

ADDENDUM NO. 1

Dated: April 23, 2024

FOR:

CITY OF BUFFALO WASTEWATER TREATMENT PLANT IMPROVEMENTS



GENERAL LAND OFFICE CONTRACT NUMBER 22-082-002-D197

BIDS DUE:

2:00PM
May 1, 2024

MRB PROJECT No. 0236.21006.000

PREPARED BY:

MRB Group
TBPE Firm No: F-10615
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T. Taylor 4.23.24

CITY OF BUFFALO
MRB Project No. 0236.21006.000

ADDENDUM No. 1
April 23, 2024

This Addendum forms a part of the Bidding and Contract Documents and modifies the original Bidding and Contract Documents dated March 2024 as noted below. Acknowledge receipt of this addendum in the space provided on the Bid Form. Failure to do so may subject the bidder to disqualification.

ATTENTION – The BID DATE is NOT CHANGED by this addendum. The BID DATE remains May 1, 2024 at 2:00 pm.

CHANGES TO SPECIFICATIONS

Section	Instruction	Description of Action Required
00 41 43.10	REPLACE	Replace with attached Itemized Proposal
01 23 00	ADD	ADD attached sludge dewatering box detail to Paragraph 1.3.D.1

CHANGES TO DRAWINGS

Drawing Number	Instruction	Description of Action Required
None.		

INFORMATION FOR BIDDERS (Q&A)

Question	SECTION 46 33 33 -POLYMER BLENDING AND FEED SYSTEM - CAN THE PROMINENT POLYMER PRO-MIX BE CONSIDERED AS AN EQUAL TO THE PB Equipment, Inc. AND Hinsilblon, Inc. EQUIPMENT?
Answer	No.
Question	I cannot find spec for Dewatering Box for Alternate #1. Please provide.
Answer	See attached details.
Question	We offer a quite similar pump design by Ebara (although several of our features we feel to be superior to Flygt) - ? Will you evaluate our design for possible 'approval' as allowed to bid for RAS Pumps ??
Answer	No.
Question	Please confirm the lining materials for the ductile iron pipe fittings. Specs indicate cement lining on DIP w/ only the force main and lift station piping being epoxy lined. Also, please confirm the epoxy lining material FBE or Ceramic Epoxy such as 401.
Answer	Refer to 33 05 33 – Ductile Iron Piping Paragraph 2.1.F
Question	Can the bid form be condensed to a single yard piping bid item? If not, can an explanation of pay items be provided for the items as they are currently listed? For instance, bid item #7 description includes "relocation of piping" for the new 5' manhole. This seems to reference the 10" force main re-route. Bid item #26 for 10" DIP yard piping has a unit quantity of 40LF and this appears to be the only 10" yard piping line on the project and the plans measure 47 LF.
Answer	GLO will not allow all yard piping to be a single bid item. Clarifications were made to the revised bid form.
Question	I do not see any documents for Section 26 Electrical Specifications. Will those be provided?
Answer	Specifications are on the drawings.

ATTACHMENTS

*Section 00 41 43.10 Itemized Proposal
Sludge Dewatering Bin Requirements*

END OF ADDENDUM No. 1

Item No.	Item Description	Qty.	Unit	Bid Unit Price (Numerals)	Bid Price (Numerals)
BASE BID ITEMS					
1	<p>Mobilization/Demobilization: The Contract Price shall be the cost for mobilization of Contractor's forces and demobilization. The cost includes portions or the entire Contractor's cost for setting up of Contractor's forces, acceptance by Engineer and Owner of schedule of payment values, and equipment and personnel movement. Payment for this item shall not exceed the original contract amount bid regardless of the fact that the Contractor may have, for any reason, shut down his work on the project, moved equipment away from the project and then back again, or for additional quantities or items of work added to the contract.</p>	1.00	EA	\$ _____	\$ _____
2	<p>Demolition of Treatment Unit #1: Provide all labor, materials, and equipment necessary to demolish and dispose of off-site Treatment Unit #1 as shown in the plans. Bid prices shall include but not be limited to: piping, valves, tankage, blowers (including building), electrical, foundations, stairways, walkways, sidewalks, railings, contents and all incidentals necessary and required to complete the work satisfactory to the Owner and Engineer. Cap all piping 5 feet from the tank foundation. Payments will be based on a percentage of completion of the Bid Item.</p>	1.00	EA	\$ _____	\$ _____
3	<p>Demolition of Treatment Unit #2: Provide all labor, materials, and equipment necessary to demolish and dispose of off-site Treatment Unit #2 as shown in the plans. Bid prices shall include but not be limited to: piping, valves, tankage, blowers (including building), electrical, foundations, stairways, walkways, walkway between treatment unit #1 and #2, railings, sidewalks, contents and all incidentals necessary and required to complete the work satisfactory to the Owner and Engineer. Cap all piping 5 feet from the tank foundation. Payments will be based on a percentage of completion of the Bid Item.</p>	1.00	EA	\$ _____	\$ _____

Item No.	Item Description	Qty.	Unit	Bid Unit Price (Numerals)	Bid Price (Numerals)
4	<p>Relocate Solids Dewatering Bin: Provide all labor, materials, and equipment necessary to relocate the solids dewatering bin as shown in the plans. Bid prices shall include but not be limited to: relocation of the existing dewatering bin to the new solids handling facility and all incidentals necessary and required to complete the work satisfactory to the Owner and Engineer. Payments will be based on a percentage of completion of the Bid Item.</p>	1.00	EA	\$ _____	\$ _____
5	<p>Floor Drain in Existing Solids Handling Building: Provide all labor, materials, and equipment necessary to plug the existing floor drain inside the existing Solids Handling Building as shown in the plans. Bid prices shall include but not be limited to: plugging the existing floor drain within the building, cap the end of the pipe and all incidentals necessary and required to complete the work satisfactory to the Owner and Engineer. Payments will be based on a percentage of completion of the Bid Item.</p>	1.00	EA	\$ _____	\$ _____
6	<p>Demolition of Equipment and Walls in Treatment Unit #3: Provide all labor, materials, and equipment necessary to demolish and dispose of off-site the equipment inside the existing Treatment Unit #3 and the indicated interior concrete walls as shown in the plans. Bid prices shall include but not be limited to: the removal of all equipment, piping, valves, stairs, walkways, railings, sidewalk, concrete walls, electric, and all incidentals necessary and required to complete the work satisfactory to the Owner and Engineer. Owner shall have first right of refusal on the equipment. Contractor shall dispose of equipment and concrete off-site. Cap all utilities 5 feet from the edge of the treatment unit foundation. Payments will be based on a percentage of completion of the Bid Item.</p>	1.00	EA	\$ _____	\$ _____

Item No.	Item Description	Qty.	Unit	Bid Unit Price (Numerals)	Bid Price (Numerals)
7	<p>Installation of New 5' Diameter Manhole: Provide all labor, materials, and equipment necessary to furnish and install a new 5' diameter manhole as shown in the plans. Bid prices shall include but not be limited to: the installation of the manhole, and piping connection to the new manhole and all incidentals necessary and required to complete the work satisfactory to the Owner and Engineer. Payments will be based on a percentage of completion of the Bid Item.</p>	1.00	EA	\$ _____ \$ _____	\$ _____
8	<p>Installation of New 5' Diameter Grinder Manhole: Provide all labor, materials, and equipment necessary to furnish and install a new 5' diameter manhole for the grinder as shown in the plans. Bid prices shall include but not be limited to: the installation of the manhole, installation of new grinder, piping and connection to the new manhole and all incidentals necessary and required to complete the work satisfactory to the Owner and Engineer. Payments will be based on a percentage of completion of the Bid Item.</p>	1.00	EA	\$ _____ \$ _____	\$ _____
9	<p>Construction of New Solids Handling Facility: Provide all labor, materials, and equipment necessary to construct a new solids handling facility and associated equipment as shown in the plans. Bid prices shall include but not be limited to: the construction of a solids handling building, concrete slab, sidewalks, polymer feed system, sludge handling pump, piping, valves, supports, utilities, a 15 amp, 480V/277V, 3 phase, 4 wire Pump Control panel, HVAC, installation of the existing sludge dewatering bin and all incidentals necessary and required to complete the work satisfactory to the Owner and Engineer. Payments will be based on a percentage of completion of the Bid Item.</p>	1.00	EA	\$ _____ \$ _____	\$ _____

Item No.	Item Description	Qty.	Unit	Bid Unit Price (Numerals)	Bid Price (Numerals)
10	<p>Construction of New Sludge Holding Basins #1 and #2: Furnish all labor, materials, and equipment necessary to construct new sludge holding basins and associated equipment as shown in the plans. Bid prices shall include but not be limited to: the installation of blower equipment (1 each), piping, valves, air piping, diffusers, supports, stairways, walkways, railings, concrete stair landings, light fixtures, finishing of cut concrete edges, and all incidentals necessary and required to complete the work satisfactory to the Owner and Engineer. Payments will be based on a percentage of completion of the Bid Item.</p>	1.00	EA	\$ _____	\$ _____
11	<p>Construction of New 0.32 MGD Activated Sludge Wastewater Treatment Plant: Provide all labor, materials, and equipment necessary to construct a new 0.32 MGD wastewater treatment plant as shown in the plans. Bid prices shall include but not be limited to: the construction of concrete rapid mix basin and aeration treatment tanks, 26' diameter clarifiers, chlorine contact basins, non-potable water basin, blowers (2 each), pumps, piping, valves, supports, gates, stairways, walkways, railings, concrete stair landings, blowers, air piping, diffusers, 2-15 amp 480V/277V, 3 phase 4 wire pump control panels with VFDs for WAS pumps and one 15 amp 480V/277V 3 phase 4 wire pump control panel with VFDs for scum pumps, lights, receptacles, instrumentation and all incidentals necessary and required to complete the work satisfactory to the Owner and Engineer. Payments will be based on a percentage of completion of the Bid Item.</p>	1.00	EA	\$ _____	\$ _____

Item No.	Item Description	Qty.	Unit	Bid Unit Price (Numerals)	Bid Price (Numerals)
12	<p>Construction of New Chlorine, Lab, MCC and Blower Building: Provide all labor, materials, and equipment necessary to construct a new Chlorine, Lab, MCC, Blower Building and associated equipment as shown in the plans. Bid prices shall include but not be limited to: the construction of building, installation of the equipment, electrical service, HV panel, secondary low voltage transformer, low voltage panel, blower control panel, VFDs, piping, valves, supports, utilities, HVAC and all incidentals necessary and required to complete the work satisfactory to the Owner and Engineer. Payments will be based on a percentage of completion of the Bid Item.</p>	1.00	EA	\$ _____ \$ _____	
13	<p>Installation of New Gravel Pavement: Provide all labor, materials, and equipment necessary to furnish and install a new gravel pavement as shown in the plans. Bid prices shall include but not be limited to: preparing the area to receive gravel pavement, the installation of gravel pavement throughout the site and all incidentals necessary and required to complete the work satisfactory to the Owner and Engineer. Payments will be based on the measured completion of the Square Yard Bid Item.</p>	1,850.00	SY	\$ _____ \$ _____	
14	<p>Installation of New Concrete Sidewalks: Provide all labor, materials, and equipment necessary to furnish and install a new concrete sidewalks and concrete stair landing pads as shown in the plans. Bid prices shall include but not be limited to: preparing the area for new sidewalks or landing pads, the installation of concrete sidewalks and concrete landing pads throughout the site and all incidentals necessary and required to complete the work satisfactory to the Owner and Engineer. Payments will be based on the measured completion of the Square Foot Bid Item.</p>	675.00	SF	\$ _____ \$ _____	

Item No.	Item Description	Qty.	Unit	Bid Unit Price (Numerals)	Bid Price (Numerals)
15	<p>Installation of 18" RCP Culvert : Provide all labor, materials, and equipment necessary to furnish and install a new 18" diameter reinforced concrete pipe (RCP) culvert as shown in the plans. Bid prices shall include but not be limited to: the installation of the culverts and all incidentals necessary and required to complete the work satisfactory to the Owner and Engineer. Payments will be based on the measured completion of the Linear Foot Bid Item.</p>	62.00	LF	\$ _____ \$ _____	\$ _____
16	<p>Installation of Concrete Headwalls: Provide all labor, materials, and equipment necessary to furnish and install a new precast concrete headwalls as shown in the plans. Bid prices shall include but not be limited to: the installation of the headwalls and all incidentals necessary and required to complete the work satisfactory to the Owner and Engineer. Payments will be based on the measured completion of the Bid Item.</p>	2.00	EA	\$ _____ \$ _____	\$ _____
17	<p>Modifications to Existing Parshall Flume: Provide all labor, materials, and equipment necessary to modify the existing Parshall flume and furnish and install new equipment as shown in the plans. Bid prices shall include but not be limited to: installation of new flow monitoring device, installation of dissolved oxygen sensor, electric and controls and all incidentals necessary and required to complete the work satisfactory to the Owner and Engineer. Payments will be based on a percentage of completion of the Bid Item.</p>	1.00	LF	\$ _____ \$ _____	\$ _____
18	<p>Furnish and Install Silt Fence: Provide all labor, materials, and equipment necessary to furnish and install silt fence at the direction of the Engineer. Bid prices shall include but not be limited to: the installation of silt fence and removal (upon completion of construction) and all incidentals necessary and required to complete the work satisfactory to the Owner and Engineer. Payments will be based on the measurement completion of the Linear Foot Bid Item.</p>	925.00	LF	\$ _____ \$ _____	\$ _____

Item No.	Item Description	Qty.	Unit	Bid Unit Price (Numerals)	Bid Price (Numerals)
19	<p>Furnish and Install Concrete Truck Washout Area: Provide all labor, materials, and equipment necessary to furnish and install a concrete truck washout area as shown in the plans. Bid prices shall include but not be limited to: the installation of the concrete truck washout area and removal of the area upon completion of work and all incidentals necessary and required to complete the work satisfactory to the Owner and Engineer. Payments will be based on the measured completion of the Bid Item.</p>	1.00	EA	\$ _____ \$ _____	\$ _____
20	<p>Furnish and Install Stabilized Construction Entrance: Provide all labor, materials, and equipment necessary to furnish, install and maintain a stabilized construction entrance as shown in the plans. Bid prices shall include but not be limited to: the installation of the stabilized construction entrance, maintenance of the entrance during construction, removal at the completion of construction, and all incidentals necessary and required to complete the work satisfactory to the Owner and Engineer. Payments will be based on the measured completion of the Bid Item.</p>	1.00	EA	\$ _____ \$ _____	\$ _____
21	<p>Installation of Yard Piping - 3/4" PVC Schedule 80: Provide all labor, materials, and equipment necessary to furnish and install 3/4" diameter PVC Schedule 80 yard piping as shown in the plans. Bid prices shall include but not be limited to: installation of the new pipe and fittings, and all incidentals necessary and required to complete the work satisfactory to the Owner and Engineer. Payments will be based on the measured completion of the Linear Foot Bid Item.</p>	110.00	LF	\$ _____ \$ _____	\$ _____

Item No.	Item Description	Qty.	Unit	Bid Unit Price (Numerals)	Bid Price (Numerals)
22	<p>Installation of Yard Piping - 1" PVC Schedule 80: Provide all labor, materials, and equipment necessary to furnish and install 1" diameter PVC Schedule 80 yard piping as shown in the plans. Bid prices shall include but not be limited to: connection to the existing piping, installation of the new pipe and fittings, and all incidentals necessary and required to complete the work satisfactory to the Owner and Engineer. Payments will be based on the measured completion of the Linear Foot Bid Item.</p>	295.00	LF	\$ _____	\$ _____
23	<p>Installation of Yard Piping - 4" PVC C900 DR25: Provide all labor, materials, and equipment necessary to furnish and install 4" diameter PVC C900 DR25 yard piping as shown in the plans. Bid prices shall include but not be limited to: installation of the new pipe and fittings, and all incidentals necessary and required to complete the work satisfactory to the Owner and Engineer. Payments will be based on the measured completion of the Linear Foot Bid Item.</p>	280.00	LF	\$ _____	\$ _____
24	<p>Installation of Yard Piping - 4" DIP: Provide all labor, materials, and equipment necessary to furnish and install 4" diameter ductile iron (DIP) yard piping as shown in the plans. Bid prices shall include but not be limited to: installation of the new pipe and fittings, and all incidentals necessary and required to complete the work satisfactory to the Owner and Engineer. Payments will be based on the measured completion of the Linear Foot Bid Item.</p>	345.00	LF	\$ _____	\$ _____
25	<p>Installation of Yard Piping - 8" DIP: Provide all labor, materials, and equipment necessary to furnish and install 8" diameter ductile iron yard piping (DIP) as shown in the plans. Bid prices shall include but not be limited to: installation of the new pipe and fittings, and all incidentals necessary and required to complete the work satisfactory to the Owner and Engineer. Payments will be based on the measured completion of the Linear Foot Bid Item.</p>	230.00	LF	\$ _____	\$ _____

Item No.	Item Description	Qty.	Unit	Bid Unit Price (Numerals)	Bid Price (Numerals)
26	<p>Installation of Yard Piping - 10" DIP: Provide all labor, materials, and equipment necessary to furnish and install 10" diameter ductile iron yard piping (DIP) as shown in the plans. Bid prices shall include but not be limited to: installation of the new pipe and fittings, and all incidentals necessary and required to complete the work satisfactory to the Owner and Engineer. Payments will be based on the measured completion of the Linear Foot Bid Item.</p>	50.00	LF	\$ _____	\$ _____
27	<p>Installation of Yard Piping - 12" DIP: Provide all labor, materials, and equipment necessary to furnish and install 12" diameter ductile iron yard piping (DIP) as shown in the plans. Bid prices shall include but not be limited to: installation of the new pipe and fittings, and all incidentals necessary and required to complete the work satisfactory to the Owner and Engineer. Payments will be based on the measured completion of the Linear Foot Bid Item.</p>	275.00	LF	\$ _____	\$ _____
28	<p>Lawn Restoration: Provide all labor, materials, and equipment necessary restore all disturbed areas of lawn on the site. Bid prices shall include but not be limited to: site gradings, the installation of topsoil, fertilizer and seed and all incidentals necessary and required to complete the work satisfactory to the Owner and Engineer. Payments will be based on a percentage of completion of the Bid Item.</p>	1.00	EA	\$ _____	\$ _____
29	<p>Site Grading: Provide all labor, materials, and equipment necessary to grade the site as shown on the plans. Bid prices shall include but not be limited to: grading excavated material on the site and all incidentals necessary and required to complete the work satisfactory to the Owner and Engineer. Payments will be based on a percentage of completion of the Bid Item.</p>	1.00	EA	\$ _____	\$ _____

Item No.	Item Description	Qty.	Unit	Bid Unit Price (Numerals)	Bid Price (Numerals)
30	<p>Equipment Testing and Start-Up: Provide all labor, materials, and equipment necessary to test equipment (existing or newly installed) and start operations of the new wastewater treatment plant as shown in the plans. Bid prices shall include but not be limited to: the testing and start up of all equipment necessary to operate the new wastewater treatment plant and all incidentals necessary and required to complete the work satisfactory to the Owner and Engineer. Payments will be based on a percentage of completion of the Bid Item.</p>	1.00	EA	\$ _____	\$ _____
31	<p>Project Closeout and O&M Manuals: Provide all labor, materials, and equipment necessary to complete the project closeout paperwork and provide O&M Manuals for all equipment provided. Bid prices shall include but not be limited to: the preparation of O&M Manuals and closeout documentation for the project and all incidentals necessary and required to complete the work satisfactory to the Owner and Engineer. Payments will be based on a percentage of completion of the Bid Item.</p>	1.00	EA	\$ _____	\$ _____
32	<p>Final Site Cleanup and Restoration: Provide all labor, materials, and equipment necessary to provide final site cleanup and restoration as shown in the. Bid prices shall include but not be limited to: the final site cleaning, including inside buildings, and site restoration and all incidentals necessary and required to complete the work satisfactory to the Owner and Engineer. Payments will be based on a percentage of completion of the Bid Item.</p>	1.00	EA	\$ _____	\$ _____

Item No.	Item Description	Qty.	Unit	Bid Unit Price (Numerals)	Bid Price (Numerals)
33	<p>Temporary Project Sign: Provide all labor, materials, and equipment necessary to furnish and install a temporary project sign as detailed in the specifications. Bid prices shall include but not be limited to: the installation of the project sign and all incidentals necessary and required to complete the work satisfactory to the Owner and Engineer. Payments will be based on a percentage of completion of the Bid Item.</p>	1.00	EA	\$ _____ \$ _____	
34	<p>Permanent Project Sign: Provide all labor, materials, and equipment necessary to furnish and install a permanent project sign as detailed in the specifications. Bid prices shall include but not be limited to: the provision of and installation of the project sign and all incidentals necessary and required to complete the work satisfactory to the Owner and Engineer. Payments will be based on a percentage of completion of the Bid Item.</p>	1.00	EA	\$ _____ \$ _____	
35	<p>Electric Utility Service: Provide all labor, materials and equipment necessary to furnish a new 800 amp, 480V/277V, 3 Phase, 4 Wire electrical service from the local electrical utility as shown on the plans, Bid price shall include, but not be limited to: coordination with electrical utility, raceway trenching, concrete equipment pads, and all incidentals necessary and required to complete the work satisfactory to the Owner. Payments will be based on a percentage of completion of the Bid Item.</p>	1.00	EA	\$ _____ \$ _____	
36	<p>Underground Electrical Trenches: Provide all labor, materials and equipment necessary to furnish underground electrical and control raceways as shown on the plans. Bid price shall include by not be limited to: trenching, new underground raceways, fittings, conductors, spacers and all incidentals necessary and required to complete the work satisfactory to the Owner and Engineer. Payments will be based on the measured completion of the Linear Foot Bid Item.</p>	700.00	LF	\$ _____ \$ _____	

Item No.	Item Description	Qty.	Unit	Bid Unit Price (Numerals)	Bid Price (Numerals)
37	<p>Installation of Chain-link Fence: Provide all labor, materials, and equipment necessary to furnish install a new 6-foot-high chain link fence with 3-strand barbed wire at the direction of the Engineer. Bid prices shall include but not be limited to: the installation of new chain-link fence, 3-strand barbed wire, fence posts and all incidentals necessary and required to complete the work satisfactory to the Owner and Engineer. Payments will be based on the measured completion of the Linear Foot Bid Item.</p>	500.00	LF	\$ _____ \$ _____	\$ _____
CONDITIONAL BID ITEMS (ALTERNATES)					
A-1	<p>New Sludge Dewatering Bin Provide all labor, materials, and equipment necessary to furnish and install a new sludge dewatering bin as shown in the plans. Bid prices shall include but not be limited to: the procurement, delivery and installation of a new sludge dewatering bin and all incidentals necessary as required to complete the work satisfactory to the Owner and Engineer. Payments will be based on a percentage of completion of the Bid Item.</p>	1.00	EA	\$ _____ \$ _____	\$ _____
A-2	<p>Construction of New Lift Station and Associated Valve Vault: Provide all labor, materials, and equipment necessary to furnish and install a triplex wastewater lift station and associated valve vault as shown in the plans. Bid prices shall include but not be limited to: the installation of new 10' diameter polymer concrete lift station, three 590 gallon per minute submersible wastewater pumps, a sewage grinder, valve vault, access hatches, piping, valves, supports, electrical equipment mounting rack complete with 50 amp, 480V/277V, 3 phase, 4 wire, Triplex Pump Control panel and all incidentals necessary and required to complete the work satisfactory to the Owner and Engineer. Payments will be based on a percentage of completion of the Bid Item.</p>	1.00	EA	\$ _____ \$ _____	\$ _____

Item No.	Item Description	Qty.	Unit		Bid Unit Price (Numerals)	Bid Price (Numerals)
A-3	<p>Construction of Office and Maintenance Building Provide all labor, materials, and equipment necessary to construct a new Office and Maintenance Building as shown in the plans. Bid prices shall include but not be limited to: the construction of building, installation of the equipment, electrical wiring, piping, valves, supports, HVAC, water (10 LF 1" PVC) and sewer (135 LF 4" PVC) service and all incidentals necessary and required to complete the work satisfactory to the Owner and Engineer. Payments will be based on a percentage of completion of the Bid Item.</p>	1.00	EA	\$	_____	\$ _____
A-4	<p>SCADA: Provide all labor, materials, and equipment necessary for providing SCADA system. This item shall include, but not be limited to, providing the labor, materials and equipment necessary to program the outputs from the wastewater operations into the City's SCADA system along with incidentals required for full compliance with the Contract Documents. The City's existing system is Pump2it!VTSCADA by Hahn Equipment. Payments will be based on a percentage of completion of the Bid Item.</p>	1.00	EA	\$	_____	\$ _____
A-5	<p>Blower #4: Provide all labor, materials, and equipment necessary to construct provide and install Blower #4 as shown in the plans. Bid prices shall include but not be limited to: installation of Blower #4 and control panel including connection to air piping and all incidentals necessary and required to complete the work satisfactory to the Owner and Engineer. Payments will be based on a percentage of completion of the Bid Item.</p>	1.00	EA	\$	_____	\$ _____

Item No.	Item Description	Qty.	Unit	Bid Unit Price (Numerals)	Bid Price (Numerals)
A-6	Installation of New Emergency Generator: Provide all labor, materials, and equipment necessary to furnish and install a new 450 KW diesel emergency generator with aluminum platform and automatic transfer switch and associated equipment as shown in the plans. Bid prices shall include but not be limited to: the installation of the generator, concrete slab, conduit, wiring and controls and all incidentals necessary and required to complete the work satisfactory to the Owner and Engineer. Payments will be based on a percentage of completion of the Bid Item.	1.00	EA	\$ _____ \$ _____	
Total of All Conditional Unit Price Items					\$ _____
Total of All Base Bid and Conditional Unit Price Items					\$ _____

BID SPECIFICATIONS

ROLL-OFF SLUDGE DEWATERING BIN

3.0 CONSTRUCTION AND MATERIAL REQUIREMENTS

Container Construction

- 3.1 Container Filter shall be a **Sludge Mate® Model SM-30-RO-S** as manufactured by Flo Trend, LLC of Houston, Texas OR Engineer approved equal.
- 3.2 Dimensions shall not exceed 23'-1" L x 8'-6" W x 7' H nor shall it weigh over 12,000 lb. Internal area shall yield a minimum of 27 cubic yards of sludge storage.
- 3.3 Container Filter shall be constructed of A-36 carbon steel plate with ¼" floor and 3/16" walls. The unit shall be rectangular in shape. Floor cross members are structural channels spaced on 16" centers.
- 3.4 Container Filter shall have two 3" threaded drainage ports on each lower side at opposing ends. Each port to have a 3" hose cam connection with cap and chain. The drainage system shall be constructed in such a way to allow the side walls and vertical center panel to drain into a common drain channel or cavity. Drainage can be either by gravity or by a pump assist.
- 3.5 Rails are constructed of 6" x 2" x 3/16" structural tubing with 36½" inside spacing.
- 3.6 The Container Filter shall be equipped with four (4) wheels, 8" diameter x 8" wide diagonally braced. Tracking wheels shall be 4" diameter x 6" wide.
- 3.7 Wall gussets are 3/16" Rectangular Tubing
- 3.8 Door sealing face will be totally watertight and have an EPDM gasket on the surface area. Door frame shall be made of 4" x 3" x 3/16" structural tubing and with three steel hinges located on the side. Door sealing shall have 1" ratchet chain binders, one on each side and one in the middle of the door. Hinges are constructed of ½" wall steel tubing and 1" diameter hot rolled bar pins with welded retainer washers.
- 3.9 Internal filter support system will be comprised of ¼" angles, cold formed channels and **removable filter support panels** with frames made from 1-1/2 No. 9 flat both sides A36 carbon steel expanded metal and reinforced with flat bars. The vertical center panels will be shelf supporting and made with ¼" structural angles and flat bars.
- 3.10 All removable filter panels shall have a ¼" x 2" wide neoprene gasket installed between the panel and framework. **Caulking or other sealant is not an acceptable gasket material.**
- 3.11 The Sludge Mate shall have a center panel filter spaced in such a way that the distance that water must travel to a filter surface is held to a minimum. The center panel will have filter media installed on both sides, thus providing the extra filter surface area necessary to dewater sludge.

- 3.12 Filter media shall be four pieces made from Flo Trend® Poly 2000. This material consists of a polyester blend, plain weave, 26.7 ounces per square yard, 600 x 800 micron opening, 26% open area, .047" thickness, 758 CFM @ ½" W.G. air permeability and tensile strength @ break will be 747 pounds per linear inch. **A commercial heat knife and hole-maker shall be used for cutting ends and locating holes** No substitutions or alternates will be accepted.
- 3.13 Filter media shall be installed on each long side wall, and both faces of the vertical center panel. The filter media shall be 57 1/2" minimum in vertical height on all faces. All filter panel supports, bars and media are bolted into place with **stainless steel fasteners consisting of studs, flat washers, and acorn nuts.**
- 3.14 Single point inlet connection at the front of the unit shall be a minimum of 3" NPT and equipped with female cam hose connector. Inlet port shall direct the incoming sludge at the angle diverter on center panel filter end.
- 3.15 Side to side 22 oz rolling tarp with tarp supports and hardware to fasten to container to be provided.

Material Specifications

- 3.16 Hot-rolled structural steel shapes and plates shall be ASTM A36.
- 3.17 Hot-rolled carbon steel sheet and strip structural quality shall conform to ASTM-A570 grades D & E.
- 3.18 Hot-formed welded and seamless steel tubing shall conform to ASTM A500 grade B.
- 3.19 Welded and seamless steel pipe shall conform to ASTM A53 grade B.
- 3.20 Stainless steel fasteners shall conform to AISI grade 304/305.
- 3.21 Welding electrodes are E70S used in gas metal arc process conforming to the specifications for mild steel electrodes for gas metal ARL welding AWS A518.

Paint

- 3.22 All exposed welds shall be cleaned of welding slag and rounded. All exposed sharp edges and corners shall be rounded.
- 3.23 All steel metal surfaces shall be sandblasted to near white metal and commercially coated with a two-part epoxy primer.
- 3.24 The external final surface shall receive two part industrial polyurethane epoxy at 5 mils .
- 3.25 Interior surfaces will have a final coating of epoxy mastic applied totaling 5 mils dry.
- 3.26 Filter support panels and tie-down bars shall be hot-dipped galvanized as a protective coating.

Miscellaneous

3.27 Unit shall be water tested for complete water tightness.

Manufacturers Services

3.27 The successful bidder shall furnish the services of a qualified field engineer to perform the following functions in the designated periods of time as detailed by the contract. These services are to be performed at the jobsite. A minimum of one (1) visit to the job site shall be required. The visit will include equipment installation check, start up of the equipment and initial operators training.