



March 18, 2009

Bettisworth North
2600 Denali Street, Suite 710
Anchorage, AK 99503

Attention: Lawrence Jorgensen

Subject: Selawik Clinic

Dear Loren:

Following is a report of yesterday's trip to Selawik with my observations on the status of roughed-in mechanical systems at the clinic.

Status of Mechanical Work

1. Plumbing piping including waste, vent, vacuum waste, hot and cold water and hot water recirculation has been roughed in. Hot and cold water piping has been insulated.
2. The boilers have been installed along with the heating water supply and return headers including isolation, control, balance and drain valves, etc.
3. The packaged glycol tank, expansion tanks and hot water generator have been installed with associated piping and accessories.
4. Boiler flues, complete with breeching and dampers are installed.
5. The main circulation pump CP-1 is installed.
6. Combustion air ductwork is installed in the mechanical room and has been insulated.
7. The daytank is installed as well as associated fuel oil piping, valves and fittings to the boiler burners, vent pipe to exterior, and main fuel oil supply and return underneath the building.
8. Heating piping mains and most branch piping have been installed and insulated throughout the building, although no baseboard has been installed.
9. The heat recovery ventilator is installed as well as associated supply and exhaust ductwork. HRV intake and exhaust ducts are insulated.

Incomplete or Deficient Work

1. Water and sewer for the building has not been installed so associated piping in the mechanical room is incomplete.
2. The exterior fuel tank has not been set in place, so fuel oil piping is capped.
3. Vacuum waste check valves at the water closet branch lines are missing (valves shown on detail 2, M1.1).
4. PVC (vacuum waste) piping is required to be supported at 4-foot maximum intervals per UPC, it appears that some additional hangers may be required for this overhead piping in the plumbing chase.

5. Main vacuum valve not yet installed at the holding tank in the mechanical room.
6. The air vent for expansion tank ET-3 air purger is missing.
7. Thermometers have not been installed at the hot water generator or heat exchanger, although thermometer wells are installed.
8. Circulation pump CP-3 is not installed due to lack of building water service.
9. Hot and cold water pipes serving one of two sinks (fixture P-5) in the trauma room are reversed, with hot water on the right and cold on the left. The contractor should make a note so that when final connection is made to the faucet the flexible supplies are installed to account for the piping reversal.
10. There is not yet a rough-in for the thermostat in the Comm room to control exhaust fan EF-3, or in the Morgue to control EF-4.
11. A section of fintube in the plumbing chase is located directly beneath a plumbing waste pipe, and the two are nearly in direct contact, as shown in the adjacent photograph. The fintube should be relocated away from the waste pipe.
12. The heat exchanger 3-way mixing valve is piped incorrectly, with the common AB port connected to the coil bypass (supply) leg, rather than the mixed return leg. In addition, the valve does not have a modulating actuator as required.
13. No temperature sensor well is installed on the heat exchanger supply piping, necessary to allow control of the modulating valve as shown on detail 5, M3.1.
14. HGR piping mains in the ceiling space of Hall 130 appear to be rigidly clamped to supporting unistrut and thus are not free to move due to accommodate thermal expansion and contraction. Pipe loops have been installed as shown on the drawings, but cannot serve their purpose as installed due to the clamps. The contractor should also verify that the HGS piping mains located in the ceiling space of Hall 146 are likewise free to move.
15. Pipe guides should be installed at HGS and HGR expansion loops as indicated on detail 1, M2.1.
16. Exhaust fan EF-3 vertical duct within the plumbing chase has not been insulated.
17. A support strap for the duct crossing Hall 130 from Exam 114 has come loose.
18. The exhaust fan EF-2 duct penetration on the underside of the floor structure is inadequately sealed (gap between duct and plywood).
19. The mechanical code requires the clothesdryer exhaust duct to have a backdraft damper. Attached is a recommended detail for this installation on the underside of the building (sketch SKM-1).

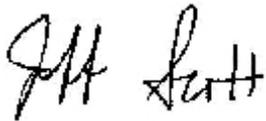


Deviations from the Construction Documents

1. Domestic cold water piping has been supported on unistrut, with clamps in direct contact with the piping. This a variation to Specification Section 15060, 3.3.K and 15080, 3.2 which require the insulation to be continuous through the hangers and protected by insulation shields, in order to ensure a continuous vapor barrier around the cold piping.
2. Some of the branch domestic water piping to individual fixtures was insulated with 1/2 inch thick insulation, while the rest was done with 1 inch thick insulation. Section 15080 requires 1 inch thick insulation throughout, unless otherwise approved by the owner.

Except as noted above, the mechanical work has been installed in a very neat and professional manner and appears to be of high quality workmanship. If you have any questions or comments concerning the above, please let me know.

Sincerely,

A handwritten signature in black ink, appearing to read "JM Scott". The signature is written in a cursive, somewhat stylized font.

Jeffery M. Scott, P.E.
Senior Mechanical Engineer