

AIR INLET/OUTLET SCHEDULE

SYMBOL	MANUFACTURER	MODEL	TYPE	USE	MATERIAL	FINISH	CFM	FACE SIZE (IN)	NC	REMARKS
A	TITUS	TBD-80	SLOT	SUPPLY	STEEL	PER ARCH	PER PLANS	48" LONG	<25	3 SLOT, 1" SLOT WIDTH PLENUM SLOT DIFFUSER, EARTHQUAKE TABS
B	TITUS	TBR-80	SLOT	RETURN	STEEL	PER ARCH	PER PLANS	48" LONG	<25	2 SLOT, 1" SLOT WIDTH, EARTHQUAKE TABS
C	TITUS	35ORL	WALL	T/A	STEEL	PER ARCH	N/A	30/24	<25	3/4" BLADE SPACING, SINGLE DEFLECTION, BLADES PARALLEL TO LONG DIMENSION
D	TITUS	TMS	CEILING	SUPPLY	STEEL	PER ARCH	PER PLANS	24"x24"	<25	PROVIDE EARTHQUAKE TABS
E	TITUS	50F	CEILING	RETURN	STEEL	PER ARCH	PER PLANS	24"x24"	<25	PROVIDE EARTHQUAKE TABS

GENERAL

THE INFORMATION SHOWN ON THIS DRAWING IS TAKEN FROM AS-BUILT DRAWINGS AND A NON-DESTRUCTIVE WALK THROUGH OF THE FACILITY. THE CONTRACTOR SHALL FIELD VERIFY ALL ITEMS SCHEDULED FOR DEMOLITION PRIOR TO START OF WORK.

PLANS – THE CONTRACTOR SHALL PROVIDE ALL MATERIALS AND LABOR NECESSARY FOR A COMPLETE AND OPERABLE SYSTEM PER THE FOLLOWING PLANS AND SPECIFICATIONS. THE DRAWINGS ARE PARTLY DIAGRAMMATIC, NOT NECESSARILY SHOWING ALL OFFSETS OR EXACT LOCATIONS OF PIPING AND DUCTS, UNLESS SPECIFICALLY DIMENSIONED. CONTRACTOR TO COORDINATE DIFFUSER LOCATIONS WITH ELECTRICAL PLANS TO AVOID CONFLICT.

COMPLETE PROJECT – THE INTENT OF THIS PROJECT IS TO LET ONE CONTRACT WHICH INCLUDES ALL WORK REQUIRED FOR A COMPLETE JOB.

PERMITS – THE CONTRACTOR SHALL SECURE AND PAY FOR ALL NECESSARY PERMITS AND FEES.

CODE – ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST ADOPTED EDITION OF THE INTERNATIONAL BUILDING CODE (IBC), INTERNATIONAL MECHANICAL CODE (IMC), UNIFORM PLUMBING CODE (UPC) AND NATIONAL ELECTRICAL CODE (NEC) AS AMENDED BY THE MUNICIPALITY OF ANCHORAGE. SHEET METAL WORK SHALL BE DONE IN ACCORDANCE WITH SMACNA STANDARDS.

INSURANCE – CONTRACTOR MUST PROVIDE BUILDER’S ALL RISK INSURANCE, WORKER’S COMPENSATION INSURANCE, AND GENERAL LIABILITY INSURANCE AT ALL TIMES WHILE WORKING ON THIS PROJECT.

WARRANTY – ALL WORK PERFORMED UNDER THIS CONTRACT SHALL BE FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM ACCEPTANCE. ANY FAULTY MATERIALS OR WORKMANSHIP SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER DURING THE GUARANTEE PERIOD.

ELECTRICAL WORK – ALL ELECTRICAL WORK IS TO BE PERFORMED BY A LICENSED ELECTRICIAN, IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, NEC.

MATERIALS – ALL MATERIALS OTHER THAN OWNER SUPPLIED SHALL BE NEW AND UNUSED, INSTALLED IN ACCORDANCE WITH THE MANUFACTURER’S DIRECTIONS AND IN THE BEST PRACTICE OF THE CRAFT. OBTAIN OWNER’S APPROVAL OF ALL PRODUCTS PRIOR TO ORDERING OR INSTALLING ANY PART OF ANY SYSTEM.

SUBMITTALS – SUBMITTALS SHALL BE IN ELECTRONIC FORM. THE DATA SHALL BE ARRANGED AND INDEXED UNDER BASIC CATEGORIES. PROVIDE IN ORDER OF MECHANICAL SCHEDULES. PROVIDE MATERIAL AND EQUIPMENT SUBMITTALS CONTAINING A COMPLETE LISTING OF MATERIAL AND EQUIPMENT SHOWN ON THE DRAWINGS. INCLUDE CATALOG NUMBERS, WIRING DIAGRAMS, ACCESSORIES/OPTIONS PROVIDED, ROUGH-IN DIMENSIONS AND PERFORMANCE DATA FOR ALL MATERIAL AND EQUIPMENT.

OPERATION AND MAINTENANCE MANUAL – PROVIDE THE OWNER WITH AN OPERATING AND MAINTENANCE MANUAL, TO INCLUDE MANUFACTURER’S SPECIFICATIONS, OPERATING AND MAINTENANCE INSTRUCTIONS, WARRANTY INFORMATION ON EACH PIECE OF EQUIPMENT, AND SCHEMATIC DIAGRAMS OF CONTROL SYSTEMS AS-BUILT, AS WELL AS A SOURCE OF SUPPLY FOR SPARE PARTS AND SERVICE.

ACCESS – PROVIDE WORKABLE ACCESS TO ALL SERVICEABLE AND/OR OPERABLE EQUIPMENT.

TEST AND START-UP – TEST ALL PLUMBING AND PIPING SYSTEMS WITH 60 PSIG FOR ONE HOUR BEFORE FILLING AND IN ACCORDANCE WITH THE UNIFORM PLUMBING CODE, UPC.

EQUIPMENT INSTALLATION – INSTALL ALL EQUIPMENT WHERE NOTED ON THE DRAWINGS IN ACCORDANCE WITH THE MANUFACTURER’S INSTRUCTIONS. PROVIDE MISCELLANEOUS APPURTENANCES, ACCESSORIES, SUPPORTS AND CONTROL CONNECTIONS REQUIRED FOR COMPLETE AND OPERATING SYSTEMS. MAINTAIN MANUFACTURER’S RECOMMENDED SERVICE CLEARANCES.

BALANCE – THE CONTRACTOR SHALL BALANCE THE AIR AND HYDRONIC SYSTEMS ACCORDING TO NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB) RECOMMENDED PROCEDURES AND CONTRACT DOCUMENTS, AND TO THE SATISFACTION OF THE OWNER. AIRFLOWS ARE TO BE BALANCED TO WITHIN 10% OF INDICATED FLOWS, PER AMERICAN AIR BALANCING COUNCIL (AABC) RECOMMENDED METHODS.

CONTROLS – CONTRACTOR SHALL MODIFY DIRECT DIGITAL CONTROL SYSTEM TO ACCOMMODATE THE CHANGE OF FLOOR PLAN. INCLUDE MODIFICATIONS TO GRAPHICS PACKAGE TO UPDATE FLOOR PLAN AND EQUIPMENT LOCATIONS. INSTALL ALL WIRING IN ACCORDANCE WITH THE NEC. TEST ALL SYSTEMS, VERIFY ALL SYSTEMS OPERATE AS SPECIFIED IN SEQUENCE OF OPERATIONS, AND RECORD INITIAL SETTINGS AND OPERATING SETPOINTS IN O&M MANUALS. PROVIDE CONTROL SYSTEMS DEMONSTRATIONS TO OWNERS REPRESENTATIVE(S) PRIOR TO SUBSTANTIAL COMPLETION. SIEMENS CONTROLS, NO SUBSTITUTIONS.

DUCTWORK

LOW AND MEDIUM PRESSURE DUCTWORK – FABRICATE AND SUPPORT IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS AND ASHRAE HANDBOOKS, EXCEPT AS INDICATED.

DUCTWORK – PROVIDE GALVANIZED SHEET METAL RECTANGULAR OR ROUND DUCT WHERE CALLED OUT ON THE PLANS. SEAL ALL DUCT SEAMS AND JOINTS AIRTIGHT. USE TURNING VANES IN ALL SQUARE ELBOWS. INSTALL VOLUME DAMPERS AND EXTRACTORS WHERE SHOWN ON THE DRAWINGS. ALL SHEET METAL WORK TO BE CONSTRUCTED, INSTALLED, TESTED AND BALANCED IN ACCORDANCE WITH SMACNA STANDARDS. SUPPORT LOW AND MEDIUM PRESSURE DUCTWORK PER SMACNA GUIDELINES.

INSULATED FLEXIBLE DUCTS – FABRIC SUPPORTED BY HELICALLY WOUND SPRING STEEL WIRE OR FLAT STEEL BANDS; RATED TO 2 INCHES W.C. POSITIVE AND 1.5 INCHES W.C. NEGATIVE FOR LOW PRESSURE DUCTS AND 15 INCHES W.C. POSITIVE OR NEGATIVE FOR MEDIUM HIGH PRESSURE DUCTS. WRAPPED WITH FLEXIBLE GLASS FIBER INSULATION, ENCLOSED BY SEAMLESS ALUMINUM PIGMENTED PLASTIC VAPOR BARRIER JACKET; MAXIMUM 0.23 K VALUE AT 75 DEG F.

DUCT SOUND LINING – FLEXIBLE GLASS FIBER; ANSI/ASTM C1071; ‘K’ VALUE OF 0.24 AT 75 DEG F; COATED AIR SIDE FOR MAXIMUM 5,000 FT./MIN. AIR VELOCITY, UL LISTED ADHESIVE GALVANIZED STEEL PINS.

VOLUME DAMPER – FABRICATE IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS.

PIPING

VENT PIPING – CAST IRON PIPE: CISPI 301, HUBLESS, SERVICE WEIGHT. FITTINGS: CAST IRON. JOINTS: CISPI 310, NEOPRENE GASKETS AND STAINLESS STEEL CLAMP-AND-SHIELD ASSEMBLIES.

PRESSURE WASTE PIPING – COPPER PIPE: ASTM B306, DWV. FITTINGS: ASME B16.3, CAST BRONZE, OR ASME B16.29, WROUGHT COPPER (DWV). JOINTS: ANSI/ASTM B32, SOLDER: GRADE 95TA; FLUX: ASTM B813.

DOMESTIC WATER PIPING – COPPER TUBING: ASTM B88, TYPE L, HARD DRAWN. FITTINGS: ASME B16.18 CAST BRONZE OR ASME B16.22 WROUGHT COPPER. JOINTS: ASTM B32, LEAD FREE SOLDER, WATER SOLUBLE FLUX OR VIEGA, PRO PRESS SYSTEM

HEATING PIPING – COPPER TUBING: ASTM B88, TYPE L, HARD DRAWN. FITTINGS: ASME B16.18 CAST BRONZE OR ASME B16.22 WROUGHT COPPER. JOINTS: ASTM B32, LEAD FREE SOLDER, WATER SOLUBLE FLUX OR VIEGA, PRO PRESS SYSTEM

PIPING SUPPORTS AND HANGERS – SIZED AND SPACED IN ACCORDANCE WITH THE UPC. INSTALLED AS PER THE MANUFACTURERS INSTRUCTIONS.

DISINFECTION OF POTABLE WATER SYSTEM – THE NEW PORTIONS OF THE DOMESTIC WATER PIPING SYSTEM SHALL BE DISINFECTED IN ACCORDANCE WITH SECTION 609.9 OF THE UPC.

PIPING INSULATION – INSULATE ALL DOMESTIC HOT AND COLD WATER PIPING SIZE 3/4” AND SMALLER WITH 1/2” INSULATION, COMPLETE WITH VAPOR BARRIER JACKET AND PLASTIC COVERS FOR FITTINGS. INSULATE ALL HEATING PIPING WITH 1” INSULATION.

FIRE SPRINKLER PROTECTION

CONTRACTOR TO REVISE EXISTING WET AUTOMATIC FIRE SPRINKLER SYSTEM, TO PROVIDE COMPLETE COVERAGE OF PROJECT AREA. FIRE PROTECTION SYSTEM SHALL BE IN COMPLIANCE WITH CONTRACT DOCUMENTS, APPLICABLE CODES AND STANDARDS, AS WELL AS THE AUTHORITY HAVING JURISDICTION AS DEFINED IN NFPA 13. PROVIDE NEW SPRINKLER HEADS AS REQUIRED, NEW HEADS SHALL MATCH MAKE, MODEL, AND FINISH FOR EXISTING SPRINKLERS WHILE COMPLYING WITH NFPA 13 STANDARDS. COORDINATE THE CEILING HEIGHT REQUIREMENTS WITH THE REFLECTED CEILING PLAN.

SEQUENCE OF OPERATION

VARIABLE VOLUME TERMINAL UNITS AND FINTUBE – SPACE SENSOR WILL MODULATE AIR VALVE TO MAINTAIN SETPOINT. UPON CONTINUED DROP IN AREA TEMPERATURE AFTER AIRFLOW IS AT MINIMUM POSITION, MODULATE THE CONTROL VALVE ON THE FINTUBE IN SERIES WITH THE BOOSTER COIL CONTROL VALVE TO MAINTAIN THE SPACE TEMPERATURE SETPOINT. MINIMUM AIRFLOW SETPOINT FOR BOXES SHALL BE 30% (INITIAL SETTING, ADJUSTABLE).

AIR CONDITIONER AC-1, CV-1 – PACKAGED CONTROLS SHALL CYCLE AC-1 ON AND OFF AS REQUIRED TO MAINTAIN ROOM COOLING TEMPERATURE SETPOINT AS CONTROLLED BY LOCAL HEAT/COOL THERMASTAT. INTEGRAL CONDENSATE PUMP CONTROLS SHALL CYCLE THE PUMP ON AND OFF AS REQUIRED TO DRAIN CONDENSATE. WHEN ROOM TEMPERATURE DROPS BELOW HEATING SETPOINT, CONTROL VALVE FOR CV-1 WILL OPEN UNTIL SPACE HEATING TEMPERATURE SETPOINT IS SATISFIED.

LIFT STATION LS-1 – INTEGRAL PUMP CONTROLS SHALL CYCLE THE PUMP ON AND OFF AS REQUIRED TO DRAIN CONTAINMENT BASIN.

FULL SIZE PRINTED ON 22 x 34

SPECIFICATIONS AND SCHEDULE

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UAA/ISU

Phase II Doctor of Pharmacy Program
Tenant Improvements at the PSB Building

CONSTRUCTION DOCUMENTS

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RS&A Engineering, Inc.
MECHANICAL AND ELECTRICAL CONSULTING ENGINEERS
670 West Friesend Lane, Suite 200 Anchorage, AK 99503 (807) 276-0021
1000 West Northern Blvd., Suite 101 Wasilla, AK 99564 (807) 357-1521
Corporate No.: ALEC05542

ECI/HYER ARCHITECTURE + INTERIORS
3909 Arctic Boulevard, Suite 103
ANCHORAGE, ALASKA 99503 907.561.5543
PROJECT NO. 13-008.11