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May 15, 2026

Re: Wastewater System Improvements Project
Garden City, South Dakota
A-9512
SRF: C461341-01

Bid Opening: **May 21, 2026, 1:00 pm Local Time**

ADDENDUM NUMBER 1

The following modifications become a part of the original plans and specifications, taking precedence over the items that may conflict. The bidder shall note receipt and make acknowledgement of the addendum on the bid form, incorporating its provisions in the bid.

CONTRACT DOCUMENTS AND TECHNICAL SPECIFICATIONS

1. SECTION 00 11 10 - *Paragraph 4, beginning with* "Bidders on this work will be required to comply with Presidents…" *shall be deleted.*

2. SECTION 00 21 13, ARTICLE 24 – *Delete Paragraph 24.01 and 24.04.*

3. SECTION 00 21 13, ARTICLE 25, Paragraph 25.04 – *Delete the second sentence and replace with the following:* The Small Business Administration Resources may be used as a reference for DBEs. The website for the SBAR is https://search.certifications.sba.gov/advanced?page=0

4. BIDDING DOCUMENTS, SECTION 00 41 00 - *Remove and use the attached Bid Form.*

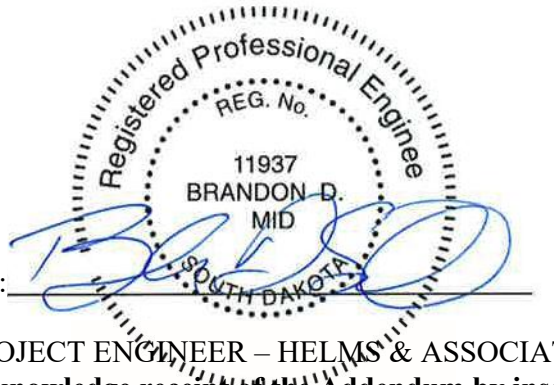
5. PART 2, DIVISION 33 00 00, SECTION 33 32 13.13 - *Remove Section 33 32 13.13 in its entirety and replace with attached Section 33 32 13.13*

CONSTRUCTION PLANS

1. PLAN SHEET 7 - *Replace with attached, Plan Sheet 7*

2. PLAN SHEET 14 - *Replace with attached, Plan Sheet 14*

ALL OTHER ITEMS OF THE PLANS AND SPECIFICATIONS REMAIN UNCHANGED



BY:_____

PROJECT ENGINEER – HELMS & ASSOCIATES

Acknowledge receipt of the Addendum by inserting its number on the Bid Form. Failure to do so may subject bidder to disqualification. This Addendum forms a part of the Contract Documents. It modifies them as above.

Wastewater Collection and Treatment System Improvements
Garden City, South Dakota
HELMS # A-9512
Bid Opening May 21, 2026 at 1:00 p.m.

Base Bid Form					
Item	**Description**	**Quantity**	**Unit**	**Bid Unit Price**	**Bid Price**
1	Mobilization	1	L.S.	Lump Sum	$
2	Remove & Dispose Pond Control Manhole	5	Each	$	$
3	Remove & Dispose Concrete Inlet/ Outlet Structure & Piping	10	Each	$	$
4	Remove & Dispose Sanitary Sewer Mainline	24	Ft	$	$
5	Remove & Dispose of Existing Wet & Dry Well	1	Each	$	$
6	Manhole Exfiltration / Vacuum Testing	3	Each	$	$
7	Connect to Existing 4" Forcemain	1	Each	$	$
8	4" Sanitary Sewer Forcemain	75	Ft	$	$
9	4" 45° Forcemain Bends	2	Each	$	$
10	Abandon & Cap 4" Sanitary Sewer Forcemain	2	Each	$	$
11	Connect to Existing 8" Sewermain	1	Each	$	$
12	8" Sanitary Sewermain	21	Ft	$	$
13	8" Pond Piping	430	Ft	$	$
14	Base Course	100	Tons	$	$
15	6' X 6' Wet Well	1	Each	$	$
16	Duplex Lift Station and Control Valve Pit Complete	1	Each	$	$
17	Pond Control Manhole #1	1	Each	$	$
18	Pond Control Manhole #2	1	Each	$	$
19	Pond Control Manhole #3	1	Each	$	$
20	Pond Control Manhole #4	1	Each	$	$
21	Pond Control Valve	5	Each	$	$
22	Pond Depth Indicator	4	Each	$	$
23	Pond Outlet Structure	5	Each	$	$
24	Pond Inlet Structure	5	Each	$	$
25	Trash Guard for Inlet/ Outlet Structure	10	Each	$	$
26	Seepage Control Collar	10	Each	$	$
27	Pond Pre-Fill	1	L.S.	Lump Sum	$
28	Pond Bypass Pumping	1	L.S.	Lump Sum	$
29	Seeding, Fertilizing, and Mulching	1	Acre	$	$
30	Exploratory Excavation	16	Hrs	$	$
Total Base Bid				$	
Written					Dollars

All Items Furnished & Installed

SECTION 33 32 13.13 - DUPLEX SUBMERSIBLE GRINDER PUMP LIFT STATIONS

PART 1 GENERAL

1.01 RELATED DOCUMENTS

A. The general provisions of the Contract, including General and Supplementary Conditions and provisions of Division 1, Special Requirements, apply to work covered by this section.

B. Related work specified elsewhere:

1. Section 31 23 16 - Structural Excavating, Filling and Grading
2. Section 33 31 00 – Wastewater Piping and Fittings
3. Section 33 31 12 – Wastewater Valves and Appurtenances
4. Section 33 39 13 - Manholes and Castings

1.02 DESCRIPTION OF WORK

A. The Work covered by this Section includes all labor, material and equipment necessary to furnish, install and place in satisfactory operating condition a submersible pump lift station, including submersible pump, electrical controls, pre-cast reinforced concrete wet well, pump installation and removal system, along with all piping, valving, and other appurtenances required to make a complete operating unit.

1.03 OPERATING CONDITIONS

A. Each grinder pump in the lift station shall be capable of pumping 150 gpm against a total dynamic head of 75 feet.

B. Maximum allowable motor size shall be 7.5 horsepower with a minimum efficiency rating of 55%. All furnished motors shall operate on 240 volts, 60 hertz, three-phase power. **Motors shall be explosion proof**. Motors shall be sized with a minimum 1.15-service factor under the maximum continuous load.

C. Maximum allowable pump speed shall be 1750 revolutions per minute. Units operating at lower speeds will not be considered.

1.04 QUALITY ASSURANCE

A. The pump supplier and control panel manufacturer shall be the same company.

B. The pumping equipment supplier shall have in place a 24/7 service center within 150 miles from the project site.

C. The pump manufacturer shall have a minimum of 1,000 units of similar type pump, installed and operating for no less than five years in the United States. A certificate of conformance with this requirement shall be furnished by the manufacturer and shall be submitted with the shop drawings. Upon request by the Engineer, the manufacturer shall furnish a listing of installations, including names and addresses of contact persons.

D. The pump manufacturer shall perform the following inspections and tests on each pump

before shipment from factory:

1. Pump Capacity vs Head, impeller size, motor rating, and electrical connections shall first be checked for compliance to these specification's purchase order.
2. The motor and cable insulation shall be tested for moisture content or insulation defects.
3. A hydrostatic test shall be run at 150 percent of shutoff head for a minimum of 5 minutes.
4. The pump shall be run for 30 minutes submerged a minimum of 6 feet under water.
5. After operational test 3 and 4, the insulation test 2, is to be performed again.

E. A written report with the results of the tests specified in Paragraph B above shall be supplied with each pump at the time of shipment.

F. The pump cable end will be sealed with a high quality protective covering to make it impervious to moisture or water seepage prior to electrical installation.

G. Each pump shall be tested at start-up by the Contractor's electrician and voltage, current, and other significant parameters recorded. The manufacturer shall provide a formal test procedure and forms for recording data.

1.05 SUBMITTALS

A. The Contractor shall provide 5 copies of shop drawings for Engineers review.

B. The Contractor shall provide 5 copies of Operation and Maintenance manuals for operation of pumps and controls to the Engineer prior to operation of facility.

C. A copy of the manufacturer's warranty shall be submitted with the shop drawings.

D. A copy of the written installation instructions shall be furnished to the Engineer before shipment of the equipment.

1.06 WARRANTY

A. The requirements of the General Conditions and the requirements as specified hereinafter shall apply.

B. The Contractor shall be responsible for the costs of materials, repair or replacement, at point of installation and use, without cost to the Owner, such equipment, or any part thereof, that is found to be defective.

C. Warranties by the manufacturer, or as specified herein, which extend beyond the period specified above, shall be extended in writing to the Owner.

D. Specifically exempted from the warranty shall be those items such as oil, grease, filters, etc., which is normally consumed in service. These items shall be considered as part of routine station operation and maintenance.

PART 2 PRODUCTS

2.01 SUBMERSIBLE PUMP

A. Submersible pumps shall be as manufactured by Pentair Hydromatic, Gorman-Rupp, Flyte, Meyers, Hydromatic, Crane, Barnes, Fairbanks-Morse, KSB, or Engineer approved equal.

The basis of design for the lift station was a Pentair Hydromatic model HPGFHX750.

B. The pump shall be capable of handling raw, unscreened sewage. The discharge connection elbow shall be cast iron permanently installed in the wet well along with the discharge piping. The discharge elbow shall have 3" 125-lb ANSI flanges. The pump shall be automatically connected to the discharge connection elbow when lowered into place and shall be easily removed for inspection or service. There shall be no need for personnel to enter pump well. Sealing of the pumping unit to the discharge connection elbow shall be accomplished by a simple linear downward motion of the pump. A sliding guide bracket shall be an integral part of the pump unit. The entire weight of the pump unit shall be guided by a preapproved similar rail system, and pressed tightly against the discharge connection elbow. The pump with its appurtenances and cable shall be capable of continuous submergence under water without loss of watertight integrity.

C. The Impeller shall be 316 Stainless Steel multivane, semi-open, non-overloading design either be factory or field trimmed to meet specific performance conditions. Impellers shall be dynamically balanced at the factory and machined for threading on to the pump shaft.

D. The combination centrifugal pump impeller and grinder unit shall be attached to the common motor and pump shaft made of 416 stainless steel. The grinder unit shall be on the suction side of the pump impeller and discharge directly into the impeller inlet, leaving no exposed shaft to permit packing of ground solids. The grinder shall consist of two stages. The cutting action of the second stage shall be perpendicular to the plane of the first cut for better control of the particle size. The grinder shall be capable of grinding normal domestic sewage. Both stationary and rotating cutters shall be made of 440C stainless steel hardened to Rockwell 60C and ground to close tolerance.

E. The upper (axial) cutter and stationary cutter ring shall be reversible to provide new cutting edges. The stationary cutter ring shall be a slip fit into the suction opening of the volute and held in place by 300 series stainless steel screws and a retaining ring. The lower (radial) cutter shall macerate the solids against the I.D. of the cutter ring and extrude them through the slots of the cutter ring. The upper (axial) cutter shall cut off the extrusions, as they emerge from the slots of the cutter ring to eliminate any roping effect that may occur in single stage cutting action. The upper (axial) cutter shall fit over the hub of the impeller and the lower (radial) cutter shall be slip fit and rotate simultaneously with the rotation of the shaft and impeller. The grinding mechanism shall be locked to the shaft

F. The volute shall be gray cast iron, of single piece design with smooth fluid passages large enough at all points to pass any size solid, which can pass through the impeller. The pump discharge shall be furnished with 3" 125-lb ANSI flanges.

G. Major pump components shall be of Class 30 gray cast iron conforming to ASTM A48, with smooth surfaces devoid of blowholes and other irregularities. All nameplates, exposed nuts and bolts shall be of Grade 308 or 316 (A4) stainless steel. All surfaces coming into contact with sewage, other than stainless steel, shall be protected by an approved sewage resistant coating. Pump exterior shall be sprayed with PVC epoxy primer and an alkyd enamel finish resistant to sewage.

H. All mating surfaces where watertight sealing is required shall be machined and fitted with nitrile rubber O-rings. Fitting shall be such that sealing is accomplished by metal-to-metal

contact between machined surfaces, which will result in controlled compression of nitrile rubber O-rings without requirement of a specific torque limit. No secondary sealing compounds, rectangular gaskets, grease, or other devices shall be required to make a watertight seal.

2.02 SUBMERSIBLE MOTOR

A. Each submersible sewage pump shall be driven by a completely sealed electric submersible motor conforming to the requirements of paragraph 1.03. The motor nameplate horsepower rating shall not be exceeded by the brake horsepower requirements of the pump for the specified head and GPM conditions.

B. The submersible pump motor shall be designed for a Class 1 Groups C and D, Division I hazardous location as defined by the National Electric Code. The unit shall be listed with Underwriters Laboratories as Class 1, Groups C and D, Division I, explosion-proof, for installation in water or sewage.

C. The pump motor shall be squirrel cage, induction, shell type design, housed in either an oil-filled or air filled, watertight chamber, NEMA Design B Type of the size specified in Paragraph 1.03. The stator winding and stator leads shall be insulated with moisture resistant Class F insulation, which will resist a temperature of 155 C (311 F). The motor shall be designed for continuous duty, capable of sustaining a minimum of 10 starts per hour. Automatic reset, normally closed thermal overloads shall be installed in adjacent phases of the motor winding to provide the overheating protection.

D. The pump motor shaft shall be one-piece stainless steel. The pump shaft shall rotate on 2 permanently lubricated bearings with a minimum B10 rated bearing life of 40,000 hours.

E. Connection between the power cable conductors and stator leads shall be made without soldering. The cable entry water seal design shall preclude specific torque requirements to insure a watertight and submersible seal. All leads and cables are to be sealed and designed to prevent cable-wicking to or from the motor junction chamber. The junction chamber shall be sealed from the motor by O-ring or other approved method to isolate the motor interior from foreign material gaining access through the pump top.

F. The pump motor cable, installed, shall be suitable for submersible pump application with STWA approval and this shall be indicated by a code or legend permanently embossed on the cable. Cable sizing shall conform to NEC specifications for pump motors.

G. Each unit shall be provided with an adequately designed cooling system. Thermal radiators (cooling fins) integral to the stator housing shall be adequate to provide the cooling required by the motor. Water jacket or other cooling devices shall not be necessary for continuous pumping at sump liquid levels below mid-point of stator housing.

H. Each pump motor unit shall be provided with a double-faced or tandem mechanical rotating shaft seal system. The seal chamber shall be oil filled. Each seal shall be held in contact by its own spring contact. Each unit shall be provided with an oil chamber for the shaft sealing system. The oil chamber drain and inspection plug, with positive anti-leak seal, shall be easily accessible from the outside. Moisture sensing probes or micro switches shall be used to detect any influx of conductive liquid past the outer seal and provide ample warning of seal failure. Said probes or switches will activate a moisture alarm system but will not cause motors to shut down.

2.03 GUIDE RAILS AND LIFTING CHAINS

A. Each unit shall be fitted with a sufficient length of Grade 304 (A2) or 316 (A4) stainless steel lifting chain having adequate strength to permit raising and lowering the pump. The chain will extend from the lift ring to the top of the station at ground level with one (1) foot extra slack minimum.

B. Provide and install preapproved guide rail system, of the size indicated on the plans, or required by the manufacturer, for lowering and raising the submersible pump.

C. The trash baskets shall be fitted with stainless steel guide bars of the size and length required to permit easy lifting and lowering of the baskets for cleaning.

2.04 CONTROLS

A. The Contractor shall furnish and install one (1) NEMA 4X stainless-steel, weather-proof enclosure, UL 698 for 240 volts, 3 phase, 60 hertz, power supply. The control panel shall include the following:

1. Separae contractors and resettable thermal overload relays, along with individual pump circuit breakers. All pilot devices and circuit breakers shall be operable from the inner door on the front side of the control panel;

2. Hand-off-automatic pump operation selector switch overload relay to be pre-calibrated to match motor characteristics, and factory sealed to insure trip setting is tamperproof;

3. 120 volt control circuitry;

4. 24-volt control circuit transformer with disconnect circuit breaker and overload protection for liquid level sensors and pilot control circuits of auxiliary equipment;

5. A terminal board for connections of line, pump, and level sensor.

6. Condensation Heater: A 200 watt (minimum), 120 VAC heater shall be provided to protect the enclosure from the harmful effects of condensation corrosion and low temperatures. The heater shall be complete with an adjustable thermostat. Branch protection shall be provided.

B. Additional features shall include a running time meter and light (to be on when the pump is running), lightning arrestor, and indicating lights for low level shut-down, thermostatic overheating, and seal moisture detection. Enclosure shall be provided with a dead front with separate removable inside panel. A locking hasp shall be provided for the outside door. The panel shall be furnished with an audible alarm and a 120-volt, 100-watt alarm light with a red weatherproof protective globe mounted on the exterior of the panel. The alarm light shall be normally on and shall flash or shut off in alarm conditions. The alarm horn shall sound during alarm conditions and an alarm silence push button shall be provided on the outside of the enclosure.

C. All motor branch circuit breakers, motor starters and control relays shall be securely fastened to the removable back panel with screws and lock washers. Back panel shall be tapped to accept all mounting screws. Self-tapping screws shall not be used to mount any component.

D. A mechanical disconnect mechanism shall be installed on the circuit breaker to provide a means of disconnecting power to the pump motor with service entrance rating.

E. An open frame, across-the-line NEMA rated, magnetic motor starter, adequately sized, shall be furnished for the pump motor. Motor starter contacts shall be easily replaceable without removing the motor starter from its mounted position. The motor starters shall be as manufactured by ABB, General Electric, Square "D" or approved equivalent.

F. Loss of phase, phase reversal and low voltage shall be monitored by an adjustable voltage phase monitor. Time delays shall be included to prevent nuisance tripping caused by transients. The monitor shall be adjustable to allow for temporary low voltage on an auxiliary power source. The voltage lag time shall be adjusted for drops in voltage on initial startup up to 5 seconds while auxiliary power is used.

G. The control panel shall be equipped with high temperature shutdown for the motor and shall utilize the temperature switches embedded in the motor windings. In a high motor temperature condition, the switch shall open, de-energize the motor starter and stop the pump motor. The shut-down shall activate an indicator light on the control panel.

H. The control panel shall be equipped with a moisture detector control for the pump, which senses moisture in the motor housing. In a motor housing moisture condition, the switch shall open, de-energize the motor starter and stop the pump motor. The shut-down shall activate an indicator light on the control panel.

I. A lamp test button shall be provided on each control panel.

J. The control panel shall bear a serialized U.L. label certifying that the assembly is approved under "UL698-Enclosed Industrial Control Equipment".

K. Wet well level shall be monitored and controlled by 4 float switches or a Fogrod Liquid Level Control by Wastewater Level Inc. with intrinsically-safe barriers suitable for a Class 1, Division I environments. Each intrinsically safe barrier shall include an input closed LED with red LED's indicating alarm input closed and green LED's indicating pump called for float input closed and an amber LED to indicate stop float input closed. If a Fogrod is utilized, a high-level back-up float and timer shall be provided in the event there is a failure.

L. Form "C" output contacts shall be provided for high- and low-level alarm. Normally open contacts shall be provided for pump control. Red LED's shall be provided to indicate alarm on and green LED's shall be provided to indicate pump control output on. All output contacts shall be rated for 10 amps @ 120 VAC.

M. Under normal operating conditions the pumps shall cycle between the common stop float and the lead start float. If the level continues to rise, the lag start float will close and call for the lag pump to start. If the level continues to rise the high alarm level float will close, causing the external alarm light to flash, sounding the external alarm horn, and call for both pumps to start. The alarm horn and light will return to normal operating conditions when the level recedes below the alarm float. If the level recedes past the common stop float the low-level float shall open, cutout the pumps, cause the external alarm light to flash, and sound the external alarm horn. If a Fogrod is utilized, the single backup float with adjustable timer will operate the pump during failure. The pumps shall not restart until the level rises and closes the lead pump start float.

N. The Alarm Notification System shall be programmed into the OIT / PLC. The Alarm Notification System shall send notifications via email and text messaging. The PLC shall utilize a Cloud Based VPN device. If the site requires, the device shall be a cell-based

modem if no internet access is available. The system shall send a status email out every day with the previous days runtimes and starts recorded in it. The following alarm conditions are to be monitored by the Alarm Notification system:

Pump 1 Fail	Pump 1 Overtemp
Pump 2 Fail	Pump 2 Overtemp
High Wet Well Level	Pump 1 Seal Fail
Transducer Fail	Pump 2 Seal Fail
Float Backup	Phase Fail

O. In the instance that power is lost to the control panel, the Server will send an alarm notification saying that there was a communication loss with the Modem (VPN) and PLC.

2.05 LEVEL SENSOR

A. The level device shall work via conductivity.

B. The unit installed in the wetwell shall be manufactured out of PVC.

1. The unit, hung from its cable, shall be able to sustain an additional weight of 100 lbs for 10 seconds.

C. The wetwell unit will have 10 metal contacts exposed down its length.

D. The 10 metal contacts shall be super-austenitic stainless steel.

E. The cable shall be shielded with a braided shield to minimize electrical interference from pumps and motors. The cable length shall be 50 ft or 100 ft.

F. The manufacturer's warranty on the wetwell unit shall be 10 years.

G. The wetwell unit shall be supplied with a mounting bracket that includes a cleaning pad.

H. The electronic unit to be installed in the control panel shall be:

1. UL approved
2. DIN rail mounted
3. Powered from 10-30v D.C.

I. The electronic unit shall include LEDs to display:

1. Level
2. Fault conditions
3. Power status

J. The electronic unit shall include:

1. 10 relay contacts corresponding to each level in the wetwell, configurable as normally open (N/O) or normally closed (N/C)
2. 2 relay contacts corresponding to fault conditions, configurable as N/O or N/C
3. Isolated 4-20mA output for level with 1mA steps for each level point

K. The electronic unit shall include cable logic:

1. The unit will test every 10 seconds for:
   a. Open circuit condition

b. Short circuit condition between the electronic unit and the wetwell unit.

2. Either of these conditions shall activate a fault relay
3. Each of these conditions shall activate either a Cable Open-Circuit fault LED or a Cable Short-Circuit fault LED

L. The electronic unit shall include pump logic:

1. The highest level relay activated will also activate the relays below.
   a. This condition will activate a fault relay.
   b. This condition will activate a fault LED and cause the relevant level LED to flash slowly, thereby indicating the problem wetwell unit contact or wire.

M. The electronic unit shall include Cleaning Alert logic:

1. The logic shall detect multiple contacts appearing to go “wet” within a 5 second period.
   a. This condition shall activate a timer to prevent the affected level relays from turning on immediately.
   b. This 3-minute timer shall also prevent the analog signal from responding to the false levels for the duration of the timer.
   c. This condition shall latch a fault relay
   d. This condition shall latch a fault LED

N. The system shall meet Class I Div 2 without barriers, and Class I Div 1 with approved barriers

O. The manufacturer’s warranty on the electronic unit shall be 2 years, extendable to 5 years

2.06 LEVEL SENSOR ALTERNATIVE OPTION

A. The pressure transmitter level sensor shall have a range of 0 to 11.5 feet with a 4-20 mA output signal.

B. Sensor shall be 316 stainless steel with a chemical resistant polyurethane cable jacket.

C. Sensor shall be mounted in a PVC stilling tube mounted to the wall of the lift station.

D. Two liquid level sensors, with enough cable to reach the control panel, shall be supplied and installed. The first float shall be provided to signal the low level shutdown and to insure that the pumps do not operate dry for an extended period of time. The second float shall alarm a high level condition and call for the pumps to start.

E. All sensors shall have a mercury tube switch, which shall be sealed in a solid polyurethane float for corrosion and shock resistance. The support wire shall have a heavy neoprene jacket, and a weight shall be attached to the cord above the float to hold the switch in place in the wet well. The float switches shall hang in the wet well supported by the cord that is held to the underside of the access hatch.

F. A Grade 304 (A2) or 316 (A4) stainless steel chain attached to a poly coated boat anchor shall be furnished and installed and shall extend from the top of the wetwell to the base of the wetwell as shown on the plans. The float cables shall be attached to the chain to prevent "bouncing" and "tangling" of the floats and cables in the wetwell.

2.07 VALVES

A. A check valve for each pump shall be furnished and installed in the valve pit as shown on the plans to prevent backflow into the wetwell when only one pump is operating.

B. A gate valve for each pump with a hand wheel operator shall be furnished and installed in the valve pit as shown on the plans.

C. All valves shall be included in the unit bid price for the lift station. Refer to Section 33 31 12 – Wastewater Valves and Appurtenances, Part 2 and 3 for valve details.

D. Bolting: All fasteners shall be Grade 304 (A2) or Grade 316 (A4) stainless steel. Anti-Seize shall be applied to all threads prior to installation.

2.08 LIFT STATION PIPING

A. Refer to Section 33 31 00 - Sanitary Sewer Piping and Fittings, Part 2 and 3.

B. Uni-Flanges or other field bolted flanges will not be allowed.

2.09 WET WELL STRUCTURE

A. The interior sidewalls of the wet well shall be lined with a PVC liner that is integral with the concrete. The liner seams shall be welded in the field, upon completion of the installation, to insure total coverage of joints and areas damaged during assembly.

B. All lifting holes shall be sealed to prevent groundwater infiltration. Grouting of lifting holes shall be completed as detailed in Section 33 39 13.

C. Refer to plans.

2.10 PORTABLE HOIST

A. The Contractor shall furnish and install one portable manually operated cable winch with cable and accessories for removing pumps from the wetwell. The unit shall have a minimum lifting capacity of 150% of the pump and motor unit furnished.

B. The manually operated winch shall have an enclosed gear design with carbon steel gears and shaft; oil impregnated bearings, and two-way ratchet. The unit shall be furnished with a "V" groove ball bearing sheave. The cable shall be galvanized steel aircraft cable with sufficient strength for 150% of the weight of the pump and motor unit. The cable shall be fitted with a latched, forged eye end grab hook. The cable shall be of sufficient length to reach the floor of the lift station.

C. The mounting base shall be schedule 40 steel pipe or as shown on the plans. Mounting base shall be located to allow hoist to lower and remove trash basket assembly.

2.11 ACCESS HATCH

A. Access hatches shall be T-Style door design that is, at a minimum 30” x 54” pump opening and 24”x24” trash basket opening. This shall be sized to allow access to the pump for ease of removal.

B. Access doors shall have a minimum clear opening as shown on the plans. Access doorframe shall be provided with sliding nut rails to attach the accessories required.

C. Angle frame shall be 1/4" aluminum with strap anchors bolted to the exterior. Door leaf shall

be 1/4" aluminum diamond pattern plate with stainless steel hinges bolted to the underside and shall pivot on torsion bars for ease of operation. The door shall open to 90 degrees and lock automatically in that position. A grip handle shall be provided to raise and lower cover. Doors shall be built for a minimum live load of 150 pounds per square foot. Hardware shall be stainless steel or aluminum.

D. Provide doors with snap locks and removable handle.

E. Safety grates shall be provided beneath the hatch covers for fall through protection when the covers are open. The safety grates shall be reinforced to support a minimum live load of 300 psf with a maximum deflection of $1/150^{th}$ of the span. Each safety grate shall be provided with a permanent hinging system that will lock the grates in the 90-degree position once opened.

F. Provide an aluminum cable rack underneath the latch for pump and float switch cables. Equip with non-sparking upper guide rail support, float bracket, and flush locking mechanism.

2.12 STRAINER BASKET ASSEMBLY

A. Holding brackets and lower guide rails shall be stainless steel construction of size to adequately support strainer basket assembly and to allow easy removal strainer basket. Anchor bolts shall be Grade 304 (A2) or Grade 316 (A4) stainless steel. Anti-Seize shall be applied to all threads prior to installation.

B. Strainer basket shall be a stainless steel strainer basket, 303 stainless steel rod welded construction, with 2" X 2" - 3/16 inch mesh.

C. Guide Rails shall be schedule 40 stainless steel.

D. Lifting chain shall be stainless steel and shall be sized to lift the basket plus 30 lbs.

E. Strainer basket door and frame assembly shall be aluminum construction, shall be provided with locking mechanism and lock. All locks shall be provided with 2 keys. Keys shall work all locks provided under this contract.

2.13 SPARE PUMPS AND MOTORS

A. One spare pump and motor, complete with all hardware for installing into wetwell on rail system provided, shall be supplied. The spare pump and motor shall be identical to the one supplied for the lift station.

B. Provide the Owner with one (1) spare motor starter and overload relay.

2.14 FASTENERS

A. All fasteners in wetwell and/or valve pit shall be Grade 304 (A2) or 316 (A4) stainless steel. Anti-Seize shall be applied to all threads prior to installation.

PART 3 EXECUTION

3.01 INSTALLATION

A. Each pumping unit shall be leveled, plumbed, aligned, and set into position to fit connecting piping. Installation procedures shall be as recommended by the pump manufacturer, the

Hydraulic Institute Standards, and as required herein.

B. The rail base shall be mounted on the floor of the lift station wetwell with stainless steel anchor bolts and nuts. The base shall be aligned for installation of pumps and connecting piping. Special care shall be taken to maintain alignment of pumping unit components. No stresses shall be transmitted to the pump flanges. After final alignment and bolting, pump connections shall be tested for applied piping stresses by loosening the flange bolts. If any movement or opening of the joints is observed, piping shall be adjusted to proper fit.

C. Couplings shall be realigned after grouting. Shimming between machined surfaces will not be permitted.

3.02 INSPECTION, SUPERVISION, AND START-UP

A. Each pump supplier shall furnish a qualified process engineer for supervision of installation procedures and the system's start-up. He shall train the operating personnel in the operation and maintenance of the system. He shall also instruct the Owner's personnel in storage of the spare pumping unit.

B. Each pump supplier shall furnish a minimum of 6 hours operator training to the Owner's operators on the operation and maintenance of the pumps. After the system has been placed in operation, the supplier's representative shall make all final adjustments for the proper operation of the equipment.

PART 4 MEASUREMENT AND PAYMENT

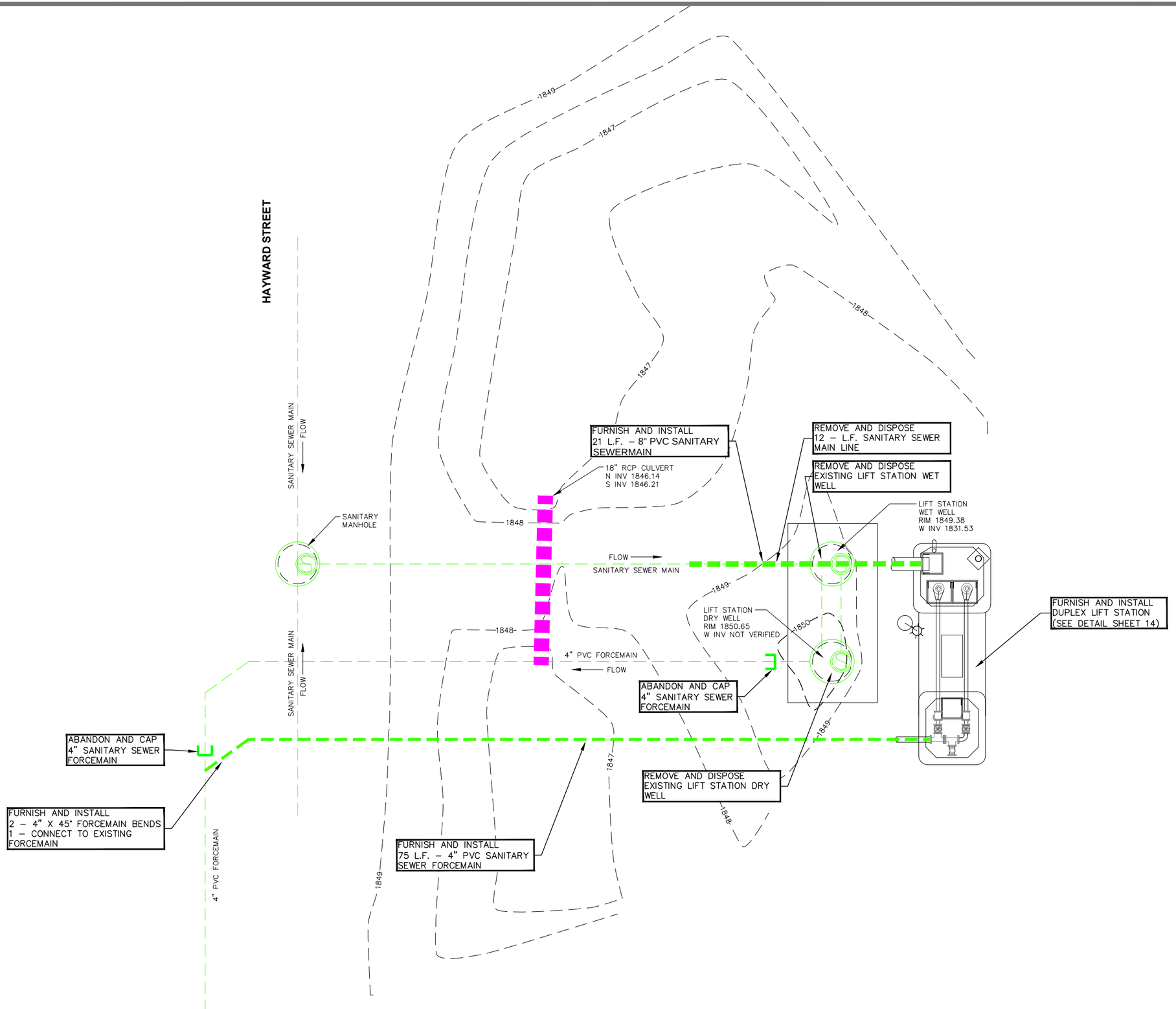
4.01 METHOD OF MEASUREMENT

A. No separate measurement shall be made for pumps, piping, valves, structures, electrical wiring and controls, and all other appurtenances necessary for a complete, operating unit as described herein and within the limits shown on the plans.

4.02 BASIS OF PAYMENT

A. Payment shall be made at the Contract unit price as indicated on the Bid Form. The lump sum price bid shall also include the cost for furnishing the spare parts as described in sections 2.13 and 2.14 of this specification.

* * * END OF SECTION * * *



N
W E
S

SCALE
11x17 1"=10'
24X36 1"=5'

Registered Professional Engineer
REG. No.
11907
BRANDON D. SWIER
SOUTH DAKOTA
8/22/2025

No.	Revision	Date
1	Update to Layout of Lift Station	5/15/26

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the law of the State of South Dakota Registration No.

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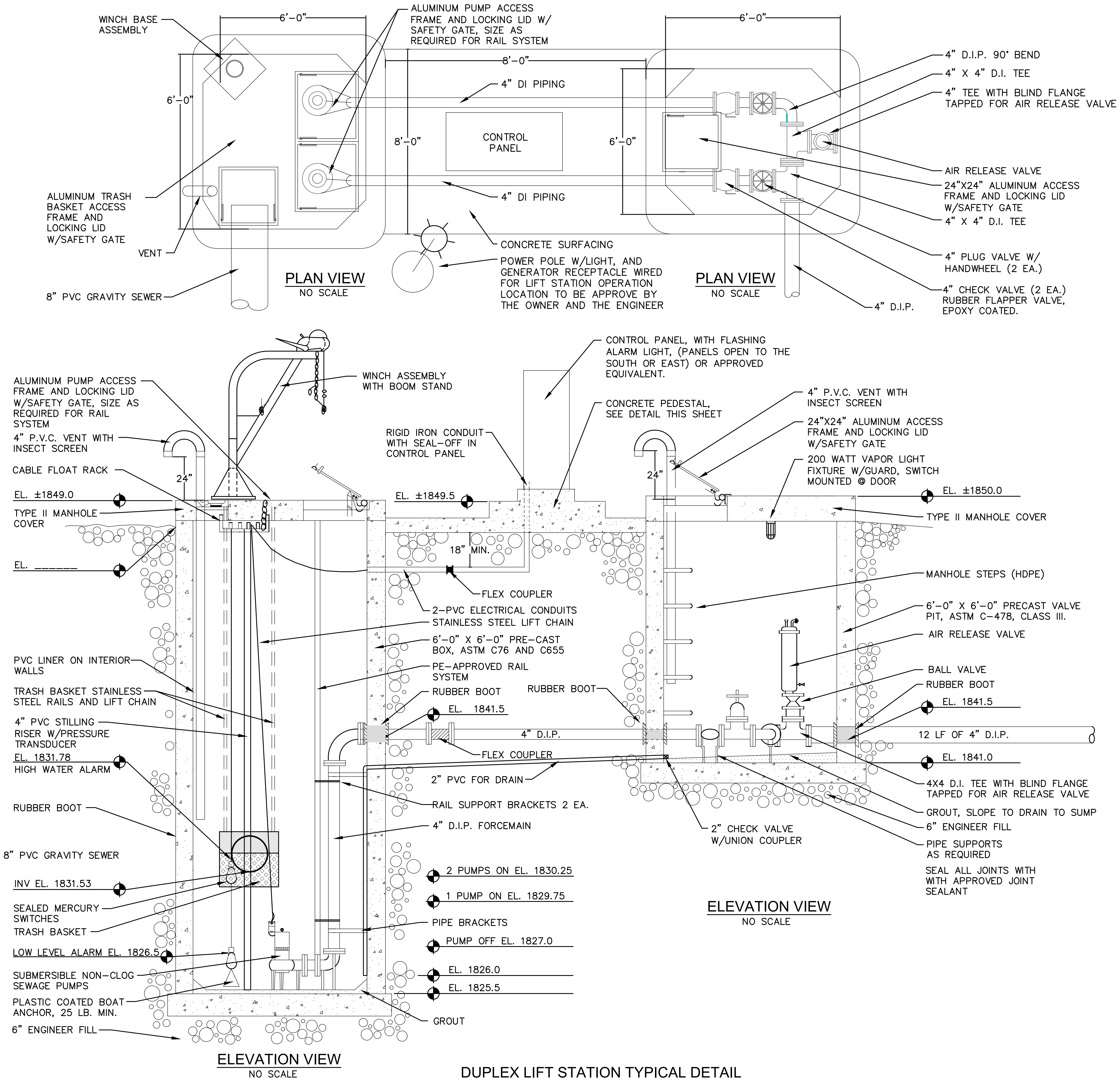
SPN Helms
CIVIL ENGINEERS & LAND SURVEYORS

LIFT STATION IMPROVEMENTS SHEET

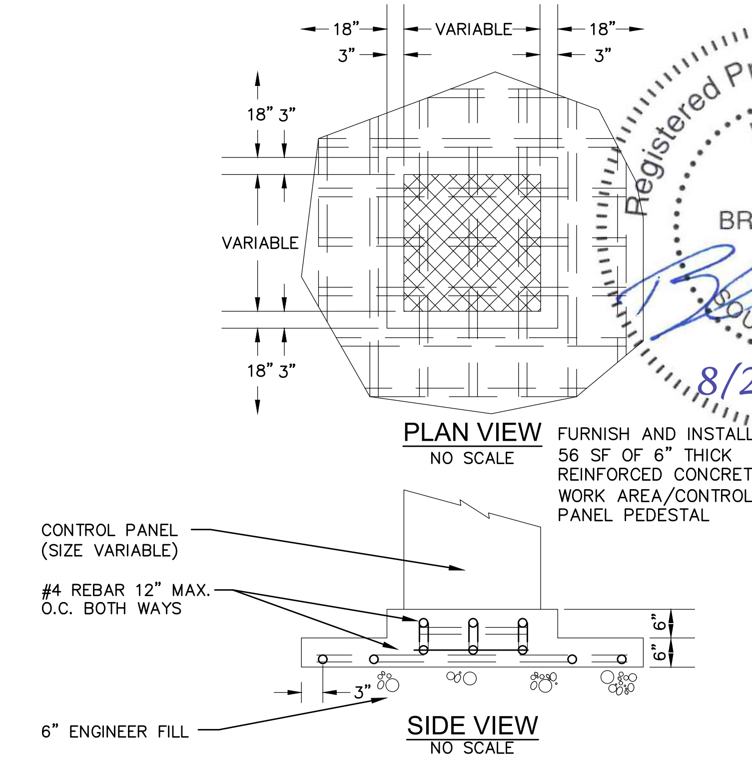
WASTE WATER COLLECTION AND TREATMENT SYSTEM IMPROVEMENTS
GARDEN CITY, SOUTH DAKOTA

Drawn By:	KMW
Chk' By:	BDS
Proj. No:	A-9512
Dwg. No:	9512-PNT
VP. No:	LIFT
Date:	IMPROVEMENTS 5/15/26



DUPLEX LIFT STATION TYPICAL DETAIL

NO SCALE



FURNISH AND INSTALL 56 SF OF 6" THICK REINFORCED CONCRETE WORK AREA/CONTROL PANEL PEDESTAL

CONTROL PEDESTAL BASE DETAIL

NOTES

NOTE: THE CONTRACTOR SHALL FURNISH & INSTALL ON THE JOB SITE AN APPROVED POLE, UTILITY LIGHT METER SOCKET, FUSED DISCONNECT SWITCH, NECESSARY CONDUIT FITTINGS, AND UNDERGROUND CABLE. THIS SHALL BE IN ONE UN-SPLICED LENGTH FROM THE OUTSIDE DISCONNECT SWITCH TO THE PUMP UNIT. THE CONTRACTOR SHALL FURNISH & INSTALL ALL WIRING & CONDUIT FROM DISCONNECT & METER TO THE CONTROL PANEL. THE COST FOR THESE ITEMS SHALL BE INCLUDED IN THE LUMP SUM BID FOR THE LIFT STATION. THE POWER SUPPLY TO THE POLE WILL BE THE RESPONSIBILITY OF THE OWNER. THE CONTRACTOR SHALL COORDINATE CONNECTION TO THE EXISTING SERVICE WITH THE POWER COMPANY, OWNER AND THE ENGINEER.

THE CONCRETE MANHOLES, PUMPS, RAILS PIPING, FITTINGS, VALVES, ACCESS HATCH, VENT, HOIST AND APPURTENANCES SHALL BE INCIDENTAL TO THE LUMP SUM PRICE FOR THE LIFT STATION. ALL BACK FILL MATERIAL AROUND THE LIFT STATION AND VALVE PIT SHALL BE SELECT MATERIAL. EXCAVATED FOR THE LIFT STATION. MATERIAL TO BE COMPACTED TO A MIN. 95% STANDARD PROCTOR DENSITY. ALL BRACKETS, SUPPORTS, NUTS, BOLTS. ETC. SHALL BE STAINLESS STEEL

THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE TEMPORARY PUMPING OF SEWAGE TO THE WASTEWATER LAGOON DURING THE CONSTRUCTION OF THE NEW LIFT STATION AND VALVE PIT. THE CONTRACTOR SHALL PROVIDE TO THE OWNER AND THE ENGINEER A WRITTEN PLAN ON HOW THEY WILL PROVIDE THIS SERVICE. THE CONTRACTOR SHALL BE RESPONSIBLE TO DO THIS WORK WITHOUT INTERRUPTION TO THE SEWER UTILITY AND INCUR AND INCONVENCE TO THE CITY OF RAYMOND

No.	Revisions	Date
1	Update to layout of Lift Station	5/15/26

Registered Professional Engineer
BRANDON ... SOUTH DAKOTA
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the law of the State of South Dakota.
Registration No.
8/22/2025

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LIFT STATION DETAIL SHEET

WASTE WATER COLLECTION AND TREATMENT SYSTEM IMPROVEMENTS
GARDEN CITY, SOUTH DAKOTA

Drawn By:	KMW
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Proj. No:	A-9512
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