COUNTY OF ROCKLAND
Department of General Services
Purchasing Division

Contract Award Notification

Title:	**Pump and Parts for Sludge Pump Swaby Lobeline MR160DM or Approved Equal**
Contract Period:	November 23, 2020 through November 22, 2021, Extended through November 22, 2022 with a one-year option, **Extended through November 22, 2023**
Original Date of Issue:	**November 23, 2020**
Date of Revision:	**July 14, 2022**
BID No:	**RFB-RC-2020-102**
Catalog:	**WASTEWATER**
Authorized Users:	County Agencies, All Political Subdivisions

Address Inquiries To:

Name: Michele Phillips
Title: Purchaser I
Phone: 845-364-2984
Fax: 845-364-3809
E-mail: phillipm@co.rockland.ny.us

Description

This contract is to provide a Swaby Lobeline pump.

Contract #	Vendor Number	Contractor & Address	Telephone No.
Bid 20-102	0000022980	Sherwood-Logan and Associates 2140 Renard Court Annapolis, MD 21401 Contact: James Konatsotis konatsotis.j@sherwoodlogan.com/ Kelly Plummer plummer.k@sherwoodlogan.com	410 841-6810 Ext. 1304

LINE NO.	DESCRIPTION	ITEM NUMBER	EST. QTY.	UNIT	UNIT PRICE	EXTENDED PRICE	VENDOR
1	**Swaby Lobeline™ Pump Size: MR160DM 6/600 Mfg. Sherwood Logan**	**72064000034**	**1**	**EA**	**$ 38,800.00**	**MR160DM**	**Sherwood-Logan & Associates**
2	**Percent Discount (%) off of Mfg. List Price for Replacement/Repair Parts for Swaby Lobeline Pump Size - MR160DM/600 - Bidders submitting response electronically shall enter in a whole number e.g. 10% = 0.10**	**72064000038**		**$500.00 Estimated Expenditures**	**5 % Vendor must enter % Discount Offered**		
3	**Days to Complete Delivery from Receipt of Purchase Order**				**60 DAYS**		
4	**Total Extended Price**					**$ 38,800.00**	
5	**Total Extended Price Written Out**	**Thirty Eight Thousand Eight Hundred and XX/00**					

COUNTY OF ROCKLAND - DGS-PURCHASING
BLDG. A., 6TH FLOOR, 50 SANATORIUM RD, POMONA, NY 10970
TELEPHONE: 845-364-3820 / TELEFAX: 845-364-3809

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PURCHASES BY OTHER

LOCAL GOVERNMENTS, SCHOOL DISTRICTS, AND NON PROFIT AGENCIES

As per the New York State General Municipal Law, all political subdivisions of New York State are allowed to make purchases through the resulting contract(s). As per Rockland County Procurement Policy, Non Profit Agencies approved to participate in New York State's Contract Extension Program are authorized to make purchases through the resulting contract(s).

1. The County of Rockland must make all contract award information available to other political subdivisions and non profit agencies through our website: **www.rcpurchasing.com**
2. Any other political subdivision or Rockland County non profit agency will issue purchase orders directly to vendors within the specified contract period referencing the County's contract and must be liable for any payments due on such purchase orders; and must accept sole responsibility for any payment due.
3. All purchases must be subject to audit and inspection by the other political subdivisions and Rockland County non profit agencies for which the purchase was made.
4. No officer, board or agency of a county, town, village, or school district must make any purchase through the County when bids have been received for such purchase by such officer, board or agency, unless such purchase may be made upon the same terms, conditions and specifications at a lower price through the County.
5. All Bidders must be on notice that as a condition of the award of a County contract, the successful bidder must accept the award of a similar contract with any other political subdivision in New York State and Rockland County non profit agencies authorized to use New York State's contracts, if called upon to do so. A listing of approved Rockland County non profit agencies is available on the Purchasing Division's website at www.rcpurchasing.com. The County, however, will not be responsible for any debts incurred by the participants pursuant to this or any other agreement.
6. Necessary deviations from the County's specifications in the award of a participant contract, whether such deviations relate to quantities, or delivery points must be resolved between the successful bidder and the other political subdivisions and Rockland County non profit agencies.

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GENERAL SPECIFICATIONS

1. **SCOPE**

1.1. The scope of this bid is to provide fixed pricing to the Rockland County Sewer District to furnish and deliver one (1) Rotary Lobe Positive Displacement Pump that will be suitable for exposure to thickened sludge. Pump must be a new Swaby Lobeline Pump, Size MR160DM 6/600 or approved equal, refurbished pumps are not acceptable. Pump must be ordered on an as needed basis. There is no guarantee of an order off of this contract.

1.2. Bidder is to supply a percent (%) discount off of Mfg. Price List for replacement/repair parts for Swaby Lobeline Pump Size MR160DM 6/600 – Bidder must include latest list price with their bid submission. List price must be valid for a one year term with updates authorized by the County of Rockland upon subsequent renewal/option terms.

2. **GENERAL**

2.1. Any pump ordered must be a replacement for a unit that has been removed and is no longer available for physical inspection or for sizing purposes. The steel skid where the replacement pump will be mounted is available for inspection. The pump will be coupled to the existing motor and gear assembly, currently mounted on the skid.

2.2. The replacement unit must have mechanical seals and have the same physical, hydraulic, and material composition to be compatible with the existing system. The pump must fit on the existing base and must align with the existing suction and discharge flange connections. The base and the piping are not being replaced and will not be modified as part of this project.

2.3. Bidders are encouraged to visit the site. Site visits can be arranged by calling Mr. Josue Thomas at (845) 365-6111. Vendors must perform as specified whether or not they visit the site.

3. **APPROVED EQUAL OR EQUIVALENT PRODUCTS**

3.1. If proposing an equivalent pump, bidder must submit an item by item listing and explanation of any differences between their product specifications and performance and the specified model. Product and service warranties must be included with bid. Failure to comply with this requirement may deem your bid non-responsive.

3.2. If bidders submit or bid for equivalent or approved equal products, they must submit manufacturer's product description and specifications. These specifications must include all functionality and parts of the specified model.

3.3. Bidders must list five entities currently using the proposed pump on the certification of experience page in the bid package. Proposed pump requiring adapters will not be acceptable.

3.4. Bidder must be able to demonstrate within one week after notice and guarantee in writing that the item bid is interconnectable with existing equipment.

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4. SPECIFIC REQUIREMENTS

4.1. STANDARDS

4.1.1. The pump must be manufactured in accordance with all codes standards, regulations and regulatory agency requirements including the partial listing below.

4.1.1.1. ANSI, American National Standard Institute.

4.1.1.2. AGMA, American Gear Manufacturer's Association.

4.1.1.3. Hydraulic Institute Standards.

4.1.1.4. ASTM, American Society for Testing and Materials.

4.1.1.5. ASTM A470, Vacuum-Treated Carbon and Alloy Steel Forgings for Turbines Rotors and shafts.

4.1.1.6. ASTM A536, Ductile Iron Castings.

4.2. PUMP MINIMUM FEATURES

4.2.1. Pump must be able to run dry indefinitely without damage.

4.2.2. Design to provide access to complete pump chamber without disconnecting pipework or disturbing seals or bearings.

4.2.3. Design to provide unhindered access to rotors to facilitate ease of maintenance and operator safety.

4.2.4. Design to provide unhindered access to rotors to facilitate ease of maintenance and operator safety.

4.2.5. Stainless steel nameplates giving the name of the manufacturer, the rated capacity, head, speed and all other pertinent data must be attached to the pump.

4.2.6. The nameplate ratings of the existing motor and reducing gear assemblies must not be exceeded, nor must the design service factor be reduced when the pump is operating at any point on its characteristic curve at maximum speed.

4.2.7. Pumps must be designed with an air space between the pumping head containing the sludge and the timing gearbox such that a leak in the shaft seal will allow sludge to run onto the floor and not into the timing gear box. An oil-filled seal chamber is not acceptable.

4.2.8. Pumps must be designed with replaceable radial wear plates with attachment hardware located on the exterior of the rotor case.

4.2.9. Pumps must be designed with rotors that connect to shafts with a splined and taper-locked arrangement.

4.2.10. Pumps must be designed with timing gears that connect to shafts with a self-centering taper-locked arrangement.

4.2.11. Pumps must be designed with a one piece ductile-iron rotor case with integral flanges.

4.2.12. Pumps must be designed without end bearings.

4.2.13. Only one (1) upper rotor and one (1) lower rotor must be provided on the pump.

4.2.14. The rotors must be of a tri-lobe design. In addition, the tips of each lobe must be parallel to the axis of rotation of the rotor. Helical or twisted rotors are not acceptable.

4.2.15. The rotors must be capable of being removed individually. Pumps which require the simultaneous removal of both rotors must not be acceptable.

4.3. PUMP CONSTRUCTION

4.3.1. *ROTOR CASE:*

4.3.1.1. The rotor case must be constructed of ductile iron incorporating 150 lb. ANSI flanged connections. The pump flanges must be integrally cast with the rotor case. Fabricated ports/flange connections are not acceptable. Multiple piece rotor cases will not be acceptable.

4.3.1.2. The internal rotor case surface must provide a smooth transition from circular port connections at the flanges, to a full width rectangular port at the rotor chamber, with a greater cross sectional area than at the flanged port connection, to allow for unimpeded passage of solids.

4.3.1.3. The front of the rotor case must incorporate an O-ring to form a reusable seal for the front cover. All fasteners must be stainless steel.

4.3.1.4. The rotor case bore must be fitted with removable restriction bushings enabling the removal of the shaft sleeve or mechanical seals and O-rings through the rotor case without requiring its removal.

4.3.1.5. The rotor case must have an open area between it and the gear case. This area must allow for physical, visual inspection and/or adjustment of the mechanical seal. The area must also isolate the gear case in the event of failure of the seal. Pumps without an open area between the rotor case and gear case or open areas less than a 3-1/2" air gap are not acceptable. The open area must also allow ample room for a packing gland arrangement in the event that the mechanical seals would need to be changed out for packing gland arrangements. The change over from mechanical seals to a packing gland or vice versa must be accomplished with no modifications to the pump.

4.3.2. *RADIAL WEARPLATE:*

4.3.2.1. The peripheral surface of the rotor case must be fitted with removable 40 Rockwell C AISI 4140 carbon steel radial wearplates to permit the restoration of the rotor case in the eventuality of worn surfaces without replacing the whole case. The radial wearplates must be retained through a series of stainless steel socket-head cap screws located at the exterior corners of the rotor case. The securing screws for the radial wearplates must not protrude into the wearing surface of the wear plates to prevent premature grooving of the rotors. Other wearplate securing methods such as those with the screw heads or exposed

to the rotors or with unprotected threads or with screw heads/attachment hardware protruding in the flow of the pumped liquids are not acceptable.

4.3.2.2. The wearplates and wearplate/rotor case machining, must be as designed and manufactured by the original pump manufacturing factory. Wearplates and rotor case machining not designed and manufactured by the original equipment manufacturer will not be acceptable.

4.3.3. *REAR WEARPLATE:*

4.3.3.1. The rear surfaces of the rotor case body must be lined with a pair of 55/60 Rockwell C AISI 8620 carbon steel wearplates. These wearplates must incorporate fiber-cutting grooves that prevent the accumulation of fibers behind the rotors. The wearplates must be secured with stainless steel hex screws through the rear of the rotor case. The rear wearplates must be retained from the rear in a tapped recessed boss. The securing screws for the rear wearplates must not protrude into the wearing surface of the wearplates to prevent premature grooving of the rotors. Other wearplate securing methods such as those with the screw heads touching or exposed to the rotors or with unprotected threads or with screw heads/attachment hardware protruding in the flow of the pumped liquids are not acceptable. Wearplates must have no mounting holes on the rotor mating side.

4.3.4. *FRONT COVER:*

4.3.4.1. The front cover must be reversible, hinged open and constructed from AISI 8620 carbon steel with a 55/60 Rockwell C ground finish (or contain wearplates) and fitted with an oil impregnated bronze pin and designed to allow for mounting on a stepped seat on the suction/discharge flange.

4.3.4.2. The reversible front cover must be rigidly supported by a front hinge constructed of cast ductile iron. The hinges must be secured on the front of the front cover, but away from the swept surface of the rotors (in order to prevent drilled/tapped mounting holes from accumulating fibers and interfering with the rotors). The hinge mounting holes must not intrude on the swept surface of the rotors.

4.3.5. *ROTORS:*

4.3.5.1. The pump must be fitted with a pair of intermeshing rotors with a minimum of three lobes, constructed with a heavy ductile iron core covered with an abrasion resistant Urethane with a Durometer hardness of 90. The elastomeric-coated rotors must be guaranteed against "bonding failure" otherwise known as delamination. The pump manufacturer must verify rotor material and hardness are suitable for the application.

4.3.5.2. The rotors must be end-mounted on the shafts, held precisely in radial position through an involute hub design. This must ensure the positive positioning of the rotors on the shaft as well as providing precise intermeshing clearances around the rotors. The rotors must be axially locked into position by a recessed self-centering taper locking assembly consisting of internal and external radial expanding rings. The complete locking assembly must be protected from the sludge by an O-ring seal at the rear of the rotor and an O-ring sealed

cover completely flush with the front face of the rotors. The sealing arrangement must shut out any water, grit or sludge from touching the shaft or the splines, thereby simplifying rotor replacement and preventing shaft failure. The replacement of the rotors must not necessitate the adjustment of the shaft timing gears.

4.3.5.3. The rotors must be able to be removed and/or replaced individually. Rotors that require removal and/or replacement as a set and/or with special pullers are not acceptable.

4.3.6. *SHAFTS:*

4.3.6.1. The shafts must be constructed of carbon steel in accordance with AISI 4340 HT (minimum) and be appropriately sized and heat treated to ensure a smooth operation and concentric positioning on the rotors.

4.3.6.2. The motor driven shaft must be the upper shaft as determined by the centerline height of the driver.

4.3.6.3. The shafts must be non-wetted at all points and sealed from the pumped liquid.

4.3.7. *SHAFTS SLEEVES:*

4.3.7.1. The shaft sleeves must be of the O-ring sealed, hooked typed design. An O-ring must be positioned at the back-end of the sleeve and the front-end must be compressed by the elastomeric surface of the rotor. The shaft sleeves must fully extend to the labyrinth bearing isolators, thereby leaving no exposed surface of the shaft. The shaft sleeve must be constructed from AISI 316 stainless steel. The shaft sleeves must be easily removable from the pump without the removal of the rotor case. Pumps that require removal of the rotor case are not acceptable.

4.3.8. *BEARINGS:*

4.3.8.1. Each shaft must be supported by pre-loaded heavy-duty duplex taper roller bearing of the anti-friction type. The positioning of the shafts relative to the gearcase must be such to permit removal of one shaft bearing without disturbing the bearings of the opposing shaft.

4.3.9. *BEARINGS ISOLATORS:*

4.3.9.1. Bearing must be completely protected from water or sludge by grease packed stainless steel labyrinth bearing isolators providing full protection with the pump either operating or idle. The gearcase wall adjacent to the rotor case must be sealed from water or sludge penetration by a pair of non-wearing stainless steel AISI 316, grease filled, and labyrinth-bearing isolators. Bearing isolators must consist of a statically mounted shaft retainer with double-groove on the outer face. A labyrinth ring must be mounted against the shaft and interlock with the grooves on the retainer. The retainer must be fitted with a grease connection nipple allowing grease input to act as a barrier within the labyrinth. The design must incorporate a double lip oil seal to contain the gearcase oil and provide additional bearing protection. Mechanical or magnetic seals are not acceptable in this area. The design must ensure that no water or dirt enters the gearcase adjacent to the seal housing area, permitting periodic hose down of any eventual sludge run-off in the gland area.

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4.3.10. *GEARCASE:*

4.3.10.1. The gearcase must be constructed of cast iron and incorporate a separate oil reservoir for the bearings of each shaft to ensure adequate lubrication at low running speed. Pumps that incorporate force feed oil lubrication system, or an external pump with controls, electrical hardware, switches and piping to lubricate the pump bearings, are not acceptable. Sealed expansion chambers must be used for vent caps preventing any air transfer to and from the gearbox. The gearcase cover must be fitted with a timing cover plate on the top shaft to permit adjustment of the rotor timing.

4.3.10.2. The cover plate removal must expose all of the cap screws on the torque-locking device. Pipe plugs, caps or drilled holes, which do not expose all of the cap screws, are not acceptable. (Pumps that require the removal of gearcase oil and the gearcase cover plate to adjust rotor timing are not acceptable).

4.3.11. *FRONT LOADING MECHANICAL SEALS:*

4.3.11.1. Each pump must be supplied with front-loading cartridge-type single mechanical seals. Tungsten Carbide to Tungsten carbide seal faces must be provided. The mechanical seals must be manufactured by a major mechanical seal manufacturing company such as John Crane, Chesterton, Durometalic or Environamics, etc. with their main emphasis and business being engaged in the manufacturing of mechanical seals. Each cartridge seal must be removable as a complete unit, consisting of a seal, shaft sleeve and seal housing. (Designs requiring the removal of the rotor case or the disturbance of both seals will not be acceptable). The seals must be able to be removed and replaced as a complete unit.

5. BRAND NAME

5.1. The use of a brand name is for the purpose of describing a standard of quality, performance and characteristics desired and is not intended to limit or restrict competition.

6. SUBMITAL

6.1. The bidder must submit his bid application with the following:

6.1.1. A copy of this specification section, with addendum updates included, and all referenced and applicable sections, with addendum updates included, with each paragraph check-marked to indicate specification compliance or marked to indicate requested deviations from specification requirements. If deviations from the specifications are indicated and, therefore requested by the vendor, the submittal must be accompanied by a detailed, written justification for each deviation.

6.1.2. Manufacturer's literature, illustrations, specifications and engineering data including dimensions, materials, size, weight, performance data and curves showing overall pump efficiencies, flow rate, head, brake horsepower speed and shut-off head.

6.1.3. Product and service warranties must be included in the bid package.

6.1.4. Complete details of mechanical seal, including water flow rate and pressure required.

6.1.5. A sample of typical Factory Test Report and quality assurance check list for this equipment.

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6.1.6. Bidder must list five entities currently using the same proposed equipment in thickened sludge application on the certification of experience page in the bid package.

6.1.7. Submit horsepower, RPM, gear ratio, and coupling requirements of the prime mover for the proposed pump. This information will be used to check if the existing motor and gear assembly is adequate.

6.1.8. Bidder must guarantee in writing that the item bid is interconnectable with existing equipment.

7. INVOICING

7.1. Awarded contractor must submit invoices for product delivery in accordance with the award and pricing submitted on the proposal pages.

7.1.1. All invoices must contain:

7.1.1.1. Purchase Order Number

7.1.1.2. Item description, Number and Manufacturer Part Number

7.1.1.3. Pricing for pump as awarded or for parts, Mfg. List Price as awarded- Documentation of Mfg. List price

7.1.3.1. For parts – discount as awarded

7.1.3.2. Net Price

7.2. All deliveries must be made to the Rockland County Sewer District # 1 between the hours of 8:00 AM and 2:30 PM, Monday through Friday excluding holidays.

8. AWARD

8.1. Bid must be awarded to the lowest responsible bidder. Quantities listed are estimates. Actual amounts ordered will depend on the requirements of the Rockland County Sewer District #1.

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PRODUCT SPECIFICATIONS

Bidder must submit an item-by-item explanation of any differences between their product specifications and performance and the listed bid specifications. Bidders are to note comply or write in alternative specification in column at right of specification pages.

DESCRIPTION	***BIDDER TO NOTE "COMPLY" OR LIST ALTERNATE SPECIFICATIONS***
ITEM	
One (1) Swaby Lobeline™ size MR160DM 6/600 or approved equal	
PUMPHEAD	
Manufactured in ductile iron, has ductile iron rotor case.	
BASE	
Horizontal in-Line-Base	
GEARBOX	
Cast iron, heavy duty tape roll on bearings	
PORTS	
Tungsten carbide coated 150 mm ports 6.00	
SHAFT SLEEVES	
Polyimide packing hard coated shaft sleeves	
ROTORS	
NFT lantern flush NBR elastomer urethane coated trilobe rotors 70 degree	
COVER	
Carbon steel hardened hinge front cover	
SHAFTS	
Carbon steel nitride shafts top drive, Manufactured from surface hardened carbon steel	
WEAR PLATES	
Fitted with hardened, replaceable wear plates	
INLET AND OUTLET CONNECTIONS	
6 inches	
DISPLACEMENT (US GAL./100 REV)	
93.26	
MAXIMUM DIFF. PRESS. (PSI)	
215	
MAXIMUM SPEED	
REV/MIN 500	
SLUDGE APPLICATIONS	
REV/MIN 350	
WEIGHT (BARE SHAFT PUMP)	
662	
MISCELLANEOUS	