



**Nelson County School District
Addition and Renovation to Nelson County Early Learning Center
Design Development MEP Pricing Narrative**

General:

The addition is approximately 10,600 square feet which includes 7 classrooms with a single restroom, multipurpose room, and restroom for outdoor playground. The existing building is approximately 15,500 square feet with 2,350 square feet of renovation.

Plumbing - Addition:

- All sanitary piping shall be schedule 40 PVC with solvent weld joints. All domestic water piping shall be copper Type L with soldered or pro-press joints. All domestic water piping shall be insulated with 1-1/2" thick fiberglass insulation.
- All roof drainage will be handled via roof drains and overflow drains routed within the building. Roof drainage piping shall be schedule 40 PVC with solvent welded joints. Roof drains will route outside of building and connect to existing storm mains and overflow piping will route above ceiling and terminate at the exterior wall utilizing a Zurn scupper nozzle. Refer to the civil and architectural drawings for storm piping requirements. All horizontal roof drain piping shall be insulated with 1" fiberglass insulation.
- Provide a 2" O.R. in each mechanical closet for the heat pump condensate. Provide a sure seal trap adapter at each open receptacle.
- Typical plumbing fixture specifications:
 - Children's Water Closet: Zurn model Z5670 vitreous china, 10" high, siphon jet water closet with 1-1/2" top spud, elongated bowl, china bolt caps and white open front plastic seat with check hinge. Install flush valve on "open" side of water closet. Water closet flush valve shall be as follows: Battery powered, sensor operated flush valve to be Zurn model ZER6000-CP.
 - Lavatory: Crane Plumbing Model "Harwich 1412" vitreous china 20" x 18" lavatory with backsplash, rectangular basin, splash lip, front overflow, soap depression. Provide with concealed arm support and wall carrier. Provide lavatory drain with integral perforated strainer, 3/8" angle rigid supplies with stops and P-trap. Install insulation on the supply lines and P-trap on similar to Brocar "Trap Wrap" vinyl plastic covering per ADA

Standards. Mounting height to be per ADA. The lavatory faucet will be provided by the owner and installed by the contractor. The owner provided faucet is a Wolverine Brass – Endurance with chrome finish and chrome metal loop handle.

- Drinking Fountain: Haws Model #HWBFA8.VRC electric water cooler; 8.0 GPH of 50°F water at 90°F room temperature and 80°F entering water; vandal resistant stainless steel basin and housing, 1/5 HP compressor; 115/1phase/60 HZ. Mount spout at 36" AFF. Provide with loose key manual shut-off at wall.
- Single Compartment Sink – Classroom: Elkay PSDKADQ2517, ADA compliant, single compartment stainless steel sink, 25" x 17" O.D. X 5-1/2" deep, 18 gauge with 2-hole, faucet punching. Provide with grid strainer, 3/8" chrome supplies stops, tailpiece, P-trap, drain and escutcheons. Provide with trap wrap insulation on p-trap and water supplies. Sink trim shall be as follows: LK208513L Single wing handle faucet with 13" high fixed spout, ADA compliant. Provide with mixing valve set at 90 f. under counter. Provide with LK1141A pushbutton bubbler with flexible guard and ADA compliant.
- Bathroom Floor Drain: Zurn, ZN-415 floor drain with 6" dia. nickel bronze strainer, Type "B", dura-coated cast iron body with 3" bottom outlet.
- Mechanical Room Floor Drain: Zurn, ZN-511 floor drain with 9" dia. nickel bronze strainer, dura-coated cast iron deep sump with 4" bottom outlet, seepage pan and sediment bucket. Provide with sure seal trap adapter.

Plumbing - Renovation:

- A new hand washing station shall be installed in the dining room.
- A new restroom group, including four water closets and wall mounted lavatories, shall be installed in the renovated area that used to be the multi-purpose room.
 - Public Water Closet: Crane Plumbing Model "Placidus 3446" vitreous china, elongated rim, siphon action water closet. Provide 1 1/2" top spud, solid plastic elongated seat with open front, extended back, and check hinge. Provide with concealed carrier. Mount seat at 18" AFF. Install flush valve on "open" side of water closet. Water closet flush valve shall be a hard wired, electric eye flush valve, Sloan "Optima" 111 ES-S with EL-154 120/24 V. transformer.
 - Public Wash Stations: Bradley Model MG-3/IR with infrared control, Vandal resistant, ADA compliant, 0.5 GPM flow rate per station, all valving, water supplies, and waste connections are concealed inside the apron with access panel is removable only with a hex key. Unit bowl to be constructed of Terreon, a densified solid surface material composed of polyester resin. The support frame and access panel shall be constructed from stainless steel. Unit to be provided with thermostatic mixing valve,

control transformer, check stops and strainers, drain spud, flexible stainless steel supply hoses and locknut. Color to be selected by Architect

- A new classroom ADA restroom, including one water closet and wall mounted lavatory, shall be installed in the renovated area that used to be the multi-purpose room.
- A new classroom ADA restroom, including one water closet and wall mounted lavatory, shall be installed in the renovated area at Classrooms 4 and 7.

Fire Protection – Addition and Renovation:

- The new addition shall be 100% covered with a wet type fire protection system in accordance with NFPA 13 and all other applicable standards; extend from the existing service. All new piping shall be grooved or threaded black steel piping. Schedule 40 piping shall be used on branch piping and Schedule 10 piping shall be used on mains. All new sprinkler heads in lay-in ceiling shall be semi-recessed heads with escutcheons and all areas without ceilings shall be upright type heads. Flexible stainless steel sprinkler piping can be used at the sprinkler run-outs. Sprinkler heads in the multipurpose room shall include cages for protection. Sprinkler heads in renovated areas to be re-worked for new floor plan layout.

Mechanical - Addition:

The addition shall be served by a geothermal HVAC system as described below.

- Each classroom or classrooms will be served by a unitary, two-stage, ECM motor, R-410A refrigerant, heat pump. The heat pump will be installed in a closet. Approved manufacturers are Florida Heat Pump, Climate Master, and Water Furnace. Refer to the schematic drawings for the zoning plan and approximate unit sizes. All classrooms will be controlled via temperature sensors with a fixed temperature setpoint through the BAS system. Any unit that serves more than one classroom, a temperature sensor shall be installed in each classroom and the space temperature shall be averaged for the heat pump unit control.
- The geothermal system is to have centralized pumping. Two (2) central inline pumps, rated for 60 gpm (ea.), will be located in the main mechanical room for the addition. One (1) pump will be redundant.
- The new well field will be comprised of sixteen (16), 400 feet deep wells. Each well will include 1-1/4" pipe and fully grouted with thermally enhanced grout. All well field piping shall be high density polyethylene with butt fused joints.
- The ventilation air will be delivered and condition via a dedicated outdoor air system (DOAS). The DOAS is made up of an energy recovery wheel which all

building exhaust will be routed through for the maximum energy efficiency. DX cooling with electric heat will be included in the DOAS to condition the air.

- All interior heat pump piping mains shall be SDR 15.5 HDPE piping with butt/fused joints with solvent welded joints. All branch piping shall be Type L copper with solder or pro-press joints. Provide 1" thick insulation on concealed geothermal piping above lay-in ceiling.
- IDF Closet – Ventilation fan with thermostatic control.
- A new DDC Building Automation System (BAS) shall be installed to control the building addition system. The system shall be integrated with the existing network via third party software. Web based graphics will be required. Acceptable manufacturers shall be Alerton and Invensys.

Mechanical – Renovation:

- Rework existing AC unit in the renovated area that used to be Classroom 3.
- Rework existing Outside Air and Exhaust Air in the renovated area that used to be the multi-purpose room.
- Rework existing AC units and associated controls in the renovated area that used to be the multi-purpose room.
- Rework Exhaust Air grilles for new Restrooms in Classroom 4 and 7.

Electrical – New Addition:

- New branch panels will be installed to serve circuits in the new addition. Panels will be fed from the service serving the existing building. Receptacles and data/voice outlets will be installed in the new classrooms to meet KDE requirements. All new circuits will be installed in EMT conduit with a 3/4" minimum.
- A new IDF wiring closet will be provided in the new addition to serve new data/voice outlets. Fiber optic cabling will be pulled from the new IDF closet back to the existing MDF. New cable tray cabling paths will be routed through the corridors to support all new cabling.
- Lighting will be much the same as the work in the renovated portion of the building. High efficiency fluorescent fixtures will be used throughout the new addition with occupancy sensors and relays for automatic shutdown of fixtures.

- New fire alarm and intercom devices will be installed through-out the new addition. These devices will be interfaced into the existing systems provided for the building so that the existing building and addition are served from central head end equipment.

Electrical - Renovation:

- General receptacle layouts in the existing building will remain largely unchanged. In areas undergoing major architectural renovations rooms will be provided with new layouts to meet the new room requirements. Data and voice outlets will be added or reworked in renovated rooms as required.
- Power for mechanical equipment, lighting, intercom, and security devices will be reworked in renovated rooms as required.