Addendum No. 1 February 9, 2023

- Project: Harrisburg Elementary School #8 Harrisburg, South Dakota Architecture Incorporated Project #3000
- Architect: Architecture Incorporated
- Letting: Thursday, February 23, 2023 2:00 p.m.
- Location: Community Center Conference Room at the Harrisburg School District Administration Offices, 200 Willow Street, Harrisburg, South Dakota 57032. (Enter from southeast community center entrance).

Scope of this Addendum:

To all bidders and all others to whom drawings and specifications have been issued by Architecture Incorporated, this Addendum forms a part of the Contract Documents. Acknowledge receipt of this addendum by listing its number and date in the bidder's Form of Proposal. Failure to do so may subject bidder to disqualification. This addendum modifies the drawings and specifications as follows:

GENERAL ITEMS:

1) <u>SECTION 085654 – WIND AND IMPACT RESISTANT STORM SHELTER WINDOWS</u>

- a) Provide insulated glass-clad polycarbonate glazing at exterior storm shelter windows as specified below:
 - 1. Subject to compliance with requirements, provide glazing at storm shelter window assemblies based on [**TOR-GARD 30 IG**] insulated glass units as manufactured by Insulgard Security Products.
 - a. Glass Type: Clear, low-e-coated, glass-clad polycarbonate insulated [storm shelter] glazing units.
 - 1) Overall Unit Thickness: [2.03 inch], nominal.
 - 2) Weight: [15 lbs/ sq ft].
 - 3) Outdoor Lite: Clear, [float glass] [fully-tempered float glass].
 - a) Thickness: [1/4-inch].
 - 4) Interspace Content: [Air].
 - 5) Spacer: Box-type aluminum material with loose-fill desiccant; dual-sealed.
 - 6) Indoor Lite: Clear, laminated, [glass-clad polycarbonate].
 - a) Thickness: [1.272 inch], nominal.

- b) **NOTE**: Protected side of window shall be a mar-resistant polycarbonate with the Threat Side glass surface.
- 7) Low-E Coating: Pilkington Energy Advantage; [**Pyrolytic on second**] surface.
- 8) Visible Light Transmittance: [65] percent minimum.
- 9) Winter Nighttime U-Factor: [0.27] maximum.
- 10) Solar Heat Gain Coefficient: [0.57] maximum.
- 11) Calculated Shading Coefficient: [0.66].
- 12) Glazing and Glazing Materials:
 - a) Edge-of-Glass Materials: Manufacturer's standard EPDM glazing gaskets at exterior. Interior sealant shall be manufacturer's standard EPDM glazing gaskets.
- 13) Insulated glass-clad polycarbonate glazing shall also comply with requirements specified in Section 088000.

2) <u>SECTION 116623 – GYMNASIUM EQUIPMENT</u>

- a) Replace Article 2.6.A. with the following; disregard all reference to archery backstop curtains.
 - *A.* Provide gym divider curtains based on [Porter No. 9067000 Roll fold] [or] [Performance Sports Systems Model #4020].

3) <u>SECTION 220100 – GENERAL PROVISIONS</u>

a) Add following to Article 1.01:

Contractor shall follow all provisions outlined in the Inflation Reduction Act of 2022 for the owner to obtain an ITC (Investment Tax Credit) for the complete ice system (tanks, ice pump, chiller, piping, controls, etc.). This includes, but is not limited to, the prevailing wage requirements, apprenticeship program requirements, and domestic content requirements. Contractor will assist the owner by providing all documentation to prove the requirements of the Inflation Reduction Act of 2022 were met during construction. Contractor shall provide a breakout cost for all components related to the ice storage system.

b) Replace the Pipe and Pipe fitting types for the cold, hot, recirculating hot water, hot water heating supply and return, chilled water supply and return, and ice storage supply and return systems in **Article 1.27** as following:

<u>PIPE AND PIPE FITTINGS</u>

Piping for cold, hot, recirculating hot water, hot water heating supply and return, chilled water supply and return, and ice storage supply and return shall be PP-RCT resin meeting the short-term properties and long-term strength requirements of ASTM F2389 and CSA B137.11.

Pipe shall be listed for potable water (shall have listings to NSF 14 and 61g), regardless of the whether the pipe and fittings are to be used for potable water service or HVAC service. All pipe shall be made in an extrusion process. The piping shall be extruded with a middle layer that has glass fiber content to restrict thermal expansion. Cold, chilled water supply and return, and ice storage supply and return shall be SDR 17. Hot water heating supply and return, hot, and recirculating hot water shall be SDR 11.

Fittings shall be manufactured from a PP-RCT resin meeting the short-term properties and longterm strength requirements of ASTM F 2389. All fittings shall comply with NSF 14, ASTM F 2389 and CSA B137.11. Fittings shall be PP-RCT piping and be provided by the same manufacturer as the pipe.

Fittings may be either socket fusion through nominal 5 inch (125 mm), electrofusion through 10 inch (200mm) or butt fusion in nominal 2 inch through 24 inch sizes (63mm through 630 mm). Electrofusion may also be performed in nominal sizes 12 inch through 24 inch (315mm through 630mm) by means of the use of electrofusion couplings as applied on butt fusion fittings and pipe.

Pipe and fittings shall be covered by a factory warranty for 30 years to be free of defects in materials or manufacturing.

Valves shall be provided by the same manufacturer as the pipe and fittings and shall comply with the performance requirements of ASTM F 2389 or CSA B137.11.

Where piping and fittings are installed in a plenum the pipe shall be wrapped/or insulated to meet the requirements of ASTM E84. The systems shall have a Flame Spread Classification of less than 25 and Smoke Development rating of less than 50.

Where piping is exposed to UV light for more than 30 days, it shall be protection with a factory applied, UV-resistant coating or alternative UV protection.

Insulate piping per the requirements found in specification section 220700.

Install fittings and joints using socket-fusion, electrofusion, butt-fusion or compression joining as applicable for the fitting or joint type. All fusion-weld joints shall be made in accordance with the specifications and product standards of the manufacturer.

Install hangers and supports at intervals specified in the applicable Plumbing or Mechanical Code and/or as recommended by the manufacturer.

Support vertical piping at each floor and as specified in the applicable Plumbing or Mechanical Code. Piping 2" (63mm) or smaller shall be installed with mid-story guides.

Fire stopping shall be provided to both be compatible with the PP-RCT piping and meet the requirements of ASTM E 814 or ULC S115, "Fire Tests of Through-Penetration Firestops".

While still accessible all piping shall be pressure/leak tested to the manufacturer's standards. Tests shall be carried out using water, compressed air or a mixture of the two. The test pressure for a hydrostatic test shall be 1.5 times the design pressure or 150 psi, whichever is greater, and for an air test shall be 1.1 times the design pressure or 150 psi, whichever is greater. Any leaks detected shall be repaired at the contractor's expense by removing the leaking part and replacing with new parts welded per the manufacturer's guidelines. Pipe sizes currently shown on the drawings are for copper pipe. Upsize all 3" and 4" heating water supply and return system piping by one pipe size to accommodate for piping material difference.

Provide expansion loops or expansion compensators per the manufacturer's design guide and recommendations. Contractor shall provide a drawing showing expansion loops and/or expansion compensators prior to the installation of any PP-RCT piping.

Piping shall be Niron, Aquatherm, or approved equal.

Domestic water piping in block wall construction may be Type L, hard drawn copper tubing, ASTM B88 and Federal Specification WW-T-799. Fittings shall be wrought copper solder type, ANSI B16.22. Joints for pipe and fittings shall be made with No. 95-5 (tin-antimony) solder and No. 50 non-corrosive flux.

Piping from the heating and cooling coils to the shutoff valves can be Schedule 40 black steel pipe shall conform to ASTM A120/ASTM A53 and Federal Specification WW-P-406, Weight A or hard drawn Type L copper tubing, ASTM B88 and Federal Specification WW-T-799. Fittings shall be wrought copper solder type, ANSI B16.22. Joints for pipe and fittings shall be made with No. 95-5 (tin-antimony) solder and No. 50 non-corrosive flux.

4) <u>SECTION 220400 – PLUMBING</u>

a) Replace Article 1.16. with the following:

WATER SOFTNER

Provide as indicated a vertical pressure type water softener system complete with pressure vessel, softening resin, control valve, brine maker and electronic controller. The system will be of an approved design as fabricated by a manufacturer regularly engaged in the production of water treatment equipment. All equipment and material will be supplied in compliance with the specifications as intended for a complete and operational system.

The system specifications are based on Culligan International model CTM-150-DF with Hard Water Bypass configured as a single system with a Water Meter.

The purpose of the Culligan International Culligan Top Mount Single automatic water softener will be to remove mineral hardness from a known water supply to a level not to exceed 17.1 mg/l, as determined by an accepted ASTM or EDTA test method, when the system is operated in accordance with the operating instructions. 18772 18772 18772

The systems performance will be capable of a peak flow rate of 76 gpm for sustained periods of 90 minutes with a pressure drop of 25 psi.

Design parameters shall be as listed below:

Normal System Flow & Pressure Drop : 59 gpm @ 15 psi Maximum System Flow & Pressure Drop : 76 gpm @ 25 psi Backwash/Rinse Flow : 8 gpm Backwash Volume : 272 gallons nominal Daily Water Usage : 2000 Operating Temperature Range : 40-120 °F Operating Pressure Range (System) : 35-125 psi 4 of 10 *Electrical Requirements : 120 Volts AC, 50/60 Hz, 1 Ph System Dimension (L x W x H) : 55x88.5x21.5*

Each system shall include (1) tank(s). Each softener tank shall be 18 in. in diameter. The overall tank height (less base) shall be 65 in., sufficient to allow for a proper freeboard space above the resin bed for adequate expansion of the resin during backwashing. Tank(s) shall be manufactured of polyester reinforced by a continuous roving glass filament overwrap. The top opening will be 4"-8 UN threaded and the tank bottom will be supported on a molded structural base. Each tank will be equipped with openings for mineral filling and periodic inspection.

The upper distribution system shall be of the single point diffuser type to dispense water laterally to avoid

channeling within the resin bed. The lower distribution system shall be of the single point distributor type, constructed of PVC pipe and a fine slotted strainer to provide even flow distribution through the resin bed. The distribution system shall be embedded in a two layer subfill of washed inorganic material to support the resin bed.

The main operating valve shall be of a top mount design constructed of thermoplastic resistant to attack by substances found in natural water supplies. Inlet and outlet connections to be 1.5" or 2 inch NPTE. The Cv (flow coefficient) of the main operating valve shall be equal to/greater than 32. A vacuum breaker and pressure regulating valve shall be integrated in the design of the main operating valve. The main operating valve will be of the motor driven, mechanically activated design with 5 positions to accomplish the regeneration steps of backwash, brine draw/rinse, fast rinse and brine refill in addition to the service position. The internal seals will be of a modular design for ease of replacement and service. The main operating valve will be fitted with a fixed orifice eductor to control brine draw/slow rinse. The main operating valve shall be designed by the same manufacturer as the water softener system and tested prior to shipment.

A fully integrated programmable microprocessor driven electronic controller shall be provided to automatically cycle the main operating valve through the regeneration sequence. The electronic controller shall be designed and manufactured by the same manufacturer as the water treatment equipment.

The controller shall be capable of initiating a regeneration by accepting an internal signal from the controller time keeping device; an external Hall-Effect flow sensor, a Culligan Aqua-Sensor®, an external device such as a remote start push-button or any combination of these methods. The controller shall sequence all steps of an automatic regeneration and automatically return the softener to a service or stand-by mode. The initiating time and/or volume setpoints shall automatically reset upon completion of the regeneration sequence.

The controller shall include a sealed keypad, capable of programming all controller functions, located on the face of the controller. The controller display shall be a multi-line OLED display capable of full text readouts of operating status and codes. The firmware shall be capable of being updated to the latest version.

An audible alarm beeper capable of emitting a tone of \sim 70 dBA shall be available but capable of being disabled if so desired.

The controller shall allow for a manual initiation of the automatic regeneration sequence by utilizing a regeneration selection from the controller menu.

The controller shall operate on a low voltage electrical system. The system shall include a UL/CUL listed

transformer. The entire electronic control package and its associated inputs/outputs shall require not more than

24 VAC @ 50VA. The control shall be rated for web environments and certified to NEMA 3R.

The controller shall utilize EEPROM to save pertinent programmed data and statistical functions. The controller must retain all functionality for power interruptions of less than 72 hours. A battery backup shall be installed and capable of maintaining the time of day for a minimum of 5 years.

An operator selected volume-based reconditioning for single units shall be available. A flow sensor package shall be provided consisting with an appropriately sized installation fitting. The operator shall be able to select reconditioning to occur after a specified number of gallons. The electronic controller shall indicate various data that includes number of reconditionings in the last 14 days, days since last reconditioning, total number of reconditionings for the life of the unit, time of day, and unit in reconditioning.

In addition, the following functions shall be provided as part of the system controller:

The controller shall have the capability of providing communications with the following external devices:

- Serial Communications (RS-232 & RS-485)
- USB
- Modbus RTU
- Profibus Communications
- BACnet Communications
- Modem (cell modem or land-line modem)
- Dry Contact Alarm Relay
- Wireless Remote (local RF wireless remote, 200 ft range)

Regeneration sequence timers: The controller shall allow control customization of individual regeneration cycle times, each programmable from 1 - 99 minutes. The regeneration cycle and time of cycle remaining shall be displayed when in regeneration.

Lockout function: The controller shall include a lockout to prevent unauthorized personnel from altering program data.

Regeneration override: The controller shall include a function to direct pre-programmed regeneration after a user determined period of time (hours or 24-hour intervals) without an input signal from another regeneration initiation device.

Alarm status indicator: The controller shall monitor operation of internal functions. If a fault is identified, the need for operator intervention will be signaled visually within the controller display.

Two Auxiliary Outputs: Two Auxiliary Outputs shall be integral to the controller circuit board. Each Output shall be capable of being programmed to provide power to a "Normally Open" or "Normally Closed" contact (user choice). These 24VAC outputs shall be used only for the purpose of energizing a relay coil.

Flow rate indication: The controller shall be capable of indicating the flow rate of the treated water.

Totalizer: The controller shall include a totalizer function and a display capacity to 99,999,999 units before resetting to zero. The totalizer value shall be displayed through the controller display during operation.

The controller shall have the availability to be wall- or remote-mounted for greater accessibility. Each softener will include a turbine-type Hall Effect flow sensor. The sensor shall be integral to the control valve. A cable shall be provided for direct connection to the system controller. The flow sensor package provided shall be functional within the flow range of 1.5 to 180.0 gpm. The flow sensor shall have an accuracy of +/-2% over the full range.

The ion exchange resin shall be virgin high capacity "standard mesh" of sulfonated polystyrene type stable over the entire pH range with good resistance to bead fracture from attrition or osmotic shock. Each cubic foot of resin will be capable of removing 30000.0 grains of hardness as calcium carbonate when regenerated with 15.0 pounds of salt. The resin shall be solid, of the proper particle size of 16x40 mesh, U.S. standard screen and will contain no agglomerates, shells, plates or other shapes that might interfere with the normal function of the water softener. The resin shall be manufactured to comply with the food additive regulation 21 CFR 173.25 as set forth by the USFDA. The system shall include 5 cubic feet of exchange resin per vessel and a total of 5 cubic feet of resin for the system.

Provide a complete brine system consisting of a plastic tank, cover, salt platform, brine well, an automatic brine valve and all necessary fittings for operation with the water softening system. The system shall consist of a combined brine measuring and salt storage tank with salt platform. The tank will be sized 18.0 in. x 38.0 in.; the system will include a total of one (1) brine tank(s). The brine tank can hold 800 lbs of salt which provides for 27 regenerations per salt fill.

The brine tank will be equipped with a float operated non-corrosive field serviceable brine float valve for

automatic control of brine withdrawal and fresh water refill.

The brine valve will automatically open to admit brine to the resin tank during eduction and close automatically providing positive shut-off to prevent air from entering the system. The brine valve will also regulate the flow of soft water into the brine tank during refill. The brine valve works with the timed fill feature of the main operating valve controls to admit the correct volume of fresh water to the brine tank in accordance with the refill time setting in the control program. The brine valve will include a float operated safety shut-off valve as a back up to the timed refill from the main operating valve control to prevent brine tank overflow.

Water Softener shall be Culligan, Bruner, Lindsay or equal.

5) SECTION 230100 - GENERAL PROVISION

a) Add following to Article 1.01:

Contractor shall follow all provisions outlined in the Inflation Reduction Act of 2022 for the owner to obtain an ITC (Investment Tax Credit) for the complete ice system (tanks, ice pump, chiller, piping, controls, etc.). This includes, but is not limited to, the prevailing wage requirements, apprenticeship program requirements, and domestic content requirements. Contractor will assist the owner by providing all documentation to prove the requirements of the Inflation Reduction Act of 2022 were met during construction. Contractor shall provide a breakout cost for all components related to the ice storage system.

6) <u>SECTION 230900 – AUTOMATIC TEMPERATURE CONTROL/BUILDING AUTOMATION</u> <u>SYSTEM</u>

a) Add following to Article 1.01:

Contractor shall follow all provisions outlined in the Inflation Reduction Act of 2022 for the owner to obtain an ITC (Investment Tax Credit) for the complete ice system (tanks, ice pump, chiller, piping, controls, etc.). This includes, but is not limited to, the prevailing wage requirements, apprenticeship program requirements, and domestic content requirements. Contractor will assist the owner by providing all documentation to prove the requirements of the Inflation Reduction Act of 2022 were met during construction. Contractor shall provide a breakout cost for all components related to the ice storage system.

7) <u>SECTION 312000 – EARTHWORK</u>

a) Omit Article 3.18.D.1. in its entirety; not applicable to this Project.

8) <u>SHEET 1.10 – GENERAL INFORMATION</u>

- a) Wall Types Legend Clarifications:
 - i) Wall Type C3: Acoustical sealant keynote at the structural deck shall be changed to fire resistive joint assembly.
 - ii) Wall Type E3: Wall Type E3 shall be defined as 3 5/8" steel stud framing with two layers of 5/8" gypsum board on one side and one layer of ½" RC-1 resilient channel and one layer of 5/8" gypsum board on other side; provide sound batt insulation in the wall cavity.

9) <u>SHEET 2.33 – SITE DETAILS</u>

- a) Clarification: Sign posts shall be based on *Telespar Traffic Products* Square-Fit (2" x 2") perforated, telescoping galvanized-steel tubing sign post system (w/ separate base).
 - i) Sign posts installed in landscape areas shall not require concrete footing.
- b) Omit access aisle signage detail 3/2.33; no sign required for 5'-0" wide aisle, disregard any reference to detail 3/2.33.

10) SHEET 2.40 - SITE / SURFACING PLAN

a) CLARIFICATION: The width of all sidewalks on the west side of school from the building exits to the asphalt pavement shall be 5'-0" in lieu of 4'-0".

11) SHEET 4.11 – FLOOR PLAN – AREA A

a) Install concrete stoop with frost-free footing at all exterior doors. Reference *revised* drawing Sheet 4.11, revision dated 2-9-23, attached to the end of this addendum for location and size of the concrete stoops.

- b) Add plan note for concrete equipment pads for the outdoor chiller, ice storage tanks and other mechanical equipment as indicated per *revised* drawing Sheet 4.11, revision dated 2-9-23, attached to the end of this addendum.
 - i) See clouded plan note for concrete pad thickness and reinforcing size/spacing.
- c) Relocate aluminum entrances A109-1 and A109-2 as indicated per *revised* drawing Sheet 4.11, revision dated 2-9-23, attached to the end of this addendum; shift aluminum entrances to the south as shown.

12) SHEET 4.12 – FLOOR PLAN – AREA B

a) Install concrete stoop with frost-free footing at Doors B121-1 and B121; concrete stoop shall be 5'-0" deep; the width of the stoop shall be same as entrance alcove.

13) SHEET 4.13 – FLOOR PLAN – AREA C

- a) Install concrete stoops with frost-free footing at all exterior doors; concrete stoops shall be 5'-0" deep; the width of the stoop shall be same as entrance alcove.
- b) Omit two (2) Type 3 borrowed lite shown originally at the west wall of C137 RESOURCE.

14) SHEET 4.14 – MEZZANINE PLAN – AREA A

- a) Install 4" high perimeter concrete curb at A200 PENTHOUSE as indicated in the *revised* drawing Sheet 4.14, dated 2-9-23 attached to the end of this addendum.
- b) Provide and install two (2) prefinished metal louvers on the north wall of A200 PENTHOUSE as indicated in the *revised* drawing Sheet 4.14, dated 2-9-23 attached to the end of this addendum; coordinate with mechanical for exact location and size of the louvers.
- c) Disregard cross hatch pattern originally shown on the roof adjacent to south wall of A200 PENTHOUSE.

15) SHEET 4.15 - MEZZANINE PLAN - AREA B

- a) Install 4" high perimeter concrete curb at B200 PENTHOUSE.
- b) CLARIFICATION: Coordinate exact location and size of mechanical louvers with mechanical.

16) <u>SHEET 4.16 – MEZZANINE PLAN – AREA C</u>

- a) Install 4" high perimeter concrete curb at C200 PENTHOUSE.
- b) CLARIFICATION: Coordinate exact location and size of mechanical louvers with mechanical.

17) SHEET 4.30 - DOOR SCHEDULE

- a) Borrowed Lite Types Legend: Omit borrowed lite Type 3 in its entirety; not applicable to this project.
- b) Borrowed Lite Schedule: Omit borrowed lite Type 3 in its entirety; not applicable to this project.

c) Clarification: Borrowed lite Type 9 shall be an (interior) aluminum storm-rated window assembly with non-insulated storm-rated glass-clad polycarbonate glazing, as specified per Section 085654.

18) SHEET 5.10 – EXTERIOR ELEVATION-AREA A

a) Reference *B/5.10 North Elevation – AREA A* on the *revised* drawing Sheet 5.10, dated 2-9-23 for newly added prefinished metal louvers on the north wall of A200 PENTHOUSE; coordinate with mechanical for exact location and size of the louvers.

19) SHEET 5.13 - ALUMINUM WINDOW AND STOREFRONT ELEVATIONS

- a) Frame Elevations 3/5.13 and 4/5.13: Omit the vertical sunscreens shown on the lower aluminum curtainwall frames. Vertical sunscreens shall only be required at the upper curtainwall framing as indicated per the exterior elevations; reference Sheets 5.10 & 5.11.
- b) Clarification: Aluminum window Type F shall be an (exterior) aluminum storm-rated window assembly with insulated storm-rated glass-clad polycarbonate glazing. Reference Section 085654 for insulated glass-clad polycarbonate glazing specifications.

20) <u>SHEET 5.33 – SECTION DETAILS</u>

a) Provide batt insulation in the header and stud framing that occurs over the door in detail 7/5.33.

21) SHEET 10.10 – FOOD SERVICE

- a) Food Service Equipment Clarifications:
 - i) FSE Item No. 46: Per his Base Bid, the Contractor shall include two (2) 18x36 dunnage racks.
 - ii) FSE Item No. 47: As indicated per the FSE specifications, provide two (2) 24x60 shelving units (w/ 5 shelves each). Provide a total of 12 shelving units as specified.

MECHANICAL ITEMS:

1) <u>SHEET 8.24 – ENLARGED KITCHEN UNDERFLOOR & FLOOR PLAN – AREA "A"</u> <u>PLUMBING</u>

a) Change the Lavatory and Water Closet in Toilet A124 to L-1 and WC-3.

2) <u>SHEET 8.25 – FLOOR PLAN – AREA "B" – PLUMBING & HEATING</u>

b) Change the water closet in Storage B113, B116, B117 and B119 to WC-1.

END OF ADDENDUM No. 1











