SECTION 01 00 00 – GENERAL REQUIREMENTS

1. Drawings are diagrammatic and should not be scaled for exact dimensions; exact dimensions and locations shall be determined by measurements in the field and shall be subject to approval by the Architect/Engineer. The Contractor shall verify dimension prior to ordering equipment and material.
2. Before submitting a bid, it will be necessary for each Contractor to visit the site and ascertain for himself/herself the conditions to be met in installing the work and make provisions for the conditions in the final price. Failure to comply with this requirement shall not be considered justification for the omission or faulty installation of any work. By submitting a bid, the Contractor is stating that the bid covers all work necessary to properly install the system indicated.
3. In case of disagreement between the Drawing and Specifications, or within the Drawings or Specifications, the bid shall include the greater amount of work and the matter shall be referred to the Architect/Engineer.
4. The Contractor shall secure and pay all fees associated with any and all necessary permits, licenses, and inspections required for the work.
5. All work shall comply with all pertinent national, state, and local ordinances and codes, and all American Disabilities Act (ADA) requirements, and any amendments, as well as any/all **Texas Accessibility Standards (TAS)**. Nothing within the Drawings or Specifications shall be construed as waiving any of the rules, regulations, or requirements of the authorities having jurisdiction. In the event of a conflict, the requirements of the authority having jurisdiction shall govern. The conflict shall be reported to the Architect/Engineer immediately, and necessary modification shall be made at no additional cost to the Owner or Architect/Engineer.
6. If the requirements of these Construction Documents are in excess of those required by Code, the provisions of the Construction Documents shall take precedence.
7. All equipment and materials for which approval standards have been established by Underwriters' Laboratories, Inc. (UL), Factory Mutual (FM), and American Standard Codes shall be so approved and shall bear approval labels.
8. All work shall be in compliance with all applicable safety regulations.
9. Should any doubt arise as to the true meaning of the Drawings or Specifications, reference shall be made to the Architect/Engineer, whose decision shall be final. The Architect/Engineer will respond within 10 business days after receipt of request for information. The Contractor shall conform to these responses as part of the Contract with no additional cost to the Owner or Architect/Engineer. No alleged statement by the Architect/Engineer is acceptable excuse for inferior work.
10. The listing of product manufacturers, materials and methods is intended to establish a standard of quality. Products by other manufacturers may be accepted provided they have the equivalent capacity, construction, and performance. The Engineer shall be the sole judge of quality and equivalence of equipment, materials, and methods. However, under no circumstances shall any substitution be made without written approval of the Architect/Engineer prior to bidding.
11. Equipment has been chosen to fit within the available space. Where substituted or alternative equipment is proposed, it shall be the Contractor's responsibility to verify that the equipment will fit within the space available, including all required code and maintenance clearances, and to coordinate all equipment requirements with other Contractors.
12. Obtain all equipment or material of each type through one source, locally when possible, from a single manufacturer.
13. Substitutions: Products of equal performance characteristics may be considered. Contractors wishing to substitute a product or material shall submit such request to the Architect/Engineer in writing at least 7 DAYS PRIOR to bids being due. Requests will not be considered after that time. The Architect/Engineer shall review the request and is acceptable will issue a letter allowing the substitution. Any anticipated use of a non–specified product without written approval is strictly the risk of the Contractor. If a request is rejected, the Contractor shall furnish the specified product or material. Each contractor is responsible for costs incurred by other trades as a result of any substitution made by the Contractor.
14. Submittals: Submit the following in accordance with Division 1 Specifications and the requirements of this section for each piece of equipment and each type of component and material.
    - 14.1. Submit product data for each type of product specified.
    - 14.2. Submit shop/coordination drawings at a minimum scale of 1/4"=1'–0" detailing all major equipment, component, and systems in relation to work of other trades, indicating installation, code, and working clearances and access for all equipment and components.
    - 14.3. Submit samples of color, lettering, and graphics for each identification product.
    - 14.4. Contractor shall separate submittals to contain no more than one Specification section.
    - 14.5. Within 30 days after award of Contract, the Contractor shall submit a minimum of four (4) copies of each submittal with coversheet to the Architect/Engineer. If acceptable to the Architect/Owner, an electronic version containing the coversheet and all submittal data within one file may be submitted in lieu of the 4 copies.
    - 14.6. Each submittal shall include the following information. Submittals that do not comply with the following requirements will be marked "REJECTED" and returned.
        - 14.6.1. Coversheet: Indicating the names and address of the Project, Architect, Engineer, and Contractor, and the submittal name and number. Number shall be based on the Specification section, submittal sequence number, and a revision sequence number, if applicable. Ex: 262726–02–R1 is the 1st revision to the 2nd submittal for section 26 27 26.
        - 14.6.2. List of Variations: This page shall list all variations including furnished/unfurnished options and features between the submitted item and the scheduled/specified item. If there are not variations, the page shall state "NO VARIATIONS."
        - 14.6.3. Product Information: Clearly indicate manufacturer's name, designation, size, performance and capacity data, dimensional data, sufficient pictorial and diagrammatic data to show conformance with the Construction Documents. Applicable information shall be clearly indicated and non–applicable information shall be struck–out.
        - 14.6.4. Warranty Information: Manufacturer's warranty certificate that meets or exceed the requirements of the Construction Documents.
        - 14.6.5. Certification by the General and Sub–Contractor that material submitted is in accordance with the Construction Documents, signed and dated.
    - 14.7. Submittal review time in the Engineer's office will be a minimum of 10 working days per review. The Contractor shall consider this review time when scheduling work.
    - 14.8. Each submittal will be marked with one of the following :
        - 14.8.1. NO EXCEPTIONS TAKEN – Submittal was reviewed and no deviations were found.
        - 14.8.2. EXCEPTIONS NOTED, SUBMIT RESPONSE – Submittal was reviewed and found to have minor deviations or missing information. A re–submittal is not required; however, a written response to all review comments shall be submitted.
        - 14.8.3. EXCEPTIONS NOTED, RESUBMIT – Submittal was reviewed and major deviations were noted. The submittal shall be revised to address the noted deviations and resubmitted.
        - 14.8.4. REJECTED – Submittal was reviewed and is not in conformance or is not in the correct format. A revised submittal that is in conformance shall be resubmitted.
    - 14.9. Inadequate or incomplete submittals will not be reviewed and will be returned marked "REJECTED."
    - 14.10. The Architect's/Engineer's review of a submittal shall not relieve the Contractor of the responsibility for errors, omissions, oversights, or deviations that may be contained within the submittal. If the Contractor proceeds based on undetected errors, omissions, oversights, or deviations, it is at his/her sole responsibility. Regardless of any information contained in the submittal or the Engineer's review thereof, the Contract Documents shall govern the Work and neither waived nor superseded by the submittal review.
    - 14.11. Equipment and material purchased without a "NO EXCEPTIONS TAKEN" submittal review is at the risk of the Contractor. The cost of removal and replacement of such items which is judged unsatisfactory by the Architect/Engineer for any reason shall be at the Contractor's expense.
15. Operation & Maintenance Requirements (per energy code):
    - 15.1. Record Drawings: The Contractor shall maintain a set of clearly marked Record Drawing prints at the site, which indicated all alterations and changes. Within 90 days after the date of system acceptance provide a reproducible set of record drawings to the building owner or the designated representative of the building owner. Record drawings shall include as a minimum the location and performance data on each piece of equipment, general configuration of duct and pipe distribution system including sizes, and the terminal air or water design flow rates. Record drawings provided to building owner or building owner's representative shall be in the building owner's requested format (plots, CAD, pdf, etc.) with the Architect's/Engineer's seals struck–out and each drawing marked with the General and associated Sub–Contractors' names and date.
    - 15.2. Operation and Maintenance Manuals: Provide operating manual and a maintenance manual to the building owner or the designated representative of the building owner within 90 days after the date of system acceptance. These manuals shall be in accordance with industry–accepted standards and shall include, at a minimum, the following:
        - 15.2.1. Submittal data stating equipment size and selected options for each piece of equipment requiring maintenance. Submittal data shall be based on final "NO EXCEPTIONS TAKEN" submission from previous specification section requirements
        - 15.2.2. Operation manuals and maintenance manuals for each piece of equipment requiring maintenance, except equipment not furnished as part of the project. Required routine maintenance actions shall be clearly identified.
        - 15.2.3. Names and addresses of at least one service agency.
        - 15.2.4. HVAC controls system maintenance and calibration information, including wiring diagrams, schematics, and control sequence descriptions. Desired or field–determined set–points shall be permanently recorded on control drawings at control devices or, for digital control systems, in programming comments.
        - 15.2.5. A complete narrative/description of how each system furnished is intended to operate, including suggested initial set–points.
16. All equipment and material shall be installed, connected, and adjusted per the manufacturer's written instructions and recommendations.
17. The Contractor shall be held responsible for coordinating with all other trades prior to system installation. The Contractor shall refer to other trade plans for other work that may impact his/her work.
18. Where space requirements conflict, the following order of precedence shall be used.
    - 18.1. Building Lines and Structural Members.
    - 18.2. Soil, Drain, and Condensate Piping.
    - 18.3. Grease–Rated Ductwork.
    - 18.4. Refrigerant and Vent Piping.
    - 18.5. HVAC Ductwork.
    - 18.6. HVAC and Domestic Water Piping.
    - 18.7. Fire Protection (Sprinkler & Standpipe) Piping.
    - 18.8. Electrical Conduit.
19. The Contractor shall take care during work to avoid damage to work by other trades.
20. The Contractor shall keep the premises free of debris and rubbish caused by his/her work on a daily basis. This debris and rubbish shall be removed from the building and site.
21. Guarantee: The Contractor shall guarantee the entire installation to be in proper working order for a period of one (1) year, unless noted otherwise, after final acceptance and shall furnish free of charge all materials and labor necessary to comply with this guarantee.
22. Demolition: Where accessible work is to be demolished, it shall be removed in its entirety to a point of permanent concealment. Where work to be demolished is not accessible, remove system to 2' below the surface, cap, and patch surface to match existing. Where work to remain is damaged, remove the damaged portions and install new of equal capacity, quality, and function.
23. Work within Existing Building: Construction shall be arranged to minimize the hazard and interruption to the occupants. Do not interrupt services to the occupants without written permission from the Architect/Owner/Tenant, a minimum of 5 working days prior to the interruption. Where disruption of a service becomes necessary, provisions shall be made to provide temporary service throughout the interruption of the primary service.

CODE COMPLIANCE INFORMATION

ENERGY CODE COMPLIANCE

2021 IECC - C103.2 INFORMATION ON CONSTRUCTION DOCUMENTS

1.	INSULATION MATERIALS AND THEIR R-VALUES.	REFER TO MECHANICAL BOOK SPECS SECTION 230700
2.	FENESTRATION U-FACTORS AND SOLAR HEAT GAIN COEFFICIENTS (SHGCs).	REFER TO ARCHITECTURAL PLANS.
3.	AREA-WEIGHTED U-FACTOR AND SOLAR HEAT GAIN COEFFICIENT (SHGC) CALCULATIONS.	REFER TO ARCHITECTURAL PLANS.
4.	MECHANICAL SYSTEM DESIGN CRITERIA.	REFER TO MECHANICAL BOOK SPECS
5.	MECHANICAL AND SERVICE WATER HEATING SYSTEM AND EQUIPMENT TYPES, SIZES, AND EFFICIENCIES.	REFER TO MECHANICAL AND PLUMBING SCHEDULES ON SHEETS M3.01 AND P4.01.
6.	ECONOMIZER DESCRIPTION.	REFER TO MECHANICAL SHEET M3.01.
7.	EQUIPMENT AND SYSTEM CONTROLS.	REFER TO MECHANICAL SHEET M3.01.
8.	FAN MOTOR HORSEPOWER (HP) AND CONTROLS.	REFER TO MECHANICAL SHEET M3.01.
9.	DUCT SEALING, DUCT AND PIPE INSULATION, AND LOCATION.	REFER TO MECHANICAL BOOK SPECS SECTION 233113.
10.	LIGHTING FIXTURE SCHEDULE WITH WATTAGE AND CONTROL NARRATIVE.	REFER TO ELECTRICAL SHEET E6.01.
11.	LOCATION OF DAYLIGHT ZONES ON FLOOR PLANS.	REFER TO ELECTRICAL SHEET E2.01.
12.	AIR SEALING DETAILS.	REFER TO ARCHITECTURAL PLANS.

CALCULATION OF HEATING AND COOLING LOADS PER IECC C403.2.1

Program used:
Elite Software CHVAC Commercial HVAC Loads: Version 7.01
Developed by Elite Software Development, Inc.
Uses ASHRAE Cooling Load Temperature Difference/Cooling Load Factor (CLTD/CLF)
method as described in ASHRAE Fundamentals.
Uses weather database and ASHRAE fundamentals adjustment factors for Hourly calculations.

ASHRAE Standard 183 appendix B Compliance Statement

Building or Zone Name: Wells Fargo Greeley

Location or Address: tbd, Greeley CO

Design Conditions:
Weather Data Used:
Winter design dry–bulb: 28 deg F
Summer design dry–bulb/wet–bulb: 96/80.5 deg F

Indoor Dry Bulb Design Temperature:
Heating: 72 deg F
Cooling: 75 deg F

Indoor Design Relative Humidity:
Heating: 50% RH
Cooling: 50% RH

Load Calculation Method:
_X_CLTD/CLF–Cooling Load Temperature Difference/Cooling Load Factor
____HB–Heat Balance
____TEDA/TA–Total Equivalent Temperature Difference/Time Averaging
____**TFM–Transfer Function**
____RTS–Radiant Time Series
____Other (specify)_____

We understand the software used to be in compliance with ANSI/ASHRAE/ACCA Standard 183 based on developer statements or descriptions of calculation methods in developer documentation. Program used is typical for this industry.

Applicable Codes W/ City of Greeley Amendments
- 2021 IBC
- 2021 IMC
- 2021 IFC
- 2021 IPC
- 2021 IECC
- 2023 NEC

MECHANICAL SYMBOL LEGEND

ALL SYMBOLS MAY NOT BE USED. VERIFY WITH PLANS.
REFER TO SPECIFICATIONS AND PLAN NOTES FOR OTHER REQUIREMENTS

GRILLES, REGISTERS & DIFFUSERS

- SUPPLY AIR SLOT DIFFUSER (4', 3' & 2' LENGTHS SHOWN) (EXISTING – NEW – DEMOLITION)
- SUPPLY AIR CEILING DIFFUSER (2'X2' SHOWN, OTHERS SIMILAR) (EXISTING – NEW – DEMOLITION)
- RETURN AIR CEILING DIFFUSER (2'X2' SHOWN, OTHERS SIMILAR) (EXISTING – NEW – DEMOLITION)
- EXHAUST AIR CEILING DIFFUSER (2'X2' SHOWN, OTHERS SIMILAR) (EXISTING – NEW – DEMOLITION)
- SUPPLY AIR CEILING DIFFUSER WITH SECTORING BAFFLE (ARROW DENOTES AIRFLOW – SHADING DENOTE NO AIRFLOW)
- SIDEWALL SUPPLY AND SIDEWALL RETURN (FACE SIZE NOTED ON PLANS)
- SUPPLY AIR LIGHT TROFFER (EXISTING – NEW – DEMOLITION)
- A/250 — AIR DEVICE TAG (TYPE/CFM)

DUCTWORK (ALL DUCTWORK SHALL CONFORM WITH SMACNA REQUIREMENTS)

- 18/12 — NEW RECTANGULAR DUCTWORK (CLEAR INSIDE DIMENSION) FIRST NUMBER IS VISIBLE DIMENSION
- 14ø — NEW ROUND DUCTWORK (CLEAR INSIDE DIMENSION)
- NEW FLEXIBLE DUCTWORK SEE SPECS/DETAILS/SCHEDULES FOR SIZE AND MAX. LENGTH.
- EXISTING / DEMOLITION DUCTWORK
- HARD ROUND / FLEXIBLE DUCTWORK BRANCH TAKEOFF WITH SPIN–IN DAMPERS
- RECTANGULAR BRANCH TAKEOFF WITH VOLUME DAMPER
- RECTANGULAR ELBOW — PROVIDE TURNING VANES FOR ALL RECTANGULAR ELBOWS, REGARDLESS IF INDICATED
- R=DUCT WIDTH — STANDARD RADIUS ELBOW — *WHERE SPACE DOES NOT ALLOW STANDARD RADIUS ELBOWS, SHORT RADIUS ELBOWS WITH TURNING VANES MAY BE USED.
- R — SLOPING RISE IN DUCTWORK
- D — SLOPING DROP IN DUCTWORK
- ELBOW UP IN DUCTWORK (SUPPLY – RETURN – EXHAUST)
- ELBOW DOWN IN DUCTWORK (SUPPLY – RETURN – EXHAUST)

DAMPERS

- MANUAL AND AUTOMATIC/MOTORIZED CONTROL DAMPERS "XX" DENOTES TYPE
  VD – VOLUME DAMPER
  OAD – OUTSIDE AIR DAMPER
  RAD – RETURN AIR DAMPER
  BDD – BACK DRAFT DAMPER
- SAFETY DAMPERS (ACCESS DOORS AND SLEEVES NOT SHOWN) "XX" DENOTES TYPE
  FD – FIRE DAMPER
  SD – SMOKE DAMPER
  FSD – FIRE/SMOKE DAMPER

EQUIPMENT

- EQUIPMENT (EXISTING – NEW – DEMOLITION) MAINTENANCE ACCESS NOT SHOWN ON EXISTING. KEEP OTHER SYSTEMS CLEAR. MANUFACTURER'S RECOMMENDED CLEARANCES SHALL PREVAIL.
- XX / # — EQUIPMENT TAG "XX" DENOTES EQUIPMENT TYPE – "#" DENOTES DESIGNATION
- VAV–3–6 SIZE 10 1200 C 740 H .7 kW — TYPICAL EXISTING VAV BOX INFORMATION
  DESIGNATION
  SIZE
  MAX COOLING SETPOINT, CFM (FOR REFERENCE)
  MAX HEATING SETPOINT, CFM, IF APPLICABLE (FOR REFERENCE)
  HEATER SIZE, IF APPLICABLE

CONTROLS

- (T) (T) (T) — THERMOSTAT OR TEMPERATURE SENSOR (PER PLAN NOTES) (EXISTING – NEW – DEMOLITION))
- (H) (H) (H) — HUMIDISTAT OR HUMIDITY SENSOR (PER PLAN NOTES) (EXISTING – NEW – DEMOLITION))
- (S) (S) (S) — GENERAL SENSOR – SEE PLAN NOTES FOR MOUNTING AND TYPE (EXISTING – NEW – DEMOLITION)
- CONTROL CABLING OR TUBING

PIPING

- HVAC PIPING – REFER TO ABBREVIATION FOR SYSTEM TAG (EXISTING – NEW – DEMOLITION)

HVAC PIPING ABBREVIATIONS

CHW	– CHILLED WATER	CW	– CONDENSER WATER
PCHW	– PRIMARY CHILLED WATER	SCHW	– SECONDARY CHILLED WATER
COND	– CONDENSATE	HW	– HOT WATER (SERVICE)
REF	– REFRIGERANT		

ANY OF ABOVE WITH "S" OR "R" INDICATES SUPPLY OR RETURN RESPECTIVELY

PLUMBING PIPING (EXISTING – NEW – DEMOLITION)

- SANITARY SEWER PIPING
- GREASE WASTE PIPING — GW
- COMBINATION WASTE/VENT PIPING — CWV
- SANITARY VENT PIPING
- DOMESTIC COLD WATER PIPING
- DOMESTIC HOT WATER PIPING – IF NOT NOTED, 105' — 140°
- DOMESTIC HOT WATER RETURN PIPING — 140°
- NATURAL GAS PIPING — G
- FIRE PROTECTION PIPING — F

- FITTINGS – NOT ALL FITTINGS SHOWN ON PLAN
  1–ELBOW UP, 2–DROP IN LINE, 3–ELBOW, 4–STRAIGHT TEE, 5–TEE OUTLET UP, 6–TEE OUTLET DOWN, 7–CAP, 8–ELBOW IN DROP, 9–TOP CONNECTION, 10–BOTTOM CONNECTION, 11–ELBOW DOWN, 12–CONTINUATION
- VALVES – REFER TO SPECS FOR TYPE BASED ON APPLICATION
  A–MANUAL VALVE, B–ACTUATED VALVE, C–MANUAL 3–WAY VALVE, D–CONTROLLED 3–WAY VALVE, E–CHECK VALVE
- GAS FITTINGS – NOT ALL FITTINGS SHOWN ON PLAN
  1–GAS COCK, 2–PRESSURE REGULATOR, 3–THREADED UNION, 4–FLANGED UNION, 5–SOLENOID VALVE
- PLUMBING SPECIALTIES – SEE RISER & SCHEDULES FOR SIZE
- BACKFLOW PREVENTOR
- HUB DRAIN / P–TRAP
- FLOOR DRAIN
- FLOOR SINK
- FLOOR / GRADE CLEANOUT
- WALL CLEANOUT
- VTR — VENT–THROUGH–ROOF TAG "#" DENOTES DESIGNATION

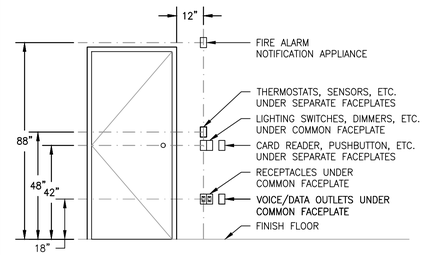
GENERAL SYMBOL LEGEND

ALL SYMBOLS MAY NOT BE USED. VERIFY WITH PLANS.
REFER TO SPECIFICATIONS AND PLAN NOTES FOR OTHER REQUIREMENTS

- (#) — KEYED NOTE "#" DENOTES NUMBER
- # — REVISION DELTA TAG "#" DENOTES NUMBER
- REVISION CLOUD – DENOTES APPROXIMATE AREA OF CHANGES CONTRACTOR RESPONSIBLE TO VERIFY ACTUAL CHANGES
- CONNECTION TO EXISTING FIELD VERIFY EXACT CONNECTION LOCATION AND SIZE

TYPICAL DEVICE MOUNTING

ALL SYMBOLS MAY NOT BE USED. VERIFY WITH PLANS.
REFER TO SPECIFICATIONS AND PLAN NOTES FOR OTHER REQUIREMENTS



1 MECHANICAL LEGENDS, NOTES & SYMBOLS
SCALE = NTS

WELLS FARGO

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ARCHITECT

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TEXAS REGISTRATION #F-10421

THESE DOCUMENTS ARE RELEASED FOR INTERIM REVIEW ONLY UNDER THE AUTHORITY OF JUSTIN D COTHERN, P.E. 56534 ON 04/25/25. IT IS NOT TO BE USED FOR CONSTRUCTION/PERMIT PURPOSES.

SET ISSUE

	SET ISSUE FOR	DATE
	BID	04/25/2025

REVISIONS

REV	REASON FOR ISSUE	DATE

REVIEWED BY: JC

DRAWN BY: BR

WF BE# 112766

WF PROJECT# 419105

SHEET TITLE

MECHANICAL LEGENDS, NOTES & SYMBOLS

SHEET NUMBER

M0.00

T&D PROJECT NUMBER
24169

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GAS PIPING MATERIAL

A. NATURAL GAS PIPING TO BE ASTM A53 SCHEDULE 40 BLACK STEEL PIPING AND PAINTED SAFETY YELLOW.

MECHANICAL GENERAL NOTES

A. CONTRACTOR TO PROPERLY SEAL ALL NEW DUCTWORK.
B. ALL CONSTRUCTION IS TO CONFORM TO MORE STRINGENT OF PLAN AND SPECIFICATION REQUIREMENTS AND LOCAL CODE. CONFORM TO SMACNA HVAC CONSTRUCTION STANDARDS AS A MINIMUM WHERE NO OTHER SPECIFICATIONS OR CODE REQUIREMENTS APPLY.
C. RETURN AIR IS THROUGH RETURN AIR GRILLES AND DUCTWORK BACK TO THE MECHANICAL UNITS. CONTRACTOR TO MAINTAIN RETURN AIR PATH.

KEYED NOTES

1 CONNECT GAS LINE TO UTILITY MAIN GAS LINE ON SITE. GAS STUB UP CONNECTION FOR NEW METER LOCATION TO BE PROVIDED BY UTILITY COMPANY. FIELD VERIFY ALL FINAL CONNECTION POINTS PRIOR TO INSTALL AND ROUTING WITH UTILITY COMPANY. REFER TO CIVIL PLANS FOR CONTINUATION.
2 ROUTE NEW GAS LINE TO ROOF. COORDINATE EXACT ROUTING IN FIELD WITH STRUCTURAL.

1 MECHANICAL GAS ENTRY PLAN
1/4" = 1'-0"

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WELLS FARGO

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SET ISSUE

	SET ISSUE FOR	DATE
	BID	04/25/2025

REVISIONS

REV	REASON FOR ISSUE	DATE

REVIEWED BY: BH
DRAWN BY: AR

WF BE# 112766

WF PROJECT# 419105

SHEET TITLE

MECHANICAL GAS ENTRY PLAN

SHEET NUMBER

M0.01

T&D PROJECT NUMBER
24169

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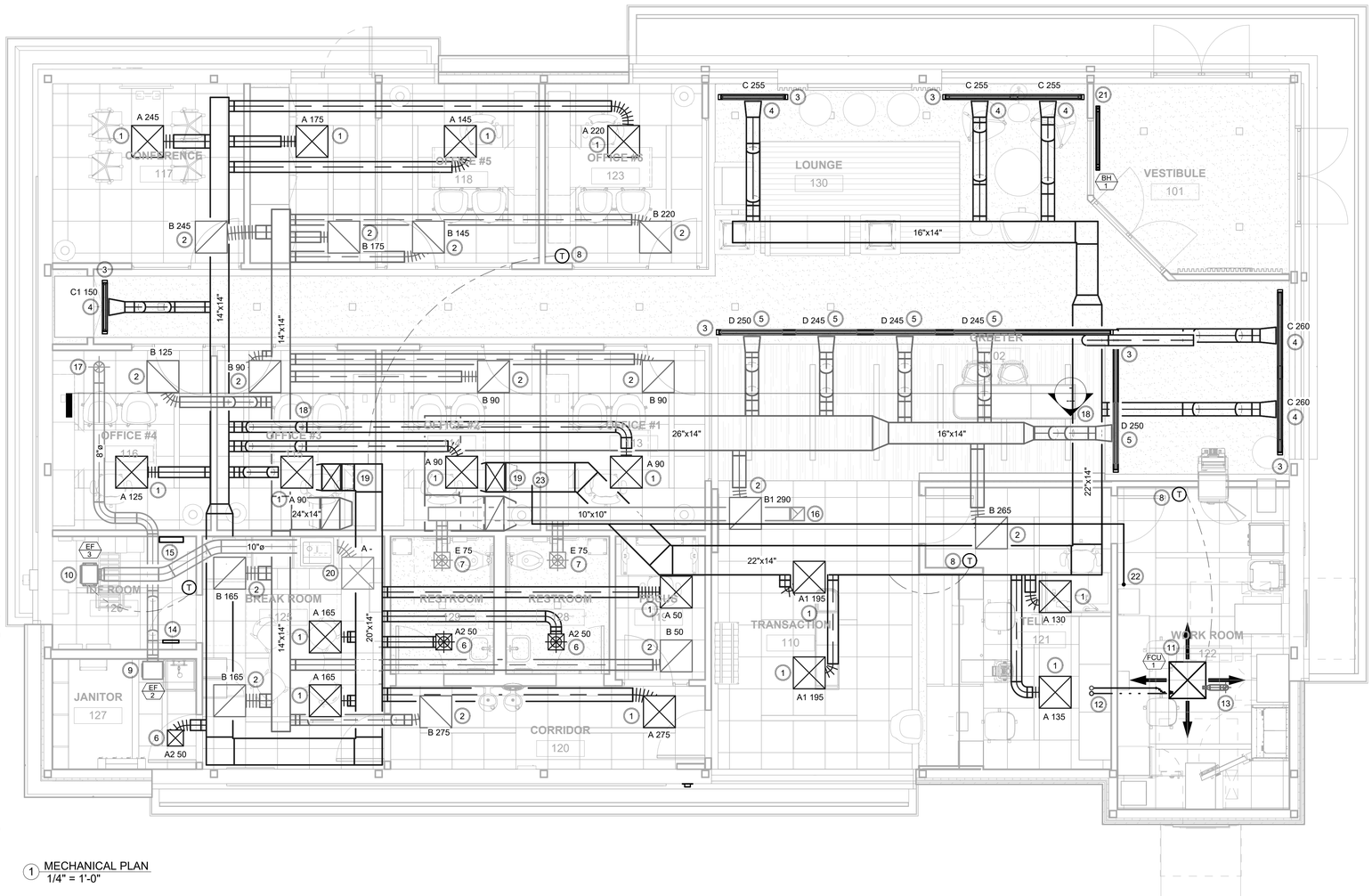
MECHANICAL GENERAL NOTES

A. CONTRACTOR TO PROPERLY SEAL ALL NEW DUCTWORK.

B. ALL CONSTRUCTION IS TO CONFORM TO MORE STRINGENT OF PLAN AND SPECIFICATION REQUIREMENTS AND LOCAL CODE. CONFORM TO SMACNA HVAC CONSTRUCTION STANDARDS AS A MINIMUM WHERE NO OTHER SPECIFICATIONS OR CODE REQUIREMENTS APPLY.

C. RETURN AIR IS THROUGH RETURN AIR GRILLES AND DUCTWORK BACK TO THE MECHANICAL UNITS. CONTRACTOR TO MAINTAIN RETURN AIR PATH.



1 MECHANICAL PLAN
1/4" = 1'-0"

KEYED NOTES

1. NEW 2X2 CEILING SUPPLY DIFFUSER. PROVIDE NEW SPIN-IN AND FLEX DUCTWORK. BALANCE TO CFM INDICATED. SEE SCHEDULE.
2. NEW 2X2 DUCTED CEILING RETURN AIR GRILLE. PROVIDE NEW SPIN-IN AND FLEX DUCTWORK. BALANCE TO CFM INDICATED. SEE SCHEDULE.
3. PROVIDE FL-15-HT/JT TYPE FLOWBAR TRACK AS SHOWN. PROVIDE BLANK-OFFS FOR UNUSED SECTIONS OF FLOWBAR TRACK. FLOWBAR TRACK IS TO BE FLOATED/TAPED AND SPACKLED INTO NEW CEILING SO THAT TRACK FLANGES ARE NOT VISIBLE. PROVIDE BALANCE AT THE FACE CAPABILITIES AND BALANCE TO CFM INDICATED. COORDINATE EXACT FINAL LENGTH AND LOCATION WITH ARCHITECT AND EXISTING CONDITIONS.
4. NEW SLOT SUPPLY DIFFUSER. PROVIDE HARD ROUND DUCTWORK TO SLOT PLENUM WITH REMOTE DAMPER AND BALANCE AT SLOT FACE CAPABILITIES. BALANCE TO CFM INDICATED. SEE SCHEDULE.
5. NEW DUCTED RETURN AIR SLOT DIFFUSER. PROVIDE HARD ROUND DUCTWORK TO SLOT PLENUM WITH REMOTE DAMPER AND BALANCE AT SLOT FACE CAPABILITIES. BALANCE TO CFM INDICATED. SEE SCHEDULE.
6. NEW 1X1 CEILING SUPPLY DIFFUSER. PROVIDE NEW SPIN-IN AND FLEX DUCTWORK. BALANCE TO CFM INDICATED. SEE SCHEDULE.
7. NEW 1X1 CEILING EXHAUST DIFFUSER. PROVIDE NEW SPIN-IN AND FLEX DUCTWORK. BALANCE TO CFM INDICATED. SEE SCHEDULE.
8. NEW T-STAT. CONNECT TO CONTROL PANEL. PROVIDE NEW CONTROL WIRING AS NECESSARY. FIELD VERIFY EXACT FINAL LOCATION WITH ARCHITECT PRIOR TO INSTALLATION TO AVOID CONFLICT WITH SHELVING, FURNITURE, ETC.
9. NEW CEILING MOUNTED EXHAUST FAN WITH BACK DRAFT DAMPER TO BE INTERLOCKED AND CONTROLLED WITH LIGHTING FIXTURES WITHIN JANITOR'S CLOSET. PROVIDE DUCTWORK SIZE AS NOTED ON PLAN TO EXHAUST AIR ROOF CAP. FIELD VERIFY EXACT LOCATION/ROUTING.
10. NEW CEILING MOUNTED EXHAUST FAN. PROVIDE A PROGRAMMABLE T-STAT SET TO 75°F (ADJUSTABLE). PROVIDE DUCTWORK (SIZE AS NOTED ON PLAN) A MINIMUM OF 15' AWAY FROM FAN. FIELD VERIFY EXACT LOCATION/ROUTING.
11. NEW CEILING MOUNTED CASSETTE DX FAN COIL UNIT. SEE SCHEDULE AND SEQUENCE OF OPERATION. PROVIDE NEW REFRIGERANT PIPING AS SHOWN. SIZE REFRIGERANT PIPING PER MANUFACTURERS REQUIREMENTS. PROVIDE WITH INTEGRAL CONDENSATE PUMP. ROUTE NEW CONDENSATE DRAIN LINE TO FLOOR SINK IN JANITOR'S CLOSET, OR OTHER CODE APPROVED LOCATION. PROVIDE FACTORY T-STAT. MAINTAIN MANUFACTURER'S RECOMMENDED UNIT CLEARANCES. VERIFY EXACT LOCATION WITH TENANT PRIOR TO INSTALLATION TO AVOID CONFLICT WITH EQUIPMENT. FIXTURES.
12. ROUTE REFRIGERANT PIPING UP TO CONDENSING UNIT ON THE ROOF. SEE SHEET M2.01 FOR CONTINUATION.
13. ROUTE NEW 4" DUCT UP THROUGH ROOF FROM CEILING CASSETTE TO BRING OUTSIDE AIR TO UNIT.
14. PROVIDE 12"X8" ALUMINUM LOUVER IN DOOR FOR IDF ROOM AIR TRANSFER AND PAINT TO MATCH DOOR. COORDINATE WITH ARCHITECT PRIOR TO INSTALLATION.
15. LOCATE BUILDING DISTECH CONTROL PANEL WITHIN IT ROOM. COORDINATE EXACT LOCATION AND ALL REQUIREMENTS WITH OWNER'S IT REP.
16. ROUTE EXHAUST AIR DUCTWORK UP TO ROOF MOUNTED EXHAUST FAN AT THIS LOCATION. SEE SHEET M2.01 FOR MORE INFORMATION.
17. ROUTE EXHAUST AIR DUCTWORK UP TO ROOF CAP AT THIS LOCATION. SEE SHEET M2.01 FOR MORE INFORMATION.
18. SUPPLY AND RETURN TAPS WITHIN PLENUM SHALL BE ROUTED BELOW MAIN DUCTWORK WHERE THEY CROSS TO AVOID CONFLICTS.
19. ROUTE ALL MAIN DUCTWORK AS HIGH AS POSSIBLE TIGHT TO STRUCTURE. COORDINATE ROUTING WITHIN HIGHER CEILING AREA TO AVOID CONFLICTS WITH CEILING AND LIGHT FIXTURES.
20. DISCHARGE EXHAUST AIR FROM IDF ROOM TO LOCATION OUTSIDE OF ROOM. BALANCE AIR DEVICES TO MATCH CFM OF FAN SERVING ROOM.
21. PROVIDE NEW BASE BOARD HEATER AND HARDWIRE ELECTRICAL CONNECTION FOR SUPPLEMENTAL HEATING WITHIN VESTIBULE. COORDINATE CONDUIT RUN DOWN WALL TO HEATER LOCATION. VESTIBULE TO HAVE INDEPENDENT CONTROLS AND HAVE RANGE SETPOINTS TO RESTRICT HEATING BASED OFF OUTSIDE AIR TEMPERATURE.
22. CONTRACTOR TO ROUTE TUBING FROM SCENT DIFFUSER TO BASE OF SUPPLY DUCTWORK AS SHOWN.
23. CONTRACTOR TO PROVIDE RIGID PROBE ASSEMBLY AT END OF TUBING RUN TO BE INSTALLED A MINIMUM OF 6 INCHES INTO THE AIR STREAM TO DELIVER SCENT INTO SUPPLY AIR STREAM. CONTRACTOR TO SEAL DUCTWORK AROUND PROBE ASSEMBLY TO PREVENT AIR LEAKAGE. COORDINATE ALL WORK/REQUIREMENTS WITH SCENT DIFFUSER MANUFACTURER.

WELLS FARGO

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SET ISSUE

SET ISSUE FOR	DATE
BID	04/25/2025

REVISIONS

REV	REASON FOR ISSUE	DATE

REVIEWED BY: JC

DRAWN BY: BR

WF BE# 112766

WF PROJECT# 419105

SHEET TITLE

MECHANICAL PLAN

SHEET NUMBER

M1.01

T&D PROJECT NUMBER
24169

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MECHANICAL GENERAL NOTES

A. CONTRACTOR TO PROPERLY SEAL ALL NEW DUCTWORK.

B. ALL CONSTRUCTION IS TO CONFORM TO MORE STRINGENT OF PLAN AND SPECIFICATION REQUIREMENTS AND LOCAL CODE. CONFORM TO SMACNA HVAC CONSTRUCTION STANDARDS AS A MINIMUM WHERE NO OTHER SPECIFICATIONS OR CODE REQUIREMENTS APPLY.

C. RETURN AIR IS THROUGH RETURN AIR GRILLES AND DUCTWORK BACK TO THE MECHANICAL UNITS. CONTRACTOR TO MAINTAIN RETURN AIR PATH.

KEYED NOTES

1 NEW PACKAGED ROOFTOP UNIT TO BE PLACED ON NEW ROOF CURB. CONDENSATE DRAINAGE TO ROUTE THRU ROOF CURB AND DOWN TO FLOOR SINK IN JANITOR'S CLOSET. COORDINATE EXACT ROUTING WITH FINAL LOCATION TO MAINTAIN REQUIRED SLOPE. CONTRACTOR TO ENSURE OUTSIDE AIR INTAKE IS A MINIMUM OF 15' FROM NEAREST VENT OR EXHAUST OUTLET. ROUTE ELECTRICAL UP THROUGH CURB. SEE SCHEDULE.

2 NEW OUTDOOR CONDENSING UNIT. CONDENSING UNIT TO BE LOCATED ON ROOF LEVEL AS SHOWN. PROVIDE NEW REFRIGERANT PIPING THRU ROOF TO NEW CEILING MOUNTED CASSETTE FAN COIL UNIT. PIPE SIZE TO BE PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE ROOF CURB/PLATFORM FOR MOUNTING. COORDINATE ALL ROOF WORK WITH ROOFING CONTRACTOR. SEE SCHEDULE AND DETAILS.

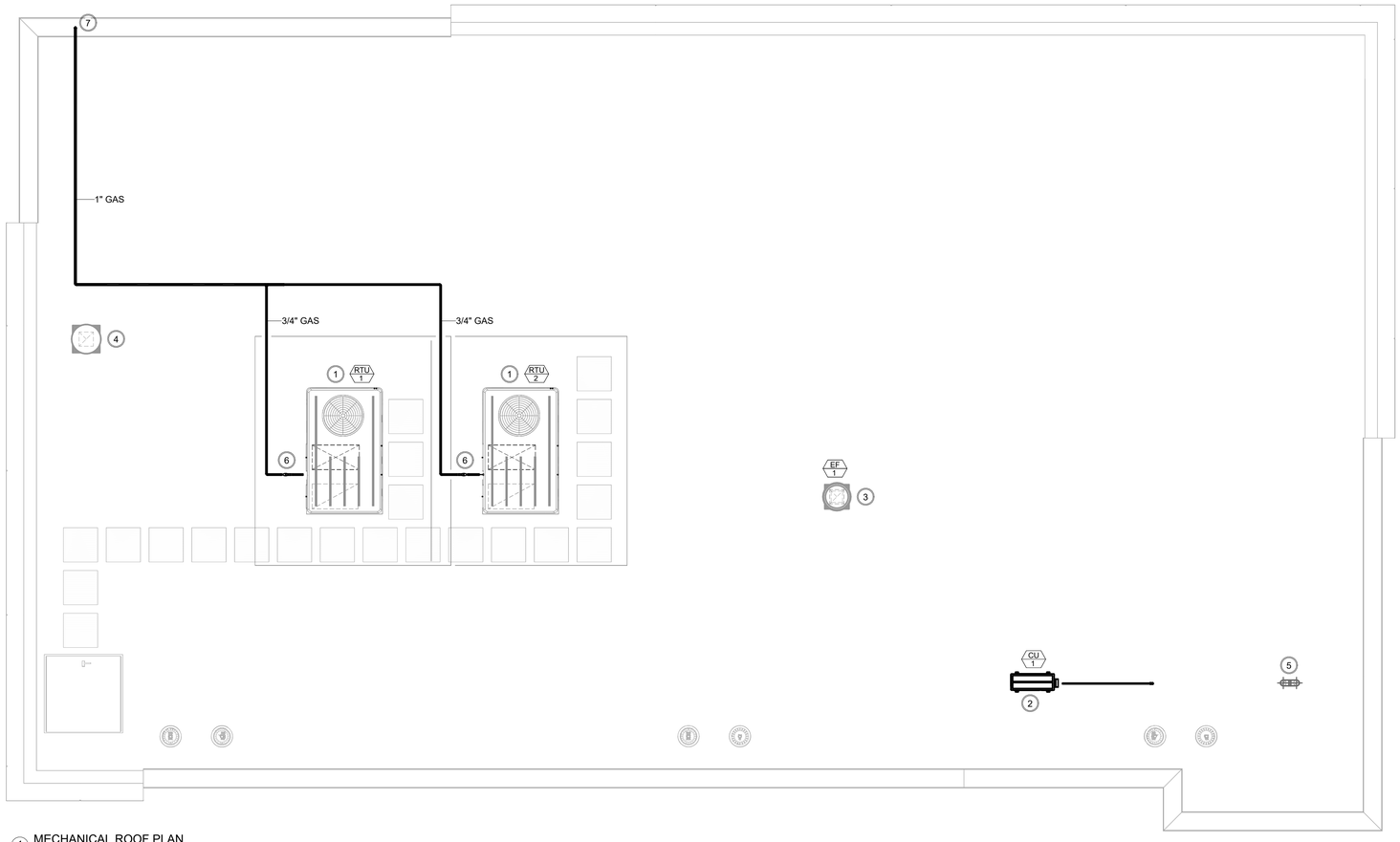
3 NEW ROOF MOUNTED EXHAUST FAN TO BE CONTROLLED VIA TIME SCHEDULE (OPERATING HOURS). ROOF CURB IS TO BE FLASHED INTO ROOF MEMBRANE. COORDINATE EXACT ROOF PENETRATION LOCATION WITH STRUCTURE. EXHAUST SHALL BE A MINIMUM OF 15' FROM ANY INTAKE INLETS. ROOF CURB IS TO BE FLASHED INTO ROOF MEMBRANE. COORDINATE WORK WITH ROOFING CONTRACTOR.

4 NEW EXHAUST AIR ROOF CAP SIMILAR TO GREENHECK MODEL GRSR. ROOF CAP IS TO BE PROVIDED WITH BIRD SCREEN AND BAFFLED EDGES. COORDINATE EXACT ROOF PENETRATION LOCATION WITH STRUCTURE. EXHAUST SHALL BE A MINIMUM OF 15' FROM ANY INTAKE INLETS. ROOF CURB IS TO BE FLASHED INTO ROOF MEMBRANE. COORDINATE WORK WITH ROOFING CONTRACTOR.

5 ROUTE NEW 4" OA VENT PIPING UP THROUGH ROOF AT THIS LOCATION. PROVIDE GOOSENECK WITH BIRDSCREEN. SEE DETAIL.

6 GAS LINE TO ROOF TOP UNITS (RTU-1 & RTU-2). PROVIDE DIRT LEG AND MANUAL GAS SHUT-OFF VALVE PRIOR TO UNIT CONNECTION. PROVIDE NEW PRV TO REGULATE SYSTEM PRESSURE TO REQUIRED PRESSURE AT UNIT, COORDINATE REQUIREMENTS WITH RTU MANUFACTURER. GAS LINE TO BE PAINTED SAFETY YELLOW ON ROOFTOP. SEE RISER AND DETAILS FOR MORE INFORMATION.

7 ROUTE NEW GAS LINE TO ROOF. COORDINATE EXACT ROUTING IN FIELD WITH STRUCTURAL.



1 MECHANICAL ROOF PLAN
1/4" = 1'-0"

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WF BE# 112766

WF PROJECT# 419105

SHEET TITLE

MECHANICAL ROOF PLAN

SHEET NUMBER

M2.01

T&D PROJECT NUMBER

24169

AIR DEVICE SCHEDULE

TAG	MANUFACTURER	MODEL	DESCRIPTION	FACE SIZE	SERVICE	NECK SIZE	CFM	FINISH	MATERIAL	NOTES
A	PRICE	ASPD	PLAQUE FACE	24"X24"	SUPPLY	8"	0-220	WHITE	ALUMINUM	1,2,3,4,5
						10"	221-400			
A1	PRICE	ASCDA	LOUVER FACE	24"X24"	SUPPLY	8"	0-220	WHITE	ALUMINUM	1,2,3,4,5
						10"	221-400			
A2	PRICE	ASPD	PLAQUE FACE	12"X12"	SUPPLY	8"	0-220	WHITE	ALUMINUM	1,2,3,4,5
B	PRICE	ASPD	PLAQUE FACE	24"X24"	RETURN	8"	0-220	WHITE	ALUMINUM	1,2,3,4,5
						10"	221-400			
B1	PRICE	ASCDA	LOUVER FACE	24"X24"	RETURN	8"	0-200	WHITE	ALUMINUM	1,2,3,4,5
						10"	0-400			
C	PRICE	ASPI	SINGLE 1.5" SLOT	4'	SUPPLY	8"	0-220	BLACK	ALUMINUM	1,3,4,5,6,7,8
						10"	221-400			
C1	PRICE	ASPI	SINGLE 1.5" SLOT	3'	SUPPLY	8"	0-220	BLACK	ALUMINUM	1,3,4,5,6,7,8
						10"	221-400			
D	PRICE	ASPI	SINGLE 1.5" SLOT	4'	RETURN	8"	0-220	BLACK	ALUMINUM	1,3,4,5,6,7,8
						10"	221-400			
E	PRICE	ASPD	PLAQUE FACE	12"X12"	EXHAUST	8"	0-220	WHITE	ALUMINUM	1,2,3,4,5

1. PROVIDE OPPOSED BLADE DAMPER AT EACH SUPPLY AND EXHAUST UNLESS BALANCING DAMPER IS PROVIDED AT RUNOUT TAKE-OFF.
2. 4-WAY UNLESS SHOWN OTHERWISE. PROVIDE SECTORING BAFFLES AS REQUIRED FOR 3-WAY OR 2-WAY THROW WHERE SHOWN ON PLANS.
3. INSULATE BACK OF SUPPLY AND RETURN PLENUMS IN UNCONDITIONED PLENUMS
4. PROVIDE GYP BOARD MOUNTING KIT WHEN LOCATED IN HARD CEILING OR WALL.
4. COORDINATE FINISH SELECTIONS WITH ARCHITECT PRIOR TO PURCHASE. COLORS INDICATED ARE TO BE USED WHERE OWNER/ARCHITECT HAS NO PREFERENCE.
5. COORDINATE LOCATION OF ALL GRILLES, REGISTERS, AND DIFFUSERS WITH CEILING GRID, LIGHTING, STRUCTURAL MEMBERS, AND ARCHITECTURAL FEATURES PRIOR TO CONSTRUCTION.
6. PROVIDE CABLE DRIVEN DAMPER, ADJUSTABLE AT THE FACE FOR AIR BALANCING WHEN DAMPER IS LOCATED IN NON-ACCESSIBLE CEILING AREAS.
7. PROVIDE AS215 TYPE FLOWBAR TRACK WITH BOARD TYPE 22 AT LENGTH SHOWN PER PLANS. CONTRACTOR IS TO TAPE AND SPACKLE FLOWBAR FLANGES SO THAT ONLY SUPPLY AIR OPENING IS VISIBLE.
8. COORDINATE SLOT WIDTH, COUNT AND LOCATION WITH THE EXISTING FIELD CONDITIONS PRIOR TO PURCHASE.

SEQUENCE OF OPERATION FOR SPLIT SYSTEM

FCU/CU-1:
FCU/CU-1 SHALL BE PROVIDED WITH PROGRAMMABLE THERMOSTAT AND OPERATE 24/7. HEAT PUMP EVAPORATOR AND COMPRESSOR(S) SHALL STAGE AND CYCLE IN SEQUENCE AS REQUIRED TO MAINTAIN HEATING OR COOLING SETPOINT SPACE TEMPERATURE SETPOINT OF 74F (ADJUSTABLE). MOTORRIZED OA DAMPER SHALL OPEN WHILE UNIT IS ENERGIZED TO ALLOW FOR OA TO UNIT. PROVIDE WITH HEATING AND COOLING MODE LOCK-OUTS TO PREVENT UNNECESSARY CYCLING BETWEEN HEATING AND COOLING MODES. FCU/CU CONTROLLER SHALL BE TIED INTO BUILDING MANAGEMENT SYSTEM FOR CONTROLS INTEGRATION. SEE SHEET MEP1.01 FOR MORE INFORMATION.

DX SPLIT SYSTEM

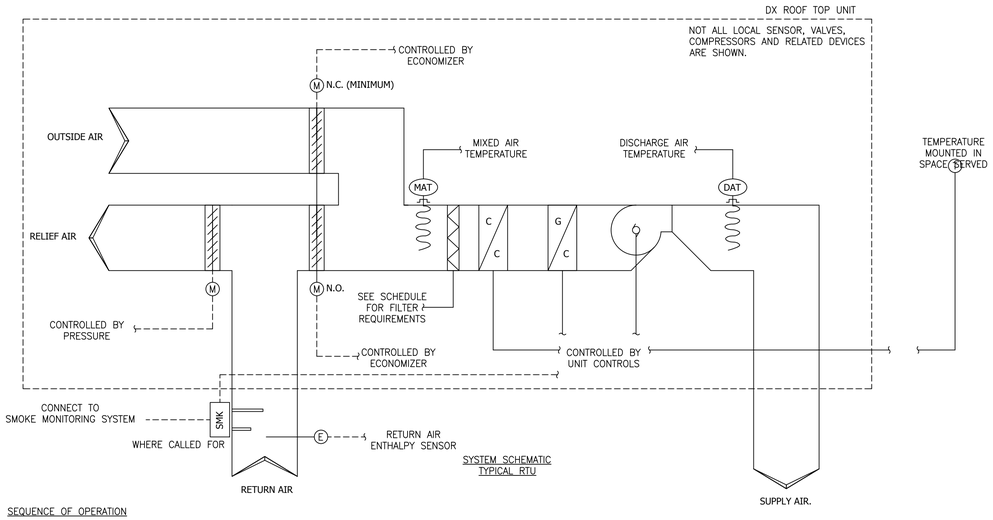
SYSTEM	FCU/CU-1
SERVES	ATM WORKROOM
TYPE	CASSETTE
EVAPORATOR SECTION:	FCU-1
SUPPLY FAN:	
TOTAL AIRFLOW, CFM	350
OUTSIDE AIRFLOW, CFM	30
EXTERNAL STATIC, "WG	0.3
COOLING COIL:	
MAX FACE VELOCITY, FPM	550
MINIMUM ROWS	3
ENTERING AIR DRY BULB, DEG F	75
ENTERING AIR WET BULB, DEG F	66
LEAVING COIL AIR DRY BULB, DEG F	56.0
LEAVING COIL AIR WET BULB, DEG F	55.0
SENSIBLE CAPACITY, BTUH	7200
TOTAL CAPACITY, BTUH	8471
MIN SEER @ ARI CONDITIONS	19.4
CONDENSER SECTION:	CU-1
CONDENSER AMBIENT TEMPERATURE, DEG F	95
FANS	1
COMPRESSORS	1
FILTERS:	
TYPE	1" THROWAWAY
MERV	13
ELECTRICAL:	
V/PH/HZ	208/1/60
FLA	12.3
MOP	15
SINGLE POINT CONNECTION	YES
ACCESSORIES	
SINGLE POINT POWER CONNECTION	YES
FACTORY SENSOR/CONTROLLER	YES
PREMIUM EFFICIENCY MOTOR	YES
INTEGRAL CONDENSATE PUMP	YES (POWERED BY UNIT)
EXTENDED LUBE LINES	YES
FACTORY MOUNTED DISCONNECT	NO
SMOKE DETECTOR	NO
MANUFACTURER	LG
EVAPORATOR MODEL	LC128HV4
REMOTE CONDENSER MODEL	LUU127HV

NOTES:
PROVIDE WITH INTERNAL ISOLATION OR EXTERNAL ISOLATION + FLEXIBLE DUCT CONNECTION
REQUIRED COOLING CAPACITY TO INCLUDE FAN HEAT
ALL UNITS TO HAVE FULLY DRAINING, DOUBLE WALL STAINLESS STEEL OR IAQ COMPLIANT CONDENSATE PANS
ALL UNITS TO COMPLY WITH ASHRAE 62 AND 90.1, CURRENT VERSIONS
PROVIDE WITH ACCESS PANELS FOR CLEANING OF COILS
FAN MOTORS TO BE NON-OVERLOADING
SMOKE DETECTORS (WHEN INDICATED) ARE TO BE PROVIDED AND INSTALLED BY MECHANICAL
SINGLE POINT CONNECTIONS TO INCLUDE INTERNAL FUSING AND CONTACTORS FOR HEATERS AND STARTERS FOR MOTORS.
EXTERNAL STATIC INCLUDES DUCT, DIFFUSERS, FILTERS, AND RETURN AIR PLENUMS.
SENSOR/CONTROLLER TO INCLUDE CONTROL OF DUCT MOUNTED GAS HEATER
INTERLOCK DUCT HEATER TO RUN ONLY WITH FAN OPERATION

PACKAGED ROOFTOP UNIT SCHEDULE

TAG	RTU-1	RTU-2
SERVES	BACK OF HOUSE	FRONT OF HOUSE
TYPE	SINGLE ZONE	SINGLE ZONE
	VARIABLE VOLUME	VARIABLE VOLUME
	DOWN DISCHARGE	DOWN DISCHARGE
SUPPLY FAN:		
TOTAL AIRFLOW, CFM	2145	1940
OUTSIDE AIRFLOW, CFM	150	150
EXTERNAL STATIC, "WG	1	1
MOTOR HP	2.0	2.0
COOLING COIL:		
MAX FACE VELOCITY, FPM	550	550
MINIMUM ROWS	4	4
ENTERING AIR DRY BULB, DEG F	75.3	75.5
ENTERING AIR WET BULB, DEG F	61.0	61.0
LEAVING COIL AIR DRY BULB, DEG F	55.0	55.0
LEAVING COIL AIR WET BULB, DEG F	54.0	54.0
SENSIBLE CAPACITY, BTUH	47,093	42,887
TOTAL CAPACITY, BTUH	51,188	46,616
CONDENSER AMBIENT TEMPERATURE	93	93
MIN SEER @ ARI CONDITIONS	16.3	16.3
MIN EER @ ARI CONDITIONS	13	13
HEATING COIL:	GAS	GAS
INPUT, BTU	80,000	80,000
OUTPUT, BTU	61,000	61,000
MAX LEAVING AIR TEMP, DEG F	95	95
MIN EFFICIENCY, AFUE%	81	81
FILTERS		
TYPE	4" Pleated Filters	4" Pleated Filters
MERV	13	13
ELECTRICAL		
V/PH/HZ	480/3/60	480/3/60
MCA	16	16
MOCP	20	20
ACCESSORIES		
PREMIUM EFFICIENCY MOTOR	YES	YES
COMPRESSORS	2	2
FACTORY CURB	YES	YES
EXTENDED LUBE LINES	YES	YES
FACTORY MOUNTED DISCONNECT	NO	NO
VARIABLE FREQUENCY DRIVE	YES	YES
ENTHALPY ECONOMIZER	YES	YES
MOTORIZED OUTSIDE AIR DAMPER	YES	YES
STATIC PRESS. DIFF. SWITCH & WEATHER HEAD	NO	NO
LOW AMBIENT CONTROLS	YES	YES
SMOKE DETECTOR	YES	YES
HIGH EFFICIENCY	YES	YES
HUMIDIFIER	YES	YES
BACNET CONNECTION FOR MONITORING	YES	YES
MANUFACTURER	TRANE	TRANE
MODEL	YHCK048A4S0L	YHCK060A4S0L
NOMINAL WEIGHT, LBS	1033	1071

NOTES:
PROVIDE WITH INTERNAL ISOLATION OR EXTERNAL ISOLATION + FLEXIBLE DUCT CONNECTION
REQUIRED COOLING CAPACITY TO INCLUDE FAN HEAT
ALL UNITS TO HAVE FULLY DRAINING, DOUBLE WALL STAINLESS STEEL OR IAQ COMPLIANT CONDENSATE PANS
ALL UNITS TO COMPLY WITH ASHRAE 62 AND 90.1, CURRENT VERSIONS
ALL UNITS TO BE PROVIDED WITH A WATER SENSING DEVICE INSIDE PRIMARY DRAIN PAN THAT WILL SHUT OFF UNIT WHEN THE PRIMARY CONDENSATE DRAIN IS RESTRICTED.
PROVIDE WITH ACCESS PANELS FOR CLEANING OF COILS
PROVIDE EXTRA HEIGHT CURB IF REQUIRE FOR HORIZONTAL DISCHARGE OR TRANSITION WITHIN CURB.
FAN MOTORS TO BE NON-OVERLOADING
SMOKE DETECTORS (WHEN INDICATED) ARE TO BE PROVIDED AND INSTALLED BY MECHANICAL, POWERED BY ELECTRICAL
SINGLE POINT CONNECTIONS TO INCLUDE STARTERS FOR MOTORS
WEIGHTS INDICATED DO NOT INCLUDE OPTIONAL ACCESSORIES AND CURBS. COORDINATE WITH MANUFACTURER FOR ACTUAL WEIGHTS.
EXTERNAL STATIC INCLUDES DUCT, DIFFUSERS, FILTERS, AND RETURN AIR PLENUMS. TOTAL STATIC (NOT SHOWN) TO INCLUDE INTERIOR COMPONENTS SUCH AS COILS.



SYSTEM SCHEMATIC
TYPICAL RTU

SEQUENCE OF OPERATION

Draw-Through DX Rooftop Air Handling Unit:

This unit consists of an air handling unit, a DX cooling coil, an gas heating coil and a supply fan.

Start/Stop Control:
The occupancy mode (Occupied or Unoccupied) shall be determined through a user-adjustable, seven-day schedule with a holiday schedule.
Whenever the system is de-energized the outside air dampers shall be closed, DX cooling and all heating stages shall be de-energized.

Occupied Mode:
The supply fan shall be energized.
When heating and cooling setpoints are satisfied the supply fan shall remain energized for ventilation mode purposes.
Initial (adjustable) setpoints shall be : Cooling 75'F, Heating 70'F, and Humidity 50% RH.

The heating and DX cooling shall stage all in sequence to maintain space temperature setpoint of 75F (adjustable). The DX unit shall stage up or down as described below.

The OA damper shall not close below the minimum position required for outside air ventilation. This position shall be set in conjunction with the balance contractor.

DX Cooling:

a. If the outside air temperature is greater than the DX lock-out temperature, DX cooling shall be enabled.
b. DX operation shall observe the following timing constraints:
   1) When a cooling stage is called to run, it will run for at least the DX minimum on-time.
   2) When a cooling stage cycles off, it will remain off for at least the DX minimum off-time.
c. DX operation shall observe the following performance constraints
   1) Under a steady partial load, if the system cycles, the cycling must be limited to a single stage, while the others stay on or off.
   2) Under a steady partial load, if the system stabilizes, the space temperature error must be less than the DX temperature deadband.
d. Safety trips and loss of fan status shall override the time delays and de-energize all cooling stages.

Economizer cooling is enabled whenever the outside air dry bulb is less than the return air dry bulb and greater than 45F and outdoor relative humidity is less than 50%.

a. When the outside air dry bulb exceeds 75F, economizer cooling is disabled.
b. When outdoor air enthalpy exceeds return air enthalpy, economizer cooling is disabled.
c. During economizer cooling compressor shall be off, supply fan on, powered exhaust on, and economizer modulates (minimum to maximum open position) to maintain space temperature setpoint.
d. Provide deadband to prevent heating operation whenever economizer cooling is enabled.
e. There shall be a mixed air low limit function to modulate the economizer dampers closed to prevent the mixed air temperature from dropping below the mixed air low limit setpoint of 45F (adjustable).

Gas heating shall stage off-low-high.
a. High stage shall not be active unless low stage has been active for at least 5 minutes or the space air temperature is more than 8'F (adjustable) below setpoint.

The software shall prevent:
The heating setpoint from exceeding the cooling setpoint minus 5'F (i.e. the minimum deadband shall be 5'F);
The unoccupied heating setpoint from exceeding occupied heating setpoint; and unoccupied cooling setpoint from being less than the occupied cooling setpoint.

Unoccupied Mode:

Unoccupied Off: The supply fan shall be de-energized except when operation is called for as described below. Outside air dampers and exhaust dampers shall be closed.

Unoccupied Setback:
The supply fan shall cycle on with the outside and exhaust dampers closed when the space temperature drops below the unoccupied setpoint of 65'F (adjustable). When the fan is energized, the heating shall stage to maintain space temperature setpoint of 65'F (adjustable).
The supply fan shall cycle on with the outside and exhaust dampers closed when the space temperature rises above the unoccupied setpoint of 85'F (adjustable). When the fan is energized, the cooling shall stage to maintain space temperature setpoint of 85'F (adjustable).

Safety Shutdowns:
Duct smoke detection, space smoke detection, and low temperature limit trips shall de-energize the supply fan and close the outside air dampers. Manual reset of the tripped device shall be required to restart the system.

HEATER SCHEDULE

TAG	BH-1
AREA SERVED	VESTIBULE
HEATER TYPE	BASEBOARD HEATER
LENGTH (IN)	48
HEATER SIZE (WATTS)	1000
ELECTRICAL, V/PH/HZ	277/1/60
MANUFACTURER (OR EQUAL)	QMARK
MODEL	DBSL-04250
ACCESSORIES/CONTROLS	A,B

CONTROLS:
A. HEATER TO BE CONTROLLED BY LOCAL T-STAT.
B. PROVIDE SEPARATE SENSOR TO MONITOR OUTDOOR AIR TEMPERATURE. HEATER SHALL NOT HEAT THE VESTIBULE WHILE OUTSIDE AIR TEMP IS GREATER THAN 45 DEGREES.
C. HEATER TO HEAT VESTIBULE TO NOT MORE THAN 60 DEGREES PER ENERGY CODE (IECC C403.4.1.4)

FAN SCHEDULE

TAG	EF-1	EF-2	EF-3
SERVICE	EXHAUST	EXHAUST	EXHAUST
AREA SERVED	RESTROOM	JANITOR	IDF ROOM
FAN TYPE	ROOF UPBLAST	CEILING	CEILING
AIRFLOW	150	75	250
EXTERNAL STATIC PRESSURE, "WG	0.3	0.3	0.3
DRIVE	DIRECT	DIRECT	DIRECT
RPM	1408	950	1254
MOTOR SIZE, HP (WATTS)	1/15	(16 WATTS)	(49 WATTS)
ELECTRICAL, V/PH/HZ	120/1/60	120/1/60	120/1/60
MANUFACTURER (OR EQUAL)	GREENHECK	GREENHECK	GREENHECK
MODEL	CUE-070-VG	SP-A110	CSP-A390-VG
ACCESSORIES/CONTROLS	1, A	1, B	1, C

ACCESSORIES:
1. BACKDRAFT DAMPER

CONTROLS:
A. FAN TO BE CONTROLLED BY TIME CLOCK.
B. FAN TO BE INTERLOCKED WITH LIGHTS.
C. FAN TO BE CONTROLLED ON BY LOCAL THERMOSTAT, SET TO 75 DEG F (ADJUSTABLE)

OUTSIDE AIR CALCULATIONS

PER 2021 IMC, Multiple Zone Recirculating System per 403.3.1.1.2.3

SYSTEM / SPACE	AREA, SQ.FT. (Az)	MIN OA, CFM/SQ.FT. (Ra)	PEOPLE (Pz)	MIN OA, CFM/PERSON (Rp)	MIN OA CFM REQUIRED BY AREA (RA)	MIN OA CFM REQUIRED BY POPULATION (RP)	BREATHING ZONE OA (Vbz)	ZONE AIR DIST. EFFECTIVENESS (Ez)	ZONE OA FLOW (Voz)	PRIMARY AIRFLOW (Vpz)	PRIMARY AIR FRACTION (Zpz)
AHU-1											
Office	720	0.06	13	5	43	65	108	0.8	135	820	0.16
Conference	136	0.06	4	5	8	20	28	0.8	35	245	0.14
Breakroom	166	0.06	4	5	10	20	30	0.8	37	330	0.11
Restrooms	112	**	**	**	**	**	**	**	**	100	**
Corridor	191	0.06	0	5	11	0	11	0.8	14	600	0.02
Utility Closets	126	0.06	0	5	8	0	8	0.8	9	50	0.19
AHU VARIABLES		Pz TOTAL =	21	SYSTEM POPULATION (Ps) =	7	0.33	=OCCUPANT DIVERSITY (D)				
				UNCORRECTED OA INTAKE (Vou) =		115	MAXIMUM Zpz =	0.19	SYSTEM VENT EFF (Ev) =	0.9	
										OUTDOOR AIR INTAKE FLOW REQUIRED (Vot) =	**128**
										OUTDOOR AIR PROVIDED =	**150**
AHU-2											
Lobby/Lounge	1090	0.06	10	5	65	50	115	0.8	144	1285	0.11
Teller/Transaction	439	0.06	5	5	26	25	51	0.8	64	655	0.10
AHU VARIABLES		Pz TOTAL =	15	SYSTEM POPULATION (Ps) =	5	0.33	=OCCUPANT DIVERSITY (D)				
				UNCORRECTED OA INTAKE (Vou) =		117	MAXIMUM Zpz =	0.11	SYSTEM VENT EFF (Ev) =	1.0	
										OUTDOOR AIR INTAKE FLOW REQUIRED (Vot) =	**117**
										OUTDOOR AIR PROVIDED =	**150**
FCU-1											
ATM Room	217	0.06	2	5	13	10	23	0.8	29	350	0.08
AHU VARIABLES		Pz TOTAL =	2	SYSTEM POPULATION (Ps) =	2	1.00	=OCCUPANT DIVERSITY (D)				
				UNCORRECTED OA INTAKE (Vou) =		23	MAXIMUM Zpz =	0.08	SYSTEM VENT EFF (Ev) =	1.0	
										OUTDOOR AIR INTAKE FLOW REQUIRED (Vot) =	**23**
										OUTDOOR AIR PROVIDED =	**30**

OUTSIDE AIR PROVIDED TO A/C UNITS EXCEEDS MINUMUM REQUIREMENTS
ZONE PRIMARY AIRFLOW TO BE LOWEST EXPECTED PRIMARY AIRFLOW RATE DURING OCCUPIED CONDITIONS FOR VAV SYSTEMS
Ez FROM TABLE 403.3.1.1.1.2
Ev FROM TABLE 403.3.3.1.1.2.3.2
Ps SHALL BE MAXIMUM NUMBER OF OCCUPANTS SERVED BY SYSTEM AND MAY BE LESS THAN SUM OF ZONE Pz SUBTOTALS DUE TO DIVERSITY
*CFM/SQ.FT. ONLY
**50 CFM EXHAUST EACH URINAL OR WATER CLOSET
*** SEE PLAN FOR NATURAL VENTILATION CALCULATION

1 MECHANICAL SCHEDULES
SCALE = NTS

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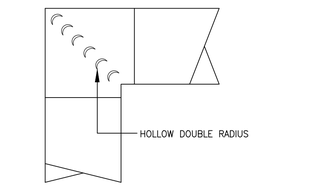
WF BE# 112766
WF PROJECT# 419105

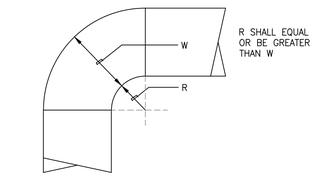
SHEET TITLE
MECHANICAL SCHEDULES

SHEET NUMBER
M3.01

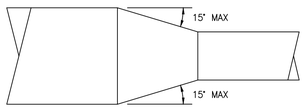
T&D PROJECT NUMBER
24169



SQUARE ELBOW



STANDARD RADIUS ELBOW

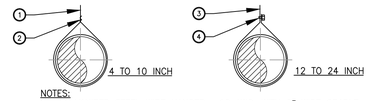


PLAN OR SIDE VIEW

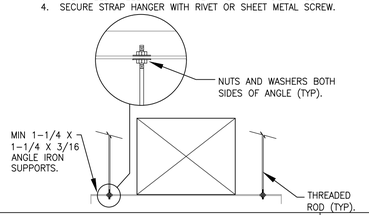
SQUARE ELBOW NOTES:
1. FOR DUCT WIDTH LESS THAN 18" USE MINIMUM 26 GA VANES AT 2–1/8" O.C. FOR DUCT 18" AND WIDER, USE MINIMUM 24 GA VANES AT 3–1/4" O.C.

RADIUS ELBOW NOTES:
1. THE INTERIOR SURFACE OF ALL RADIUS ELBOWS SHALL BE MADE ROUND
2. RADIUS ELBOWS SHOWN ON PLANS MAY BE MADE SHORT RADIUS ELBOWS ONLY WHERE SPACE DOES NOT ALL FOR STANDARD. ALL SHORT SHORT RADIUS ELBOWS SHALL HAVE VANES. VANES SHALL BE CONSTRUCTED, SUPPORTED AND FASTENED AS RECOMMENDED BY SMACNA

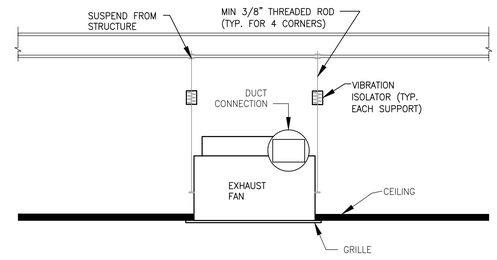
TYPICAL DUCT ELBOWS AND TRANSITION | SCALE: NONE | 1



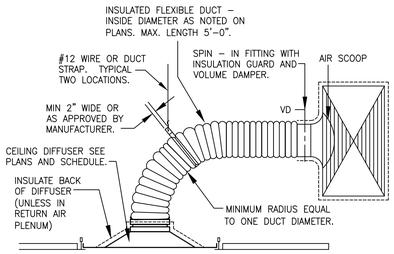
NOTES:
1. GALVANIZED STEEL WIRE HANGER. 12 AWG. WITH 2" WIDE CRADLE.
2. SECURE WIRE HANGER WITH THREE TURNS MINIMUM.
3. GALVANIZED STEEL STRAP HANGER. 2 INCH WIDE BY 22 GA.
4. SECURE STRAP HANGER WITH RIVET OR SHEET METAL SCREW.



DUCT SUPPORT DETAIL | SCALE: NONE | 3

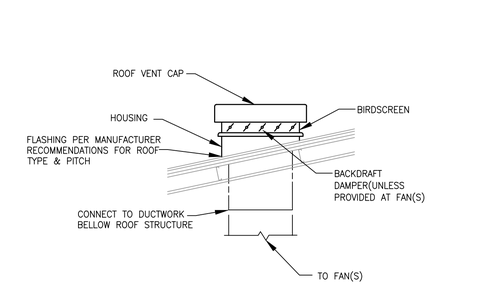


CEILING MOUNTED EXHAUST FAN | SCALE: NONE | 6



NOTES:
1. ACOUSTICAL TILE CEILING SHOWN. GYP. BOARD CEILING SIMILAR.
2. FLEXIBLE DUCT NOT ALLOWED IN INACCESSIBLE CEILING.
3. INSULATED FLEXIBLE DUCT, MAX. HORIZ. OFFSET = D/8.
4. FOR LENGTHS GREATER THAN 5'–0" USE EXTERNALLY INSULATED RIGID ROUND DUCT FOR THE ADDITIONAL LENGTH. RIGID ROUND DUCT SHALL BE THE SAME SIZE AS THE FLEXIBLE DUCT.

DIFFUSER CONNECTION | SCALE: NONE | 4



TYPICAL ROOF EXHAUST VENT | SCALE: NONE | 7

ROUTE CONDENSATE DRAIN TO NEAREST ROOF DRAIN OR AS INDICATED ON PLANS. SEE CONDENSATE DRAIN TRAP DETAIL UNLESS UNIT IS PROVIDED WITH INTERNAL TRAP.

RISK CATEGORY	WIND SPEED
I	101
II	108
III	114
IV	118

OUTSIDE AIR INTAKE MIN 10' (OR AS NOTED ON PLANS) FROM NEAREST EXHAUST OR PLUMBING VENT.

ROOF OPENING, CURB AND FLASHING DETAILS TO BE COORDINATED WITH ARCHITECTURAL OR ROOF MANUFACTURE'S INSTRUCTIONS TO MAINTAIN ROOF WARRANTY

ROOF TOP UNIT

ROOF CURB APPROVED BY ROOF MANUFACTURER. PROVIDE CONNECTION OF CURB TO ROOF STRUCTURE TO WITHSTAND WINDS PER IBC CHAPTER 16 – 108 MPH FOR RISK CATEGORY II. ULTIMATE DESIGN WIND'S SPEED PER IBC 1609.3

FLEX CONNECTION UNLESS UNIT IS INTERNALLY ISOLATED. TRANSITION WITHIN CURB.

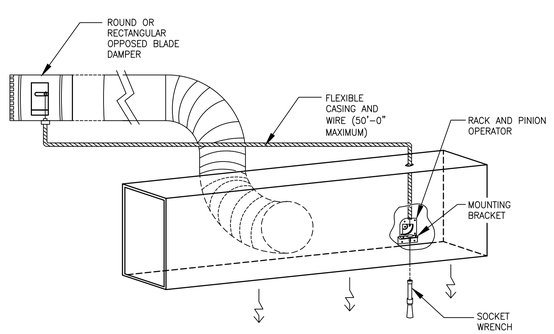
LOCATE UNIT CENTER OF GRAVITY AT OR NEAR MAJOR BEAM OR COLUMN.

INSULATE UNUSED OPENINGS AROUND DUCT (AND AROUND CONDENSATE PIPE AND CONDUIT WHEN ROUTED THROUGH CURB).

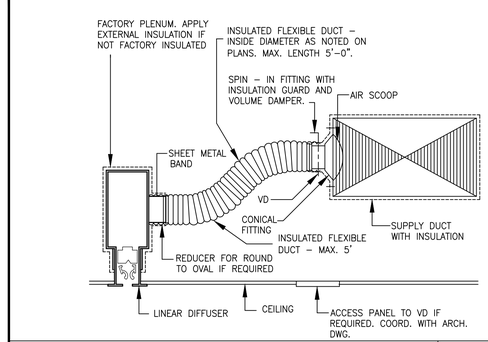
S SMOKE DETECTOR FOR UNITS 2000 CFM OR LARGER IN RETURN PRIOR TO MIXING OR IN SUPPLY PRIOR TO FIRST BRANCH OR TAP. COORDINATE WITH ELECTRICAL.

NOTES:
1. ORIENT TO MINIMIZE INTERFERENCE OF DUCT PENETRATIONS WITH STRUCTURE.
2. MAINTAIN REQUIRED MAINTENANCE AND OUTSIDE AIR CLEARANCES.
3. COORDINATE WITH STRUCTURAL.
4. PROVIDE SHOP DRAWINGS IF DUCT SPLITTING OR INCREASED HEIGHT CURBS ARE REQUIRED TO AVOID STRUCTURAL OBSTRUCTIONS.

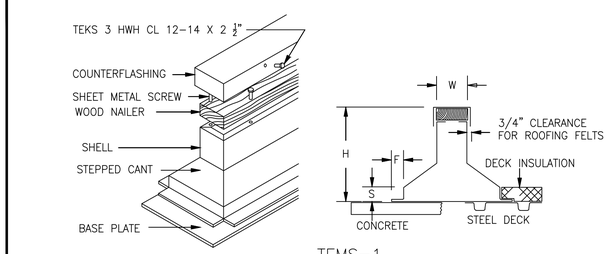
ROOF TOP UNIT DETAIL | SCALE: NONE | 2



SLOT DIFFUSER REMOTE BALANCING CABLE DETAIL | SCALE: NONE | 5



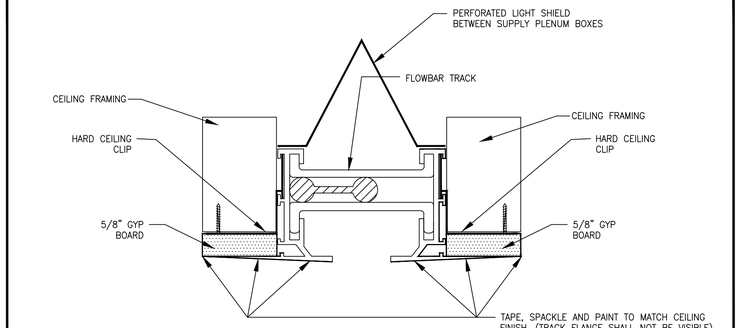
LINEAR SLOT DIFFUSER DETAIL | SCALE: NONE | 8



TEMS–1

- FOR INSULATED ROOF DECKS WITH 3" CANT AND VARIABLE STEP TO MATCH DECK INSULATION THICKNESS (CONFIRM ROOF TYPE/CONSTRUCTION WITH ROOFING CONTRACTOR).
- REFER TO STRUCTURAL DRAWINGS FOR ANCHORING EQUIPMENT SUPPORT TO ROOF STRUCTURE TO WITHSTAND WINDS PER IBC 1609.3 WITH CITY OF HOUSTON AMENDMENTS.
- MECHANICAL CONTRACTOR TO PROVIDE SUPPORT DIMENSIONS BASED ON EQUIPMENT SIZE.

CONDENSING UNIT SUPPORT | SCALE: NONE | 10



FLOWBAR TRACK DETAIL (BORDER TYPE 22) | SCALE: NONE | 9

1 MECHANICAL DETAILS
SCALE = NTS

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MECHANICAL DETAILS

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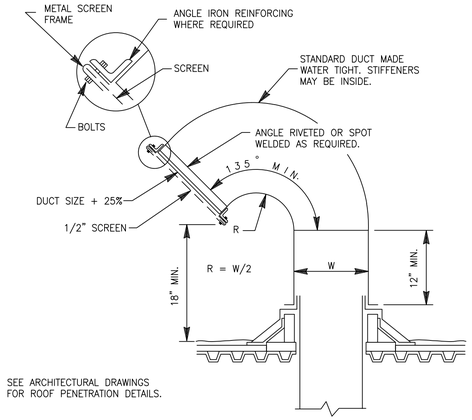
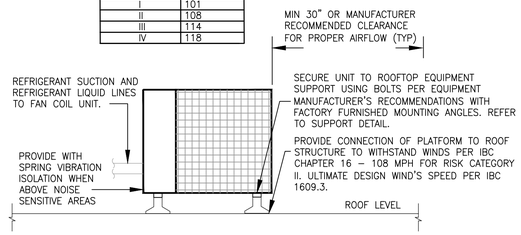
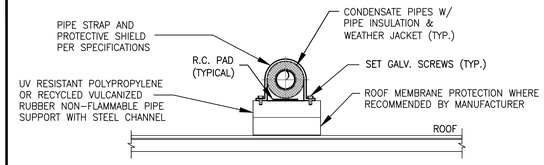


TYPICAL GOOSENECK DETAIL | SCALE NONE | 1

RISK CATEGORY	WIND SPEED
I	101
II	108
III	114
IV	118

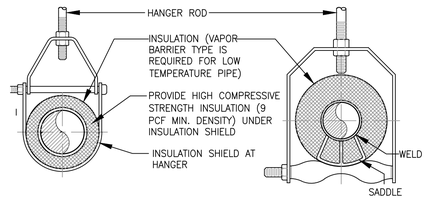


AIR COOLED CONDENSER (ROOF) | SCALE NONE | 2



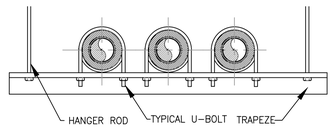
NOTES:
1. SUPPORT AT ELBOWS AND SPACING PER MANUFACTURER RECOMMENDATIONS OR ASHRAE/ASME STANDARDS.

CONDENSATE PIPE SUPPORT | SCALE NONE | 4

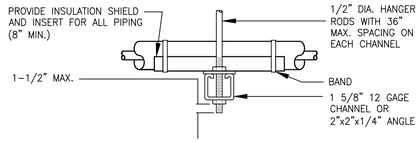


ADJUSTABLE CLEVIS HANGER TYPE 1

ADJUSTABLE CLEVIS HANGER TYPE 43



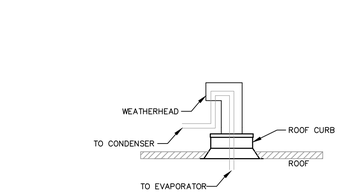
FRONT VIEW TRAPEZE HANGER



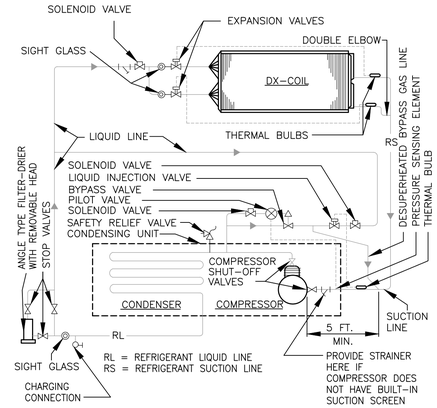
SIDE VIEW TRAPEZE HANGER FOR UP TO 1000 LB. UNIFORM LOAD

NOTES:
1. NUMBER AND SIZE OF PIPE VARIES.
2. DO NOT MOUNT NON VIBRATION ISOLATED PIPING OR CONDUITS ON SUPPORTS WITH VIBRATION ISOLATION.
3. PROVIDE FELT ISOLATOR W/STEEL SHIELD FOR UNINSULATED PIPE
4. PROVIDE INSERTS AND FULL CIRCUMFERENCE SHEET METAL SHIELD AT ALL TIE DOWNS.
5. SUSPEND WITH SPRING ISOLATION WHEN CALLED FOR ON PLAN OR SPECIFICATIONS.

TYPICAL PIPE HANGERS | SCALE NONE | 5



REFRIGERANT PIPE THRU ROOF DETAIL | SCALE NONE | 6

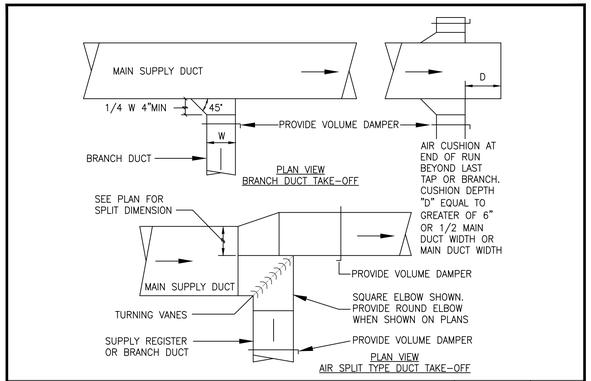


EVAPORATOR HIGHER THAN CONDENSER

NOTES:
1. SUCTION LINE TO BE INSULATED: 25/50 FLAME/SMOKE RATINGS ALL INDOOR SECTIONS. UV PROTECTION ALL EXPOSED OUTDOOR SECTIONS. R-VALUE AND/OR THICKNESS PER SPECIFICATIONS.
2. REFRIGERANT PIPING, SIZING AND ACCESSORIES TO BE INSTALLED IN FIELD SHALL BE APPROVED BY MANUFACTURER OF EQUIPMENT BEFORE STARTING INSTALLATION.
3. SINGLE REFRIGERANT SUCTION RISER IS SHOWN. COORDINATE W/ MANUFACTURER REQUIREMENTS FOR SINGLE OR DOUBLE SUCTION RISER REQUIREMENTS. REFRIGERANT SUCTION RISERS TO BE PER MANUFACTURER OF EQUIPMENT SIZING REQUIREMENTS DEPENDING ON COMPRESSOR CAPABILITIES.
4. DETAIL SHOWS SINGLE CIRCUIT REFRIGERANT PIPING. DUPLICATE REFRIGERANT PIPING REQUIRED FOR DOUBLE CIRCUIT SYSTEMS.
5. DETAIL SHOWS HOT GAS BYPASS PIPING AND ACCESSORIES. ASSOCIATED PIPING AND ACCESSORIES NOT REQUIRED IF EQUIPMENT IS NOT SCHEDULED OR SELECTED WITH HOT GAS CAPABILITIES.
6. PROVIDE ADDITIONAL ACCESSORIES NOT SHOWN (SUCH AS RECEIVERS AND/OR ACCUMULATORS) AS REQUIRED BY MANUFACTURER FOR ACTUAL INSTALLATION CONDITIONS (I.E. LONG LINE APPLICATIONS WHERE APPLICABLE)

MINIMUM TRAP REQUIREMENTS:
1. TRAP SUCTION AT EVAPORATOR (AFTER EXPANSION VALVES AND DOUBLE ELBOW)
2. USE INVERTED TRAP WHERE LARGER RISER(S) OF DOUBLE RISER HOT GAS AND/OR SUCTION RISERS RECONNECT TO ASSOCIATED MAIN LINE.
3. INVERTED TRAP SAME HEIGHT AS EVAPORATOR WHEN CONDENSER IS BELOW OR SAME LEVEL AS EVAPORATOR AS REQUIRED TO PREVENT REFRIGERANT MIGRATION DURING OFF CYCLES.
4. PROVIDE ADDITIONAL TRAPS WHERE RECOMMENDED BY MANUFACTURER BASED ON ACTUAL INSTALLATION CONDITIONS.

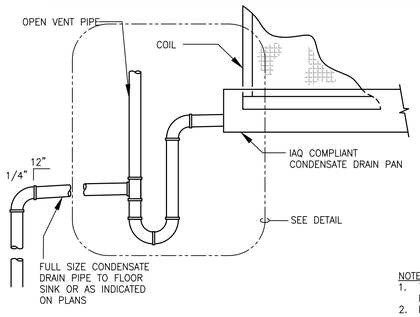
REFRIGERANT PIPING DETAIL | SCALE NONE | 7

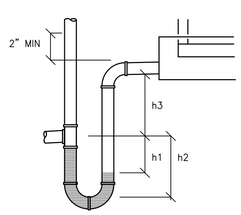


PLAN VIEW BRANCH DUCT TAKE-OFF

PLAN VIEW AIR SPLIT TYPE DUCT TAKE-OFF

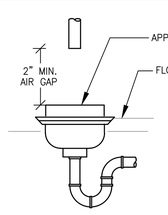
SUPPLY DUCT TAKE-OFFS | SCALE NONE | 3

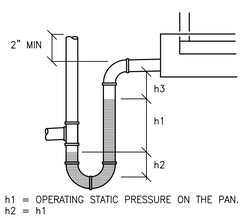




h1 = OPERATING STATIC PRESSURE ON THE PAN.
h2 = 2xh1
h3 = 1"

BLOW-THROUGH UNIT





h1 = OPERATING STATIC PRESSURE ON THE PAN.
h2 = h1
h3 = 1"

DRAW-THROUGH UNIT

NOTE:
1. THE CONDENSATE PIPE SHALL BE INSULATED UNLESS ALL PIPE IS ROUTED OUTSIDE.
2. DRAIN LINE FOR ROOF MOUNTED EQUIPMENT SHALL PENETRATE THE ROOF LINE WITHIN THE CONFINEMENT OF THE HVAC EQUIPMENT CURB

CONDENSATE PIPE SIZING (BASED ON EQUIPMENT CAPACITY)
- UP TO 10 TONS = ¾"
- 10 TONS – 40 TONS = 1"
- 40 TONS – 90 TONS = 1-1/4"
- 90 TONS – 125 TONS = 1-1/2"
- 125 TONS – 280 TONS = 2"
- OVER 250 TONS = SEE PLANS

CONDENSATE DRAIN PIPE DETAIL | SCALE NONE | 8

1 MECHANICAL DETAILS CONTINUED
SCALE = NTS

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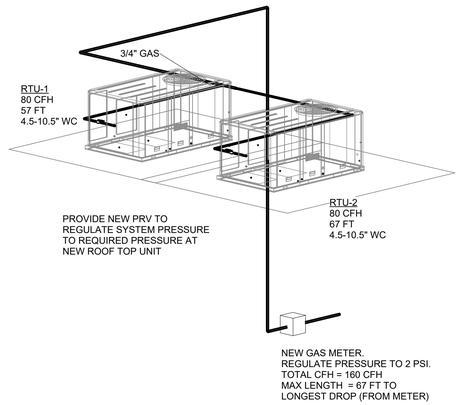

1 GAS RISER
NTS

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DRAWN BY: AR

WF BE# 112766

WF PROJECT# 419105

SHEET TITLE

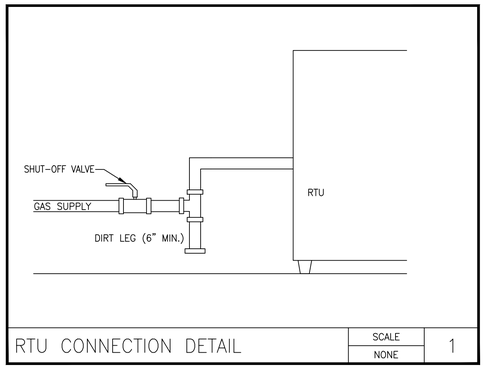
GAS RISER

SHEET NUMBER

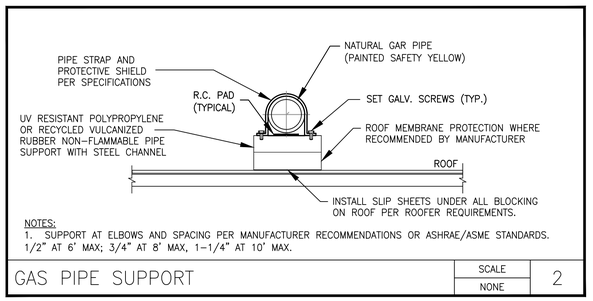
M6.01

T&D PROJECT NUMBER

24169

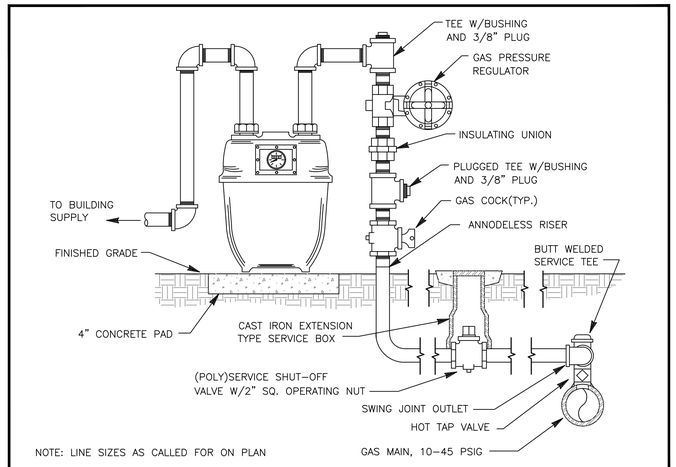


RTU CONNECTION DETAIL | SCALE NONE | 1



NOTES:
1. SUPPORT AT ELBOWS AND SPACING PER MANUFACTURER RECOMMENDATIONS OR ASHRAE/ASME STANDARDS. 1/2" AT 6' MAX; 3/4" AT 8' MAX, 1-1/4" AT 10' MAX.

GAS PIPE SUPPORT | SCALE NONE | 2



NOTE: LINE SIZES AS CALLED FOR ON PLAN

TYPICAL GAS SERVICE CONNECTION DETAIL | SCALE NONE | 3

1 MECHANICAL GAS DETAILS
SCALE = NTS

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WELLS FARGO

GREELEY, CO

6835 10TH STREET
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TEXAS REGISTRATION #F-10421

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SET ISSUE

	SET ISSUE FOR	DATE
	BID	04/25/2025

REVISIONS

REV	REASON FOR ISSUE	DATE

REVIEWED BY: JC

DRAWN BY: BR

WF BE# 112766

WF PROJECT# 419105

SHEET TITLE

MECHANICAL GAS DETAILS

SHEET NUMBER

M7.01

T&D PROJECT NUMBER
24169

BUILDING SET POINT STANDARDS

PARAMETER	SETPOINT	OVERRIDE DURATION	OTHER CONSIDERATIONS
OCCUPIED COOLING	74°F	2 DEGREE USER ADJUST (2 UP 2 DOWN)	
UNOCCUPIED COOLING	83°F		
OCCUPIED HEATING	70°F	2 DEGREE USER ADJUST (2 UP 2 DOWN)	
UNOCCUPIED HEATING	64°F		
INTERIOR LIGHTING OCCUPIED	ON 60 MINUTES BEFORE OPENING, 60 MINUTES AFTER BRANCH CLOSING	60 MINUTES	WHERE DRIVE THRU TELLERS IS OPENED BEFORE THE MAIN BRANCH, ONLY TURN ON EMPLOYEE LIGHTING WHERE APPLICABLE.
EXTERIOR LIGHTING	ASTRONOMICAL TIMECLOCK FUNCTIONALITY	PHOTOCELL OVERRIDE	DRIVE-UP CANOPY, TELLER OVERRIDE. DARK SKY LOCAL MANDATES MAY APPLY.
HVAC START STOP OPTIMIZATION	60 MINUTES BEFORE OPEN OFF AT CLOSE		
AFTER HOURS HVAC OVERRIDE DURATION	60 MINUTES	HVAC	
INTERIOR AFTER HOURS LIGHTING OVERRIDE DURATION	60 MINUTES	60 MINUTES	
HVAC SYSTEM AUTOMATIC CHANGEOVER	SET IN AUTO	SWITCHES BETWEEN HEATING AND COOLING ON DEMAND	CONSIDER DEAD BAND
SUPPLY FAN SETTING	SET IN AUTO	FAN RUNS WITH CALL FOR COOLING OR HEATING OFF WHEN NO CALL IS PRESENT EXCEPT WHEN REQUIRED BY CODE	
SMART RECOVERY	ENABLED		
DEMAND CONTROL VENTILATION	WHERE APPLICABLE	SET MIN-MAX TO ASHRAE 62.7 LEVELS	MAY BE CODE/LEED DRIVEN
EXTERIOR SIGNAGE	ASTRONOMICAL TIMECLOCK FUNCTIONALITY	PHOTOCELL OVERRIDE	
HOT WATER RECIRC PUMP	ASTRONOMICAL TIMECLOCK FUNCTIONALITY	60 MINUTES	
EXHAUST FAN (RESTROOMS)	ASTRONOMICAL TIMECLOCK FUNCTIONALITY	60 MINUTES	
EXHAUST FAN (JANITOR'S CLOSET)	WITH LIGHTING		
EXHAUST FAN (IT ROOM)	THERMOSTAT CONTROLS	FAN RUNS WITH CALL FOR COOLING OFF WHEN NO CALL IS PRESENT.	

1 BUILDING SET POINT STANDARDS
SCALE = NTS

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WELLS FARGO

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SET ISSUE

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WF PROJECT# 419105

SHEET TITLE

BUILDING SET POINT STANDARDS

SHEET NUMBER

MEP1.01

T&D PROJECT NUMBER
24169

SECTION 01 00 00 – GENERAL REQUIREMENTS

1. Drawings are diagrammatic and should not be scaled for exact dimensions; exact dimensions and locations shall be determined by measurements in the field and shall be subject to approval by the Architect/Engineer. The Contractor shall verify dimension prior to ordering equipment and material.
2. Before submitting a bid, it will be necessary for each Contractor to visit the site and ascertain for himself/herself the conditions to be met in installing the work and make provisions for the conditions in the final price. Failure to comply with this requirement shall not be considered justification for the omission or faulty installation of any work. By submitting a bid, the Contractor is stating that the bid covers all work necessary to properly install the system indicated.
3. In case of disagreement between the Drawing and Specifications, or within the Drawings or Specifications, the bid shall include the greater amount of work and the matter shall be referred to the Architect/Engineer.
4. The Contractor shall secure and pay all fees associated with any and all necessary permits, licenses, and inspections required for the work.
5. All work shall comply with all pertinent national, state, and local ordinances and codes, and all American Disabilities Act (ADA) requirements, and any amendments, as well as any/all **Texas Accessibility Standards (TAS)**. Nothing within the Drawings or Specifications shall be construed as waiving any of the rules, regulations, or requirements of the authorities having jurisdiction. In the event of a conflict, the requirements of the authority having jurisdiction shall govern. The conflict shall be reported to the Architect/Engineer immediately, and necessary modification shall be made at no additional cost to the Owner or Architect/Engineer.
6. If the requirements of these Construction Documents are in excess of those required by Code, the provisions of the Construction Documents shall take precedence.
7. All equipment and materials for which approval standards have been established by Underwriters' Laboratories, Inc. (UL), Factory Mutual (FM), and American Standard Codes shall be so approved and shall bear approval labels.
8. All work shall be in compliance with all applicable safety regulations.
9. Should any doubt arise as to the true meaning of the Drawings or Specifications, reference shall be made to the Architect/Engineer, whose decision shall be final. The Architect/Engineer will respond within 10 business days after receipt of request for information. The Contractor shall conform to these responses as part of the Contract with no additional cost to the Owner or Architect/Engineer. No alleged statement by the Architect/Engineer is acceptable excuse for inferior work.
10. The listing of product manufacturers, materials and methods is intended to establish a standard of quality. Products by other manufacturers may be accepted provided they have the equivalent capacity, construction, and performance. The Engineer shall be the sole judge of quality and equivalence of equipment, materials, and methods. However, under no circumstances shall any substitution be made without written approval of the Architect/Engineer prior to bidding.
11. Equipment has been chosen to fit within the available space. Where substituted or alternative equipment is proposed, it shall be the Contractor's responsibility to verify that the equipment will fit within the space available, including all required code and maintenance clearances, and to coordinate all equipment requirements with other Contractors.
12. Obtain all equipment or material of each type through one source, locally when possible, from a single manufacturer.
13. Substitutions: Products of equal performance characteristics may be considered. Contractors wishing to substitute a product or material shall submit such request to the Architect/Engineer in writing at least 7 DAYS PRIOR to bids being due. Requests will not be considered after that time. The Architect/Engineer shall review the request and is acceptable will issue a letter allowing the substitution. Any anticipated use of a non-specified product without written approval is strictly the risk of the Contractor. If a request is rejected, the Contractor shall furnish the specified product or material. Each contractor is responsible for costs incurred by other trades as a result of any substitution made by the Contractor.
14. Submittals: Submit the following in accordance with Division 1 Specifications and the requirements of this section for each piece of equipment and each type of component and material.
    - 14.1. Submit product data for each type of product specified.
    - 14.2. Submit shop/coordination drawings at a minimum scale of 1/4"=1'-0" detailing all major equipment, component, and systems in relation to work of other trades, indicating installation, code, and working clearances and access for all equipment and components.
    - 14.3. Submit samples of color, lettering, and graphics for each identification product.
    - 14.4. Contractor shall separate submittals to contain no more than one Specification section.
    - 14.5. Within 30 days after award of Contract, the Contractor shall submit a minimum of four (4) copies of each submittal with coversheet to the Architect/Engineer. If acceptable to the Architect/Owner, an electronic version containing the coversheet and all submittal data within one file may be submitted in lieu of the 4 copies.
    - 14.6. Each submittal shall include the following information. Submittals that do not comply with the following requirements will be marked "REJECTED" and returned.
        - 14.6.1. Coversheet: Indicating the names and address of the Project, Architect, Engineer, and Contractor, and the submittal name and number. Number shall be based on the Specification section, submittal sequence number, and a revision sequence number, if applicable. Ex: 262726-02-R1 is the 1st revision to the 2nd submittal for section 26 27 26.
        - 14.6.2. List of Variations: This page shall list all variations including furnished/unfurnished options and features between the submitted item and the scheduled/specified item. If there are not variations, the page shall state "NO VARIATIONS."
        - 14.6.3. Product Information: Clearly indicate manufacturer's name, designation, size, performance and capacity data, dimensional data, sufficient pictorial and diagrammatic data to show conformance with the Construction Documents. Applicable information shall be clearly indicated and non-applicable information shall be struck-out.
        - 14.6.4. Warranty Information: Manufacturer's warranty certificate that meets or exceed the requirements of the Construction Documents.
        - 14.6.5. Certification by the General and Sub-Contractor that material submitted is in accordance with the Construction Documents, signed and dated.
    - 14.7. Submittal review time in the Engineer's office will be a minimum of 10 working days per review. The Contractor shall consider this review time when scheduling work.
    - 14.8. Each submittal will be marked with one of the following :
        - 14.8.1. NO EXCEPTIONS TAKEN – Submittal was reviewed and no deviations were found.
        - 14.8.2. EXCEPTIONS NOTED, SUBMIT RESPONSE – Submittal was reviewed and found to have minor deviations or missing information. A re-submittal is not required; however, a written response to all review comments shall be submitted.
        - 14.8.3. EXCEPTIONS NOTED, RESUBMIT – Submittal was reviewed and major deviations were noted. The submittal shall be revised to address the noted deviations and resubmitted.
        - 14.8.4. REJECTED – Submittal was reviewed and is not in conformance or is not in the correct format. A revised submittal that is in conformance shall be resubmitted.
    - 14.9. Inadequate or incomplete submittals will not be reviewed and will be returned marked "REJECTED."
    - 14.10. The Architect's/Engineer's review of a submittal shall not relieve the Contractor of the responsibility for errors, omissions, oversights, or deviations that may be contained within the submittal. If the Contractor proceeds based on undetected errors, omissions, oversights, or deviations, it is at his/her sole responsibility. Regardless of any information contained in the submittal or the Engineer's review thereof, the Contract Documents shall govern the Work and neither waived nor superseded by the submittal review.
    - 14.11. Equipment and material purchased without a "NO EXCEPTIONS TAKEN" submittal review is at the risk of the Contractor. The cost of removal and replacement of such items which is judged unsatisfactory by the Architect/Engineer for any reason shall be at the Contractor's expense.
15. Operation & Maintenance Requirements (per energy code):
    - 15.1. Record Drawings: The Contractor shall maintain a set of clearly marked Record Drawing prints at the site, which indicated all alterations and changes. Within 90 days after the date of system acceptance provide a reproducible set of record drawings to the building owner or the designated representative of the building owner. Record drawings shall include as a minimum the location and performance data on each piece of equipment, general configuration of duct and pipe distribution system including sizes, and the terminal air or water design flow rates. Record drawings provided to building owner or building owner's representative shall be in the building owner's requested format (plots, CAD, pdf, etc.) with the Architect's/Engineer's seals struck-out and each drawing marked with the General and associated Sub-Contractors' names and date.
    - 15.2. Operation and Maintenance Manuals: Provide operating manual and a maintenance manual to the building owner or the designated representative of the building owner within 90 days after the date of system acceptance. These manuals shall be in accordance with industry-accepted standards and shall include, at a minimum, the following:
        - 15.2.1. Submittal data stating equipment size and selected options for each piece of equipment requiring maintenance. Submittal data shall be based on final "NO EXCEPTIONS TAKEN" submission from previous specification section requirements
        - 15.2.2. Operation manuals and maintenance manuals for each piece of equipment requiring maintenance, except equipment not furnished as part of the project. Required routine maintenance actions shall be clearly identified.
        - 15.2.3. Names and addresses of at least one service agency.
        - 15.2.4. HVAC controls system maintenance and calibration information, including wiring diagrams, schematics, and control sequence descriptions. Desired or field-determined set-points shall be permanently recorded on control drawings at control devices or, for digital control systems, in programming comments.
        - 15.2.5. A complete narrative/description of how each system furnished is intended to operate, including suggested initial set-points.
16. All equipment and material shall be installed, connected, and adjusted per the manufacturer's written instructions and recommendations.
17. The Contractor shall be held responsible for coordinating with all other trades prior to system installation. The Contractor shall refer to other trade plans for other work that may impact his/her work.
18. Where space requirements conflict, the following order of precedence shall be used.
    - 18.1. Building Lines and Structural Members.
    - 18.2. Soil, Drain, and Condensate Piping.
    - 18.3. Grease-Rated Ductwork.
    - 18.4. Refrigerant and Vent Piping.
    - 18.5. HVAC Ductwork.
    - 18.6. HVAC and Domestic Water Piping.
    - 18.7. Fire Protection (Sprinkler & Standpipe) Piping.
    - 18.8. Electrical Conduit.
19. The Contractor shall take care during work to avoid damage to work by other trades.
20. The Contractor shall keep the premises free of debris and rubbish caused by his/her work on a daily basis. This debris and rubbish shall be removed from the building and site.
21. Guarantee: The Contractor shall guarantee the entire installation to be in proper working order for a period of one (1) year, unless noted otherwise, after final acceptance and shall furnish free of charge all materials and labor necessary to comply with this guarantee.
22. Demolition: Where accessible work is to be demolished, it shall be removed in its entirety to a point of permanent concealment. Where work to be demolished is not accessible, remove system to 2' below the surface, cap, and patch surface to match existing. Where work to remain is damaged, remove the damaged portions and install new of equal capacity, quality, and function.
23. Work within Existing Building: Construction shall be arranged to minimize the hazard and interruption to the occupants. Do not interrupt services to the occupants without written permission from the Architect/Owner/Tenant, a minimum of 5 working days prior to the interruption. Where disruption of a service becomes necessary, provisions shall be made to provide temporary service throughout the interruption of the primary service.

ELECTRICAL SYMBOL LEGEND

ALL SYMBOLS MAY NOT BE USED. VERIFY WITH PLANS.
REFER TO SPECIFICATIONS AND PLAN NOTES FOR OTHER REQUIREMENTS

CONDUIT & CIRCUITRY

- X-# — HOMERUN TO PANELBOARD "X" DENOTES PANELBOARD NAME – "#" DENOTES CIRCUIT NUMBER
- X-# — UNDERGROUND HOMERUN TO PANELBOARD "X" DENOTES PANELBOARD NAME – "#" DENOTES CIRCUIT NUMBER
- X-# — PARTIAL HOMERUN TO PANELBOARD "X" DENOTES PANELBOARD NAME – "#" DENOTES CIRCUIT NUMBER
- ABOVE / UNDERGROUND CONDUIT WITH WIRE COUNT
- LINE (HOT OR SWITCH LEG)
- NEUTRAL
- EQUIPMENT GROUND
- ISOLATED GROUND
- CONDUIT STUB-UP TO LEVEL ABOVE
- CONDUIT STUB-UP FROM BELOW GRADE

EQUIPMENT

- 277/480 VOLT PANELBOARD – CONNECTED TO NORMAL POWER (EXISTING – NEW – DEMOLITION)
- 120/208 VOLT PANELBOARD – CONNECTED TO NORMAL POWER (EXISTING – NEW – DEMOLITION)
- 277/480 VOLT PANELBOARD – CONNECTED TO EMERGENCY POWER (EXISTING – NEW – DEMOLITION)
- 120/208 VOLT PANELBOARD – CONNECTED TO EMERGENCY POWER (EXISTING – NEW – DEMOLITION)
- DISTRIBUTION SWITCHGEAR/SWITCHBOARD (EXISTING – NEW – DEMOLITION)
- TRANSFORMER – FLOOR-MOUNTED ON 4" HOUSEKEEPING PAD (EXISTING – NEW – DEMOLITION)
- TRANSFORMER – SUSPENDED FROM OVERHEAD STRUCTURE (EXISTING – NEW – DEMOLITION)
- NON-FUSED DISCONNECT SWITCH (EXISTING – NEW – DEMOLITION) SWITCH SIZE/# OF POLES/NEMA ENCLOSURE — 30A/3P/1
- FUSED DISCONNECT SWITCH (EXISTING – NEW – DEMOLITION) SWITCH SIZE/# OF POLES/FUSE SIZE/NEMA ENCLOSURE — 30A/3P/25A/3R
- MAGNETIC MOTOR STARTER (EXISTING – NEW – DEMOLITION) NEMA STARTER SIZE/NEMA ENCLOSURE — NEMA "00"/1
- COMBO STARTER/DISCONNECT (EXISTING – NEW – DEMOLITION) SWITCH SIZE/NEMA STARTER SIZE/NEMA ENCLOSURE — 30A/NEMA "0"/3R
- TC — TIMECLOCK (EXISTING – NEW – DEMOLITION)
- CONT — LIGHTING CONTACTOR CABINET (EXISTING – NEW – DEMOLITION)
- M — ELECTRICITY METER (UTILITY OR OWNER / KWH OR DEMAND) (EXISTING – NEW – DEMOLITION)
- CT — METER CT CABINET (EXISTING – NEW – DEMOLITION)

WIRING DEVICES (REFER TO SPECIFICATIONS FOR MOUNTING HEIGHTS)

- 5-20R SIMPLEX RECEPTACLE (EXISTING – NEW – DEMOLITION)
- 5-20R DUPLEX RECEPTACLE (EXISTING – NEW – DEMOLITION)
- 5-20R QUADRAPLEX RECEPTACLE (EXISTING – NEW – DEMOLITION)
- SPECIAL RECEPTACLE (EXISTING – NEW – DEMOLITION)

"XX" DENOTES CONFIG, TYPE, OR MOUNTING HEIGHT
GFI-GROUND FAULT CIRCUIT INTERRUPTOR
WP-WEATHERPROOF
IG-ISOLATED GROUND

- 5-20R SIMPLEX FLOOR RECEPTACLE / POKE-THROUGH (EXISTING – NEW – DEMOLITION)
- 5-20R DUPLEX FLOOR RECEPTACLE / POKE-THROUGH (EXISTING – NEW – DEMOLITION)
- 5-20R QUADRAPLEX FLOOR RECEPTACLE / POKE-THROUGH (EXISTING – NEW – DEMOLITION)
- SPECIAL FLOOR RECEPTACLE / POKE-THROUGH (EXISTING – NEW – DEMOLITION)
- SYSTEM FURNITURE BASE FEED / POKE-THROUGH (EXISTING – NEW – DEMOLITION)
- JUNCTION BOX – FIELD DETERMINE FINAL CONNECTION (EXISTING – NEW – DEMOLITION)
- P — SERVICE POWER POLE – FIELD DETERMINE ACTUAL LENGTH (EXISTING – NEW – DEMOLITION)
- DIRECT CONNECTION TO EQUIPMENT FIELD VERIFY EXACT CONNECTION LOCATION AND SIZE
- S_a — SINGLE POLE TOGGLE SWITCH – "a" DENOTE SWITCH ZONE (EXISTING – NEW – DEMOLITION)
- S_3 — 3-WAY TOGGLE SWITCH (EXISTING – NEW – DEMOLITION)
- S_4 — 4-WAY TOGGLE SWITCH (EXISTING – NEW – DEMOLITION)
- S_K — KEYED SINGLE POLE TOGGLE SWITCH (EXISTING – NEW – DEMOLITION)
- S_D — DIMMER SWITCH – FIELD VERIFY COMPATIBILITY WITH LOAD TYPE (EXISTING – NEW – DEMOLITION)
- S_D — WALL-BOX OCCUPANCY SENSOR SWITCH – FIELD ADJUST (EXISTING – NEW – DEMOLITION)
- OS — CEILING-MOUNTED OCCUPANCY SENSOR – FIELD ADJUST (EXISTING – NEW – DEMOLITION)
- PP — LOW-VOLTAGE SWITCHING POWER PACK (EXISTING – NEW – DEMOLITION)

COMMUNICATION DEVICES (REFER TO SPECIFICATIONS FOR MOUNTING HEIGHTS)

- WALL COMM. ROUGH-IN – 1" C. WITH PULLSTRING TO A.C. (EXISTING – NEW – DEMOLITION)
- FLOOR COMM. ROUGH-IN – 1" C. WITH PULLSTRING TO A.C. (EXISTING – NEW – DEMOLITION)

LIGHTING ("X" DENOTES TYPE – REFER TO FIXTURE SCHEDULE)

- X — FLUORESCENT FIXTURE – RECESSED OR SURFACE (EXISTING/NEW – DEMOLITION) (2'x4' SHOWN, OTHERS SIMILAR)
- EMERGENCY/NIGHTLIGHT FIXTURE – RECESSED OR SURFACE (EXISTING/NEW – DEMOLITION) (2'x4' SHOWN, OTHERS SIMILAR)
- FLUORESCENT STRIP FIXTURE (EXISTING/NEW – DEMOLITION) (4' SHOWN, OTHERS SIMILAR)
- EMERGENCY/NIGHTLIGHT STRIP FIXTURE (EXISTING/NEW – DEMOLITION) (4' SHOWN, OTHERS SIMILAR)
- DOWNLIGHT / WALL-WASHER – RECESSED OR SURFACE (EXISTING/NEW – DEMOLITION)
- EMERGENCY/NIGHTLIGHT DOWNLIGHT / WALL-WASHER (EXISTING/NEW – DEMOLITION) – RECESSED OR SURFACE
- DECORATIVE WALL SCONCE – VERIFY MOUNTING HEIGHT (EXISTING/NEW – DEMOLITION)
- TRACK SECTION AND HEADS – PROVIDE ALL APPURTENANCES (EXISTING/NEW – DEMOLITION)
- EXTERIOR WALL PACK – VERIFY MOUNTING HEIGHT (EXISTING/NEW – DEMOLITION)
- EXTERIOR RECTANGULAR FIXTURE ON POLE – VERIFY CONFIG. (EXISTING/NEW – DEMOLITION)
- EXTERIOR ROUND FIXTURE ON POLE – VERIFY CONFIG. (EXISTING/NEW – DEMOLITION)
- EMERGENCY LIGHTING UNIT (EXISTING – NEW – DEMOLITION)
- WALL-MOUNTED EXIT SIGN – SHADING DENOTE FACE (EXISTING – NEW – DEMOLITION) – ARROWS DENOTE CHEVRONS
- CEILING-MOUNTED EXIT SIGN – SHADING DENOTE FACE (EXISTING – NEW – DEMOLITION) – ARROWS DENOTE CHEVRONS
- COMBO EXIT SIGN / LIGHTING UNIT – SHADING DENOTE FACE (EXISTING – NEW – DEMOLITION) – ARROWS DENOTE CHEVRONS

FIRE ALARM

- FACP — FIRE ALARM CONTROL PANEL (EXISTING – NEW – DEMOLITION)
- ANN — FIRE ALARM REMOTE ANNUNCIATOR PANEL (EXISTING – NEW – DEMOLITION)
- FARP — FIRE ALARM REMOTE PANEL (EXISTING – NEW – DEMOLITION)
- SD — SMOKE DETECTOR – CEILING MOUNTED – CENTER IN TILE (EXISTING – NEW – DEMOLITION)
- HD — HEAT DETECTOR – CEILING MOUNTED – CENTER IN TILE (EXISTING – NEW – DEMOLITION)
- FD — FLAME DETECTOR – CEILING MOUNTED – CENTER IN TILE (EXISTING – NEW – DEMOLITION)
- SD — SMOKE DETECTOR – DUCT/UNIT MOUNTED WITH SAMPLING TUBE (EXISTING – NEW – DEMOLITION)
- F — MANUAL FIRE ALARM PULLSTATION (EXISTING – NEW – DEMOLITION)
- FIRE FIGHTER TELEPHONE JACK (EXISTING – NEW – DEMOLITION)
- FS — FIRE PROTECTION SYSTEM FLOW SWITCH (EXISTING – NEW – DEMOLITION)
- TS — FIRE PROTECTION VALVE TAMPER SWITCH (EXISTING – NEW – DEMOLITION)
- G — FIRE PROTECTION SYSTEM WATER GONG (EXISTING – NEW – DEMOLITION)
- B — FIRE PROTECTION SYSTEM ELECTRIC BELL (EXISTING – NEW – DEMOLITION)
- DH — ELECTRO-MAGNETIC DOOR HOLD (EXISTING – NEW – DEMOLITION)
- V — VISUAL STROBE – WALL MOUNTED – 110cd UNO (EXISTING – NEW – DEMOLITION)
- H — AUDIBLE HORN – WALL MOUNTED (EXISTING – NEW – DEMOLITION)
- S — SPEAKER – WALL MOUNTED (EXISTING – NEW – DEMOLITION)
- HV — COMBINATION HORN/STROBE – WALL MOUNTED – 110cd UNO (EXISTING – NEW – DEMOLITION)
- SV — COMBINATION SPEAKER/STROBE – WALL MOUNTED – 110cd UNO (EXISTING – NEW – DEMOLITION)
- V — VISUAL STROBE – CEILING MOUNTED – 110cd UNO (EXISTING – NEW – DEMOLITION) – CENTER IN TILE
- H — AUDIBLE HORN – CEILING MOUNTED (EXISTING – NEW – DEMOLITION) – CENTER IN TILE
- S — SPEAKER – CEILING MOUNTED (EXISTING – NEW – DEMOLITION) – CENTER IN TILE
- HV — COMBINATION HORN/STROBE – CEILING MOUNTED – 110cd UNO (EXISTING – NEW – DEMOLITION) – CENTER IN TILE
- SV — COMBINATION SPEAKER/STROBE – CLG MOUNTED – 110cd UNO (EXISTING – NEW – DEMOLITION) – CENTER IN TILE

SECURITY / ACCESS

- CR — CARD READER (EXISTING – NEW – DEMOLITION)
- ML — ELECTRO-MAGENTIC DOOR LOCK (EXISTING – NEW – DEMOLITION)
- EL — ELECTRONIC DOOR LATCH (EXISTING – NEW – DEMOLITION)
- PUSHBUTTON (EXISTING – NEW – DEMOLITION)

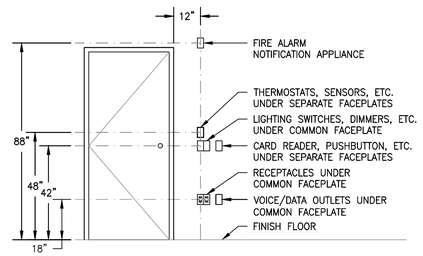
GENERAL SYMBOL LEGEND

ALL SYMBOLS MAY NOT BE USED. VERIFY WITH PLANS.
REFER TO SPECIFICATIONS AND PLAN NOTES FOR OTHER REQUIREMENTS

- # — KEYED NOTE "#" DENOTES NUMBER
- # — REVISION DELTA TAG "#" DENOTES NUMBER
- REVISION CLOUD – DENOTES APPROXIMATE AREA OF CHANGES CONTRACTOR RESPONSIBLE TO VERIFY ACTUAL CHANGES
- CONNECTION TO EXISTING FIELD VERIFY EXACT CONNECTION LOCATION AND SIZE

TYPICAL DEVICE MOUNTING

ALL SYMBOLS MAY NOT BE USED. VERIFY WITH PLANS.
REFER TO SPECIFICATIONS AND PLAN NOTES FOR OTHER REQUIREMENTS.
CONTRACTOR TO COORDINATE FINAL MOUNTING HEIGHT AND LOCATION FOR ALL DEVICES WITH ARCHITECT/ARCHITECT PLANS PRIOR TO ROUGH-IN.



CODE COMPLIANCE INFORMATION

ENERGY CODE COMPLIANCE
2021 IECC - C103.2 INFORMATION ON CONSTRUCTION DOCUMENTS

1.	INSULATION MATERIALS AND THEIR R-VALUES.	REFER TO MECHANICAL BOOK SPECS SECTION 230700
2.	FENESTRATION U-FACTORS AND SOLAR HEAT GAIN COEFFICIENTS (SHGCs).	REFER TO ARCHITECTURAL PLANS.
3.	AREA-WEIGHTED U-FACTOR AND SOLAR HEAT GAIN COEFFICIENT (SHGC) CALCULATIONS.	REFER TO ARCHITECTURAL PLANS.
4.	MECHANICAL SYSTEM DESIGN CRITERIA.	REFER TO MECHANICAL BOOK SPECS
5.	MECHANICAL AND SERVICE WATER HEATING SYSTEM AND EQUIPMENT TYPES, SIZES, AND EFFICIENCIES.	REFER TO MECHANICAL AND PLUMBING SCHEDULES ON SHEETS M3.01 AND P4.01.
6.	ECONOMIZER DESCRIPTION.	REFER TO MECHANICAL SHEET M3.01.
7.	EQUIPMENT AND SYSTEM CONTROLS.	REFER TO MECHANICAL SHEET M3.01.
8.	FAN MOTOR HORSEPOWER (HP) AND CONTROLS.	REFER TO MECHANICAL SHEET M3.01.
9.	DUCT SEALING, DUCT AND PIPE INSULATION, AND LOCATION.	REFER TO MECHANICAL BOOK SPECS SECTION 233113.
10.	LIGHTING FIXTURE SCHEDULE WITH WATTAGE AND CONTROL NARRATIVE.	REFER TO ELECTRICAL SHEET E6.01.
11.	LOCATION OF DAYLIGHT ZONES ON FLOOR PLANS.	REFER TO ELECTRICAL SHEET E2.01.
12.	AIR SEALING DETAILS.	REFER TO ARCHITECTURAL PLANS.

Applicable Codes W/ City of Greeley Amendments
- 2021 IBC
- 2021 IMC
- 2021 IFC
- 2021 IPC
- 2021 IECC
- 2023 NEC

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REV	REASON FOR ISSUE	DATE

REVIEWED BY: JC
DRAWN BY: SP

WF BE# 112766

WF PROJECT# 419105

SHEET TITLE

ELECTRICAL LEGENDS, NOTES & SYMBOLS

SHEET NUMBER

E0.00

T&D PROJECT NUMBER
24169

LIGHTING FIXTURE SCHEDULE

SYMBOL	MANUFACTURER AND MODEL NUMBER	VOLTAGE & PHASE	LAMP QUANTITY	LAMP TYPE	DESCRIPTION AND REMARKS	ACTUAL WATTAGE	MAXIMUM WATTAGE
P1	LITHONIA LIGHTING #RSX3-LED-P3-40K-R4-HS POLE: SSS-20-4G-DM19AS	277/1	WITH FIXTURE	LED LAMPS WITH FIXTURE 23,534 LUMENS 4000 CCT	LED POLE MOUNTED SITE LIGHTING AT 22.5' WITH 20' POLE AND 30" BASE. PROVIDE FIXTURE WITH (1) HEAD AND PHOTOEYE. COORDINATE EXACT POLE LOCATION AND FINISH WITH ARCHITECT PRIOR TO PURCHASE. COORDINATE WITH STRUCTURAL ON POLE AND POLE BASE REQUIREMENTS, SEE DETAIL. PROVIDE ALL NECESSARY EQUIPMENT FOR A COMPLETE INSTALLATION.	267W	267W
P1B	LITHONIA LIGHTING #RSX3-LED-P4-40K-R4-HS POLE: SSS-20-4G-DM19AS	277/1	WITH FIXTURE	LED LAMPS WITH FIXTURE 26,931 LUMENS 4000 CCT	LED POLE MOUNTED SITE LIGHTING AT 22.5' WITH 20' POLE AND 30" BASE. PROVIDE FIXTURE WITH (1) HEAD AND PHOTOEYE. COORDINATE EXACT POLE LOCATION AND FINISH WITH ARCHITECT PRIOR TO PURCHASE. COORDINATE WITH STRUCTURAL ON POLE AND POLE BASE REQUIREMENTS, SEE DETAIL. PROVIDE ALL NECESSARY EQUIPMENT FOR A COMPLETE INSTALLATION.	312W	312W
P3	LITHONIA LIGHTING #RSX3-LED-P4-40K-R4-EGFV POLE: SSS-20-4G-DM19AS	277/1	WITH FIXTURE	LED LAMPS WITH FIXTURE 73,011 LUMENS 4000 CCT	LED POLE MOUNTED SITE LIGHTING AT 22.5' WITH 20' POLE AND 30" BASE. PROVIDE FIXTURE WITH (3) HEADS AND PHOTOEYE. COORDINATE EXACT POLE LOCATION AND FINISH WITH ARCHITECT PRIOR TO PURCHASE. COORDINATE WITH STRUCTURAL ON POLE AND POLE BASE REQUIREMENTS, SEE DETAIL. PROVIDE ALL NECESSARY EQUIPMENT FOR A COMPLETE INSTALLATION.	936W	936W

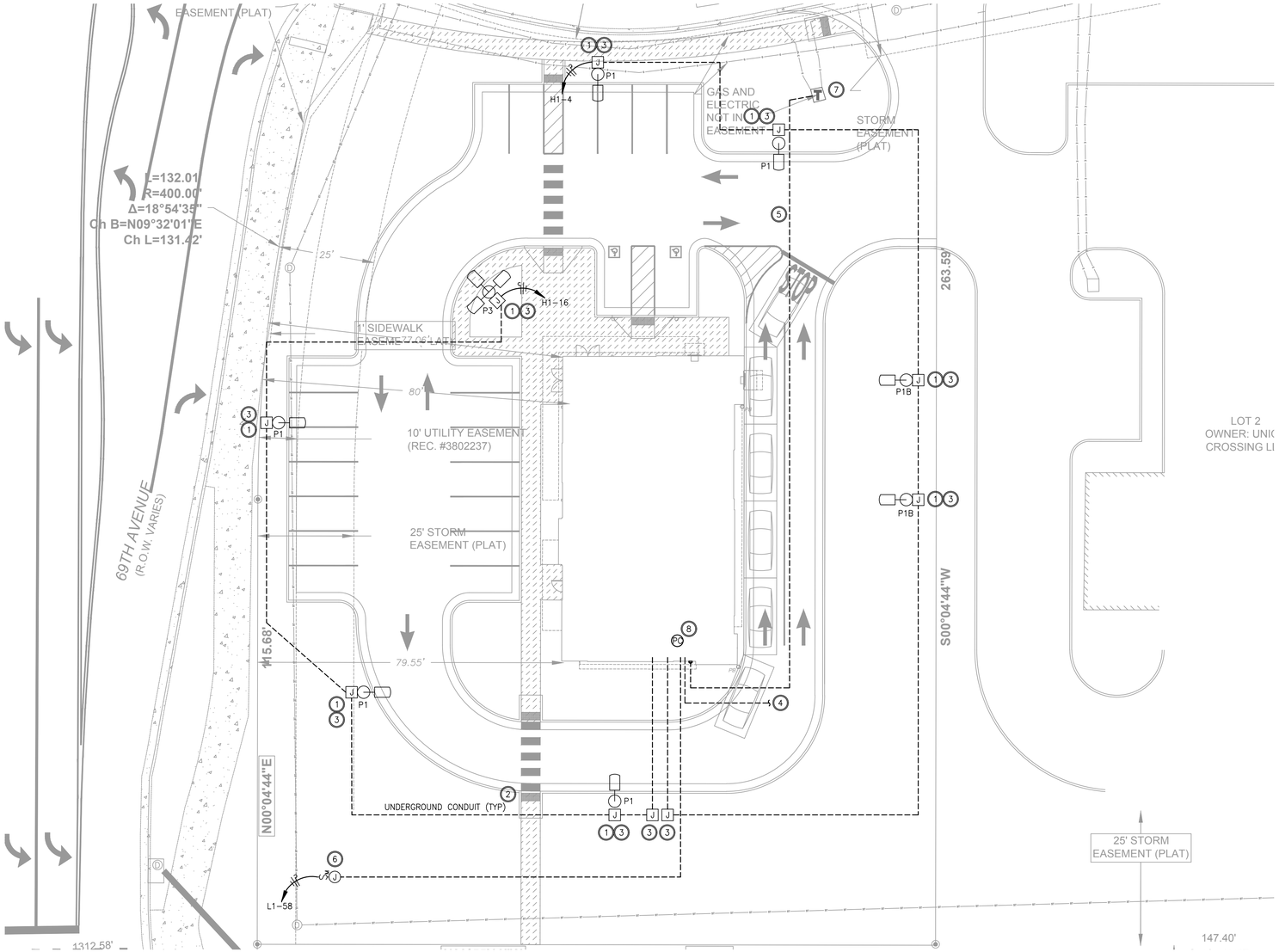
FOR QUESTIONS REGARDING INTERIOR LIGHTING CONTROLS AND EXTERIOR LIGHTING CALCULATIONS PLEASE CONTACT LESCO AT TST@LESCOHOUSTON.COM AND REF AGENT 268 ON RFQs.

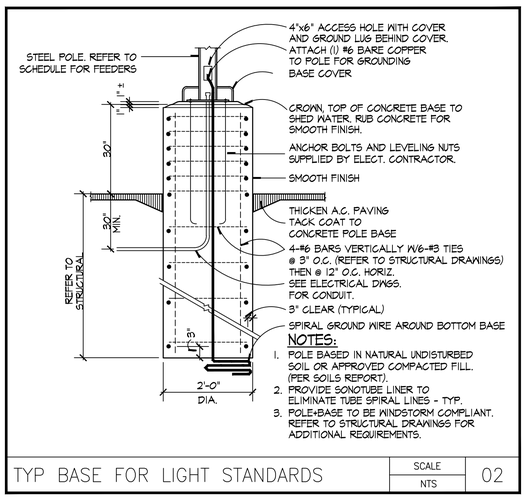
KEYED NOTES

1. NO AUTOMATIC SHUT-OFF PERMITTED IN THIS AREA FOR OCCUPANTS SAFETY AT DRIVE UP ATM.
2. PROVIDE (1) 1" PVC CONDUIT WITH PULLSTRING MINIMUM 30" BELOW GRADE TO FEED SITE LIGHTING. ALL CONDUIT AND FEEDERS SERVING SITE LIGHTING SHALL BE ROUTED UNDERGROUND AND STUB UP INTO BUILDING WITHIN ELECTRICAL ROOM.
3. PROVIDE JUNCTION BOX AT EVERY LIGHT POLE AND INTERSECTION AS REQUIRED FOR PURPOSES OF TAPPING AND PULLING CONDUCTORS. COORDINATE EXACT ROUTING IN FIELD PRIOR TO INSTALLATION.
4. PROVIDE (2) 4" PVC CONDUITS WITH PULLSTRING FOR NEW TELEPHONE/ COMMUNICATION SERVICE ENTRY. VERIFY EXACT LOCATION AND ALL REQUIREMENTS WITH TELEPHONE/ COMMUNICATION COMPANIES PRIOR TO INSTALL.
5. ROUTE SERVICE CONDUITS UNDERGROUND TO UTILITY DISCONNECT/METER. COORDINATE EXACT ROUTING AND ALL REQUIREMENTS WITH UTILITY COMPANY PRIOR TO INSTALL. REFER TO ONE-LINE FOR MORE INFORMATION.
6. PROVIDE (1) 1" PVC CONDUIT WITH PULLSTRING MINIMUM 30" BELOW GRADE FROM BUILDING ELECTRICAL ROOM TO POWER TOTEM OR MONUMENT SIGN. PROVIDE WEATHER PROOF J-BOX WITH NEMA 3R DISCONNECT SWITCH. ROUTE CIRCUIT THRU TIMECLOCK/LIGHTING CONTROLLER. COORDINATE EXACT LOCATION AND ALL REQUIREMENTS WITH SIGNAGE VENDOR PRIOR TO START OF WORK.
7. EXISTING PAD MOUNTED TRANSFORMER.
8. PROVIDE NEW PHOTOCELL TIED TO LIGHTING CONTROLS PANEL. SENSOR TO FACE NORTH IN A LOCATION THAT AVOIDS ANY OBSTACLES.

GENERAL NOTES

A. ALL WORK SHALL COMPLY WITH ALL PERTINENT NATIONAL, STATE, AND LOCAL ORDINANCES AND CODES, AND ALL AMERICAN DISABILITIES ACT (ADA) REQUIREMENTS.
B. DRAWINGS ARE DIAGRAMMATIC; CONFIRM DIMENSIONS AND LOCATIONS IN THE FIELD AND ADVISE ENGINEER OF MAJOR DISCREPANCIES.
C. CONTRACTOR SHALL BE HELD RESPONSIBLE FOR COORDINATING WITH ALL OTHER TRADES PRIOR TO ROUGH-IN OF ALL ELECTRICAL DEVICES INCLUDING BUT NOT LIMITED TO RECEPTACLES AND EQUIPMENT. REFER TO HVAC PLANS FOR OTHER ELECTRICAL WORK.
D. IN THE EVENT OF A CONFLICT BETWEEN DRAWINGS AND SPECIFICATIONS. (REFER TO SPECIFICATION MANUAL) THE GREATER AMOUNT OF WORK SHALL BE PRICED. THE CONFLICT SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER AND DIRECTION SHALL BE REQUESTED.
E. COORDINATE THE ROUGH-IN LOCATION, CONNECTION TYPE, AND TERMINATION REQUIREMENT WITH EQUIPMENT INSTALLERS PRIOR TO ROUGH-IN.
F. CONTRACTOR SHALL CONTACT ALL APPROPRIATE UTILITY PROVIDERS TO VERIFY EXACT LOCATION OF EXISTING UTILITIES AND ROUTING OF NEW UTILITIES. UTILITY LOCATIONS SHOWN ARE SUBJECT TO THE REVIEW AND APPROVAL OF THE LOCAL UTILITY COMPANIES, AND SHALL BE BID APPROPRIATELY. CONTRACTOR SHALL COORDINATE WITH, AND PAY ALL FEES AND ASSOCIATED COSTS TO, THE LOCAL UTILITY COMPANY TO PROVIDE APPROPRIATE SERVICES TO THE PROJECT.
G. A FINAL COMMISSIONING REPORT SHALL BE DELIVERED TO THE BUILDING OWNER/MEP ENGINEER PER SECTION C408.2.5 OF THE 2021 IECC PRIOR TO CLOSE-OUT.





NOTES:
1. POLE BASED IN NATURAL UNDISTURBED SOIL OR APPROVED COMPACTED FILL. (PER SOILS REPORT).
2. PROVIDE SONOTUBE LINER TO ELIMINATE TUBE SPIRAL LINES - TYP.
3. POLE+BASE TO BE WINDSTORM COMPLIANT. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.

TYP BASE FOR LIGHT STANDARDS | SCALE NTS | 02

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

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DRAWN BY: SP

WF BE# 112766

WF PROJECT# 419105

SHEET TITLE
ELECTRICAL SITE PLAN

SHEET NUMBER
E0.01

T&D PROJECT NUMBER
24169

4/25/2025 7:09:12 PM

POWER GENERAL NOTES

A. ALL WORK SHALL COMPLY WITH ALL PERTINENT NATIONAL, STATE, AND LOCAL ORDINANCES AND CODES, AND ALL AMERICAN DISABILITIES ACT (ADA) REQUIREMENTS.

B. DRAWINGS ARE DIAGRAMMATIC; CONFIRM DIMENSIONS AND LOCATIONS IN THE FIELD AND ADVISE ENGINEER OF MAJOR DISCREPANCIES.

C. CONTRACTOR SHALL BE HELD RESPONSIBLE FOR COORDINATING WITH ALL OTHER TRADES PRIOR TO ROUGH-IN OF ALL ELECTRICAL DEVICES INCLUDING BUT NOT LIMITED TO RECEPTACLES AND EQUIPMENT. REFER TO HVAC PLANS FOR OTHER ELECTRICAL WORK.

D. IN THE EVENT OF A CONFLICT BETWEEN DRAWINGS AND SPECIFICATIONS, THE GREATER AMOUNT OF WORK SHALL BE PRICED. THE CONFLICT SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER AND DIRECTION SHALL BE REQUESTED.

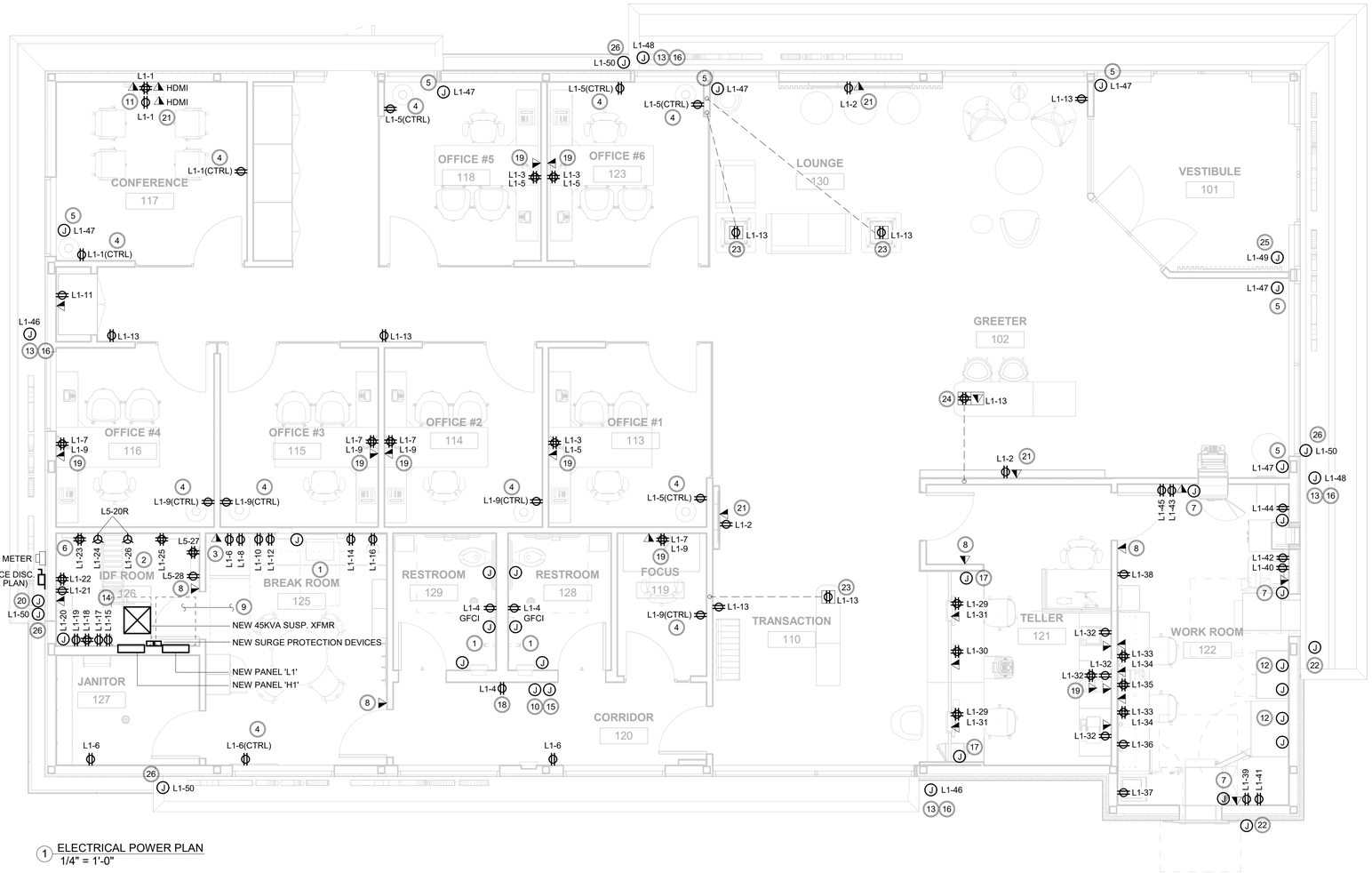
E. COORDINATE THE ROUGH-IN LOCATION, CONNECTION TYPE, AND TERMINATION REQUIREMENT WITH EQUIPMENT INSTALLERS PRIOR TO ROUGH-IN.

F. CONTRACTOR SHALL CONTACT ALL APPROPRIATE UTILITY PROVIDERS TO VERIFY EXACT LOCATION OF EXISTING UTILITIES AND ROUTING OF NEW UTILITIES. UTILITY LOCATIONS SHOWN ARE SUBJECT TO THE REVIEW AND APPROVAL OF THE LOCAL UTILITY COMPANIES, AND SHALL BE BID APPROPRIATELY. CONTRACTOR SHALL COORDINATE WITH, AND PAY ALL FEES AND ASSOCIATED COSTS TO, THE LOCAL UTILITY COMPANY TO PROVIDE APPROPRIATE SERVICES TO THE PROJECT.

CONTRACTOR TO REFER TO ARCHITECTURAL DRAWINGS FOR FINISH OF DEVICES, COVERPLATES AND RECEPTACLES PRIOR TO BID/PURCHASE AND ELEVATIONS FOR MOUNTING HEIGHTS OF ALL J-BOXES/OUTLETS PRIOR TO ROUGH-IN AND INSTALLATION.

ALL RECEPTACLES TO BE 20A NON-LOCKING 125V AND 250V RECEPTACLES TO BE TAMPER RESISANT PER NEC 2023 SECTION 406.12(5).

MEETING ROOM RECEPTACLE QUANTITY MEETS REQUIREMENTS OF NEC 210, THE LAYOUT PROVIDED IS BASED OFF PROJECT NEED AND PLACED ACCORDINGLY AS ALLOWED PER CODE.



1 ELECTRICAL POWER PLAN
1/4" = 1'-0"

KEYED NOTES

1 ALL RECEPTACLES WITHIN 6'-0" OF SINK OR ALONG COUNTERTOP WHERE FOOD PREP TAKE PLACE SHALL HAVE GROUND-FAULT PROTECTION. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR MOUNTING HEIGHTS AND EXACT LOCATIONS FOR ALL DEVICES. ALL DEVICES SHALL BE FULLY ACCESSIBLE.

2 VERIFY RECEPTACLE CONFIGURATION, AMPACITY, LOCATION, AND MOUNTING HEIGHT WITH TENANT'S IT PERSONNEL PRIOR TO DEVICE INSTALLATION IN THIS ROOM.

3 FURNISH AND INSTALL RECEPTACLE/DATA OUTLET SIMILAR TO LEGRAND TV2MW AND JUNCTION BOX WITH PULLSTRING FOR CONNECTION TO WALL-MOUNTED TELEVISION. PRIOR TO INSTALLATION, VERIFY EXACT LOCATION AND MOUNTING HEIGHT TO KEEP CONNECTIONS HIDDEN FROM VIEW. CONFIRM WALL DEPTH PRIOR TO ORDER. PROVIDE 3/4" CONDUIT FROM TELEVISION JUNCTION BOX AND TO UP ABOVE AN ACCESSIBLE CEILING. COORDINATE REQUIREMENTS WITH AV VENDOR.

4 FURNISH AND INSTALL POWER PACK ABOVE ACCESSIBLE CEILING IN THE AREA TO CONTROL RECEPTACLES AS INDICATED, POWER PACK TO BE INTERLOCKED WITH LIGHTING CONTROLS IN THE ROOM FOR AUTOMATIC RECEPTACLE CONTROL. PROVIDE ADDITIONAL POWER PACKS AS REQUIRED. COORDINATE REQUIREMENTS WITH FURNITURE VENDOR.

5 PROSCENIUM LIGHTING BY WELLS FARGO VENDOR. CONTRACTOR TO INSTALL JUNCTION BOX ABOVE CEILING FOR PROSCENIUM LIGHTING LOW VOLTAGE POWER. COORDINATE EXACT REQUIREMENTS WITH VENDOR PRIOR TO ROUGH-IN.

KEYED NOTES

6 PROVIDE AN INDEPENDENT GROUNDING BUSBAR (GB) MOUNTED ON FIRE RETARDANT PLYWOOD BOARD. COORDINATE EXACT LOCATION WITH TENANT IT REPRESENTATIVE. GB TO BE MINIMUM OF 1/4"X1"X6" IN SIZE WITH MINIMUM OF 3 GROUNDING TERMINALS. PROVIDE GROUNDING MEANS FOR ISOLATED GROUND PANEL 'L1', A/V EQUIPMENT, RACKS, AND MISC. ELECTRONICS TO GB. PROVIDE (1) #6 COPPER WIRE WITH GREEN INSULATION CONNECTED TO THE GB. ROUTE THE #6 IN A 3/4" CONDUIT AND CONNECT TO BASE BUILDING STEEL WITH GROUND LUG. GROUND BUSBAR SHALL BE ERICO OR APPROVED EQUAL.

7 PROVIDE (1) 2" CONDUIT WITH PULLSTRING FROM ATM TO IDF ROOM. ROUTE OVER LAY-IN CEILING AND AVOID MECHANICAL DUCTWORK WHERE POSSIBLE. PROVIDE TRANSITIONS AND CABLE PULL BOXES AS NEEDED. COORDINATE WORK PRIOR TO ROUGH IN.

8 CONTRACTOR TO PROVIDE (1) 3/4" CONDUIT WITH PULLSTRING FOR CONNECTION TO "RED" EMERGENCY PHONE. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH IN.

9 CONTRACTOR TO PROVIDE (1) 3/4" CONDUITS WITH RG-6 TEFLON CABLE (5FT SLACK AT EACH END) TO ALL TV LOCATIONS.

10 FURNISH AND INSTALL ZURN'S POWER CONVERTER AND JUNCTION BOX FOR HARDWIRING OF AUTOMATIC FLUSH VALVE AND FAUCET WITHIN THE RESTROOMS. COORDINATE EXACT LOCATION ABOVE CEILING WITH PLUMBER AND ARCHITECT PRIOR TO INSTALLATION.

11 PROVIDE POWER, DATA AND HDMI FOR CPU BELOW TABLE. COORDINATE EXACT REQUIREMENTS WITH FURNITURE VENDOR AND AV INSTALLER.

12 FURNISH AND INSTALL J-BOX WITH (1) 3/4" CONDUIT AND PULLSTRING BACK TO IDF ROOM FOR CONNECTION TO ALARM. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH IN.

13 FURNISH AND INSTALL WEATHER PROOF BOXES WITH (1) 3/4" CONDUIT WITH PULLSTRINGS TO ACCESSIBLE CEILING TO IDF ROOM FOR TENANT SIGNAGE. PROVIDE ALL NECESSARY ACCESSORIES AS NEEDED FOR A COMPLETE INSTALLATION. REFER TO ARCHITECTURAL ELEVATION.

14 CONTRACTOR SHALL COORDINATE EXACT LOCATION OF ALL ELECTRICAL EQUIPMENT IN FIELD PRIOR TO INSTALLATION. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL REQUIRED WORKING CLEARANCES.

15 FURNISH AND INSTALL STEP DOWN TRANSFORMER/POWER CONVERTER AND JUNCTION BOX FOR HARDWIRING OF AUTOMATIC PAPER TOWEL DISPENSER WITHIN THE RESTROOMS AND BREAKROOM. COORDINATE EXACT LOCATION ABOVE CEILING WITH ARCHITECT PRIOR TO INSTALLATION.

16 EXTERIOR SIGNAGE CIRCUIT TO BE CONTROLLED VIA LIGHTING CONTROLLER WITH INPUT FROM PHOTOCELL TO TURN ON AND TIME CLOCK TO TURN OFF. REFER TO LIGHTING CONTROLS DIAGRAM ON E2.01 FOR MORE INFORMATION.

17 PROVIDE JUNCTION BOX FOR POWER AND DATA LOW ON WALL FOR CONNECTION TO DEVICES WITHIN MILLWORK. ROUTE (1) 3/4" CONDUIT FOR POWER AND (2) 1" CONDUIT FOR DATA THROUGH MILLWORK TO IDF ROOM. COORDINATE EXACT ROUTING WITH ARCHITECT. PROVIDE GROMMET AS REQUIRED. ISOLATED GROUND CIRCUIT FOR COMPUTER (PC) SHALL BE SEPARATE FROM GENERAL PURPOSE POWER. REFER TO ARCHITECTURAL DRAWINGS FOR RECEPTACLE INFORMATION.

18 RECEPTACLE TO HAVE GFCI PROTECTION, BUT WILL NOT BE READILY ACCESSIBLE FOR TESTING SO CIRCUIT TO BE SERVED FROM GFCI BREAKER. PROVIDE LABELING ON RECEPTACLE WITH PROTECTION LOCATION FOR TESTING PURPOSES.

19 FURNISH AND INSTALL RECESSED (2) RECEPTACLE AND (1) DATA OUTLETS SIMILAR TO ARLINGTON TVBS507 WITH PULLSTRING. PRIOR TO INSTALLATION, VERIFY EXACT LOCATION AND MOUNTING HEIGHT TO KEEP CONNECTIONS HIDDEN FROM VIEW. CONFIRM WALL DEPTH PRIOR TO ORDER. PROVIDE (1) 1" CONDUIT WITH PULLSTRING FROM BOX AND UP ABOVE CEILING. COORDINATE REQUIREMENTS WITH AV VENDOR AND FURNITURE VENDOR.

20 WEATHERPROOF J-BOX SET AT 54" ABOVE FINISHED GRADE FOR IRRIGATION CONTROLLER. COORDINATE EXACT LOCATION WITH INSTALLER OF IRRIGATION SYSTEM. ALL CONDUIT TO BE CONCEALED IN WALL.

21 FURNISH AND INSTALL RECEPTACLE/DATA OUTLET SIMILAR TO LEGRAND TV2MW AND JUNCTION BOX WITH PULLSTRING FOR CONNECTION TO DIGITAL DISPLAY. PRIOR TO INSTALLATION, VERIFY EXACT LOCATION AND MOUNTING HEIGHT TO KEEP CONNECTIONS HIDDEN FROM VIEW. CONFIRM WALL DEPTH PRIOR TO ORDER. PROVIDE (1) 3/4" CONDUIT FROM TELEVISION JUNCTION BOX AND TO UP ABOVE CEILING. COORDINATE REQUIREMENTS WITH AV VENDOR.

22 SECURITY VENDOR TO FURNISH AND INSTALL ATM CAMERA TIED TO SECURITY MONITORING SYSTEM. COORDINATE WITH TENANT'S SECURITY VENDOR. PROVIDE ALL BOXES AND (1) 3/4" CONDUIT WITH PULLSTRINGS TO ACCESSIBLE CEILING TO IDF ROOM. PROVIDE ALL NECESSARY ACCESSORIES AS NEEDED FOR A COMPLETE INSTALLATION.

23 FURNISH AND INSTALL METAL FLOOR BOX, SIMILAR TO LEGRAND WIREMOLD #RPSFB-OG RATCHET-PRO SERIES WITH #895P-BLK COVER. VERIFY COLOR AND FINISH WITH ARCHITECT/OWNER PRIOR TO PURCHASE. PROVIDE (1) 3/4" CONDUIT FOR POWER WITH PULLSTRINGS TO NEAREST WALL FOR ROUTING OF CABLING UP TO ABOVE CEILING. COORDINATE EXACT PLACEMENT OF THE METAL BOX WITH FURNITURE LAYOUT.

24 FURNISH AND INSTALL METAL FLOOR BOX, SIMILAR TO LEGRAND WIREMOLD #RPSFB-OG RATCHET-PRO SERIES WITH #RP4CTC COVER. VERIFY COLOR AND FINISH WITH ARCHITECT/OWNER PRIOR TO PURCHASE. PROVIDE (1) 3/4" CONDUIT FOR POWER & (1) 1-1/4" CONDUIT FOR DATA WITH PULLSTRINGS TO NEAREST WALL FOR ROUTING OF CABLING UP TO ABOVE CEILING. COORDINATE EXACT PLACEMENT OF THE METAL BOX WITH FURNITURE LAYOUT.

25 CONTRACTOR TO PROVIDE AND INSTALL J-BOX ABOVE CEILING FOR ILLUMINATED CHANNEL LETTERS. COORDINATE WITH SIGNAGE VENDOR.

26 CONTRACTOR TO INSTALL JUNCTION BOX FOR LOW VOLTAGE STONE LIGHTING POWER PROVIDED BY ACM VENDOR. COORDINATE EXACT REQUIREMENTS WITH VENDOR PRIOR TO ROUGH-IN.

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DRAWN BY: SP

WF BE# 112766

WF PROJECT# 419105

SHEET TITLE

ELECTRICAL POWER PLAN

SHEET NUMBER

E1.01

T&D PROJECT NUMBER
24169

4/25/2025 7:09:30 PM

LIGHTING GENERAL NOTES

A. ALL WORK SHALL COMPLY WITH ALL PERTINENT NATIONAL, STATE, AND LOCAL ORDINANCES AND CODES, AND ALL AMERICAN DISABILITIES ACT (ADA) REQUIREMENTS.

B. DRAWINGS ARE DIAGRAMMATIC; CONFIRM DIMENSIONS AND LOCATIONS IN THE FIELD AND ADVISE ENGINEER OF MAJOR DISCREPANCIES.

C. CONTRACTOR SHALL BE HELD RESPONSIBLE FOR COORDINATING WITH ALL OTHER TRADES PRIOR TO ROUGH-IN OF ALL ELECTRICAL DEVICES INCLUDING BUT NOT LIMITED TO RECEPTACLES AND EQUIPMENT. REFER TO HVAC PLANS FOR OTHER ELECTRICAL WORK.

D. IN THE EVENT OF A CONFLICT BETWEEN DRAWINGS AND SPECIFICATIONS, THE GREATER AMOUNT OF WORK SHALL BE PRICED. THE CONFLICT SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER AND DIRECTION SHALL BE REQUESTED.

E. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING LOCATIONS, HEIGHTS, AND EXACT PLACEMENT OF ALL FIXTURES.

F. ALL OCCUPANCY SENSOR CALIBRATION AND ADJUSTMENT SHALL BE BY THE ELECTRICAL CONTRACTOR. INITIAL SETTING SHALL HAVE ALL TIME DELAYS AT THEIR MAXIMUM SETTING. WHERE LIGHT SWITCHES ARE SHOWN IN CONJUNCTION WITH OCCUPANCY SENSOR(S), CONTRACTOR SHALL WIRE THE LIGHT SWITCH(ES) ON THE LOAD SIDE OF THE SENSOR AND POWERPACK, PER WIRING DETAIL.

G. DETERMINE LIGHTING TIMECLOCK CONTROL SCHEDULES WITH OWNER AND MAKE NECESSARY ADJUSTMENTS.

TOTAL PROJECT LIGHTING LOAD LESS THAN/EQUAL TO 10% LESS THAN ALLOWABLE PER SPACE BY SPACE METHOD REQUIRED BY IECC 2021, THUS THIS PROJECT COMPLIES WITH SECTION C406 OPTION #2 (REDUCED LIGHTING POWER DENSITY)

ALL POTENTIAL DAYLIGHTING AREAS HAVE BEEN REVIEWED AND ONLY THOSE AREAS ABOVE THE REQUIRED 150W/300W OF POWER CONSUMPTION HAVE BEEN GIVEN DAYLIGHT RESPONSIVE CONTROLS PER IECC 2021 SECTION 405.2.3

CONTRACTOR SHALL PROVIDE LIGHTING SYSTEM FUNCTIONAL TESTING COMPLIANT WITH IECC 2021 SECTION C408.3. PROVIDE REQUIRED DOCUMENTATION TO OWNER WITHIN 90 DAYS OF RECEIPT OF CERTIFICATE OF OCCUPANCY.

KEYED NOTES

1 FIXTURE TO BE CONTROLLED WITH THE EXTERIOR CANOPY FIXTURES IN THE AREA AND ILLUMINATE TO 100 PERCENT IN THE EVENT OF AN OUTAGE. ROUTE THRU NEW INVERTER SYSTEM FOR 90 MINUTES OF BATTERY BACK-UP FOR EMERGENCY EGRESS. COORDINATE WITH VENDOR TO PROVIDE ALL NECESSARY EQUIPMENT NEEDED FOR COMPLETE INSTALLATION SUCH AS BUT NOT LIMITED TO JUMPER CABLES AND EMERGENCY TRANSFER DEVICES.

2 NO AUTOMATIC SHUT-OFF PERMITTED IN THIS ROOM FOR OCCUPANTS SAFETY, ROOM CONTAINS ELECTRICAL PANELS.

3 SEE LIGHTING CONTROLS PANEL SCHEDULE ON E5.01 AND SHEET MEP1.01 FOR SETPOINTS. CONTRACTOR TO COORDINATE WITH CONTROLS VENDOR ON REQUIREMENTS AND COORDINATE SCHEDULE WITH TENANT.

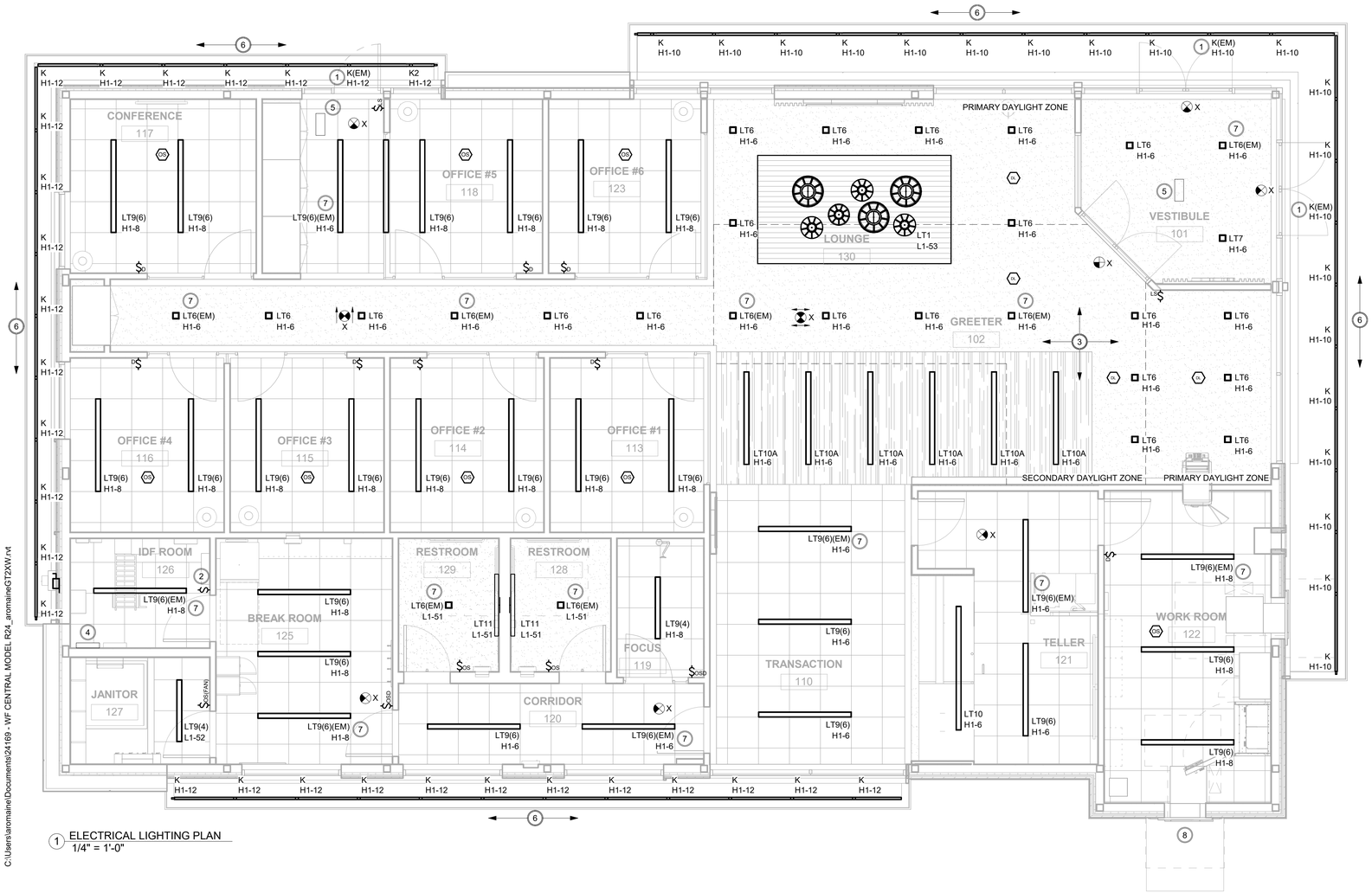
4 FURNISH AND INSTALL LIGHTING CONTROLLER ACUITY nECY WITH NETWORK CONNECTION TO CONTROL LIGHTING AS INDICATED. CONTRACTOR TO COORDINATE WITH CONTROLS VENDOR ON REQUIREMENTS. PANEL TO HAVE INTERNAL DIGITAL, ASTRONOMICAL TIMECLOCK WITH SEPARATE SCHEDULING CAPABILITIES AND PHOTOCELL/OVERRIDE SWITCH INPUTS.

5 FURNISH AND INSTALL EMERGENCY INVERTER (375VA) SIMILAR TO IOTA #IIS 375 FOR EMERGENCY EGRESS ABOVE ACCESSIBLE CEILING OR ACCESS PANEL FOR ACCESS. FIELD VERIFY FINAL LOCATION.

6 EXTERIOR LIGHTING TO BE CONTROLLED WITH PHOTOCELL AND TIME SCHEDULE VIA RELAY. EXTERIOR CANOPY LIGHTING IS CONTRIBUTING TO SAFETY LIGHTING FOR ATMS AND SHALL BE CONTINUOUSLY LIT.

7 FURNISH EMERGENCY BATTERY PACK CAPABLE OF OPERATING FIXTURE FOR 90 MINUTES AFTER LOSS OF NORMAL POWER. CONNECT BATTERY UNSWITCHED TO THE LIGHTING CIRCUIT. MINIMUM OF 1FT CANDLE INTENSITY AT FLOOR LEVEL ALONG ALL PATHS OF EGRESS.

8 ATM CANOPY LIGHTING TO BE PROVIDED BY VENDOR. COORDINATE EXACT REQUIREMENTS PRIOR TO INSTALLATION.



1 ELECTRICAL LIGHTING PLAN
1/4" = 1'-0"

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WELLS FARGO

GREELEY, CO

6835 10TH STREET
GREELEY CO 80634

ARCHITECT

SGDesign, Inc.
3311 Elm Street, Suite 105
Dallas, TX 75226
469-865-1910

CONSULTANTS

T&D ENGINEERS
THOMAS & DUNNE ENGINEERS, LLC
738 S. HIGHWAY 6
SUITE #260
HOUSTON, TX 77079
PHONE: 713.933.1001
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TEXAS REGISTRATION #F-10421

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SET ISSUE

SET ISSUE FOR	DATE
BID	04/25/2025

REVISIONS

REV	REASON FOR ISSUE	DATE

REVIEWED BY: JC

DRAWN BY: SP

WF BE# 112766

WF PROJECT# 419105

SHEET TITLE

ELECTRICAL LIGHTING PLAN

SHEET NUMBER

E2.01

T&D PROJECT NUMBER
24169

4/25/2025 8:56:08 PM

POWER GENERAL NOTES

A. ALL WORK SHALL COMPLY WITH ALL PERTINENT NATIONAL, STATE, AND LOCAL ORDINANCES AND CODES, AND ALL AMERICAN DISABILITIES ACT (ADA) REQUIREMENTS.

B. DRAWINGS ARE DIAGRAMMATIC; CONFIRM DIMENSIONS AND LOCATIONS IN THE FIELD AND ADVISE ENGINEER OF MAJOR DISCREPANCIES.

C. CONTRACTOR SHALL BE HELD RESPONSIBLE FOR COORDINATING WITH ALL OTHER TRADES PRIOR TO ROUGH-IN OF ALL ELECTRICAL DEVICES INCLUDING BUT NOT LIMITED TO RECEPTACLES AND EQUIPMENT. REFER TO HVAC PLANS FOR OTHER ELECTRICAL WORK.

D. IN THE EVENT OF A CONFLICT BETWEEN DRAWINGS AND SPECIFICATIONS, THE GREATER AMOUNT OF WORK SHALL BE PRICED. THE CONFLICT SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER AND DIRECTION SHALL BE REQUESTED.

E. COORDINATE THE ROUGH-IN LOCATION, CONNECTION TYPE, AND TERMINATION REQUIREMENT WITH EQUIPMENT INSTALLERS PRIOR TO ROUGH-IN.

F. CONTRACTOR SHALL CONTACT ALL APPROPRIATE UTILITY PROVIDERS TO VERIFY EXACT LOCATION OF EXISTING UTILITIES AND ROUTING OF NEW UTILITIES. UTILITY LOCATIONS SHOWN ARE SUBJECT TO THE REVIEW AND APPROVAL OF THE LOCAL UTILITY COMPANIES, AND SHALL BE BID APPROPRIATELY. CONTRACTOR SHALL COORDINATE WITH, AND PAY ALL FEES AND ASSOCIATED COSTS TO, THE LOCAL UTILITY COMPANY TO PROVIDE APPROPRIATE SERVICES TO THE PROJECT.

KEYED NOTES

1 EXHAUST FAN SHALL BE CONTROLLED BY THE LOCAL LIGHT SWITCH WITHIN ROOM.

2 EXHAUST FAN SHALL BE CONTROLLED BY THE LOCAL THERMOSTAT WITHIN ROOM.

3 PUMP TO BE CONTROLLED VIA TIME SCHEDULE FROM TIMECLOCK/LIGHTING CONTROLLER TO ONLY OPERATE DURING TENANT HOURS.

4 POWER FOR INDOOR UNIT TO BE FED FROM EXTERIOR CONDENSING UNIT POWER. PROVIDE CONTINUOUS CONDUCTORS WITH NO SPLICES FROM CONDENSER ON ROOF DOWN TO INDOOR UNIT. COORDINATE EXACT REQUIREMENTS, ROUTING AND CONNECTION POINTS WITH MECHANICAL CONTRACTOR.

5 PROVIDE MOTOR-RATED SWITCH FOR DISCONNECTING MEANS AND POWER CONNECTION TO BASE HEATER. COORDINATE ALL WORK WITH GENERAL CONTRACTOR PRIOR TO ROUGH-IN.

6 DUCT DETECTOR/SMOKE MONITORING SYSTEM. COORDINATE EXACT MOUNTING LOCATION WITHIN BUILDING. SEE GENERAL NOTE FOR MORE INFORMATION. PROVIDE ONE MONITORING STATION PER DUCT SMOKE DETECTOR.

7 FURNISH AND INSTALL DUCT SMOKE DETECTOR IN THE RETURN AIR SECTION OF UNITS. SMOKE DETECTOR TO BE CONNECTED TO MONITORING SYSTEM. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR.

1 ELECTRICAL EQUIPMENT PLAN
1/4" = 1'-0"

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REVIEWED BY: Approver

DRAWN BY: Author

WF BE# 112766

WF PROJECT# 419105

SHEET TITLE

ELECTRICAL EQUIPMENT PLAN

SHEET NUMBER

E3.01

T&D PROJECT NUMBER
24169

POWER GENERAL NOTES

A. ALL WORK SHALL COMPLY WITH ALL PERTINENT NATIONAL, STATE, AND LOCAL ORDINANCES AND CODES, AND ALL AMERICAN DISABILITIES ACT (ADA) REQUIREMENTS.

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C. CONTRACTOR SHALL BE HELD RESPONSIBLE FOR COORDINATING WITH ALL OTHER TRADES PRIOR TO ROUGH-IN OF ALL ELECTRICAL DEVICES INCLUDING BUT NOT LIMITED TO RECEPTACLES AND EQUIPMENT. REFER TO HVAC PLANS FOR OTHER ELECTRICAL WORK.

D. IN THE EVENT OF A CONFLICT BETWEEN DRAWINGS AND SPECIFICATIONS, THE GREATER AMOUNT OF WORK SHALL BE PRICED. THE CONFLICT SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER AND DIRECTION SHALL BE REQUESTED.

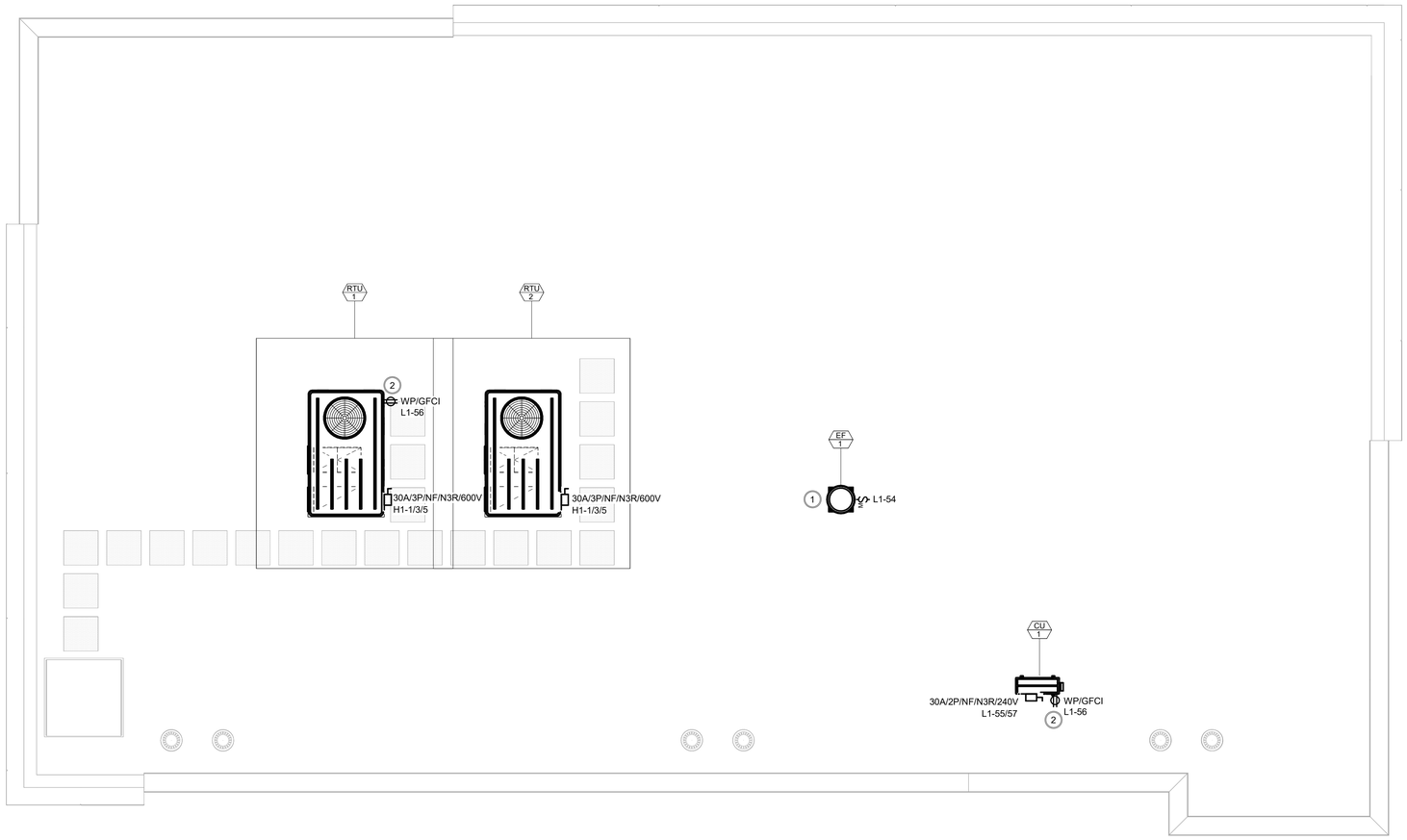
E. COORDINATE THE ROUGH-IN LOCATION, CONNECTION TYPE, AND TERMINATION REQUIREMENT WITH EQUIPMENT INSTALLERS PRIOR TO ROUGH-IN.

F. CONTRACTOR SHALL CONTACT ALL APPROPRIATE UTILITY PROVIDERS TO VERIFY EXACT LOCATION OF EXISTING UTILITIES AND ROUTING OF NEW UTILITIES. UTILITY LOCATIONS SHOWN ARE SUBJECT TO THE REVIEW AND APPROVAL OF THE LOCAL UTILITY COMPANIES, AND SHALL BE BID APPROPRIATELY. CONTRACTOR SHALL COORDINATE WITH, AND PAY ALL FEES AND ASSOCIATED COSTS TO, THE LOCAL UTILITY COMPANY TO PROVIDE APPROPRIATE SERVICES TO THE PROJECT.

KEYED NOTES

1 EXHAUST FAN TO BE CONTROLLED BY TIMECLOCK/LIGHTING CONTROLLER TO ONLY OPERATE DURING TENANT HOURS.

2 FURNISH AND INSTALL WP, GFI OUTLET WITHIN 25' OF MECHANICAL EQUIPMENT TO MEET CODE REQUIRED MAINTENANCE REQUIREMENTS. CONTRACTOR TO COORDINATE FINAL LOCATION AND MOUNTING, IN FIELD, WITH ROOFTOP EQUIPMENT.



1 ELECTRICAL ROOF PLAN
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SHEET TITLE

ELECTRICAL ROOF PLAN

SHEET NUMBER

E4.01

T&D PROJECT NUMBER
24169

PANELBOARD: H1

NEW PANEL — SEE NOTE 1 BELOW

RECESSED :**MOUNTING** — **VOLTAGE:** 277 480 — **BUS RATING:** 200A — **NEMA ENCLOSURE:** 1
100% :**NEUTRAL SIZE** — **PHASE:** 3 — **FEED-THRU LUGS:** NO
NO :**ISOLATED GROUND BAR** — **WIRE:** 4 — **MAIN BREAKER:** 200A — **INTERRUPTING RATING:** 22 kAIC

	NOTE	SERVES	KVA	WIRE	CB	Ø	CKT	A B C	CKT	Ø	CB	WIRE	KVA	SERVES	NOTE	
C		WF - RTU 1	13.29	#10	20A	3	1	8.43	2	1	20A	#12	4.00	WF - EWH 1		X
		-			-	-	3	5.59	4	1	20A	#10	1.16	WF - SITE LIGHTING	2	L
		-			-	-	5	5.24	6	1	20A	#12	0.81	WF - CUSTOMER LIGHTING	2	L
C		WF - RTU 2	13.29	#10	20A	3	7	5.31	8	1	20A	#12	0.88	WF - EMPLOYEE LIGHTING	2	L
		-			-	-	9	4.87	10	1	20A	#12	0.44	WF - CANOPY LIGHTING	2	L
		-			-	-	11	4.74	12	1	20A	#12	0.31	WF - CANOPY LIGHTING	2	L
P		WF - PANEL 'L1' VIA SUSP. 45KVA XFMR	18.99	SEE	70A	3	13	19.99	14	1	20A	#12	1.00	WF - FLOOR MOUNT HEATER		H
P		-	17.33	ONE	-	-	15	19.07	16	1	20A	#10	1.74	WF - SITE LIGHTING	2	L
P		-	14.54	LINE	-	-	17	14.54	18	1	20A			SPARE		
		SPARE			20A	1	19	0.00	20	1	20A			SPARE		
		SPARE			20A	1	21	0.00	22	1	20A			SPARE		
		SPARE			20A	1	23	0.00	24	1	20A			SPARE		
		SPARE			20A	1	25	0.00	26	3	60A			SPD		
		SPARE			20A	1	27	0.00	28	-	-			-		
		SPARE			20A	1	29	0.00	30	-	-			-		
			77.44										10.34			

CONNECTED LOAD (KVA) BY TYPE	
8.90	LIGHTING (L)
35.94	RECEPTACLES (R)
3.20	KITCHEN EQUIPMENT (K)
0.00	ELECTRIC HEAT (EH)
7.60	MISCELLANEOUS (X)
2.00	MOTORS (M)
0.00	HVAC - HEATING/COOLING (AC)
1.00	HVAC - HEATING ONLY (H)
29.14	HVAC - COOLING ONLY (C)

CONNECTED LOAD - PHASE A: 33.73 KVA
CONNECTED LOAD - PHASE B: 29.53 KVA
CONNECTED LOAD - PHASE C: 24.52 KVA
CONNECTED FED-THRU LOAD: 0.00 KVA
TOTAL CONNECTED LOAD: 87.78 KVA
NEC DERATED LOAD: 75.72 KVA
NEC DERATED AMPS: 91.07 AMPS

Panelboard Schedule Notes

1 - PROVIDE TYPED DIRECTORY CARD WITHIN PANEL.
2 - CIRCUIT/LOAD TO BE CONTROLLED BY LIGHTING TIMECLOCK/LIGHTING CONTROLLER
3 - CONTRACTOR SHALL REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL PANELBOARD REQUIREMENTS TO ENSURE COMPLIANCE WITH APPLICABLE CODES AND STANDARDS

PANELBOARD: L1

NEW PANEL — SEE NOTE 1 BELOW

RECESSED :**MOUNTING** — **VOLTAGE:** 120 208 — **BUS RATING:** 150A — **NEMA ENCLOSURE:** 1
100% :**NEUTRAL SIZE** — **PHASE:** 3 — **FEED-THRU LUGS:** NO
YES :**ISOLATED GROUND BAR** — **WIRE:** 4 — **MAIN BREAKER:** 150A — **INTERRUPTING RATING:** 14 kAIC

	NOTE	SERVES	KVA	WIRE	CB	Ø	CKT	A B C	CKT	Ø	CB	WIRE	KVA	SERVES	NOTE	
R		WF - CONFERENCE ROOM	1.50	#12	20A	1	1	2.25	2	1	20A	#12	0.75	WF - DIGITAL DISPLAYS		R
R		WF - PC'S	0.75	#12	20A	1	3	1.35	4	1	20A	#12	0.60	WF - AUTO FLUSH VALVE/FAUCET/DISP.	4	X
R		WF - GEN REC'S	1.26	#12	20A	1	5	1.98	6	1	20A	#12	0.72	WF - GEN REC'S		R
R		WF - PC'S	1.00	#12	20A	1	7	1.80	8	1	20A	#12	0.80	WF - REFRIGERATOR		K
R		WF - GEN REC'S	1.44	#12	20A	1	9	2.64	10	1	20A	#12	1.20	WF - MICROWAVE		K
R		WF - PRINTER	1.00	#12	20A	1	11	2.00	12	1	20A	#12	1.00	WF - DED BREAK REC		R
R		WF - GEN REC'S/FLOOR BOXES	1.44	#12	20A	1	13	2.44	14	1	20A	#12	1.00	WF - DED BREAK REC		R
R		WF - DED IT REC (IG)	1.00	#12	20A	1	15	2.20	16	1	20A	#12	1.20	WF - COFFEE MAKER		K
R		WF - DED IT REC (IG)	1.00	#12	20A	1	17	2.00	18	1	20A	#12	1.00	WF - DED IT QUAD (IG)		R
R		WF - DED IT REC (IG)	1.00	#12	20A	1	19	2.00	20	1	20A	#12	1.00	WF - LIGHTING CONTROL PANEL		X
R		WF - DED IT REC (IG)	1.00	#12	20A	1	21	2.00	22	1	20A	#12	1.00	WF - DED IT QUAD (IG)		R
R		WF - DED IT QUAD (IG)	1.00	#12	20A	1	23	2.00	24	1	20A	#12	1.00	WF - DED IT REC (L5-20R) (IG)		R
R		WF - DED IT QUAD (IG)	1.00	#12	20A	1	25	2.00	26	1	20A	#12	1.00	WF - DED IT REC (L5-20R) (IG)		R
R		WF - DED IT QUAD (IG)	1.00	#12	20A	1	27	2.00	28	1	20A	#12	1.00	WF - DED IT REC (IG)		R
R		WF - TELLER PC'S (IG)	0.50	#12	20A	1	29	1.50	30	1	20A	#12	1.00	WF - DED TELLER QUAD (IG)		R
R		WF - TELLER REC'S (IG)	0.36	#12	20A	1	31	1.36	32	1	20A	#12	1.00	WF - TELLER EQUIPMENT (IG)		R
R		WF - PC'S	0.50	#12	20A	1	33	0.86	34	1	20A	#12	0.36	WF - GEN REC'S		R
R		WF - DED REC (IG)	1.00	#12	20A	1	35	2.00	36	1	20A	#12	1.00	WF - DED REC (IG)		R
R		WF - DED REC (IG)	1.00	#12	20A	1	37	2.00	38	1	20A	#12	1.00	WF - DED REC (IG)		R
R		WF - ATM (IG)	1.00	#12	20A	1	39	2.00	40	1	20A	#12	1.00	WF - ATM (IG)		R
L		WF - ATM LIGHTING (IG)	0.50	#12	20A	1	41	1.00	42	1	20A	#12	0.50	WF - ATM LIGHTING (IG)		L
R		WF - ATM (IG)	1.00	#12	20A	1	43	2.00	44	1	20A	#12	1.00	WF - DED REC (IG)		R
L		WF - ATM LIGHTING (IG)	0.50	#12	20A	1	45	1.00	46	1	20A	#12	0.50	WF - TENANT SIGNAGE	2	X
L	2	WF - PROCENIUM LIGHTING	0.50	#12	20A	1	47	1.00	48	1	20A	#12	0.50	WF - TENANT SIGNAGE	2	X
X		WF - ILLUMINATED LETTERS	0.50	#12	20A	1	49	1.50	50	1	20A	#12	1.00	WF - STONE LIGHTING	2	L
L		WF - RESTROOM LIGHTING	0.50	#12	20A	1	51	1.50	52	1	20A	#12	1.00	WF - LIGHTING/EXHAUST FANS		M
L	2	WF - PENDANT LIGHTING	0.06	#12	20A	1	53	1.06	54	1	20A	#12	1.00	WF - RESTROOM EXHAUST FAN/RCP	2	M
C		WF - CU	2.56	#12	15A	2	55	1.64	56	1	20A	#12	0.36	WF - WP/GFCI ROOFTOP REC'S		R
		-			-	-	57	1.78	58	1	20A	#10	0.50	WF - TOTEM SIGN	2	X
		SPARE			20A	1	59	0.00	60	1	20A			SPARE		
		SPARE			20A	1	61	0.00	62	1	20A			SPARE		
		SPARE			20A	1	63	0.00	64	1	20A			SPARE		
		SPARE			20A	1	65	0.00	66	1	20A			SPARE		
		SPARE			20A	1	67	0.00	68	1	20A			SPARE		
		SPARE			20A	1	69	0.00	70	1	20A			SPARE		
		SPARE			20A	1	71	0.00	72	1	20A			SPARE		
		SPARE			20A	1	73	0.00	74	1	20A			SPARE		
		SPARE			20A	1	75	0.00	76	1	20A			SPARE		
		SPARE			20A	1	77	0.00	78	1	20A			SPARE		
		SPARE			20A	1	79	0.00	80	3	60A			SPD		
		SPARE			20A	1	81	0.00	82	-	-			-		
		SPARE			20A	1	83	0.00	84	-	-			-		
			25.87										24.99			

CONNECTED LOAD (KVA) BY TYPE	
3.56	LIGHTING (L)
35.94	RECEPTACLES (R)
3.20	KITCHEN EQUIPMENT (K)
0.00	ELECTRIC HEAT (EH)
3.60	MISCELLANEOUS (X)
2.00	MOTORS (M)
0.00	HVAC - HEATING/COOLING (AC)
0.00	HVAC - HEATING ONLY (H)
2.56	HVAC - COOLING ONLY (C)

CONNECTED LOAD - PHASE A: 18.99 KVA
CONNECTED LOAD - PHASE B: 17.33 KVA
CONNECTED LOAD - PHASE C: 14.54 KVA
CONNECTED FED-THRU LOAD: 0.00 KVA
TOTAL CONNECTED LOAD: 50.86 KVA
NEC DERATED LOAD: 38.46 KVA
NEC DERATED AMPS: 106.75 AMPS

Panelboard Schedule Notes

1 - PROVIDE TYPED DIRECTORY CARD WITHIN PANEL.
2 - CIRCUIT/LOAD TO BE CONTROLLED BY LIGHTING TIMECLOCK/LIGHTING CONTROLLER
3 - CONTRACTOR SHALL REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL PANELBOARD REQUIREMENTS TO ENSURE COMPLIANCE WITH APPLICABLE CODES AND STANDARDS
4 - PROVIDE NEW GFCI BREAKER, SIZE NOTED.

LIGHTING CONTROL PANEL

RELAY NUMBER	CONTACTOR AMPS	CONTACTOR POLES	CONTACTOR CIRCUIT NUMBER	CONTROL CIRCUIT VOLTS	CONTROL CIRCUIT OPERATION BY	LOAD DESCRIPTION
R1	20	1	H1-8	277	TC,OR	EMPLOYEE LIGHTING
R2	20	1	H1-6	277	TC,OR	CUSTOMER LIGHTING
R3	20	1	L1-53	120	TC,OR	PENDANT LIGHTING
R4	20	1	H1-10	277	PC,TC	CANOPY LIGHTING #1
R5	20	1	H1-12	277	PC,TC	CANOPY LIGHTING #2
R6	20	1	L1-46	120	PC,TC	TENANT SIGNAGE #1
R7	20	1	L1-48	120	PC,TC	TENANT SIGNAGE #2
R8	20	1	L1-58	120	PC,TC	TOTEM SIGNAGE
R9	20	1	L1-54	120	TC,OR	RESTROOM EXHAUST FAN/RCP
R10	20	1	L1-50	120	PC,TC	STONE LIGHTING
R11	20	1	L1-47	120	PC,TC	PROSCENIUM LIGHTING
R12	20	1	H1-4	277	PC,TC	SITE LIGHTING
R13	20	1	SPARE	SPARE	SPARE	SPARE
R14	20	1	SPARE	SPARE	SPARE	SPARE

RELAY NOTES:

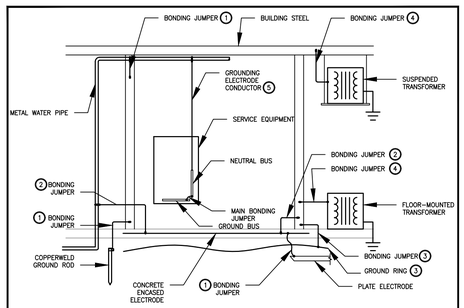
1. PROVIDE ALL REQUIRED CONTROL ACCESSORIES NECESSARY FOR OPERATION AS DESCRIBED ABOVE AND IN SEQUENCE OF OPERATION
2. PROVIDE PANEL SCHEDULE.
3. REFER TO PANELBOARD SCHEDULE FOR CIRCUITING INFORMATION.
4. CONTRACTOR TO PROVIDE A MINIMUM OF (2) SPARE RELAYS.
5. COORDINATE ALL REQUIREMENTS WITH LIGHTING AND CONTROLS VENDOR.

ABBREVIATIONS
TC = TIMECLOCK
OR = OVERRIDE SWITCH
PC = PHOTO CELL

SEQUENCE OF OPERATION

SITE LIGHTING POLES IN THE PARKING AREA AND EXTERIOR FIXTURES SHALL BE CONTROLLED ON/OFF BY PHOTOCELL AS A FUNCTION OF THE AVAILABLE DAYLIGHT PRESENT. FIXTURES SHALL NOT TURN OFF DUE TO SECURITY REASONS. CONTROLS SHALL COMPLY WITH 2021 IECC SECTION C405.2.5.

SITE LIGHTING POLES AND EXTERIOR BUILDING SIGNAGE SHALL BE CONTROLLED ON/OFF BY PHOTOCELL AS A FUNCTION OF THE AVAILABLE DAYLIGHT PRESENT.



KEYED NOTES (#) "#" DENOTES KEYED NOTE NUMBER

GROUNDING ELECTRODE SYSTEM REQUIRED BY NEC ART. 250

1. MAXIMUM SIZE: ONE (1) #6 AWG COPPER.
2. MAXIMUM SIZE: ONE (1) #4 AWG COPPER.
3. MINIMUM SIZE: ONE (1) #2 AWG COPPER.
4. GROUND SIZE SHOWN ON RISER
5. FULL-SIZE GROUNDING CONDUCTOR SHOWN ON RISER.

GROUNDING ELECTRODE SYSTEM — SCALE: NONE — 2

SURGE PROTECTION DEVICE SCHEDULE

SYMBOL	CATEGORY	EXPOSURE	PER MODE	PER PHASE
CM	C	MEDIUM	150kA	300kA
BM	B	MEDIUM	100kA	200kA

SPD NOTES:

1. VERIFY THAT EQUIPMENT SELECTED MATCH CLASSIFICATION LEVEL PER PANEL CHARACTERISTICS.
2. SPD'S TO BE EXTERNAL TYPE IN SEPARATE ENCLOSURE, SIZED AS INDICATED.
3. PROVIDE SURGE PROTECTION TO MATCH VOLTAGE OF EACH PANEL PROTECTED, WITH A NEMA 4 RATED ENCLOSURE.
4. ALL SPD'S TO PROVIDE PROTECTION FOR LINE TO GROUND FOR EACH PHASE (3) AND NEUTRAL TO GROUND.
5. SPD TO BE FURNISHED WITH INDICATING LIGHTS, SURGE COUNTER AND DISCONNECT SWITCH.
6. LEADS SHALL BE A MAXIMUM OF 6" LONG. SPD SHALL BE LOCATED IMMEDIATELY ADJACENT TO PANEL.
7. SPD'S TO BE UL 1449 LISTED AND TO MEET TESTING REQUIREMENTS PER IEE 62.41.

KEYED NOTES (#) "#" DENOTES KEYED NOTE NUMBER

1. PROVIDE NEW SURGE PROTECTION DEVICE (SPD) AT PANEL. SEE SPD SCHEDULE FOR MORE INFORMATION.
2. THE ELECTRICAL DESIGN HAS A MAXIMUM VOLTAGE DROP OF 5% PER C405.10.
3. A FINAL COMMISSIONING REPORT SHALL BE DELIVERED TO THE BUILDING OWNER PER SECTION C408.2.5 OF THE 2021 IECC.
4. CONDUCTORS TO BE COPPER THHN/THWN UNLESS NOTED OTHERWISE.

ELECTRICAL LOAD ANALYSIS

FACILTY: Wells Fargo Greeley
PROJECT LOCATION: 6835 10th St. & 69th Ave. Greeley, CO 80634

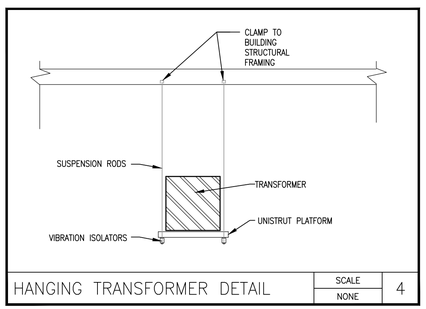
1. LIGHTING LOAD - NEC 210.20(A), 220.12 & 220.42				
A. UNIT LOAD	3577 SF	AT 1.90 VA/SF =	6,796 VA	6.80 kVA
B. CONNECTED LIGHTING LOAD			5,340 VA	--
C. CONTINUOUS LOAD (+25% OF LOAD)				1.70 kVA
			SUBTOTAL	8.50 kVA
2. RECEPTACLE LOAD - NEC 220.14(K) & 220.44				
A. UNIT LOAD	3577 SF	AT 0.00 VA/SF =	0 VA	
B. CONNECTED RECEPTACLE LOAD	0 RECEPTS.	AT 180 VA =	0 VA	
FIRST 10 kVA AT 100%				0.00 kVA
REMAINDER AT 50%				--
			SUBTOTAL	0.00 kVA
3. MOTOR LOAD - NEC 220.50 & NEC 430.24-26				
A. CONNECTED MOTOR LOAD			35,940 VA	35.94 kVA
B. 25% OF LARGEST MOTOR			0 VA	0.00 kVA
			SUBTOTAL	35.94 kVA
4. FIXED ELECTRIC SPACE HEATING LOAD - NEC 210.20(A) & 220.51				
A. CONNECTED FIXED SPACE HEATING LOAD			0 VA	0.00 kVA
B. CONTINUOUS LOAD (+25% OF LOAD)				0.00 kVA
			SUBTOTAL	0.00 kVA
5. KITCHEN EQUIPMENT LOAD - NEC 220.56				
A. CONNECTED KITCHEN EQUIPMENT LOAD			0 VA	
	0 UNIT(S)	AT 100%	0 VA	0.00 kVA
			SUBTOTAL	0.00 kVA
6. MISCELLANEOUS LOAD - NEC 220.14 & 220.40				
A. CONNECTED MISCELLANEOUS LOAD			7,560 VA	7.56 kVA
			SUBTOTAL	7.56 kVA
7. HVAC EQUIPMENT LOAD - NEC 220.51 & 220.60				
A. CONNECTED HVAC LOAD			3,200 VA	3.20 kVA
B. CONNECTED HVAC - HEATING ONLY LOAD			1,000 VA	--
C. CONNECTED HVAC - COOLING ONLY LOAD			30,180 VA	30.18 kVA
D. CONTINUOUS LOAD (HEATING ONLY) (+25% OF LOAD)				--
			SUBTOTAL	33.38 kVA

NEC DERATED KVA	**85.38 kVA**
TOTAL AMPS AT 277/480, 3 PHASE	**102.69 Amps**
FEEDER CAPACITY	**200.00 Amps**
SPARE AMPACITY	**97.31 Amps**

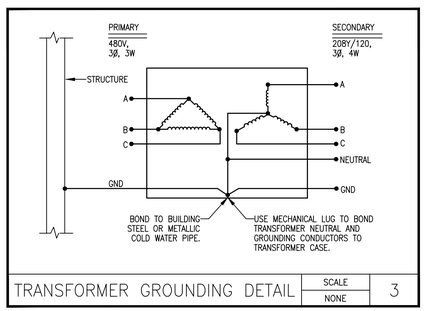
ALL EXTERIOR INSTALLED EQUIPMENT AND CONDUIT ALONG BACK OF BUILDING TO BE PAINTED TO MATCH EXTERIOR OF BUILDING. IDENTIFY ALL EQUIPMENT WITH ADDRESS ON FRONT AFTER INSTALLATION.

SERVICE EQUIPMENT AVAILABLE FAULT CURRENT LABELING:
PROVIDE A 2 X 3 INCH LABEL WITH BLUE LETTERING ON CONTRASTING BACKGROUND PERMANENTLY AFFIXED TO THE SERVICE DISCONNECT/EQUIPMENT PRIOR TO ENERGIZING THE SERVICE EQUIPMENT. THE LABEL SHALL INCLUDE THE DATE OF INSTALLATION AND THE DATE OF CALCULATION. THE DATE OF CALCULATION SHALL BE THE DATE INDICATED BY THE ENGINEER OF RECORD'S SEAL ON THE CONSTRUCTION DOCUMENT ELECTRICAL ONE-LINE DIAGRAM/RISER DRAWING. EXAMPLE:

SERVICE EQUIPMENT AVAILABLE FAULT CURRENT: ##,### AMPS
DATE OF INSTALLATION: MM/DD/YY
DATE OF CALCULATION: MM/DD/YY

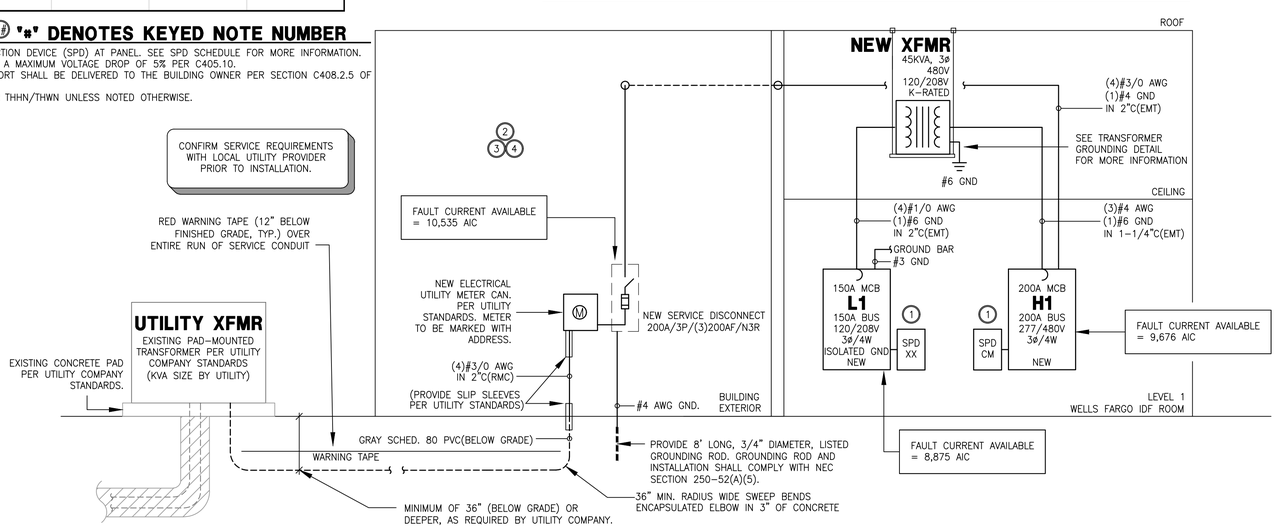


HANGING TRANSFORMER DETAIL — SCALE: NONE — 4



TRANSFORMER GROUNDING DETAIL — SCALE: NONE — 3

CONFIRM SERVICE REQUIREMENTS WITH LOCAL UTILITY PROVIDER PRIOR TO INSTALLATION.



1 ELECTRICAL ONE-LINE, SCHEDULES & DETAILS
SCALE = NTS

WELLS FARGO

GREELEY, CO

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GREELEY CO 80634

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TEXAS REGISTRATION #F-10421

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SET ISSUE

SET ISSUE FOR	DATE
BID	04/25/2025

REVISIONS

REV	REASON FOR ISSUE	DATE

REVIEWED BY: JC
DRAWN BY: SP

WF BE# 112766

WF PROJECT# 419105

SHEET TITLE

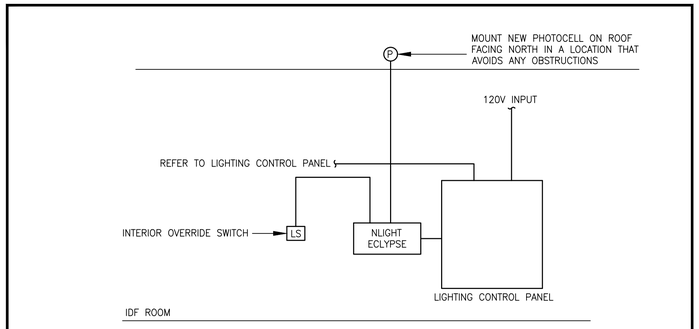
ELECTRICAL ONE-LINE, SCHEDULES & DETAILS

SHEET NUMBER

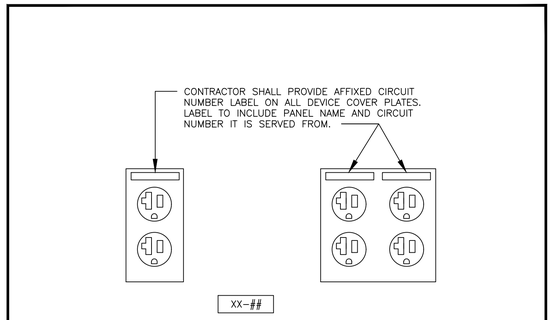
E5.01

T&D PROJECT NUMBER
24169

T:\PROJECTS\T & D-2024\24169 - WELLS FARGO GREELEY - W 10TH STREET, GREELEY CO\DWGS\ISSUE_01\E\24169E501.DWG 4/25/2025 7:23 PM BRANDON REIGEL



PARTIAL LIGHTING CONTROLS DIAGRAM | SCALE NONE | 4



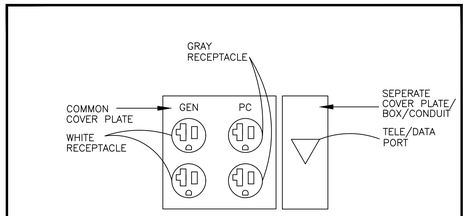
TYP. RECEPTACLE IDENTIFICATION DETAIL | SCALE NONE | 1

LIGHTING FIXTURE SCHEDULE

SYMBOL	MANUFACTURER AND MODEL NUMBER	VOLTAGE & PHASE	LAMP QUANTITY	LAMP TYPE	DESCRIPTION AND REMARKS	ACTUAL WATTAGE	MAXIMUM WATTAGE
LT1	RESOLUTE #CUSTOM PENDANTS (7)	120/1	WITH FIXTURE	LED LAMPS WITH FIXTURE 831 LUMENS 2200 CCT	CLUSTER OF SEVEN LED SHADE PENDANTS. REFER TO ARCHITECTURAL PLANS FOR EXACT SPEC. CONTRACTOR TO COORDINATE MOUNTING HEIGHT WITH ARCHITECT PRIOR TO INSTALLATION.	60W	60W
LT6	ACUITY #NIT3SQ-D-12LM-35K-80CRI-50D-GZ1-MVOLT(E5WR)/NT3SQ-W-FM/NT3SQFMA	120/277/1	WITH FIXTURE	LED LAMPS WITH FIXTURE 1200 LUMENS 3500 CCT	3" SQUARE LED DOWNLIGHT. COORDINATE EXACT MODEL NUMBER WITH ARCHITECT PRIOR TO PURCHASE AND INSTALLATION. PROVIDE FIXTURE WITH GYP BOARD MOUNTING KIT. PROVIDE EMERGENCY FIXTURE WITH 90 MINUTE BATTERY PACK FOR OPERATION AFTER LOSS OF POWER.	12W	12W
LT7	ACUITY #NIT3SQ-D-12LM-35K-80CRI-25D-GZ1-MVOLT/NT3SQWW-W-FM/NT3SQFMA	277/1	WITH FIXTURE	LED LAMPS WITH FIXTURE 1200 LUMENS 3500 CCT	3" SQUARE LED WALLWASHER. COORDINATE EXACT MODEL NUMBER WITH ARCHITECT PRIOR TO PURCHASE AND INSTALLATION.	12W	12W
LT9(4) LT9(6)	ACUITY #SL4L-LOP-4FT/6FT-FLP-TG-80CRI-35K-600LMF-MIN1-277-NLTAIR2-4" WIDE	277/1	WITH FIXTURE	LED LAMPS WITH FIXTURE 625 LUMENS/FT 3500 CCT	RECESSED LINEAR LED WITH FLUSH LENS. COORDINATE EXACT MODEL NUMBER WITH ARCHITECT PRIOR TO PURCHASE AND INSTALLATION. FIELD VERIFY LENGTHS PRIOR TO PURCHASE. FIXTURE SHALL BE CONTROLLED VIA LOCAL DIMMING SWITCH AS REQUIRED. PROVIDE EMERGENCY FIXTURE WITH 90 MINUTE BATTERY PACK FOR OPERATION AFTER LOSS OF POWER.	7W/FT	7W/FT
LT10	ACUITY #SL2L-LOP-8FT-FLP-GB-80CRI-35K-400LMF-MIN1-277-NLTAIR2	277/1	WITH FIXTURE	LED LAMPS WITH FIXTURE 375 LUMENS/FT 3500 CCT	RECESSED LINEAR LED WITH FLUSH LENS. COORDINATE EXACT MODEL NUMBER WITH ARCHITECT PRIOR TO PURCHASE AND INSTALLATION. FIELD VERIFY LENGTH PRIOR TO PURCHASE.	4W/FT	4W/FT
LT10A	ACUITY #SL2L-LOP-8FT-FLP-FL(SPECIALTY CLG)-80CRI-35K-400LMF-MIN1-277-NLTAIR2(E10WLCP)/BLKT-ZT	277/1	WITH FIXTURE	LED LAMPS WITH FIXTURE 375 LUMENS/FT 3500 CCT	RECESSED LINEAR LED WITH FLUSH LENS. COORDINATE EXACT MODEL NUMBER WITH ARCHITECT PRIOR TO PURCHASE AND INSTALLATION. FIELD VERIFY LENGTHS PRIOR TO PURCHASE. PROVIDE EMERGENCY FIXTURE WITH 90 MINUTE BATTERY PACK FOR OPERATION AFTER LOSS OF POWER.	4W/FT	4W/FT
LT11	LITHONIA LIGHTING #CLX-L48-3000LM-SEF-FDL-MVOLT-EZ1-35K-80CRI-WH	277/1	WITH FIXTURE	LED LAMPS WITH FIXTURE 3000 LUMENS 3500 CCT	DECORATIVE LED WALL MOUNTED SCONCE. COORDINATE EXACT MODEL NUMBER WITH ARCHITECT PRIOR TO PURCHASE AND INSTALLATION.	20W	20W
K K(2)	SLOAN LED - HIGHLINER 3 #701912-L2/L4-35 (277V DRIVER)	277/1	WITH FIXTURE	LED LAMPS WITH FIXTURE 559 LUMENS/FT 3500 CCT	EXTERIOR LINEAR LED. COORDINATE EXACT MODEL NUMBER WITH ARCHITECT PRIOR TO PURCHASE AND INSTALLATION. ROUTE EMERGENCY FIXTURE THRU NEW BATTERY INVERTER FOR 90 MINUTE BATTERY PACK FOR OPERATION AFTER LOSS OF POWER. PROVIDE JUMPER CABLES AS NEEDED FROM J-BOX WITHIN ACCESSIBLE CEILING OR ACCESS PANEL WITHIN BUILDING TO FIXTURE WITHIN CANOPY. FIELD VERIFY LENGTH PRIOR TO PURCHASE.	5W/FT	5W/FT
X	LITHONIA LIGHTING #EDGR-W-1/2-RW-EL	277/1	WITH FIXTURE	LED LAMPS WITH FIXTURE	EDGE-LIT LED EXIT SIGN WITH RED LETTERS. REFER TO PLAN FOR NUMBER OF FACES AND DIRECTIONAL CHEVRONS. PROVIDE NICKEL-CADMIUM BATTERY FOR 90 MINUTE OPERATION AFTER LOSS OF POWER.	3W	3W

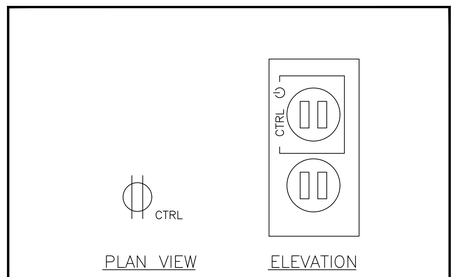
LIGHTING DEVICE SCHEDULE

SYMBOL	MANUFACTURER AND DEVICE DESCRIPTION	OPERATION AND REMARKS
$	ACUITY WALL MOUNTED SINGLE ZONE TOGGLE SWITCH	FURNISH AND INSTALL ON/OFF SWITCH TO CONTROL THE LIGHTING FIXTURES WITHIN THE AREA. COORDINATE CONTROLS AND CONFIGURATION WITH LIGHTING CONTROLS VENDOR.
$D	ACUITY WALL MOUNTED SINGLE ZONE DIMMER SWITCH	FURNISH AND INSTALL DIMMING SWITCH TO DIM THE LIGHTING FIXTURES WITHIN THE AREA. COORDINATE CONTROLS AND CONFIGURATION WITH LIGHTING CONTROLS VENDOR.
$OS(FAN)	ACUITY WALL MOUNTED DUAL ZONE SENSOR SWITCH	FURNISH AND INSTALL SENSOR SWITCH TO CONTROL THE LIGHTING FIXTURES AND EXHAUST FAN WITHIN THE AREA WHEN SENSOR IS ACTIVATED. COORDINATE CONTROLS AND CONFIGURATION WITH LIGHTING CONTROLS VENDOR.
$OSDW	ACUITY - NLIGHT AIR WALL MOUNTED SINGLE ZONE DIMMING OCCUPANCY SWITCH - WIRELESS	FURNISH AND INSTALL DIMMING SENSOR SWITCH TO DIM THE LIGHTING FIXTURES WITHIN THE AREA. CONFIGURE SENSOR TO ILLUMINATE FIXTURES TO 50% ON WHEN SENSOR IS ACTIVATED. COORDINATE CONTROLS AND CONFIGURATION WITH LIGHTING CONTROLS VENDOR.
$OSD	ACUITY - SENSOR SWITCH - #WSX-D WALL MOUNTED SINGLE ZONE DIMMING OCCUPANCY SWITCH	FURNISH AND INSTALL DIMMING SENSOR SWITCH TO DIM THE LIGHTING FIXTURES WITHIN THE AREA. CONFIGURE SENSOR TO ILLUMINATE FIXTURES TO 50% ON WHEN SENSOR IS ACTIVATED. COORDINATE CONTROLS AND CONFIGURATION WITH LIGHTING CONTROLS VENDOR.
$LS	ACUITY - NLIGHT AIR WALL MOUNTED MULTI ZONE OVERRIDE SWITCH - WIRELESS	FURNISH AND INSTALL OVERRIDE SWITCH TO CONTROL THE LIGHTING FIXTURES WITHIN THE COMMON AREAS. COORDINATE CONTROLS AND CONFIGURATION WITH LIGHTING CONTROLS VENDOR.
OS	ACUITY CEILING MOUNTED OCCUPANCY SENSOR	FURNISH AND INSTALL CEILING MOUNTED SENSOR TO CONTROL THE LIGHTING FIXTURES WITHIN THE AREA VIA DIMMING POWER PACK. CONFIGURE SENSOR TO ILLUMINATE FIXTURES TO 50% ON WHEN SENSOR IS ACTIVATED. COORDINATE CONTROLS AND CONFIGURATION WITH LIGHTING CONTROLS VENDOR.
DL	ACUITY - NLIGHT AIR CEILING MOUNTED DAYLIGHT SENSOR - WIRELESS	FURNISH AND INSTALL CEILING MOUNTED DAYLIGHT SENSOR TO CONTROL THE LIGHTING FIXTURES WITHIN THE DAYLIGHT ZONE. COORDINATE CONTROLS AND CONFIGURATION WITH LIGHTING CONTROLS VENDOR.



CIRCUIT RECEPTACLES AS INDICATED ON PLAN

GENERAL OFFICE RECEPTACLE LAYOUT | SCALE NONE | 2



CONTROLLED RECEPTACLE LAYOUT | SCALE NONE | 3

MEETING ROOM OUTLET REQUIREMENTS PER 2023 NEC ARTICLE 210.65

CONFERENCE 117 – 135 SF
WALL RECEPTACLE OUTLETS REQUIRED = 4
QUANTITY PROVIDED = 4

FLOOR RECEPTACLE OUTLETS REQUIRED = 0
QUANTITY PROVIDED = 0

MEETING ROOM RECEPTACLE QUANTITY MEETS REQUIREMENTS OF NEC 210, THE LAYOUT PROVIDED IS BASED OFF PROJECT NEED AND PLACED ACCORDINGLY AS ALLOWED PER CODE.

1 ELECTRICAL SCHEDULES CONTINUED
SCALE = NTS

WELLS FARGO

GREELEY, CO

6835 10TH STREET
GREELEY CO 80634

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TEXAS REGISTRATION #F-10421

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	BID	04/25/2025

REVISIONS

REV	REASON FOR ISSUE	DATE

REVIEWED BY: JC
DRAWN BY: SP

WF BE# 112766

WF PROJECT# 419105

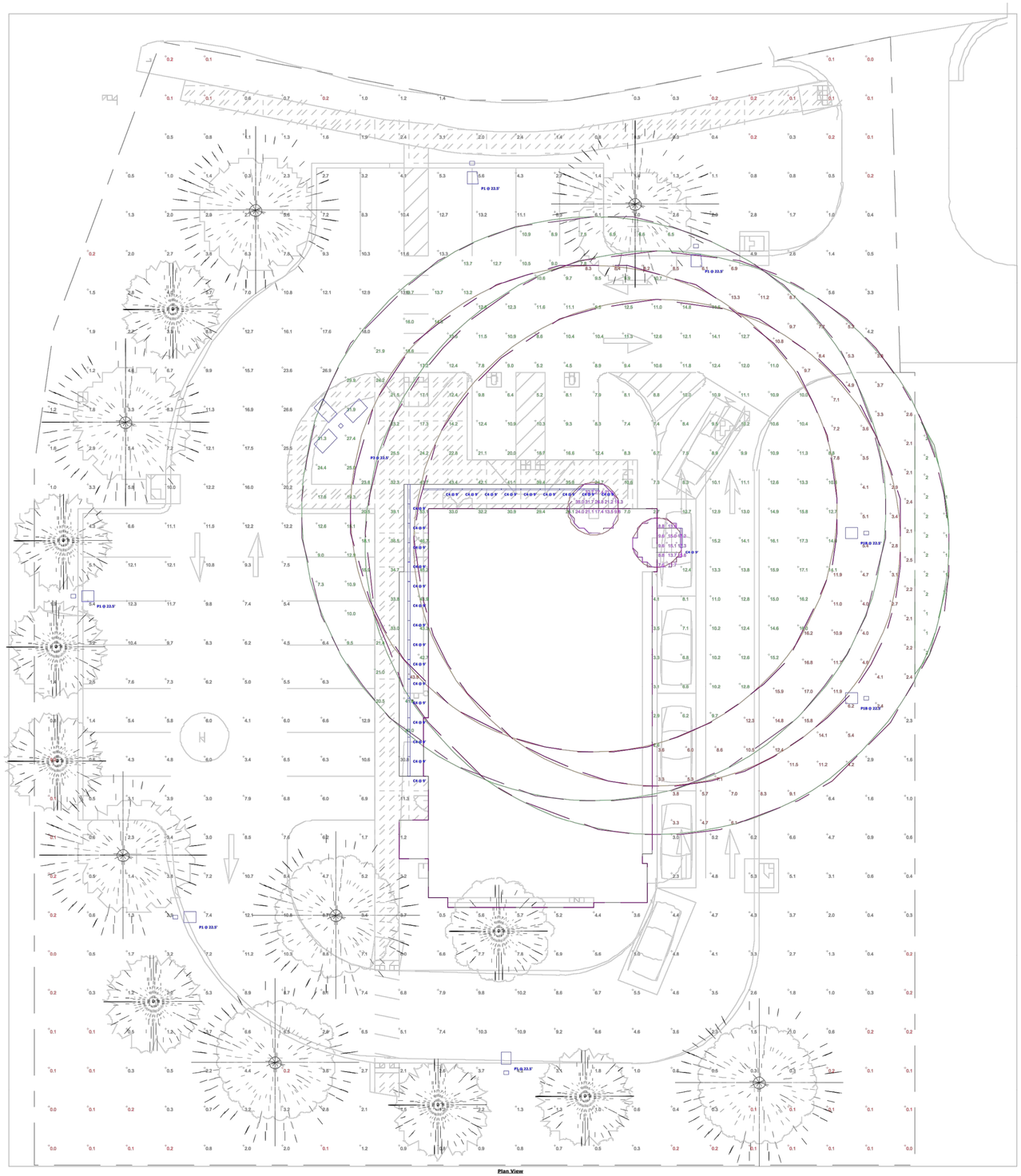
SHEET TITLE

ELECTRICAL SCHEDULES CONTINUED

SHEET NUMBER

E6.01

T&D PROJECT NUMBER
24169



Schedule							
Symbol	Label	Manufacturer	Catalog	Description	Lamp Output	LLF	Input Power
	C4	FINELITE, INC.	HP-4-WL-D-4ft-H-835-F	WET LOCATION LINEAR	17	0.9	28.3
	P1	Lithonia Lighting	RSX3 LED P3 40K R4 HS	RSX LED Area Luminaire Size 3 P3 Lumen Package 4000K CCT Type R4 Distribution with HS shield	23534	0.9	266.82
	P1B	Lithonia Lighting	RSX3 LED P4 40K R4 HS	RSX LED Area Luminaire Size 3 P4 Lumen Package 4000K CCT Type R4 Distribution with HS shield	26931	0.9	311.92
	P3	Lithonia Lighting	RSX3 LED P4 40K R4 EGFV	RSX Area Fixture Size 3 P4 Lumen Package 4000K CCT Type R4 Distribution with EGFV Shield	24337	0.9	935.7639

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
ATM - DRIVE UP - 60'	+	0.0 fc	0.0 fc	0.0 fc	N/A	N/A
ATM - WALK UP - 60'	+	0.0 fc	0.0 fc	0.0 fc	N/A	N/A
DRIVE UP ATM 5'	+	12.6 fc	17.3 fc	7.6 fc	2.3:1	1.7:1
DRIVE UP ATM 50'	+	8.2 fc	17.0 fc	2.7 fc	6.3:1	3.0:1
DRIVE UP ATM 60'	+	6.8 fc	43.9 fc	2.1 fc	20.9:1	3.2:1
PROPERTY LINE E	+	2 fc	2 fc	1 fc	2.0:1	2.0:1
SITE	+	4.4 fc	30.8 fc	0.0 fc	N/A	N/A
WALK UP ATM 5'	+	22.9 fc	35.0 fc	9.8 fc	3.6:1	2.3:1
WALK UP ATM 50'	+	15.5 fc	53.1 fc	2.6 fc	20.4:1	6.0:1
WALK UP ATM 60'	+	16.9 fc	41.8 fc	6.5 fc	6.4:1	2.6:1

RSX3 LED
Area Luminaire

External Shields


House Side Shield


External Glare Shield


External 360 Full Visor

LESCO

T&D ENGINEERING - WELLS FARGO
GREELEY, CO - SITE PHOTOMETRY WITH TREES

Designer
LESCO Technical Services
Date
03/08/2025
Scale
Not to Scale
Drawing No.
Summary
1 of 1

1 ELECTRICAL PHOTOMETRIC PLAN
SCALE = NTS

WELLS FARGO

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GREELEY CO 80634

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REV	REASON FOR ISSUE	DATE

REVIEWED BY: JC
DRAWN BY: SP

WF BE# 112766
WF PROJECT# 419105

SHEET TITLE
ELECTRICAL PHOTOMETRIC PLAN

SHEET NUMBER
E7.01

T&D PROJECT NUMBER
24169

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SECTION 01 00 00 – GENERAL REQUIREMENTS

1. Drawings are diagrammatic and should not be scaled for exact dimensions; exact dimensions and locations shall be determined by measurements in the field and shall be subject to approval by the Architect/Engineer. The Contractor shall verify dimension prior to ordering equipment and material.
2. Before submitting a bid, it will be necessary for each Contractor to visit the site and ascertain for himself/herself the conditions to be met in installing the work and make provisions for the conditions in the final price. Failure to comply with this requirement shall not be considered justification for the omission or faulty installation of any work. By submitting a bid, the Contractor is stating that the bid covers all work necessary to properly install the system indicated.
3. In case of disagreement between the Drawing and Specifications, or within the Drawings or Specifications, the bid shall include the greater amount of work and the matter shall be referred to the Architect/Engineer.
4. The Contractor shall secure and pay all fees associated with any and all necessary permits, licenses, and inspections required for the work.
5. All work shall comply with all pertinent national, state, and local ordinances and codes, and all American Disabilities Act (ADA) requirements, and any amendments, as well as any/all **Colorado Accessibility Standards (CAS)**. Nothing within the Drawings or Specifications shall be construed as waiving any of the rules, regulations, or requirements of the authorities having jurisdiction. In the event of a conflict, the requirements of the authority having jurisdiction shall govern. The conflict shall be reported to the Architect/Engineer immediately, and necessary modification shall be made at no additional cost to the Owner or Architect/Engineer.
6. If the requirements of these Construction Documents are in excess of those required by Code, the provisions of the Construction Documents shall take precedence.
7. All equipment and materials for which approval standards have been established by Underwriters' Laboratories, Inc. (UL), Factory Mutual (FM), and American Standard Codes shall be so approved and shall bear approval labels.
8. All work shall be in compliance with all applicable safety regulations.
9. Should any doubt arise as to the true meaning of the Drawings or Specifications, reference shall be made to the Architect/Engineer, whose decision shall be final. The Architect/Engineer will respond within 10 business days after receipt of request for information. The Contractor shall conform to these responses as part of the Contract with no additional cost to the Owner or Architect/Engineer. No alleged statement by the Architect/Engineer is acceptable excuse for inferior work.
10. The listing of product manufacturers, materials and methods is intended to establish a standard of quality. Products by other manufacturers may be accepted provided they have the equivalent capacity, construction, and performance. The Engineer shall be the sole judge of quality and equivalence of equipment, materials, and methods. However, under no circumstances shall any substitution be made without written approval of the Architect/Engineer prior to bidding.
11. Equipment has been chosen to fit within the available space. Where substituted or alternative equipment is proposed, it shall be the Contractor's responsibility to verify that the equipment will fit within the space available, including all required code and maintenance clearances, and to coordinate all equipment requirements with other Contractors.
12. Obtain all equipment or material of each type through one source, locally when possible, from a single manufacturer.
13. Substitutions: Products of equal performance characteristics may be considered. Contractors wishing to substitute a product or material shall submit such request to the Architect/Engineer in writing at least 7 DAYS PRIOR to bids being due. Requests will not be considered after that time. The Architect/Engineer shall review the request and is acceptable will issue a letter allowing the substitution. Any anticipated use of a non–specified product without written approval is strictly the risk of the Contractor. If a request is rejected, the Contractor shall furnish the specified product or material. Each contractor is responsible for costs incurred by other trades as a result of any substitution made by the Contractor.
14. Submittals: Submit the following in accordance with Division 1 Specifications and the requirements of this section for each piece of equipment and each type of component and material.
    - 14.1. Submit product data for each type of product specified.
    - 14.2. Submit shop/coordination drawings at a minimum scale of 1/4"=1'–0" detailing all major equipment, component, and systems in relation to work of other trades, indicating installation, code, and working clearances and access for all equipment and components.
    - 14.3. Submit samples of color, lettering, and graphics for each identification product.
    - 14.4. Contractor shall separate submittals to contain no more than one Specification section.
    - 14.5. Within 30 days after award of Contract, the Contractor shall submit a minimum of four (4) copies of each submittal with coversheet to the Architect/Engineer. If acceptable to the Architect/Owner, an electronic version containing the coversheet and all submittal data within one file may be submitted in lieu of the 4 copies.
    - 14.6. Each submittal shall include the following information. Submittals that do not comply with the following requirements will be marked "REJECTED" and returned.
        - 14.6.1. Coversheet: Indicating the names and address of the Project, Architect, Engineer, and Contractor, and the submittal name and number. Number shall be based on the Specification section, submittal sequence number, and a revision sequence number, if applicable. Ex: 262726–02–R1 is the 1st revision to the 2nd submittal for section 26 27 26.
        - 14.6.2. List of Variations: This page shall list all variations including furnished/unfurnished options and features between the submitted item and the scheduled/specified item. If there are not variations, the page shall state "NO VARIATIONS."
        - 14.6.3. Product Information: Clearly indicate manufacturer's name, designation, size, performance and capacity data, dimensional data, sufficient pictorial and diagrammatic data to show conformance with the Construction Documents. Applicable information shall be clearly indicated and non–applicable information shall be struck–out.
        - 14.6.4. Warranty Information: Manufacturer's warranty certificate that meets or exceed the requirements of the Construction Documents.
        - 14.6.5. Certification by the General and Sub–Contractor that material submitted is in accordance with the Construction Documents, signed and dated.
    - 14.7. Submittal review time in the Engineer's office will be a minimum of 10 working days per review. The Contractor shall consider this review time when scheduling work.
    - 14.8. Each submittal will be marked with one of the following :
        - 14.8.1. NO EXCEPTIONS TAKEN – Submittal was reviewed and no deviations were found.
        - 14.8.2. EXCEPTIONS NOTED, SUBMIT RESPONSE – Submittal was reviewed and found to have minor deviations or missing information. A re–submittal is not required; however, a written response to all review comments shall be submitted.
        - 14.8.3. EXCEPTIONS NOTED, RESUBMIT – Submittal was reviewed and major deviations were noted. The submittal shall be revised to address the noted deviations and resubmitted.
        - 14.8.4. REJECTED – Submittal was reviewed and is not in conformance or is not in the correct format. A revised submittal that is in conformance shall be resubmitted.
    - 14.9. Inadequate or incomplete submittals will not be reviewed and will be returned marked "REJECTED."
    - 14.10. The Architect's/Engineer's review of a submittal shall not relieve the Contractor of the responsibility for errors, omissions, oversights, or deviations that may be contained within the submittal. If the Contractor proceeds based on undetected errors, omissions, oversights, or deviations, it is at his/her sole responsibility. Regardless of any information contained in the submittal or the Engineer's review thereof, the Contract Documents shall govern the Work and neither waived nor superseded by the submittal review.
    - 14.11. Equipment and material purchased without a "NO EXCEPTIONS TAKEN" submittal review is at the risk of the Contractor. The cost of removal and replacement of such items which is judged unsatisfactory by the Architect/Engineer for any reason shall be at the Contractor's expense.
15. Operation & Maintenance Requirements (per energy code):
    - 15.1. Record Drawings: The Contractor shall maintain a set of clearly marked Record Drawing prints at the site, which indicated all alterations and changes. Within 90 days after the date of system acceptance provide a reproducible set of record drawings to the building owner or the designated representative of the building owner. Record drawings shall include as a minimum the location and performance data on each piece of equipment, general configuration of duct and pipe distribution system including sizes, and the terminal air or water design flow rates. Record drawings provided to building owner or building owner's representative shall be in the building owner's requested format (plots, CAD, pdf, etc.) with the Architect's/Engineer's seals struck–out and each drawing marked with the General and associated Sub–Contractors' names and date.
    - 15.2. Operation and Maintenance Manuals: Provide operating manual and a maintenance manual to the building owner or the designated representative of the building owner within 90 days after the date of system acceptance. These manuals shall be in accordance with industry–accepted standards and shall include, at a minimum, the following:
        - 15.2.1. Submittal data stating equipment size and selected options for each piece of equipment requiring maintenance. Submittal data shall be based on final "NO EXCEPTIONS TAKEN" submission from previous specification section requirements
        - 15.2.2. Operation manuals and maintenance manuals for each piece of equipment requiring maintenance, except equipment not furnished as part of the project. Required routine maintenance actions shall be clearly identified.
        - 15.2.3. Names and addresses of at least one service agency.
        - 15.2.4. HVAC controls system maintenance and calibration information, including wiring diagrams, schematics, and control sequence descriptions. Desired or field–determined set–points shall be permanently recorded on control drawings at control devices or, for digital control systems, in programming comments.
        - 15.2.5. A complete narrative/description of how each system furnished is intended to operate, including suggested initial set–points.
16. All equipment and material shall be installed, connected, and adjusted per the manufacturer's written instructions and recommendations.
17. The Contractor shall be held responsible for coordinating with all other trades prior to system installation. The Contractor shall refer to other trade plans for other work that may impact his/her work.
18. Where space requirements conflict, the following order of precedence shall be used.
    - 18.1. Building Lines and Structural Members.
    - 18.2. Soil, Drain, and Condensate Piping.
    - 18.3. Grease–Rated Ductwork.
    - 18.4. Refrigerant and Vent Piping.
    - 18.5. HVAC Ductwork.
    - 18.6. HVAC and Domestic Water Piping.
    - 18.7. Fire Protection (Sprinkler & Standpipe) Piping.
    - 18.8. Electrical Conduit.
19. The Contractor shall take care during work to avoid damage to work by other trades.
20. The Contractor shall keep the premises free of debris and rubbish caused by his/her work on a daily basis. This debris and rubbish shall be removed from the building and site.
21. Guarantee: The Contractor shall guarantee the entire installation to be in proper working order for a period of one (1) year, unless noted otherwise, after final acceptance and shall furnish free of charge all materials and labor necessary to comply with this guarantee.
22. Demolition: Where accessible work is to be demolished, it shall be removed in its entirety to a point of permanent concealment. Where work to be demolished is not accessible, remove system to 2' below the surface, cap, and patch surface to match existing. Where work to remain is damaged, remove the damaged portions and install new of equal capacity, quality, and function.
23. Work within Existing Building: Construction shall be arranged to minimize the hazard and interruption to the occupants. Do not interrupt services to the occupants without written permission from the Architect/Owner/Tenant, a minimum of 5 working days prior to the interruption. Where disruption of a service becomes necessary, provisions shall be made to provide temporary service throughout the interruption of the primary service.

CODE COMPLIANCE INFORMATION

ENERGY CODE COMPLIANCE 2021 IECC - C103.2 INFORMATION ON CONSTRUCTION DOCUMENTS		
1.	INSULATION MATERIALS AND THEIR R-VALUES.	REFER TO MECHANICAL BOOK SPECS SECTION 230700
2.	FENESTRATION U-FACTORS AND SOLAR HEAT GAIN COEFFICIENTS (SHGCs).	REFER TO ARCHITECTURAL PLANS.
3.	AREA-WEIGHTED U-FACTOR AND SOLAR HEAT GAIN COEFFICIENT (SHGC) CALCULATIONS.	REFER TO ARCHITECTURAL PLANS.
4.	MECHANICAL SYSTEM DESIGN CRITERIA.	REFER TO MECHANICAL BOOK SPECS
5.	MECHANICAL AND SERVICE WATER HEATING SYSTEM AND EQUIPMENT TYPES, SIZES, AND EFFICIENCIES.	REFER TO MECHANICAL AND PLUMBING SCHEDULES ON SHEETS M3.01 AND P4.01.
6.	ECONOMIZER DESCRIPTION.	REFER TO MECHANICAL SHEET M3.01.
7.	EQUIPMENT AND SYSTEM CONTROLS.	REFER TO MECHANICAL SHEET M3.01.
8.	FAN MOTOR HORSEPOWER (HP) AND CONTROLS.	REFER TO MECHANICAL SHEET M3.01.
9.	DUCT SEALING, DUCT AND PIPE INSULATION, AND LOCATION.	REFER TO MECHANICAL BOOK SPECS SECTION 233113.
10.	LIGHTING FIXTURE SCHEDULE WITH WATTAGE AND CONTROL NARRATIVE.	REFER TO ELECTRICAL SHEET E6.01.
11.	LOCATION OF DAYLIGHT ZONES ON FLOOR PLANS.	REFER TO ELECTRICAL SHEET E2.01.
12.	AIR SEALING DETAILS.	REFER TO ARCHITECTURAL PLANS.

Applicable Codes W/ City of Greeley Amendments
- 2021 IBC
- 2021 IMC
- 2021 IFC
- 2021 IPC
- 2021 IECC
- 2023 NEC

PLUMBING SYMBOL LEGEND

ALL SYMBOLS MAY NOT BE USED. VERIFY WITH PLANS.
REFER TO SPECIFICATIONS AND PLAN NOTES FOR OTHER REQUIREMENTS

PIPING

- HVAC PIPING – REFER TO ABBREVIATION FOR SYSTEM TAG (EXISTING – NEW – DEMOLITION)

HVAC PIPING ABBREVIATIONS

CHW	– CHILLED WATER	CW	– CONDENSER WATER
PCHW	– PRIMARY CHILLED WATER	SCHW	– SECONDARY CHILLED WATER
COND	– CONDENSATE	HW	– HOT WATER (SERVICE)
REF	– REFRIGERANT		

ANY OF ABOVE WITH "S" OR "R" INDICATES SUPPLY OR RETURN RESPECTIVELY

PLUMBING PIPING (EXISTING – NEW – DEMOLITION)

- SANITARY SEWER PIPING
- GREASE WASTE PIPING (GW)
- COMBINATION WASTE/VENT PIPING (CWV)
- SANITARY VENT PIPING
- DOMESTIC COLD WATER PIPING
- DOMESTIC HOT WATER PIPING – IF NOT NOTED, 105° (140°)
- DOMESTIC HOT WATER RETURN PIPING
- NATURAL GAS PIPING (G)
- FIRE PROTECTION PIPING (F)

- FITTINGS – NOT ALL FITTINGS SHOWN ON PLAN
  1–ELBOW UP; 2–DROP IN LINE; 3–ELBOW; 4–STRAIGHT TEE; 5–TEE OUTLET UP; 6–TEE OUTLET DOWN; 7–CAP; 8–ELBOW IN DROP; 9–TOP CONNECTION; 10–BOTTOM CONNECTION; 11–ELBOW DOWN; 12–CONTINUATION
- VALVES – REFER TO SPECS FOR TYPE BASED ON APPLICATION
  A–MANUAL VALVE; B–ACTUATED VALVE; C–MANUAL 3–WAY VALVE; D–CONTROLLED 3–WAY VALVE; E–CHECK VALVE
- GAS FITTINGS – NOT ALL FITTINGS SHOWN ON PLAN
  1–GAS COCK; 2–PRESSURE REGULATOR; 3–THREADED UNION; 4–FLANGED UNION; 5–SOLENOID VALVE
- PLUMBING SPECIALTIES – SEE RISER & SCHEDULES FOR SIZE
- BACKFLOW PREVENTOR
- HUB DRAIN / P–TRAP
- FLOOR DRAIN
- FLOOR SINK
- FLOOR / GRADE CLEANOUT
- WALL CLEANOUT
- VENT–THROUGH–ROOF TAG "#" DENOTES DESIGNATION

GENERAL SYMBOL LEGEND

ALL SYMBOLS MAY NOT BE USED. VERIFY WITH PLANS.
REFER TO SPECIFICATIONS AND PLAN NOTES FOR OTHER REQUIREMENTS

- KEYED NOTE "#" DENOTES NUMBER
- REVISION DELTA TAG "#" DENOTES NUMBER
- REVISION CLOUD – DENOTES APPROXIMATE AREA OF CHANGES CONTRACTOR RESPONSIBLE TO VERIFY ACTUAL CHANGES
- CONNECTION TO EXISTING FIELD VERIFY EXACT CONNECTION LOCATION AND SIZE

EQUIPMENT

- EQUIPMENT (EXISTING – NEW – DEMOLITION) MAINTENANCE ACCESS NOT SHOWN ON EXISTING. KEEP OTHER SYSTEMS CLEAR. MANUFACTURER'S RECOMMENDED CLEARANCES SHALL PREVAIL.
- EQUIPMENT TAG "XX" DENOTES EQUIPMENT TYPE – "#" DENOTES DESIGNATION

1 PLUMBING LEGENDS, NOTES & SYMBOLS
SCALE = NTS

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	SET ISSUE FOR	DATE
	BID	04/25/2025

REVISIONS

REV	REASON FOR ISSUE	DATE

REVIEWED BY: JC
DRAWN BY: AR

WF BE# 112766

WF PROJECT# 419105

SHEET TITLE

PLUMBING LEGENDS, NOTES & SYMBOLS

SHEET NUMBER

P0.00

T&D PROJECT NUMBER
24169

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PLUMBING SPECIFICATIONS

A. ALL PLUMBING WORK AND MATERIALS USED SHALL BE IN ACCORDANCE WITH THE 2021 INTERNATIONAL PLUMBING CODE WITH STATE OF COLORADO AMENDMENTS.

B. ALL PLUMBING WORK TO BE COORDINATED WITH THE ARCHITECTURAL PLANS. ANY MATERIAL OR FIXTURE SUBSTITUTIONS SHALL BE APPROVED BY THE ENGINEER PRIOR TO USE.

C. ALL PLUMBING WORK TO BE PROVIDED BY A LICENSED PLUMBER. LABOR AND MATERIALS TO BE WARRANTED FOR A MINIMUM OF 1 YEAR. WARRANTY BEGINS ONCE SUBSTANTIAL COMPLETION IS DETERMINED FOR THE PLUMBING WORK PROVIDED.

D. SUBMIT SHOP DRAWINGS/SUBMITTALS FOR ALL FIXTURES, ACCESSORIES, INSULATION, ETC... PROVIDE COPIES OF OPERATION AND MAINTENANCE MANUALS TO THE OWNER. PROVIDE TRAINING TO OWNER REPRESENTATIVES FOR ALL NEW EQUIPMENT.

E. PROVIDE AS-BUILT DRAWINGS IN AUTOCAD OR SIMILAR FORMAT SHOWING EXACT FINAL CONDITIONS.

F. SUPPORT ALL PIPING AND EQUIPMENT WITH SUPPORT SYSTEMS PROVIDED FOR THE SPECIFIC USE. DO NOT SUPPORT PIPE DIRECTLY TO STRUCTURAL MEMBERS. ALL EQUIPMENT/EQUIPMENT SUPPORTS SHALL BE PROVIDED WITH VIBRATION ISOLATION WHERE NECESSARY.

G. PIPING CONNECTIONS OF DISSIMILAR METALS SHALL BE MADE WITH MANUFACTURED UNIONS/CONNECTIONS FOR SUCH DISSIMILAR MATERIAL USE.

H. INSULATE DOMESTIC COLD WATER, HOT WATER, AND HOT WATER RETURN PIPING WITH 1" THICK INSULATION UP TO 1-1/4"ø PIPE AND 1.5" THICK INSULATION FOR PIPING 1-1/2"ø AND GREATER. INSULATION TO BE GLASS FIBER PIPE INSULATION WITH A SERVICE JACKET. INSULATION TO BE 25/50 FLAME/SMOKE SPREAD RATED. INSULATION TO HAVE A CONDUCTIVITY (K) NOT EXCEEDING 0.28 BTU PER IN./H· FT2·°F. PER TABLE 403.12.3 OF 2021 IECC.

I. INSULATE EXPOSED DRAIN AND WATER SUPPLY PIPING BENEATH ADA SINKS. USE CLOSE CELL SOLID INSULATION IN LIEU OF FIBERGLASS.

J. ALL DRAIN PIPING THAT RECIEVES HVAC CONDENSATION SHALL BE INSULATED FOR THE FIRST 6 FEET OF HORIZONTAL/VERTICAL RUN.

K. DOMESTIC WATER VALVES SHALL BE PORT BALL TYPE VALVES WITH A BRONZE BODY AND SOLID BRASS BALL. PROVIDE VALVE WITH A PLASTIC COATED HANDLE. ALL VALVES SHALL BE LOCATED TO PROVIDE FULL ACCESS TO THE VALVE.

L. ALL NEW PLUMBING FIXTURES SHALL MEET THE WATER CONSERVATION REQUIREMENTS OF THE STATE OF COLORADO.

M. SEE PLUMBING FIXTURE SCHEDULE FOR MORE INFORMATION. PROVIDE ANY AND ALL ACCESSORIES THAT MAY BE REQUIRED FOR THE COMPLETE INSTALLATION OF ALL PLUMBING FIXTURES.

N. INSULATE HORIZONTAL STORM AND OVERFLOW DRAIN WITH 1" THICK INSULATION UP TO 2-8"ø PIPE. INSULATION TO BE CELLULAR GLASS PIPE INSULATION WITH A SERVICE JACKET. INSULATION TO BE 25/50 FLAME/SMOKE SPREAD RATED. INSULATION TO HAVE A CONDUCTIVITY (K) NOT EXCEEDING 0.28 BTU PER IN./H· FT2·°F.

PLUMBING GENERAL NOTES

A. CONTRACTOR SHALL BE RESPONSIBLE FOR ADDITIONAL PIPE ACCESSORIES OR MATERIALS DUE TO ACTUAL FIELD PIPE ROUTING OR CONNECTION REQUIREMENTS. PRICING FOR SUCH PIPING OFFSETS AND OTHER MATERIALS SHALL BE PROVIDED AS PART OF THE BASE BID.

B. FINAL EQUIPMENT/FIXTURE TYPES, SIZES AND LOCATIONS TO BE COORDINATED WITH THE ARCHITECTURAL MILLWORK PLANS, FINISH PLANS, ELEVATIONS, AND FLOOR PLANS. ANY CONFLICTS FOUND BETWEEN PLUMBING PLANS AND ARCHITECTURAL PLANS REQUIRE AN OFFICIAL REQUEST FOR INFORMATION PRIOR TO PROCEEDING WITH ANY PRICING, BIDDING, EQUIPMENT ORDERING OR CONSTRUCTION.

C. ALL MATERIALS USED IN THIS PROJECT SHALL BE CERTIFIED BY THE MANUFACTURER AS ASBESTOS FREE.

D. CONTRACTOR SHALL PROVIDE CLEANOUTS FOR SANITARY AND STORM DRAINAGE AT EVERY 100 FEET IN STRAIGHT RUNS AND EVERY HORIZONTAL CHANGE OF DIRECTION EXCEEDING 45 DEGREES AS REQUIRED IPC 2021 SECTION 1101.8 & 708.

KEYED NOTES

1 ROOF DRAIN AND OVERFLOW ROOF DRAIN FROM ROOF ABOVE.

2 STORM DRAIN LINE TO BE ROUTED HORIZONTALLY THRU PLENUM, DOWN WALL CAVITY AND OUT TO SITE STORM DRAINAGE LINE (BELOW GRADE). PROVIDE WALL FURR-OUT TO CONCEAL PIPING AS REQUIRED. SEE CIVIL PLANS FOR MORE INFORMATION. COORDINATE ROUTING WITH STRUCTURAL MEMBERS.

3 DISCHARGE FOR OVERFLOW OR CANOPY DRAIN TO BE ROUTED HORIZONTALLY THRU PLENUM, DOWN WALL CAVITY AND THRU WALL WITH DOWNSPOUT NOZZLE. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION. COORDINATE EXACT HEIGHT OF NOZZLE WITH ARCHITECT PRIOR TO INSTALL. SEE SCHEDULE AND RISER FOR STORM INLET SIZE AND DOWNSPOUT NOZZLE.

4 STORM DRAIN LINE TO BE ROUTED FROM ACM CANOPY, DOWN WALL CAVITY, AND OUT TO SITE STORM DRAINAGE LINE (BELOW GRADE). PROVIDE WALL FURR-OUT TO CONCEAL PIPING AS REQUIRED. SEE CIVIL PLANS FOR MORE INFORMATION. COORDINATE ROUTING WITH STRUCTURAL MEMBERS.

5 CONNECT NEW 1-1/2" CW LINE TO PLUMBING AT NEW CW ENTRY LOCATION IN AREA. FIELD VERIFY ALL CONDITIONS AND FINAL CONNECTION POINTS. CONTRACTOR TO PROVIDE SHUTOFF VALVE LOCATED WITHIN JANITOR'S CLOSET AT INTERIOR FOR TENANT USE. FULLY INSULATE COLD WATER LINES. REFER TO SERVICE ENTRY DETAIL.

6 COORDINATE WASTE CONNECTION POINT AND CLEANOUT REQUIREMENTS WITH CIVIL DRAWINGS.

PIPING MATERIALS

A. DOMESTIC WATER SHALL BE TYPE L COPPER WITH COPPER BRASS FITTINGS WITH LEAD-FREE SOLDIER JOINTS (SEE BOOK SPECIFICATIONS FOR INSULATION REQUIREMENTS FOR ALL PIPING TYPES).

B. UNDERGROUND DOMESTIC WATER SERVICE PIPING TO BE TYPE K COPPER WITH COPPER BRASS FITTINGS WITH LEAD-FREE SOLDER JOINTS.

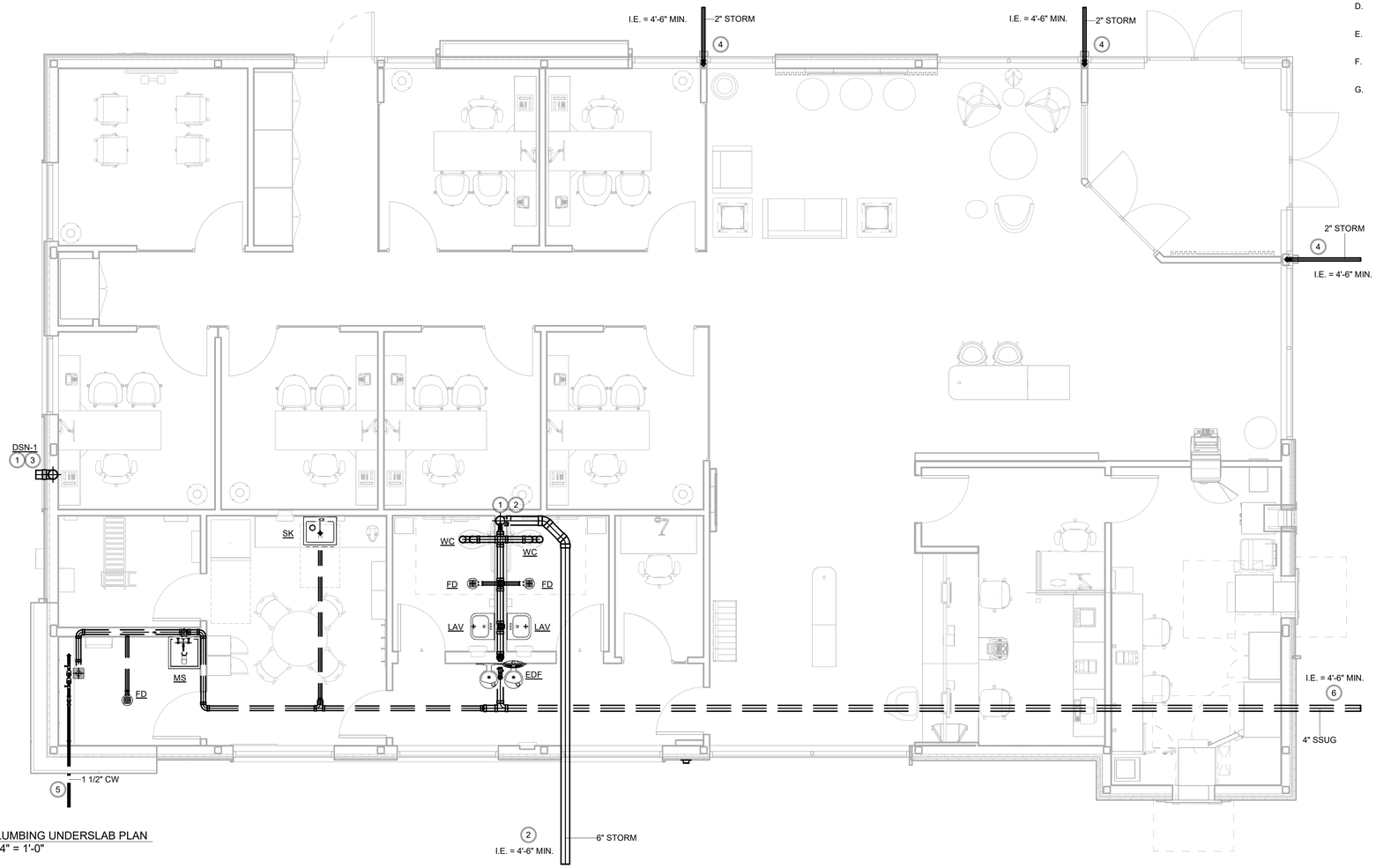
C. INTERIOR SANITARY WASTE SHALL BE SCHEDULE 40 PVC WITH SCHEDULE 40 PVC FITTINGS.

D. SANITARY SEWER BELOW GRADE TO BE SCHEDULE 40 PVC WITH SCHEDULE 40 PVC FITTINGS.

E. SANITARY VENT SHALL BE SCHEDULE 40 PVC WITH SCHEDULE 40 PVC FITTINGS.

F. STORM LINE ABOVE GRADE SHALL BE SCHEDULE 40 PVC WITH SCHEDULE 40 PVC FITTINGS.

G. STORM LINE BELOW GRADE, SIZES 8" AND SMALLER, SHALL BE SCHEDULE 40 PVC WITH SCHEDULE 40 PVC FITTING.



1 PLUMBING UNDERSLAB PLAN
1/4" = 1'-0"

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REVISIONS

REV	REASON FOR ISSUE	DATE

REVIEWED BY: JC

DRAWN BY: AR

WF BE# 112766

WF PROJECT# 419105

SHEET TITLE

PLUMBING UNDERSLAB PLAN

SHEET NUMBER

P0.01

T&D PROJECT NUMBER
24169

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PLUMBING SPECIFICATIONS

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E. PROVIDE AS-BUILT DRAWINGS IN AUTOCAD OR SIMILAR FORMAT SHOWING EXACT FINAL CONDITIONS.

F. SUPPORT ALL PIPING AND EQUIPMENT WITH SUPPORT SYSTEMS PROVIDED FOR THE SPECIFIC USE. DO NOT SUPPORT PIPE DIRECTLY TO STRUCTURAL MEMBERS. ALL EQUIPMENT/EQUIPMENT SUPPORTS SHALL BE PROVIDED WITH VIBRATION ISOLATION WHERE NECESSARY.

G. PIPING CONNECTIONS OF DISSIMILAR METALS SHALL BE MADE WITH MANUFACTURED UNIONS/CONNECTIONS FOR SUCH DISSIMILAR MATERIAL USE.

H. INSULATE DOMESTIC COLD WATER, HOT WATER, AND HOT WATER RETURN PIPING WITH 1" THICK INSULATION UP TO 1-1/4"ø PIPE AND 1.5" THICK INSULATION FOR PIPING 1-1/2"ø AND GREATER. INSULATION TO BE GLASS FIBER PIPE INSULATION WITH A SERVICE JACKET. INSULATION TO BE 25/50 FLAME/SMOKE SPREAD RATED. INSULATION TO HAVE A CONDUCTIVITY (K) NOT EXCEEDING 0.28 BTU PER IN./H· FT2·°F. PER TABLE 403.12.3 OF 2021 IECC.

I. INSULATE EXPOSED DRAIN AND WATER SUPPLY PIPING BENEATH ADA SINKS. USE CLOSE CELL SOLID INSULATION IN LIEU OF FIBERGLASS.

J. ALL DRAIN PIPING THAT RECIEVES HVAC CONDENSATION SHALL BE INSULATED FOR THE FIRST 6 FEET OF HORIZONTAL/VERTICAL RUN.

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L. ALL NEW PLUMBING FIXTURES SHALL MEET THE WATER CONSERVATION REQUIREMENTS OF THE STATE OF COLORADO.

M. SEE PLUMBING FIXTURE SCHEDULE FOR MORE INFORMATION. PROVIDE ANY AND ALL ACCESSORIES THAT MAY BE REQUIRED FOR THE COMPLETE INSTALLATION OF ALL PLUMBING FIXTURES.

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PLUMBING GENERAL NOTES

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B. FINAL EQUIPMENT/FIXTURE TYPES, SIZES AND LOCATIONS TO BE COORDINATED WITH THE ARCHITECTURAL MILLWORK PLANS, FINISH PLANS, ELEVATIONS, AND FLOOR PLANS. ANY CONFLICTS FOUND BETWEEN PLUMBING PLANS AND ARCHITECTURAL PLANS REQUIRE AN OFFICIAL REQUEST FOR INFORMATION PRIOR TO PROCEEDING WITH ANY PRICING, BIDDING, EQUIPMENT ORDERING OR CONSTRUCTION.

C. ALL MATERIALS USED IN THIS PROJECT SHALL BE CERTIFIED BY THE MANUFACTURER AS ASBESTOS FREE.

D. CONTRACTOR SHALL PROVIDE CLEANOUTS FOR SANITARY AND STORM DRAINAGE AT EVERY 100 FEET IN STRAIGHT RUNS AND EVERY HORIZONTAL CHANGE OF DIRECTION EXCEEDING 45 DEGREES AS REQUIRED IPC 2021 SECTION 1101.8 & 708.

KEYED NOTES

1 NEW 1/2" CW LINE FOR COFFEE MAKER CONNECTION. COORDINATE EXACT WATER LINE LOCATION THROUGH COUNTERTOP WITH ARCHITECT AND EQUIPMENT PRIOR TO ROUTING LINES. SEE SCHEDULE AND RISER FOR BACKFLOW PREVENTION REQUIREMENTS (CV-1).

2 NEW WALL MOUNTED/SUSPENDED WATER HEATER ABOVE MOP SINK WITHIN JANITOR'S CLOSET. FIELD VERIFY EXACT LOCATION AND HEIGHT/SIZE WITH ROOF HATCH, STRUCTURE AND OTHER DISCIPLINES (LIGHTING, POWER, MECHANICAL, ETC.) PRIOR TO PURCHASE AND INSTALL. PROVIDE WATER SENSOR WITHIN DRIP PAN. ROUTE T&P LINES TO NEW FLOOR SINK. SEE PLUMBING SCHEDULE AND RISER.

3 CONNECT NEW 1-1/2" CW LINE TO PLUMBING AT NEW CW ENTRY LOCATION IN AREA. FIELD VERIFY ALL CONDITIONS AND FINAL CONNECTION POINTS. CONTRACTOR TO PROVIDE SHUTOFF VALVE LOCATED WITHIN JANITOR'S CLOSET AT INTERIOR FOR TENANT USE. FULLY INSULATE COLD WATER LINES. REFER TO SERVICE ENTRY DETAIL.

4 PROVIDE NEW VENT THRU ROOF. CONTRACTOR TO MAINTAIN A MINIMUM OF 15' FROM ROOF TOP UNIT OUTSIDE AIR INTAKE. SEE DETAIL AND RISER DIAGRAM FOR MORE INFORMATION.

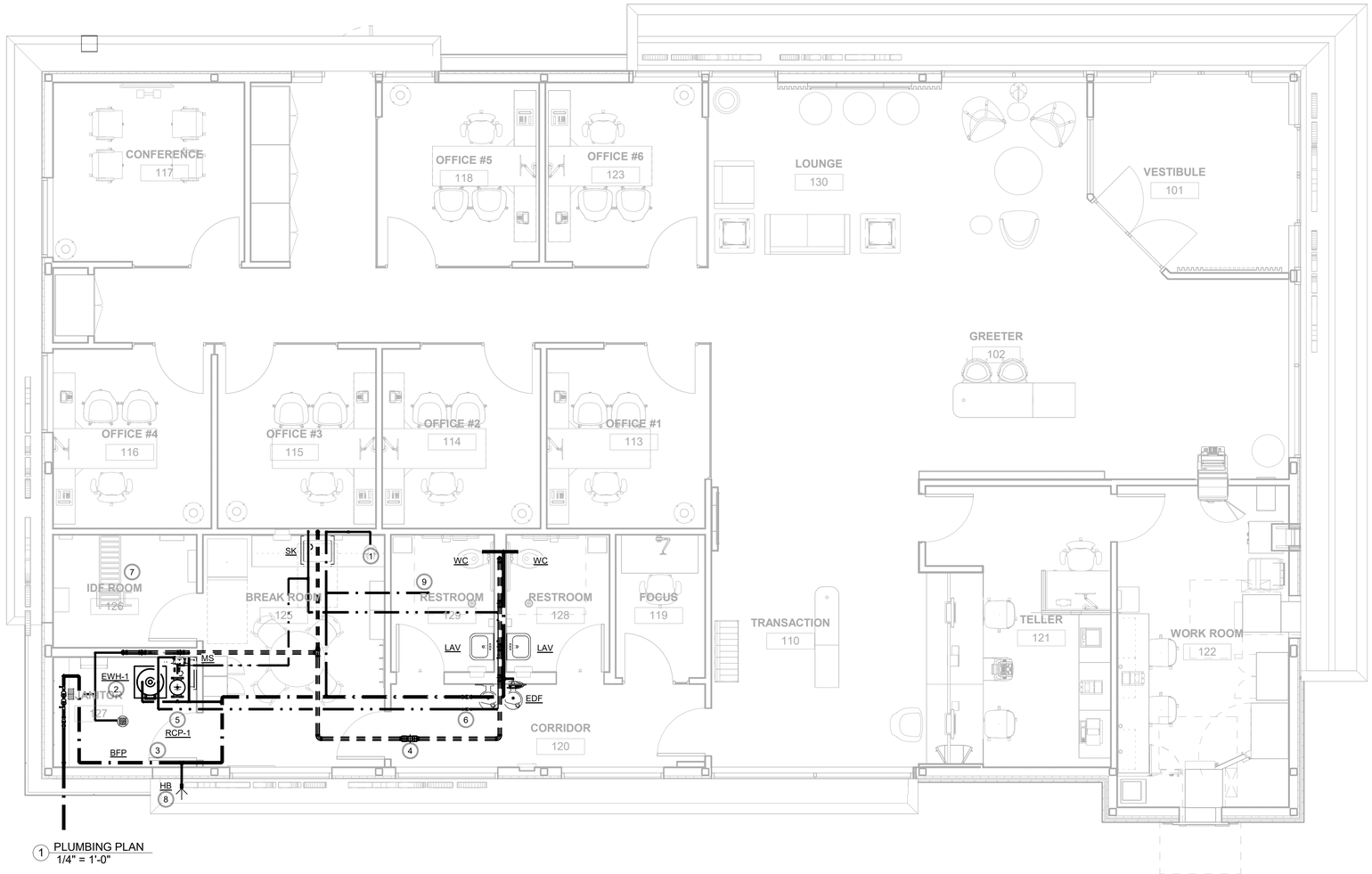
5 NEW RECIRCULATION PUMP TO BE MOUNTED NEAR NEW WATER HEATER. PUMP TO BE CONTROLLED BY TIMECLOCK TO ONLY RUN DURING OCCUPIED HOURS. PUMP OPERATION TO BE LIMITED BY AQUASTAT PRIOR TO COLD WATER PIPE TIE IN. COORDINATE EXACT LOCATION WITH OTHER DISCIPLINES. SEE PLUMBING SCHEDULE AND RISER DIAGRAM FOR MORE INFORMATION.

6 PROVIDE CW AND HW ISOLATION VALVES IN ACCESSIBLE CEILING AREA TO SERVE RESTROOM FIXTURES. COORDINATE WITH TENANT ON LABELING/MARKING CEILING TILES NEAR VALVE TO PROVIDE QUICK ACCESSIBILITY.

7 DO NOT ROUTE CW OR HW LINES OVER IDF ROOM TO AVOID CROSSING OVERTOP EQUIPMENT IN ROOM.

8 PROVIDE WALL-MOUNTED, FREEZE PROOF HOSE BIBB FOR EXTERIOR USE. SEE SCHEDULE AND RISER FOR MORE INFORMATION.

9 PROVIDE AND INSTALL NEW ROOF HYDRANT FOR MAINTENANCE USE. PROVIDE FREEZE PROTECTION. FIELD VERIFY AND COORDINATE ROUTING WITH STRUCTURE AND OTHER DISCIPLINES (LIGHTING, MECHANICAL, SPRINKLER, ETC.) REFER TO SCHEDULE AND DETAIL FOR MORE INFORMATION.



1 PLUMBING PLAN
1/4" = 1'-0"

PIPING MATERIALS

A. DOMESTIC WATER SHALL BE TYPE L COPPER WITH COPPER BRASS FITTINGS WITH LEAD-FREE SOLDIER JOINTS (SEE BOOK SPECIFICATIONS FOR INSULATION REQUIREMENTS FOR ALL PIPING TYPES).

B. UNDERGROUND DOMESTIC WATER SERVICE PIPING TO BE TYPE K COPPER WITH COPPER BRASS FITTINGS WITH LEAD-FREE SOLDER JOINTS.

C. INTERIOR SANITARY WASTE SHALL BE SCHEDULE 40 PVC WITH SCHEDULE 40 PVC FITTINGS.

D. SANITARY SEWER BELOW GRADE TO BE SCHEDULE 40 PVC WITH SCHEDULE 40 PVC FITTINGS.

E. SANITARY VENT SHALL BE SCHEDULE 40 PVC WITH SCHEDULE 40 PVC FITTINGS.

F. STORM LINE ABOVE GRADE SHALL BE SCHEDULE 40 PVC WITH SCHEDULE 40 PVC FITTINGS.

G. STORM LINE BELOW GRADE, SIZES 8" AND SMALLER, SHALL BE SCHEDULE 40 PVC WITH SCHEDULE 40 PVC FITTING.

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SET ISSUE

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REVISIONS

REV	REASON FOR ISSUE	DATE

REVIEWED BY: JC

DRAWN BY: AR

WF BE# 112766

WF PROJECT# 419105

SHEET TITLE

PLUMBING PLAN

SHEET NUMBER

P1.01

T&D PROJECT NUMBER
24169

4/25/2025 6:54:13 PM

PLUMBING SPECIFICATIONS

A. ALL PLUMBING WORK AND MATERIALS USED SHALL BE IN ACCORDANCE WITH THE 2021 INTERNATIONAL PLUMBING CODE WITH STATE OF COLORADO AMENDMENTS.

B. ALL PLUMBING WORK TO BE COORDINATED WITH THE ARCHITECTURAL PLANS. ANY MATERIAL OR FIXTURE SUBSTITUTIONS SHALL BE APPROVED BY THE ENGINEER PRIOR TO USE.

C. ALL PLUMBING WORK TO BE PROVIDED BY A LICENSED PLUMBER. LABOR AND MATERIALS TO BE WARRANTED FOR A MINIMUM OF 1 YEAR. WARRANTY BEGINS ONCE SUBSTANTIAL COMPLETION IS DETERMINED FOR THE PLUMBING WORK PROVIDED.

D. SUBMIT SHOP DRAWINGS/SUBMITTALS FOR ALL FIXTURES, ACCESSORIES, INSULATION, ETC... PROVIDE COPIES OF OPERATION AND MAINTENANCE MANUALS TO THE OWNER. PROVIDE TRAINING TO OWNER REPRESENTATIVES FOR ALL NEW EQUIPMENT.

E. PROVIDE AS-BUILT DRAWINGS IN AUTOCAD OR SIMILAR FORMAT SHOWING EXACT FINAL CONDITIONS.

F. SUPPORT ALL PIPING AND EQUIPMENT WITH SUPPORT SYSTEMS PROVIDED FOR THE SPECIFIC USE. DO NOT SUPPORT PIPE DIRECTLY TO STRUCTURAL MEMBERS. ALL EQUIPMENT/EQUIPMENT SUPPORTS SHALL BE PROVIDED WITH VIBRATION ISOLATION WHERE NECESSARY.

G. PIPING CONNECTIONS OF DISSIMILAR METALS SHALL BE MADE WITH MANUFACTURED UNIONS/CONNECTIONS FOR SUCH DISSIMILAR MATERIAL USE.

H. INSULATE DOMESTIC COLD WATER, HOT WATER, AND HOT WATER RETURN PIPING WITH 1" THICK INSULATION UP TO 1-1/4"ø PIPE AND 1.5" THICK INSULATION FOR PIPING 1-1/2"ø AND GREATER. INSULATION TO BE GLASS FIBER PIPE INSULATION WITH A SERVICE JACKET. INSULATION TO BE 25/50 FLAME/SMOKE SPREAD RATED. INSULATION TO HAVE A CONDUCTIVITY (K) NOT EXCEEDING 0.28 BTU PER IN./H· FT2·°F. PER TABLE 403.12.3 OF 2021 IECC.

I. INSULATE EXPOSED DRAIN AND WATER SUPPLY PIPING BENEATH ADA SINKS. USE CLOSE CELL SOLID INSULATION IN LIEU OF FIBERGLASS.

J. ALL DRAIN PIPING THAT RECIEVES HVAC CONDENSATION SHALL BE INSULATED FOR THE FIRST 6 FEET OF HORIZONTAL/VERTICAL RUN.

K. DOMESTIC WATER VALVES SHALL BE PORT BALL TYPE VALVES WITH A BRONZE BODY AND SOLID BRASS BALL. PROVIDE VALVE WITH A PLASTIC COATED HANDLE. ALL VALVES SHALL BE LOCATED TO PROVIDE FULL ACCESS TO THE VALVE.

L. ALL NEW PLUMBING FIXTURES SHALL MEET THE WATER CONSERVATION REQUIREMENTS OF THE STATE OF COLORADO.

M. SEE PLUMBING FIXTURE SCHEDULE FOR MORE INFORMATION. PROVIDE ANY AND ALL ACCESSORIES THAT MAY BE REQUIRED FOR THE COMPLETE INSTALLATION OF ALL PLUMBING FIXTURES.

N. INSULATE HORIZONTAL STORM AND OVERFLOW DRAIN WITH 1" THICK INSULATION UP TO 2-8"ø PIPE. INSULATION TO BE CELLULAR GLASS PIPE INSULATION WITH A SERVICE JACKET. INSULATION TO BE 25/50 FLAME/SMOKE SPREAD RATED. INSULATION TO HAVE A CONDUCTIVITY (K) NOT EXCEEDING 0.28 BTU PER IN./H· FT2·°F.

PLUMBING GENERAL NOTES

A. CONTRACTOR SHALL BE RESPONSIBLE FOR ADDITIONAL PIPE ACCESSORIES OR MATERIALS DUE TO ACTUAL FIELD PIPE ROUTING OR CONNECTION REQUIREMENTS. PRICING FOR SUCH PIPING OFFSETS AND OTHER MATERIALS SHALL BE PROVIDED AS PART OF THE BASE BID.

B. FINAL EQUIPMENT/FIXTURE TYPES, SIZES AND LOCATIONS TO BE COORDINATED WITH THE ARCHITECTURAL MILLWORK PLANS, FINISH PLANS, ELEVATIONS, AND FLOOR PLANS. ANY CONFLICTS FOUND BETWEEN PLUMBING PLANS AND ARCHITECTURAL PLANS REQUIRE AN OFFICIAL REQUEST FOR INFORMATION PRIOR TO PROCEEDING WITH ANY PRICING, BIDDING, EQUIPMENT ORDERING OR CONSTRUCTION.

C. ALL MATERIALS USED IN THIS PROJECT SHALL BE CERTIFIED BY THE MANUFACTURER AS ASBESTOS FREE.

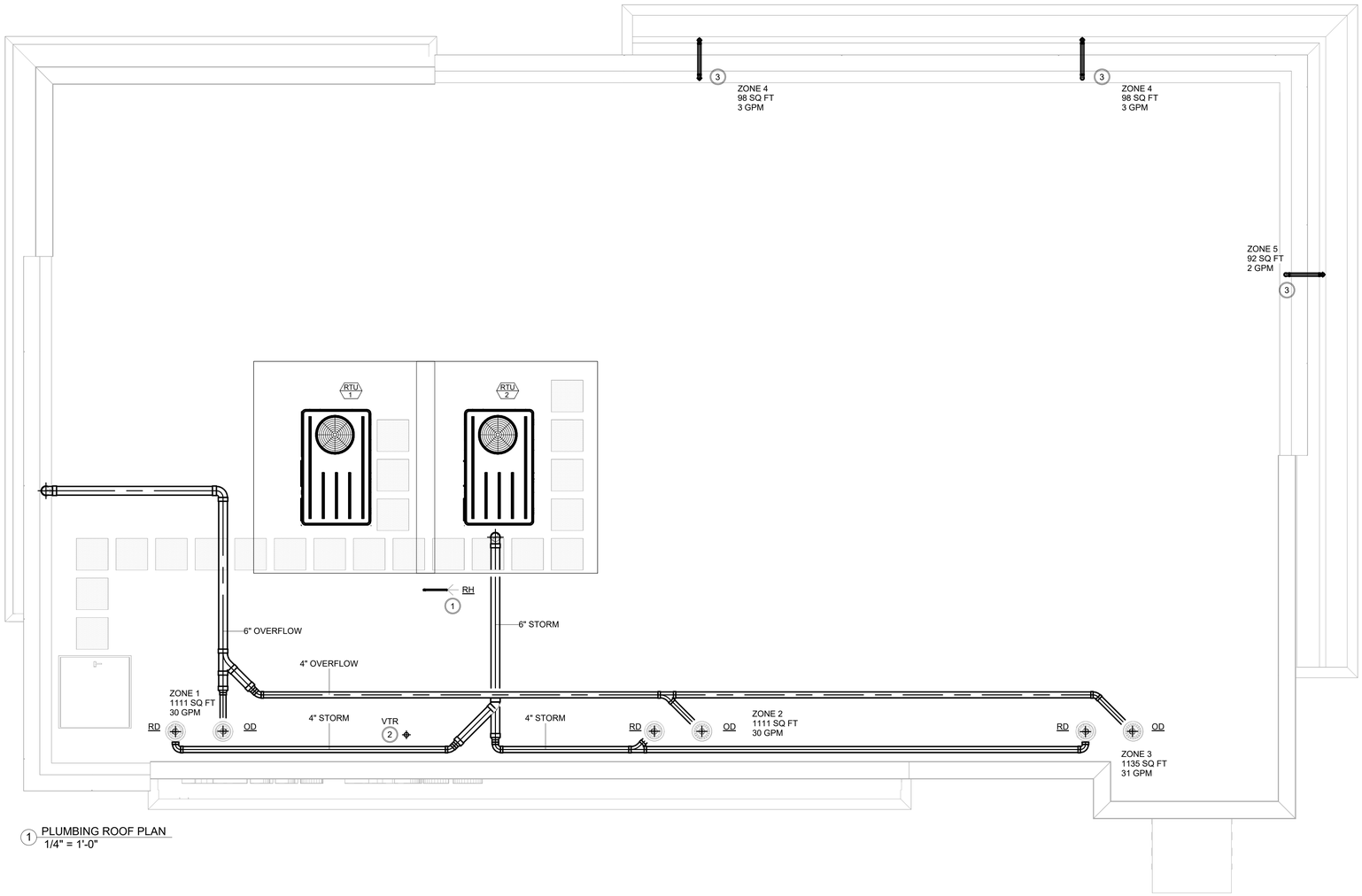
D. CONTRACTOR SHALL PROVIDE CLEANOUTS FOR SANITARY AND STORM DRAINAGE AT EVERY 100 FEET IN STRAIGHT RUNS AND EVERY HORIZONTAL CHANGE OF DIRECTION EXCEEDING 45 DEGREES AS REQUIRED IPC 2021 SECTION 1101.8 & 708.

KEYED NOTES

1 PROVIDE AND INSTALL NEW ROOF HYDRANT FOR MAINTENANCE USE. PROVIDE FREEZE PROTECTION. FIELD VERIFY AND COORDINATE ROUTING WITH EXISTING STRUCTURE AND OTHER DISCIPLINES (LIGHTING, MECHANICAL, ETC.) REFER TO SCHEDULE AND DETAIL FOR MORE INFORMATION.

2 PROVIDE NEW VENT THRU ROOF. CONTRACTOR TO MAINTAIN A MINIMUM OF 15' FROM ROOF TOP UNIT OUTSIDE AIR INTAKE. SEE DETAIL AND RISER DIAGRAM FOR MORE INFORMATION.

3 CONNECT NEW 2" STORM PIPE TO STORM GUTTER LOCATED WITHIN ACM CANOPY. COORDINATE CONNECTION LOCATION WITH ACM VENDOR AND COORDINATE ROUTING DOWN THRU EXTERIOR WALL TO BELOW SLAB WITH ARCHITECT.



1 PLUMBING ROOF PLAN
1/4" = 1'-0"

PIPING MATERIALS

A. DOMESTIC WATER SHALL BE TYPE L COPPER WITH COPPER BRASS FITTINGS WITH LEAD-FREE SOLDIER JOINTS (SEE BOOK SPECIFICATIONS FOR INSULATION REQUIREMENTS FOR ALL PIPING TYPES).

B. UNDERGROUND DOMESTIC WATER SERVICE PIPING TO BE TYPE K COPPER WITH COPPER BRASS FITTINGS WITH LEAD-FREE SOLDER JOINTS.

C. INTERIOR SANITARY WASTE SHALL BE SCHEDULE 40 PVC WITH SCHEDULE 40 PVC FITTINGS.

D. SANITARY SEWER BELOW GRADE TO BE SCHEDULE 40 PVC WITH SCHEDULE 40 PVC FITTINGS.

E. SANITARY VENT SHALL BE SCHEDULE 40 PVC WITH SCHEDULE 40 PVC FITTINGS.

F. STORM LINE ABOVE GRADE SHALL BE SCHEDULE 40 PVC WITH SCHEDULE 40 PVC FITTINGS.

G. STORM LINE BELOW GRADE, SIZES 8" AND SMALLER, SHALL BE SCHEDULE 40 PVC WITH SCHEDULE 40 PVC FITTING.

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WELLS FARGO

GREELEY, CO

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PLUMBING ROOF PLAN

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P2.01

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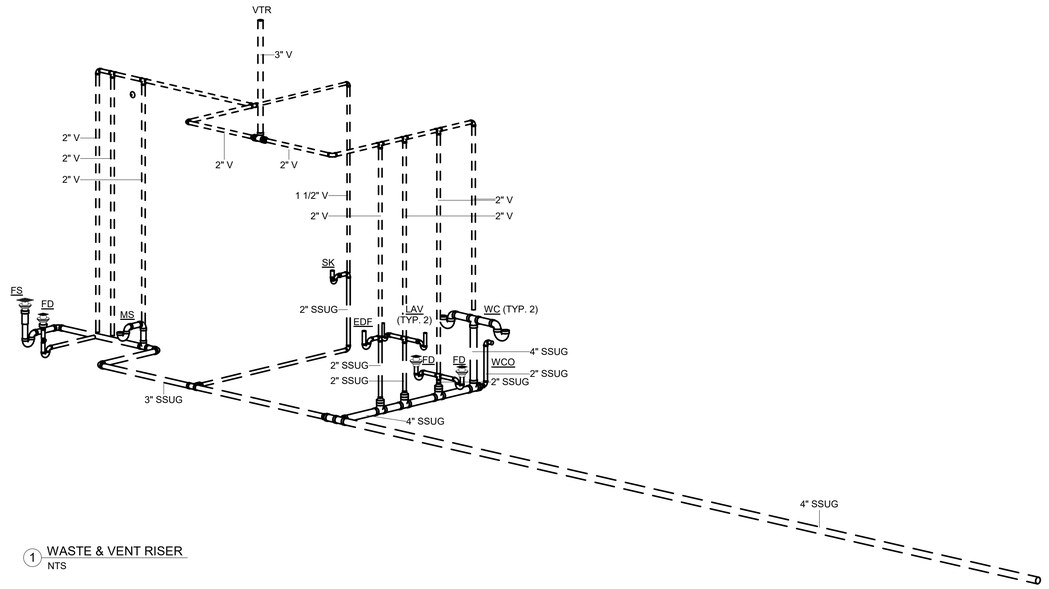
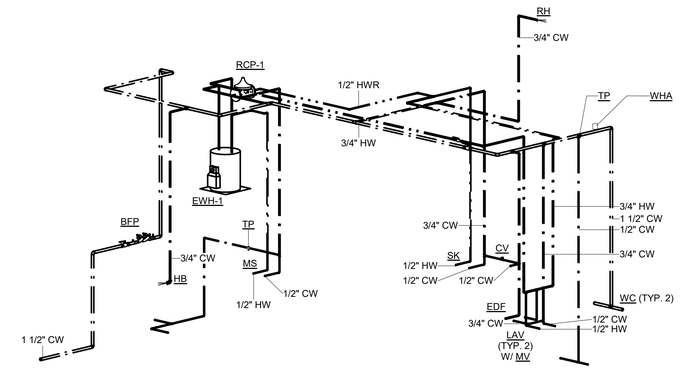
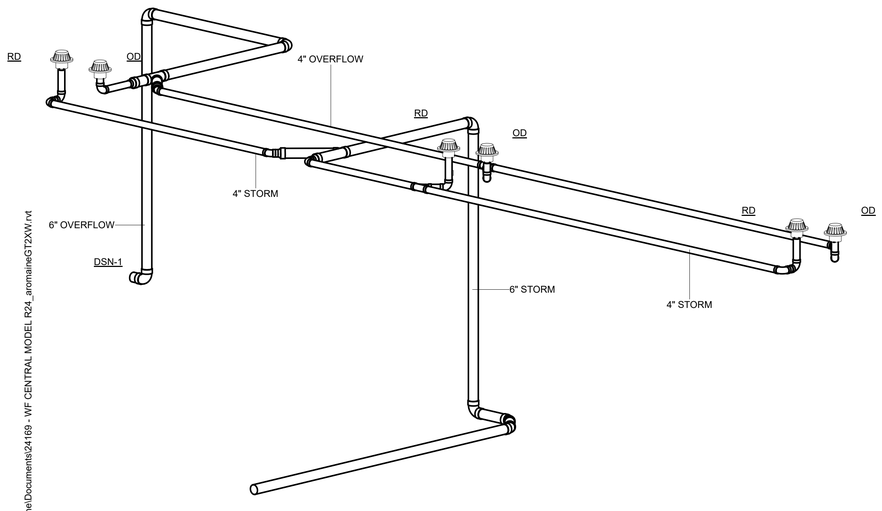


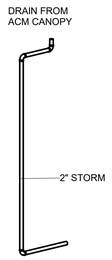
1 WASTE & VENT RISER
NTS

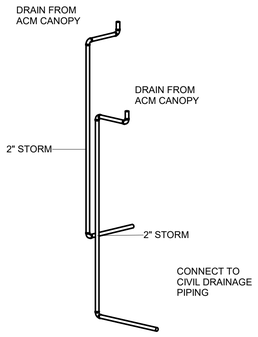


2 WATER RISER
NTS



3 STORM RISER
NTS





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PLUMBING RISERS

SHEET NUMBER

P3.01

T&D PROJECT NUMBER
24169

T&D Engineers, LLC
738 South Highway 6, Suite #260
Houston, Texas 77079

Domestic Water Sizing (2021 IPC)

Project Name:	Wells Fargo Greeley	Location:	Greeley, CO	Project No.:	24169

1. Building Information:

System Type: PUBLIC

System Pressue Range: 46 - 60 psi

Total Devloped Water Length (ft):	58
Total Devloped Sanitary Waste Length (ft):	83
Total Devloped Sanitary Vent Length (ft):	44

2. Specify Fixture Quantities:

	Quantities	Domestic Water Fixture Units Per	Domestic Water Fixture Units Total	Waste/Vent Fixture Units Per	Waste/Vent Fixture Units Total
Bathtub or Combination Bath/Shower		4.00	0.00	2.00	0.00
3/4" Bathtub Fill Valve		10.00	0.00	N/A	0.00
Bidet		0.00	0.00	0.00	0.00
Clotheswasher		4.00	0.00	3.00	0.00
Dental Unit, cuspidor		1.00	0.00	1.00	0.00
Dishwasher, domestic		1.50	0.00	2.00	0.00
Drinking Fountain or Watercooler	1	0.50	0.50	0.50	0.50
Hose Bibb	2	N/A	3.50	N/A	0.00
Emergency Floor Drain			0.00	N/A	0.00
2" Floor Drain	3	N/A	0.00	4.00	12.00
3" Floor Drain	1	N/A	0.00	6.00	6.00
4" Floor Drain		N/A	0.00	8.00	0.00
Lavatory	2	1.00	2.00	1.00	2.00
Lawn Sprinkler, each head		1.00	0.00	N/A	0.00
Mobile Home, each		0.00	0.00	0.00	0.00
Sinks					
Bar	1	2.00	2.00	2.00	2.00
Clinic Faucet		3.00	0.00	3.00	0.00
Clinic Fluchometer Valve		8.00	0.00	6.00	0.00
Kitchen, domestic		1.50	0.00	2.00	0.00
Laundry		1.50	0.00	2.00	0.00
Service or Mop Basin	1	3.00	3.00	3.00	3.00
Washup, each set of faucets		2.00	0.00	2.00	0.00
Shower, per head		2.00	0.00	1.00	0.00
Urinal, 1.0 GPF Flushometer Valve		N/A	0.00	2.00	0.00
Urinal, > 1.0 GPF Flushometer Valve		N/A	0.00	2.00	0.00
Urinal, flush tank		2.00	0.00	0.00	0.00
Washfountain, circular spray		4.00	0.00	3.00	0.00
Water Closet, 1.6 GPF Gravity Tank		2.50	0.00	4.00	0.00
Water Closet, 1.6 GPF FlushometerTank		2.50	0.00	4.00	0.00
Water Closet, 1.6 GPF FlushometerValve	2	N/A	70.00	4.00	8.00
Water Closet, > 1.6 GPF Gravity Tank		5.50	0.00	6.00	0.00
Water Closet, > 1.6 GPF FlushometerValve		N/A	0.00	6.00	0.00
Additional Load					
Total Fixture Units		**81.00**		**33.50**	**Total Fixture Units**

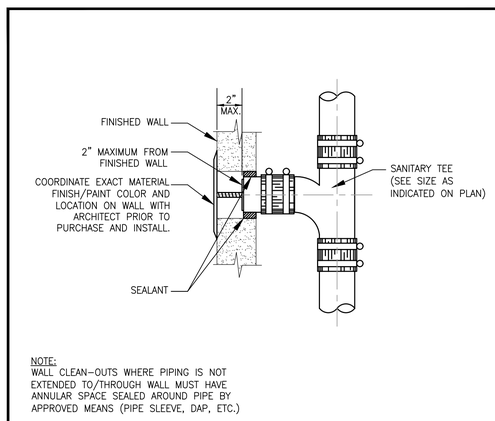
Required Water Pipe Size: 1 1/2 Inches

Horiz. Waste	3 Inches	Required Pipe Sizes
Vert. Waste	3 Inches	
Vent	2 1/2 Inches	

PLUMBING SCHEDULE

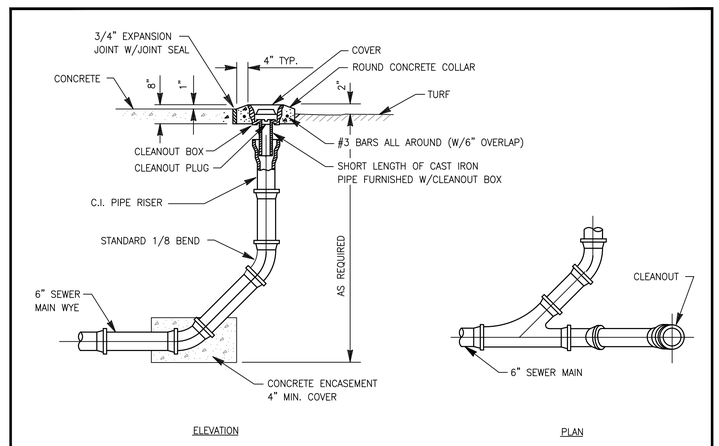
TAG	FIXTURE/EQUIPMENT TYPE	MANUFACTURER/MODEL #	ACCESSORIES	CONNECTION SIZES	ELECTRICAL/GAS	NOTES
EWH-1	ELECTRIC WATER HEATER	A.O SMITH MODEL # DEL-15S	PROVIDE T&P RELIEF VALVE	3/4" CW 3/4" T&P, 1" DRAIN	277V/1PH/60Hz 4KW	SEE NOTE 6 ROUTE T&P LINES TO FS IN JANITOR CLOSET
RCP-1	IN-LINE RECIRCULATION PUMP	BELL & GOSSETT- #100	PROVIDE WITH AQUASTAT CONTROLLER #AQS-1/2	1/2" HWR	120/1PH/60Hz 1/12 HP	SEE NOTE 7, 8 8 GPM, 8 FT HEAD
EXT	EXPANSION TANK	THERM-X-TROL-ST-5		3/4" CW		
VR	VACUUM RELIEF VALVE	WATTS - LFN36-M1		3/4" CW		
VWB	IN WALL VALVE BOX	GUY GRAY - SSIB1AB		1/2" CW		
WCO	WALL CLEAN OUT	JR SMITH - 4472	THREAD PLUG, ROUND COVER	2" WASTE		
IWF	IN-LINE WATER FILTER	3M - CFS8576-S		1/2" CW		SEE NOTE 4
CV	DUAL CHECK VALVE	ZURN #700XL		1/2" CW		SEE NOTE 5, ASSE 2024 COMPLIANT
SK	SINGLE BOWL SINK, 20 GA 33"X22", ADA, REAR CENTER, 6" DEEP	ELKAY - HDSB33226ADA	DELTA FAUCET - MODEL #101LF-WF WITH DELTA RP72730 (1.0GPM) AERATOR	1/2" CW, 1/2" HW, 2" WASTE, 1-1/2" VENT		SEE NOTE 1
LAV	RESTROOM LAVATORY - ADA, WALL HUNG	ZURN - WALL-HUNG MODEL #Z5341	ZURN FAUCET MODEL #Z6950-XL-S-HW6 (0.5 GPM) WITH ZURN P6000-HW6	2" WASTE, 1-1/2" VENT, 1/2" CW, 1/2" HW	HARDWIRED	SEE NOTE 1
MV	MIXING VALVE LEAD-FREE	ZURN #P6900-TMV-1	LEONARD RECESSED CABINET #BWE-REC	1/2" CW, 1/2" HW		SEE NOTE 2, 3
WC	RESTROOM WATER CLOSET - FLOOR MOUNTED, ADA, WITH FLUSH VALVE	ZURN - MODEL #Z5665-BWL1	WITH ZURN FLUSH VALVE - MODEL #Z5665-BWL1 (1.1 GPF)	4" WASTE, 2" VENT, 1" CW	HARDWIRED	SEE NOTE 1
EDF	BI-LEVEL WATER FOUNTAIN (ADA)	ELKAY - MODEL #LZWS-EDFPBM117K	WITH CANE APRON AND BOTTLE FILLER & STAINLESS STEEL ACCESS PANEL	3/4" CW, 2" WASTE, 2" VENT	115V/60Hz PLUG-IN	SEE NOTE 1
MS	JANITOR MOP SINK. PROVIDE MOLDED STONE SERVICE BASIN, 24"X24"X10"	FIAT PRODUCTS - MODEL #MSB-2424	FIAT PRODUCTS FAUCET - MODEL #830-AA (6.6 GPM) WITH #832-AA HOUSE AND BRACKET, AND 889-CC MOP HANGER	1/2" CW, 1/2" HW, 2" WASTE, 2" VENT		SEE NOTE 1
DCO	DOUBLE CLEAN-OUT	ZURN - Z1474	TAPER THREAD, BRONZE PLUG	6"		REFER TO DETAIL
FD	FLOOR DRAIN, ROUND, NICKEL BRONZE STRAINER	JR SMITH - 2005A	TP INSERT	2" WASTE, 2" VENT		SEE NOTE 1,5
FS	8"X8" SQUARE FLOOR SINK WITH 1/2 GRATE	ZURN - Z1910-3-NH-2	TP INSERT	3" WASTE, 2" VENT		SEE NOTE 1,5
TP	TRAP PRIMER	PROFLO PRODUCTS - #PRO1-500	PRIME RATE	1/2" CW		SEE NOTE 5
WHA	WATER HAMMER ARRESTOR	WATTS - LF15M2		1-1/4" CW		
BFP	DOUBLE CHECK, BACKFLOW PREVENTOR	WATTS - #LF007S SERIES	PROVIDE STRAINER OPTION WITH DRAIN DOWN VALVE	1-1/2" CW		REFER TO SERVICE ENTRY DETAIL
RD	ROOF DRAIN, LOW PROFILE DOME	JR SMITH - #1010Y		4"		CONTRACTOR TO COORDINATE DRAIN SIZE WITH STORM DRAIN RISER
OD	OVERFLOW DRAIN, LOW PROFILE DOME WITH 2" EXTENSION RING	JR SMITH - #1010Y		4"		OVERFLOW DRAIN TO BE LOCATED 2" ABOVE ROOF DRAIN (RD)
DSN-1	DOWNSPOUT NOZZLE	ZURN - Z199-SS		6"		COORDINATE EXACT LOCATION AND EXTERIOR ELEVATION WITH ARCHITECT
DSN-2	DOWNSPOUT NOZZLE	ZURN - Z199-SS		2"		
RH	EXTERIOR, NON-FREEZE ROOF HYDRANT WITH VACUUM BREAKER	WOODFORD - #SRH-MS WITH 3/4" BRASS HOSE NOZZLE	PROVIDE DRAIN DOWN VALVE AND PIPING TO FS-1 IN JANITOR CLOSET	3/4" CW		SEE NOTE 1
WH	FLUSH WITH WALL EXTERIOR NON-FREEZE WALL HYDRANT WITH VACUUM BREAKER	PRIER - C-634NBX1		3/4" CW		SEE NOTE 1

NOTES:
1. ARCHITECT O APPROVE SPEC/FINISH PRIOR TO PURCHASE.
2. PROVIDED MIXING VALVE THAT MEETS ASSE 1070 REQUIREMENTS.
3. SET TEMPERATURE LIMIT TO 110°F
4. PROVIDE IN AN ACCESSIBLE CONCEALED LOCATION.
5. ASSEMBLY TO BE EASILY ACCESSIBLE FOR INSPECTION.
6. PROVIDE WATER DETECTION SENSOR WITHIN DRIP PAN. TIE INTO ALARM SYSTEM FOR MONITORING. COORDINATE CONTROL REQUIREMENTS WITH CONTROL VENDOR. SEE SHEET MEP1.01 FOR MORE INFORMATION.
7. PUMP TO BE CONTROLLED BY TIMECLOCK PROVIDED BY ELECTRICIAN AND RUN DURING OCCUPIED HOURS.
8. AQUASTAT TO SWITCH PUMP OFF AT 120°F AND ON AT 100°F. COORDINATE ALL WORK WITH THE ELECTRICAL CONTRACTOR.

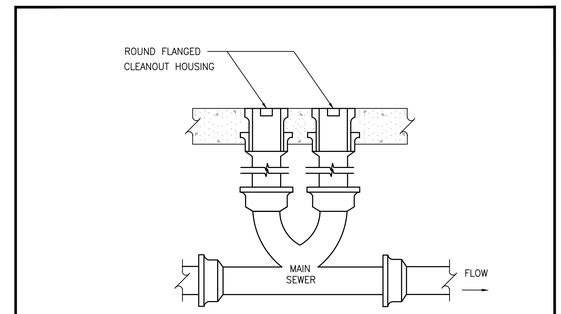


NOTE:
WALL CLEAN-OUTS WHERE PIPING IS NOT EXTENDED TO/THROUGH WALL MUST HAVE ANNULAR SPACE SEALED AROUND PIPE BY APPROVED MEANS (PIPE SLEEVE, DAP, ETC.)

WALL CLEANOUT DETAIL | SCALE NONE | 1



TYPICAL EXTERIOR CLEAN-OUT DETAIL | SCALE NONE | 3



SANITARY 2-WAY GRADE CLEANOUT DETAIL | SCALE NONE | 5

1 PLUMBING DATA, SCHEDULE & DETAILS
SCALE = NTS

WELLS FARGO

GREELEY, CO

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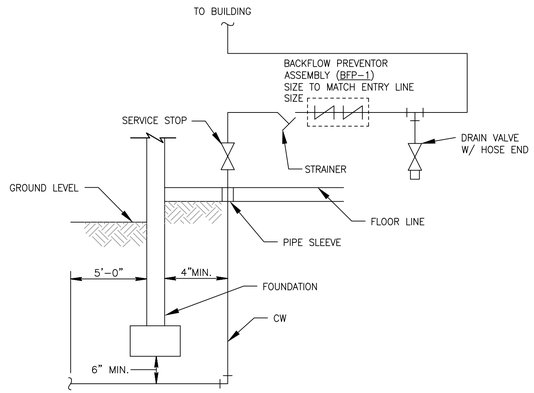
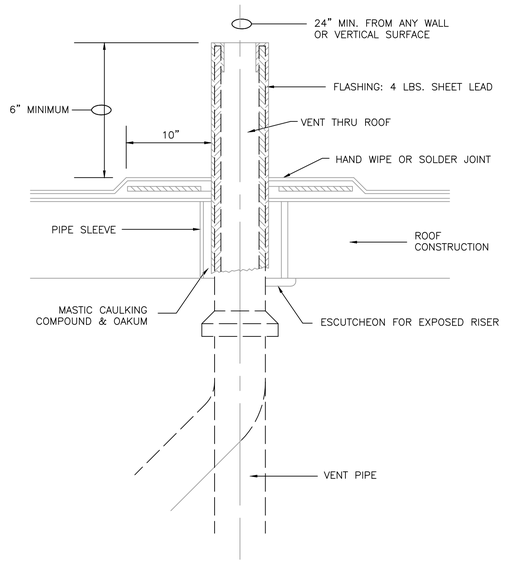
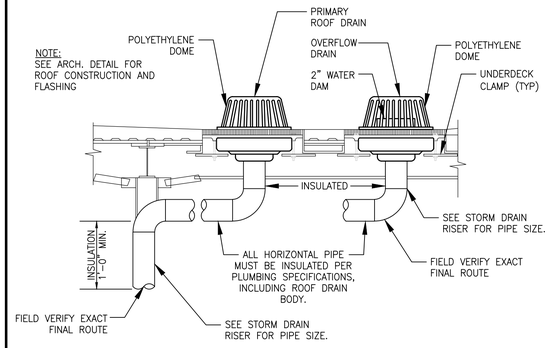


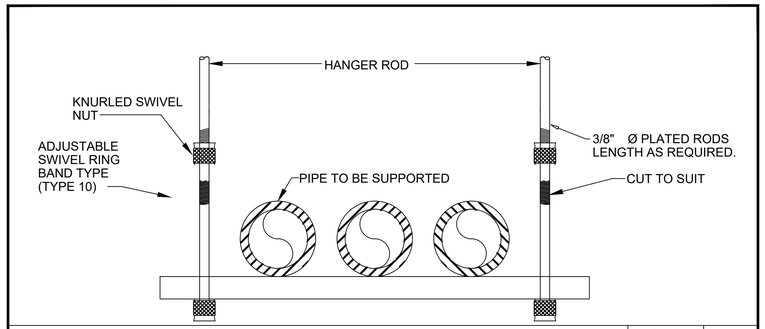
WATER SERVICE ENTRANCE SCHEMATIC | SCALE NONE | 1



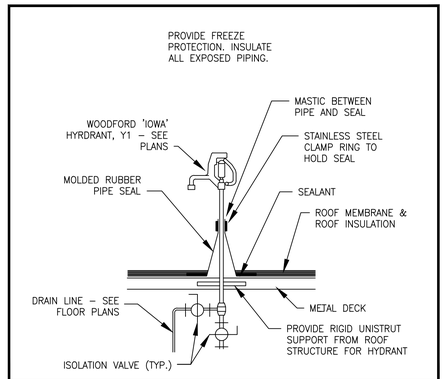
VENT THRU ROOF DETAIL | SCALE NONE | 2



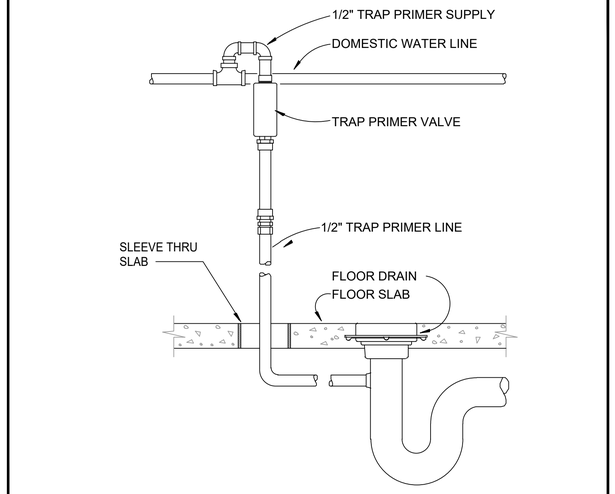
ROOF AND OVERFLOW DRAIN DETAIL | SCALE NONE | 3



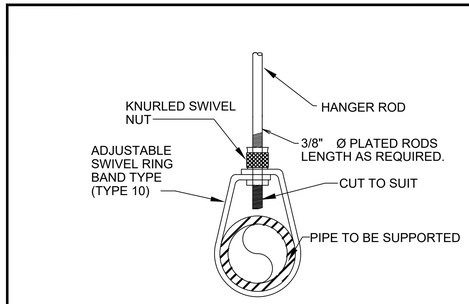
TRAPEZE PIPE SUPPORT DETAIL | SCALE NONE | 4



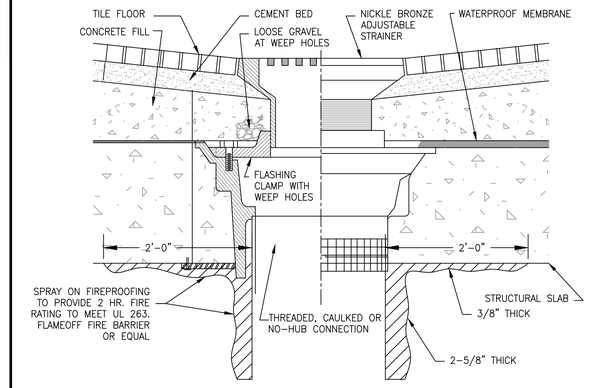
ROOF HYDRANT DETAIL | SCALE NONE | 5



TRAP PRIMER DETAIL | SCALE NONE | 6



PIPE SUPPORT DETAIL | SCALE NONE | 7



NOTES:
1. PROVIDE SPRAY ON FIREPROOFING ON ALL PIPE WITHIN 2'-0" OF FLOOR DRAIN LOCATION.
2. FLOOR SINK REQUIRES SIMILAR FIREPROOFING APPLICATION.
3. FIREPROOFING NOT REQUIRED FOR SLAB ON GRADE SITUATIONS.

TYPICAL FLOOR DRAIN DETAIL | SCALE NONE | 8

1 PLUMBING DETAILS CONTINUED

SCALE = NTS

WELLS FARGO

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SET ISSUE

	SET ISSUE FOR	DATE
	BID	04/25/2025

REVISIONS

REV	REASON FOR ISSUE	DATE

REVIEWED BY: JC

DRAWN BY: AR

WF BE# 112766

WF PROJECT# 419105

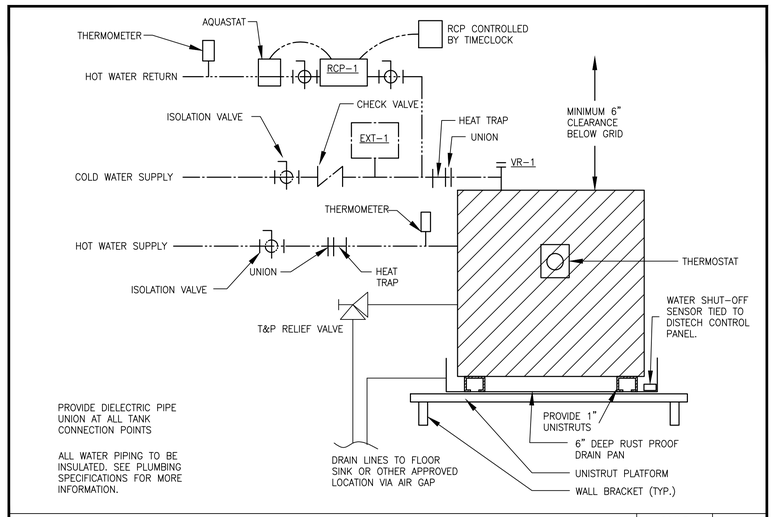
SHEET TITLE

PLUMBING DETAILS CONTINUED

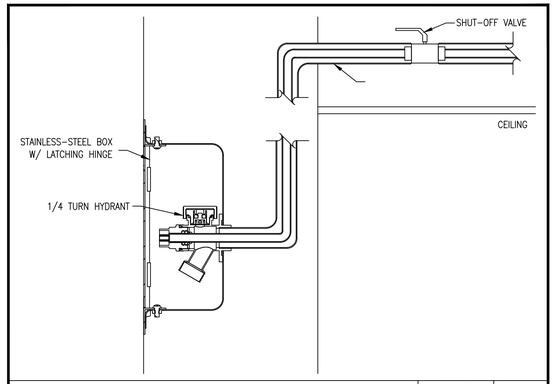
SHEET NUMBER

P5.01

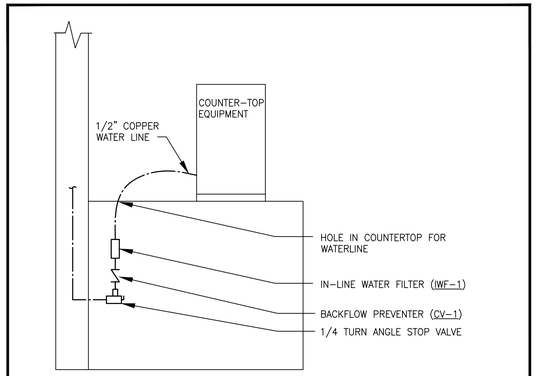
T&D PROJECT NUMBER
24169



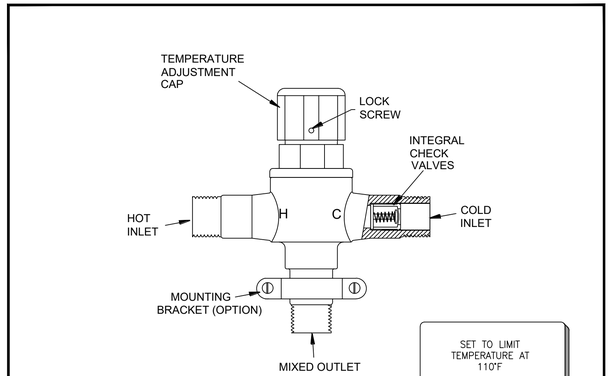
WALL MOUNTED ELECTRIC WATER HEATER DETAIL | SCALE: NONE | 1



RECESSED WALL HYDRANT DETAIL | SCALE: NONE | 2



APPLIANCE CONNECTION DETAIL | SCALE: NONE | 3



MIXING VALVE DETAIL | SCALE: NONE | 4

1 PLUMBING DETAILS CONTINUED
SCALE = NTS

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