

**City of Puyallup
Building
REVIEWED
FOR
COMPLIANCE**

SKinnear
12/16/2024
10:29:05 AM



**City of Puyallup
Development & Permitting Services
ISSUED PERMIT**



Approval of submitted plans is not an approval of omissions or oversights by this office or non compliance with any applicable regulations of local government. The contractor is responsible for making sure that the building complies with all applicable codes and regulations of the local government.

The approved construction plans, documents, and all engineering must be posted on the job at all inspections in a visible and readily accessible location.

Full sized legible color plans are required to be provided by the permittee on site for inspection.

Separate Electrical Permit is required with the Washington State Department of Labor & Industries.
<https://lni.wa.gov/licensing-permits/electrical/electrical-permits-fees-and-inspections> or call for Licensing Information: 1-800-647-0982

IF SHEET IS LESS THAN 30"x42"
IT IS A REDUCED PRINT
SCALE REDUCED ACCORDINGLY

GENERAL NOTES:

- THE FOLLOWING NOTES APPLY TO ALL MECHANICAL DRAWINGS. ADDITIONAL NOTES MAY BE INDICATED ON INDIVIDUAL DRAWINGS.
- DRAWINGS INDICATE CONNECTIONS FOR EQUIPMENT TO BE FURNISHED BY THE OWNER OR AS THE WORK OF OTHER TRADES. VERIFY LOCATION OF EQUIPMENT, ROUGH-IN LOCATIONS, AND TYPE OF CONNECTIONS PRIOR TO PREPARATION OF SHOP DRAWINGS OR SUBMITTALS, AND PRIOR TO INSTALLATION OF SERVICE CONNECTIONS. DO NOT INTERFERE WITH ACCESS FOR MAINTENANCE AND REMOVAL OR REPLACEMENT OF EQUIPMENT.
- COORDINATE THE PHASING AND INSTALLATION OF NEW WORK WITH THE WORK OF ALL OTHER TRADES. BEAR THE TOTAL EXPENSE FOR ANY ADDITIONAL WORK WHICH MAY BE CAUSED BY IMPROPER SEQUENCING OF CONSTRUCTION ACTIVITIES.
- REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR GENERAL CONSTRUCTION INCLUDING, BUT NOT LIMITED TO, PENETRATION DETAILS, FLASHING AND SEALING DETAILS, AND OTHER ELEMENTS OF GENERAL CONSTRUCTION. COORDINATE THE SIZE AND LOCATION OF EQUIPMENT HOUSEKEEPING PADS WITH APPROVED EQUIPMENT.
- COORDINATE EQUIPMENT POWER CONNECTION REQUIREMENTS AND ELECTRICAL CHARACTERISTICS WITH ELECTRICAL DRAWINGS AND CONNECTION REQUIREMENTS.
- EQUIPMENT SHORT CIRCUIT CURRENT RATINGS (SCCR) SHALL BE NOT LESS THAN THE INTERRUPTING RATING OF THE BRANCH CIRCUIT OVER CURRENT PROTECTIVE DEVICE SUPPLYING POWER TO THE EQUIPMENT. REFER TO ELECTRICAL SCHEDULES FOR BRANCH CIRCUIT OVER CURRENT DEVICE INTERRUPTING RATINGS.
- COORDINATE THE LOCATION OF WORK TO PROVIDE CLEARANCES OVER LIGHTING FIXTURES AND OTHER CEILING MOUNTED DEVICES AS REQUIRED TO ALLOW FOR REMOVAL AND MAINTENANCE ACCESS.
- DO NOT RESTRICT ACCESS TO ELECTRICAL CABLE TRAYS. AT A MINIMUM, ALLOW 18" CLEAR ON ONE SIDE OF CABLE TRAYS UP TO AN ELEVATION OF 6" ABOVE THE TOP OF THE CABLE TRAY. MAINTAIN 12" MINIMUM CLEARANCE OVER TOP OF CABLE TRAYS EXCEPT WHERE PIPING OR CONDUIT CROSS PERPENDICULAR TO CABLE TRAY, THIS CLEARANCE MAY BE REDUCED TO 6" OVER A DISTANCE OF NO MORE THAN 36" ALONG THE CABLE TRAY. PROVIDE NO LESS THAN 36" BETWEEN AREAS OF REDUCED CLEARANCE AND MAINTAIN INDICATED ACCESS ON THE SAME SIDE OF THE CABLE TRAY EXCEPT WHERE OTHERWISE APPROVED. DO NOT CONNECT OTHER TRADE ITEMS TO CABLE TRAYS, CABLE TRAY SUPPORTS OR CABLE TRAY SEISMIC RESTRAINTS.
- PROVIDE SUPPORTS AND SEISMIC RESTRAINTS FOR PIPES AND EQUIPMENT AS SPECIFIED, AS REQUIRED, AND AS SHOWN ON THE DRAWINGS. IF REQUIRED FOR INSTALLATION OF PIPES AND EQUIPMENT, DESIGN AND PROVIDE ADDITIONAL STRUCTURAL MEMBERS BETWEEN COLUMNS, JOISTS, AND STRUCTURAL FRAME TO MEET SUPPORT AND SEISMIC RESTRAINT REACTIONS (FORCES, MOMENTS, DEFLECTIONS). STRUCTURAL MEMBERS AND ANCHORAGES SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE IN WHICH THE PROJECT IS LOCATED. REFER TO STRUCTURAL DRAWINGS FOR DESIGN CRITERIA. SUBMIT STRUCTURAL MEMBER SHOP DRAWINGS AND CALCULATIONS FOR REVIEW. STRUCTURAL MEMBERS, BOLTS, AND WELDS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS SHOWN ON THE STRUCTURAL DRAWINGS AND INDICATED IN THE SPECIFICATIONS. NO WELDING, BOLTING, OR OTHER MEANS OF ATTACHMENT TO THE STRUCTURAL MEMBERS SHALL BE MADE ON PORTIONS OF STRUCTURAL MEMBERS AT OR NEAR CONNECTIONS BETWEEN STRUCTURAL MEMBERS ON ANY ELEMENTS DESIGNATED IN THE SEISMIC LOAD RESISTING SYSTEMS UNLESS APPROVED BY THE STRUCTURAL ENGINEER. SUPPORTS SHALL NOT INDUCE TORSIONAL LOADS INTO SUPPORTING STRUCTURAL FRAMING.
- DO NOT CORE DRILL OR DRILL THROUGH BEAMS, COLUMNS OR SHEAR WALLS UNLESS INDICATED ON STRUCTURAL DRAWINGS OR AS APPROVED BY THE STRUCTURAL ENGINEER.
- PROVIDE PIPE SLEEVES AND PENETRATION SEALS AS REQUIRED FOR THE INSTALLATION OF PIPING SYSTEMS. REFER TO SPECIFICATIONS FOR REQUIREMENTS.
- COORDINATE THE LAYOUT OF EQUIPMENT, PIPING, AND APPURTENANCES SO THAT IT FITS INTO THE SPACE ALLOTTED. PROVIDE SERVICE ACCESS AND CLEARANCES AS INDICATED ON DRAWINGS, AS REQUIRED BY CODES, AND AS RECOMMENDED BY THE MANUFACTURER FOR THE INSTALLATION, REMOVAL, ENTRY, SERVICING, AND MAINTENANCE OF EQUIPMENT. PRIOR TO INSTALLATION, COORDINATE LAYOUT OF EQUIPMENT, PIPING, AND APPURTENANCES WITH ALL OTHER TRADES TO AVOID BLOCKING SERVICE OR REPLACEMENT ACCESS FOR NEW AND EXISTING EQUIPMENT AND EQUIPMENT INSTALLED BY OTHERS.
- DRAWINGS ARE DIAGRAMMATIC AND SHOW APPROXIMATE LOCATIONS OF EQUIPMENT, PIPING, AND APPURTENANCES. DRAWINGS DO NOT SHOW REQUIRED TRANSITIONS, OFFSETS, FITTINGS, AND DEVICES. REFER SPECIFICATIONS FOR REQUIRED SYSTEM APPURTENANCES, CONTROL DEVICES, ETC. INSTALL DEVICES IN ACCORDANCE WITH DEVICE MANUFACTURER RECOMMENDATIONS. CAREFULLY INVESTIGATE ELEMENTS OF CONSTRUCTION THAT COULD AFFECT THE WORK TO BE PERFORMED AND ARRANGE NEW WORK ACCORDINGLY. PREPARE COORDINATION DRAWINGS FOR NEW WORK, WHICH ARE COORDINATED WITH THE APPROVED AND INSTALLED WORK OF OTHER TRADES. PROVIDE REQUIRED OFFSETS, FITTINGS, TRANSITIONS, SUPPORTS AND OTHER APPURTENANCES AS REQUIRED. BEAR THE TOTAL EXPENSE OF RE-WORK THAT IS CAUSED BY FAILURE TO COORDINATE.
- PROVIDE MAXIMUM HEADROOM AND CLEARANCE BELOW PIPING AND EQUIPMENT AND ASSOCIATED SUPPORTS AND RESTRAINTS. UNLESS OTHERWISE INDICATED, INSTALL TIGHT TO STRUCTURAL SYSTEMS ABOVE. WHERE WALL MOUNTED, INSTALL AS CLOSE TO WALL AS POSSIBLE. PROVIDE ADDITIONAL FITTINGS AND OFFSETS AS REQUIRED.
- REFER TO EQUIPMENT SCHEDULES FOR DESIGN CAPACITIES. SCHEDULED VALUES SHALL BE CONSIDERED DESIGN CAPACITIES. PROVIDE EQUIPMENT WHICH MEETS OR EXCEEDS THE SCHEDULED VALUES. MARK THE CONTRACT DRAWING EQUIPMENT SCHEDULES TO INDICATE THE MANUFACTURER, MODEL AND CAPACITY OF THE ACTUAL APPROVED EQUIPMENT PROVIDED AND SUBMIT THIS INFORMATION WITH RECORD DRAWINGS AS PART OF PROJECT CLOSEOUT.
- TO ENHANCE THE CLARITY OF PLAN DRAWINGS, AND WHERE NOT NECESSARY TO DESCRIBE THE REQUIRED SIZE, INDIVIDUAL SEGMENTS OF PIPE BETWEEN CONNECTIONS MAY BE SHOWN WITHOUT A SIZE INDICATED. WHERE SIZE IS NOT SHOWN ON PLANS, THAT SEGMENT SHALL BE THE SAME SIZE AS THE NEXT UPSTREAM SEGMENT WITH A SIZE INDICATED.
- WHERE NOT INDICATED ON PLANS, REFER TO EQUIPMENT SCHEDULES FOR INLET AND OUTLET PIPE SIZES. WHERE INDICATED ON PLANS, PLAN SIZES SHALL TAKE PRECEDENCE.
- INSULATE ALL CHILLED WATER PIPING WITH 1-INCH CLOSED CELL FOAM IN ACCORDANCE WITH TABLE C403.10.3 OF THE 2021 WASHINGTON STATE ENERGY CODE (WSEC).
- THE FOLLOWING IS A LIST OF DEFERRED SUBMITTALS ITEMS. DO NOT INSTALL DEFERRED SUBMITTAL ITEMS UNTIL THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.
 - A. SEISMIC
- CONTROLS CONTRACTOR TO PROVIDE UPDATED SEQUENCE OF OPERATION TO INCORPORATE NEW EQUIPMENT. DIRECT DIGITAL CONTROLS SEQUENCES SHALL COMPLY WITH THE REQUIREMENTS OF THE 2021 WSEC FOR WATERSIDE ECONOMIZER AND VARIABLE SPEED FAN/PUMP CONTROL.

GENERAL SYMBOLS

- LIGHT LINE INDICATES BACKGROUND
- LIGHT LINE INDICATES EXISTING WORK
- HEAVY LINE INDICATES NEW WORK
- MATCHLINE OR PROPERTY LINE
- FUTURE WORK
- POINT OF CONNECTION
- SHEET NOTE

REFERENCE CALLOUTS

- DETAIL IDENTIFICATION
- NUMBER INDICATES DETAIL
- SHEET NUMBER WHERE DETAIL IS DRAWN
- DRAWING REVISION DESIGNATOR
- REVISION NO.

PLAN AND DETAIL TITLE CALLOUT

- (DRAWING/PLAN TITLE)**
SCALE: (DRAWING/PLAN SCALE)
- (DETAIL TITLE)**
SCALE: (DETAIL SCALE) (REFERENCE DRAWING #)

ABBREVIATIONS

- (E) EXISTING
- EWT ENTERING WATER TEMPERATURE
- F FAHRENHEIT
- GPM GALLONS PER MINUTE
- IN INCHES
- KW KILOWATTS
- LB POUND
- L LITER
- LWT LEAVING WATER TEMPERATURE
- PH PHASE
- POC POINT OF CONNECTION
- TYP TYPICAL
- W WASTE, WATT
- WSEC WASHINGTON STATE ENERGY CODE

PIPING VALVES / FITTINGS

- BALL VALVE
- BUTTERFLY VALVE
- FLANGE
- UNION

PIPING TYPES

- CHR CHILLED WATER RETURN
- CHS CHILLED WATER SUPPLY

PROJECT DESCRIPTION:

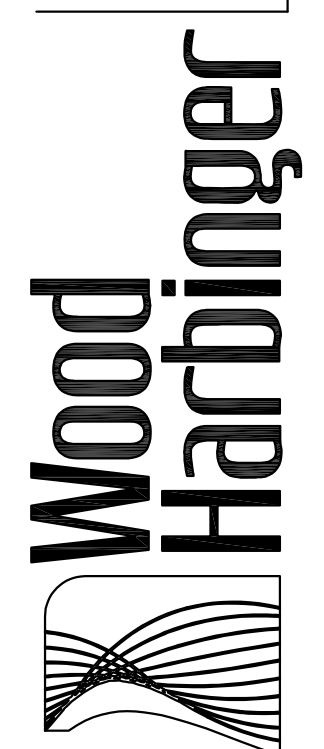
THIS PROJECT ADDS 12 NEW PIPING CONNECTIONS ALONG WITH USING 6 EXISTING MANIFOLDS TO INCREASE DATA CENTER CABINET CAPACITY. THE SERVER RACK SCHEDULE SHOWS THE EXISTING CAPACITY AND ADDITIONAL UNITS BEING BROUGHT ONLINE. THE MECHANICAL COOLING CAPACITY WILL BE 3,880KW (97% OF MAXIMUM CAPACITY). THE CHILLED WATER SYSTEM DESIGN MAXIMUM CAPACITY IS 4,000KW.

| DRAWING LIST | |
|--------------|---|
| SHEET No. | DRAWING TITLE |
| M-0.01 | GENERAL NOTES, ABBREVIATIONS, LEGEND, AND SYMBOLS |
| M-1.01 | ENLARGED FIRST FLOOR PIPING PLAN |
| M-6.01 | MECHANICAL SCHEDULES |

Permit Set
11/26/2024

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**CENTERIS DATA CENTERS
DATA CENTER EXPANSION PHASE 2**
1028 30TH AVENUE SE, PUYALLUP, WA 98674
SHEET TITLE
**GENERAL NOTES, ABBREVIATIONS,
LEGEND, AND SYMBOLS**

| | |
|-------|----------|
| DATE | 11/22/24 |
| SCALE | NONE |
| ENGR | TJB |
| DRWN | TJB |
| CHKD | PMG |
| APPR | NRB |
| JOB | 23025.00 |

M-0.01
SHEET 1 OF 3

IF SHEET IS LESS THAN 30"x42"
IT IS A REDUCED PRINT
SCALE REDUCED ACCORDINGLY

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

| | |
|-------------|--------------|
| Building | Planning |
| Engineering | Public Works |
| Fire | Traffic |

| REVISION | BY |
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centeris
Centers for Information Systems

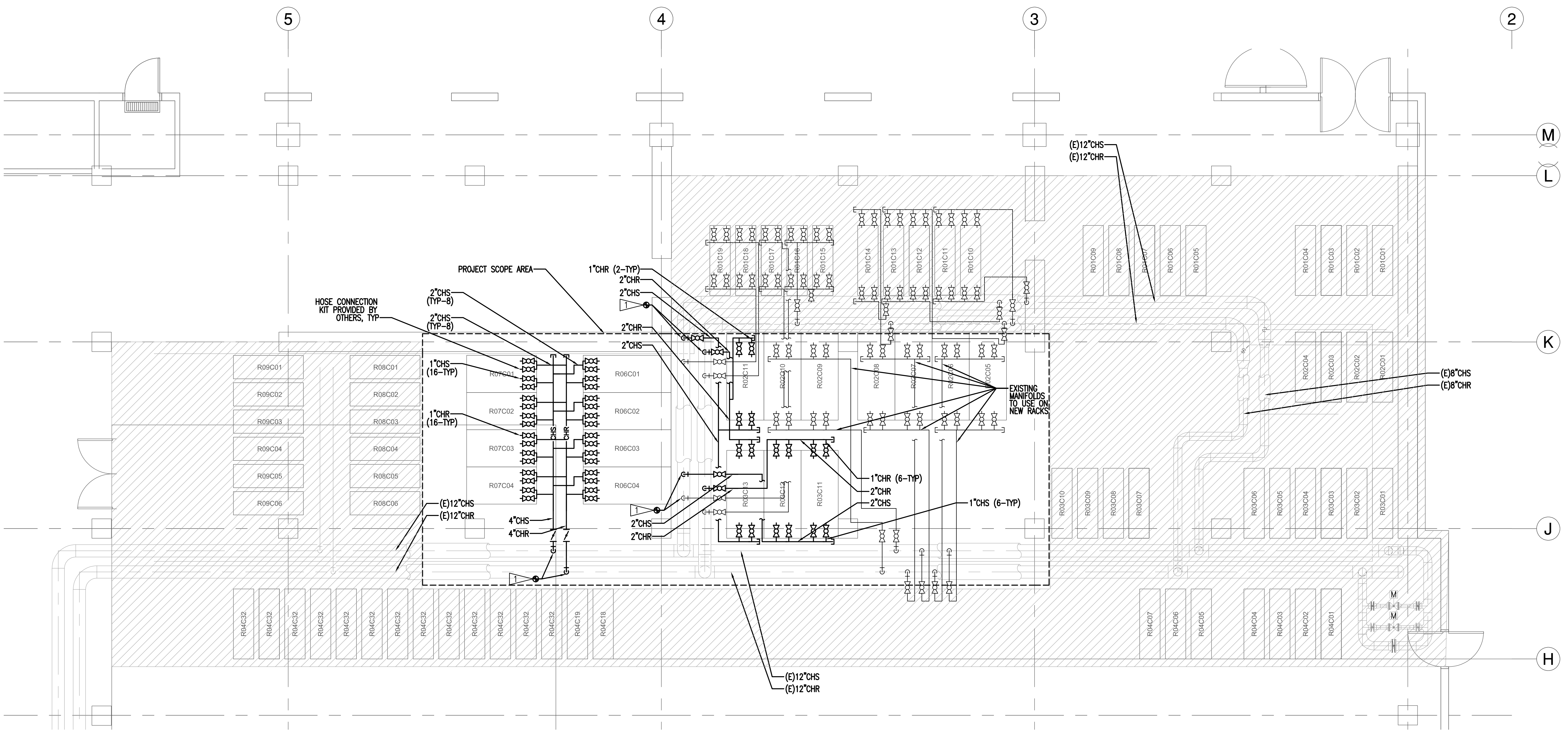
**CENTERIS DATA CENTERS
DATA CENTER EXPANSION PHASE 2**
1028 39TH AVENUE SE, PUYALLUP, WA 98674

**ENLARGED FIRST FLOOR
PIPING PLAN**

SHEET TITLE

| | |
|-------|--------------|
| DATE | 11/22/24 |
| SCALE | 1/4" = 1'-0" |
| ENGR | TJB |
| DRWN | TJB |
| CHKD | PMG |
| APPR | NRB |
| JOB | 23025.00 |

M-101
SHEET 2 OF 3



- GENERAL NOTES**
- DRAWINGS ARE DIAGRAMMATIC -- FIELD VERIFY PIPING ROUTES AND SPACING.
 - MANUFACTURER'S HOSE CONNECTION KIT AND FINAL CONNECTIONS PROVIDED BY OTHERS.
 - ALL EXISTING SERVER RACKS SHOWN ARE CONNECTED TO CHILLED WATER SYSTEM.

- SHEET NOTES**
- CONNECT TO EXISTING TAPS. FIELD VERIFY EXACT LOCATIONS. PROVIDE NEW WELDOLET CONNECTION ON PIPING MAIN WHERE NEEDED.

PARTIAL 1ST FLOOR PIPING PLAN
SCALE: 1/4" = 1'-0"



Permit Set
11/26/2024

PLUMBING AND HVAC SPECIFICATIONS

PART 1 – GENERAL

- GENERAL PROVISIONS: DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF WORK IN CONTRACT.
- SCOPE: PERFORM WORK AND PROVIDE NEW MATERIAL AS SHOWN ON DRAWINGS AND AS SPECIFIED IN THIS SECTION OF THE SPECIFICATIONS. PROVIDE ALL COMPONENTS AND MATERIALS, WHETHER SPECIFICALLY SHOWN OR NOT, THAT ARE NECESSARY TO MAKE THE SYSTEMS COMPLETE AND FULLY OPERATIONAL AS INTENDED IN THE CONSTRUCTION DOCUMENTS. WORK SHALL INCLUDE, BUT NOT BE LIMITED TO: 1) THE DESIGN INTENT AS ILLUSTRATED ON THESE DRAWINGS, 2) ALL TESTING AND CERTIFICATIONS NECESSARY FOR COMPLIANCE INCLUDING ANY REQUIRED REMEDIAL ACTIONS AND RE-TESTING DUE TO FAILURE.
- CODES, PERMITS, INSPECTIONS, AND FEES: CONFORM TO REQUIREMENTS OF DIVISION 01. OBTAIN PERMITS AND INSPECTIONS AND PAY FEES REQUIRED BY NATIONAL, STATE AND LOCAL AUTHORITIES. MAKE ARRANGEMENTS FOR INSPECTIONS BY ARCHITECT, OWNER OR OTHER AUTHORITY AS REQUIRED. SUBMIT 3 COPIES OF CERTIFICATES OF COMPLIANCE TO ARCHITECT. WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH REQUIREMENTS OF LATEST ADOPTED EDITION OF APPLICABLE CODES, REGULATIONS, ORDINANCES, AND LOCAL AMENDMENTS INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING: NOTHING IN DRAWINGS AND SPECIFICATIONS SHALL BE CONSTRUED TO PERMIT WORK NOT IN CONFORMANCE WITH THESE RULES AND REGULATIONS.
 - INTERNATIONAL BUILDING CODE.
 - INTERNATIONAL MECHANICAL CODE.
 - INTERNATIONAL FIRE CODE.
 - UNIFORM PLUMBING CODE.
 - WASHINGTON STATE ENERGY CODE.
 - NATIONAL ELECTRICAL CODE.
 - STATE OF WASHINGTON STANDARDS, WAC_296_24, GENERAL SAFETY AND HEALTH STANDARDS.
 - NFPA 13, SPRINKLER SYSTEMS.
 - NFPA 90A, INSTALLATION OF AIR CONDITIONING AND VENTILATING SYSTEMS.
 - AMERICAN NATIONAL STANDARD CODE FOR PRESSURE PIPING, CHAPTER V (ANSI B31.1).
 - WASHINGTON BOILERS AND UNFIED PRESSURE VESSEL LAWS, RCW 70.79 AND WAC 296, CHAPTER 104, AS PUBLISHED BY WASHINGTON STATE DEPARTMENT OF LABOR AND INDUSTRIES, DIVISION OF BOILER INSPECTION.
 - AMERICANS WITH DISABILITIES ACT (ADA).
 - PUGET SOUND AIR POLLUTION CONTROL AGENCY.
- INTERPRETATIONS OF DOCUMENTS: WHERE DRAWINGS OR SPECIFICATIONS DO NOT COINCIDE WITH MANUFACTURER'S RECOMMENDATIONS, OR ARE UNCLEAR AS TO INTENT, OR REQUIRED MATERIAL QUALITY, ADVISE THE ENGINEER IN WRITING BEFORE PROCEEDING WITH THE WORK. ALL COST FOR REMARK NECESSARY TO RESOLVE DISCREPANCIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- REQUESTS FOR INFORMATION: ANY RFI FOR RESOLVING AN APPARENT CONFLICT OR UNCLEARITY, OR A REQUEST FOR ADDITIONAL DETAIL, SHALL INCLUDE A SKETCH OR EQUIVALENT DESCRIPTION OF CONTRACTOR'S PROPOSED SOLUTION.
- SUBMITTALS: PROVIDE SPECIFIED ITEMS AND EQUIPMENT UNLESS "EQUAL" OR "APPROVED EQUAL" IS EXPLICITLY INDICATED ON THE DRAWINGS. DEVIATIONS TO SPECIFIED ITEMS SHALL BE AT THE SOLE RISK OF THE CONTRACTOR, WHO SHALL BE RESPONSIBLE FOR ALL ASSOCIATED COSTS TO THIS AND OTHER TRADES. REVIEW OF THE SHOP DRAWINGS BY THE ENGINEER SHALL NOT ABSOLVE THE CONTRACTOR FROM MEETING THE FULL DESIGN INTENT OF THE ASSOCIATED SYSTEM(S). SUBMITTALS SHALL INDICATE PRIOR REVIEW AND APPROVAL BY THE RESPONSIBLE CONTRACTOR. SUBMIT FOR REVIEW MANUFACTURER'S PRODUCT DATA FOR THE FOLLOWING ITEMS: 1) PIPING DISTRIBUTION LAYOUT DRAWINGS, COMPONENTS, AND DETAILS, 2) ALL TEST REPORTS, AND 3) ALL CERTIFICATES. ALLOW ENGINEER A MINIMUM OF 10 WORKING DAYS FOR PROCESSING AND REVIEW OF EACH SUBMISSION.
- RECORD DRAWINGS: CAD RECORD DRAWING FILES SHALL BE SUBMITTED AT THE COMPLETION OF THE PROJECT SHOWING THE "AS-BUILT" CONDITION INCLUDING WORK INSTALLED AND ALL MODIFICATIONS OR ADDITIONS TO ORIGINAL DESIGN. OBTAIN THE AUTOCAD FILES FOR PREPARATION OF AS-BUILT DRAWINGS FROM THE ARCHITECT. THE ARCHITECT AND ENGINEER ARE NOT GRANTING ANY OWNERSHIP OR PROPERTY INTEREST IN THE CAD DRAWINGS BY THE DELIVERY OF THE CAD FILES. THE USE OF THE CAD FILES AND DRAWINGS ARE LIMITED FOR THE SOLE PURPOSE OF ASSISTING IN THE CONTRACTOR'S PERFORMANCE IN ITS CONTRACTUAL OBLIGATIONS WITH RESPECT TO THIS PROJECT. ANY REUSE AND/OR OTHER USE BY THE CONTRACTOR WILL BE AT THE CONTRACTOR'S SOLE RISK AND WITHOUT LIABILITY TO THE ARCHITECT AND ENGINEER. RECORD DOCUMENTS SHALL CONFORM TO REQUIREMENTS OF THE WASHINGTON STATE ENERGY CODE.
- WARRANTIES: WARRANTY INSTALLATION IN WRITING FOR ONE YEAR FROM DATE OF OWNER'S ACCEPTANCE OF CERTIFICATE OF SUBSTANTIAL COMPLETION. WHERE INDIVIDUAL EQUIPMENT SECTIONS SPECIFY LONGER WARRANTIES, PROVIDE THE LONGER WARRANTY. REPAIR, REPLACE OR PROVIDE TEMPORARY ACCOMMODATIONS FOR DEFECTIVE MATERIALS, EQUIPMENT, WORKMANSHIP AND INSTALLATION THAT DEVELOP WITHIN 24 HOURS OF NOTIFICATION. WARRANTY SHALL INCLUDE A CONTACT PERSON (NAME AND 24 HOUR TELEPHONE NUMBER) FOR SERVICE REQUESTS. CORRECT DAMAGE CAUSED WHILE MAKING NECESSARY REPAIRS AND REPLACEMENTS UNDER WARRANTY PERIOD AT NO ADDITIONAL COST.
- COORDINATION: CONFER WITH ALL OTHER TRADES RELATIVE TO LOCATION OF ALL APPARATUS AND EQUIPMENT TO BE INSTALLED AND SELECT LOCATIONS SO AS NOT TO CONFLICT WITH OR HINDER THE PROGRESS OF THE WORK OF OTHER SECTIONS. WORK INSTALLED THAT CREATES INTERFERENCE OR RESTRICTS ACCESS REQUIRED BY CODE (INCLUDING CLEARANCES TO ELECTRICAL COMPONENTS) OR TO CONDUCT MAINTENANCE AND/OR ADJUSTMENTS SHALL BE MODIFIED AT NO ADDITIONAL COST TO THE OWNER.
- SUPPORTS: INCLUDE ALL STRUCTURAL STEEL SUPPORTS, HANGER BRACKETS, ETC., REQUIRED FOR THE EXECUTION OF THE WORK OF THIS SECTION. THE WELDS AND EDGES OF ALL BRACKETS SHALL BE FILED OR GROUND SMOOTH FOR PAINTING. HANGERS SHALL BE STEEL ANGLE IRON, CHANNEL OR STEEL ROD USED WITH APPROVED CLAMPS, INSERTS, ETC. ALL HANGERS SHALL BE GALVANIZED OR PAINTED WITH TWO COATS OF CORROSION RESISTANT PAINT BEFORE INSTALLATION. APPLY TOUCH-UP PAINT (ZINC GALVANIZING FOR GALVANIZED STEEL) AFTER INSTALLATION. SUPPORTS INSTALLED IN EXTERIOR LOCATIONS SHALL BE PVC COATED STEEL, GALVANIZED STEEL, OR STAINLESS STEEL WITH STAINLESS STEEL HARDWARE.
- CUTTING AND PATCHING: INCLUDE ALL CORING, CUTTING, PATCHING AND FIREPROOFING NECESSARY FOR THE EXECUTION OF THE WORK OF THIS SECTION. STRUCTURAL ELEMENTS SHALL NOT BE CUT WITHOUT WRITTEN APPROVAL OF THE ARCHITECT. CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING ALL PRECAUTIONS REQUIRED TO IDENTIFY HIDDEN PIPING, CONDUITS, WIRING, ETC. BEFORE ANY CORE DRILLING, AND/OR CUTTING OF SLABS COMMENCES, INCLUDING X-RAYING THE AFFECTED SLABS. REPAIR AND PATCH AROUND THE WORK SPECIFIED HEREIN TO MATCH THE EXISTING ADJACENT SURFACES TO THE SATISFACTION OF THE ARCHITECT. FILL AND PATCH ALL OPENINGS OR HOLES LEFT IN THE EXISTING STRUCTURES BY THE REMOVAL OF EXISTING EQUIPMENT THAT IS PART OF THIS SECTION OF THE SPECIFICATIONS. PATCH AND SEAL ALL EXISTING OPENINGS IN DUCTWORK AND PIPING NOT UTILIZED FOR NEW LAYOUT. PROVIDE FIRE STOPPING TO MAINTAIN THE FIRE RATING OF THE FIRE RESISTANCE-RATED ASSEMBLY. ALL PENETRATIONS AND ASSOCIATED FIRE STOPPING SHALL BE INSTALLED IN ACCORDANCE WITH THE FIRE STOPPING MANUFACTURER'S LISTED INSTALLATION DETAILS AND BE LISTED BY UL OR FM.
- HOISTING, SCAFFOLDING AND PLANKING: INCLUDE THE FURNISHING, SET-UP AND MAINTENANCE OF ALL HOISTING MACHINERY, CRANES, SCAFFOLDS, STAGING AND PLANKING AS REQUIRED FOR THE EXECUTION OF WORK FOR THIS SECTION.
- SAFETY PRECAUTIONS: LIFE SAFETY AND ACCIDENT PREVENTION SHALL BE A PRIMARY CONSIDERATION. COMPLY WITH ALL OF THE SAFETY REQUIREMENTS OF THE OWNER AND OSHA THROUGHOUT THE ENTIRE CONSTRUCTION PERIOD OF THE PROJECT. FURNISH, PLACE AND MAINTAIN PROPER GUARDS AND ANY OTHER NECESSARY CONSTRUCTION REQUIRED TO SECURE SAFETY OF LIFE AND PROPERTY.
- ACCESSIBILITY: ALL WORK PROVIDED UNDER THIS SECTION OF THE SPECIFICATION SHALL BE INSTALLED SO THAT PARTS REQUIRING PERIODIC INSPECTION, MAINTENANCE AND REPAIR ARE READILY ACCESSIBLE. WORK OF THIS TRADE SHALL NOT INFRINGE UPON CLEARANCES REQUIRED BY EQUIPMENT OF OTHER TRADES.
- PROTECTION OF WORK AND PROPERTY: CONTRACTOR SHALL BE RESPONSIBLE FOR THE CARE AND PROTECTION OF ALL WORK INCLUDED UNDER THIS SECTION UNTIL THE COMPLETION AND FINAL ACCEPTANCE OF THIS PROJECT. PROTECT ALL EQUIPMENT AND MATERIALS FROM DAMAGE FROM ALL CAUSES INCLUDING, BUT NOT LIMITED TO, FIRE, VANDALISM AND THEFT. ALL MATERIALS AND EQUIPMENT DAMAGED OR STOLEN SHALL BE REPAIRED OR REPLACED WITH EQUAL MATERIAL OR EQUIPMENT AT NO ADDITIONAL COST TO THE OWNER. PROTECT ALL EQUIPMENT, OUTLETS AND OPENINGS, AND ROOF PENETRATIONS WITH TEMPORARY PLUGS, CAPS AND COVERS. PROTECT WORK AND MATERIALS OF OTHER TRADES FROM DAMAGE THAT MIGHT BE CAUSED BY WORK OR WORKMEN UNDER THIS SECTION AND MAKE GOOD DAMAGE THUS CAUSED. DAMAGED MATERIALS ARE TO BE REMOVED FROM THE SITE; NO SITE STORAGE OF DAMAGED MATERIALS WILL BE ALLOWED. ANY DAMAGE TO EXISTING SYSTEMS AND EQUIPMENT CAUSED BY THE CONTRACTOR DURING INSTALLATION SHALL BE REPAIRED AND/OR REPLACED AT THE CONTRACTOR'S EXPENSE TO THE COMPLETE SATISFACTION OF THE BUILDING OWNER.
- SEISMIC RESTRAINT REQUIREMENTS: PROVIDE SEISMIC RESTRAINTS AS REQUIRED IN ACCORDANCE WITH THE STATE BUILDING CODE. A REGISTERED PROFESSIONAL STRUCTURAL ENGINEER, LICENSED IN THE STATE OF WASHINGTON, SHALL PREPARE THE SEISMIC RESTRAINT DESIGN AND CERTIFY THAT THE DESIGN IS IN COMPLIANCE WITH THE STATE BUILDING CODE REQUIREMENTS.

PART 2 – PRODUCTS

- CHILLED PIPING AND VALVES: BLACK STEEL PIPING CONFORMING TO ASTM A53/A53M, TYPE E (ELECTRIC RESISTANCE WELDED) OR TYPE S (SEAMLESS), GRADE A OR GRADE B, STANDARD WEIGHT, 2" AND SMALLER SHALL BE ASME B16.3, CLASS 150 THREADED BLACK MALLEABLE IRON OR WELDED, ASME B16.11, CLASS 3000, SCHEDULE 40 STEEL. FITTINGS 2-1/2" AND LARGER SHALL BE BUTTWELDED CONFORMING TO REQUIREMENTS OF ASME B16.9, STANDARD WEIGHT, SEAMLESS WROUGHT CARBON STEEL CONFORMING TO REQUIREMENTS OF ASTM A234/A234M GRADE WPB. FITTING WALL THICKNESS SHALL MATCH PIPE WALL THICKNESS. UNIONS (ONLY ON 2" AND SMALLER) SHALL BE BRASS SEATED, ASME B16.39, CLASS 150, ASTM A197/197M THREADED MALLEABLE IRON. PROVIDE DIELECTRIC FITTINGS EQUAL TO PIP CLEARFLOW TO CONNECT DISSIMILAR PIPING MATERIALS. VALVES SHALL HAVE NAME OF MANUFACTURER AND GUARANTEED WORKING PRESSURE CAST OR STAMPED ON BODIES. VALVES SHALL BE AS MANUFACTURED BY CRANE, MUELLER, APOLLO, WATTS, SARCO, OR MILWAUKEE. BALL VALVES SHALL BE USED ON 2" AND SMALLER WATER PIPING, BUTTERFLY USED ON 2-1/2" AND LARGER WATER PIPING. PROVIDE DRAIN VALVES AT LOW POINTS IN PIPING AND VALVED VENTS AT HIGH POINTS.
- PIPE INSULATION: WATER PIPING INSULATION SHALL BE FIBROUS GLASS INSULATION WITH FACTORY-APPLIED FIRE RETARDANT VAPOR BARRIER JACKET WITH K FACTOR OF AT LEAST 0.23 AT 75 DEG. F MEAN TEMPERATURE BY OWENS CORNING, CERTAIN-TEED, MANVILLE, OR KNAUF. ASTM E-84 FIRE HAZARD RATINGS SHALL BE 25 FLAME SPREAD, 50 SMOKE DEVELOPED AND 50 FUEL CONTRIBUTED.
- PIPE HANGERS AND SUPPORTS: PROVIDE PIPE STANDS, SUPPORTS, HANGERS, AND OTHER SUPPORTING APPLIANCES AS NECESSARY TO SUPPORT WORK REQUIRED BY CONTRACT DOCUMENTS. SPACING OF HANGERS SHALL BE INSTRUCTED IN ACCORDANCE WITH APPLICABLE BUILDING AND MECHANICAL CODES. SIZE OF HANGERS SHALL INCLUDE THE PIPE INSULATION WITH SHIELD. WHERE HANGERS ARE USED OUTDOORS, THEY SHALL BE STAINLESS STEEL OR PVC COATED GALVANIZED STEEL.

PART 3 – EXECUTION

- INSTALLATION OF EQUIPMENT: INSTALL ALL ITEMS SPECIFIED UNDER PART 2 – PRODUCTS, ACCORDING TO THE MANUFACTURER'S REQUIREMENTS, SHOP DRAWINGS, AND DETAILS AS SHOWN ON THE DRAWINGS AND AS SPECIFIED. INSTALL ALL WORK SO THAT PARTS REQUIRING INSPECTION, REPLACEMENT, MAINTENANCE AND REPAIR SHALL BE READILY ACCESSIBLE. MINOR DEVIATIONS FROM THE DRAWINGS MAY BE MADE TO ACCOMPLISH THIS, BUT ANY SUBSTANTIAL CHANGE SHALL NOT BE MADE WITHOUT PRIOR WRITTEN OWNER APPROVAL.
- IDENTIFICATION: ALL PIPING AND VALVES PROVIDED UNDER THIS SECTION OF THE SPECIFICATIONS SHALL BE MARKED FOR EASE OF IDENTIFICATION PER OWNER'S OR INDUSTRY STANDARDS.
- PIPE EXPANSION: THE EXPANSION OF SUPPLY AND RETURN PIPES SHALL BE PROVIDED FOR BY CHANGES IN THE DIRECTION OF THE RUN OF PIPE, BY EXPANSION LOOPS, OR BY EXPANSION JOINTS AS REQUIRED.
- CLEANING: AFTER ALL WATERPIPING SYSTEMS HAVE BEEN PRESSURE TESTED AND APPROVED FOR TIGHTNESS, CLEAN AND FLUSH PIPING. AFTER COMPLETION OF PROJECT, CLEAN EXTERIOR SURFACES OF ALL EQUIPMENT INCLUDED IN THIS SECTION, INCLUDING REMOVAL OF CONCRETE RESIDUE. AFTER COMPLETION OF PROJECT, REMOVE ALL CONSTRUCTION DEBRIS, TEMPORARY FACILITIES AND EQUIPMENT FROM WORK AREA. CLEAN WORK AREA TO PERMIT OCCUPATION.
- TESTING AND INSPECTION: PROVIDE QUALIFIED PERSONNEL, EQUIPMENT, APPARATUS, AND SERVICES FOR TESTING AND INSPECTION OF MECHANICAL SYSTEMS. DO NOT COVER OR CONICAL WORK BEFORE TESTING AND INSPECTION AND OBTAINING APPROVAL. ALL WATER PIPING SHALL BE HYDROSTATICALLY TESTED AT 125% OF DESIGN PRESSURE (125 PSIG MINIMUM). LEAKS, DAMAGE, AND DEFECTS DISCOVERED OR RESULTING FROM TESTING SHALL BE REPAIRED OR REPLACED TO LIKE-NEW CONDITION WITH ACCEPTABLE MATERIALS. TESTS SHALL BE CONTINUED UNTIL SYSTEMS OPERATE WITHOUT LEAKS OR REPAIRS. REPORT ON INDUSTRY STANDARD REPORTING FORMS, SUBMITTED FOR APPROVAL IN ADVANCE. SUBMIT SIX COPIES OF TESTING REPORTS FOR APPROVAL. CONTRACTOR SHALL FURNISH ALL TEST MEDIUMS AND DISPOSE OF ALL TEST MEDIUMS AT AN APPROVED OFFSITE LOCATION AFTER TESTING IS COMPLETE.

START UP AND BALANCING: PROVIDE NEBB OR AABC CERTIFIED PERSONNEL, EQUIPMENT, APPARATUS, AND SERVICES FOR START-UP AND BALANCING OF MECHANICAL SYSTEMS TO PERFORMANCE DATA SHOWN IN SCHEDULES AND ON DRAWINGS, AS SPECIFIED, AND AS REQUIRED BY CODES, STANDARDS, REGULATIONS, AND AUTHORITIES HAVING JURISDICTION INCLUDING CITY INSPECTORS. WATER FLOWS SHALL BE BALANCED TO +/- 10% OF DESIGN. LEAKS, DAMAGE, AND DEFECTS DISCOVERED OR RESULTING FROM START-UP AND BALANCING SHALL BE REPAIRED OR REPLACED TO LIKE-NEW CONDITION WITH ACCEPTABLE MATERIALS. TESTS SHALL BE CONTINUED UNTIL SYSTEM OPERATES WITHOUT ADJUSTMENTS OR REPAIRS. REPORT DATA ON INDUSTRY STANDARD NEBB OR AABC REPORTING FORMS. SUBMIT SIX COPIES OF START-UP AND BALANCING REPORTS TO ARCHITECT FOR APPROVAL.

PART 4 – PROJECT CLOSEOUT

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ITEMS ASSOCIATED WITH PROJECT CLOSEOUT. ALLOW SUFFICIENT TIME IN THE CONSTRUCTION SCHEDULE TO ENSURE THAT THE INSTALLATION IS SUBSTANTIALLY COMPLETE AND ALL REQUIRED TESTING AND ACCURATELY COMPLETED DOCUMENTATION IS DELIVERED TO THE ENGINEER AT LEAST TWO WEEKS PRIOR TO ENGINEER'S SUBSTANTIAL COMPLETION SITE VISIT. FAILURE TO ADEQUATELY PLAN OR SUBMISSION OF INCOMPLETE/INCORRECT DOCUMENTATION WILL RESULT IN BACK CHARGES OF ALL COSTS ASSOCIATED WITH ADDED WORK PERFORMED BY ENGINEERS.
- INSPECTION: WHEN REQUESTING FINAL INSPECTION, SUBMIT WRITTEN CERTIFICATION THAT WORK HAS BEEN FULLY COMPLETED IN STRICT ACCORDANCE WITH DRAWINGS AND SPECIFICATIONS. SUBMIT WRITTEN CERTIFICATION OF INSPECTION FROM GOVERNING BUILDING AUTHORITY STATING THAT WORK HAS BEEN INSPECTED, ACCEPTED, AND APPROVED AS COMPLYING WITH EXISTING GOVERNING ORDINANCES AND CODES.
- SUBSTANTIAL COMPLETION SITE VISIT BY THE ENGINEER SHALL BE CONDUCTED AFTER RECEIPT AND REVIEW OF THE CONTRACTOR'S CERTIFICATE OF COMPLETION AND ALL CODE MANDATED TEST REPORTS AND SUBMISSIONS LISTED ABOVE. SUBSTANTIAL COMPLETION SITE VISITS SHALL NOT BE REQUESTED UNTIL THE PROJECT IS SUBSTANTIALLY COMPLETE.
- PREMATURE REQUESTS THAT REQUIRE ADDITIONAL/FOLLOW UP SITE VISITS BY THE ENGINEER OF DEFICIENT ITEMS (AREAS INCOMPLETE, SYSTEMS NOT OPERATIONAL, ETC.) WILL RESULT IN BACK CHARGES OF THE COSTS ASSOCIATED WITH ANY ADDED VISITS.

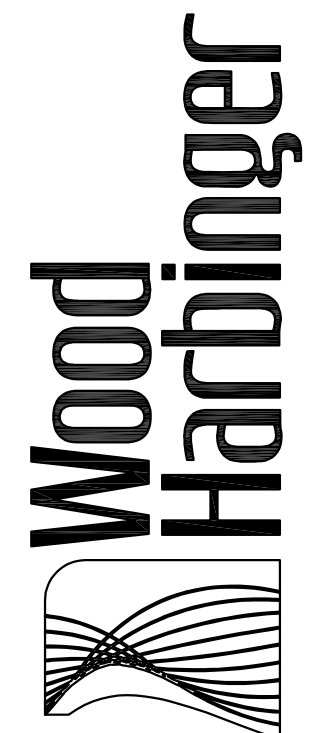
IF SHEET IS LESS THAN 30"x42" IT IS A REDUCED PRINT SCALE REDUCED ACCORDINGLY

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

| | |
|-------------|--------------|
| Building | Planning |
| Engineering | Public Works |
| Fire | Traffic |

| REVISION | BY |
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929 108th Ave NE
Suite 1000
Bellevue WA 98004
425.626.6000
woodharbinger.com



centeris
Centers for Information Systems

CENTERIS DATA CENTERS DATA CENTER EXPANSION PHASE 2
1028 39TH AVENUE SE, PUYALLUP, WA 98674

MECHANICAL SCHEDULES

SHEET TITLE

| | |
|-------|----------|
| DATE | 11/22/24 |
| SCALE | NONE |
| ENGR | TJB |
| DRWN | TJB |
| CHKD | PMG |
| APPR | NRB |
| JOB | 23025.00 |

M-6.01

SHEET 3 OF 3

SERVER RACK

| CABINET NUMBER (1) | NEW EQUIPMENT | EXISTING | |
|------------------------------------|---|---|--|
| | R07C01-04, R06C01-04, R02C05-11 AND R03C11-13 | R09C01-06, R08C01-06, R04C18-32 AND R01C10-19 | R09C01-09, R02C01-04, R03C01-10, AND R04C01-07 |
| OPERATING TEMPERATURE RANGE | 50°F TO 77°F | 50°F TO 77°F | 50°F TO 77°F |
| CHILLED WATER | | | |
| COOLING CAPACITY | 52KW | 52KW | 34KW |
| WATER SUPPLY CONNECTION | 2 x 1" | - | - |
| CHILLED WATER EWT/LWT, °F | 42/54 | 42/54 | 42/54 |
| FLOW RATE, GPM | 30 | - | - |
| MAKE MODEL | DDC S1052 | - | - |
| NOTE: | 1. PROVIDED BY OTHERS. | | |

MINIMUM PIPE INSULATION

| FLUID DESIGN OPERATING TEMP ° F | INSULATION CONDUCTIVITY | | NOMINAL PIPE DIAMETER (INCH) | | | | |
|---|--|----------------------|------------------------------|-------------|-------------|---------|-----|
| | CONDUCTIVITY RANGE | MEAN TEMP RATING ° F | <1 | 1 TO <1-1/2 | 1-1/2 TO <4 | 4 TO <8 | ≥8 |
| COOLING SYSTEMS' (CHILLED WATER) | | | | | | | |
| 40-60 | 0.21-0.27 | 75 | 0.5 | 0.5 | 1.0 | 1.0 | 1.0 |
| NOTE: | 1. NOT REQUIRED FOR STRAINERS, CONTROL VALVES & BALANCING VALVES ASSOCIATED WITH PIPING 1" OR LESS IN DIA. | | | | | | |

Permit Set
11/26/2024