

3001 REDHILL AVENUE, SUITE 117, 118, 119
COSTA MESA, CA 92626

JASON BURLEY
714.966.4454 (P)

JASON DONTJE, AIA, NCARB
949.228.7528 (P)

HUY LE
714.693.2277 EXT. 787 (P)

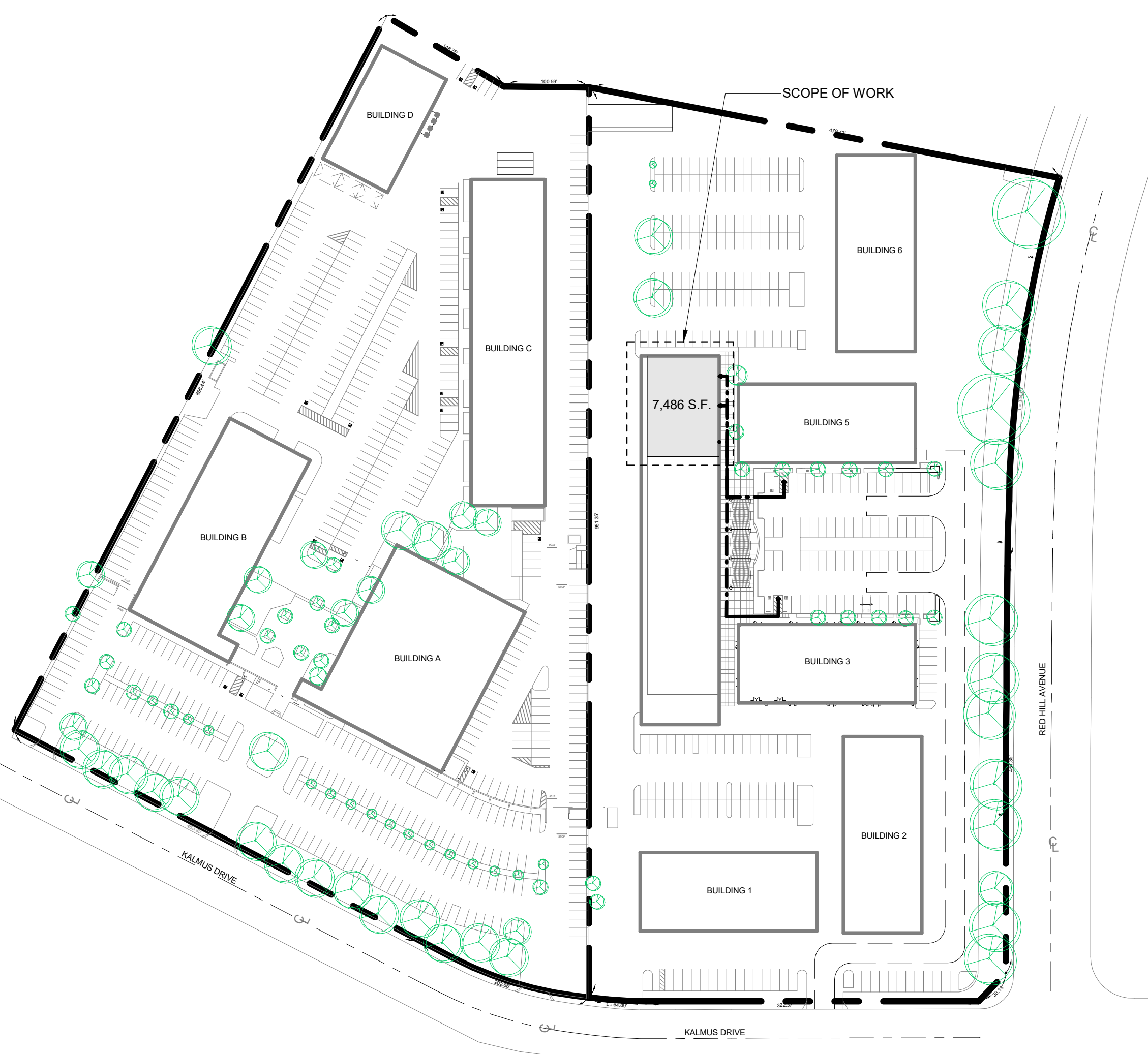
ABBY BANERJEE
714.925.5118 (P)

ANDY CHAN
559.347.8249 (P)

These drawings have been prepared as one coordinated set of drawings and are complimentary. What is required by one drawing is required by all of the drawings, even if a detail or component part is not identified on every sheet. Any user's reliance on a single or select few sheet(s) of the drawings without consideration for the information included in the entire set of drawings will be at the user's sole risk and shall not form the basis for a request for additional compensation or time.

SCOPE OF WORK: 7,486 SF TENANT IMPROVEMENTS ALTERATIONS IN EXISTING OFFICE AREA. INCLUDES NON-BEARING PARTITIONS AND EXISTING NON-BEARING PARTITION ALTERATIONS, PATCH & REPAIR OF EXISTING INTERIOR FINISHES, NEW PAINT, NEW CEILING, NEW LIGHT FIXTURES, MINOR HVAC ALTERATIONS.

1. ALL SCREEN/HALF-TONE LINES INDICATE EXISTING ITEMS TO REMAIN (TYP., UNLESS NOTED OTHERWISE).	11. DAMAGES TO EXISTING STRUCTURE, UTILITIES AND OTHER ITEMS WHICH ARE CAUSED BY CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED TO THEIR ORIGINAL CONDITION.
2. ALL DASHED LINES INDICATE EXISTING ITEMS TO BE REMOVED (TYP., UNLESS NOTED OTHERWISE).	12. MAINTAIN AND KEEP CLEAR ALL REQUIRED FIRE EXITS THROUGHOUT FACILITY WITHIN AND IN VICINITY OF CONSTRUCTION AREAS. COORDINATE ALTERNATE TEMPORARY EGRESS ROUTES WITH OWNER AND LOCAL FIRE AUTHORITY.
3. WORK IS REQUIRED TO BE PERFORMED WITHIN EXISTING BUILDING. EACH CONTRACTOR WILL HAVE ACCESS TO AREAS IN WHICH THIS WORK OCCURS.	13. MAINTAIN EXISTING BUILDING IN A WEATHERTIGHT CONDITION THROUGHOUT CONSTRUCTION PERIOD. REPAIR LEAKS AND WATER SEALS IN EXISTING CONSTRUCTION OPERATIONS. TAKE ALL PRECAUTION NECESSARY TO PROTECT BUILDING AND ITS OCCUPANTS DURING CONSTRUCTION PERIOD.
4. OWNER WILL OCCUPY EXISTING BUILDING DURING LIFE OF THIS CONTRACT. EXISTING BUILDING WORK WILL BE LIMITED TO MINIMUM NECESSARY TO PREVENT INTERFERENCE TO PUBLIC, STAFF AND OWNER'S OPERATIONS. CONTRACTOR MUST OBTAIN APPROVAL OF OWNER BEFORE STARTING ANY WORK WITHIN ANY EXISTING AREA OF BUILDING.	14. THE DEMOLITION DRAWINGS FOR ARCHITECTURAL AND ENGINEERING WORK HAVE BEEN PREPARED USING (AS DESIGNED) DOCUMENTS PROVIDED BY THE OWNER. NEITHER THE OWNER NOR THE ARCHITECT WARRANTS THESE TO BE (AS-BUILT) DOCUMENTS AND ACTUAL CONDITIONS MAY VARY.
5. AREA IMMEDIATELY SURROUNDING ALL AREAS OF WORK SHALL BE PROTECTED FROM DAMAGE BY MATERIALS BEING DROPPED OR DISCLOSED.	15. CONTRACTOR SHALL DISPOSE OF ALL ITEMS - OWNER RESERVES THE RIGHT TO SELECT SPECIFIC ITEMS FOR SALVAGE.
6. WORK SHALL BE CARRIED OUT IN A MANNER THAT WILL NOT IMPOSE AVOIDABLE HANDSHP, DAMAGE OR INCONVENIENCE TO PUBLIC OR STAFF. WORK SHALL BE PLANNED SO AS TO MINIMIZE SHUTDOWN TIME OR ANY SERVICE.	16. PROVIDE TEMPORARY DUST, SIGHT, AND SOUND BARRIERS WHEREVER NECESSARY TO LIMIT THE AMOUNT OF NOISE, DUST AND VISUAL POLLUTION WHICH REACHES AND AROUND THE EXISTING BUILDING AND THE ADJACENT OCCUPIED AREAS. IN THE EXISTING BUILDING 24 HOURS PER DAY. THE EXACT LOCATION AND QUANTITY OF TEMPORARY BARRIERS IS TO BE DETERMINED BY THE CONTRACTOR IN CONJUNCTION WITH THE ARCHITECT. INTERIOR PARTITIONS ARE DEFINED FOR THESE PURPOSES AS FULL HEIGHT 3'-6" METAL STUD WITH GWS FINISH, PAINTED COLOR AS SELECTED BY OWNER. SOUND INSULATED WITH 1" MINIMUM UNFACED MINERAL WOOL INSULATION BLANKETS AND SEALED TOP, BOTTOM, AND ENDS TO PREVENT THE PASSAGE OF DUST AND NOISE.
7. REVIEW ALL EXISTING CONDITIONS, DRAWINGS AND OTHER DOCUMENTS FOR PROPER COORDINATION BETWEEN NEW AND EXISTING CONSTRUCTION.	17. SAFETY DURING CONSTRUCTION TO COMPLY WITH CFC & CBC CHAPTER 33.
8. ACTIVE UTILITIES WHOS LOCATIONS ARE UNKNOWN TO OWNER ARE SUSPECTED TO EXIST. CONTRACTOR SHALL BE CAUTION OF THEIR EXISTENCE. IF THEY ARE ENCOUNTERED, IMMEDIATE REPORT TO OWNER FOR DIRECTOR.	
9. LIMIT USE AND OPERATION AT SITE TO "LIMITS OF CONSTRUCTION," INDICATED BY THE REQUIRED TO PERFORM WORK. PORTIONS OF SITE BEYOND AREA OF REQUIRED WORK SHALL NOT BE DISTURBED WITHOUT WRITTEN APPROVAL OF OWNER.	
10. LIMIT USE AND OPERATION WITHIN EXISTING FACILITIES AND AREAS INDICATED FOR CONSTRUCTION WORK AND AS REQUIRED TO PERFORM WORK. OTHER AREAS WITHIN FACILITY SHALL NOT BE DISTURBED OR DISRUPTED.	

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G-000

2025 CALIFORNIA GREEN BUILDING STANDARDS CODE

NONRESIDENTIAL MANDATORY MEASURES, SHEET 1 (January 2025)

AGENCY APPROVAL

CHAPTER 3 GREEN BUILDING

SECTION 301 GENERAL

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

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

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

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

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

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

301.4 PUBLIC SCHOOLS AND COMMUNITY COLLEGES. (see BGSC)

301.5 HEALTH FACILITIES. (see BGSC)

SECTION 302 MIXED OCCUPANCY BUILDINGS

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

SECTION 303 PHASED PROJECTS

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

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

ABBREVIATION DEFINITIONS:

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

CHAPTER 5 NONRESIDENTIAL MANDATORY MEASURES DIVISION 5.1 PLANNING AND DESIGN

SECTION 5.101 GENERAL

5.101.1 SCOPE

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

SECTION 5.102 DEFINITIONS

5.102.1 DEFINITIONS

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

CUTOFF LUMINAIRES. Luminaires whose light distribution is such that the candela per 1000 lamp lumens does not numerically exceed 25 (2.5 percent) at an angle of 90 degrees above nadir, and 100 (10 percent) at a vertical angle of horizontally exceed 25 (2.5 percent) at an angle of 60 degrees above nadir, and 100 (10 percent) at a vertical angle of 60 degrees above nadir. The applies to all lateral angles around the luminaire.

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

ZEV. [BSC-CG, DSA-SS] Any vehicle certified to zero-emission standards.

SECTION 5.105 DECONSTRUCTION AND REUSE OF EXISTING STRUCTURES

5.105.1 Scope. [BSC-CG] Effective July 1, 2024, alterations to existing buildings where the combined altered floor area is 100,000 square feet or greater shall comply with either Section 5.105.2, 5.409.2, or 5.409.3. Addition(s) to existing building(s) where the total floor area combined with the existing building(s) is 100,000 square feet or greater shall comply with either Section 5.105.2, Section 5.409.2, or Section 5.409.3. Effective January 1, 2026, the combined floor area shall be 50,000 square feet or greater.

[DSA-SS] Alteration(s) to existing building(s) where the combined altered floor area is 50,000 square feet or greater shall comply with either Section 5.105.2, 5.409.2, or 5.409.3. Addition(s) to existing building(s) where the total floor area combined with the existing building(s) is 50,000 square feet or greater shall comply with either Section 5.105.2, Section 5.409.2, or Section 5.409.3.

Exception [BSC-CG, DSA-SS]: Combined addition(s) to existing building(s) of two times the area or more of the existing building(s) is not eligible to meet compliance with Section 5.105.2.

5.105.2 Reuse of existing building. An alteration or addition to an existing building shall maintain at a minimum 45 percent combined of the existing building's primary structural elements (foundations, columns, beams, walls, and floors; and lateral elements) and existing building enclosure (roof framing, wall framing and exterior finishes). Window assemblies, insulation, portions of buildings deemed structurally unsound or hazardous, and hazardous materials that are remediated as part of the project shall not be included in the calculation.

5.105.2.1 Verification of compliance. Documentation shall be provided in the construction documents to demonstrate compliance with Section 5.105.2.

Note: Sample Worksheet WS-3 in Chapter 8 may be used to assist in documenting compliance with this section.

5.105.3 Deconstruction (Reserved).

SECTION 5.106 SITE DEVELOPMENT

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

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

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

- Soil loss BMPs that should be considered for implementation as appropriate for each project include, but are not limited to, the following:
 - Scheduling construction activity during dry weather, when possible.
 - Preservation of natural features, vegetation, soil, and buffers around surface waters.
 - Drainage swales or lined ditches to control stormwater flow.
 - Mulching or hydrosediment to stabilize disturbed soil.
 - Erosion control to protect slopes.
 - Protection of storm drain inlets (gravel or straw filter socks).
 - Perimeter sediment control (permeable or non-permeable).
 - Sediment trap or sediment basin to filter runoff.
 - Stabilized construction exits.
 - Wind erosion control.
 - Other soil loss BMPs acceptable to the enforcing agency.

- Good housekeeping BMPs to manage construction equipment, materials, non-stormwater discharges and wastes that should be considered for implementation as appropriate for each project include, but are not limited to, the following:
 - Devolving activities.
 - Material handling and waste management.
 - Building materials stockpile management.
 - Management of washout areas (concrete, paint, sludge, etc.).
 - Control of vehicle/equipment fueling to contractor's staging area.
 - Vehicle and equipment cleaning performed off site.
 - Spill prevention and control.
 - Other housekeeping BMPs acceptable to the enforcing agency.

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

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

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

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

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

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

5.106.4.1.1 Short-term bicycle parking. If the new project or an addition or alteration is anticipated to generate visitors, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 20% of the peak daily visitors, with a minimum of one two-bike capacity rack.

Exception: Additions or alterations which add nine or less visitor vehicular parking spaces.

5.106.4.1.2 Long-term bicycle parking. Acceptable bicycle parking facility for Section 5.106.4.1.2.1, 5.106.4.1.2.2 and 5.106.4.1.2.3 shall be conveniently located near the street and shall meet one of the following:

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

Calculations for bicycle parking requirements shall be rounded up to the nearest whole number.

5.106.4.1.2.1

For new buildings with tenant spaces, provide secure bicycle parking for 10 percent of the tenant-occupants, with a minimum of one bicycle parking facility.

5.106.4.1.2.2

For additions or alterations, provide secure bicycle parking for 10 percent of the tenant-occupants being added, with a minimum of one bicycle parking facility.

5.106.4.1.2.3

For new shell buildings in phased projects, provide secure bicycle parking facility for 10 percent of the anticipated tenant-occupants, with a minimum of one bicycle parking facility.

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

5.106.4.2.1 Student bicycle parking. Provide permanently anchored bicycle racks conveniently accessed with a minimum of four two-bike capacity racks per new building.

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

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

5.106.5.3 Electric vehicle (EV) charging. [N] [BSC-CG] Construction to provide electric vehicle infrastructure and facilitate electric vehicle charging shall comply with Section 5.106.5.3.1 EV capable spaces, Section 5.106.5.3.2 Electric vehicle charging stations and associated Table 5.106.5.3.1, or Section 5.106.5.3.6 Electric vehicle charging stations (EVCS)—Power allocation method and associated Table 5.106.5.3.6 shall be provided in accordance with regulations in the California Building Code and the California Electrical Code.

Exceptions:

- On a case-by-case basis where the local enforcing agency has determined compliance with this section is not feasible based upon one of the following conditions:
 - Where there is no local utility power supply.
 - Where the local utility is unable to supply adequate power.
 - Where there is evidence suitable to the local enforcement agency substantiating the local utility infrastructure design requirements, directly related to the implementation of Section 5.106.5.3, may adversely impact the construction cost of the project.
 - Where demonstrated as impracticable excluding local utility service or utility infrastructure issues.
- Remote parking facilities that do not have access to the building service panel.
- Parking area lighting upgrades where no trenching is part of the scope of work.
- Emergency repairs, including but not limited to water line break in parking facilities, natural disaster repairs, etc.

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

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

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

TABLE 5.106.5.3.1 EV CAPABLE SPACES AND EVCS			
TOTAL NUMBER OF ACTUAL PARKING SPACES	NUMBER OF REQUIRED EV CAPABLE SPACES	OTHER THAN OFFICE AND RETAIL NUMBER OF REQUIRED EVCS*	OFFICE AND RETAIL NUMBER OF REQUIRED EVCS*
1-9	0	0	0
10-25	4	2	0
26-50	8	4	6
51-75	13	6	8
76-100	17	8	13
101-150	25	12	19
151-200	35	18	26
201 AND OVER	20 PERCENT OF ACTUAL PARKING SPACES	50 PERCENT OF EV CAPABLE SPACES	75 PERCENT OF EV CAPABLE SPACES

- Calculation for spaces shall be rounded up to the nearest whole number.
- Each EVCS shall reduce the number of required capable spaces by the same number.
- At least one Level 2 EVSE shall be provided.

5.106.5.3.2 Electric vehicle charging stations (EVCS) EV capable spaces shall be provided with electric vehicle supply equipment (EVSE) to create EVCS in the number indicated in Table 5.106.5.3.1. The EVCS shall be provided with Table 5.106.5.3.1 shall be provided with Level 2 EVSE or DCFC as permitted in Section 5.106.5.3.2.2. At least one Level 2 EVSE shall be provided.

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

5.106.5.3.2.1 Receptacle configurations. 208/240V EV charging receptacles shall comply with one of the following configurations:

- For 20-ampere receptacles, NEMA 6-20R
- For 30-ampere receptacles, NEMA 14-30R
- For 50-ampere receptacles, NEMA 14-50R

5.106.5.3.2.2 EV charger connectors. EV chargers shall be equipped with SAE J1772 with a maximum output 240 Volts AC or SAE J3400 connectors. When using level 2 SAE J3400 SAE connectors, supplied by a 480 V 3-phase service, at least 20 percent of the EV charger connectors shall be SAE J1772 with a maximum output 240 Volts AC.

5.106.5.3.2.3 The installation of each DCFC EVSE shall be permitted to reduce the minimum number of required EV capable spaces without EVSE or EVCS with Level 2 EVSE by five and reduce proportionally the required electrical load capacity to the service panel or subpanel.

5.106.5.3.2.4 The installation of two low power Level 2 EV charging receptacles shall be permitted to reduce the minimum number of required EV capable spaces without EVSE in Table 5.106.5.3.1 by one.

5.106.5.3.2.4.1 Raceway capacity requirements. To allow for future upgrades to the electrical conductors serving low power Level 2 charging receptacles, the listed raceway serving such receptacles shall be sized to allow the installation of a dedicated 208/240-volt 40-ampere branch circuit. Where no raceway is used, the conductors shall be sized to accommodate a 208/240-volt 40-ampere receptacle.

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

5.106.5.3.4 Accessible EVCS.

When EVSE is installed, accessible EVSC shall be provided in accordance with the California Building Code, Chapter 11B, Section 11B-228.3.

Note: For EVCS signs, refer to Caltrans Traffic Operations Policy Directive 13-01 (Zero Emission Vehicle Signs and Pavement Markings) or its successor(s).

5.106.5.3.4 Accessible electric vehicle charging station (EVCS). When EVSE is installed, accessible EVCS shall be provided in accordance with the California Building Code, Chapter 11B, Section 11B-228.3.

5.106.5.3.5 Electric vehicle charging station signage. Electric vehicle charging stations shall be identified by signage or pavement markings in compliance with Caltrans Traffic Operations Policy Directive 13-01 (Zero Emission Vehicle Signs and Pavement Markings) or its successor(s).

Power allocation method shall include the following:

- Use any kVA combination of EV capable spaces, low power Level 2, Level 2 or DCFC EVCS.
- At least one Level 2 EVSE shall be provided.

5.106.5.3.6 Electric vehicle charging stations (EVCS)—power allocation method. The power allocation method may be used as an alternative to the requirements in Section 5.106.5.3.1, Section 5.106.5.3.2 and associated Table 5.106.5.3.1. Use Table 5.106.5.3.6 to determine the total power in kVA required based on the total number of actual parking spaces.

TABLE 5.106.5.3.6 POWER ALLOCATION METHOD			
TOTAL NUMBER OF ACTUAL PARKING SPACES.	MINIMUM TOTAL KVA @ 6.6 KVA	OTHER THAN OFFICE AND RETAIL TOTAL KVA REQUIRED IN ANY COMBINATION OF EV CAPABLE LOW POWER LEVEL 2, LEVEL 2 OR DCFC	OFFICE AND RETAIL TOTAL KVA REQUIRED IN ANY COMBINATION OF EV CAPABLE LOW POWER LEVEL 2, LEVEL 2 OR DCFC
1-9	0	0	0
10-25	26.4	26.4	26.4
26-50	52.8	52.8	52.8
51-75	85.8	85.8	85.8
76-100	112.2	112.2	112.2
101-150	165	165	165
151-200	231	231	231
201 AND OVER	20 PERCENT OF ACTUAL PARKING SPACES X 6.6	TOTAL REQUIRED KVA = P X 20 X 6.6 WHERE P = PARKING SPACES IN FACILITY	TOTAL REQUIRED KVA = P X 20 X 6.6 WHERE P = PARKING SPACES IN FACILITY

- Level 2 EVSE @ 6.6 kVA minimum.
- At least one Level 2 EVSE shall be provided.
- Maximum allowed kVA to be utilized for EV capable spaces is 75 percent.
- If EV capable spaces are utilized, they shall meet the requirements of Section 5.106.5.3.1 EV capable spaces.
- For Office and Retail buildings the maximum allowed kVA to be utilized for EV capable is 25 percent.

5.106.5.3.6.1 Receptacle configurations. 208/240V EV charging receptacles shall comply with one of the following configurations:

- For 20-ampere receptacles, NEMA 6-20R
- For 30-ampere receptacles, NEMA 14-30R
- For 50-ampere receptacles, NEMA 14-50R

5.106.5.3.6.2 EV charger connectors. EV chargers shall be equipped with SAE J1772 with a maximum output 240 Volts AC or SAE J3400 connectors. When using level 2 SAE J3400 connectors, supplied by a 480 V 3-phase service, at least 20 percent of the EV charger connectors shall be SAE J1772 with a maximum output 240 Volts AC.

5.106.5.3.6.3 Raceway capacity requirements. To allow for future upgrades to the electrical conductors serving low power Level 2 charging receptacles, the listed raceway serving such receptacles shall be sized to allow the installation of a dedicated 208/240-volt 40-ampere branch circuit. Where no raceway is used, the conductors shall be sized to accommodate a 208/240-volt 40-ampere receptacle.

5.106.5.4 Additions or alterations to existing buildings or parking facilities [A]. [BSC-CG] Existing buildings or parking facilities being modified by one of the following shall comply with Section 5.106.5.4.1 or 5.106.5.4.2. When EVSE is installed, accessible EVCS shall be provided in accordance with the California Building Code, Chapter 11B, Section 11B-228.3.

- When the scope of construction work includes an increase in power supply to an electric service panel as part of a parking facility addition or alteration.
- When a new photovoltaic system is installed covering existing parking spaces.
- When additions or alterations to existing buildings are triggered pursuant to code Section 301.3 and the scope of work includes an increase in power supply to an electric service panel.

Exceptions:

- On a case-by-case basis where the local enforcing agency has determined compliance with this section is not feasible based upon one of the following conditions:
 - Where there is no local utility power supply.
 - Where the local utility is unable to supply adequate power.
 - Where there is evidence suitable to the local enforcement agency substantiating that additional local utility infrastructure design requirements, directly related to the implementation of Section 5.106.5.3, may adversely impact the construction cost of the project.
 - Where demonstrated as impracticable excluding local utility service or utility infrastructure issues.
- Remote parking facilities that do not have access to the building service panel.
- Parking area lighting upgrades where no trenching is part of the scope of work.
- Emergency repairs, including but not limited to water line break in parking facilities, natural disaster repairs, etc.

5.106.5.4.1 Existing buildings or parking areas without previously installed EV capable infrastructure [A]. When EV capable infrastructure does not exist at an existing parking facility or building, and the parking facility or building undergoes an addition or alteration listed in Section 5.106.5.4, construction shall include electric vehicle charging in compliance with either Section 5.106.5.3 and associated Table 5.106.5.3.1, or Section 5.106.5.3.6 and associated Table 5.106.5.3.6. Initial EVCS at all existing EV capable spaces, utilizing the existing EV capable allocated power and infrastructure for the total number of actual parking spaces being added or altered, prior to adding any new EV capable spaces. If the area being added or altered exceeds the existing EV capable capacity, the new infrastructure, provide additional EV charging as needed to comply with this section.

5.106.5.4.2 Existing buildings or parking areas with previously installed EV capable infrastructure [A]. When EV capable infrastructure is available at an existing parking facility or building, and the parking facility or building is undergoing an addition or alteration listed in Section 5.106.5.4, construction shall include electric vehicle charging in compliance with either Section 5.106.5.3 and associated Table 5.106.5.3.1, or Section 5.106.5.3.6 and associated Table 5.106.5.3.6. Initial EVCS at all existing EV capable spaces, utilizing the existing EV capable allocated power and infrastructure for the total number of actual parking spaces being added or altered, prior to adding any new EV capable spaces. If the area being added or altered exceeds the existing EV capable capacity, the new infrastructure, provide additional EV charging as needed to comply with this section.

5.106.5.5 Electric vehicle (EV) charging, medium- and heavy-duty. [N] [BSC-CG] Construction shall comply with Section 5.106.5.5.1 to facilitate future installation of electric vehicle supply equipment (EVSE). Construction for warehouses, grocery stores and retail stores, office buildings, and manufacturing facilities with planned off-street loading spaces shall also comply with Section 5.106.5.5.1 for future installation of medium- and heavy-duty EVSE.

Exceptions:

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

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

5.106.5.5.1 Electric vehicle charging readiness requirements for warehouses, grocery stores, office buildings, and manufacturing facilities and retail stores with planned off-street loading spaces. [N]

In order to avoid future demolition when adding EV supply and distribution equipment, spare raceway(s) or busway(s) and adequate capacity for transformer(s) or service panel(s) or subpanel(s) shall be installed at the time of construction in accordance with the California Electrical Code. Construction plans and specifications shall include, but are not limited to, the following:

- The transformer, main service equipment and subpanels shall meet the minimum power requirement in Table 5.106.5.5.1 to accommodate the dedicated branch circuit for the future installation of EVSE.
- The construction documents shall indicate one or more location(s) convenient to the planned off-street loading space(s) reserved for medium- and heavy-duty EV charging cable and charging dispensers, and a pathway reserved for routing of conduit from the termination of the raceway(s) or busway(s) to the charging cabinet(s) and dispenser(s), as shown in Table 5.106.5.5.1.
- Raceway(s) or busway(s) originating at a main service panel or a subpanel(s) serving the area where potential future medium- and heavy-duty EVSE will be located and shall terminate in close proximity to the potential future location of the charging equipment for medium- and heavy-duty vehicles.
- The raceway(s) or busway(s) shall be of sufficient size to carry the minimum additional system load to the future location of the charging for medium- and heavy-duty ZEVs as shown in Table 5.106.5.5.1.

TABLE 5.106.5.5.1 RACEWAY CONDUIT AND PANEL POWER REQUIREMENTS FOR MEDIUM- AND HEAVY-DUTY EVSE			
BUILDING TYPE	BUILDING SIZE (SQ. FT.)	NUMBER OF OFF-STREET LOADING SPACES	ADDITIONAL CAPACITY REQUIRED (KVA) FOR RACEWAY & BUSWAY AND TRANSFORMER & PANEL
GROCERY	10,000 TO 90,000	1 OR 2	200
		3 OR GREATER	400
		1 OR GREATER	400
MANUFACTURING FACILITIES	10,000 TO 50,000	1 OR 2	200
		3 OR GREATER	400
		1 OR GREATER	400
OFFICE BUILDINGS	10,000 TO 135,000	1 OR GREATER	400
		1 OR 2	200
		3 OR GREATER	400
RETAIL	10,000 TO 135,000	1 OR GREATER	400
		1 OR 2	200
		3 OR GREATER	400
WAREHOUSE	20,000 TO 256,000	1 OR GREATER	400
		1 OR 2	200
		3 OR GREATER	400
	GREATER THAN 256,000	1 OR GREATER	400

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These drawings have been prepared as one coordinated set of drawings and are complimentary. What is required by one drawing is required by all of the drawings, even if a detail or component part is not identified on every sheet. Any user's reliance on a single or select few sheet(s) of the drawings without consideration for the information included in the entire set of drawings will be at the user's sole risk and shall not form the basis for a request for additional compensation or time.

PROJECT _____

ORANGE COUNTY DEPARTMENT OF

EDUCATION ESPLANADE BLDG 4

TENANT IMPROVEMENT

3001 RED HILL AVENUE, SUITE 117, 118, 119,
COSTA MESA, CA 92626

DATE 10/07/2026

PROJECT #	026 0084 00
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DESIGN PROFESSIONAL



27/1A

STATE OF CALIFORNIA

TITLE
CAL GREEN CHECKLIST 2

SHEET # _____

G-031

AGENCY APPROVAL

REMARKS DATE	TABLE 5.504.4.3 - VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS	
	GRAMS OF VOC PER LITER OF COATINGS, LESS WATER & LESS EXEMPT COMPOUNDS	
	COATING CATEGORY	CURRENT VOC LIMIT..
	FLAT COATINGS	50
	NON-FLAT COATINGS	100
	NON-FLAT HIGH GLOSS COATINGS	150
	SPECIALTY COATINGS:	
	ALUMINUM ROOF COATINGS	400
	BASEMENT SPECIALTY COATINGS	400
	BITUMINOUS ROOF COATINGS	400
	BITUMINOUS ROOF PRIMERS	350
	BOND BREAKERS	350
	CONCRETE CURING COMPOUNDS	350
	CONCRETE/MASONRY SEALERS	100
	DRIVEWAY SEALERS	50
	DRY FOG COATINGS	150
	FAUX FINISHING COATINGS	350
	FIRE RESISTIVE COATINGS	350
	FLOOR COATINGS	100
	FORM-RELEASE COMPOUNDS	250
	GRAPHIC ARTS COATINGS (SIGN PAINTS)	400
	HIGH-TEMPERATURE COATINGS	520
	INDUSTRIAL MAINTENANCE COATINGS	150
	LOW SOLIDS COATINGS	120
	MAGNESITE CEMENT COATINGS	650
	MASTIC TEXTURE COATINGS	100
	METALLIC PIGMENTED COATINGS	500
	MULTICOLOR COATINGS	250
	PRETREATMENT WASH PRIMERS	420
	PRIMERS, SEALERS & UNDERCOATERS	100
	REACTIVE PENETRATING SEALERS	350
	RECYCLED COATINGS	250
	ROOF COATINGS	50
	SEMI-CONDUCTIVE COATINGS	250
	SHELLACs:	
	CLEAR	730
	OPAQUE	550
	SPECIALTY PRIMERS, SEALERS & UNDERCOATERS	100
	STAINS	250
	STONE CONSOLIDANTS	450
	SWIMMING POOL COATINGS	340
	TRAFFIC MARKING COATINGS	100
	TUB & TILE REFINISH COATINGS	420
	WATERPROOFING MEMBRANES	250
	WOOD COATINGS	275
	WOOD PRESERVATIVES	350
	ZINC-RICH PRIMERS	340

- GRAMS OF VOC PER LITER OF COATING, INCLUDING WATER & EXEMPT COMPOUNDS
- THE SPECIFIED LIMITS REMAIN IN EFFECT UNLESS REVISED LIMITS ARE LISTED IN SUBSEQUENT COLUMNS IN THE TABLE.
- VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIFORNIA AIR RESOURCES BOARD, ARCHITECTURAL FINISHES SUGGESTED CONTROL MEASURE, FEB. 1, 2008. MORE INFORMATION IS AVAILABLE FROM THE AIR RESOURCES BOARD.

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

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

5.504.4.3.1 Aerosol Paints and coatings. Aerosol paints and coatings shall meet the PMVIR Limits for ROC in Section 94522(a)(3) and other requirements, including prohibitions on use of certain toxic compounds and ozone depleting substances, in Sections 94522(c)(2) and (d)(2) of California Code of Regulations, Title 17, commencing with Section 94520, and in areas under the jurisdiction of the Bay Area Air Quality Management District additionally comply with the percent VOC by weight of product limits of Regulation 6 Rule 49.

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

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

5.504.4.4 Carpet Systems.

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

See California Department of Public Health's website for certification programs and testing labs.
<https://www.cdph.ca.gov/Programs/CID/DCDC/CEH/ELB/IAQ/Pages/VOC.aspx#material>

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

See California Department of Public Health's website for certification programs and testing labs.
<https://www.cdph.ca.gov/Programs/CID/DCDC/CEH/ELB/IAQ/Pages/VOC.aspx#material>

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

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

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

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

TABLE 5.504.4.5 - FORMALDEHYDE LIMITS	
MAXIMUM FORMALDEHYDE EMISSIONS IN PARTS PER MILLION	
PRODUCT	CURRENT LIMIT
HARDWOOD PLYWOOD VENEER CORE	0.05
HARDWOOD PLYWOOD COMPOSITE CORE	0.05
PARTICLE BOARD	0.09
MEDIUM DENSITY FIBERBOARD	0.11
THIN MEDIUM DENSITY FIBERBOARD	0.13

- VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIFORNIA AIR RESOURCES BOARD, AIR TOXICS CONTROL MEASURE FOR COMPOSITE WOOD AS TESTED IN ACCORDANCE WITH ASTM E 1333. FOR ADDITIONAL INFORMATION, SEE CALIFORNIA CODE OF REGULATIONS, TITLE 17, SECTIONS 93120 THROUGH 93120.12.
- THIN MEDIUM DENSITY FIBERBOARD HAS A MAXIMUM THICKNESS OF 5/16 INCHES (8 MM).

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

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

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

See California Department of Public Health's website for certification programs and testing labs.
<https://www.cdph.ca.gov/Programs/CID/DCDC/CEH/ELB/IAQ/Pages/VOC.aspx#material>

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

5.504.4.7 Thermal insulation

Comply with the requirements of the California Department of Public Health, "Standard Method of the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.2, January 1.2, January 2017 (Emission testing method for California Specifications 01350).

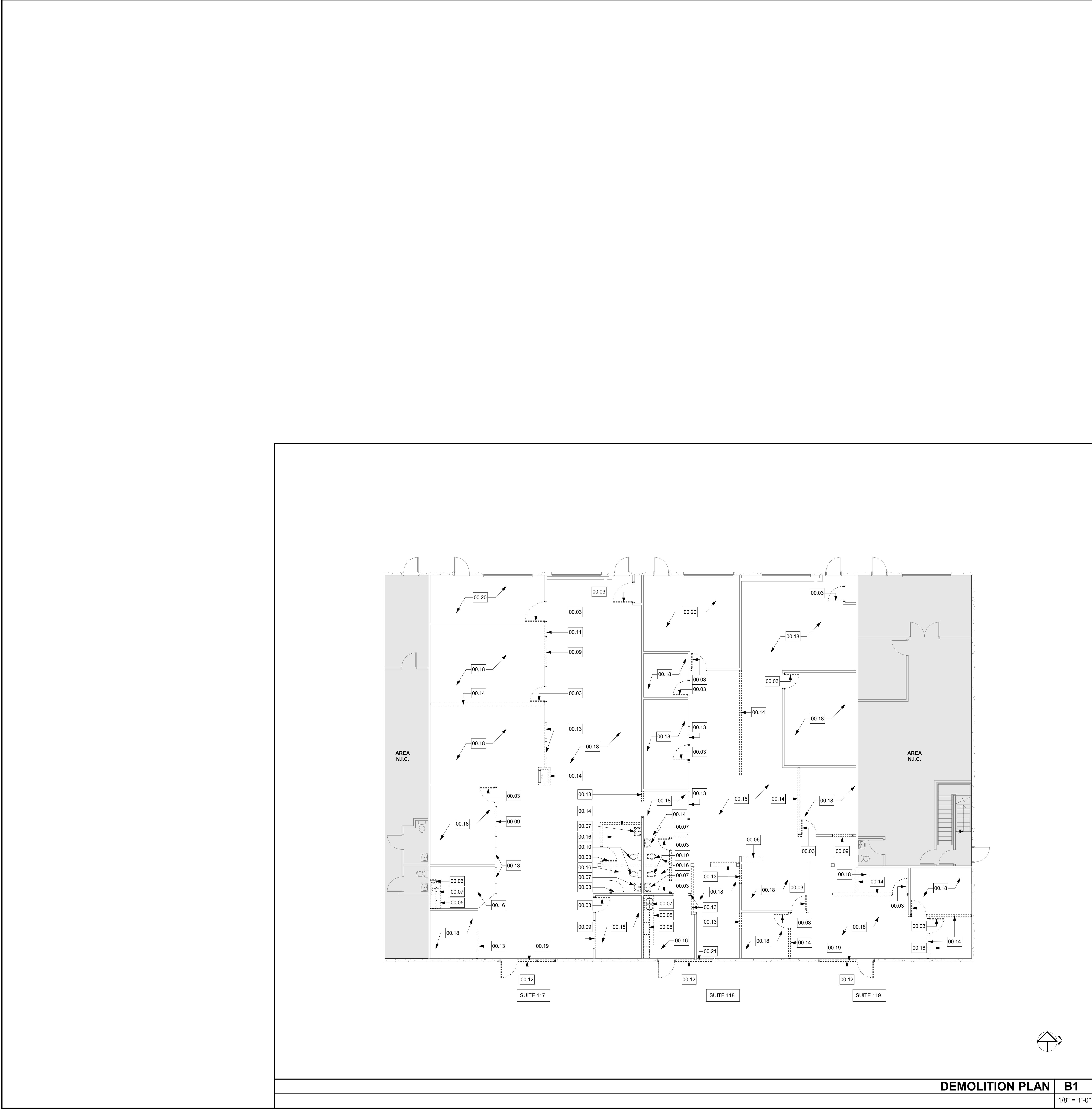
See California Department of Public Health's website for certification programs and testing labs.
<https://www.cdph.ca.gov/Programs/CID/DCDC/CEH/ELB/IAQ/Pages/VOC.aspx#material>

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

		5.504.4 Acoustical ceiling and wall panels. Comply with the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 12, January 1977 (Emission testing method for California Specification 01350). See California Department of Public Health's website for certification programs and testing labs.
		5.504.4.1 Verification of compliance. Documentation shall be provided verifying that acoustical finish materials meet the pollutant emission limits.
		5.504.5 Filters. In mechanically ventilated buildings, provide regularly occupied areas of the building with air filtration media for outside and return air that provides a minimum of 100 percent of the required Minimum Efficiency Reporting Value (MERV) of 13. MERV 13 filters shall be installed prior to occupancy, and recommendations for maintenance with filters of the same value shall be included in the operation and maintenance manual.
		Exceptions: Existing mechanical equipment.
		5.504.5.1 Labeling. Installed filters shall be clearly labeled by the manufacturer indicating the MERV rating.
		5.504.7 ENVIRONMENTAL TOBACCO SMOKE (ETES) CONTROL. Where outdoor areas are provided for smoking, prohibit smoking within 25 feet of building entries, outdoor air intakes and operable windows and within the building as already prohibited by other laws or regulations, or as enforced by ordinances, regulations or policies of any city, county, city and county, California Community College, campus of the California State University, or campus of the University of California, whichever are more stringent. When ordinances, regulations or policies are not in place, post signage to inform building occupants of the prohibitions.
		SECTION 5.505 INDOOR MOISTURE CONTROL
		5.505.1 INDOOR MOISTURE CONTROL. Buildings shall meet or exceed the provisions of California Building Code, CCR, Title 24, Part 2, Sections 1002 (Ventilation) and Chapter 14 (Exterior Walls). For additional measures, see Section 5.407.2 of this code.
		SECTION 5.506 INDOOR AIR QUALITY
		5.506.1 OUTSIDE AIR DELIVERY. For mechanically or naturally ventilated spaces in buildings, meet the minimum requirements of Section 120.1 (Requirements For Ventilation) of the California Energy Code, or the applicable local code, whichever is more stringent, and Division 1, Chapter 4 of CCR, Title 8.
		5.506.2 CARBON DIOXIDE (CO2) MONITORING. For buildings or additions equipped with demand control ventilation, CO2 sensors and ventilation controls shall be specified and installed in accordance with the requirements of the California Energy Code, Section 120(c)(4).
		5.506.3 Carbon dioxide (CO2) monitoring in classrooms. [DSA-S] Classrooms and other similar rooms that are used for group instruction shall be equipped with a carbon dioxide monitor or sensor.
		[BSC-CG] Newly constructed projects and qualifying additions and alterations (per scope in Section 301.3) for University of California, California State University and private school classrooms, lecture and postsecondary classrooms shall be equipped with a carbon dioxide monitor or sensor.
		[DSA-S, BSC-CG] The carbon dioxide monitor shall meet the following requirements:
		1. The monitor or sensor shall be permanently affixed in a tamper-proof manner in each classroom between 3 and 6 feet (914 mm and 1829 mm) above the finished floor, at least 5 feet (1524 mm) away from door and operable windows.
		2. When the monitor or sensor is connected to an Energy Management Control System (EMCS), the monitor or sensor shall display the carbon dioxide readings on the device. When the sensor is integral to an EMCS, the carbon dioxide readings shall be available to and regularly monitored by facility personnel.
		3. A regular shall provide notification through a visual indicator on the monitor when the carbon dioxide levels in the classroom have exceeded 1,100ppm. A sensor integral to an EMCS shall provide notification to facility personnel through a visual and/or audible indicator when the carbon dioxide levels in the classroom have exceeded 1,100ppm.
		4. The monitor or EMCS devices used to measure carbon dioxide levels shall maintain a record of previous data that includes at least the maximum carbon dioxide concentration measured.
		5. The monitor or sensor used to measure carbon dioxide levels shall have the capacity to measure carbon dioxide levels with a range of 400ppm to 2000ppm or greater.
		6. The monitor or sensor shall be certified by the manufacturer to be accurate within 7ppm at 1,000ppm carbon dioxide concentration and shall be certified by the manufacturer to require calibration no more frequently than once every 5 years.
		SECTION 5.507 ENVIRONMENTAL COMFORT
		5.507.1 ACOUSTICAL CONTROL. Employ building assemblies and components with Sound Transmission Class (STC) values determined in accordance with ASTM E 90 and ASTM E 413, or Outdoor-Indoor Sound Transmission Class (OITC) determined in accordance with ASTM E 1332, using either the prescriptive or performance method in Section 5.507.4.1 or 5.507.4.2.
		Exception: Buildings with few or no occupants or where occupants are not likely to be affected by exterior noise, as determined by the enforcement authority, such as factories, stadiums, airport, enclosed parking structures and utility buildings.
		Exception: [DSA-S] For public schools and community colleges, the requirements of this section and all subsections apply only to new construction.
		5.507.1.1 Exterior noise transmission, prescriptive method. Wall and roof-ceiling assemblies exposed to the noise source making up the building or addition exterior or altered exterior shall meet a composite STC rating of least 50 or a composite OITC rating of no less than 40, with exterior windows of a minimum STC of 40 or OITC of 30 in the following locations:

		5.500.2.3 Refrigerated service cases. Refrigerated service cases holding food products containing vinegar and salt shall have evaporator coils of corrosion-resistant material, such as stainless steel, or be coated to prevent corrosion from these substances. 5.500.2.3.1 Coil coating. Consideration shall be given to the heat transfer efficiency of coil coating to maximize energy efficiency. 5.500.2.4 Refrigerant receivers. Refrigerant receivers with capacities greater than 200 pounds shall be fitted with a device that indicates the level of refrigerant in the receiver. 5.500.2.5 Pressure testing. The system shall be pressure tested during installation prior to evacuation and charging. 5.500.2.5.1 Minimum pressure. The system shall be charged with regulated dry nitrogen and appropriate tracer gas to bring system pressure up to 300 psig minimum. 5.500.2.5.2 Leaks. Check the system for leaks, repair any leaks, and retest for pressure using the same gauge. 5.500.2.5.3 Allowable pressure change. The system shall stand, unaltered, for 24 hours with no more than a +/- one pound pressure change from 300 psig, measured with the same gauge. 5.500.2.6 Evacuation. The system shall be evacuated after pressure testing and prior to charging. 5.500.2.6.1 First vacuum. Pull a system vacuum down to at least 1000 microns (+/- 50 microns), and hold for 30 minutes. 5.500.2.6.2 Second vacuum. Pull a second system vacuum to a minimum of 500 microns and hold for 30 minutes. 5.500.2.6.3 Third vacuum. Pull a third vacuum down to a minimum of 300 microns, and hold for 24 hours with a maximum drift of 100 microns over a 24-hour period.
		CHAPTER 7 INSTALLER & SPECIAL INSPECTOR QUALIFICATIONS 702 QUALIFICATIONS 702.1 INSTALLER TRAINING. HVAC system installers shall be trained and certified in the proper installation of HVAC systems including ducts and equipment by a nationally or regionally recognized training or certification program. Uncertified persons may perform HVAC installations when under the direct supervision and responsibility of a person trained and certified to install HVAC systems or contractor licensed to install HVAC systems. Examples of acceptable HVAC training and certification programs include but are not limited to the following: 1. State certified apprenticeship programs. 2. Public utility training programs. 3. Training programs sponsored by trade, labor or statewide energy consulting or verification organizations. 4. Programs sponsored by manufacturing organizations. 5. Other programs acceptable to the enforcing agency. 702.2 SPECIAL INSPECTION (HCD). When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition to other certifications or qualifications acceptable to the enforcing agency, the following certifications or education may be considered by the enforcing agency when evaluating the qualifications of a special inspector: 1. Certification by a national or regional green building program or standard publisher. 2. Certification by a statewide energy consulting or verification organization, building performance contractors, and home energy auditors. 3. Successful completion of a third party apprentice training program in the appropriate trade. 4. Other programs acceptable to the enforcing agency. Notes: 1. Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code. [BSC-CG] When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition, the special inspector shall have a certification from a recognized state, national or international association, as determined by the local agency. The area of certification shall be closely related to the primary job function, as determined by the local agency. Note: Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code.
		703 VERIFICATIONS 703.1 DOCUMENTATION. Documentation used to show compliance with this code shall include but is not limited to, construction documents, plans, specifications, builder or installer certification, inspection reports, or other methods acceptable to the enforcing agency which demonstrate substantial conformance. When specific documentation or special inspection is necessary to verify compliance, that method of compliance will be specified in the appropriate section or identified applicable checklist.

studio+ 2755 Bristol Street, Suite 250, Newport Beach, California 92626 P: 949.315.1993 These drawings have been prepared as one coordinated set of drawings and are complimentary. It is required by one drawing is required by all of the drawings, even if a detail or component is not identified on every sheet. Any user's reliance on a single or select few sheet(s) of the drawings without consideration for the information included in the entire set of drawings will be at user's sole risk and shall not form the basis for a request for additional compensation or time.	
PROJECT	
ORANGE COUNTY DEPARTMENT OF EDUCATION ESPLANADE BLDG 4 TENANT IMPROVEMENT 3001 RED HILL AVENUE, SUITE 117, 118, COSTA MESA, CA 92626	
DATE 10/07/2026	
PROJECT # 026.0084.00	
DESIGN PROFESSIONAL	
TITLE CALGREEN CHECKLIST 3	
SHEET # G-032	



- GENERAL DEMOLITION PLAN NOTES
1. REFER TO SHEET G-001 FOR TYPICAL SYMBOL LEGEND OTHER GRAPHIC STANDARDS.

2. REFER TO SHEET G-001 FOR ABBREVIATIONS AND ADDITION PROJECT INFORMATION.

3. REFER TO SPECIFICATIONS SECTION 02 41 19 FOR ADDITIONAL DEMOLITION REQUIREMENTS.

4. REFER TO PHOTO SHEETS (AD-200 SERIES) FOR ADDITIONAL DEMOLITION REQUIREMENTS.

5. ALL SCREENED/HALFTONE LINES INDICATE EXISTING ITEMS TO REMAIN (TYP., UNLESS NOTED OTHERWISE) BUT NOT LIMITED TO THE FOLLOWING:

A. INTERIOR PARTITIONS (REMOVE TO STRUCTURE).

B. CEILINGS - INCLUDING CUBICAL CURTAIN TRACKS, IV TRACKS, CEILING SUSPENSION SYSTEM, MISC. STEEL SUPPORTS FOR SUSPENDED EQUIPMENT, LIGHT FIXTURES, DIFFUSERS AND GRILLES.

C. FLOOR FINISHES TO CONCRETE INCLUDING: CARPET, RVT, SHEET VINYL, CERAMIC TILE, ETC. GRIND SMOOTH, ROUGHEN AND/OR ETCH TO LEAVE FLOOR SUBSTRATES IN PROPER CONDITION TO RECEIVE NEW SCHEDULED FLOOR FINISH AS RECOMMENDED BY SURFACE FINISH MANUFACTURER.

D. DOORS, DOOR FRAMES, WINDOW FRAMES AND GLAZING.

E. FIRE EXTINGUISHER AND FIRE HOSE CABINETS.

F. CABINETWORK, SHELVING, BASES.

G. TOILET PARTITIONS AND ACCESSORIES.

H. TACKBOARDS, MARKERBOARDS, CHALKBOARDS, AND PEGBOARDS.

I. EQUIPMENT ITEMS (SEE MECHANICAL AND ELECTRICAL).

J. SAW CUT & REMOVAL OF EXISTING CONCRETE SLAB FLOOR FOR UNDERGROUND UTILITY WORK.

7. WORK IS REQUIRED TO BE PERFORMED WITHIN EXISTING BUILDING. EACH CONTRACTOR WILL HAVE ACCESS TO AREAS IN WHICH THIS WORK OCCURS.

8. OWNER WILL OCCUPY EXISTING BUILDING DURING LIFE OF THIS CONTRACT. SCHEDULE ALL WORK AT SUCH TIME AND IN SUCH A MANNER TO MINIMIZE INTERFERENCE TO PUBLIC, STAFF AND OWNER'S OPERATIONS. CONTRACTOR MUST OBTAIN APPROVAL OF OWNER BEFORE STARTING ANY WORK WITHIN ANY EXISTING AREA OF BUILDING.

9. AREA IMMEDIATELY SURROUNDING ALL AREAS OF WORK SHALL BE PROTECTED FROM DANGER OF MATERIALS BEING DROPPED OR DISLODGED.

10. WORK SHALL BE CARRIED OUT IN A MANNER THAT WILL NOT IMPOSE AVOIDABLE HARDSHIP, DANGER, OR INCONVENIENCE TO PUBLIC OR STAFF. WORK SHALL BE PLANNED SO AS TO MINIMIZE SHUTDOWN TIME OR ANY SERVICE.

11. ANY SHUTDOWN OR DISRUPTION OF SERVICE SHALL BE MADE BY WRITTEN REQUEST TO THE OWNER TWO WEEKS BEFORE COMMENCEMENT OF WORK. LIMIT DURATION OF EACH SUCH DISRUPTION OF SERVICE TO MAXIMUM OF 4 HOURS OR AS APPROVED BY OWNER.

12. FABRICATE AND INSTALL INTERCONNECTING PORTIONS OF THESE SYSTEMS PRIOR TO SHUT DOWN FOR FINAL CONNECTIONS.

13. MAINTAIN UTILITIES OR OTHER SERVICE, INDICATED TO BE ABANDONED, IN SERVICE OR PROVIDE ALTERNATE MEANS OF SERVICE UNTIL NEW FACILITIES AREA PROVIDED, TESTED, AND PUT IN OPERATION.

14. MAINTAIN FIRE PROTECTION AND FIRE ALARM SYSTEMS AT ALL TIMES WITHIN EXISTING FACILITIES.

15. REVIEW ALL EXISTING CONDITIONS, DRAWINGS AND OTHER DOCUMENTS FOR PROPER COORDINATION BETWEEN NEW AND EXISTING CONSTRUCTION.

16. ACTIVE UTILITIES WHOSE LOCATIONS ARE UNKNOWN TO OWNER ARE SUSPECTED TO EXIST. CONTRACTOR SHALL BE CAUTION OF THEIR EXISTENCE. IF THEY ARE ENCOUNTERED, IMMEDIATELY REPORT TO OWNER FOR DIRECTION.

17. LIMIT USE AND OPERATION AT SITE TO "LIMITS OF CONSTRUCTION," INDICATED AND REQUIRED TO PERFORM WORK. PORTIONS OF SITE BEYOND AREA OF REQUIRED WORK SHALL NOT BE DISTURBED WITHOUT WRITTEN APPROVAL OF OWNER.

18. LIMIT USE AND OPERATION WITHIN EXISTING FACILITIES TO AREAS INDICATED FOR CONSTRUCTION WORK AND AS REQUIRED TO PERFORM WORK. OTHER AREAS WITHIN FACILITY SHALL NOT BE DISTURBED OR DISRUPTED.

19. DAMAGES TO EXISTING STRUCTURE, UTILITIES AND OTHER ITEMS WHICH ARE CAUSED BY CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED TO THEIR ORIGINAL CONDITION.

20. MAINTAIN AND KEEP CLEAR ALL REQUIRED FIRE EXITWAYS THROUGHOUT FACILITY WITHIN AND IN VICINITY OF CONSTRUCTION AREAS. COORDINATE ALTERNATE TEMPORARY EGRESS ROUTES WITH OWNER AND LOCAL FIRE AUTHORITY.

21. MAINTAIN EXISTING BUILDING IN A WEATHERTIGHT CONDITION THROUGHOUT CONSTRUCTION PERIOD. REPAIR DAMAGE AND LEAKS CAUSED BY CONSTRUCTION OPERATIONS. TAKE ALL PRECAUTION NECESSARY TO PROTECT BUILDING AND ITS OCCUPANTS DURING CONSTRUCTION PERIOD.

22. THE DEMOLITION DRAWINGS FOR ARCHITECTURAL AND ENGINEERING WORK HAVE BEEN PREPARED USING (AS DESIGNED) DOCUMENTS PROVIDED BY THE OWNER. NEITHER THE OWNER NOR THE ARCHITECT WARRANT THESE TO BE (AS-BUILT) DOCUMENTS AND ACTUAL CONDITIONS MAY VARY.

23. CONTRACTOR SHALL DISPOSE OF ALL ITEMS - OWNER RESERVES THE RIGHT TO SELECT SPECIFIC ITEMS FOR SALVAGE - THESE ITEMS SHALL BE IDENTIFIED DURING PRE-CONSTRUCTION WALK THROUGH.

24. PROVIDE TEMPORARY DUST, SIGHT, AND SOUND BARRIERS WHEREVER NECESSARY TO LIMIT THE AMOUNT OF NOISE, DUST AND VISUAL POLLUTION WITHIN AND AROUND THE FACILITY. TO MAINTAIN OCCUPANCY AND USE OF OCCUPIED AREAS IN THE EXISTING BUILDING 24 HOURS PER DAY. THE EXACT LOCATION AND QUANTITY OF TEMPORARY BARRIERS IS TO BE DETERMINED BY CONSTRUCTION SCHEDULE AND WORK SEQUENCE. INTERIOR PARTITIONS ARE DEFINED FOR THESE PURPOSES AS FULL HEIGHT 3-5/8" METAL STUD WITH GWB FINISH, PAINTED (COLOR AS SELECTED BY OWNER), SOUND INSULATED WITH FULL HEIGHT 2" (UNFACED) SOUND ATTENUATION BLANKETS, AND SEALED TOP, BOTTOM, AND ENDS TO PREVENT THE PASSAGE OF DUST AND NOISE.

25. SUPPORTS AND ATTACHMENTS OF ALL EQUIPMENT TO BE INSTALLED AS PART OF THIS PROJECT SHALL BE DETAILED ON CONSTRUCTION DOCUMENTS, EXCEPT THOSE EXEMPT BY THE 2016 CBC SECTION 1616A.1.18 EQUIPMENT SUPPORTS AND ATTACHMENTS SHALL BE APPROVED BY THE APPROPRIATE DESIGN PROFESSIONAL OF RECORD (DPR) AND CSHD AS A PART OF FIELD REVIEWS/OBSERVATIONS. THE INSPECTOR OF RECORD SHALL ASSURE THAT THE ABOVE REQUIREMENTS ARE ENFORCED.

26. SPRINKLER BRANCH LINES AND SPRINKLER HEADS SHALL BE PROTECTED IN PLACE DURING ANY DEMOLITION. SPRINKLER BRANCH LINES AND HEADS TO BE MODIFIED/RELOCATED AS REQUIRED TO MEET CODE REQUIRED COVERAGE IN ACCORDANCE WITH CBC SECTION 903.3 AND NFPA 13.

27. EXISTING WALL ACCESSORIES SHALL BE REMOVED AND REINSTALLED, U.N.O.

28. REFER TO MPE DRAWINGS FOR ADDITIONAL DEMOLITION REQUIREMENTS.

29. CONCRETE SUB-FLOOR TO BE CLEANED, PATCHED AND REPAIRED TO EXTENT NECESSARY TO MAKE LEVEL AND RECEIVE NEW FLOOR FINISHES. EXISTING FLOOR PENETRATIONS SHALL BE FILLED PER THE FOLLOWING:

A. PIPE/CONDUIT HOLES 4" DIA. OR LESS PER DETAIL.

B. 4" - 13" DIAMETER PER DETAIL.

HAZARDOUS MATERIAL NOTES

1. OWNER SHALL SUPPLY CONTRACTOR W/ HAZARDOUS MATERIAL INSPECTION REPORT (CONDUCTED BY A LICENSED PROFESSIONAL - LICENSED BY LOCAL JURISDICTION LAWS)

2. ALL HAZARDOUS MATERIALS SHALL BE PROPERLY DISPOSED OF BY LOCAL, STATE AND FEDERAL REQUIREMENTS.

3. THE OWNER SHALL BE RESPONSIBLE FOR HIRING LICENSED PROFESSIONALS FOR ANY REMOVAL OF ANY HAZARDOUS MATERIALS. SUCH PROFESSIONAL SHALL BE RESPONSIBLE FOR:

A. MEANS AND METHOD OF REMOVAL TO MEET ALL LOCAL, STATE AND FEDERAL REQUIREMENTS.

B. OBTAIN ALL PROPER PERMITS

C. PROVIDE ALL PROPER PAPERWORK FOR PROPER REMOVAL AND DISPOSAL.

4. THE ARCHITECT ASSUMES NO RESPONSIBILITY OF ANY HAZARDOUS MATERIALS FOR THIS PROJECT AND THESE DRAWINGS ARE NOT PREPARED FOR OBTAINING ANY PERMIT FOR THE REMOVAL OF HAZARDOUS MATERIALS.

5. IF ABATEMENT IS REQUIRED, THE ABATEMENT CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND PREPARE THE REQUIRED DOCUMENTATION FOR PERMIT TO REMOVE ANY HAZARDOUS MATERIALS AND SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS AND INSPECTIONS FOR HAZARDOUS MATERIAL REMOVAL.

AGENCY APPROVAL

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These drawings have been prepared as one coordinated set of drawings and are complimentary. What is required by one drawing is required by all of the drawings, even if a detail or component part is not identified on every sheet. Any user's reliance on a single or select few sheet(s) of the drawings without consideration for the information included in the entire set of drawings will be at the user's sole risk and shall not form the basis for a request for additional compensation or time.

KEYNOTE LEGEND

NUMBER	PROVIDE WORK / ITEM
00.03	REMOVE (E) DOOR, DOOR FRAME AND HARDWARE.
00.05	REMOVE (E) BASE CABINETS AND COUNTERTOP.
00.06	REMOVE (E) WALL-MOUNTED CABINETS.
00.07	REMOVE (E) SINK, FAUCET, AND RELATED COMPONENTS (REF PLUMB).
00.09	REMOVE (E) WINDOW FRAME AND GLAZING.
00.10	REMOVE (E) TOILET AND RELATED COMPONENTS (REF. PLUMB).
00.11	DEMO PORTION OF (E) PARTITION PER REMODEL PLAN.
00.12	REMOVE (E) STOREFRONT DOOR AND GLAZING SYSTEM. PREPARE FOR NEW STOREFRONT GLAZING SYSTEM (TO MATCH EXISTING). REF. REMODEL PLAN FOR ADDITIONAL SCOPE.
00.13	DEMO PORTION OF WALL AS REQUIRED FOR NEW WORK.
00.14	DEMO FRAMED WALL FROM FLOOR TO CEILING.
00.16	DEMO (E) SHEET VINYL FLOORING.
00.18	DEMO (E) CARPET.
00.19	REMOVE, SALVAGE AND REINSTALL (E) SHADING DEVICES.
00.20	DEMO (E) VCT.
00.21	REMOVE (E) SHADING DEVICE AND RETURN TO OWNER.

DEMOLITION FLOOR PLAN LEGEND

SYMBOL	DESCRIPTION
	AREA NOT IN SCOPE OF WORK
---	DEMOLISH ITEM PER KEYNOTE
---	EXISTING PARTITION - RE. FLOOR PLAN FOR EXISTING PARTITION TYPES.
---	(E) CONC WALL

1. RE. FLOOR PLAN SHEETS FOR NEW & EXISTING PARTITION TYPES.

PROJECT

ORANGE COUNTY DEPARTMENT OF
EDUCATION ESPLANADE BLDG 4
TENANT IMPROVEMENT

3001 RED HILL AVENUE, SUITE 117, 118, 119,
COSTA MESA, CA 92626

DATE 10/07/2026

PROJECT # 026.0084.00

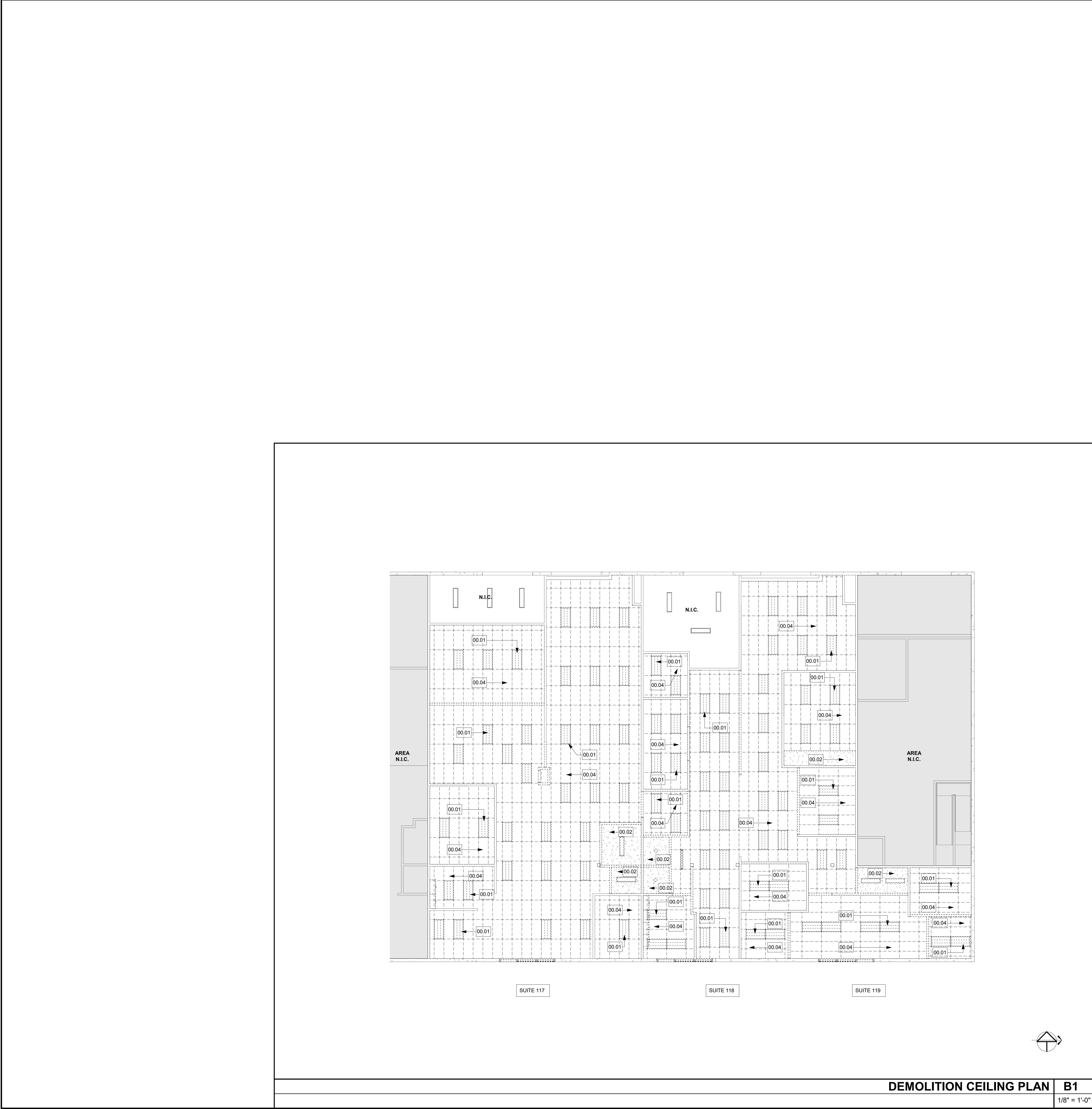
DESIGN PROFESSIONAL

LICENSED ARCHITECT
JASON A. DOWNEY
NO. C-32176
STATE OF CALIFORNIA
EXPI. 07-31-27

TITLE
DEMOLITION FLOOR PLAN WITH
NOTES

SHEET #

AD-100



- ### GENERAL DEMOLITION PLAN NOTES

 - REFER TO SHEET G-001 FOR TYPICAL SYMBOL LEGEND OTHER GRAPHIC STANDARDS.
 - REFER TO SHEET G-001 FOR ABBREVIATIONS AND ADDITION PROJECT INFORMATION.
 - REFER TO SPECIFICATIONS SECTION 02 41 19 FOR ADDITIONAL DEMOLITION REQUIREMENTS.
 - REFER TO PHOTO SHEETS (AD-200 SERIES) FOR ADDITIONAL DEMOLITION REQUIREMENTS.
 - ALL SCREENED/HALFTONE LINES INDICATE EXISTING ITEMS TO REMAIN (TYP., UNLESS NOTED OTHERWISE) BUT NOT LIMITED TO THE FOLLOWING:
 - INTERIOR PARTITIONS (REMOVE TO STRUCTURE).
 - CEILINGS - INCLUDING CUBICAL CURTAIN TRACKS, IV TRACKS, CEILING SUSPENSION SYSTEM, MISC. STEEL SUPPORTS FOR SUSPENDED EQUIPMENT, LIGHT FIXTURES, DIFFUSERS AND GRILLES.
 - FLOOR FINISHES TO CONCRETE INCLUDING: CARPET, RVT, SHEET VINYL, CERAMIC TILE, ETC. GRIND SMOOTH, ROUGHEN AND/OR ETCH TO LEAVE FLOOR SUBSTRATES IN PROPER CONDITION TO RECEIVE NEW SCHEDULED FLOOR FINISH AS RECOMMENDED BY SURFACE FINISH MANUFACTURER.
 - DOORS, DOOR FRAMES, WINDOW FRAMES AND GLAZING.
 - FIRE EXTINGUISHER AND FIRE HOSE CABINETS.
 - CABINETWORK, SHELVING, BASES.
 - TOILET PARTITIONS AND ACCESSORIES.
 - TACKBOARDS, MARKERBOARDS, CHALKBOARDS, AND PEGBOARDS.
 - EQUIPMENT ITEMS (SEE MECHANICAL AND ELECTRICAL).
 - SAW CUT & REMOVAL OF EXISTING CONCRETE SLAB FLOOR FOR UNDERGROUND UTILITY WORK.
 - WORK IS REQUIRED TO BE PERFORMED WITHIN EXISTING BUILDING. EACH CONTRACTOR WILL HAVE ACCESS TO AREAS IN WHICH THIS WORK OCCURS.
 - OWNER WILL OCCUPY EXISTING BUILDING DURING LIFE OF THIS CONTRACT. SCHEDULE ALL WORK AT SUCH TIME AND IN SUCH A MANNER TO MINIMIZE INTERFERENCE TO PUBLIC, STAFF AND OWNER'S OPERATIONS. CONTRACTOR MUST OBTAIN APPROVAL OF OWNER BEFORE STARTING ANY WORK WITHIN ANY EXISTING AREA OF BUILDING.
 - AREA IMMEDIATELY SURROUNDING ALL AREAS OF WORK SHALL BE PROTECTED FROM DANGER OF MATERIALS BEING DROPPED OR DISLODGED.
 - WORK SHALL BE CARRIED OUT IN A MANNER THAT WILL NOT IMPOSE AVOIDABLE HARDSHIP, DANGER, OR INCONVENIENCE TO PUBLIC OR STAFF. WORK SHALL BE PLANNED SO AS TO MINIMIZE SHUTDOWN TIME OR ANY SERVICE.
 - ANY SHUTDOWN OR DISRUPTION OF SERVICE SHALL BE MADE BY WRITTEN REQUEST TO THE OWNER TWO WEEKS BEFORE COMMENCEMENT OF WORK. LIMIT DURATION OF EACH SUCH DISRUPTION OF SERVICE TO MAXIMUM OF 4 HOURS OR AS APPROVED BY OWNER.
 - FABRICATE AND INSTALL INTERCONNECTING PORTIONS OF THESE SYSTEMS PRIOR TO SHUT DOWN FOR FINAL CONNECTIONS.
 - MAINTAIN UTILITIES OR OTHER SERVICE, INDICATED TO BE ABANDONED, IN SERVICE OR PROVIDE ALTERNATE MEANS OF SERVICE UNTIL NEW FACILITIES AREA PROVIDED, TESTED, AND PUT IN OPERATION.
 - MAINTAIN FIRE PROTECTION AND FIRE ALARM SYSTEMS AT ALL TIMES WITHIN EXISTING FACILITIES.
 - REVIEW ALL EXISTING CONDITIONS, DRAWINGS AND OTHER DOCUMENTS FOR PROPER COORDINATION BETWEEN NEW AND EXISTING CONSTRUCTION.
 - ACTIVE UTILITIES WHOSE LOCATIONS ARE UNKNOWN TO OWNER ARE SUSPECTED TO EXIST. CONTRACTOR SHALL BE CAUTION OF THEIR EXISTENCE. IF THEY ARE ENCOUNTERED, IMMEDIATELY REPORT TO OWNER FOR DIRECTION.
 - LIMIT USE AND OPERATION AT SITE TO "LIMITS OF CONSTRUCTION," INDICATED AND REQUIRED TO PERFORM WORK. PORTIONS OF SITE BEYOND AREA OF REQUIRED WORK SHALL NOT BE DISTURBED WITHOUT WRITTEN APPROVAL OF OWNER.
 - LIMIT USE AND OPERATION WITHIN EXISTING FACILITIES TO AREAS INDICATED FOR CONSTRUCTION WORK AND AS REQUIRED TO PERFORM WORK. OTHER AREAS WITHIN FACILITY SHALL NOT BE DISTURBED OR DISRUPTED.
 - DAMAGES TO EXISTING STRUCTURE, UTILITIES AND OTHER ITEMS WHICH ARE CAUSED BY CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED TO THEIR ORIGINAL CONDITION.
 - MAINTAIN AND KEEP CLEAR ALL REQUIRED FIRE EXITWAYS THROUGHOUT FACILITY WITHIN AND IN VICINITY OF CONSTRUCTION AREAS. COORDINATE ALTERNATE TEMPORARY EGRESS ROUTES WITH OWNER AND LOCAL FIRE AUTHORITY.
 - MAINTAIN EXISTING BUILDING IN A WEATHERTIGHT CONDITION THROUGHOUT CONSTRUCTION PERIOD. REPAIR DAMAGE AND LEAKS CAUSED BY CONSTRUCTION OPERATIONS. TAKE ALL PRECAUTION NECESSARY TO PROTECT BUILDING AND ITS OCCUPANTS DURING CONSTRUCTION PERIOD.
 - THE DEMOLITION DRAWINGS FOR ARCHITECTURAL AND ENGINEERING WORK HAVE BEEN PREPARED USING (AS DESIGNED) DOCUMENTS PROVIDED BY THE OWNER. NEITHER THE OWNER NOR THE ARCHITECT WARRANT THESE TO BE (AS-BUILT) DOCUMENTS AND ACTUAL CONDITIONS MAY VARY.
 - CONTRACTOR SHALL DISPOSE OF ALL ITEMS - OWNER RESERVES THE RIGHT TO SELECT SPECIFIC ITEMS FOR SALVAGE - THESE ITEMS SHALL BE IDENTIFIED DURING PRE-CONSTRUCTION WALK THROUGH.
 - PROVIDE TEMPORARY DUST, SIGHT, AND SOUND BARRIERS WHEREVER NECESSARY TO LIMIT THE AMOUNT OF NOISE, DUST AND VISUAL POLLUTION WITHIN AND AROUND THE FACILITY. TO MAINTAIN OCCUPANCY AND USE OF OCCUPIED AREAS IN THE EXISTING BUILDING 24 HOURS PER DAY. THE EXACT LOCATION AND QUANTITY OF TEMPORARY BARRIERS IS TO BE DETERMINED BY CONSTRUCTION SCHEDULE AND WORK SEQUENCE. INTERIOR PARTITIONS ARE DEFINED FOR THESE PURPOSES AS FULL HEIGHT 3-5/8" METAL STUD WITH GWB FINISH, PAINTED (COLOR AS SELECTED BY OWNER), SOUND INSULATED WITH FULL HEIGHT 2" (UNFACED) SOUND ATTENUATION BLANKETS, AND SEALED TOP, BOTTOM, AND ENDS TO PREVENT THE PASSAGE OF DUST AND NOISE.
 - SUPPORTS AND ATTACHMENTS OF ALL EQUIPMENT TO BE INSTALLED AS PART OF THIS PROJECT SHALL BE DETAILED ON CONSTRUCTION DOCUMENTS, EXCEPT THOSE EXEMPT BY THE 2016 CBC SECTION 1816A.1.18 EQUIPMENT SUPPORTS AND ATTACHMENTS SHALL BE APPROVED BY THE APPROPRIATE DESIGN PROFESSIONAL OF RECORD (DPRI) AND CSHPO AS A PART OF FIELD REVIEWS/OBSERVATIONS. THE INSPECTOR OF RECORD SHALL ASSURE THAT THE ABOVE REQUIREMENTS ARE ENFORCED.
 - SPRINKLER BRANCH LINES AND SPRINKLER HEADS SHALL BE PROTECTED IN PLACE DURING ANY DEMOLITION. SPRINKLER BRANCH LINES AND HEADS TO BE MODIFIED/RELOCATED AS REQUIRED TO MEET CODE REQUIRED COVERAGE IN ACCORDANCE WITH CBC SECTION 903.3 AND NFPA 13.
 - EXISTING WALL ACCESSORIES SHALL BE REMOVED AND REINSTALLED, U.N.O.
 - REFER TO MPE DRAWINGS FOR ADDITIONAL DEMOLITION REQUIREMENTS.
 - CONCRETE SUB-FLOOR TO BE CLEANED, PATCHED AND REPAIRED TO EXTENT NECESSARY TO MAKE LEVEL AND RECEIVE NEW FLOOR FINISHES. EXISTING FLOOR PENETRATIONS SHALL BE INFILLED PER THE FOLLOWING:
 - PIPE/ CONDUIT HOLES 4" DIA. OR LESS PER DETAIL.
 - 4" - 13" DIAMETER PER DETAIL.

HAZARDOUS MATERIAL NOTES

 - OWNER SHALL SUPPLY CONTRACTOR W/ HAZARDOUS MATERIAL INSPECTION REPORT (CONDUCTED BY A LICENSED PROFESSIONAL - LICENSED BY LOCAL JURISDICTION LAWS)
 - ALL HAZARDOUS MATERIALS SHALL BE PROPERLY DISPOSED OF BY LOCAL, STATE AND FEDERAL REQUIREMENTS.
 - THE OWNER SHALL BE RESPONSIBLE FOR HIRING LICENSED PROFESSIONALS FOR ANY REMOVAL OF ANY HAZARDOUS MATERIALS. SUCH PROFESSIONAL SHALL BE RESPONSIBLE FOR:
 - MEANS AND METHOD OF REMOVAL TO MEET ALL LOCAL, STATE AND FEDERAL REQUIREMENTS.
 - OBTAIN ALL PROPER PERMITS
 - PROVIDE ALL PROPER PAPERWORK FOR PROPER REMOVAL AND DISPOSAL.
 - THE ARCHITECT ASSUMES NO RESPONSIBILITY OF ANY HAZARDOUS MATERIALS FOR THIS PROJECT AND THESE DRAWINGS ARE NOT PREPARED FOR OBTAINING ANY PERMIT FOR THE REMOVAL OF HAZARDOUS MATERIALS.
 - IF ABATEMENT IS REQUIRED, THE ABATEMENT CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND PREPARE THE REQUIRED DOCUMENTATION FOR PERMIT TO REMOVE ANY HAZARDOUS MATERIALS AND SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS AND INSPECTIONS FOR HAZARDOUS MATERIAL REMOVAL
- ### KEYNOTE LEGEND

NUMBER	PROVIDE WORK / ITEM
00.01	REMOVE, SALVAGE AND REINSTALL 12 BEST 2X4 LIGHT FIXTURE OF LIKE KIND.
00.02	REMOVE (E) GYP BD CEILING.
00.04	REMOVE (E) CEILING GRID.

DEMOLITION RCP LEGEND

SYMBOL	DESCRIPTION
[Solid Grey Box]	AREA NOT IN SCOPE OF WORK
[Dashed Line]	DEMOLISH ITEM PER KEYNOTE
[Double Line]	EXISTING PARTITION -RE: FLOOR PLAN FOR EXISTING PARTITION TYPES
[Dashed Line with Arrow]	(E) CONC WALL
[Dashed Grid]	DEMO (E) CEILING GRID
[Dashed Box]	DEMO (E) LIGHT FIXTURE

AGENCY APPROVAL

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2755 Bristol Street, Suite 250, Newport Beach, California 92626 | P: 949.315.1993

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KEYNOTE LEGEND

DEMOLITION RCP LEGEND

PROJECT

ORANGE COUNTY DEPARTMENT OF
EDUCATION ESPLANADE BLDG 4
TENANT IMPROVEMENT

3001 RED HILL AVENUE, SUITE 117, 118, 119,
COSTA MESA, CA 92626

DATE 10/07/2026

PROJECT # 026.0084.00

DESIGN PROFESSIONAL

LICENSED ARCHITECT
NATION A
NO. C-32176
RENEW 07-31-27
STATE OF CALIFORNIA

TITLE
DEMOLITION REFLECTED
CEILING PLAN

SHEET #

AD-110



KEYNOTE LEGEND

NUMBER	PROVIDE WORK / ITEM
1	(E) BUILDING
2	BUILDING IN SCOPE OF WORK
3	(E) ITEM
4	(N) ITEM
5	ACCESSIBLE PATH OF TRAVEL PER THIS PROJECT
6	PROPERTY LINE
7	(E) FIRE ACCESS LANE
8	FIRE APPARATUS

DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE STATEMENT:
THE P.O.T. IDENTIFIED IN THESE CONSTRUCTION DOCUMENTS IS COMPLIANT WITH THE CURRENT APPLICABLE CALIFORNIA BUILDING CODE ACCESSIBILITY PROVISIONS FOR PATH OF TRAVEL REQUIREMENTS FOR ALTERATIONS, ADDITIONS AND STRUCTURAL REPAIRS. AS PART OF THE DESIGN OF THIS PROJECT, THE P.O.T. WAS EXAMINED AND ANY ELEMENTS, COMPONENTS OR PORTIONS OF THE P.O.T. THAT WERE DETERMINED TO BE NONCOMPLIANT HAVE BEEN IDENTIFIED AND THE CORRECTIVE WORK NECESSARY TO BRING THEM INTO COMPLIANCE HAS BEEN INCLUDED WITHIN THE SCOPE OF THIS PROJECTS WORK THROUGH DETAILS, DRAWINGS AND SPECIFICATIONS INCORPORATED INTO THESE CONSTRUCTION DOCUMENTS. ANY NONCOMPLIANT ELEMENTS, COMPONENTS, OR PORTIONS OF THE P.O.T. THAT WILL NOT BE CORRECTED BY THIS PROJECT BASED ON VALUATION THRESHOLD LIMITATIONS OR A FINDING OF UNREASONABLE HARDSHIP ARE INDICATED IN THESE CONSTRUCTION DOCUMENTS.

DURING CONSTRUCTION, IF P.O.T. ITEMS WITHIN THE SCOPE OF THE PROJECT REPRESENTED AS CODE COMPLIANT ARE FOUND TO BE NONCONFORMING BEYOND REASONABLE CONSTRUCTION TOLERANCES, THEY SHALL BE BROUGHT INTO COMPLIANCE WITH THE CBC AS A PART OF THIS PROJECT BY MEANS OF A CONSTRUCTION CHANGE DOCUMENT.

OPENINGS IN GRATINGS OR STRAINERS LOCATED IN PEDESTRIAN CIRCULATION PATHS OR IN POT SHALL NOT ALLOW PASSAGE OF A SPHERE MORE THAN 1/2" DIA. ELONGATED OPENINGS SHALL BE PLACED SO THAT LONG DIMENSION IS PERPENDICULAR TO THE DOMINANT DIRECTION OF TRAVEL IN COMPLIANCE WITH SECTION 11B-302.3

PARKING ANALYSIS				
PARKING LOT				
TOTAL NUMBER OF PARKING STALLS	NO. OF STANDARD ACCESSIBLE STALLS CBC 2022 11B-308.1		NO. OF VAN ACCESSIBLE STALLS CBC 2022 11B-308.2.4	
	REQUIRED	PROVIDED	REQUIRED	PROVIDED
68	3	3	1	1

AGENCY APPROVAL

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PROJECT

ORANGE COUNTY DEPARTMENT OF
EDUCATION ESPLANADE BLDG 4
TENANT IMPROVEMENT

3001 RED HILL AVENUE, SUITE 117, 118, 119,
COSTA MESA, CA 92626

DATE 10/07/2026

PROJECT # 026.0084.00

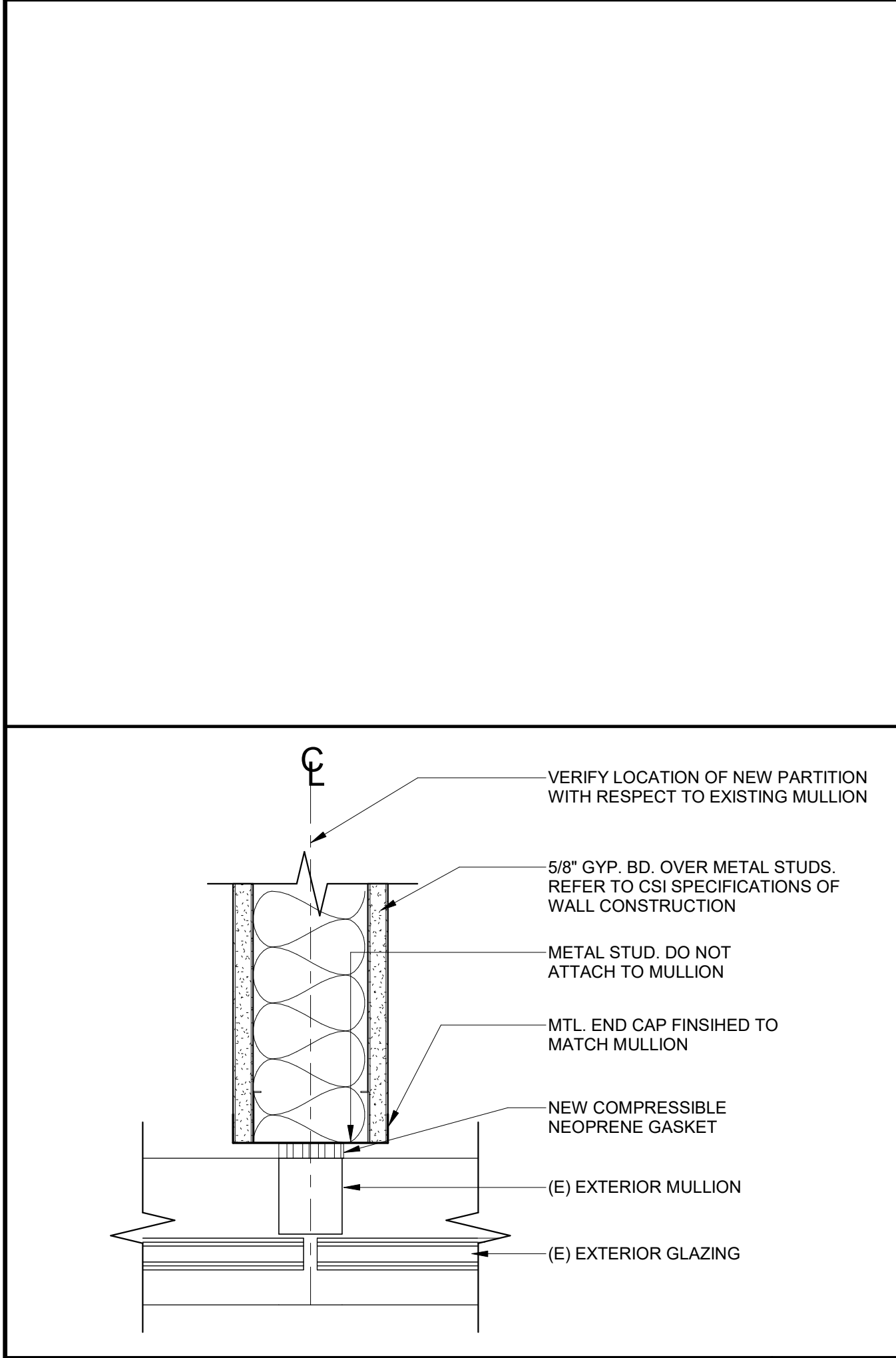
DESIGN PROFESSIONAL

LICENSED ARCHITECT
TAYLOR A. BOWMAN
NO. C-32176
REV. 07-31-21
STATE OF CALIFORNIA

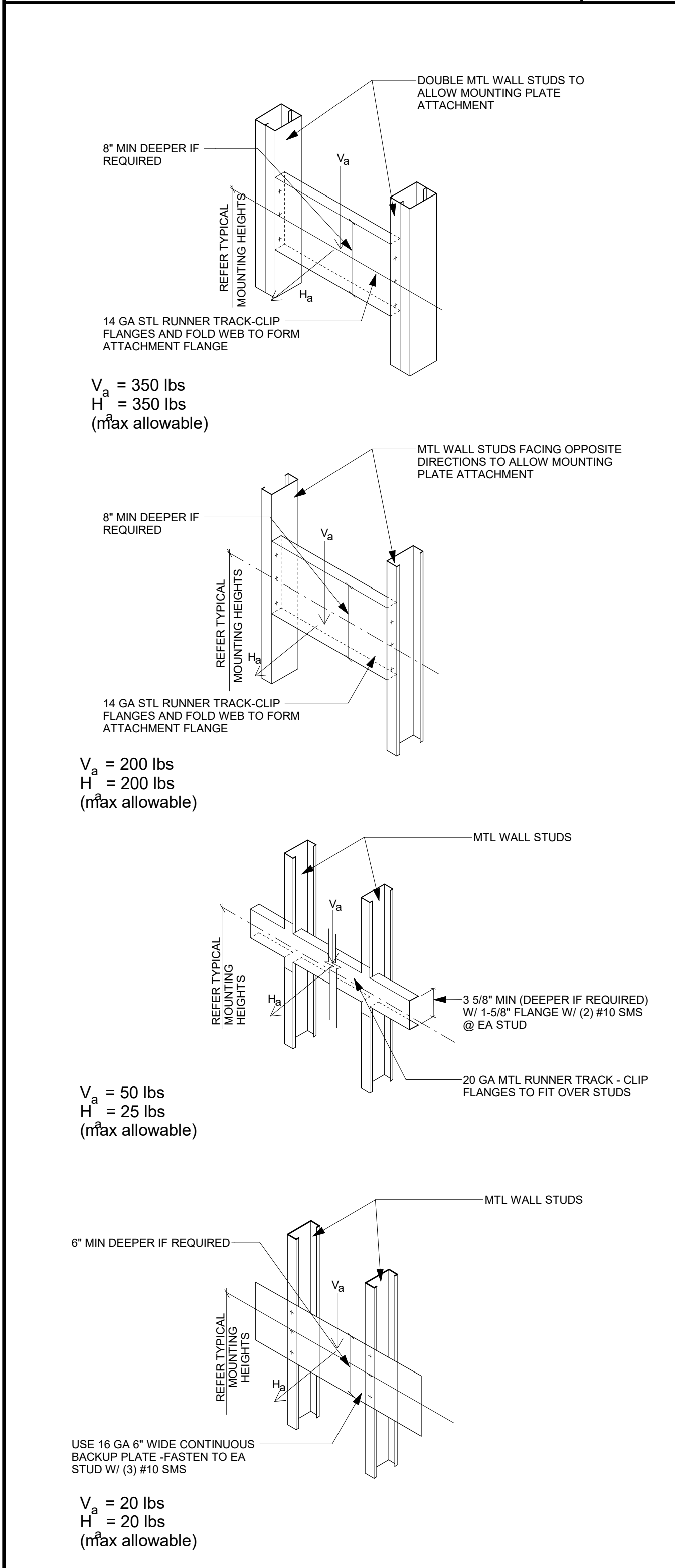
TITLE
ARCHITECTURAL SITE PLAN

SHEET #

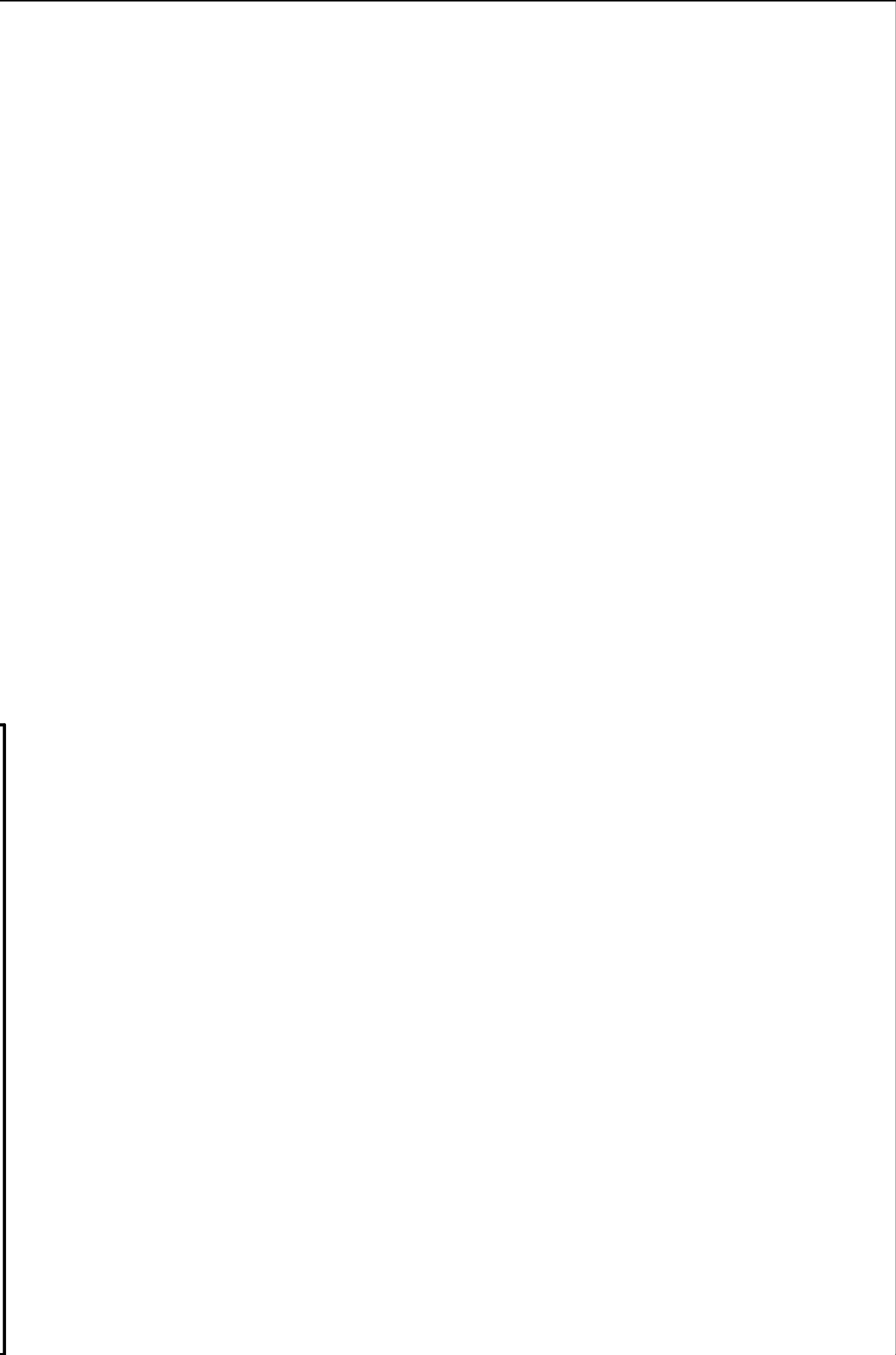
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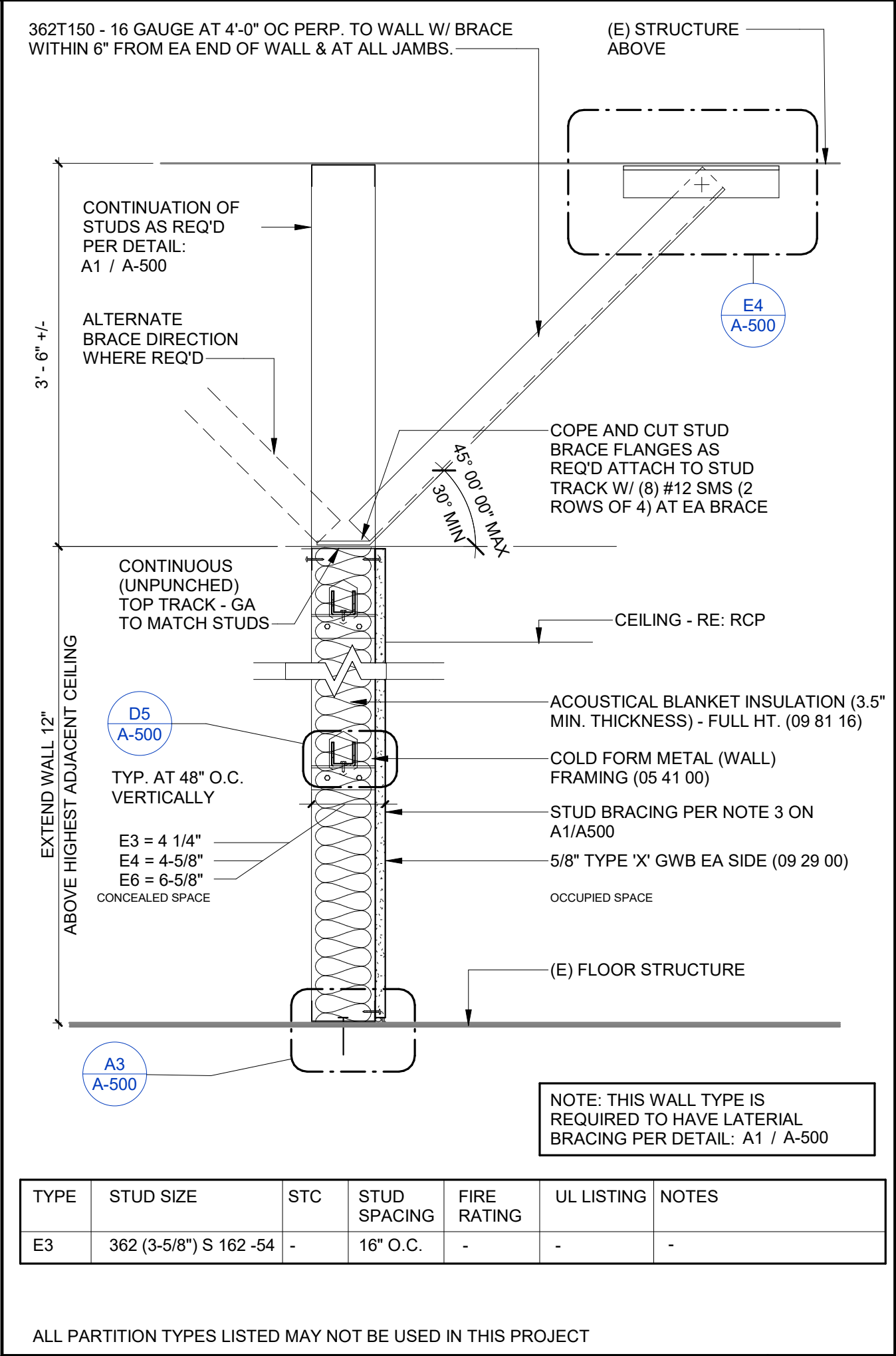
PARTITION TO MULLION DETAIL **E4**
3" = 1'-0"



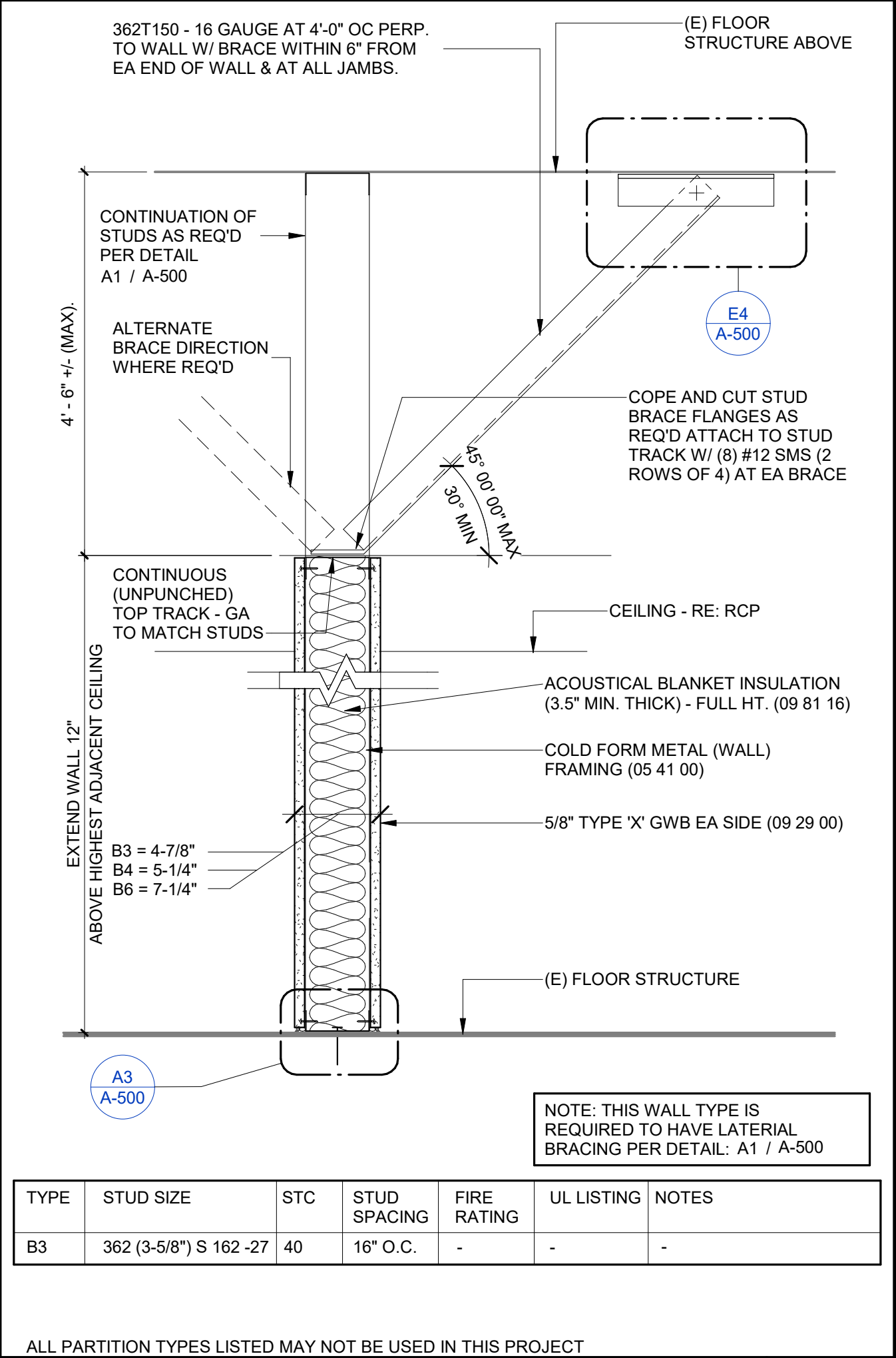
PARTITION BACKING DETAILS **E1**
1/4" = 1'-0"



PARTITION TYPE "E" - PARTIAL HT FURRING **C4**
1 1/2" = 1'-0"



PARTITION TYPE "B" - PARTIAL HT. **B4**
1 1/2" = 1'-0"



PARTITION TYPE "B" - PARTIAL HT. **B4**
1 1/2" = 1'-0"

KEYNOTE LEGEND

NUMBER	PROVIDE WORK / ITEM
10.11	REINSTALL (E) SHADING DEVICE
22.07	PROVIDE WATER CONNECTION TO WATER COOLER - RE: (PLUMBING)

GENERAL FLOOR PLAN NOTES

- REFER TO SHEET G-001 FOR ADDITIONAL BUILDING INFORMATION.
- REFER TO SHEET G-001 FOR ALL GRAPHIC SYMBOLS.
- REFER TO SHEET A-140 FOR MASTER SCHEDULE.
- ALL DIMENSIONS SHALL BE FROM FINISHED FACE OF GWB. REFER TO PARTITION TYPES FOR WALL ASSEMBLY THICKNESSES.
- REFER TO SHEET A-110 FOR PLUMBING FIXTURE AND ACCESSORY MOUNTING HEIGHTS AND REQUIRED CLEARANCES.
- CONTRACTOR SHALL FIELD VERIFY ALL EXISTING OVERALL DIMENSIONS PRIOR TO FRAMING AND NOTIFY THE ARCHITECT IN WRITING OF ANY DISCREPANCIES.
- REFER TO PARTITION SHEETS (A-100 SERIES) FOR ADDITIONAL FRAMING REQUIREMENTS.
- CONTRACTOR SHALL PROVIDE TEXTURE AND PAINT AT ALL EXISTING SHAFTS AND INTERIOR WALLS TO MATCH NEW WALLS.

FLOOR PLAN LEGEND

SYMBOL	DESCRIPTION
(E) ITEM	(E) ITEM
(N) ITEM	(N) ITEM
AREA NOT IN SCOPE OF WORK	AREA NOT IN SCOPE OF WORK
(E) NON-RATED PARTITION	(E) NON-RATED PARTITION
(E) CONC WALL	(E) CONC WALL
(E) 1-HR FIRE RATED PARTITION	(E) 1-HR FIRE RATED PARTITION
FULL HEIGHT (FLOOR TO UNDERSIDE OF ROOF/FLOOR DECK) PARTITION WITH SOUND INSULATION	FULL HEIGHT (FLOOR TO UNDERSIDE OF ROOF/FLOOR DECK) PARTITION WITH SOUND INSULATION
PARTIAL HEIGHT (FLOOR TO 12" ABOVE HIGHEST ADJACENT CEILING) PARTITION WITH SOUND INSULATION	PARTIAL HEIGHT (FLOOR TO 12" ABOVE HIGHEST ADJACENT CEILING) PARTITION WITH SOUND INSULATION

WALL TYPE NOTES

WALL STUD SIZE - RE: PARTITION DETAIL. EX=EXISTING PARTITION. WALL TYPE - RE: LEGEND BELOW.

DENOTES LEAD SHIELDING REQUIREMENTS - RE: LEAD SHIELDING NOTES BELOW.

DENOTES TYPE OF FIRE PROTECTION FEATURE PER CBC. IF NOT RATED, A "-" WILL BE LISTED.

FIRE RATING IN HOURS. IF NOT RATED, A "-" WILL BE LISTED.

FIRE PROTECTION FEATURE TYPES:

FW= INDICATES NO FIRE PROTECTION FEATURE
FB= FIRE WALL PER CBC 706
FP= FIRE BARRIER PER CBC 707
SB= FIRE PARTITION PER CBC 708
SP= SMOKE BARRIER PER CBC 709
SMOKE PARTITION PER CBC 710

PARTITION LEGEND

B	B4 / A-100
E	C4 / A-100

PROJECT

ORANGE COUNTY DEPARTMENT OF EDUCATION ESPLANADE BLDG 4 TENANT IMPROVEMENT

3001 RED HILL AVENUE, SUITE 117, 118, 119, COSTA MESA, CA 92626

DATE

10/07/2026

PROJECT #

026.0084.00

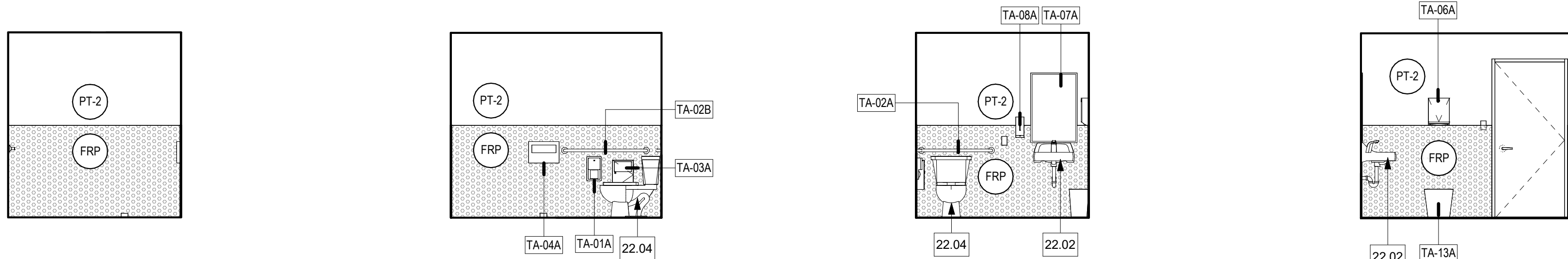
DESIGN PROFESSIONAL

TITLE

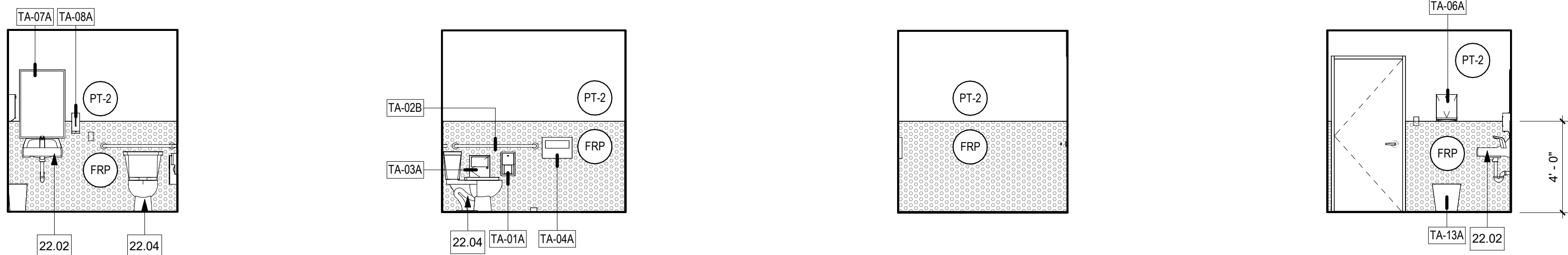
ARCHITECTURAL FLOOR PLAN

SHEET #

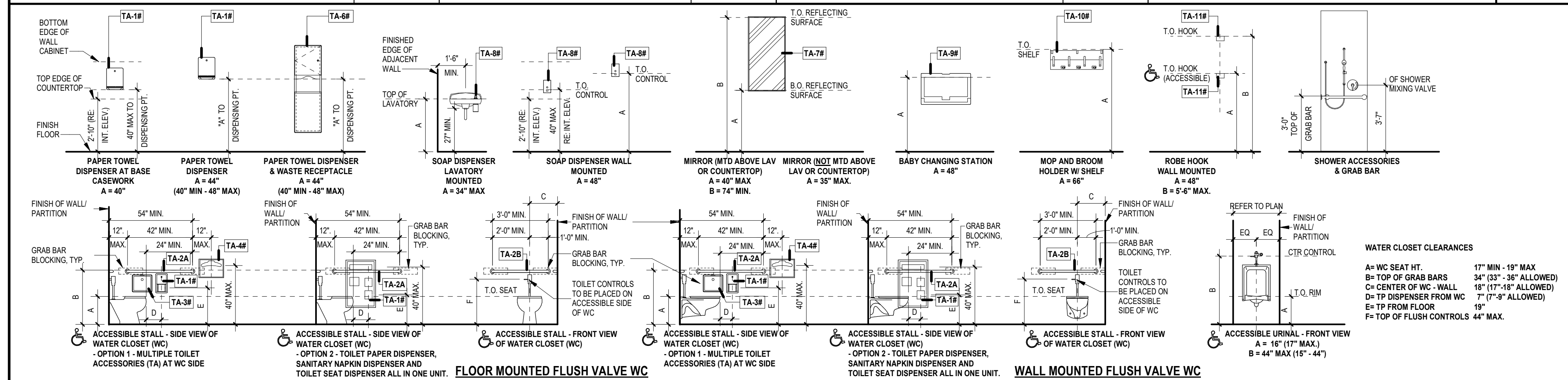
A-100



RESTRM 123 & 124	F5	RESTRM 123 & 124	E5	RESTRM 123 & 124	D5	RESTRM 123 & 124	C5
- INT ELEV	1/4" = 1'-0"	- INT ELEV	1/4" = 1'-0"	- INT ELEV	1/4" = 1'-0"	- INT ELEV	1/4" = 1'-0"

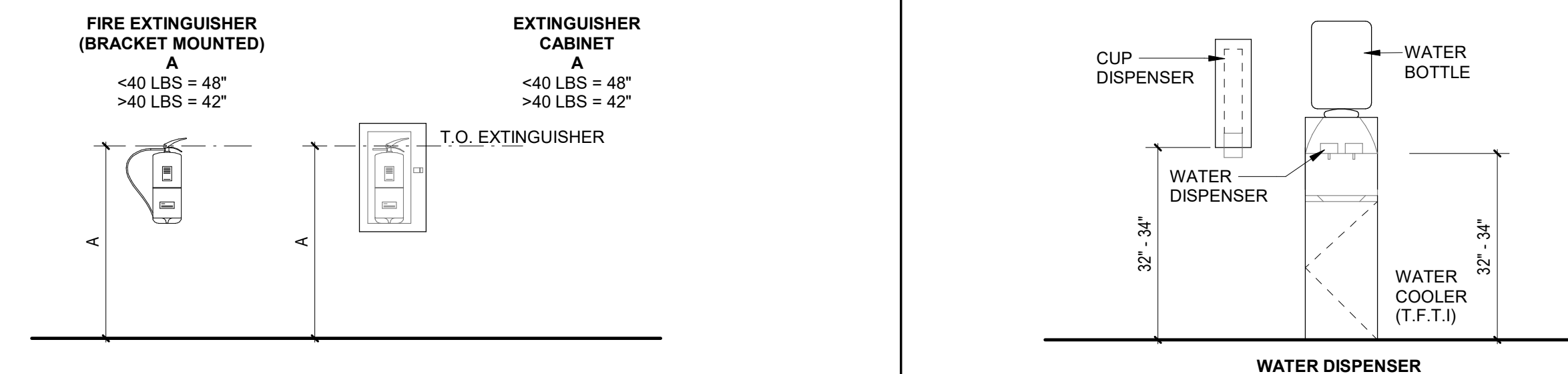


RESTRM 107 & 108	F4	RESTRM 107 & 108	E4	RESTRM 107 & 108	D4	RESTRM 107 & 108	C4
- INT ELEV	1/4" = 1'-0"	- INT ELEV	1/4" = 1'-0"	- INT ELEV	1/4" = 1'-0"	- INT ELEV	1/4" = 1'-0"



TOILET ACCESSORIES / FIXTURES ADA MOUNTING HEIGHTS (ADULTS)

REFER TO EQUIPMENT SCHEDULE FOR
ACCESSORY SPECIFICATIONS



FIRE EXTINGUISHER (FE) & FIRE EXTINGUISHER CABINET (FEC)

WATER COOLER/ DISPENSER

TYPE MARK	DESCRIPTION	MANUFACTURER	MODEL NO.	FINISHES			DOOR GLAZING	FE TYPE	FEC ACCESSORIES	NOTES
				MATERIAL FINISH	CABINET MATERIAL	CABINET TRIM MATERIAL				
PEC-1	SEMI-RECESSED MOUNT FIRE EXTINGUISHER CABINET	NYSTROM	FC-7013-A	BAKED ENAMEL - WHITE	COLD ROLLED SHEET STEEL	SAME MATERIAL AND FINISH AS CABINET AND DOOR.	BREAK GLASS	UL RATED 2A10BC - 10-LB NOMINAL CAPACITY	PROVIDE MOUNTING BRACKETS AND DOOR LOCKS	

FIRE EXTINGUISHER CABINET SCHEDULE

#	DESCRIPTION	MANUFACTURER	MODEL	MOUNTING DETAIL	PROVIDED BY	COMMENTS
TA-01A	TOILET TISSUE DISPENSER - RECESSED MOUNTED	BOBRICK	B-3886		CFCI	
TA-02A	GRAB BAR - 36 INCH	BOBRICK	B-6800x36		CFCI	
TA-02B	GRAB BAR - 42 INCH	BOBRICK	B-6800x42		CFCI	
TA-03A	SANITARY NAPKIN DISPOSAL - SURFACE MOUNTED	BOBRICK	B-254		CFCI	
TA-04A	TOILET SEAT DISPENSER - SURFACE MOUNTED	BOBRICK	B-221		CFCI	
TA-06A	SURFACE MOUNTED PAPER TOWEL DISPENSER	BOBRICK	B-262		CFCI	
TA-07A	MIRROR WITH CHANNEL FRAME	BOBRICK	B-290 2436		CFCI	
TA-08A	AUTOMATIC FOAM SOAP DISPENSER - WALL MOUNTED	BOBRICK	B-20113		CFCI	
TA-03A	7 GALLON TRASH BIN	RUBBERMAID	2099591		CFCI	

TOILET ACCESSORIES & FIXTURES SCHEDULE

KEYNOTE LEGEND	
NUMBER	PROVIDE WORK / ITEM
11.04	WATER COOLER (OFOI) - CONNECT WATER AND POWER.
11.05	REFRIGERATOR (OFOI)
22.02	(N) LAVATORY
22.04	(N) FLOOR MOUNTED TOILET

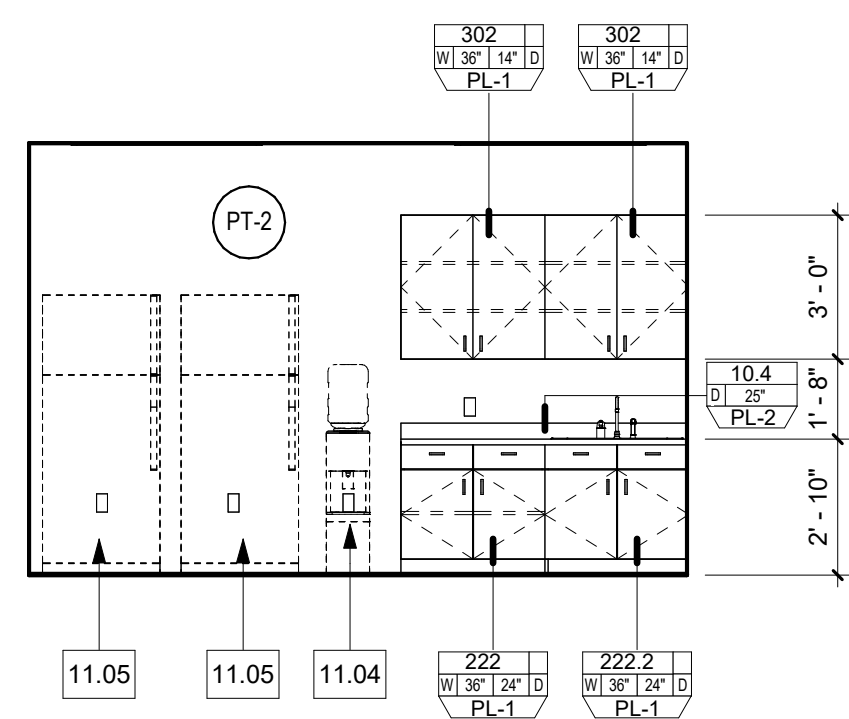
AGENCY APPROVAL



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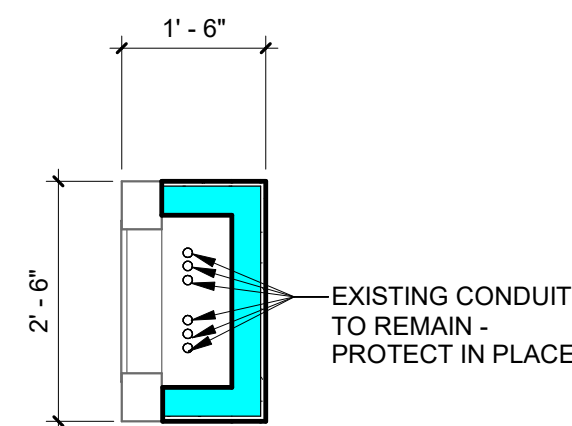
GENERAL RESTROOM FINISH NOTES

1. ALL DRYWALL ADJACENT TO ALL PLUMBING FIXTURES SHALL BE WATER RESISTANT DRYWALL.
2. THE ARCHITECT'S SCOPE FOR THIS PROJECT DID NOT INCLUDE INTERIOR FINISH SELECTIONS AND THEREFORE ALL INTERIOR FINISH SELECTIONS SHALL BE PER THE TENANT / CLIENT. ALL INTERIOR FINISHES SHALL MEET THE CBC SECTION 1210 TOILET & BATHROOM REQUIREMENTS THAT INCLUDE THE FOLLOWING:
 - A. THE ARCHITECT SHALL PROVIDED INTERIOR FINISH SELECTIONS (RE: MASTER SCHEDULE) WITH THE INTENT OF MEETING THE FOLLOWING CBC SECTION 1210 TOILET & BATHROOM REQUIREMENTS THAT INCLUDE THE FOLLOWING:
 - B. 1210.2.1 FLOORS AND WALL BASES, IN OTHER THAN DWELLING UNITS, TOILET, BATHING AND SHOWER ROOM FLOOR FINISH MATERIALS SHALL HAVE A SMOOTH, HARD, NONABSORBENT SURFACE. THE THICKNESS OF SUCH FLOORS WITH WALLS SHALL HAVE A SMOOTH, HARD, NONABSORBENT VERTICAL BASE THAT EXTENDS UPWARD ONTO THE WALLS NOT LESS THAN 4 INCHES (102 MM).
 - C. 1210.2.2 WALLS AND PARTITIONS, WALL AND PARTITIONS WITHIN 2 FEET (610MM) OF SERVICE SINKS, URINALS AND WATER CLOSETS SHALL HAVE A SMOOTH, HARD, NONABSORBENT SURFACE NOT LESS THAN 4 FEET (1219 MM) ABOVE THE FLOOR AND EXCEPT FOR STRUCTURAL ELEMENTS, THE MATERIALS USED IN SUCH AREAS SHALL BE OF A TYPE NOT ADVERSELY AFFECTED BY MOISTURE. ACCESSORIES SUCH AS GRAB BARS, TOWEL BARS, PAPER DISPENSERS AND SOAP DISHES, PROVIDED ON OR WITHIN WALLS, SHALL BE INSTALLED AND SEALED TO PROTECT STRUCTURAL ELEMENTS FROM FINISHES WITH A SMOOTH, NONABSORBENT SURFACE.
 - D. 1210.2.3 SHOWERS, SHOWER COMPARTMENTS AND WALLS ABOVE BATHTUBS WITH NEWLED SHOWERS HEADERS SHALL BE FINISHED WITH A SMOOTH, NONABSORBENT SURFACE TO A HEIGHT NOT LESS THAN 72 INCHES (1829 MM) ABOVE THE DRAIN INLET.
 - E. 1210.2.4 WATERPROOF JOINTS, BUILT-UP TUBS WITH SHOWERS SHALL HAVE WATERPROOF JOINTS BETWEEN THE TUB AND ADJACENT WALL.
 - F. 1210.3 PRIVACY, PRIVACY AT WATER CLOSETS AND URINALS SHALL BE PROVIDED IN ACCORDANCE WITH SECTIONS 1210.3.1 AN 1210.3.2.
 - G. 1210.3.1 WATER CLOSET COMPARTMENT, EACH WATER CLOSET UTILIZED BY THE PUBLIC OR EMPLOYEES SHALL OCCUPY A SEPARATE COMPARTMENT WITH WALLS OR PARTITIONS AND A DOOR ENCLOSING THE FIXTURES TO ENSURE PRIVACY.
- EXCEPTIONS:
 1. WATER CLOSET COMPARTMENTS SHALL NOT BE REQUIRED IN A SINGLE-OCCUPANT TOILET ROOM WITH A LOCKABLE DOOR.
3. 1210.3.2 URINAL PARTITIONS, EACH URINAL UTILIZED BY THE PUBLIC OR EMPLOYEES SHALL OCCUPY A SEPARATE AREA WITH WALLS OR PARTITIONS TO PROVIDE PRIVACY. THE WALLS OR PARTITIONS SHALL BE FINISHED WITH A SMOOTH, NONABSORBENT SURFACE AND EXTEND NOT LESS THAN 60 INCHES (1524 MM) ABOVE THE FINISH FLOOR SURFACE. THE WALLS OR PARTITIONS SHALL EXTEND FROM THE WALL SURFACE AT EACH SIDE OF THE URINAL, NOT LESS THAN 18 INCHES (457 MM) FROM THE URINAL AND NOT LESS THAN 18 INCHES (457 MM) BEYOND THE OUTERMOST FRONT LIP OF THE URINAL MEASURED FROM THE FINISHED BACKWALL SURFACE, WHICHEVER IS GREATER.
- EXCEPTION:
 1. URINAL PARTITIONS SHALL NOT BE REQUIRED IN A SINGLE-OCCUPANT OR FAMILY OR ASSISTED-USE TOILET ROOM WITH A LOCKABLE DOOR.

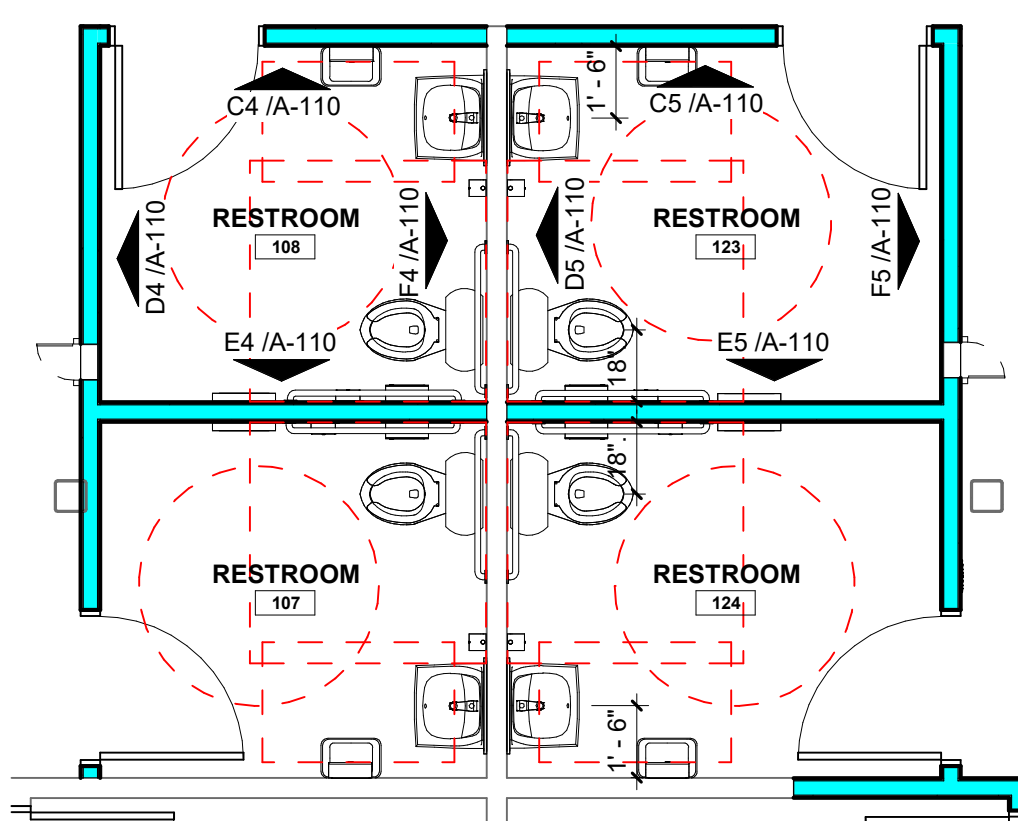


BREAK ROOM 122 - INT ELEV

1/4" = 1'-0"



CHASE WALL

$$\frac{1}{2}'' = 1'-0''$$


ENLARGED FLOOR PLAN

$$1/4" = 1'-0"$$

PROJECT

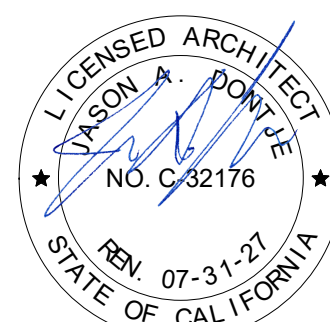
**ORANGE COUNTY DEPARTMENT OF
EDUCATION ESPLANADE BLDG 4
TENANT IMPROVEMENT**

3001 RED HILL AVENUE, SUITE 117, 118, 119,
COSTA MESA, CA 92626

DATE 10/07/2026

PROJECT # 026.0084.00

DESIGN PROFESSIONAL



TITLE
**ENLARGED FLOOR PLANS &
INTERIOR ELEVATIONS**

SHEET #

A-110

KEYNOTE LEGEND

NUMBER PROVIDE WORK / ITEM

REFLECTED CEILING PLAN LEGEND

SYMBOL	DESCRIPTION	DETAIL
(E) ITEM		
(N) ITEM		
HVAC REGISTER (REF MECH)		
SUSPENDED CEILING GRID SYSTEM		C1 / A-520
FRAMED CEILING/ SOFFIT		RE: RCP
ILLUMINATED EXIT SIGNAGE		RE: ELEC DWGS
2 X 4 LAY-IN LIGHT FIXTURE		RE: ELEC DWGS
6" X 4" LAY-IN LIGHT FIXTURE		RE: ELEC DWGS
RECESSED CAN LIGHT FIXTURE		RE: ELEC DWGS
GRID ORIGIN		

GENERAL RCP NOTES

- CONTRACTOR SHALL COORDINATE ALL MECHANICAL GRILLS & DIFFUSERS WITH MECHANICAL.
- REFER TO SHEET G-001 FOR ALL GRAPHIC SYMBOLS.
- REFER TO SHEET A-140 FOR MASTER SCHEDULE.
- CONTRACTOR SHALL COORDINATE ALL LIGHTING & SWITCH SPECS & LOCATIONS WITH ELECTRICAL. ALL FIXTURES SHOWN ARE FOR QUANTITY AND LOCATION ONLY. REFER TO ENGINEERING DRAWINGS FOR TECHNICAL INFORMATION. NOTIFY ARCHITECT OF ANY DISCREPANCIES BETWEEN ARCHITECTURAL & ENGINEERING DRAWINGS PROMPTLY. ARCHITECTURAL DRAWINGS WILL GOVERN FOR LOCATIONS AND QUANTITIES.
- ALL LIGHTING FIXTURES LOCATED IN THE ACOUSTICAL CEILING PANELS ARE TO BE CENTERED IN THE PANEL, UNLESS NOTED OTHERWISE.
- CONTRACTOR SHALL COORDINATE ALL ABOVE CEILING UTILITY ROUTES WITH ALL TRADES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY ARCHITECT OF ANY DISCREPANCIES / CLEARANCE HEIGHT ISSUES.
- RE: MASTER SCHEDULE (A-140 SERIES) FOR ACP SPECIFICATIONS (09 51 13).
- ALL GWB CEILINGS, SOFFITS AND COVES (INCLUDING ALL INSIDE SURFACES OF COVES) SHALL BE LEVEL 5 FINISHED PAINTED PT-1 (RE: MASTER SCHEDULE (SHEET A-140)).
- CENTER NEW CEILING GRID IN EACH ROOM OR SPACE AS ILLUSTRATED ON RCP UNLESS INDICATED WITH A GRID ORIGIN OR DIMENSION.

FIRE SPRINKLER NOTES

- CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING FIRE SPRINKLER SHOP DRAWINGS AND SUBMITTING THEM TO THE AUTHORITY HAVING JURISDICTION (AHJ) FOR APPROVAL.
- SPRINKLER HEADS SHALL BE CENTERED ON GRID PANELS.
- THE NEW PROJECT SUITE SHALL BE EQUIPPED WITH NEW FIRE SPINKLER HEADS - FULLY CONCEALED WITH FACTORY FINISHED "WHITE" COVERS (NO FIELD PAINTING ALLOWED).
- CONTRACTOR SHALL ROUTE ALL NEW SPRINKLER LINES ABOVE CEILING AS REQUIRED TO MAINTAIN REQUIRED CEILING HEIGHTS AND UTILITY CLEARANCES SET FORTH IN THE MPET DOCUMENTS.
- RE: DIVISION 21 SPECIFICATION SECTIONS FOR ADDITIONAL SPRINKLER BASIS OF DESIGN REQUIREMENTS.

AGENCY APPROVAL

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PROJECT

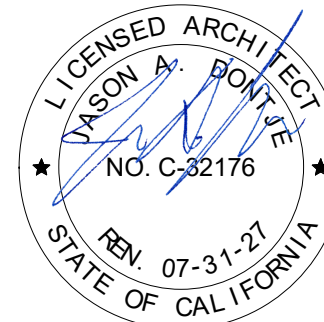
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DESIGN PROFESSIONAL



TITLE
REFLECTED CEILING PLAN

SHEET #

A-120



REFLECTED CEILING PLAN B1
1/8" = 1'-0"

KEYNOTE LEGEND

NUMBER	PROVIDE WORK / ITEM
26.02	PROVIDE (8) WAPs (APPROX 3) IN EACH SUITE - LOCATION TBD IN THE FIELD.

GENERAL FURNITURE & APPLIANCE NOTES

1. THERE MAY BE ADDITIONAL FURNITURE AND MOBILE FIXTURES THAT ARE NOT SHOWN IN THESE DRAWINGS SO CONTRACTOR SHALL OBTAIN ALL FURNITURE DOCUMENTS FROM THE OWNER.

2. PRIOR TO FINAL ROUGH-IN, CONTRACTOR SHALL SCHEDULE A SITE MEETING WITH THE FURNITURE REPRESENTATIVE AND CLIENT REPRESENTATIVE TO REVIEW ALL PROPOSED POWER AND DATA LOCATIONS ONCE THE WALLS ARE CONSTRUCTED BUT BEFORE POWER AND DATA IS ROUGHED IN.

3. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE DELIVERY AND INSTALLATION OF ALL FURNISHINGS AND EQUIPMENT PRIOR TO CASEWORK FABRICATION AND INSTALLATION.

4. ALL COMPUTER/ IT FIXTURES SHOWN IN THESE DOCUMENTS ARE FOR REFERENCE ONLY. CONTRACTOR SHALL OBTAIN A FULL FIXTURE LIST FROM OWNER.

5. RE: SHEET G-001 FOR ALL SYMBOL DEFINITIONS

6. RE: SHEET G-001 FOR ABBREVIATION LEGEND

7. RE: SHEET SERIES A-140 FOR MASTER SCHEDULE

8. CONTRACTOR SHALL COORDINATE THE FOLLOWING DESIGN DETAILS IN CONJUNCTION WITH ELECTRICAL & TECHNOLOGY DOCUMENTS:

RE: INTERIOR ELEVATIONS, CASEWORK SECTIONS AND CASEWORK ELEVATIONS SHEETS FOR OUTLET REQUIREMENTS AT CASEWORK.

AGENCY APPROVAL

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10" MAX.

15" MIN.

48" MAX.

CBC FIGURE 11B-308.3.1

UNOBSTRUCTED SIDE REACH

15" MIN.

48" MAX.

CBC FIGURE 11B-308.1.1

UNOBSTRUCTED FORWARD REACH

10" MAX.

34" MAX.

48" MAX.

CBC FIGURE 11B-308.3.2 (a)

UNOBSTRUCTED HIGH SIDE REACH

20" MAX.

48" MAX.

CBC FIGURE 11B-308.2.2 (a)

UNOBSTRUCTED HIGH FORWARD REACH

10-24" MAX.

34" MAX.

48" MAX.

CBC FIGURE 11B-308.3.2 (b)

UNOBSTRUCTED HIGH SIDE REACH

>20-25" MAX.

48" MAX.

CBC FIGURE 11B-308.2.2 (b)

UNOBSTRUCTED HIGH FRONT REACH

1. ALL OUTLETS (POWER / DATA) AND T-STATS TO BE MOUNTED TO MEET SIDE APPROACH CLEARANCES. REFER TO MPET DOCUMENTS FOR ADDITIONAL REQUIREMENTS.

2. ALL PLUMBING CONTROLS SHALL MEET FRONT APPROACH WHEN FIXTURES ARE DESIGNED FOR FRONT APPROACH.

3. ALL TOILET ACCESSORIES SHALL MEET SIDE APPROACH REQUIREMENTS WHEN ACCESSIBLE FROM SIDE AND FRONT APPROACH WHEN ACCESSIBLE FROM FRONT.

POWER AND EQUIPMENT PLAN

B1

1/8" = 1'-0"

PROJECT

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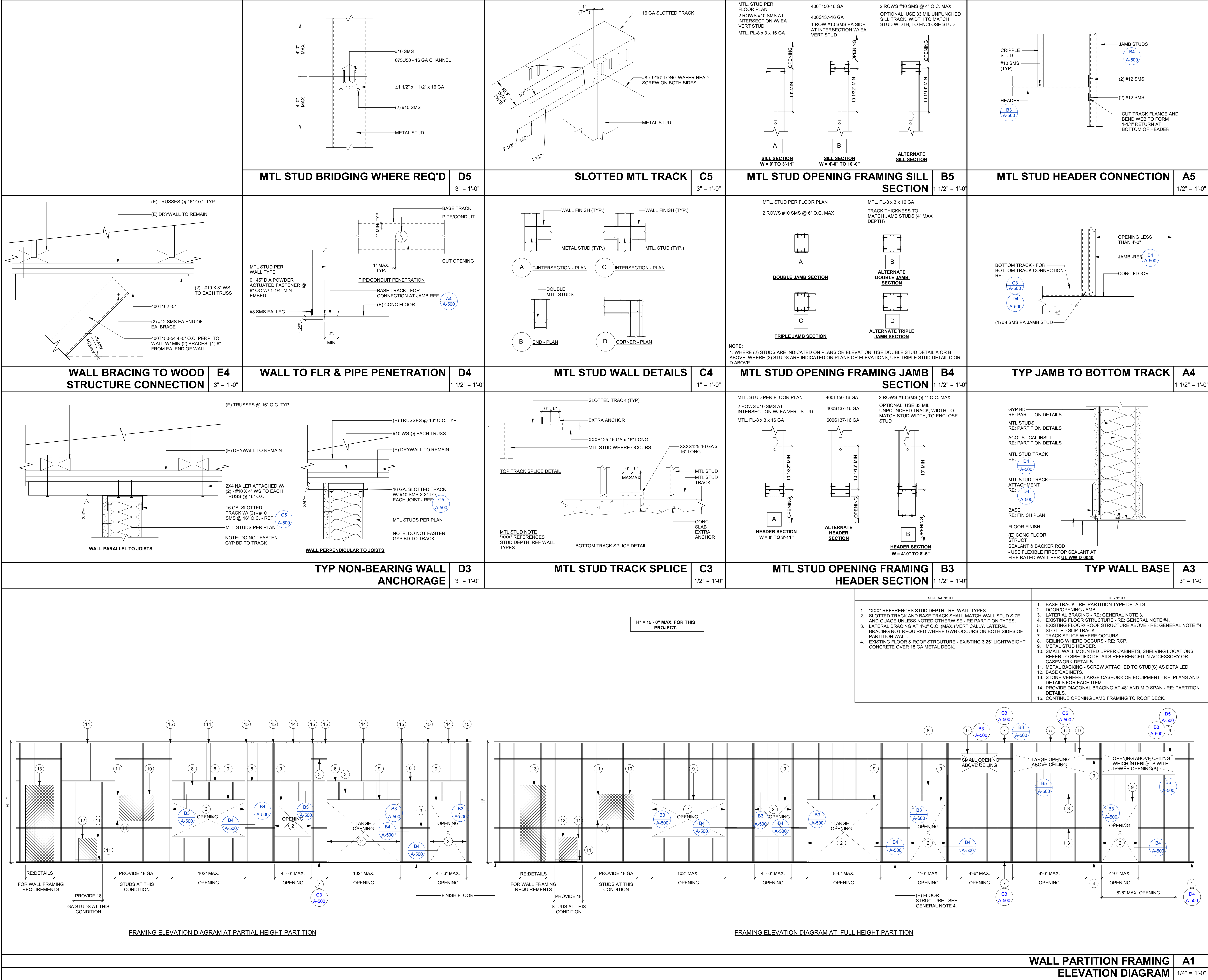
PROJECT # 026.0084.00

DESIGN PROFESSIONAL

TITLE
POWER & EQUIPMENT PLAN

SHEET #

A-130



AGENCY APPROVAL

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WALL TYPE NOTES

WALL STUD SIZE - RE: PARTITION DETAIL. EX=EXISTING PARTITION. DENOTES LEAD SHIELDING REQUIREMENTS - RE: LEAD SHIELDING NOTES BELOW.

WALL TYPE - RE: LEGEND BELOW. FIRE RATING IN HOURS. IF NOT RATED, A "-" WILL BE LISTED. DENOTES TYPE OF FIRE PROTECTION FEATURES PER CBC. IF NOT RATED, A "-" WILL BE LISTED.

FIRE PROTECTION FEATURE TYPES:

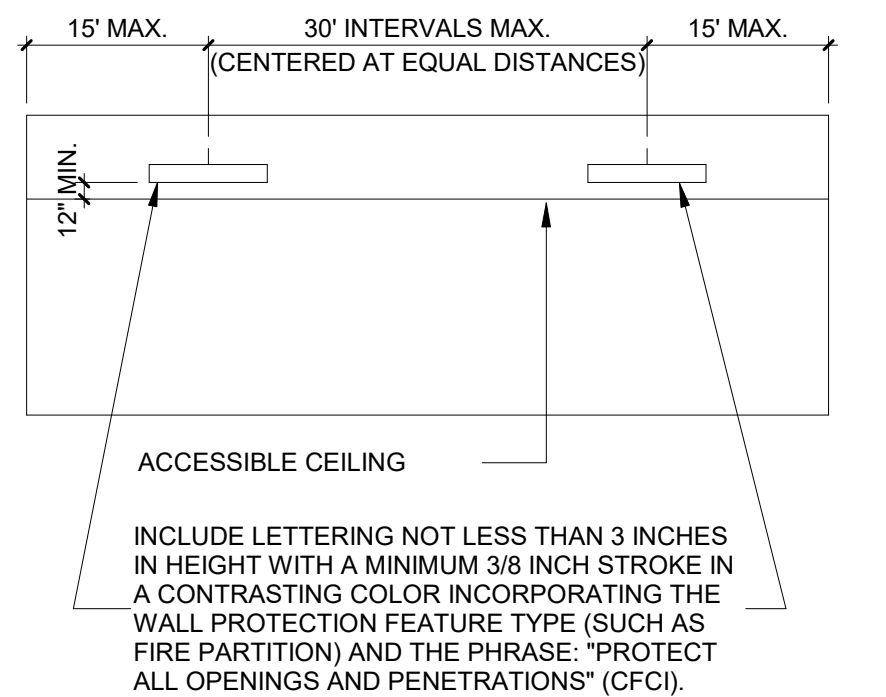
INDICATES NO FIRE PROTECTION FEATURE. FW= FIRE WALL PER CBC 706. FB= FIRE BARRIER PER CBC 707. FP= FIRE PARTITION PER CBC 708. SB= SMOKE BARRIER PER CBC 709. SP= SMOKE PARTITION PER CBC 710.

PARTITION LEGEND

B..... B4 / A-100. E..... C4 / A-100.

WALL MARKING AND IDENTIFICATION

PER CBC SECTION 703.7, WHERE THERE IS AN ACCESSIBLE CONCEALED FLOOR, FLOOR-CEILING OR ATTIC SPACE, FIRE WALLS (FW), FIRE PARTITIONS (FP), SMOKE BARRIERS (SB) AND SMOKE PARTITIONS (SP) OR ANY OTHER WALL REQUIRED TO HAVE PROTECTED OPENINGS OR PENETRATIONS SHALL BE EFFECTIVELY AND PERMANENTLY IDENTIFIED WITH SIGNS OR STENCILING IN THE CONCEALED SPACE. SUCH IDENTIFICATION SHALL:



PROJECT

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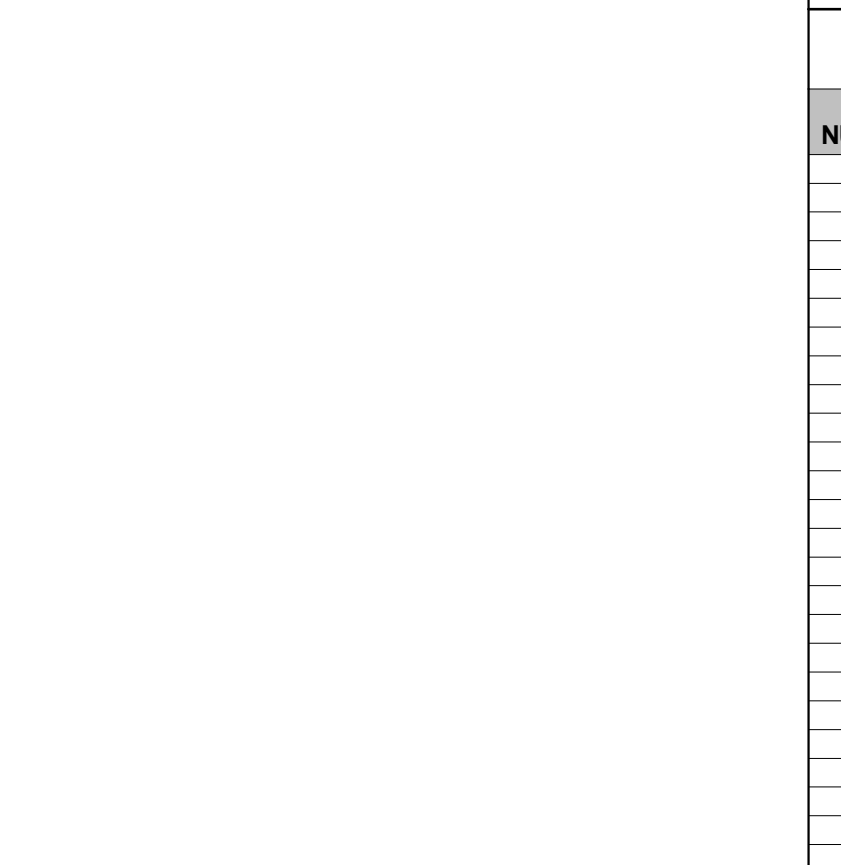
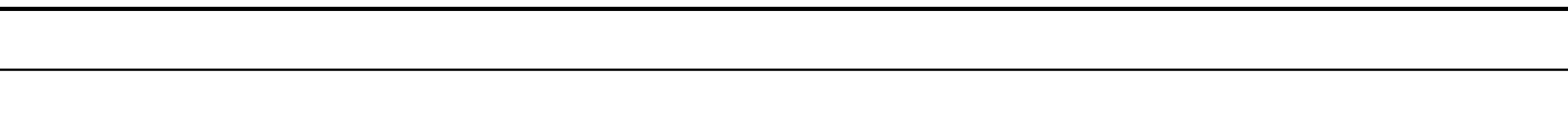
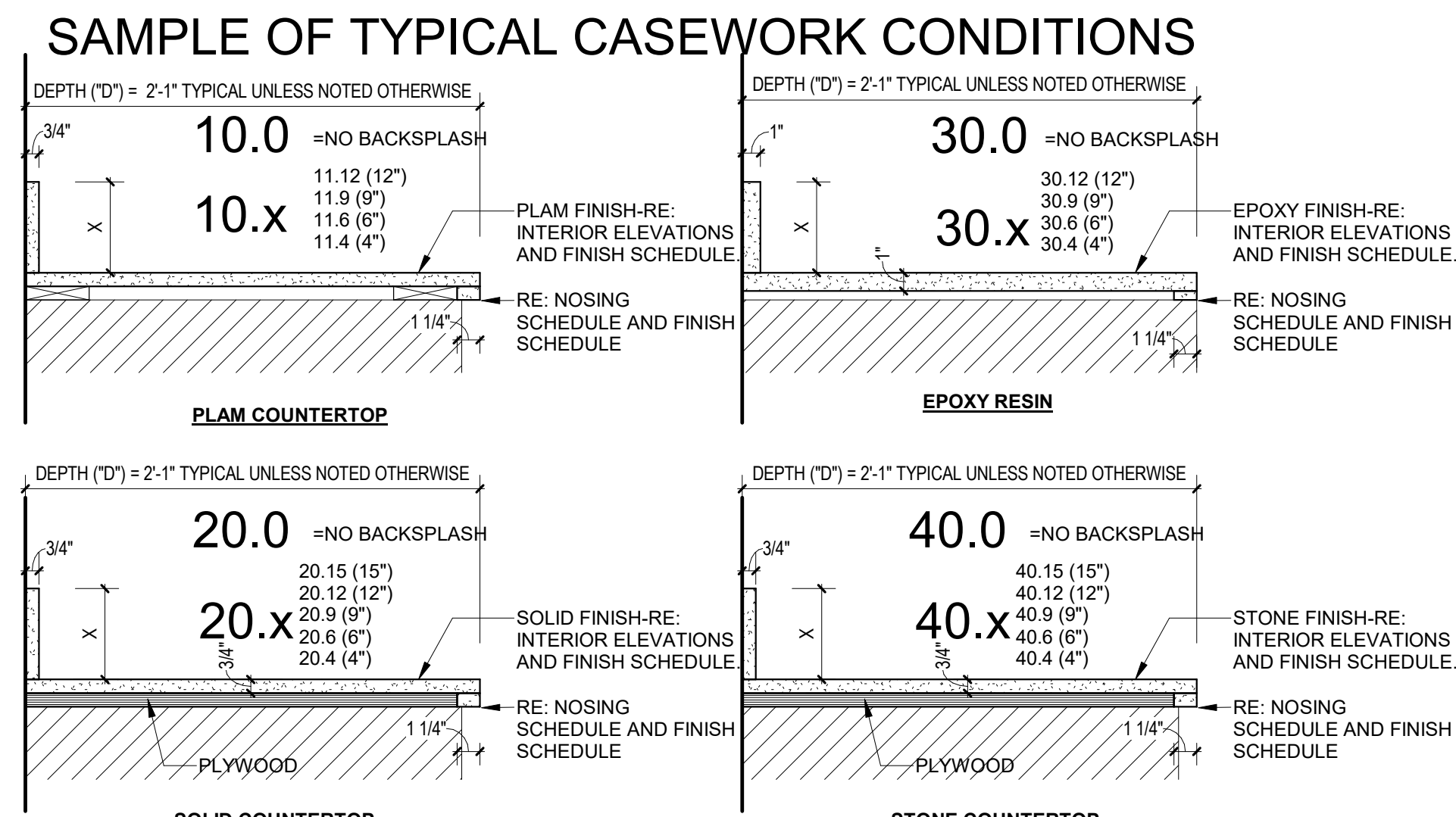
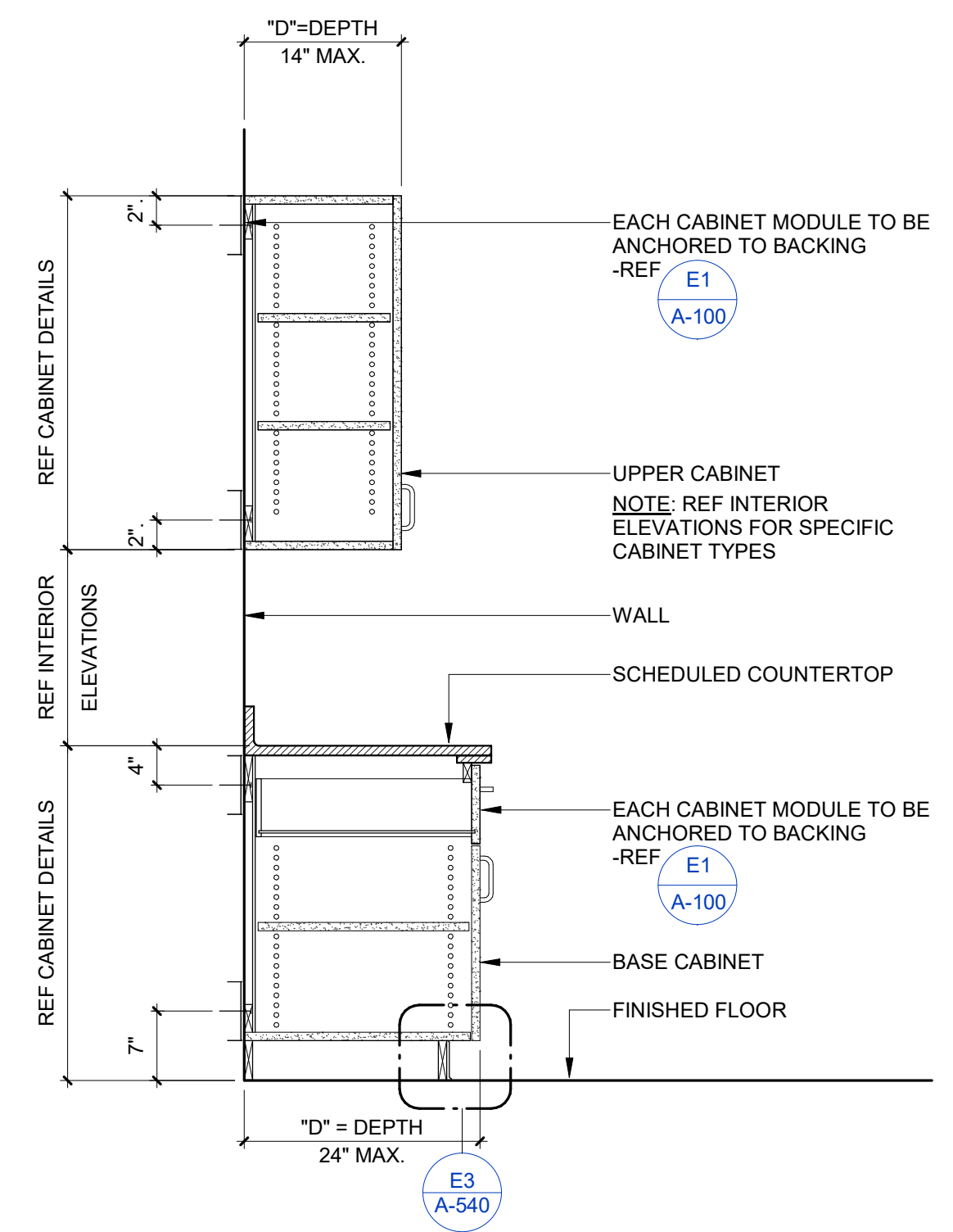
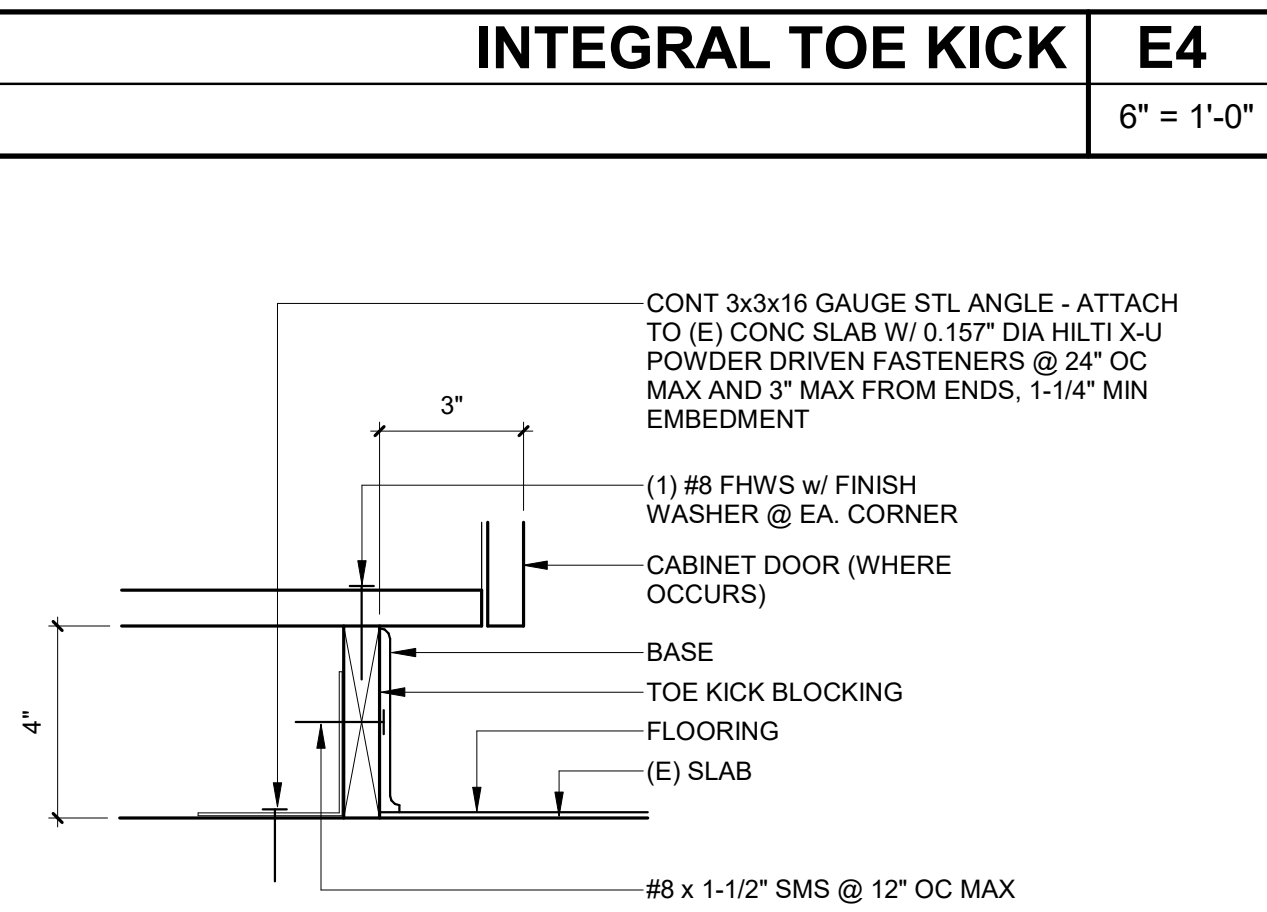
PROJECT # 026.0084.00

DESIGN PROFESSIONAL

TITLE
FRAMING DETAILS

SHEET #

A-500



06 41 16 CASEWORK FINISH SCHEDULE									
ID NUMBER	DESCRIPTION	OUTSIDE FINISH	CORE MATERIAL	INSIDE FINISH	TOP/FRONT EDGE	BOTTOM/BACK EDGE	LEFT EDGE	RIGHT EDGE	
1	DRAWER 3" FRT	VS	PVC	GLS	PVC	PVC	-	-	-
2	DRAWER SUBFRT	MELAMINE	1/2" MDF	MELAMINE	MELAMINE	MELAMINE	MELAMINE	MELAMINE	MELAMINE
3	DRAWER BACK	MELAMINE	1/2" MDF	MELAMINE	MELAMINE	MELAMINE	MELAMINE	MELAMINE	MELAMINE
4	DRAWER TOPS	MELAMINE	1/2" MDF	MELAMINE	MELAMINE	MELAMINE	MELAMINE	MELAMINE	MELAMINE
5	DRAWER BOTTOM	MELAMINE	1/2" MDF	UNFINISHED	-	MELAMINE	MELAMINE	MELAMINE	MELAMINE
6	DOOR FRT	VS	3/4" MDF	GLS	PVC	PVC	PVC	PVC	PVC
7	BASE CABINET BACK	MELAMINE	1/2" MDF	BACKER	-	-	-	-	-
8	TOXOKFR FRONT AND BACK	SEE DRAWINGS	Plywood	PLYWOOD	-	-	SEE DRAWINGS IF EXPOSED	SEE DRAWINGS IF EXPOSED	SEE DRAWINGS IF EXPOSED
9A	BASE CABINET END - (FINISHED)	VS	3/4" MDF	MELAMINE	PVC (EXPOSED)	-	PVC (EXPOSED)	PVC (EXPOSED)	PVC (EXPOSED)
9B	BASE CABINET END - (UNFINISHED)	3/4" MELAMINE	3/4" MDF	MELAMINE	-	-	PVC (EXPOSED)	PVC (EXPOSED)	PVC (EXPOSED)
10	BASE CABINET BOTTOM	MELAMINE	3/4" MDF	MELAMINE	PVC (EXPOSED)	-	-	-	-
11A	BASE CABINET SPREADERS	MELAMINE	3/4" MDF	MELAMINE	-	-	-	-	-
12	BASE CABINET TOP	MELAMINE	3/4" MDF	MELAMINE	-	-	MELAMINE	MELAMINE	MELAMINE
13	COUNTERTOP SURFACE	SEE ELEVATIONS	SEE DETAILS	SEE DETAILS	SEE DETAILS	SEE DETAILS	SEE DETAILS	SEE DETAILS	SEE DETAILS
14	COUNTERTOP SPLASH	SEE ELEVATIONS	SEE DETAILS	SEE DETAILS	SEE DETAILS	SEE DETAILS	SEE DETAILS	SEE DETAILS	SEE DETAILS
15A	COUNTERTOP SPLASH RETURN AT CORNER WALL LOCATION	SEE ELEVATIONS	SEE DETAILS	SEE DETAILS	SEE DETAILS	SEE DETAILS	SEE DETAILS	SEE DETAILS	SEE DETAILS
16	WALL CABINET BACK	MELAMINE	1/2" MDF	MELAMINE	-	-	-	-	-
15A	WALL CABINET END - (FINISHED)	VS	3/4" MDF	MELAMINE	-	-	PVC (EXPOSED)	PVC (EXPOSED)	PVC (EXPOSED)
15B	WALL CABINET END - (UNFINISHED)	MELAMINE	3/4" MDF	MELAMINE	-	-	VS	VS	VS
16	WALL CABINET TOP	VS (EXPOSED)	3/4" MDF	MELAMINE	PVC	-	PVC (EXPOSED)	PVC (EXPOSED)	PVC (EXPOSED)
17	WALL CABINET BOTTOM	VS (EXPOSED)	3/4" MDF	MELAMINE	PVC	-	PVC (EXPOSED)	PVC (EXPOSED)	PVC (EXPOSED)
18	ADJUSTABLE SHELF	MELAMINE	2"X4" MDF	MELAMINE	-	-	-	-	-
19	EXPOSED ADJUSTABLE SHELF	VS	3/4" MDF	VS	PVC	-	-	-	-
20	EXPOSED CABINET BOTTOM	VS	1/2" MDF	BACKER	-	-	-	-	-
21	EXPOSED BASE CABINET BOTTOM	VS (EXPOSED)	1/2" MDF	UNFINISHED	PVC (EXPOSED)	-	-	-	-



CASEWORK DIAGRAM AND SCHEDULES	A1 1/2" = 1'-0"
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A-540

A-540

PLAN VIEW	MIN. LAVATORY KNEE AND TOE CLEARANCE FRONT VIEW SIDE VIEW	LAVATORIES AND SINKS NOTES - A CLEAR FLOOR SPACE COMPLYING WITH SECTION 11B-305, POSITIONED FOR A FORWARD APPROACH, AND KNEE AND TOE CLEARANCE COMPLYING WITH SECTION 11B-306 SHALL BE PROVIDED. [11B-606.2] - A PARALLEL APPROACH COMPLYING WITH SECTION 11B-305 SHALL BE PERMITTED TO A KITCHEN SINK IN A SPACE WHERE A COOK TOP OR CONVENTIONAL RANGE IS NOT PROVIDED AND TO WET BARS. [11B-606.2, EXCEPTION 1] - LAVATORIES AND SINKS SHALL BE INSTALLED WITH THE FRONT OF THE HIGHER OF THE RIM OR COUNTER SURFACE 34 INCHES MAXIMUM ABOVE THE FINISH FLOOR OR GROUND. [11B-606.3] - CONTROLS OF FAUCETS SHALL COMPLY WITH SECTION 11B-309. - WATER SUPPLY AND DRAIN PIPES UNDER LAVATORIES AND SINKS SHALL BE INSULATED OR OTHERWISE CONFIGURED TO PROTECT AGAINST CONTACT. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES AND SINKS. [11B-606.5] - LAVATORIES WHEN LOCATED ADJACENT TO A SIDE WALL OR PARTITION, SHALL BE A MINIMUM OF 18 INCHES TO THE CENTERLINE OF THE FIXTURE. [11B-606.6] - SINKS SHALL BE 6 1/2 INCHES DEEP MAXIMUM. [11B-606.7]	AGENCY APPROVAL studio+ 2755 Bristol Street, Suite 250, Newport Beach, California 92626 P: 949.315.1993 These drawings have been prepared as one coordinated set of drawings and are complimentary. What is required by one drawing is required by all of the drawings, even if a detail or component part is not identified on every sheet. Any user's reliance on a single or select few sheet(s) of the drawings without consideration for the information included in the entire set of drawings will be at the user's sole risk and shall not form the basis for a request for additional compensation or time. CASEWORK COORDINATION NOTES VGS VERTICAL: GRADE (020) PLASTIC LAMINATE USED ON CABINET DOORS, DRAWERS AND FINISHED ENDS CLS CABINET LINER, HIGH PRESSURE LAMINATE (020) USED ON BACK OF DOORS AND FINISHED ENDS BKL BACKER MELAMINE LOW PRESSURE MELAMINE LAMINATE PVC EDGE-BANDING, HIGH IMPACT PVC EDGING - PVC EDGING FINISH TO MATCH ADJACENT PLAM U.N.O.
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CS-T01

ALL GENDER RESTROOM DOOR SIGNAGE
LOCATE AT: SINGLE STALL (GENDER NEUTRAL) RESTROOM DOOR

12" DIA.

CIRCLE COLOR TO CONTRAST DOOR AND TRIANGLE COLOR.

PROVIDE CHAMFERED EDGES AND RADIUS AT ALL VERTICES FOR ALL RAISED GEOMETRIC SYMBOLS, TYP.

+5" - 6" AFF
CENTER OF SIGN

TRIANGLE SHALL CONTRAST 70% MIN. WITH CIRCLE SYMBOL

1/4" THICK TRIANGLE OVER 1/4" THICK CIRCLE

8"

CS-T02

ALL GENDER RESTROOM SIGNAGE
LOCATE AT: STRIKE SIDE OF SINGLE STALL (GENDER NEUTRAL) RESTROOM DOOR FROM ACCESSIBLE CORRIDOR / HALLWAY

8"

8"

RESTROOM

The diagram shows a rectangular sign with a black border. The top of the sign has the text "CS-M03" in large, bold, black letters. Below this, in smaller, bold, black letters, is "MAXIMUM OCCUPANCY LOAD SIGN". Underneath that, in even smaller, bold, black letters, is "LOCATED IN ROOMS EXCEEDING 50 OCCUPANTS - RE: LIFE-SAFETY PLAN(S)". The bottom of the sign features the text "MAXIMUM OCCUPANCY" in large, bold, black letters, followed by "###" in large, bold, black letters. To the right of the sign, there is a note: "NOTE: NO BRAILLE REQUIRED FOR THIS SIGN. RE: CS / A-900". Below the sign, there is a line pointing to the bottom right corner with the text "VERIFY # PER LIFE SAFETY PLAN(S)". A dimension line above the sign indicates a width of "10\"". A dimension line to the right of the sign indicates a height of "9 3/4\" AFF".

Diagram illustrating the layout of a room (CS-R01) with a door (D-1011) and a window (W-1011). The room dimensions are 6' wide and 6' high. The door is located on the left wall, and the window is located on the right wall. The storage area is located on the right wall, below the window.

CS-R01
 ROOM NAME & NUMBER SIGN
 LOCATE AT EACH ROOM - CORRIDOR /
 HALLWAY SIDE.

Diagram illustrating the layout of a room (CS-R02) with a door (D-1011) and a window (W-1011). The room dimensions are 6' wide and 6' high. The door is located on the left wall, and the window is located on the right wall. The storage area is located on the right wall, below the window.

CS-R02
 ROOM NAME & NUMBER SIGN
 LOCATE AT EACH ROOM - CORRIDOR / HALLWAY SIDE.

The diagram shows a rectangular sign with a white background and a black border. On the left side, there is a square pictorial symbol containing a stylized ear and a hearing aid. To the right of the symbol, the text "ASSISTIVE LISTENING SYSTEM AVAILABLE" is written in a bold, sans-serif font, arranged in four lines. Above the sign, a dimension line indicates a width of 12". To the left of the sign, a dimension line indicates a height of 16". To the right of the sign, the text "CS-H01" is displayed in a large, bold, sans-serif font. Below "CS-H01", the text "ASSISTIVE LISTENING SYSTEM AVAILABLE SIGN" is written in a smaller, bold, sans-serif font, followed by "LOCATE PER PLANS". Below this, the text "4\" AFF" is shown, with a dimension line indicating the distance from the center of the pictorial symbol to the center of the text block. A small arrow points to the center of the pictorial symbol, and another small arrow points to the center of the text block.

CS-A02

ACCESSIBLE ROUTE SIGN
 LOCATE AT:

- ACCESSIBLE ENTRY DOORS
- ACCESSIBLE RAMP LANDINGS

CS-A02A

ACCESSIBLE ROUTE SIGN WITH ROOM SIGN ABOVE
 LOCATE AT:

- ACCESSIBLE ENTRY DOORS
- ACCESSIBLE RAMP LANDINGS

ROOM SIGNAGE WHERE OCCURS -RE: SIGN PLAN(S)

The diagram illustrates two types of exit signs: CS-E01 and CS-E02. CS-E01 is an 'EXIT' sign, and CS-E02 is an 'EXIT ROUTE' sign. Both signs are rectangular with a width of 8 inches and a height of 16 inches. The text 'EXIT' is centered on the sign, and 'EXIT ROUTE' is centered on the sign. The signs are shown in a perspective view, with the text 'EXIT' and 'EXIT ROUTE' appearing slightly tilted. The signs are labeled 'CS-E01' and 'CS-E02' respectively. The diagram also includes a list of requirements for the signs, such as 'EXIT SIGN LOCATE AT GRADE LEVEL EXIT DOORS' and 'EXIT ROUTE SIGN LOCATE AT: - EACH ACCESS DOOR FROM AN INTERIOR ROOM OR AREA TO A CORRIDOR OR HALLWAY - EACH DOOR THAT LEADS TO A GRADE LEVEL EXIT BY MEANS OF EXIT ENCLOSURE OR EXIT PASSAGEWAY.'

CS-E01

EXIT SIGN
LOCATE AT GRADE LEVEL EXIT DOORS

CS-E02

EXIT ROUTE SIGN
LOCATE AT:
- EACH ACCESS DOOR FROM AN INTERIOR ROOM OR AREA TO A CORRIDOR OR HALLWAY
- EACH DOOR THAT LEADS TO A GRADE LEVEL EXIT BY MEANS OF EXIT ENCLOSURE OR EXIT PASSAGEWAY.

1. NOT ALL SIGN TYPES ILLUSTRATED ON THIS SHEET MAY BE USED ON THIS PROJECT -RE: SIGNAGE PLAN(S).
2. ALL BRAILLE SHOWN IS FOR GRAPHICAL REPRESENTATION ONLY -RE: BRAILLE REQUIREMENTS PER DETAIL A3 / A-800
3. ALL FONT / CHARACTER REQUIREMENTS PER
A. WITH BRAILLE: A3 / A-800
B. WITHOUT BRAILLE: C3 / A-800
4. ALL SIGN DIMENSIONS ARE FOR REFERENCE ONLY - SIGN MANUFACTURER SHALL MEET ALL SIGN LETTERING, BRAIL AND PICTOGRAM REQUIREMENTS / SPACING PER THIS SHEET.
5. ALL PICTOGRAMS SHALL MEET REQUIREMENTS PER DETAIL C1 / A-800
6. RE B1 / A-800 FOR ALL SIGNAGE HEIGHT AND LOCATION REQUIREMENTS FOR TACTILE SIGNS.
7. THE SIGNAGE TYPES SHOWN IN THESE DIAGRAMS ARE INTENDED TO ILLUSTRATE THE MINIMUM CODE REQUIREMENTS PER CBC 2025. CONTRACTOR SHALL MATCH THE FACILITY DESIGN REQUIREMENTS - VERIFY WITH BUILDING OWNER PRIOR TO FABRICATION.
8. ALL SIGNS TO BE ATTACHED TO VERTICAL SURFACE PER DETAIL D1 / A-800
9. SIGN MATERIAL SHALL BE 1/4" THICK PLASTER WITH 1/32" RAISED LETTERS - RE: FONT / LETTER REQUIREMENTS.
10. ALL RESTROOM SIGNAGE TO MEET REQUIREMENTS SET FORTH IN DETAIL A1 / A-800
11. OCCUPANT LOAD SIGNS SHALL COMPLY WITH CBC SECTION 1004.3: EVERY ROOM OR SPACE WHICH IS USED FOR ASSEMBLY, CLASSROOM, DINING, DRINKING OR SIMILAR PURPOSES HAVING AN OCCUPANT LOAD OF 50 OR MORE SHALL HAVE THE OCCUPANT LOAD OF THE ROOM OR SPACE POSTED IN A CONSPICUOUS PLACE, NEAR THE MAIN EXIT OR EXIT ACCESS DOORWAY FROM THE ROOM OR SPACE. THE SIGNAGE SHALL BE DESIGNED IN ACCORDANCE WITH THE FACILITY DESIGN AND SHALL BE MAINTAINED BY THE OWNER OR THE OWNER'S AUTHORIZED AGENT.
12. ALL STAIR SIGNAGE SHALL MEET CBC SECTIONS 1023.8, 1023.9 AND 1023.9.1.
13. ALL ELEVATOR LOBBIES SHALL PROVIDE IDENTIFICATION SIGNAGE PER CBC SECTION 1023.10
14. REFER TO ELEVATOR SHEETS FOR ADDITIONAL SIGNAGE REQUIREMENTS (FOR PROJECTS WITH ELEVATORS SCOPE OF WORK).
15. PER CBC SECTION 1009.9: SIGNAGE INDICATING SPECIAL ACCESSIBILITY PROVISIONS SHALL BE PROVIDED AS SHOWN:
A. EACH RAISED SIGNAGE LOCATED TO AN AREA OF REFUGE FROM AN ADJACENT FLOOR AREA SHALL BE IDENTIFIED BY A SIGN STATING: "AREA OF REFUGE".
B. EACH DOOR PROVIDING ACCESS TO AN EXTERIOR AREA FOR ASSISTED RESCUE SHALL BE IDENTIFIED BY A TACTILE EXIT SIGN WITH THE WORDS: "EXIT ROUTE".
C. SIGNAGE SHALL COMPLY WITH CHAPTER 11A, SECTION 1143A AND CHAPTER 11B, SECTION 11B-703.5 AS APPLICABLE. REQUIREMENTS FOR VISUAL CHARACTERS AND INCLUDE THE FOLLOWING: ADDITIONAL ACCESS TO AN EXTERIOR AREA FOR ASSISTED RESCUE, 11B, SECTION 11B-703.7.2.1. WHERE EXIT SIGN ILLUMINATION IS REQUIRED BY SECTION 1011.3, THE SIGNS SHALL BE ILLUMINATED. ADDITIONALLY, VISUAL CHARACTERS, RAISED CHARACTER AND TACTILE CHARACTERS, 11B, SECTION 11B-703.3 AND 11B-703.5 SHALL BE LOCATED AT EACH DOOR TO AN AREA OF REFUGE AND EXTERIOR AREA FOR ASSISTED RESCUE IN ACCORDANCE WITH SECTION 1013.4. ADDITIONAL SYMBOL OF ACCESSIBILITY SHALL COMPLY WITH CHAPTER 11A, SECTION 1143A COMPLYING WITH CHAPTER 11B, SECTION 11B-703.7.2.1.
16. DIRECTIONAL SIGNAGE COMPLYING WITH CHAPTER 11B, SECTION 11B-703.5 INDICATING THE LOCATION OF THE OTHER MEANS OF EGRESS AND WHICH OF THOSE ARE ACCESSIBLE MEANS OF EGRESS SHALL BE PROVIDED AT THE FOLLOWING:
A. AT OUTRIS SIGNAGE TO A REQUIRED ACCESSIBLE SPACE BUT NOT PROVIDING AN APPROVED ACCESSIBLE MEANS OF EGRESS.
B. AT ELEVATOR LANDINGS.
C. WITHIN AREAS OF REFUGE
17. RAISED CHARACTER AND BRAILLE EXIT SIGNS SHALL MEET REQUIREMENTS OF CBC SECTION 1013.4, AND SHALL BE LOCATED AT THE FOLLOWING LOCATIONS:
A. EACH GRADE-LEVEL EXTERIOR EXIT DOOR THAT IS REQUIRED TO COMPLY WITH SECTION 1013.1, SHALL BE IDENTIFIED BY A TACTILE EXIT SIGN WITH THE WORD: "EXIT".
B. EACH EXTERIOR EXIT DOOR THAT IS REQUIRED TO COMPLY WITH CHAPTER 11A, AND THAT LEADS DIRECTLY TO A GRADE-LEVEL EXTERIOR EXIT BY MEANS OF A STAIRWAY OR RAMP SHALL BE IDENTIFIED BY A TACTILE EXIT SIGN WITH THE FOLLOWING WORDS AS APPROPRIATE:
1. "EXIT STAIR DOWN"
2. "EXIT STAIR DOWN"
3. "EXIT STAIR UP"
4. "EXIT STAIR DOWN"
C. EACH DOOR THAT IS REQUIRED TO COMPLY WITH SECTION 1013.1 AND THAT LEADS DIRECTLY TO A GRADE - LEVEL EXTERIOR EXIT BY MEANS OF AN EXIT PASSAGE WAY SHALL BE IDENTIFIED BY A TACTILE EXIT SIGN WITH THE WORDS: "EXIT ROUTE".
D. EACH EXIT ACCESS DOOR FROM AN INTERIOR ROOM OR AREA TO A CORRIDOR OR HALLWAY THAT IS REQUIRED TO COMPLY WITH SECTION 1013.1, SHALL BE IDENTIFIED BY A TACTILE EXIT SIGN WITH THE WORDS: "EXIT ROUTE".
E. EACH EXIT DOOR THROUGH A HORIZONTAL EXIT THAT IS REQUIRED TO COMPLY WITH SECTION 1013.1, SHALL BE IDENTIFIED BY A SIGN WITH THE WORDS, "TO EXIT".
18. ALL FIRE RISER ROOM DOOR SIGNAGE SHALL MEET THE REQUIREMENTS OF CBC SECTION 905.7.1.

	3" = 1'-0"
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NOTE:
 PROVIDE SPACES AS NEEDED SO SIGNAGE IS WITHIN 3" OF WINDOW FRAME

MECHANICAL MOUNTING (MASONRY, STUCCO & CONCRETE SURFACES): MOUNT WITH COUNTERSINK, VANDAL RESISTANT #6 FASTENERS

ADHESIVE MOUNTING (GLASS & INTERIOR PLASTER / GWB SURFACES): MOUNT WITH CLEAR SILICONE & VHB TAPE.

SAME HEIGHT, WIDTH, CORNER RADIIUSES- MIRROR BACK TO BACK

WINDOW FRAME (BEYOND)

BLANK PLATE/ SIGNAGE, AS OCCURS. PROVIDE BLANK IF NO SIGNAGE OCCURS. MOUNTED WITH CLEAR ADHESIVE SILICONE.

ALIGN EACH END, TYP.

GLAZING

SIGNAGE MOUNTED WITH CLEAR SILICONE ADHESIVE

SM-001: MOUNTING AT DBL. GLAZING

WINDOW FRAME

SAME HEIGHT, WIDTH, CORNER RADIIUSES- MIRROR BACK TO BACK

BLANK PLATE/ SIGNAGE, AS OCCURS. PROVIDE BLANK IF NO SIGNAGE OCCURS. MOUNTED WITH CLEAR ADHESIVE SILICONE.

GLAZING

ALIGN EACH END, TYP.

SIGNAGE MOUNTED WITH CLEAR SILICONE ADHESIVE

SM-002: MOUNTING AT SGL. GLAZING

C.M.U WALL

SIGNAGE MOUNTED TO MATERIAL / SURFACE WITH MECHANICAL (VANDAL RESISTANT) FASTENERS & CLEAR SILICONE ADHESIVE.

SM-003: MOUNTING AT SMOOTH C.M.U WALL

GRIND SMOOTH HIGH POINTS AS NEEDED TO ALLOW PLUMB INSTALLATION

SPLIT FACED C.M.U WALL

SIGNAGE MOUNTED TO MATERIAL / SURFACE WITH MECHANICAL (VANDAL RESISTANT) FASTENERS & CLEAR SILICONE ADHESIVE.

SM-004: MOUNTING AT SPLITFACED C.M.U WALL

INTERIOR PARTITION

GWB FINISH

EXCEPTION: WHERE VISUAL CHARACTERS COMPLY WITH SECTION 11B-703.2 AND ARE ACCOMPANIED BY BRAILLE COMPLYING WITH SECTION 11B-703.3, THEY SHALL NOT BE REQUIRED TO COMPLY WITH SECTIONS 11B-703.5.2 THROUGH 11B-703.5.6, 11B-703.5.8 AND 11B-703.5.9

11B-703.5.1 FINISH AND CONTRAST. CHARACTERS AND THEIR BACKGROUND SHALL HAVE A NON-GLARE FINISH. CHARACTERS SHALL CONTRAST WITH THEIR BACKGROUND WITH EITHER LIGHT CHARACTERS ON A DARK BACKGROUND OR DARK CHARACTERS ON A LIGHT BACKGROUND.

11B-703.5.2 CASE. CHARACTERS SHALL BE UPPERCASE OR LOWERCASE OR A COMBINATION OF BOTH.

11B-703.5.3 STYLE. CHARACTERS SHALL BE CONVENTIONAL. IN FORM, CHARACTERS SHALL NOT BE ITALIC, OBLIQUE, SCRIPT, HIGHLY DECORATIVE, OR OF OTHER UNUSUAL FORMS.

11B-703.5.4 CHARACTER PROPORTIONS. CHARACTERS SHALL BE SELECTED FROM FONTS WHERE THE WIDTH OF THE UPPERCASE LETTER "O" IS 60 PERCENT MINIMUM AND 110 PERCENT MAXIMUM OF THE HEIGHT OF THE UPPERCASE LETTER "T".

11B-703.5.5 CHARACTER HEIGHT. MINIMUM CHARACTER HEIGHT SHALL COMPLY WITH TABLE 11B-703.5.5. VIEWING DISTANCE SHALL BE MEASURED AS THE HORIZONTAL DISTANCE BETWEEN THE CHARACTER AND AN OBSTRUCTION BEING THE NEAREST APPROACH TOWARDS THE SIGN. CHARACTER HEIGHT SHALL BE BASED ON THE UPPERCASE LETTER "T".

EXCEPTION: WHERE PROVIDED, FLOOR PLANS PROVIDING PROCEDURES INFORMATION IN ACCORDANCE WITH TITLE 19 SHALL NOT BE REQUIRED TO COMPLY WITH SECTION 11B-703.5.5.

HEIGHT TO FINISH FLOOR OR GROUND FROM BASELINE OF CHARACTER	HORIZONTAL VIEWING DISTANCE	MINIMUM CHARACTER HEIGHT
40 INCHES (1015 MM) TO LESS THAN OR EQUAL TO 70 INCHES (1778 MM)	LESS THAN 72 INCHES (1829MM)	5/8 INCH (15.9 MM)
	72 INCHES (1829 MM) AND GREATER	5/8 INCH (15.9 MM), PLUS 1/8 INCH (3.2 MM) PER FOOT (305 MM) OF VIEWING DISTANCE ABOVE 72 INCHES (1829 MM)
GREATER THAN 70 INCHES (1778 MM) TO LESS THAN OR EQUAL TO 120 INCHES (3048 MM)	180 INCHES (4572 MM) AND GREATER	2 INCHES (51 MM), PLUS 1/8 INCH (3.2 MM) PER FOOT (305 MM) OF VIEWING DISTANCE ABOVE 180 INCHES (4572 MM)
GREATER THAN 120 INCHES (3048 MM)	LESS THAN 21 FEET (6401 MM)	3 INCHES (76 MM)
	21 FEET (6401 MM) AND GREATER	3 INCHES (76 MM), PLUS 1/8 INCH (3.2 MM) PER FOOT (305 MM) OF VIEWING DISTANCE ABOVE 21 FEET (6401 MM)

11B-703.5.6 HEIGHT FROM FINISH FLOOR OR GROUND. VISUAL CHARACTERS SHALL BE 40 INCHES (1016 MM) MINIMUM ABOVE THE FINISH FLOOR OR GROUND.

EXCEPTIONS:

1. VISUAL CHARACTERS INDICATING ELEVATOR CAR CONTROLS SHALL NOT BE REQUIRED TO COMPLY WITH SECTION 11B-703.5.6.
2. FLOOR-LEVEL EXIT SIGNS COMPLYING WITH CHAPTER 10, SECTION 1013.7 SHALL NOT BE REQUIRED TO COMPLY WITH SECTION 11B-703.5.6.
3. WHERE PROVIDED, FLOOR PLANS PROVIDING EMERGENCY PROCEDURES INFORMATION IN ACCORDANCE WITH TITLE 19 SHALL NOT BE REQUIRED TO COMPLY WITH SECTION 11B-703.5.6.

11B-703.5.7 STROKE THICKNESS. STROKE THICKNESS OF THE UPPERCASE LETTER "T" SHALL BE 10 PERCENT MINIMUM AND 30 PERCENT MAXIMUM OF THE HEIGHT OF THE CHARACTER.

11B-703.5.8 CHARACTER SPACING. CHARACTER SPACING SHALL BE MEASURED BETWEEN THE TWO CLOSEST POINTS OF ADJACENT CHARACTERS, EXCLUDING WORD SPACES. SPACING BETWEEN INDIVIDUAL CHARACTERIZED FLOOR PLANS PROVIDING EMERGENCY PROCEDURES INFORMATION IN ACCORDANCE WITH TITLE 19 SHALL BE 10 PERCENT MINIMUM AND 35 PERCENT MAXIMUM OF CHARACTER HEIGHT.

11B-703.5.9 LINE SPACING. SPACING BETWEEN THE BASELINES OF SEPARATE LINES OF CHARACTERS WITHIN A MESSAGE SHALL BE 135 PERCENT MINIMUM AND 170 PERCENT MAXIMUM OF THE CHARACTER HEIGHT.

11B-703.5.10 FORMAT. TEXT SHALL BE IN A HORIZONTAL FORMAT.

11B-703.6 PICTOGRAMS. PICTOGRAMS SHALL COMPLY WITH SECTION 11B-703.6.	6"
11B-703.6.1 PICTOGRAM FIELD. PICTOGRAMS SHALL HAVE A FIELD HEIGHT OF 6 INCHES (152 MM) MINIMUM. CHARACTERS AND BRAILLE SHALL NOT BE LOCATED IN THE PICTOGRAM FIELD.	6" = 1'-0"

FIGURE 11B-703.6.1 PICTOGRAM FIELD

11B-703.4.1 HEIGHT ABOVE FINISH FLOOR OR GROUND. TACTILE CHARACTERS ON SIGNS SHALL BE LOCATED 48 INCHES (1219 MM) MINIMUM ABOVE THE FINISH FLOOR OR GROUND SURFACE, MEASURED FROM THE BASELINE OF THE LOWEST BRAILLE CELLS AND 60 INCHES (1524 MM) MAXIMUM ABOVE THE FINISH FLOOR OR GROUND SURFACE, MEASURED FROM THE BASELINE OF THE HIGHEST LINE OF RAISED CHARACTERS.

EXCEPTION: TACTILE CHARACTERS FOR ELEVATOR CAR CONTROLS SHALL NOT BE REQUIRED TO COMPLY WITH SECTION 11B-703.4.1.

Diagram illustrating the height requirements for tactile characters on signs above the finish floor or ground. The diagram shows a sign with "EXIT ROUTE" text and Braille. A dashed circle indicates the height range from 48 inches (1219 mm) minimum to 60 inches (1524 mm) maximum above the finish floor or ground. A callout "A3 (A-800)" points to the sign. A dashed line indicates the height from the bottom of the Braille to the top of the sign.

LOCATION OF TACTILE SIGNS AT DOORS IN CORRIDOR WITH LESS THAN 18" CLEAR AT JAMB SIDE.

The diagrams illustrate the placement of tactile signs on double doors and glazing. The top section shows two scenarios for double doors: one where the sign is centered on the tactile characters (labeled 'LOCATION OF TACTILE SIGNS AT DOUBLE DOORS, SHOWN AT GLAZING LOCATIONS (SIMILAR AT SOILD WALLS)') and another where the sign is centered on the tactile characters (labeled 'OPTIONAL LOCATION OF TACTILE SIGNS AT DOUBLE DOORS WHEN SIGN CANNOT BE MOUNTED ON RIGHT HAND SIDE, SHOWN AT GLAZING LOCATIONS (SIMILAR AT SOILD WALLS)'). The bottom section shows the location of tactile signs at double egress doors, including an alternate location for the right-hand side if it does not have proper clearances (labeled 'ALTERNATE LOCATION IF RIGHT HAND SIDE DOES NOT HAVE PROPER CLEARANCES').

11B-703.1 SIGNS

11B-703.1.1 GENERAL SIGNS SHALL COMPLY WITH SECTION 11B-703. WHERE BOTH VISUAL AND TACTILE CHARACTERS ARE REQUIRED, EITHER ONE SIGN WITH BOTH VISUAL AND TACTILE CHARACTERS, OR TWO SEPARATE SIGNS, ONE WITH VISUAL AND ONE WITH TACTILE CHARACTERS, SHALL BE PROVIDED.

11B-703.1.2 RAISED CHARACTERS. RAISED CHARACTERS SHALL COMPLY WITH SECTION 11B-703.2 AND SHALL BE DUPLICATED IN BRAILLE complying WITH 11B-703.3. RAISED CHARACTERS SHALL BE INSTALLED IN ACCORDANCE WITH 11B-703.4.

11B-703.2.1 DEPTH. RAISED CHARACTERS SHALL BE .103 INCH (.8 MM) MINIMUM ABOVE THEIR BACKGROUND.

11B-703.2.2 CASE. CHARACTERS SHALL BE UPPERCASE.

11B-703.2.3 STYLE. CHARACTERS SHALL NOT BE ITALIC, OBLIQUE, SCRIPT, HIGHLY DECORATIVE, OR OF OTHER UNUSUAL FORMS.

11B-703.2.4 CHARACTER PROPORTIONS. CHARACTER SHALL BE SELECTED FROM FONTS WHERE THE WIDTH OF THE UPPERCASE LETTER "O" IS 60 PERCENT MAXIMUM AND 110 PERCENT MINIMUM OF THE HEIGHT OF THE UPPERCASE LETTER "T".

11B-703.2.5 CHARACTER HEIGHT. CHARACTER HEIGHT MEASURED VERTICALLY FROM THE BASELINE OF THE CHARACTER SHALL BE .58 INCH (15 MM) MINIMUM AND 2 INCHES (51 MM) MAXIMUM BASED ON THE HEIGHT OF THE UPPERCASE LETTER "T".

11B-703.2.6 STROKE THICKNESS. STROKE THICKNESS OF THE UPPERCASE LETTER "T" SHALL BE 15 PERCENT MAXIMUM OF THE HEIGHT OF THE CHARACTER.

11B-703.2.7 CHARACTER SPACING. CHARACTER SPACING SHALL BE MEASURED BETWEEN THE TWO CLOSEST POINTS OF ADJACENT RAISED CHARACTERS WITHIN A MESSAGE EXCLUDING WORD SPACES, WHERE CHARACTERS HAVE RECTANGULAR CROSS SECTIONS. SPACING BETWEEN INDIVIDUAL RAISED CHARACTERS SHALL BE 18 INCH (± 3 MM) MINIMUM AND 4 TIMES THE RAISED CHARACTER STROKE WIDTH MAXIMUM, WHERE CHARACTERS HAVE OTHER CROSS SECTIONS. SPACING BETWEEN INDIVIDUAL RAISED CHARACTERS SHALL BE .195 INCH (5 MM) MINIMUM AND 4 TIMES THE RAISED CHARACTER STROKE WIDTH MAXIMUM AT THE BASE OF THE CROSS SECTIONS. AND .18 INCH (4.5 MM) MINIMUM AND 4 TIMES THE RAISED CHARACTER STROKE WIDTH MAXIMUM AT THE TOP OF THE CROSS SECTIONS. CHARACTERS SHALL BE SEPARATED FROM RAISED BORDER AND DECORATIVE ELEMENTS .38 INCH (9.5 MM) MINIMUM.

11B-703.2.8 LINE SPACING. SPACING BETWEEN THE BASELINES OF SEPARATE LINES OF RAISED CHARACTERS WITHIN A MESSAGE SHALL BE 135 PERCENT MINIMUM AND 170 PERCENT MAXIMUM OF THE RAISED CHARACTER HEIGHT.

11B-703.2.9 FORMAT. TEXT SHALL BE IN A HORIZONTAL FORMAT.

SIGN WIDTH

RE: SIGN TYPE; (SHT A-800)

— STROKE THICKNESS per 11B-703.2.6
— CHARACTER SPACING per 11B-703.2.7
SIGNAGE CHARACTERS - RE: SIGN TYPE

SIGN HEIGHT
RE: SIGN TYPES; (SHT A-800)

3/8" MIN.

3/8" MIN.

3/8" MIN.
2" MAX.

SECTION 11B-
703.2.8

HEIGHT OF BOTTOM OF RAISED
CHARACTERS (MEASURED AT BOTTOM
OF TOP LINE OF CHARACTER)

HEIGHT OF BRAILLE (MEASURED AT
BOTTOM OF BRAILLE)

RAISED BORDER (WHERE OCCURS)
CORRESPONDING BRaille (SHOWN CENTERED)

• 3/8" MIN. IF BRAILLE IS PLACED FLUSH LEFT PER 11B-703.3.2

EXIT ROUTE

• RAISED CHARACTERS TO BE CONTRASTING COLOR, EITHER LIGHT OR DARK ON LIGHT. RE: GENERAL NOTES FOR ADDITIONAL COLOR COORDINATION.

DIRECTLY BELOW OR ADJACENT TO THE CORRESPONDING RAISED CHARACTERS OR SYMBOLS.		
TABLE 11B-703.3.1 BRAILLE DIMENSIONS		
TAG	MEASUREMENT RANGE	MINIMUM IN INCHES TO MAXIMUM IN INCHES
A	DOT BASE DIAMETER	0.059 (1.5 MM) TO 0.063 (1.6 MM)
B	DISTANCE BETWEEN TWO DOTS IN THE SAME CELL	0.090 (2.3 MM) TO 0.100 (2.5 MM) MEASURED CENTER TO CENTER
C	DISTANCE BETWEEN CORRESPONDING DOTS IN THE ADJACENT CELLS	0.241 (6.1 MM) TO 0.300 (7.6 MM) MEASURED CENTER TO CENTER
D	DOT HEIGHT	0.025 (0.6 MM) TO 0.037 (0.9 MM)
E	DISTANCE BETWEEN CORRESPONDING DOTS FROM ONE CELL DIRECTLY BELOW	0.395 (10 MM) TO 0.400 (10.2 MM) MEASURED CENTER TO CENTER

FIGURE 11B-703.3.1 BRAILLE DIMENSIONS

11B-703.7.2.6 TOILET AND BATHING FACILITIES: GEOMETRIC SYMBOLS: GEOMETRIC SYMBOLS AT ENTRANCES TO TOILET AND BATHING FACILITIES SHALL BE MOUNTED 36 INCHES (147.3 MM) MINIMUM AND 60 INCHES (1524 MM) MAXIMUM ABOVE FINISH FLOOR OR GROUND SURFACE MEASURED FROM THE CENTERLINE OF THE SYMBOL. WHERE A DOOR IS PROVIDED THE SYMBOL SHALL BE MOUNTED WITHIN 1 INCH (25 MM) OF THE VERTICAL CENTERLINE OF THE DOOR.

9" MIN - 12" MAX

TOILET / BATHING ROOM DOOR SIGN - RE: SIGNAGE PLAN

ROOM SIGN MOUNTED TO WALL - RE: SIGNAGE PLAN

EQ EQ

DOOR AT TOILET / BATHING ROOM - RE: PLAN AND DOOR SCHEDULE.

58" - 60" AFF TO CENTER OF DOOR SIGN (CB 11B-703.7.2.6)

FINISH FLOOR OR GRADE

11B-703.7.2.8.1 MEN'S TOILET AND BATHING FACILITIES: AN EQUILATERAL TRIANGLE, 1/4 INCH (6.4 MM) THICK WITH EDGES 12 INCHES (305 MM) LONG AND A VERTEX POINTING UPWARD, SHALL BE LOCATED AT ENTRANCES TO MEN'S TOILET AND BATHING FACILITIES. THE TRIANGLE SYMBOL SHALL CONTRAST WITH THE DOOR, EITHER LIGHT ON A DARK BACKGROUND OR DARK ON A LIGHT BACKGROUND.

EXCEPTION: WHEN SECURE PERIMETER OF DETENTION AND CORRECTIONAL FACILITIES, GEOMETRIC SYMBOLS SHALL NOT BE REQUIRED TO BE 1/4 INCH (6.4 MM) THICK.

11B-703.7.2.8.2 WOMEN'S TOILET AND BATHING FACILITIES: A CIRCLE, 1/4 INCH (6.4 MM) THICK AND 12 INCHES (305 MM) DIAMETER, SHALL BE LOCATED AT ENTRANCES TO WOMEN'S TOILET AND BATHING FACILITIES. THE CIRCLE SYMBOL SHALL CONTRAST WITH THE DOOR, EITHER LIGHT ON A DARK BACKGROUND OR DARK ON A LIGHT BACKGROUND.

EXCEPTION: WHEN SECURE PERIMETER OF DETENTION AND CORRECTIONAL FACILITIES, GEOMETRIC SYMBOLS SHALL NOT BE REQUIRED TO BE 1/4 INCH (6.4 MM) THICK.

11B-703.7.2.8.3 ALL-GENDER (PREVIOUSLY CALLED UNISEX) TOILET AND BATHING FACILITIES: A CIRCLE, 1/4 INCH (6.4 MM) THICK AND 12 INCHES (305 MM) IN DIAMETER WITH A TRIANGLE WITH A 1/4 INCH (6.4 MM) THICK TRIANGLE WITH A VERTEX POINTING UPWARD, SUPERIMPOSED ON AND GEOMETRICALLY INSCRIBED WITHIN THE CIRCLE AND WITHIN THE 12 INCH (305 MM) DIAMETER, SHALL BE PROVIDED AT ENTRANCES TO ALL-GENDER UNISEX / SINGLE-STALL TOILET AND BATHING FACILITIES. THE VERTICES OF THE TRIANGLE SHALL BE LOCATED 1/4 INCH (6.4 MM) MAXIMUM FROM EDGE OF THE CIRCLE. THE TRIANGLE SYMBOL SHALL CONTRAST WITH THE CIRCLE SYMBOL, EITHER LIGHT ON A DARK BACKGROUND OR DARK ON A LIGHT BACKGROUND. THE CIRCLE SYMBOL SHALL CONTRAST WITH THE DOOR, EITHER LIGHT ON A DARK BACKGROUND OR DARK ON A LIGHT BACKGROUND.

EXCEPTION: WHEN SECURE PERIMETER OF DETENTION AND CORRECTIONAL FACILITIES, GEOMETRIC SYMBOLS SHALL NOT BE REQUIRED TO BE 1/4 INCH (6.4 MM) THICK.

11B-703.7.2.8.4 EDGES AND VERTICES ON GEOMETRIC SYMBOLS: EDGES SHALL BE EASED OR ROUNDED AT 1/16 INCH (1.59 MM) MINIMUM, OR CHAMFERED AT 1/8 INCH (3.2 MM) MAXIMUM. VERTICES SHALL BE RADISED BETWEEN 1/8 INCH (3.2 MM) MINIMUM AND 1/4 INCH (6.4 MM) MAXIMUM.

1/8" MIN - 1/4" MAX

1/16" MINIMUM

EDGES

1/8" MAX.

1/8" MAX.

RADIUS @ VERTICES

EASED/ROUNDED

CHAMFERED

studio+ 2755 Bristol Street, Suite 250, Newport Beach, California 92626 P: 949.315.1993 These drawings have been prepared as one coordinated set of drawings and are complimentary. That is required by one drawing is required by all of the drawings, even if a detail or component of it is not identified on every sheet. Any user's reliance on a single or select few sheet(s) of the drawings without consideration for the information included in the entire set of drawings will be at the user's sole risk and shall not form the basis for a request for additional compensation or time.	
PROJECT	
ORANGE COUNTY DEPARTMENT OF EDUCATION ESPLANADE BLDG 4 TENANT IMPROVEMENT 3001 RED HILL AVENUE, SUITE 117, 118, 119, COSTA MESA, CA 92626	
DATE 10/07/2026	
PROJECT # 026.0084.00	
DESIGN PROFESSIONAL	
TITLE CODE (INTERIOR ONLY) SIGNAGE TYPES	

GENERAL NOTES		
----- GENERAL NOTES ----- 1. ENTIRE INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF THE 2022 CALIFORNIA MECHANICAL CODE, 2025 CALIFORNIA BUILDING CODE, AND ALL OTHER APPLICABLE CODES AND REGULATIONS, INCLUDING 2025 BUILDING ENERGY EFFICIENCY STANDARDS DIVISION 1-24. 2. 2025 CALIFORNIA GREEN BUILDING STANDARDS (CALGREEN) CODE INCLUDING THE APPLICABLE MANDATORY MEASURES: - 5.201.1 CALIFORNIA ENERGY CODE, FOR THE PURPOSES OF MANDATORY ENERGY EFFICIENCY STANDARDS IN THIS CODE, THE CALIFORNIA ENERGY COMMISSION WILL CONTINUE TO ADOPT MANDATORY STANDARDS. - 5.504.3 COVERING OF DUCT OPENINGS AND PROTECTION OF MECHANICAL EQUIPMENT DURING CONSTRUCTION, AT THE TIME OF ROUGH INSTALLATION AND DURING STORAGE ON THE CONSTRUCTION SITE UNTIL FINAL STARTUP OF THE HEATING, COOLING AND VENTILATING EQUIPMENT, ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, SHEET METAL OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY TO REDUCE THE AMOUNT OF DUST, WATER AND DEBRIS WHICH MAY ENTER THE SYSTEM. - 5.504.5 FILTERS, IN MECHANICALLY VENTILATED BUILDINGS, PROVIDE REGULARLY OCCUPIED AREAS OF THE BUILDING WITH AIR FILTRATION MEDIA FOR OUTSIDE AND RETURN AIR PRIOR TO OCCUPANCY THAT PROVIDES AT LEAST A MINIMUM EFFICIENCY REPORTING VALUE (MERV) OF 13. MERV 13 FILTERS SHALL BE INSTALLED PRIOR TO OCCUPANCY AND RECOMMENDATIONS FOR MAINTENANCE WITH FILTERS OF THE SAME VALUE SHALL BE INCLUDED IN THE OPERATION AND MAINTENANCE MANUAL. EXCEPTIONS: -a. EXISTING MECHANICAL EQUIPMENT. - 5.504.5.1 LABELING. INSTALLED FILTERS SHALL BE CLEARLY LABELED BY THE MANUFACTURER INDICATING THE MERV RATING. - 5.506.1 OUTSIDE AIR DELIVERY, FOR MECHANICALLY OR NATURALLY VENTILATED SPACES IN BUILDINGS, MEET THE MINIMUM REQUIREMENTS OF SECTION 121 (REQUIREMENTS FOR VENTILATION) OF THE 2025 CALIFORNIA ENERGY CODE, OR THE APPLICABLE LOCAL CODE, WHICHEVER IS MORE STRINGENT, AND DIVISION 1, CHAPTER 4 OF CCR, TITLE 8. - 5.508.1 OZONE DEPLETION AND GREENHOUSE GAS REDUCTIONS. INSTALL HVAC AND REFRIGERATION AND FIRE SUPPRESSION EQUIPMENT SHALL COMPLY WITH 5.508.1.1 AND 5.508.1.2. - 5.508.1.1 CHLOROFLUOROCARBONS (CFCs). INSTALL HVAC, REFRIGERATION AND FIRE SUPPRESSION EQUIPMENT THAT DO NOT CONTAIN CFCs. - 5.508.1.2 HALONS. INSTALL HVAC, REFRIGERATION AND FIRE SUPPRESSION EQUIPMENT THAT DO NOT CONTAIN HALONS. - ADHESIVES, SEALANTS AND CAULKS SHALL MEET CALGREEN REQUIREMENTS. - INSTALLER AND SPECIAL INSPECTORS SHALL MEET ALL QUALIFICATIONS LISTED IN SECTION 702 OF THE 2025 CALIFORNIA GREEN BUILDING STANDARDS CODE. 3. COORDINATE ENTIRE INSTALLATION OF THE HVAC SYSTEM WITH THE WORK OF ALL OTHER TRADES PRIOR TO ANY FABRICATION OR INSTALLATION. PROVIDE ALL FITTINGS, OFFSETS, AND TRANSITIONS AS REQUIRED FOR A COMPLETE WORKABLE INSTALLATION. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE ITEMS TO BE PROVIDED BY OTHER TRADES WHERE MENTIONED IN THE CONTRACT DOCUMENTS PRIOR TO BID - NO EXCEPTIONS. 4. COORDINATE THE LOCATIONS OF ALL CEILING DIFFUSERS, REGISTERS, AND GRILLES WITH THE ARCHITECTURAL REFLECTIVE CEILING PLAN, ELECTRICAL LIGHTING LAYOUT AND ARCHITECTURAL ROOM ELEVATIONS. THE ARCHITECT AND ENGINEER SHALL BE IMMEDIATELY NOTIFIED OF ANY CONFLICTS PRIOR TO FABRICATION AND INSTALLATION. 5. CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER OF CONSTRUCTION PHASING PRIOR TO START OF CONSTRUCTION, REMOVAL, AND/OR REPLACEMENT OF ANY EQUIPMENT. CONTRACTOR SHALL RECEIVE PERMISSION IN WRITING PRIOR TO THE START OF ANY WORK DURING ANY PHASE FOR WORK SHOWN HEREIN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONDUCT WORK AND ARRANGE HIS WORK IN A MANNER THAT WILL CAUSE MINIMAL INTERFERENCE WITH DAILY FUNCTIONS WITHIN THE FACILITY. ANY EXPECTED DOWNTIME SHALL BE COORDINATED WITH THE OWNER. 6. ALL EQUIPMENT, DUCTS, PIPING, AND OTHER DEVICES AND MATERIALS INSTALLED OUTSIDE OF THE BUILDING OR OTHERWISE EXPOSED TO THE WEATHER SHALL BE COMPLETELY WEATHER-PROOFED AND PAINTED TO MATCH, COORDINATE WITH ARCHITECT PRIOR TO PAINTING. 7. THE OWNER ACKNOWLEDGES THAT THE DESIGN PROFESSIONAL'S PLANS ARE INSTRUMENTS OF PROFESSIONAL SERVICE. NEVERTHELESS, THE PLANS PREPARED UNDER THIS AGREEMENT SHALL BECOME THE PROPERTY OF THE OWNER UPON COMPLETION OF		
THE WORK. THE OWNER AGREES TO HOLD HARMLESS AND INDEMNIFY THE DESIGN PROFESSIONAL AGAINST ALL DAMAGES, CLAIMS AND LOSSES, INCLUDING DEFENSE COSTS, ARISING OUT OF ANY RESCUE OF THE PLANS WITHOUT THE WRITTEN AUTHORIZATION OF THE DESIGN PROFESSIONAL. 8. ALL DIMENSIONS SHOWN ON THESE PLANS ARE APPROXIMATE AND MUST BE CONFIRMED ON SITE. 9. PRIOR TO OCCUPANCY, THE ENTIRE H.V.A.C. SYSTEMS SHALL BE BALANCED IN ACCORDANCE WITH (AABC) ASSOCIATED AIR BALANCE COUNCIL STANDARDS BY AN INDEPENDENT AIR BALANCE CONTRACTOR. CERTIFICATION SHALL BE PROVIDED BY THE CONTRACTOR FOR AIR AS APPLICABLE. SYSTEMS SHALL BE BALANCED AS INDICATED ON PLANS INCLUDING FRESH AIR VENTILATION. WHERE THERE IS A CONFLICT WITH THE MECHANICAL PLANS, THE AIR BALANCE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO BALANCING OF SYSTEM. IF NOT THE AIR BALANCE CONTRACTOR SHALL BEAR ALL COSTS INCURRED FOR WORK THAT MUST BE RE-BALANCED DUE TO CONFLICTS ON CONTRACT DOCUMENTS. CONTRACTOR SHALL PROVIDE THREE COPIES OF THE AIR BALANCE REPORT TO THE ENGINEER FOR APPROVAL. 10. FOR INACCESSIBLE AREAS THE CONTRACTOR SHALL PROVIDE ACCESS PANELS FOR ALL DAMPERS, EQUIPMENT, SMOKE DETECTORS, AND CONTROL DEVICES. THESE PANELS SHALL MATCH THE RATING OF THE WALL AND/OR CEILING THAT THEY ARE LOCATED IN. MINIMUM ACCESS PANEL SIZES SHALL BE AS FOLLOWS: 1) HAND ACCESS: 12"x12" 2) BODY ACCESS: 30"x30" MIN. WHERE A LARGER ACCESS SIZE IS REQUIRED DUE TO INSTALLATION CONSTRAINTS, THE CONTRACTOR SHALL DO SO AT NO ADDITIONAL COST AND SHALL NOTIFY THE ARCHITECT AND ENGINEER OF DEVIATIONS PRIOR TO INSTALLATION. 11. COORDINATE THE LOCATION OF ALL ROOF OPENINGS AND THE LOCATION OF ALL ROOF MOUNTED EQUIPMENT WITH THE STRUCTURAL AND ARCHITECTURAL PLANS PRIOR TO ANY INSTALLATION. 12. PLATFORMS, CURBS, AND FLASHINGS FOR MECHANICAL EQUIPMENT SHALL BE AS INDICATED ON THE MECHANICAL PLANS, UNLESS NOTED OTHERWISE. WHERE THERE IS A CONFLICT WITH THE MECHANICAL PLANS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO FABRICATION AND INSTALLATION. 13. ALL EQUIPMENT, ACCESSORIES, AND RELATED PIPING SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE EQUIPMENT MANUFACTURERS' RECOMMENDATIONS. PROVIDE ALL FITTINGS, TRANSITIONS, DAMPERS, VALVES, AND OTHER DEVICES REQUIRED FOR A COMPLETE WORKABLE INSTALLATION. 14. MAINTENANCE LABEL SHALL BE AFFIXED TO ALL MECHANICAL EQUIPMENT AND A MAINTENANCE MANUAL SHALL BE PROVIDED FOR THE OWNER'S USE. 15. PROVIDE MERV 13 EFFICIENCY THROWAWAY FILTERS FOR ALL AIR CONDITIONING UNITS. SEE EQUIPMENT SCHEDULE AND SPECIFICATIONS FOR TYPE, SIZES SHALL BE AS RECOMMENDED BY THE MANUFACTURER, UNLESS OTHERWISE SPECIFIED. 16. AIR FILTERS SHALL BE STATE FIRE MARSHALL APPROVED AND LISTED. PREFORMED FILTERS HAVING COMBUSTIBLE FRAMING SHALL BE TESTED AS A COMPLETE ASSEMBLY. AIR FILTERS SHALL BE ACCESSIBLE FOR CLEANING OR REPLACEMENT. 17. ALL EQUIPMENT WITH MOVING PARTS SHALL BE PROVIDED WITH FLEXIBLE DUCT AND PIPE CONNECTIONS. 18. ALL EQUIPMENT SHALL BE LABELED AS TO THE SPACE IT SERVES. 19. ALL HVAC EQUIPMENT SHALL BE CERTIFIED BY THE CALIFORNIA ENERGY COMMISSION TO COMPLY WITH LATEST EFFICIENCY STANDARDS. 20. PROVIDE MANUAL VOLUME DAMPERS AND BACKDRIFT DAMPERS FOR FRESH AIR INTAKES ON ALL AIR HANDLING EQUIPMENT AND SUPPLY AIR FANS SERVING CONDITIONED SPACES. 21. ALL AIR HANDLING EQUIPMENT SERVING CONDITIONED SPACES SHALL PROVIDE CONTINUOUS FRESH AIR TO SPACES IN OCCUPIED MODE. 22. CONTRACTOR SHALL VERIFY ALL CLEARANCES AND INSTALL HVAC UNITS PER MANUFACTURER GUIDELINES. 23. CONTRACTOR TO SUBMIT ALL EQUIPMENT AND OTHER ACCESSORIES TO THE ENGINEER FOR APPROVAL PRIOR TO ANY ORDERING OF SUCH ITEMS. 24. CONTRACTOR SHALL BE RESPONSIBLE FOR COMMISSIONING OF EQUIPMENT. 25. PAINT EXPOSED SURFACES, WHETHER OR NOT COLORS ARE DESIGNATED IN SCHEDULES, EXCEPT WHERE A SURFACE OR MATERIAL IS SPECIFICALLY INDICATED NOT TO BE PAINTED OR IS TO REMAIN NATURAL, WHERE AN ITEM OR SURFACE IS NOT SPECIFICALLY MENTIONED, PAINT THE SAME AS SIMILAR ADJACENT MATERIALS OR SURFACES. IF COLOR OR FINISH IS NOT DESIGNATED, THE OWNER'S REPRESENTATIVE WILL SELECT FROM STANDARD COLORS OR FINISHES AVAILABLE. 1) PAINTING INCLUDES FIELD PAINTING EXPOSED BARE AND COVERED PIPES AND DUCTS (INCLUDING COLOR COORDINATE HANGERS, EXPOSED STEEL AND IRON WORK, AND PRIMED METAL SURFACES OF MECHANICAL AND ELECTRICAL EQUIPMENT.		
26. ALL MECHANICAL PIPING SYSTEMS, DUCTS, CONTROLS, VALVES, APPARATUS, ETC., EXCEPT THOSE THAT ARE INSTALLED IN INACCESSIBLE LOCATIONS IN PARTITIONS, WALLS, AND FLOORS, AND THOSE BURIED UNDERGROUND, SHALL BE PERMANENTLY MARKED AND IDENTIFIED AS INDICATED IN THE RELATED SPECIFICATIONS. 27. UNLESS SPECIFICALLY SHOWN ON THESE PLANS NO STRUCTURAL MEMBER SHALL BE CUT, DRILLED NOR NOTCHED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER AND THE CITY INSPECTOR. ----- CONTROLS ----- 1. CONTROL SCHEMATICS ARE FOR SEQUENCE ONLY. REFER TO ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR ALL ELECTRICAL DEVICES REQUIRED. 2. ALL LINE VOLTAGE WIRING SHALL BE INSTALLED IN CONDUIT. ALL LINE VOLTAGE CONDUIT AND WIRING, INCLUDING FINAL CONNECTIONS, SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR AS INDICATED ON THE ELECTRICAL DRAWINGS OR SPECIFIED IN THE ELECTRICAL SECTION OF THE SPECIFICATIONS. ALL ELECTRICAL WORK SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS OF ALL GOVERNING BODIES HAVING JURISDICTION THEREOF. 3. ALL LOW VOLTAGE CONDUIT AND WIRING AS APPLICABLE, INCLUDING FINAL CONNECTIONS, SHALL BE FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR AS INDICATED ON THE MECHANICAL DRAWINGS. A1) ALL LOW VOLTAGE WIRING SHALL BE INSTALLED IN CONDUIT. A2) ALL LOW VOLTAGE WIRING SHALL BE PLENUM - RATED. B) WHERE THE CONTROLS CONTRACTOR IS RETAINED BY THE OWNER, THEY SHALL BE RESPONSIBLE FOR THE FOLLOWING: 1) FURNISH AND INSTALL ALL DEVICES, WIRING, AND TERMINATIONS REQUIRED FOR A COMPLETE AND FUNCTIONAL INSTALLATION. 2) COORDINATE ALL WORK AND REQUIREMENTS WITH OTHER TRADES INCLUDING GENERAL, MECHANICAL, AND ELECTRICAL CONTRACTORS PRIOR TO BID. 3) CONTRACTOR SHALL FOLLOW ALL SUBMITTAL REQUIREMENTS PER DRAWINGS. 4. CONTRACTOR SHALL BE RESPONSIBLE FOR ORDERING AIR CONDITIONING EQUIPMENT WITH THRU-ROOF POWER, CONTROL, AND GAS CONNECTIONS. VERIFY ALL CONNECTION LOCATIONS WITH UNIT MANUFACTURER AND COORDINATE WITH OTHER TRADES AS NECESSARY. 5. ELECTRICAL CONTRACTOR SHALL PROVIDE REQUIRED RELAY ACCESSORIES FOR CONNECTION OF 120 VOLT 1 PHASE VENTILATION EQUIPMENT TO 277 VOLT 1 PHASE LIGHTING AS APPLICABLE. 6. ALL THERMOSTATS SHALL HAVE LOCKABLE COVERS (WHERE INDICATED ON PLANS) AND SHALL BE OF THE ELECTRONIC, PROGRAMMABLE, AUTOMATIC CHANGEOVER TYPE TO SEQUENCE HEATING OR COOLING. SET POINT RANGE SHALL BE 10 DEGREES F. BETWEEN FULL HEATING AND COOLING. THEY SHALL HAVE CAPABILITY OF TERMINATING ALL HEATING AT A TEMPERATURE NO MORE THAN 70 DEGREES F. AND COOLING AT A TEMPERATURE NOT LESS THAN 78 DEGREES F. ADJUSTABLE TEMPERATURE DIFFERENTIAL SHALL BE 1-10 DEGREES F. CONTROL LIMITS SHALL BE FROM 55 DEGREES F. TO 85 DEGREES F. MOUNT AT 48 INCHES ABOVE FLOOR OR AS REQUIRED BY LOCAL AUTHORITIES OR HANDICAP CODES. NOTES: 1) THERMOSTATS THAT ARE PART OF AN ENERGY MANAGEMENT SYSTEM SHALL FOLLOW CONTROL SPECIFICATIONS AND DRAWING REQUIREMENTS. 2) SHOULD THE LOCATION OF THE THERMOSTAT NOT MEET THE ADA HEIGHT REQUIREMENTS DUE TO OBSTRUCTIONS, THEN AN ALTERNATE LOCATION SHALL BE PROPOSED OR REQUESTED BY THE CONTRACTOR THAT SHALL BE APPROVED BY THE ENGINEER AND ARCHITECT. 7. LINE VOLTAGE THERMOSTATS SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR AND INSTALLED BY THE ELECTRICAL CONTRACTOR. 8. CONTROLS CONTRACTOR AND AIR BALANCE CONTRACTOR SHALL COORDINATE WORK AND PERFORM NECESSARY TASKS AS REQUIRED TO OBTAIN AIR AND WATER FLOW QUANTITIES FOR SYSTEMS SHOWN HEREIN. 9. CONTROLS SHALL BE PROVIDED TO PROVIDE THE MINIMUM RATE OF OUTDOOR AIR REQUIRED BY THE STATE ENERGY REGULATIONS. ----- AIR DISTRIBUTION ----- 1. ALL DUCTWORK SHALL BE SHEET METAL CONSTRUCTED OR SPIRAL, ERECTED, AND TESTED IN ACCORDANCE WITH THE MOST RESTRICTIVE OF LOCKING STANDARDS OR SPECIFICATIONS DETAILED IN THE ASHRAE HANDBOOK OF FUNDAMENTALS, CHAPTER 6 OF THE MECHANICAL CODE, OR THE APPLICABLE STANDARDS ADOPTED BY THE SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION. 2. CONTRACTOR SHALL PROVIDE EXTERIOR MANUAL VOLUME DAMPER HANDLES W/ LOCK-DOWN AFTER COMPLETING AIR BALANCE & OBTAIN FINAL APPROVAL FROM ENGINEER. 3. ALL RECTANGULAR DUCT TURNS IN OUTSIDE AIR DUCTS SHALL HAVE SINGLE WALL TURNING VANES WITH TRAILING EDGE, UNLESS OTHERWISE NOTED. 4. MANUAL VOLUME DAMPERS SHALL BE PROVIDED IN ALL DUCT BRANCHES TO INDIVIDUAL FRESH AIR INTAKE DUCTS. DAMPERS SHALL BE LOCATED AT THE BRANCH DUCT LOCATIONS. THE MECHANICAL CONTRACTOR SHALL COORDINATE LOCATIONS OF DAMPERS WITH THE AIR BALANCE CONTRACTOR PRIOR TO BID, SO THEY ARE ACCESSIBLE PRIOR TO INSTALLATION. IN LOCATIONS WHERE THESE DAMPERS ARE INACCESSIBLE, CABLE OPERATED ADJUSTMENT CONTROLS SHALL BE PROVIDED AT NO ADDITIONAL COST. OPPOSED BLADE DAMPERS SHALL NOT BE PERMITTED UNLESS NOTED OTHERWISE. 5. DUCTWORK HANDLING CONDITIONED AIR SHALL BE INSULATED OR LINED AS INDICATED ON DRAWINGS. SUPPLY AND RETURN DUCT INSULATION SHALL BE MIN. 2" THICK, 1.5 LB./CUBIC FT. DENSITY AND HAVE A MIN. VALUE OF R-8 WHERE LOCATED IN ONE OR MORE OF THE FOLLOWING SPACES: A) OUTDOORS, OR B) IN A SPACE BETWEEN THE ROOF AND AN INSULATED CEILING, OR C) IN A SPACE DIRECTLY UNDER A ROOF WITH FIXED VENTS OR OPENINGS TO THE OUTSIDE OR UNCONDITIONED SPACES, OR D) IN AN UNCONDITIONED CRAWLSPACE; OR E) IN OTHER UNCONDITIONED SPACES PER 2025 CEC, OTHERWISE PROVIDE R-4.2 WHEN LOCATED IN CONDITIONED ATTIC SPACES ABOVE CEILINGS. ALL DUCTWORK EXPOSED ON ROOF SHALL BE INTERNALLY LINED WITH 2" THICK, 1.5 LB./CUBIC FT. DENSITY DUCT LINER UNLESS OTHERWISE INDICATED OR SPECIFIED. ALL DUCT SIZES ARE NET CLEAR INSIDE DIMENSIONS. ALL DUCT JOINTS SHALL BE SEALED PER CHAPTER 6 MECHANICAL CODE REQUIREMENTS. PROVIDE PIPING AND DUCT INSULATION IN ACCORDANCE WITH THE LATEST STANDARDS OF THE CALIFORNIA ENERGY COMMISSION.		

LEGEND		
SYMBOL	ABBR	DESCRIPTION
	-	SUPPLY AIR RISER
	-	RETURN AIR RISER
	-	EXHAUST AIR RISER
	SAG	SUPPLY AIR GRILLE
	RAG	RETURN AIR GRILLE
	EAG	EXHAUST AIR GRILLE
	SWR	SIDEWALL REGISTER
	(L)	LINED DUCTWORK
	-	FLEXIBLE CONNECTION
	FC	FLEXIBLE CONNECTION
	-	NEW DUCT (SEE PLAN)
	-	EXISTING DUCT (SEE PLAN)
	-	DEMO DUCT (SEE PLAN)
	MVD	MANUAL VOLUME DAMPER
	BDD	BACKDRAFT DAMPER
	SFD	SMOKE / FIRE DAMPER
	FD	FIRE DAMPER
	DL	DOOR LOUVER
	UC	UNDERCUT DOOR 3/4"
	RS	REFRIGERANT SUCTION LINE
	RL	REFRIGERANT LIQUID LINE
	CD	CONDENSATE DRAIN
	S.D.	SMOKE DETECTOR
	P.O.C.	POINT OF CONNECTION
	T-STAT	THERMOSTAT
	H	HUMIDISTAT
	TS	TEMPERATURE SENSOR
	OS	OVERRIDE SWITCH
	PD	PRESSURE DIFFERENTIAL SWITCH
	S	SWITCH
	OC	ON CENTER
	HWR	HOT-WATER RETURN
	HWS	HOT-WATER SUPPLY
	I.D.	INSIDE DIAMETER
	O.D.	OUTSIDE DIAMETER
	W/	WITH
	SM	SHEET METAL
	S/S	STAINLESS STEEL
	G.C.	GENERAL CONTRACTOR
	VTR	VENT THRU ROOF
	EMS	ENERGY MANAGEMENT SYSTEM
	OBD	OPPOSED BLADE DAMPER
	FSC	FAN SPEED CONTROL
	E	ITEMS FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR AS SPECIFIED ON THE ELECTRICAL CONTRACT DOCUMENTS
	M	ITEMS FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR AS SPECIFIED ON THE MECHANICAL CONTRACT DOCUMENTS
	EM	ITEMS FURNISHED BY ELECTRICAL CONTRACTOR AND INSTALLED BY MECHANICAL CONTRACTOR
	ME	ITEMS FURNISHED BY MECHANICAL CONTRACTOR AND INSTALLED BY ELECTRICAL CONTRACTOR.
	C.C.	CONTROLS CONTRACTOR
	CBD	COUNTER-BALANCE DAMPER
	D.S.	DOOR SWITCH

APPLICABLE CODES	
2025 BUILDING STANDARDS ADMINISTRATIVE CODE, PART 1 TITLE 24 C.C.R. 2025 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 C.C.R. 2025 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R. (2014 NEC) 2025 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 C.C.R. 2025 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R. 2025 CALIFORNIA ENERGY CODE, PART 6, TITLE 24 C.C.R. 2025 CALIFORNIA FIRE CODE, PART 9, TITLE 24 C.C.R. 2025 CALIFORNIA REFERENCED STANDARDS, PART 12, TITLE 24 C.C.R. 2025 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN), PART 11, TITLE 24 C.C.R. TITLE 19 C.C.R., PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS, AMERICAN WITH DISABILITY ACT. <u>PARTIAL LIST OF APPLICABLE STANDARDS:</u> NFPA 13 AUTOMATIC SPRINKLER SYSTEM, 2025 EDITION. NFPA 24 PRIVATE FIRE MAINS (INCLUDED IN 2022 NFPA 13) 2025 EDITION. NFPA 72 NATIONAL FIRE ALARM CODE (CALIFORNIA AMENDED)	
REFERENCE CODE SECTION FOR NFPA STANDARDS - 2025 CBC (SFM) CHT. 35	

SHEET INDEX		
S.NO.	SHEET NO.	SHEET TITLE
1	M-001	MECHANICAL GENERAL NOTES AND LEGEND
2	M-002	MECHANICAL SCHEDULES
3	M-003	MECHANICAL SPECIFICATIONS
4	M-004	MECHANICAL SPECIFICATIONS
5	MD-100	MECHANICAL DEMOLITION FLOOR PLAN
6	MD-200	MECHANICAL DEMOLITION ROOF PLAN
7	M-100	MECHANICAL REMODEL FLOOR PLAN
8	M-200	MECHANICAL REMODEL ROOF PLAN
9	M-300	MECHANICAL DETAILS
10	M-500	MECHANICAL TITLE 24
11	M-501	MECHANICAL TITLE 24

AGENCY APPROVAL

studio+

2755 Bristol Street, Suite 250, Newport Beach, California 92626 | P: 949.315.1993
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oed optimum energy design

Consulting Engineers
5200 E. La Palma Ave
Anaheim, CA 92807
Telephone: (714) 693-2277

PROJECT

ORANGE COUNTY DEPARTMENT OF
EDUCATION ESPLANADE BLDG 4
TENANT IMPROVEMENT

3001 RED HILL AVENUE, SUITE 117, 118, 119,
COSTA MESA, CA 92626

DATE 09/04/2026

PROJECT # 026.0084.00

DESIGN PROFESSIONAL



TITLE
MECHANICAL GENERAL
NOTES AND LEGEND

SHEET #

M-001

EXISTING PACKAGED GAS/ELECTRIC A/C UNIT SCHEDULE - FOR REFERENCE																				
SYM	MFR & MODEL #	NOMINAL TONS	COOLING CAPACITY		SEER / IEER	HEATING CAPACITY		AFUE %	CFM	MIN. OA CFM*	ESP	FAN PWR (HP)	FAN MOTOR TYPE	ELECTRICAL				WEIGHTS		
			TOTAL	SENSIBLE		INPUT	OUTPUT							V	PH	MCA	MOCP	UNIT	CURB	TOTAL
AC 4-26	CARRIER 48VGUE480905	4	47,790	37,030	16.00 / -	89,000	73,000	81.0	1,700	305	0.5	0.63	DIRECT	208	3	26.3	40	495	20	515
AC 4-28	CARRIER 48VGUE300403	2.5	28,600	20,070	15.00 / -	45,000	37,000	81.0	910	160	0.45	0.25	DIRECT	208	1	21.7	30	355	20	375
AC 4-31	CARRIER 48VGUE300403	2.5	28,600	20,070	15.00 / -	45,000	37,000	81.0	910	245	0.45	0.25	DIRECT	208	1	21.7	30	355	20	375

*CONTRACTOR SHALL BALANCE OSA TO VALUE INDICATED ON SCHEDULE. OSA VALUE CALCULATED USING ENERGYPRO SOFTWARE BASED ON THE LATEST CALIFORNIA ENERGY CODE

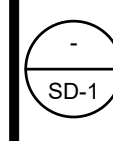
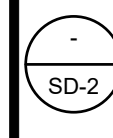
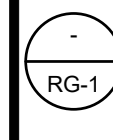
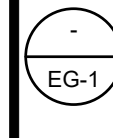
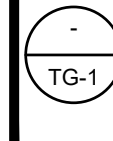
EXISTING PACKAGED HEAT PUMP UNIT SCHEDULE - FOR REFERENCE																				
SYM	MFR & MODEL #	NOMINAL TONS	CFM	MIN. OA CFM*	ESP (IN. WG)	FAN BHP	FAN MOTOR TYPE	COOLING				HEATING		ELECTRICAL				WEIGHTS		
								TOTAL CAPACITY (BTU/H)	SENSIBLE CAPACITY (BTU/H)	SEER	EER	OUTPUT (BTU/H)	HSPF	V	PH	MCA	MOCP	UNIT	CURB	TOTAL
	CARRIER 50VR-A48	4	1,700	820	0.5	0.63	DIRECT	47,850	37,050	15.00	-	46,970	8.2	208	3	26.3	40	450	20	470
	CARRIER 50VR-C30	2.5	940	165	0.5	0.33	DIRECT	28,720	21,440	15.00	-	29,570	8.2	208	1	21.8	30	355	20	375
*CONTRACTOR SHALL BALANCE OSA TO VALUE INDICATED ON SCHEDULE. OSA VALUE CALCULATED USING ENERGYPRO SOFTWARE BASED ON THE LATEST CALIFORNIA ENERGY CODE																				

EXHAUST FAN SCHEDULE													
SYM	MFR & MODEL #	TYPE	AREA SERVICED	CFM	ESP	HP	ELECTRICAL				FAN RPM	WT	REMARKS
							V	PH	FLA	MOCP			
EF 1	GREENHECK SP-A200	CEILING	RESTROOM	80	0.5	-	115	1	0.5	15	777	30 LB	1, 2, 3, 4, 5
EF 2	GREENHECK SP-A200	CEILING	RESTROOM	80	0.5	-	115	1	0.5	15	777	30 LB	1, 2, 3, 4, 5
EF 3	GREENHECK SP-A200	CEILING	RESTROOM	80	0.5	-	115	1	0.5	15	777	30 LB	1, 2, 3, 4, 5
EF 4	GREENHECK SP-A200	CEILING	RESTROOM	80	0.5	-	115	1	0.5	15	777	30 LB	1, 2, 3, 4, 5

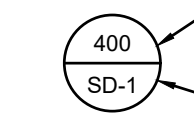
REMARKS

1. BACK DRAFT DAMPER.
2. INTERLOCK WITH LIGHTS.
3. PROVIDE SPEED CONTROL DIAL FOR AIR BALANCING.
4. FAN WHEEL ALUMINUM CONSTRUCTION.
5. ALUMINUM GRILLE.

NOTES:
ALL DIMENSION, SERVICE ACCESS LOCATIONS, AND
CONNECTION LOCATIONS SHALL BE VERIFIED PRIOR
TO ORDERING/BEGINNING INSTALLATION.

AIR DISTRIBUTION SCHEDULE									
SYM.	MFR. & MODEL #	NECK SIZE	CFM RANGE	MAX. NECK VELOCITY	MAX. N.C.	S.P. DROP	TYPE	DAMPER	REMARKS
	TRUAIRE 2004CDL	6"Ø 8"Ø 10"Ø 12"Ø 14"Ø	0-100 101-175 176-270 271-390 391-535	500	<15	.06	PLAQUE	MVD	ALUMINUM CONSTRUCTION, 24"x24" MODULE,T-BAR MOUNTED
	TITUS PSS	6"x6"	0-125	500	20	.07	PERFORATED	MVD	ALUMINUM CONSTRUCTION, 12"x12" MODULE,HARDLID MOUNTED, BLACK BACK PAN, FIELD ADJUSTED DISCHARGE PATTERN, SQUARE TO ROUND
	TITUS PAR-AA	6"Ø 8"Ø 10"Ø 12"Ø 14"Ø	0-78 79-140 140-218 219-314 315-427	500	<15	0.07	PERFORATED	MVD	ALUMINUM CONSTRUCTION, 24"x24" MODULE, T-BAR MOUNTED,BLACK BACK PAN
	TITUS 355R	6"x6" 6"x6" 10"x10" 12"x12" 18"x12"	0-95 96-185 186-295 296-440 441-610	500	30	.06	35 DEGREE DEFLECTION, ADJUSTABLE	MVD	ALUMINUM CONSTRUCTION, 1/2" BLADE SPACING BORDER TYPE 1 FOR SURFACE MOUNT
	TITUS PAR-AA	22"x22"	0-1680	500	30	.06	PERFORATED	MVD	ALUMINUM CONSTRUCTION, 24"x24" MODULE T-BAR MOUNTED, BLACK BACK PAN

LEGEND:

 CFM
AIR DISTRIBUTION DEVICE

SD SUPPLY DIFFUSER
RG RETURN GRILLE
TG TRANSFER GRILLE
EG EXHAUST GRILLE

NOTES:
CONTRACTOR SHALL PROVIDE REMOTE CABLE DAMPERS IN ALL AREAS WITH HARD LID CEILINGS OR AREAS WHERE DAMPER WOULD OTHERWISE BE INACCESSIBLE FOR TAB CONTRACTOR.

GRAVITY HOOD SCHEDULE									
SYM.	MFR. & MODEL#	TYPE	CFM	PD	THROAT SIZE	FREE AREA	HOOD SIZE (W xL)	WT	REMARKS
	GREENHECK FGR	RELIEF	1400	.06	18"x18"	2.25 SQ.FT.	32"x39"	75 LBS	1, 2, 3

REMARKS:
1. PROVIDE GREENHECK WD-100 COUNTERBALANCE DAMPER PER THE THROAT SIZE.
2. PROVIDE INSECT SCREEN.
3. PROVIDE 14" ROOF CURB.

AGENCY APPROVAL

studio+

2755 Bristol Street, Suite 250, Newport Beach, California 92626 | P: 949.315.1993
These drawings have been prepared as one coordinated set of drawings and are complimentary. What is required by one drawing is required by all of the drawings, even if a detail or component part is not identified on every sheet. Any user's reliance on a single or select few sheet(s) of the drawings without consideration for the information included in the entire set of drawings will be at the user's sole risk and shall not form the basis for a request for additional compensation or time.

oed optimum energy design
Consulting Engineers
5200 E. La Palma Ave
Anaheim, CA 92807
Telephone (714) 693-2277

PROJECT

ORANGE COUNTY DEPARTMENT OF
EDUCATION ESPLANADE BLDG 4
TENANT IMPROVEMENT

3001 RED HILL AVENUE, SUITE 117, 118, 119,
COSTA MESA, CA 92626

DATE 09/04/2026

PROJECT # 026.0084.00

DESIGN PROFESSIONAL



TITLE
MECHANICAL SCHEDULES

SHEET #

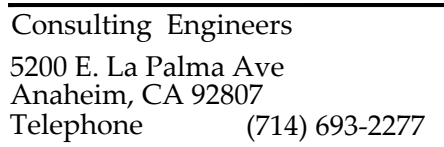
M-002

MECHANICAL SPECIFICATIONS		
SECTION 23 00 00 HEATING, VENTILATION AND AIR CONDITIONING	1.8 AVAILABILITY OF SPECIFIED EQUIPMENT	1.18 DELIVERY, STORAGE AND PROTECTION OF PROPERTY
1. PART 1 - GENERAL	A. VERIFY PRIOR TO BIDDING THAT ALL SPECIFIED EQUIPMENT IS AVAILABLE AND CAN BE OBTAINED IN TIME FOR INSTALLATION DURING ORDERLY AND TIMELY PROGRESS OF THE WORK.	A. PLACE ORDERS FOR ALL EQUIPMENT IN TIME TO PREVENT ANY DELAY IN CONSTRUCTION SCHEDULE OR COMPLETION OF PROJECT. IF ANY MATERIALS OR EQUIPMENT ARE NOT ORDERED IN TIME, ADDITIONAL CHARGES MADE BY EQUIPMENT MANUFACTURERS TO COMPLETE THEIR EQUIPMENT IN TIME TO MEET CONSTRUCTION SCHEDULE, TOGETHER WITH ANY SPECIAL HANDLING CHARGES, SHALL BE BORNE BY THE CONTRACTOR.
1.1 DESCRIPTION	B. IN THE EVENT THAT SPECIFIED ITEMS WILL NOT BE SO AVAILABLE, NOTIFY THE OWNER PRIOR TO RECEIPT OF BIDS.	B. MATERIALS SHALL BE DELIVERED IN AMPLÉ QUANTITIES FROM TIME TO TIME AS MAY BE NECESSARY FOR THE UNINTERRUPTED PROGRESS OF THE WORK. THEY SHALL BE STORED AS TO CAUSE THE LEAST OBSTRUCTION TO THE PREMISES AND DISTRIBUTED SO AS TO PREVENT OVERLOADING TO ANY PORTION OF THE STRUCTURE.
A. WORK UNDER THIS SECTION INCLUDES ALL LABOR, EQUIPMENT, MATERIAL, SERVICES, TRANSPORTATION, ETC. REQUIRED FOR AND REASONABLY INCIDENTAL TO THE COMPLETE AND SATISFACTORY INSTALLATION OF ALL OF THE HVAC SYSTEMS AS INDICATED ON THE DRAWINGS OR SPECIFIED HEREIN.	C. COSTS OF DELAYS BECAUSE OF NON-AVAILABILITY OF SPECIFIED ITEMS, WHEN SUCH DELAYS COULD HAVE BEEN AVOIDED BY PROPER INVESTIGATION ON THE PART OF THE CONTRACTOR, WILL BE BACK-CHARGED AS NECESSARY AND SHALL NOT BE BORN BY THE OWNER.	C. THE CONTRACTOR SHALL PROVIDE TEMPORARY STORAGE AND SHOP AREAS THAT ARE REQUIRED AT THE SITE FOR THE SAFE AND PROPER STORAGE OF MATERIALS, TOOLS, AND OTHER ITEMS USED IN THE PERFORMANCE OF THIS WORK. THESE AREAS SHALL BE CONSTRUCTED ONLY IN APPROVED LOCATIONS AND SHALL NOT INTERFERE WITH THE WORK OF ANY OTHER CONTRACTOR.
1.2 WORK INCLUDED IN THIS SECTION:	1.9 RECORD DRAWINGS	D. ALL WORK, EQUIPMENT AND MATERIALS SHALL BE PROTECTED AT ALL TIMES. THE CONTRACTOR SHALL MAKE GOOD ALL DAMAGE CAUSED EITHER DIRECTLY OR INDIRECTLY BY HIS OWN WORKMEN. THE CONTRACTOR SHALL ALSO PROTECT HIS OWN WORK FROM DAMAGE. HE SHALL CLOSE ALL PIPE AND DUCT OPENINGS WITH CAPS OR PLUGS DURING INSTALLATION. HE SHALL PROTECT ALL OF HIS EQUIPMENT AND MATERIALS AGAINST DIRT, WATER, CHEMICAL, AND MECHANICAL INJURY. UPON COMPLETION, ALL WORK SHALL BE THOROUGHLY CLEANED AND DELIVERED IN A NEW CONDITION.
A. PACKAGE ROOF TOP HEAT PUMP UNITS	A. THE CONTRACTOR SHALL ARRANGE AND PAY FOR ONE SET OF WHITE PRINTS OF THE HVAC DRAWINGS, WHICH HE SHALL ALTER IN RED TO SHOW ALL CHANGES MADE TO THE ORIGINAL LAYOUT. THESE DRAWINGS SHALL BE KEPT CURRENT.	1.19 DAMAGE BY LEAKS, ETC.
B. MINI-SPLIT HEAT PUMP UNITS	B. THE CONTRACTOR SHALL DELIVER THESE COMPLETED TO THE OWNER WHEN THE JOB IS FINISHED AND ACCEPTED PRIOR TO FINAL PAYMENT.	A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO ANY PART OF THE PREMISES OR WORK OF OTHER CONTRACTORS CAUSED BY LEAKS OR BREAKS IN THE PIPING OR EQUIPMENT FURNISHED AND/OR INSTALLED UNDER THIS SECTION, DURING THE CONSTRUCTION AND GUARANTEE PERIOD.
C. VARIABLE VOLUME AND TEMPERATURE SYSTEMS(VVT)	1.10 OPERATION AND MAINTENANCE DATA	1.20 ACCESS TO EQUIPMENT FOR MAINTENANCE
D. EXHAUST FANS.	A. SUBMIT ELECTRONIC FORMAT SUBMITAL PRIOR TO FINAL INSPECTION. ELECTRONIC FORMAT FILES WITH SEARCHABLE TEXT AND BOOK-MARK. PREPARE WITH TITLE "OPERATION AND MAINTENANCE INSTRUCTIONS", AND TITLE OF PROJECT. INTERNALLY SUBDIVIDE THE FILE WITH BOOK-MARK CONTENTS LOGICALLY ORGANIZED AS DESCRIBED BELOW.	A. INSTALL ALL EQUIPMENT, PIPING, ETC. TO PERMIT ACCESS FOR NORMAL MAINTENANCE. MAINTAIN EASY ACCESS TO FILTERS, MOTORS, ETC. INSTALL ALL SUCH EQUIPMENT AND ACCESSORIES TO FACILITATE MAINTENANCE. PERFORM ANY RELOCATION OF PIPES, ETC. REQUIRED TO PERMIT ACCESS AT REQUEST OF OWNER AT NO ADDITIONAL COST TO OWNER.
E. SUBMITTALS AND SHOP DRAWINGS.	B. CONTENTS: PREPARE A TABLE OF CONTENTS WITH EACH PRODUCT OR SYSTEM DESCRIPTION IDENTIFIED.	B. FURNISH AND INSTALL ACCESS DOORS OR PANELS IN WALLS, FLOORS, AND CEILINGS TO PERMIT ACCESS TO EQUIPMENT, DAMPERS, AND ALL OTHER ITEMS REQUIRING SERVICE. COORDINATE LOCATION OF ACCESS DOORS WITH OTHER TRADES AS REQUIRED.
F. RECORD DRAWINGS.	1. PART 1: DIRECTORY LISTING NAMES, ADDRESSES, AND TELEPHONE NUMBERS OF OWNER, CONTRACTOR, SUBCONTRACTORS, AND MAJOR EQUIPMENT SUPPLIERS.	C. SIZE ACCESS PANELS TO ALLOW INSPECTION AND REMOVAL OF ALL ITEMS SERVED.
G. OPERATION AND MAINTENANCE MANUALS.	2. PART 2: OPERATION AND MAINTENANCE INSTRUCTIONS, ARRANGED BY SYSTEM. IDENTIFY THE FOLLOWING:	D. USE MILCOR STYLE AS REQUIRED FOR MATERIAL IN WHICH DOOR IS INSTALLED. WHERE DOOR IS INSTALLED IN FIRE RATED CONSTRUCTION, PROVIDE DOOR BEARING UL LABEL REQUIRED FOR CONDITION.
H. GUARANTEE.	a. SIGNIFICANT DESIGN CRITERIA.	2. PART 2 - PRODUCTS
1.3 RELATED WORK SPECIFIED ELSEWHERE	b. LIST OF EQUIPMENT.	2.1 GENERAL
A. ELECTRICAL SUPPLY TO UNITS. SEE ELECTRICAL DRAWINGS.	c. PARTS LIST FOR EACH COMPONENT.	A. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND OF THE BEST OF THEIR RESPECTIVE GRADES, FREE FROM ALL DEFECTS AND OF THE MAKE, BRAND OR QUALITY HEREIN SPECIFIED OR AS ACCEPTED BY THE OWNER.
1.4 GENERAL REQUIREMENTS	d. OPERATING INSTRUCTIONS.	B. ALL MATERIALS AND EQUIPMENT SHALL BE IDENTIFIED BY MANUFACTURER'S NAME OR NAMEPLATE DATA. UNIDENTIFIED MATERIAL OR EQUIPMENT SHALL BE REMOVED FROM THE SITE.
A. THIS SECTION OF THE SPECIFICATION SHALL BE CONSIDERED AS A PART OF THE ENTIRE SPECIFICATION AND ALL APPLICABLE PORTIONS OF GENERAL CONDITIONS, SPECIAL CONDITIONS, AND DIVISION 1 SHALL APPLY.	e. MAINTENANCE INSTRUCTIONS FOR EQUIPMENT AND SYSTEMS.	C. EQUIPMENT SPECIFIED BY MANUFACTURER'S NUMBER SHALL INCLUDE ALL ACCESSORIES, CONTROLS, ETC., LISTED IN THE CATALOG AS STANDARD WITH THE EQUIPMENT. OPTIONAL OR ADDITIONAL ACCESSORIES SHALL BE FURNISHED AS SPECIFIED.
B. ERECTION: THE CONTRACTOR SHALL FURNISH THE SERVICES OF AN EXPERIENCED SUPERINTENDENT, WHO SHALL BE CONSTANTLY IN CHARGE OF THE ERECTION OF THE WORK, TOGETHER WITH ALL NECESSARY JOURNEYMEN, HELPERS, AND LABORERS REQUIRED TO PROPERLY UNLOAD, ERECT, CONNECT, ADJUST, START OF OPERATE AND TEST THE WORK INVOLVED.	f. MAINTENANCE INSTRUCTIONS FOR SPECIAL FINISHES, INCLUDING RECOMMENDED CLEANING METHODS AND MATERIALS AND SPECIAL PRECAUTIONS IDENTIFYING DETRIMENTAL AGENTS.	D. WHERE NO SPECIFIC MAKE OF MATERIAL OR EQUIPMENT IS MENTIONED, ANY FIRST CLASS PRODUCT OF A REPUTABLE MANUFACTURER MAY BE USED, PROVIDED IT CONFORMS TO THE REQUIREMENTS OF THE SYSTEM AND MEETS WITH THE APPROVAL OF THE OWNER.
1.5 REFERENCES	C. SUBMIT ONE COPY OF COMPLETED VOLUMES IN FINAL FORM 7 DAYS PRIOR TO FINAL INSPECTION. THIS COPY WILL BE RETURNED AFTER FINAL INSPECTION, WITH OWNER COMMENTS. REVISE CONTENT OF DOCUMENTS AS REQUIRED PRIOR TO FINAL SUBMITAL.	E. EQUIPMENT AND MATERIALS DAMAGED DURING TRANSPORTATION, INSTALLATION AND OPERATION SHALL BE CONSIDERED AS "TOTALLY DAMAGED" AND SHALL BE REPLACED WITH NEW. ANY VARIANCE FROM THIS CLAUSE SHALL BE MADE ONLY WITH WRITTEN APPROVAL OF THE OWNER.
A. AABC - NATIONAL STANDARDS FOR FIELD MEASUREMENT AND INSTRUMENTATION, TOTAL SYSTEM BALANCE.	D. SUBMIT FINAL VOLUMES (REVISED) WITHIN TEN DAYS AFTER FINAL INSPECTION.	2.2 MANUFACTURER
B. AMCA 210 - LABORATORY METHODS OF TESTING FANS FOR RATING PURPOSES.	1.11 GUARANTEES	A. EXHAUST FANS
C. AMCA 300 - TEST CODE FOR SOUND RATING AIR-MOVING DEVICES.	A. THE CONTRACTOR, IN ACCEPTING THIS CONTRACT, BINDS HIMSELF TO REPLACE OR REPAIR AT HIS OWN EXPENSE ANY DEFECT IN WORKMANSHIP OR MATERIAL WHICH MAY APPEAR WITHIN A PERIOD OF ONE YEAR FROM THE DATE OF THE FINAL ACCEPTANCE OF THE BUILDING, AND TO PAY FOR ALL RESULTING DAMAGE WHICH SHALL APPEAR WITHIN THE SAID PERIOD, PROVIDED ALWAYS THAT THE CONTRACTOR SHALL NOT BE LIABLE FOR ANYTHING ATTRIBUTABLE TO ACTS OF THE AGENTS OF THE OWNER, OR FOR ORDINARY WEAR. ALSO, GIVEN DATE OF WORK PERFORMED BY THE CONTRACTOR BE ACCEPTED AS COMPLETE, HE SHALL AGREE TO CORRECT ANY DEFICIENCIES OR OMISSIONS IN RESPECT TO THE PLANS OR SPECIFICATIONS WHICH MAY APPEAR IN THE AFORE-MENTIONED TWENTY-FOUR MONTH PERIOD.	1. GREENHECK.
D. ANS/INFA 90A - INSTALLATION OF AIR CONDITIONING AND VENTILATION SYSTEM.	B. THE CONTRACTOR GUARANTEES THAT ALL PIPING AS PROVIDED IN THIS SPECIFICATION WILL BE FREE FROM ALL OBSTRUCTIONS, AND THAT ALL PIPING WILL BE TIGHT AND DRIP FREE.	2. LOREN COOK.
E. AIR 270 - SOUND RATING OF OUTDOOR UNITARY EQUIPMENT.	1.12 LOCAL CONDITIONS	3. OR APPROVED EQUAL.
F. ASHRAE 52-76 - METHOD OF TESTING AIR CLEANING DEVICES USED IN GENERAL VENTILATION FOR REMOVING PARTICULATE MATTER.	A. THE CONTRACTOR AND TRADE SUBMITTING TENDERS ON THIS WORK SHALL VISIT AND WILL BE DEEMED TO HAVE VISITED THE SITE TO ENSURE THAT THEY ARE FAMILIAR WITH ALL CONDITIONS RELATING TO THE WORK. FAILURE TO VISIT THE SITE WILL IN NO WAY RELIEVE THE SUCCESSFUL CONTRACTOR OF THE NECESSITY OF FURNISHING ANY MATERIAL OR PERFORMING ANY WORK THAT MAY BE REQUIRED TO COMPLETE THE WORK IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS WITHOUT ADDITIONAL COST TO THE OWNER.	B. PACKAGE ROOF TOP HEAT PUMP UNITS
G. ASTM A90 - WEIGHT OF COATINGS ON ZINC - COATED (GALVANIZED) IRON OR STEEL ARTICLES.	1.13 RULES, REGULATIONS AND CODES	1. CARRIER.
H. ASTM A120 - BLACK AND GALVANIZED STEEL PIPE.	A. ALL WORK AND MATERIALS SHALL BE IN FULL ACCORDANCE WITH THE LATEST CALIFORNIA MECHANICAL CODE, CALIFORNIA PLUMBING CODE, CALIFORNIA BUILDING CODE AND LOCAL RULES AND REGULATIONS, STATE FIRE MARSHAL REGULATIONS, THE SAFETY ORDERS OF THE DIVISION OF INDUSTRIAL SAFETY, THE NATIONAL ELECTRIC CODE, THE STANDARDS OF THE NATIONAL FIRE PROTECTION ASSOCIATION, AMERICAN GAS ASSOCIATION, OCCUPATION AND SAFETY ACT, AMERICAN NATIONAL STANDARDS INSTITUTE, AMERICAN SOCIETY OF MECHANICAL ENGINEERS, AMERICAN SOCIETY FOR TESTING AND MATERIALS, INSTALLATION STANDARDS PUBLISHED BY THE INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS (IAPMO) AND OTHER APPLICABLE LAWS, CODES, OR REGULATIONS. NOTHING IN THESE SPECIFICATIONS SHALL BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.	2. TRANE.
I. ASTM B88 - SEAMLESS COPPER WATER TUBE.	B. ELECTRICAL WORK, MOTORS, ELECTRICAL APPARATUS AND WIRING SPECIFIED IN THIS SECTION SHALL CONFORM TO THE NATIONAL ELECTRICAL MANUFACTURER'S STANDARDS AND THE NATIONAL ELECTRIC CODE AND BEAR THE UNDERWRITER'S LABEL OF APPROVAL.	3. YORK.
J. ASTM C518 - STEADY STATE HEAT FLUX MEASUREMENTS AND THERMAL TRANSMISSION PROPERTIES BY MEANS OF THE HEAT FLOW METER APPARATUS.	C. THE CONTRACTOR SHALL FURNISH, WITHOUT EXTRA CHARGE, ANY ADDITIONAL MATERIAL AND LABOR WHEN AND WHERE REQUIRED TO COMPLY WITH THESE RULES AND REGULATIONS, THOUGH THE WORK BE NOT MENTIONED IN THESE SPECIFICATIONS OR SHOWN ON THE DRAWINGS. WHEN THESE SPECIFICATIONS OR DRAWINGS CALL FOR OR DESCRIBE MATERIALS OR CONSTRUCTION OF A BETTER QUALITY OR LARGER SIZES THAN REQUIRED BY THE ABOVE MENTIONED RULES AND REGULATIONS, THE PROVISIONS OF THESE SPECIFICATIONS AND ACCOMPANYING DRAWINGS SHALL TAKE PRECEDENCE.	C. MINI-SPLIT HEAT PUMP UNITS
K. ASTM C553 - MINERAL FIBER BLANKET AND FELT INSULATION.	1.14 FEES AND PERMITS	1. CARRIER.
L. ASTM C612 - MINERAL FIBER BLOCK AND BOARD THERMAL INSULATION.	A. THE CONTRACTOR MUST OBTAIN AND PAY ALL FEES FOR PERMITS, LICENSES, INSPECTIONS, ETC., WHICH ARE REQUIRED BY ANY LEGALLY CONSTITUTED AUTHORITY. COORDINATE EXACT REQUIREMENTS WITH THE OWNER PRIOR TO BID.	2. TRANE.
M. ASTM E84 - SURFACE BURNING CHARACTERISTICS OF BUILDING MATERIALS.	1.15 COORDINATION	3. OR APPROVED EQUAL.
N. ASTM E96 - WATER VAPOR TRANSMISSION OF MATERIALS.	A. FOLLOWING THE GENERAL ARRANGEMENT INDICATED ON THE DRAWINGS AS CLOSELY AS POSSIBLE, THE CONTRACTOR SHALL COORDINATE WITH THE ARCHITECTURAL, STRUCTURAL, PLUMBING, ELECTRICAL AND ALL OTHER TRADES PRIOR TO INSTALLATION OF THE MATERIALS AND EQUIPMENT TO VERIFY ADEQUATE SPACE AVAILABLE FOR INSTALLATION OF THE WORK SHOWN. THE OWNER SHALL BE IMMEDIATELY NOTIFIED IF AN AREA OF CONFLICT OCCURS BETWEEN TRADES.	D. VARIABLE VOLUME AND TEMPERATURE SYSTEM(VVT)
O. NFPA 90B - INSTALLATION OF WARM AIR HEATING AND AIR CONDITIONING SYSTEMS.	B. THE CONTRACTOR SHALL BEAR ALL COSTS INCURRED FOR WORK THAT MUST BE RELOCATED DUE TO CONFLICTS BETWEEN TRADES.	1. CARRIER.
P. NFPA 255 - SURFACE BURNING CHARACTERISTICS OF BUILDING MATERIALS.	C. THE MECHANICAL CONTRACTOR SHALL COORDINATE ALL REQUIREMENTS FOR ALL POINTS OF CONNECTION WITH THE GENERAL CONTRACTOR AND OTHER TRADES PRIOR TO BID.	2. TRANE.
Q. SMACNA - LOW PRESSURE DUCT CONSTRUCTION STANDARDS.	1.16 DRAWINGS	3. OR APPROVED EQUAL.
R. UL 18		

5

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**ORANGE COUNTY DEPARTMENT OF
EDUCATION ESPLANADE BLDG 4
TENANT IMPROVEMENT**

DATE 09/04/2026

PROJECT # 026.0084.00

DESIGN PROFESSIONAL



SHEET #

M-003

MECHANICAL SPECIFICATIONS	
3.1	INSTALLATION A. EQUIPMENT INSTALLATION: - ALL EQUIPMENT PROVIDED UNDER THIS SECTION OF THE SPECIFICATIONS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. - SHOULD THE DRAWINGS OR SPECIFICATIONS INDICATE THE EQUIPMENT IS TO BE INSTALLED IN A MANNER NOT IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, THE CONTRACTOR SHALL OBTAIN DIRECTION FROM THE ENGINEER PRIOR TO PROCEEDING WITH THE INSTALLATION. IF THE CONTRACTOR PROCEEDS WITH THE INSTALLATION WITHOUT OBTAINING DIRECTION FROM THE ENGINEER, THE CONTRACTOR SHALL BE REQUIRED TO MAKE ALL REQUIRED CORRECTIONS TO THE INSTALLATION AT NO ADDITIONAL COST TO THE CONTRACT. - INSTALL ALL EQUIPMENT IN LOCATIONS INDICATED ON THE DRAWINGS. CONTRACTOR WILL BE RESPONSIBLE TO VERIFY WITH THE OWNER, IF SUITABILITY IS DOUBTED. CONTRACTOR SHALL NOTIFY THE OWNER BEFORE INSTALLATION INTO ANY APPARENT IMPROPER LOCATIONS OF INTERFERENCE WITH OTHER WORK SUCH AS ELECTRICAL, OUTLETS, WINDOWS, CABINETWORK OR OTHER FEATURES. - SPACE CONSIDERATION: - CERTAIN EQUIPMENT AND DUCTWORK WILL HAVE TO BE INSTALLED WITHIN THE LIMITED SPACE AVAILABLE AS INDICATED ON THE DRAWINGS. - EXACT FIELD MEASUREMENTS OF EXISTING CONDITIONS WILL BE THE RESPONSIBILITY OF THIS CONTRACTOR TO ASSURE THAT THE EQUIPMENT AND DUCTWORK TO BE INSTALLED UNDER THIS SECTION OF THE SPECIFICATIONS CAN BE INSTALLED AS INDICATED. - CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO INSTALLATION. - THESE FIELD VERIFIED DIMENSIONS SHALL BE MADE PRIOR TO PURCHASE OF EQUIPMENT OR FABRICATION OF DUCTWORK. - LINE, ALL DUCT AS INDICATED ON MECHANICAL SHEETS. LINE DUCTWORK AS PER GENERAL NOTES, INCLUDING BUT NOT LIMITED TO ALL DUCTWORK AT BYPASS DAMPER CONNECTION LOCATIONS. B. ROOF AND WALL FLASHINGS: - DUCTS PENETRATING ROOF SHALL HAVE TWENTY-TWO (22) GAUGE SHEET METAL FLASHING WITH A MINIMUM OF TEN INCHES (10") OF THE BASE EXTENDED ON TO THE ROOF, OR ROOF CURB, AS INDICATED ON THE DRAWINGS. - DUCTS THROUGH WALLS SHALL BE SEALED WITH GALVANIZED ANGLE IRON ON ALL SIDES. - WHERE REQUIRED OR INDICATED, A WEATHER HOOD CONSTRUCTED OF GALVANIZED SHEET METAL, WITH GALVANIZED BRDSCREEN SHALL BE PROVIDED. C. REFRIGERANT PIPING PENETRATING ROOF SHALL PROVIDE LEAD FREE FLASHING AND COUNTER FLASHING. C. OPENINGS THROUGH WALLS AND ROOF: - FRAMED OPENINGS IN WALLS AND ROOF FOR DUCTWORK TO BE COORDINATED IN ADVANCE OF THE WORK. INSTALLER SHALL FURNISH SHOP DRAWINGS SHOWING THE CORRECT DIMENSIONS AND LOCATIONS OF THE REQUIRED OPENINGS. - THE CONTRACTOR SHALL PROVIDE AND INSTALL "LINE-SEALS" WHERE PIPES PASS THROUGH MASONRY WALLS OR FLOORS. - ALL PIPES PASSING THROUGH WALLS, FLOORS, CEILINGS, AND PARTITIONS IN FINISHED PORTIONS OF THE BUILDINGS SHALL BE PROVIDED WITH CHROMIUM PLATED, CAST BRASS, SET SCREW PLATES. - WHERE SLEEVES AND PLATES ARE INSTALLED AROUND INSULATED PIPES, THEY SHALL BE OF SUFFICIENT SIZE TO ALLOW THE INSULATION TO GO THROUGH THEM, PRESENTING A NEAT FINISH. D. SLEEVES AND SEALS (PROVIDE FOR PIPES PASSING THROUGH WALLS OR FLOOR SLABS): - SHEET METAL SLEEVES (ABOVE GRADE): 10-GAUGE, GALVANIZED SHEET METAL, ROUND TUBE CLOSED WITH WELDED LONGITUDINAL JOINT. - STEEL SLEEVES (BELOW GRADE): 10-GAUGE, GALVANIZED SHEET METAL, ROUND TUBE CLOSED WITH WELDED LONGITUDINAL JOINT. - POLYETHYLENE SLEEVES (ABOVE GRADE): MANUFACTURER'S STANDARD PRODUCT. - MECHANICAL SLEEVE SEALS (INSTALL, WHERE INDICATED ON DRAWINGS): MODULAR MECHANICAL TYPE, CONSISTING OF INTERLOCKING SYNTHETIC RUBBER LINKS SHAPED TO CONTINUOUSLY FILL ANNULAR SPACE BETWEEN PIPE AND SLEEVE, CONNECTED WITH BOLTS AND PRESSURE PLATES WHICH CAUSE RUBBER SEALING ELEMENTS TO EXPAND WHEN TIGHTENED, PROVIDING WATERTIGHT SEAL AND ELECTRICAL INSULATION. - ISOLATE PIPES THROUGH GROUND FLOOR SLEEVES WITH KRAFT PAPER, PLASTIC TAPE OR SIMILAR MATERIALS. - PACK SPACE BETWEEN PIPE AND SLEEVE WITH CERAMIC FIBER AND FIBRE STOP FIBRE NO. 1402/20 SEALANT SO AS TO ABSOLUTELY FIREPROOF AND WATERKIGHT. E. DUCTWORK AND ACCESSORIES: - PROVIDE OPENINGS IN DUCTWORK WHERE REQUIRED TO ACCOMMODATE THERMOMETERS AND CONTROLLERS. PROVIDE PLOT TUBE OPENINGS WHERE REQUIRED FOR TESTING OF SYSTEMS, COMPLETE WITH METAL CAN WITH SPRING DEVICE OR SCREW TO ENSURE AGAINST AIR LEAKAGE. WHERE OPENINGS ARE PROVIDED IN INSULATED DUCTWORK, INSTALL INSULATION MATERIAL INSIDE A METAL RING. - LOCATE DUCTS WITH SUFFICIENT SPACE AROUND EQUIPMENT TO ALLOW NORMAL OPERATING AND MAINTENANCE ACTIVITIES. - INSTALL ACCESSORIES IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND PER SEISMIC NOTE ON MECHANICAL SHEET M-0.1. - PROVIDE BALANCING DAMPERS AT POINTS ON LOW-PRESSURE SUPPLY, RETURN, AND EXHAUST SYSTEMS WHERE BRANCHES ARE TAKEN FROM LARGER DUCTS AS REQUIRED FOR AIR BALANCING. USE SPLITTER DAMPERS ONLY WHERE INDICATED. - PROVIDE FLEXIBLE CONNECTIONS IMMEDIATELY ADJACENT TO EQUIPMENT IN DUCTS ASSOCIATED WITH FANS AND MOTORIZED EQUIPMENT. - PROVIDE DUCT ACCESS DOORS FOR INSPECTION AND CLEANING BEFORE AND AFTER FILTERS, COILS, FANS, AUTOMATIC DAMPERS, AT FIRE DAMPERS, AND ELSEWHERE AS INDICATED. PROVIDE MINIMUM 8 X 8 INCH SIZE FOR HAND ACCESS, 18 X 18 INCH SIZE FOR SHOULDER ACCESS, AND AS INDICATED. - PROVIDE DUCT TEST HOLES WHERE INDICATED AND REQUIRED FOR TESTING AND BALANCING PURPOSES. - CHECK LOCATION OF OUTLETS AND INLETS AND MAKE NECESSARY ADJUSTMENTS IN POSITION TO CONFORM TO ARCHITECTURAL FEATURES, SYMMETRY, AND LIGHTING ARRANGEMENT. - INSTALL DIFFUSERS TO DUCTWORK WITH AIRTIGHT CONNECTION. - PROVIDE BALANCING DAMPERS ON DUCT TAKE-OFF TO DIFFUSERS AND REGISTERS, REGARDLESS OF WHETHER DAMPERS ARE SPECIFIED AS PART OF THE DIFFUSER, OR REGISTER ASSEMBLY. - PAINT DUCTWORK VISIBLE BEHIND AIR OUTLETS AND INLETS WHITE BLACK. - HANGER STRAPS TO TURN UNDER BOTTOM OF RECTANGULAR DUCTS AND SHEET METAL SCREWS AT THIS POINT AS WELL AS MINIMUM TWO (2) ADDITIONAL SCREWS INTO SIDES OF DUCT FOR SIZES EIGHTEEN INCHES (18") AND UNDER THREE (3) SCREWS FOR SIZES ABOVE EIGHTEEN INCHES (18"). (TYPICAL FOR EACH STRAP). DUCTS IN SIZES ABOVE FORTY-EIGHT INCHES (48") SHALL RUN CONTINUOUS UNDER BOTTOM OF DUCT. STRAPS FOR ROUND DUCT SHALL RUN COMPLETELY UNDER UNDERSIDE OF DUCT AND BE SECURED IN PLACE WITH MINIMUM OF TWO (2) SHEET METAL SCREWS EACH SIDE. - STRAP INSTALLATION: IN GENERAL, PROVIDE IN ACCORDANCE WITH SMACNA DUCT INSTALLATION STANDARDS. CONTRACTOR MAY REQUEST APPROVAL OF ALTERNATE SUPPORT METHODS TO TYPE SPECIFIED. SHOP DRAWINGS WILL BE REQUIRED. - CONCRETE: SECURE SUPPORTS TO CONCRETE WITH CONCRETE INSERTS. BRANCH DUCTWORK IN SIZES EIGHTEEN INCH (18") AND SMALLER MAY BE SECURED BY POWER ACTUATED FASTENERS. CONTRACTOR SHALL SUBMIT SIZES AND MAXIMUM LOADING DATA. - BRACING ALL DUCTWORK LATERALLY TO STRUCTURAL FRAMING TO PREVENT SWAYING OR LATERAL MOVEMENT PER BRACING DETAILS ON PLANS PER SEISMIC NOTE ON MECHANICAL SHEET M-0.1. - TURNING VANES: ALL ELBOWS HAVING A CENTERLINE RADIUS LESS THAN THE WIDTH OF THE DUCT SHALL BE SQUARE ELBOWS WITH TURNING VANES, OR PROPER RADIUS AND SPACING. THESE TURNING VANES SHALL BE MULTI-VANE TYPE AND SHALL BE CAREFULLY INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. PROVIDE TURNING VANES FOR DUCT WIDTHS OF 18 INCHES OR GREATER. PROVIDE SINGLE THICKNESS VANES FOR DUCTS OF LESS THAN 18 INCHES. CONTRACTOR MAY SUBMIT FOR APPROVAL SHOP FABRICATED VANES CONFORMING TO SMACNA DUCT MANUAL STANDARD, WHERE REQUIRED OR INDICATED ON DRAWINGS. PROVIDE ACOUSTIC TURNING VANES CONSTRUCTED OF AIR FOIL SHAPED ALUMINUM EXTRUSION WITH PERFORATED FACES AND FIBERGLASS FILL. - FLEXIBLE DUCT CONNECTIONS: SHALL BE PROVIDED WHERE INDICATED AS REQUIRED AND SHALL BE "VENT-GLASS", "VENTIBRESTOS", OR DURO-DYNE DUKROLAN SUPER METAL-FAB. - DUCT TAPE AND SEALER: - ALL LONGITUDINAL SNAP LOCK JOINTS SHALL BE MADE AIRTIGHT WITH HIGH PRESSURE DUCT SEALANT TREMCO J.S. 773, GREY A-F, AND TRANSVERSE JOINTS SEALED WITH HARCAST AFG NO. 1402 FOIL GRP INSTANT TAPE SEALANT FOR RECTANGULAR DUCTS AND ROUND DUCTS, ALL U.L. CLASSIFIED. AT CONTRACTOR'S OPTION, ALL ROUND DUCT TRANSVERSE JOINTS MAY BE MADE WITH MIRACLE D-019 WATER BASED DUCT SEALANT U.L. CLASSIFIED 800 PSIG MANUFACTURED BY MIRACLE ADHESIVES CORP. - EXPOSED OUTDOOR DUCTWORK SHALL BE SEALED AS DESCRIBED HEREIN AND, IN ADDITION, ALL TRANSVERSE JOINTS SHALL BE COVERED WITH GLENKOTE "SEAL-FLK". F. THERMOSTATS AND OVER-RIDE SWITCHES: - INSTALL AT 48" ABOVE FINISHED FLOOR UNLESS OTHERWISE STATED. - COORDINATE WITH OTHER TRADES. - ALL THERMOSTATS AND OVER-RIDE SWITCHES SHALL BE BY SIEMENS. - CONTROLS CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING, FURNISHING ALL CONTROLS AND WIRING FOR TIE-IN OF THERMOSTATS TO NEW BUILDING ENERGY MANAGEMENT SYSTEM AND SHALL CO-ORDINATE ALL REQUIREMENTS WITH OTHER TRADES INCLUDING NOTIFYING ELECTRICAL CONTRACTOR OF NECESSARY CONDUIT AND POWER REQUIREMENTS. - ALL COSTS FOR SCOPE OF WORK SHALL BE SUBMITTED FOR FINAL BID. - ALL CONTROL CONDUITS SHALL BE BY CONTROLS CONTRACTOR. G. INSULATION: - DUCT INSULATION: - UNLESS SPECIFICALLY INDICATED ON THE DRAWINGS THE CONTRACTOR MAY LINE OR WRAP DUCTWORK TO MEET INSULATION REQUIREMENTS. - FIBERGLASS DUCT WRAP: - SECURE INSULATION WITH VAPOR BARRIER WITH WIRES AND SEAL JACKET JOINTS WITH VAPOR BARRIER ADHESIVE OR TAPE TO MATCH JACKET. - SECURE INSULATION WITHOUT VAPOR BARRIER WITH STAPLES, TAPE, OR WIRES. - INSTALL WITHOUT SAG ON UNDERSIDE OF DUCTWORK. USE ADHESIVE OR MECHANICAL FASTENERS WHERE NECESSARY TO PREVENT SAGGING. LIFT DUCTWORK OFF TRAPEZE HANGERS AND INSERT SPACERS. - SEAL VAPOR BARRIER PENETRATIONS BY MECHANICAL FASTENERS WITH VAPOR BARRIER ADHESIVE. - STOP AND POINT INSULATION AROUND ACCESS DOORS AND DAMPER OPERATORS TO ALLOW OPERATION WITHOUT DISTURBING WRAPPING. - DUCT (AND PLENUM) LINER APPLICATION: - INSTALL AS INDICATED (ROUND LINING) ON THE DRAWINGS. - ACHIEVE INSULATION WITH ADHESIVE FOR 100 PERCENT COVERAGE. SECURE INSULATION WITH MECHANICAL LINER FASTENERS. REFER TO SMACNA STANDARDS FOR SPACING, SEAL AND SMOOTH JOINTS. SEAL LINER SURFACE PENETRATIONS WITH ADHESIVE. - DUCT DIMENSIONS INDICATED ARE OUTSIDE DIMENSIONS REQUIRED FOR AIRFLOW.
3.2	PIPING APPLICATIONS FOR REFRIGERANT R-410A A. SUCTION LINES NPS 2 (DN 50) AND SMALLER FOR CONVENTIONAL AIR-CONDITIONING APPLICATIONS: COPPER, TYPE ACR, STRAIGHT ANNEALED-TEMPER TUBING AND WROUGHT-COPPER FITTINGS WITH BRAZED OR SOLDERED JOINTS. B. HOT GAS AND LIQUID LINES AND SUCTION LINES FOR HEAT-PUMP APPLICATIONS: COPPER, TYPE ACR, STRAIGHT ANNEALED- OR DRAWN-TEMPER TUBING AND WROUGHT-COPPER FITTINGS WITH BRAZED OR SOLDERED JOINTS. C. SAFETY-RELIEF-VALVE DISCHARGE PIPING: COPPER, TYPE ACR, STRAIGHT ANNEALED- OR DRAWN-TEMPER TUBING AND WROUGHT-COPPER FITTINGS WITH BRAZED OR SOLDERED JOINTS. D. NO COOLED TEMPER (SOFT ANNEALED), ACR SHALL BE USED IN THIS PROJECT.
3.4	PIPING INSTALLATION A. DRAWING PLANS, SCHEMATICS, AND DIAGRAMS INDICATE GENERAL LOCATION AND ARRANGEMENT OF PIPING SYSTEMS; INDICATED LOCATIONS AND ARRANGEMENTS WERE USED TO SIZE PIPE AND CALCULATE FRICTION LOSS, EXPANSION, PUMP SIZING, AND OTHER DESIGN CONSIDERATIONS. INSTALL PIPING AS INDICATED UNLESS DEVIATIONS TO LAYOUT ARE APPROVED ON SHOP DRAWINGS. B. INSTALL REFRIGERANT PIPING ACCORDING TO ASHRAE 15. C. INSTALL PIPING IN CONCEALED LOCATIONS UNLESS OTHERWISE INDICATED AND EXCEPT IN EQUIPMENT ROOMS AND SERVICE AREAS. D. INSTALL PIPING INDICATED TO BE EXPOSED AND PIPING IN EQUIPMENT ROOMS AND SERVICE AREAS AT RIGHT ANGLES OR PARALLEL TO BUILDING WALLS. DIAGONAL RUNS ARE PROHIBITED UNLESS SPECIFICALLY INDICATED OTHERWISE. E. INSTALL PIPING ABOVE ACCESSIBLE CEILINGS TO ALLOW SUFFICIENT SPACE FOR CEILING PANEL REMOVAL. F. INSTALL PIPING ADJACENT TO MACHINES TO ALLOW SERVICE AND MAINTENANCE. G. INSTALL PIPING FREE OF SAGS AND BENDS. H. INSTALL FITTINGS FOR CHANGES IN DIRECTION AND BRANCH CONNECTIONS. I. SELECT SYSTEM COMPONENTS WITH PRESSURE RATING EQUAL TO OR GREATER THAN SYSTEM OPERATING PRESSURE. J. INSTALL PIPING AS SHORT AND AS POSSIBLE, WITH A MINIMUM NUMBER OF JOINTS, ELBOWS, AND FITTINGS. K. ARRANGE PIPING TO ALLOW INSPECTION AND SERVICE OF REFRIGERATION EQUIPMENT. INSTALL VALVES AND SPECIALTIES IN ACCESSIBLE LOCATIONS TO ALLOW FOR SERVICE AND INSPECTION. INSTALL ACCESS DOORS OR PANELS AS SPECIFIED IN PLANS IF VALVES OR EQUIPMENT REQUIRING MAINTENANCE IS CONCEALED BEHIND FINISHED SURFACES. L. INSTALL REFRIGERANT PIPING IN PROTECTIVE CONDUIT WHERE INSTALLED BELOWGROUND. M. INSTALL REFRIGERANT PIPING IN RIGID OR FLEXIBLE CONDUIT IN LOCATIONS WHERE EXPOSED TO MECHANICAL INJURY. N. SLOPE REFRIGERANT PIPING AS FOLLOWS: - INSTALL HORIZONTAL HOT-GAS DISCHARGE PIPING WITH A UNIFORM SLOPE DOWNWARD AWAY FROM COMPRESSOR. - INSTALL HORIZONTAL SUCTION LINES WITH A UNIFORM SLOPE DOWNWARD TO COMPRESSOR. - INSTALL TRAPS AND DOUBLE RISERS TO ENTRAIN OIL IN VERTICAL RUNS. - LIQUID LINES MAY BE INSTALLED LEVEL. O. WHEN BRAZING OR SOLDERING, REMOVE SOLDERING VALVE COILS AND SIGHT GLASSES, ALSO REMOVE VALVE STEMS, SEATS, AND PACKING, AND ACCESSIBLE INTERNAL PARTS OF REFRIGERANT SPECIALTIES. DO NOT APPLY HEAT NEAR EXPANSION-VALVE BULB.
P	BEFORE INSTALLATION OF STEEL REFRIGERANT PIPING, CLEAN PIPE AND FITTINGS USING THE FOLLOWING PROCEDURES: - SHOT BLAST THE INTERIOR OF PIPING. - REMOVE COARSE PARTICLES OF DIRT AND DUST BY DRAWING A CLEAN, UNTENSIONED CLOTH THROUGH TUBING BY MEANS OF A WIRE OR ELECTRICIAN'S TAPE. - DRAW A CLEAN, UNTENSIONED CLOTH SATURATED WITH TRICHLOROETHYLENE THROUGH THE TUBE OR PIPE. CONTINUE THIS PROCEDURE UNTIL CLOTH IS NOT DISCOLORED BY DIRT. - DRAW A CLEAN, UNTENSIONED CLOTH SATURATED WITH COMMERCE OIL, SQUEEZED DRY, THROUGH THE TUBE OR PIPE TO REMOVE REMAINING LINT. - FINALLY, DRAW A CLEAN, DRY, UNTENSIONED CLOTH THROUGH THE TUBE OR PIPE. - SAFETY-RELIEF-VALVE DISCHARGE PIPING IS NOT REQUIRED TO BE CLEANED BUT IS OPEN TO ALLOW UNRESTRICTED FLOW. - INSTALL PIPING WITH ADEQUATE CLEARANCE BETWEEN PIPE AND ADJACENT WALLS AND HANGERS OR BETWEEN PIPES FOR INSULATION INSTALLATION.
3.5	PIPE JOINT CONSTRUCTION A. REAM ENDS OF PIPES AND TUBES AND REMOVE BURRS. BEVEL PLAIN ENDS OF STEEL PIPE. B. REMOVE SCALE, SLAG, DIRT, AND DEBRIS FROM INSIDE AND OUTSIDE OF PIPE AND FITTINGS BEFORE ASSEMBLY. C. FILL PIPE AND FITTINGS WITH AN INERT GAS (NITROGEN OR CARBON DIOXIDE), DURING BRAZING OR WELDING, TO PREVENT SCALE FORMATION. D. SOLDERED JOINTS: CONSTRUCT JOINTS ACCORDING TO ASTM B 828 OR CDA'S "COPPER TUBE HANDBOOK." E. BRAZED JOINTS: CONSTRUCT JOINTS ACCORDING TO AWS'S "BRAZING HANDBOOK," CHAPTER "PIPE AND TUBE." - USE TYPE BCUP (COPPER-PHOSPHORUS) ALLOY FOR JOINING COPPER SOCKET FITTINGS WITH COPPER PIPE. - USE TYPE BAC (COPPER-AMALGAM-FREE SILVER) ALLOY FOR JOINING COPPER WITH BRONZE OR STEEL. F. THREADED JOINTS: THREAD STEEL PIPE WITH TAPSED PIPE THREADS ACCORDING TO ASME B1.20.1. CUT THREADS FULL AND CLEAN USING SHARP DIES. REAM THREADED PIPE ENDS TO REMOVE BURRS AND TO RESTORE FULL JOIN PIPE FITTINGS AND VALVES AS FOLLOWS: - APPLY APPROPRIATE TAPE OR THREAD COMPOUND TO EXTERNAL PIPE THREADS UNLESS DRY-SEAL THREADING IS SPECIFIED. G. DAMAGED THREADS: DO NOT USE PIPE OR PIPE FITTINGS WITH THREADS THAT ARE CORRODED OR DAMAGED. DO NOT USE PIPE SECTIONS THAT HAVE CRACKED OR OPEN WELDS. G. STEEL PIPE CAN BE THREADED, BUT THREADED JOINTS MUST BE SEAL BRAZED OR SEAL WELDED. H. WELDED JOINTS: CONSTRUCT JOINTS ACCORDING TO AWS D10.10M/D10.12. I. FLANGED JOINTS: SELECT APPROPRIATE GASKET MATERIAL, SIZE, TYPE, AND THICKNESS FOR SERVICE APPLICATION. INSTALL GASKET CONCENTRICALLY POSITIONED. USE SUITABLE LUBRICANTS ON BOLT THREADS.
3.6	HANGERS AND SUPPORTS A. INSTALL THE FOLLOWING PIPE ATTACHMENTS: - ADJUSTABLE STEEL CLEVIS HANGERS FOR INDIVIDUAL HORIZONTAL RUNS LESS THAN 20 FEET (6 M) LONG. - ROLLER HANGERS AND SPRING HANGERS FOR INDIVIDUAL HORIZONTAL RUNS 20 FEET (6 M) OR LONGER. - PIPE ROLLER, MSS SP-58, TYPE 44 FOR MULTIPLE HORIZONTAL PIPING 20 FEET (6 M) OR LONGER, SUPPORTED ON A TRAPEZE. - SPRING HANGERS TO SUPPORT VERTICAL RUNS. - COPPER-CLAD HANGERS AND SUPPORTS FOR HANGERS AND SUPPORTS IN DIRECT CONTACT WITH COPPER PIPE. B. INSTALL HANGERS FOR COPPER TUBING WITH THE FOLLOWING MAXIMUM SPACING AND MINIMUM ROD DIAMETERS: - NPS 1/2 (DN 15): MAXIMUM SPAN, 60 INCHES (1500 MM); MINIMUM ROD, 1/4 INCH (6.4 MM). - NPS 3/8 (DN 10): MAXIMUM SPAN, 60 INCHES (1500 MM); MINIMUM ROD, 1/4 INCH (6.4 MM). - NPS 1 (DN 25): MAXIMUM SPAN, 72 INCHES (1800 MM); MINIMUM ROD, 1/4 INCH (6.4 MM). - NPS 1-1/4 (DN 32): MAXIMUM SPAN, 86 INCHES (2400 MM); MINIMUM ROD, 3/8 INCH (9.5 MM). - NPS 1-1/2 (DN 40): MAXIMUM SPAN, 86 INCHES (2400 MM); MINIMUM ROD, 3/8 INCH (9.5 MM). - NPS 2 (DN 50): MAXIMUM SPAN, 86 INCHES (2400 MM); MINIMUM ROD, 3/8 INCH (9.5 MM).
3.7	FIELD QUALITY CONTROL A. PERFORM THE FOLLOWING TESTS AND INSPECTIONS: - COMPLY WITH ASME B31.5, CHAPTER VI. - TEST REFRIGERANT PIPING, SPECIALTIES, AND RECEIVERS. ISOLATE COMPRESSOR, CONDENSER, EVAPORATOR, AND SAFETY DEVICES FROM TEST PRESSURE IF THEY ARE NOT RATED ABOVE THE TEST PRESSURE. - TEST HIGH- AND LOW-PRESSURE SIDE PIPING OF EACH SYSTEM SEPARATELY AT NOT LESS THAN THE PRESSURES INDICATED IN "PERFORMANCE REQUIREMENTS" ARTICLE. - FILL SYSTEM WITH NITROGEN TO THE REQUIRED TEST PRESSURE. - SYSTEM SHALL MAINTAIN TEST PRESSURE AT THE MANIFOLD GAGE THROUGHOUT DURATION OF TEST. - TEST JOINTS AND FITTINGS WITH ELECTRONIC LEAK DETECTOR OR BY BRUSHING A SMALL AMOUNT OF SOAP AND GLYCERIN SOLUTION OVER JOINTS. - REMAKE LEAKING JOINTS USING NEW MATERIALS AND RETEST UNTIL SATISFACTORY RESULTS ARE ACHIEVED. - COMPLY WITH BRAZING DETAILS ON PLANS PER SEISMIC NOTE ON MECHANICAL SHEET M-0.1. B. PREPARE TEST AND INSPECTION REPORTS.
3.8	SYSTEM CHARGING A. CHARGE SYSTEM USING THE FOLLOWING PROCEDURES: - INSTALL CORE IN FILTER DRYER OR LEAK TEST BUT BEFORE EVACUATION. - EVALUATE ENTIRE REFRIGERANT SYSTEM WITH A VACUUM PUMP TO 500 MICROMETERS (0.7 PA) IF VACUUM HOLDS FOR 12 HOURS, SYSTEM IS READY FOR CHARGING. - BREAK VACUUM WITH REFRIGERANT GAS, ALLOWING PRESSURE TO BUILD UP TO 2 PSIG (14 KPA). - CHARGE SYSTEM WITH A NEW FILTER-DRYER CORE IN CHARGING LINE.
3.9	AIR SYSTEM TEST AND BALANCE A. PERFORM ALL TESTS TO THE ENTIRE SATISFACTION OF THE OWNER. AIR BALANCING CONTRACTOR SHALL NOTIFY OWNER ONE WEEK PRIOR TO SCHEDULING AIR BALANCE AT THE SITE. B. REGULATING AND ADJUSTING AIR SYSTEMS: THE CONTRACTOR SHALL HAVE AN EXPERIENCED INDEPENDENT TESTING COMPANY CERTIFIED MEMBER OF THE ASSOCIATED AIR BALANCE COUNCIL (A.A.B.C.) SPECIALIZING IN AIR CONDITIONING SYSTEM TESTING COMPLETELY BALANCE THE AIR SYSTEMS SO THAT THE VOLUME OF AIR INDICATED ON THE DRAWINGS IS BEING DELIVERED TO THE OUTLETS. HE SHALL ADJUST AND RE-ADJUST THIS PART OF THE WORK UNTIL THE OPERATION COMPLES WITH THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. - TESTING PROCEDURE: PROCEDURES SHALL CONFORM TO A.A.B.C. STANDARDS. PROVIDE REPORTS IN SORT COVER, LETTER SIZE, 3-RING BINDER MANUALS, COMPLETE WITH INDEX PAGE AND INDEXING TABS, WITH COVER IDENTIFICATION AT FRONT AND SIDE. INCLUDE SET OF REDUCED DRAWINGS WITH AIR OUTLETS AND EQUIPMENT IDENTIFIED TO CORRESPOND WITH DATA SHEETS, AND INDEXING THERMOSTAT LOCATIONS. - THE FOLLOWING TEST DATA SHALL BE TAKEN AND ELECTRONIC FORMAT SUBMITTED IN TABULATED FORM TO THE ARCHITECT FOR EACH SYSTEM: - TEST AND ADJUST ALL SUPPLY, RETURN & EXHAUST BLOWER RPM TO DESIGN REQUIREMENTS. - TEST AND RECORD ALL MOTOR FULL LOAD AMPIRES. - TEST AND RECORD SYSTEM STATIC PRESSURES, SUCTION AND DISCHARGE. - TEST AND ADJUST SYSTEM FOR DESIGN RE-CIRCULATED AIR CFM. - TEST AND ADJUST SYSTEM FOR DESIGN CFM OUTSIDE AIR. - ADJUST ALL SUPPLY, RETURN AND EXHAUST OUTLETS TO WITHIN 5% OF DESIGN CFM.
3.10	ADJUSTING A. ADJUST THERMOSTATIC EXPANSION VALVE TO OBTAIN PROPER EVAPORATOR SUPERHEAT. B. ADJUST HIGH- AND LOW-PRESSURE SWITCH SETTINGS TO AVOID SHORT CYCLING IN RESPONSE TO FLUCTUATING SUCTION PRESSURE. C. ADJUST SET-POINT TEMPERATURE OF AIR-CONDITIONING OR CHILLED-WATER CONTROLLERS TO THE SYSTEM DESIGN TEMPERATURE. D. PERFORM THE FOLLOWING ADJUSTMENTS BEFORE OPERATING THE REFRIGERATION SYSTEM, ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS: - OPEN SHUT-OFF VALVES IN CONDENSER WATER CIRCUIT. - VERIFY THAT COMPRESSOR OIL LEVEL IS CORRECT. - OPEN COMPRESSOR SUCTION AND DISCHARGE VALVES. - OPEN REFRIGERANT VALVES EXCEPT BYPASS VALVES THAT ARE USED FOR OTHER PURPOSES. - CHECK OPEN COMPRESSOR MOTOR ALIGNMENT AND APPLY LUBRICATION FOR MOTORS AND BEARINGS. - REPLACE CORE OF REPLACEABLE FILTER DRYER AFTER SYSTEM HAS BEEN ADJUSTED AND AFTER DESIGN FLOW RATES AND PRESSURES ARE ESTABLISHED.
3.11	SOUND AND VIBRATION ISOLATION A. ALL VIBRATING EQUIPMENT SHALL BE SOUND ISOLATED FROM THE STRUCTURE. B. THE CONTRACTOR SHALL SUBMIT ALL NECESSARY DATA FOR EACH VIBRATION ISOLATOR, INCLUDING STATIC DEFLECTION AND WEIGHT LOADING, FOR EQUIPMENT IN OPERATION. C. VIBRATION ISOLATORS SHALL HAVE A VALID OSHPD APPROVAL NUMBER.
3.12	JOB COMPLETION A. EQUIPMENT IDENTIFICATION: - ALL EQUIPMENT FURNISHED UNDER THIS SECTION SHALL BE PROVIDED WITH THE MANUFACTURER'S METAL IDENTIFICATION LABELS SECURELY ATTACHED AND SHOWING ALL PERTINENT DATA, INCLUDING PERFORMANCE CHARACTERISTICS, SIZE, MODEL, AND SERIAL NUMBER. LABELS SHALL NOT BE OBLISCURED IN ANY MANNER. - IDENTIFICATION NAME PLATES SHALL BE PROVIDED ON ALL EQUIPMENT AND CONTROL COMPONENTS, INCLUDING ROOM THERMOSTAT NUMBERS CODED TO THEIR RESPECTIVE AUTOMATIC ZONE DAMPER VALVE, OR AIR CONDITIONING UNIT. NAME PLATES SHALL BE CONSTRUCTED OF BLACK SLAGGITE WITH WHITE CENTER ENGRAVED LETTERS THREE-SIXTEENTH INCH (3/16") HIGH AND SHALL BE CEMENTED TO EQUIPMENT WITH AN EPOXY RESIN. THE CONTRACTOR SHALL SUBMIT TO THE ARCHITECT, A COMPLETE LIST OF NAME PLATE TITLES FOR APPROVAL PRIOR TO INSTALLATION. - EACH VALVE SHALL BE IDENTIFIED BY A NUMBER BRASS TAG WITH HOLE AND BRASS CHAIN MOUNTED ON VALVE STEM OR HANDLE. TAG SHALL BE A MINIMUM OF ONE AND ONE-HALF INCH (1-1/2") IN DIAMETER AND NUMBERS SHALL BE AT LEAST ONE-FOURTH INCH (1/4") HIGH STAMPED INTO THE TAG. B. FINAL OPERATION: UPON COMPLETION OF THE INSTALLATION OF THE EQUIPMENT AND AFTER ALL SYSTEMS HAVE BEEN TESTED, CLEANED, THE CONTRACTOR SHALL PLACE A COMMITMENT PERSON ON CHARGE WHO SHALL OPERATE THE EQUIPMENT FOR A PERIOD OF THREE (3) EIGHT-HOUR DAYS. DURING THIS PERIOD OF OPERATION, ALL SAFETY AND OPERATING CONTROLS SHALL BE ACTUATED TO DEMONSTRATE PROPER OPERATION. DURING THIS OPERATING PERIOD, THE OWNER'S REPRESENTATIVE SHALL BE INSTRUCTED IN ALL DETAILS OF OPERATION AND MAINTENANCE. ALL REQUIRED INSTRUCTIONS FROM THE EQUIPMENT MANUFACTURER'S REPRESENTATIVE SHALL BE GIVEN DURING THE PERIOD. C. OPERATION INSTRUCTIONS: - PREPARE A DIAGRAM OF THE ENTIRE CONTROL SYSTEM WITH A FULL DESCRIPTION OF THE HEATING, VENTILATING AND AIR CONDITIONING SYSTEMS. - AFTER APPROVAL BY THE ENGINEER, THE CONTROL DIAGRAM AND COMPLETE OPERATING INSTRUCTIONS SHALL BE MOUNTED UNDER GLASS AND INSTALLED WHERE DIRECTED. - PREPARE TWO (2) MAINTENANCE MANUALS WHICH SHALL INCLUDE ALL THE NECESSARY OR PERTINENT DATA, SUCH AS: - NAMES, ADDRESSES AND EMERGENCY PHONE NUMBERS OF ALL SUPPLIERS AND MANUFACTURERS. - PART NUMBERS OF ALL REPLACEABLE ITEMS. - OILING AND LUBRICATION INSTRUCTIONS. - AIR BALANCE REPORT. - CONTROL DIAGRAM AND OPERATION SEQUENCE, TOGETHER WITH LABELING OF CONTROLS AND INSTRUMENTS TO MATCH THE DIAGRAM. - A MAINTENANCE SCHEDULE WHICH SHALL LIST ALL REQUIRED MAINTENANCE ON ALL EQUIPMENT FURNISHED UNDER THIS SECTION OF THE SPECIFICATIONS AND THE INTERVALS OF WHICH THE ITEMS ARE TO BE PERFORMED. - AN IDENTIFICATION CHART INDICATING VALVE OPERATING IN THE PIPING SYSTEM SHALL BE INSTALLED AS LOCATED BY THE OWNER. IDENTIFICATION CHARTS SHALL BE MOUNTED BEHIND GLASS IN A FRAME. D. CLEAN-UP: - AFTER ALL HEATING, VENTILATING AND AIR CONDITIONING WORK HAS BEEN TESTED AND APPROVED, THE CONTRACTOR SHALL THOROUGHLY CLEAN ALL PARTS OF THE EQUIPMENT INSTALLATION. EXPOSED PARTS WHICH ARE TO BE PAINTED ARE TO BE THOROUGHLY CLEANED OF CEMENT PLASTER AND OTHER MATERIALS AND ALL GREASES AND OIL SPOTS REMOVED WITH SOLVENT. EXPOSED ROUGH METAL WORK TO BE CAREFULLY BRUSHED DOWN WITH STEEL BRUSHES TO REMOVE RUST AND OTHER SPOTS AND LEFT IN PROPER CONDITION TO RECEIVE PAINTER'S FINISH. - REMOVE ALL DEBRIS FROM THE JOB SITE, ALL CARTONS, BOXES, PACKING GRATES, EXCESS MATERIALS NOT USED OCCASIONED BY THE WORK AND TO THE SATISFACTION OF THE OWNER. - IF THE ABOVE REQUIREMENTS OF CLEAN-UP ARE NOT TO THE SATISFACTION OF THE OWNER, THE OWNER RESERVES THE RIGHT TO ORDER THE WORK DONE AND THE COST OF WHICH SHALL BE BORNE BY THE CONTRACTOR. - THE CONTRACTOR SHALL REMOVE ON A DAILY BASIS ALL DEBRIS FROM THE JOB SITE, TO THE SATISFACTION OF THE OWNER. - IF THE ABOVE REQUIREMENTS OF CLEAN-UP ARE NOT TO THE SATISFACTION OF THE OWNER, THE OWNER RESERVES THE RIGHT TO ORDER THE WORK DONE BY A THIRD PARTY AND THE COST OF WHICH SHALL BE BORNE BY THE CONTRACTOR.

AGENCY APPROVAL

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Consulting Engineers
5200 E. La Palma Ave
Anaheim, CA 92807
Telephone (714) 693-2277

PROJECT

ORANGE COUNTY DEPARTMENT OF
EDUCATION ESPLANADE BLDG 4
TENANT IMPROVEMENT

3001 RED HILL AVENUE, SUITE 117, 118, 119,
COSTA MESA, CA 92626

DATE 09/04/2026

PROJECT # 026.0084.00

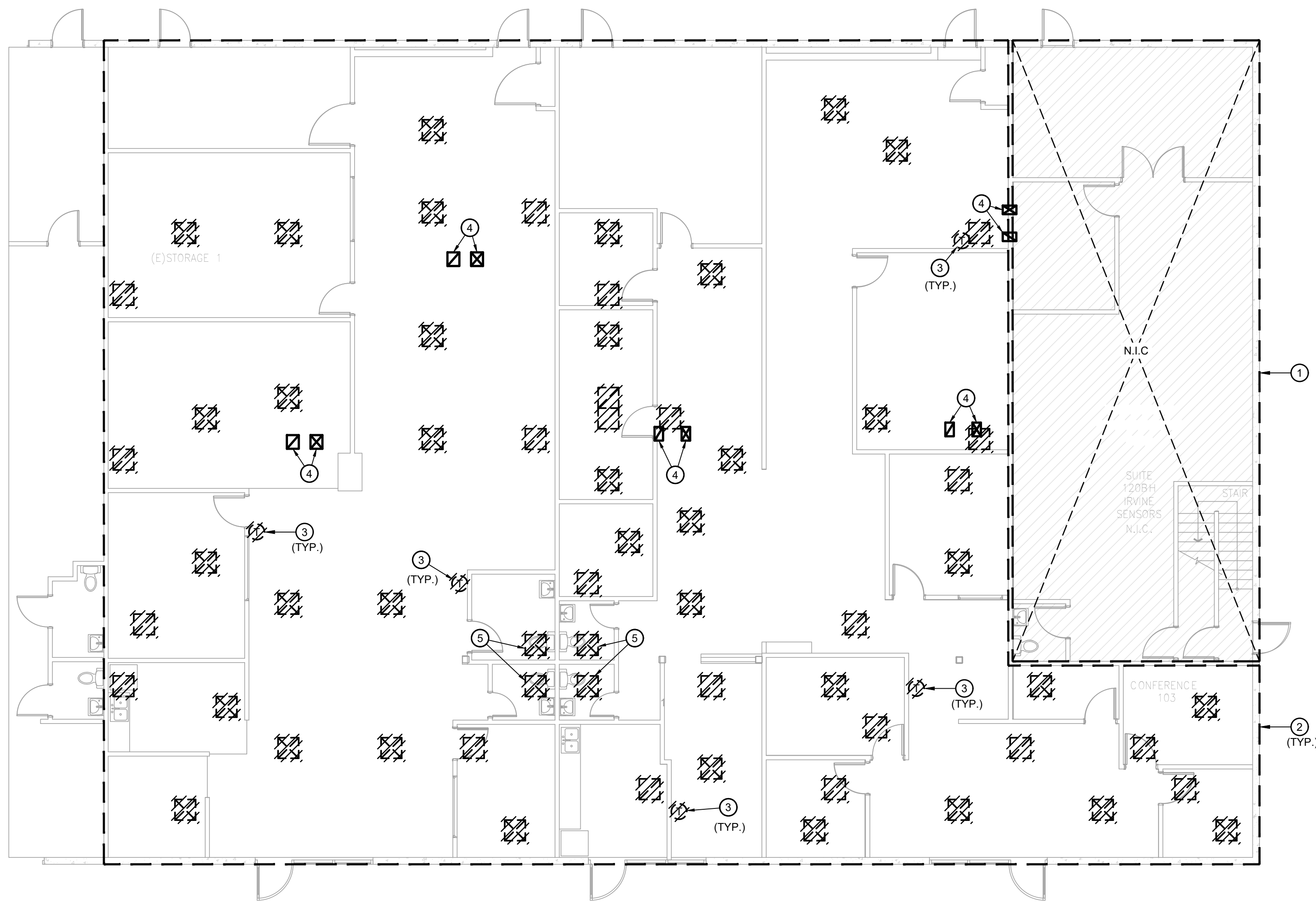
DESIGN PROFESSIONAL



TITLE
MECHANICAL
SPECIFICATIONS

SHEET #

M-004



- DEMOLITION KEY NOTES:**
- ① SUITE 1209H AREA NOT IN SCOPE.
 - ② ALL HVAC APPURTENANCES (DUCT, DIFFUSERS, GRILLES, ETC.) WITHIN CEILING SPACE AND BELOW TO BE REMOVED WITHIN DASHED LINE AREA UNLESS OTHERWISE NOTED.
 - ③ DEMOLISH (E) THERMOSTAT AND WIRING MODULE. EXISTING WIRING TO REMAIN. PLEASE CONTACT PELICAN WIRELESS (BRYCE MERCORD, P: 1-310-975-8894) PRIOR TO STARTING DEMOLITION FOR THERMOSTAT UPGRADE COORDINATION.
 - ④ EXISTING SUPPLY AIR DUCT AND RETURN AIR DUCT DOWN FROM EXISTING ROOF TOP UNIT ON ROOF. REFER TO SHEET MD-200 FOR EXACT DUCT DROP LOCATION.
 - ⑤ DEMOLISH EXHAUST DUCT. RETAIN EXISTING EXHAUST TERMINATION.

- DEMOLITION GENERAL NOTES:**
1. CONTRACTOR SHALL COORDINATE WORK WITH OTHER TRADES AS NECESSARY PRIOR TO INSTALLATION.
 2. CONTRACTOR SHALL MAINTAIN PROPER CLEARANCES FROM ALL ELECTRICAL EQUIPMENT AND SERVICE CLEARANCES FOR MECHANICAL EQUIPMENT.
 3. CONTRACTOR SHALL COORDINATE ALL LOCATIONS OF DUCT PENETRATIONS THRU SHEAR WALLS. NO DUCT PENETRATIONS THRU SHEAR WALLS UNLESS SPECIFICALLY SHOWN ON STRUCTURAL PLANS.

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5200 E. La Palma Ave
Anaheim, CA 92807
Telephone (714) 693-2277

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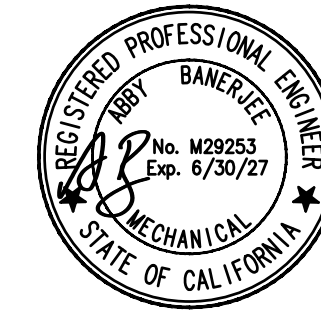
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TENANT IMPROVEMENT**

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COSTA MESA, CA 92626

DATE **09/04/2026**

PROJECT # **026.0084.00**

DESIGN PROFESSIONAL

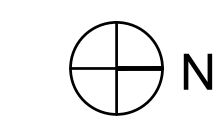


TITLE
**MECHANICAL DEMOLITION
FLOOR PLAN**

SHEET #

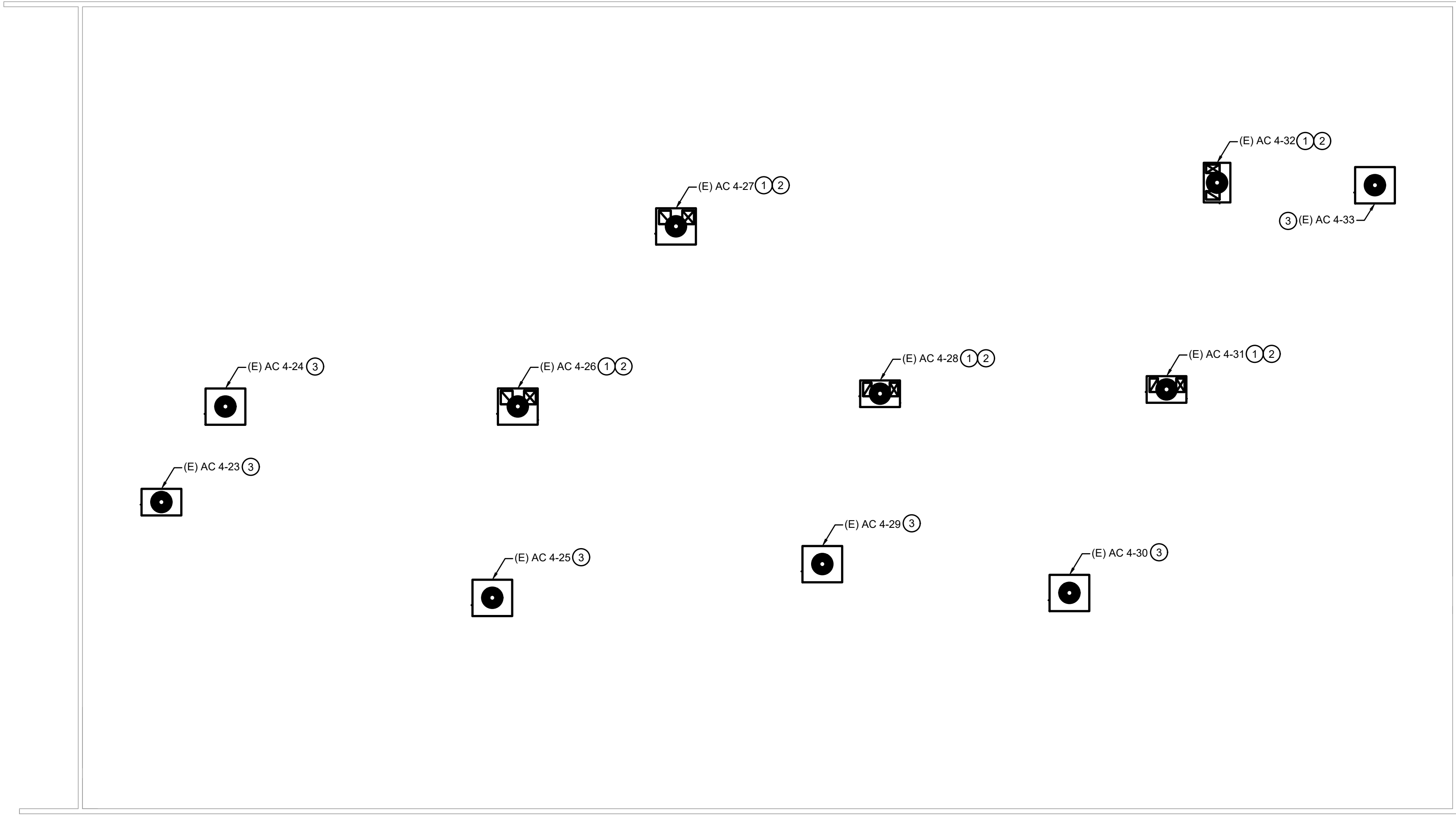
MD-100

MECHANICAL DEMOLITION FLOOR PLAN



1/8" = 1'-0"

1



MECHANICAL DEMOLITION ROOF PLAN

1/8" = 1'-0"

1

DEMOLITION KEY NOTES:

- ① EXISTING RTU TO REMAIN.
- ② DEMOLISH PELICAN WIRELESS THERMOSTAT WIRING MODULE IF APPLICABLE. EXISTING WIRING TO OTHERWISE REMAIN. PLEASE CONTACT PELICAN WIRELESS (BRYCE MERCORD, P: 1-310-875-5894) PRIOR TO STARTING DEMOLITION FOR THERMOSTAT UPGRADE COORDINATION.
- ③ EXISTING UNIT NOT IN SCOPE.

DEMOLITION GENERAL NOTES:

- CONTRACTOR SHALL VISIT THE JOB SITE AND VERIFY THE SCOPE OF DEMOLITION WORK.
- DEMOLITION IS INDICATED AS A CONVENIENCE FOR THE CONTRACTOR AND MAY NOT INDICATE THE FULL SCOPE OF DEMOLITION REQUIRED TO COMPLETE THE NEW WORK.
- PATCH AND REPAIR EXISTING SURFACES AS REQUIRED TO COMPLETE THE NEW WORK.
- ALL NEW WORK SHALL MATCH EXISTING IN KIND, QUALITY AND FINISH U.O.N.
- CONTRACTOR SHALL INCLUDE IN THE SCOPE OF WORK ALL WORK REQUIRED TO PATCH, FINISH, MATCH, AND BLEND NEW SURFACES TO EXISTING AS IMPACTED BY THE AREAS OF NEW WORK.
- CONTRACTOR SHALL PATCH AND REPAIR ANY UNUSED ROOF OPENINGS.

AGENCY APPROVAL



2755 Bristol Street, Suite 250, Newport Beach, California 92626 | P: 949.315.1993

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Consulting Engineers
5200 E. La Palma Ave
Anaheim, CA 92807
Telephone (714) 693-2277

PROJECT

ORANGE COUNTY DEPARTMENT OF
EDUCATION ESPLANE BLDG 4
TENANT IMPROVEMENT

3001 RED HILL AVENUE, SUITE 117, 118, 119,
COSTA MESA, CA 92626

DATE 09/04/2026

PROJECT # 026.0084.00

DESIGN PROFESSIONAL



TITLE
MECHANICAL DEMOLITION
ROOF PLAN

SHEET #

MD-200


$$1/8^{\circ} = 1'-0''$$

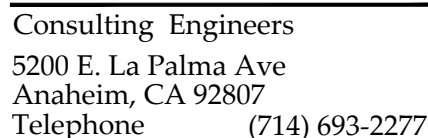
1

- 1 EXISTING SUPPLY AIR DUCT AND RETURN AIR DUCT DOWN FROM EXISTING ROOF TOP UNIT ON ROOF. REFER TO SHEET M-200 FOR EXACT DUCT DROP LOCATION. CONTRACTOR TO FIELD VERIFY THE EXACT LOCATION OF SUPPLY AND RETURN AIR DUCT DROP.
- 2 PROVIDE PELICAN WIRELESS THERMOSTAT. T62 DIGITAL. 24V. 1/2" NPT. MOUNT AT 4' 6" REUSE EXISTING THERMOSTAT WIRING. PROVIDE NEW WIRING MODULE AND UNIT. PLEASE COORDINATE INSTALL WITH PELICAN WIRELESS (BYRCE MERCORD P-1-310-975-5894).
- 3 ROUTE EXHAUST DUCT TO EXISTING EXHAUST TERMINATION POINT. FOR PURPOSES OF BID CONTRACTOR SHALL ASSUME 40 FT. OF EXHAUST DUCT PER EXHAUST FAN.
- 4 PROVIDE DUCT SMOKE DETECTOR IN SUPPLY DUCT PER CMC SMOKE DETECTOR TO SHUT OFF UNIT UPON DETECTION OF SMOKE AND SEND SIGNAL TO BUILDING FIRE ALARM PANEL(IF APPLICABLE).
- 5 PROVIDE 1" DOOR UNDER.
- 6 PROVIDE COUNTER BALANCE BACK DRAFT DAMPER ALLOWING PRESSURE RELIEF AT LESS THAN 0.1 INCHES W.G. PROVIDE RUSKIN CB2D OR APPROVED EQUAL.
- 7 19X18" RELIEF DUCT UP THRU ROOF TO GRAVITY HOOD TERMINATION.

1. CONTRACTOR SHALL COORDINATE WORK WITH OTHER TRADES AS NECESSARY PRIOR TO INSTALLATION.
2. CONTRACTOR SHALL MAINTAIN PROPER CLEARANCES FROM ALL ELECTRICAL EQUIPMENT AND SERVICE CLEARANCES FOR MECHANICAL EQUIPMENT.
3. CONTRACTOR SHALL COORDINATE ALL LOCATIONS OF DUCT PENETRATIONS THRU SHEAR WALLS. NO DUCT PENETRATIONS THROUGH SHEAR WALLS UNLESS SPECIFICALLY SHOWN ON STRUCTURAL PLANS.
4. ALL INSULATION SHALL HAVE A FLAME SPREAD OF NOT MORE THAN 25 AND A SMOKE DENSITY NOT EXCEEDING 50.
5. ALL RECTANGULAR DUCT TURNS IN MAIN TRUNK AIR DUCTS SHALL HAVE SINGLE WALL TURNING VANES WITH TRAILING EDGE. OTHERWISE INDICATED OR NOTED.
6. MECHANICAL CONTRACTOR SHALL COORDINATE ALL DOOR LOUVER AND OVERCUT LOCATIONS WITH THE APPROPRIATE TRADES PRIOR TO BID.

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**ORANGE COUNTY DEPARTMENT OF
EDUCATION ESPLANE BLDG 4
TENANT IMPROVEMENT**

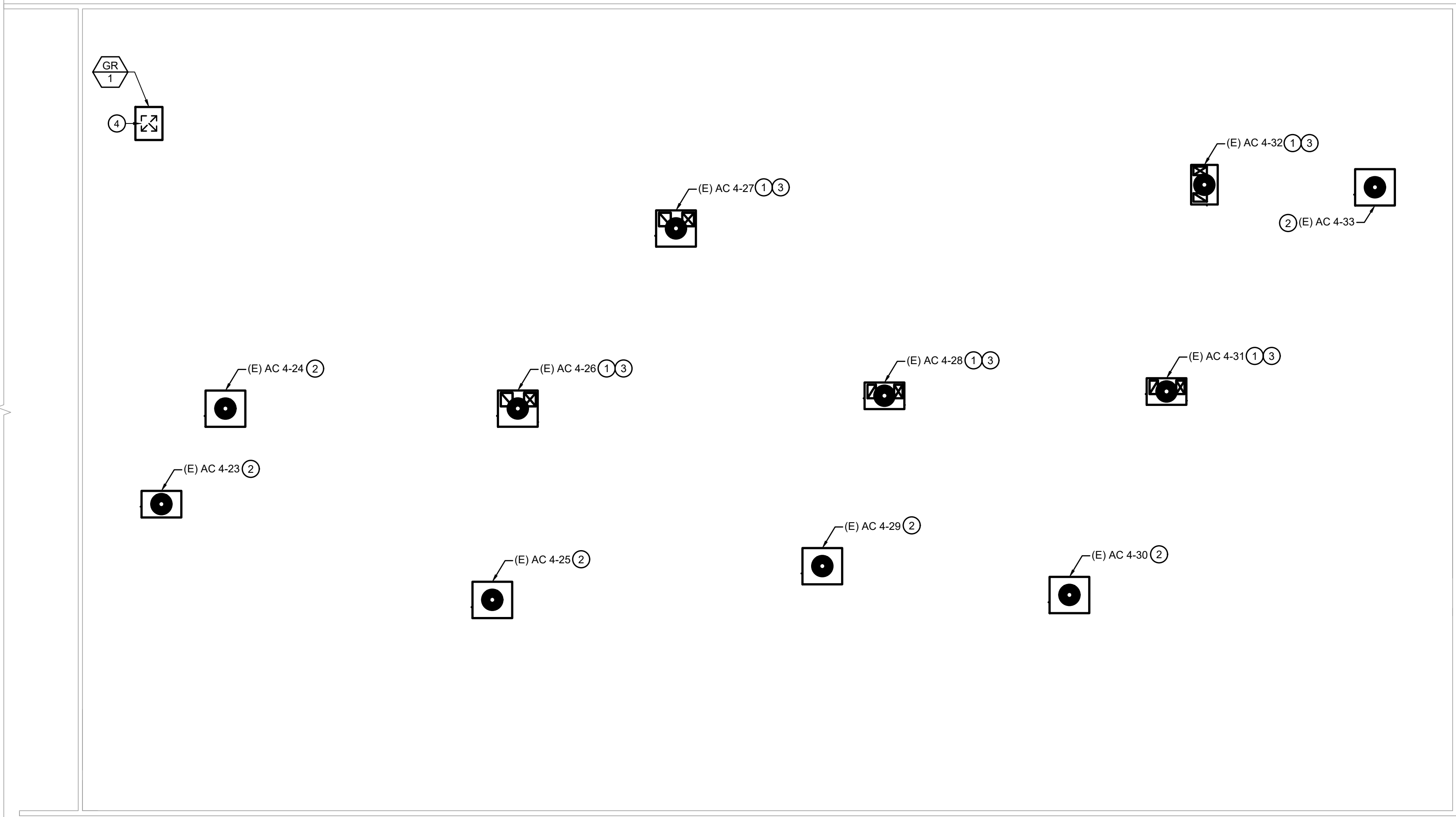
3001 RED HILL AVENUE, SUITE 117, 118, 119,
COSTA MESA, CA 92626

PROJECT # 026.0084.00



SHEET #

M-100



- CONSTRUCTION KEY NOTES:**
- ① EXISTING RTU TO REMAIN.
 - ② EXISTING UNIT NOT IN SCOPE.
 - ③ INSTALL PELICAN WIRELESS THERMOSTAT WIRING MODULE IF APPLICABLE. EXISTING WIRING TO OTHERWISE REMAIN. PLEASE CONTACT PELICAN WIRELESS(BRYCE MERCORD; P: 1-310-975-5894) PRIOR TO STARTING DEMOLITION FOR THERMOSTAT UPGRADE COORDINATION.
 - ④ 18"X18" RELIEF DUCT DOWN THRU' ROOF.

- CONSTRUCTION GENERAL NOTES:**
- CONTRACTOR SHALL COORDINATE WORK WITH OTHER TRADES AS NECESSARY PRIOR TO INSTALLATION.
 - MAINTAIN PROPER CLEARANCES FROM ALL ELECTRICAL EQUIPMENT AND SERVICE CLEARANCES FOR MECHANICAL EQUIPMENT.
 - FRESH AIR INTAKES SHALL BE 10'0" MIN. AWAY FROM ALL EXHAUST OUTLETS, PLUMBING VENTS, AND FLUES.
 - ALL INSULATION SHALL HAVE A FLAME SPREAD OF NOT MORE THAN 25 AND A SMOKE DENSITY NOT EXCEEDING 50.
 - CONTRACTOR SHALL COORDINATE EXACT EQUIPMENT PAD SIZES AND LOCATIONS WITH OTHER TRADES PRIOR TO INSTALLATION.

AGENCY APPROVAL

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oed optimum energy design
Consulting Engineers
5200 E. La Palma Ave
Anaheim, CA 92807
Telephone (714) 693-2277

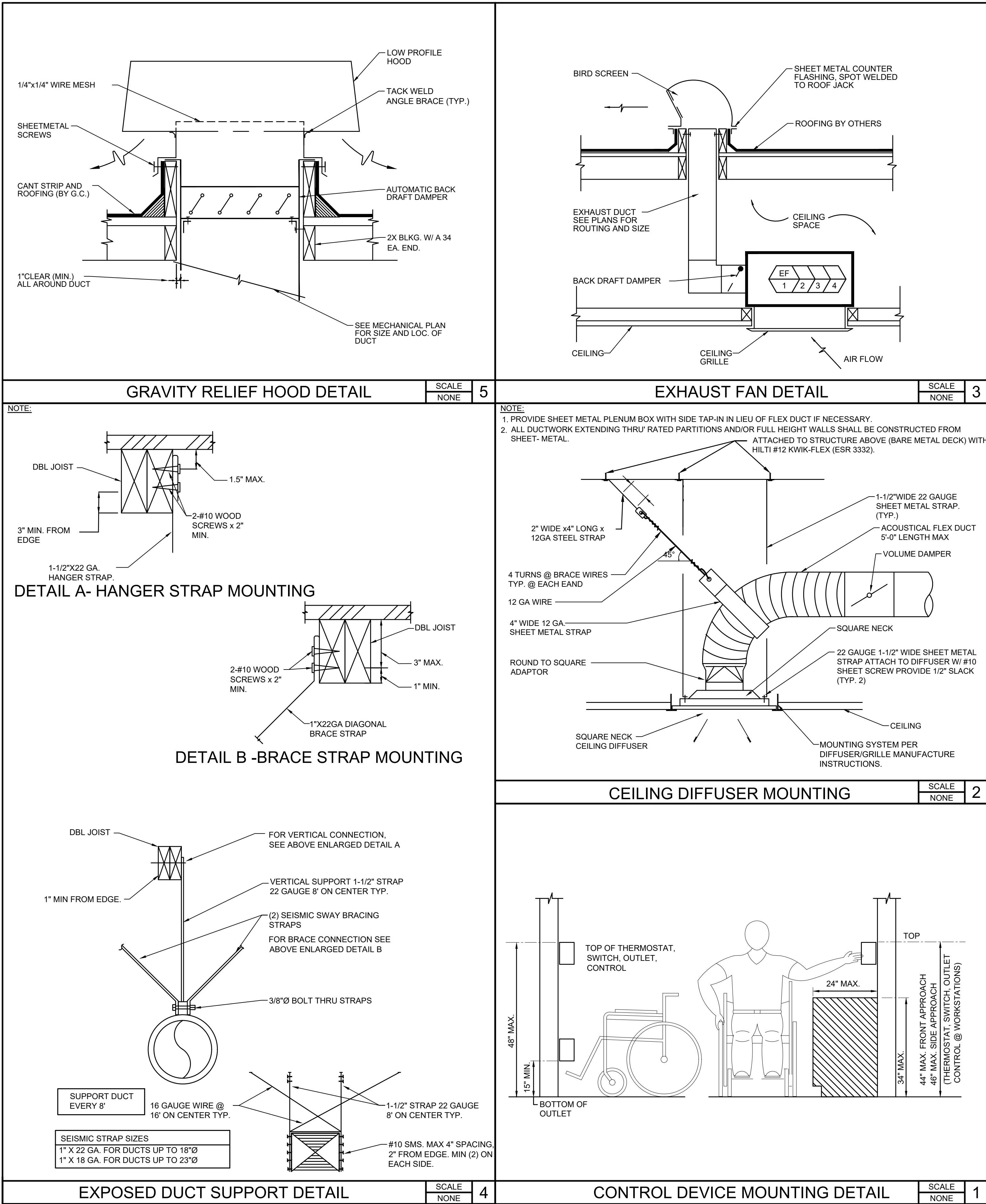
PROJECT
**ORANGE COUNTY DEPARTMENT OF
EDUCATION ESPLANE BLDG 4
TENANT IMPROVEMENT**
3001 RED HILL AVENUE, SUITE 117, 118, 119,
COSTA MESA, CA 92626

DATE **09/04/2026**
PROJECT # **026.0084.00**

DESIGN PROFESSIONAL

TITLE
**MECHANICAL REMODEL
ROOF PLAN**

SHEET #
M-200



Consulting Engineers
5200 E. La Palma Ave
Anaheim, CA 92807
Telephone (714) 693-2277

PROJECT

ORANGE COUNTY DEPARTMENT OF
EDUCATION ESPLANADE BLDG 4
TENANT IMPROVEMENT

3001 RED HILL AVENUE, SUITE 117, 118, 119,
COSTA MESA, CA 92626

DATE 09/04/2026

PROJECT # 026.0084.00

DESIGN PROFESSIONAL



TITLE
MECHANICAL DETAILS

SHEET #

M-300

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD				NRCC-PRF-E
Nonresidential Performance Compliance Method				(Page 1 of 15)
Project Name:		OCDE Esplanade 117	Date Prepared:	2026-09-15
A. General Information				
1	Project Name	OCDE Esplanade 117		
2	Run Title	Title 24 Analysis		
3	Project Location	3001 RED HILL AVE, SUITE 117		
4	City	COSTA MESA	5	Standards Version Compliance 2025
6	Zip code	92626	7	Compliance Software (version) EnergyPro 10.1
8	Climate Zone	6	9	Building Orientation (deg) 0
10	Building Type(s)	• Nonresidential	11	Weather File CA_Title24_2025_COSTA-MESA-WAYNE.epw
12	Project Scope	• Existing addition and alteration	13	Number of Dwelling Units 0
14	Total Conditioned Floor Area in Scope (ft²)	6287.24	15	Total # of hotel/motel rooms 0
16	Total Unconditioned Floor Area (ft²)	826.01	17	Fuel Type Natural gas
18	Is Natural Gas Available per Section 100.17	Yes	19	Nonresidential Conditioned Floor Area 6287.24
20	Total # of Stories (Habitable Above Grade)	1	21	Residential Conditioned Floor Area 0

CA Building Energy Efficiency Standards - 2025 Nonresidential Compliance Report Version: 2025.0.000 Report Generated: 2026-09-15 10:28:08
Schema Version: rev 20250101 Compliance ID: EnergyPro-4917-0926-0122

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD				NRCC-PRF-E
Nonresidential Performance Compliance Method				(Page 4 of 15)
C2. LSC ENERGY COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS (Annual LSC Energy Use, \$/ft²-yr)				
COMPLIES				
Energy Component	Standard Design (LSC)	Proposed Design (LSC)	Compliance Margin (LSC) ¹	
Space Heating	0.62	1.92	-1.3	
Space Cooling	7.62	7.22	0.4	
Indoor Fans	16.73	8.36	8.37	
Heat Rejection	0	0	0	
Pumps & Misc.	0	0	0	
Domestic Hot Water	2.4	2.4	0	
Indoor Lighting	7.41	7.41	0	
Flexibility	---	---	---	
EFFICIENCY COMPLIANCE TOTAL	34.78	27.31	7.47 (21.5%)	
Photovoltaics	---	---	---	
Batteries	---	---	---	
TOTAL COMPLIANCE	34.78	27.31	7.47 (21.5%)	

¹ Notes: This number in parenthesis following the Compliance Margin in column 4, represents the Percent Better than Standard.

CA Building Energy Efficiency Standards - 2025 Nonresidential Compliance Report Version: 2025.0.000 Report Generated: 2026-09-15 10:28:08
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CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD				NRCC-PRF-E
Nonresidential Performance Compliance Method				(Page 7 of 15)
C8. ENERGY USE INTENSITY (EUI)				
	Standard Design (kBtu/ft² / yr)	Proposed Design (kBtu/ft² / yr)	Margin (kBtu/ft² / yr)	Margin Percentage
GROSS EUI ¹	33.29	29.55	3.74	11.23
NET EUI ¹	33.29	29.55	3.74	11.23

¹ Notes: Gross EUI is Energy Use Total (not including PV)/Total Building Area. Net EUI is Energy Use Total (including PV)/Total Building Area.

D1. EXCEPTIONAL CONDITIONS			
• The building does not include service water heating. Verify that service water heating is not required and is not included in the design. • Project claiming exception to Section 120.7(e) Vestibules requirements.			

G1. ENVELOPE GENERAL INFORMATION (conditioned spaces only)			
01	02	03	04
Opaque Surfaces & Orientation	Total Gross Surface Area (ft²)	Total Fenestration Area (ft²)	Window to Wall Ratio (%)
North-Facing ¹	0	0	0
East-Facing ²	2385.56	275.47	11.55
South-Facing ³	0	0	0
West-Facing ⁴	389.53	0	0
Total	2775.09	275.47	9.93
Roof	6286.76	0	0

Notes
¹North-Facing is oriented to within 45 degrees of true north, including 4500°00" east of north (NE), but excluding 4500°00" west of north (NW).
²East-Facing is oriented to within 45 degrees of true east, including 4500°00" south of east (SE), but excluding 4500°00" north of east (NE).
³South-Facing is oriented to within 45 degrees of true south, including 4500°00" west of south (SW), but excluding 4500°00" east of south (SE).
⁴West-Facing is oriented to within 45 degrees of true west, including 4500°00" north of west (NW), but excluding 4500°00" south of west (SW).

CA Building Energy Efficiency Standards - 2025 Nonresidential Compliance Report Version: 2025.0.000 Report Generated: 2026-09-15 10:28:08
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CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD				NRCC-PRF-E
Nonresidential Performance Compliance Method				(Page 2 of 15)
B. PROJECT SUMMARY				
Table B shows which building components are included in the performance calculation. If indicated as not included, the project must show compliance prescriptively if within the permit application.				
Building Components Complying via Performance				Building Components Complying Prescriptively
Envelope (See Table G)	Nonres MultiFam	Performance Not Included	Solar Thermal Water Heating (See Table I3)	☐ Performance ☒ Not Included
Mechanical (See Table H)	Nonres MultiFam	Performance Not Included	Covered Process: Commercial Kitchens (see Table J)	☐ Performance ☒ Not Included
Domestic Hot Water (See Table I)	Nonres MultiFam	Not Included Not Included	Covered Process: Laboratory Exhaust (see Table J)	☐ Performance ☒ Not Included
Lighting (Indoor Conditioned, see Table K)	Nonres MultiFam	Performance Not Included	Photovoltaics (see Table F)	☐ Performance ☒ Not Included
			Battery (see Table F)	☐ Performance ☒ Not Included

CA Building Energy Efficiency Standards - 2025 Nonresidential Compliance Report Version: 2025.0.000 Report Generated: 2026-09-15 10:28:08
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CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD				NRCC-PRF-E
Nonresidential Performance Compliance Method				(Page 5 of 15)
C3. LSC ENERGY RESULTS FOR NON-REGULATED COMPONENTS ¹				
Non-Regulated Energy Component	Standard Design (LSC)	Proposed Design (LSC)	Compliance Margin (LSC) ²	
Receptacle	18.22	18.22	---	
Process	---	---	---	
Other Ltg	0.57	0.57	---	
Process Motors	---	---	---	
TOTAL (TOTAL COMPLIANCE + NON-REGULATED COMPONENTS)	53.57	46.1	7.47 (13.9%)	

¹ Notes: This table is not used for Energy Code Compliance.
² Notes: This number in parenthesis following the Compliance Margin in column 4, represents the Percent Better than Standard.

C6. 'ABOVE CODE' QUALIFICATIONS			
☐ This project is pursuing CalGreen Tier 1 ☐ This project is pursuing CalGreen Tier 2			

CA Building Energy Efficiency Standards - 2025 Nonresidential Compliance Report Version: 2025.0.000 Report Generated: 2026-09-15 10:28:08
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CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD										NRCC-PRF-E
Nonresidential Performance Compliance Method										(Page 8 of 15)
G4. NONRESIDENTIAL AIR BARRIER										
01					02					
Building Story Name					Air Barrier					
Com-Floor 1					No air barrier					
G5. OPAQUE SURFACE ASSEMBLY SUMMARY										
01	02	03	04	05	06		07	08	09	10
Surface Name	Construction Type	Area (ft²)	Framing Type	Cavity R-Value	Continuous R-Value		Units	Value	Description of Assembly Layers	Status ¹
					Interior	Exterior				
Slab On Grade6	Underground Floor	7,112.77	N/A	0	N/A	N/A	F-factor	0.73	Slab Type =Unheated slab on grade Insulation Orientation =None Insulation R-Value=none	E
R-38 Roof Attic8	Roof	7,112.77	Wood	38	N/A	N/A	U-factor	0.0329	AsphaltShingles0_25in Vapor permeable felt - 1/8 in. Plywood - 1/2 in. Air - Cavity - Wall Roof Ceiling - 4 in. or more Composite-1 Gypsum Board - 1/2 in.	E
R-21 Wall10	Interior Wall	2,192	Wood	21	N/A	N/A	U-factor	0.0659	Stucco - 7/8 in. Vapor permeable felt - 1/8 in. Composite-2 Gypsum Board - 1/2 in.	E
R-21 Wall101	Exterior Wall	4,273.23	Wood	21	N/A	N/A	U-factor	0.0691	Stucco - 7/8 in. Vapor permeable felt - 1/8 in. Composite-2 Gypsum Board - 1/2 in.	E

¹ Status: N - New, A - Altered, E - Existing

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CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD				NRCC-PRF-E
Nonresidential Performance Compliance Method				(Page 3 of 15)
C1. COMPLIANCE SUMMARY				
	COMPLIES ¹			
	Long-term System Cost (LSC) ²		Source Energy Use	
	Efficiency ³ (\$/ft²-yr)	Total ³ (\$/ft²-yr)	Total ³ (kBtu/ft²-yr)	
Standard Design	34.78	n/a	n/a	
Proposed Design	27.31	n/a	n/a	
Compliance Margins	7.47	n/a	n/a	
	Pass	n/a	n/a	

¹ Long-term System Cost (LSC) is a 30-year present value cost to California's energy system. LSC is not a predicted utility bill.
² Efficiency measures include energy efficiency improvements such as better building envelope and more efficient mechanical equipment.
³ Compliance Totals include efficiency, photovoltaics and batteries.
⁴ New Construction: Building complies when Proposed Design is equal to or less than Standard Design in all compliance categories and unmet load hour limits are not exceeded. Complete Addition Scope and Existing, Addition and Alteration Scope: Building complies when efficiency compliance margin is greater than or equal to zero and unmet load hour limits are not exceeded.

CA Building Energy Efficiency Standards - 2025 Nonresidential Compliance Report Version: 2025.0.000 Report Generated: 2026-09-15 10:28:08
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CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD							NRCC-PRF-E
Nonresidential Performance Compliance Method							(Page 6 of 15)
C7. ENERGY USE SUMMARY							
Energy Component	Standard Design Site (MWh)	Proposed Design Site (MWh)	Margin (MWh)	Standard Design Site (MBtu)	Proposed Design Site (MBtu)	Margin (MBtu)	
Space Heating	0.5	1.1	-0.6	---	7.9	---	
Space Cooling	11	10.3	0.7	---	---	---	
Indoor Fans	20.1	10.1	10	---	---	---	
Heat Rejection	---	---	---	---	---	---	
Pumps & Misc.	---	---	---	---	---	---	
Domestic Hot Water	3.1	3.1	0	---	---	---	
Indoor Lighting	9.7	9.7	0	---	---	---	
Flexibility	---	---	---	---	---	---	
EFFICIENCY TOTAL	44.4	34.3	10.1	0	7.9	-7.9	
Photovoltaics	---	---	---	---	---	---	
Batteries	---	---	---	---	---	---	
ENERGY USE SUBTOTAL	44.4	34.3	10.1	0	7.9	-7.9	
Receptacle	24.3	24.3	0	---	---	---	
Process	---	---	---	---	---	---	
Other Ltg	0.7	0.7	0	---	---	---	
Process Motors	---	---	---	---	---	---	
ENERGY USE TOTAL	69.4	59.3	10.1	0	7.9	-7.9	

CA Building Energy Efficiency Standards - 2025 Nonresidential Compliance Report Version: 2025.0.000 Report Generated: 2026-09-15 10:28:08
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CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD				NRCC-PRF-E
Nonresidential Performance Compliance Method				(Page 9 of 15)
G6A. OPAQUE DOOR SUMMARY (NONRESIDENTIAL)				
01	02	03	04	
Assembly Name	Area (ft²)	Overall U-factor	Status ¹	
Metal Door18	562.77	0.7	E	

¹ Status: N - New, A - Altered, E - Existing

G7A. FENESTRATION ASSEMBLY SUMMARY (NONRESIDENTIAL)								
01	02	03	04	05	06	07	08	09
Fenestration Assembly Name	Fenestration Type/ Product Type / Frame Type	Certification Method ¹	Assembly Method	Area (ft²)	Overall U-factor	Overall SHGC	Overall VT	Status ²
Single Metal Tinted	Vertical fenestration Fixed window Metal	Default 110.6	Site built	192.43	1.19	0.68	0.77	E
GLAZED DOOR	Vertical fenestration Fixed window Metal	Default 110.6	Site built	83.04	1.19	0.68	0.77	E

¹ Notes: Newly installed fenestration shall have a certified NFRC Label Certificate or use the CEC default tables found in Table 110.6-A and Table 110.6-B. Center of Glass (COG) values are for the glass only, determined by the manufacturer, and are shown for ease of verification. Site-built fenestration values are calculated per Nonresidential Appendix NA6 and are used in the analysis.
² Status: N - New, A - Altered, E - Existing

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Consulting Engineers
5200 E. La Palma Ave
Anaheim, CA 92807
Telephone (714) 693-2277

PROJECT

ORANGE COUNTY DEPARTMENT OF EDUCATION ESPLANADE BLDG 4 TENANT IMPROVEMENT

3001 RED HILL AVENUE, SUITE 117, 118, 119,
COSTA MESA, CA 92626

DATE 09/04/2026

PROJECT # 026.0084.00

DESIGN PROFESSIONAL



TITLE
MECHANICAL TITLE 24
REPORTS

SHEET #

M-500

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD												NRCC-PRF-E
Nonresidential Performance Compliance Method												(Page 10 of 15)
H1. DRY SYSTEM EQUIPMENT (FURNACES, AIR HANDLING UNITS, HEAT PUMPS, VRF, ECONOMIZERS ETC.)												
01	02	03	04	05	06	07	08	09	10	11	12	
Equipment Name	Equipment Type	Qty	Heating			Cooling			Economizer Type (if present)	Status ¹		
			Total Heating Output (kBtu/h)	Supp Heat Output (kBtu/h)	Efficiency Unit	Efficiency	Total Cooling Output (kBtu/h)	Efficiency Unit	Efficiency			
AC 4-27	Single Zone Heat Pump (SZHP) Air System	1	48.92	0	HSPF	8.2	45.94	EER SEER	12.5 15	No Economizer	N	
AC 4-26	Single Zone Air Conditioner (SZAC) Air System	1	73	0	AFUE	81	45.88	EER SEER	12.3 16	No Economizer	N	
AC 4-28	Single Zone Air Conditioner (SZAC) Air System	1	37	0	AFUE	81	27.46	EER SEER	12 15	No Economizer	N	
AC 4-32	Single Zone Heat Pump (SZHP) Air System	1	30.8	0	HSPF	8.2	27.57	EER SEER	12 15	No Economizer	N	
AC 4-31	Single Zone Air Conditioner (SZAC) Air System	1	37	0	AFUE	81	27.46	EER SEER	12 15	No Economizer	N	
¹ Status: N - New, A - Altered, E - Existing												

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CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD						NRCC-PRF-E
Nonresidential Performance Compliance Method						(Page 13 of 15)
K1. INDOOR CONDITIONED LIGHTING GENERAL INFO						
01	02	03	04	05	06	
Occupancy Type ¹	Conditioned Floor Area ² (ft ²)	Installed Lighting Power (Watts)	Lighting Control Credits (Watts)	Additional (Custom) Allowance		
				Area Category Footnotes (Watts)	Area Category Footnotes (Watts)	
Convention, Conference, Multipurpose and Meeting Center	2136.2	1602.15	0	0	0	
Office (250 square feet)	4151.04	2698.18	0	0	0	
Building Totals:	6287.24	4300.33	0	0	0	
¹ See Table 140.6-C ² See NRCC-LTI-E for unconditioned spaces ³ Lighting information for existing spaces modeled is not included in this table						
K4. INDOOR CONDITIONED LIGHTING MANDATORY LIGHTING CONTROL						
See NRCC-LTI-E for mandatory controls						
N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION						
Selections made by Documentation Author indicate which Certificates of Installation must be submitted for the features to be recognized for compliance. These documents must be retained and provided to the building inspector during construction and can be found online						
Building Component	Form/Title					
Mechanical	NRCI-MCH-E - For all buildings with Mechanical Systems					

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CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD													NRCC-PRF-E
Nonresidential Performance Compliance Method													(Page 11 of 15)
H3. NONRESIDENTIAL / COMMON USE AREA FAN SYSTEMS SUMMARY													
01	02	03	04	05	06	07	08	09	10	11	12	13	
Name or Item Tag	Qty	Design OA CFM	Supply Fan			Return / Relief Fan			CFM	Power	Power Units	Control	Status ¹
			CFM	Power	Power Units	Control	Fan Type	CFM					
AC 4-27	1	815.32	1,700	0.63	BHP	Constant Vol	N/A	N/A	N/A	N/A	N/A	N/A	N
AC 4-26	1	303.83	1,700	0.63	BHP	Constant Vol	N/A	N/A	N/A	N/A	N/A	N/A	N
AC 4-28	1	157.85	910	0.25	BHP	Constant Vol	N/A	N/A	N/A	N/A	N/A	N/A	N
AC 4-32	1	160.97	940	0.33	BHP	Constant Vol	N/A	N/A	N/A	N/A	N/A	N/A	N
AC 4-31	1	242.09	910	0.25	BHP	Constant Vol	N/A	N/A	N/A	N/A	N/A	N/A	N
01	14		15		16		17		18		19		
Name or Item Tag	Supply Fan			Return / Relief Fan			CFM	Power	Power Units	Control	Status ¹		
	Modeling Method	Fan Efficiency	Motor Efficiency	Modeling Method	Fan Efficiency	Motor Efficiency							
AC 4-27	Brake Horse Power	0.65	0.86	N/A	N/A	N/A							
AC 4-26	Brake Horse Power	0.65	0.86	N/A	N/A	N/A							
AC 4-28	Brake Horse Power	0.65	0.86	N/A	N/A	N/A							
AC 4-32	Brake Horse Power	0.65	0.86	N/A	N/A	N/A							
AC 4-31	Brake Horse Power	0.65	0.86	N/A	N/A	N/A							
¹ Status: N - New, A - Altered, E - Existing													

H9. NONRESIDENTIAL / COMMON USE AREA & HOTEL/MOTEL VENTILATION						
01	02	03	04	05	06	07
Zone Name	Mechanical Ventilation		# of People	Supply OA CFM	Exhaust CFM	Conditioned Area (sf)
	Ventilation Function					
1-AC 4-27	General - Conference/meeting		54.35	815.32	0	1647.12
3-AC 4-26	Office - Office space		10.13	303.83	0	2025.56
4-AC 4-28	Office - Office space		5.26	157.85	0	1052.35
6-AC 4-32	Office - Office space		5.37	160.97	0	1073.13

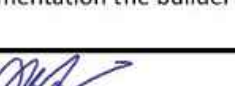
CA Building Energy Efficiency Standards - 2025 Nonresidential Compliance Report Version: 2025.0.000 Report Generated: 2026-09-15 10:28:08
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CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD		NRCC-PRF-E
Nonresidential Performance Compliance Method		(Page 14 of 15)
O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE		
Selections made by Documentation Author indicate which Certificates of Acceptance must be submitted for the features to be recognized for compliance. These documents must be provided to the building inspector during construction. Lighting controls and mechanical NRCCs must be completed through an Acceptance Test Technician Certification Provider (ATTCP).		
Building Component ¹	Form/Title & System Name(s)	
Mechanical	NRCA-MCH-02-A - Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH-02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap AC 4-27, AC 4-26, AC 4-28, AC 4-32 and AC 4-31.	
Mechanical	NRCA-MCH-03-A - Constant Volume Single Zone HVAC AC 4-27, AC 4-26, AC 4-28, AC 4-32 and AC 4-31.	
<i>¹Refer to other prescriptive NRCC forms applicable to the project for additional NRCA tests required that are not included in the NRCC-PRF-E form</i>		
P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION		
Selections made by Documentation Author indicate which Certificates of Verification must be submitted for the features to be recognized for compliance. These documents must be retained and provided to the building inspector during construction and can be found online		
There are no certificates applicable to this project		

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CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD										NRCC-PRF-E	
Nonresidential Performance Compliance Method										(Page 12 of 15)	
H9. NONRESIDENTIAL / COMMON USE AREA & HOTEL/MOTEL VENTILATION											
01	02	03	04	05	06		07				
Zone Name	Mechanical Ventilation				Conditioned Area (sf)		DCV or Occupant Sensor Controls, or Both				
	Ventilation Function	# of People	Supply OA CFM	Exhaust CFM							
7-AC 4-31	General - Conference/meeting	16.14	242.09	0	489.08		N/A				
H11. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY											
01	02	03	04	05	06	07	08	09	10	11	12
System ID	System Type	Qty	Rated Capacity (kBtu/h)		Airflow (cfm)			Fan			VSD
			Heating	Cooling	Design	Min.	Min. Ratio	Power	Power Units	Cycles	
1-AC 4-27-Trm	Uncontrolled	1	N/A	N/A	1,700	N/A	0	N/A	N/A	N/A	☐
3-AC 4-26-Trm	Uncontrolled	1	N/A	N/A	1,700	N/A	0	N/A	N/A	N/A	☐
4-AC 4-28-Trm	Uncontrolled	1	N/A	N/A	910	N/A	0	N/A	N/A	N/A	☐
6-AC 4-32-Trm	Uncontrolled	1	N/A	N/A	940	N/A	0	N/A	N/A	N/A	☐
7-AC 4-31-Trm	Uncontrolled	1	N/A	N/A	910	N/A	0	N/A	N/A	N/A	☐

CA Building Energy Efficiency Standards - 2025 Nonresidential Compliance Report Version: 2025.0.000 Report Generated: 2026-09-15 10:28:08
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CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD				NRCC-PRF-E
Nonresidential Performance Compliance Method				(Page 15 of 15)
Documentation Author's Declaration Statement				
1. I certify that this Certificate of Compliance documentation is accurate and complete.				
Documentation Author Name: Cole Condon		Documentation Author Signature: 		
Company: Optimum Energy Design		Signature Date: 2026-09-15		
Address: 5200 E La Palma Avenue		CEA/AEA/ECC Certification Identification (if applicable):		
City/State/Zip: Anaheim, CA 92807		Phone: 714-693-2277		
Responsible Person's Declaration statement				
I certify the following under penalty of perjury, under the laws of the State of California:				
1. The information provided on this Certificate of Compliance is true and correct.				
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).				
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.				
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.				
5. I understand that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building and shall be made available to the enforcement agency for all applicable inspections. I will take the necessary steps to fulfill this requirement.				
6. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy. I will take the necessary steps to fulfill this requirement.				
Responsible Designer Name: Abby Banerjee		Responsible Designer Signature: 		
Company: Optimum Energy Design		Date Signed: 2026-09-15		
Address: 5200 E La Palma Avenue		License #:		
City/State/Zip: Anaheim, CA 92807		Title:		
Phone: 714-693-2277		Scope:		

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These drawings have been prepared as one coordinated set of drawings and are complementary. What is required by one drawing is required by all of the drawings, even if a detail or component part is not identified on every sheet. Any user's reliance on a single or select few sheet(s) of the drawings without consideration for the information included in the entire set of drawings will be at the user's sole risk and shall not form the basis for a request for additional compensation or time.



Consulting Engineers
5200 E. La Palma Ave
Anaheim, CA 92807
Telephone (714) 693-2277

PROJECT

ORANGE COUNTY DEPARTMENT OF
EDUCATION ESPLANADE BLDG 4
TENANT IMPROVEMENT

3001 RED HILL AVENUE, SUITE 117, 118, 119,
COSTA MESA, CA 92626

DATE 09/04/2026

PROJECT # 026.0084.00

DESIGN PROFESSIONAL



TITLE
MECHANICAL TITLE 24
REPORTS

SHEET #

M-501

MEP COMPONENT ANCHORAGE NOTE

All mechanical, plumbing, and electrical components shall be anchored and installed per the details on the DSA-approved construction documents. The following components shall be anchored or braced to meet the force and displacement requirements prescribed in the 2025 CBC Sections 1617A.1.18 through 1617A.1.26 and ASCE 7-22 Chapters 13, 26, and 30.

1. All permanent equipment and components.

2. Temporary, movable or mobile equipment that is permanently attached (e.g. hard wired) to the building utility services such as electricity, gas or water. "Permanently attached" shall include all electrical connections except plugs for 110/220 volt receptacles having a flexible cable.

3. Temporary, movable or mobile equipment which is heavier than 400 pounds or has a center of mass located 4 feet or more above the adjacent floor or roof level that directly support the component is required to be restrained in a manner approved by DSA.

The following mechanical and electrical components shall be positively attached to the structure but need not demonstrate design compliance with the references noted above. These components shall have flexible connections provided between the component and associated ductwork, piping, and conduit. Flexible connections must allow movement in both transverse and longitudinal directions:

A. Components weighing less than 400 pounds and having a center of mass located 4 feet or less above the adjacent floor or roof level that directly support the component.

B. Components weighing less than 20 pounds, or in the case of distributed systems, less than 5 pounds per foot, which are suspended from a roof or floor or hung from a wall.

The anchorage of all mechanical, electrical and plumbing components shall be subject to the approval of the design professional in general responsible charge or structural engineer delegated responsibility and acceptance by DSA. The project inspector will verify that all components and equipment have been anchored in accordance with the above requirements.

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

APPLICABLE CODE: 2025 CBC

MEP DISTRIBUTION SYSTEM BRACING NOTE FOR PIPING, DUCTWORK, AND ELECTRICAL CONDUIT

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7 SECTION 13.3 AS DEFINED IN ASCE 7 SECTIONS 13.6.5, 13.6.6, 13.6.7, AND 13.6.8; AND 2025 CBC SECTIONS 1617A.1.24, 1617A.1.25, AND 1617A.1.26.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEMS ARE AS NOTED BELOW. THE MEP DESIGN PROFESSIONAL ENGINEER RESPONSIBLE FOR CONTENT ON THESE SHEETS HAS VERIFIED THAT THE DESIGN METHODS IDENTIFIED BELOW ARE IN ACCORDANCE WITH DSA IR 16-13.

MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):

MP ☐ MD ☐ PP ☒ E ☐ OPTION 1: PROJECT-SPECIFIC DESIGN.

MP ☐ MD ☐ PP ☐ E ☐ OPTION 2: DESIGN BASED ON OSHPD OPM, WITHIN PROJECT SUBMITTAL.

MP ☐ MD ☐ PP ☐ E ☐ OPTION 3: DESIGN BASED ON OSHPD OPM, DEFERRED SUBMITTAL.

DESIGN PROFESSIONAL USER NOTE (DO NOT COPY THIS USER NOTE TO THE PLANS):
MEP DESIGN PROFESSIONALS: IDENTIFY WHICH OPTIONS APPLY FOR YOUR PROJECT. IF OPTION 1 IS CHOSEN, PROVIDE PROJECT-SPECIFIC DETAILS COORDINATED WITH A STRUCTURAL ENGINEER AND PRESENTED ON THE DRAWINGS IN ACCORDANCE WITH IR 16-13 SECTION 2.1. FOR OPTION 2, VERIFY THAT AN OPM PACKAGE HAS BEEN PREPARED IN ACCORDANCE WITH IR 16-13 SECTION 2.2 AND IS INCLUDED WITHIN THE ORIGINAL PROJECT SUBMITTAL. FOR OPTION 3, VERIFY THAT ALL OF THE REQUIREMENTS FOR THE DEFERRED SUBMITTAL HAVE BEEN SATISFIED PRIOR TO THE PLAN SUBMITTAL IN ACCORDANCE WITH IR 16-13 SECTION 2.2.6.
FOR ALL OPTIONS, VERIFY THAT THE SEOR HAS VERIFIED THE ADEQUACY OF THE STRUCTURE TO SUPPORT ALL HANGER AND BRACE LOADS.

APPLICABLE CODES

BUILDING OCCUPANCY CLASSIFICATION: -
THE CONSTRUCTION OF THIS PROJECT SHALL CONFORM TO THE REQUIREMENTS OF:

CODES

2025 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 CCR
2025 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR
2025 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 CCR
2025 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 CCR
2025 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 CCR
2025 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 CCR
2025 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 CCR
2025 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR
2025 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN), PART 11, TITLE 24 CCR
2025 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 CCR
TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

GENERAL NOTES

- CONTRACTOR SHALL VERIFY EXACT LOCATION OF EXISTING LINES, LATERALS AND WYES BEFORE STARTING. SHOULD IT BE NECESSARY TO REROUTE LINES DUE TO CONDITIONS FOUND ON THE SITE OR IF INDICATED P.O.C. CANNOT BE MADE TO THE LINES AS FOUND, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT BEFORE INSTALLING ANY WORK WHICH MAY BE AFFECTED.
- OFFSET PIPES AS REQUIRED TO CLEAR MECHANICAL DUCTWORK.
- FURNISH AND INSTALL A SHUT-OFF VALVE, PLUG COCK OR STOP AT EACH PIECE OF EQUIPMENT FURNISHED BY OTHERS REQUIRING DRAIN, WASTE, WATER, ETC.
- SEAL AND FLASH ALL PENETRATIONS THROUGH ROOF WATERTIGHT.
- THE DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC TO THE EXTENT THAT ALL OFFSETS, BENDS, SPECIAL FITTINGS AND LOCATIONS ARE NOT EXACTLY LOCATED. THE CONTRACTOR SHALL LOCATE ALL OFFSETS, BENDS, AND SPECIAL FITTINGS TO SUIT JOB SITE CONDITIONS. THEREFORE THE CONTRACTOR SHALL MAKE HIMSELF FULLY AWARE OF ALL EXISTING CONDITIONS AND LOCATE ALL REQUIRED SPECIAL FITTINGS TO SUIT EXISTING CONDITIONS.
- THIS CONTRACTOR SHALL COMPLY WITH ALL CONTRACT DOCUMENTS IN LAYING OUT HIS WORK AND EQUIPMENT. HE SHALL COORDINATE THE WORK OF THIS SECTION WITH THE WORK OF OTHER TRADES AND ALL JOB CONDITIONS.
- THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, FEES, CHARGES, AND INCIDENTAL COSTS NECESSARY FOR EXECUTION AND COMPLETION OF WORK, INCLUDING ALL CHARGES BY STATE, COUNTY AND LOCAL GOVERNMENT AGENCIES.
- THE CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL TRADES AT THE SITE. ANY COSTS TO INSTALL WORK TO ACCOMPLISH SAID COORDINATION WHICH DIFFERS FROM THE WORK AS SHOWN ON THE PLANS SHALL BE INCURRED BY THE CONTRACTOR. ANY DISCREPANCIES, AMBIGUITIES OR CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT DURING BID TIME FOR CLARIFICATION. ANY SUCH CONFLICTS NOT CLARIFIED PRIOR TO BID SHALL BE SUBJECT TO THE INTERPRETATION OF THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.
- AFTER ALL REQUIREMENTS OF THE SPECIFICATIONS AND/OR THE DRAWINGS HAVE BEEN FULLY COMPLETED, REPRESENTATIVES OF THE OWNER WILL INSPECT THE WORK. THE CONTRACTOR SHALL PROVIDE COMPETENT PERSONNEL TO DEMONSTRATE THE OPERATION OF ANY ITEM OR SYSTEM, TO THE FULL SATISFACTION OF EACH REPRESENTATIVE. FINAL ACCEPTANCE OF THE WORK WILL BE MADE BY THE OWNER AFTER RECEIPT OF APPROVAL AND RECOMMENDATION OF ACCEPTANCE FROM EACH REPRESENTATIVE.
- WHEREVER A DISCREPANCY IN QUANTITY OR SIZE OF MECHANICAL EQUIPMENT MATERIAL ARISES ON THE DRAWINGS AND/OR SPECIFICATIONS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL MATERIAL, AND SERVICES REQUIRED BY THE STRICTEST CONDITIONS NOTED ON DRAWINGS AND/OR IN THE SPECIFICATION TO ENSURE COMPLETE AND OPERABLE SYSTEMS.
- ALL PIPING INSULATION AND SEALING MATERIALS SHALL HAVE FLAME SPREAD RATING NOT EXCEEDING 25 AND SMOKE DEVELOPED RATING NOT EXCEEDING 50.
- BEFORE ORDERING ANY PIECE OF EQUIPMENT, THE CONTRACTOR SHALL PROVIDE EQUIPMENT SUBMITTALS, SHOP DRAWINGS WITH EQUIPMENT DIMENSIONS, AND SITE CLEARANCE AVAILABLE. WHERE REQUIRED BY SPACE LIMITATIONS HAVE UNITS SHIPPED IN SECTIONS.
- SANITARY VENTS TO BE 10'-0" FROM ANY AND ALL FRESH AIR INTAKES, FAN DISCHARGE OR HEATING EQUIPMENT.
- ALL PIPE BRANCH CONNECTIONS SHALL OFF-SET. NO "BULL HEAD" CONNECTIONS WILL BE ALLOWED.
- ALL EXISTING PLUMBING LINES SHOWN ARE TAKEN FROM EXISTING DRAWINGS WHICH INDICATE APPROXIMATE LOCATION ONLY. THE CONTRACTOR IS TO INCLUDE IN HIS BID TO PERFORM FIELD INVESTIGATION TO PIN POINT THE EXACT LOCATION AS REQUIRED FOR DEMOLITION OR MAKING NEW CONNECTION.
- INTERRUPTION OF EXISTING SERVICES: THE CONTRACTOR'S ATTENTION IS CALLED TO THE PRESENCE OF EXISTING, CONDUIT, PIPING, ETC. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE PROPER AND APPROVED REPAIR OF ANY AND ALL DAMAGE BY HIM OR HIS CAUSED WORK TO EXISTING BUILDINGS, CONDUIT, PIPING, PLANTS, ETC. NEW WORK AND INSTALLATIONS SHALL BE MADE WITH MINIMAL INTERRUPTIONS OF SERVICES TO EXISTING BUILDINGS ANY INTERRUPTIONS REQUIRED SHALL BE SCHEDULED TO MINIMIZE INCONVENIENCE TO THE OWNER, AND AT TIMES AS APPROVED IN ADVANCE BY THE ARCHITECT. NEW WORK AND INSTALLATIONS SHALL NOT IMPAIR THE PROPER FUNCTIONING OF THE EXISTING FACILITY. THE COMPLETED PROJECT SHALL BE A PROPERLY FUNCTIONING ENTITY THROUGHOUT. FURNISH ALL LABOR AND MATERIALS REQUIRED TO RELOCATE, REMOVE, REINSTALL, RECONNECT, REPLACE, ETC., ANY EXISTING PIPING TO ACCOMMODATE THE WORK. MATERIALS SHALL BE AS SPECIFIED UNLESS OTHERWISE APPROVED I IN WRITING BY THE ARCHITECT. CONTRACTOR SHALL INCLUDE IN HIS BID ANY EXTRA WORK REQUIRED TO MINIMIZE SHUTDOWN TIME.
- WHERE EQUIPMENT IS NOTED AND/OR SHOWN TO BE REMOVED AND/ OR RELOCATED, THIS REMOVAL AND/OR RELOCATION SHALL INCLUDE ALL PIPING, SUPPORT, TRIM, ETC. CONSIDERED TO BE A FUNCTIONING PART OF THE ITEM.
- ALL EXISTING PIPING AND EQUIPMENT THAT IS REMOVED SHALL BE DISPOSED OF AS DIRECTED BY THE OWNER'S REPRESENTATIVE.
- THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR THE JOB SITE CONDITIONS, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY, AND SHALL NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY REAL OR ALLEGED, IN CONNECTION WITH PERFORMANCE OF WORK ON THIS PROJECT.
- CONTRACTOR SHALL PATCH AND REPAIR ALL EXISTING WALLS, FLOORS AND CEILING OPENED DURING CONSTRUCTION TO MATCH EXISTING.
- ALL UTILITIES BEING REMOVED FOR THE PROJECT SHALL BE REMOVED BACK TO ITS SOURCE.
- UNLESS SPECIFICALLY SHOWN ON THESE PLANS NO STRUCTURAL MEMBER SHALL BE CUT, DRILLED NOR NOTCHED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER AND THE DISTRICT STRUCTURAL ENGINEER FROM THE DIVISION OF THE STATE ARCHITECT.
- ALL PIPING AND RELATED VALVES AND FITTINGS TO BE DEMOLISHED SHALL BE DISPOSED AND REMOVED FROM THE PROJECT SITE.
- ALL PIPING SHOWN TO BE DEMOLISHED AND/OR REMOVED SHALL BE CAPPED OFF AT THE POINT OF DEMOLITION AND CLEAR FROM INTERFERENCE FROM NEW WORK BEING INSTALLED.
- ANY DISCREPANCIES ARISE BETWEEN THE PLUMBING DRAWINGS AND OTHER DISCIPLINES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO BID AND CONSTRUCTION.

LEGEND

SYMBOL	ABBREVIATION	DESCRIPTION
---	CW	COLD WATER
---	S / W	SEWER / WASTE
----	V	VENT
--- TP ---	TP	TRAP PRIMER
---		DIRECTION OF FLOW
---	SOV	SHUT-OFF VALVE
---	BV	BALANCING VALVE
---	FCO	FLOOR CLEANOUT
---	WCO	CLEANOUT
---		RISER UP
---		RISER DOWN
	ABV	ABOVE
	BEL	BELOW
	CLG	CEILING
	COTG	CLEANOUT TO GRADE
	CONT	CONTINUATION
	DN	DOWN
	(E)	EXISTING
	FLR	FLOOR
●	POC	POINT OF CONNECTION
⊕		DEMOLITION KEYNOTE
⊖		REMODEL KEYNOTE
⊙		POINT OF DISCONNECT
	VTR	VENT THRU ROOF
	WHA	WATER HAMMER ARRESTOR

PIPE MATERIAL SCHEDULE

SERVICE		MATERIAL	SEAMLESS COPPER TUBING PIPE, 1/2" MIN. WALL THICKNESS NOT LEAD SOLDER	COPPER PIPE M-885 SCHEDULE 40 SOLDER OR BAG-STEEL SCH 40	SERVICE WEIGHT CAPABLE SCH 40 PIPE WITH ANGLE SOL. 1"	PIPE - HIGH DENSITY POLYETHYLENE 800 SDR	REMARKS
WATER (CW)	ABOVE		●				5 PSI/100 FT. @ 8FT/S MAX VELOCITY
	BELOW					●	
WASTE & VENT (w/v)	ABOVE			●			GRAVITY @ 2% SLOPE. RESTROOM TO SUMP PIT
	BELOW			●			

A) MATERIALS FOR DRAINAGE PIPING SHALL BE IN ACCORDANCE WITH ONE OF THE REFERENCED STANDARDS IN TABLE 701.2. MATERIALS FOR BUILDING WATER PIPING AND BUILDING SUPPLY PIPING SHALL COMPLY WITH THE APPLICABLE STANDARD REFERENCED IN TABLE 604.1.

B) PIPING SUBJECT TO CORROSION SHALL BE PROTECTED IN AN APPROVED MANNER. PROVIDE THE METHOD OF PROTECTION FOR SUCH PIPING FOR UNDERGROUND INSTALLATIONS. [CPC 312.0]

SHEET INDEX

S.NO.	SHEET No.	SHEET TITLE
1	P-00.1	PLUMBING GENERAL NOTES AND LEGEND
2	P-00.2	PLUMBING SCHEDULE
3	PD-100	PLUMBING DEMOLITION PLAN
4	P-100	PLUMBING REMODEL ROOF PLAN
5	P-4.1	PLUMBING DETAILS

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oed optimum energy design

Consulting Engineers
5200 E. La Palma Ave
Anaheim, CA 92807
Telephone (714) 693-2277

PROJECT

ORANGE COUNTY DEPARTMENT OF
EDUCATION ESPLANADE BLDG 4
TENANT IMPROVEMENT

3001 RED HILL AVENUE, SUITE 117, 118, 119,
COSTA MESA, CA 92626

DATE 09/04/2026

PROJECT # 026.0084.00

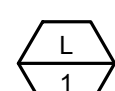
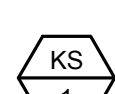
DESIGN PROFESSIONAL



TITLE
PLUMBING GENERAL NOTES
AND LEGEND

SHEET #

P-001

PLUMBING FIXTURE SCHEDULE								
ITEM	FIXTURE	ROUGH-IN CONNECTIONS						DESCRIPTION
		TRAP	WASTE	VENT	HOT WATER	COLD WATER	GAS	
	WATER CLOSET (ADA)	INT	4"	2"	--	1-1/2"	--	AMERICAN STANDARD "MADERA YOUTH" #2467.100, ADA, FLOOR MOUNTED, FLUSH TANK VITREOUS CHINA W/ ELONGATED BOWL, #5503A00B ELONGATED, FRONT SEAT LESS COVER, 1.1 GPF, ADA COMPLIANT. INSTALL PER MFR INSTRUCTIONS.
	LAVATORY (ADA)	1-1/4"	2"	2"	1/2"	1/2"	--	AMERICAN STANDARD "LUCERNE" MODEL #0356.421 SINGLE CENTER HOLE, WALL-HUNG LAVATORY, VITREOUS CHINA. AMERICAN STANDARD #1340.119, DECK-MOUNTED METERING FAUCET, SINGLE-HOLE MOUNTING, 0.5 GPM, ADA COMPLIANT. CHICAGO 1006-ABCP STOPS AND SUPPLIES, P-TRAP TRUEBRO LAVGUARD-2, STOPS AND SUPPLY AND P-TRAP INSULATION. JAY R. SMITH #0720 WALL MOUNTED CONCEALED ARMS SUPPORT OR EQUAL.
	BREAK ROOM SINK (ADA)	1-1/4"	2"	2"	1/2"	1/2"	--	JUST #DL-ADA-1933-A-GR, TWO COMPARTMENT SINK 33"x19", 18 GAUGE, TYPE 304 STAINLESS STEEL, 6 1/2" DEEP, CHICAGO FAUCET 2300-8ABCP, 2.2 GPM DECK MOUNTED, LEVEL HANDLE, PROVIDE CHICAGO STOPS, SUPPLIES AND LA PATTERN P-TRAP, COMPLETE WITH FOOD WASTE DISPOSER BADGER 5XP, 120 V, 3/4 HP.

AGENCY APPROVAL

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Consulting Engineers
5200 E. La Palma Ave
Anaheim, CA 92807
Telephone (714) 693-2277

PROJECT

**ORANGE COUNTY DEPARTMENT OF
EDUCATION ESPLANADE BLDG 4
TENANT IMPROVEMENT**

3001 RED HILL AVENUE, SUITE 117, 118, 119,
COSTA MESA, CA 92626

DATE 09/04/2026

PROJECT # 026.0084.00

DESIGN PROFESSIONAL



TITLE
PLUMBING SCHEDULES

SHEET #

P-002



- DEMOLITION KEY NOTES:**
- ① EXISTING WATER CLOSET AND WATER SUPPLY STOP TO BE REMOVED. CAP SEWER BELOW FLOOR, VENT AND WATER LINE IN WALL.
 - ② EXISTING LAVATORY, FAUCET, P-TRAP, STOPS AND SUPPLIES TO BE REMOVED. CAP EXISTING SEWER, VENT AND WATER LINES IN WALL.
 - ③ EXISTING TWO COMP SINK, FAUCET, P-TRAP, STOPS AND SUPPLIES TO BE REMOVED. CAP EXISTING SEWER, VENT AND WATER LINES IN WALL.

- DEMOLITION GENERAL NOTES:**
- 1. CONTRACTOR SHALL COORDINATE WORK WITH OTHER TRADES AS NECESSARY PRIOR TO INSTALLATION.
 - 2. CONTRACTOR SHALL MAINTAIN PROPER CLEARANCES FROM ALL ELECTRICAL EQUIPMENT AND SERVICE CLEARANCES FOR MECHANICAL EQUIPMENT.
 - 3. CONTRACTOR SHALL COORDINATE ALL LOCATIONS OF PIPE PENETRATIONS THRU SHEAR WALLS. NO PIPE PENETRATIONS THRU SHEAR WALLS UNLESS SPECIFICALLY SHOWN ON STRUCTURAL PLANS.

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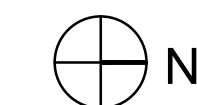
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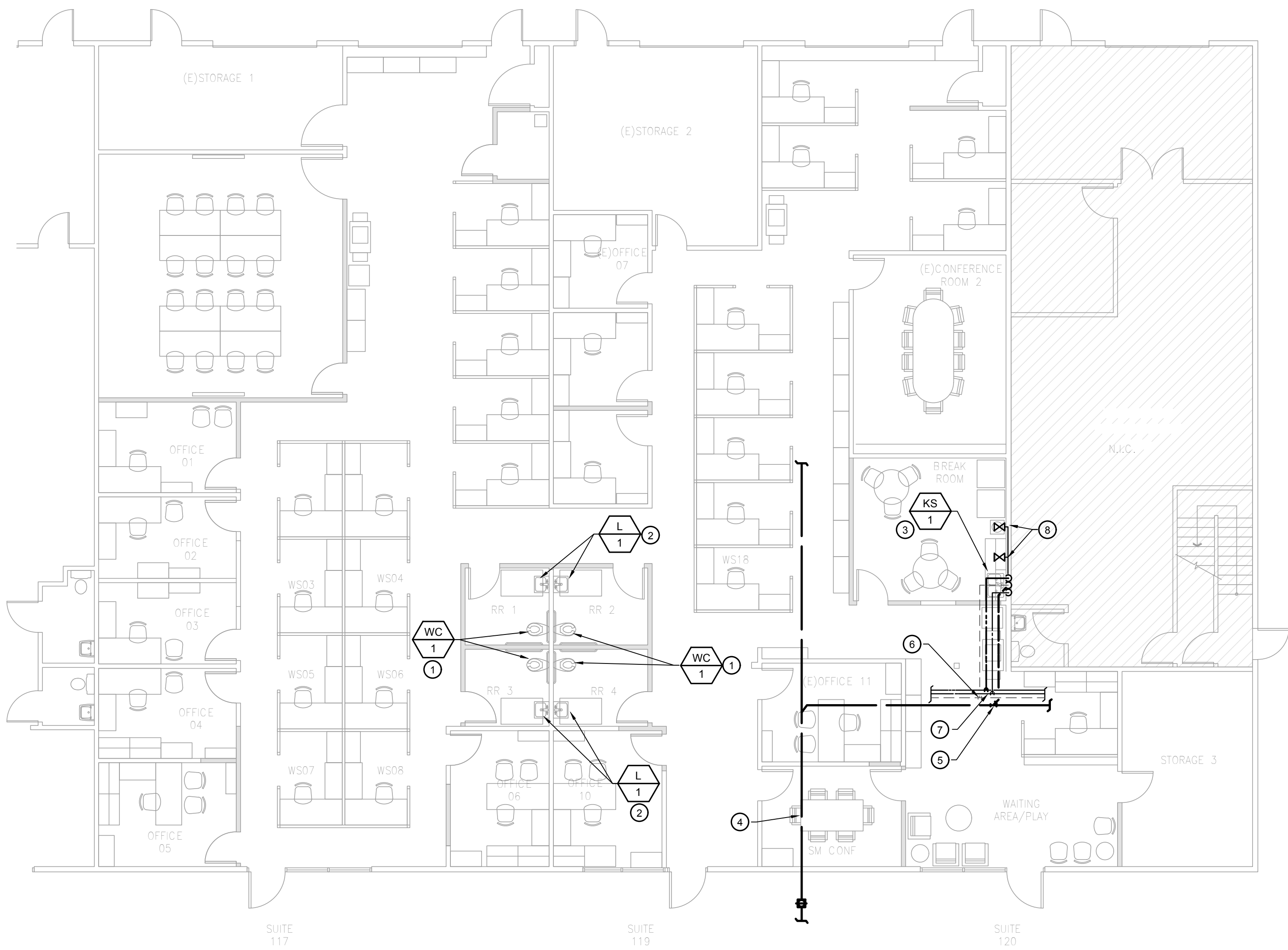


TITLE
**PLUMBING DEMOLITION
FLOOR PLAN**

SHEET #

PD-100





PLUMBING REMODEL FLOOR PLAN

1/8" = 1'-0"

1

CONSTRUCTION KEY NOTES:

- ① FURNISH AND INSTALL NEW WATER CLOSET, R.I.&C TO EXISTING 4"S BELOW FLOOR, 2" VENT AND 3/4"CW IN WALL
- ② FURNISH AND INSTALL NEW LAVATORY, FAUCET AND FITTINGS. R.I.&C TO EXISTING 2"S, 1 1/2" V, 1/2"CW & HW IN WALL.
- ③ FURNISH AND INSTALL NEW BREAKROOM SINK, FAUCET AND FITTINGS. R.I.&C NEW 2"S W/ WCO, 1 1/2" V, 1/2"CW & HW.
- ④ EXISTING 4"S BEL GRADE, VERIFY EXACT LOCATION, SIZE AND DEPTH IN FIELD
- ⑤ CONNECT NEW 2"S. TO EXISTING 4" SEWER BELOW FLOOR
- ⑥ CONNECT NEW 2"V TO EXISTING 2"V, ABOVE CEILING.
- ⑦ CONNECT NEW 1/2"CW & HW TO EXISTING ABOVE CEILING.
- ⑧ PROVIDE 1/2"CW TO COFFEE MAKE AND WATER DISPENSER. PROVIDE SHUT OFF VALVE

CONSTRUCTION GENERAL NOTES:

1. CONTRACTOR SHALL COORDINATE WORK WITH OTHER TRADES AS NECESSARY PRIOR TO INSTALLATION.
2. CONTRACTOR SHALL MAINTAIN PROPER CLEARANCES FROM ALL ELECTRICAL EQUIPMENT AND SERVICE CLEARANCES FOR MECHANICAL EQUIPMENT.
3. CONTRACTOR SHALL COORDINATE ALL LOCATIONS OF PIPE PENETRATIONS THRU SHEAR WALLS. NO PIPE PENETRATIONS THRU SHEAR WALLS UNLESS SPECIFICALLY SHOWN ON STRUCTURAL PLANS.
4. ALL INSULATION SHALL HAVE A FLAME SPREAD OF NOT MORE THAN 25 AND A SMOKE DENSITY NOT EXCEEDING 50.

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Anaheim, CA 92807
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TITLE
PLUMBING REMODEL FLOOR
PLAN

SHEET #

P-100

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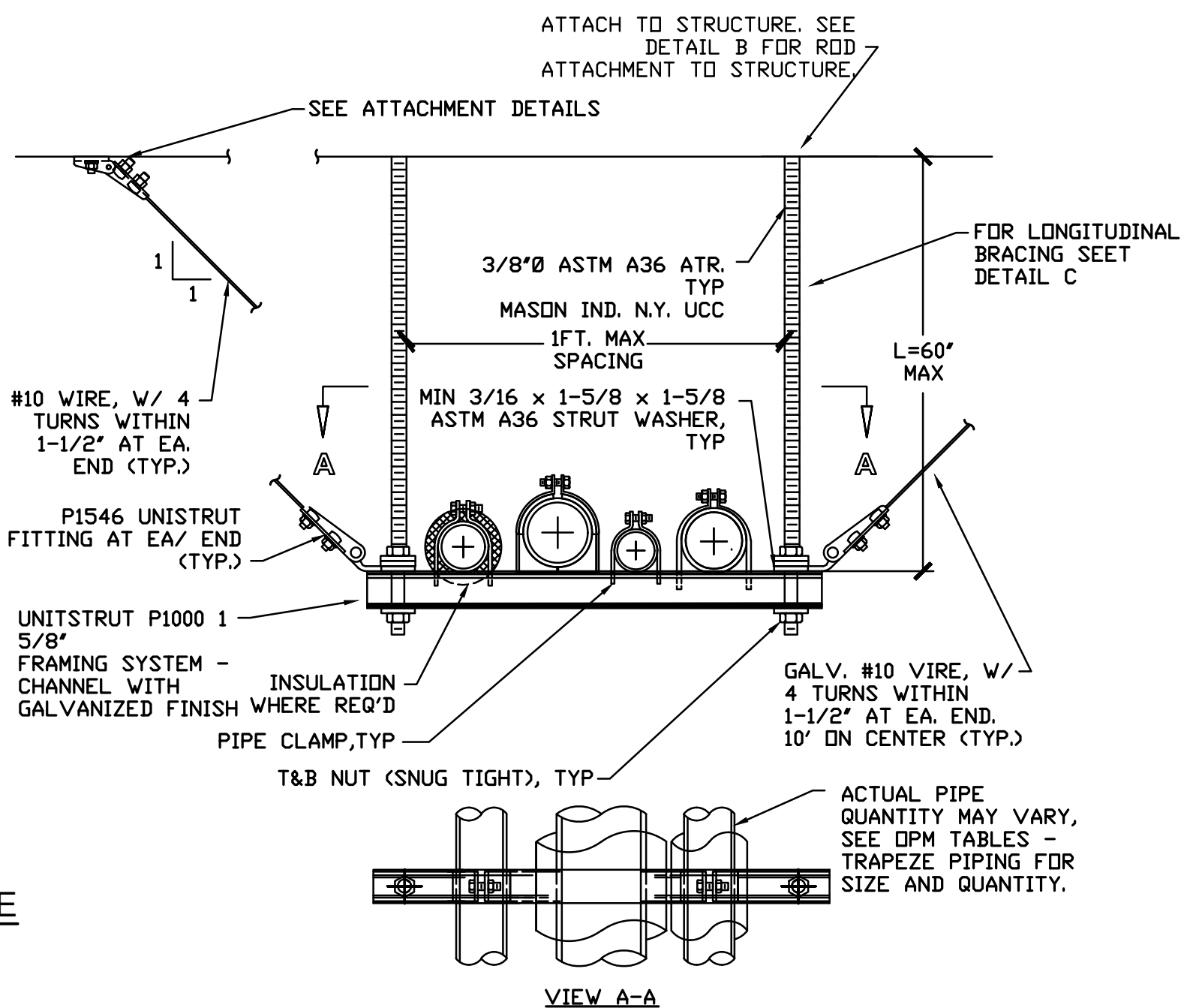
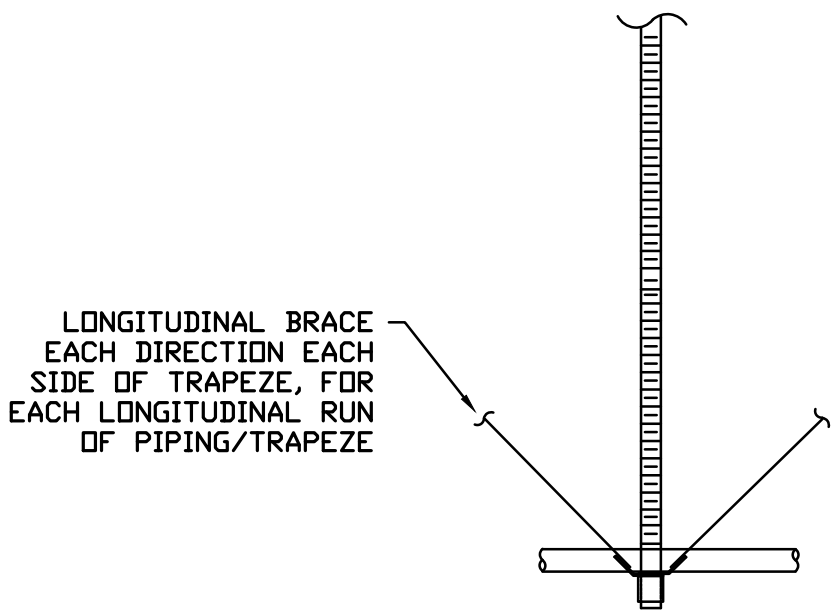
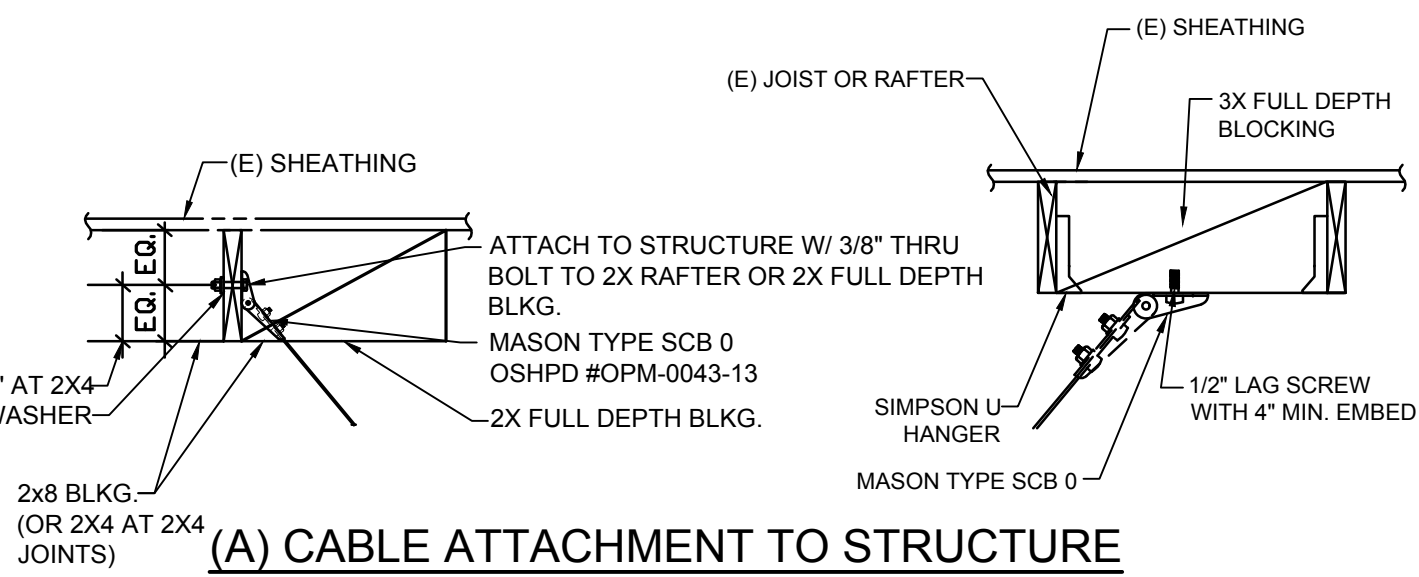
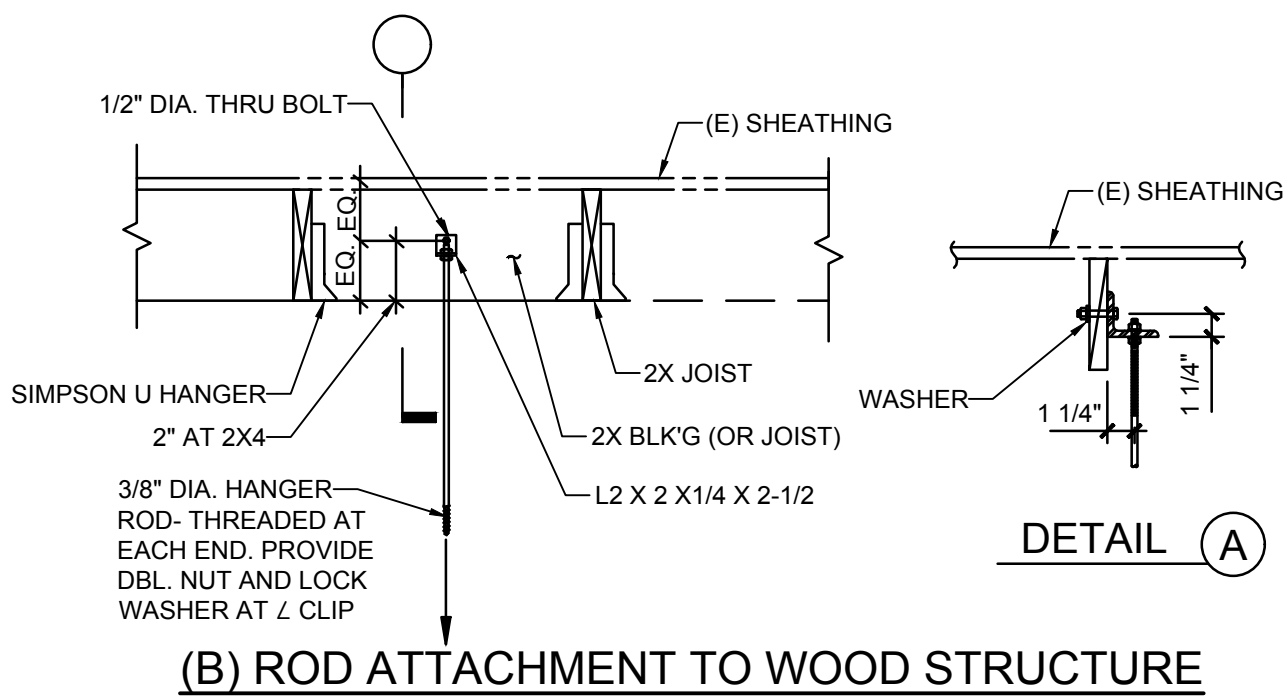
DESIGN PROFESSIONAL



TITLE
PLUMBING DETAILS

SHEET #

P-300



TOTAL WEIGHT ON TRAPEZE SHALL NOT EXCEED 15LB PER LINEAR FOOT.
TOTAL WEIGHT OF 1/2\"/>

ELECTRICAL LEGEND			
	L1A	POWER PANELBOARD "L1A", MOUNT TOP OF PANEL AT 6'-0" ABOVE FINISHED FLOOR. SEE PANELBOARD SCHEDULE FOR EQUIPMENT CONTAINED IN PANELBOARD AND PANELBOARD RATINGS.	
	Ⓢ	JUNCTION BOX, SIZE AND USE AS REQUIRED; COVERPLATE SHALL OVERLAP THE BOX EDGE BY 1/2" WHERE RECESSED IN WALL WITH CONCEALED WIRING.	
	▽	(4) RJ-45 DATA OUTLETS W/FACEPLATE AND 1" CONCEALED CONDUIT STUB UP TO ACCESSIBLE CEILING AND EXTEND CONDUIT TO 6" AWAY FROM CABLE TRAY	
	TV	VIDEO/CABLE OUTLET - (1) F-BARREL COAX CONN. W/FACEPLATE AND 1" CONCEALED CONDUIT STUB UP TO ACCESSIBLE CEILING AND EXTEND CONDUIT TO 6" AWAY FROM CABLE TRAY.	
	□	SPECIAL RECEPTACLE, +18" AFF. SEE FLOOR PLAN FOR DETAIL.	
	□ GFI 125V	TAMPER RESISTANT DUPLEX RECEPTACLE - 125V, 20A, MOUNT 3" ABOVE BACKSPASH AT WORK COUNTERS AND LAVATORIES AND 18" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED. "GFI" INDICATES GROUND FAULT CIRCUIT INTERRUPTER TYPE. "WPC" INDICATES EXTRA HEAVY DUTY WEATHERPROOF METAL COVER AND SHALL BE "CLOSED WHILE IN USE". "IG" INDICATES ISOLATED GROUND RECEPTACLE, ORANGE IN COLOR. "D" INDICATES DEDICATED RECEPTACLE. PROVIDE COMMERCIAL SPECIFICATION GRADE RECEPTACLES.	
	⊕	TAMPER RESISTANT QUADRUPLX CONVENIENCE OUTLET - 125V, 20A, MOUNT 18" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED. PROVIDE COMMERCIAL SPECIFICATION GRADE RECEPTACLES	
	Ⓢ	CEILING-MOUNTED DUPLEX/QUADRUPLX RECEPTACLE 20A, 125V, 3WG, (2) NEMA 5-20R U.N.O.	
	⊞ 30A	FUSED DISCONNECT SWITCH, "30" INDICATES SWITCH SIZE, HEAVY DUTY "HP" RATED. PROVIDE NEMA 3R ENCLOSURE OUTDOORS. FUSE PER EQUIPMENT NAMEPLATE DATA.	
	⊞ 30A	NON-FUSED DISCONNECT SWITCH, "30" INDICATES SWITCH SIZE, HEAVY DUTY "HP" RATED. PROVIDE NEMA 3R ENCLOSURE OUTDOORS.	
	⊞ NEMA 1	COMBINATION MOTOR STARTER/DISCONNECT WITH THERMAL OVERLOAD PROTECTION, FVNR, HOA SELECTOR, VOLTAGE PER PLANS, CONTROL TRANSFORMER, MOUNT AT +48" ABOVE FINISHED FLOOR. "NEMA 1" INDICATES NEMA STARTER SIZE.	
	---	CONDUIT UNDERGROUND, 1" MINIMUM, UNLESS NOTED OTHERWISE.	
	→ LP1-1,3,5	HOMERUN - LP1 INDICATES PANELBOARD, 1,3,5 INDICATE CIRCUIT NUMBERS. SEE PANELBOARD DESIGNATION SCHEDULE FOR ADDITIONAL INFORMATION.	
	ⓧ	EXIT SIGN, "X" INDICATES FIXTURE TYPE. SHADED QUADRANTS INDICATE ILLUMINATED FACE. PROVIDE DIRECTIONAL ARROWS AS INDICATED ON PLANS. UNIT EQUIPPED WITH BATTERY BACK-UP AND WIRED TO UNSWITCHED HOT.	
	ⓧ	EMERGENCY/EXIT LIGHT COMBO UNIT, BATTERY BACK-UP POWERED. WIRE UNIT TO UNSWITCHED HOT ON CIRCUITS SHOWN.	
	ⓧ	EMERGENCY LIGHTING UNIT, BATTERY BACK-UP POWERED. WIRE UNIT TO UNSWITCHED HOT ON CIRCUITS SHOWN.	
	A NL L1A-30	LED DOWNLIGHT, "A" IS THE FIXTURE TYPE IN THE FIXTURE SCHEDULE, "L1A-3" INDICATES WHICH PANELBOARD AND CIRCUIT THE FIXTURE IS FED FROM, AND "3" INDICATES WHICH SWITCH CONTROLS THE FIXTURE. "NL" INDICATES A NIGHT LIGHT FIXTURE. (CONNECT FIXTURE TO UNSWITCHED HOT SO THAT FIXTURE STAYS ON AT ALL TIMES).	
	AE L1A-3	LED DOWNLIGHT WITH BUILT IN EMERGENCY BATTERY PACK TO PROVIDE LIGHTING WHEN NORMAL POWER IS NOT AVAILABLE. PROVIDE UNSWITCHED "HOT" CONDUCTOR FROM SAME CIRCUIT FIXTURE IS USING TO BATTERY PACK IN ORDER TO ALLOW NORMAL SWITCHING OF LIGHT FIXTURE WITHOUT DISCHARGING BATTERY PACK. ANY FIXTURE SYMBOL THAT HAS SHADING INDICATES THAT FIXTURE HAS AN EMERGENCY BATTERY BACK-UP.	
	A L1A-30	LED LIGHTING FIXTURE, "A" IS THE FIXTURE TYPE IN THE FIXTURE SCHEDULE, "L1A-3" INDICATES WHICH PANELBOARD AND CIRCUIT THE FIXTURE IS FED FROM, AND "3" INDICATES WHICH SWITCH CONTROLS THE FIXTURE.	
	AE NL L1A-3	LED LIGHTING FIXTURE WITH BUILT IN EMERGENCY BATTERY PACK TO PROVIDE LIGHTING WHEN NORMAL POWER IS NOT AVAILABLE. PROVIDE UNSWITCHED "HOT" CONDUCTOR FROM SAME CIRCUIT FIXTURE IS USING TO BATTERY PACK IN ORDER TO ALLOW NORMAL SWITCHING OF LIGHT FIXTURE WITHOUT DISCHARGING BATTERY PACK. ANY FIXTURE SYMBOL THAT HAS SHADING INDICATES THAT FIXTURE HAS AN EMERGENCY BATTERY BACK-UP. "NL" INDICATES A NIGHT LIGHT FIXTURE. (CONNECT FIXTURE TO UNSWITCHED HOT SO THAT FIXTURE STAYS ON AT ALL TIMES).	
	Ⓢ	SINGLE POLE TOGGLE SWITCH, WALL MOUNTED, +44" AFF.	
	Ⓢ	LIGHT SWITCH CUSTOMIZED, MOUNTED AT +44" AFF.	
	Ⓢ	INTELLIGENT VACANCY/OCCUPANCY SENSOR SWITCH, WALL MOUNTED, +44" AFF.	
	Ⓢ	DIMMABLE LIGHT SWITCH, WALL MOUNTED, +44" AFF.	
	Ⓢ	OCCUPANCY SENSOR, CEILING MOUNTED. "WM" INDICATES WALL MOUNTED AT +44" AFF.	
	Ⓢ	EXTENT OF DEMOLITION	
	Ⓢ	NEW TO EXISTING CONNECTION	
	Ⓢ	WORK ITEM (ELECTRICAL)	
	Ⓢ	DETAIL DESIGNATION	
		ELEVATION NUMBER DRAWING NUMBER	
		DETAIL NUMBER (IF BLANK, SAME SHEET)	

ELECTRICAL ABBREVIATIONS			
A	AMPERES	G	GROUNDING CONDUCTOR
AC	ALTERNATING CURRENT	GFI/GFCI	GROUND FAULT INTERRUPTER
AF	ARC FAULT	HP	HORSEPOWER
A.F.F.	ABOVE FINISHED FLOOR	JB	JUNCTION BOX
A.F.G.	ABOVE FINISHED GRADE	KCMIL	THOUSANDS OF CIRCULAR MILS
AL	ALUMINUM	MCM	
AWG	AMERICAN WIRE GAUGE	KV	KILOVOLTS
C	CONDUIT	KVA	KILOVOLT-AMPERES
CKT	CIRCUIT	KW	KILOWATTS
CLG	CEILING	LCP	LIGHTING CONTROL PANEL
CND	CONDUIT	LTG	LIGHTING
CU	COPPER	LT SW	LIGHT SWITCH
DC	DIRECT CURRENT	MIN.	MINIMUM
DISC	DISCONNECT	<N>	NEW
DWG.	DRAWING	N.C.	NORMALLY CLOSED
<E>	EXISTING	N.I.C.	NOT IN CONTRACT
ELEC.	ELECTRICAL/ELECTRIC	N.O.	NORMALLY OPEN
ELEV	ELEVATION	NEC	NATIONAL ELECTRICAL CODE
EM	EMERGENCY	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOC.
EQ	EQUAL	NL	NIGHT LIGHT
FWE	FURNISHED WITH EQUIPMENT	PH	PHASE
<F>	FUTURE	PB	PULL BOX
FIXT	FIXTURE		

SUMMARY OF WORK	
1.	COORDINATE WITH OCCDE FOR LOW VOLTAGE SYSTEM (TELECOM, SECURITY CAMERAS, ACCESS CONTROL, AV, PA, ETC.) CONNECTION REQUIREMENT.
2.	FURNISH AND INSTALL ELECTRICAL DEVICES/EQUIPMENT PER PLAN. PROVIDE STRUCTURAL MOUNTING PER SEISMIC REQUIREMENT.
3.	PROVIDE SHORT CIRCUIT CALCULATIONS AND ARC FLASH STUDY FOR NEW ELECTRICAL EQUIPMENT AFTER MANUFACTURERS ARE SELECTED. ARC FLASH LABELS SHALL BE PROVIDED AND INSTALLED ON ALL NEW ELECTRICAL EQUIPMENT.
4.	FURNISH AND INSTALL ELECTRICAL PANEL WITH NEW, COORDINATE WITH SCE FOR POWER SHUTDOWN AND RE-ENERGIZE. COORDINATE WITH SCE FOR AVAILABLE FAULT CURRENT AND PROVIDE ELECTRICAL PANELBOARD WITH SUITABLE SCCR RATING.
5.	FOR ALL POWER SHUTDOWN OR CUTOVER, CONTRACTOR SHALL SUBMIT MOP (METHOD OF PROCEDURE) TO OCCDE AND EEOFR FOR APPROVAL. PROVIDE TEMPORARY POWER, HVAC, AND LIGHTING DURING CONSTRUCTION AS REQUIRED BY OCCDE.
6.	CONTRACTOR IS RESPONSIBLE TO REWIRE CIRCUITS/CONDUITS TO MAINTAIN ADJACENT SPACES (OUT OF AREA OF SCOPE).
7.	CONTRACTOR IS RESPONSIBLE TO OBTAIN ALL THE PERMITS AND ASSOCIATED FEES AS REQUIRED IN THIS PROJECT.

GENERAL ELECTRICAL NOTES	
1.	CONTRACTOR IS RESPONSIBLE TO OBTAIN A COMPLETE SET OF CONTRACT DOCUMENTS, ADDENDA, DRAWINGS, AND SPECIFICATIONS. PRIOR TO SUBMITTING PROPOSAL, CONTRACTOR SHALL EXAMINE ARCHITECTURAL AND MECHANICAL CONSTRUCTION DRAWINGS AND SPECIFICATIONS AND SHALL HAVE VISITED THE CONSTRUCTION SITE. HE/SHE SHALL BE FAMILIAR WITH THE EXISTING CONDITIONS UNDER WHICH HE/SHE WILL HAVE TO OPERATE AND WHICH WILL IN ANY WAY AFFECT THE WORK UNDER THIS CONTRACT. NO SUBSEQUENT ALLOWANCE WILL BE MADE IN THIS CONNECTION IN BEHALF OF THE CONTRACTOR FOR ANY ERROR OR NEGLIGENCE ON HIS/HER PART. DETERMINE THE SEQUENCE OF CONSTRUCTION THROUGHOUT THE PROJECT, INCLUDING TEMPORARY FACILITIES AND CONNECTIONS REQUIRED FOR THE DURATION OF THE PROJECT.
2.	ALL TEMPORARY CONNECTIONS SHALL BE CONSIDERED PART OF THIS CONTRACT AND NO EXTRA CHARGES WILL BE ALLOWED. THIS SHALL INCLUDE MINOR ITEMS OF MATERIAL AND EQUIPMENT NECESSARY TO MEET THE REQUIREMENTS AND INTENT OF THE PROJECT.
3.	THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF PERSONS AND PROPERTY AND SHALL PROVIDE INSURANCE COVERAGE AS NECESSARY FOR LIABILITY, PERSONAL, AND PROPERTY DAMAGE, TO FULLY PROTECT THE OWNER, ARCHITECT, AND ENGINEER FROM ANY AND ALL CLAIMS RESULTING FROM THIS WORK.
4.	THE CONTRACTOR SHALL PROVIDE TO THE ARCHITECT A CONSTRUCTION SCHEDULE OF ALL ELECTRICAL WORK. THE CONSTRUCTION SCHEDULE SHALL IDENTIFY ALL SIGNIFICANT MILESTONES WITH COMPLETION DATES.
5.	THE CONTRACTOR SHALL MAINTAIN RECORD DRAWINGS AT THE PROJECT SITE INDICATING ALL MODIFICATIONS TO ELECTRICAL SYSTEMS. THE CONTRACTOR SHALL, AT THE CONCLUSION OF THE PROJECT, PROVIDE A SET OF REPRODUCIBLE (AUTOCAD), ACCURATE AND NEAT "AS-BUILT" DRAWINGS ACCEPTABLE TO THE ARCHITECT.
6.	THESE DRAWINGS DO NOT REPRESENT THE EXACT LOCATIONS, SIZES OR EXTENT OF UTILITIES ON SITE. CONTRACTOR SHALL TAKE STANDARD PRECAUTIONS FOR WORK IN EXISTING FACILITIES.
7.	EXISTING ELECTRICAL WIRING WHICH WILL NOT BE MADE OBSOLETE AND WHICH WILL BE DISTURBED DUE TO CONSTRUCTION CHANGES REQUIRED BY THIS CONTRACT SHALL BE RESTORED TO OPERATING CONDITION, AS REQUIRED AND/OR DIRECTED. WHERE REQUIRED, SHOWN AND/OR DIRECTED, OUTLETS AND CONDUIT RUNS SHALL BE RELOCATED. IN SOME CASES IT MAY BE NECESSARY TO EXTEND CONDUITS AND PULL IN NEW WIRING OR INSTALL JUNCTION BOXES AND SPICE IN NEW WIRING OR REPLACE OLD WIRING WITH NEW.
8.	CERTAIN REMODELING OF ELECTRICAL FACILITIES WILL BE REQUIRED IN THE EXISTING BUILDING. EXISTING CONDUIT RUNS ARE GENERALLY NOT SHOWN, ALTHOUGH A FULL ATTEMPT HAS BEEN MADE TO SHOW SOME EXISTING CONDITIONS, OF WHICH INFORMATION HAS BEEN TAKEN FROM EXISTING RECORD DRAWINGS AND/OR LIMITED FIELD INVESTIGATIONS. THE DRAWINGS SHOWING LOCATION OF EXISTING EQUIPMENT, OUTLETS, FIXTURES, ETC., ARE APPROXIMATE ONLY. (CONTRACTOR TO FIELD VERIFY).
9.	ALL ELECTRICAL MATERIALS AND EQUIPMENT SHALL BE NEW AND SHALL BE LISTED AND LABELED BY A NATIONALLY RECOGNIZED TESTING LABORATORY AND SHALL BE INSTALLED AS PER LISTING OR LABELING (IE, MAXIMUM FUSE SIZE MEANS FUSE PROTECTION IS REQUIRED).
10.	ALL ELECTRICAL EQUIPMENT AND INSTALLATION SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS: a. AMERICAN STANDARD ASSOCIATION (ASA) b. AMERICAN NATIONAL STANDARD INSTITUTE (ANSI) c. AMERICAN SOCIETY OF TESTING MATERIALS (ASTM) d. CALIFORNIA CODE OF REGULATIONS, TITLE 24 (CCR) e. INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE) f. INSULATED POWER CABLE ENGINEERS ASSOCIATIONS (IPCEA) g. NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATIONS (NEMA) h. NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) i. ALL LOCAL CODE HAVING JURISDICTION
11.	CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, FEES, INSPECTIONS AND INCIDENTAL COSTS NECESSARY FOR EXECUTION AND COMPLETION OF ELECTRICAL WORK, INCLUDING ALL CHARGES BY STATE, COUNTY AND LOCAL GOVERNMENTAL AGENCIES. CONTRACTOR SHALL BE RESPONSIBLE FOR THE ELECTRICAL UTILITY SYSTEM SHUT-DOWNS AND START-UP. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION REQUIRED WITH OTHER AGENCIES AND UTILITY COMPANIES.
12.	CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL CROSSINGS ON NEW UTILITIES WITH THAT OF EXISTING ON SITE AND IN ADJACENT PROPERTIES. NOTIFY THE ENGINEER IMMEDIATELY OF ANY DEVIATIONS OR DISCREPANCIES FROM THIS PLAN.
13.	CONTRACTOR SHALL COORDINATE HIGHER WORK WITH OTHER TRADE ON SITE. ANY COST TO PERFORM WORK TO ACCOMPLISH SAID COORDINATION WHICH DIFFERS FROM THAT SHOWN ON THE DRAWINGS SHALL BE INCURRED BY THE CONTRACTOR. ANY DISCREPANCIES, AMBIGUITIES OR CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT DURING BID TIME FOR CLARIFICATIONS. ANY SUCH CONFLICTS NOT CLARIFIED PRIOR TO BID SHALL BE SUBJECT TO THE INTERPRETATION OF THE ARCHITECT/ENGINEER AT NO ADDITIONAL COST TO THE OWNER.
14.	COORDINATE WITH OTHER TRADES AS TO THE EXACT LOCATION OF THEIR RESPECTIVE EQUIPMENT. PROVIDE POWER AND CONNECTION TO MOTORS AND EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS AS INDICATED ON ELECTRICAL DRAWINGS AND DRAWINGS OF OTHER TRADES. CONTRACTOR SHALL REVIEW DRAWINGS OF OTHER TRADES FOR CONTROL DIAGRAMS, SIZE AND LOCATION OF EQUIPMENT, DISCONNECT SWITCHES, STARTERS, AND CONDUITS FOR CONTROL WIRING FOR MECHANICAL AND PLUMBING EQUIPMENT SHALL BE PROVIDED BY ELECTRICAL CONTRACTOR. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING MANUFACTURER'S SHOP DRAWINGS PRIOR TO ROUGHING IN ALL CONDUITS TO THIS EQUIPMENT.
15.	BEFORE ROUGH-IN, VERIFY ALL MOUNTING HEIGHTS AND EXACT LOCATIONS FOR ALL EQUIPMENT, ELECTRICAL CONNECTIONS, STUB-UPS, RECEPTACLES, OUTLETS, CONDUIT RUNS, ETC. WITH ARCHITECT AND OWNER. PLACE DEVICES LOCATED ABOVE COUNTERS, SHELVEING, ETC. AND IN BATHROOMS SO AS NOT TO CONFLICT WITH EDGES OF WAINSCOTING, COUNTER SPLASH, SHELVEING, ETC. ARCHITECTURAL DRAWINGS SHALL GOVERN. REFER TO ARCHITECTURAL ELEVATIONS FOR EXACT LOCATIONS OF ELECTRICAL DEVICES.
16.	MOUNTING HEIGHTS OF ALL CONTROL DEVICES TO BE USED BY OCCUPANT OF THE ROOM OR AREA SHALL BE MOUNTED AT THE FOLLOWING HEIGHTS: RECEPTACLES/OUTLETS - +18" (TO BOTTOM OF OUTLETS) TELEPHONE/TV/DATA OUTLETS - +18" (TO BOTTOM OF OUTLETS) LIGHT SWITCHES - +44" (TO HIGHEST OPERABLE PART) OUTLETS ABOVE COUNTER - +44" (TO HIGHEST OPERABLE PART) MOUNTING HEIGHTS OF ALL DEVICES AND EQUIPMENT ARE FROM FINISHED FLOOR TO LOCATION OF DEVICE AS NOTED. EQUIPMENT INSTALLED IN LOCATIONS NOT APPROVED BY THE ARCHITECT SHALL BE RELOCATED AS DIRECTED BY THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.
17.	COORDINATE ALL OUTLET BOX INSTALLATION WITH ARCHITECTURAL WALL FINISH SCHEDULES. SPACE BETWEEN FACEPLATE AND DEVICE BOX SHALL NOT EXCEED 1/8".
18.	FOR RENOVATION WORK, THE CONTRACTOR SHALL CONCEAL ALL WORK WHERE POSSIBLE. ALL EXPOSED RACEWAY AND BOXES IN OCCUPIED AREAS OR ON EXTERIOR WALLS SHALL BE PAINTED TO MATCH ADJACENT FINISH. EXTERIOR WALLS SHALL BE PAINTED WITH OXIDE INHIBITING COMPOUND BURNDY PENETROX-E OR EQUAL. APPLY COMPOUND BETWEEN BUS BAR AND LUG PAD AND BETWEEN CONDUCTOR AND LUG BARREL. INSTALL COMPRESSION CONNECTORS WITH A FULLY CIRCUMFERENTIAL COMPRESSION DIE BURNDY HYPRESS OR EQUAL.
19.	THE CONTRACTOR SHALL BE HELD FULLY RESPONSIBLE FOR THE PROPER RESTORATION OF ALL EXISTING SURFACES REQUIRING PATCHING, PLASTERING, PAINTING AND/OR OTHER REPAIR DUE TO THE INSTALLATION OF ELECTRICAL WORK UNDER THE TERMS OF THIS SPECIFICATION. CLOSE ALL OPENINGS, REPAIR ALL SURFACES, ETC., AS REQUIRED.
20.	SEAL ALL CONDUIT PENETRATIONS THROUGH FIRE RATED WALLS AND CEILINGS. FURNISH AND INSTALL FIRE RATED BACKBOXES AS REQUIRED, MAINTAINING FIRE RATING OF CEILING OR WALLS WHERE RECESSED ELECTRIC EQUIPMENT SUCH AS LIGHT FIXTURES, SWITCHES, RECEPTACLES, PANEL, ETC. ARE INSTALLED IN RATED WALL OR CEILING. PENETRATIONS OF FIRE RATED WALLS, CEILINGS, OR FLOORS SHALL COMPLY WITH CBC CHAPTER 7 (T14) REQUIREMENTS. CONDUIT PENETRATIONS THAT ARE NOT STUBBED-OUT INSIDE THE WALL SHALL MEET F AND T RATING. ALL FIRE PROOFING METHODS SHALL BE UL APPROVED.
21.	ALL EXTERIOR EQUIPMENT SHALL BE NEMA 3R RATED. ALL WALL PENETRATIONS TO EXTERIOR WALLS SHALL BE SEALED WATER TIGHT.
22.	PULLING TAPES: ALL RACEWAY WITHOUT CABLE OR WIRE SHALL BE INSTALLED WITH A MINIMUM 1100 LBS. STRENGTH TEST POLYESTER PULLING TAPE. PULLING TAPES SHALL BE DETECTABLE MULE-TAPE WITH SEQUENTIAL FOOTAGE MARKING.
23.	RUN NO MORE THAN 3 CURRENT CARRYING CONDUCTORS IN ANY WIREWAY UNLESS DE-RATING IS APPROVED BY ENGINEER OR SHOWN ON DRAWINGS.
24.	ALL BRANCH CIRCUIT CONDUCTORS SHALL BE COPPER, #10 AWG MINIMUM, RATED FOR 600V, THINWTHWN, 75 DEGREE CELSIUS. ALL CONDUCTORS SHALL BE STRANDED, SOFT DRAWN ANNEALED COPPER WIRE 90% CONDUCTIVITY, BEARING THE UL LABEL. SYSTEM VOLTAGE SHALL BE IDENTIFIED AS TO VOLTAGE AND PHASE CONNECTIONS BY MEANS OF COLOR IMPEGNATED INSULATION OR APPROVED COLORED MARKING TAPE.

2026 APPLICABLE CODES	
UNLESS OTHERWISE INDICATED OR SPECIFIED, PERFORM THE WORK IN CONFORMANCE WITH THE LATEST EDITIONS OF ALL APPLICABLE REGULATORY REQUIREMENTS, INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING:	
1.	CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE (PART 1, TITLE 24): 2025
2.	CALIFORNIA BUILDING CODE (PART 2, TITLE 24): 2024 IBC WITH 2025 CA AMENDMENTS
3.	CALIFORNIA ELECTRICAL CODE (PART 3, TITLE 24): 2023 NEC WITH 2025 CA AMENDMENTS
4.	CALIFORNIA MECHANICAL CODE (PART 4, TITLE 24): 2024 UMC WITH 2025 CA AMENDMENTS
5.	CALIFORNIA PLUMBING CODE (PART 5, TITLE 24): 2024 UPC WITH 2025 CA AMENDMENTS
6.	CALIFORNIA ENERGY CODE (PART 6, TITLE 24): 2025
7.	CALIFORNIA HISTORICAL BUILDING CODE, (PART 8, TITLE 24): 2025
8.	CALIFORNIA FIRE CODE (PART 9, TITLE 24): 2024 IFC WITH 2025 CA AMENDMENTS
9.	CALIFORNIA EXISTING BUILDING CODE (PART 10, TITLE 24): 2025 (2024 INTERNATIONAL EXISTING BUILDING CODE WITH 2022 CA AMENDMENTS)
10.	CALIFORNIA GREEN BUILDING STANDARDS CODE OR CAL GREEN (PART 11, TITLE 24): 2025
11.	CALIFORNIA REFERENCED STANDARDS CODE (PART 12, TITLE 24): 2025
12.	PUBLIC SAFETY (CCR TITLE 19), STATE FIRE MARSHAL: CURRENT REVISION
13.	NFPA 72, NATIONAL FIRE ALARM AND SIGNALING CODE, 2022 EDITION

DEMOLITION NOTES	
1.	REMOVE EXISTING EQUIPMENT IN CONFLICT WITH NEW CONDITIONS. REMOVE ALL WIRE NOT IN SERVICE AND FROM ABANDONED RACEWAYS. PROTECT EXISTING CIRCUITING PASSING THROUGH DEMOLITION AREAS. EXTEND AND/OR RELOCATE AS NECESSARY.
2.	ALL ABANDONED EQUIPMENT INCLUDING LIGHT, RECEPTACLES, DATA, FIRE ALARM, ETC., SHALL BE COVERED WITH BLANK METAL PLATES AND PAINTED TO MATCH THE ADJACENT FINISH OF SURROUNDING WALLS OR CEILING TO THE SATISFACTION OF THE ARCHITECT/OWNER.
3.	ELECTRICAL CONTRACTOR IS RESPONSIBLE TO DISCONNECT AND REMOVE ALL EXISTING ELECTRICAL EQUIPMENT AFFECTED BY THE PROJECT. THIS INCLUDES REROUTING OR THE EXTENSION OF EXISTING CONDUIT AND FEEDER WHERE NECESSARY TO MAINTAIN OPERATIONAL OF ANY EXISTING EQUIPMENT.
4.	CIRCUIT NUMBERS AND CONDUIT HOMERUNS SHOWN ON THESE DRAWINGS WERE TAKEN FROM EXISTING RECORD DRAWINGS. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO VERIFY EXISTING CIRCUITING AND CONDUIT HOMERUNS. ADJUST CIRCUIT NUMBERS ACCORDING TO THE ACTUAL CONDITIONS.
5.	WHERE EXISTING CONDUIT IS TO BE ABANDONED OR DEMOLISHED, THE CONDUIT SHALL BE REMOVED IF IT IS EXPOSED, IN A CRAWL SPACE OR IN AN ACCESSIBLE CEILING. ABANDONED OR DEMOLISHED CONDUIT FEEDS UP THROUGH THE FLOOR SHALL BE CUT OFF AND PLUGGED FLUSH WITH THE FLOOR.
6.	ALL ELECTRICAL EQUIPMENT INCLUDING LIGHT, RECEPTACLE, DATA, FIRE ALARM, ETC., THAT ARE TO BE REMOVED, SHALL BE REMOVED COMPLETELY, INCLUDING CONDUIT AND WIRING BACK TO THE LAST DEVICE REMAINING IN SERVICE, OR SOURCE.
7.	EXISTING CIRCUITS WHICH ARE REMOVED AND NOT REUSED SHALL BE IDENTIFIED ON THE PANEL SCHEDULE AS "SPARE".
8.	ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE OWNER PRIOR TO REMOVAL OF EXISTING ELECTRICAL EQUIPMENT AND TURN OVER REMOVED EQUIPMENT THAT THE OWNER REQUESTS IN AN "AS-FOUND" CONDITION.
9.	ALL DEMOLITION WORK SHOWN, IF ANY, WAS PREPARED FOR THE CONVENIENCE OF THE CONTRACTOR. NO REPRESENTATION HAS BEEN MADE THAT ALL ITEMS THAT MAY REQUIRE DEMOLITION HAVE BEEN SHOWN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CAREFULLY EXAMINE THE SITE AND THE CONTRACT DOCUMENTS AND TO PERFORM ALL DEMOLITION AND RECONSTRUCTION WHICH MAY BE REQUIRED FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK.
10.	WHEN CALLED FOR, OR SCOPE OF WORK REQUIRES ELECTRICAL EQUIPMENT TO BE REMOVED, ALL CONDUIT, WIRE, BOXES, HANGERS, ETC. SHALL BE REMOVED COMPLETELY. ALL OPENINGS SHALL BE PATCHED, SEALED AND PAINTED TO MATCH THE ADJACENT FINISH.

DRAWING INDEX	
SHEET NO.	DESCRIPTION
E001	ELECTRICAL NOTES, SYMBOLS & ABBREVIATIONS
E002	ELECTRICAL SPECIFICATIONS
E003	ELECTRICAL TITLE 24
E101	ELECTRICAL FLOOR PLAN - DEMO
E102	ELECTRICAL FLOOR PLAN - NEW
E103	LIGHTING FLOOR PLAN - DEMO
E104	LIGHTING FLOOR PLAN - NEW
E105	PHOTOMETRIC CALCULATIONS
E201	ELECTRICAL DETAILS
E701	SINGLE LINE DIAGRAM AND PANEL SCHEDULES

AGENCY APPROVAL

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PROJECT

ORANGE COUNTY DEPARTMENT OF
EDUCATION ESPLANADE BLDG 4 TI

300 RED HILL AVENUE, COSTA MESA, CA 92626

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DSA PROJECT # - 04-123078

DATE 10/09/2026

PROJECT # 026.0084.00

DESIGN PROFESSIONAL

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100 PROFESSIONAL
STAMP
DATE OF CALIFORNIA
EXPIRATION

TITLE
ELECTRICAL LEGEND AND
GENERAL NOTES

SHEET #
E001

PHOTOGRAPHIC CONSTRUCTION RECORDS

THE CONTRACTOR SHALL PROVIDE PRECONSTRUCTION DIGITAL PHOTOGRAPHS AND VIDEO RECORDINGS PRIOR TO COMMENCEMENT OF WORK ON THE SITE. BEFORE CONSTRUCTION MAY START, CONTRACTOR SHALL DOCUMENT ANY EXISTING CONDITIONS THAT ARE NOT COVERED BY THE CONTRACT DOCUMENTS (DAMAGED CONCRETE, WALLS, LANDSCAPE, ETC.). FAILURE TO DOCUMENT EXISTING DAMAGE WILL RESULT IN CONTRACTOR REPAIRS TO SURFACE TO MATCH ADJACENT AFTER CONSTRUCTION ACTIVITIES. ADDITIONAL PRECONSTRUCTION PHOTOGRAPHS/VIDEOS SHALL BE TAKEN AT LOCATIONS TO BE DESIGNATED BY THE OWNER'S REPRESENTATIVE.

CONTRACTOR SHALL MAKE A VIDEO RECORDING OF ALL PROPOSED ROUTINGS FOR INFRASTRUCTURE WORK, NOTING CONDITIONS OF EXISTING SURFACES AND ADJACENT IMPROVEMENTS. ONE COPY OF COMPLETE VIDEO SHALL BE TRANSMITTED TO THE OWNER'S REPRESENTATIVE.

CONSTRUCTION PHOTOGRAPHS

THE CONTRACTOR SHALL PROVIDE CONSTRUCTION PHOTOGRAPHS SHOWING THE PROGRESS OF THE WORK AND AS MAY BE DIRECTED BY THE OWNER'S REPRESENTATIVE. PHOTOGRAPHS/VIDEOS SHALL BE FORMATTED, IDENTIFIED, AND DELIVERED AS DESCRIBED ABOVE FOR DIGITAL PHOTOS AND VIDEOS. STARTING ONE MONTH AFTER THE DATE OF THE PRECONSTRUCTION PHOTOGRAPHS AND CONTINUING AS LONG AS THE WORK IS IN PROGRESS, APPROXIMATELY 40 MONTHLY PHOTOGRAPHS SHALL BE TAKEN, CATALOGED AND CROSS REFERENCED TO DRAWINGS/PLANS.

ANY WORK TO BE CONCEALED (BURIED, BEHIND WALLS, ABOVE CEILING, BELOW SLAB, ETC.) SHALL BE PHOTO DOCUMENTED AFTER ANY TESTING AND INSPECTION AND PRIOR TO CONCEALING TO CLEARLY INDICATE THE WORK. DOCUMENT ON PLANS THE LOCATION AND ORIENTATION FOR EACH PHOTO DOCUMENTING CONCEALED WORK.

FOR FINAL COMPLETION, DOCUMENT ALL PUNCH LIST ITEM COMPLETION BY PHOTOGRAPH OR VIDEO.

DELIVER CONSTRUCTION PHOTOGRAPHS AND VIDEOS WITHIN 10 DAYS OF CREATION. ALL PHOTOS AND VIDEOS SHALL BE OF SUFFICIENT QUALITY TO CLEARLY DEPICT WORK.

APPLICABLE CODES

APPLICABLE CODE: 2025 CBC

MEP COMPONENT ANCHORAGE NOTE

ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA. APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2025 CBC SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTERS 13, 26, AND 30:

- ALL PERMANENT EQUIPMENT AND COMPONENTS.
- TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G., HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.
- TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE BUT NEED NOT DEMONSTRATE DESIGN COMPLIANCE WITH THE REFERENCES NOTED ABOVE. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS:

- COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVING A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
- COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

THE ANCHORAGE OF ALL MECHANICAL, ELECTRICAL AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL. IN GENERAL, RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND ACCEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH THE ABOVE REQUIREMENTS.

APPLICABLE CODE: 2025 CBC PER IR 16-13.

MEP DISTRIBUTION SYSTEM BRACING NOTE FOR PIPING, DUCTWORK, AND ELECTRICAL CONDUIT

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7 SECTION 13.3 AS DEFINED IN ASCE 7 SECTIONS 13.6.5, 13.6.6, 13.6.7, AND 13.6.8, AND 2022 CBC SECTIONS 1617A.1.24, 1617A.1.25, AND 1617A.1.26.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEMS ARE AS NOTED BELOW. THE MEP DESIGN PROFESSIONAL ENGINEER RESPONSIBLE FOR CONTENT ON THESE SHEETS HAS VERIFIED THAT THE DESIGN METHODS IDENTIFIED BELOW ARE IN ACCORDANCE WITH DSA IR 16-13.

MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):

MP	MD	PP	E	OPTION 1: PROJECT-SPECIFIC DESIGN.
MP	MD	PP	E	OPTION 2: DESIGN BASED ON OSHPO OPM, WITHIN PROJECT SUBMITTAL.
MP	MD	PP	E	OPTION 3: DESIGN BASED ON OSHPO OPM, DEFERRED SUBMITTAL.

ADMINISTRATIVE REQUIREMENTS

- A COPY OF PARTS 1 THRU 6, TITLE 24, C.C.R. SHALL BE KEPT ON THE JOB SITE AT ALL TIMES.
- ALL CONSTRUCTION CHANGE DOCUMENTS AND ADDENDA TO BE SIGNED BY THE ARCHITECT AND THE OWNER AND APPROVED BY DSA. CONSTRUCTION CHANGE DOCUMENTS ARE NOT VALID UNTIL APPROVED BY DSA PER SECTION 4-338, PART 1, TITLE 24.
- ALL TESTS TO CONFORM TO THE REQUIREMENTS OF SECTION 4-335, PART 1, TITLE 24, AND APPROVED T & I SHEET.
- TESTS OF MATERIAL, SAND TESTING LABORATORY SHALL BE IN ACCORDANCE WITH SECTION 4-335 OF PART 1, TITLE 24, AND THE DISTRICT SHALL EMPLOY AND PAY THE LABORATORY. COSTS OF RE-TEST MAY BE BACK CHARGED TO THE CONTRACTOR.
- DSA SHALL BE NOTIFIED AT THE START OF CONSTRUCTION AND PRIOR TO THE PLACEMENT OF CONCRETE PER SECTION 4-331, PART 1, TITLE 24.
- INSPECTOR SHALL BE APPROVED BY DSA. INSPECTION SHALL BE IN ACCORDANCE WITH SECTION 4-333(B). THE DUTY OF THE INSPECTOR SHALL BE IN ACCORDANCE WITH SECTION 4-342, PART 1, TITLE 24.
- SUPERVISION OF CONSTRUCTION BY DSA SHALL BE IN ACCORDANCE WITH SECTION 4-334, PART 1, TITLE 24.
- CONTRACTOR, INSPECTOR, ARCHITECT AND ENGINEERS SHALL SUBMIT VERIFIED REPORTS (FORM SSS-6) IN ACCORDANCE WITH SECTION 4-336 AND 4-343, PART 1, TITLE 24.
- THE ARCHITECT AND THE STRUCTURAL ENGINEER SHALL PERFORM THEIR DUTIES IN ACCORDANCE WITH SECTION 4-333(A) AND 4-341, PART 1, TITLE 24.
- THE CONTRACTOR SHALL PERFORM HIS DUTIES IN ACCORDANCE WITH SECTION 4-343, PART 1, TITLE 24.

ELECTRICAL SPECIFICATIONS

GENERAL PROVISIONS:

- FURNISH ALL LABOR, MATERIALS, APPARATUS, TOOLS, EQUIPMENT, TRANSPORTATION, TEMPORARY CONSTRUCTION AND SPECIAL OR OCCASIONAL SERVICES AS REQUIRED TO MAKE A COMPLETE WORKING ELECTRICAL INSTALLATION, AS SHOWN ON THE DRAWINGS OR DESCRIBED IN THESE SPECIFICATIONS.
- STRUCTURAL MEMBERS SHALL, IN NO CASE BE DRILLED, BORED OR NOTCHED IN SUCH A MANNER THAT WILL IMPAIR THEIR STRUCTURAL VALUE. CUTTING OF HOLES, IF REQUIRED, SHALL BE DONE WITH CORE DRILL AND ONLY WITH THE APPROVAL OF THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RETURNING ANY SURFACE FROM WHICH HE HAS REMOVED EQUIPMENT OR DEVICES TO THE CONDITION AND FINISH OF THE ADJACENT SURFACES.
- KEEP CONDUITS, JUNCTION BOXES, AND OUTLET BOXES, AND OTHER OPENINGS CLOSED TO PREVENT ENTRY OF FOREIGN MATTER. COVER FIXTURES, EQUIPMENT, AND APPARATUS AND PROTECT AGAINST DIRT, PAINT, WATER, CHEMICAL, OR MECHANICAL DAMAGE, BEFORE AND DURING CONSTRUCTION PERIOD. RESTORE TO ORIGINAL CONDITION ANY FIXTURE, APPARATUS, OR EQUIPMENT DAMAGED PRIOR TO FINAL ACCEPTANCE, INCLUDING RESTORATION OF DAMAGED SHOP COATS OF PAINT, BEFORE FINAL ACCEPTANCE. PROTECT BRIGHT FINISHED SURFACES AND SIMILAR ITEMS UNTIL IN SERVICE. NO RUST OR DAMAGE WILL BE PERMITTED.
- DRAWINGS FOR THE WORK UNDER THIS SECTION ARE DIAGRAMMATIC. THE CONTRACTOR SHALL VISIT THE SITE AND DETERMINE THE LOCAL, WORKING CONDITIONS, CONFLICTING UTILITIES, AND THE CONDITIONS IN WHICH THE ELECTRICAL WORK WILL TAKE PLACE.
- CONTRACTOR SHALL INSURE RECONNECTION OF EXISTING EQUIPMENT AND CIRCUITS AFFECTED BY CONTRACT DEMOLITION WHETHER OR NOT RECONNECTION IS SPECIFICALLY SHOWN ON THE CONTRACT DOCUMENTS.
- INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS AND TECHNICAL DATA PARTICULAR TO THE PRODUCT SPECIFIED AND/OR ACCEPTED EQUAL EXCEPT AS OTHERWISE SPECIFIED AND IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION "STANDARD OF INSTALLATION" FOR GENERAL INSTALLATION PRACTICE.

BASIC MATERIALS AND METHODS:

- RIGID STEEL CONDUIT SHALL BE FULL WEIGHT, PIPE SIZE, FINISHED INSIDE AND OUT BY HOT-DIP GALVANIZING AFTER FABRICATION, AND SHALL CONFORM WITH ANSI C80.1 AND UL.
 - USE RIGID STEEL CONDUIT FOR THE FOLLOWING LOCATIONS OR CONDITIONS: ALL EXTERIOR APPLICATIONS, ALL CONDUITS LARGER THAN 2" TRADE DIAMETER, AND ALL CONDUITS IN-DOOR BELOW EIGHT (8) FEET ABOVE FINISHED FLOOR.
 - COUPLINGS SHALL BE ELECTROPLATED STEEL, INSULATING BUSHINGS, THREADED POLYPROPYLENE OR THERMO-SETTING PHENOLIC RATED 150°C MINIMUM, INSULATED GROUNDING BUSHINGS, THREADED CAST MALLEABLE IRON BODY WITH INSULATED THROAT AND STEEL "LAY-IN" GROUND LUG WITH COMPRESSION SCREW. INSULATED METALLIC BUSHINGS, THREADED CAST MALLEABLE IRON BODY WITH PLASTIC INSULATED THROAT RATED 150°C. RUNNING THREADS ARE NOT ACCEPTABLE.
- ELECTRICAL METALLIC TUBING (EMT) SHALL BE FORMED OF COLD ROLLED STRIP STEEL, AND SHALL COMPLY WITH ANSI C80.3 AND UL REQUIREMENTS.
 - EMT IS ALLOWED FOR THE FOLLOWING CONDITIONS: INTERIOR ONLY AND ABOVE EIGHT (8) FEET FROM FINISHED FLOOR AND INTERIOR ONLY AND WHEN ENTERING A PANEL FROM ABOVE.
 - COUPLINGS, ELECTROPLATED STEEL, UL LISTED RAIN AND CONCRETE TIGHT THROUGH 1-1/4" TRADE SIZE. ALL EMT FITTINGS SHALL BE COMPRESSION TYPE. CONNECTORS: STEEL, GLAND COMPRESSION TYPE WITH INSULATED PLASTIC THROAT, 150°C TEMPERATURE RATED. ALL EMT FITTINGS SHALL BE COMPRESSION TYPE.
- LIQUID TIGHT FLEXIBLE METAL CONDUIT SHALL BE FABRICATED IN CONTINUOUS LENGTHS FROM GALVANIZED STEEL STRIP, SPIRALLY WOUND, FLEXIBLE CONDUIT, EXCEPT WHERE INSTALLED IN CONCEALED DRY LOCATIONS, SHALL BE LIQUID TIGHT WITH PLASTIC JACKET EXTRUDED OVER THE OUTER ZINC COATING. NO ALUMINUM SUBSTITUTE WILL BE ACCEPTED.
 - USE LIQUIDTIGHT FOR THE FOLLOWING CONDITIONS: IN DAMP AND WET LOCATIONS FOR CONNECTIONS TO MOTORS, TRANSFORMERS, VIBRATING EQUIPMENT AND MACHINERY AND FOR CONNECTIONS TO ALL PUMP MOTORS, FLOW SWITCHES, AND SIMILAR DEVICES.
 - CONNECTORS SHALL BE THE SCREW CLAMP ON SCREW-IN (WAKE) VARIETY WITH CAST MALLEABLE IRON BODIES AND THREADED MALE HUBS WITH INSULATED THROAT OR INSULATED BUSHINGS. SET SCREW TYPE CONNECTORS ARE NOT ACCEPTABLE. LIQUID TIGHT FITTINGS SHALL BE OF CADMIUM PLATED CAST MALLEABLE IRON, WITH INSULATED THROAT.
- LOW VOLTAGE WIRING SHALL BE INSTALLED IN CONDUIT, MINIMUM 3/4" TRADE DIAMETER.
- CONDUITS SHALL BE TIGHTLY COVERED AND WELL PROTECTED DURING CONSTRUCTION USING METALLIC BUSHINGS AND BUSHING "PENNIES" TO SEAL OPEN ENDS. IN MAKING JOINTS IN RIGID STEEL CONDUIT, REAM CONDUIT SMOOTH AFTER CUTTING AND THREADING, CLEAN ANY CONDUIT IN WHICH MOISTURE OR ANY FOREIGN MATTER HAS COLLECTED BEFORE PULLING IN CONDUCTORS. PAINT ALL FIELD THREADED JOINTS TO PREVENT CORROSION.
- CONDUIT SYSTEMS SHALL BE ELECTRICALLY CONTINUOUS THROUGHOUT. INSTALL CODE SIZE, UNINSULATED, COPPER GROUNDING CONDUCTORS IN ALL CONDUIT RUNS. GROUNDING CONDUCTOR SHALL BE BONDED TO CONDUIT, EQUIPMENT FRAMES AND PROPERLY GROUNDED.
- LOW VOLTAGE CONDUIT SHALL BE GROUPED SEPARATELY AND LABELED EVERY 10 FT INTERVAL AS TO SYSTEM (I.E. FIRE, CONTROL, ETC)
- EXPPOSED CONDUIT SHALL BE RUN PARALLEL OR AT RIGHT ANGLES TO THE CENTERLINES OF THE COLUMNS AND BEAMS. CONDUITS SHALL NOT BE PLACED CLOSER THAN 12 INCHES FROM A PARALLEL HOT WATER OR STEAM LINE OR THREE INCHES FROM SUCH LINES CROSSING PERPENDICULAR TO THE RUNS. IN LONG RUNS OF CONDUIT, PROVIDE SUFFICIENT PULL BOXES PER NEC INSIDE BUILDINGS TO FACILITATE PULLING WIRES AND CABLES. SUPPORT PULL BOXES FROM STRUCTURE INDEPENDENT OF CONDUIT SUPPORTS. THESE PULL BOXES ARE NOT SHOWN ON THE PLANS.
- ALL RACEWAY SYSTEMS SHALL BE SECURED TO BUILDING STRUCTURES USING SPECIFIED FASTENERS, CLAMPS AND HANGERS SPACED ACCORDING TO CODE. SUPPORT SINGLE RUNS OF CONDUIT USING TWO HOLE PIPE STRAPS. WHERE RUN HORIZONTALLY ON WALLS IN DAMP OR WET LOCATIONS, INSTALL "CLAMP BLOCKS" TO SPACE CONDUIT OFF THE SURFACE. MULTIPLE CONDUIT RUNS SHALL BE SUPPORTED USING "TRAPEZE" HANGERS FABRICATED FROM 3/8 INCH DIAMETER, THREADED STEEL RODS SECURED TO BUILDING STRUCTURES. FASTEN CONDUIT TO CONSTRUCTION CHANNEL WITH STANDARD TWO HOLE PIPE CLAMPS. PROVIDE LATERAL SEISMIC BRACING FOR HANGERS.
- LOCATE AND INSTALL ANCHORS, FASTENERS, AND SUPPORTS IN ACCORDANCE WITH NECA "STANDARD OF INSTALLATION". DO NOT FASTEN SUPPORTS TO PIPES, DUCTS, MECHANICAL EQUIPMENT, OR CONDUIT. DO NOT DRILL OR CUT STRUCTURAL MEMBERS, RIGIDLY WELD SUPPORT MEMBERS OR USE HEXAGON-HEAD BOLTS TO PRESENT NEAT APPEARANCE WITH ADEQUATE STRENGTH AND RIGIDITY. USE SPRING LOCK WASHERS UNDER ALL NUTS.
- RACEWAYS SHALL BE JOINED USING SPECIFIED COUPLINGS OR TRANSITION COUPLINGS WHERE DISSIMILAR RACEWAY SYSTEMS ARE JOINED. RIGID CONDUIT CONNECTION TO ENCLOSURES SHALL BE MADE BY MYERS TYPE GROUNDING HUBS ONLY. EMT CONNECTIONS TO ENCLOSURES SHALL BE MADE WITH COMPRESSION CONNECTOR WITH GROUNDING LOCK-NUTS OR BUSHINGS. INSTALL CABLE SEALING BUSHINGS OR CAULK CONDUIT TERMINATIONS IN ALL GRADE LEVEL OR BELOW GRADE EXTERIOR PULL, JUNCTION OR OUTLET BOXES.
- FURNISH AND INSTALL METAL SLEEVES FOR ALL EXPOSED INTERIOR CONDUIT RUNS PASSING THROUGH CONCRETE FLOORS OR WALLS. FOLLOWING CONDUIT INSTALLATION, SEAL ALL PENETRATIONS USING NON-IRON BEARING, CHLORIDE FREE, NON-SHRINKING, DRY-PAK, GROUTING COMPOUND.
- CONDUITS PENETRATING RATED WALLS, FLOORS, ETC. SHALL BE FIREPROOFED.
- FOR EXISTING CONDUITS THAT WILL BE REUSED, PULL OUT EXISTING CONDUCTORS AND COMPLETELY AND THOROUGHLY SWAB RACEWAY BEFORE INSTALLING WIRE. USE 50/50 SOLUTION OF SIMPLE GREEN. USE CO2 TO BLOW WATER AND SOAP INTO CONDUIT - LET SOAK TO BREAK UP DRIED OUT PULLING COMPOUNDS, THEN PULL CONDUCTORS. PULL ONE CONDUCTOR AT A TIME IF WILL NOT PULL ALL OUT TOGETHER.
- CONDUCTORS SHALL BE MANUFACTURED BY SOUTHWIRE. ALL WIRE AND CABLE SHALL BE INSULATED, STRANDED COPPER CONDUCTORS, SOFT DRAWN ANNEALED COPPER WIRE 98% CONDUCTIVITY, BEARING THE UL LABEL.
- WIRE AND CABLE: 0 TO 600 VOLT SHALL BE NEC TYPE THWN, OR TYPE XHHW FOR FEEDERS AND BRANCH CIRCUITS IN WET OR DRY LOCATIONS. NEC TYPE THHN FOR BRANCH CIRCUITS IN DRY LOCATIONS. MINIMUM CONDUCTOR SIZE: AWG NO. 10 FOR ALL POWER AND LIGHTING BRANCH CIRCUITS. AWG NO. 14 FOR ALL SIGNAL AND CONTROL CIRCUITS.

- COLOR CODING: SYSTEM CONDUCTORS SHALL BE IDENTIFIED AS TO VOLTAGE AND PHASE CONNECTIONS BY MEANS OF COLOR IMPREGNATED INSULATION OR APPROVED COLORED MARKING TAPE AS FOLLOWS:
 - 120/240 VOLT, SINGLE PHASE, 3 WIRE SYSTEM, PHASE A - BLACK, PHASE B - RED, PHASE C - ORANGE FOR HIGH LEG (208V TO NEUTRAL), NEUTRAL - WHITE, GROUND - GREEN.
 - 120/208 VOLT, 3 PHASE, 4 WIRE SYSTEMS, PHASE A - BLACK, PHASE B - RED, PHASE C - BLUE, NEUTRAL - WHITE, GROUND - GREEN
 - 277/480 VOLT, 3 PHASE, 4 WIRE SYSTEM, PHASE A - BROWN, PHASE B - ORANGE, PHASE C - YELLOW, NEUTRAL - GREY, GROUND - GREEN
- UL APPROVED NON-PETROLEUM BASE AND INSULATING TYPE PULLING COMPOUND SHALL BE USED AS NEEDED. ALL CABLES SHALL BE INSTALLED AND TESTED IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS AND WARRANTY. BLOCK AND TACKLE, POWER DRIVEN WINCH OR OTHER MECHANICAL MEANS SHALL NOT BE USED IN PULLING CONDUCTORS OF SIZE SMALLER THAN AWG # 1.
- SPLICING AND TERMINATING SHALL BE IN ACCORDANCE WITH CABLE MANUFACTURER'S PUBLISHED PROCEDURES. MAKE UP ALL SPLICES IN OUTLET BOXES WITH CONNECTORS AS SPECIFIED HEREIN WITH SEPARATE TAILS OF CORRECT COLOR TO BE MADE UP TO SPLICE. PROVIDE AT LEAST SIX (6) INCHES OF TAILS PACKED IN BOX AFTER SPLICE IS MADE UP. ALL WIRE AND CABLE IN PANELS, CONTROL CENTERS AND EQUIPMENT ENCLOSURES SHALL BE BUNDLED AND CLAMPED. ENCAPSULATE SPLICES IN EXTERIOR OUTLET, JUNCTION AND PULL BOXES USING INSULATING RESIN KITS. ALL SPLICES FOR EXTERIOR EQUIPMENT IN PUMP ROOMS SHALL BE MADE UP WATERTIGHT.
- ROUTE WIRE AND CABLE AS REQUIRED TO MEET PROJECT CONDITIONS. WIRE AND CABLE ROUTING INDICATED IS APPROXIMATE UNLESS DIMENSIONED. WHERE WIRE AND CABLE DESTINATION IS INDICATED AND ROUTING IS NOT SHOWN, DETERMINE EXACT ROUTING AND LENGTHS REQUIRED. INCLUDE WIRE AND CABLE OF LENGTHS REQUIRED TO INSTALL CONNECTED DEVICES WITHIN 10 FT OF LOCATION SHOWN.
- PROTECT EXPOSED CABLE FROM DAMAGE. SUPPORT CABLES ABOVE ACCESSIBLE CEILING, USING SPRING METAL CLIPS OR METAL CABLE TIES TO SUPPORT CABLES FROM STRUCTURE OR CEILING SUSPENSION SYSTEM. DO NOT REST CABLE ON CEILING PANELS. USE SUITABLE CABLE FITTINGS AND CONNECTORS. CLEAN CONDUCTOR SURFACES BEFORE INSTALLING LUGS AND CONNECTORS. MAKE SPLICES, TAPS, AND TERMINATIONS TO CARRY FULL AMPCITY OF CONDUCTORS WITH NO PERCEPTIBLE TEMPERATURE RISE. USE SUITABLE REDUCING CONNECTORS OR MECHANICAL CONNECTOR ADAPTORS FOR CONNECTING ALUMINUM CONDUCTORS TO COPPER CONDUCTORS. USE SPLIT BOLT CONNECTORS FOR COPPER CONDUCTOR SPLICES AND TAPS, 8 AWG AND LARGER. TAPE UNINSULATED CONDUCTORS AND CONNECTOR WITH ELECTRICAL TAPE TO 150 PERCENT OF INSULATION RATING OF CONDUCTOR. USE SOLDERLESS PRESSURE CONNECTORS WITH INSULATING COVERS FOR COPPER CONDUCTOR SPLICES AND TAPS, 8 AWG AND SMALLER. USE INSULATED SPRING WIRE CONNECTORS WITH PLASTIC CAPS FOR COPPER CONDUCTOR SPLICES AND TAPS, 10 AWG AND SMALLER STING OF MOTORS FOR CORRECT OPERATION AND ROTATION. ANY PRODUCTS WHICH FAIL DURING THE TESTS OR ARE RULED UNSATISFACTORY BY THE ENGINEER SHALL BE REPLACED, REPAIRED, OR CORRECTED AS PRESCRIBED BY THE ENGINEER AT THE EXPENSE OF THE CONTRACTOR. TESTS SHALL BE PERFORMED AFTER REPAIRS, REPLACEMENTS, OR CORRECTIONS UNTIL SATISFACTORY PERFORMANCE IS DEMONSTRATED.
- MAKE ELECTRICAL CONNECTIONS IN ACCORDANCE WITH EQUIPMENT MANUFACTURER'S INSTRUCTIONS. FOR CONDUIT CONNECTIONS TO EQUIPMENT, USE FLEXIBLE CONDUIT. USE LIQUIDTIGHT FLEXIBLE CONDUIT WITH WATERTIGHT CONNECTORS IN DAMP OR WET LOCATIONS. CONNECT HEAT PRODUCING EQUIPMENT USING WIRE AND CABLE WITH INSULATION SUITABLE FOR TEMPERATURES ENCOUNTERED.
- INSTALL SUITABLE STRAIN-RELIEF CLAMPS AND FITTINGS FOR CORD CONNECTIONS AT OUTLET BOXES AND EQUIPMENT CONNECTION BOXES. INSTALL DISCONNECT SWITCHES, CONTROLLERS, CONTROL STATIONS, AND CONTROL DEVICES TO COMPLETE EQUIPMENT WIRING REQUIREMENTS. INSTALL TERMINAL BLOCK JUMPFERS TO COMPLETE EQUIPMENT WIRING REQUIREMENTS. INSTALL INTERCONNECTING CONDUIT AND WIRING BETWEEN DEVICES AND EQUIPMENT TO COMPLETE EQUIPMENT WIRING REQUIREMENTS.
- INSTALL JUNCTION OR PULLBOXES WHERE REQUIRED TO LIMIT BENDS IN CONDUIT RUNS TO NOT MORE THAN 360 DEGREES OR WHERE PULLING TENSION ACHIEVED WOULD EXCEED THE MAXIMUM ALLOWABLE FOR THE CABLE TO BE INSTALLED. CONSULT WIRE AND CABLE MANUFACTURER.
- SECURELY FASTEN DEVICES INTO BOXES AND ATTACH APPROPRIATE COVER PLATES. CAULK AROUND EDGES OR OUTDOOR DEVICE PLATES AND BOXES WHEN ROUGH WALL SURFACES PREVENT RAINTIGHT SEAL. USE CAULKING MATERIALS APPROVED BY ENGINEER. FIREPROOF AROUND OPENING OF DEVICES LOCATED OR PENETRATING FIRE-RATED CONSTRUCTION ASSEMBLIES. FIREPROOF AROUND OPENING OF DEVICES LOCATED OR PENETRATING FIRE-RATED CONSTRUCTION ASSEMBLIES.
- FURNISH AND INSTALL ENGRAVED LEGEND OF EACH SWITCH THAT CONTROLS EXHAUST FANS, MOTORS, EQUIPMENT SYSTEMS, ETC. NOT LOCATED WITHIN SIGHT OF THE CONTROLLING SWITCH.
- MOUNT RECEPTACLES VERTICALLY WITH U-SHAPED GROUND POSITION, GROUND PIN SHALL BE FACING DOWN. DO NOT COMBINE GFCI PROTECTED CIRCUITS WITH OTHER CIRCUITS IN THE SAME RACEWAY. LIMIT NUMBER OF GFI PROTECT CIRCUITS IN ANY ONE RACEWAY TO A MAXIMUM OF ONE (1) CIRCUIT.
- FUSES SHALL BE INSTALLED AND SIZED AS NOTED ON PLANS AND AS REQUIRED PER MANUFACTURER. BE SURE TO OBSERVE MAXIMUM BRANCH CIRCUIT FUSE SIZE LABELS.
- GROUND NON-CURRENT CARRYING METAL PARTS OF ELECTRICAL EQUIPMENT ENCLOSURES, FRAMES, CONDUCTOR RACEWAYS OR CABLE TRAYS TO PROVIDE A LOW IMPEDANCE PATH FOR LINE-TO-GROUND FAULT CURRENT AND TO BOND ALL NON-CURRENT CARRYING METAL PARTS TOGETHER. INSTALL A GROUND CONDUCTOR IN EACH RACEWAY SYSTEM IN ADDITION TO CONDUCTORS SHOWN. EQUIPMENT GROUND CONDUCTOR SHALL BE ELECTRICALLY AND MECHANICALLY CONTINUOUS FROM THE ELECTRICAL CIRCUIT SOURCE TO THE EQUIPMENT TO BE GROUNDED. SIZE GROUND CONDUCTORS PER NEC 250 UNLESS LARGER CONDUCTORS ARE SHOWN ON THE DRAWINGS. MOTORS SHALL BE CONNECTED TO EQUIPMENT GROUND CONDUCTORS WITH A CONDUIT GROUNDING BUSHING AND WITH A BOLTED SOLDERLESS LUG CONNECTION ON THE METAL FRAME.
- GROUNDING CONDUCTORS SHALL BE IDENTIFIED WITH GREEN INSULATION, EXCEPT WHERE A BARE GROUND CONDUCTOR IS SPECIFIED. MEASURE GROUND RESISTANCE, SHALL BE 5 OHMS OR LESS.
- INSTALL RACEWAY COUPLINGS, FITTINGS AND TERMINATIONS SECURE AND TIGHT TO INSURE GOOD GROUND CONTINUITY. PROVIDE INSULATED GROUNDING BUSHING AND BONDING JUMPER WHERE METAL RACEWAY IS NOT DIRECTLY ATTACHED TO EQUIPMENT METAL ENCLOSURE AND AT CONCENTRIC KNOCK-OUTS.
- CONDUIT TERMINATING IN CONCENTRIC KNOCKOUTS AT PANELBOARDS, CABINETS AND GUTTERS SHALL HAVE INSULATED GROUNDINGS BUSHINGS AND BONDING JUMPERS INSTALLED INTERCONNECTING ALL SUCH CONDUITS AND THE PANELBOARD CABINET, GUTTER, ETC.
- PANELBOARDS SHALL HAVE COPPER BUSSING, COPPER GROUND BAR AND DOOR-IN-DOOR TRIM.

TESTING:

- AT COMPLETION OF JOB, CHECK VOLTAGE AT SEVERAL POINTS OF UTILIZATION ON THE SYSTEM WHICH HAS BEEN INSTALLED UNDER THIS CONTRACT. DURING TEST, ENERGIZE ALL LOADS INSTALLED. MEASURE 3-PHASE VOLTAGES AND NOTE PERCENTAGE DIFFERENCES.
- CONTRACTOR SHALL PERFORM TESTS AS SPECIFIED TO PROVE INSTALLATION IS IN ACCORDANCE WITH CONTRACT REQUIREMENTS. TESTS SHALL BE CONDUCTED DURING THE CONSTRUCTION PERIOD AND AT COMPLETION TO DETERMINE CONFORMITY WITH APPLICABLE CODES AND WITH THESE SPECIFICATIONS. TESTS, IN ADDITION TO SPECIFIC SYSTEM TEST DESCRIBED ELSEWHERE, SHALL INCLUDE:
 - PERFORM TESTING AS DESCRIBED IN NETA ATS. INCLUDE TE

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PROJECT

ORANGE COUNTY DEPARTMENT OF
EDUCATION ESPLANADE BLDG 4 TI

300 RED HILL AVENUE, COSTA MESA, CA 92626

2
DSA PROJECT # - 04-123078

DATE 10/09/2026

PROJECT # 026.0084.00

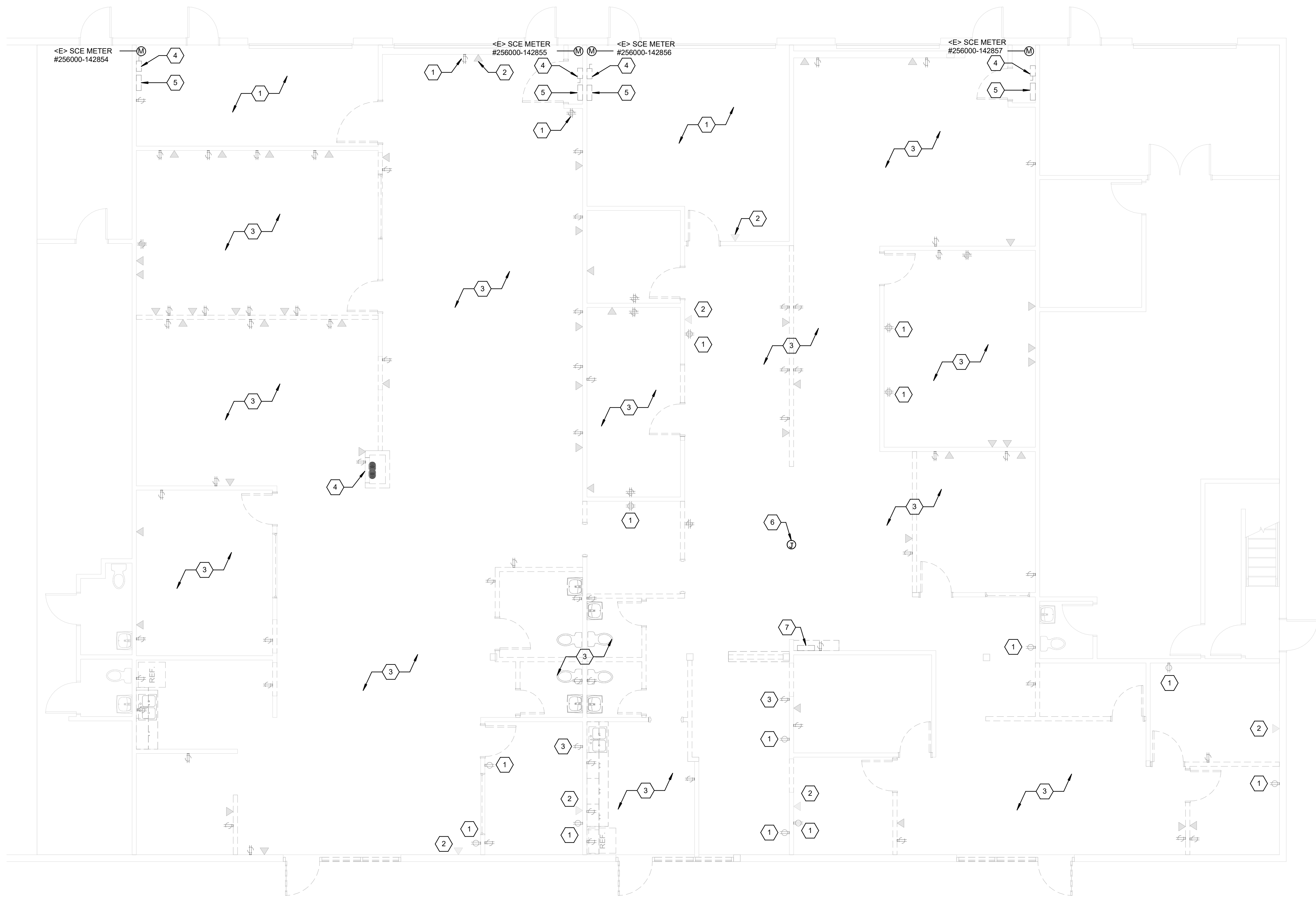
DESIGN PROFESSIONAL



TITLE
ELECTRICAL SPECIFICATIONS

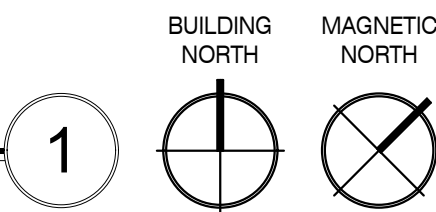
SHEET #

E002



FLOOR PLAN - POWER DEMO

SCALE: 3/16" = 1'-0"



GENERAL SHEET NOTES

- A. SEE SHEET E-001 FOR DEMOLITION NOTES AND ADDITIONAL GENERAL NOTES.
- B. ALL NEW ELECTRICAL DEVICES ARE SHOWN DIAGRAMMATICALLY. ELECTRICAL TO COORDINATE EXACT MOUNTING HEIGHT AND LOCATION WITH ARCHITECTURAL, REFRIGERATION AND OWNER PRIOR TO ROUGH-IN.
- C. U.O.N. ALL NEW CONDUITS SHALL BE CONCEALED ABOVE CEILINGS AND IN WALL. ALL NEW ELECTRICAL DEVICES SHALL BE RECESSED IN WALL. CUT & PATCH AND PAINT WALL TO MATCH ADJACENT WALL.
- D. CONTRACTOR SHALL REMOVE AND RENSTALL DEVICES AS NEEDED FROM AFFECTED WALLS SCHEDULED TO BE DEMOLISHED. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO REMOVED DEVICES DURING DEMOLITION AND REINSTALLATION.
- E. ALL ELECTRICAL DEVICES/DISCONNECT SWITCHES SHALL BE READILY ACCESSIBLE PER CODE REQUIREMENT.
- F. CONTRACTOR SHALL ADD CIRCUIT LABEL TO ALL NEW AND EXISTING RECEPTACLES PER DETAIL 4 ON SHEET E-501.
- G. ALL EXISTING ELECTRICAL DEVICES TO REMAIN PROTECTED IN PLACE.

KEYED SHEET NOTES

1. EXISTING ELECTRICAL EQUIPMENT TO REMAIN PROTECTED IN PLACE.
2. EXISTING DEVICE TO REMAIN PROTECTED IN PLACE. REMOVE ASSOCIATED CONNECTIONS BACK TO SOURCE.
3. REMOVE EXISTING DEVICES AND ASSOCIATED CONNECTIONS BACK TO SOURCE U.O.N.
4. REMOVE EXISTING DISCONNECT SWITCH AND ASSOCIATED WIRING/CONDUIT BACK TO SOURCE.
5. REMOVE EXISTING ELECTRICAL PANELBOARD AND ASSOCIATED EQUIPMENT. RE-CIRCUIT EXISTING BRANCH CIRCUITS TO NEW REPLACEMENT PANELBOARD AS INDICATED.
6. REMOVE EXISTING POWER POLE AND ASSOCIATED POWER/DATA WIRING AND CONDUIT BACK TO SOURCE. PATCH AND REPAIR CEILING AND FLOOR SURFACES TO MATCH ADJACENT FINISHES.
7. COORDINATE WITH IT DEPARTMENT FOR LOW VOLTAGE REQUIREMENTS.

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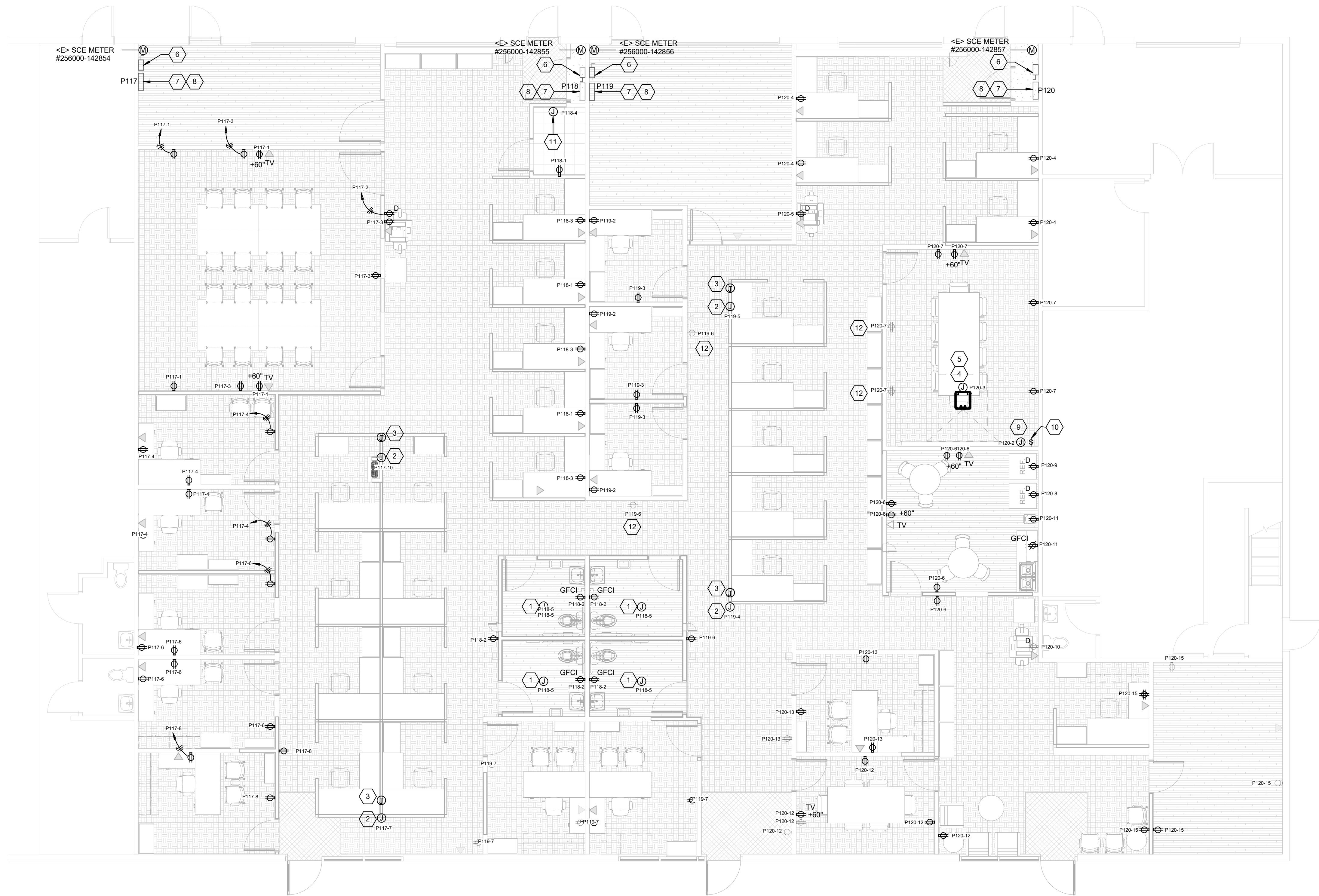
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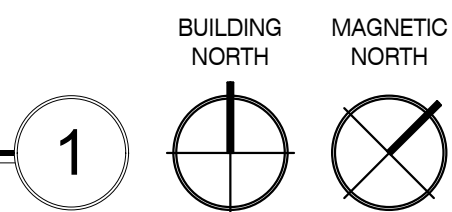
TITLE
ELECTRICAL FLOOR PLAN -
DEMO

SHEET #

E101



FLOOR PLAN - POWER
SCALE: 3/16" = 1'-0"



GENERAL SHEET NOTES

- SEE SHEET E-001 FOR DEMOLITION NOTES AND ADDITIONAL GENERAL NOTES.
- ALL NEW ELECTRICAL DEVICES ARE SHOWN DIAGRAMMATICALLY. ELECTRICAL TO COORDINATE EXACT MOUNTING HEIGHT AND LOCATION WITH ARCHITECTURAL, REFRIGERATION AND OWNER PRIOR TO ROUGH-IN.
- U.O.N. ALL NEW CONDUITS SHALL BE CONCEALED ABOVE CEILINGS AND IN WALL. ALL NEW ELECTRICAL DEVICES SHALL BE RECESSED IN WALL. CUT & PATCH AND PAINT WALL TO MATCH ADJACENT WALL.
- CONTRACTOR SHALL REMOVE AND REINSTALL DEVICES AS NEEDED FROM AFFECTED WALLS SCHEDULED TO BE DEMOLISHED. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO REMOVED DEVICES DURING DEMOLITION AND REINSTALLATION.
- ALL ELECTRICAL DEVICES/DISCONNECT SWITCHES SHALL BE READILY ACCESSIBLE PER CODE REQUIREMENT.
- CONTRACTOR SHALL ADD CIRCUIT LABEL TO ALL NEW AND EXISTING RECEPTACLES PER DETAIL 4 ON SHEET E-001.
- ALL EXISTING ELECTRICAL DEVICES TO REMAIN PROTECTED IN PLACE.

OKEYED SHEET NOTES

- PROVIDE 3/4" - 2#10 x 1#10 GND AND 20A RATED SWITCH FOR EXHAUST FAN. INTERIE WITH LIGHT SWITCH FOR CONTROL. PROVIDE WIRING AND RELAY AS REQUIRED.
- PROVIDE 3/4" - 2#10 x 1#10 GND FOR FURNITURE FEED.
- PROVIDE 3/4" WITH LOW VOLTAGE DATA WIRING FOR FURNITURE FEED. COORDINATE WITH OCDE FOR LOW VOLTAGE WIRING REQUIREMENTS AND TERMINATION POINT.
- PROVIDE 3/4" - 2#10 x 1#10 GND FOR CEILING-MOUNTED PROJECTOR.
- PROVIDE 3/4" WITH LOW VOLTAGE WIRING FOR CEILING-MOUNTED PROJECTOR. COORDINATE WITH OCDE FOR LOW VOLTAGE WIRING REQUIREMENTS AND TERMINATION POINT.
- PROVIDE 100A, 120/208V, 3P HEAVY DUTY FUSED DISCONNECT SWITCH (SUSE RATED). INTERCEPT AND EXTEND PREVIOUS POWER CONNECTION FROM RESPECTIVE SCE METER.
- PROVIDE 100A, 120/120V, 3PH SURFACE MOUNTED PANEL. REFER TO SHEET E-701 FOR PANEL SCHEDULE AND SINGLE LINE DIAGRAM FOR FEEDER REQUIREMENTS AND INFORMATION.
- RECIRCUIT ALL EXISTING TO REMAIN ELECTRICAL EQUIPMENT AND CONNECTIONS.
- PROVIDE 3/4" - 2#10 x 1#10 GND FOR MOTORIZED PROJECTOR SCREEN.
- PROVIDE 3/4" WITH CONTROL WIRING FROM 3-POSITION SWITCH UP/DOWN/STOP. COORDINATE WITH MANUFACTURER FOR EXACT REQUIREMENTS.
- PROVIDE 1" - 2#10 x 1#10 GND FOR DATA RACK. CONFIRM DATA RACK REQUIREMENTS WITH OCDE AND MANUFACTURER.
- PROVIDE 3/4" - 2#10 x 1#10 GND TO EXISTING QUADPLEX RECEPTACLE.

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**ORANGE COUNTY DEPARTMENT OF
EDUCATION ESPLANADE BLDG 4 TI**

300 RED HILL AVENUE, COSTA MESA, CA 92626

DSA PROJECT # - 04-123078

DATE 10/09/2026

PROJECT # 026.0084.00

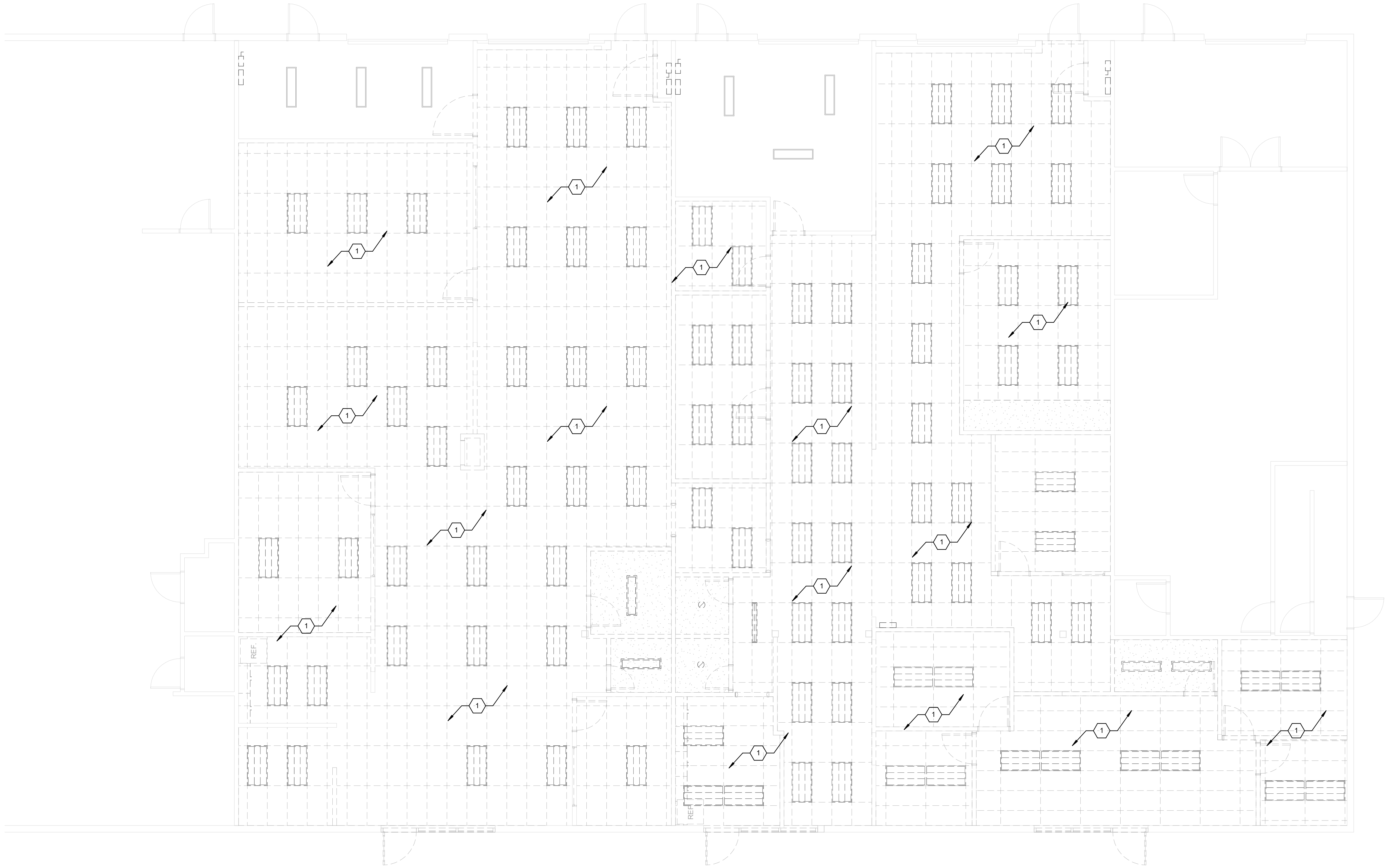
DESIGN PROFESSIONAL



TITLE
ELECTRICAL FLOOR PLAN - NEW

SHEET #

E102



FLOOR PLAN - LIGHTING DEMO
SCALE: 3/16" = 1'-0"

1

BUILDING NORTH
MAGNETIC NORTH

GENERAL SHEET NOTES

- SEE SHEET E-001 FOR DEMOLITION NOTES AND ADDITIONAL GENERAL NOTES.
- ALL NEW ELECTRICAL DEVICES ARE SHOWN DIAGRAMMATICALLY. ELECTRICAL TO COORDINATE EXACT MOUNTING HEIGHT AND LOCATION WITH ARCHITECTURAL, REFRIGERATION AND OWNER PRIOR TO ROUGH-IN.
- U.O.N. ALL NEW CONDUITS SHALL BE CONCEALED ABOVE CEILINGS AND IN WALL. ALL NEW ELECTRICAL DEVICES SHALL BE RECESSED IN WALL. CUT & PATCH AND PAINT WALL TO MATCH ADJACENT WALL.
- CONTRACTOR SHALL REMOVE AND REINSTALL DEVICES AS NEEDED FROM AFFECTED WALLS SCHEDULED TO BE DEMOLISHED. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO REMOVED DEVICES DURING DEMOLITION AND REINSTALLATION.
- ALL ELECTRICAL DEVICES/DISCONNECT SWITCHES SHALL BE READILY ACCESSIBLE PER CODE REQUIREMENT.
- CONTRACTOR SHALL ADD CIRCUIT LABEL TO ALL NEW AND EXISTING RECEPTACLES PER DETAIL 4 ON SHEET E-001.
- ALL EXISTING ELECTRICAL DEVICES TO REMAIN PROTECTED IN PLACE.

KEYED SHEET NOTES

- REMOVE EXISTING LIGHT FIXTURE/LIGHTING CONTROLS AND DEMOLISH ASSOCIATED CONNECTION BACK TO SOURCE. CONTRACTOR SHALL COORDINATE WITH OCDE TO CONFIRM WHICH LIGHT FIXTURES ARE TO BE SALVAGED AND TURNED OVER TO THE DISTRICT.

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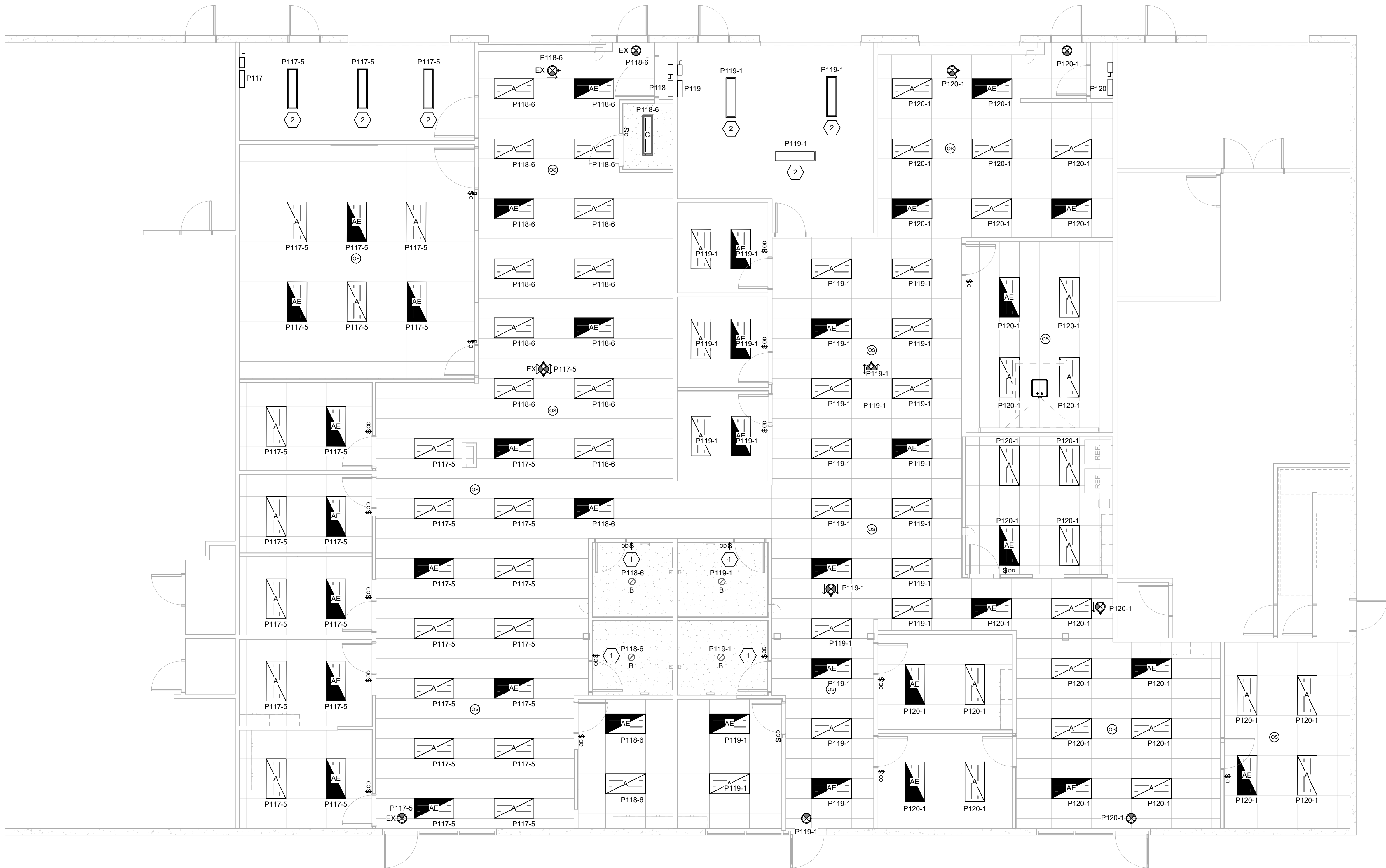
DESIGN PROFESSIONAL



TITLE
LIGHTING FLOOR PLAN - DEMO

SHEET #

E103



FLOOR PLAN - LIGHTING

SCALE: 3/16" = 1'-0"

1

BUILDING
NORTH



MAGNETIC
NORTH



GENERAL SHEET NOTES

- A. SEE SHEET E-001 FOR DEMOLITION NOTES AND ADDITIONAL GENERAL NOTES.
- B. ALL NEW ELECTRICAL DEVICES ARE SHOWN DIAGRAMMATICALLY, ELECTRICAL TO COORDINATE EXACT MOUNTING HEIGHT AND LOCATION WITH ARCHITECTURAL, REFRIGERATION AND OWNER PRIOR TO ROUGH-IN.
- C. U.O.N. ALL NEW CONDUITS SHALL BE CONCEALED ABOVE CEILINGS AND IN WALL. ALL NEW ELECTRICAL DEVICES SHALL BE RECESSED IN WALL. CUT & PATCH AND PAINT WALL TO MATCH ADJACENT WALL.
- D. CONTRACTOR SHALL REMOVE AND RENSTALL DEVICES AS NEEDED FROM AFFECTED WALLS SCHEDULED TO BE DEMOLISHED. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO REMOVED DEVICES DURING DEMOLITION AND REINSTALLATION.
- E. ALL ELECTRICAL DEVICES/DISCONNECT SWITCHES SHALL BE READILY ACCESSIBLE PER CODE REQUIREMENT.
- F. CONTRACTOR SHALL ADD CIRCUIT LABEL TO ALL NEW AND EXISTING RECEPTACLES PER DETAIL 4 ON SHEET E-501.
- G. ALL EXISTING ELECTRICAL DEVICES TO REMAIN PROTECTED IN PLACE.

KEYED SHEET NOTES

1. PROVIDE LIGHTING CONTROL. INTERTIE WITH EXHAUST FAN FOR CONTROL. PROVIDE WIRING RELAY AS REQUIRED.
2. CONNECT EXISTING LIGHT FIXTURE. CONTRACTOR TO PROVIDE CONDUIT AND WIRING AS NECESSARY.

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DESIGN PROFESSIONAL



TITLE
LIGHTING FLOOR PLAN - NEW

SHEET #

E104

TYPE	LAMP TYPE	VOLTAGE	WATTS	LUMENS	COLOR TEMP	CRI	MOUNTING	HEIGHT	MANUFACTURE	MODEL	COMMENTS
A	LED	120	34	4000	4000K	90	RECESSED	CEILING	LITHONIA	2BLT4-40L-ADSM-LP940	CONFIRM FINISH W/ ARCH.
AE	LED	120	34	4000	4000K	90	RECESSED	CEILING	LITHONIA	2BLT4-40L-ADSM-LP940-E10	CONFIRM FINISH W/ ARCH 90 MIN. BATTERY BACK-UP
B	LED	120	30	4000	4000K	90	SURFACE	CEILING	LITHONIA	LDN8-40K-30-LS6-MVOLT-G21	CONFIRM FINISH W/ ARCH 90 MIN. BATTERY BACK-UP
C	LED	120	30	4000	4000K	90	SURFACE	CEILING	LITHONIA	BLWP4-40L-ADSM-LP940	CONFIRM FINISH W/ ARCH
EX	LED	120	5	-	-	-	SURFACE	CEILING	LITHONIA	EDGR-1-REL	EXIT SIGN W/BATTERY BACK-UP

INTERIOR LIGHTING FIXTURE NOTES

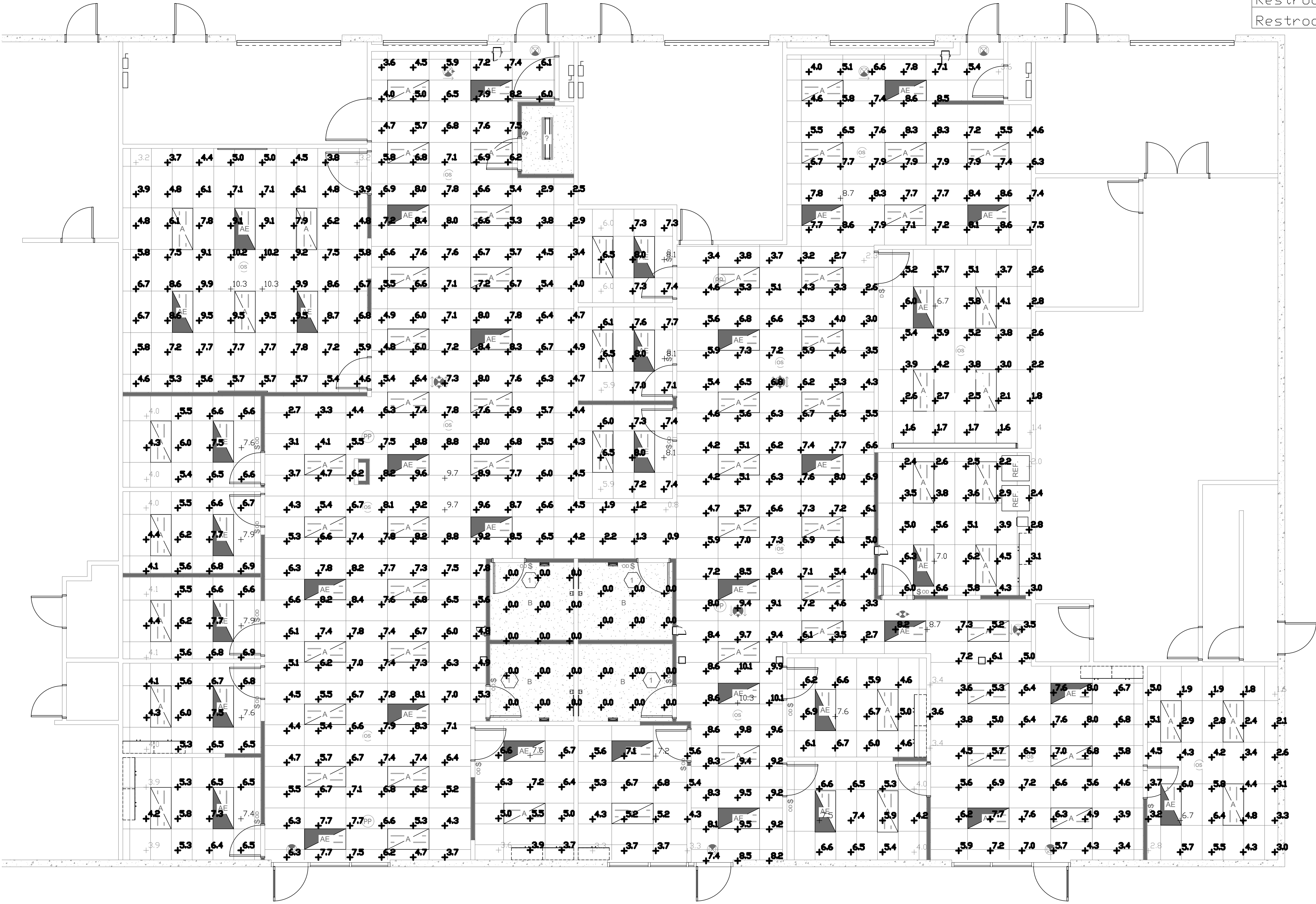
- ALL FIXTURES SHALL BE U.L. AND CERTIFIED PER C.E.C. 2-111.
- VERIFY CATALOG NUMBER PRIOR TO BIDDING OR PURCHASING.
- ALL LED FIXTURES SHALL BE 4000K UNLESS NOTED OTHERWISE.

LIGHT CONTROL DEVICE SCHEDULE			
MFR.	CATALOG NO.	DESCRIPTION	MTG.
nLIGHT	NLTAIR2 APIR	GEN2 CONTROL DEVICE WITH LOW MOUNT OCCUPANCY AND DAYLIGHT SENSOR	MOUNTING ON FIXTURE
nLIGHT	NLTAIREM2 APIR	GEN2 CONTROL DEVICE WITH LOW MOUNT OCCUPANCY AND DAYLIGHT SENSOR, WITH UL924 LISTED EMERGENCY OPERATION	MOUNTING ON FIXTURE

LIGHTING CONTROL DEVICES NOTES

- CONTRACTOR SHALL FURNISH AND INSTALL CAT5E CABLES BETWEEN LIGHTING CONTROL DEVICES PER MANUFACTURER REQUIREMENT.
- LIGHTING CONTROL SYSTEM SHALL BE COMMISSIONED BY MANUFACTURER'S REPRESENTATIVE.
- ALL LIGHT FIXTURES AND LIGHTING CONTROL DEVICES SHALL HAVE 5 YEARS WARRANTY.

Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
109 - Open Office	+	6.3 fc	9.7 fc	0.8 fc	12:1:1	7.9:1
110 - Conferenc Room	+	6.8 fc	10.3 fc	3.2 fc	3.2:1	2:1:1
118 - Open Office	+	6.5 fc	10.3 fc	2.3 fc	4.5:1	2.8:1
119 - Open Office	+	7.2 fc	8.7 fc	3.6 fc	2.4:1	2.0:1
121 - Conference	+	3.6 fc	6.7 fc	1.4 fc	4.8:1	2.6:1
122 - Break Room	+	4.1 fc	7.0 fc	2.0 fc	3.5:1	2:1:1
128 - Conference	+	5.8 fc	7.5 fc	4.0 fc	1.9:1	1.5:1
129 - Waiting Area	+	5.9 fc	8.7 fc	2.8 fc	3.1:1	2.1:1
130 - Storage	+	3.8 fc	6.7 fc	1.6 fc	4.2:1	2.4:1
Office	+	5.8 fc	7.4 fc	3.9 fc	1.9:1	1.5:1
Office	+	5.9 fc	7.6 fc	4.0 fc	1.9:1	1.5:1
Office	+	6.0 fc	7.9 fc	4.1 fc	1.9:1	1.5:1
Office	+	6.0 fc	7.9 fc	4.0 fc	2.0:1	1.5:1
Office	+	5.9 fc	7.6 fc	4.0 fc	1.9:1	1.5:1
Office	+	5.6 fc	7.6 fc	3.6 fc	2.1:1	1.6:1
Office	+	7.1 fc	8.1 fc	6.0 fc	1.4:1	1.2:1
Office	+	7.1 fc	8.1 fc	5.9 fc	1.4:1	1.2:1
Office	+	7.1 fc	8.1 fc	5.9 fc	1.4:1	1.2:1
Office	+	5.2 fc	7.2 fc	3.3 fc	2.2:1	1.6:1
Office	+	5.6 fc	7.6 fc	3.4 fc	2.2:1	1.6:1
Restroom	+	0.0 fc	0.0 fc	0.0 fc	N/A	N/A
Restroom	+	0.0 fc	0.0 fc	0.0 fc	N/A	N/A
Restroom	+	0.0 fc	0.0 fc	0.0 fc	N/A	N/A
Restroom	+	0.0 fc	0.0 fc	0.0 fc	N/A	N/A



ELECTRICAL EMERGENCY PHOTOMETRIC CALCULATIONS

AGENCY APPROVAL

studio+

2155 Bristol Street, Suite 250, Newport Beach, California 92660 | P: 949.315.1993
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MBI

PROJECT

ORANGE COUNTY DEPARTMENT OF
EDUCATION ESPLANADE BLDG 4 TI

300 RED HILL AVENUE, COSTA MESA, CA 92626

DSA PROJECT # - 04-123078

DATE 10/09/2026

PROJECT # 026.0084.00

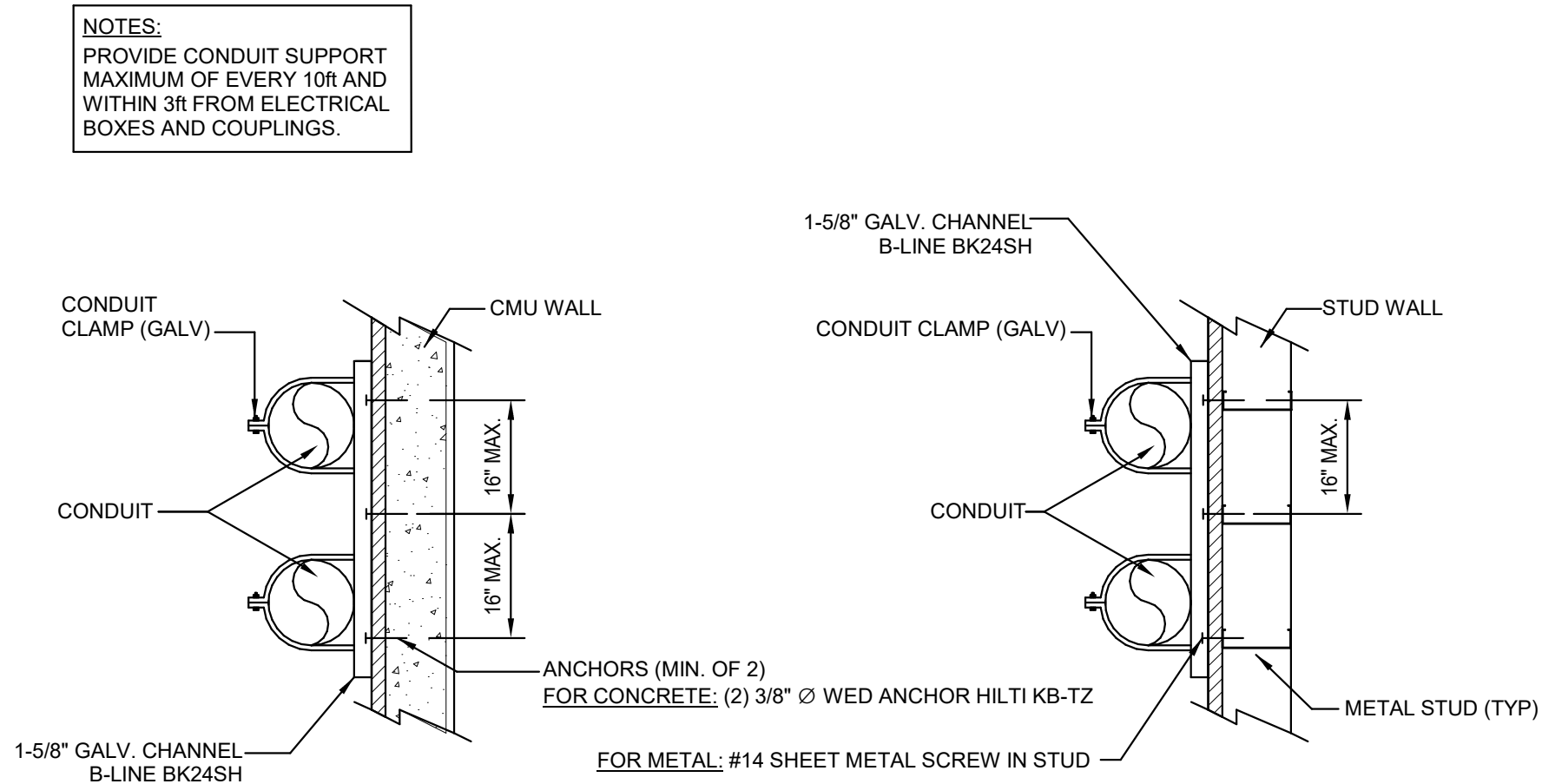
DESIGN PROFESSIONAL



TITLE
PHOTOMETRIC CALCULATIONS

SHEET #

E105

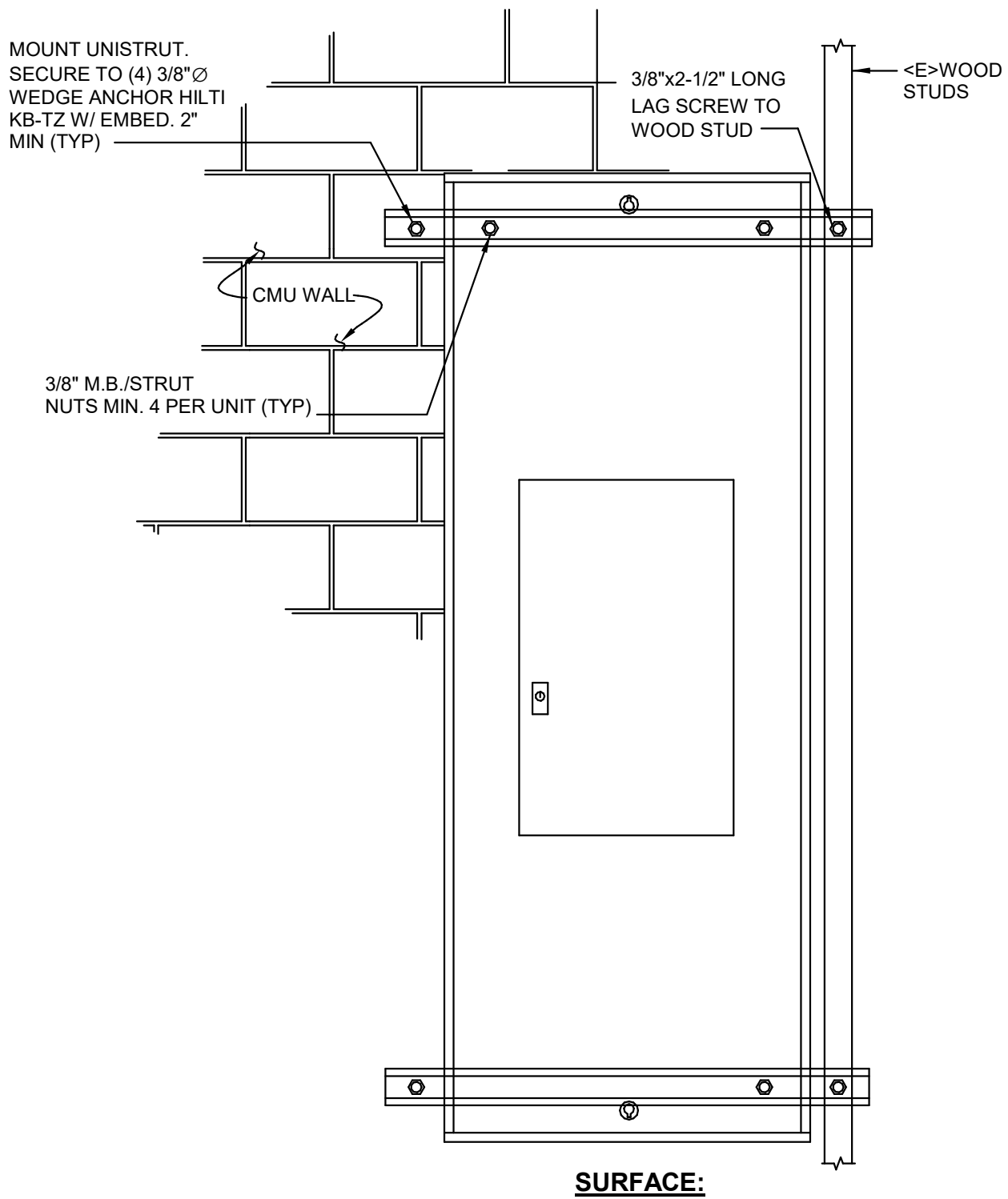


CONDUIT WALL SUPPORT

SCALE: NTS

4

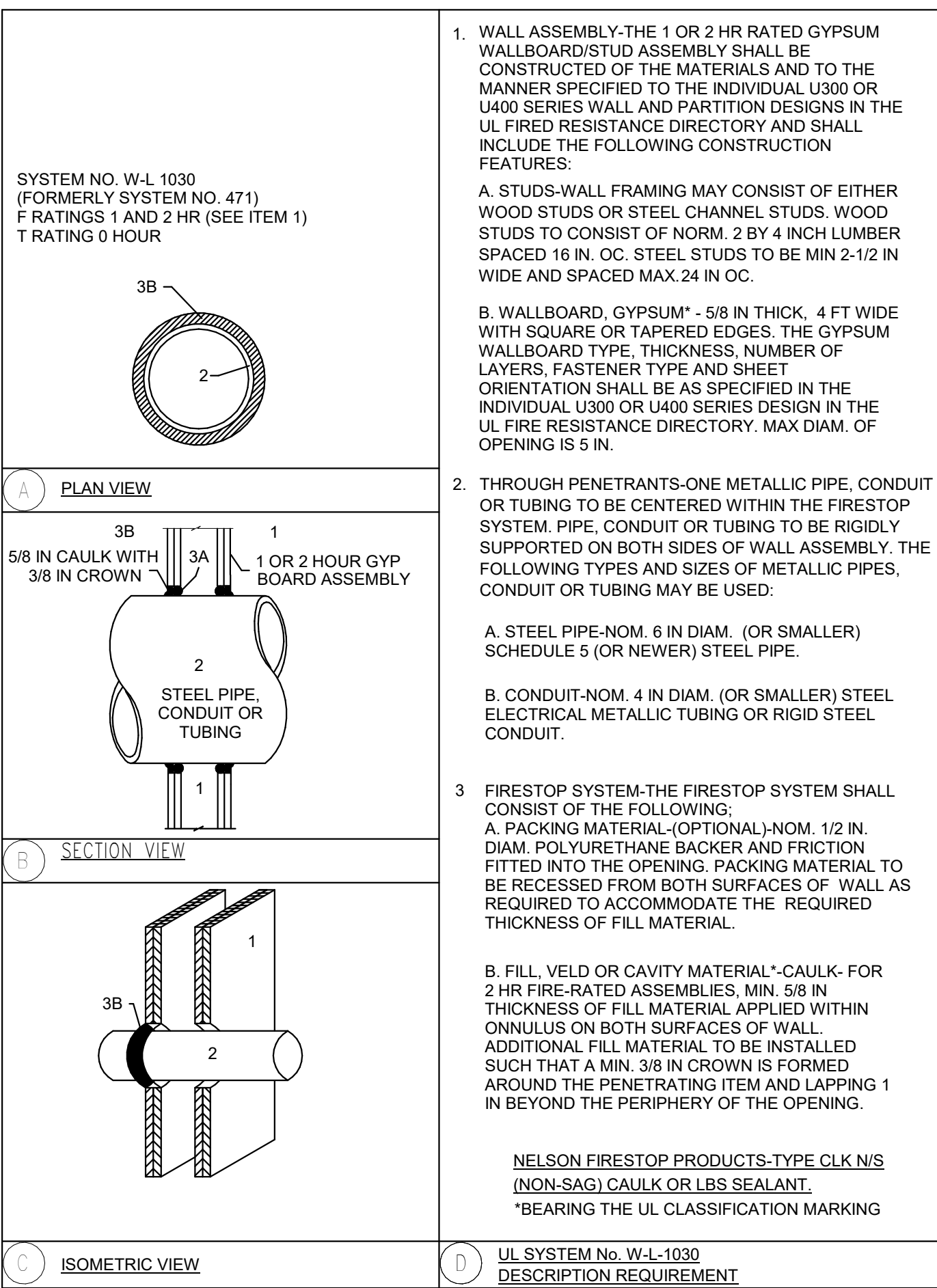
NOTE:
REFER TO STRUCTURAL SHEETS
FOR BLOCKING DETAILS



PANELBOARD MOUNTING
DETAIL

SCALE: NTS

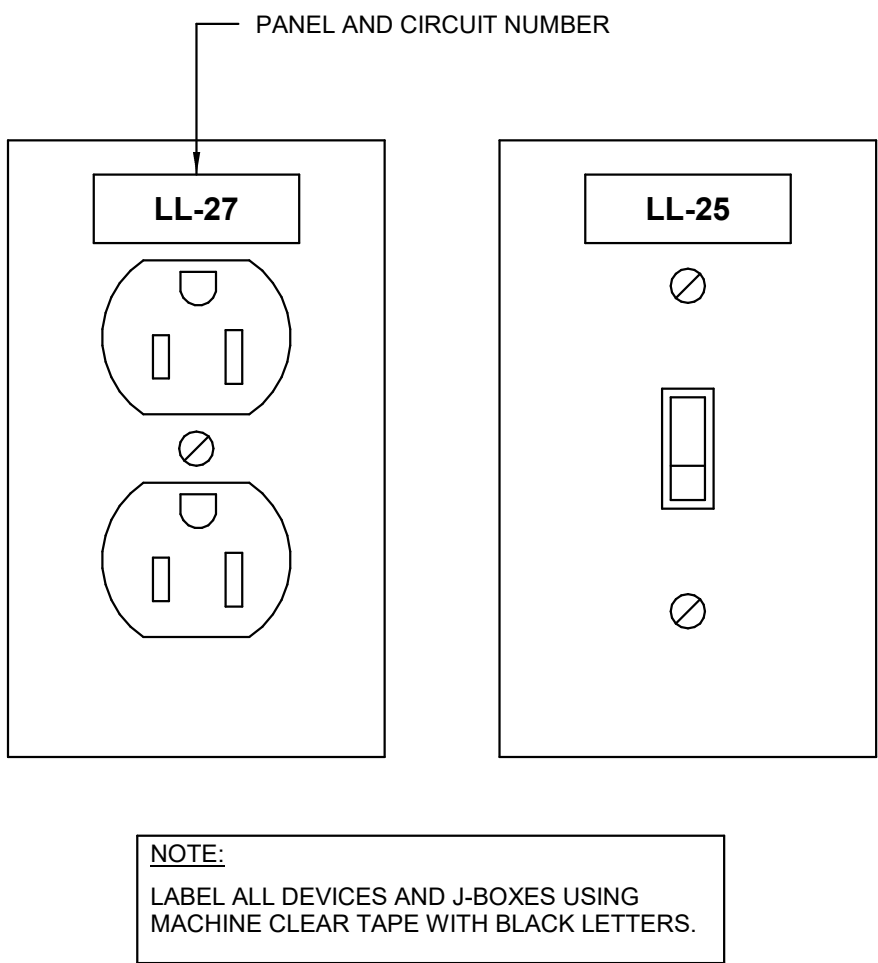
3



PENETRATION FIRESTOP
DETAIL

SCALE: NTS

2



DEVICE LABELING

SCALE: NTS

1

PROJECT

ORANGE COUNTY DEPARTMENT OF
EDUCATION ESPLANADE BLDG 4 TI

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DESIGN PROFESSIONAL

100% PROFESSIONAL
STATE OF CALIFORNIA

TITLE
ELECTRICAL DETAILS

SHEET #

E501

14

Branch Panel: P117

Location: STORAGE 113
Supply From:
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 3P
Phases: 3
Wires: 4

A.I.C. Rating:
Mains Type:
Mains Rating: 125 A
MCB Rating: 100 A

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT
1	R - 110 CONFERENCE REC	20 A	1	860	180			1	20 A R - 109 OPEN OFFICE COPY MACHINE	2
3	R - 110 CONFERENCE REC	20 A	1		720	1080		1	20 A R - 104.105 OFFICE REC	4
5	L - 101-105, 108, 110, 111 LIGHTING	20 A	1					1	20 A R - 102.103 OFFICE REC	6
7	E - 109 OPEN OFFICE POWER POLE	20 A	1	500	540			1	20 A R - 101 OFFICE REC	8
9	SPARE	20 A	1		0	500		1	20 A E - 109 OPEN OFFICE POWER POLE	10
11	SPARE	20 A	1			0	0	1	20 A SPARE	12
13	SPARE	20 A	1	0	0			1	20 A SPARE	14
15	SPARE	20 A	1		0	0		1	20 A SPARE	16
17	SPARE	20 A	1			0	0	1	20 A SPARE	18
19	SPARE	20 A	1	0	0			1	20 A SPARE	20
21	SPARE	20 A	1		0	0		1	20 A SPARE	22
23	SPARE	20 A	1			0	0	1	20 A SPARE	24
25	SPARE	20 A	1	0	0			1	20 A SPARE	26
27	SPARE	20 A	1		0	0		1	20 A SPARE	28
29	SPARE	20 A	1			0	0	1	20 A SPARE	30
31	SPARE	20 A	1	0	0			1	20 A SPARE	32
33	SPARE	20 A	1		0	0		1	20 A SPARE	34
35	SPARE	20 A	1			0	0	1	20 A SPARE	36
37	SPARE	20 A	1	0	0			1	20 A SPARE	38
39	SPARE	20 A	1		0	0		1	20 A SPARE	40
41	SPARE	20 A	1			0	0	1	20 A SPARE	42
Total Load:				2080 VA	2300 VA	2128 VA				
Total Amps:				17 A	19 A	18 A				

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
L - LIGHTING	100 VA		125 VA	
R - RECEPTACLE	3960 VA	100.00%	3960 VA	Total Conn. Load: 6508 VA
E - EQUIPMENT	1500 VA	100.00%	1500 VA	Total Est. Demand: 6533 VA
Lighting	948 VA	100.00%	948 VA	Total Conn. Current: 18 A
				Total Est. Demand Current: 18 A

14

Branch Panel: P118

Location: ELEC 112
Supply From:
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 3P
Phases: 3
Wires: 4

A.I.C. Rating:
Mains Type:
Mains Rating: 200 A
MCB Rating: 200 A

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT
1	R - 111 IDF REC	20 A	1	540	900			1	20 A R - 107.108.123.124 RESTROOM REC	2
3	R - 109 OPEN OFFICE REC	20 A	1		540	0		1	20 A E - 111 IDF DATA RACK	4
5	E - 107, 108, 123, 124 RESTROOM EXHAUST...	20 A	1			0	600	1	20 A L - 106.109 LIGHTING	6
7	SPARE	20 A	1	0	0			1	20 A SPARE	8
9	SPARE	20 A	1		0	0		1	20 A SPARE	10
11	SPARE	20 A	1			0	0	1	20 A SPARE	12
13	SPARE	20 A	1	0	0			1	20 A SPARE	14
15	SPARE	20 A	1		0	0		1	20 A SPARE	16
17	SPARE	20 A	1			0	0	1	20 A SPARE	18
19	SPARE	20 A	1	0	0			1	20 A SPARE	20
21	SPARE	20 A	1		0	0		1	20 A SPARE	22
23	SPARE	20 A	1			0	0	1	20 A SPARE	24
25	SPARE	20 A	1	0	0			1	20 A SPARE	26
27	SPARE	20 A	1		0	0		1	20 A SPARE	28
29	SPARE	20 A	1			0	0	1	20 A SPARE	30
31	SPARE	20 A	1	0	0			1	20 A SPARE	32
33	SPARE	20 A	1		0	0		1	20 A SPARE	34
35	SPARE	20 A	1			0	0	1	20 A SPARE	36
37	SPARE	20 A	1	0	0			1	20 A SPARE	38
39	SPARE	20 A	1		0	0		1	20 A SPARE	40
41	SPARE	20 A	1			0	0	1	20 A SPARE	42
Total Load:				1440 VA	540 VA	600 VA				
Total Amps:				12 A	5 A	5 A				

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
L - LIGHTING	70 VA		125.00%	
R - RECEPTACLE	1980 VA	100.00%	1980 VA	Total Conn. Load: 2580 VA
E - EQUIPMENT	0 VA	0.00%	0 VA	Total Est. Demand: 2588 VA
Lighting	530 VA	100.00%	530 VA	Total Conn. Current: 7 A
				Total Est. Demand Current: 7 A

14

Branch Panel: P119

Location: STORAGE 114
Supply From:
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 3P
Phases: 3
Wires: 4

A.I.C. Rating:
Mains Type:
Mains Rating: 125 A
MCB Rating: 100 A

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT
1	L - 114-118, 123, 124, 126 LIGHTING	20 A	1	951	540			1	20 A R - 115, 116, 117 OFFICE REC	2
3	R - 115, 116, 117 OFFICE REC	20 A	1		540	500		1	20 A E - 118 OPEN OFFICE POWER POLE	4
5	E - 118 OPEN OFFICE POWER POLE	20 A	1			500	900	1	20 A R - 110 OPEN OFFICE REC	6
7	R - 106, 125 OFFICE REC	20 A	1	900	0			1	20 A SPARE	8
9	SPARE	20 A	1		0	0		1	20 A SPARE	10
11	SPARE	20 A	1			0	0	1	20 A SPARE	12
13	SPARE	20 A	1	0	0			1	20 A SPARE	14
15	SPARE	20 A	1		0	0		1	20 A SPARE	16
17	SPARE	20 A	1			0	0	1	20 A SPARE	18
19	SPARE	20 A	1	0	0			1	20 A SPARE	20
21	SPARE	20 A	1		0	0		1	20 A SPARE	22
23	SPARE	20 A	1			0	0	1	20 A SPARE	24
25	SPARE	20 A	1	0	0			1	20 A SPARE	26
27	SPARE	20 A	1		0	0		1	20 A SPARE	28
29	SPARE	20 A	1			0	0	1	20 A SPARE	30
31	SPARE	20 A	1	0	0			1	20 A SPARE	32
33	SPARE	20 A	1		0	0		1	20 A SPARE	34
35	SPARE	20 A	1			0	0	1	20 A SPARE	36
37	SPARE	20 A	1	0	0			1	20 A SPARE	38
39	SPARE	20 A	1		0	0		1	20 A SPARE	40
41	SPARE	20 A	1			0	0	1	20 A SPARE	42
Total Load:				2391 VA	1040 VA	1400 VA				
Total Amps:				20 A	9 A	12 A				

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
L - LIGHTING	165 VA		125.00%	
R - RECEPTACLE	2880 VA	100.00%	2880 VA	Total Conn. Load: 4831 VA
E - EQUIPMENT	1000 VA	100.00%	1000 VA	Total Est. Demand: 4872 VA
Lighting	786 VA	100.00%	786 VA	Total Conn. Current: 13 A
				Total Est. Demand Current: 14 A

14

Branch Panel: P120

Location: ELEC 120
Supply From:
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 3P
Phases: 3
Wires: 4

A.I.C. Rating:
Mains Type:
Mains Rating: 125 A
MCB Rating: 100 A

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT
1	L - 119, 121, 122, 127-130 LIGHTING	20 A	1	1024	0			1	20 A E - 121 CONF. MOTORIZED PROJECTOR...	2
3	E - 121 CONFERENCE PROJECTOR	20 A	1		0	720		1	20 A R - 119 OPEN OFFICE REC	4
5	E - 119 OPEN OFFICE COPY MACHINE	20 A	1			1200	1150	1	20 A R - 122 BREAK ROOM REC	6
7	R - 121 CONFERENCE REC	20 A	1	1510	180			1	20 A R - 122 BREAK ROOM FRIDGE	8
9	R - 122 BREAK ROOM FRIDGE	20 A	1		180	1200		1	20 A E - 129 WAITING AREA COPY MACHINE	10
11	R - 122 BREAK ROOM COUNTERWATER REC	20 A	1			430	1150	1	20 A R - 128 CONFERENCE ROOM REC	12
13	R - 127 CONFERENCE REC	20 A	1	720	0			1	20 A SPARE	14
15	R - 130 STORAGE REC	20 A	1		1080	0		1	20 A SPARE	16
17	SPARE	20 A	1			0	0	1	20 A SPARE	18
19	SPARE	20 A	1	0	0			1	20 A SPARE	20
21	SPARE	20 A	1		0	0		1	20 A SPARE	22
23	SPARE	20 A	1			0	0	1	20 A SPARE	24
25	SPARE	20 A	1	0	0			1	20 A SPARE	26
27	SPARE	20 A	1		0	0		1	20 A SPARE	28
29	SPARE	20 A	1			0	0	1	20 A SPARE	30
31	SPARE	20 A	1	0	0			1	20 A SPARE	32
33	SPARE	20 A	1		0	0		1	20 A SPARE	34
35	SPARE	20 A	1			0	0	1	20 A SPARE	36
37	SPARE	20 A	1	0	0			1	20 A SPARE	38
39	SPARE	20 A	1		0	0		1	20 A SPARE	40
41	SPARE	20 A	1			0	0	1	20 A SPARE	42
Total Load:				3434 VA	3180 VA	3930 VA				
Total Amps:				29 A	27 A	33 A				

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
L - LIGHTING	20 VA		125.00%	
R - RECEPTACLE	6120 VA	100.00%	6120 VA	Total Conn. Load: 10544 VA
E - EQUIPMENT	3400 VA	100.00%	3400 VA	Total Est. Demand: 10549 VA
Lighting	1004 VA	100.00%	1004 VA	Total Conn. Current: 29 A
				Total Est. Demand Current: 29 A

14

Branch Panel: P120

Location: ELEC 120
Supply From:
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 3P
Phases: 3
Wires: 4

A.I.C. Rating:
Mains Type:
Mains Rating: 125 A
MCB Rating: 100 A

14

Branch Panel: P120

Location: ELEC 120
Supply From:
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 3P
Phases: 3
Wires: 4

A.I.C. Rating:
Mains Type:
Mains Rating: 125 A
MCB Rating: 100 A