Washington County
MARYLAND

PURCHASING DEPARTMENT
DIVISION OF BUDGET & FINANCE

PUR-1485
ADDENDUM NO. 1
INVITATION TO BID

OAK RIDGE PUMP STATION UPGRADE

DATE: Friday, September 17, 2021 **BIDS DUE: Wednesday, September 29, 2021**
(Revised Due Date via Addendum No. 1) **2:00 P.M.(EDT/EST)**

To Bidders:

This Addendum is hereby made a part of the Contract Documents on which all bids will be based and is issued to correct and clarify the original documents.

Please acknowledge receipt of this Addendum at the appropriate space on the Proposal Form. This Addendum consists of eight (8) pages and three (3) attachments.

NOTE: All Bidders must enter the Washington County Administrative Complex through either the front door at the 100 West Washington Street entrance or through the rear entrance (w/blue canopy roof) which is handicap accessible and must use the elevator to access the Purchasing Department to submit their bid and/or to attend the Pre-Bid Conference and/or the Bid Opening. Alternate routes are controlled by a door access system. Washington County Government has announced new security protocols being implemented at the Washington County Administrative Complex at 100 West Washington Street, Hagerstown. The general public will be subject to wand search and will be required to remove any unauthorized items from the building prior to entry. Prohibited items include but are not limited to: Weapons of any type; Firearms, ammunition and explosive devices; Cutting instruments of any type - including knives, scissors, box cutters, work tools, knitting needles, or anything with a cutting edge, etc.; Pepper spray, mace or any other chemical defense sprays; and Illegal substances.

ITEM NO. 1: *Inquiry:* Please clarify the following: Specs do not have a section for the Comminutor Taskmaster Titan Model TM 14016 grinder, listing Horsepower, Motor type, controls, ect., please provide.

Response: See Attachment "A" to this Addendum.

ITEM NO. 2: *Inquiry:* We would like clarification on the following question: Referencing the Information to Bidders – Item 28: We cannot find the Buy American Certificate form that needs to be submitted with the bid. Will this be uploaded in an addendum?

Response: Refer to the bid document, Page 7, Information to Bidders, Item No. 28 Buy American; **DELETE** in its entirety.

ITEM NO. 3: *Inquiry:* Per Specification Division 11 – Equipment 11320 3.06 B – Will a Pentair Hydromatic S6LXP HPE series pump be considered and Equal Manufacturer based on the attached information?

Response: The Hydromatic pumps submitted by STH are considered to be an approved equal with the following comments:

1. Pump motors needs to be inverter rated for use with VFD's
2. The proposed impeller will need to be trimmed to obtain the peak. flow of 1,800 GPM with two (2) pumps in operation.

ITEM NO. 4: *Inquiry:* Ref drawing 6
There are two floor infill- It appears there is a 6" perimeter curb around them, however it is not called out- will a curb be required?

Detail A shows the new interior 8" cmu wall- there is a note to install a gypsum board ceiling – Is the new ceiling required in the room to the right of the wall or the entire building?

In plan view there is a note to create a new 6.0' double door opening on the south wall – should this note be pointing to the north exterior wall (where the existing restroom is)? Or are there two new 6.0' door openings required?

Response: Part 1 of Item No. 4 herein: No, the shaded areas on the plan sheet designate demolition. Therefore, the existing curbs located at the two areas shall be removed and ground flush to avoid a tripping hazard with the new infills.

Part 2 of Item No. 4 herein: The intent is to install new drywall (creating a double layer) just within the hazardous area.

Part 3 of Item No. 4 herein: The note should be pointing to the new 6' double door on the north exterior wall. Only one (1) new double door is to be added.

ITEM NO. 5: *Inquiry:* Ref Drawing 14:
There is a picture requiring us to remove and reinstall a new floor access hatch. Could you please provide the size of the new hatch we are to install? I am assuming you are looking for a Halliday Alum hatch. Quest for Mark

Response: The existing hatch is to be replaced with a similar hatch. Yes, a Halliday aluminum hatch is acceptable. The hatch size is 34.5" X 34.5".

ITEM NO. 6: *Inquiry:* Could you have your Engineers look at drawing S1 (6) and M6

(16), They seem to be missing the new wall and doors at the new restroom / storage room construction. The floor plans do not reflect the same layout. This may also need to be addressed on your electrical drawings as well.

Response: Contractor shall reference the floor plan layout identified on Sheet 16 (Drawing M-6) for the restroom and storage room construction. The Masonry Wall Detail (Detail A) on Sheet 6 shall be referenced for the wall construction.

ITEM NO. 7: *Inquiry:* Sheet G-4 shows a valve insertion being installed on the existing force main. Please provide a specification for the valve insertion along with the material of the existing line and pressure.

Response: Force main pressure should not exceed 60 PSIG, which is the shut-off head for the specified pumps. The material for the force main is unknown. We recommend that the contractor perform a test-pit to verify the pipe size and type of materials.

ITEM NO. 8: *Inquiry:* RE: Spec 11375 – Wet Well Aeration System
During the design phase in 2019, we had access to positive displacement blowers for the Envirep wet well aeration systems. Currently, we no longer have access to that equipment.
We are requesting that the positive displacement blower be changed to our standard regenerative blower.

Response: Regenerative blowers in addition to positive displacement blowers are acceptable.

ITEM NO. 9: *Inquiry:* I was wondering if you are going to publicly publish a plan holders list and a pre-bid attendees' list?

Response: Part 1 of Item No. 9 herein: See Attachment "B" to this Addendum.

Part 2 of Item No. 9 herein: See Attachment "C" to this Addendum.

ITEM NO. 10: *Inquiry:* Please confirm that a temporary office trailer is not required to be provided for the Engineer or Owner per 01500.

Response: A temporary office trailer is not required.

ITEM NO. 11: *Inquiry:* Please confirm that the project is unclassified and that Bid Item C1, titled, "Unclassified" is intended to cover additional excavation scope authorized by the Engineer.

Response: Part 1 of Item No. 11 herein: This project is unclassified.

*(**NOTE:** The wording of all "Inquiries" submitted are displayed exactly as received.)*

Part 2 of Item No. 11 herein: Bid Item C1, titled, "Unclassified" is intended to cover additional excavation scope authorized by the Engineer.

ITEM NO. 12: *Inquiry:* Please confirm funding is in place for the project.

Response: Funding is available for this project.

ITEM NO. 13: Refer to the bid document, Page GC-47, Approval of Material Sources, Section GC-6.02. Alternates must be submitted and approved in advance of the bid opening.

ITEM NO. 14: *Inquiry:* No spec was included for the grinder, it will be included in the addendum.

Response: See Item No. 1 in this addendum.

ITEM NO. 15: *Inquiry*: Section 03610-1.01A indicated there are joints and cracks in the sump pit that require pressure injection with a hydrophobic grout as indicated in the contract documents. However, no information is provided on the drawings to clarify this requirements.

Response: The sump pit is referring to the existing wet well, which was not available for inspection during design since the pump station could not be taken out of service. At this present time the lineal feet is not available.

ITEM NO. 16: *Inquiry*: We assume Section 07100 is not applicable to this project as no waterproofing and dampproofing is called out on the plans and specifications. Please confirm.

Response: Section 07100 was included in the project manual in case waterproofing and dampproofing becomes necessary during construction of the project.

ITEM NO. 17: *Inquiry:* We did not locate a painting schedule within Section 09900 detailing the scope of painting on the project. We assume the coating systems apply to all new work or damaged portions of existing work.

Response: Correct, coating systems will apply to all new and damaged work.

ITEM NO. 18: *Inquiry*: The Unit Heater Schedule on M7 conflicts with the unit heaters specified in Section 15200. We assume the Unit Heater Schedule on M7 is correct.

Response: Refer to the bid document, Unit heater schedule shown on

drawing M-7 is correct. **DELETE** in its entirety the unit heater specification in section 15200. Unit heater shall be model specified in heater schedule on drawing M-7 or approved equal.

ITEM NO. 19: *Inquiry*: The drawings and specifications do not note with duct is low, medium or high pressure but specification 15210 provides for various fabrication and testing requirements based on the pressure classification. Also, it is not clear whether the FRP duct fabrication is impacted by the pressure class designation. Please clarify.

Response: Part 1 of Item No. 19 herein; All primary main ductwork runs shall be treated and tested as medium pressure duct systems. All branch ductwork to end terminations shall be treated and tested as low-pressure duct systems.

Part 2 of Item No. 19 herein: Per section 15210/2.12/D of the project manual, all FRP ductwork shall be rated for 12" WC pressure and 12" WC vacuum minimum, and therefore treated and tested as high-pressure duct systems.

ITEM NO. 20: *Inquiry*: Will the contractor be responsible for start-up of the generator? If so, can you please provide the manufacture of owner supplied generator.

Response: Yes, the contractor is responsible for startup and testing. Manufacturer is Kohler. The owner will pay for the manufacture to provide the training and testing for the new generator.

ITEM NO. 21: *Inquiry*: Who is responsible for providing the fuel for the generator? If it is the contractor, can you please provide an approximate quantity of fuel needed?

Response: The owner will be responsible for the fuel.

ITEM NO. 22: *Inquiry*: Will Eaton be an acceptable manufacturer for Manual Starter Switches?

Response: Eaton is an acceptable manufacturer for the manual starter switches.

ITEM NO. 23: *Inquiry*: Please confirm the owner is providing the generator. Please confirm ATS is to be provided by Pump Control System Supplier.

Response: Part 1 of Item No. 23 herein: The owner is providing the emergency generator.

Part 2 of Item No. 23 herein: The ATS is being provided in the MCC, by the MCC manufacturer.

ITEM NO. 24: *Inquiry*: Please provide information for fixture type WC.

Response: Part 1 of Item No. 24 herein: Refer to the bid document, Drawings, Pages E-4; **CHANGE** reference made to type "WC" wall mounted lights to read type "WA".

Part 2 of Item No. 24 herein: Refer to the bid document, Drawing, Page E-6; **CHANGE** reference made to type "WB" to read type "WC".

Part 3 of Item No. 24 herein: Refer to the bid document, Drawing, Page E-6; **CHANGE** reference made to type "WA" to read type "WB

All light fixture models are located in specification section 16500.

ITEM NO. 25: *Inquiry*: Will the power company be providing the wire for the line side of the transformer?

Response: The contractor will be responsible for conduit and the conduit trench detail on drawing E-2. The power company will be responsible for conductors to the power company pad mounted transformer. From the transformer, the conductors and conduits are shown on drawing PCS-2.

ITEM NO. 26: *Inquiry*: Please provide size of generator feeder conduits and wire sizes.

Response: 500MCM and #3 ground in 4" PVC schedule 80 conduit through pull box in storage room.

ITEM NO. 27: *Inquiry*: It does not appear that waterproofing is required on the sewage holding tank or other structures. Please confirm.

Response: See Item No. 16. in this Addendum.

ITEM NO. 28: *Inquiry*: Requesting the sign-in sheet for the Oak Ridge Pump Station Upgrade.

Response: See Attachment "C" to this Addendum.

ITEM NO. 29: *Inquiry*: Thought you should know subject pump station upgrade is out for bid and engineer has the Muffin Monster being removed and replaced by

hydraulic drive Franklin Miller unit. Please advise if Washington County will approve us to bid on this project?

Response: Since the technical literature was not provided as required, the product is not pre-approved.

ITEM NO. 30: *Inquiry:* What flow rate do the by-pass pumps have to have.

Response: The by-pass pumps shall be capable of pumping the same rate as the designed pumps. The design flow rate is 1,800 gpm with two pumps operating and the third pump as a standby.

ITEM NO. 31: *Inquiry:* If a Contractor want to utilize alternative pumps, should they submit the pump information now or wait till after the bid opening?

Response: If a Contractor is considering utilizing an alternative pump, the vendor needs to submit the pump information to Purchasing Department to the attention of Brandi Naugle prior to the submission due date. The information will be reviewed, if the information is considered an approved equal, an addendum will be issued informing potential vendors of this exception.

ITEM NO. 32: *Inquiry:* IS the Contractor responsible for obtaining the building permit and paying the associated fees?

Response: Part 1 of Item No. 32 herein; The County will obtain the building permit.

Part 2 of Item No. 32 herein; The Contractor will be responsible to apply for the trade's permits, but the associated fees will be waived.

ITEM NO. 33: *Inquiry:* I would like to confirm if the deadline is still on September 22nd at 2:00 PM and if there's been an addendum issued for the project. I would also like to request a copy of the current plan holders list as well as the Pre bid conference attendance list for this project. And lastly I would like to know the estimate

Response: Part 1 of Item No. 33 herein; the deadline for submittals shall remain unchanged.

Part 2 of Item No. 33 herein; See attachment "B" to this Addendum.

Part 3 of Item No. 33 herein; See attachment "C" to this Addendum.

Part 4 of Item No. 33 herein: $1.1 million

ITEM NO. 34: *Inquiry:* Please provide the plan holders list for the above-mentioned project bidding on September 22nd.

Response: See attachment "B" to this Addendum.

ITEM NO. 35: *Inquiry:* I would like to request a planholders or bidders list, and to confirm that the bid date and time are unchanged.

Response: See attachment "B" to this Addendum.

ITEM NO. 36: *Inquiry:* I am asking if the bid date for the above project could be extended if it is already not via the upcoming addendum.

Response: The deadline for submittals shall remain unchanged.

ITEM NO. 37: *Inquiry:* I am requesting a prospective bidders list or a pre-bid meeting attendees list for the Oak Ridge Pump Station Upgrade, Project ID # 1006046171.

Response: See attachment "C" to this Addendum.

ITEM NO. 38: Refer to the bid document., Section 17010 Part 1.01 A2 – **ADD** the following pre-approved Pump Control System Supplier:

Micro-Tech Design, Inc
4312 Black Rock Road, Suite 1
Hampstead, MD 21074
410-239-2885
Contact: Josh Whitney

ITEM NO. 39: All references in the bid document made to the Bid Submission Deadline and Bid Opening Time shall be changed to read: **No later than 2:00 P.M. (EDT/EST), Wednesday, September 29, 2021.**

By Authority of:

Rick F. Curry, CPPO
Director of Purchasing

***(NOTE:** The wording of all "Inquiries" submitted are displayed exactly as received.)*

SECTION 11400

COMMINUTOR

PART 1 – GENERAL

1.01 SECTION INCLUDES

A. Comminutor (channel sewer grinder)

1.02 DESCRIPTION

A. Under this section, the contractor shall provide all labor, equipment, and materials necessary to furnish, install, test and place in operation a comminutor as shown in the plans and as specified herein.

B. Intended Purpose: The purpose of the comminutor is to cut and grind solids contained in raw unscreened sewer.

1.03 AREA RATING

A. Class 1, Division 1, Groups C & D

1.04 EQUIPMENT

A. Grinder: TASKMASTER® TM14016

B. Drive Assembly

C. Channel Frame: CF-3000

D. Controller: S260

1.05 MANUFACTURER

A. Manufactuer shall have installations of same design equipment in service for at least twenty (20) years to be considered. Supplier shall provide a list of names and dates of installations for verification by the Engineer or Owner's Representative.

B. Franklin Miller Inc. of Livingston, New Jersey.

1.06 RELATED SECTIONS

A. Section 01300 - Submittals

B. Section 15010 - General Building Mechanical Requirements

C. DIVISION 16 - Electrical

1.07 SUBMITTALS

A. Submit completely assembled weight for each comminutor model to be provided.

B. Submit the following electric motor data:

1. Horsepower Rating
2. Voltage
3. Number of Phases
4. Service Factor
5. RPM @ Full Load
6. Locked-Rotor kVA Code (letter)
7. LRA (Locked Rotor Amps)
8. Design Letter (A, B, C, or D)
9. FLA (Full Load Amps)
10. Efficiency (%)
11. Power Factor

C. Dimension drawings suitable for installation purposes.

D. Complete material specifications for the comminutor.

E. Complete "Manufacturer's Equipment Warranty & Certification" form included at the back of this section.

F. Submit in accordance with Section 01300.

1.08 QUALITY ASSURANCE

A. References:

1. This section contains references to the following documents. They are a part of this section as specified and modified. In case of conflict between the requirements of this section and those of the listed documents, the requirements of this section shall prevail.

Reference	Title
AISI	American Iron and Steel Institute
ASTM	American Society for Testing and Materials
HDPE	High Density Polyethylene
UHMWPE	Ultra High Molecular Weight Polyethylene
AGMA	American Gear Manufacturers Association
NEMA	National Electrical Manufacturer's Association Standards
NEC	National Electric Code
UL	Underwriter's Laboratory
IEC	International Electrotechnical Commission
SSPC	Steel Structures Paint Council

PART 2 – PRODUCTS

2.01 SEWAGE GRINDER

A. General

1. The TASKMASTER® TM14016 Titan twin-shaft grinder shall be designed to reduce solids normally found in sewage.

2. Each grinder shall consist of the following main components:

   a. Grinder assembly (Lower Works)

   b. Drive assembly

   c. Channel Frame

B. Grinder Housing

1. The main housing components shall be constructed of Ductile Iron.

2. The main housing components shall be independent of and shall not be subject to wear from seal or labyrinth seal system and shall not constitute a seal wear element.

3. The unit shall employ high flow side rails on both sides of the cutters incorporating a series of parallel slots on the sides of the unit housing to optimize the unit flow capability and reduce headloss.

C. Cutting Principal

1. The grinder shall employ one stack of CUTTER CARTRIDGES® that intermeshes with a second stack of Titan disks to handle the specified flow rate with an intrinsically open dual shaft design that allows liquid flow to pass through freely without the need for auxiliary screen diverters.

2. The shafts shall counter-rotate with the driven cutter peripheral linear speed operating at approximately two-thirds (2/3) that of the drive cutter peripheral linear speed.

3. The Taskmaster Titan twin-shaft grinder shall employ a "full-cut" design wherein cutters fill 90% of the cutting chamber. Units with passive style diverter screens or diverter disks shall not be accepted.

4. All cutters shall be constructed of 4140 Heat-treated Alloy Steel, through hardened to a minimum of Rc45-49 and precision ground for uniformity.

5. CUTTER CARTRIDGES®

   a. The drive shaft shall carry single piece CUTTER CARTRIDGES®.

      1. The cutters shall be a monolithic CUTTER CARTRIDGE® type comprising a plurality of 5/16" (8 mm) thick, 7-tooth cam shaped cutter elements.

2. The cartridges shall be designed to eliminate individual cutter and spacer disks for improved strength and transmission of power from the shaft.

3. Units using multitudes of individual cutters and spacers shall not be accepted.

4. The inside configuration of cutters shall be hexagonal to fit the shafts with a total clearance that shall not exceed 0.015 inch (0.381 mm) across the flats to assure positive drive and minimize wear. Units with keyed cutters shall not be accepted.

5. The spaces defined by the adjacent side surfaces of the cutting edges and outer surface of the connecting spacer areas shall be cylindrically ground for uniformity.

6. Each CUTTER CARTRIDGE® shall further have a total accumulated tolerance of plus or minus .0005" (0.127 mm) to eliminate shimming, cutter stack tolerance accumulation and misalignment.

6. Titan Disks

a. Each disk shall incorporate a multi-tooth cutting disk and spacer as one integrated element for high strength.

1. The Titan Disks shall have a minimum of 10" diameter with 14 cutting edges per disk.

2. The Titan Disks shall have a hexagonal bore.

D. Shafts

1. The shafts shall be made of AISI 4140 heat-treated hexagon steel with a nominal tensile strength rating of 180,000 PSI (1241.1 MPa) to incorporate high ductile strength.

2. Each shaft size shall be a minimum of 2-inch (51 mm) hexagon (across the flats).

E. Bearings and Seals

1. The bearings and seals shall be housed in replaceable cartridges that support and align the bearings and seals. The cartridge housings shall be constructed of hardened AISI 17-4 PH Stainless Steel for superior resistance to corrosive and abrasive contaminants.

2. The cutter shaft's radial and axial loads shall be borne by a sealed oversize deep-groove (Conrad type) ball bearing at each end. The bearings shall have a minimum rating of 11,000 lbs (49kN) (dynamic C_E).

3. Units without bearings on both ends shall not be accepted.

4. The bearings shall be protected by a combination of a replaceable and tortuous path device and end face mechanical seals.

5. Face materials shall be tungsten carbide vs. tungsten carbide and shall not require an external flush.

6. The seals shall employ elastomeric members operating as opposing disk springs when compressed and, at the same time, maintain a positive seal face pressure to ensure positive sealing. No metal springs shall be employed.

7. The contact-less labyrinth rings shall be supplied to further protect from coarse and fine granular contaminants.

8. Components subject to wear shall be designed as replaceable elements and shall not be a part of the ductile iron unit main housing.

9. O-rings shall be made of Buna-N elastomers.

F. Painting Specifications

1. All steel or iron structural components shall be prepared and painted in accordance with the following procedures:

   a. The surfaces shall be properly prepared as defined by (SSPC) Steel Structures Paint Council.

      1. The metal surfaces shall be blast cleaned to near-white in preparation for painting to substantially remove mill scale, rust, paint or foreign matter including oil, grease, dirt or oxides.

      2. The cleaned surfaces shall be primed the same day as cleaned.

   b. The parts shall be painted with 2 coats of Polyamide Epoxy.

      1. One (1) coat primer

      2. One (1) Top coat

   c. The dry film thickness shall be 3 to 5 mil per coat.

   d. Color shall be Franklin Miller Blue

   e. Finish shall be Satin

   f. All stainless-steel parts, if used, shall not be painted.

A. Hydraulic Drive

1. Motor

   a. The motor shall be: Hydraulic design, 7.5 HP (5.6 kW), 230/460 Volt, 3-phase, 60 Hz.

   b. The hydraulic motor shall be capable of operating satisfactorily under at least 50 ft (15.24 m) of water.

2. Power Pack

   a. The power pack consists of an oil reservoir with a positive displacement pump.

   b. The power pack shall include all necessary controls for operation including a pressure switch, safety relief valve, directional valves, and electrical control box.

   c. The pump shall deliver oil to the hydraulic motor thorough appropriate high-pressure hose with suitable connectors.

   d. Hydraulic System shall be designed for max 3000 PSI (20.68 MPa).

   e. At about 2850 PSI (19.65 MPa), the pressure switch shall be actuated to reverse the direction of rotation of the unit to clear tough materials that may stall the machine.

   f. Switching of the direction of rotation shall be accomplished through a directional valve system.

   g. If the pressure in the system shall rise to about 3000 PSI (20.68 MPa), the safety relief valve shall actuate, causing the hydraulic oil to bypass the hydraulic motor and go back to the reservoir.

G. Channel Frame

1. The CF-3000 channel frame shall support the unit and provide for convenient unit installation and removal.

   a. The frame shall be constructed of AISI 304 stainless steel and shall consist of a one-piece angle structure with integral flow diverters.

   b. The one-piece frame shall be secured by the means of anchor bolts.

   c. The unit shall slide vertically into a channel slot defined by stainless steel angles.

   d. The CF-3000 shall extend across the channel from wall to wall.

2. It shall not be necessary to bolt or otherwise affix the unit to the channel frame.

PART 3 - CONTROLLER

3.01 GENERAL

A. The controller shall completely sequence the operation of the equipment covered by the scope of supply.

B. The enclosure shall be rated NEMA 4X constructed of FRP and suitable for wall mounting. Hinges and latches shall be corrosion resistant. Enclosure shall house the control devices, relays, terminal blocks, and reversing motor components. A

provision shall be made within the enclosure for the connection of a grounding cable.

3.02 POWER INFEED

A. Terminal blocks only shall be provided for the primary feeder cables entering the controller enclosure.

B. A separate disconnect means with lockout provisions must be provided adjacent to the controller by others.

3.03 MOTOR STARTER

A. A reversing starter shall be provided for the motor indicated in the job specifications. The size of the starter shall be based on IEC requirements for the motor horsepower, rated 18A minimum. Motor starter shall be a full voltage reversing type with 120 VAC operating coils. Forward and reverse contactors shall have both mechanical and electric interlocks.

1. A motor protection relay shall be furnished as part of the starting equipment. The motor protector shall be adjustable so that the range selected includes the motor nameplate listed FLA (full load amps) rating and the service factor.

2. Repeated unsuccessful attempts to start the motor or a short circuit shall cause the motor protector to trip.

3. Tripping of the motor protector shall stop the motor and flash the trip light. Resetting the relay shall allow the alarm circuitry to be reset.

4. Output terminals shall be provided for connection of the motor leads exiting the enclosure.

3.04 CONTROL CIRCUIT

A. The following provisions apply to the control circuit:

1. The control circuit voltage shall nominally be 120V.

2. In addition, an adequately sized DC power supply shall be provided where DC is required.

3. The control transformer shall be sized to carry the control-circuit load plus a minimum of 20% spare capacity for future load growth.

4. The transformer primary and secondary side leads shall be fuse protected.

3.05 OPERATOR CONTROL

A. A three-position "HAND-OFF/RESET- AUTO" selector switch shall be provided for the Grinder. Its function is as follows:

1. Hand: When in this position, the equipment shall run under the control of the PLC until the switch is placed in Off/Reset.

2. Off/Reset: When in this position, the motor shall be prevented from starting (in both the forward and reverse directions); the remote-start signal shall be disabled; and the established Alarm Condition lockout circuitry reset.

3. Auto: In this position, when a remote Run signal is received, the motor shall cycle under the control of the PLC. The cycle shall be terminated if the run signal is interrupted, or the selector switch is placed in the Off/Reset position or if the equipment experiences an Alarm Condition.

B. Indicators: The following full voltage LED indicators shall be provided:

1. A white "POWER ON" pilot light shall be illuminated when power is available on the secondary side of the control transformer.

2. A green "RUNNING" indicating light shall be illuminated when the selector switch is in the Hand or Auto position with the equipment motor running in the forward or reverse direction; and during motor reversal pauses.

3. A red "TRIP" indicating light shall:

a. Be illuminated steadily when the selector switch is in the Hand or Auto position and the equipment has experienced an Alarm Condition stoppage.

1. It shall remain illuminated until the selector switch is placed in the Off/Reset position, resetting the Alarm Condition Lockout circuit.

b. Flash when the motor protection relay trips.

c. "Double flash" when the motor winding temperature causes the embedded thermostats to open.

4. A red "OIL LEVEL LOW" indicating light shall be illuminated when this condition is signaled by the temp/level switch on the hydraulic oil tank.

5. A red "OIL TEMP HIGH" indicating light shall be illuminated when this condition is signaled by the temp/level switch on the hydraulic oil tank.

3.06 REMOTE I/O's

A. The following inputs and outputs shall be supplied.

1. Run Status: A Form C dry-contact output shall close when the equipment motor is running (and during motor reversal pauses). It shall open when the equipment is stopped, trips on an Alarm Condition, or power to the controller is disconnected.

2. Trip Status: A Form C dry-contact output shall close when the equipment experiences an Alarm Condition stoppage. It shall open when the Alarm Condition lockout circuit has been reset.

a. The contact shall also close and remain closed (no pulsing) when the motor overload relay trips. It shall open when the relay is reset.

3. Motor Thermostats: Provisions shall be made for connection of motor thermostats to indicate Motor over temperature failures. Thermostats shall be connected to individual inputs on the PLC.

4. Remote E-stop: Provisions shall be made for connection of a maintained contact pushbutton (by others). Depressing the pushbutton shall disable the system. The terminals shall be jumpered (to be removed if installed).

5. Remote Start: Provision shall be made to accept a remote contact closure input (by others) that shall start the cycle when the selector switch is in the Auto position.

3.07 PLC

A. A programmable logic controller shall be provided within the controller.

1. PLC shall be manufactured by IDEC or Siemens.

2. A minimum of 72k programming memory shall be provided with a minimum of 80% of space available for future expansion.

3. PLC shall have an integrated Ethernet port capable of Modbus/TCP communications.

4. Terminal blocks shall be removable to allow for replacement of the PLC without requiring wire removal.

5. The PLC shall have a USB programming port and an SD slot to allow for uploading and downloading of a program without requirement of a PC.

3.08 INSTRUMENTATION

A. The following items shall be included as part of the controls of the subject equipment.

1. Current Sensor: One phase shall be monitored for a high current condition (for the Grinder) with a current sensor and current relay. If the phase current reaches an adjustable set point, the appropriate motor starter shall be de-energized and after a five second delay [user adjustable], an "Auto-Clear" sequence as described below shall be initiated. When starting the motor the control should delay looking for a signal from the current sensor for 1.5 seconds [user adjustable] to avoid tripping on motor inrush currents.

2. Panel mounted pilot lights shall be full voltage LED 120VAC and visible in sunlight.

a. To meet Sunlight Visible requirement, indicators shall have a minimum luminous intensity of 542 mcd and a minimum luminance of 1482cd/m^2.

3.09 OPERATION

A. The Grinder shall be controlled via a reversing motor starter that will normally operate in the forward direction with momentary reversing operation.

B. Normal Cycle: Placing the selector switch in the Hand or (when a remote run signal is received, if in the Auto position), shall energize the Reverse motor starter and the equipment rotates in that direction for two seconds (adjustable) before the reverse starter coil is de-energized.

1. After a delay of five seconds (adjustable) to allow the equipment to coast to a stop, the equipment shall run continuously in the Forward direction of rotation.

2. It shall continue to run in this direction until the motor starter is de-energized by interrupting the remote-run signal, or by turning the selector switch to the 'Off' position, or if the equipment experiences a jam condition.

C. Auto Clear Cycle: If the phase current reaches an adjustable set point (factory-set), the motor starter shall be de-energized.

1. After a delay of five (adjustable) seconds to allow the equipment to coast to a stop, the sequence described above for a normal starting cycle shall be initiated in an attempt to clear the Jam condition.

2. This automatic auto-clear cycle shall repeat a total of nine times.

3. If at any time the equipment runs for more than 30 seconds continuously in the forward direction during the nine attempts, the reversal counter shall be reset.

D. Alarm Condition: If after nine tries, however, the Jam condition still exists, the forward starter coil shall be de-energized, and after a two second delay, the reverse starter coil shall be energized for one second then de-energize. An Alarm Condition lockout circuit shall then be established and remain in the alarm state (even if power is lost) until it is reset.

1. The lockout circuit shall disable the automatic cycle, cause the Trip pilot light to be illuminated, the Trip Status contact to close, the Running pilot light to be extinguished, and the Run Status contact to open. Once the obstruction has been cleared, the Alarm Condition lockout circuit can be reset by moving the selector switch to Off/Reset position.

PART 4 – EXECUTION

4.01 FACTORY TEST

A. Each machine shall be tested to ensure satisfactory operation.

4.02 INSTALLATION

A. All components shall be installed in accordance with the supplier's installation instructions, and in compliance with all OSHA, local, state, and federal codes and regulations.

4.03 OPERATION AND MAINTENANCE MANUALS

A. Supplier shall provide (2) Operation and Maintenance Manuals. The manuals shall include equipment descriptions, operating instructions, drawings, troubleshooting

techniques, a recommended maintenance schedule, and the recommended lubricants.

B. Operation and Maintenance Manuals shall be provided in hardcover 3-ring binders with the serial number and equipment model information displayed on the front cover.

THIS PAGE LEFT BLANK

EQUIPMENT GUARANTEE CERTIFICATION FORM

Reference: Washington County Department of Water Quality
Oak Ridge Pump Station Upgrades

THE UNDERSIGNED HEREBY ATTESTS THAT HE/SHE HAS EXAMINED THE REFERENCED PROJECT DRAWINGS **M-4 & E-5** AND SPECIFICATIONS SECTION **11400** AND CERTIFIES THAT THE "**COMMINUTOR**" THAT HE/SHE PROPOSES TO FURNISH AND DELIVER MEETS OR EXCEEDS CONTRACT SPECIFICATIONS, IS SUITABLE FOR THE INTENDED PURPOSE STATED IN SPECIFICATIONS SECTION **1.02.B**, IS SUITABLE FOR INSTALLATION AS PRESENTED IN THE ABOVE PROJECT DRAWINGS AND SPECIFICATIONS, AND WILL PROVIDE SATISFACTORY PERFORMANCE AT THE DESIGN CRITERIA SPECIFIED. THIS GUARANTEE OF SUITABILITY FOR INTENDED PURPOSE IS IN ADDITION TO AND SHALL NOT BE IN LIEU OF ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED.

EQUIPMENT: **"Comminutor"**

MANUFACTURER: _____

Address: _____

_____

By: _____
(Typed Name and Title)

_____/s/_____ (SEAL)
(Signature) (Date)

Equipment Guarantee Certification must be signed by a Principal Person (President, Vice-President, etc.) of the equipment manufacturer. In the event the manufacturer is not the Supplier then a Principal Person of the Supplier must also sign this form.

SUPPLIER: _____

Address: _____

By: _____
(Typed Name and Title)

(SEAL)

_____/s/_____

END OF SECTION

PLAN HOLDERS LIST
PUR-1485
Oak Ridge Pump Station Upgrades

ATTACHMENT B

Company Name	Contact Name	Contact Title	Physical Address	P.O. Box	City	State	Zip	Phone	FAX	Email
Guardrails, etc., Inc.	Cynthia Taylor	Executive Asst.	4010 North Point Blvd.		Baltimore	MD	21222	(410) 477-8300	(410) 477-6859	cynthiataylor@guardrailsetc.com
Prime Vendor Inc.	Kim Jones	sad	4622 Cedar Avenue		Wilmington	NC	_82_4	(222) 222-2222		primevendor123@gmail.com
Rain for Rent	kimberly enders	Administrative Assistant	7677 Rolling Mill Rd.		Baltimore	MD	21224	(410) 282-3880		kenders@rainforrent.com
Envirep, Inc	Ginny Summers	Office Manager	3705 Trindle Road		Camp Hill	PA	17011	(717) 761-7884		gsummers@envirep.com
Sunbelt Pump Solutions	John Baugher	Sales Rep	6333 Macaw Court		Elkridge	AL	21075	(703) 789-3402		john.baugher@sunbeltrentals.com
Kelly Generator	Carl Belli	Engineer	50 Technology Drive		Coal Center	PA	15432	(412) 713-0377		cbelli@kge.com
EMH Environmental, Inc	Edward Halley	Manager	3060 Washington Road Ste 216		Glenwood	MD	21738	(410) 489-9630	(410) 489-9925	emh@emhenviro.com
REXEL USA, INC.	steve bravo	Controls engineering	120 Sparks Valley Rd Ste A		Sparks	MD	21152	(443) 386-8799		steve.bravo@rexelusa.com
mar-allen	kayla s	admin	290 millway road		Ephrata	PA	17522	(717) 466-3683		kstoltzfus@marallen.com
STH, Inc.	Carroll Holmes	Engineering Account Representative	97C Monocacy Blvd301		Frederick	MD	21701	(301) 682-3390		crh@sthinc.com
Antietam Electric	Jeremy Palmer	Estimator	16290 Spielman Road		Williamsport	MD	21795	(301) 223-1152		antietamec@myactv.net
Johnston Construction Company	Christine Rhodes	Corporate Secretary	4331 Fox Run Road		Dover	PA	17315	(717) 292-3606		bids@jcc-ri.com
C & D Municipal Sales, Inc.	Patrick Dorsey	General Manager	1701 Ridgely Steet		Baltimore	MD	21230	(410) 663-0900		sales@c-dmunicipal.com
Universal Painting Corp	Drew Aldrich	Estimator	3810 Drane Field Rd Unit 3		Lakeland	FL	33811	(863) 686-2320		dca@uipcl.com
The Bluebook Building and Construction Network	Jane Walters	Bid Update Specialist	800 East Main Street		Jefferson Valley	NY	10535	(845) 445-6744	(914) 243-4936	jwalters@mail.thebluebook.com
PIM Corporation	Dennis Torielli	Vice President	201 Circle Drive North Suite 105		Piscataway	NJ	08854	(732) 469-6224	(732) 469-8959	estimating@pimcorp.com
Micro-Tech Designs, Inc.	Josh Whitney	Estimator	4312 Black Rock Road Suite 1		Hamstead	MD	21074	(410) 239-2885		josh.whitney@microtechdesigns.com
Archer Western	Richard Vroom	Project Manager	13454 Sunrise Valley Drive Suite 440		Herndon	VA	20171	(301) 347-4680		rvroom@walshgroup.com
Callas Contractors, LLC	Tina Rhodes	Administrative Assistant	10549 Downsville Pike		Hagerstown	MD	21740	(301) 739-8400		trhodes@callascontractors.com

PLAN HOLDERS LIST
PUR-1485
Oak Ridge Pump Station Upgrades

ATTACHMENT B

C. William Hetzer, Inc.	Tony Kerns	President	9401 Sharpsburg Pike Post Office Box 506		Hagerstown	MD	21741	(130) 173-3730		estimating@cwilliamhetzer.com
Alvarez Contractors Inc.	Katie Alvarez	Secretary/Treasurer	137 N 3rd St	555	Oakland	MD	21550	(301) 662-5283		kalvarez2@comcast.net
Dodge Data & Analytics Co.	Dodge Dodge	Dodge	300 American Metro Blvd #185		Hamilton	NJ	08619	(877) 784-9556		support@construction.com
Pennsylvania Builders Exchange	Denise Hunt	Reporter	1813 North Franklin Street		Pittsburgh	PA	15233	(412) 922-4200	(412) 928-9406	denise@pbe.org
Long Fence Co	Mark Goldenthal	PM	2520 Urbana Pike		Ijamsville	MD	21754	(301) 662-1600		mgoldenthal@longfence.com
The Blue Book Building and Construction Network	Alex Gugliada	Documents Acquisition Coordinator	800 E. Main St.		Jefferson Valley	NY	10535	(800) 431-2584		agugliada@mail.thebluebook.com
Tri-Star Inc.	Allen Baumbach	President	300 Vine Street		Middletown	PA	17057	(717) 944-1234		allen@tri-star-inc.net
Allied Control Services, Inc.	Matthew Mamzic	Systems Engineer	611 Garfield Avenue	234	West Point	PA	19486	(215) 699-2855		mattmamzic@alliedcontrol.com
Contractors Association of West Virginia	Cheryl Clark	Office Administrator	2114 Kanawha Blvd E		Charleston	WV	25311	(304) 342-1166		cclark@cawv.org
Mar-Allen Concrete Inc.	Mike Olinger	Mr	490 Millway Rd		Ephrata	PA	17522	(717) 859-4921		molinger@marallen.com
MSI Controls, Inc.	Dawn Trout	Admin	105 Redland Court		Owings Mills	MD	21117	(410) 363-9690		dtrout@msi-controls.com
The Blue Book Building and Construction Network	Ridhendu Ghosh	Project Entry Specialist	800 E Main St		Jefferson Valley	NY	10535	(800) 431-2584		projectleads@mail.thebluebook.com
WASTEWATER SOLUTIONS LLC	Matias Roman	LEAD PROJECT MANAGER	2nd st		Boca Raton	FL		(646) 765-3799		matias@wws-llc.com
Geiger Pump and Equipment	Irene Pais	Environmental Sales Engineer	8924 Yellow Brick Road		Baltimore	MD	21237	(410) 682-2660		ipais@geigerinc.com
Construction Bid Source	Cindy Poliachik	Publishing Consultant	413 Brisbane Woods Way		Cary	NC	27518	(888) 786-9450		cpoliachik@constructionbidsource.com
Construction Journal	Pamela Exton	Oak Ridge Pum	400 SW 7th Stree		Stuart	FL	34994	(772) 781-2144	(772) 781-2145	bids@constructionjournal.com
ims	bid research	Oak Ridge Pump Station Upgrade	945 Hornblend St, Suite G		San Diego	CA	92109	(858) 490-8800		ims_bids@construction.com
CJIS GROUP	Mariah Isman	Reactive Operations Manager	124 Marriott Dr Sutie 201		Tallahassee	FL	32301	(850) 524-0366	(850) 926-5403	mariah@cjisgroup.com
IMS	Andy Be	Researcher	945 Hornblend		San Diego	CA	92109	(858) 490-8811		cawr@imsinfo.com
Conewago Enterprises, Inc.	Brandi Barna	Estimating Administrative Assistant	660 Edgegrove Road PO Box 407		Hanover	PA	17331	(717) 632-7722		bbarna@conewago.com

SmartProcure	Ron Bjornsson	Director of Data Engineering	700 W Hillsboro Blvd Suite 4-100		Deerfield Beach	FL	33441	(954) 420-9900		rbjornsson@smartprocure.us
ims	bid research	Oak Ridge Pump Station Upgrade	945 Hornblend St, Suite G		San Diego	Ca	92109	(858) 490-8800		ims_bids@construction.com
moonstar	mike sow	mr	westgrove	456	Coffee	AL	45256	(705) 820-9300	(705) 214-5935	kensicullen@gmail.com
Dodge Data & Analytics	jayalakshmil lakshmil	fff	4300 Beltway Place, Ste 150		Arlington	TX	76018	(141) 337-6703	(412) 588-4574	jayalakshmil@construction.com
Kiewit	Tina Chism	Office Manager	7250 Parkway Drive Ste 310		Hanover	MD	21076	(443) 733-1570		tina.chism@kiewit.com
PSI Pumping Solutions, Inc	Kip Estimator	Estimator	400 Main St		York Springs	PA	17372	(717) 259-5779		bids@pumpsol.com
HRI, Inc.	Lonnie Nolen	Chief Estimator	1750 West College Avenue		State College	PA	16801	(814) 278-6956		lnolen@hriinc.com
A. Morton Thomas and Associates, Inc.	Christian Chacon	Sr. Manager of Business & Proposal Development	800 King Farm Boulevard 4th Floor		Rockville	MD	20850	(301) 881-2545		cchacon@amtengineering.com

ATTACHMENT C

United States: +1 (646) 749-3122 Access Code: 769-142-853 Pre-Bid Date: Wednesday, August 30, 2021 @ 10 A.M.
Due Date: September 22, 2021 @ 2:00P.M.

Pre-Bid Conference / Teleconference
(PUR-1485) OAK RIDGE PUMP STATION UPGRADES

Representative's Name/E-mail *(Please Print)*	Company / County Dept.	Address City, State, Zip	Phone	Fax
Brandi Naugle E-mail bnaugle@washco-md.net	Washington County Purchasing Department	100 West Washington Street, #3200 Hagerstown, MD 21740	240-313-2330	240-313-2331
Name Tom Vance E-mail tom.vance@xylem.com	Xylem (Godwin Pumps)	5714 Celebrate Park Rd Cheverly, MD 20785	301-332-6457	—
Name Trey Johnston E-mail bids@jcc-ri.com	Johnston Construction Co	4331 Fox Run Rd. Dover, PA 17315	717-292-3606	
Name Tyler Ebert E-mail tebert@conewago.com	conewago	660 Edgegrove Rd Hanover PA 17331	717-632-7722	
Name ERIC ZEIDERS E-mail EZEIDERS@HRIINC.COM	HRI INC.	1750 WEST COLLEGE AVE STATE COLLEGE PA 16801	814-470-6807	
Name Colton Turner E-mail colton@ordersconstruction.com	Orders Construction Co.	501 6th Avenue Saint Albans, WV, 25177	304-722-4237	
Name Don Pyatt E-mail dpyatt@callascontractors.com	Callas Contractors	10549 Downsville Pike Hag. MD 21740	301-739-8400	
Name Michael Smith E-mail mjsmith@HRIINC.com	HRI INC	1750 W College State College, PA 16801	814-424-5604	
Name JEREMY PALMER E-mail antietamec@myactv.net	ANTIETAM ELECTRIC	16273 SPIELMAN RD WILLIAMSPORT MD 21795	301-223-1152	—
Name John Cole E-mail KK				

Pre-Bid Conference / Teleconference
(PUR-1485) OAK RIDGE PUMP STATION UPGRADES

Representative's Name/E-mail *(Please Print)*	Company / County Dept.	Address City, State, Zip	Phone	Fax
CARROLL HOLMES	STH, Inc	971 Monocacy Blvd Frederick, MD 21701	301-682-3390	301-682-3391
crh @ sthinc. com				
Name Mark Bradshaw	Washington County	16232 Elliott Parkway	240-313-2600	
E-mail MBradshaw@washco-md.com		Williamsport MD 21795		
Name Jamie Hasting	"	"	"	
E-mail Jhasting@washco-md.com				
Name Brandon Felton				
E-mail KKK				
Name				
E-mail				
Name				
E-mail				
Name				
E-mail				
Name				
E-mail				
Name				
E-mail				
Name				
E-mail				