

SCOPE OF WORK

- REUSE EXISTING 5.0 TON GAS FIRED ROOFTOP UNITS. PROVIDE NEW DUCTWORK AND NECESSARY ACCESSORIES FOR COMPLETE HVAC SYSTEM.
- REUSE EXISTING BATHROOM EXHAUST FANS. PROVIDE 1 NEW EXHAUST FAN FOR MOP SINK. PROVIDE NEW EXHAUST FAN IN CLASSROOM.
- COORDINATE WITH GC ANY ADDITIONAL REFRIGERATION WORK REQUIRED AND PLUMBING CONTRACTOR PROVIDING CONDENSATE LINES FOR MECHANICAL EQUIPMENT.

GENERAL NOTES

- A. CONTRACTORS AND SUB-CONTRACTORS SHALL CAREFULLY REVIEW THE CONSTRUCTION DOCUMENTS. INFORMATION REGARDING THE COMPLETE WORK IS DISPERSED THROUGHOUT THE DOCUMENT SET AND CANNOT BE ACCURATELY DETERMINED WITHOUT REFERENCE TO THE COMPLETE DOCUMENT SET.
- B. CONTRACTOR TO VERIFY THAT ALL EQUIPMENT SHOWN AS EXISTING MATCHES THE DESCRIPTIONS AND SPECIFICATIONS SHOWN ON DRAWINGS AND SCHEDULES. IF DIFFERENT NOTIFY ARCHITECT/ENGINEER BEFORE BIDDING, ORDERING, OR PROCEEDING WITH WORK.
- C. DRAWINGS/DETAILS ARE TO BE CONSIDERED DIAGRAMMATIC, NOT NECESSARILY SHOWING IN DETAIL OR TO SCALE ALL MINOR ITEMS. UNLESS SPECIFIC DIMENSIONS ARE SHOWN, THE STRUCTURAL, ARCHITECTURAL AND SITE CONDITIONS SHALL GOVERN EXACT LOCATIONS. CONTRACTOR SHALL FOLLOW DRAWINGS IN LAYING OUT WORK, AND CHECK/COORDINATE DRAWINGS OF ALL TRADES.
- D. COORDINATE WITH THE WORK OF OTHERS SECTIONS, EQUIPMENT FURNISHED BY OTHERS, REQUIREMENTS OF THE OWNER, AND WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITE. PROVIDE DUCT RISES AND DRIPS AS REQUIRED FOR FIELD INSTALLATION AND TRADE COORDINATION. NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE STARTING WORK.
- E. DRAWINGS FOR HVAC WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT, AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENT. REFER TO MANUFACTURERS STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS. PROVIDE DUCTWORK, CONNECTIONS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY FOR A COMPLETE SYSTEM.
- F. ALL WORK SHALL COMPLY WITH STATE AND LOCAL CODE REQUIREMENTS AS APPROVED AND AMENDED BY THE GOVERNING CITY. PURCHASE ALL PERMITS ASSOCIATED WITH THE WORK. OBTAIN ALL INSPECTIONS REQUIRED BY CODE.
- G. USE OF COMBUSTIBLE MATERIALS IS NOT ALLOWED IN THE RETURN AIR PLENUM. MATERIALS USED IN THE PLENUM SHALL HAVE FLAME SPREAD RATING NOT TO EXCEED 25, AND SMOKE DEVELOPED RATING NOT TO EXCEED 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84. ALL EXPOSED WIRING IN THE PLENUM SHALL BE PLENUM RATED.
- H. G.C.TO VERIFY LOCATION OF PERMISSIBLE NEW STRUCTURAL ROOF PENETRATIONS AND ADAPT THE REQUIRED DUCTS ACCORDINGLY. THE OPENINGS MUST BE LOCATED USING A REBAR LOCATOR, TRYING TO LEAVE A TRANSVERSE BAR WITHIN 4" FROM THE OPENING. LOCATE OPENINGS AT MID-DISTANCE BETWEEN THE STEMS OF THE DOUBLE TEE AND LONGITUDINAL REINFORCEMENT SHALL NEVER BE CUT. CALL THE ARCHITECTS OFFICE IN CASE OF UNEXPECTED DIFFICULTIES.
- I. ALL A/C AND FRESH AIR ROUND EXPOSED DUCTS WILL BE SPIRAL GALVANIZED AND READY FOR PAINTING. ALL RECTANGULAR DUCTS OVER CEILINGS MAY BE SHEET METAL WITH EXTERNAL INSULATION AND EXPOSED DUCTWORK WILL BE WITH INTERNAL INSULATION.
- J. G.C. SHALL COORDINATE WITH LANDLORD APPROVED ROOFING CONTRACTOR TO FLASH AND SEAL ALL ROOF PENETRATIONS TO MAINTAIN ROOFING WARRANTY.
- K. CONSTRUCTION "AS BUILT" DRAWINGS AND DOCUMENTS SHALL BE PROVIDED TO THE OWNER WITHIN 90 DAYS AFTER THE DATE OF ACCEPTANCE AND SHALL BE COPY TO LL.
- L. OPERATION MANUALS AND MAINTENANCE MANUALS SHALL BE PROVIDED TO THE BUILDING OWNER.

MECHANICAL REQUIREMENTS

- A. REUSE EXISTING 5.0 TON GAS FIRED ROOFTOP UNITS. PROVIDE NEW DUCTWORK WITH NECESSARY ACCESSORIES FOR COMPLETE HVAC SYSTEM. PROVIDE FLEXIBLE CONNECTORS ON SUPPLY AIR DUCT CONNECTIONS. INSTALL FIRE DAMPERS IN ANY FIRE WALLS AND BETWEEN FLOORS. TRANSITION TO DUCT SIZES SHOWN. PROVIDE DUCTWORK AND AIR DISTRIBUTION DEVICES AS INDICATED ON THE PLAN. REFER TO A/C UNIT SCHEDULE FOR ADDITIONAL REQUIREMENTS.
- B. FOR SYSTEM OVER 2,000 CFM CHECK FOR DUCT MOUNTED AIR SMOKE DETECTORS AND THAT MEET THE REQUIREMENTS OF U.L. 268A, INTERLOCKED TO SHUTDOWN ROOF TOP UNIT UPON DETECTION OF SMOKE. IF NECESSARY PROVIDE SMOKE DETECTOR WITH AN ANNUNCIATOR, ALARM AND POWER L.E.D.'S FOR VISIBLE AND AUDIBLE ALARM SIGNAL, AND VISIBLE TROUBLE SIGNAL. MOUNT ANNUNCIATOR ON ROOM SIDE OF CEILING.
- C. ALL DUCTS SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH SMACNA/ANSI-HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE, LATEST EDITION, SMACNA HVAC AIR DUCT LEAKAGE TEST MANUAL LATEST EDITION, NAIMA FIBROUS GLASS DUCT CONSTRUCTION STANDARD AND 2018 IMC, SECTION 603. THE MORE STRINGENT REQUIREMENT OF ANY CODES SHALL APPLY.
- D. ALL RECTANGULAR OR ROUND SUPPLY AND RETURN DUCTWORK SHALL BE LISTED AND LABELED IN ACCORDANCE WITH UL 181 AND INSTALLED IN ACCORDANCE WITH THE TERMS OF THEIR LISTING. THE MANUFACTURERS INSTRUCTION AND CONTRACTOR TO PROVIDE NECESSARY TEST CERTIFICATE TO INSPECTOR CONFORMING THE MATERIAL STANDARDS AS SPECIFIED ON 2018 IMC 302.2. FACTORY-MADE AIR DUCTS SHALL BE INSTALLED WITH NOT LESS THAN 4 INCHES OF SEPARATION FROM EARTH, EXCEPT WHERE INSTALLED AS A LINER INSIDE OF CONCRETE, TILE OR METAL PIPE AND SHALL BE PROTECTED FROM PHYSICAL DAMAGE.
- E. FACTORY-MADE FLEXIBLE AIR DUCTS AND CONNECTORS SHALL BE NOT MORE THAN 5 FEET IN LENGTH AND SHALL NOT BE USED IN LIEU OF RIGID ELBOW OR FITTINGS. FLEXIBLE AIR DUCTS SHALL BE PERMITTED TO BE USED AS AN ELBOW AT A TERMINAL DEVICE.
- F. THERMOSTATS AND HUMIDISTAT SHALL BE 7-DAY PROGRAMMABLE TYPE. MOUNT THERMOSTAT 48" A.F.F. COORDINATE LOCATION OF THERMOSTAT.
- G. ALL INTERIOR AIR DUCTS WITH INSULATION SHALL HAVE A MINIMUM OF THICKNESS OF 1.5", R-6 INSULATION AND EXTERIOR DUCTS SHALL HAVE R-12 INSULATION AS PER IECC 2018 WITH CITY OF PITTSBURGH,PA AMENDMENTS.
- H. ALL SEAMS, JOINTS, ETC WILL BE SEALED TO MAKE AIR DUCT AIRTIGHT. PRESSURE SENSITIVE MATERIALS AND OTHERS APPROVED BY LATEST SMACNA. SEALING MATERIALS WILL BE USED.
- I. ALL EQUIPMENT AND MATERIALS WILL BE INSTALLED ACCORDING TO THE MANUFACTURERS INSTRUCTIONS AND ACCORDING TO THE BEST PRACTICE.
- J. TESTING AND BALANCING SHALL BE DONE IN ACCORDANCE AS PER IECC 2018 WITH CITY OF PITTSBURGH,PA AMENDMENTS, SECTION C408.2.2. BALANCING PROCEDURES SHALL BE IN ACCORDANCE WITH THE NATIONAL ENVIRONMENTAL BALANCING BUREAU (N.E.B.B.), THE ASSOCIATED AIR BALANCE COUNCIL (A.A.B.C) NATIONAL STANDARDS OR EQUIVALENT PROCEDURES.
- K. HANGER ATTACHMENTS TO THE STEEL STRUCTURE WILL BE RATED POWDER ACTUATED FASTENERS, "C" CLAMPS, WELDED STUDS, CLAMP HANGERS, JOIST CLAMPS OR OTHER METHODS RECOMMENDED BY SMACNA'S "METAL AND FLEXIBLE STANDARDS", CHAPTER 4, AND WILL HAVE A MINIMUM SAFETY MARGIN OF 4:1. SUSPENDED FROM TOP CHORD OF JOISTS, NOTHING FROM DECK OR CROSS BRACING.
- L. ALL HVAC CONTROLS AND CONTROL WIRING SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR.

PITTSBURGH, PA BUILDING DEPARTMENT NOTES

- ALL WORK SHALL COMPLY WITH APPLICABLE SECTIONS OF PITTSBURGH BUILDING CODE 2018 AND ALL RULES AND REGULATIONS OF THE DEPARTMENT OF BUILDINGS TO DATE.
- THE CONTRACTOR SHALL ENGAGE THE SERVICES OF A PROFESSIONAL ENGINEER TO PROVIDE THE REQUIRED SPECIAL INSPECTIONS AND TESTS.
 - TESTS WILL BE CONDUCTED UNDER DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT OR OTHER PERSON HAVING NOT LESS THAN FIVE (5) YEARS EXPERIENCE SUPERVISING THE INSTALLATION OF SUCH MECHANICAL SYSTEMS. THE TESTS WILL SHOW COMPLIANCE WITH 2018 INTERNATIONAL BUILDING CODE .
 - THE LICENSED PROFESSIONAL ENGINEER, ARCHITECT OR OTHER PERSON HAVING NOT LESS THAN FIVE (5) YEARS EXPERIENCE SUPERVISING THE INSTALLATION OF SUCH MECHANICAL SYSTEMS AND CONDUCTING SUCH TESTS WILL FILE DOCUMENTATION AND REPORTS OF TESTS THAT THE SYSTEM COMPLIES WITH THE CONSTRUCTION DOCUMENTS AND APPLICABLE LAWS.
 - SMOKE DETECTOR SHALL MEET UL268A.
 - TESTS OF MECHANICAL SYSTEMS SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING SECTIONS OF THE 2018 IMC.
 - A. VENTILATION SYSTEM- 2018 IMC 403.3.
 - THE FOLLOWING WORK ITEMS, COMPONENTS, MATERIALS, CAPACITIES, ETC. SHALL COMPLY WITH THE REFERENCED CODE OR STANDARD:
 - A. DUCT CONSTRUCTION AND INSTALLATION- 2018 INTERNATIONAL MECHANICAL CODE, 603
 - B. STANDARDS OF HEATING 2018 INTERNATIONAL MECHANICAL CODE - 309.1
 - C. AIR INTAKES, EXHAUSTS AND RELIEF - 2018 INTERNATIONAL MECHANICAL CODE 401.5
 - D. AIR FILTERS - 2018 INTERNATIONAL MECHANICAL CODE 605
 - E. GAS FIRED EQUIPMENT - 2018 FUEL & GAS CODE
 - F. MANUAL AND AUTOMATIC FIRE AND SMOKE CONTROLS FOR AIR DISTRIBUTION SYSTEMS -2018 INTERNATIONAL MECHANICAL CODE - 606
 - MINIMUM TEMPERATURE TO BE MAINTAINED IN OCCUPIED SPACES DURING HEATING SEASON: 68 DEG. FAHRENHEIT.
 - VENTILATION FOR ALL AREA SHALL COMPLY WITH 2018 INTERNATIONAL MECHANICAL CODE 401.
 - A STATEMENT SHALL BE FILED BY THE OWNER OR TENANT IN POSSESSION THAT THE VENTILATION SYSTEM WILL BE KEPT IN CONTINUOUS OPERATION AT ALL TIMES DURING THE NORMAL OCCUPANCY OF THE STRUCTURE AS REQUIRED BY 2018 INTERNATIONAL MECHANICAL CODE 403.
 - REFER TO ARCHITECTURAL DRAWINGS FOR REQUIRED FIRE-RATED WALL AND SMOKE WALL CONSTRUCTION AND LOCATION.
 - THESE PLANS ARE APPROVED ONLY FOR THE WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON OR TO BE CONSIDERED AS BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.
 - ALL HEATING AND COOLING LOADS CALCULATED PER ASHRAE/ACCA 183.
 - VENTILATION SYSTEMS SHALL BE BALANCED TO MAINTAIN THE MINIMUM VENTILATION AIRFLOW RATE AS SHOWN IN VENTILATION REQUIREMENT TABLE. THIS SYSTEM SHALL BE BALANCED BY APPROVED CONTRACTOR. CONTRACTOR TO SUBMIT THE AIR BALANCE REPORT TO INSPECTOR OF RESPECTIVE BUILDING DEPARTMENT PRIOR TO FINAL INSPECTION.

THERMOSTATIC CONTROLS

- A. C403.4.1 THERMOSTATIC CONTROLS
THE SUPPLY OF HEATING AND COOLING ENERGY TO EACH ZONE SHALL BE CONTROLLED BY INDIVIDUAL THERMOSTATIC CONTROLS CAPABLE OF RESPONDING TO TEMPERATURE WITHIN THE ZONE. WHERE HUMIDIFICATION OR DEHUMIDIFICATION OR BOTH IS PROVIDED, NOT FEWER THAN ONE HUMIDITY CONTROL DEVICE SHALL BE PROVIDED FOR EACH HUMIDITY CONTROL SYSTEM.

EXCEPTION: INDEPENDENT PERIMETER SYSTEMS THAT ARE DESIGNED TO OFFSET ONLY BUILDING ENVELOPE HEAT LOSSES, GAINS OR BOTH SERVING ONE OR MORE PERIMETER ZONES ALSO SERVED BY AN INTERIOR SYSTEM PROVIDED THAT BOTH OF THE FOLLOWING CONDITIONS ARE MET:

1. THE PERIMETER SYSTEM INCLUDES NOT FEWER THAN ONE THERMOSTATIC CONTROL ZONE FOR EACH BUILDING EXPOSURE HAVING EXTERIOR WALLS FACING ONLY ONE ORIENTATION (WITHIN ± 45 DEGREES) (0.8 RAD) FOR MORE THAN 50 CONTIGUOUS FEET (15 240 MM).
2. THE PERIMETER SYSTEM HEATING AND COOLING SUPPLY IS CONTROLLED BY THERMOSTATS LOCATED WITHIN THE ZONES SERVED BY THE SYSTEM.
- B. C403.4.1.1 HEAT PUMP SUPPLEMENTARY HEAT
HEAT PUMPS HAVING SUPPLEMENTARY ELECTRIC RESISTANCE HEAT SHALL HAVE CONTROLS THAT, EXCEPT DURING DEFROST, PREVENT SUPPLEMENTARY HEAT OPERATION WHERE THE HEAT PUMP CAN PROVIDE THE HEATING LOAD.
- C. C403.4.1.2 DEADBAND
WHERE USED TO CONTROL BOTH HEATING AND COOLING, ZONE THERMOSTATIC CONTROLS SHALL BE CONFIGURED TO PROVIDE A TEMPERATURE RANGE OR DEADBAND OF NOT LESS THAN 5°F (2.8°C) WITHIN WHICH THE SUPPLY OF HEATING AND COOLING ENERGY TO THE ZONE IS SHUT OFF OR REDUCED TO A MINIMUM.

EXCEPTIONS:
THERMOSTATS REQUIRING MANUAL CHANGEOVER BETWEEN HEATING AND COOLING MODES. OCCUPANCIES OR APPLICATIONS REQUIRING PRECISION IN INDOOR TEMPERATURE CONTROL AS APPROVED BY THE CODE OFFICIAL.
- D. C403.4.1.3 SETPOINT OVERLAP RESTRICTION
WHERE A ZONE HAS A SEPARATE HEATING AND A SEPARATE COOLING THERMOSTATIC CONTROL LOCATED WITHIN THE ZONE, A LIMIT SWITCH, MECHANICAL STOP OR DIRECT DIGITAL CONTROL SYSTEM WITH SOFTWARE PROGRAMMING SHALL BE CONFIGURED TO PREVENT THE HEATING SETPOINT FROM EXCEEDING THE COOLING SETPOINT AND TO MAINTAIN A DEADBAND IN ACCORDANCE WITH SECTION C403.4.1.2.
- E. C403.4.2 OFF-HOUR CONTROLS
EACH ZONE SHALL BE PROVIDED WITH THERMOSTATIC SETBACK CONTROLS THAT ARE CONTROLLED BY EITHER AN AUTOMATIC TIME CLOCK OR PROGRAMMABLE CONTROL SYSTEM.

EXCEPTIONS:
ZONES THAT WILL BE OPERATED CONTINUOUSLY.
ZONES WITH A FULL HVAC LOAD DEMAND NOT EXCEEDING 6,800 BTU/H (2 KW) AND HAVING A MANUAL SHUTOFF SWITCH LOCATED WITH READY ACCESS.
- F. C403.4.2.1 THERMOSTATIC SETBACK
THERMOSTATIC SETBACK CONTROLS SHALL BE CONFIGURED TO SET BACK OR TEMPORARILY OPERATE THE SYSTEM TO MAINTAIN ZONE TEMPERATURES DOWN TO 55°F (13°C) OR UP TO 85°F (29°C).
- G. C403.4.2.2 AUTOMATIC SETBACK AND SHUTDOWN
AUTOMATIC TIME CLOCK OR PROGRAMMABLE CONTROLS SHALL BE CAPABLE OF STARTING AND STOPPING THE SYSTEM FOR SEVEN DIFFERENT DAILY SCHEDULES PER WEEK AND RETAINING THEIR PROGRAMMING AND TIME SETTING DURING A LOSS OF POWER FOR NOT FEWER THAN 10 HOURS. ADDITIONALLY, THE CONTROLS SHALL HAVE A MANUAL OVERRIDE THAT ALLOWS TEMPORARY OPERATION OF THE SYSTEM FOR UP TO 2 HOURS; A MANUALLY OPERATED TIMER CONFIGURED TO OPERATE THE SYSTEM FOR UP TO 2 HOURS; OR AN OCCUPANCY SENSOR.
- H. C403.4.2.3 AUTOMATIC START
AUTOMATIC START CONTROLS SHALL BE PROVIDED FOR EACH HVAC SYSTEM. THE CONTROLS SHALL BE CONFIGURED TO AUTOMATICALLY ADJUST THE DAILY START TIME OF THE HVAC SYSTEM IN ORDER TO BRING EACH SPACE TO THE DESIRED OCCUPIED TEMPERATURE IMMEDIATELY PRIOR TO SCHEDULED OCCUPANCY.

ROOFTOP UNIT SCHEDULE

| | |
|-----------------------|------------------|
| UNIT TAG | RTU-1(E) |
| UNIT TYPE | S.A.E |
| MANUFACTURER | S.A.E |
| MODEL | S.A.E |
| STATUS | S.A.E |
| LOCATION | ROOF |
| TOTAL CAPACITY | 5.0 TONS (V.I.F) |
| TOTAL COOLING MBH | S.A.E |
| TOTAL SENSIBLE MBH | S.A.E |
| EER | S.A.E |
| SEER | S.A.E |
| HEATING INPUT (BTUH) | 115,000 (V.I.F) |
| HEATING OUTPUT (BTUH) | 93,500 (V.I.F) |
| THERMAL EFF (%) | S.A.E |
| SUPPLY AIR (CFM) | 2000 (V.I.F) |
| OUTDOOR AIR (CFM) | 320 (V.I.F) |
| VOLTAGE/PHASE/Hz | 208/3/60 (V.I.F) |
| MCA (A) | 32 (V.I.F) |
| MOCP (A) | 45 (V.I.F) |
| ESP (IN. OF H2O) | S.A.E |
| WEIGHT (lbs) | S.A.E |

NOTES:

- EXISTING RTUs WITH ALL ACCESSORIES TO REMAIN SAME AND TO BE REUSED.
- S.A.E : SAME AS EXISTING, V.I.F: VERIFY IN FIELD.
- CONTRACTOR TO FIELD VERIFY IF ALL RTUs ARE WORKING AT THEIR 100% RATED CAPACITIES/LOADS. INFORM TO DESIGN ENGINEER IF ANY DISCREPANCIES ARE FOUND IN PERFORMANCE PRIOR TO CONSTRUCTION.
- CONTRACTOR TO FIELD VERIFY EXACT LOCATION AND CONFIGURATION OF UNIT ON SITE.
- IF REQUIRED PROVIDE NEW THERMOSTAT AND TEMPERATURE SENSOR. COMPATIBLE WITH EXISTING RTUs. CO-ORDINATE FINAL LOCATION OF T-SENSOR WITH ARCHITECT/OWNER.
- CONTRACTOR TO BALANCE OUTSIDE AIR & RETURN AIR DAMPERS ON EXISTING RTUs TO MATCH VALUES MENTIONED IN ABOVE TABLE.
- REPLACE FILTERS, AS IF REQUIRED

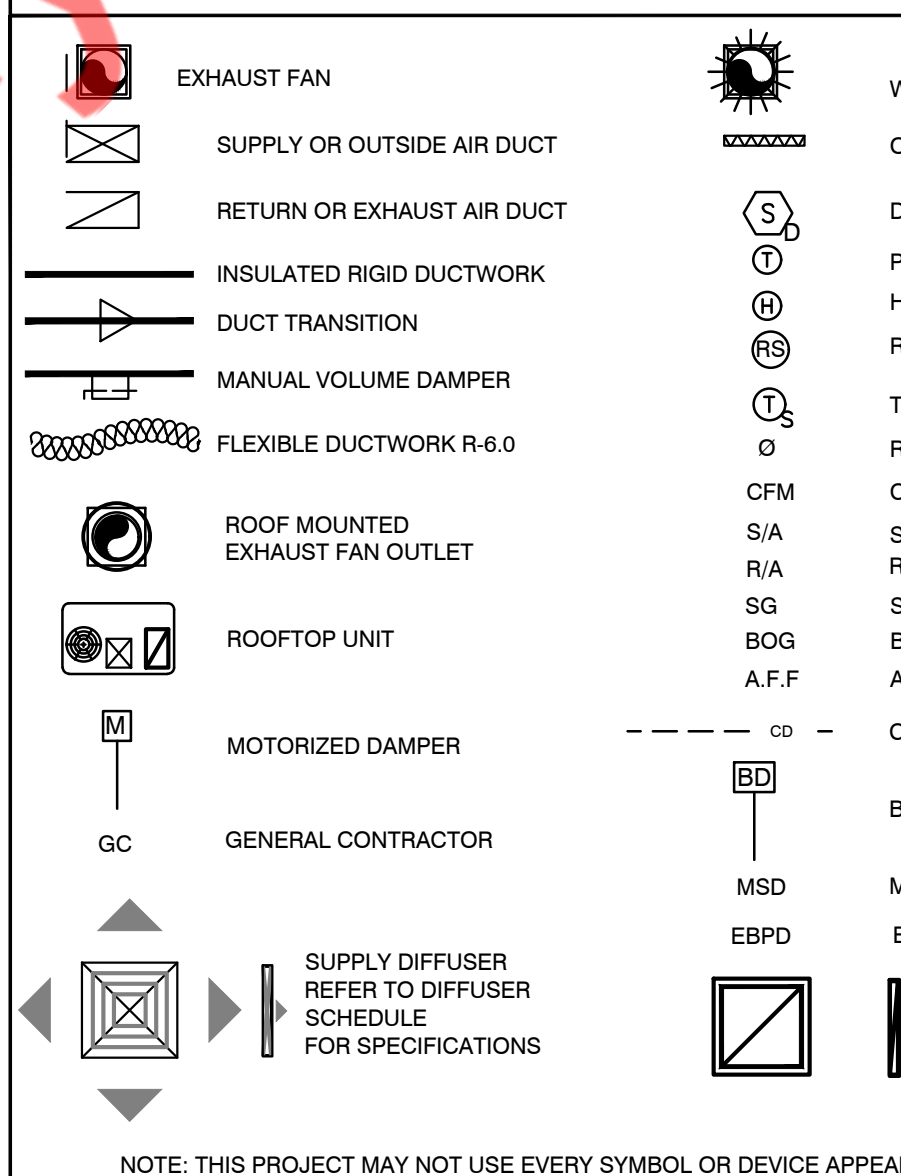
FAN SCHEDULE

| | | |
|--------------|-----------------|-------------------------|
| DESIGNATION | TEF-1(E) | EF-1(N) |
| STATUS | S.A.E | NEW |
| QUANTITY | 1 | 1 |
| MANUFACTURER | S.A.E | GREENHECK |
| MODEL | S.A.E | SP-A90 |
| CFM | 100 CFM (V.I.F) | 50 CFM AT 0.3" W.G. ESP |
| AMPS | S.A.E | 0.29 |
| ACCESSORIES | S.A.E | BDD |
| WEIGHT (LBS) | S.A.E | 12 |
| V/PH/Hz | S.A.E | 115/1/60 |

NOTES:

- S.A.E : SAME AS EXISTING, V.I.F: VERIFY IN FIELD.
- PROVIDE DISCONNECT SWITCH.
- INTERLOCK TEF-1(E) AND EF-1(N) WITH RTU-1(E).
- PROVIDE BACK DRAFT DAMPER.

MECHANICAL SYMBOLS



OCCUPANCY CALCULATION PER 2018 IMC WITH LOCAL AMENDMENTS, TABLE 403.3.1.1

| | | |
|--------------------------|---|-----------|
| OFFICE/STAFF AREA/PANTRY | 395 SQ. FT. OCCU. AS PER FURNITURE LAYOUT | 7 PEOPLE |
| CLASSROOM | 495 SQ. FT. OCCU. AS PER FURNITURE LAYOUT | 8 PEOPLE |
| LOBBY/RECEPTION | 320 SQ. FT. 10 PEOPLE PER 1000 SQ.FT. | 5 PEOPLE |
| TOTAL | | 20 PEOPLE |

VENTILATION REQUIREMENTS PER 2018 IMC, TABLE 403.3.1.1

| | | |
|------------------------------|--|---------|
| OFFICE | 105 SQ. FT. X 0.06 CFM/SQ. FT. = 2 PEOPLE X 5 CFM/PEOPLE. = | 7 CFM |
| | | 10 CFM |
| PANTRY | 100 SQ. FT. X 0.06 CFM/SQ. FT. = 2 PEOPLE X 5 CFM/PEOPLE. = | 6 CFM |
| | | 10 CFM |
| STAFF AREA | 190 SQ. FT. X 0.06 CFM/SQ. FT. = 3 PEOPLE X 5 CFM/PEOPLE. = | 12 CFM |
| | | 15 CFM |
| LOBBY/RECEPTION | 320 SQ. FT. X 0.06 CFM/SQ. FT. = 5 PEOPLE X 5 CFM/PEOPLE. = | 20 CFM |
| | | 25 CFM |
| CLASSROOMS | 495 SQ. FT. X 0.12 CFM/SQ. FT. = 8 PEOPLE X 10 CFM/PEOPLE. = | 60 CFM |
| | | 80 CFM |
| CORRIDOR | 56 SQ. FT. X 0.06 CFM/SQ. FT. = | 4 CFM |
| MIN. OUTSIDE AIR REQUIRED | | 249 CFM |
| OA AFTER EFFECTIVENESS (0.8) | | 312 CFM |

EXHAUST AIR REQUIREMENT

| | | |
|------------------------------|----------------------------------|----------|
| MEN RESTROOM | 50 CFM PER FIXTURE (2# FIXTURES) | 100 CFM |
| UTILITY CLOSET | | 50 CFM |
| EXHAUST AIR REQUIRED | | 150 CFM |
| AIR BALANCE | | |
| OUTSIDE AIR THROUGH RTU-1(E) | | 320 CFM |
| TEF-1(E) | | -100 CFM |
| EF-1(N) | | -50 CFM |
| BUILDING PRESSURE | | +170 CFM |

DIFFUSER SCHEDULE

| | | | |
|----------------|--------------------|--------------------|--------------------|
| MANUFACTURER | TITUS | TITUS | TITUS |
| DESIGNATION | A | B | R |
| USE | SUPPLY | SUPPLY | RETURN |
| MODEL | TDC-AA | TDC-AA | TDC-AA |
| MOUNTING | SAT / HARD CEILING | SAT / HARD CEILING | SAT / HARD CEILING |
| LOCATION | ANY | ANY | ANY |
| FACE SIZE | 24" X 24" | 12" X 12" | 24" X 24" |
| NECK SIZE | REFER TABLE A | REFER TABLE A | - |
| FRAME TYPE | LAY IN/FLANGED | LAY IN/FLANGED | LAY IN/FLANGED |
| NOISE CRITERIA | <30 | <30 | <30 |
| ACCESSORIES | VOLUME DAMPER | VOLUME DAMPER | VOLUME DAMPER |

NOTES:

- MAX. NC LEVEL 30 OR LESS.
- PROVIDE SQUARE TO ROUND NECK ADAPTOR.
- CO-ORDINATE WITH ARCHITECT FOR FINAL MOUNTING, FRAME TYPE, PAINT AND FINISH.
- PROVIDE 4-WAY AIR THROW PATTERN UNLESS NOTED OR INDICATED.
- PROVIDE INSULATED BACKS ON ALL DIFFUSERS.
- CONTRACTOR TO USE EXISTING DIFFUSERS AS MUCH AS POSSIBLE.
- SCHEDULE IS FOR REFERENCE ONLY. PROVIDE NEW DIFFUSER SIMILAR IN KIND TO EXISTING.

NECK SIZE TABLE - A

| | |
|---------------|-----------|
| NECK SIZE DIA | CFM RANGE |
| Ø6" | 0-100 |
| Ø8" | 101-200 |
| Ø10" | 201-400 |
| Ø12" | 401-600 |

NY ENGINEERS

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PROJECT

YOUNG CHEFS ACADEMY

REVISIONS DATES:

| SR. NO | DETAIL | DATE |
|--------|----------------|----------|
| | CLIENT CHANGES | 9/10/24 |
| △ | CLIENT CHANGES | 11/07/24 |

ISSUE DATE: 05.07.24
PROJECT #: -
DRAWN BY: NYE
CHECKED BY: NYE

HVAC NOTES AND SCHEDULES

M-1

| SR. NO. | DETAIL | DATE |
|---------|----------------|----------|
| | CLIENT CHANGES | 9/10/24 |
| △ | CLIENT CHANGES | 11/07/24 |

ISSUE DATE: 05.07.24
 PROJECT #: -
 DRAWN BY: NYE
 CHECKED BY: NYE

HVAC FLOOR PLAN

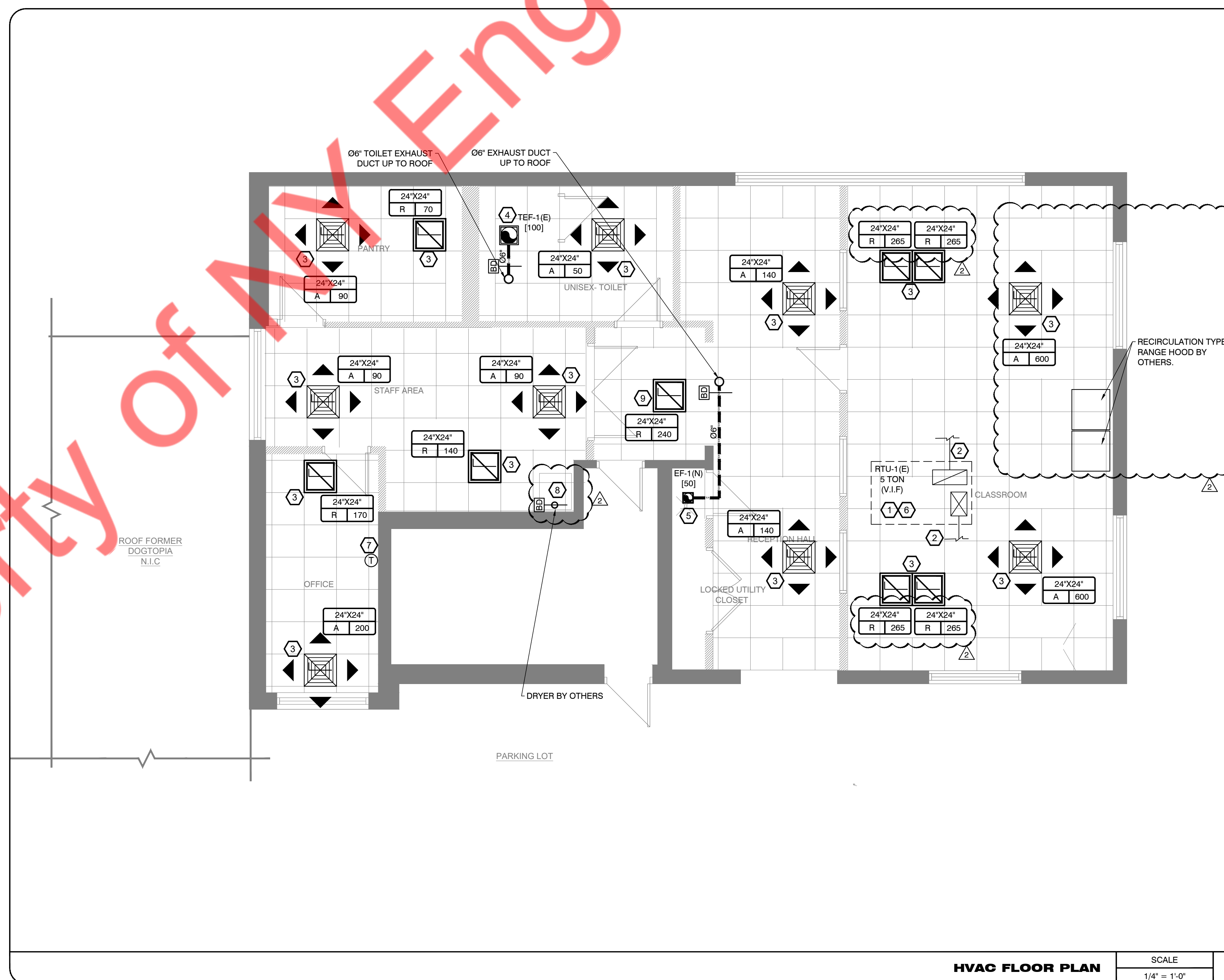
M-2

FLOOR PLAN KEY NOTES #

- APPROXIMATE LOCATION OF EXISTING DUCTWORKS DROP FOR RTU-1(E). CONTRACTOR TO VERIFY THE EXACT SIZE AND LOCATION IN FIELD.
- EXISTING SUPPLY & RETURN DUCTS FROM EXISTING RTU. MODIFY/EXTEND AS NEEDED TO CONNECT RELOCATED SUPPLY/RETURN DIFFUSER AS PER LATEST RCP. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES PRIOR TO BID AND START OF WORK.
- EXISTING SUPPLY/RETURN DIFFUSERS TO REMAIN OR TO BE RELOCATED. VERIFY SIZE, LOCATION AND COORDINATE WITH LATEST REFLECTED CEILING PLAN FOR RELOCATIONS. CLEAN AND REFURBISH TO "LIKE NEW" CONDITION. EXTEND/MODIFY DUCTWORK AS REQUIRED AT RELOCATED DIFFUSERS. REBALANCE THE CFM AS MENTIONED ON PLAN. PROVIDE VOLUME DAMPER OR COLLAR DAMPER IF REQUIRED. VERIFY IN FIELD PRIOR TO BID.
- EXISTING TOILET EXHAUST SYSTEM TO REMAIN & REUSED. CONTRACTOR TO FIELD VERIFY & CLEAN AND REFURBISH TO "LIKE NEW" CONDITION. IF EXISTING IS NOT IN CONDITION TO REUSE PROVIDE NEW EXHAUST FAN (EQUIVALENT TO MODEL: GREENHECK SP-A200, 100 CFM CAPACITY @0.3 ESP) & DUCTWORK AS SHOWN ON PLANS. TERMINATE ON ROOF WITH GOOSENECK & BIRD SCREEN.
- PROVIDE MOP CLOSET EXHAUST FAN EF-1(N). TERMINATE DUCT ON ROOF WITH GOOSENECK & BIRD SCREEN.
- CONTRACTOR TO FIELD VERIFY RTUS' TEMPERATURE SENSORS IN RETURN AIR DUCT. PROVIDE NEW IF EXISTING TEMPERATURE SENSORS ARE DAMAGED OR NOT WORKING.
- REUSE EXISTING THERMOSTAT. IF EXISTING THERMOSTAT IS NOT IN CONDITION TO REUSE THEN INSTALL NEW THERMOSTAT WITH LOCKABLE VENTED BOX TO BE MOUNTED AT 45° CENTER LINE A.F.F. COORDINATE EXACT LOCATION WITH ARCHITECT AND OWNER PRIOR TO ROUGH-IN.
- Ø4" DRYER VENT UP TO THE ROOF. CONTRACTOR TO INSTALL AS PER MANUFACTURE'S INSTRUCTION.
- PROVIDE NEW SUPPLY/RETURN DIFFUSER SIMILAR IN KIND TO EXISTING.

FLOOR PLAN GENERAL NOTES

- CONTRACTOR SHALL BALANCE EACH DEVICE WITH THE CFM SHOWN ON PLAN.
- PROVIDE FIRE OR FIRE+SMOKE DAMPER WHEREVER DUCTS ARE CROSSING FIRE/SMOKE RATED WALLS/ BARRIERS. COORDINATE WITH ARCHITECTURAL DRAWING FOR FIRE RATING OF THE WALLS/ROOF.
- DUCT SIZES SHOWN ON PLANS ARE CLEAR INSIDE AIR STREAM DIMENSIONS.
- REUSE EXISTING DUCTWORK, DIFFUSERS, DAMPERS AS MUCH AS POSSIBLE. REPLACE AS/IF REQUIRED. REPLACE DUCT INSULATION IF DAMAGED. INSULATION VALUES SHALL MATCH WITH THE LOCAL CODE OR AS MENTIONED IN MECHANICAL SPECIFICATIONS.
- PROVIDE MINIMUM R-6 INSULATION (INTERNAL FOR EXPOSED DUCTS AND EXTERNAL FOR CONCEALED DUCTS) FOR SUPPLY & RETURN AIR DUCTS.
- CONTRACTOR SHALL COORDINATE ALL ELECTRICAL REQUIREMENTS FOR ALL HVAC BASED ON ACTUAL EQUIPMENT SELECTED PRIOR TO INSTALLATION.
- ALL SOURCE OF MECHANICAL INTAKE SHALL MAINTAIN 10 LINEAR FEET SEPARATION BETWEEN ANY SOURCE OF EXHAUST. CONTRACTOR IS RESPONSIBLE TO ADJUST DUCT LENGTH AS NEEDED.
- MOUNT DUCTWORK AS HIGH AS POSSIBLE.
- TEST AND BALANCE AIR SYSTEMS. PROVIDE REPORT TO G.C AND OWNER.
- NEW DUCTWORK IN CONCEALED AREAS MAY BE RECTANGULAR WITH EQUIVALENT CROSS SECTIONAL FLOW AREA.
- ARCHITECTURAL LAYOUT AND DIMENSIONS FOR EQUIPMENT TO TAKE PRECEDENCE OVER MEP.



HVAC FLOOR PLAN

SCALE
 1/4" = 1'-0"

1

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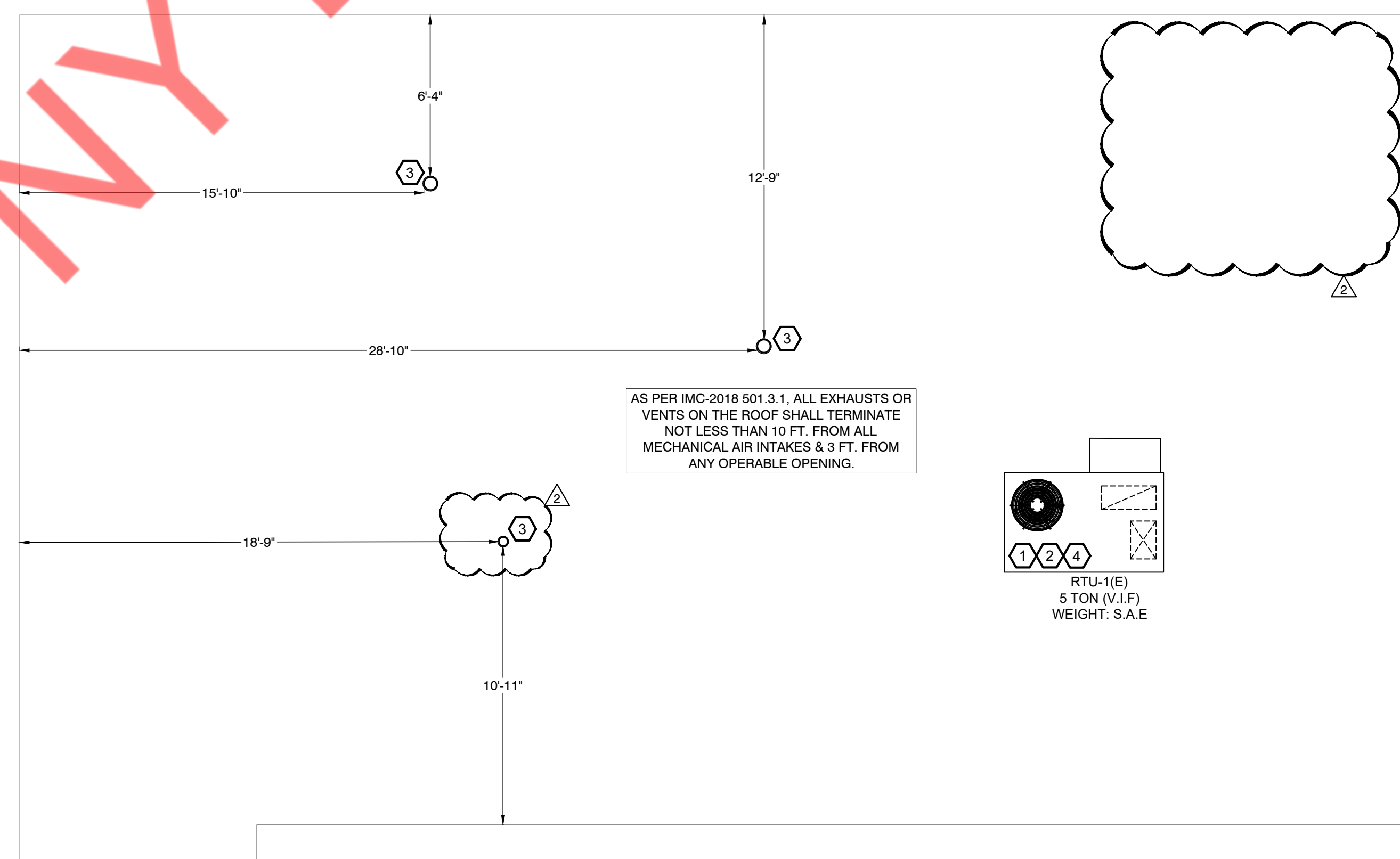
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HVAC ROOF PLAN

M-3

- ROOF PLAN KEY NOTES** #
- EXISTING MECHANICAL ROOFTOP UNIT TO REMAIN & TO BE REUSED. CLEAN AND REFURBISH TO "LIKE-NEW" CONDITION. REPAIR/REPLACE ANY ACCESSORIES AS REQUIRED TO PROVIDE A FULLY FUNCTIONING UNIT. VERIFY IN FIELD PRIOR TO BID. VERIFY FINAL LOCATION & CONFIGURATION ON FILED. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES PRIOR TO BID AND START OF WORK.
 - EXISTING CONDENSATE DRAINS TO REMAIN AS IT IS. CONTRACTOR TO FLUSH THE EXISTING DRAIN.
 - EXHAUST SHALL TERMINATE 3 FEET FROM THE PROPERTY LINE, 3 FEET FROM THE OPERABLE OPENING INTO THE BUILDING AND 10 FEET FROM THE OUTSIDE AIR INTAKE OPENINGS.
 - ALL SOURCE OF MECHANICAL INTAKE SHALL MAINTAIN 10 LINEAR FEET SEPARATION BETWEEN ANY SOURCE OF EXHAUST. CONTRACTOR IS RESPONSIBLE TO ADJUST DUCT LENGTH AS NEEDED.

- ROOF GENERAL NOTES**
- CONTRACTOR TO FIELD VERIFY LOCATION OF EXISTING ROOF TOP UNITS AND OTHER EQUIPMENT IF ANY.
 - PROVIDE WEATHER PROOF COATING FOR ALL EXTERIOR DUCTING AND PIPING.
 - G.C. SHALL COORDINATE WITH LANDLORD APPROVED ROOFING CONTRACTOR FOR ROOF PENETRATIONS.
 - EXISTING ROOF CURBS TO BE REUSED. CONTRACTOR TO FIELD VERIFY THE CONDITION OF EXISTING CURBS. REPLACE EXISTING CURBS IF NOT IN A GOOD CONDITION & REDO ROOFING. COORDINATE WITH ROOFING CONTRACTOR.

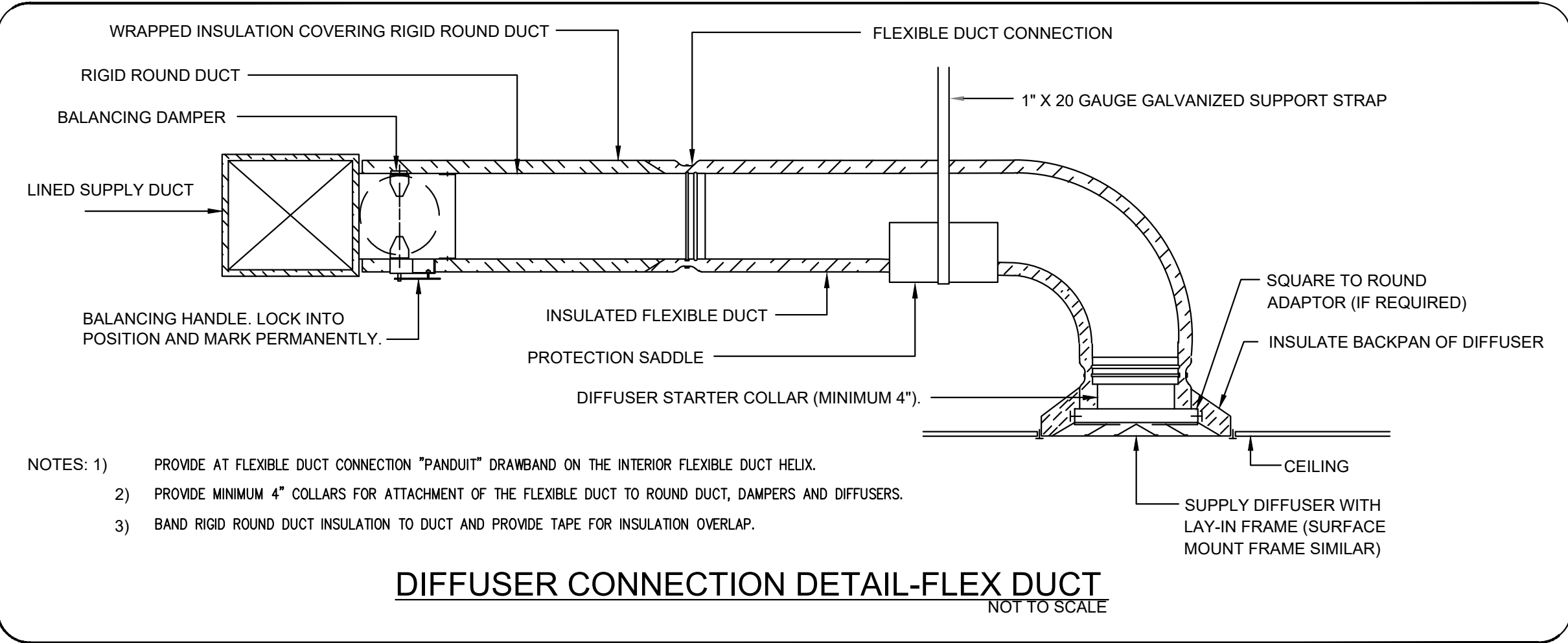
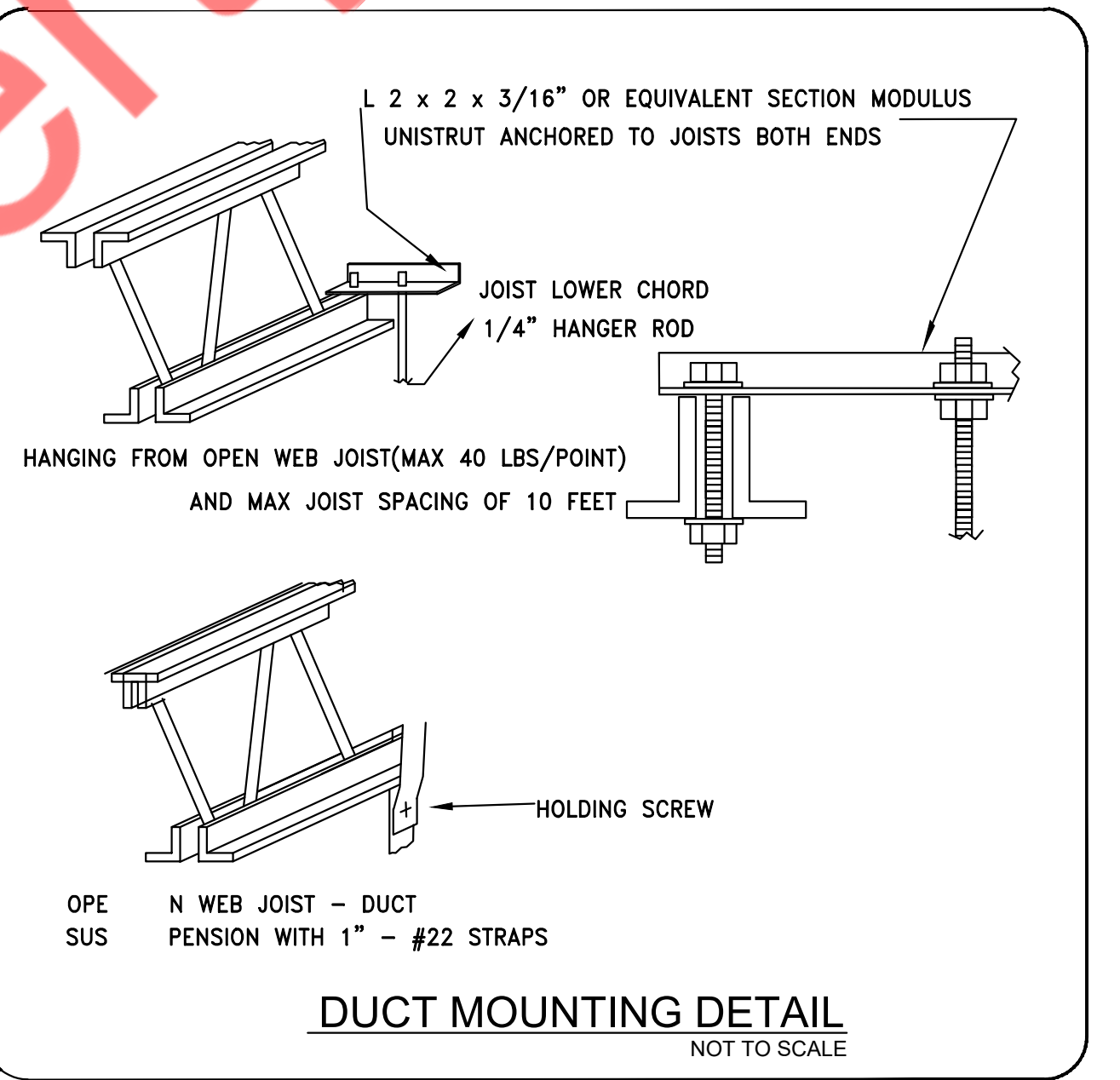
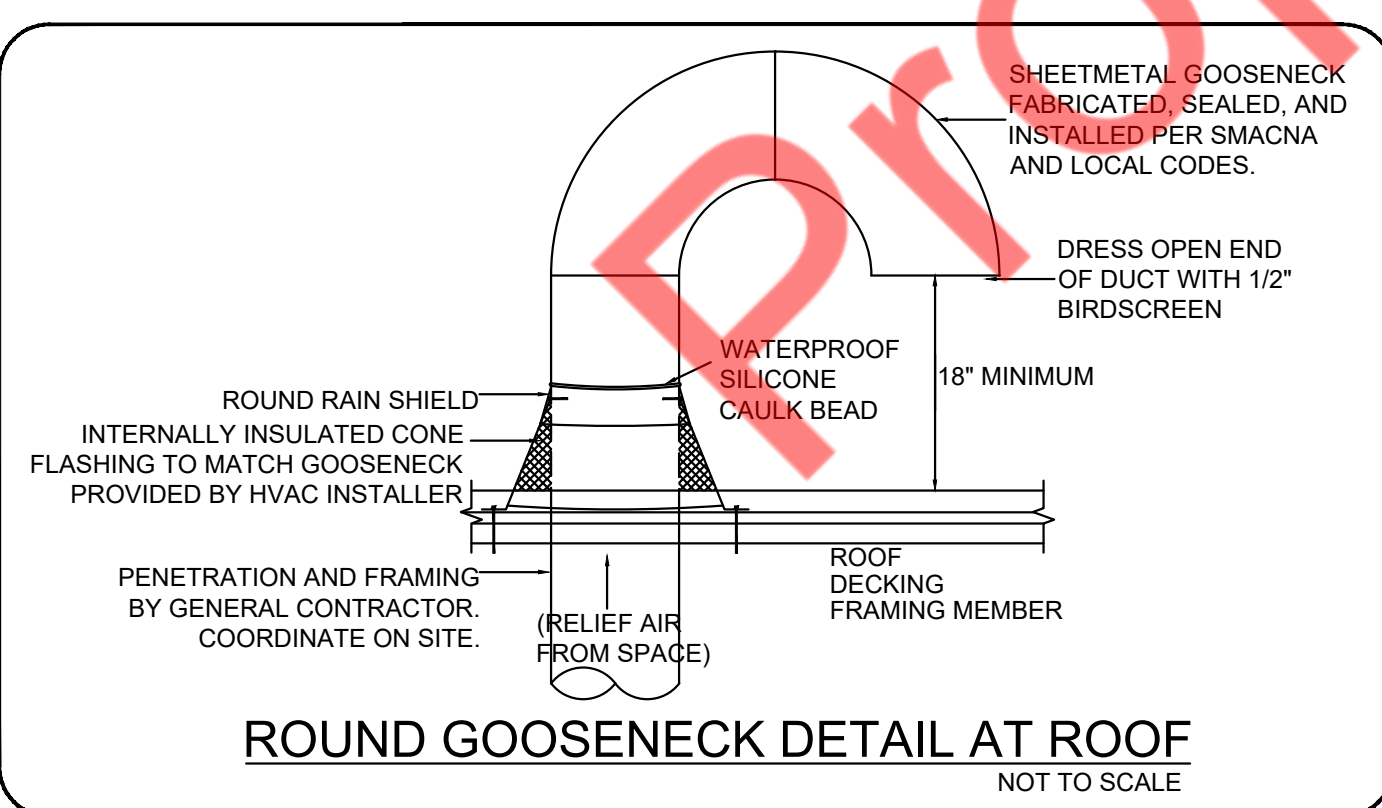
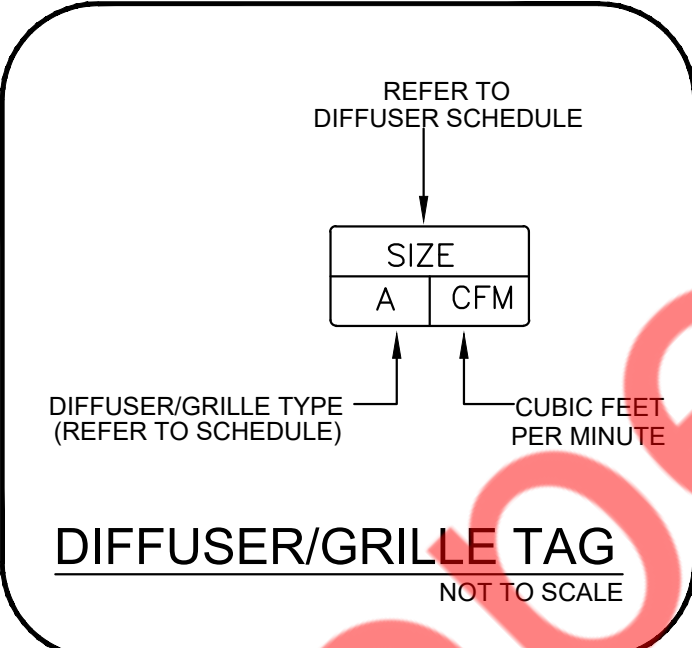
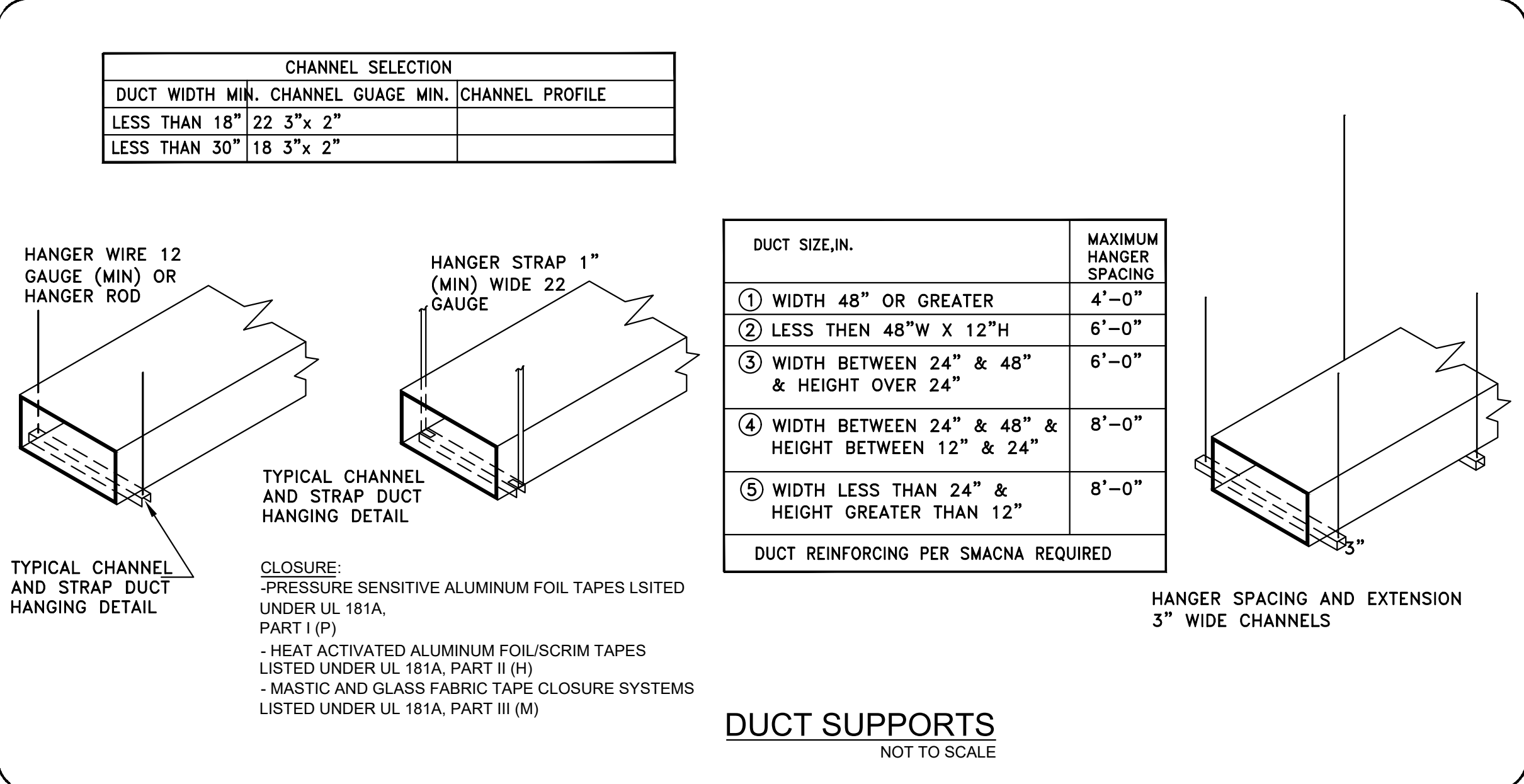
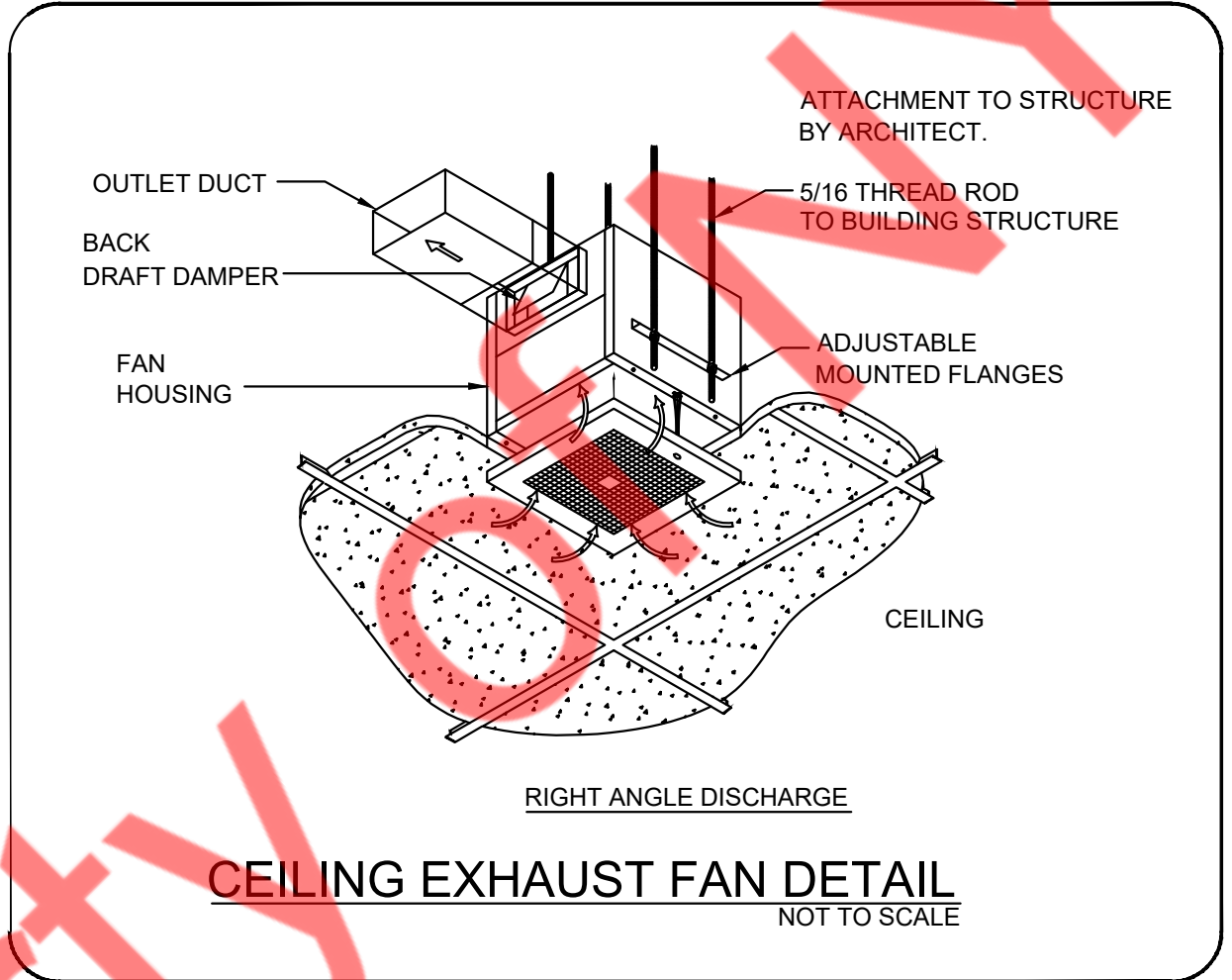
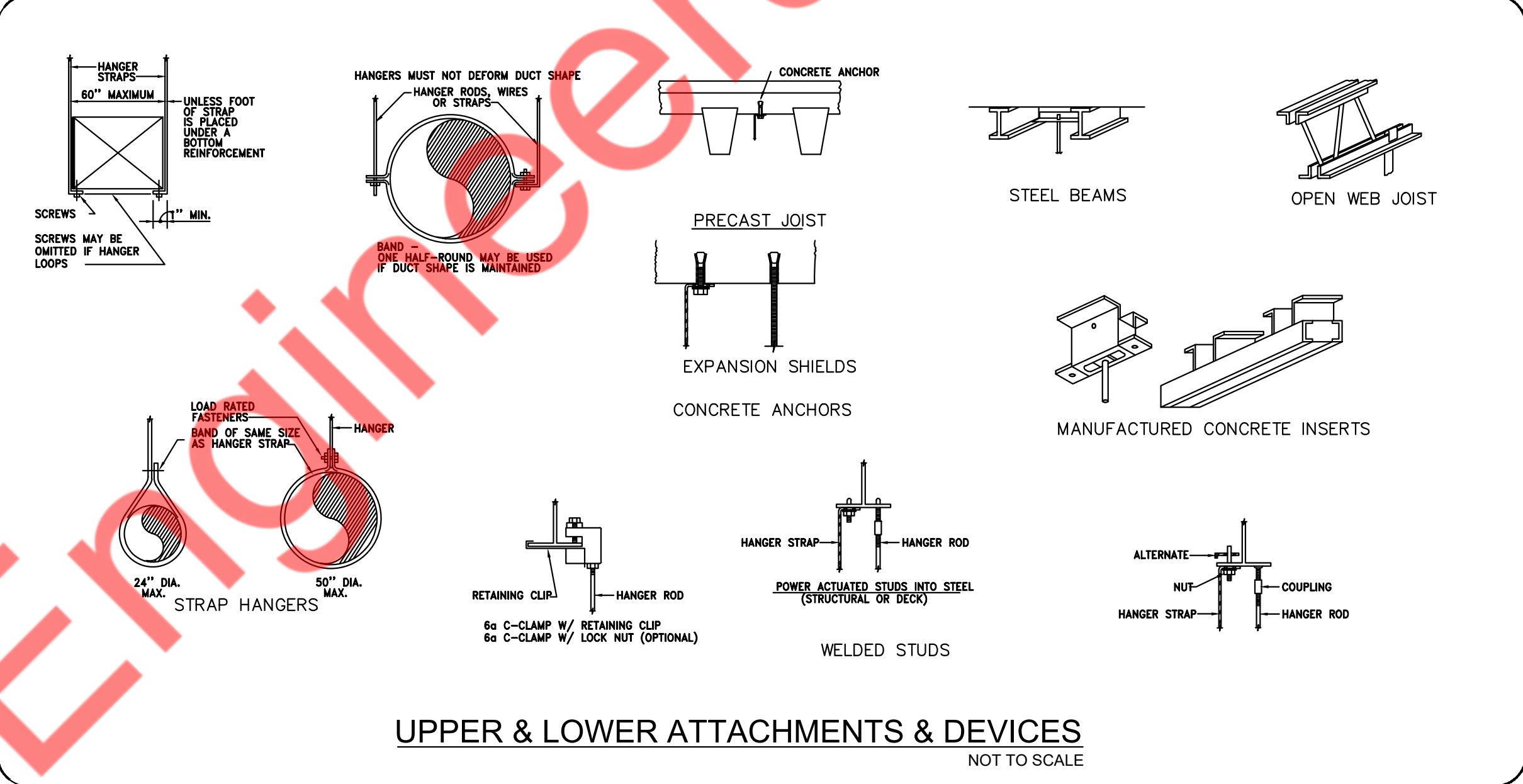
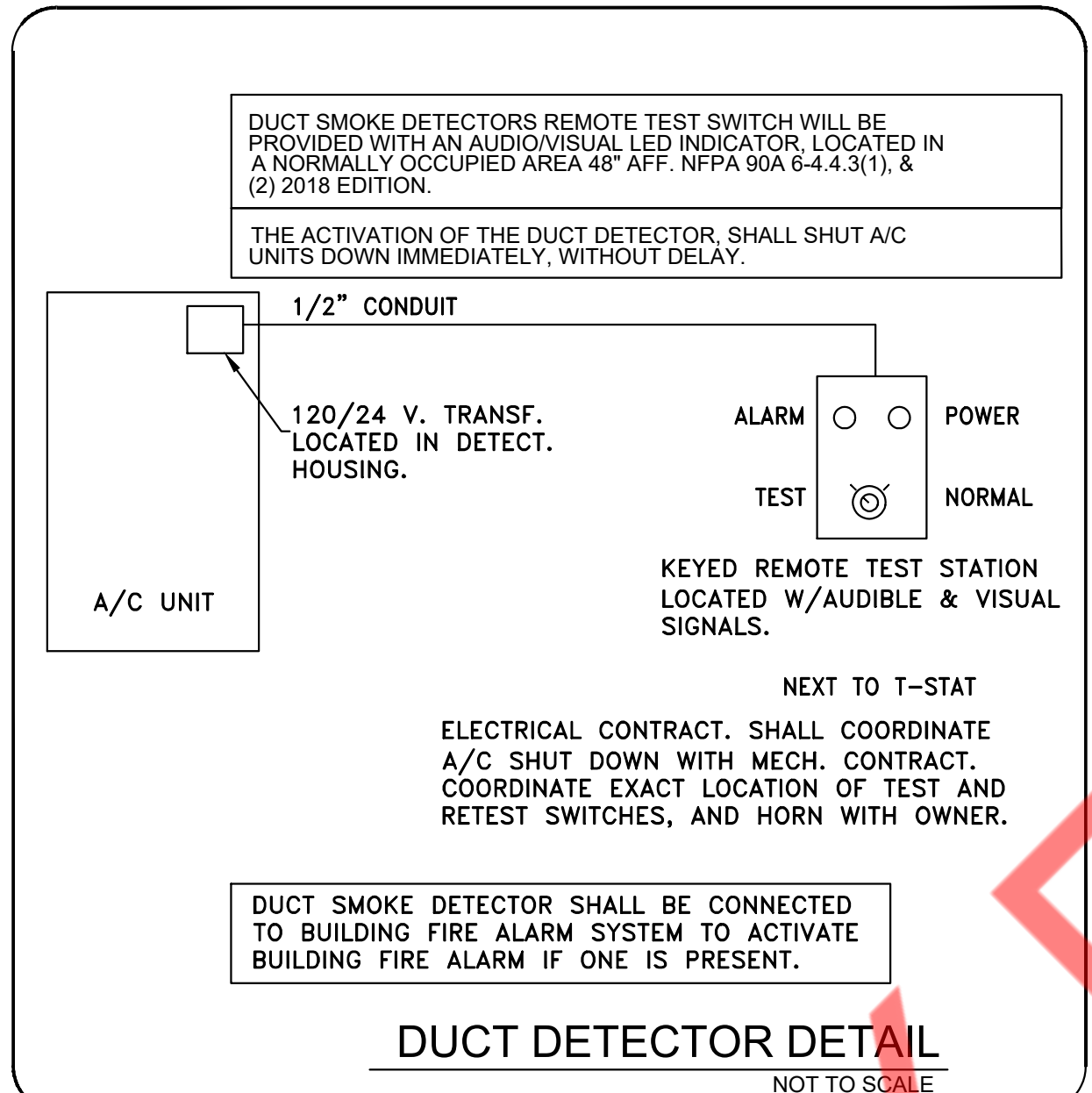


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LIGHTING FIXTURE SCHEDULE

| | TYPE | DESCRIPTION | MANUFACTURER | CATALOG NUMBER | VOLT | No. LAMPS | LAMP TYPE | TOTAL WATTS | MOUNTING |
|-----|------|-------------------------------------|--------------------|---|------|-----------|--------------|-------------|--------------|
| ☒ | A | 2x4 LED | ORACLE LIGHTING | 24-FPL1-LED | 120 | 17 | 50 WATTS LED | 850 | RECESSED |
| ☒ | B | 1x4 LED | WAREHOUSE LIGHTING | WHL-PNLX4-40L-LKFS | 120 | 09 | 28 WATTS LED | 252 | RECESSED |
| ☒ | C | BI-DIRECTIONAL LIGHTING | ENERGETIC LIGHTING | E2BL2040D-840 | 120 | 01 | 58 WATTS LED | 58 | WALL MOUNTED |
| ☒ | X1 | WALL MOUNTED EXIT SIGN | NORA LIGHTING | NX-815-LED-R-A | 120 | 2 | 5 WATTS LED | 10 | WALL MOUNTED |
| ☒ | XC | EXIT SIGN-EMERGENCY LIGHT COMBO | NORA NSPEC | NEX-711LED-R | 120 | 4 | 3 WATTS LED | 12 | WALL MOUNTED |
| ☒ | XB | EMERGENCY LIGHT | NORA NSPEC | NE-602LEDRC-B | 120 | 4 | 2 WATTS LED | 8 | WALL MOUNTED |
| ☒ | D | DIMMER WALL SWITCH | LUTRON | D75TY243SPWH (DVA DVELV - 300P FOR TRACK LIGHT "C") | 120 | - | - | - | WALL |
| ☒ | T | TIMER WALL SWITCH | TBD | TBD | 120 | - | - | - | WALL |
| ☒ | OS | OCCUPANCY WALL SWITCH | LUTRON | MS-OPS6M2-DV-BL | 120 | - | - | - | WALL |
| ☒ | OS | CEILING OCCUPANCY SENSOR | TBD | TBD | 120 | - | - | - | CEILING |
| (E) | | EXISTING LIGHTING FIXTURE TO REMAIN | | | | | | | |

GENERAL NOTES:

- REFER TO SHEET A-2 - REFLECTED CEILING PLAN IN ARCHITECTURAL DRAWINGS FOR MORE INFORMATION ON COLORS AND TRIMS REQUIRED
- E.C. SHALL RECEIVE APPROVAL FROM ARCHITECTURE FOR LIGHTING FIXTURE SELECTION BEFORE PURCHASE AND INSTALLATION.

SCOPE OF WORK

- REUSE EXISTING 200 AMP, 120/240V, 1-PHASE, 3-WIRE ELECTRICAL SERVICE.
- REUSE EXISTING 100 AMP, 120/240V, 3-PHASE, 4-WIRE ELECTRICAL SERVICE.
- REUSE EXISTING 200A, 120/240V, 1-PHASE ELECTRICAL PANEL FOR CIRCUITING AND POWER DISTRIBUTION.
- REUSE EXISTING 100A, 120/240V, 3-PHASE ELECTRICAL PANEL FOR CIRCUITING AND POWER DISTRIBUTION.
- PROVIDE ALL NECESSARY EQUIPMENT AND ALL WIRING AND LIGHTING FOR THE TENANT'S SPACE.
- COORDINATE WITH G.C. FOR LOW VOLTAGE WIRING.

GENERAL LIGHTING NOTES

- UPPER CASE LETTER NEXT TO LIGHT FIXTURE DENOTES FIXTURE TYPE.
- ALL EMERGENCY FIXTURES SHALL BE CONNECTED TO AN UNSWITCHED HOT CONDUCTOR

ELECTRICAL LEGEND

| SYMBOL | DESCRIPTION |
|--------|---|
| ☒ | EXHAUST FAN |
| ☐ | JUNCTION BOX |
| ☒ | BATTERY BACK UP EXIT LIGHT |
| ☒ | BATTERY BACK UP EMERGENCY LIGHT |
| ☒ | WALL SWITCH (SINGLE, DOUBLE,) |
| ☒ | WALL SWITCH (3 WAY, 4 WAY) |
| ☒ | WALL SWITCH (TIMER) |
| ☒ | DIMMER WALL SWITCH |
| ☒ | OCCUPANCY SENSOR WALL SWITCH |
| ☒ | SIMPLEX RECEPTACLE, 4-18" AFF OR AS NOTED. SUFFIX DENOTES FOLLOWING: A - NEMA 5-15R B - NEMA 6-15R C - NEMA 14-30R D - NEMA 14-50R E - NEMA L6-30R |
| ☒ | DUPLEX RECEPTACLE |
| ☒ | DUPLEX RECEPTACLE, 46" TO AFF AT KITCHEN, BATHS AND TOPS |
| ☒ | HALF SWITCHED DUPLEX RECEPTACLE |
| ☒ | 230 VOLT RECEPTACLE |
| ☒ | QUADRUPLEX RECEPTACLE |
| ☒ | FLOOR MOUNTED, FLUSH DUPLEX RECEPTACLE |
| ☒ | FLOOR MOUNTED, FLUSH QUAD. RECEPTACLE |
| ☒ | FLOOR MOUNTED, FLUSH 230 VOLT RECEPTACLE |
| ☒ | USB CHARGER RECEPTACLE |
| ☒ | CEILING MOUNTED DUPLEX RECEPTACLE |
| ☒ | ELECTRICAL PANEL |
| ☒ | DISCONNECT SWITCH |
| ☒ | TELEVISION OUTLET |
| ☒ | TELEPHONE OUTLET |
| ☒ | TELEPHONE/DATA OUTLET |
| ☒ | DATA OUTLET |
| ☒ | FLOOR MTD. FLUSH TELEPHONE/DATA OUTLET |
| ☒ | QUAD. DATA OUTLET RJ45 |
| ☒ | NON FUSED DISCONNECT SWITCH AMPERAGE AND NUMBER OF POLES AS NOTED |
| ☒ | 30A/240V NON FUSED DISCONNECT SWITCH |
| ☒ | 60A/240V NON FUSED DISCONNECT SWITCH |

ABBREVIATIONS:

- | | |
|----------------------------------|---------------------------|
| ABOVE FINISH FLOOR= A.F.F. | BELOW COUNTER= BC |
| COUNTER TOP LEVEL= C | PUSH BUTTON= PB |
| GROUND FAULT INTERRUPTER= GFCI | UNDER CABINET= UC |
| VERIFY PRIOR TO INSTALL= VH | VAPOR PROOF= VP |
| WEATHER PROOF= WP | WATER HEATER= WH |
| RECIRCULATION PUMP= RCP | EXHAUST FAN= EF |
| BATHROOM EXHAUST FAN= BEF | ROOF TOP UNIT= RTU |
| UTILITY HAVING JURISDICTION= AHJ | ELECTRICAL CONTRACTOR= EC |
| LL- LANDLORD | DRINKING FOUNTAIN= DF |

ELECTRICAL PLAN NOTES

- ELECTRICAL CONTRACTOR SHALL REVIEW ALL DRAWINGS OF THIS SET.
- CONTRACTOR TO VERIFY THAT ALL EQUIPMENT SHOWN AS EXISTING MATCHES THE DESCRIPTIONS AND SPECIFICATIONS SHOWN ON DRAWINGS AND SCHEDULES. IF DIFFERENT, NOTIFY ARCHITECT/ENGINEER BEFORE BIDDING, ORDERING, OR PROCEEDING WITH WORK.
- ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL ALL NEW ELECTRICAL WORK INDICATED. CONSTRUCTION SHALL BE IN ACCORDANCE WITH DRAWINGS AND APPLICABLE SPECIFICATIONS. IF A PROBLEM IS ENCOUNTERED IN COMPLYING WITH THIS REQUIREMENT, CONTRACTOR SHALL NOTIFY THE OWNER OR HIS REPRESENTATIVE AS SOON AS POSSIBLE AFTER DISCOVERY OF THE PROBLEM AND SHALL NOT PROCEED WITH THAT PORTION OF THE WORK UNTIL OWNER HAS DIRECTED CORRECTIVE ACTION TO BE TAKEN.
- ELECTRICAL CONTRACTOR SHALL VISIT JOB SITE AND FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING ELECTRICAL AND COMMUNICATIONS INSTALLATION AND MAKE PROVISIONS AS TO THE COST THEREOF. EXISTING CONDITIONS OF ELECTRICAL EQUIPMENT, LIGHT FIXTURES, ETC. THAT ARE PART OF THE FINAL SYSTEM SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO SUBMITTING HIS BID.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE 2023 MA ELECTRIC CODE AND ALL CODES AND ORDINANCES OF THE AUTHORITY HAVING JURISDICTION.
- DO NOT SCALE THE ELECTRICAL DRAWINGS. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR EXACT LOCATION FOR ALL EQUIPMENT. CONFIRM WITH OWNER'S REPRESENTATIVE.
- ALL ELECTRICAL NOT BEING REUSED MUST BE REMOVED IN ITS ENTIRETY.
- ALL CONDUIT IN OR UNDERGROUND OR IN CONCRETE MUST BE RIGID GALVANIZED STEEL.
- CIRCUIT BREAKERS AND PANELS TO BE BOLT ON TYPE
- ALL EQUIPMENT SHALL BE APPROVED BY UL OR OTHER NATIONALLY RECOGNIZED TESTING COMPANY.
- ALL RECEPTACLES SHALL BE GROUNDED AS REQUIRED BY NEC 250.146
- SUBMIT SERVICE ENTRANCE EQUIPMENT FOR SEPARATE APPROVAL.
- ALL LOW VOLTAGE MUST BE IN CONDUIT TO ABOVE THE DROP CEILING. BRIDAL RINGS OR "J" HOOKS REQUIRED.
- SEPARATE PERMITS ARE REQUIRED FOR ALL LOW VOLTAGE SUCH AS TELEPHONE, DATA, THERMOSTAT, MUSIC, ALARMS ETC.
- SEPARATE PERMIT REQUIRED FOR SIGNAGE.
- PRIOR TO ANY CONSTRUCTION WORK BEGINNING AN ON-SITE MEETING WITH GENERAL CONTRACTORS IS REQUIRED.
- ELECTRICIAN MUST BE ON SITE FOR ALL INSPECTIONS.
- MINIMUM WIRE SIZE SHALL BE #12 A.W.G. EXCLUDING CONTROL WIRING. ALL CONDUCTORS SHALL BE COPPER AND UNLESS OTHERWISE NOTED THIN INSULATION.
- OUTLET BOXES SHALL BE PRESSED STEEL IN DRY LOCATIONS, PLASTIC AND CAST ALLOY WITH THREADED HUBS IN WET OR DAMP LOCATIONS, AND SPECIAL ENCLOSURES FOR OTHER CLASSIFIED AREAS.
- IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION. THE CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS NECESSARY FOR EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER.
- ELECTRICAL SYSTEM SHALL BE COMPLETE AND EFFECTIVELY GROUNDED AS REQUIRED BY THE N.E.C. OR LOCAL CODES.
- ALL MATERIALS SHALL BE NEW AND BEAR UNDERWRITERS' LABELS WHERE APPLICABLE.
- ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE AND ACCEPTED BY ENGINEER/ARCHITECT.
- ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION.
- ELECTRICAL CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN ONE YEAR FROM DATE THAT CERTIFICATE OF OCCUPANCY IS ISSUED. WARRANTY SHALL BE PROVIDED IN WRITING. PROVIDE COPY TO LL.
- CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED THEREBY.
- ALL REQUIRED INSURANCE SHALL BE PROVIDED FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF THE WORK.
- CONTRACTOR SHALL PAY FOR ALL PERMITS, FEES, INSPECTIONS AND TESTING. CONTRACTOR TO OBTAIN PERMIT AND APPROVED SUBMITTALS PRIOR TO BEGINNING WORK OR ORDERING EQUIPMENT.
- THE ELECTRICAL INSTALLATION SHALL MEET ALL STANDARD REQUIREMENTS OF POWER AND TELEPHONE COMPANIES.
- CONTRACTOR SHALL COORDINATE WITH MECHANICAL DRAWINGS AND PROVIDE ALL NECESSARY CONTROL WIRING.
- ALL CIRCUIT BREAKERS FEEDING MECHANICAL EQUIPMENT SHALL BE HACR TYPE CIRCUIT BREAKERS.
- PROVIDE AND INSTALL CONDUIT, CONDUCTORS, PULL WIRES, BOXES, COVER PLATES, DEVICES, ETC. FOR ALL OUTLETS AS INDICATED.
- MATERIALS, PRODUCTS, AND EQUIPMENT, INCLUDING ALL COMPONENTS THEREOF, SHALL BE NEW AND SUCH AS APPEAR ON THE UL LIST OF APPROVED ITEMS AND SHALL MEET OR EXCEED THE REQUIREMENTS OF N.E.C., NEMA, AND IEC.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OR CUT SHEETS OF LIGHTING FIXTURES, SWITCHES, AND OTHER ELECTRICAL ITEMS FOR APPROVAL BY ENGINEER/ARCHITECT.
- ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING, PATCHING AND FIRED CAULKING REQUIRED OF HIS WORK.
- ELECTRICAL CONTRACTOR SHALL LABEL ALL PANELS W/TYPE WRITTEN DIRECTORIES.
- ALL ELECTRICAL OUTLETS SHALL BE AT 18" A.F.F. EXCEPT IN THE REHEARSAL AND MULTI-PURPOSE ROOM SHALL BE AT 24" UNLESS OTHERWISE NOTED.
- ALL LIGHT SWITCHES TO BE AT 42" A.F.F.
- ALL ELECTRICAL WIRING SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. ALL ELECTRICAL WIRING FOR HVAC SYSTEM INCLUDING CONTROLS, THERMOSTATS, POWER, ETC. SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
- BREAKER AND PANELS - ALL CURRENT CARRYING BUSSES SHALL BE COPPER. ALL GROUND BUS BARS SHALL BE COPPER. PANEL BOARD ENCLOSURES SHALL BE FURNISHED WITHOUT PRE-PUNCHED CONCENTRIC HOLES. A.I.C. RATINGS SHALL BE AS INDICATED ON PANEL BOARD SCHEDULES.
- DISCONNECT SWITCHES SHALL BE H.P. RATED, GENERAL DUTY, QUICK-MAKE, QUICK-BREAK ENCLOSURES AS REQUIRED BY EXPOSURE.
- MOTOR STARTERS SHALL BE MANUAL OR MAGNETIC, WITH OVERLOAD RELAYS IN EACH HOT LEG.
- THE TERM "PROVIDE" USED IN THE CONSTRUCTION DOCUMENTS AND SPECIFICATIONS INDICATES THE CONTRACT SHALL FURNISH AND INSTALL.
- CONTRACTOR SHALL CONFIRM WITH ANY AND ALL REQUIREMENTS SUCH AS: LUG SIZE RESTRICTIONS, CONDUIT ENTRY, TRANSFORMER SIZE, SCHEDULED DOWN TIME FOR OWNERS CONFIRMATION, ETC. ANY CONFLICTS SHALL BE BROUGHT TO ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH ANY WORK.
- VOLTAGE DROP FOR ALL BRANCH CONDUCTORS SHALL NOT EXCEED 3%, WHERE VOLTAGE DROP EXCEEDS 3%, CONTRACTOR SHALL INCREASE SIZE OF CONDUCTORS.
- CONTRACTOR SHALL PROVIDE GFI TYPE BREAKER FOR ALL EXTERIOR 120V CIRCUITS OR GFI PROTECTION - FOR THE WHOLE CIRCUIT.
- GAS PIPING SHALL BE BONDED.
- ELECTRICAL CONTRACTOR SHALL COORDINATE SERVICE ENTRY WITH SERVICE PROVIDER PRIOR TO DETERMINING EXACT LOCATION OF THE METER BOX IN ORDER TO AVOID DISCREPANCIES BETWEEN DRAWINGS AND JOB CONDITIONS.
- ALL OUTDOOR EQUIPMENT SHALL BE WEATHERPROOF.
- CONSTRUCTION "AS BUILT" DRAWINGS AND DOCUMENTS SHALL BE PROVIDED TO THE OWNER WITHIN 30 DAYS AFTER THE DATE OF ACCEPTANCE. PROVIDE A COPY TO LL.
- OPERATION MANUALS AND MAINTENANCE MANUALS SHALL BE PROVIDED TO THE BUILDING OWNER.
- ABSOLUTELY NO FLEXIBLE CONDUIT IS PERMITTED IN DEMISING WALLS. FLEXIBLE CONDUIT IS PERMITTED FOR SHORT FINAL CONNECTIONS ONLY (6'-0" OR LESS).
- EXPOSED CONDUIT SHALL BE INSTALLED IN STRAIGHT LINES, PARALLEL OR IN RIGHT ANGLES TO THE BUILDING STRUCTURE. DO NOT LOOP EXCESS FLEXIBLE CONDUIT IN CEILING SPACE OR WALL CAVITY. NO CONDUIT TO BE SUPPORTED FROM THE ROOF DECK.
- CABLE TYPES AC AND NM CABLES ARE NOT ACCEPTABLE. TYPE MC CABLE, ELECTRIC METALLIC TUBING (EMT) AND RIGID GALVANIZED CONDUIT ARE PERMITTED.
- ALL EQUIPMENT, DEVICES AND FIXTURES SHALL BE GROUNDED IN COMPLIANCE WITH NEC AND UL REQUIREMENTS.
- ALL PANELS TO BE UL LABELED WITH BOLT-ON TYPE CIRCUIT BREAKERS.
- 7-DAY 24-HOUR TIME CLOCK IS REQUIRED TO CONTROL STOREFRONT ENTRY LIGHTS. SHOW WINDOW LIGHTS, SHOW WINDOW RECEPTACLES AND STOREFRONT SIGNAGE. ILLUMINATED STOREFRONT SIGNS MUST REMAIN LIT DURING ALL BUSINESS HOURS.
- TENANT IS REQUIRED TO MAKE A FIELD SURVEY OF THE EXISTING ELECTRICAL SERVICE TO ENSURE THAT THE TOTAL CONNECTED LOAD DOES NOT EXCEED THE ELECTRICAL SERVICE. ANY ALL MODIFICATIONS OR UPGRADES NEEDED ARE SUBJECT TO LANDLORD'S PRIOR APPROVAL AND WILL BE COMPLETED BY TENANT/TENANT'S GC AT TENANT'S SOLE EXPENSE.
- ALL ELECTRICAL PANELS TO BE MOUNTED ON PLYWOOD BACKER BOARD.
- ALL THE ELECTRICAL BOXES SHALL BE SEALED.

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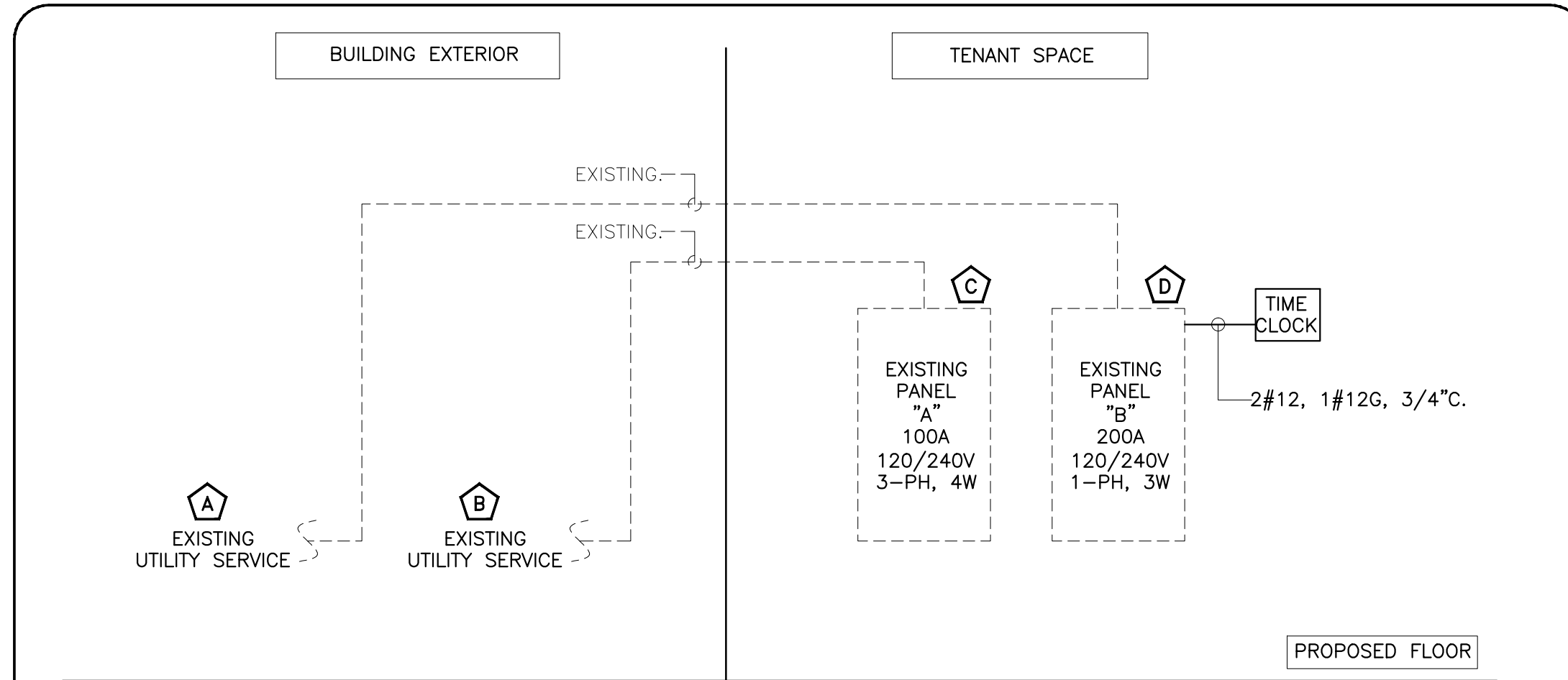
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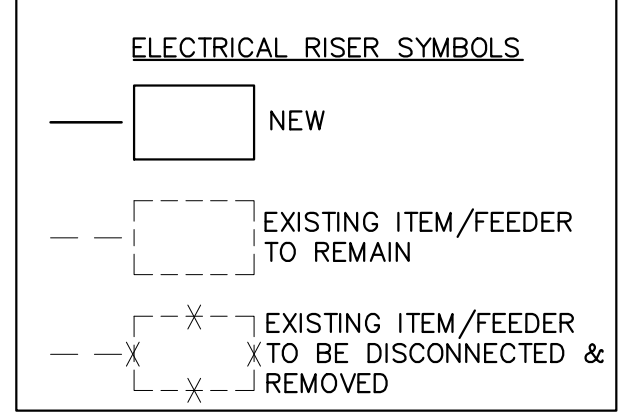
LIGHTING LEGEND, NOTES & RISER DIAGRAM

E-1



ELECTRICAL RISER KEYED NOTES:

- EXISTING 200A, 120/240V, 1-PHASE, 3-WIRE ELECTRICAL INCOMING SERVICE. E.C. SHALL COORDINATE WITH THE BASE BUILDING/ LANDLORD/OWNER FOR EXACT POWER DISTRIBUTION. REPORT TO ENGINEER ON RECORD OF ANY DISCREPANCIES.
- EXISTING 100A, 120/240V, 3-PHASE, 4-WIRE ELECTRICAL INCOMING SERVICE. E.C. SHALL COORDINATE WITH THE BASE BUILDING/ LANDLORD/OWNER FOR EXACT POWER DISTRIBUTION. REPORT TO ENGINEER ON RECORD OF ANY DISCREPANCIES.
- EXISTING 100A, 120/240V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "A", E.C. SHALL COORDINATE WITH THE BASE BUILDING/ LANDLORD/OWNER FOR EXACT LOCATION. REPORT TO ENGINEER ON RECORD OF ANY DISCREPANCIES. E.C. SHALL VERIFY OPERABLE CONDITION IN FIELD. REPLACE IF FOUND IN-OPERABLE. BASE BID ACCORDINGLY.
- EXISTING 200A, 120/240V, 1-PHASE, 3-WIRE ELECTRICAL PANEL "B", E.C. SHALL COORDINATE WITH THE BASE BUILDING/ LANDLORD/OWNER FOR EXACT LOCATION. REPORT TO ENGINEER ON RECORD OF ANY DISCREPANCIES. E.C. SHALL VERIFY OPERABLE CONDITION IN FIELD. REPLACE IF FOUND IN-OPERABLE. BASE BID ACCORDINGLY.



ELECTRICAL RISER GENERAL NOTE:

- ELECTRICAL CONTRACTOR TO COORDINATE FAULT CURRENT (ISC) RATING WITH UTILITY COMPANY AND AHJ PRIOR TO COMMENCING ANY WORK.
- RISER DIAGRAM SHOWN IS FOR REFERENCE PURPOSE ONLY. E.C. SHALL VERIFY EXACT POWER DISTRIBUTION IN FIELD.

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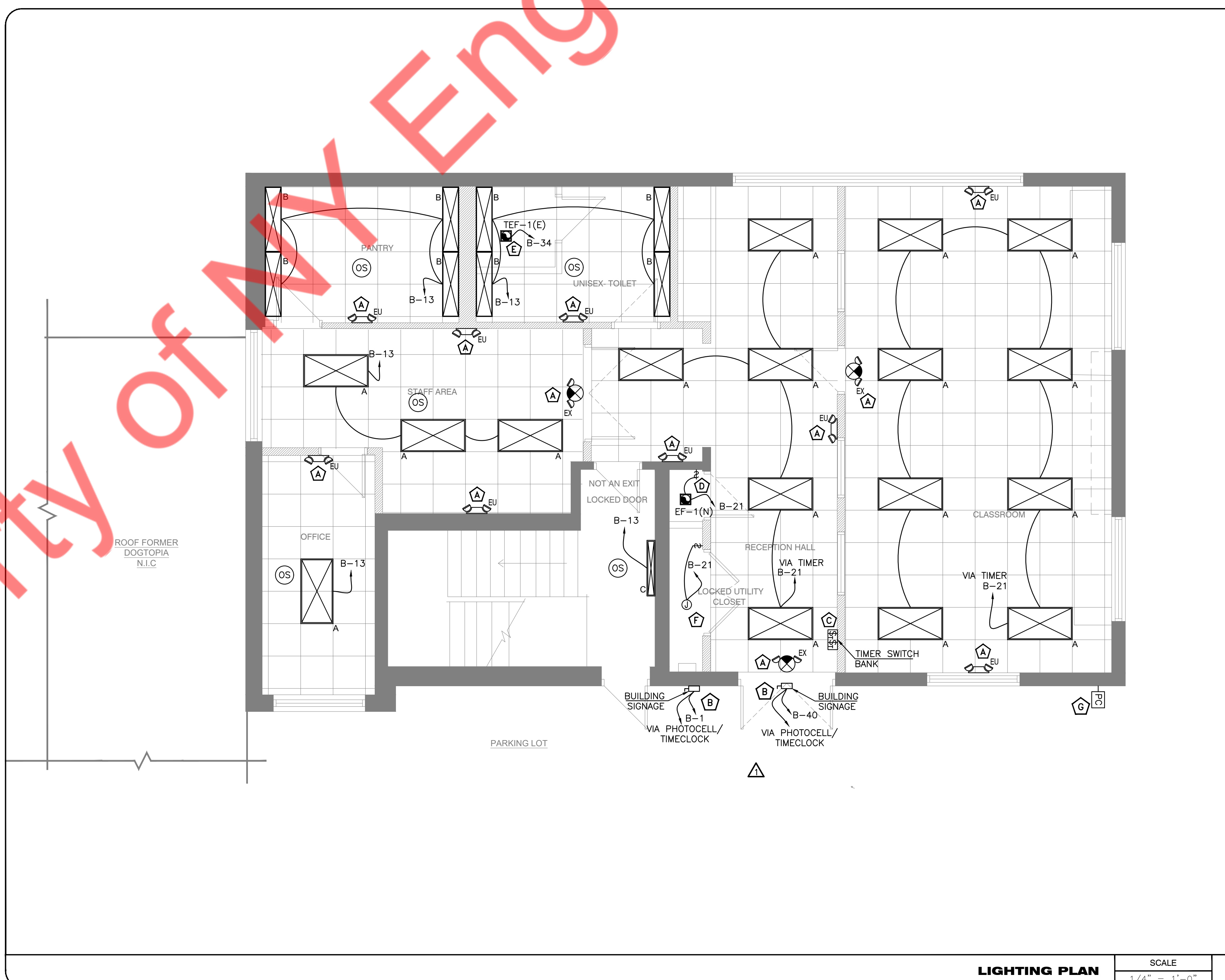
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LIGHTING PLAN

E-2

- LIGHTING PLAN GENERAL NOTES**
1. ALL EXIT, EMERGENCY, AND BATTERY PACKS IN FLUORESCENT FIXTURES TO BE WIRED AHEAD OF CONTROL SWITCH.
 2. ALL WALL MOUNTED EMERGENCY LIGHT FIXTURES SHALL BE MOUNTED AT HEIGHTS INDICATED ON THE PLANS.
 3. ALL DIMMER SWITCHES SHALL HAVE A PRESET MINIMUM RATING OF 1.0 KW.
 4. ALL FIXTURE COUNTS, SELECTIONS, AND EXACT LOCATIONS MUST BE VERIFIED WITH OWNER/ARCHITECT PRIOR TO PURCHASE. CONFIRM ALL LIGHT FIXTURE MODEL NUMBERS, FINISH COLORS AND ELECTRICAL REQUIREMENTS BEFORE ORDERING AND INSTALLATION.
 5. CONTRACTOR TO VERIFY IF ANY LOW VOLTAGE LIGHT FIXTURES REQUIRE STEP-DOWN TRANSFORMERS, QUANTITY AND LOCATION TO BE FIELD VERIFIED PRIOR TO CONSTRUCTION.
 6. ALL FIXTURES TO HAVE U.L. CERTIFICATION.

- LIGHTING PLAN KEYED NOTES**
- Ⓐ CONNECT ALL EMERGENCY EGRESS LIGHTING FIXTURES TO THE NEAREST LIGHTING BRANCH CIRCUIT AHEAD OF ALL SWITCHING AND CONTROLS PER STATE AND LOCAL CODES.
 - Ⓑ E.C TO COORDINATE THE BUILDING SIGNAGE CONNECTION REQUIREMENTS WITH SIGN VENDOR. BASE BID ACCORDINGLY.
 - Ⓒ E.C. SHALL COORDINATE EXACT LOCATION/MANUFACTURER OF THE TIME CLOCK ON THE FILED WITH ARCHITECT/OWNER.
 - Ⓓ EXHAUST FANS EF-1(N) SHALL BE CIRCUITED AND CONTROLLED ALONG WITH THE LIGHT FIXTURES IN THE SAME ROOM.
 - Ⓔ INTERCONNECT TEF-1(E) & EF-2(N) WITH RTU-1(E). E.C TO COORDINATE WITH MECHANICAL DRAWINGS.
 - Ⓕ J-BOX FOR LIGHTING FIXTURE. E.C. SHALL COORDINATE WITH ARCHITECT/OWNER FOR THE EXACT SELECTION OF THE LIGHTING FIXTURE AT THIS AREA, PROVIDE CONNECTIONS ACCORDINGLY.
 - Ⓖ E.C. SHALL COORDINATE EXACT LOCATION/MANUFACTURER OF PHOTOCELL ON THE FILED WITH ARCHITECT/OWNER.



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| △ | CLIENT CHANGES | 11/07/24 |

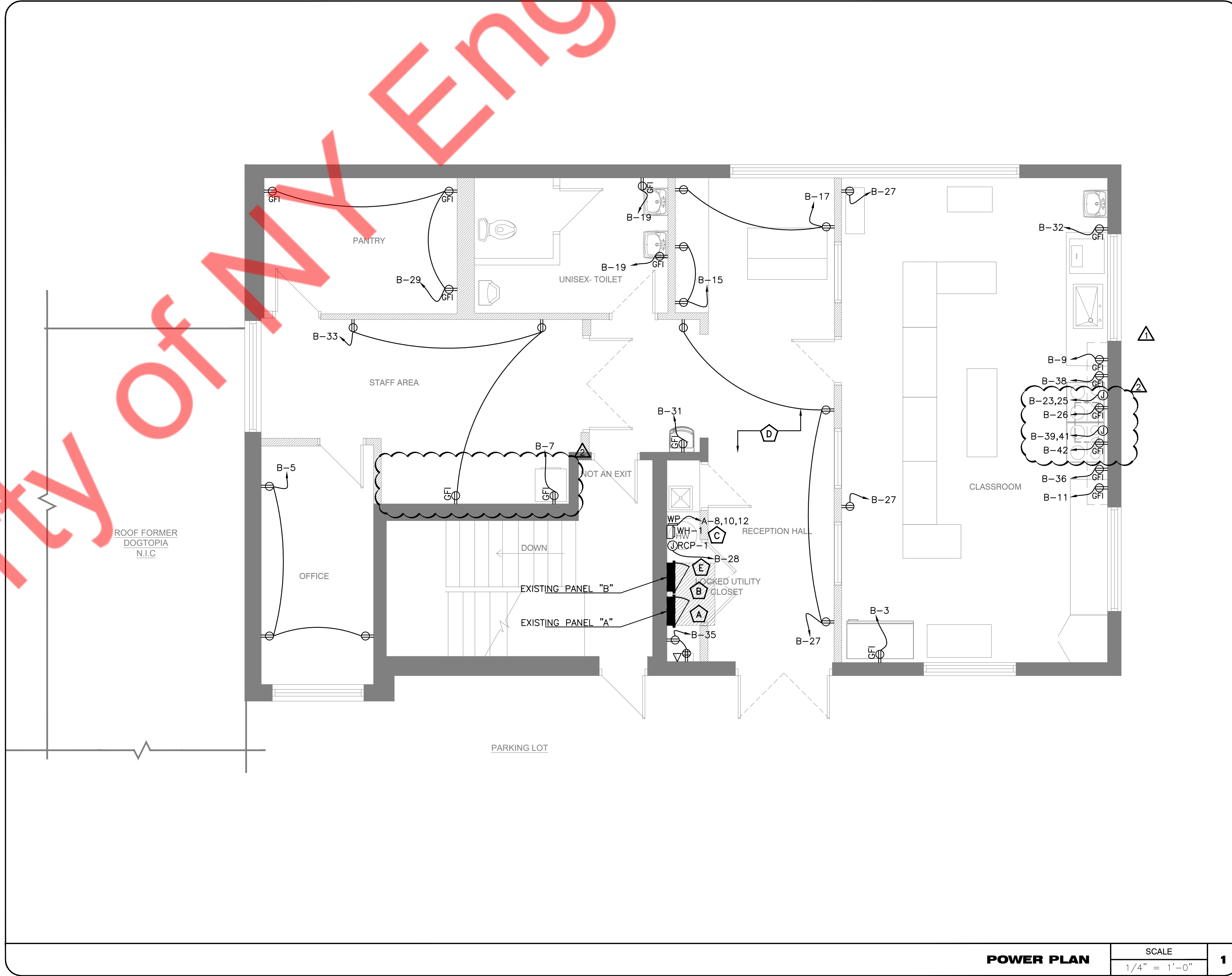
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POWER PLAN

E-3

- POWER PLAN GENERAL NOTES**
- A. ALL RECEPTACLES AND SWITCHES SHALL BE BLACK. RECEPTACLES AND SWITCHES IN THE REHEARSAL ROOM/DRUM ROOM/ROOKIES ROOM EXCEPT LESSON ROOMS SHALL BE SURFACE MOUNTED. E.C. SHALL COORDINATE WITH ARCHITECT PRIOR TO ROUGH-IN.
 - B. FOR CCTV CAMERA REQUIREMENTS E.C. SHALL COORDINATE WITH SECURITY DRAWINGS/SPECIALIST FOR EXACT REQUIREMENTS AS PER THE EXISTING SITE CONDITIONS.
 - C. E.C. SHALL COORDINATE WITH LOW VOLTAGE VENDOR FOR EXACT QUANTITY AND POWER REQUIREMENTS FOR LOW VOLTAGE EQUIPMENTS PRIOR TO ROUGH-IN. BASE BID ACCORDINGLY.
 - D. E.C. TO PLACE RECEPTACLES BOXES AT LEAST TWO FEET APART TO GUARANTEE AT LEAST ONE STUD BETWEEN OUTLETS.

- POWER PLAN KEYED NOTES**
- A. EXISTING 100A, 120/240V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "A". E.C. SHALL COORDINATE WITH THE BASE BUILDING/ LANDLORD/OWNER FOR EXACT LOCATION. REPORT TO ENGINEER ON RECORD OF ANY DISCREPANCIES. E.C. SHALL VERIFY OPERABLE CONDITION IN FIELD. REPLACE IF FOUND IN-OPERABLE. BASE BID ACCORDINGLY.
 - B. EXISTING 200A, 120/240V, 1-PHASE, 3-WIRE ELECTRICAL PANEL "B". E.C. SHALL COORDINATE WITH THE BASE BUILDING/ LANDLORD/OWNER FOR EXACT LOCATION. REPORT TO ENGINEER ON RECORD OF ANY DISCREPANCIES. E.C. SHALL VERIFY OPERABLE CONDITION IN FIELD. REPLACE IF FOUND IN-OPERABLE. BASE BID ACCORDINGLY.
 - C. E.C. SHALL COORDINATE WITH PLUMBING CONTRACTOR FOR THE EXACT LOCATION & POWER REQUIREMENT OF NEW WATER HEATER AND PROVIDE ELECTRICAL CONNECTIONS ACCORDINGLY.
 - D. ALL 15/20A, 125V AND 250V NON LOCKING TYPE RECEPTACLES IN LOBBY/ RECEPTION SHALL BE LISTED TAMPER RESISTANCE AS PER NEC 406.12.
 - E. E.C. SHALL VERIFY/PERFORM THE INSTALLATION OF ELECTRICAL PANELS IN COMPLIANCE WITH NEC ARTICLE 110.26(A) AND (B). E.C. SHALL FIELD VERIFY THAT THE PANELS ARE UNOBSTRUCTED AND THE AREA WHERE THE PANELS ARE PLACED SHALL NOT BE USED AS A STORAGE SPACE.



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PROJECT

YOUNG CHEFS ACADEMY

REVISIONS DATES:

| SR. NO. | DETAIL | DATE |
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| | CLIENT CHANGES | 9/10/24 |
| | CLIENT CHANGES | 11/07/24 |
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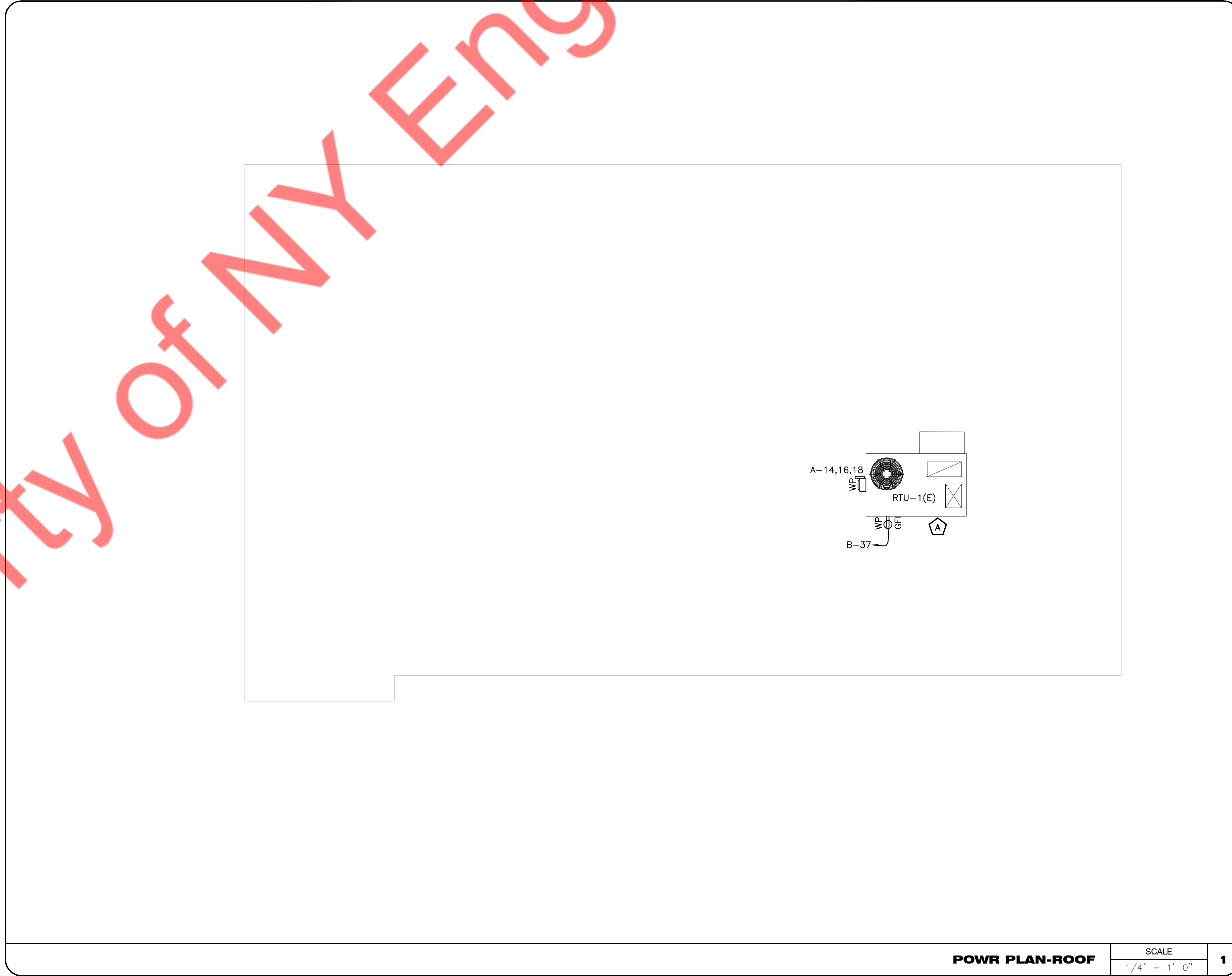
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POWER PLAN-ROOF

E-4

ROOF POWER PLAN KEYED NOTES

A E.C. SHALL COORDINATE WITH MECHANICAL DRAWINGS FOR THE EXACT LOCATION OF MECHANICAL EQUIPMENT RTU AND ALSO SHALL COORDINATE WITH MECHANICAL EQUIPMENT MANUFACTURER FOR THE EXACT POWER REQUIREMENT OF THE SAME.



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REVISIONS DATES:

| SR. NO | DETAIL | DATE |
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PANEL SCHEDULE

E-5

PANEL SCHEDULE:-

| PANEL: A (E) | | | | | | | | | | MOUNTING: SURFACE | | | | |
|----------------------------|-----------|---------------------|-----------|------------|------------------------|----------------------------|------|-----------------------------|------------------------|-------------------|-----------|---------------------|-----------|---------|
| 120/240V VOLTS, | | 3 PHASE, | | 4 WIRE | | PANEL LOCATION: ELE CLOSET | | | | | | | | |
| MAIN CB: NA | | MLO: 100A | | BUS: 125A | | MIN, | | FED FROM: DISCONNECT SWITCH | | | | | | |
| NOTE: | | | | | | | | | | | | | | |
| CKT NO. | TRIP AMPS | DESCRIPTION OF LOAD | LOAD TYPE | LOAD (KVA) | MINIMUM BRANCH CIRCUIT | PER PHASE (KVA) | | | MINIMUM BRANCH CIRCUIT | LOAD (KVA) | LOAD TYPE | DESCRIPTION OF LOAD | TRIP AMPS | CKT NO. |
| | | | | | | A | B | C | | | | | | |
| 1 | 20 | SPARE | | | | 0.00 | | | | | | SPACE | | 2 |
| 3 | 20 | SPARE | | | | | 0.00 | | | | | SPACE | | 4 |
| 5 | 20 | SPARE | | | | | | 0.00 | | | | SPACE | | 6 |
| 7 | 20 | SPARE | | | | 4.07 | | | | 4.07 | O | | | 8 |
| 9 | | SPACE | | | | | 4.07 | | | 4.07 | O | WATER HEATER | 40A/3P | 10 |
| 11 | | SPACE | | | | | | 4.07 | | 4.07 | O | | | 12 |
| 13 | | SPACE | | | | 3.84 | | | | 3.84 | M | | | 14 |
| 15 | | SPACE | | | | | 3.84 | | | 3.84 | M | RTU-01(E) | 40A/3P | 16 |
| 17 | | SPACE | | | | | | 3.84 | | 3.84 | M | | | 18 |
| TOTAL CONNECTED LOAD (KVA) | | | | | | 7.90 | 7.90 | 7.90 | | | | | | |

| PANEL: B (E) | | | | | | | | | | MOUNTING: SURFACE | | | |
|----------------------------|-----------|--|-----------|------------|------------------------|----------------------------|-------|-----------------------------|------------|-------------------|-----------------------------|-----------|---------|
| 120/240 VOLTS, | | 1 PHASE, | | 3 WIRE | | PANEL LOCATION: ELE CLOSET | | | | | | | |
| MAIN CB: NA | | MLO: 200A | | BUS: 225A | | MIN, | | FED FROM: DISCONNECT SWITCH | | | | | |
| NOTE: | | | | | | | | | | | | | |
| CKT NO. | TRIP AMPS | DESCRIPTION OF LOAD | LOAD TYPE | LOAD (KVA) | MINIMUM BRANCH CIRCUIT | PER PHASE (KVA) | | MINIMUM BRANCH CIRCUIT | LOAD (KVA) | LOAD TYPE | DESCRIPTION OF LOAD | TRIP AMPS | CKT NO. |
| | | | | | | A | B | | | | | | |
| 1 | 20 | BUILDING SIGNAGE | L | 1.20 | 2#12, #12G, 3/4"C | 1.20 | | | | | | | 2 |
| 3 | 20 | REFRIGERATOR-CLASSROOM | E | 1.80 | 2#12, #12G, 3/4"C | | 1.80 | | | | SPARE | 20/2P | 4 |
| 5 | 20 | OFFICE RECEPTACLES | R | 0.54 | 2#12, #12G, 3/4"C | 0.54 | | | | | SPARE | 20/2P | 6 |
| 7 | 20 | WASHER/DRYER | E | 1.27 | 2#12, #12G, 3/4"C | | 1.27 | | | | | | 8 |
| 9 | 20 | KITCHEN COUNTER KITCHENETTE | E | 0.18 | 2#12, #12G, 3/4"C | 0.18 | | | | | SPARE | 20/2P | 10 |
| 11 | 20 | KITCHEN COUNTER KITCHENETTE | E | 0.18 | 2#12, #12G, 3/4"C | | 0.18 | | | | | | 12 |
| 13 | 20 | RESTROOM,PANTRY,STAFF AREA,OFFICE LIGHTING | L | 0.53 | 2#12, #12G, 3/4"C | 0.53 | | | | | SPARE | 20/2P | 14 |
| 15 | 20 | DISPLAY AREA RECEPTACLE | R | 0.36 | 2#12, #12G, 3/4"C | | 0.36 | | | | | | 16 |
| 17 | 20 | DISPLAY AREA RECEPTACLE | R | 0.36 | 2#12, #12G, 3/4"C | 0.36 | | | | | SPARE | 20/2P | 18 |
| 19 | 20 | RESTROOM RECEPTACLES | R | 0.36 | 2#12, #12G, 3/4"C | | 0.36 | | | | | | 20 |
| 21 | 20 | RECEPTION HALL,CLASS ROOM LIGHTS,EF-1 | L | 0.65 | 2#12, #12G, 3/4"C | 0.65 | | | | | SPARE | 20/2P | 22 |
| 23 | 50A/2P | ELECTRIC RANGE SINGLE OVEN WITH AIR FRYER | E | 4.80 | 2#8, #10G, 3/4"C | 4.80 | | | | | | | 24 |
| 25 | 50A/2P | ELECTRIC RANGE SINGLE OVEN WITH AIR FRYER | E | 4.80 | 2#8, #10G, 3/4"C | 6.60 | | 2#12, #12G, 3/4"C | 1.80 | E | MICROWAVE HOOD COMBI | 20 | 26 |
| 27 | 20 | RECEPTION HALL,CLASS ROOM RECEPTACLES | R | 0.90 | 2#12, #12G, 3/4"C | | 1.00 | 2#12, #12G, 3/4"C | 0.10 | M | RCP-1 | 20 | 28 |
| 29 | 20 | PANTRY RECEPTACLES | R | 0.54 | 2#12, #12G, 3/4"C | 0.54 | | | | | SPARE | 20 | 30 |
| 31 | 20 | DRINKING FOUNTAIN -RECEPTACLES | R | 0.18 | 2#12, #12G, 3/4"C | 1.98 | | 2#12, #12G, 3/4"C | 1.80 | E | DISHWASHER | 20 | 32 |
| 33 | 20 | STAFF AREA RECEPTACLES | R | 0.54 | 2#12, #12G, 3/4"C | 0.64 | | 2#12, #12G, 3/4"C | 0.10 | M | TEF-1(E) | 20 | 34 |
| 35 | 20 | ELEI CLOSET RECEPTACLES | R | 0.54 | 2#12, #12G, 3/4"C | 0.72 | | 2#12, #12G, 3/4"C | 0.18 | E | KITCHEN COUNTER KITCHENETTE | 20 | 36 |
| 37 | 20 | ROOFTOP RECEPTACLES | R | 0.18 | 2#12, #12G, 3/4"C | 0.36 | | 2#12, #12G, 3/4"C | 0.18 | E | KITCHEN COUNTER KITCHENETTE | 20 | 38 |
| 39 | 50A/2P | ELECTRIC RANGE SINGLE OVEN WITH AIR FRYER | E | 4.80 | 2#8, #10G, 3/4"C | 6.00 | | 2#12, #12G, 3/4"C | 1.20 | L | BUILDING SIGNAGE | 20 | 40 |
| 41 | 50A/2P | ELECTRIC RANGE SINGLE OVEN WITH AIR FRYER | E | 4.80 | 2#8, #10G, 3/4"C | 6.60 | | 2#12, #12G, 3/4"C | 1.80 | E | MICROWAVE HOOD COMBI | 20 | 42 |
| TOTAL CONNECTED LOAD (KVA) | | | | | | 18.20 | 18.47 | | | | | | |

PANEL SCHEDULE GENERAL NOTES

- A. E.C. SHALL COORDINATE WITH MECHANICAL AND PLUMBING CONTRACTOR/EQUIPMENT/MANUFACTURER FOR THE EXACT ELECTRICAL REQUIREMENTS AND ACCORDINGLY PROVIDE THE BREAKER, CABLE AND CONDUIT ACCORDINGLY. BASE BID ACCORDINGLY.
- B. E.C. SHALL COORDINATE WITH ALL EQUIPMENT MANUFACTURER/SUPPLIER/ARCHITECT/ OWNER FOR THE EXACT ELECTRICAL REQUIREMENTS AND ACCORDINGLY PROVIDE THE BREAKER, CABLE AND CONDUIT ACCORDINGLY. BASE BID ACCORDINGLY.
- C. CONTRACTOR SHALL COORDINATE WITH ARCHITECT/OWNER/LV CONSULTANT FOR POWER AND ELECTRICAL REQUIREMENTS FOR THE LOW VOLTAGE AND SECURITY SYSTEM IN FIELD AND ACCORDINGLY PROVIDE THE ELECTRICAL CONNECTIONS/CIRCUITS FROM SPARE CIRCUITS FOR LOW VOLTAGE SYSTEM PER REQUIREMENTS. BASE BID ACCORDINGLY.

PLUMBING SPECIFICATIONS

- ALL WORK TO BE DONE IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE 2018 OF THE PLUMBING SECTION AND TO COMPLY WITH ALL LOCAL RULES AND ORDINANCES.
1. ALL WORKMANSHIP & MATERIALS TO BE IN STRICT ACCORDANCE WITH APPLICABLE NATIONAL, STATE, LOCAL CODES, RULES & ORDINANCES.
 2. CONTRACTOR SHALL VISIT THE JOB SITE & THOROUGHLY FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS.
 3. ALL MATERIALS TO BE NEW.
 4. ALL WORK SHALL BE PERFORMED BY A LICENSED PLUMBING CONTRACTOR IN A FIRST-CLASS WORK MANNER. THE COMPLETE SYSTEM SHALL BE FULLY OPERATIVE.
 5. ALL EXCAVATION & BACK FILL AS REQUIRED FOR THIS PHASE OF CONSTRUCTION SHALL BE A PART OF THIS CONTRACT.
 6. REQUIRED INSURANCE SHALL BE PROVIDED BY THIS CONTRACTOR FOR PROTECTION AGAINST PUBLIC LIABILITY & PROPERTY DAMAGE FOR THE DURATION OF WORK.
 7. CONTRACTOR SHALL PAY FOR ALL PERMITS, FEES, INSPECTIONS & TEST. SUBSTITUTIONS BY THE CONTRACTOR SHALL HAVE PRIOR APPROVAL. ANY CHANGES MADE WITHOUT APPROVAL WILL BE PAID BY THE CONTRACTOR TO RETURN TO THE ORIGINAL DESIGN.
 8. EXISTING PIPE SIZES TO BE VERIFIED BY THE PLUMBER AND UPGRADED IF NOT LARGE ENOUGH TO ACCOMMODATE LOAD.
 9. ALL WORK TO BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROCESS OF CONSTRUCTION.
 10. THE CONTRACTORS AND SUBCONTRACTORS SHALL BE RESPONSIBLE FOR REVIEW OF THE GENERAL NOTES, SPECIFICATIONS AND ALL OTHER DRAWINGS OR ADDITIONAL REQUIREMENTS WHICH MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS.
 11. DRAWINGS FOR PLUMBING WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT, AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENT. FIELD VERIFY FINAL LOCATIONS FOR EQUIPMENT. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR DIMENSIONS AND EXACT LOCATION OF PLUMBING FIXTURES. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS.
 12. DRAWINGS AND SPECIFICATIONS GOVERN WHERE THEY EXCEED CODE REQUIREMENTS.
 13. VERIFY LOCATION, SIZE, TRAPS, INVERTS OF ALL EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION. ADVISE ENGINEER OF ANY DISCREPANCIES. ANY COST RESULTING FROM DISCREPANCIES NOT REPORTED AT THIS TIME SHALL BE PAID BY THE CONTRACTOR.
 14. INSTALL SIOUX CHIEF 650 SERIES WATER HAMMER ARRESTORS IN PIPING TO QUICK-CLOSING VALVES AS DEFINED IN INTERNATIONAL PLUMBING CODE 2018.
 15. PROVIDE SHUT-OFF VALVES IN THE SUPPLY PIPING TO EVERY FIXTURE.
 16. ALL FIXTURES MUST BE PROVIDED WITH READILY ACCESSIBLE TOPS.
 17. CAP ALL PIPING OPENINGS DURING CONSTRUCTION UNTIL FINAL CONNECTIONS TO EQUIPMENT AND ACCESSORIES ARE MADE.
 18. SANITARY PIPE 2 1/2" AND SMALLER SHALL BE SLOPED AT 1/4" PER FOOT. SANITARY PIPE 3" AND LARGER SHALL BE SLOPED AT 1/8" PER FOOT. CONDENSATE PIPING SHALL BE SLOPED AT A MINIMUM OF 1/4" PER FOOT.
 19. WHERE SOIL CONDITIONS REQUIRE THE USE OF PIER, OR PILING SUPPORTED GRADE BEAM CONSTRUCTION OR WHERE SOIL CONDITIONS ARE SUSCEPTIBLE TO WASH OUT DURING HIGH WATER LEVELS, OR IN FILLED GROUND WHERE THE SOIL COMPACTION IS LESS THAN 95% OR AS REQUIRED BY THE LOCAL AUTHORITY HAVING JURISDICTION, THE SANITARY PIPING TO BE INSTALLED BY TRENCHING INTO THE FILL, AND THEN PUTTING HANGERS WITH SUPPORT RODS ON THE PIPES AS THEY ARE INSTALLED. THE HANGER RODS EXTENDING UPWARD TO BE EMBEDDED IN AND ANCHORED IN THE CONCRETE PER ASTM F236-06S AND UNDERGROUND PIPE SHALL BE CAST IRON SCHEDULE 40 PIPING OR SOLID CORE PVC WHICH SHALL CONFORM TO ASTM STANDARD D2665.
 20. DO NOT ROUTE ANY WET PIPING OVER ELECTRICAL EQUIPMENT.
 21. WATER PIPING TO BE TYPE "L" COPPER ABOVE AND TYPE "K" COPPER BELOW GRADE.
 22. SOIL, WASTE, VENT AND STORM PIPING TO BE PVC SCHEDULE #40 DWV CONFORMING TO ASTM D2689 PLUMING AND AS PER INTERNATIONAL PLUMBING CODE 2018, TABLE 702.2 & 702.3. CAST IRON SHALL BE USED IN COMMON PLENUM AREAS.
 23. RAINWATER/STORM WATER TO BE SCHEDULE #40 DWV, INSULATE WITH ARMAFLEX INSULATION WHEN IN COMMON PLENUM.
 24. HOT WATER, TEMPERED WATER AND HOT WATER RETURN PIPES TO BE INSULATED WITH ARMAFLEX INSULATION FROM THE WATER HEATER TO THE FURTHEST FIXTURE PER INTERNATIONAL PLUMBING CODE 2018, 607.2.1.
 25. THE DISCHARGE WATER TEMPERATURE FROM LAVATORIES, BIDETS & GROUP WASH FIXTURES LOCATED IN PUBLIC TOILET FACILITIES PROVIDED FOR CUSTOMERS, PATRONS AND VISITORS SHALL BE LIMITED TO A MAXIMUM TEMPERATURE OF 110°F (43°C) BY A WATER TEMPERATURE LIMITING DEVICE CONFORMING TO ASSE 1070 OR CSA B125.3.
 26. WHERE DISSIMILAR METALS ARE TO BE JOINED, APPROVED INSULATING UNIONS SHALL BE USED.
 27. ALL PLUMBING PIPES PENETRATING FIRE RATED WALLS, CEILINGS AND/OR FLOORS SHALL BE PROVIDED WITH U.L. APPROVED FIRE RATED ASSEMBLY. (EQUAL TO WALL FIRE RATING - SEE ARCHITECTURAL DRAWINGS).
 28. HOT WATER EXPANSION LOOPS SHALL BE INSTALLED AS REQUIRED TO PARTLY ABSORB TENSION OR COMPRESSION PRODUCED DURING ANTICIPATED CHANGE IN TEMPERATURE. INSTALL EXPANSION JOINTS OF SIZES OF PIPING IN WHICH THEY ARE INSTALLED. INSTALL ALIGNMENT GUIDES TO GUIDE EXPANSION AND TO AVOID LOADING STRESS.
 29. NO PVC PIPING TO BE USED IN COMMON PLENUM AREAS.
 30. WHERE CEILING SPACE IS A COMMON PLENUM NO COMBUSTIBLE MATERIALS ALLOWED.
 31. CONDENSATE LINES TO BE COPPER/PVC DEPENDING ON PROJECT REQUIREMENTS. INSULATE WITH ARMAFLEX INSULATION.
 32. FLUSH OUT EXISTING WATER PIPING. STERILIZE THE NEW WATER PIPING LINES BY INTRODUCING IN THEM A SOLUTION OF CALCIUM HYPOCHLORITE OR CHLORINE OF LIME. OPEN AND CLOSE ALL NEW VALVES WHILE SYSTEM IS BEING CHLORINATED. AFTER THE STERILIZING AGENT HAS BEEN APPLIED FOR 24 HOURS, TEST FOR RESIDUAL CHLORINE AT THE ENDS OF LINES. IF LESS THAN 10 PARTS PER MILLION IS INDICATED, REPEAT THE PROCESS. WHEN TESTS SHOW AT LEAST 10 PARTS PER MILLION OF RESIDUAL CHLORINE, FLUSH OUT THE SYSTEM UNTIL ALL TRACES OF THE CHEMICAL USED ARE REMOVED. MAKE NECESSARY CONNECTIONS TO STERILIZE PIPING.
 33. AFTER STERILIZATION HAS BEEN ACCOMPLISHED INITIATE A BACTERIOLOGICAL TEST PERFORMED BY AN APPROVED TESTING LABORATORY. WATER SHALL BE DRAWN FROM THE SYSTEM AT A POINT FURTHEST FROM THE WATER ENTRANCE TO THE BUILDING. A CERTIFIED TEST REPORT OF THESE TESTS RESULTS INDICATING SATISFACTORY COLIFORM COUNT, COLOR AND CHLORINE RESIDUAL SHALL BE PRESENTED TO THE ARCHITECT AND OWNER WHEN THE WATER SUPPLY PIPING SYSTEM IS SUBSTANTIALLY COMPLETED DURING CONSTRUCTION. ANOTHER SIMILAR TEST SHALL BE PERFORMED AT THE TIME OF ISSUANCE OF THE CERTIFICATE OF OCCUPANCY WITH ANOTHER CERTIFIED TEST REPORT PRESENTED TO THE ARCHITECT AND OWNER AT THAT TIME.
 34. FEDERAL LAW MANDATES AS OF JANUARY 4, 2017 THE WETTED SURFACE OF EVERY PIPE, FIXTURE AND FITTING INSTALLED IN POTABLE WATER APPLICATIONS SHALL NOT CONTAIN MORE THAN 0.25% LEAD BY WEIGHT. SOLDER AND FLUX SHALL NOT CONTAIN MORE THAN 0.2% LEAD. NON-COMPLIANCE MAY RESULT IN FINES, INSTALLED PRODUCT REMOVAL COSTS, LAWSUITS BY PRIVATE PARTIES OR GOVERNMENT AGENCY.
 35. CONTRACTOR SHALL GUARANTEE ALL MATERIALS & WORKMANSHIP FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN ONE (1) YEAR FROM DATE OF ACCEPTANCE. CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED THEREBY.
 36. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS PRIOR TO BID AND INSTALLATION. INFORM THE ENGINEER OF RECORD OF ANY DISCREPANCY BETWEEN THE DOCUMENTS AND THESE CONDITIONS AND HE SHALL INCLUDE IN HIS BID TO CORRECT THE SAME AS DIRECTED. THE ENGINEER AND THE ARCHITECT ARE NOT RESPONSIBLE FOR ANY ADDITIONAL COSTS RESULTING FROM VERIFIABLE EXISTING CONDITIONS DISCOVERED AFTER THE CONTRACT HAS BEEN AWARDED.
 37. CONTRACTOR SHALL KEEP AS-BUILTS AND SUBMIT TO THE ENGINEER OF RECORD FOR REVIEW. ALL CHANGES SHALL BE FORWARDED A MINIMUM OF (2) WEEKS PRIOR TO FINAL INSPECTION. ANY EXPENSES, SUCH AS REVISIONS OR AS-BUILTS, NECESSARY FOR FINAL C.O. SHALL BE AT THE EXPENSE OF THE OWNER.

ENERGY CONSERVATION NOTES

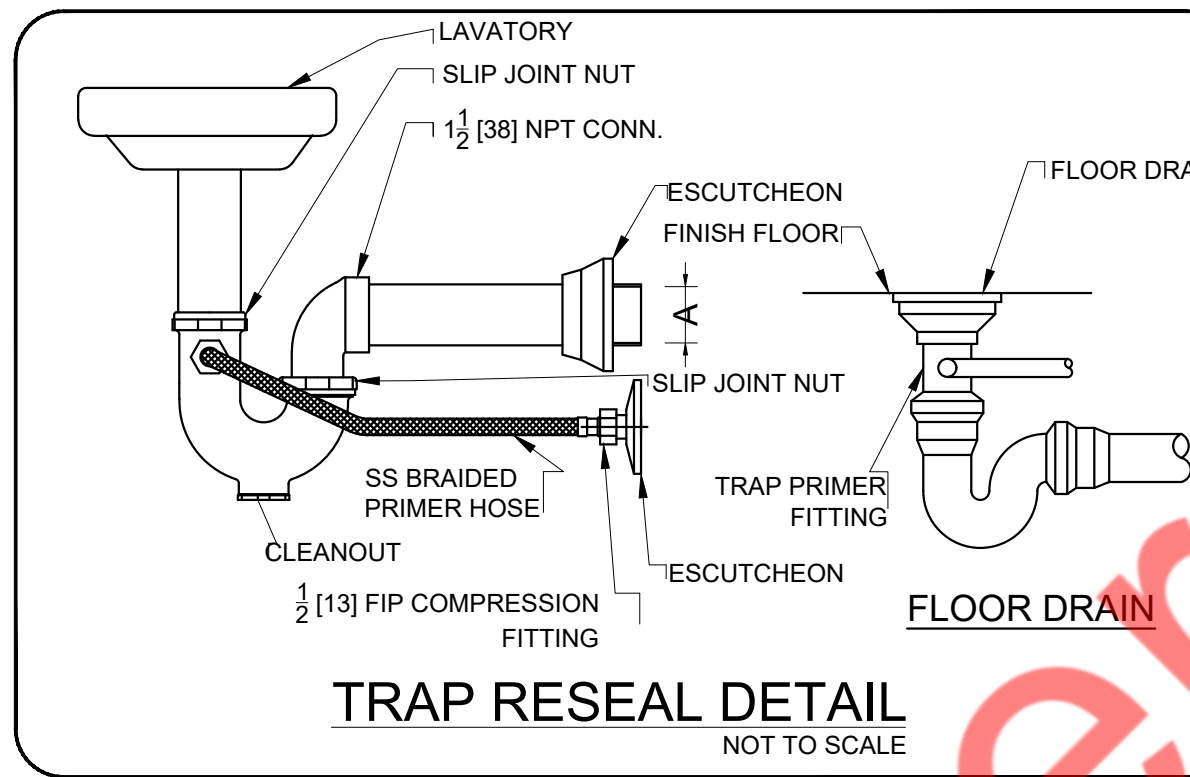
1. ALL DOMESTIC WATER PIPING ABOVE GRADE SHALL BE INSULATED WITH FIRE-RETARDANT, FACTORY-APPLIED JACKET PROVIDE COLD WATER PIPING WITH FACTORY-APPLIED VAPOR BARRIER. INSULATION REQUIREMENT SHOULD COMPLY WITH INTERNATIONAL ENERGY CONSERVATION CODE 2018, SECTION C403.11.3 REFER BELOW TABLE.

| MINIMUM PIPE INSULATION THICKNESS | | | | | | | |
|--|--|-----------------------------|------------------------------------|--------------|--------------|-----------|-----|
| FLUID OPERATING TEMPERATURE RANGE AND USAGE (°F) | INSULATION CONDUCTIVITY | | NOMINAL PIPE OR TUBE SIZE (INCHES) | | | | |
| | CONDUCTIVITY BTU-IN (H·FT ² ·F) | MEAN RATING TEMPERATURE, °F | <1 | 1 to < 1 1/2 | 1 1/2 to < 4 | >4 to < 8 | >8 |
| 105-140 | 0.21-0.28 | 100 | 1.0 | 1.0 | 1.5 | 1.5 | 1.5 |
| 40-60 | 0.21-0.27 | 75 | 0.5 | 0.5 | 1.0 | 1.0 | 1.0 |
2. HW SYSTEM PIPING IS DESIGNED AS PER MAXIMUM ALLOWED PIPE LENGTH METHOD AS PER INTERNATIONAL ENERGY CONSERVATION CODE 2018, C404.5.1. THE HW PIPE LENGTH FROM THE NEAREST SOURCE OF HEATED WATER TO THE TERMINATION OF THE FIXTURE SUPPLY PIPE SHALL BE AS PER FOLLOWING TABLE.

| NOMINAL PIPE SIZE (INCHES) | MAXIMUM PIPING LENGTH (FEET) | |
|----------------------------|------------------------------|----------------|
| | PUBLIC LAV | OTHER FIXTURES |
| 1/2" | 2' | 20' |
| 3/4" | 0.5' | 21' |
| 1" | 0.5' | 13' |
| 1 1/4" | 0.5' | 8' |
| 1 1/2" | 0.5' | 6' |
| 2" OR LARGER | 0.5' | 4' |
3. WATER DISTRIBUTION SYSTEM AS INTERNATIONAL ENERGY CONSERVATION CODE 2018, C404.7, HAVING ONE OR MORE RECIRCULATION PUMPS THAT PUMP WATER FROM A HEATED-WATER SUPPLY PIPE BACK TO THE HEATED-WATER SOURCE THROUGH A COLD-WATER SUPPLY PIPE SHALL BE A DEMAND RECIRCULATION WATER SYSTEM. PUMPS SHALL HAVE CONTROLS THAT COMPLY WITH BOTH OF THE FOLLOWING:
 - a. THE CONTROL SHALL START THE PUMP UPON RECEIVING A SIGNAL FROM THE ACTION OF A USER OF A FIXTURE OR APPLIANCE, SENSING THE PRESENCE OF A USER OF A FIXTURE OR SENSING THE FLOW OF HOT OR TEMPERED WATER TO A FIXTURE FITTING OR APPLIANCE.
 - b. THE CONTROL SHALL LIMIT THE TEMPERATURE OF THE WATER ENTERING THE COLD-WATER PIPING TO 104°F (40°C).
4. AS PER INTERNATIONAL ENERGY CONSERVATION CODE 2018, C404.6.1 HEATED-WATER CIRCULATION SYSTEMS SHALL BE PROVIDED WITH A CIRCULATION PUMP. THE SYSTEM RETURN PIPE SHALL BE A DEDICATED RETURN PIPE OR A COLD WATER SUPPLY PIPE. CONTROLS FOR CIRCULATING HOT WATER SYSTEM PUMPS SHALL START THE PUMP BASED ON THE IDENTIFICATION OF A DEMAND FOR HOT WATER WITHIN THE OCCUPANCY. THE CONTROLS SHALL AUTOMATICALLY TURN OFF THE PUMP WHEN THE WATER IN THE CIRCULATION LOOP IS AT THE DESIRED TEMPERATURE AND WHEN THERE IS NO DEMAND FOR HOT WATER.

PLUMBING LEGEND

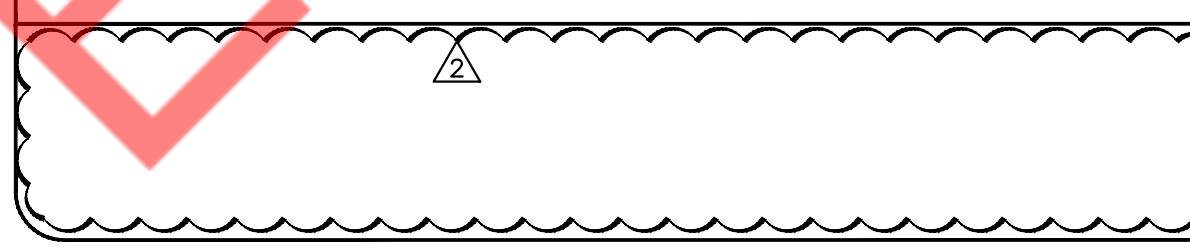
| | |
|--|--------------------------------|
| | SANITARY SEWER PIPING |
| | VENT PIPING |
| | DOMESTIC COLD WATER PIPING |
| | HOT WATER PIPING |
| | HOT WATER RETURN PIPING |
| | PIPE RISE |
| | PIPE DROP |
| | FLOOR CLEAN OUT |
| | P-TRAP |
| | CW DOMESTIC COLD WATER |
| | HW DOMESTIC HOT WATER |
| | HWR DOMESTIC HOT WATER RETURN |
| | FCO FLOOR CLEAN OUT |
| | GATE VALVE |
| | WB WASHER BOX FOR WASHER/DRYER |
| | FD FLOOR DRAIN |
| | WHA WATER HAMMER ARRESTER |
| | BV BALANCING VALVE |
| | PC POINT OF CONNECTION |
| | TMV THERMOSTATIC MIXING VALVE |



GREASE INTERCEPTOR SIZING



GREASE INTERCEPTOR SCHEDULE

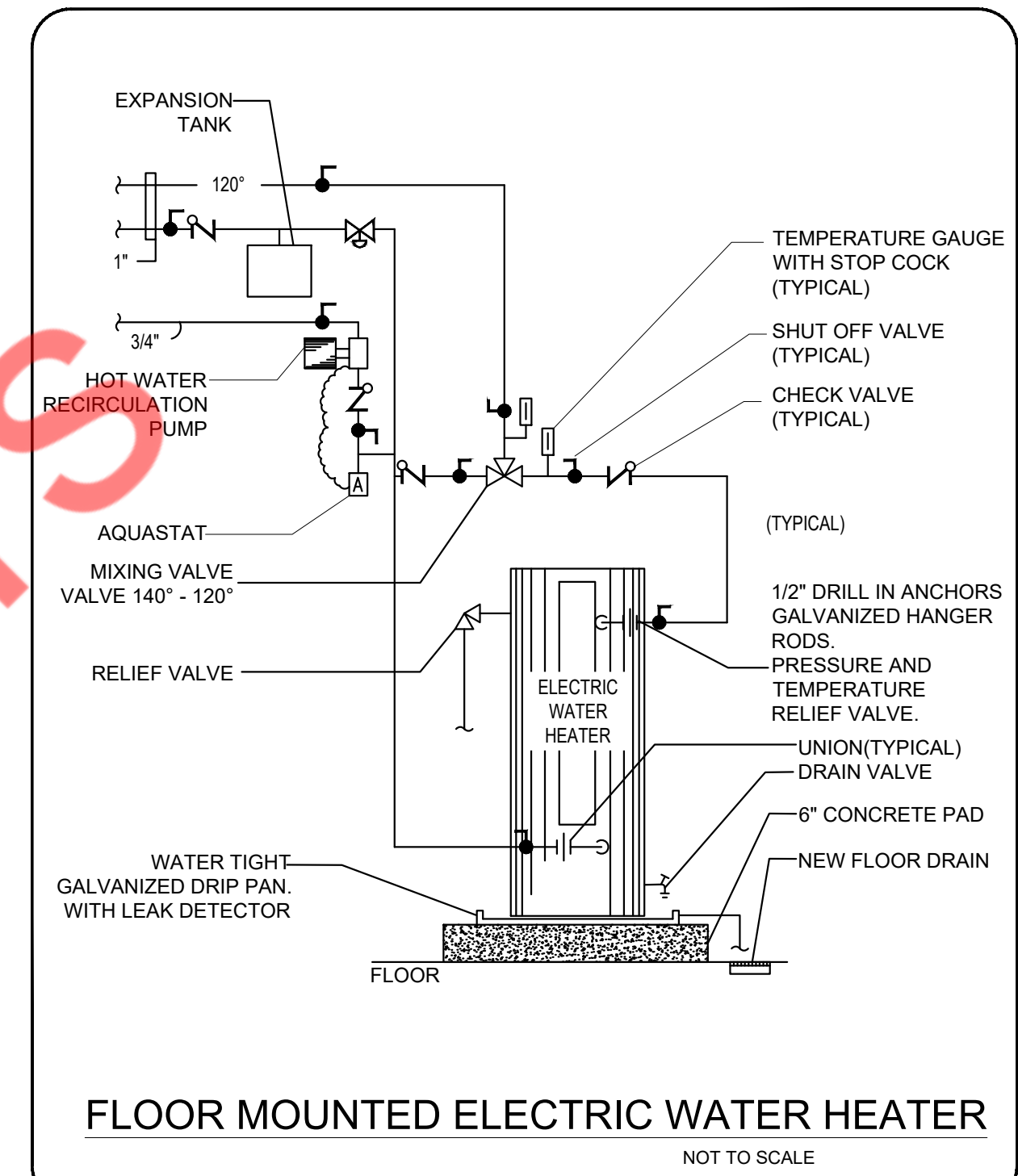


RESTROOM FIXTURE SCHEDULE

| Qty. | Description | Manufacturer | Model | WATER | | WASTE | | Usage | Spec |
|------|---------------------------|--------------|-------|-------|------|-------|-------|-------|------|
| | | | | Hot | Cold | Waste | Usage | | |
| 2 | LAVATORY | - | - | | | 2" | | | |
| 2 | TRAP COVER | - | - | | | | | | |
| 1 | WATER CLOSET | - | - | 3/4" | 4" | 1.28 | GPF | | |
| 1 | WATER CLOSET SEAT | - | - | | | | | | |
| 2 | LAVATORY FAUCET | - | - | 1/2" | 1/2" | 2" | 1.2 | GPF | |
| 1 | URINAL | - | - | | | 1/2" | 3" | 1.2 | GPF |
| 4 | THERMOSTATIC MIXING VALVE | WATTS | LFMMV | 1/2" | 1/2" | | | | |

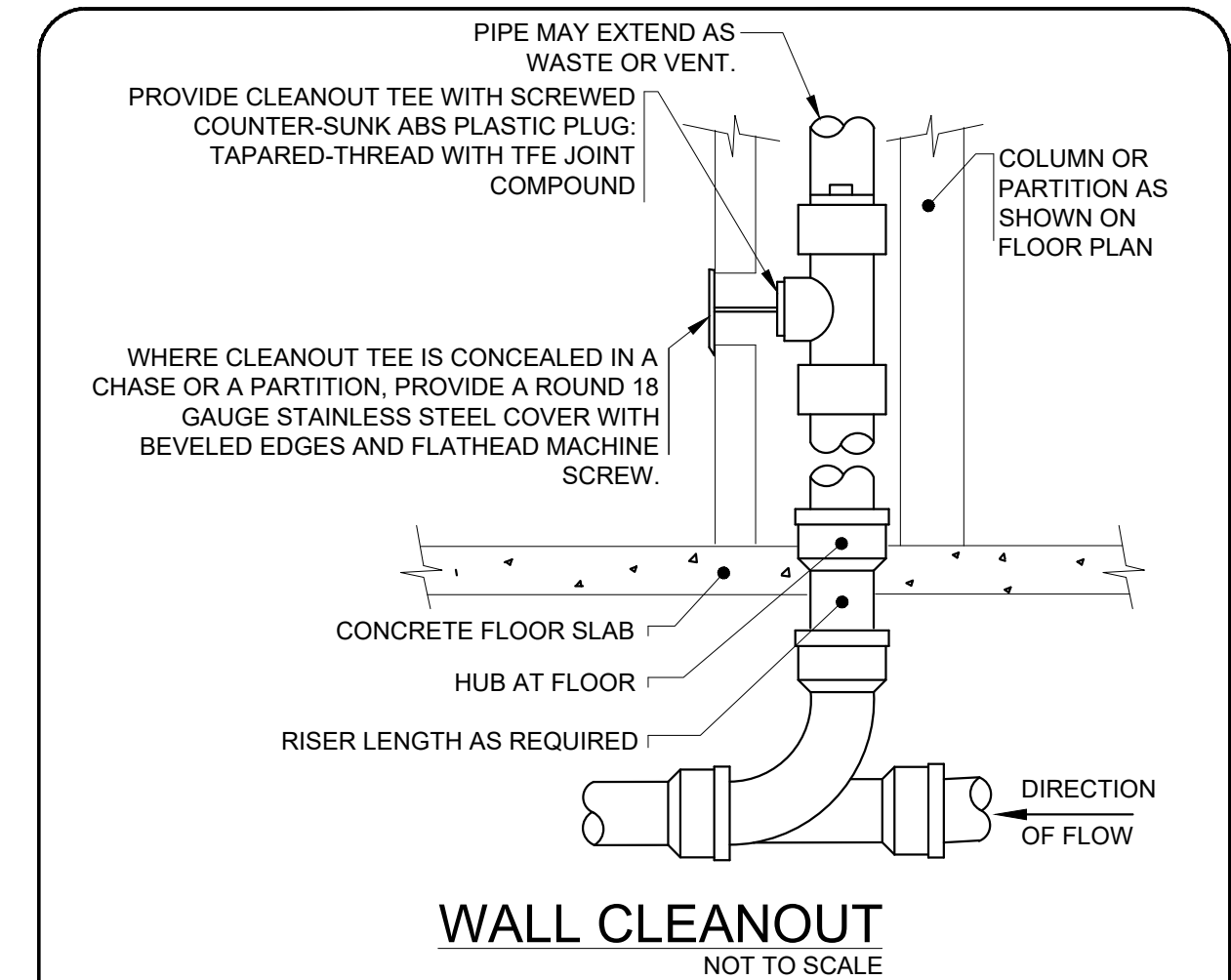
OTHER EQUIPMENT PLUMBING SCHEDULE

| Qty. | Description | Manufacturer | Model | Hot | Cold | Waste | Vent | P-trap |
|------|-------------------------|---------------|---|------|------|-------|------|--------|
| 1 | HAND SINK | AMGOOD | - | | | 2" | 2" | 2" |
| 2 | SINK FAUCET | KRAUS | KPF-1610 | 1/2" | 1/2" | | | |
| 1 | MOP SINK | ADVANCE TABCO | 9-OP-20-EC-X | | | 3" | 2" | 3" |
| 1 | MOP SINK FAUCET | - | - | 3/4" | 3/4" | | | |
| 1 | UNDERCOUNTER DISHWASHER | WHIRLPOOL | - | 1/2" | | | | |
| 1 | WASHER / DRYER | MAGIC CHEF | MCSCWD27W5 | 1/2" | 1/2" | 2" | 2" | 2" |
| 1 | DRINKING FOUNTAIN | - | - | | 1/2" | 2" | 2" | 2" |
| 1 | ELECTRIC WATER HEATER | AO SMITH | DEN-66 | | | | | |
| 2 | FLOOR SINK | ZURN | Z1900-23-31 (ZS1900 IF IN EXPOSED AREAS) | | | 3" | 2" | 3" |
| 3 | FLOOR DRAIN | ZURN | KITCHEN: ZN-415N-8B; RESTROOM: ZN-415N-6B-P | | | 3" | 2" | 3" |
| 1 | PREP SINK | ELKAY | LUSTERTONE ILR4322R2 | | | | | |
| 1 | PREP SINK FAUCET | PEERLESS | P288LF | 1/2" | 1/2" | | | |



FLOOR MOUNTED ELECTRIC WATER HEATER

NOT TO SCALE

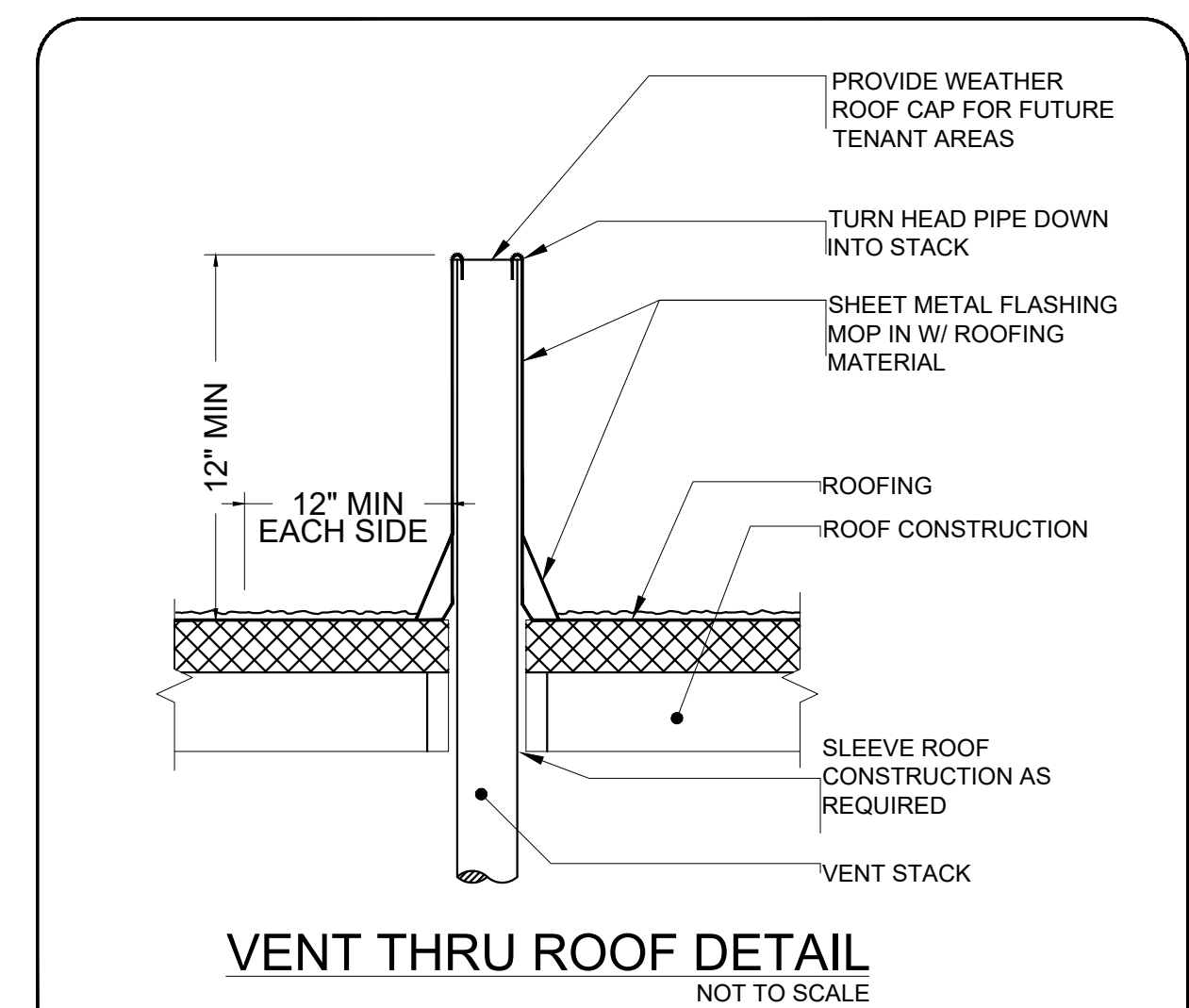


WALL CLEANOUT

NOT TO SCALE

WALL CLEANOUT DETAIL NOTES

- 1) PROVIDE WCO WHERE SHOWN ON PLANE, AND ON SANITARY WASTE BRANCHES NOT SERVED WITH A FLOOR CLEANOUT.
- 2) LOCATE ABOVE FIXTURE FLOOR RIM WITHIN 4' OF FLOOR.
- 3) CONSULT LOCAL CODES FOR OTHER WCO REQUIREMENTS.
- 4) LONG SWEEP AT END OF LINE OR COMBINATION WYE AND EIGHT BEND IN RUN OF LINE.
- 5) CLEAN OUT FACE SHALL BE WITHIN 4" OF WALL SURFACE. PROVIDE A PIPE EXTENSION IF REQUIRED.



VENT THRU ROOF DETAIL NOTE

ANY VENT WITHIN 10'-0" OF ANY DOOR, WINDOW, OR EXHAUST OPENING SHALL EXTEND NOT LESS THAN 3'-0" ABOVE SUCH OPENING

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PROJECT

YOUNG CHEFS ACADEMY

REVISIONS DATES:

| SR. NO. | DETAIL | DATE |
|---------|----------------|----------|
| 1 | CLIENT CHANGES | 9/10/24 |
| 2 | CLIENT CHANGES | 11/07/24 |

ISSUE DATE: 05.07.24

PROJECT #: -

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PLUMBING NOTES & DETAILS

P-1

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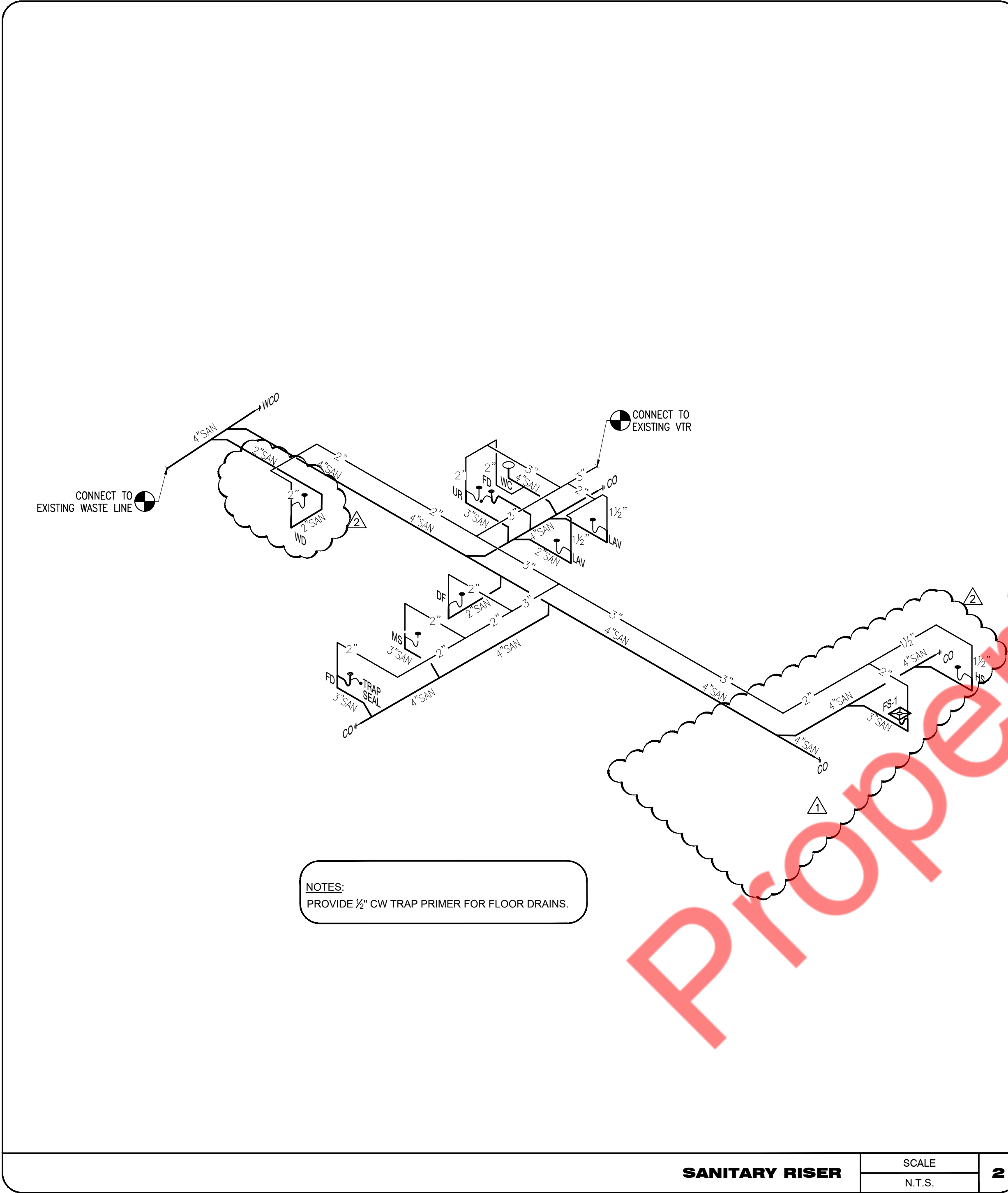
| REVISIONS DATES: | | |
|------------------|----------------|----------|
| SR. NO. | DETAIL | DATE |
| △ | CLIENT CHANGES | 9/10/24 |
| △ | CLIENT CHANGES | 11/07/24 |

ISSUE DATE: 05.07.24
 PROJECT #: -
 DRAWN BY: NYE
 CHECKED BY: NYE

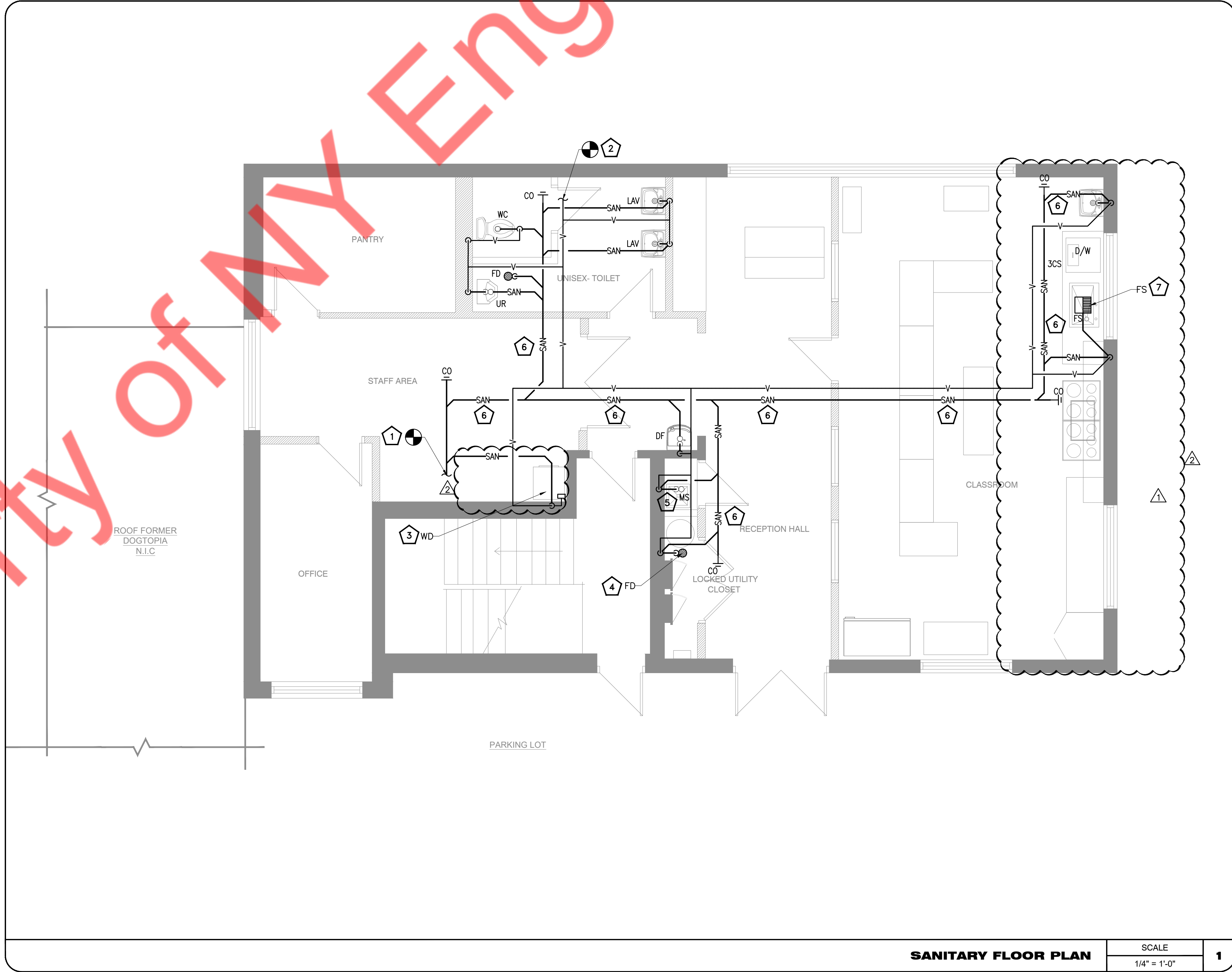
SANITARY FLOOR PLAN & RISER

- GENERAL NOTES**
- SLOPE OF DRAINAGE PIPING SHALL BE 1/8" PER FOOT OF RUN FOR PIPE 3" TO 6" AND 1/4" PER FOOT OF RUN FOR PIPE 2-1/2" AND SMALLER. VENT PIPING SHALL BE PITCHED TO DRAIN.
 - CONTRACTOR TO FIELD VERIFY FEASIBILITY OF SLAB PENETRATION AS PER STRUCTURAL REQUIREMENT.
 - ALL MATERIAL INDICATED AND IMPLIED ON THESE DRAWINGS SHALL BE NEW UNLESS OTHERWISE NOTED.
 - PROVIDE ACCESS PANELS FOR CLEANOUTS AS REQUIRED.
 - REFER SANITARY RISER DIAGRAM FOR ALL PIPE SIZES.
 - PROJECT IS A COOKING SCHOOL FOR CHILDREN, NOT A PERMANENT FOOD SERVICE ESTABLISHMENT. FOOD IS NOT SOLD OR SERVED TO THE PUBLIC FOR CONSUMPTION. FATS, OIL OR GREASE WILL NOT BE PRODUCED IN ANY SIGNIFICANT QUANTITY.

- SANITARY KEYED NOTES**
- CONNECT NEW 4" SANITARY WASTE PIPING TO EXISTING SANITARY WASTE LINE. CONTRACTOR TO FIELD VERIFY SIZE, LOCATION AND INVERT OF EXISTING SANITARY WASTE LINE.
 - CONNECT NEW 3" VENT PIPING TO EXISTING VTR. CONTRACTOR TO FIELD VERIFY SIZE, LOCATION OF THE EXISTING VTR.
 - ROUTE WASTE FROM WASHER/DRYER MACHINE (WD) TO WASHER BOX FOR THE SAME.
 - ROUTE INDIRECT WASTE FROM WATER HEATER (WH1) TO FLOOR DRAIN WITH APPROVED AIR GAP.
 - ROUTE INDIRECT WASTE FROM RPZ TO MOP SINK WITH APPROVED AIR GAP.
 - ALL SANITARY PIPES RUNNING AT CEILING LEVEL OF THE BELOW FLOOR. CONTRACTOR TO COORDINATE WITH THE BELOW FLOOR TENANT FOR ROUTINE THE SANITARY PIPE.
 - ROUTE INDIRECT WASTE FROM PREP SINK UNIT (PS) & DISHWASHER (DW) TO FLOOR SINK WITH APPROVED AIR GAP.



SANITARY RISER SCALE N.T.S. 2



SANITARY FLOOR PLAN SCALE 1/4" = 1'-0" 1

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PROJECT

YOUNG CHEFS ACADEMY

| REVISIONS DATES: | | |
|------------------|----------------|----------|
| SR. NO. | DETAIL | DATE |
| △ | CLIENT CHANGES | 9/10/24 |
| △ | CLIENT CHANGES | 11/07/24 |

ISSUE DATE: 05.07.24
 PROJECT #: -
 DRAWN BY: NYE
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WATER FLOOR PLAN & RISER

- GENERAL NOTES**
- CW/HW/HWR PIPING TO BE PROVIDED WITH INSULATION AS PER 2018 INTERNATIONAL ENERGY CONSERVATION CODE (REFER SHEET P-1).
 - PROVIDE BRANCH PRV IF PRESSURE EXCEEDS 80 PSI.
 - PROVIDE ACCESS PANELS FOR SHUT-OFF VALVES AS REQUIRED.
 - REFER RISER DIAGRAM FOR ALL PIPE SIZES.
 - CONTRACTOR TO FIELD VERIFY FEASIBILITY OF SLAB PENETRATION AS PER STRUCTURAL REQUIREMENT.
 - WATER HEATER DRAIN SPILLS TO THE FLOOR DRAIN.
 - PROVIDE WATER-HAMMER ARRESTOR WHERE QUICK-CLOSING VALVES ARE USED.

- WATER KEYED NOTES**
- CONNECT NEW 1-1/4" COLD WATER LINE TO EXISTING COLD WATER LINE. VERIFY EXACT LOCATION, SIZE CONNECTION POINT IN FIELD PRIOR TO CONSTRUCTION. IF EXISTING PIPING IS NOT LARGE ENOUGH CONTRACTOR TO UPGRADE WATER SERVICE AS REQUIRED TO ACCOMMODATE NEW LOAD.
 - PROVIDE LAVATORIES & PREP SINKS WITH THERMOSTATIC MIXING VALVES (TMV-1). LIMIT TEMPERATURE TO 110 DEG F. ALSO PROVIDE BALANCING VALVE ON HWR LINE LESS THAN 2' AWAY FROM LAVATORY.
 - PROVIDE NEW WATER HEATER (WH-1) WITH EXPANSION TANK (ET-1), RECIRCULATION PUMP (RCP-1) & THERMOSTATIC MIXING VALVE (TMV-2). LIMIT TEMPERATURE AFTER TMV-2 TO 120 DEG F. REFER SHEET P-1 FOR INSTALLATION DETAILS.

WATER HEATER SCHEDULE

| | |
|----------------|------------|
| MANUFACTURER | AO SMITH |
| MODEL | DEN-66 |
| EQUIPMENT TAG | WH-1 |
| STATUS | NEW |
| QUANTITY | 1 |
| CAPACITY | 66 GALLONS |
| FUEL | ELECTRIC |
| KW | 12 KW |
| RECOVERY | 49 GPH* |
| DIMENSIONS | 97% |
| PHASE | 3-PH |
| VOLTAGE | 208V |
| AMPERAGE | 74.9 |
| WEIGHT (EMPTY) | 177 LBS |

NOTES:
 1. *100°F TEMPERATURE RISE.
 2. REFER SHEET P-1 FOR INSTALLATION DETAILS.

RECIRCULATION PUMP SCHEDULE

| | |
|----------------------|-------------------------|
| MANUFACTURER & MODEL | GRUNDFOS UP 15-18 B5/TL |
| EQUIPMENT TAG | RCP-1 |
| STATUS | NEW |
| QUANTITY | 2 |
| HEAD | 13' |
| WATER TEMP.(°F) | 140 |
| PUMP TYPE | INLINE |
| MHP | 85 WATTS |
| V/PHHZ | 115/160 |
| RPM | 2280 |
| SERVICE FACTOR | 1.0 |

NOTES:
 1. PROVIDE AQUA STAT WITH AUTOMATIC TIMER KIT FOR THE TEMPERATURE CONTROL OF HOT WATER SYSTEM.
 2. COORDINATE ELECTRICAL REQUIREMENTS FOR TIMER WITH ELECTRICAL CONTRACTOR.

EXPANSION TANK SCHEDULE

| | |
|----------------------|--------------------|
| MANUFACTURER & MODEL | THERM-X-TROL ST-12 |
| EQUIPMENT TAG | ET |
| STATUS | NEW |
| TANK VOLUME | 4.4 GALLONS |
| DIMENSIONS | 11" DIA X 15" H |
| SHIPPING WEIGHT | 7 LBS |

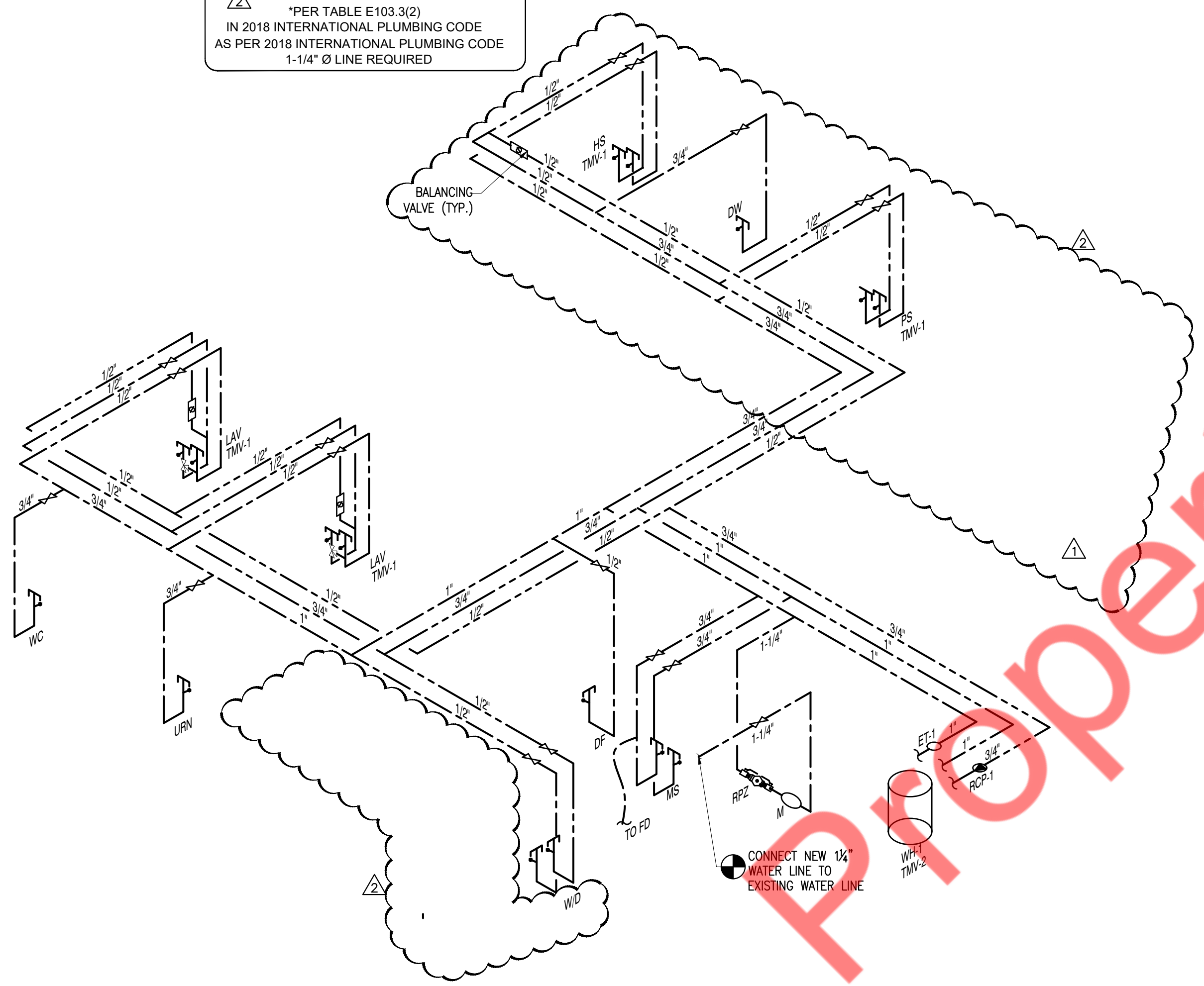
THERMOSTATIC MIXING VALVE SCHEDULE

| | | | |
|----------------------|----------------------|----------------------|---------------------|
| MANUFACTURER & MODEL | USG-M-M2 (ASSE 1070) | WATTS | LFMMVM1 (ASSE 1017) |
| EQUIPMENT TAG | TMV-1 | TMV-2 | |
| PIPE SIZE | 1/2" | 1" | |
| FLOW RANGE | 2.25 GPM | 0.5-20 GPM | |
| TEMP RANGE | 120-180 DEG F | 120-200 DEG F | |
| MATERIAL | BRASS | COPPER-SILICON ALLOY | |

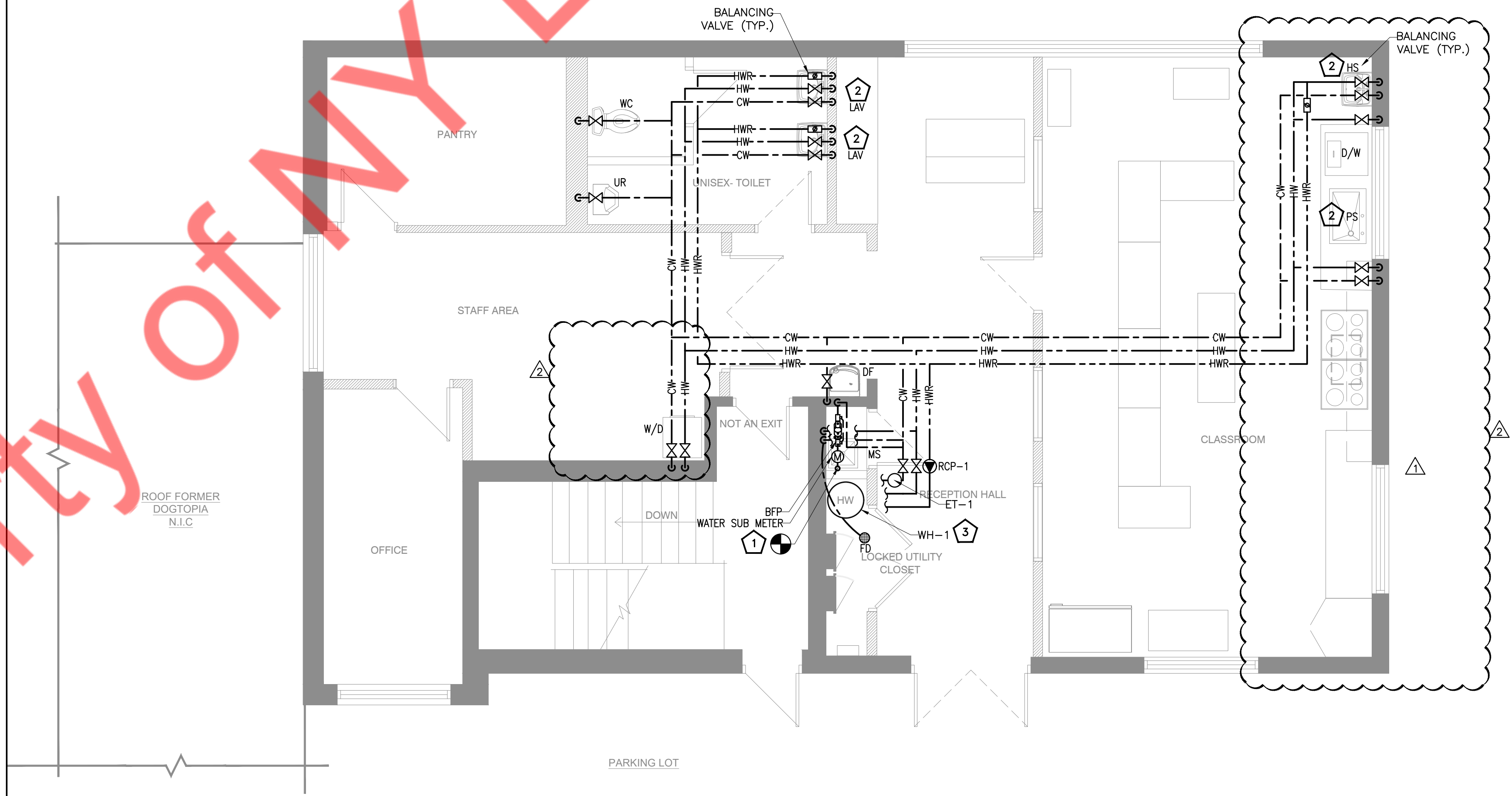
FIXTURE FACTOR VALUE *

| | |
|---------------------------|--------|
| 1 WATER CLOSET @ 5 | = 5 |
| 2 LAVATORY @ 2 | = 4 |
| 1 WASHER/ DRYER @ 3 | = 3 |
| 1 MOP SINK @ 3 | = 3 |
| 1 DRINKING FOUNTAIN @ 0.5 | = 0.5 |
| 1 HAND SINK @ 2 | = 2 |
| 1 URINAL @ 5 | = 5 |
| 1 DISHWASHER @ | = 1.4 |
| 1 PREP SINK @ | = 2 |
| TOTAL | = 25.9 |

*PER TABLE E103.3(2)
 IN 2018 INTERNATIONAL PLUMBING CODE
 AS PER 2018 INTERNATIONAL PLUMBING CODE
 1-1/4" Ø LINE REQUIRED



WATER RISER SCALE N.T.S. 2



WATER FLOOR PLAN SCALE 1/4" = 1'-0" 1