SHOPS AT JORDAN CROSSING
RETAIL SHELL BUILDING B
29906 JORDAN CROSSING RD BROOKSHIRE, TX 77423

MEP PLANS

SPECIAL NOTICE TO CONTRACTORS

1. ALL CONTRACTORS (GENERAL CONTRACTOR AND SUB-CONTRACTORS) BIDDING THIS PROJECT ARE REQUIRED TO VISIT THE JOB SITE AND VERIFY THE EXISTING CONDITIONS PRIOR TO SUBMITTING THEIR BID. CONTRACTORS ARE TO CAREFULLY REVIEW ALL CONSTRUCTION DOCUMENTS AND NOTE ANY DISCREPANCIES BETWEEN THE CONSTRUCTION DOCUMENTS AND THE CONDITIONS OBSERVED AT THE JOB SITE PRIOR TO SUBMISSION OF ANY BID. THE BUILDING OWNER REPRESENTATIVE LISTED BELOW MAY BE CONTACTED FOR ACCESS TO THE JOB SITE.

2. CONTRACTORS ARE RESPONSIBLE FOR VERIFYING THE LOCATION AND CONDITION OF ALL POINTS OF CONNECTION, LOCATION AND CONDITION OF ALL BUILDING (ROOF/FLOOR/CEILING) PENETRATIONS, LOCATION AND CONDITION OF ALL UTILITIES AND BUILDING SYSTEMS INCLUDING, BUT NOT LIMITED TO, TXS, WATER, SEWER, VENT, ELECTRICAL, BUILDING MECHANICAL SYSTEMS, DUCT CONNECTIONS, EXHAUST/OUTSIDE AIR CONNECTIONS, SECURITY, FIRE ALARM, DATA, AND PHONE PRIOR TO SUBMISSION OF THEIR BID.

3. ANY DISCREPANCIES BETWEEN THE CONSTRUCTION DOCUMENTS AND THE CONDITIONS OBSERVED SHALL BE BROUGHT TO THE ATTENTION, IN WRITING, TO THE ARCHITECT AND/OR ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.

EQUIPMENT MARKINGS.

ALL EQUIPMENT USED ON CIRCUITS OVER 300 VOLTS BETWEEN CONDUCTORS SHALL HAVE A WARNING SIGN EITHER ON OR ADJACENT TO THE EQUIPMENT. WARNING SIGNS SHALL BE MADE IN ACCORDANCE WITH ANSI Z535 ENVIRONMENTAL AND SAFETY SIGNS. THE LANGUAGE SHALL READ:

(A) FOR VOLTAGES OVER 300 VOLTS BUT LESS THAN 600 VOLTS: 480 VOLTS. (LABEL DIMENSIONS SHALL BE 1" X 4"); AND

(B) OR VOLTAGES OVER 600 VOLTS AND THERE ARE EXPOSED PARTS: DANGER – HIGH VOLTAGE – KEEP OUT.

SPACES ABOUT ELECTRICAL EQUIPMENT.

(A) WORKING SPACE. DISCONNECTS THAT DO NOT PROVIDE OVER–CURRENT, OVERLOAD, SHORT CIRCUIT, OR GROUND FAULT PROTECTION ARE NOT REQUIRED TO MAINTAIN THE DIMENSIONS , WHERE ADEQUATE SPACE IS NOT READILY AVAILABLE AND THE DISCONNECT IS PERMANENTLY LABELED INADEQUATE WORKING SPACE–DO NOT WORK ON WHILE ENERGIZED. THE LABEL SHALL BE READILY VISIBLE ON THE EXTERIOR OF THE DISCONNECT.

(B) HEIGHT OF WORKING SPACE. SEE THIS SECTION OF THE NEC AND ADD THE FOLLOWING EXCEPTION: IN UNDERGROUND WATER WELL PUMP ENCLOSURES, SERVICE EQUIPMENT OR PANEL BOARDS THAT DO NOT EXCEED 200 AMPERES, OPERATING AT 250 VOLTS OR LESS AND ONLY FEEDING EQUIPMENT ASSOCIATED WITH THE WATER WELL ENCLOSURE, SHALL BE PERMITTED IN SPACES WHERE THE HEADROOM IS LESS THAN SIX AND ONE HALF FEET (6 1/2 FT.) BUT GREATER THAN FIVE FEET (5 FT.) PROVIDED THE ENCLOSURE IS SUPPLIED WITH A REMOVABLE LID, THAT WHEN REMOVED WOULD ALLOW A MINIMUM OF SIX AND ONE HALF FEET (6 1/2 FT.) HEADROOM.

NOTES:

ACCESSIBILITY REQUIREMENTS FOR PERSONS WITH DISABILITIES:
ELECTRICAL DEVICE INSTALLATION SHALL COMPLY WITH ACCESSIBILITY CODES ADOPTED FOR TEXAS.

SCOPE OF WORK

1. PLUMBING SYSTEM
2. MECHANICAL SYSTEM.
3. ELECTRICAL SYSTEM.

THE FOLLOWING DOCMENT SHALL BE PROVIDED TO THE OWNER

A. OWNERS MANUAL AND INSTALLATION INSTRUCTIONS COVERING ALL SYSTEMS EQUIPMENT REQUIREMENTS.
B. RECORD SHOP DRAWINGS IN AUTOCAD FORMAT.
C. RECORD COPY OF SITE SPECIFIC SOFTWARE (FOR SOFTWARE BASED).

APPLICABLE CODES

1. 2021 TX BUILDING STANDARDS ADMINISTRATIVE CODE.
2. 2021 TX BUILDING CODE (IBC).
3. 2020 TX ELECTRICAL CODE (NEC).
4. 2021 TX MECHANICAL CODE (IMC).
5. 2021 TX PLUMBING CODE(IPC).
6. 2021TX ENERGY CODE (IECC).
7. 2021 TX FIRE CODE, (IFC).

HEIGHT LIMIT PER BUILDING CODE:

THE BUILDING ARE ONE STORY

SHEET INDEX

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E–2	ELECTRICAL LIGHTING PLAN
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APPLICABLE CODES

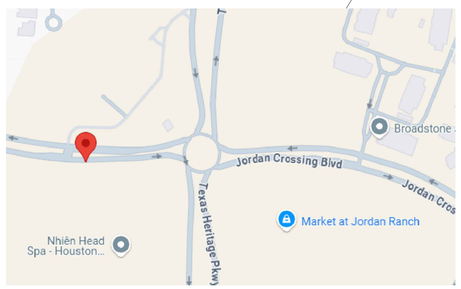
PARTIAL LIST OF APPLICABLE STANDARDS

1. 2021 TX ELECTRICAL CODE Adopts with amendments NFPA 70, 2022

PROJECT INFORMATION

PROVIDE ALL LABOR AND MATERIALS FOR WORK AS DEPICTED ON DRAWINGS AND IN SPECIFICATIONS TO INSTALL NEW SYSTEM

PROJECT LOCATION



N
NOT TO SCALE

GENERAL NOTES

1. THE CONTRACTOR SHALL THOROUGHLY REVIEW ALL THE DRAWINGS BEFORE START OF WORK AND SHALL COORDINATE WITH ALL OTHER DISCIPLINE AND ANY DISCREPANCY APPEARS IT SHOULD BE BROUGHT TO THE CONSULTANT'S KNOWLEDGE IMMEDIATELY BEFORE START WORK.

2. NO WORK SHALL BE CARRIED OUT UNLESS SHOP DRAWING ARE PREPARED AND SUBMITTED BY THE CONTRACTOR FOR THE APPROVAL OF CONSULTANT.

3. MEP SERVICES SHALL NOT CUT IN ANY STRUCTURAL BEAMS, RIBS OR ANY OTHER STRUCTURAL ELEMENTS UNLESS A PRIOR WRITTEN APPROVAL HAS BEEN TAKEN FROM THE STRUCTURE ENGINEER.

4. MEP CONTRACTOR SHALL PROVIDE SLEEVE / OPENINGS / PIPES IN CIVIL WORK PRIOR TO CONSTRUCTION FOR RESPECTIVE SERVICES.

5. CONTRACTOR SHALL TAKE APPROVAL FROM CONSULTANT FOR ALL THE MATERIAL TO BE INSTALLED PRIOR TO PURCHASE HOWEVER, PAKISTAN CABLE, NEW AGE AND PIONEER CABLE ARE APPROVED.

5. ALL DISTRIBUTIONS BOARD DB's SHALL BE APPROVED BY CONSULTANT PRIOR TO PURCHASE BY CONTRACTOR, CONTRACTOR PROVIDE TECHNICAL SUBMITTAL FOR DB's.

6. MAIN AND SUB TELEPHONE/TV/FACP JUNCTION BOX SHALL BE PROVIDED WHERE REQUIRED.

7. ALL KINDS OF WIRING SHALL NOT BE VISIBLE INSIDE OR OUTSIDE THE BUILDING, CONTRACTOR SHALL PLACE SLEEVE / CONDUITS WHERE REQUIRED DURING CONSTRUCTIONS.

8. ALL MATERIALS SHALL BE NEW AND THE BEST OF THEIR RESPECTIVE KINDS, SUITABLE FOR THE CONDITIONS AND DUTIES IMPOSED UPON SAME AT THE BUILDING. MATERIALS SHALL MATCH EXISTING FOR SIMILAR SERVICE EXCEPT AS OTHERWISE NOTES HERE IN.

9. ALL PIPING SHALL BE SUBSTANTIALLY SUPPORTED FROM THE BUILDING STRUCTURE. ALL HANGERS, RODS AND SUPPORTS SHALL BE SPECIFICALLY APPROVED FOR USE INTENDED.

10. THE DRAWINGS SHOWN ARE PERFORMANCE DRAWINGS ONLY AND NOT TO BE USED AS A SHOPDRAWING. THE CONTRACTOR SHALL SUBMIT DOUBLE LINED SHOPDRAWINGS BASED ON ACTUAL SITE CONDITION AND ACTUAL EQUIPMENT DIMENSIONS. FINAL APPROVAL SHALL BE SUBJECT TO SENIOR ENGINEER REQUIREMENTS/APPROVAL AND LOCAL AUTHORITY REGULATIONS. THE SHOPDRAWINGS SHALL BE UPDATED IN ACCORDANCE TO THESE REQUIREMENTS TO BE INCLUDED IN THE CONTRACTOR'S SCOPE.

11. THE DRAWINGS ARE FOR GUIDANCE ONLY. THE CONTRACTOR SHALL CHECK AND CONFIRM THAT ALL SIZES AND CAPACITY MENTIONED IN THE DRAWINGS ARE CORRECT AND AS PER STANDARDS. THE CONTRACTOR SHALL SUBMIT RELEVANT CALCULATIONS FOR SENIOR ENGINEER APPROVAL. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE THAT THE SHOPDRAWINGS ARE IN COMPLIANCE WITH LOCAL REGULATIONS.
SENIOR ENGINEER

12. THE CONTRACTOR SHALL NOT BE ALLOWED TO INSTALL WITHOUT OBTAINING AN APPROVED SHOPDRAWING FROM SENIOR ENGINEER.

13. THE CONTRACTOR SHALL NOT BE ALLOWED TO INSTALL ANY EQUIPMENTS AND MATERIALS WITHOUT OBTAINING APPROVAL FROM SENIOR ENGINEER.

14. THE SHOPDRAWING SHOULD INDICATE THE EXACT LOCATION OF THE EQUIPMENT, DISTANCES FROM WALLS, BOTTOM LEVELS OF THE SERVICES, INVERT LEVELS, CEILING VOID SECTION FOR SERVICES, EQUIPMENT ROOM/PLANT SECTIONS AND ENSURE THAT THE SHOP DRAWING HAS BEEN COORDINATED WITH THE ARCHITECTURAL AND MEP DRAWINGS.

15. THE CONTRACTOR SHALL BE HELD LIABLE FOR ANY FAULT THAT WILL OCCUR DURING CONSTRUCTION AND COMMISSIONING, IF ANY INSTALLATION WAS DONE WITHOUT AN APPROVED SHOPDRAWING AND APPROVED MATERIALS FROM SENIOR ENGINEER.

16. THE MATERIALS SHALL COMPLY TO MEP SPECIFICATIONS.

17. IF ANY UNEXPECTED DISCOVERY OF SUSPECTED HAZARDOUS MATERIALS IS MADE DURING THE COURSE OF WORK, THE CONTRACTOR SHALL REPORT THE DISCOVERY IMMEDIATELY REPORT TO THE OWNER. THE CONTRACTOR SHALL STOP ANY WORK THAT MAY DISTURB THE SUSPECTED HAZARDOUS MATERIAL. CONTRACTOR SHALL RESUME WORK AFTER ALL HAZARDOUS MATERIAL HAS BEEN REMEDIATED.

GENERAL NOTES

- ALL FINISHES ARE 3" THICK.
- ALL DIMENSIONS ARE IN FEETS.

PROJECT NAME:
29906 JORDAN CROSSING RD BROOKSHIRE, RX 77423

DRAWING TITLE:
COVER SHEET

DRAWN BY: -
CHECKED BY: -
APPROVED BY: -
DATE: 06/22/2025

REV:	DESCRIPTION:	BY:	DATE:

PROJECT NO: 11
HEET SIZE: D
DRAWING NO: **G-1**
SCALE: 1/16"= 1'-0"
REVISION: 0

GENERAL NOTES

1. THE INTENT OF THESE PLANS AND SPECIFICATIONS IS TO INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND SERVICES NECESSARY TO FURNISH, INSTALL, TEST, AND ADJUST A COMPLETE WORKABLE PLUMBING INSTALLATION AS SHOWN, PRESCRIBED, OR REASONABLY IMPLIED BUT NOT LIMITED TO THAT EXPLICITLY INDICATED IN THE CONTRACT DOCUMENTS, BUT NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE INTENT THEREOF.
2. COORDINATE ENTIRE INSTALLATION OF THE PLUMBING SYSTEM WITH THE WORK OF OTHER TRADES PRIOR TO ANY FABRICATION OR INSTALLATION. FIELD VERIFY ALL DIMENSIONS AND CONDITIONS. REPORT ANY DISCREPANCIES, IN WRITING, TO THE ENGINEER PRIOR TO COMMENCEMENT OF WORK.
3. CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS WITH ALL CHANGES NOTED THEREON AT THE COMPLETION OF THE PROJECT IN ACCORDANCE WITH THE SPECIFICATIONS.PROVIDE ONE YEAR WARRANTY ON ALL PARTS AND LABOR.
6. THE DRAWINGS ARE DIAGRAMMATIC AND INTENDED TO SHOW SCOPE. CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHER TRADES TO PROVIDE THE BEST ARRANGEMENT OF ALL DUCT, PIPE, CONDUIT, ETC.
7. ALL CUTTING AND PATCHING OF THE EXISTING STRUCTURE SHALL BE PROVIDED UNDER OTHER SECTIONS OF THE WORK. PROVIDE NECESSARY REQUIREMENTS TO THE PROJECT SUPERINTENDENT.
8. CONDENSATE DRAINS SHALL BE PROVIDED FOR EACH AIR CONDITIONING UNIT. HORIZONTAL CONDENSATE DRAINS ABOVE ANY CEILING SHALL BE INSULATED WITH MIN. 3/8" THICK CLOSED CELL INSULATION.
9. PIPING:

A. WASTE, VENT, AND STORM DRAIN PIPING SHALL BE CO-EXTRUDED PVC SCHEDULE 40) PIPE
B. WATER PIPE SHALL BE CPVC PIPE
C. CONDENSATE PIPING SHALL BE CO-EXTRUDED PVC (SCHEDULE 40) PIPE
D. INSIDE TXS PIPING SHALL BE BLACK IRON SCHEDULE 40 WITH MALLEABLE IRON FITTINGS. OUTSIDE SHALL BE TXLVANIZED IRON SCHEDULE 40 WITH GALVANIZED FITTINGS. GAS LINE TO BE PAINTED GRAY IN COLOR. A 24 HOUR METERED GAS TEST SHALL BE REQUIRED.
E. ALL PIPING NOT ENCLOSED IN CONDITION SPACE OR AT EXTERIOR WALLS SHALL BE INSULATED.
F. PIPING: PVC SCHEDULE 40, SCHEDULE 80 AND CPVC PIPING WITH SOLVENT WELD FITTINGS SHALL BE USED WHERE PERMITTED BY CODE/LOCAL AUTHORITIES

11. ALL VENTS OR EXHAUSTS SHALL BE AT LEAST 10 FT. AWAY OR 3 FT. ABOVE ANY WINDOW, DOOR, OPENING, OR AIR INTAKE.
12. CLEANOUTS SHALL BE INSTALLED PER THE INTERNATIONAL PLUMBING CODE.
13. PROVIDE WATER TIGHT FLASHINGS WHEREVER PIPES PASS THROUGH EXTERIOR WALLS, ROOFS, OR FLOORS.
14. PROVIDE ISOLATION FOR ALL PIPES THAT COME IN CONTACT WITH THE STRUCTURE.
15. LOCATION OF EXISTING UTILITIES AND POINTS OF CONNECTION ARE APPROXIMATE. CONTRACTOR SHALL VERIFY EXACT LOCATIONS AND DEPTHS OF EXISTING UTILITIES AND SERVICES PRIOR TO STARTING WORK OF THIS SECTION. IF INDICATED POINTS OF CONNECTION CANNOT BE MADE TO EXISTING UTILITIES AS FOUND, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO INSTALLING ANY WORK WHICH MAY BE AFFECTED.
16. VALVES SHALL BE NIBCO, JENKINS, HAMMOND, RED & WHITE OR APPROVED EQUAL.SERVICE PRESSURE SHALL BE SUITABLE FOR SERVICE INTENDED.THE MAIN WATER SHUT OF VALVE SHALL BE A FULL PORT BALL TYPE AND APPROVED FOR SERVICE INTENDED.
17. CONTRACTOR SHALL PROVIDE ALL SHUT OFF VALVES AS NECESSARY TO ISOLATE ANY EQUIPMENT, PLUMBING ITEMS, OR FIXTURES, THAT MAY NEED SERVICING OR ARE SUBJECT TO FAILURE WHETHER OR NOT SUCH VALVES ARE SHOWN ON THE DRAWINGS.
18. PROVIDE HANGERS AND SUPPORTS AS REQUIRED. PLUMBERS TAPE AND WIRE ARE NOT ACCEPTABLE.
19. CONTRACTOR IS RESPONSIBLE FOR HIS OWN TRENCHING, BACKFILL, AND COMPACTION OF TRENCHES NECESSARY TO COMPLETE HIS SCOPE OF WORK. BACKFILLED TRENCHES SHALL BE RETURNED TO THEIR ORIGINAL GRADE UNLESS NOTED OTHERWISE.
20. CONTRACTOR SHALL AFFIX A MAINTENANCE LABEL TO ALL EQUIPMENT REQUIRING ROUTINE MAINTENANCE AND SHALL PROVIDE MAINTENANCE AND OPERATIONAL MANUALS IN ACCORDANCE WITH THE SPECIFICATIONS.
21. ALL EQUIPMENT THAT REQUIRES KEYS OR SPECIAL TOOLS TO OPERATE SHALL SUPPLY THE OWNER WITH TWO OF ANY SUCH KEYS OR TOOLS FOR EACH PIECE OF EQUIPMENT THAT REQUIRE THE SAME.
25. ANY CHANGE OR DEVIATION FROM THESE PLANS OR SPECIFICATIONS SHALL REQUIRE THE APPROVAL, IN WRITING, OF THE ENGINEER PRIOR TO COMMENCEMENT OF SUCH WORK.
26. ALL PLUMBING, ELECTRICAL, AND TXS LINES SHALL BE CONCEALED WITHIN THE THE BUILDING STRUCTURE TO AS GREAT EXTENT AS POSSIBLE. ALL LINES NOT CONCEALED SHALL BE SECURED 6" OFF THE FLOOR AND 3/4" FROM THE WALLS USING STANDOFF BRACKETS
27. AN APPROVED BACKFLOW PREVENTOR SHALL BE PROPERLY INSTALLED UPSTREAM OF ANY POTENTIAL HAZARD BETWEEN THE POTABLE WATER SUPPLY AND SOURCE OF COMTAMINATION.
28. WATER SUPPLY CARBONATORS SHALL BE PROTECTED BY AN APPROVED REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTOR. THE RELIEF VALVE SHALL DRAIN IN-DIRECTLY TO A FLOOR SINK WITH A 1" MIN. AIR TXP.

PLUMBING SPECIFICATIONS

1. THE WORK INCLUDES MODIFICATION TO THE EXISTING PLUMBING SYSTEM AND PROVIDING NEW MATERIALS, FITTINGS AND ACCESSORIES NECESSARY FOR A COMPLETE FUNCTIONING PLUMBING SYSTEM.
2. ALL WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES AND/OR ORDINANCES AND IS SUBJECT TO INSPECTION.
3. HOOK-UP CHARGES, PERMITS AND ALL OTHER EXPENSES RELATED TO A COMPLETE AND FUNCTIONING PLUMBING SYSTEM ARE INCLUDED AS A PART OF THIS SECTION.
4. WARRANTY: PROVIDE LABOR AND MATERIALS TO REPAIR OR REPLACE DEFECTIVE PARTS AND MATERIALS AS REQUIRED FOR ONE YEAR AFTER SUBSTANTIAL COMPLETION OR OWNER ACCEPTANCE OF THE COMPLETED PROJECT.
5. PROVIDE A SEPARATE LINE ITEM DEDUCT AMOUNT ON THE PROPOSAL FORM TO DELETE WARRANTY SERVICE, AT THE OWNER'S OPTION.
6. THE INTENT OF THE DRAWINGS IS TO INDICATE THE GENERAL EXTENT OF WORK REQUIRED FOR THE PROJECT. THE DRAWINGS FOR PLUMBING WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, FIXTURES AND EQUIPMENT REQUIRED.
7. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENTS.
8. REFER TO MANUFACTURER'S STANDARD ROUGH-IN DRAWINGS FOR PLUMBING FIXTURE INSTALLATION REQUIREMENTS. COMPLY WITH ALL APPLICABLE ADA INSTALLATION REQUIREMENTS.
9. COORDINATE WITH THE WORK OF OTHER SECTIONS, EQUIPMENT FURNISHED BY OTHERS, AND WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITE.
10. PIPING SYSTEMS

- GENERAL:

A. ALL PIPING SHALL BE RUN PARALLEL TO BUILDING LINES AND SUPPORTED AND ANCHORED AS REQUIRED TO FACILITATE EXPANSION AND CONTRACTION.
B. ALL PIPING SHALL BE CONCEALED EXCEPT IN UNFINISHED SPACES.
C. INSTALL AS REQUIRED TO MEET ALL CONSTRUCTION CONDITIONS AND TO ALLOW FOR INSTALLATION OF OTHER WORK SUCH AS DUCTS AND ELECTRICAL CONDUIT.
D. AT ALL CONNECTIONS BETWEEN FERROUS PIPING AND NONFERROUS PIPING, PROVIDE AN ISOLATING DIALECTIC UNION.
E. ALL HANGERS SHALL BE COMPATIBLE WITH PIPING MATERIAL TO PREVENT CORROSION.
F. PROVIDE ALL FITTINGS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY TO FACILITATE THE PLUMBING SYSTEM'S FUNCTIONING AS INDICATED BY THE DESIGN AND THE EQUIPMENT INDICATED.

11. FIXTURES/EQUIPMENT FURNISHED BY OTHERS: PLUMBING CONTRACTOR SHALL PROVIDE UTILITY CONNECTIONS REQUIRED SUCH AS WATER, TXS, AIR, SUPPLIES, WASTE OUTLET, TRAPS, ETC.
12. AT ALL PLUMBING TYPE FIXTURES OR EQUIPMENT FURNISHED BY OWNER, GENERAL CONTRACTOR, FOOD SERVICE CONTRACTOR, EQUIPMENT SUPPLIER, ETC. INCLUDED ARE STOP VALVES, ESCUTCHEONS, AND CHROME PLATED BRASS TUBING WITH COMPRESSION FITTINGS.
13. SEWER AND WASTE PIPING:

A. PROVIDE ALL DRAINS AND SEWERS WITHIN THE SPACE WITH CONNECTION TO THE EXISTING DRAINAGE SYSTEMS ON-SITE.
B. SANITARY DRAINAGE PIPING ABOVE FLOOR SHALL BE CO-EXTRUDED PVC DWV (SCHEDULE 40) PIPE, FITTINGS AND CONNECTIONS.
C. SANITARY DRAINAGE PIPING BELOW GRADE SHALL BE CO-EXTRUDED PVC DWV (SCHEDULE 40) PIPE WITH SOLVENT WELD FITTINGS MAY BE USED (WHERE PERMITTED BY CODE/LOCAL AUTHORITIES).
D. ALL DRAINAGE PIPING SHALL BE UNIFORMLY PITCHED, 1/4" PER FOOT UNLESS OTHERWISE REQUIRED BY EXISTING CONDITIONS, OR INDICATED ON THE DRAWINGS.

14. VENTS: PROVIDE A COMPLETE SYSTEM OF STANDARD WEIGHT CAST IRON NO-HUB VENT RISERS WHERE THE CEILING SPACE IS USED AS A RETURN AIR PLENUM OR USE CO-EXTRUDED PVC DWV (SCHEDULE 40) PIPE (WHERE PERMITTED BY CODE/LOCAL AUTHORITIES).
15. WHERE THERE IS A DUCTED RETURN AIR SYSTEM. DO NOT USE PVC PIPE IN RETURN AIR PLENUM SPACES. THE VENT SYSTEM SHALL BE CARRIED THROUGH THE ROOF WITH APPROPRIATE FLASHING.
16. CONDENSATE AND INDIRECT DRAIN PIPING:PIPING ABOVE FLOOR SHALL BE CO-EXTRUDED PVC DWV (SCHEDULE 40) PIPE, FITTINGS AND CONNECTIONS. PIPING BELOW GRADE SHALL BE CO-EXTRUDED PVC DWV(SCHEDULE 40) PIPE WITH SOLVENT WELD FITTINGS.
17. CLEANOUTS: PROVIDE CLEANOUTS AT THE END OF EACH HORIZONTAL RUN, AND AT THE BASE OF ALL VERTICAL WASTE AND DRAIN PIPES. CLEANOUTS SHALL BE OF THE SAME SIZE AS THE PIPES THEY SERVE, CONFORMING TO CODE REQUIREMENTS. PROVIDE SUITABLE WALL OR FLOOR CLEANOUTS WITH ACCESSORIES TO OBSCURE FROM VIEW.
18. WATER DISTRIBUTION PIPING:

A. LAYOUT WATER PIPING SO THAT THE ENTIRE SYSTEM CAN BE DRAINED. HOT AND COLD WATER PIPING SHALL BE 1/2" MIN. CPVC PIPE WITH SOLVENT FITTING.
B. PROVIDE WATER HAMMER ARRESTERS AT EACH FIXTURE OR GROUP OF FIXTURES AS REQUIRED.
C. INSTALL CHROME PLATED BRASS ESCUTCHEON PLATES AT ALL PENETRATIONS THROUGH FINISHED SURFACES (INCLUDING CABINET INTERIORS).

19. PIPE INSULATION: INSULATE (AS ALLOWED BY CODE) ALL LISTED SERVICE PIPING AS FOLLOWS. DOMESTIC COLD/HOT WATER, HOT WATER RETURN, STORM WATER PIPING. PROVIDE 1" PREFORMED FIBERGLASS, ASJ/SS-11, FLAME SPREAD 25, SMOKE DEVELOPED 50, ASTM C-547. FOR CONDENSATE PIPING PROVIDE 1/2" THICK INSULATION OF SAME CHARACTERISTICS AS LISTED FOR 1" ABOVE. WHERE PERMITTED BY LOCAL CODES, PROVIDE 1/2" SELF-ADHESIVE UNICELLULAR FOAM PIPE INSULATION WITH PRE-FORMED PVC FITTING COVERS - EQUAL TO SELF-ADHESIVE ARMSTRONG 2000 WITH K FACTOR OF 0.27 AT 75 DEGREES MEAN TEMPERATURE. INSULATE ANY EXPOSED CONDENSATE PIPING WITH WASTE TEMPERATURE BELOW 60 DEGREES F.
20. SHUTOFF VALVES, WITH UNIONS SHALL BE PROVIDED FOR SERVICE TO EACH PLUMBING FIXTURE, FOOD SERVICE EQUIPMENT ITEM OR OTHER EQUIPMENT ITEM, TO FACILITATE ISOLATION FOR REPAIR OR REPLACEMENT. VALVES SHALL BE EQUAL TO JENKINS #902-T BALL VALVE, CHROME-FINISHED BRONZE, TEFLON SEATS AND PACKING, 400 LB. W.O.G., SOLDER END.
21. ACCESS PANELS SHALL BE PROVIDED WHERE CONCEALED CONTROL DEVICES, VALVES, ETC. ARE CONCEALED WITHIN WALLS. WHERE ACCESS FOR ADJUSTMENT AND MAINTENANCE IS POSSIBLE THROUGH LAY-IN SUSPENDED CEILINGS, ACCESS PANELS ARE NOT REQUIRED.

PLUMBING GENERAL NOTES

1. BEFORE BEGINNING EXCAVATIONS OR DEMOLITION OF ANY NATURE WHATSOEVER. CONTRACTOR SHALL LOCATE ALL SERVICES AND UTILITIES OCCURRING WITHIN THE BOUNDS OF THE PROJECT. THE CONTRACTOR SHALL THEN PROCEED WITH CAUTION IN HIS WORK SO THAT NO UTILITY OR LINE SERVING AREAS THAT ARE TO REMAIN BE DAMAGED WITH A RESULTANT LOSS OF SERVICE. SIZE AND LOCATION ON RECORD DRAWINGS.
2. IT IS THE INTENTION OF THESE DRAWINGS TO CALL FOR FINISHED WORK, IE. FULLY ADJUSTED, TESTED, AND READY FOR OPERATION WHENEVER THE WORD "PROVIDE" IS USED, IT SHALL MEAN "FURNISH AND INSTALL COMPLETE AND READY FOR USE".
3. THE PLUMBING DRAWINGS ARE DIAGRAMMATIC AND DO NOT NECESSARILY SHOW EVERY COMPONENT AND/OR ACCESSORY REQUIRED FOR A COMPLETE INSTALLATION. THE CONTRACTOR SHALL INCLUDE SUCH ITEMS AS ARE REQUIRED TO ENSURE THAT THE ENTIRE SYSTEM IS FUNCTIONING IN COMPLIANCE WITH APPLICABLE CODES, ACCEPTED INDUSTRY STANDARDS, AND MANUFACTURER'S INSTALLATION REQUIREMENTS UPON COMPLETION OF THE WORK.
4. ALL CUTTING, DRILLING, AND PATCHING OF WALLS, FLOORS, AND/OR STRUCTURAL MEMBERS, FOR THE INSTALLATION OF THE PLUMBING AND FIRE PROTECTION SYSTEMS SHALL BE PROVIDED. STRUCTURAL COMPONENTS SHALL NOT BE CUT, DRILLED, OR MODIFIED IN A WAY WITHOUT THE STRUCTURAL ENGINEER'S REVIEW AND PRIOR WRITTEN APPROVAL.
5. CONTRACTOR SHALL COORDINATE EQUIPMENT CONNECTIONS WITH EQUIPMENT DRAWINGS AND SUPPLIER. INSTALL EQUIPMENT AND MAKE FINAL FINAL CONNECTIONS FURNISHING CUTOFF VALVES, P-TRAPS, PRV'S, AND PIPING REQUIRED.
6. COORDINATE WATER, WASTE, AND VENT PIPING WITH OTHER TRADES TO AVOID SPACING OR ROUTING PROBLEMS.
7. EQUIPMENT AND CONNECTION AND PIPING SHALL BE FURNISHED AND INSTALLED TO MEET OR EXCEED STATE AND LOCAL CODES AND REQUIREMENTS.
8. FURNISH AND INSTALL SHOCK ABSORBERS IN COLD WATER LINES AT CONNECTIONS TO FLUSH VALVES AND QUICK CLOSING VALVES.
9. PENETRATIONS THROUGH WALLS AND FLOORS SHALL BE SLEEVED AND PATCHED TO MAINTAIN INTEGRITY OF WALL OR FLOOR RATING.
10. DRAWINGS ARE SCHEMATIC IN NATURE. CONTRACTOR IS RESPONSIBLE FOR COORDINATING EXACT ROUTING OF ALL SERVICES WITH EXISTING CONDITIONS AND WITH ALL OTHER TRADES.
11. FLOOR DRAINS. LOCATE FLOOR DRAINS 1/2" BELOW FINISH FLOOR ELEVATION UNLESS SHOWN OTHERWISE (COORDINATE WITH ARCHITECTURAL DRAWINGS).
12. DRAWINGS SHOW KNOWN EXISTING SERVICES IN REASONABLE PROXIMITY. CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS.
13. EXISTING EQUIPMENT, SERVICES, AND CONNECTIONS WHICH ARE DAMAGED DURING CONSTRUCTION SHALL BE REWORKED OR REPLACED AS REQUIRED TO PROVIDE ORIGINAL OPERATION.
14. CONTRACTOR SHALL COORDINATE THE INTERRUPTION OF EXISTING SERVICES WITH OWNER PRIOR TO CONSTRUCTION.
15. PLUMBING CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL CODES AND AUTHORITIES HAVING JURISDICTIONAL AND MAKE FINAL CONNECTIONS TO FIXTURES AND EQUIPMENT. PROVIDE BACKFLOW PREVENTER AT THE LOCATIONS REQUIRED BY CODE AND ALL COVERING AUTHORITIES. VENT PENETRATIONS THROUGH ROOF SHALL MAINTAIN 25' CLEARANCE FROM ANY FRESH AIR INTAKE.

16. ALL LAVATORIES AND SINK WILL BE WITH TAMPERING VALVE

GENERAL NOTES

- ALL FINISHES ARE 3" THICK.
- ALL DIMENSIONS ARE IN FEETS.

PROJECT NAME:
29906 JORDAN CROSSING RD BROOKSHIRE, RX 77423

DRAWING TITLE:
PLUMBING GENERAL NOTES

DRAWN BY: -

CHECKED BY: -

APPROVED BY: -

DATE: 06/22/2025

REV:	DESCRIPTION:	BY:	DATE:

PROJECT NO: 11

HEET SIZE: D

DRAWING NO: **P-1**

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

REVISION: 0

PLUMBING SPECIFICATIONS

2.02 PIPE FLASHINGS
LEAD WITH COUNTER FLASHING RING BY GLENCO, STONEMAN ENGINEERING OR APPROVED EQUAL.
2.03 VALVES
A. GATE VALVES: RED & WHITE 204 OR EQUAL, 3" AND SMALLER.
B. CHECK VALVES: RED & WHITE 238 OR EQUAL, 3" AND SMALLER.
C. BALL VALVEES: BRASS OR BRONZE BODY WITH CHROME -PLATED BRONZE BALL, MSS SP-110, RED & WHITE VALVE 5044F OR EQUAL.
2.04 PLUMBING FIXTURES AND TRIM: PLUMBING FIXTURES TO BE FURNISHED AND INSTALLED UNDER THIS CONTRACT. SEE PLUMBING FIXTURE SCHEDULE.
2.05 PIPE HANGERS AND SUPPORTS
A. SUPERSTRUT, GRINNELL, OR APPROVED EQUAL.
B. INSTALLATION PER MANUFACTURER'S RECOMMENDATIONS.
C. ALL HANGERS BELOW DECK TO BE STAINLESS STEAL. ALL BOLTS AND THREADED ROLS SHALL HAVE DOUBLE NUTS FOR LOCKING.
3.00 - INSTALLATION AND EXECUTION
3.01 GENERAL
SUPPORT C.I. SOIL PIPING AT 5 FEET ON CENTER MAXIMUM AND EACH JOINT AND/OR FITTING. SUPPORT 1/2" AND 3/4" PIPING AT 6 FEET ON CENTER MAXIMUM. SUPPORT 1" TO 1-1/2" PIPING AT 8 FEET ON CENTERS. SUPPORT 2" AND LARGER PIPING AT 10 FEET ON CENTER MAXIMUM. STEEL PIPING 4" AND LARGER MAY BE SUPPORTED AT 12 FEET ON CENTER MAXIMUM EXCEPT FOR VICTAULIC FITTED PIPING WHICH SHALL BE SUPPORTED AT 10 FEET ON CENTER MAXIMUM.
3.02 SPECIAL REQUIREMENTS, RESPONSIBILITIES AND TESTING
A. INSTALL PIPING GENERALLY LEVEL, FREE OF TRAPS AND UNNECESSARY BENDS, TO CONFORM WITH BUILDING REQUIREMENTS. PIPE TO BE FREE OF DEFECTS, AND INSTALLED TO AVOID ANY POSSIBLE TXLVANIC ACTION BY ISOLATING DISSIMILAR METALS.
B. TEST AND RECORD AVAILABLE DOMESTIC WATER PRESSURE IN STATIC AND DYNAMIC CONDITIONS FOR DYNAMIC TESTING RECORD PRESSURE AND FLOW RATE IN GALLONS PER MINUTE. TRANSMIT THIS INFORMATION TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
C. PROVIDE ALL TESTS SPECIFIED HEREINAFTER AND AS OTHERWISE REQUIRED. PROVIDE ALL TEST EQUIPMENT, INCLUDING TEST PUMPS, TXUGES, INSTRUMENTS AND OTHER EQUIPMENT REQUIRED. PRESSURE TXUGES USED SHALL BE GRADUATED IN INCREMENTS NOT GREATER THAN 5 POUNDS PER SQUARE INCH.. NO PLUMBING OR DRAINAGE SYSTEM OR PART THEREOF SHALL BE COVERED, CONCEALED, OR PUT INTO USE UNLESS IT HAS BEEN SPECIFIED. CONDUCT ALL TESTS IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE, AND OBTAIN THE NECESSARY JURISDICTIONAL AUTHORITY INSPECTIONS.
D. APPLY A WATER TEST TO THE WASTE, AND VENT SYSTEMS WHETHER IN ITS ENTIRETY OR IN SECTIONS; IF APPLIED TO THE ENTIRE SYSTEM, TIGHTLY CLOSE ALL OPENINGS IN THE PIPING EXCEPT THE HIGHEST OPENING, AND FILL THE SYSTEM WITH WATER TO THE POINT OF OVERFLOW. IF THE SYSTEM IS TESTED IN SECTIONS, TIGHTLY PLUG EACH OPENING EXCEPT FOR THE HIGHEST OPENING OF THE SECTION UNDER TEST, AND FILL EACH SECTION WITH WATER, BUT TEST WITH NO LESS THAN A 10' HEAD OF WATER. IN TESTING SUCCESSIVE SECTIONS, TEST AT LEAST THE UPPER 10' OF THE NEXT PRECEDING SECTION SO THAT NO JOINT OR PIPE IN THE BUILDING (EXCEPT THE UPPERMOST 10' OF THE SYSTEM) SHALL HAVE BEEN SUBMITTED TO A TEST OF LESS THAN A 10' HEAD OF WATER. KEEP WATER IN THE SYSTEM OR IN THE PORTION UNDER TEST FOR AT LEAST 24 HOURS BEFORE INSPECTION STARTS, WITH THE SYSTEM TIGHT AT ALL POINTS.
E. DOMESTIC WATER SYSTEM SHALL BE TESTED AND PROVED TIGHT UNDER A PRESSURE OF NOT LESS THAN 150 PSI. PIPING MUST STAND THE TEST FOR A PERIOD OF 24 HOURS WITHOUT LEAKING.
F. CHLORINATION OF THE DOMESTIC COLD AND HOT WATER PIPING SYSTEMS IN ACCORDANCE WITH STANDARD TESTING PROCEDURES AND LOCAL HEALTH DEPARTMENT REQUIREMENTS. TESTING BY A FIRM SUCH AS BENNET-MARINE OR EQUAL. SUBMIT CERTIFICATE OF SATISFACTORY TEST RESULTS.
G. UPON COMPLETION OF TESTING, CERTIFY TO THE ARCHITECT, IN WRITING THAT THE SPECIFIED TESTS HAVE BEEN PERFORMED AND THAT THE INSTALLATION COMPLIES WITH THE SPECIFIED REQUIREMENTS.

3.03 PIPING INSTALLATION
A. MAKE CHANGES IN SIZE OF PIPE WITH REDUCING FITTINGS; BUSHINGS WILL NOT BE PERMITTED EXCEPT FOR BELL SHAPED COPPER BUSHINGS.
B. INSTALL DIELECTRIC INSULATING UNIONS IN WATER PIPING BETWEEN COPPER PIPING AND FERROUS PIPING OR EQUIPMENT - EPCO, OR EQUAL.
C. INSTALL EXPOSED POLISHED CHROME CONNECTIONS FROM FIXTURES OR EQUIPMENT WITH SPECIAL CARE. SHOW NO TOOL MARKS OR THREADS AT FITTINGS.
D. CAP OPENINGS IN PIPING DURING CONSTRUCTION.
E. PROVIDE 85% RED BRASS PIPE IPS, IN CONNECTION TO FAUCETS, FLUSH VALVES, HOSE BIBBS OR SIMILAR ITEMS REQUIRING RIGID PIPING. EXTEND BRASS PIPE FROM FIXTURE TO POINT WHERE PIPING CAN BE SECURELY FASTENED TO BUILDING CONSTRUCTION. ALL EXPOSED PIPING AND STOP VALVES IN CONNECTION TO FIXTURES SHALL BE CHROME PLATED BRASS.
F. INSTALL UNIONS ADJACENT TO VALVES AND WHERE NECESSARY TO FACILITATE DISASSEMBLY OF PIPING.
G. ESCUTCHEONS: FIT EXPOSED PIPES PASSING THROUGH FLOORS, WALLS OR CEILINGS WITH ESCUTCHEONS. MANUFACTURE SPECIAL SIZES OF ESCUTCHEONS FROM STEEL AND PRIME COAT SAME. CUT IN ROUND, RECTANGULAR OR SQUARE SPACE TO PROVIDE A CLEAN APPEARANCE ACCEPTABLE TO THE ARCHITECT.
MAKE COPPER SOLDER JOINTS WITH 95/5 SOLDER, OR SILFOS; CLEAN SURFACES TO BE JOINED FREE OF OIL, GREASE, RUST OR OXIDES AND APPLY FLUX TO EACH JOINT BEFORE HEATING ASSEMBLY.
H. SUPPORT PIPING INDEPENDENTLY OF EQUIPMENT TO WHICH IT IS CONNECTED.
J. ROUGH-IN AND MAKE FINAL CONNECTIONS TO ALL OTHER EQUIPMENT FURNISHED UNDER OTHER DIVISIONS, REQUIRING PLUMBING CONNECTIONS.

WATER SAVING STANDARDS.

THE WATER SAVING PERFORMANCE STANDARDS FOR A PLUMBING FIXTURE ARE THOSE ESTABLISHED BY THE AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI), CURRENT REVISION, OR THE FOLLOWING STANDARDS, WHICHEVER ARE THE MORE RESTRICTIVE:

1-THE MAXIMUM FLOW FROM A SINK OR LAVATORY FAUCET OR A FAUCET AERATOR SHALL NOT EXCEED 0.5 GALLONS OF WATER PER MINUTE AT A PRESSURE OF 60 POUNDS PER SQUARE INCH WHEN TESTED IN ACCORDANCE WITH ANSI TESTING PROCEDURES.

2- THE MAXIMUM VOLUME OF WATER PER FLUSH FROM A TOILET SHALL NOT EXCEED AN AVERAGE OF 1.28 GALLONS WHEN TESTED IN ACCORDANCE WITH ANSI TESTING PROCEDURES.

3- THE MAXIMUM VOLUME OF WATER PER FLUSH FROM A URINAL AND THE ASSOCIATED FLUSH VALVE, IF ANY, SHALL NOT EXCEED AN AVERAGE OF ONE GALLONS WHEN TESTED IN ACCORDANCE WITH ANSI TESTING PROCEDURES

PLAN CHECK NOTES

- ALL FIXTURES, EQUIPMENT, PIPING AND MATERIALS SHALL BE LISTED.
- ALL PLUMBING FIXTURES SHALL MEET THE FLOW REQUIREMENTS SPECIFIED IN THE 2015 TEXAS PLUMBING CODE
- PRESSURE RELIEF VALVES FOR WATER HEATER INSTALLED INSIDE A BUILDING SHALL DISCHARGE TO A FLOOR DRAIN, FLOOR SINK OR SIMILAR FIXTURE
- WATER PIPE AND FITTINGS WITH A LEAD CONTENT WHICH EXCEEDS 0.25% SHALL BE PROHIBITED IN SYSTEMS CONVEYING POTABLE WATER
- ALL SANITARY SYSTEM MATERIALS SHALL BE LISTED BY AN APPROVED LISTING AGENCY
- EACH VENT SHALL RISE VERTICALLY TO A POINT NOT LESS THAN SIX (6) INCHES ABOVE THE FLOOD-LEVEL RIM OF THE FIXTURE SERVED BEFORE OFFSETTING HORIZONTALLY OR BEFORE BEING CONNECTED TO ANY OTHER VENT
- BACKWATER VALVE SHALL BE INSTALLED ON DOWNSTREAM OF PLUMBING FIXTURES THAT ARE LOCATED ON A FLOOR LEVEL THAT IS LOWER THAN THE NEXT UPSTREAM MANHOLE COVER OF THE PUBLIC OR PRIVATE SEWER SYSTEM PER SECTION 701.1 FBC AND SUBJECT TO FIELD INSPECTION APPROVAL
- A SLOPE OF NOT LESS THAN 1/8 INCH PER FOOT OR 1 PERCENT IS PROVIDED FOR DRAINAGE PIPING 4 INCHES OR LARGER ONLY WHERE IT IS IMPRACTICAL DUE TO THE DEPTH OF STREET SEWER, TO THE STRUCTURAL FEATURES , OR TO THE ARRANGEMENT OF A BUILDING OR STRUCTURE TO OBTAIN A SLOPE OF 1/4 INCH PER FOOT OR 2 PERCENT AND THAT IS SUBJECT TO THE CITY OF BROOKSHIRE PLUMBING FIELD INSPECTOR'S APPROVAL
- SHOWERS AND TUB SHOWER COMBINATIONS SHALL BE PROVIDED WITH MIXING VALVES PER SECTION TEXAS PLUMBING CODE.
- PROVIDE EXPANSION TANK OR OTHER APPROVED METHOD OF RELIEVING PRESSURE PER SECTION TEXAS PLUMBING CODE.
- A WATER HEATER PRESSURE AND TEMPERATURE RELIEF DRAIN THAT TERMINATES OUTSIDE THE BUILDING SHALL COMPLY WITH TEXAS PLUMBING CODE.

PLUMBING FIXTURE SCHEDULE

FIXT. ID	DESCRIPTION	MANUFACTURER	MODEL	ROUGH-IN				
				W	V	CW	HW	
WC-1	WATER CLOSET	SELECT BY ARCHITECT	–	3"	2"	3/4"	–	SELECTED BY ARCHITECT. TANK TYPE, FLOOR MOUNTED. 1.28 GPF. VERIFY FOR EXACT SPECIFICATION AND MODEL NUMBER OF PLUMBING FIXTURE WITH ARCHITECT AND OWNER PRIOR TO ORDERING AND INSTALLATION. CERTIFIED TO THE PERFORMACE CRITERIA OF THE U.S. EPA WATERSENSE SPECIFICATIONS FOR TANK TYPE TOILETS.
LAV-1	LAVATORY	SELECT BY ARCHITECT	–	2"	2"	1/2"	1/2"	PLUMBING FIXTURE WITH ARCHITECT AND OWNER PRIOR TO ORDERING AND INSTALLATION. LAVATORY FAUCETS IN RESTROOMS SHALL BE THE SELF-CLOSING TYPE AND SHALL NOT EXCEED A WATER FLOW OF 0.5 GAL/USE.

CONDESATE DRAIN PIPE SIZING

CONDENSATE DRAIN SIZE (IN INCHES)	MAXIMUM EQUIPMENT CAPACITY IN TONS OF REFRIGERATION (SLOPE : 1/8" = 1'-0")	REMARK
3/4"	20	1. WITH PIPE RUNNING AT 3/4 FULL AND OUTSIDE AIR AT 90°F DB AND 73°F WB. 2. CONDENSATE DRAIN PIPING: COPPER TUBING, TYP M.
1"	40	
1-1/4"	90	
1-1/2"	125	
2"	250	

CONDENSATE DRAIN PIPING SHALL BE SLOPED AT 1/8" PER FOOT. CONDENSATE DRAIN PIPING SIZED TEXAS BUILDING CODE

MATERIAL SPECIFICATIONS

SERVICES		PVC DWV	GALV. STEEL SCH 40	BLACK STEEL SCH 40	ABS PIPE ASTM D 2661, SCH 40	TYPE M COPPER	TYPE K COPPER	TYPE K COPPER (1)	PEX	CPVC 41 SDR11	CPVC SCH. 80	SCH. 40 PVC ASTM D1785/D2665
COLD WATER	ABOVE GROUND							•	•			
	BELOW GROUND											
HOT/TEMPER WATER	ABOVE GROUND							•	•			
	BELOW GROUND											
WASTE	ABOVE GROUND											•
	BELOW GROUND											•
VENT	ABOVE GROUND											•
	BELOW GROUND											•
INDIRECT WASTE	INDOOR					•						
	OUTDOOR					•						
NATURAL GAS	INDOOR			•								
	OUTDOOR		•									
STORM DRAIN	ABOVE GROUND	•										
	BELOW GROUND	•										
STORM DRAIN SEWAGE EJETOR PRESSURE PIPE EJECTION SYSTEM	ABOVE GROUND											•
	BELOW GROUND											•

(1) PROVIDE PLASTIC WRAP UNDERGROUND WATER SUPPLY PIPING TO PREVENT CORROSION.
(2) ALL SANITARY SYSTEM MATERIALS SHALL BE LISTED BY AN APPROVED LISTING AGENCY.
(3) THE SYSTEM MUST BE INSTALLED BY PROFICIENT PLUMBERS COMPETENT IN INSTALLING ABS OR PVC PIPE. INSTALLATION, STORAGE, HANDLING AND PROTECTION OF THE ABS OR PVC PIPING SHALL BE PER THE MANUFACTURER'S INSTRUCTIONS.

PLUMBING SPECIFICATIONS

1. THE WORK INCLUDES MODIFICATION TO THE EXISTING PLUMBING SYSTEM AND PROVIDING NEW MATERIALS, FITTINGS AND ACCESSORIES NECESSARY FOR A COMPLETE FUNCTIONING PLUMBING SYSTEM.
2. ALL WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES AND/OR ORDINANCES AND IS SUBJECT TO INSPECTION.
3. HOOK-UP CHARGES, PERMITS AND ALL OTHER EXPENSES RELATED TO A COMPLETE AND FUNCTIONING PLUMBING SYSTEM ARE INCLUDED AS A PART OF THIS SECTION.
4. WARRANTY: PROVIDE LABOR AND MATERIALS TO REPAIR OR REPLACE DEFECTIVE PARTS AND MATERIALS AS REQUIRED FOR ONE YEAR AFTER SUBSTANTIAL COMPLETION OR OWNER ACCEPTANCE OF THE COMPLETED PROJECT.
5. PROVIDE A SEPARATE LINE ITEM DEDUCT AMOUNT ON THE PROPOSAL FORM TO DELETE WARRANTY SERVICE, AT THE OWNER'S OPTION.
6. THE INTENT OF THE DRAWINGS IS TO INDICATE THE GENERAL EXTENT OF WORK REQUIRED FOR THE PROJECT. THE DRAWINGS FOR PLUMBING WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, FIXTURES AND EQUIPMENT REQUIRED.
7. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENTS.
8. REFER TO MANUFACTURER'S STANDARD ROUGH-IN DRAWINGS FOR PLUMBING FIXTURE INSTALLATION REQUIREMENTS. COMPLY WITH ALL APPLICABLE ADA INSTALLATION REQUIREMENTS.
9. COORDINATE WITH THE WORK OF OTHER SECTIONS, EQUIPMENT FURNISHED BY OTHERS, AND WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITE.
10. PIPING SYSTEMS
- GENERAL:
A. ALL PIPING SHALL BE RUN PARALLEL TO BUILDING LINES AND SUPPORTED AND ANCHORED AS REQUIRED TO FACILITATE EXPANSION AND CONTRACTION.
B. ALL PIPING SHALL BE CONCEALED EXCEPT IN UNFINISHED SPACES.
C. INSTALL AS REQUIRED TO PREVENT ALL CONSTRUCTION CONDITIONS AND TO ALLOW FOR INSTALLATION OF OTHER WORK SUCH AS DUCTS AND ELECTRICAL CONDUIT.
D. AT ALL CONNECTIONS BETWEEN FERROUS PIPING AND NONFERROUS PIPING, PROVIDE AN ISOLATING DIALECTIC UNION.
E. ALL HANGERS SHALL BE COMPATIBLE WITH PIPING MATERIAL TO PREVENT CORROSION.
F. PROVIDE ALL FITTINGS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY TO FACILITATE THE PLUMBING SYSTEM'S FUNCTIONING AS INDICATED BY THE DESIGN AND THE EQUIPMENT INDICATED.
11. FIXTURES/EQUIPMENT FURNISHED BY OTHERS: PLUMBING CONTRACTOR SHALL PROVIDE UTILITY CONNECTIONS REQUIRED SUCH AS WATER, TXS, AIR, SUPPLIES, WASTE OUTLET, TRAPS, ETC.
12. AT ALL PLUMBING TYPE FIXTURES OR EQUIPMENT FURNISHED BY OWNER, GENERAL CONTRACTOR, FOOD SERVICE CONTRACTOR, EQUIPMENT SUPPLIER, ETC. INCLUDED ARE STOP VALVES, ESCUTCHEONS, AND CHROME PLATED BRASS TUBING WITH COMPRESSION FITTINGS.
13. SEWER AND WASTE PIPING:
A. PROVIDE ALL DRAINS AND SEWERS WITHIN THE SPACE WITH CONNECTION TO THE EXISTING DRAINAGE SYSTEMS ON-SITE.
B. SANITARY DRAINAGE PIPING ABOVE FLOOR SHALL BE CO-EXTRUDED PVC DWV (SCHEDULE 40) PIPE, FITTINGS AND CONNECTIONS.
C. SANITARY DRAINAGE PIPING BELOW GRADE SHALL BE CO-EXTRUDED PVC DWV (SCHEDULE 40) PIPE WITH SOLVENT WELD FITTINGS MAY BE USED (WHERE PERMITTED BY CODE/LOCAL AUTHORITIES).
D. ALL DRAINAGE PIPING SHALL BE UNIFORMLY PITCHED, 1/8" PER FOOT UNLESS OTHERWISE REQUIRED BY EXISTING CONDITIONS, OR INDICATED ON THE DRAWINGS.
14. VENTS: PROVIDE A COMPLETE SYSTEM OF STANDARD WEIGHT CAST IRON NO-HUB VENT RISERS WHERE THE CEILING SPACE IS USED AS A RETURN AIR PLENUM OR USE CO-EXTRUDED PVC DWV (SCHEDULE 40) PIPE (WHERE PERMITTED BY CODE/LOCAL AUTHORITIES).
15. WHERE THERE IS A DUCTED RETURN AIR SYSTEM. DO NOT USE PVC PIPE IN RETURN AIR PLENUM SPACES. THE VENT SYSTEM SHALL BE CARRIED THROUGH THE ROOF WITH APPROPRIATE FLASHING.
16. CONDENSATE AND INDIRECT DRAIN PIPING:PIPING ABOVE FLOOR SHALL BE CO-EXTRUDED PVC DWV (SCHEDULE 40) PIPE, FITTINGS AND CONNECTIONS. PIPING BELOW GRADE SHALL BE CO-EXTRUDED PVC DWV(SCHEDULE 40) PIPE WITH SOLVENT WELD FITTINGS.
17. CLEANOUTS: PROVIDE CLEANOUTS AT THE END OF EACH HORIZONTAL RUN, AND AT THE BASE OF ALL VERTICAL WASTE AND DRAIN PIPES. CLEANOUTS SHALL BE OF THE SAME SIZE AS THE PIPES THEY SERVE, CONFORMING TO CODE REQUIREMENTS. PROVIDE SUITABLE WALL OR FLOOR CLEANOUTS WITH ACCESSORIES TO OBSCURE FROM VIEW.
18. WATER DISTRIBUTION PIPING:
A. LAYOUT WATER PIPING SO THAT THE ENTIRE SYSTEM CAN BE DRAINED. HOT AND COLD WATER PIPING SHALL BE 1/2" MIN. CPVC PIPE WITH SOLVENT FITTING.
B. PROVIDE WATER HAMMER ARRESTERS AT EACH FIXTURE OR GROUP OF FIXTURES AS REQUIRED.
C. INSTALL CHROME PLATED BRASS ESCUTCHEON PLATES AT ALL PENETRATIONS THROUGH FINISHED SURFACES (INCLUDING CABINET INTERIORS).
19. PIPE INSULATION: INSULATE (AS ALLOWED BY CODE) ALL LISTED SERVICE PIPING AS FOLLOWS. DOMESTIC COLD/HOT WATER, HOT WATER RETURN, STORM WATER PIPING. PROVIDE 1" PREFORMED FIBERGLASS, ASJ/SS-11, FLAME SPREAD 25, SMOKE DEVELOPED 50, ASTM C-547. FOR CONDENSATE PIPING PROVIDE 1/2" THICK INSULATION OF SAME CHARACTERISTICS AS LISTED FOR 1" ABOVE. WHERE PERMITTED BY LOCAL CODES, PROVIDE 1/2" SELF-ADHESIVE UNICELLULAR FOAM PIPE INSULATION WITH PRE-FORMED PVC FITTING COVERS - EQUAL TO SELF-ADHESIVE ARMSTRONG 2000 WITH K FACTOR OF 0.27 AT 75 DEGREES MEAN TEMPERATURE. INSULATE ANY EXPOSED CONDENSATE PIPING WITH WASTE TEMPERATURE BELOW 60 DEGREES F.
20. SHUTOFF VALVES, WITH UNIONS SHALL BE PROVIDED FOR SERVICE TO EACH PLUMBING FIXTURE, FOOD SERVICE EQUIPMENT ITEM OR OTHER EQUIPMENT ITEM, TO FACILITATE ISOLATION FOR REPAIR OR REPLACEMENT. VALVES SHALL BE EQUAL TO JENKINS #902-T BALL VALVE, CHROME-FINISHED BRONZE, TEFLON SEATS AND PACKING, 400 LB. W.O.G., SOLDER END.
21. ACCESS PANELS SHALL BE PROVIDED WHERE CONCEALED CONTROL DEVICES, VALVES, ETC. ARE CONCEALED WITHIN WALLS. WHERE ACCESS FOR ADJUSTMENT AND MAINTENANCE IS POSSIBLE THROUGH LAY-IN SUSPENDED CEILINGS, ACCESS PANELS ARE NOT REQUIRED.

PLUMBING LEGEND

SYMBOL	ABBREVIATION	DESCRIPTION
	CW	COLD WATER PIPING
	HW	HOT WATER PIPING (110-140°F)
	HWR	HOT WATER RETURN PIPING
	SS OR W	SOIL OR WASTE PIPING BELOW GRADE
	SS OR W	SOIL OR WASTE PIPING ABOVE GRADE
CWV	CWV	COMBINATION WASTE & VENT
	V	VENT PIPING
DD	DD	DECK DRAIN
ED	ED	EMERGENCY DRAIN
CD	CD	CONDENSATE DRAIN PIPING
ID	ID	INDIRECT DRAIN
G	G	NATURAL TXS
RO	RO	REVERSE OSMOSIS
RD	RD	ROOF DRAIN
OFD	OFD	OVERFLOW ROOF DRAIN
	WHA	WATER HAMMER ARRESTOR
	P.O.C.	POINT-OF-CONNECTION
		CAPPED
		UNION
	UP	PIPE UP
	DN	PIPE DOWN
	DN	PIPE TEE DOWN
	BV	BALL VALVE
	SOV	SHUT-OFF VALVE
	GV	TXTE VALVE
	GV	GLOBE VALVE
	CV	CHECK VALVE
	BFP	BACKFLOW PREVENTOR
	BFP	DOUBLE CHECK BACKFLOW PREVENTOR
	RED	REDUCER
	PUMP	PUMP
	FCO/GCO	FLOOR CLEANOUT OR GRADE CLEANOUT
	WCO (CO)	WALL CLEANOUT (PLUG CLEANOUT)
	VTR	VENT THRU ROOF
	FS	FLOOR SINK
	HD	HUB DRAIN (CASE & COIL DRAINS)
	FD	FLOOR DRAIN
		FIRE SPRINKLER RISER
		PRESSURE TXUGE
		PRESSURE REDUCING VALVE
		THERMOSTAT
		T & P RELIEF VALVE W/ PIPE TO DRAIN
		SOLENOID VALVE
	MX	MIXING VALVE
		STRAINER
M	M	METER
		OVERFLOW RAIN DRAIN DISCHARGED 6" ABOVE FLOOR
	BFF	BELOW FINISHED FLOOR
	BG	BELOW GROUND
	(E)	EXISTING
	(N)	NEW
	IE	INVERT ELEVATION
	FU	FIXTURE UNIT
	HD	HUB DRAIN
	FS	FLOOR SINK
	FD	FLOOR DRAIN
	MBH	THOUSAND BTUH'S/HOUR
	BTU	BRITISH THERMAL UNIT

NOTE: THIS IS A STANDARD SYMBOL LIST AND NOT ALL ITEMS LISTED MAY BE USED.

GENERAL NOTES
- ALL FINISHES ARE 3" THICK.
- ALL DIMENSIONS ARE IN FEETS.

PROJECT NAME:
29906 JORDAN CROSSING RD BROOKSHIRE, RX 77423

DRAWING TITLE:
PLUMBING SPECIFICATION

DRAWN BY: -
CHECKED BY: -
APPROVED BY: -
DATE: 06/22/2025

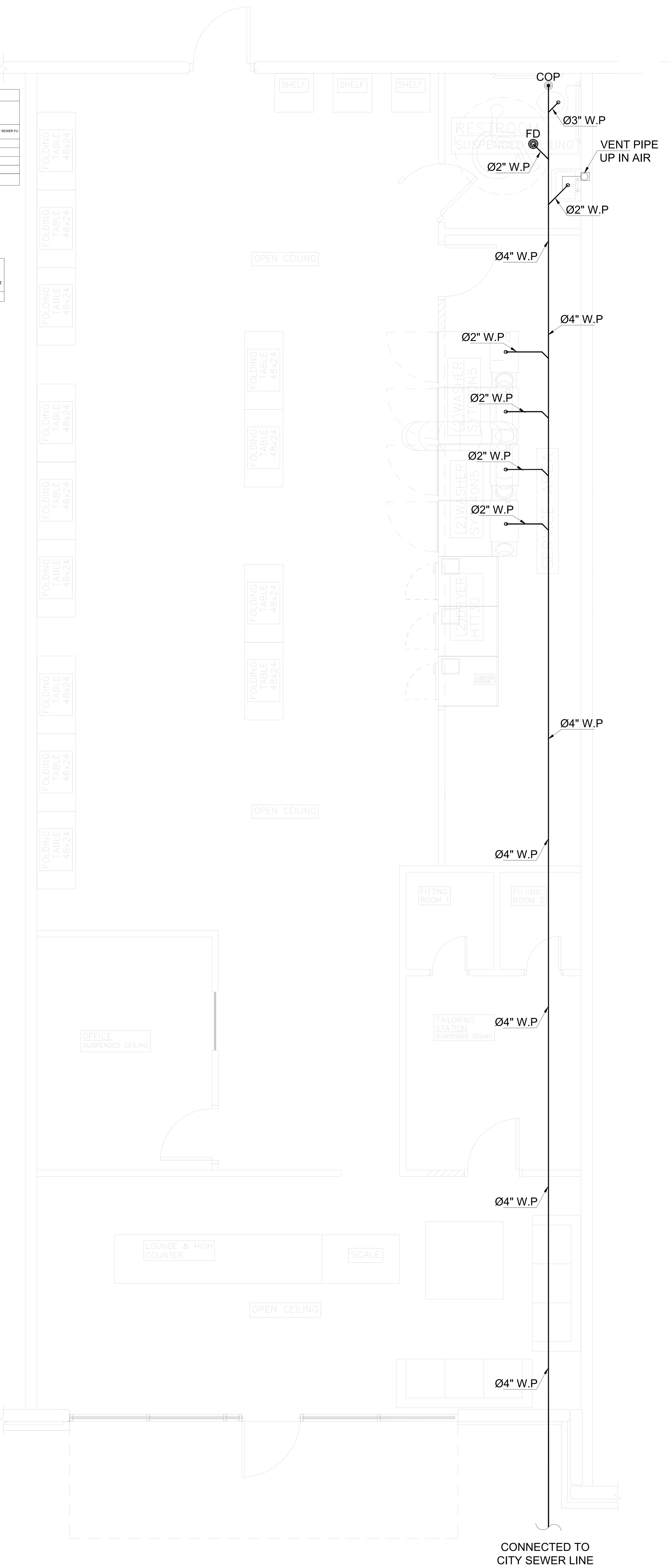
REV:	DESCRIPTION:	BY:	DATE:

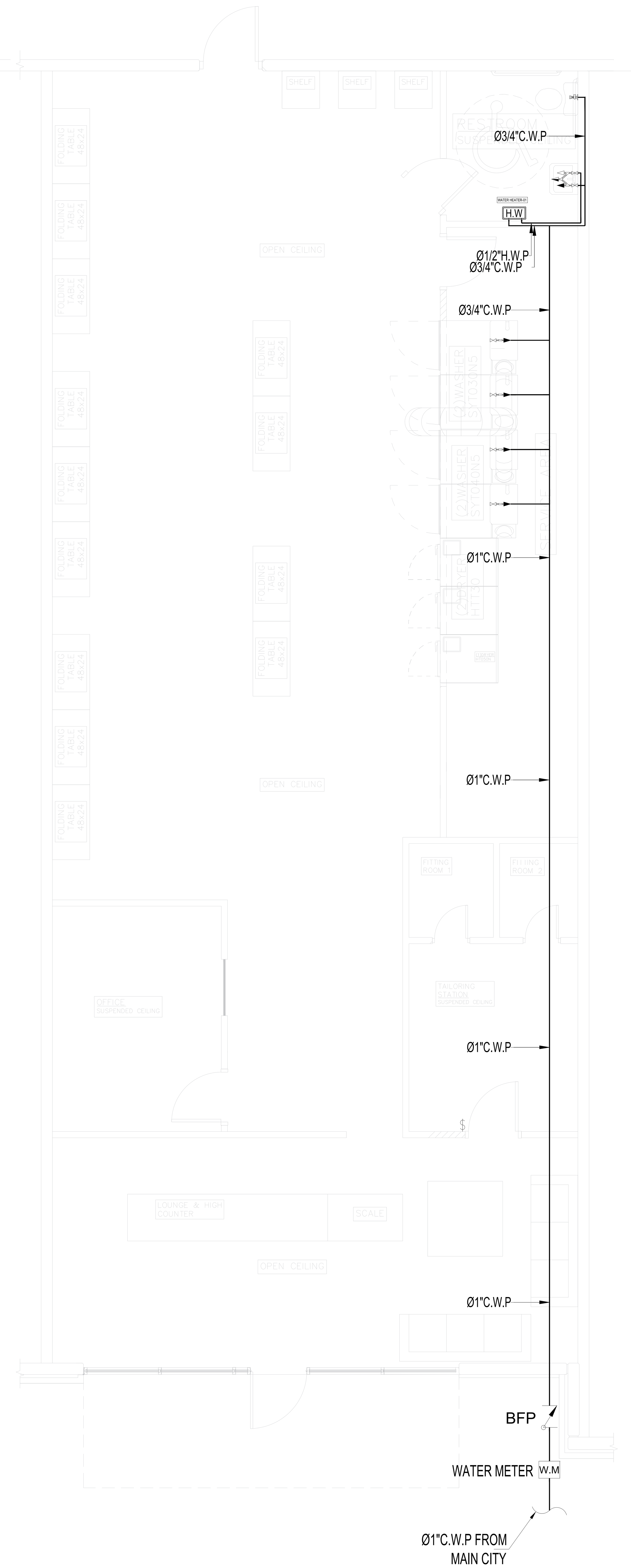
PROJECT NO: 11
SHEET SIZE: D
DRAWING NO: P-2
SCALE: 1/16"= 1'-0"
REVISION: 0

FIXTURE UNIT CALCULATION										
FIXTURE ID	QTY	DESCRIPTION	WATER PIPING						SEWER PIPING	
			COLD WATER		HOT WATER		WATER			
			CW F.U. PER FIXTURE	TOTAL CW F.U.	HW F.U. PER FIXTURE	TOTAL HW F.U	F.U. PER FIXTURE	TOTAL F.U.	F.U. PER FIXTURE	TOTAL SANITARY SEWER FU
WC-1	01	WATER CLOSET (FLUSH VALVE)	6.0	6.0	-	-	6.0	6.0	6.0	6.0
HWL-1	01	HAND WASHING LAVATORY	1.5	1.5	1.5	1.5	2.0	2.0	2.0	2.0
WS-1	04	WASHING MACHINE	3.0	12.0	-	-	2.0	2.0	2.0	8.0
FD-1	01	FLOOR DRAIN	-	-	-	-	-	-	2.0	2.0
TOTAL BUILDING				19.5		1.5		10.0		18.0

WATER HEATER SPECIFICATION

DESCRIPTION				FEATURES			ROUGHING IN DIMENSIONS (SHOWN IN INCHES)										ENERGY INFO.	
TYPE	NOMINAL GALLON CAPACITY	RATED GALLON CAPACITY	MODEL NUMBER	GAS INPUT IN THOUS. BTU/H NAT.	RECOVERY IN G.P.H. 90° F RISE NAT.	FIRST HOUR RATING (GALLONS)	HEIGHT TO VENT A	TANK HEIGHT B	DIAM. C	HT. TO GAS CONN. D	VENT SIZE E	WATER CONN. CENTER F	HT. TO SIDE T&P VALVE G	WATER CONN. SIZE H	SHIP WT. (LBS)	UNIFORM ENERGY FACTOR (UEF)	MAX ALTITUDE (FEET)
Tall	29	28	PROG29-30U RH63 EC1-1	30	30	51	59-3/4	56-7/8	16-1/2	14	3 or 4	8	50-7/8	3/4	112	0.60	10,000





GENERAL NOTES

- ALL FINISHES ARE 3" THICK.
- ALL DIMENSIONS ARE IN FEETS.

PROJECT NAME:
29906 JORDAN CROSSING RD BROOKSHIRE, RX 77423

DRAWING TITLE:
PLUMBING PLANS

DRAWN BY: -

CHECKED BY: -

APPROVED BY: -

DATE: 06/22/2025

REV:	DESCRIPTION:	BY:	DATE:

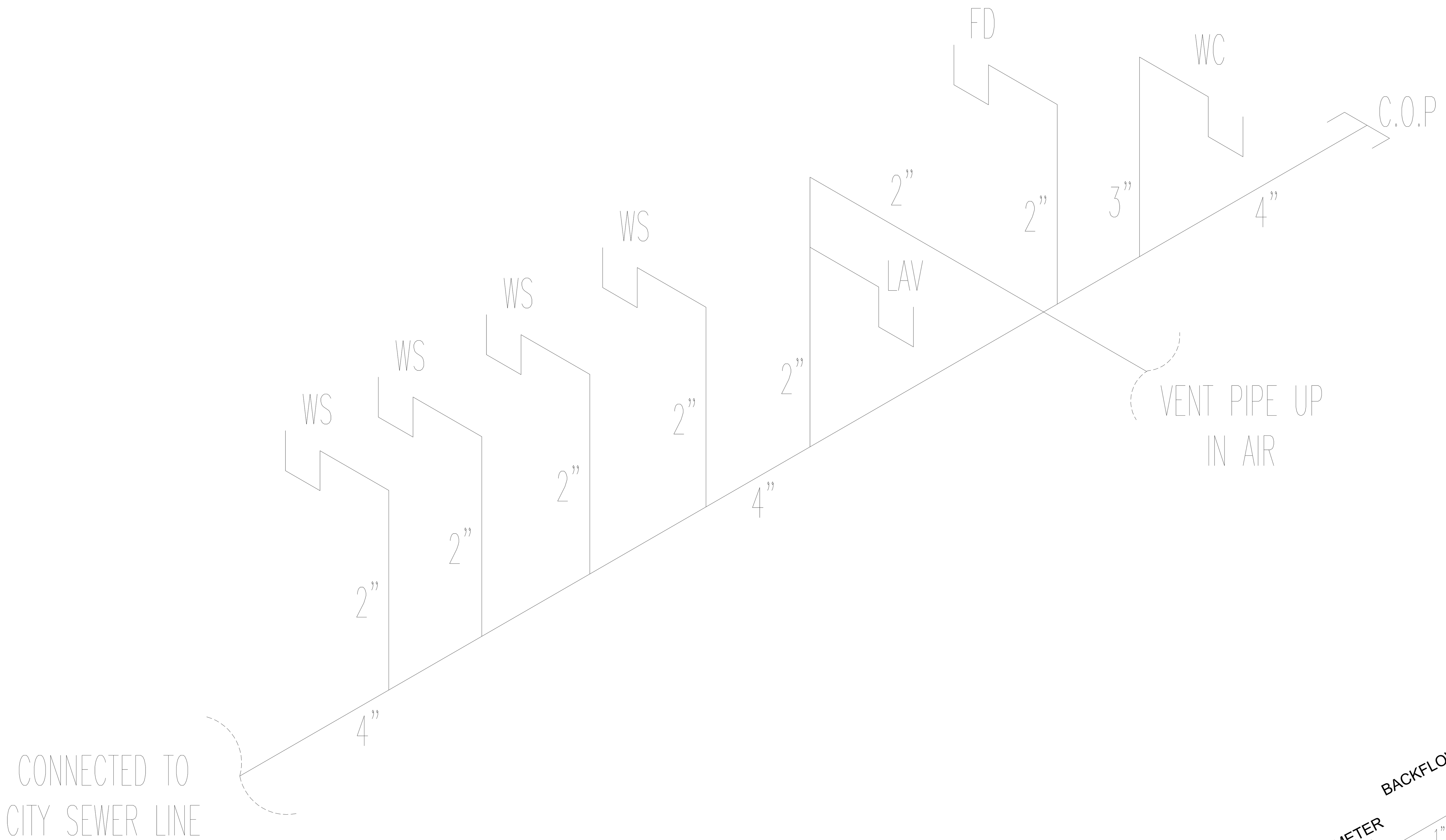
PROJECT NO: 11

SHEET SIZE: D

DRAWING NO: **P-3**

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

REVISION: 0



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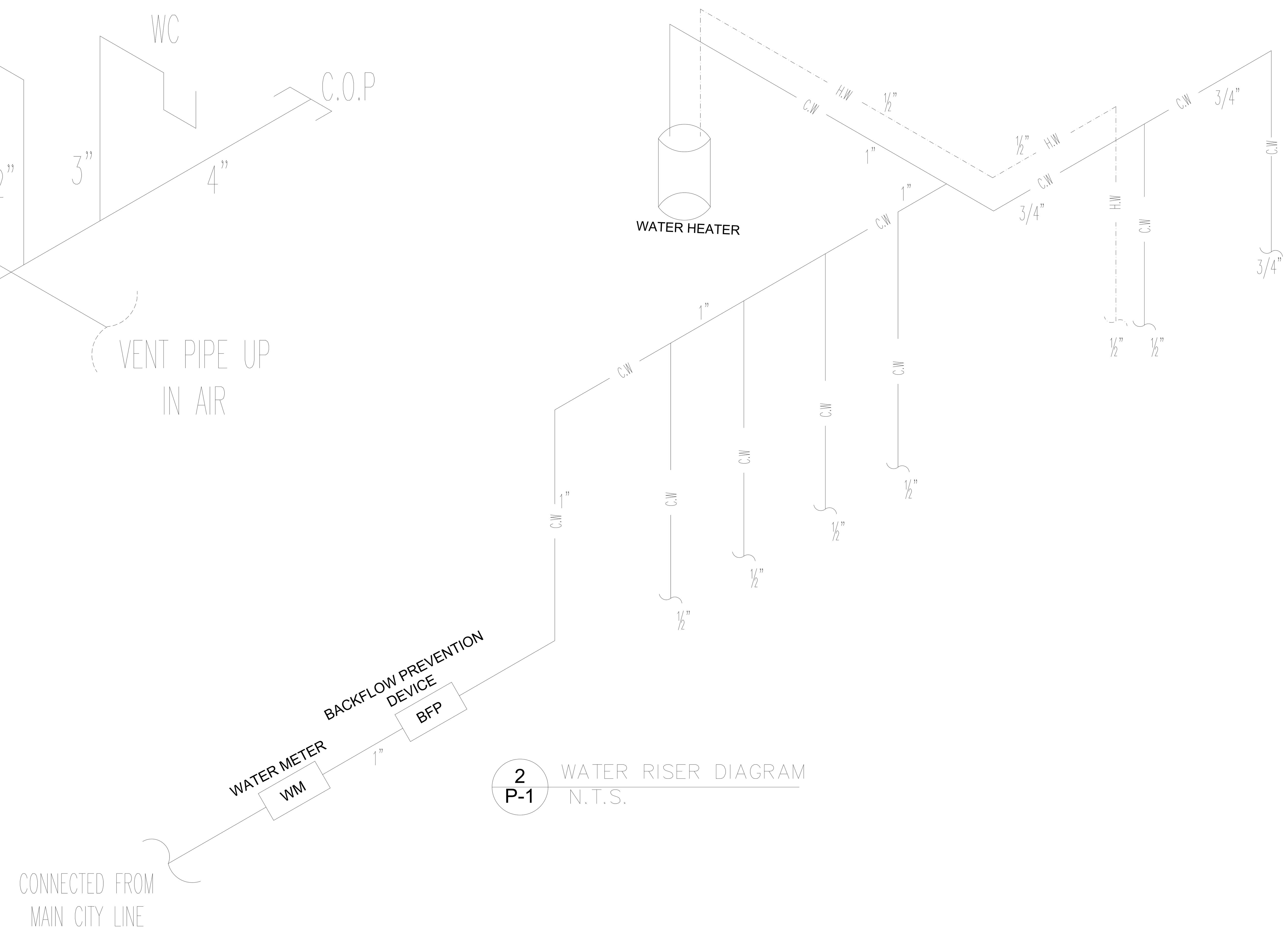
P-1
SEWER RISER DIAGRAM
N.T.S.



2
P-1
WATER RISER DIAGRAM
N.T.S.

GENERAL NOTES

- ALL FINISHES ARE 3" THICK.
- ALL DIMENSIONS ARE IN FEETS.

PROJECT NAME:
29906 JORDAN CROSSING RD BROOKSHIRE, RX 77423

DRAWING TITLE:
PLUMBING RISER

DRAWN BY: -

CHECKED BY: -

APPROVED BY: -

DATE: 06/22/2025

REV:	DESCRIPTION:	BY:	DATE:

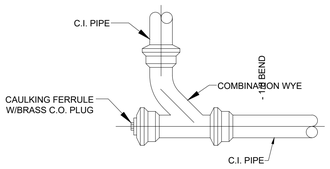
PROJECT NO: 11

HEET SIZE: D

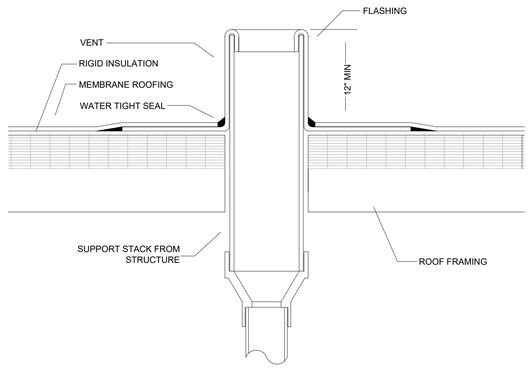
DRAWING NO: **P-4**

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

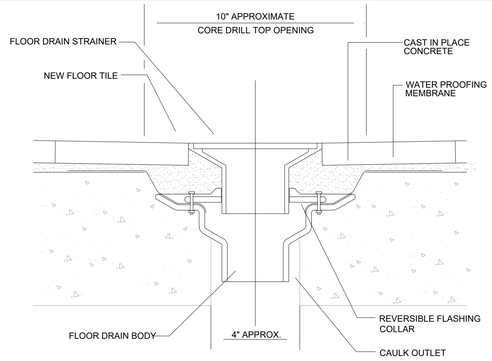
REVISION: 0



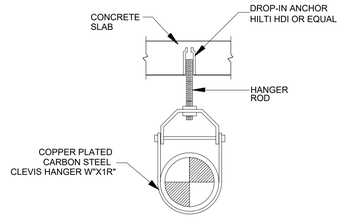
1 EXPOSED CLEANOUT DETAIL
SCALE: NTS



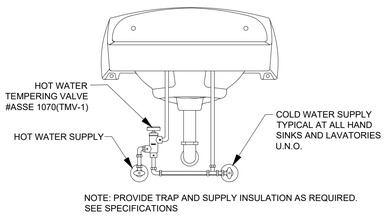
2 VENT THROUGH ROOF DETAIL
SCALE: NTS



3 FLOOR DRAIN DETAIL
SCALE: NTS

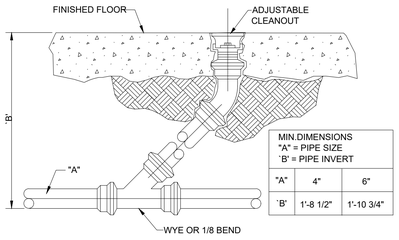


4 PIPE HANGER SUPPORT DETAIL
SCALE: NTS



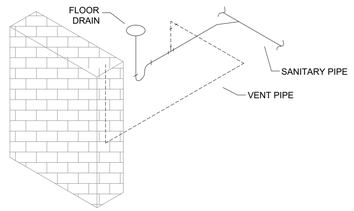
NOTE: PROVIDE TRAP AND SUPPLY INSULATION AS REQUIRED. SEE SPECIFICATIONS

5 LAVATORY AND HANDSINK TEMPERING VALVE DETAIL
SCALE: NTS

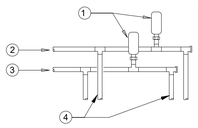


MIN.DIMENSIONS "A" = PIPE SIZE 'B' = PIPE INVERT		
"A"	4"	6"
'B'	1'-8 1/2"	1'-10 3/4"

6 TYPICAL CLEANOUT TO FINISHED FLOOR
SCALE: NTS



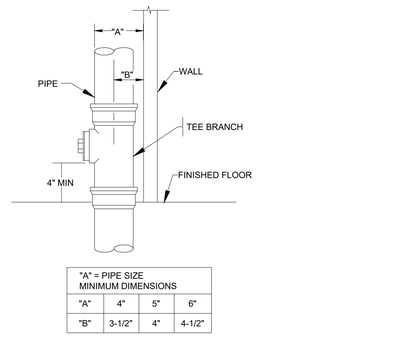
7 VENTING DETAIL
SCALE: NTS



(#) KEY NOTES:
1. WATER HAMMER ARRESTOR (WHA) INSTALL AHEAD OF LAST FIXTURE SERVED BY BRANCH. (TYP)
2. CW PIPE
3. HW PIPE
4. CONNECT TO FIXTURE

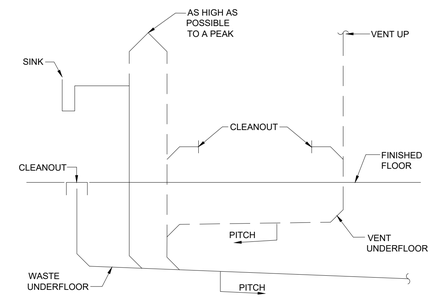
WATER ARRESTOR SCHEDULE		
P.I.D. SYMBOL	FIXTURE UNIT RATING	SIZE (MM)
A	1-11	25
B	12-32	32
C	33-60	40
D	61-113	50

8 WATER HAMMER ARRESTER DETAIL
SCALE: NTS



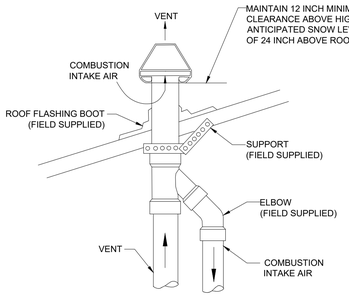
"A" = PIPE SIZE MINIMUM DIMENSIONS				
"A"	4"	5"	6"	
"B"	3-1/2"	4"	4-1/2"	

9 CLEANOUT AT BASE OF RISER DETAIL
SCALE: NTS

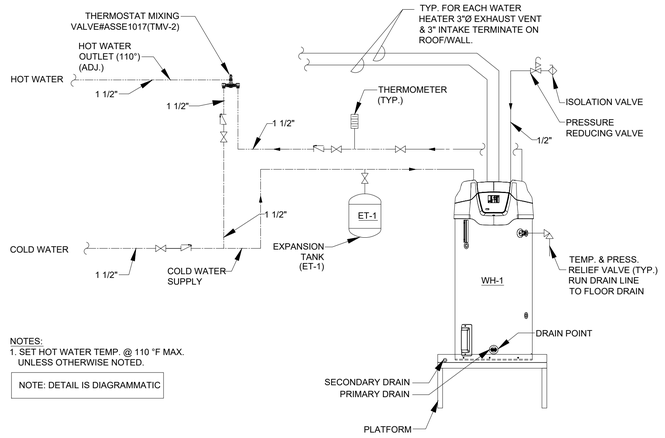


NOTES:
1. PROVIDE DRAINAGE FITTINGS ON ALL SECTIONS OF THE VENT UNDER FLOOR AND PROVIDE MINIMUM SLOPE OF 1/4" PER FOOT TOWARD DRAINAGE POINT.

10 ISLAND VENTING DETAIL
SCALE: N.T.S.



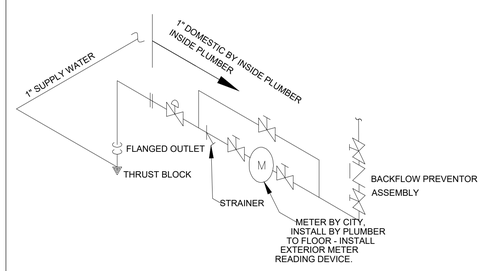
11 CONCENTRIC VENT ROOF INSTALLATION
SCALE: N.T.S.



NOTES:
1. SET HOT WATER TEMP. @ 110 °F MAX. UNLESS OTHERWISE NOTED.

NOTE: DETAIL IS DIAGRAMMATIC

12 WATER HEATER DETAIL
SCALE: N.T.S.



13 DOMESTIC COLD WATER METER RISER DETAIL
SCALE: NTS

GENERAL NOTES

- ALL FINISHES ARE 3" THICK.
- ALL DIMENSIONS ARE IN FEETS.

PROJECT NAME:
29906 JORDAN CROSSING RD BROOKSHIRE, RX 77423

DRAWING TITLE:
PLUMBING DETAIL

DRAWN BY: -

CHECKED BY: -

APPROVED BY: -

DATE: 06/22/2025

REV:	DESCRIPTION:	BY:	DATE:

PROJECT NO: 11

SHEET SIZE: D

DRAWING NO: **P-5**

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

REVISION: 0

MECHANICAL SPECIFICATIONS

PROVIDE EQUIPMENT INDICATED ON THE DRAWINGS, AND AS REQUIRED FOR A COMPLETE FUNCTIONING SYSTEM.
DEFINITIONS:
1. FURNISH MEANS TO SUPPLY AND DELIVER TO PROJECT SITE, READY FOR INSTALLATION.
2. INSTALL MEANS TO PLACE IN POSITION AND MAKE CONNECTIONS FOR SERVICE OR USE.
3. PROVIDE MEANS TO FURNISH AND INSTALL, COMPLETE AND READY FOR INTENDED USE.
4. WARRANTY: PROVIDE LABOR AND MATERIALS TO REPAIR OR REPLACE DEFECTIVE PARTS AND MATERIALS AS REQUIRED FOR ONE YEAR AFTER SUBSTANTIAL COMPLETION OR OWNER ACCEPTANCE OF THE COMPLETED PROJECT. PROVIDE A SEPARATE LINE ITEM DEDUCT AMOUNT ON THE PROPOSAL FORM TO DELETE WARRANTY SERVICE, AT THE OWNER'S OPTION.
5. PROVIDE OPERATION MANUALS, MAINTENANCE MANUALS AND SCHEMATICS FOR ALL MECHANICAL EQUIPMENT INSTALLED.
6. COORDINATION: COORDINATE WITH THE WORK OF OTHER SECTIONS, EQUIPMENT FURNISHED BY OTHERS, REQUIREMENTS OF THE OWNER, AND WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT

7. ROOF PENETRATIONS SHALL COMPLY WITH "SMACNA" AND "NRCA" STANDARDS, AND WITH THE REQUIREMENTS OF THE EXISTING ROOFING WARRANTY, IF APPLICABLE. DO NOT PERFORM ROOFING PENETRATIONS IN A MANNER WHICH WOULD VOID OR OTHERWISE LIMIT THE EXISTING ROOF WARRANTY.
8. DUCT DIMENSIONS: UNLESS OTHERWISE NOTED, DUCT DIMENSIONS ON THE DRAWINGS ARE INSIDE CLEAR DIMENSIONS.
9. SHEET METAL DUCTWORK:
9.1. PROVIDE SHEET METAL DUCTWORK FABRICATED AND INSTALLED IN ACCORDANCE WITH ASHRAE AND SMACNA STANDARDS, FOR 1" W.G. PRESSURE CLASS, SEAL CLASS "A".
9.2. SHEET METAL SHALL BE GALVANIZED SHEET STEEL OF LOCK FORMING QUALITY, WITH G90 ZINC COATING. SHEET STEEL SHALL COMPLY WITH ASTM A653 STANDARD SPECIFICATION FOR STEEL SHEET METAL, ZINC COATED (GALVANIZED) OR ZINC-IRON ALLOY-COATED (GALVANNEALED) BY THE HOT DIP PROCESS, AND A924 STANDARD SPECIFICATION FOR GENERAL REQUIREMENTS FOR SHEET, METALLIC-COATED BY THE HOT DIP PROCESS.
9.3. ALL ANGLE IRON USED FOR SUPPORT SHALL BE GALVANIZED.
9.4. CONNECTIONS TO WALLS OR FLOOR SHALL BE AIR TIGHT WITH ANGLE IRON AND CAULKING.
9.5. SEAL ALL DUCT SEAMS, TRANSVERSE AND LONGITUDINAL, AIR TIGHT.
9.6. PROVIDE TURNING VANES AT ALL 90º ELBOWS.
9.10. TRAPEZE DUCT HANGERS: PROVIDE MINIMUM 1" X 2" X 1" X 18 GAUGE CHANNELS WITH MINIMUM 1" X 18 GAUGE STRAPS TO STRUCTURAL SUPPORT.
9.11. ROUND SHEET METAL DUCT: PROVIDE SPIRAL SEAM (ALL SIZES) OR SNAP LOCK (DUCT SIZES UP TO 10") GALVANIZED STEEL COMPLYING WITH SMACNA STANDARDS.
9.12. SPIRAL SEAM DUCTWORK SHALL HAVE SMACNA SEAM TYPE RL-1.
9.13. FIBER GLASS DUCT BOARD IS AN ACCEPTABLE ALTERNATIVE IF APPROVED BY OWNER AND THE LOCAL BUILDING CODE OFFICIAL. PRODUCT AND INSTALLATION MUST MEET NAIMA STANDARDS AND OTHER APPLICABLE CODES AND REGULATIONS.
9.14. EXPOSED DUCTWORK: EXPOSED DUCTWORK SHALL BE CLEANED OF DEBRIS AND OIL, THEN WIPED DOWN WITH VINEGAR OR OTHER SURFACE PREPARING CHEMICAL TO PREPARE DUCT FOR PAINT.
9.15. DUCT SEALANT: PROVIDE POLYMERIC RUBBER TYPE SEALANT FOR USE ON BOTH INTERIOR LOCATED DUCTWORK AND DUCTWORK EXPOSED TO OUTDOOR CONDITIONS. SEALER SHALL HAVE HIGH BONDING STRENGTH FOR SURE, FIRST TIME SEALING OF JOINTS IN LOW, MEDIUM, AND HIGH PRESSURE DUCT SYSTEMS. SEALER SHALL BE HIGH IN SOLID CONTENT.
9.16. PROVIDE A TWO PART TAPE SEALING SYSTEM, CONSISTING OF WOVEN FIBER TAPE IMPREGNATED WITH A GYPSUM MINERAL COMPOUND, AND A MODIFIED ACRYLIC/SILICONE ACTIVATOR THAT REACTS EXOTHERMICALLY WITH THE TAPE. TWO PART TAPE SEALING SYSTEM MUST BE RATED FOR BOTH INDOOR AND OUTDOOR APPLICATION. TAPE SHALL NOT CONTAIN ASBESTOS.
9.20. DUCT INSULATION: MATERIAL FOR SUPPLY AND RETURN AIR DUCT ABOVE CEILING INSIDE THE BUILDING SHALL HAVE THE EQUIVALENT THERMAL RESISTANCE OF MINIMUM R-6. THE REQUIRED R VALUES ARE FOR INSTALLED INSULATION WITH 25% COMPRESSION AT THE CORNERS.
9.21. PROVIDE PINS AND WASHERS IN ACCORDANCE WITH SMACNA REQUIREMENTS AND AS REQUIRED TO PREVENT INSULATION FROM SAGGING.
9.22. PROVIDE ADEQUATE INSULATION AT THE SUPPLY AIR DIFFUSERS TO PREVENT CONDENSATION.
9.23. FLEXIBLE DUCT : UL #181 LISTED, CLASS 1, AND CONTAIN A 0.1 PERM RATED POLYETHYLENE INNER LINER, WITH R-8 FIBERGLASS INSULATION. FLEXIBLE DUCTS SHALL BE SECURED TO RIGID SHEET METAL COLLARS AND AIR DIFFUSERS WITH NYLON TIES OR STAINLESS STEEL WORM GEAR STRAPS.
9.24. SEAL ALL CONNECTIONS AND JOINTS AIRTIGHT.
9.25. SUPPORT FLEXIBLE DUCTS FROM THE BUILDINGS STRUCTURE WITH MINIMUM 1" WIDE, 18 GAUGE, GALVANIZED STEEL STRAP AT MAXIMUM 4'-0" CENTERS. PROVIDE 4" WIDE SHEET METAL SADDLES AT EACH SUPPORT EACH STRAP. SAG OF FLEXIBLE DUCT BETWEEN HANGERS SHALL NOT EXCEED 1/2" PER FOOT OF SUPPORT SPACING. 9.26. RADIUS FOR TURNS OF FLEXIBLE DUCTS SHALL BE A MINIMUM OF ONE DUCT DIAMETER.
9.27. FLEXIBLE DUCT RUNS SHALL NOT EXCEED 10'-0" IN LENGTH AND SHALL BE THE SAME SIZE AS THE DIFFUSER NECK CONNECTION.
9.28. ROUND VOLUME DAMPERS: PROVIDE MINIMUM 20 GAUGE GALVANIZED STEEL FRAME AND BLADES, MINIMUM 3/8" SQUARE STEEL AXLE, MOLDED SYNTHETIC BEARINGS, WITH LOCKING POSITION REGULATOR. REGULATOR SHALL BE POSITIONED WITH SHEET METAL BRACKET BEYOND DUCT COVERING. WHERE POSITIONING REGULATOR IS NOT ACCESSIBLE, PROVIDE COUPLING AND EXTENSION ROD WITH REGULATOR FOR CEILING OR WALL INSTALLATION, AS REQUIRED.
9.29. RECTANGULAR VOLUME DAMPERS: PROVIDE MINIMUM 16 GAUGE GALVANIZED STEEL CHANNEL FRAME, 16 GAUGE GALVANIZED STEEL BLADES, MINIMUM ½" HEXAGONAL AXLE, BOLDED SYNTHETIC BEARINGS, WITH 3/8" SQUARE PLATED STEEL CONTROL SHAFT. LINKAGES SHALL BE CONCEALED IN THE FRAME. OPERATING SHAFT SHALL EXTEND BEYOND FRAME AND DUCT TO A LOCKING QUADRANT WITH ADJUSTABLE LEVER. MAXIMUM BLADE WIDTH SHALL NOT EXCEED 6".
9.30. DUCT TURNING VANES: PROVIDE FABRICATED TURNING VANES AND VANE RUNNERS, CONSTRUCTED IN ACCORDANCE WITH SMACNA "HVAC DUCT CONSTRUCTION STANDARDS". PROVIDE TURNING VANES CONSTRUCTED OF CURVED BLADES, SUPPORTED WITH BARS PERPENDICULAR TO BLADES, AND SET INTO SIDE STRIPS SUITABLE FOR MOUNTING IN DUCTWORK. FOLLOW SMACNA GUIDELINES FOR SPACING SUPPORT, AND CONSTRUCTION. ALL BLADES SHALL BE DOUBLE THICKNESS AIRFOIL TYPE.
9.31. FLEXIBLE DUCT CONNECTORS: PROVIDE U.L. LABELED 30 OUNCE NEOPRENE COATED FIBERGLASS FABRIC DUCT CONNECTORS. DUCT ACCESS DOORS: PROVIDE HINGED ACCESS DOORS IN DUCTWORK WHERE REQUIRED FOR ACCESS TO EQUIPMENT.
9.32. PROVIDE INSULATED ACCESS DOORS FOR INSULATED DUCTWORK. CONSTRUCT OF SAME OR THICKER GAUGE SHEET METAL AS DUCT IN WHICH IT IS INSTALLED.
9.33. PROVIDE FLUSH FRAMES FOR UN-INSULATED DUCTS, AND EXTENDED FRAMES FOR EXTERNALLY INSULATED DUCTS.
9.34. PROVIDE CONTINUOUS HINGE ON ONE SIDE, WITH ONE HANDLE-TYPE LATCH FOR ACCESS DOORS 12" HIGH AND SMALLER, AND TWO HANDLE-TYPE LATCHES FOR LARGER ACCESS DOORS.
10. HVAC CONTROL SYSTEM: PROVIDE ALL THE NECESSARY CONTROLS AND CONTROL WIRING IN CONDUIT COMPATIBLE TO SYSTEMS SHOWN ON EQUIPMENT SCHEDULE.
11. PROGRAMMABLE THERMOSTAT FOR EACH SYSTEM SHALL ENABLE THE SUPPLY FAN AND CYCLE THE COOLING AND HEATING STAGES TO MAINTAIN SPACE SET-POINT.
12. SUPPLY FAN RUNS CONTINUOUSLY DURING THE OCCUPIED MODE. EACH THERMOSTAT SHALL HAVE A DEAD BAND OF AT LEAST 5 DEGREES (ADJ) WITHIN WHICH THE SUPPLY OF HEATING AND COOLING IS SHUT OFF, EACH THERMOSTAT SHALL HAVE SETBACK AND SET-UP CAPABILITY DURING THE UNOCCUPIED MODE. FOR SETBACK, THE HEATING SHALL RESTART AND TEMPORARILY OPERATE ACCORDING TO A SET-POINT ADJUSTABLE DOWN TO 55 DEGREES. FOR SET-UP, THE COOLING SHALL RESTART AND TEMPORARILY OPERATE ACCORDING TO A SET-POINT ADJUSTABLE UP TO 85 DEGREES OR TO PREVENT HIGH SPACE HUMIDITY LEVELS.
13. WHERE DEMAND CONTROLLED VENTILATION IS SPECIFIED ON PLANS, EACH SYSTEM SHALL BE PROVIDED WITH A MOTORIZED OUTSIDE AIR DAMPER THAT WILL AUTOMATICALLY SHUT WHEN THE SYSTEM OR SPACES SERVED ARE NOT IN USE. VENTILATION OUTSIDE AIR DAMPERS SHALL BE CAPABLE OF AUTOMATICALLY CLOSING DURING PREOCCUPANCY BUILDING WARM-UP, COOL DOWN, AND SETBACK, EXCEPT WHEN VENTILATION REDUCES ENERGY COSTS (e.g., NIGHT PURGE) OR WHEN VENTILATION MUST BE SUPPLIED TO MEET CODE REQUIREMENTS.
14. COMMISSIONING / VERIFICATION: HVAC CONTROL SYSTEM SHALL BE TESTED TO ENSURE THAT CONTROL ELEMENTS ARE CALIBRATED, ADJUSTED, AND IN PROPER WORKING CONDITION, AND THAT THE SYSTEM MEETS THE DESIGN REQUIREMENTS.
15. TEST AND BALANCE: CONTRACT DIRECTLY A THIRD PARTY TO PROVIDE TEST AND BALANCE OF THE HVAC SYSTEM. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR SCHEDULING. TEST AND ADJUST ALL MECHANICAL SYSTEM AND EQUIPMENT TO ASSURE PROPER BALANCE AND OPERATION. PERFORM TESTS IN ACCORDANCE WITH NEBB PROCEDURAL STANDARDS-1999 OR AABC 2002, AND ASHRAE STANDARD 111. ELIMINATE NOISE AND VIBRATION, AND ASSURE PROPER FUNCTION OF CONTROLS. SUBMIT COMPLETED TEST AND BALANCE REPORT TO OWNER'S REPRESENTATIVE. BALANCING CONTRACTOR SHALL BE INDEPENDENT AND CERTIFIED WITH NEBB OR AABC. BALANCE ALL SYSTEMS WITHIN 5% OF AIR FLOW INDICATED ON DRAWINGS, AND REPORT ALL DISCREPANCIES TO THE HVAC CONTRACTOR FOR CORRECTION. MARK FINAL BALANCE POSITIONS ON DAMPERS WITH PERMANENT MARKER.
16. COMPLETION REQUIREMENTS: THE CONTRACTOR SHALL PROVIDE, WITHIN 90 DAYS AFTER THE DATE OF SYSTEM ACCEPTANCE, RECORD DRAWINGS AND AN OPERATING AND MAINTENANCE MANUAL TO THE BUILDING OWNER OR THE DESIGNATED REPRESENTATIVE OF THE OWNER. THE RECORD DRAWING SHALL BE OF THE ACTUAL INSTALLATION AND 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. THE OPERATING AND MAINTENANCE MANUALS SHALL BE IN ACCORDANCE WITH INDUSTRY-ACCEPTED STANDARDS AND SHALL INCLUDE, AT A MINIMUM, THE FOLLOWING:
(A) SUBMITTAL DATA STATING EQUIPMENT SIZE AND SELECTED OPTIONS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE;
(B) 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;
(C) NAMES AND ADDRESSES OF AT LEAST ONE SERVICE AGENCY;
(D) HVAC CONTROLS SYSTEMS MAINTENANCE AND CALIBRATION INFORMATION, INCLUDING WIRING DIAGRAMS, SCHEMATICS, AND CONTROL SYSTEM SEQUENCE DESCRIPTIONS. DESIRED OR FIELD-DETERMINED SET-PIONTS SHALL BE PERMANENTLY RECORDED ON CONTROL DRAWINGS AT CONTROL DEVICES OR, FOR DIGITAL CONTROL SYSTEMS, IN PROGRAMMING COMMENTS;
(E) A COMPLETE NARRATIVE OF HOW EACH SYSTEM EACH SYSTEM IS INTENDED TO OPERATE, INCLUDING SET-POINTS.

HVAC GENERAL NOTES

1. SEE ARCHITECTURAL PLANS FOR TYPE OF CEILING AND LOCATIONS OF WALL MOUNTED DEVICES.
2. DO NOT OPERATE AIR HANDLERS OR EXHAUST FANS UNTIL ALL INTERIOR CLEANING AND PAINTING IS COMPLETE. THE CLEANING OF FOULED COILS OR FAN ASSEMBLIES DUE TO PAINT OR CONSTRUCTION DEBRIS WILL THE RESPONSIBILITY OF THE HVAC CONTRACTOR.
3. RECTANGULAR DUCT SIZES INDICATED ARE ACTUAL SHEET METAL DIMENSIONS IN INCHES. ALL ROUND DUCT SIZES INDICATE NET FREE INSIDE DIAMETER AND DO NOT ACCOUNT FOR ANY INSULATION. ROUND DUCTS ARE EXTERNALLY INSULATED.
4. MAJOR EQUIPMENT SHOWN ON THE PLANS AND ELEVATIONS ILLUSTRATE THE GENERAL ARRANGEMENT AND SPACE ALLOCATION. VERIFY THE SPACE REQUIREMENTS FOR EACH SYSTEM COMPONENT USING MANUFACTURER CERTIFIED SHOP DRAWINGS AND MAKE THE NECESSARY ADJUSTMENTS IN EQUIPMENT PLACEMENT AND CONNECTIONS IN ORDER TO ACCOMMODATE THE EXACT EQUIPMENT TO BE INSTALLED IN COORDINATION WITH ARCHITECTURAL SPACES.
5. REFER TO DETAILS FOR SUPPORTS. ANCHOR BOLTS AND HANGERS FOR ALL EQUIPMENT, OTHER MISCELLANEOUS STEEL BRACING, SUPPORTS, AND REINFORCEMENT STEEL REQUIRED TO SUPPORT EQUIPMENT SHALL BE FURNISHED AS PART OF THE SCOPE OF DIVISION 23.
6. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE CODES, STANDARDS, AND AUTHORITIES HAVING JURISDICTION.
7. DUCTWORK AND PLENUMS SHALL BE SEALED IN ACCORDANCE WITH THE MECHANICAL CODE AND SMACNA METHOD AND COMMERCIAL ENERGY CONSERVATION CODE. SEAL ALL LONGITUDINAL AND TRANSVERSE JOINTS. SEAL ALL PENETRATIONS OF FLOORS, SMOKE WALLS, FIRE WALLS, AND EXTERIOR WALLS.
8. DO NOT RUN DUCT ON PIPE OVER ELECTRICAL PANELS. COORDINATE LOCATION OF DUCTS AND EQUIPMENT IN MECHANICAL ROOMS WITH THE ELECTRICAL AND PLUMBING CONTRACTOR BEFORE ANY INSTALLATION.
9. ALL DUCT RUN-OUTS TO SUPPLY AND EXHAUST AND DIFFUSERS AND RECEPTORS SHALL HAVE NORMAL BALANCING DAMPERS. PROVIDE YOUNG REGULATORS WITH REMOTE ADJUSTMENT WHERE CEILING IS INACCESSIBLE.
10. ALL DUCTWORK SHALL BE INSTALLED AND MANUFACTURED IN ACCORDANCE WITH LATEST SMACNA STANDARDS.
11. SECURE ALL PERMITS AND PROVIDE ANY REQUIRED TEMPORARY UTILITIES.
12. ALL FLEXIBLE DUCT SHALL BE UL 181, CLASS 1 AIR DUCT BLACK LINER. MAXIMUM LENGTH OF FLEXIBLE DUCT SHALL NOT EXCEED 6'-0". PROVIDE RIGID ROUND INSULATED AIR DUCT ROUN-OUT AS REQUIRED. FLEXIBLE DUCT SHALL HAVE THE EQUIVALENT OF ONLY TWO 90 DEGREE ELBOWS. MAXIMUM FLEX DUCTS ARE SAME SIZE AS DIFFUSER NECK.
13. THE AIR QUANTITIES SHOWN ON THE DRAWINGS FOR INDIVIDUAL OUTLETS MAY BE CHANGED TO OBTAIN UNIFORM TEMPERATURE WITH EACH ZONE, BUT THE TOTAL AIR QUANTITY SHOWN FOR EACH ZONE MUST BE OBTAINED.
14. INSTALL SMOKE DETECTOR FOR ALL UNITS WITH THE CAPACITY OF 2200 CFM AND HIGHER AS REQUIRED BY CODE. FIRE ALARM CONTRACTOR TO FURNISH AND TERMINATE.
15. ALL SUPPLY AND RETURN AIR DUCTS LOCATED IN UNCONDITIONED ATTICS OUTSIDE THE ENVELOPE OR OUTSIDE THE BUILDING SHALL BE INSULATED USING R-8 INSULATION. EXTERNALLY INSULATED DUCT SHALL BE R-8 (INSTALLED) OR MINIMUM REQUIRED BY CURRENT HOUSTON COMMERCIAL ENERGY CONSERVATION CODE.
16. ALL SUPPLY AND RETURN DUCTS LOCATED IN A CONDITIONED SPACE OR INSIDE THE ENVELOPE SHALL BE INSULATED USING MINIMUM R-5 6 INSULATION (INSTALLED R-VALUE). EXTERNALLY INSULATED DUCT SHALL BE R-5 6 OR MINIMUM REQUIRED BY CURRENT ENERGY CONSERVATION CODE.
17. PROVIDE RECORD DRAWINGS OF THE ACTUAL INSTALLATION 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.
18. PROVIDE OPERATING AND MAINTENANCE MANUALS TO THE BUILDING OWNER OR DESIGNATED REPRESENTATIVE OF THE BUILDING OWNER. THESE MANUALS SHALL BE IN ACCORDANCE WITH INDUSTRY ACCEPTED STANDARDS AND SHALL INCLUDE, AT A MINIMUM, THE FOLLOWING:
    A) SUBMITTAL DATA STATING EQUIPMENT SIZE AND SELECTED OPTIONS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE.
    B) 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.
    C) NAMES AND ADDRESSES OF AT LEAST ONE SERVICE AGENCY.
    D) HVAC CONTROLS SYSTEM MAINTENANCE AND CALIBRATION INFORMATION INCLUDING WIRING DIAGRAMS, SCHEMATICS, AND CONTROL SEQUENCE DESCRIPTIONS, AND DESIRED OR FIELD-DETERMINED SET POINTS SHALL BE PERMANENTLY RECORDED ON CONTROL DRAWINGS AT CONTROL DEVICES OR FOR DIGITAL CONTROL SYSTEMS, IN PROGRAMMING COMMENTS.
    E) A COMPLETE NARRATIVE OF HOW EACH SYSTEM IS INTENDED TO OPERATE, INCLUDING SUGGESTED SET POINTS.
19. DUCTWORK THAT IS DESIGNED TO OPERATE AT STATIC PRESSURES IN EXCESS OF 3 IN W.G. SHALL BE LEAK TESTED ACCORDING TO INDUSTRY-ACCEPTED TEST PROCEDURES. REPRESENTATIVE SECTIONS TOTALING NO LESS THAN 25% OF THE TOTAL INSTALLED DUCT AREA FOR THE DESIGNATED PRESSURE CLASS SHALL BE TESTED. DUCT SYSTEMS WITH PRESSURE RATINGS IN EXCESS OF 3 IN W.G SHALL BE IDENTIFIED ON THE DRAWINGS. THE MAXIMUM PERMITTED DUCT LEAKAGE SHALL BE NO MORE THAN 1% OF THE TOTAL AIRFLOW IN THE SECTION TESTED OR AS REQUIRED BY CURRENT COMMERCIAL ENERGY CONSERVATION CODE.
20. ALL HVAC SYSTEMS SHALL BE BALANCED IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING STANDARDS. A WRITTEN BALANCE REPORT SHALL BE PROVIDED TO THE OWNER OF DESIGNATED REPRESENTATIVE OF THE BUILDING OWNER.
21. HVAC CONTROL SYSTEMS SHALL BE TESTED TO ENSURE THAT CONTROL ELEMENTS ARE CALIBRATED, ADJUSTED, AND PROPER WORKING CONDITION AS REQUIRED BY COMMERCIAL ENERGY CONSERVATION CODE.
22. PROVIDE AND INSTALL 7-DAY PROGRAMMABLE THERMOSTAT.

GENERAL NOTES

- ALL FINISHES ARE 3" THICK.
- ALL DIMENSIONS ARE IN FEETS.

PROJECT NAME:
29906 JORDAN CROSSING RD BROOKSHIRE, RX 77423

DRAWING TITLE:
MECHANICAL GENERAL NOTES

DRAWN BY: -
CHECKED BY: -
APPROVED BY: -
DATE: 06/22/2025

REV:	DESCRIPTION:	BY:	DATE:

PROJECT NO: 11
HEET SIZE: D
DRAWING NO: **M-1**
SCALE: 1/16"= 1'-0"
REVISION: 0

EXHAUST FAN SCHEDULE

Ceiling Exhaust Fan (CEF) — MARK: CEF-1

Qty	Greenheck Model	Volume (CFM)	External SP Total SP (in wg)	FRPM	Operating Power (hp)	Weight (Lb.)	Motor Information					
							Size (hp)	V/C/P	Encl:	Motor RPM	Windings	FLA
1	SP-B110	70	0.4 0.676	950	0.04	13	NA	115/60/1	OP	950	1	NA

OPTIONS AND ACCESSORIES

UL/cUL 507 Listed - Electric Fan
Round Hooded Wall Cap, (PN: WC-6) Shipped Loose
Round Duct Connection
Isolation Kit, (PN: VI KIT-SP/CSP), Shipped Loose
Adjustable easy installation mounting bracket
Polypropylene Wheel Material
Can Be Used to Comply with: ASHRAE 62.2 and Texas State Energy Code

LOUVER INTAKE SCHEDULE

TAG NO.	AIRFLOW RANGE	VELOCITY	FRICTION LOSS	FREE AREA	SIZE	REMARKS
	CFM	FPM	FPM	ft2	inches	
LVR-1	0-110			0.20	6 x 6	GREENHECK ESD, ESJ, EDJ, ELF SERIES OR APPROVED EQUAL
LVR-2	111-240			0.48	10 x 6	

NOTE:

1.THIS TABLE IS FOR GENERAL SIZING GUIDANCE ONLY AND NOT THE ACTUAL QUANTITIES USED FOR THIS PROJECT. SOME OF THE LISTED SIZES SHOWN ARE NOT APPLICABLE IN THE PROJECT. REFER TO HVAC PLANS FOR PROPER LOUVER QUANTITIES.

2. SELECTIONS ARE BASED ON GREENHECK MODEL. APPROVED EQUAL IS ACCEPTABLE.

RTU-01 : 50FC*A04

DESCRIPTION	FEATURES								
MODEL NO	QUANTITY	COOLING STAGE	NOMINAL CAPACITY (TONS)	NET COOLING CAPACITY(MBH)	TOTAL POWER (KW)	EER	IEER WITH 2-SPEED INDOOR FAN MOTAR	AHRI RATING CFM	NOISE LEVEL dB(A)
50FC*A04	01	1	3	34.8	3	11.7	14	1500	79

RTU-02 : 50FC*A05

DESCRIPTION	FEATURES								
MODEL NO	QUANTITY	COOLING STAGE	NOMINAL CAPACITY (TONS)	NET COOLING CAPACITY(MBH)	TOTAL POWER (KW)	EER	IEER WITH 2-SPEED INDOOR FAN MOTAR	AHRI RATING CFM	NOISE LEVEL dB(A)
50FC*A05	01	1	4	47.0	4	11.8	14	2000	79

AIR DIFFUSER, GRILLES & REGISTER SIZING SCHEDULE

TAG NO.	TYPE	AIRFLOW RANGE	CORE VELOCITY	SUPPLY NECK SIZES	SUPPLY NECK SIZES	RETURN NECK SIZES	RETURN NECK SIZES	EXHAUST NECK SIZES	EXHAUST NECK SIZES	FACE SIZE (inch)	REMARKS
		(CFM)	(FPM)	(Ø)	(inch)	(Ø)	(inch)	(Ø)	(inch)		
SD-1	SUPPLY CEILING DIFFUSER	0-110	600	6	8x6					10x8	ADJUSTABLE 1, 2, 3, 4-WAY DISCHARGE PATTERN (MODEL-250/ 250-AA Series)
SD-2		111-240		8	12x8					14x10	
SD-3		241-420		8	12x10					16x12	
SD-4		421-550		2 x 8	16x12					18x14	
SD-5		551-680		2 x 8	16x14					18x16	
SD-6		681-770		2 x 8	18x16					20x18	
RD-1	RETURN CEILING DIFFUSER	0-110	500			6	6x6			12x12	4-WAY, SQUARE DIFFUSER, WITH OPPOSED BLADE DAMPER AND AIR CONTROL PATTERN. (MODEL-TMS/ TMS-AA Series) OR (MODEL-PAR Series)
RD-2		111-240				8	8x8				
RD-3		241-420				10	10x10				
RD-4		421-550				12	12x12			24x24	
RD-5		551-680				14	14x14				
RD-6		681-770				16	16x16				
ED-1	EXHAUST CEILING DIFFUSER	0-110	500					6	6x6	12x12	4-WAY, SQUARE DIFFUSER, WITH OPPOSED BLADE DAMPER AND AIR CONTROL PATTERN. (MODEL-TMS/ TMS-AA Series)
ED-2		111-240						8	8x8		
ED-3		241-420						10	10x10		
ED-4		421-550						12	12x12	24x24	
SG-1	SUPPLY AIR GRILLE/ REGISTER	0-110	600	-	10x8					12x8	DOUBLE DEFLECTION SUPPLY REGISTER (MODEL-300RL/ 300RS Series)
SG-2		111-240		-	16x8					18x8	
SG-3		241-420		-	30x8					32x8	
SG-4		421-550		-	36x8					38x8	
SG-5		551-680		-	30x8					32x10	
SG-6		681-770		-	36x8					38x10	
SG-7		771 -1100		-	30x12					32x14	
RG-1	RETURN AIR GRILLE/ REGISTER	0-110	500			-	8x6			10x8	PROVIDE MINIMUM 2"-MERV-13 FILTER. FILTER SHALL NOT EXCEED STATIC PRESSURE OF 0.2" WC (MODEL 350-FLF2/ FSF2) OR (MODEL 355-FLF2/ FSF2)
RG-2		111-240				-	16x6			18x8	
RG-3		241-420				-	24x6			26x8	
RG-4		421-550				-	18x10			20x12	
RG-5		551-680				-	22x10			24x12	
RG-6		681-770				-	30x8			32x10	
RG-7		771-850				-	24x12			26x14	
RG-8		851 & ABOVE				SEE PLAN				-	
EG-1	EXHAUST AIR GRILLE/ REGISTER	0-110	500					-	10x8	10x8	SINGLE DEFLECTION EXHAUST REGISTER (MODEL-350 RL/RS Series)
EG-2		111-220						-	12x8	14x8	
EG-3		221-420						-	12x10	14x12	
EG-4		421-550						-	18x12	24x24	
EG-5		550 & ABOVE						SEE PLAN		-	

NOTE:
1. THE TABLE ABOVE IS FOR SIZING GUIDANCE ONLY AND NOT THE ACTUAL QUANTITIES USED FOR THIS PROJECT. SOME OF THE LISTED SIZES SHOWN ARE NOT APPLICABLE IN THIS PROJECT. REFER TO HVAC PLANS FOR GRILLE QUANTITIES.
2. SELECTIONS ARE BASED ON RUSKIN TITUS MODEL. APPROVED EQUAL IS ACCEPTABLE.

MECHANICAL SYMBOLS

SYMBOL & ABBREVIATION	DESCRIPTION
MECHANICAL SYMBOLS	
SA/SUP	SUPPLY AIR (RISE/DROP)
RA/RET	RETURN AIR DUCT (RISE/DROP)
EA/EXH	EXHAUST AIR DUCT (RISE/DROP)
CD/ SD	CEILING DIFFUSER/ SUPPLY DIFFUSER
RD/RG	RETURN DIFFUSER/GRILLE
ER/EG	EXHAUST REGISTER/GRILLE
	RECTANGULAR DUCT ELBOW WITH TURNING VANES
FC	FLEXIBLE CONNECTION
VD	MANUAL VOLUME DAMPER
FSD	FIRE SMOKE DAMPER
(L)	DUCT LINING (1" THICK UNLESS OTHERWISE NOTED)
	SINGLE LINE DUCT BRANCH TAKE-OFF
	DUCT TRANSITION (RECTANGULAR TO ROUND)
FLEX	FLEXIBLE DUCT (5'-0 MAXIMUM)
T	PROGRAMABLE THERMOSTAT, HONEYWELL T-7300.
CD	CONDENSATE DRAIN
Ø	DIAMETER
DL	DOOR LOUVER
UC	DOOR UNDERCUT (3/4" MINIMUM)
	FLEXIBLE DUCT
E	FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.
M/E	FURNISHED BY MECHANICAL CONTRACTOR AND INSTALLED BY ELECTRICAL CONTRACTOR.
SG-1 10"x10" 390	AIR OUTLET/INLET DEVICE DESIGNATION GRILLE SIZE AIR QUANTITY IN CFM
HP 1	MECHANICAL EQUIPMENT DESIGNATION DESIGNATED NUMBER
A/C , AC	AIR CONDITIONING
BDD	BACK DRAFT DAMPER
CB	CIRCUIT BREAKER
CLG.	CEILING
CONN.	CONNECT/CONNECTION
CONT.	CONTINUATION
CONT'R	CONTRACTOR
CFM	CUBIC FEET PER MINUTE
DET.	DETAIL
DISC.	DISCONNECT
DTR	DOWN THRU ROOF
EF	EXHAUST FAN
(E)	EXISTING
GA.	GAGE/GAUGE
GC	GENERAL CONTRACTOR
HVAC	HEATING, VENTILATING, AND AIR CONDITIONING
MFR.	MANUFACTURER
MECH.	MECHANICAL
(N)	NEW
OA/OSA	OUTSIDE AIR
OBD	OPPOSED BLADE DAMPER
S/S	STAINLESS STEEL
TYP.	TYPICAL
UTR	UP THRU ROOF
(R)	RELOCATED

NOTE: NOT ALL SYMBOLS AND ABBREVIATIONS ARE NECESSARILY USED IN THIS PROJECT.

GENERAL NOTES

- ALL FINISHES ARE 3" THICK.
- ALL DIMENSIONS ARE IN FEETS.

PROJECT NAME:
29906 JORDAN CROSSING RD BROOKSHIRE, RX 77423

DRAWING TITLE:
MECHANICAL SPECIFICATION

DRAWN BY: -

CHECKED BY: -

APPROVED BY: -

DATE: 06/22/2025

REV:	DESCRIPTION:	BY:	DATE:

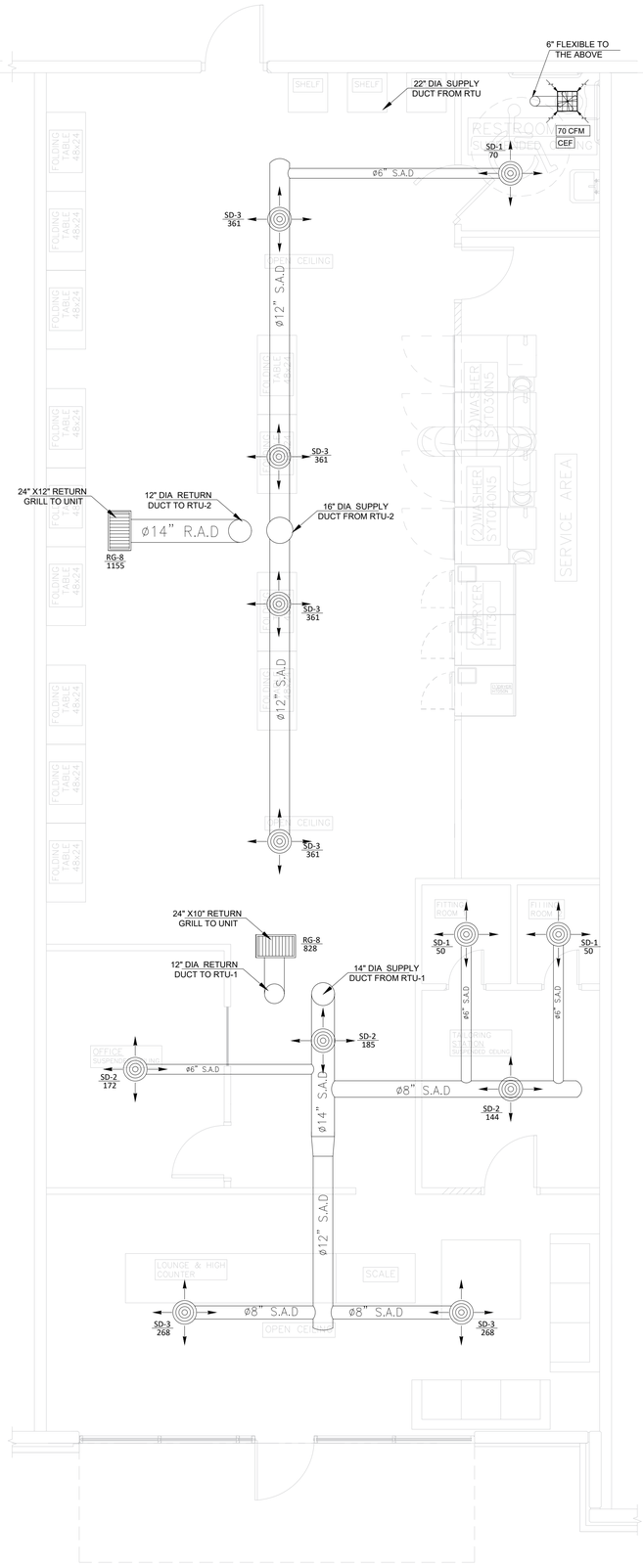
PROJECT NO: 11

HEET SIZE: D

DRAWING NO: **M-2**

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

REVISION: 0



GENERAL NOTES

- ALL FINISHES ARE 3" THICK.
- ALL DIMENSIONS ARE IN FEETS.

PROJECT NAME:
29906 JORDAN CROSSING RD BROOKSHIRE, RX 77423

DRAWING TITLE:
MECHANICAL PLANS

DRAWN BY: -

CHECKED BY: -

APPROVED BY: -

DATE: 06/22/2025

REV:	DESCRIPTION:	BY:	DATE:

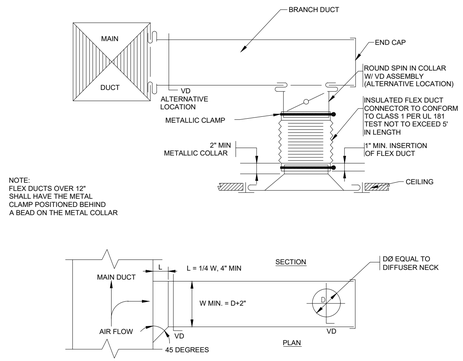
PROJECT NO: 11

SHEET SIZE: D

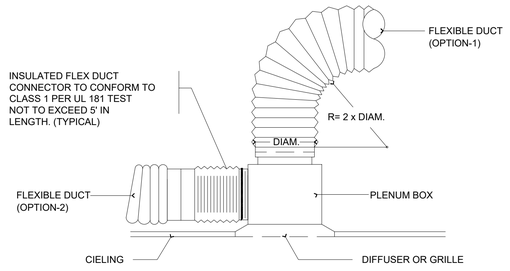
DRAWING NO: **M-3**

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

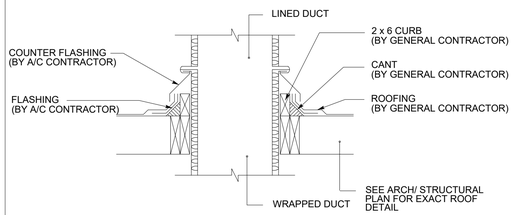
REVISION: 0



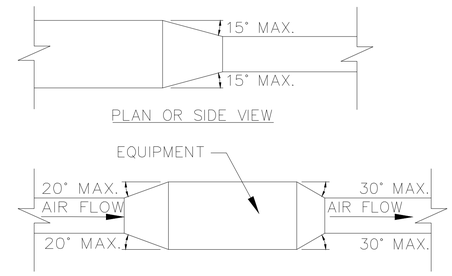
CEILING DIFFUSER AND BRANCH DUCT DETAIL | SCALE NONE | 1



TYPICAL DIFFUSER OR GRILLE CONNECTION | SCALE NONE | 2

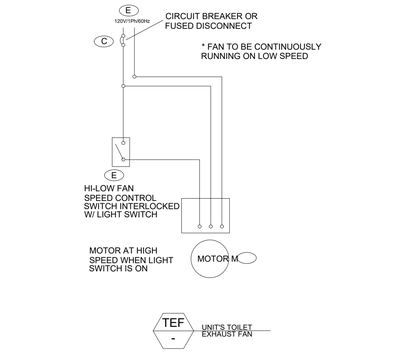


DUCT FLASHING DETAIL | SCALE NONE | 3



NOTE:
UNLESS OTHERWISE INDICATED ON PLANS, MAXIMUM ANGLES SHOWN SHALL APPLY

TYPICAL DUCT TRANSITION | SCALE NONE | 4



NOTE:

PROVIDE PITCH POCKET CONSTRUCTION ADDITIONAL FLASHING OR WEATHER CAP AS REQUIRED FOR WATERPROOF CONSTRUCTION. DO NOT MECHANICALLY TIE PIPE TO STRUCTURE IN ANY WAY. SPACE BETWEEN PIPE AND SLEEVE SHALL BE FREE OF ANY FOREIGN MATERIALS.
PIPE SHALL NOT CONTACT STRUCTURE AT ANY TIME. WEDGES SHALL NOT BE USED TO MAINTAIN PIPE IN POSITION. PIPE MUST BE APPROXIMATELY CENTERED IN OPENING. PROVIDE ADDITIONAL CLEARANCE FOR POSITIONAL CHANGE OF PIPE DUE TO LOADING OF SYSTEM OPERATION.

PIPE PENETRATION DETAIL | SCALE NONE | 5

TOILET EXHAUST DETAIL | SCALE NONE | 6

NOTE:
INSTAL INTERNAL STIFFENERS AS REQUIRED

GOOSENECK DETAIL | SCALE NONE | 7

DUCT HANGER DETAIL | SCALE NONE | 8

TOILET EXHAUST FAN WIRING DIAGRAM | SCALE NONE | 9

1. DOMESTIC CLOTHES DRYER MOISTURE EXHAUST DUCT SHALL BE OF METAL AND SHELL HAVE SMOOTH INTERIOR SURFACES.
2. LISTED CLOTHES DRYER TRANSITION DUCT COULD NOT BE MORE THAN 6 FT IN LENGTH.
3. FLEXIBLE CLOTHES DRYER TRANSITION DUCTS SHALL NOT BE CONCEALED WITHIN CONSTRUCTION.
4. SECONDARY LINT TRAP IS REQUIRED ONLY WHEN DRYER BOOSTER FAN IS INSTALLED LESS THAN 15 FT A TOTAL COMBINED HORIZONTAL AND VERTICAL LENGTH.
5. WHERE DUCTS JOIN, THE MALE END SHALL BE INSERTED IN THE DIRECTION OF AIRFLOW.
6. DUCTS SHALL NOT BE ASSEMBLED WITH SCREWS OR OTHER FASTENING MEANS THAT EXTEND INTO DUCTS AND ARE CAPABLE OF CATCHING LINT.

DRYER VENT DETAIL | SCALE NONE | 10

GENERAL NOTES

- ALL FINISHES ARE 3" THICK.
- ALL DIMENSIONS ARE IN FEETS.

PROJECT NAME:
29906 JORDAN CROSSING RD BROOKSHIRE, RX 77423

DRAWING TITLE:
MECAHNICAL DETAIL

DRAWN BY: -

CHECKED BY: -

APPROVED BY: -

DATE: 06/22/2025

REV:	DESCRIPTION:	BY:	DATE:

PROJECT NO: 11

SHEET SIZE: D

DRAWING NO: **M-4**

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

REVISION: 0

ELECTRICAL LEGENDS

POWER

- ABOVE COUNTER QUADPLEX RECEPTACLE
- ABOVE COUNTER DUPLEX RECEPTACLE
- QUADPLEX RECEPTACLE
- DUPLEX RECEPTACLE
- GFI ABOVE COUNTER QUADPLEX RECEPTACLE
- GFI ABOVE COUNTER DUPLEX RECEPTACLE
- GFI QUADPLEX RECEPTACLE
- GFI DUPLEX RECEPTACLE
- USB DUPLEX RECEPTACLE
- SPECIAL RECEPTACLE
- WEATHER PROOF/GFI DUPLEX RECEPTACLE
- PANELBOARD
- E-CONNECTION (WALL, CEILING / FLOOR MOUNTED)
- SURGE PROTECTIVE DEVICE
- DIRECT EQUIPMENT CONNECTION WITH THERMAL RATED DISCONNECT SWITCH

LOW VOLTAGE & FIRE ALARM

- VOICE/DATA OUTLET
- FIRE ALARM RELAY MODULE
- DUCT DETECTOR TEST STATION
- DUCT DETECTOR

LIGHTING

- SWITCH
- DIMMER SWITCH
- 3 - WAY SWITCH
- 4 - WAY SWITCH
- VACANCY SENSOR (WALL MOUNTED)
- OCCUPANCY SENSOR (WALL MOUNTED)
- MANUAL OVERRIDE SWITCH
- TIME CLOCK OVER RIDE SWITCH
- VACANCY SENSOR (CEILING)
- OCCUPANCY SENSOR (CEILING)
- DAYLIGHT SENSOR (CEILING)
- BATTERY EMERGENCY LIGHT (WALL MOUNTED)
- BATTERY EMERGENCY LIGHT (CEILING MOUNTED)
- EXIT SIGN
- X — UPPERCASE LETTER DENOTES FIXTURE TAG
- x — LOWERCASE LETTER DENOTES SWITCH DESIGNATION

MISCELLANEOUS

- JUNCTION BOX - CEILING/WALL MOUNTED
- PULL BOX
- CONDUIT CONCEALED IN WALL, CEILING OR UNDERGROUND. CENTER LINES DENOTE UNDERGROUND/FLOOR CONDUIT. DASHED LINES DENOTE DEMOLITION. ARROWHEAD DENOTES HOMERUN TO PANEL. SLASHED DENOTE QUANTITY OF CONDUCTORS. DOT DENOTES GROUND. LONG SLASH DENOTES NEUTRAL CONDUCTOR. SHORT SLASH DENOTES PHASE CONDUCTOR, SWITCH LEG OR CONTROL.
- FLEXIBLE CONDUIT WHIP - MAX 6'-0" IN LENGTH
- METER
- FUSED SWITCH
- CIRCUIT BREAKER
- ENCLOSED CIRCUIT BREAKER
- FUSED SWITCH
- DISCONNECT SWITCH
- FUSED DISCONNECT SWITCH
- DIGITAL PHASE CONVERTER
- COMBINATION STARTER DISCONNECT SWITCH W/H.O.A.

ANNOTATION

- KEY NOTE TAG
- REVISION NOTE TAG

APPLICABLE CODES

ALL PROJECTS WILL COMPLY WITH THE FOLLOWING BUILDING CODES AND ASSOCIATED CITY OF CONVERSE AMENDMENT.

1. 2021 TEXAS BUILDING CODE BUILDING WITH LOCAL AMENDMENTS
2. 2021 TEXAS BUILDING CODE ENERGY CONSERVATION
3. 2021 TEXAS BUILDING CODE PLUMBING CODE WITH LOCAL AMENDMENTS
4. 2021 TEXAS BUILDING CODE MECHANICAL CODE WITH LOCAL AMENDMENTS
5. 2021 TEXAS BUILDING CODE FUEL GAS WITH LOCAL AMENDMENTS
6. 2023 TEXAS ELECTRIC CODE WITH LOCAL AMENDMENTS

ELECTRICAL ABBREVIATIONS

ACP ACCESS CONTROL PANEL
AOR AREA OF RESCUE
AFF ABOVE FINISHED FLOOR
BOH BACK OF HOUSE
C CEILING MOUNTED
CL CENTER LINE
CKT CIRCUIT
D DEDICATED
EC ELECTRICAL CONTRACTOR
EM EMERGENCY
EX EXISTING
ETR EXISTING TO REMAIN
ER EXISTING, RELOCATED
FAC FIRE ALARM CONTRACTOR
FPC FIRE PROTECTION CONTRACTOR
GC GENERAL CONTRACTOR
GFI GROUND FAULT CIRCUIT INTERRUPTER
HD HAND DRYER
LVC LOW VOLTAGE CONTRACTOR
MC MECHANICAL CONTRACTOR
MT MOUNT
NL NIGHT LIGHT
PC PLUMBING CONTRACTOR
PL PILOT LIGHT
SM SURFACE MOUNT
SPD SURGE PROTECTION DEVICE
TC TIMECLOCK
TGB TELECOMMUNICATIONS GROUND BUS
TTC TELEPHONE TERMINAL CABINET
W WALL MOUNT AT 48" A.F.F.
WP WEATHERPROOF

GENERAL ELECTRICAL NOTES

Division 26: BASIC ELECTRICAL MATERIALS AND METHODS

1. RACEWAYS

A. METALLIC CONDUIT AND TUBING

Electrical Metallic Tubing, Couplings, and Fittings (EMT): ANSI C80.3, UL 797. Only steel products are allowed. Reduced wall EMT is not allowed.

Flexible Metal Conduit (FMC): Zinc-coated steel or aluminum, UL 1. Reduced-wall FMC is not allowed.

Intermediate Metal Conduit (IMC): Hot dip Galvanized Rigid Steel Conduit, ANSI C80.6, UL 1242.

Liquid tight Flexible Metal Conduit (LFMC): Flexible steel conduit with PVC jacket, UL 360; fittings: NEMA FB 1.

Rigid Metal Conduit (RMC):
1. Hot dip Galvanized Rigid Steel Conduit (GRS): ANSI C80.1, UL 6.
2. Rigid Aluminum Conduit (RAC): ANSI C80.5, UL 6A.
   Plastic-Coated IMC, RMC, and Fittings: NEMA RN 1, NRTL listed. Coating thickness of 0.04 inches minimum.

IMC and RMC Fittings: NEMA FB 1; compatible with conduit type and material, NRTL listed.

Manufacturers: AFC Cable, Alflex, Anamet Electrical, Electri-Flex, Indalex, Manhattan/CDT/Cole-Flex, O-Z/Gedney, Republic Raceway, Tyco International, Western Tube and Conduit, or Wheatland Tube.

B. NON-METALLIC CONDUIT AND TUBING

Rigid Nonmetallic Conduit (RNC): Schedule 40 PVC, 90 deg C rated, NEMA TC-2, UL 651

Fittings: NEMA TC 3, TC 6; UL 651, compatible with conduit/tubing type and material, NRTL listed.

Manufacturers: AFC Cable, American International, Anamet Electrical, Amco, Cantex, Certainteed, Condux International, Elecsys, Electri-Flex, Lamson and Sessions, Manhattan/CDT/Cole-Flex, Prime Conduit, Raco, Spiraladuct, Superflex Ltd, or Thomas and Betts.

2. RACEWAY INSTALLATION

A. GENERAL RACEWAY INSTALLATION REQUIREMENTS

Install raceways parallel and perpendicular to building lines.

Install raceways to requirements of structure, to requirements of all other work on the project, and to clear all openings, depressions, pipes, ducts, reinforcing steel, and other immovable obstacles.
Install raceways set in forms for concrete structure in such a manner that installation will not affect the strength of the structure.

Except where approved in writing by the Engineer, install no raceway in a slab-on-grade. Locate raceway below granular fill below slabs-on-grade.

Install raceways continuously between connections to outlets, boxes, and cabinets with a minimum possible number of bends and not more than the equivalent of four 90-degree bends between connections. Use manufactured elbows for all 45- and 90-degree bends, unless approved by the Engineer in advance. Make other bends smooth and even and without flattening raceway or flaking galvanizing or enamel. Radii of bends shall be as long as possible and never shorter than the corresponding trade elbow.

Use long radius elbows for all underground installations, where necessary, or where otherwise indicated.

Securely fasten raceways in place with approved straps, hangers, and steel supports as required. Attach raceway supports to the building structure. Hang single raceways for feeders with malleable split ring hangers with rod and turnbuckle suspension from inserts spaced not over 10 feet apart in construction above. Clamp groups of horizontal feeder raceways to steel channels that are suspended from inserts spaced not over 10 feet apart in construction above. Securely clamp vertical feeder raceways to structural steel members attached to structure. Install cable clamps for support of vertical feeders where required. Add raceway supports within 12 inches of all bends, on both sides of the bends. Do not support raceways from suspended ceiling components.

Ream raceway ends, thoroughly clean raceways before installation, and keep clean after installation. Plug or cover openings and boxes as required to keep raceways clean during construction and fish all raceways clear of obstructions before pulling conductor wires. Provide raceways of ample size for pulling of wire, not smaller than code requirements and not less than 1/2-inchin size, unless indicated otherwise on Drawings. Homeruns containing more than one branch circuit shall not be less than 3/4-inch in size.

Protect all raceway installations against damage during construction. Repair all raceways damaged or moved out of line after roughing-in to meet Engineer's approval without additional cost to the Owner.

Align and install true and plumb all raceway terminations at panelboards, switchboards, motor control equipment, and junction boxes.

Install approved expansion/deflection fittings where raceways pass through (if embedded) or across (if exposed) expansion joints, and when using RNC or RAC in exposed environments in accordance with NFPA 70 and expansion/contraction properties of RNC or RAC.

Install a pull wire in each empty raceway that is left for installation of conductors or cables under other divisions or contracts. Use polypropylene or monofilament plastic line with not less than 200-lb tensile strength. Leave at least 24 inches of slack at each end of pull wire.

Make all joints and connections in a manner that will ensure mechanical strength and electrical continuity. Coordinate raceway routing and installation with other trades prior to rough-in and installation.

B. ABOVE GROUND RACEWAY USE:

Install all circular raceways concealed above suspended ceilings or concealed in walls or floors wherever possible except where otherwise indicated. Provide GRS for all conduits exposed to weather or other hazardous conditions. Unless noted otherwise, all other raceways may be EMT where approved by local code. Use compression type fittings for EMT, with all fittings NRTL listed for the environment in which they are used. Unless noted otherwise, set-screw type fittings are not allowed.

C. EQUIPMENT CONNECTIONS

Use FMC for final connection to each motor, transformer, and any device that would otherwise transmit motion, vibration, or noise. Use LFMC where exposed to liquids, vapors, or sunlight. Provide all FMC and LFMC with an insulated bonding conductor.

Use only metal raceways for all power wiring from the output of variable frequency drives to their respective motors.

3. BUSHINGS AND LOCKNUTS

Rigidly terminate conduits entering sheet metal enclosures to the enclosure with a bushing and locknut on the inside and a locknut or an approved hub on the outside. Conduit shall enter the enclosure squarely.
Provide bushings and locknuts made of galvanized malleable iron with sharp, clean-cut threads.
Where EMT enters a box, provide approved EMT compression connectors.
Use insulated, grounding, or combination bushings wherever connection is subject to vibration or moisture, when required by NFPA 70.

4. CONDUCTORS AND CABLES

Annealed (soft) copper complying with ICEA S-95-658/NEMA WC70 and UL standards 44 or 83 as applicable.
Aluminum conductor option:

Compact stranded, aluminum alloy (AA-8000 series), complying with ICEA S-95-658/NEMA WC70; No. 1/0 AWG or larger only.

Terminations: Tinned, compression [mechanical] type only; NRTL-listed for copper and aluminum conductors at 75 degrees C minimum.

Increase the raceway size as required, at no additional cost to the Owner, to accommodate the increased size of the aluminum Conductors.

The aluminum conductor size shall meet or exceed the ampere rating of the scheduled copper conductors at 75 degrees C.

Option applies only for the following feeders or services No. 2 AWG and larger (based on copper conductors):
1. Service entrance conductors.
2. Feeders to switchboards.
3. Feeders to panelboards. Exception: Apartment unit load center feeder conductors shall be copper; aluminum is not acceptable.
4. Feeders to motor control centers.
5. Feeders to transformers

GENERAL ELECTRICAL NOTES

Where aluminum conductors terminate existing panelboards, switchboards or switchgear that utilize compression connections use hydraulic-compression type connectors with a zinc base, anti_oxidizing compound. Use compression tools of the type that will not release unless the correct pressure has been applied.
Measure the temperature of all aluminum conductors at all splices and terminations. Make each test under typical building load Conditions after the building is occupied and in operation for a minimum of two weeks. Replace all joints or splices indicating excessive heating.

Take measurements with a noncontact type infrared thermometer, with target size not exceeding one inch at five feet and an accuracy of two percent or better. Submit the meter specifications and calibration date with the test results.
Aluminum Conductor Manufacturer: General Cable or approved equal.

Conductor Insulation Types: 90-degree C-rated, Type THHN/THWN-2 or XHHW-2 complying with ICEA S-95-658/NEMA WC70.

Sizes of conductors and cables indicated or specified are in American Wire Gage (AWG - Brown and Sharpe).
All feeder and branch circuit conductors No. 8 AWG and larger: Stranded.

All conductors, No. 10 AWG and smaller: Solid copper.

All Branch Circuit Wiring: Not smaller than No. 12 AWG. If no conductor size is indicated on the Drawings for a branch circuit, provide conductors and conduit sized per NFPA 70 and based on the indicated branch circuit overcurrent protective device (OCPD) rating and number of poles. Where no circuit size (i.e., conductors and OCPD) is indicated on the drawings for a branch circuit, provide three No. 12 AWG conductors, in 3/4-inch raceway, and a 20A circuit breaker.

Control Wiring: Stranded copper conductors, 600V insulation, of the proper type, size, and number as required to accomplish specified function. Minimum size: No. 14 AWG, unless noted otherwise.

Flexible Cords and Cables: Stranded copper conductors for all, unless noted otherwise.

Special Purpose Conductors And Cables, Such As Low Voltage Control And Shielded Instrument Wiring: As recommended by the system equipment manufacturer unless indicated otherwise.

Copper Conductor Manufacturers: Advance Wire and Cable, AFC Cable, Alan Wire, Alflex, American Insulated Wire, Encore Wire, Northern Cables, Okonite, or Southwire.

Connections: Apply a zinc based anti_oxidizing compound to connections. Do not use terminals on wiring devices to feed through to the next device.

5. CONDUCTORS AND CABLES INSTALLATION

Install all wiring in approved raceway and enclosures, except where specified or indicated for low-voltage wiring, where specified or indicated for direct-buried cables, or where type MC cable is indicated or specified as acceptable. Install all conductors and cables in raceways continuous without taps or splices. Splice or tap only in approved boxes and enclosures with approved solderless connectors, or crimp connectors and terminal blocks for control wiring, and keep to the minimum required. Insulate all splices, taps, and joints as required by codes.

All materials used to terminate, splice, or tap conductors: designed for, properly sized for, and NRTL listed for the specific application and conductors involved, and installed in strict accordance with the manufacturer's recommendations, using the manufacturer's recommended tools.

Where wiring is indicated as installed, but the connection is indicated "FUTURE" or "BY OTHER DIVISION, TRADES, OR CONTRACTS", leave a minimum 3-foot "Pigtail" at the box, tape the ends of the conductors, and cover the box.

In general, the direction of branch circuit "home run" routing is indicated on the drawings, complete with circuit numbers and panelboard designation. Continue all such "home run" wiring to the designated panelboard, as though "circuit runs" were indicated in their entirety.

Common or shared neutrals are not allowed unless shown on the drawings to be used or specifically noted to be allowed.

Where multi-wire branch circuits (i.e., shared neutral) are allowed, they shall be provided with a means that will simultaneously disconnect all ungrounded conductors at the point the branch circuit originates. Multi-pole breakers or 3 single-pole breakers with a handle tie are two examples.

When multiple home runs are combined into a single raceway such that the number of conductors exceeds four (conductor count is made up of any combination of phase and neutral conductors), the following restrictions apply, which are in addition to those in NFPA 70:

Normal or Non-Essential circuits:
1. Maximum of 16 conductors in a single raceway. For up to eight conductors in a raceway, minimum raceway size: 3/4-inch. For greater than eight conductors, minimum raceway size: 1-inch. Do not install any other type of circuit in this raceway.
2. Minimum wire size for all conductors in this raceway: No. 10 AWG.
3. Only 15A and 20A branch circuit homeruns may be combined into one raceway.

6. GFCI circuits:

1. Do not use multi-conductor circuits, with a shared neutral, for any GFCI circuit breaker or receptacle circuit.

For branch circuits fed from GFCI circuit breakers, limit the one-way conductor length to 100 feet between the panelboard and the most remote receptacle or load on the GFCI circuit.

Properly identify all terminal blocks and wire terminals for control wiring with vinyl stick-on markers or equivalent. Provide Engineer with a list of proposed identifying numbers for review prior to installing markers.

Provide an equipment-grounding conductor or bonding jumper, as applicable, in all feeders and branch circuits, sized in accordance with NFPA 70 Tables 250.66 or 250.122, as applicable, unless indicated as larger on the drawings.

Wiring shall have insulation of the proper color to match the color code system in the table below unless there is a color system currently in use by the facility, in which case the colors are to match the existing system. In larger sizes where properly, colored insulation is not available, use vinyl plastic electrical tape of the appropriate color around each conductor at all termination points, junctions, and pull boxes.

System Voltage.
240V and under, including 208Y/120, 120/240, 120/208, and 240D/120 systems:
1. Phase A: Red.
2. Phase B: Black.
3. Phase C: Blue.
4. Neutral: White.
5. Equipment Ground: Green.
6. Isolated Ground: Green with yellow stripe.

7. MC CABLE

A. CABLE SPECIFICATIONS

Metal-clad cable (MC Cable): 600V, unjacksted; UL Standard 83, 1569, and 1685; NFPA 70 Article 330 : aluminum or galvanized steel interlocked armor; THHN- or XHHW-insulated conductors; color code: ICEA Method 1, with green insulated grounding conductor; listed for use in UL 1, 2, and 3 hour through-penetration firestop systems. MC Cable manufacturers: AFC Cable Systems, Encore Wire Corporation, Kaf-Tech, or Southwire.

B. APPLICATIONS OF MC CABLE

1. In lieu of flexible conduit and wiring from light fixtures located in accessible ceilings to junction boxes attached to building structure directly above the ceiling. Provide cable whips of sufficient lengths to allow for relocating each light fixture within a 5-foot radius of its installed location, but not exceeding 6 feet in unsupported lengths.
2. For vertical drops in stud walls.
3. In lieu of EMT, only for 15A and 20A branch circuits (with up to four (4) conductors, not including ground conductor), and only in dry concealed locations above grade, except where specifically not permitted by NFPA 70, owner, landlord, ahj, or noted in ist below.
4. In all areas or rooms involving health care, medical or dental examinations, medical or dental treatment, therapy areas, or other patient care spaces that fall under NFPA 70 Article 517. Type MC cable shall have an outer metal armor or sheath in accordance with NFPA 70 Article 517.13(A). This applies to any space where a patient may come in contact with such items as an electrical instrument, cord connected equipment, electrified bed, portable exam light, a permanently mounted exam light that could be reached by a patient, or other similar devices.

C. PROHIBITED USE OF MC CABLE UNLESS NOTED ABOVE

Examples of those uses include, but are not limited to the following:
1. Homeruns to panelboards (refer to Section 26: Definitions).
2. Where exposed to view.
3. Where exposed to damage.
4. Hazardous locations.
5. Wet locations.
6. When restricted otherwise.
7. When specifically disallowed by the local AHJ.
8. When specifically disallowed by the landlord.
9. Circuits supplied by an emergency or standby power source.

GENERAL ELECTRICAL NOTES

8. MC CABLE INSTALLATION

Secure and support cable per NFPA 70 Article 330. Secure cable within 12 inches of every box or fitting. Securing and supporting intervals shall not exceed six feet. Maintain consistent spacing to avoid derating due to bundling per NFPA 70 Section 310.15. Utilize steel cable hangers, Arlington SMC series or equivalent, to support wherever possible so cables can be routed in a neat and workmanship like manner.

9. JUNCTION BOXES, PULL BOXES, CABINETS, AND WIREWAYS

Provide junction boxes, pull boxes, cabinets, and wireways wherever necessary for proper installation of various electrical systems according to NFPA 70 and where indicated on the drawings. Size as required for the specific function or as required by NFPA 70 whichever is larger. Construction shall be of a NEMA design suitable for the environment installed.

Junction boxes installed behind wall cases and in or on other store fixtures, except where otherwise specified, shall be 4 inches square or larger with galvanized covers.

Horizontally mount junction boxes under center fixtures (and cases), handy boxes or 4-inch square boxes with tops of boxes not more than 3-1/2 inches above the floor. Size junction boxes to adequately contain all required conductors and splices.'

10. OUTLET BOXES

All outlets including light fixture, switch, receptacle, and similar outlets: galvanized steel knockout boxes, suitable in

by NFPA 70, whichever is larger. Set all outlet boxes in walls, columns, floors, or ceilings so they are flush with the

rings as required for flush mounting. Provide approved cast outlet boxes with hubs and weatherproof covers in all areas subject to damp, wet, or harsh conditions.

Manufacturers: Appleton, Cooper, Erikson Electrical, Hoffman, Killark Electric, O-Z/Gedney, Raco, Robroy Industries, Scott Fetzer, Spring City Electrical, Thomas and Betts, Walker Systems, or Woodhead.

11. OUTLET LOCATIONS

Coordinate locations of outlet boxes. Outlets are only approximately located on the small-scale drawings. Use great care in the actual location by consulting the various large scale detailed drawings used by other division trades, and by securing definite locations from the Architect.

12. MOUNTING HEIGHTS

Unless noted otherwise, install wiring devices vertically aligned at height indicated on construction drawings.

A. RECEPTACLES

Unless indicated otherwise, install vertically with the ground slot mounted at the top.

Where installed horizontally, install with the neutral slot mounted at the top.

Above counter: mount vertically aligned.

Mechanical and electrical equipment rooms and janitors closets: mount vertically aligned.

Garages: mount vertically aligned.

Weatherproof exterior receptacles: horizontally aligned.

GFCI receptacles: Same as general receptacles.

Isolated ground receptacles: Same as general receptacles.

SPD receptacles: Same as general receptacles.

Clock Receptacles: 84 inches above finished floor.

Concrete Block Walls: As long as ADA requirements are maintained, dimensions above may be adjusted slightly as required to compensate for variable joint dimensions such that bottom or top of boxes, as applicable, are at block joints.

B. SWITCHES

General: All switches shall be mounted at the same height throughout the project unless noted otherwise.
Above Counters: Same as for receptacles.
Concrete Block Walls: As long as ADA requirements are maintained, dimensions above may be adjusted slightly as required to compensate for variable joint dimensions, such that bottom or top of boxes, as applicable, are at block joints.
Walls with Wainscoting: 6 inches minimum above wainscoting, but not exceeding 48 inches above finished floor.

C. TELEPHONE/DATA OUTLET BOXES

General: Match mounting height of adjacent wiring device listed above.
Wall-mounted Telephone (Public): One at 48 inches above finished floor and one at 36 inches above finished floor.
For other than wiring devices, refer to paragraphs, articles, sections, divisions, or drawings to obtain mounting heights for specific equipment or systems.

13. WIRING DEVICES

The catalog numbers listed for wiring devices are generally for 20A rated devices. Where 15A rated devices are

for 20A, but rated for 15A.

All receptacles located outdoors or in damp or wet locations: Listed as 'weather Resistant', designated by a 'WR' on the faceplate.

Minor changes relative to the location of electrical equipment may be made to comply with structural and building requirements as determined in the course of construction. Provide all wiring devices of the same manufacturer and not mixed on the project, to the maximum extent possible. Provide color of toggles and receptacles as requested by the Architect. Refer to detail showing receptacles table.

Wiring Devices: Unless noted otherwise, devices shall be commercial grade and rated for 20A. Wiring device manufacturers: Cooper, Hubbell, Legrand, or Leviton.

Floor Boxes: UL 514A listed for scrub water exclusion. For slab on grade - Watertight, Class 1, and fully adjustable cast iron box. For slab above grade - Concrete-tight, fully adjustable, stamped galvanized steel box. Floor box shape, quantity of gangs, type and quantity of devices, finish, and flange type per drawings. Floor box

manufacturers: Hubbell, Legrand, Thomas and Betts, or Walker.

Fire-Rated or Pedestal Poke-Thru Devices: NRTL listed and NRTL fire classified with one- to four-hour fire rating as

of gangs, type, and quantity of devices, finish, and flange type per drawings. Poke-thru device manufacturers: Hubbell or Legrand.

equal.

Switch and Pilot Installations: One Despard type ivory switch and one Despard type flush 1/25 Watt neon pilot light, both installed in a single-gang box with cover plate. Pass and Seymour ACD201-IV switch and 1475 pilot light, or approved equals.Automatic Load Control Relay (ALC or ALCR) (also referred to as emergency shunt relay): UL 924 [CSA C22.1 No. 141] listed as emergency lighting and power equipment. Connect ALCR in parallel with a lighting control device. Loss of normal power shall cause relay to automatically shunt emergency power to lighting circuit regardless of lighting control device position. Emergency lighting circuit shall continue to operate at full power until normal power has been restored. Provide a two-gang junction box with separation barrier and plaster ring for the ALCR and install it adjacent to its associated lighting control device or above accessible ceiling. Manufacturers: Bodine/Philips, Cooper/Eaton, ETC, Hubbell, Iota, Legrand, Lutron, or LVS Controls.

14. SWITCH AND OUTLET COVER PLATES

Switch and Outlet Plates: Colored, as directed by Architect; by the same manufacturer as the wiring devices, wherever possible. Verify desired materials and colors with Architect before installation. Switch plates in unfinished rooms and spaces: Stamped steel, cadmium plated. Install groups of switches under one ganged-plate, usually horizontally; or, where required by details, vertically. Set all cover plates plumb, parallel, and finished flush with the wall.

GENERAL NOTES

- ALL FINISHES ARE 3" THICK.
- ALL DIMENSIONS ARE IN FEETS.

PROJECT NAME:
29906 JORDAN CROSSING RD BROOKSHIRE, RX 77423

DRAWING TITLE:
ELECTRICAL SPECIFICATION AND NOTES

DRAWN BY: -

CHECKED BY: -

APPROVED BY: -

DATE: 06/22/2025

REV:	DESCRIPTION:	BY:	DATE:

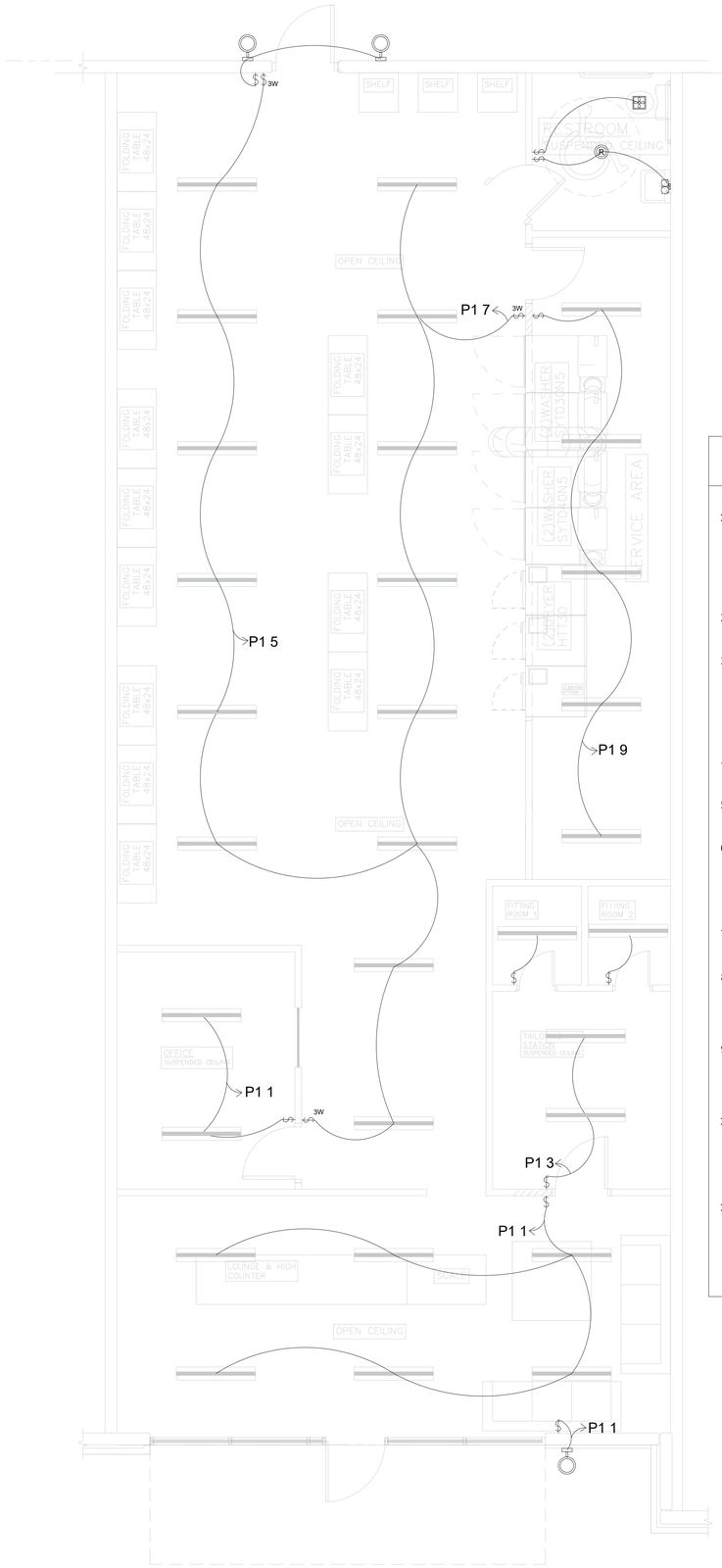
PROJECT NO: 11

HEET SIZE: D

DRAWING NO: **E-1**

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

REVISION: 0



LIGHTING FIXTURE SCHEDULE							
TAG	SYMBOL	DESCRIPTION	TYPE	W	V	MOUNT.	MANUF.
L1		CANLIGHT - 6"	LED	15W	120V	CEILING	BY ARCHITECT/ BY OWNER
L2		4'X8" TUBE LIGHT	LED	35W	120V	CEILING	BY ARCHITECT/ BY OWNER
L3		WALL MOUNTED LIGHT	LED	20W	120V	WALL	BY ARCHITECT/ BY OWNER
L4		VANITY LIGHT	LED	20W	120V	WALL	BY ARCHITECT/ BY OWNER
F6		EXHAUST FAN	FAN	40W	120V	CEILING	BY ARCHITECT/ BY OWNER

GENERAL LIGHTING NOTES

1. BRANCH CIRCUITS SHOWN ARE TO BE FIELD VERIFIED FOR AVAILABILITY PRIOR TO CONSTRUCTION. IF THERE IS A DISCREPANCY IN THE NUMBER OF AVAILABLE CIRCUITS THE CONTRACTOR SHALL NOTIFY THE ARCHITECT PRIOR TO CONSTRUCTION. CONTRACTOR SHALL UPDATE THE PANEL DIRECTORY OF THE EXISTING PANEL BOARD(S) USED FOR THIS SCOPE OF WORK. UPDATED DIRECTORY SHALL BE TYPEWRITTEN.
2. ALL WIRE AND CONDUIT TO BE ABANDONED SHALL BE REMOVED FROM ITS' POINT OF ORIGIN TO ITS' POINT OF TERMINATION.
3. ALL EXISTING JUNCTION BOXES, AND OTHER ELECTRICAL, TELE/DATA AND LIFE SAFETY DEVICES WHICH ARE IN CONFLICT WITH NEW ARCHITECTURAL OR ARE NOW LOCATED IN AN ACCESSIBLE SPACE DUE TO STRUCTURAL, HVAC OR ACOUSTICAL REVISIONS AS A RESULT FROM THIS BUILD-OUT, ARE TO BE RELOCATED TO AN ACCESSIBLE LOCATION. EXTEND CONDUIT AND WIRING REQUIRED FOR SUCH RELOCATION.
4. THE CONTRACTOR VERIFY EXACT LIGHTING FIXTURES VOLTAGE AND FINISH PRIOR TO PROCUREMENT.
5. NEW EXIT FIXTURES SHALL MATCH BUILDING STANDARD UNLESS NOTED OTHERWISE.
6. REFER TO ARCHITECTURAL PLANS AND DETAILS FOR EXACT LOCATION AND MOUNTING REQUIREMENTS FOR ALL DIMMERS, SWITCHES AND LIGHT FIXTURES. DISCREPANCY BETWEEN THE ARCHITECTURAL PLAN AND ELECTRICAL PLAN SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT IMMEDIATELY.
7. CONTRACTOR TO COORDINATE WITH ARCHITECTURAL REFLECTED CEILING PLANS FOR LIGHTING FIXTURES TYPES AND QUANTITY.
8. VERIFY THE TYPE OF CEILING SYSTEM WITH GENERAL CONTRACTOR OR CEILING CONTRACTOR. PROVIDE FIXTURES WHICH ARE COMPATIBLE WITH THE CEILING SYSTEM AND INCLUDE ALL REQUIRED MOUNTING ACCESSORIES AND HARDWARE.
9. NO EQUIPMENT JUNCTION BOXES, ETC. REQUIRING ACCESS SHALL BE LOCATED IN HARD CEILING AREAS (UNLESS ACCESS PANEL IS PROVIDED, COORDINATE WITH ARCHITECT). LOCATE ANY EXISTING EQUIPMENT, JUNCTION BOXES, ETC., TO ACCESSIBLE CEILING AREAS.
10. DRAWING SHOWS CIRCUITING AND SWITCHING/DIMMING REQUIREMENTS AND FIXTURE TYPES ONLY, VERIFY EXACT LIGHTING FIXTURES AND STANDARD SWITCHING WITH ARCHITECT AND OWNER'S PRIOR TO INSTALLATION. ALSO VERIFY EXACT LIGHTING FIXTURES VOLTAGE AND FINISH PRIOR TO INSTALLATION.
11. ANY FIXTURE SUBSTITUTION MUST BE APPROVED BY THE ARCHITECT AND/OR LIGHTING DESIGNER PRIOR TO BID. CONTRACTOR MUST BE PREPARED TO SUPPLY A SAMPLE AND/OR PHOTOMETRIC DATA IF REQUIRED. IF SUBSTITUTION IS REJECTED, CONTRACTOR MUST BE PREPARED TO PROVIDE SPECIFIED PRODUCT WITHOUT DELAY.

GENERAL ELECTRICAL NOTES

1. REFER TO ARCHITECTURAL PLANS AND DETAILS FOR EXACT LOCATION AND MOUNTING REQUIREMENTS FOR ALL OUTLETS. DISCREPANCY BETWEEN THE ARCHITECTURAL PLAN AND ELECTRICAL PLAN SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT IMMEDIATELY.
2. BRANCH CIRCUITS SHOWN ARE THE BE FIELD VERIFIED FOR AVAILABILITY PRIOR TO CONSTRUCTION. CONTRACTOR SHALL UPDATE THE PANEL AVAILABLE CIRCUITS THE CONTRACTOR SHALL NOTIFY THE ARCHITECT PRIOR TO CONSTRUCTION. IF THERE IS A DISCREPANCY IN THE NUMBER OF DIRECTOR OF THE EXISTING PANEL BOARD(S) USED FOR THIS SCOPE OF WORK. UPDATED DIRECTORY SHALL BE TYPEWRITTEN.
3. ALL BRANCH CIRCUITS SHALL BE PROVIDED WITH NEC REQUIRED NEUTRAL CONDUCTORS.
4. ALL GROUNDING AND PHASE CONDUCTORS SHALL BE IDENTIFIED AND BUNDLED.
5. ALL WIRE AND CONDUIT TO BE ABANDONED SHALL BE REMOVED FROM ITS POINT OF SERVICE TO ITS POINT OF TERMINATION.
6. ALL ABANDONED FLOOR OUTLET PENETRATIONS SHALL BE RE-POURED AND FIRE SAFE SEALED.
7. WHERE MULTIPLE WIRING DEVICES ARE SHOWN IN ONE LOCATION, THESE DEVICES SHALL BE MOUNTED UNDER A COMMON COVER PLATE UNLESS OTHERWISE SPECIFIED BY THE ARCHITECT. VERIFY WITH ARCHITECT PRIOR TO ROUGH-IN.
8. BRANCH CIRCUITS UTILIZING MULTI-WIRE BRANCH CIRCUITS SHALL BE PROVIDED WITH A FACTORY APPROVED COMMON TRIPPING MEANS. REFER TO NEC 210.4(B), 605.6 AND 605.7.
9. THE CONTRACTOR SHALL MAKE FINAL CONNECTION TO ALL OWNER/TENANT FURNISHED FURNITURE AND EQUIPMENT PER RESPECTIVE MANUFACTURERS SPECIFICATIONS UNLESS NOTED OTHERWISE.
10. ISOLATED GROUND BRANCH CIRCUITS SHALL HAVE A DEDICATED NEUTRAL CONDUCTOR FOR EACH PHASE CONDUCTOR AND A SEPARATE EQUIPMENT GROUND CONDUCTOR. CONDUIT MAY NOT BE USED AS GROUND.
11. PROVIDE TYPE WRITTEN, SELF ADHESIVE STRIP WITH BRANCH CIRCUIT INFORMATION ON COVER PLATE OF EACH POWER RECEPTACLE.
12. THE CONTRACTOR SHALL PROVIDE A FLUSH WALL BOX WITH RING AND PULL WIRE TO 6INCHES ABOVE CEILING AT ALL WALL TELEPHONE AND DATA LOCATIONS.
13. WALL/CEILING MOUNTED AUDIO/VISUAL FIRE ALARM ANNUNCIATION DEVICES SHALL BE DESIGNED BY LICENSED INDIVIDUAL IN FIRE ALARM SYSTEM DESIGN.
14. PROVIDE GFCI RECEPTACLES WHERE REQUIRED, VERIFY ON SITE.
15. SOME EQUIPMENT MAY NEED RECEPTACLES, ELECTRICAL CONTRACTOR TO INSTALL RECEPTACLES WHERE REQUIRED, VERIFY WITH EQUIPMENT MANUFACTURER PRIOR TO ROUGH-IN. DO NOT HARDWIRE.
16. EQUIPMENT WITH 3 PHASE SHALL HAVE PHASE CONVERTER TO MATCH REQUIRED VOLTAGE.

GENERAL NOTES

- ALL FINISHES ARE 3" THICK.
- ALL DIMENSIONS ARE IN FEETS.

PROJECT NAME:
29906 JORDAN CROSSING RD BROOKSHIRE, RX 77423

DRAWING TITLE:
LIGHTING PLAN

DRAWN BY: -

CHECKED BY: -

APPROVED BY: -

DATE: 06/22/2025

REV:	DESCRIPTION:	BY:	DATE:

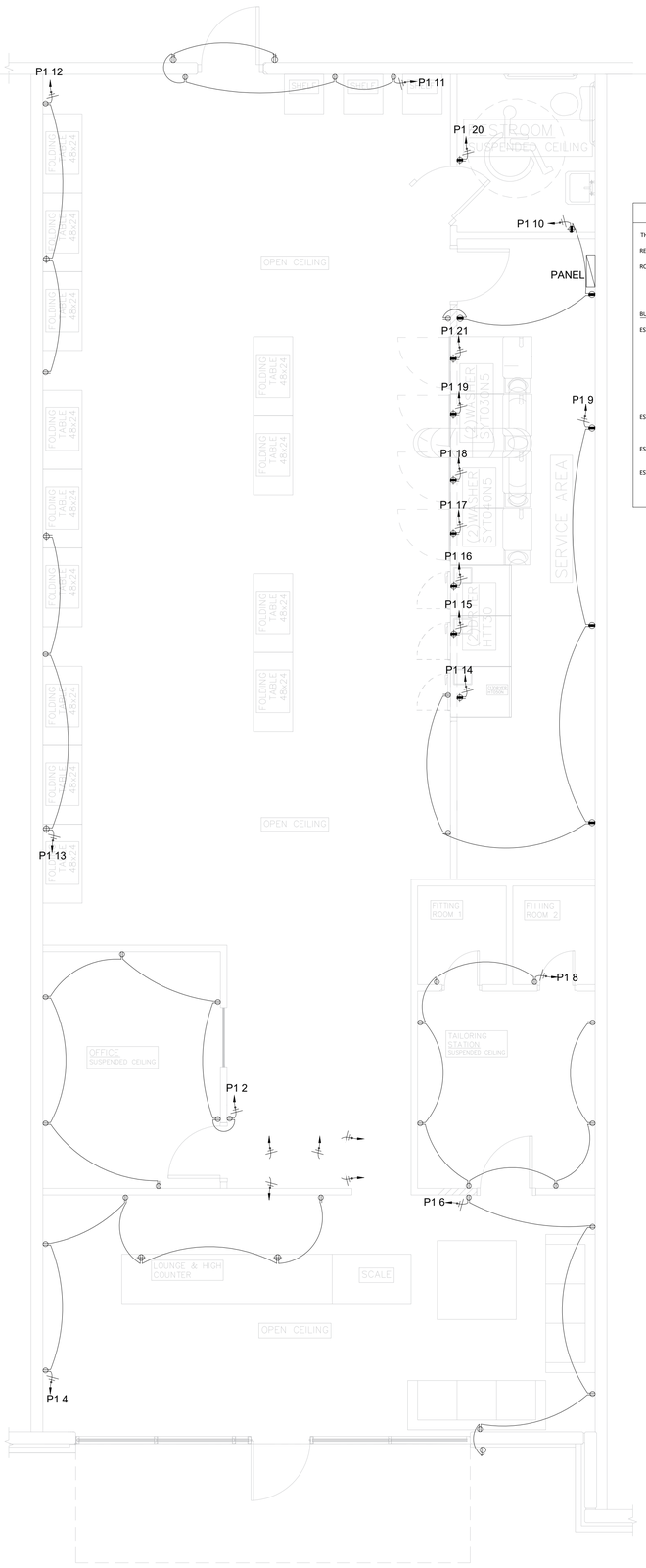
PROJECT NO: 11

SHEET SIZE: D

DRAWING NO: **E-2**

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

REVISION: 0



SYSTEM GENERAL NOTES

THESE NOTES APPLY TO ALL DRAWINGS

REFLECTIVE CEILING PLAN NOTES

RCP-1 COORDINATE ALL CEILING MOUNTED DEVICES WITH ARCHITECTURAL REFLECTED CEILING PLANS (RCPs). IF THE ARCHITECTURAL RCP DOESNOT INDICATE THE LOCATION FOR ANY CEILING MOUNTED ITEMS, CONFIRM WITH ARCHITECT THE EXACT LOCATION PRIOR TO ROUGH-IN AND INSTALLATION.

BUILDING LOW VOLTAGE SYSTEMS

ESV-1 CONTRACTOR SHALL COORDINATE AND INCORPORATE THE SCOPE REQUIRED FOR THE FOLLOWING SYSTEMS:
- A. FIRE ALARM
- B. FIRE PROTECTION
- C. SECURITY -NTI/ASD
- D. AUDIO VISUAL - NTI/ASD
- E. TELECOMMUNICATIONS - NTI/ASD
- F. LIGHTING CONTROLS
- G. HVAC CONTROLS - TRANE
- H. SIGNAGE

ESV-2 FOR THE ABOVE VENDOR SYSTEMS, BUDGETS AND/OR BIDS FROM VENDORS SHALL BE REVIEWED WITH OWNERSHIP FOR SELECTIONS AND ASSIGNMENT TO THE CONTRACTS TO THE GENERAL CONTRACTOR.

ESV-3 THE DIVISION 26 CONTRACTOR SHALL COORDINATE AND INTERFACE WITH THE SELECT VENDORS FOR A COMPLETE INSTALLATION.'

ESV-4 DIVISON 26 SHALL PROVIDE POWER BRANCH CIRCUITS AND WIRING NECESSARY FOR THE SELECT VENDOR EQUIPMENT AS DETERMINED DURING COORDINATION PHASES AND SHALL NOTE IN THE PANEL BOARD DIRECTORIES AND AS-BUILTS.

GENERAL NOTES

- ALL FINISHES ARE 3" THICK.
- ALL DIMENSIONS ARE IN FEETS.

PROJECT NAME:
29906 JORDAN CROSSING RD BROOKSHIRE, RX 77423

DRAWING TITLE:
POWER PLAN

DRAWN BY: -

CHECKED BY: -

APPROVED BY: -

DATE: 06/22/2025

REV:	DESCRIPTION:	BY:	DATE:

PROJECT NO: 11

SHEET SIZE: D

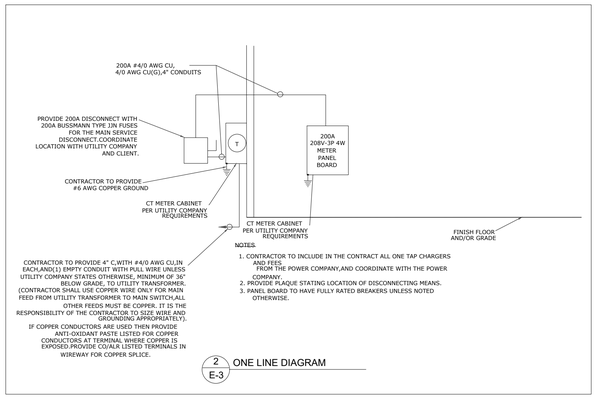
DRAWING NO: **E-3**

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

REVISION: 0

1 ELECTRICAL ONE-LINE DIAGRAM

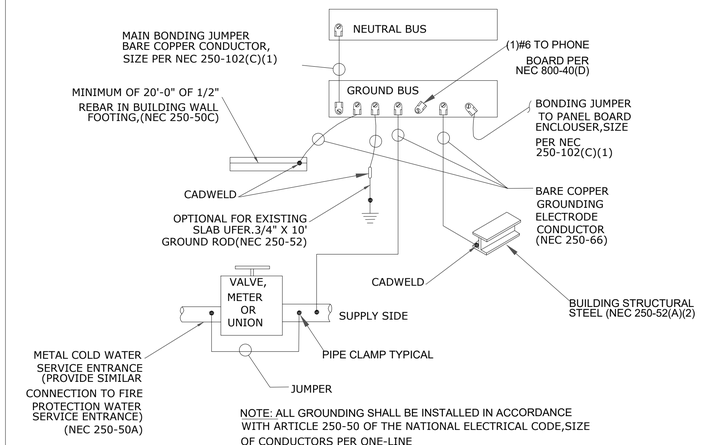
SCALE: N.T.S.



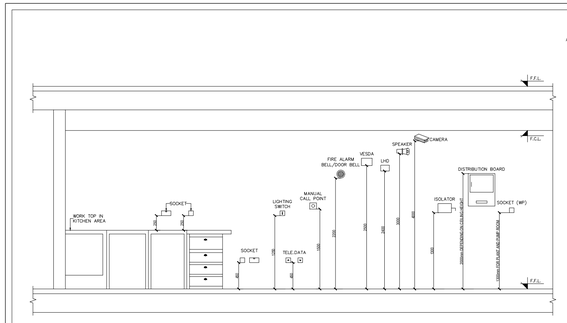
2 E-3 ONE LINE DIAGRAM

ONE-LINE GENERAL NOTES:

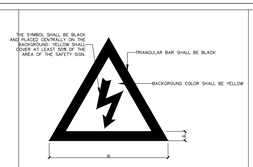
1. ABOVE RISER DIAGRAM IS FOR REFERENCE PURPOSE ONLY. EC SHALL VERIFY EXACT DISTRIBUTION IN FIELD AND INFORM ENGINEER FOR ANY DISCREPANCY.
2. REFERENCE THE NOTES FOR ADDITIONAL REQUIREMENTS REGARDING EQUIPMENT AND INSTALLATION. NOT ALL INFORMATION SHOWN ON THIS DIAGRAM.
3. ALL PANEL SHALL HAVE DOOR-IN-DOOR ACCESSIBILITY.
4. CONTRACTOR SHALL LABEL ALL DISTRIBUTION EQUIPMENT PRIOR TO FINAL OBSERVATION WALK THROUGH.
5. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ARC-FLASH HAZARD WARNING FIELD LABELING TO ELECTRICAL EQUIPMENT IN ACCORDANCE WITH NEC 110.16.
6. EC TO ENSURE THE VOLTAGE DROPS ARE UNDER LIMIT AS PER NEC FOR ALL CABLES.
7. THE ELECTRICAL CONTRACTOR SHALL PROVIDE MAXIMUM AVAILABLE FAULT CURRENT FIELD LABELING TO SERVICE EQUIPMENT BY NEC 110.24.
8. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR INSTALLING ALL INDICATED EQUIPMENT TO CODE-COMPLIANT CLEARANCES. PROVIDE SUBMITTALS AS INDICATED ON SPECIFICATIONS TO PROPERLY COORDINATE PHYSICAL LOCATIONS OF NEW AND/OR EXISTING EQUIPMENT.
9. THE ELECTRICAL CONTRACTOR SHALL PROVIDE CIRCUIT DIRECTORY OR CIRCUIT IDENTIFICATION FOR PANELBOARDS AND SOURCE OF SUPPLY FOR SWITCHBOARDS AND PANELBOARDS SUPPLIED BY A FEEDER.
10. ELECTRICAL EQUIPMENT SUCH AS SWITCHBOARDS, PANELBOARDS, INDUSTRIAL CONTROL PANELS, METER SOCKET ENCLOSURES AND MOTOR CONTROL CENTERS SHALL BE FIELD-MARKED WARNING QUALIFIED PERSONNEL OF THE POTENTIAL ARC FLASH HAZARD AND APPROPRIATE PPE IS REQUIRED PER NEC



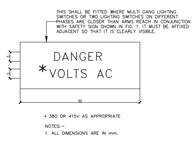
1 E-3 GROUNDING DETAIL



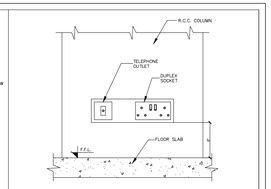
STANDARD MOUNTING HEIGHT OF ELECTRICAL ACCESSORIES



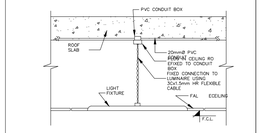
WARNING SIGNS



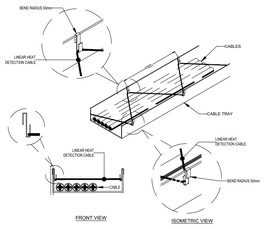
WARNING SIGNS



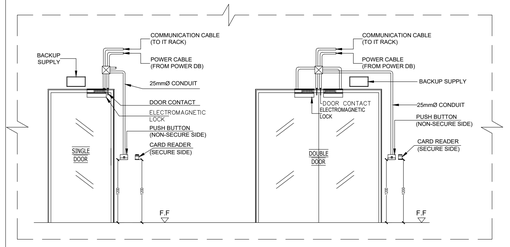
DETAIL OF INSTALLATION OF RECEPTACLE ON THE COLUMN



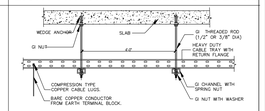
LIGHT FIXTURE INSTALLATION DETAIL



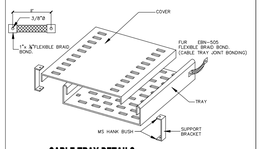
LINEAR HEAT DETECTION CABLE IN CABLE TRAY



ACCESS CONTROL PANEL DETAIL



CABLE TRAY FIXING DETAILS



CABLE TRAY DETAILS

Type:- GE Load Center
Service:- Shown
Voltage:- 120/240 , 1Ø, 3W
Location:- FIRST FLOOR

DB-PANEL "P-01"

Main Breaker:- 200 Amp
Rating:- 22 KAIC
Enclosure:- NEMA 3R

AMPS	QTY	TOTAL LOAD (VA)	POLE	LOAD DESCRIPTION	CKT No.			LOAD DESCRIPTION	POLE	TOTAL LOAD (VA)	QTY	AMPS
10	1	450	1	LIGHTING	1		2	POWER	1	1200	1	16
10	1	400	1	LIGHTING	3		4	POWER	1	1100	1	16
10	1	300	1	LIGHTING	5		6	POWER	1	800	1	16
10	1	350	1	LIGHTING	7		8	POWER	1	1000	1	16
10	1	200	1	LIGHTING	9		10	POWER	1	1100	1	16
16	1	1000	1	POWER	11		12	POWER	1	900	1	16
16	1	900	1	POWER	13		14	DRYER HTT050	1	1080	1	9
16	1	1920	1	HTT30 DRYER	15		16	HTT30 DRYER	1	1920	1	16
16	1	1000	1	WASHER SYT050N5	17		18	WASHER SYT050N5	1	1000	1	16
16	1	1500	1	WASHER SYT030N5	19		20	RTU-01	2	3000	1	30
16	1	1500	1	WASHER SYT030N5	21		22					
40	1	4000	2	RTU-02	23		24					
					25		26					
		13520		SUBTOTAL	S		G	SUBTOTAL		12100		

Total Load :- 25620 VA A/C Load :- 7000 VA

Total Current:- 120 Amp.
Total Demand Current:- 144 Amp.
Breaker Size:- 200 Amp.

1. PART OF THE 3VA/Sqft. AS PER NEC 220-3(A)
2. THRU LOW VOLTAGE TRANSFORMER
3. PROVIDE GFI PROTECTION
4. NON- CONCURRENT LOADS.
5. THROUGH TIMER-PHOTOCELL.
6. LOCKED OUT DEVICE.
7. SIZE OCPD AS SHOWN, VERIFY THE OCPD FOR THE INSTALLED EQUIPMENT TO MATCH WITH THE PLANS. IF ANY CONFLICT NOTIFY THE ENGINEER.

GENERAL NOTES

- ALL FINISHES ARE 3" THICK.
- ALL DIMENSIONS ARE IN FEETS.

PROJECT NAME:
29906 JORDAN CROSSING RD BROOKSHIRE, RX 77423

DRAWING TITLE:
ELECTRICAL PANEL AND DETAIL

DRAWN BY: -
CHECKED BY: -
APPROVED BY: -
DATE: 06/22/2025

REV:	DESCRIPTION:	BY:	DATE:

PROJECT NO: 11
HEET SIZE: D
DRAWING NO: **E-4**
SCALE: 1/16"= 1'-0"
REVISION: 0