N)10X10 RETURN DUCT TO (E)12X18 RETURN DUCT.
- CONNECT (N)10X10 OUTSIDE AIR TO (E)48X24 OUTSIDE AIR DUCT.
- CONNECT (N)10X10 EXHAUST TO (E)12X24 EXHAUST DUCT.
- EXTEND (E)18X6 SUPPLY DUCT & CONNECT TO (N)14X8.
- CONNECT (N)14X8 TO (E)68X6. PROVIDE WITH TRANSITION FITTING.

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PROJECT:

**FIRE STATION NO.2
REMODEL**

2029 BERKELEY WAY
BERKELEY, CA 94704

PROJECT NUMBER:

201320.31

CITY SPEC. NUMBER:

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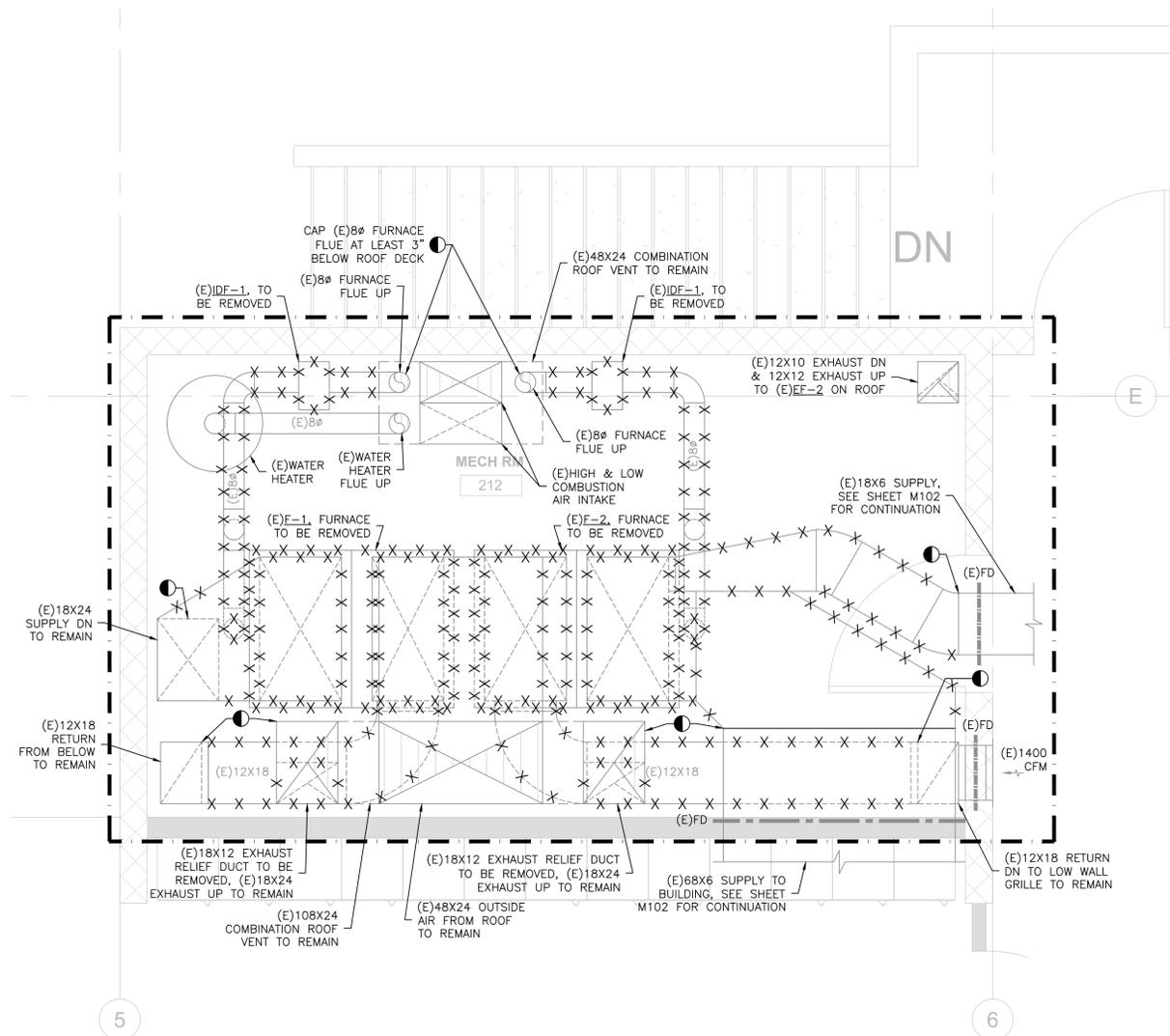


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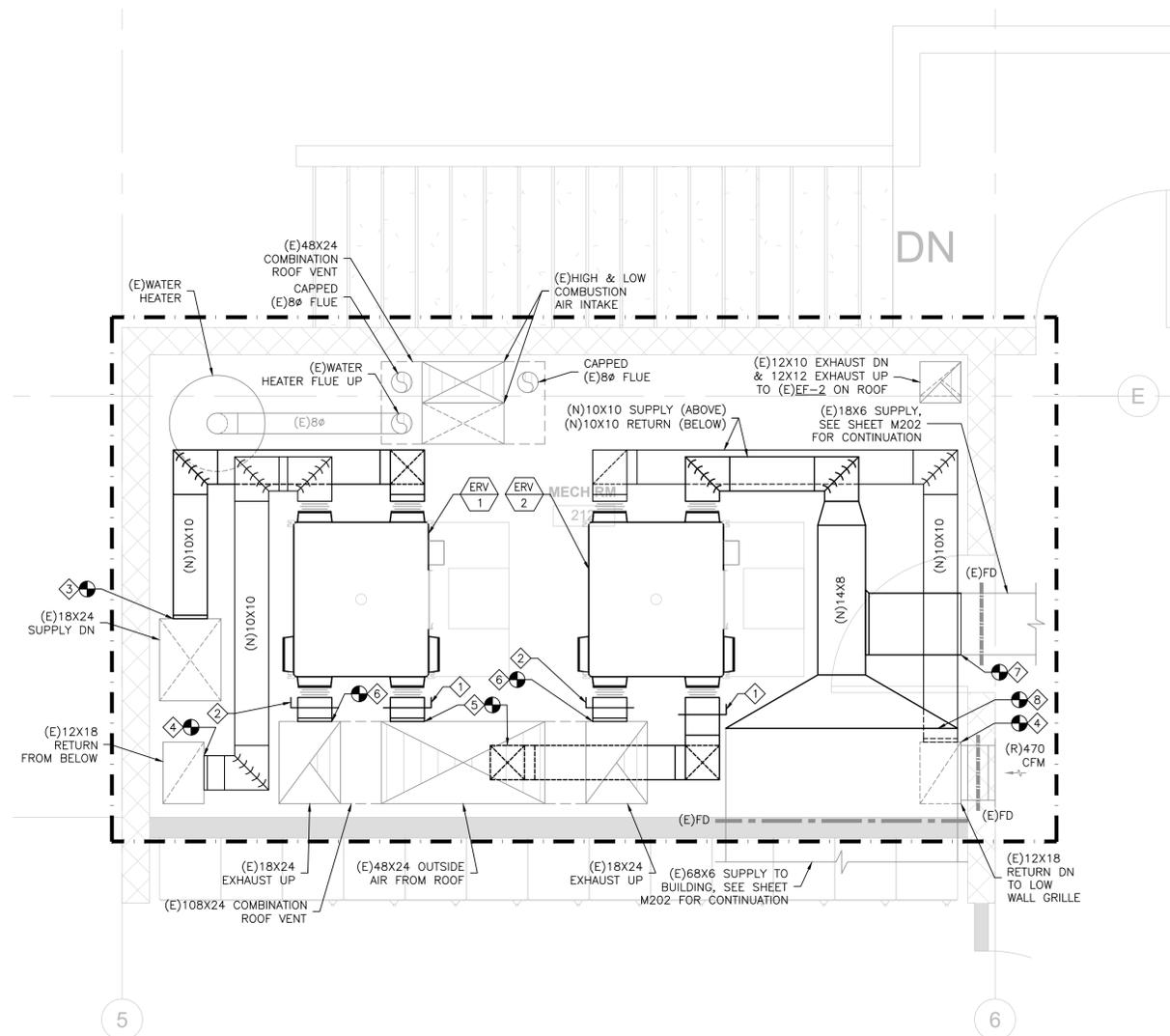
**MECHANICAL ROOM
ENLARGED
DEMOLITION & NEW
PLANS**

SHEET NUMBER:

M301

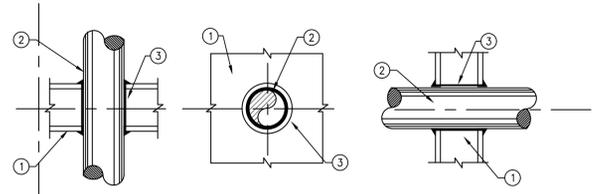


1 MECHANICAL ROOM ENLARGED DEMOLITION PLAN
SCALE: 1/2"=1'-0"



2 MECHANICAL ROOM ENLARGED NEW PLAN
SCALE: 1/2"=1'-0"





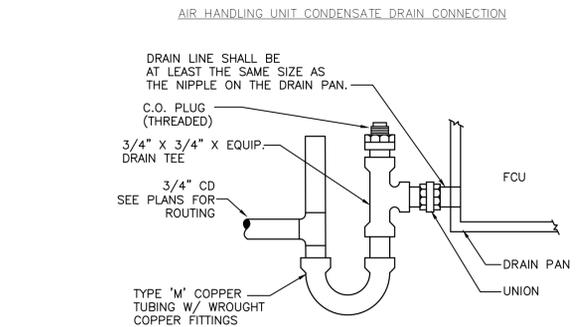
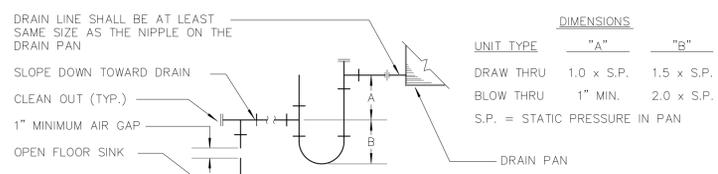
PACK SPACE BETWEEN PIPING AND PENETRATION OPENING WITH MATERIAL APPROVED BY UNDERWRITERS LABORATORIES FOR THROUGH PENETRATION FIRE STOP SYSTEMS. MATERIALS, METHODS, AND INSTALLATION SHALL BE IN ACCORDANCE WITH UL APPROVED LISTING AND SHALL BE DESIGNED TO ACT AS A FIRESTOP AS WELL AS A COLD SMOKE, NOXIOUS GAS AND WATER SEALANT. SUBMIT LISTING NUMBERS AND DETAILS FROM UL FIRE RESISTANT DIRECTORY FOR ALL SUCH SYSTEMS TO BE USED. INSULATE PIPES 3 FEET TO EITHER SIDE OF PENETRATION WITH MATERIAL SPECIFIED IN THE UL FIRE RESISTANCE DIRECTORY IF REQUIRED TO OBTAIN THE T- AND F- RATINGS.

- ① WALL AND FLOOR
- ② PIPE OR INSULATED PIPE
- ③ FIRE BARRIER - "JM PRODUCTS INC." FIRE BARRIER CAULK CP25 WB+, CP 25WB, CP 25 N/S AND S/L, FIRE BARRIER 2000+, 2000 AND 2003 SILICONE SEALANTS, MOLDABLE PUTTY.

USE FOLLOWING APPLICABLE UL SYSTEMS FOR THE CONSTRUCTION TYPES LISTED.

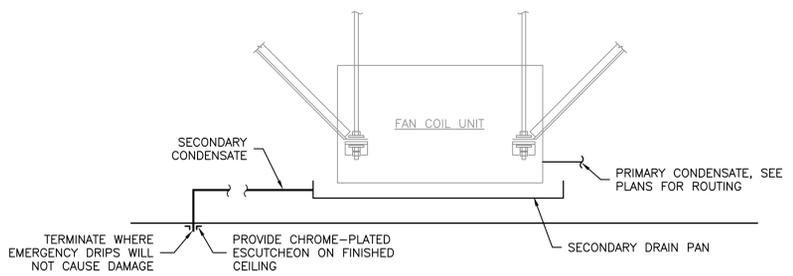
CONSTRUCTION TYPE	THROUGH PENETRATION FIRESTOP SYSTEM NUMBERS
CONCRETE FLOORS	CAJ1044 (F-2, 3, 4 HR; T-0 HR), CAJ1058 (F-3 HR; T-0 HR), CAJ1175 (F-2 HR; T-0 HR), CAJ5001 (F-1.5, 2, 3 HR; T-0 TO 1 HR)
CONCRETE OR MASONRY WALLS	CAJ1001 (F-3 HR; T-0 HR), CAJ1027 (F-3 HR; T-0 HR), CAJ1044 (F-2, 3, 4 HR; T-0 HR), CAJ1058 (F-3 HR; T-0 HR),
GYPSUM WALLBOARD/STUD WALLS	WL1001 (F-1, 2, 3, 4 HR; T-0 TO 4 HR), WL1003 (F-1, 2 HR; T-0 HR), WL2002 (F-1, 2 HR; T-0 TO 2 HR), WL2003 (F-1, 2 HR; T-0 TO 2 HR), WL2004 (F-2 HR; T-0 TO 2 HR), WL2005 (F-1, 2 HR; T-0 TO 2 HR), WL5001 (F-1, 2 HR; T-0 TO 1.5 HR), WL5002 (F-1, 2 HR; T-0 TO 2 HR)

⑦ PIPE THRU RATED BARRIER DETAIL
NOT TO SCALE

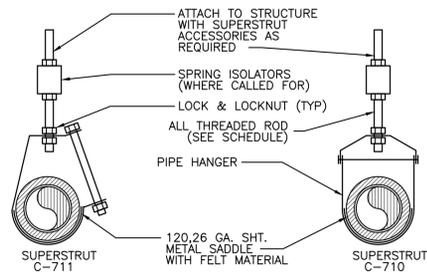


NOTE: ALL INTERIOR CONDENSATE DRAINS SHALL BE INSULATED.

⑧ CONDENSATE DRAIN TRAP DETAIL
NOT TO SCALE

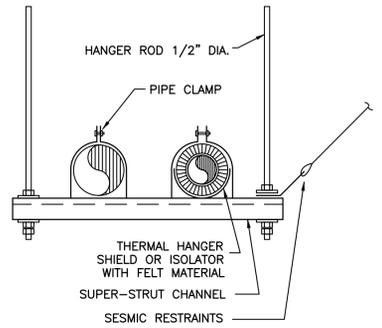


⑨ SECONDARY DRAIN PAN DETAIL
NOT TO SCALE

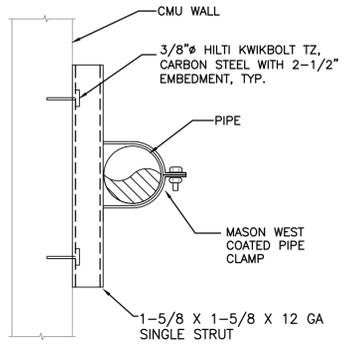


PIPE SIZE (IN)	MAX SUPPORT SPAN (FT)	MIN. ROD SIZE (IN)
UP TO 1"	6	3/8"
1-1/2"	6	3/8"
2 TO 2-1/2"	10	3/8"
3"	10	1/2"
3-1/2"	10	1/2"
4"	10	5/8"

④ PIPE HANGER DETAIL
NOT TO SCALE

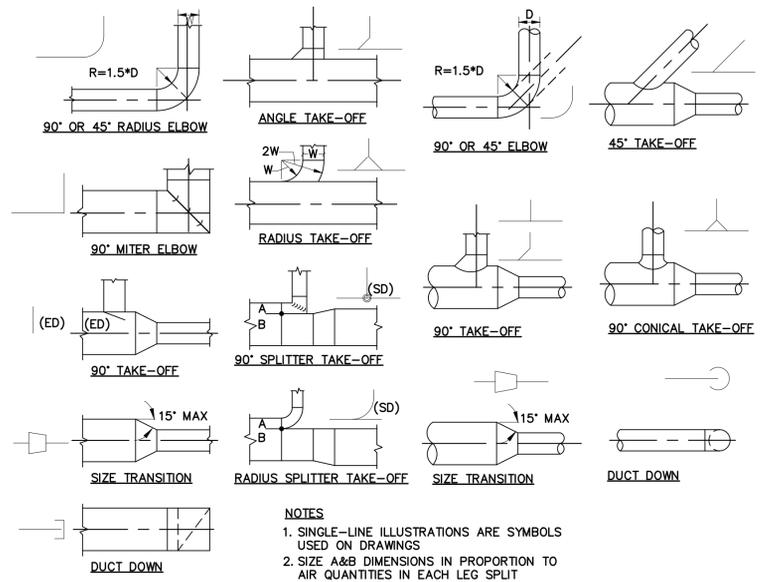


⑤ TRAPEZE HANGER DETAIL
NOT TO SCALE



NOTES:
1. PAINT TO MATCH (E) ADJACENT SURFACE. SEE ARCHITECTURAL DRAWINGS.

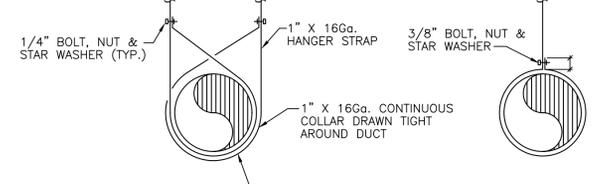
⑥ PIPE SUPPORT ON WALL
NOT TO SCALE



NOTES:
1. SINGLE-LINE ILLUSTRATIONS ARE SYMBOLS USED ON DRAWINGS
2. SIZE A&B DIMENSIONS IN PROPORTION TO AIR QUANTITIES IN EACH LEG SPLIT

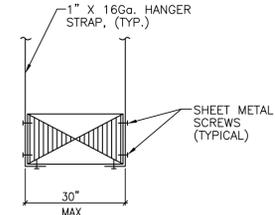
① DUCT CONSTRUCTION DETAIL
NOT TO SCALE

NOTE: THIS HANGERS SHALL BE USED ON DUCTS 25" & LARGER (MAY BE USED ON SMALLER DUCTS).



EACH STRAP ADJACENT TO ONE ANOTHER AT HANGER LOCATION. (TYPICAL)

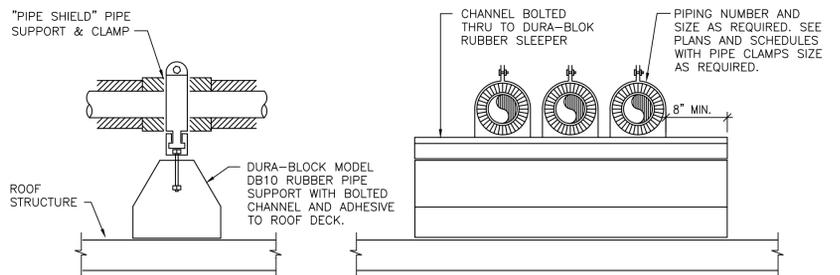
ROUND DUCT HANGER



RECTANGULAR DUCT HANGER

NOTES:
1. HANGER MATERIAL SUPPORTING FLEXIBLE DUCT SHALL IN NO CASE BE LESS THAN 1-1/2 INCHES WIDE. FLEXIBLE DUCT SHALL BE SUPPORTED PER MANUFACTURER'S RECOMMENDED MATERIALS, BUT AT NO GREATER DISTANCE THAN 4 FEET MAX. PERMISSIBLE SAG IS MAX. 1/2 INCHES PER FOOT OF SPACING BETWEEN SUPPORTS.

② DUCT SUPPORT DETAIL
NOT TO SCALE



③ REFRIGERANT PIPE ROOF MOUNTING DETAIL
NOT TO SCALE

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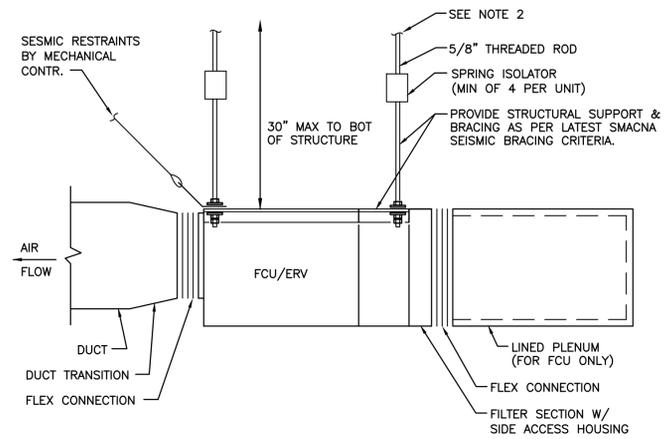
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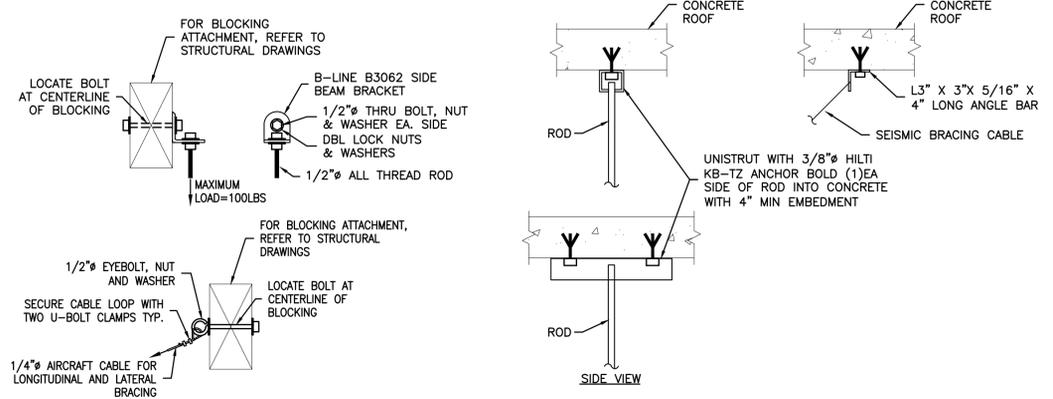
SHEET TITLE:
MECHANICAL DETAILS

SHEET NUMBER:

M401

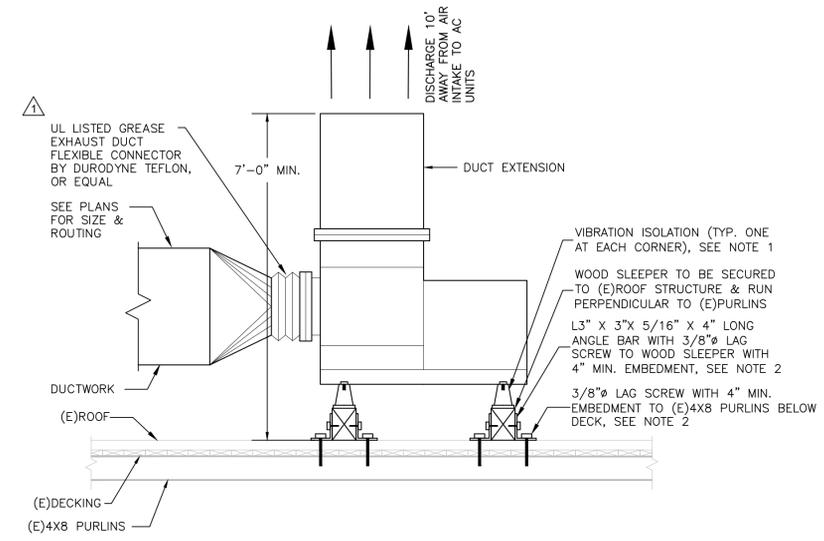


NOTES:
1. PROVIDE SEISMIC BRACING AT ALL FCU/ERV.
2. FOR UNIT ATTACHMENT TO WOOD STRUCTURE, SEE DETAIL "A".
FOR UNIT ATTACHMENT TO CONCRETE ROOF, SEE DETAIL "B".



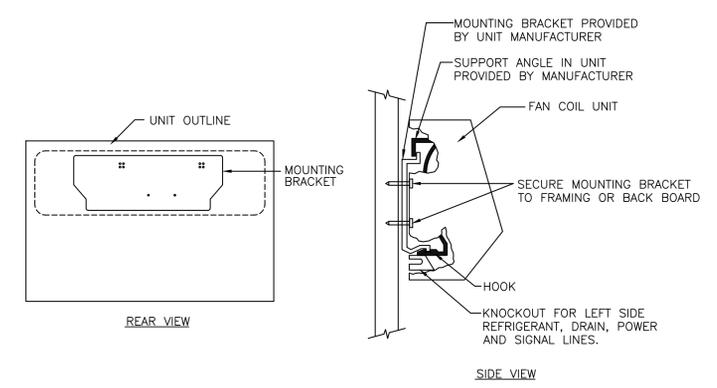
DETAIL "A": ATTACHMENT TO WOOD STRUCTURE
DETAIL "B": ATTACHMENT TO CONCRETE ROOF

4 DUCTED FCU/ERV MOUNTING DETAIL
NOT TO SCALE

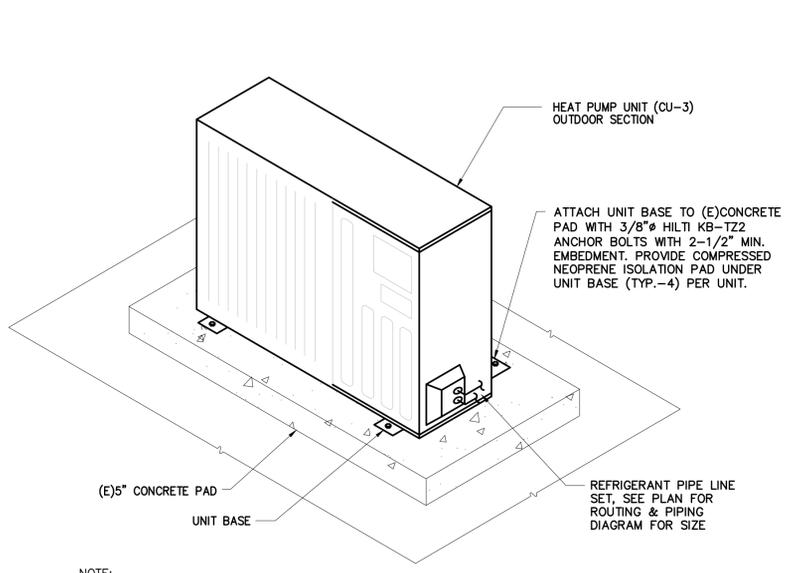


NOTE:
1. VIBRATION ISOLATOR BY MASON INDUSTRIES INC. TYPE SLR-2A-800, TYP.
2. PROVIDE LAG SCREW TO 2 EACH SIDE (4 TOTAL) TO EMBED 1-1/2" MIN. FROM EDGE AND 4" MIN. FROM END. LAG SCREW TO BE HDG OR SS, WITH STD. WASHER, TYP.
3. FAN DISCHARGE SHALL BE 45° AWAY FROM PROPERTY LINE.

1 EXHAUST FAN MOUNTING DETAIL
NOT TO SCALE

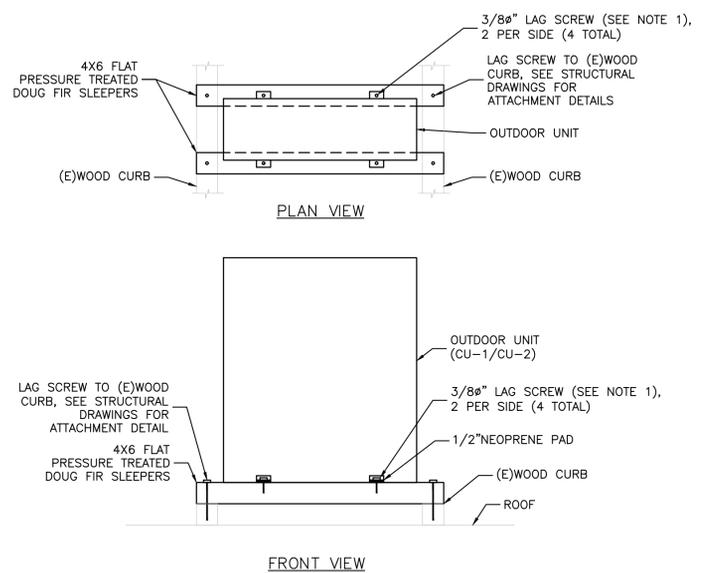


2 WALL-MOUNTED DUCTLESS INDOOR UNIT MOUNTING DETAIL
NOT TO SCALE



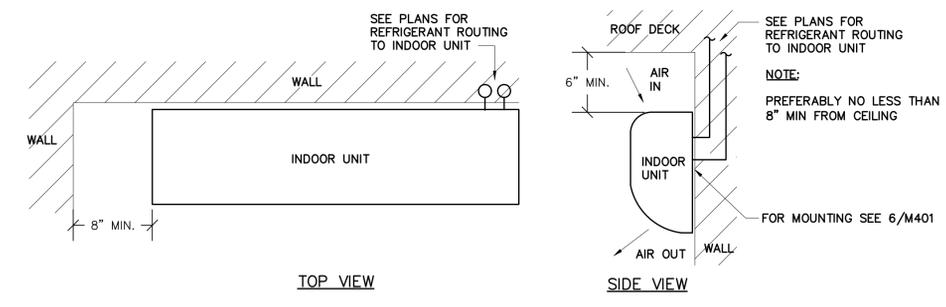
NOTE:
1. MAINTAIN 6" MINIMUM DISTANCE FROM EDGE OF THE (E)CONCRETE PAD TO OUTDOOR UNIT MOUNTING HOLES, TYP. ALL SIDES.

6 OUTDOOR HEAT PUMP (CU-3) UNIT MOUNTING DETAIL
NOT TO SCALE



NOTE:
1. 3/8" LAG SCREW TO BE HDG OR SS, WITH STD. WASHER, TYP. (SEE STRUCTURAL DETAILS FOR MIN. EMBEDMENT).

5 OUTDOOR HEAT PUMP (CU-1/CU-2) UNIT MOUNTING DETAIL
NOT TO SCALE



3 WALL-MOUNTED DUCTLESS INDOOR UNIT INSTALLATION CLEARANCE REQUIREMENTS
NOT TO SCALE

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FIRE STATION NO.2 REMODEL

2029 BERKELEY WAY
BERKELEY, CA 94704

PROJECT NUMBER:
201320.31

CITY SPEC. NUMBER:
23-11575-C

CLIENT:
CITY OF BERKELEY
1947 CENTER ST. 4TH FLOOR
BERKELEY, CA 94704

PROJECT TEAM:
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REVISION		
NUMBER	DATE	DESCRIPTION
1	03/08/2024	PLAN CHECK 1
2	08/27/2024	REVISION 1

ISSUE:
ISSUE FOR PERMIT
DATE:
AUGUST 27, 2024

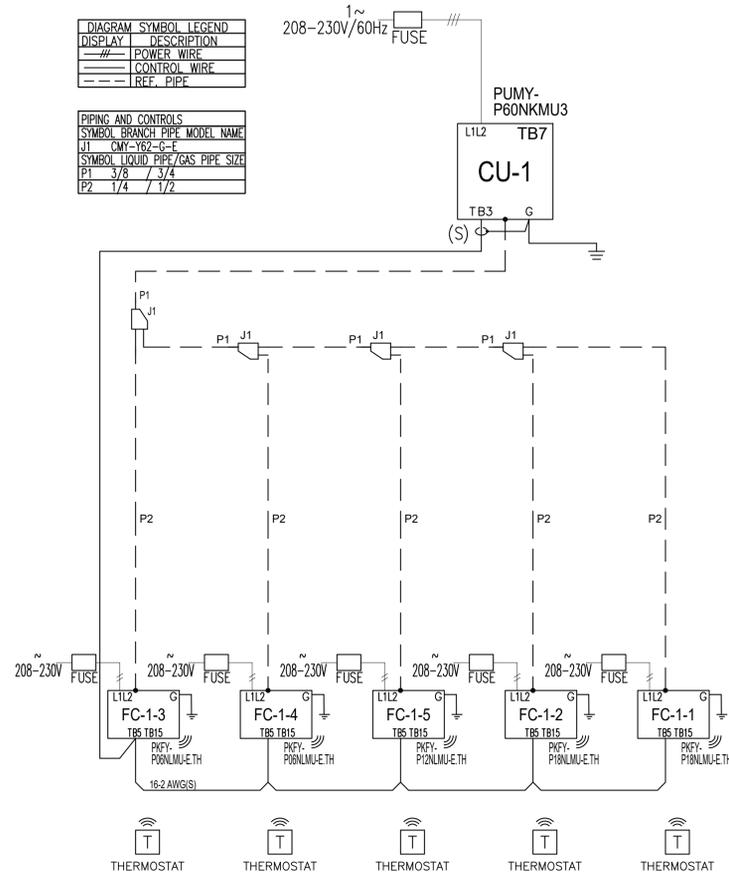


SHEET TITLE:
MECHANICAL DETAILS

SHEET NUMBER:
M402

DIAGRAM SYMBOL LEGEND	DISPLAY	DESCRIPTION
---	---	POWER WIRE
---	---	CONTROL WIRE
---	---	REF. PIPE

PIPING AND CONTROLS	
SYMBOL	BRANCH PIPE MODEL NAME
J1	CMV-Y62-C-1
SYMBOL LIQUID PIPE/GAS PIPE SIZE	
P1	3/8 / 3/4
P2	1/4 / 1/2



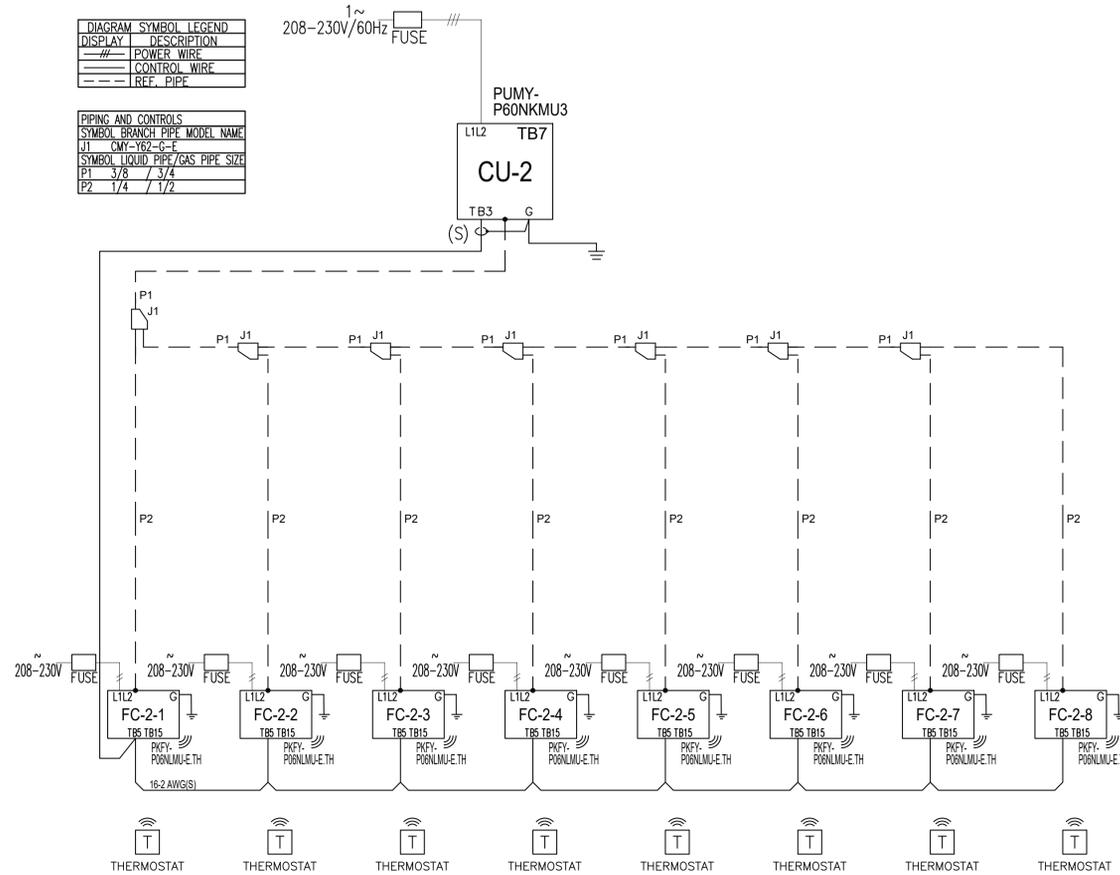
NOTES:

1. SIZE REFRIGERANT PIPING PER MANUFACTURER'S RECOMMENDATIONS.
2. INSTALL AND WIRE PER MANUFACTURER'S RECOMMENDATIONS.

1 SYSTEM H-1 CONTROL DIAGRAM
NOT TO SCALE

DIAGRAM SYMBOL LEGEND	DISPLAY	DESCRIPTION
---	---	POWER WIRE
---	---	CONTROL WIRE
---	---	REF. PIPE

PIPING AND CONTROLS	
SYMBOL	BRANCH PIPE MODEL NAME
J1	CMV-Y62-C-1
SYMBOL LIQUID PIPE/GAS PIPE SIZE	
P1	3/8 / 3/4
P2	1/4 / 1/2



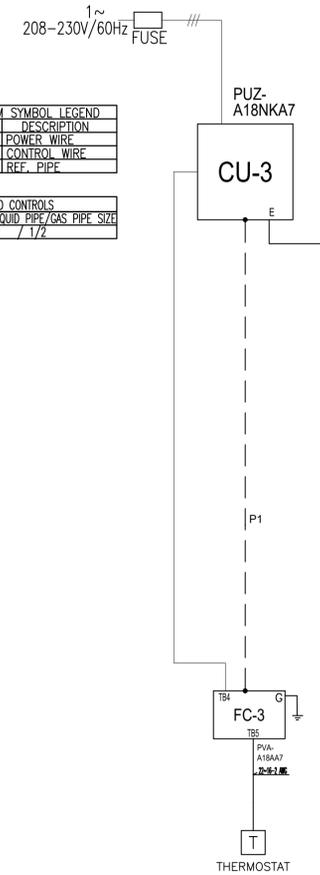
NOTES:

1. SIZE REFRIGERANT PIPING PER MANUFACTURER'S RECOMMENDATIONS.
2. INSTALL AND WIRE PER MANUFACTURER'S RECOMMENDATIONS.

2 SYSTEM H-2 CONTROL DIAGRAM
NOT TO SCALE

DIAGRAM SYMBOL LEGEND	DISPLAY	DESCRIPTION
---	---	POWER WIRE
---	---	CONTROL WIRE
---	---	REF. PIPE

PIPING AND CONTROLS	
SYMBOL	LIQUID PIPE/GAS PIPE SIZE
P1	1/4 / 1/2



NOTES:

1. SIZE REFRIGERANT PIPING PER MANUFACTURER'S RECOMMENDATIONS.
2. INSTALL AND WIRE PER MANUFACTURER'S RECOMMENDATIONS.

3 SYSTEM H-3 CONTROL DIAGRAM
NOT TO SCALE

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STAMP:



SHEET TITLE:

**MECHANICAL
DETAILS**

SHEET NUMBER:

M403

SYMBOL LIST (NOT ALL SYMBOLS USED)

	EXISTING EQUIPMENT/ RACEWAYS TO REMAIN, (E)
	EXISTING EQUIPMENT/ RACEWAYS TO BE REMOVED, (D)
	NEW EQUIPMENT / RACEWAYS
	CONDUIT CONCEALED
	EXPOSED CONDUIT
	UNDERGROUND OR BELOW GRADE CONDUIT

SINGLE LINE DIAGRAM

	TRANSFORMER
	CIRCUIT BREAKER
	DRAW OUT CIRCUIT BREAKER
	MEDIUM VOLTAGE VACUUM CIRCUIT BREAKER
	MOTOR STARTER WITH OVERCURRENT PROTECTION 3 POLE UNLESS OTHERWISE NOTED
	NON-FUSED DISCONNECT SWITCH, 30 AMP, 3P UNLESS NOTED OTHERWISE.
	FUSED DISCONNECT SWITCH, 3 POLE UNLESS NOTED OTHERWISE.
	CIRCUIT BREAKER ACCESSORY, 'S' INDICATES SHUNT TRIP, 'G' INDICATES GROUND FAULT RELAY
	UTILITY METER WITH CT/PT
	KWH SUB METER WITH CT/PT
	MULTIPOINT KWH SUB METER IN SEPARATE ENCLOSURE, CT/PTS AS SHOWN

DEVICES

FLOOR*	WALL	CEILING	
			SIMPLEX OR SPECIAL RECEPTACLE TYPE, SEE PLANS FOR NEMA TYPE
			DUPLEX RECEPTACLE, 5-20R U.O.N.
			DOUBLE DUPLEX (QUAD) RECEPTACLE, 5-20R U.O.N.
			CONTROLLED DUPLEX RECEPTACLE, 5-20R U.O.N.
			CONTROLLED DOUBLE DUPLEX (QUAD) RECEPTACLE, 5-20R U.O.N.
			*PROVIDE COMBINED POWER/DATA FLOOR BOXES IF SHOWN ON PLANS PT = POKE THRU, FB = FLOOR BOX, PD = PEDESTAL
			LTR
		A	ABOVE COUNTER OR AT DEFINED HEIGHT. REFER TO ARCHITECT
		G	GROUND FAULT CIRCUIT INTERRUPTER
		WP	WEATHERPROOF IN-USE COVER WITH GFI RECEPTACLE
		U	RECEPTACLE DEVICE WITH (2) USB PORTS
		S	SPLIT WIRED RECEPTACLE
		Z	DEDICATED CIRCUIT
			A-1
FLOOR*	WALL	CEILING	
			4-IN SQUARE JUNCTION BOX
			PULL BOX, SIZED PER CODE
			POWER AND DATA JUNCTION BOXES WITH WHIPS FOR FURNITURE CONNECTION. *PROVIDE POWER POLE WITH CEILING JUNCTION BOX

EQUIPMENT

RECESSED	SURFACE	
		DISCONNECT SWITCH, 30 AMP MINIMUM UNLESS NOTED OTHERWISE.
		FUSED DISCONNECT SWITCH, 30 AMP MINIMUM UNLESS NOTED OTHERWISE.
		COMBINATION DISCONNECT SWITCH MOTOR STARTER
		MOTOR, 5 HP INDICATED.
		TRANSFORMER, ###W INDICATES WATTAGE
		RELAY OR EQUIPMENT CABINET AS INDICATED ON PLANS.
		LIGHTING OR POWER PANEL BOARD.
		FREE STANDING SWITCHBOARD, MOTOR CONTROL CENTER OR DISTRIBUTION BOARD.
		FIRE TREATED PLYWOOD BACKBOARD 3/4"x96" HIGH X LENGTH AS INDICATED.
		GROUND BUS BAR
		BATTERY PACK OR MINI INVERTER, ###W INDICATES WATTAGE

TAGS

	ELECTRICAL EQUIPMENT DESIGNATION DESIGNATED "EQ01"
	SHEET NOTE ON SAME SHEET.
	MECHANICAL EQUIPMENT DESIGNATION "AC-1" INDICATED. A-1,3,5, INDICATES CIRCUIT NUMBER. F40-3 INDICATES FEEDER CODE IF NONE SHOWN REFER TO SINGLE LINE DIAGRAM FOR ELECTRICAL REQUIREMENTS
	DETAIL REFERENCE

ABBREVIATIONS

(E)	EXISTING
(D)	DEMOLISH
(R)	RELOCATE
(RL)	NEW LOCATION OF RELOCATED DEVICE
A	AMPERES, AMBER
AHJ	AUTHORITY HAVING JURISDICTION
AIC	AVAILABLE INTERRUPTING CAPACITY
C	CONDUIT, CLOSE, CONTROL
CA	CABLE
CAT	CATEGORY
CU	COPPER
DA	DIAMETER
DIM	DIMENSION
DW	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
MOC	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

- 2022 CALIFORNIA BUILDING CODE
- 2022 CALIFORNIA ELECTRICAL CODE
- 2022 CALIFORNIA MECHANICAL CODE
- 2022 CALIFORNIA PLUMBING CODE
- 2022 CALIFORNIA ENERGY CODE (TITLE 24)
- 2022 CALIFORNIA FIRE CODE
- 2022 CALIFORNIA GREEN CODE

DRAWING INDEX

E001	COVER SHEET - ELECTRICAL
E101	DEMOLITION PLANS - ELECTRICAL
E201	GROUND FLOOR PLAN - POWER
E202	SECOND FLOOR PLAN - POWER
E203	ROOF PLAN - POWER
E301	SINGLE LINE DIAGRAM
E401	SCHEDULES

GENERAL ELECTRICAL NOTES

- SCHEDULE WORK IN EXISTING BUILDINGS WITH THE OWNER. MINIMIZE DISRUPTION OF NORMAL OPERATIONS.
- VISIT THE SITE BEFORE SUBMITTING A BID TO OBSERVE EXISTING CONDITIONS.
- DO NOT INSTALL ELECTRICAL BOXES IN RATED WALLS CLOSER THAN 2"-0" TO EACH OTHER. PROVIDE "PADDY" PADS OR EQUIVALENT ON EACH BOX INSTALLED.
- 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.
- IN ALL CASES AND FOR ALL SYSTEMS AND COMPONENTS, USE ONLY EQUIPMENT IN ACCORDANCE WITH ITS LISTING OR LABELING. [CEC 110.3(B)]
- 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)]
- PROVIDE SUFFICIENT ACCESS AND WORKING CLEARANCE ABOUT THE ELECTRICAL EQUIPMENT IN ACCORDANCE WITH CEC 110.26(A).
- PROVIDE ACCESS AND ENTRANCES TO AND EGRESS FROM WORKING SPACE ABOUT ELECTRICAL EQUIPMENT IN ACCORDANCE WITH CEC 110.26(C).
- 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)).
- PROVIDE GROUND FAULT PROTECTION OF EQUIPMENT IN ACCORDANCE WITH CEC 230.95 AND 240.13 (SEE EXCEPTIONS).
- FOR PERMANENTLY CONNECTED APPLIANCES RATED NOT OVER 300 VOLTS/AMPERES OR 1/8 HORSEPOWER, THE BRANCH-CIRCUIT SWITCH OR CIRCUIT BREAKER SHALL BE PERMITTED TO SERVE AS THE DISCONNECTING MEANS. [CEC 422.31]

STRUCTURAL PENETRATIONS

USE CARE AND CAUTION AT ALL TIMES TO AVOID CUTTING OR DAMAGING REINFORCEMENT STEEL. ALL OPENINGS IN EXISTING CONCRETE WALLS SHALL BE CAREFULLY PRESCANNED USING EFFECTIVE MEANS PRIOR TO INSTALLING THE OPENING. DRILL PILOT HOLES WITH SMALLER DIAMETERS THEN FINAL HOLES (3/8" MAXIMUM PILOT HOLE DIAMETER) TO DETECT REINFORCEMENT WHERE OTHER MEANS ARE NOT EFFECTIVE.

WHERE REINFORCEMENT IS ENCOUNTERED, GC TO COORDINATE LOCATION TO AVOID CUTTING REBAR OR MINIMIZE IMPACT TO EXISTING REBAR. FOR ALL CONDITIONS WHERE REINFORCEMENT IS ENCOUNTERED, CONTACT THE ARCHITECT PRIOR TO INSTALLING THE OPENING.

CONTRACTOR METHODS OF OPERATION

ONGOING OPERATION OF THE FACILITY IS A PROJECT REQUIREMENT. TEMPORARY SHUTDOWNS OF THE ELECTRICAL SYSTEM ARE ACCEPTABLE DURING DAYTIME HOURS. FACILITY IS REQUIRED TO BE OPERATIONAL IN THE EVENING. PROVIDE TEMPORARY POWER AS REQUIRED TO COMPLETE THE SCOPE OF WORK.

BEFORE BEGINNING CONSTRUCTION, PROVIDE TO THE ARCHITECT A CONSTRUCTION SCHEDULE OF ELECTRICAL WORK. THE CONSTRUCTION SCHEDULE SHALL IDENTIFY ALL SIGNIFICANT MILESTONES WITH COMPLETION DATES. SCHEDULE SHALL IDENTIFY SHUTDOWN TIMES AND ANTICIPATED DURATION.



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PROJECT:

**FIRE STATION NO.2
REMODEL**

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PROJECT NUMBER:

201320.31

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1	03/08/2024	PLAN CHECK 1

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DATE:

OCTOBER 30, 2023

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Date Signed: 9/6/24

SHEET TITLE:

**COVER SHEET -
ELECTRICAL**

SHEET NUMBER:

E001

GENERAL SHEET NOTES

- A. COORDINATE DEMOLITION WORK WITH ARCHITECT AND BUILDING OWNER PRIOR TO COMMENCEMENT OF WORK.
- B. DEMOLISH EXISTING RECEPTACLES, VOICE/DATA OUTLETS, FEEDERS, ETC., AS REQUIRED TO ACCOMMODATE NEW CONSTRUCTION AND INDICATED WITH CROSSMARKS ON DRAWINGS. COORDINATE AND SEQUENCE DEMOLITION WORK WITH PROVISIONS OF CONSTRUCTION DOCUMENT DIVISIONS.
- C. REMOVE EXISTING MATERIALS CONFLICTING WITH REMODEL WORK INDICATED IN THE CONSTRUCTION DOCUMENTS AND SUBJECT TO CONDITIONS INDICATED IN SUCH.
- D. MAINTAIN IN OPERATION EXISTING SYSTEMS NOT INDICATED FOR REMOVAL IN CONSTRUCTION DOCUMENTS.
- E. PROVIDE UPDATED PANEL SCHEDULES THAT IDENTIFY EXISTING CIRCUITS AND NUMBER OF SPARE CIRCUITS AVAILABLE UPON COMPLETION OF DEMOLITION WORK.
- F. VERIFY EXISTING CONDITIONS PRIOR TO PROCEEDING WITH WORK. PROVIDE ADDITIONAL SPLICE 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.
- G. OBTAIN COPY OF EXISTING AS-BUILT DRAWINGS PRIOR TO BID.
- H. 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.
- I. 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

- 1. DISCONNECT AND REMOVE PANEL. COIL EXISTING BRANCH CIRCUIT CONDUCTORS IN GUTTER ABOVE. PANEL TO BE REPLACED, REFER TO NEW WORK AND SINGLE LINE DIAGRAM FOR ADDITIONAL INFORMATION.



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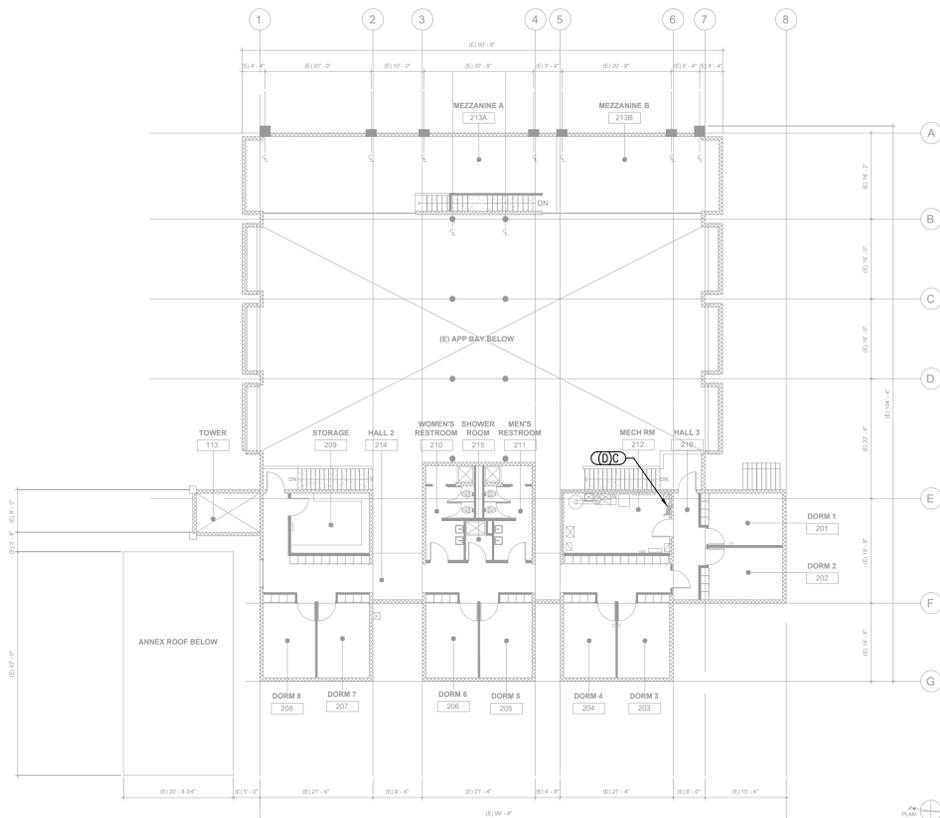
Date Signed: 9/6/24

SHEET TITLE:

**DEMOLITION
PLANS -
ELECTRICAL**

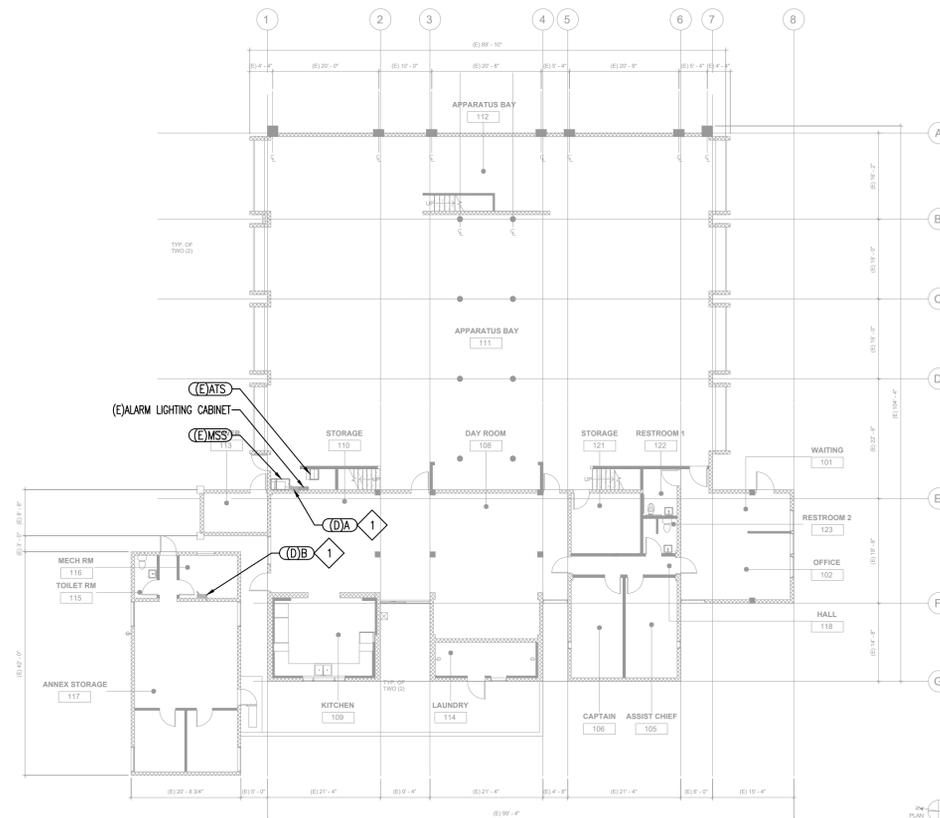
SHEET NUMBER:

E101



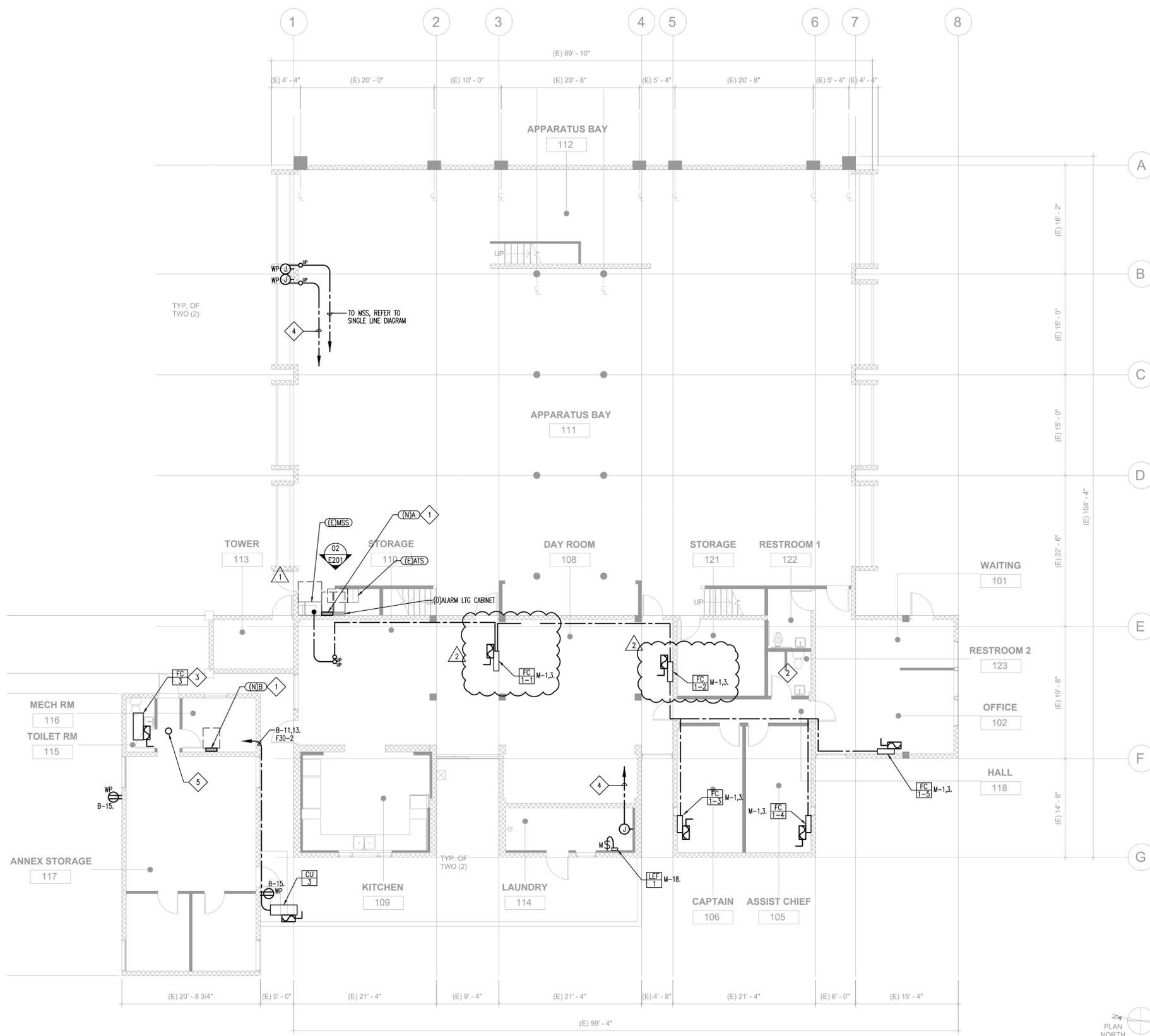
02 SECOND FLOOR PLAN - DEMOLITION

SCALE: 1/16" = 1'-0"



01 GROUND FLOOR PLAN - DEMOLITION

SCALE: 1/16" = 1'-0"



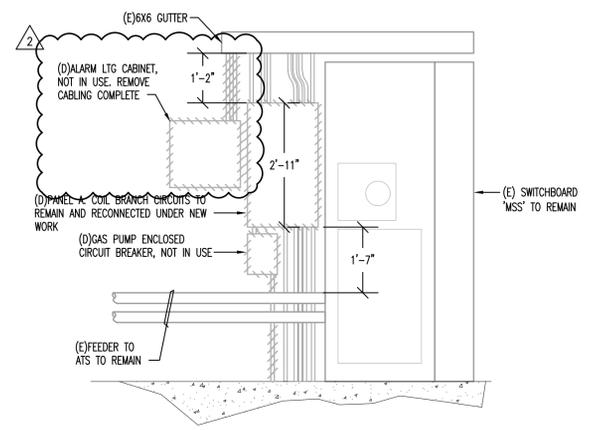
01 | GROUND FLOOR PLAN - ELECTRICAL
SCALE: 1/8" = 1'-0"

GENERAL SHEET NOTES

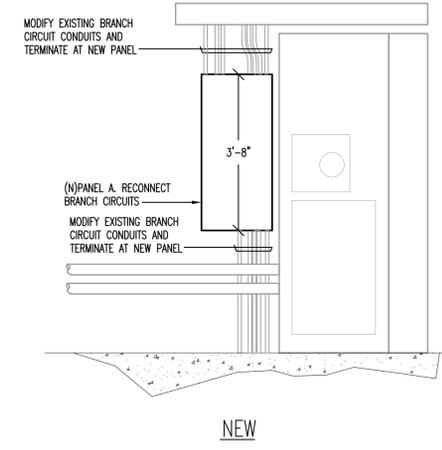
- A. COORDINATE EXACT LOCATION AND MOUNTING HEIGHT OF RECEPTACLES, VOICE/DATA OUTLETS AND ELECTRICAL DEVICES WITH ARCHITECT PRIOR TO INSTALLATION.
- B. IN FINISHED AREAS RUN ALL CONDUITS CONCEALED U.O.N. PAINT ALL EXPOSED CONDUITS AND ELECTRICAL EQUIPMENT, REFER TO ARCHITECT SPECIFICATIONS FOR PAINTING REQUIREMENTS.
- C. REFER TO SINGLE LINE DIAGRAMS, EQUIPMENT SCHEDULES, AND DETAILS FOR ADDITIONAL INFORMATION.
- D. SIZE FUSES FOR ALL MECHANICAL EQUIPMENT PER APPROVED MANUFACTURERS SHOP DRAWINGS.
- E. CONDUIT AND WIRING ARE SHOWN ON THESE PLANS DIAGRAMMATICALLY. EXACT ROUGH-IN LOCATIONS AND ROUTING SHALL BE DETERMINED IN THE FIELD TO SUIT SITE CONDITIONS AND IN COORDINATION WITH ARCHITECT.

SHEET NOTES

- 1. RECONNECT EXISTING BRANCH CIRCUITS COMPLETE TO PLACE BACK INTO SERVICE.
- 2. PROVIDE MOTOR RATED TOGGLE SWITCH FOR ON/OFF CONTROL OF EXISTING TOILET EXHAUST FAN. DISCONNECT AND REMOVE EXISTING SWITCH AT 2ND FLOOR.
- 3. POWERED VIA CU-3, PROVIDE 3/4".
- 4. ROUTE 1" C AND PULL STRING TO EXISTING SWITCHBOARD. CAP FOR FUTURE USE.
- 5. REPLACE LIGHTING FIXTURE WITH NEW, RECONNECT TO EXISTING CIRCUIT AND CONTROL; MAXLITE FLEMING ML2-LA-12-S-WH-18-9CS2-MS OR APPROVED



DEMOLITION



NEW

02 | EQUIPMENT ELEVATION
SCALE: 1/2" = 1'-0"



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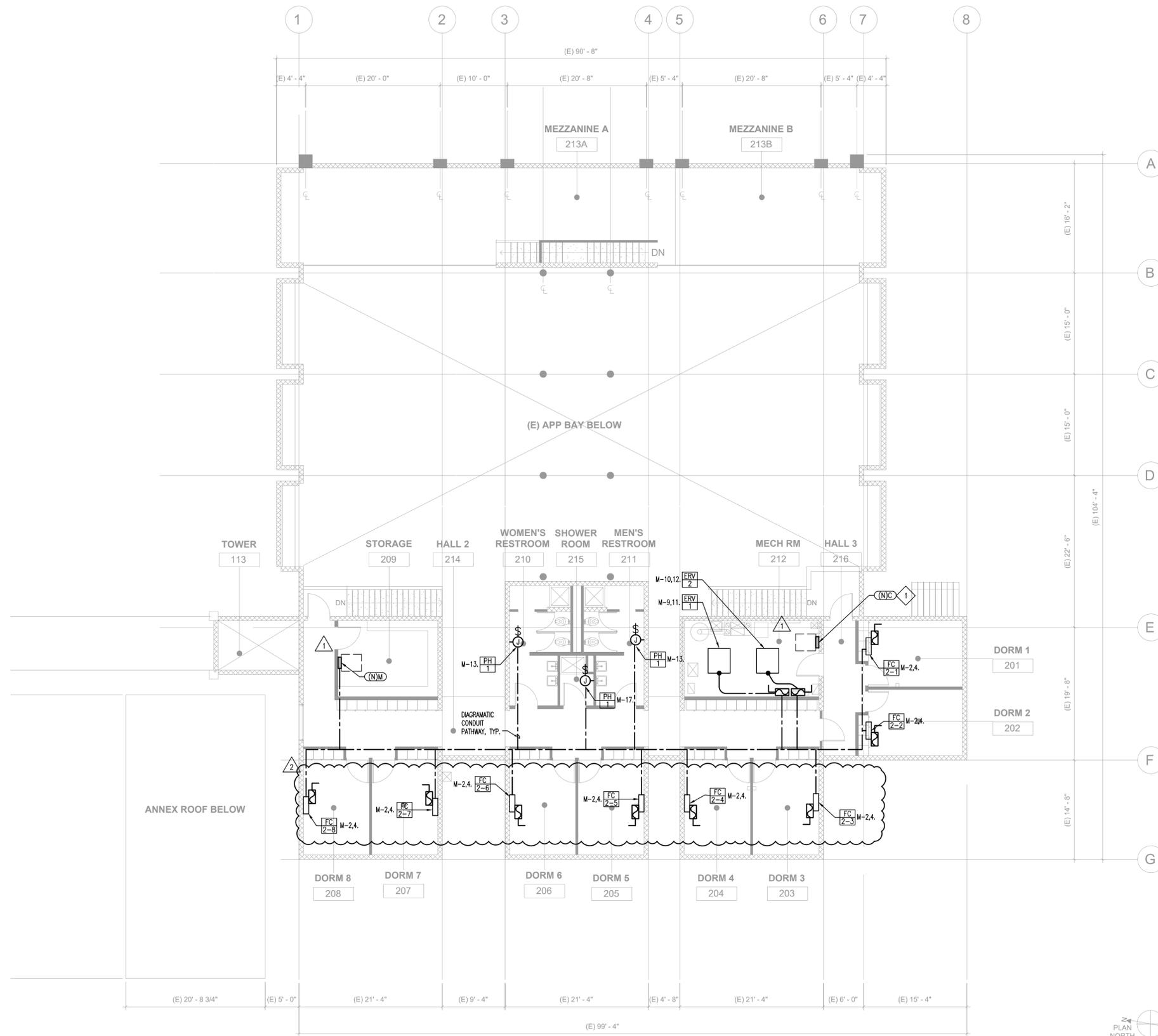
DATE:
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Date Signed: 9/6/24

SHEET TITLE:
**GROUND FLOOR
PLAN -
ELECTRICAL**

SHEET NUMBER:
E201



GENERAL SHEET NOTES

- A. COORDINATE EXACT LOCATION AND MOUNTING HEIGHT OF RECEPTACLES, VOICE/DATA OUTLETS AND ELECTRICAL DEVICES WITH ARCHITECT PRIOR TO INSTALLATION.
- B. IN FINISHED AREAS RUN ALL CONDUITS CONCEALED U.O.N. PAINT ALL EXPOSED CONDUITS AND ELECTRICAL EQUIPMENT, REFER TO ARCHITECT SPECIFICATIONS FOR PAINTING REQUIREMENTS.
- C. REFER TO SINGLE LINE DIAGRAMS, EQUIPMENT SCHEDULES, AND DETAILS FOR ADDITIONAL INFORMATION.
- D. SIZE FUSES FOR ALL MECHANICAL EQUIPMENT PER APPROVED MANUFACTURERS SHOP DRAWINGS.
- E. CONDUIT AND WIRING ARE SHOWN ON THESE PLANS DIAGRAMMATICALLY. EXACT ROUGH-IN LOCATIONS AND ROUTING SHALL BE DETERMINED IN THE FIELD TO SUIT SITE CONDITIONS AND IN COORDINATION WITH ARCHITECT.

SHEET NOTES

- 1. RECONNECT EXISTING BRANCH CIRCUITS COMPLETE TO PLACE BACK INTO SERVICE.



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PROJECT:
**FIRE STATION NO.2
REMODEL**

2029 BERKELEY WAY
BERKELEY, CA 94704

PROJECT NUMBER:
201320.31
CITY SPEC. NUMBER:
23-11575-C

CLIENT:
CITY OF BERKELEY
1947 CENTER ST. 4TH FLOOR
BERKELEY, CA 94704

PROJECT TEAM:
ARCHITECT:
ELS ARCHITECTURE AND URBAN DESIGN
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Berkeley, CA 94704
P: 510.549.2929

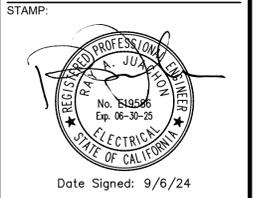
MECHANICAL AND PLUMBING
CANYON CONSULTING ENGINEERS
3260 Blume Drive, Suite 240
Richmond, CA 94806
P: 510.243.5987

ELECTRICAL ENGINEER:
RIJA INC.
5515 Doyle Street, #7
Emeryville, CA 94608
P: 415.730.7994

STRUCTURAL ENGINEER
IDA STRUCTURAL ENGINEERS, INC.
1629 Telegraph Avenue, #300
Oakland, CA 94612
P: 510.834.1629

REVISION		
NUMBER	DATE	DESCRIPTION
1	03/08/2024	PLAN CHECK 1
2	08/27/2024	REVISION 1

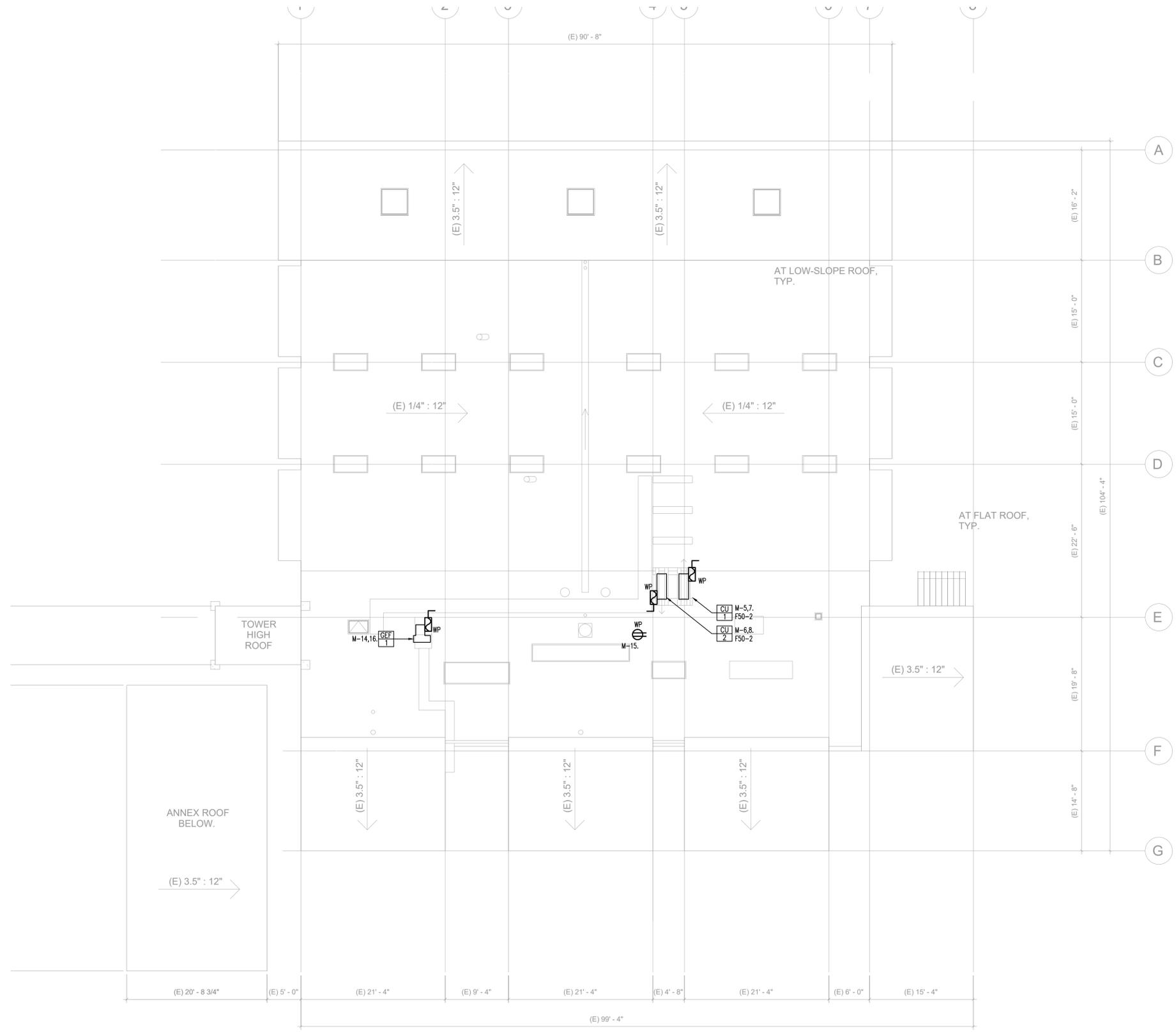
ISSUE:
ISSUE FOR PERMIT
DATE:
OCTOBER 30, 2023



SHEET TITLE:
**SECOND FLOOR
PLAN -
ELECTRICAL**

SHEET NUMBER:
E202

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



GENERAL SHEET NOTES

- A. WHERE PANELBOARDS ARE LOCATED ON FLOOR BELOW TO FEED ITEMS ON ROOF, PENETRATE ROOF FROM SPACE BELOW TO LOCATION OF DEVICE OR MOTOR. SMALL SECTIONS OF HORIZONTAL CONDUIT NOT EXCEEDING 10'-0" ARE PERMITTED WHERE:
 - A.A. INSTALLED LOCAL TO EQUIPMENT SERVED.
 - A.B. WITHIN PROXIMITY OF EQUIPMENT SERVED.
- B. USE LIQUID FLEXIBLE METAL CONDUIT FOR FINAL CONNECTION TO EQUIPMENT. MAXIMUM LENGTH OF LIQUID TIGHT FLEXIBLE METAL CONDUIT SHALL BE 6'-0". SUPPORT PER NEC ARTICLE 350.
- C. MOUNT DISCONNECT SWITCHES, COMBINATION STARTERS, RECEPTACLES, AND OTHER DEVICES FREE AND INDEPENDENT AND FREE OF MECHANICAL EQUIPMENT HOUSINGS. THE DISCONNECT MAY BE MOUNTED TO THE MECHANICAL EQUIPMENT SERVED FROM THE DISCONNECT WHERE ALL THE FOLLOWING CONDITIONS APPLY:
 - C.A. WHERE ACCEPTABLE TO THE MECHANICAL CONTRACTOR
 - C.B. WHERE APPROVED BY AHJ
 - C.C. WHERE THE LOCATION PROVIDES FREE AND CLEAR FRONT ACCESS TO DEVICES AND SWITCHES FOR SERVICE AND USE.
 - C.D. WHERE THE LOCATION DOES NOT INHIBIT ACCESS TO MECHANICAL EQUIPMENT FOR SERVICE, INSPECTION, AND OPERATION.
 - C.E. WHERE AIR FLOW PATHS ARE NOT OBSTRUCTED.
- D. COORDINATE ROOF PENETRATION AND FLASHING WITH ARCHITECT.
- E. CONSTRUCTION OF ROOF SUPPORTS (SLEEPERS) FOR RUNS OF HORIZONTAL CONDUIT TO BE INSTALLED AND ATTACHED TO ROOF STRUCTURE BY LICENSED ROOFING CONTRACTOR.
- F. SECURE CONDUITS TO SUPPORTS AT CODE REQUIRED INTERVALS.
- G. SEE ARCHITECTURAL DETAILS AND SPECIFICATIONS FOR ROOF PENETRATION MATERIALS AND ADDITIONAL ROOF PENETRATION INFORMATION.
- H. VERIFY EXACT LOCATION, LAYOUT AND ELECTRICAL REQUIREMENTS OF ALL MECHANICAL EQUIPMENT PRIOR TO ROUGH-IN.
- I. COORDINATE WITH APPROVED EQUIPMENT SUBMITTALS AND MECHANICAL CONTRACTOR FOR EXACT POINT OF CONNECTION(S) TO ALL UNITS AND LOCATE DISCONNECT WHERE CODE REQUIRED CLEARANCES WILL BE MAINTAINED. LOCATION OF DISCONNECT ARE DIAGRAMMATIC. CONTRACTOR SHALL PROVIDE FLOOR PEDESTALS OR STRUT AT THE ENCLOSURE FOR MOUNTING OF THE DISCONNECT.
- J. FIRE ALARM DEVICES, DAMPERS, SMOKE DETECTORS AND CONTROLS POWER SHALL BE COORDINATED WITH HVAC AND FIRE ALARM SYSTEM INSTALLER.



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PROJECT:
**FIRE STATION NO.2
REMODEL**

2029 BERKELEY WAY
BERKELEY, CA 94704

PROJECT NUMBER:
201320.31

CITY SPEC. NUMBER:
23-11575-C

CLIENT:
CITY OF BERKELEY
1947 CENTER ST. 4TH FLOOR
BERKELEY, CA 94704

PROJECT TEAM:
ARCHITECT:
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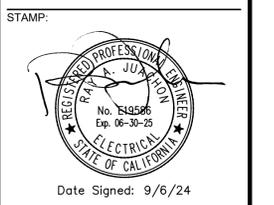
ELECTRICAL ENGINEER:
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STRUCTURAL ENGINEER
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REVISION		
NUMBER	DATE	DESCRIPTION
1	03/08/2024	PLAN CHECK 1

ISSUE:
ISSUE FOR PERMIT

DATE:
OCTOBER 30, 2023



SHEET TITLE:
**ROOF PLAN -
ELECTRICAL**

SHEET NUMBER:
E203

01 | ROOF PLAN - ELECTRICAL
SCALE: 1/8" = 1'-0"

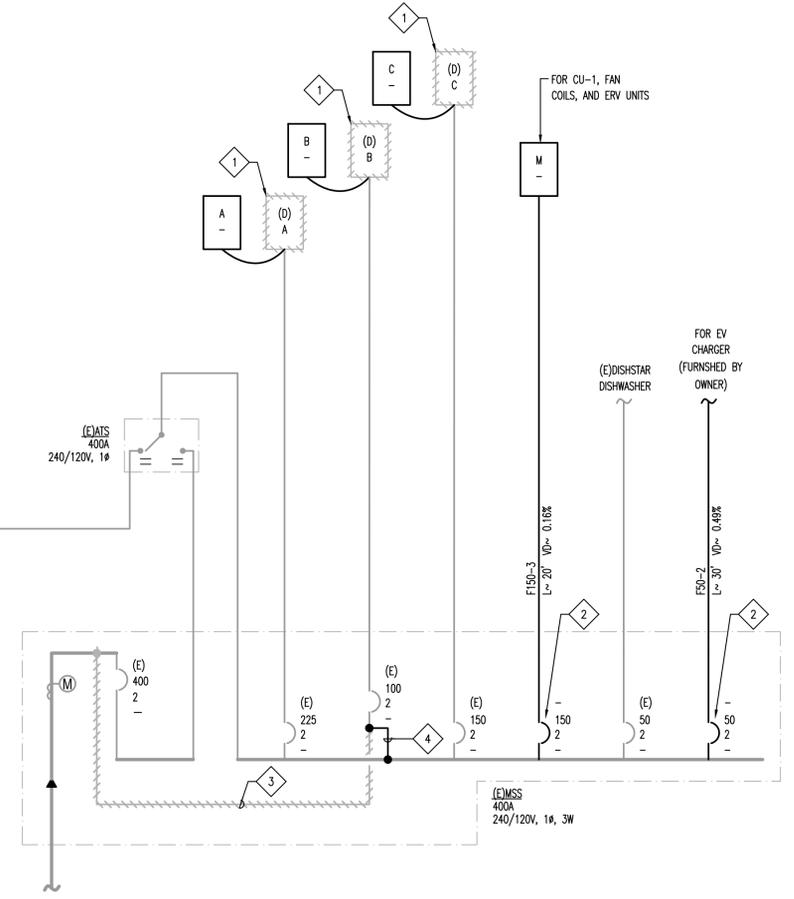
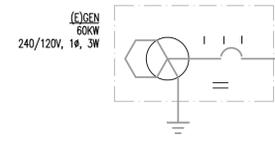
FEEDER SCHEDULE (COPPER)			
2 WIRE + GND			
FEEDER TAG	WIRE AND CONDUIT	MAXIMUM CIRCUIT BREAKER	ACTUAL FEEDER CAPACITY
F20-2	2 #12, 1#12 GND IN 3/4" C	20	20
F30-2	2 #10, 1#10 GND IN 3/4" C	30	30
F40-2	2 #8, 1#10 GND IN 3/4" C	40	40
F50-2	2 #6, 1#8 GND IN 3/4" C	60	55
F70-2	2 #4, 1#8 GND IN 1" C	70	70
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	MAXIMUM CIRCUIT BREAKER	ACTUAL FEEDER CAPACITY
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 #1/0, 1#6 GND IN 1-1/2" C	150	150
F175-3	3 #2/0, 1#6 GND IN 2" C	175	175
F200-3	3 #3/0, 1#6 GND IN 2" C	200	200
F225-3	3 #4/0, 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#2 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 #3/0, 1#2 GND IN 2" C)	400	400

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

GENERATOR LOAD CAPACITY
 THE PROPOSED LOAD ADDITIONS AND RESULTANT LOAD, 57KW IS WITHIN THE EXISTING GENERATOR SYSTEM CAPACITY.



GENERAL SHEET NOTES

- A. DERATE WIRE SIZE PER NEC FOR NUMBER OF CURRENT CARRYING WIRES AND FOR AMBIENT TEMPERATURE OF 86°F
- 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. DISCONNECT AND REMOVE EXISTING PANELBOARD, REPLACE WITH NEW, COMPLETE WITH NEW CIRCUIT BREAKERS, REFER TO SCHEDULES. PROVIDE NEW TYPE WRITTEN PANEL DIRECTORY.
2. PROVIDE NEW CIRCUIT BREAKER IN EXISTING SPACE, NEW CIRCUIT BREAKER TO MATCH EXISTING SWITCHBOARD MANUFACTURER AND AIC RATING.
3. DISCONNECT AND REMOVE EXISTING TAP CONDUCTORS THAT POWERS PANEL B UPSTREAM OF THE MAIN CIRCUIT BREAKER.
4. RE-CONNECT EXISTING PANEL B TO THE LOAD SIDE OF THE MAIN CIRCUIT BREAKER.

LOAD VERIFICATION	
EXISTING PEAK LOAD:	21 KW
DATE RECORDED:	BILLING CYCLE 11/19/21 TO 1/19/22
SOURCE:	PG&E UTILITY DATA
EXISTING SERVICE SIZE:	400 A 120/240V 1 PHASE
SERVICE CAPACITY:	96 KW
EXISTING PEAK LOAD X 125%:	26.25 KW
ADDED LOAD:	
HVAC	20 KW
HVAC @ ANNEX	2 KW
EV CHARGER	9.6 KW
TOTAL	58 KW 240 Amps

01 SINGLE LINE DIAGRAM
 SCALE: NTS



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PROJECT:

**FIRE STATION NO.2
 REMODEL**

2029 BERKELEY WAY
 BERKELEY, CA 94704

PROJECT NUMBER:
201320.31

CITY SPEC. NUMBER:
23-11575-C

CLIENT:
CITY OF BERKELEY
 1947 CENTER ST. 4TH FLOOR
 BERKELEY, CA 94704

PROJECT TEAM:
ARCHITECT:
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REVISION		
NUMBER	DATE	DESCRIPTION
1	03/08/2024	PLAN CHECK 1

ISSUE:
ISSUE FOR PERMIT

DATE:
OCTOBER 30, 2023

STAMP:



Date Signed: 9/6/24

SHEET TITLE:
**SINGLE LINE
 DIAGRAM**

SHEET NUMBER:

E301

PANEL A			VOLTAGE: 240/120 V PHASEWIRE: 1 PH 3W MAIN AMPS: M.L.O BUS AMPS: 225 A AIC RATING: MATCH (E) MOUNTING: SURFACE			PHASE A: 0 VA 0 A PHASE B: 0 VA 0 A CONNECTED: 0 VA 0 A DEMAND: 0 VA 0 A					
NOTES	LOAD DESCRIPTION	Φ	VA	BKR	CKT	CKT	BKR	VA	Φ	LOAD DESCRIPTION	NOTES
1	(EXISTING LOAD)	A			201 1	2	201		A	(EXISTING LOAD)	1
1	(EXISTING LOAD)	B			201 3	4	201		B	(EXISTING LOAD)	1
1	(EXISTING LOAD)	A			201 5	6	201		A	(EXISTING LOAD)	1
1	(EXISTING LOAD)	B			201 7	8	201		B	(EXISTING LOAD)	1
1	(EXISTING LOAD)	A			201 9	10	201		A	(EXISTING LOAD)	1
1	(EXISTING LOAD)	B			201 11	12	201		B	(EXISTING LOAD)	1
1	(EXISTING LOAD)	A			201 13	14	201		A	(EXISTING LOAD)	1
1	(EXISTING LOAD)	B			201 15	16	201		B	(EXISTING LOAD)	1
1	(EXISTING LOAD)	A			202 17	18	201		A	(EXISTING LOAD)	1
-	-	B			- 19	20	201		B	(EXISTING LOAD)	1
1	(EXISTING LOAD)	A			201 21	22	201		A	(EXISTING LOAD)	1
1	(EXISTING LOAD)	B			201 23	24	201		B	(EXISTING LOAD)	1
1	(EXISTING LOAD)	A			201 25	26	201		A	(EXISTING LOAD)	1
1	(EXISTING LOAD)	B			201 27	28	201		B	(EXISTING LOAD)	1
1	(EXISTING LOAD)	A			201 29	30	201		A	(EXISTING LOAD)	1
1	(EXISTING LOAD)	B			201 31	32	201		B	(EXISTING LOAD)	1
1	(EXISTING LOAD)	A			201 33	34	201		A	(EXISTING LOAD)	1
1	(EXISTING LOAD)	B			201 35	36	201		B	(EXISTING LOAD)	1
1	(EXISTING LOAD)	A			201 37	38	201		A	(EXISTING LOAD)	1
1	(EXISTING LOAD)	B			201 39	40	201		B	(EXISTING LOAD)	1
1	(EXISTING LOAD)	A			201 41	42	302		A	(EXISTING LOAD)	1
1	(EXISTING LOAD)	B			201 43	44	-		B	-	-
	SPARE	A			201 45	46	201		A	SPARE	
	SPARE	B			201 47	48	201		B	SPARE	
	SPARE	A			201 49	50	201		A	SPARE	
	SPARE	B			201 51	52	201		B	SPARE	
	SPARE	A			201 53	54	201		A	SPARE	
	SPARE	B			201 55	56	201		B	SPARE	
	SPARE	A			201 57	58	201		A	SPARE	
	SPARE	B			201 59	60	201		B	SPARE	
	SPACE	A			61	62			A	SPACE	
	SPACE	B			63	64			B	SPACE	
	SPACE	A			65	66			A	SPACE	
	SPACE	B			67	68			B	SPACE	
	SPACE	A			69	70			A	SPACE	
	SPACE	B			71	72			B	SPACE	
GENERAL NOTES						SCHEDULE NOTES					
a. NO LOAD IS ADDED TO THIS PANEL UNDER THIS SCOPE OF WORK						1. REFER TO EXISTING DIRECTORY FOR LOAD DESCRIPTION. PROVIDE					
b. BASIS OF DESIGN: SQUARE D NO. 72 SPACE PANELBOARD						NEW TYPE-WRITTEN PANEL DIRECTORY.					
c.						2.					
LOAD TYPE	LOAD DESCRIPTION	CONNECTED (kVA)	SUBFED (kVA)	TOTAL BY TYPE (kVA)	DEMAND FACTOR (kVA)	DEMAND BY TYPE (kVA)					
G	GENERAL	0.00	0.00	0.00	100%	0.00					
L	LIGHTING	0.00	0.00	0.00	125%	0.00					
R	RECEPTACLES	0.00	0.00	0.00	100%/50%	0.00					
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	100%	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					

PANEL B			VOLTAGE: 240/120 V PHASEWIRE: 1 PH 3W MAIN AMPS: M.L.O BUS AMPS: 100 A AIC RATING: MATCH (E) MOUNTING: SURFACE			PHASE A: 915 VA 7.6 A PHASE B: 1275 VA 10.6 A CONNECTED: 2190 VA 9.1 A DEMAND: 2190 VA 9.1 A					
NOTES	LOAD DESCRIPTION	Φ	VA	BKR	CKT	CKT	BKR	VA	Φ	LOAD DESCRIPTION	NOTES
1	(EXISTING LOAD)	A			201 1	2	201		A	(EXISTING LOAD)	1
1	(EXISTING LOAD)	B			201 3	4	201		B	(EXISTING LOAD)	1
1	(EXISTING LOAD)	A			201 5	6	201		A	(EXISTING LOAD)	1
1	(EXISTING LOAD)	B			201 7	8	302		B	(EXISTING LOAD)	1
1	(EXISTING LOAD)	A			201 9	10	-		A	-	-
	CU-3	B	915	M	30/2 11	12			B	SPACE	
		A	915	M	- 13	14			A	SPACE	
	RECEPTACLE - EXTERIOR	B	360	R	- 15	16			B	SPACE	
	SPACE	A			17	18			A	SPACE	
	SPACE	B			19	20			B	SPACE	
	SPACE	A			21	22			A	SPACE	
	SPACE	B			23	24			B	SPACE	
	SPACE	A			25	26	202		A	(EXISTING LOAD)	1
	SPACE	B			27	28	-		B	-	-
	SPACE	A			29	30			A	SPACE	
GENERAL NOTES						SCHEDULE NOTES					
a.						1. REFER TO EXISTING DIRECTORY FOR LOAD DESCRIPTION. PROVIDE					
b.						NEW TYPE-WRITTEN PANEL DIRECTORY.					
c.						2.					
LOAD TYPE	LOAD DESCRIPTION	CONNECTED (kVA)	SUBFED (kVA)	TOTAL BY TYPE (kVA)	DEMAND FACTOR (kVA)	DEMAND BY TYPE (kVA)					
G	GENERAL	0.00	0.00	0.00	100%	0.00					
L	LIGHTING	0.00	0.00	0.00	125%	0.00					
R	RECEPTACLES	0.36	0.00	0.36	100%/50%	0.36					
K	KITCHEN	0.00	0.00	0.00	100%	0.00					
H	HEATING	0.00	0.00	0.00	100%	0.00					
M	MOTORS	1.83	0.00	1.83	100%	1.83					
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					

PANEL C			VOLTAGE: 240/120 V PHASEWIRE: 1 PH 3W MAIN AMPS: M.L.O BUS AMPS: 225 A AIC RATING: MATCH (E) MOUNTING: SURFACE			PHASE A: 0 VA 0 A PHASE B: 0 VA 0 A CONNECTED: 0 VA 0 A DEMAND: 0 VA 0 A					
NOTES	LOAD DESCRIPTION	Φ	VA	BKR	CKT	CKT	BKR	VA	Φ	LOAD DESCRIPTION	NOTES
1	(EXISTING LOAD)	A			201 1	2	201		A	(EXISTING LOAD)	1
1	(EXISTING LOAD)	B			201 3	4	201		B	(EXISTING LOAD)	1
1	(EXISTING LOAD)	A			201 5	6	201		A	(EXISTING LOAD)	1
1	(EXISTING LOAD)	B			201 7	8	302		B	(EXISTING LOAD)	1
1	(EXISTING LOAD)	A			201 9	10	-		A	-	-
1	(EXISTING LOAD)	B			201 11	12	201		B	(EXISTING LOAD)	1
1	(EXISTING LOAD)	A			201 13	14	201		A	(EXISTING LOAD)	1
1	(EXISTING LOAD)	B			201 15	16	201		B	(EXISTING LOAD)	1
1	(EXISTING LOAD)	A			XX02 17	18	301		A	(EXISTING LOAD)	1
-	-	B			- 19	20	301		B	(EXISTING LOAD)	1
1	(EXISTING LOAD)	A			XX02 21	22	301		A	(EXISTING LOAD)	1
-	-	B			- 23	24	301		B	(EXISTING LOAD)	1
1	(EXISTING LOAD)	A			201 25	26	201		A	(EXISTING LOAD)	1
1	(EXISTING LOAD)	B			201 27	28	201		B	(EXISTING LOAD)	1
1	(EXISTING LOAD)	A			201 29	30	201		A	(EXISTING LOAD)	1
1	(EXISTING LOAD)	B			201 31	32	201		B	(EXISTING LOAD)	1
1	(EXISTING LOAD)	A			201 33	34	201		A	(EXISTING LOAD)	1
1	(EXISTING LOAD)	B			302 35	36	201		B	(EXISTING LOAD)	1
-	-	A			- 37	38			A	SPACE	
1	(EXISTING LOAD)	B			302 39	40	502		B	(EXISTING LOAD)	1
-	-	A			- 41	42	-		A	-	-
	SPARE	B			201 43	44	201		B	SPARE	
	SPARE	A			201 45	46	201		A	SPARE	
	SPARE	B			201 47	48	201		B	SPARE	
	SPARE	A			201 49	50	201		A	SPARE	
	SPARE	B			201 51	52	201		B	SPARE	
	SPARE	A			201 53	54	201		A	SPARE	
	SPARE	B			201 55	56	201		B	SPARE	
	SPACE	A			57	58			A	SPACE	
	SPACE	B			59	60			B	SPACE	
	SPACE	A			61	62			A	SPACE	
	SPACE	B			63	64			B	SPACE	
	SPACE	A			65	66			A	SPACE	
	SPACE	B			67	68			B	SPACE	
	SPACE	A			69	70			A	SPACE	
	SPACE	B			71	72			B	SPACE	
GENERAL NOTES						SCHEDULE NOTES					
a. NO LOAD IS ADDED TO THIS PANEL UNDER THIS SCOPE OF WORK						1. REFER TO EXISTING DIRECTORY FOR LOAD DESCRIPTION. PROVIDE					
b. BASIS OF DESIGN: SQUARE D NO. 72 SPACE PANELBOARD						NEW TYPE-WRITTEN PANEL DIRECTORY.					
c.						2.					
LOAD TYPE	LOAD DESCRIPTION	CONNECTED (kVA)	SUBFED (kVA)	TOTAL BY TYPE (kVA)	DEMAND FACTOR (kVA)	DEMAND BY TYPE (kVA)					
G	GENERAL	0.00	0.00	0.00	100%	0.00					
L	LIGHTING	0.00	0.00	0.00	125%	0.00					
R	RECEPTACLES	0.00	0.00	0.00	100%/50%	0.00					
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	100%	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					

PANEL M			VOLTAGE: 240/120 V PHASEWIRE: 1 PH 3W MAIN AMPS: M.L.O BUS AMPS: 225 A AIC RATING: 22000 A MOUNTING: SURFACE			PHASE A: 10384 VA 86.5 A PHASE B: 9344 VA 77.9 A CONNECTED: 19728 VA 82.2 A DEMAND: 19728 VA 82.2 A					
NOTES	LOAD DESCRIPTION	Φ	VA	BKR	CKT	CKT	BKR	VA	Φ	LOAD DESCRIPTION	NOTES
	FAN COILS 1ST FLOOR	A	105	M	20/2 1	2	202	M	207	A	FAN COILS 2ND FLOOR
		B	105	M	- 3	4	-	M	207	B	-
	CU-1	A	3456	M	4/5/2 5	6	45/2	M	3456	A	CU-2
		B	3456	M	- 7	8	-	M	3456	B	-
	ERV-1	A	490	M	15/2 9	10	15/2	M	490	A	ERV-2
		B	490	M	- 11	12	-	M	490	B	-
	PH-1	A	800	H	20/1 13	14	20/2	M	960	A	GEF-1
	ROOF RECEPT	B	180	R	20/1 15	16	-	M	960	B	-
	PH-1	A	400	H	20/1 17	18	20/1	M	20	A	LEF-1
	SPARE	B			20/1 19	20	20/1		B	SPARE	
	SPACE	A			21	22			A	SPACE	
	SPACE	B			23	24			B	SPACE	
	SPACE	A			25	26			A	SPACE	
	SPACE	B			27	28			B	SPACE	
	SPACE	A			29	30			A	SPACE	
	SPACE	B			31	32			B	SPACE	
	SPACE	A			33	34			A	SPACE	
	SPACE	B			35	36			B	SPACE	
	SPACE	A			37	38			A	SPACE	
	SPACE	B			39	40			B	SPACE	
	SPACE	A			41	42			A	SPACE	
GENERAL NOTES						SCHEDULE NOTES					
a.						1.					
b.						2.					
c.						3.					
LOAD TYPE	LOAD DESCRIPTION	CONNECTED (kVA)	SUBFED (kVA)	TOTAL BY TYPE (kVA)	DEMAND FACTOR (kVA)	DEMAND BY TYPE (kVA)					
G	GENERAL	0.00	0.00	0.00	100%	0.00					
L	LIGHTING	0.00	0.00	0.00	125%	0.00					
R	RECEPTACLES	0.18	0.00	0.18	100%/50%	0.18					
K	KITCHEN	0.00	0.00	0.00							

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

CERTIFICATE OF COMPLIANCE Project Name: FIRE STATION NO.2 REMODEL Report Page: (Page 1 of 4) Date Prepared: 2023-10-20T14:16:17-04:00

Table with 4 columns: 01 Project Location (city), 02 Climate Zone, 03 Occupancy Types Within Project, 04 Demand Response Controls

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

Table with 7 columns: 01 Electrical Service Designation/Description, 02 Scope of Work, 03 Rating (kVA), 04 Utility Provided Metering System Exception to 130.5(a)/160.6(a), 05 System subject to CA Elec Code Article 517 Exception to 130.5(a) and (b), 06 Demand Response Controls, 07 Provides power to dwelling units/common living areas only in multifamily occupancy

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.

Generated Date/Time: Report Version: 2022.0.000 Schema Version: rev 20220101 Compliance ID: 150535-1023-0002 Report Generated: 2023-10-20 11:16:20

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

CERTIFICATE OF COMPLIANCE Project Name: FIRE STATION NO.2 REMODEL Report Page: (Page 3 of 4) Date Prepared: 2023-10-20T14:16:17-04:00

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.

Table with 2 columns: 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.

Generated Date/Time: Report Version: 2022.0.000 Schema Version: rev 20220101 Compliance ID: 150535-1023-0002 Report Generated: 2023-10-20 11:16:20

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

CERTIFICATE OF COMPLIANCE Project Name: FIRE STATION NO.2 REMODEL Report Page: (Page 2 of 4) Date Prepared: 2023-10-20T14:16:17-04:00

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.

Table with 6 columns: 01 Service Electrical Metering 130.5(a)/160.6(a), 02 Separation for Monitoring 130.5(b)/160.6(b), 03 Voltage Drop 130.5(c)/160.6(c), 04 Controlled Receptacles 130.5(d)/160.6(d), 05 Electric Ready 160.9, 06 Compliance Results

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).

Table with 5 columns: 01 Electrical Service Designation/Description, 02 Combined Voltage Drop on Installed Feeder/Branch Circuit Conductors Compliance Method, 03 Location of Voltage Drop Calculations, 04 Sheet Number for Voltage Drop Calculations in Construction Documents, 05 Field Inspector

* NOTES: If "Permitted by CA Elec Code" is selected under Compliance Method above, please indicate where the exception applies in the space provided below.

FOOTNOTES: Voltage drop calculations may be attached to the permit application outside the construction documents if allowed by the Authority Having Jurisdiction.

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

CERTIFICATE OF COMPLIANCE Project Name: FIRE STATION NO.2 REMODEL Report Page: (Page 4 of 4) Date Prepared: 2023-10-20T14:16:17-04:00

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Ray Juachon, Signature Date: 10/20/23, Address: 5515 Doyle Street, #7, Emeryville, CA 94608

RESPONSIBLE PERSON'S DECLARATION STATEMENT

- I certify the following under penalty of perjury, under the laws of the State of California: 1. The information provided on this Certificate of Compliance is true and correct.

Responsible Designer Name: Ray Juachon, Signature Date: 10/20/23, License: E19586, Address: 5515 Doyle Street, #7, Emeryville, CA 94608

Generated Date/Time: Report Version: 2022.0.000 Schema Version: rev 20220101 Compliance ID: 150535-1023-0002 Report Generated: 2023-10-20 11:16:20



2040 Addison St, Berkeley, CA 94704 510.549.2929 | elsarch.com

PROJECT: FIRE STATION NO.2 REMODEL

2029 BERKELEY WAY BERKELEY, CA 94704

PROJECT NUMBER: 201320.31 CITY SPEC. NUMBER: 23-11575-C

CLIENT: CITY OF BERKELEY 1947 CENTER ST. 4TH FLOOR BERKELEY, CA 94704

PROJECT TEAM: ARCHITECT: ELS ARCHITECTURE AND URBAN DESIGN 2040 Addison Street Berkeley, CA 94704 P: 510.549.2929

MECHANICAL AND PLUMBING CANYON CONSULTING ENGINEERS 3260 Blume Drive, Suite 240 Richmond, CA 94806 P: 510.243.9887

ELECTRICAL ENGINEER: RIJA INC. 5515 Doyle Street, #7 Emeryville, CA 94608 P: 415.730.7994

STRUCTURAL ENGINEER: IDA STRUCTURAL ENGINEERS, INC. 1629 Telegraph Avenue, #300 Oakland, CA 94612 P: 510.834.1629

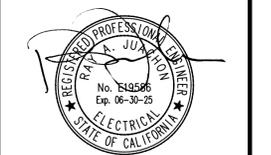
REVISION

Table with 3 columns: NUMBER, DATE, DESCRIPTION. Row 1: 1, 03/08/2024, PLAN CHECK 1

ISSUE: ISSUE FOR PERMIT

DATE: OCTOBER 30, 2023

STAMP:



Date Signed: 9/6/24

SHEET TITLE: TITLE 24

SHEET NUMBER: E501

