BOROUGH OF SEASIDE PARK
OCEAN COUNTY, NEW JERSEY
OUR FILE: 1528-U-088

NJIB CLEAN WATER APPLICATION STORMWATER MAINTENANCE EQUIPMENT

ADDENDUM #1

JANUARY 2, 2026

The following additions to the Contract Documents will be written into any Contract for the "**NJIB CLEAN WATER APPLICATION STORMWATER MAINTENANCE EQUIPMENT**" project and must be taken into account in rendering a Proposal for the work.

The following items shall be revised as follows at this time:

1. Section 11200 "VACUUM COMBINATION STORM SEWER CLEANER" of the technical specifications has been revised. The revised Section 11200 "VACUUM COMBINATION STORM SEWER CLEANER" can be found attached to this addendum.
2. Section 11300 "THREE WHEEL STREET SWEEPER" of the technical specifications has been revised. The revised Section 11300 "THREE WHEEL STREET SWEEPER" can be found attached to this addendum.
3. Section 11400 "COMPACT STREET SWEEPER" of the technical specifications has been revised. The revised Section 11400 "COMPACT STREET SWEEPER" can be found attached to this addendum.

All specifications and bids shall be revised accordingly.

Please complete the "Acknowledgement of Receipt of Addenda" (Page P-3), attached hereto, for receipt of this Addendum letter and include with bid documents submission.

The Acknowledgement of receipt of addenda page is a mandatory required document and failure to submit shall be deemed a fatal defect.

Alan B. Dittenhofer, PE, PP, CME
NJ PE License #37672

SEAL

ACKNOWLEDGEMENT OF RECEIPT OF CHANGES TO BID DOCUMENTS FORM

Borough Of Seaside Park

NJIB CLEAN WATER APPLICATION
STORMWATER MAINTENANCE EQUIPMENT
(Name of Project)

OUR FILE: 1528-U-088
(Project or Bid Number)

Pursuant to N.J.S.A. 40A:11-23.1a., the undersigned bidder hereby acknowledges receipt of the following notices, revisions, or addenda to the bid advertisement, specifications or bid documents. By indicating date of receipt, bidder acknowledges the submitted bid takes into account the provisions of the notice, revision or addendum. Note that the local unit's record of notice to bidders shall take precedence and that failure to include provisions of changes in a bid proposal may be subject for rejection of the bid.

Local Unit Reference Number Or Title of Addendum/Revision		How Received (mail, fax, pick-up, etc.)	Date Received	Bidder's Initials
Notice, Revision or Addenda No.	Title or Description			
Addendum No. 1	January 2, 2025	E-Mail		

Acknowledged by bidder:

Name of Bidder: _____

By Authorized Representative:

Signature: _____

Printed Name and Title: _____

Date: _____

SECTION 11200

VACUUM COMBINATION STORM SEWER CLEANER

PART I – GENERAL

1.01 SUMMARY

This section includes the requirements for furnishing and delivering a Vactor 2100i 10 Yd. Debris Combo (or approved equal) Vacuum Combination Storm Sewer Cleaner with a water Capacity of 1000 gallons. The contractor shall perform all necessary operations and furnish all tools, equipment, labor, and materials in strict accordance with the Bid documents to complete the required work of this section. The unit shall be a new model. No discontinued models will be accepted. The equipment must be BABA (Build America, Buy America) compliant. Federal infrastructure investments obligated on or after May 14, 2022, must comply with the Build America, Buy America (BABA) Act, which requires the use of domestic iron and steel, manufactured products, and construction materials in covered infrastructure projects. Products that qualify for a de minimis waiver cumulatively may comprise no more than a total of five percent of the total project cost, otherwise a project specific SRF Waiver must be obtained.

Bids will be accepted for consideration on any make or model that is equal or superior to the equipment specified. Decisions of equivalency will be at the sole interpretation of the Purchasing and Public Services Director.

Bidder may be required to demonstrate a reasonable likeness of the equipment being offered within a reasonable time of request. The equipment demonstrated shall be equipped with all accessories and components required in this specification to ascertain equivalence.

1.02 RELATED SECTIONS

1. Appendix: The Appendix, located within the Technical Specifications, contains a Compliance Worksheet for Contractor's submitting "approved equal" equipment and accessories.

1.03 SERVICE AND SUPPORT

1. Location of warranty service center and amount of inventory shall be noted which may be verified and inspected.

1.04 SUBMITTALS

A. **A submittal shall be made with the Bid Package** for the proposed Vacuum Combination Storm Sewer Cleaner. The submittal shall consist of one concise document containing the following:

1. Cover page
2. An information section for the Vacuum Combination Storm Sewer Cleaner containing at least the following:
   a. Catalog Cut containing descriptive literature of model features
   b. Equipment Specifications (Water capacity, debris capacity, body color, tool storage, transmission intake pipe sizing, controls, rotatable boom inlet hose specifications, camera system specifications, dimensions, operating specifications, cab features, chassis specifications, length, height, and Engine specifications)
   c. Manufacturer warranty information (see 1.05)

d. Completed compliance worksheet found in the appendix for Contractor's seeking an approved equal vacuum truck and accessories.

1.04 DELIVERY, STORAGE, AND HANDLING

A. Schedule delivery of the vacuum truck and associated equipment as to avoid delays and disruptions to the Borough.

B. Schedule by coordinating with the Engineer's Office. Delivery will be at a location specified by the Borough in the Borough of Seaside Park.

C. Handle and transport equipment in compliance with the manufacturer's recommendation and in a manner satisfactory to the Engineer.

D. If damage, theft, or loss of materials occurs prior to documented completion of unit delivery, the Contractor shall be held responsible with no additional payment(s). Damage after documented completion of unit delivery, if by fault of the Contractor or related parties shall also be the Contractor's responsibility.

1.05 WARRANTY

A. Truck chassis shall be covered by a (1) One year base warranty 100% parts & labor. Base warranty shall include (1) Year towing coverage for up to 500.00 per occurrence. Diesel engine warranty shall be Five (5) years / 100,000 miles 100% parts and labor. Coverage shall include: turbocharger, injectors, engine electronics, and water pump as well as the Emission Aftertreatment System. Chassis/Frame warranty shall be five (5) years/ unlimited miles 100% parts and labor.

B. The manufacturer shall provide a warranty of a minimum of five (5) years for the water tank, five (5) years on debris tank, one (1) year Positive displacement blower, and two (2) years on the water pump. All other equipment including the truck/chassis shall be warranted a minimum of one (1) year from the date of receipt and acceptance of the equipment. The engine shall be covered by the warranty for five (5) years including after treatment and the transmission shall be covered by the warranty for three (3) years. The warranty shall cover both parts and labor to repair any defective parts or assemblies. Bidders must include warranty statement for both chassis and body. It is the responsibility of the manufacturer to deliver the entire unit to the Borough.

C. Copies of all warranty certificates shall be submitted with the bid to allow personnel to compare warranties. If no warranty certificates are submitted, the bid will be considered incomplete and will be rejected.

D. The bidding dealer shall be perform all warranty work and shall not sub-contract any warranty work.

PART 2 – PRODUCTS

2.01 MANUFACTUERED UNITS

The equipment shall be of the quality and rating as specified herein, and the manufactured units shall be as follows:

Vacuum Combination Storm Sewer

A. Truck Mounted Single Engine Combination Sewer Cleaner and chassis:

1. Vactor 2100i 10 Yd. Debris Combo
2. Approved Equal

2.02.1 COMPONENTS AND FEATURES

A. Engine:

1. The engine shall be designed, manufactured and warranted by the machine manufacturer to ensure maximum compatibility to the other major components.
2. The engine shall meet U.S. EPA Tier 4 Interim emission standards.
3. The rated net power shall be 370 hp.
4. The air cleaner shall feature a two stage filter and include an air filter service indicator to identify the need for filter cleaning or changing.
5. A 120-volt engine coolant heater and glow plugs shall be provided for improved starting in cold weather.
6. The engine shall have replaceable valve guides and valve seats for extended service life
7. There shall be an electric fuel priming pump to facilitate engine starting after servicing the fuel system.
8. The engine shall have fan guards to prevent access when the engine is running.
9. There shall be a quick release fuel filter / water separator for protection of the engine fuel system from contaminated fuel.
10. The starting and charging system shall be 12 volt.
11. Extended life coolant shall be used.
12. The engine compartments shall be lockable
13. A non-spill engine oil drain valve shall be provided

B. Transmission / Power Train (Allison 3000 RDS Automatic Transmission):

1. An inching function transmission neutralizer shall be provided
2. The machine design shall not allow starting the machine when the transmission shifter is engaged in forward or reverse.
3. The transmission shall neutralize when the parking brake is applied, making it impossible to drive through the parking brake.
4. Maximum torque to the wheels shall be possible without down shifting the transmission.

C. Automatic Chassis:

The machine shall be mounted on a 2026 Peterbilt model 548 or equal Automatic Chassis.

D. Subframe:

1. The equipment shall be of modular design consisting of vacuum system, water tanks system, debris body and drive system.
2. A sub frame shall be fabricated to the exact dimensions of the truck chassis for mounting of modular components.
3. All components of the module shall attach to the sub frame and not directly to the chassis.
4. Sub frame shall be designed to ASME standards for maximum applied loads, chassis frame movement and even distribution of weight to the chassis and suspension.

5. Sub frame shall be continuous and uninterrupted from back of cab to end of frame.

E. Debris Body:

1. The debris body is to be made of abrasion and corrosion resistant steel with 3/16" thickness, a minimum yield point of 50,000 PSI, and minimum tensile strength of 70,000 PSI. Mild steel of any thickness is deemed unacceptable.
2. The debris body is to be round for maximum strength and ease of dumping and is to have a minimum useable capacity of 10 cubic yards. **(Not to exceed 35 ft).**
3. The body is to have a full-sized rear door hydraulic open and close that is hinged at the top and that is equipped with a replaceable neoprene type seal to prevent leakage. A hydraulic door lock system is to be mounted on a flat rear door of the debris body. The system is to be activated at the same curbside location as the debris body dump control to protect the operator from discharged materials, The dump controls are enclosed in a locking control box.
4. Dual outward mounted rear door props shall be included as standard to prevent operator from entering door swing path when engaging rear door prop.
5. For optimal particulate separation, vacuum shall be drawn from separate ports in the top of the debris body.
6. Body shall be dumped by raising the body to a 50-degree angle utilizing a forward mounted, double acting hydraulic dump cylinder.
7. Dump controls, accessory controls, e-stop control shall be provided at a central curb side location directly behind the cab of the truck.
8. For stability and safety, dumping must be accomplished while the pivot point of the body remains fixed to the subframe.
9. Industrial style rear debris body door shall be flat and shall open and close hydraulically by cylinders mounted at the top of the body. Door shall open 50 degrees from the fully closed position. Door shall be unlocked, opened, closed, and locked by a failsafe hydraulically activated sequential positive locking system, cam operated by a single hydraulic cylinder, with all controls located behind truck cab, forward of the debris body, so operator is not subject to sewage when dumping.
10. The body is to be equipped with a load level indicator to show the load level and when the body is loaded to capacity. The rear door is to be equipped with two 6" body drain valve and drain hose that will allow the operator to drain off excess liquids while retaining solids for greater on-site productivity. (Located at 6:00 and 3:00 position with knife valve).
11. The debris body shall be equipped with a rear door drain to drain off excess liquids while retaining solids. No valve included
12. The debris body shall be equipped with a rear door drain at bottom dead center to drain off excess liquids with an internal screen to prevent large solids from passing. A manually operated 6" knife valve with cam-lock coupler and 25' of lay flat hose having camlock quick connects shall be included at this location.
13. Full Swinging Decant Screen: Available Only on Valve Installed At Lowest Point In Door shall be provided.
14. (4) Dual vertical (cyclone) centrifugal separators shall be installed in-line between the debris body and the air mover, (2) per side for each debris body discharge port. Each dual separator shall include large fallout chamber cleanout door.
15. For safety, a minimum of (5) vacuum tubes shall be stored on curbside storage racks to minimize operator exposure to traffic side of unit. Shall include quick release retainer handles (no bungees or clamps).
16. A curbside, folding 3-pipe rack shall be provided, constructed of steel tubing, spring assisted. Shall include quick release retainer handles (no bungees or clamps).

17. A street-side, folding 3-pipe rack shall be provided, constructed of steel tubing, spring assisted. Shall include quick release retainer handles (no bungees or clamps).
18. (2) Pipe Storage Racks on rear door with quick releases and (2) Pipe Storage Racks Curbside waist level.
19. A splash shield shall be mounted around the lower 60% of door opening to direct liquid and debris away from the chassis. Shield shall be minimum 10" deep bolted assembly with no openings.
20. A 6" valve, electrically activated, air operated valve debris body vacuum relief system shall be in the inlet of the vacuum system to allow the venting of the tank and relieve vacuum at the debris intake hose. (3) Kunkel relief valves shall be included.
21. A debris inlet deflector distributing load evenly in debris body shall be included.
22. A blocking valve shall be provided at the inlet of the debris body to prevent liquids from splashing up into the boom during transport.

F. Water Tanks:

1. Water tanks must have a minimum certified capacity of 1000 gallons of useable water. The water supply is to be contained in no more than (4) aluminum, cylindrical, baffled tanks. The tanks must carry a ten (5) year warranty against defects in workmanship and potential cracking or corrosion caused by water, sunlight, and variable weather conditions. Further, the water supply is to be located at or below the frame rail of the truck chassis and located from behind the cab to the end of the frame rail in such fashion to assure optimum center of gravity and weight distribution from front to rear of the truck. Under no circumstances is the height of the water tanks to extend above the midline height of the debris body, nor may the tanks extend beyond the width or length of the truck. The tanks are to be mounted on the rubber lined J-straps of the sub frame assembly. The tanks are to be interconnected with minimum 4" lines for ease of rapid filling and are to be filled from a single curb-side point equipped with an anti-siphon device, and 25' of fill hose with hydrant connectors, fittings, and a hydrant wrench.
2. The tanks must be removable from the chassis to allow for the equipment to continue to be operable if a tank must be repaired. The tanks are not to be integral with the raising of the debris body during dumping. A system or valving must be provided for each tank to allow for draining. A winter recirculation system shall be provided to prevent freezing of the water while in transit or idling at the site
3. The water tanks shall be manufactured from a non-corrosive material to prevent rust yet still provide for maximum strength.
4. The water tank material shall require no internal coating and shall be repairable if patching is required.
5. The water tanks shall be easily removed from the subframe to provide complete access to the truck chassis for maintenance purposes.
6. The water tanks shall be adequately vented and connected to provide complete filling.
7. The water tanks shall be totally separate from the debris tanks and provide no structural support.
8. The water tanks shall share no common walls with the debris tanks to prevent corrosion.
9. The water tanks shall come equipped with an anti-siphon device and 25' of hydrant fill hose and fittings.
10. The water tanks shall carry a 10-year warranty against corrosion or cracking.
11. All water tanks shall be fully baffled to form a maximum compartment storage of 150 gallons for each compartment. has determined that for the stability of the vehicle when turning and stopping and for safety of personnel that systems baffled at 150 maximum gallon compartments are preferred. Exceptions of requirement shall be explained in detail accompanied with detailed engineering drawings.

12. The water tank shall be located for the lowest possible center of gravity while providing 100% gravity flooded intakes to water pump.
13. Fresh water shall enter the tanks through an in line 6" air gap, all aluminum covered anti-siphon device.
14. Water level sight tubes of non-yellowing plastic shall be installed on both tanks.
15. The sides of these water tanks shall not extend more than 48" out from the centerline of the truck chassis.
16. A fresh water drain system shall be provided to completely drain the freshwater system from one location utilizing the 3" Y-strainer on the pump.
17. A minimum 6" connection between tanks shall be provided.
18. For stability safety, the water tanks shall not elevate with debris body during dump cycle.
19. An air purge system utilizing the chassis air system shall be provided to assist displacing of residual water out of the high- pressure water system. System shall utilize the truck chassis air compressor to fill a 13-gallon auxiliary air storage chamber with pressure gauge and pressure protection valves to isolate the holding tank from the chassis compressor. System shall be equipped with ball valve and all necessary high pressure piping hoses, couplings and controls.
20. A 3 in-line "Y" trap strainer shall be located at inlet of water tank fill airgap.
21. A 3 in-line "Y" trap stainless steel strainer shall be located between the water cells and water pump.
22. A 3" Gate Valve shall be provided at water pump.
23. Water tank must be a certified metered capacity of 1000 gallons. Certification shall be necessary upon delivery.
24. The water supply is to be contained in no more than (4) aluminum, cylindrical, baffled tanks. The tanks must carry a ten (5) year warranty against defects in workmanship and potential cracking or corrosion caused by water, sunlight, and variable weather conditions.
25. Liquid Float Level Indicator shall be provided.
26. High alloy stainless steel water barrel designed to improve water barrel life in application where harsh water is used.

G. Water Pump System:

1. For most efficient use of horsepower and reduced fuel consumption, high pressure ridder pump shall be hydraulically driven via (1) load sensing utility pump, (1) variable displacement pump and (1) fixed displacement pump.
2. For most efficient use of horsepower and reduced fuel consumption, high pressure rodder pump shall be hydraulically driven via (2) variable displacement pumps.
3. Hydraulic powered rodder pump via twin variable displacement hydraulic pumps and (1) fixed displacement utilizing (2) 10-bolt PTO's.
4. Hydraulic powered rodder pump via (2) variable displacement hydraulic pumps utilizing (2) 10-bolt PTO's.
5. High pressure water pump shall be rated capable of continuous delivery of 80 GPM at 2500 PSI (submit manufacturer support documentation).
6. High-pressure water (rodder) pump system shall allow front- mounted controls for operation of three modes: (1) Low flow range 0-22 GPM; (2) medium-flow range, 22-60 GPM / 2500 psi; and (3) High-flow range: 60 up to 100 GPM / 2500 psi.
7. High-pressure water (rodder) pump system shall be completely controlled through the range with use of the MultiFlow Control and throttle located on the control panel.
8. This hydraulic drive system shall allow variation of water pump speed independent of required vacuum drive speed within maximum drive engine speed of 1760 RPM.
9. Water pump speed to remain fully adjustable via an independent operator input regardless of the selected vacuum drive speed.

10. Variable flow systems routing water back-to-tank are not considered equal due to additional wear, horsepower and fuel consumption. Any deviation from this drive requirement should have full explanation of horsepower consumption.
11. Water (rodder) pump shall include smooth and pulsation operation mode feature without altering pump flow.
12. When required to assist nozzle breaking through obstructions, water pump "pulsation mode" shall provide a forward-acting nozzle surge. Pulsation surge wave shall allow nozzle to punch forward 2" to 18" depending on flow dynamics and length of hose in sewer pipe.
13. Explanation of forward-acting pulsation method shall be submitted with bid.
14. Explanation of forward-acting pulsation method shall be submitted with bid. Systems that require the use of air induction into the water pump shall not be accepted.
15. Water pump location shall provide a flooded gravity suction inlet to eliminate potential cavitations damage.
16. An oil to water heat exchanger will be provided in the water system to cool all hydraulic fluids on the unit. State horsepower requirement to operate hydraulics at full speed:
17. The water pump shall provide precise 0-80 GPM controlled flow at variable pressure up to 2500 PSI.
18. An extreme cold weather recirculation system - minimum 25 GPM via transmission PTO at chassis engine idle speed.
19. A hydro-pneumatic nitrogen charged accumulator system shall be provided with all control valves, piping and hoses for either continuous flow or jackhammer rodding. Accumulator shall be a 2.5 gallon capacity and 1400 to 2500 PSI pressure rating.
20. A hydro-pneumatic nitrogen charged accumulator system shall be provided with all control valves, piping and hoses for either continuous flow or jackhammer rodding.Accumulator shall be a 2.5 gallon capacity and 1000 to 2500 PSI pressure rating.
21. Two (2) 1/2" high pressure ball valves shall be provided for draining the water pump and flushing sediment from the bottom of the pump.
22. A nozzle rack accommodating (3) nozzles shall be provided in curbside toolbox. The nozzles shall be labeled on storage rack for pipe size/flow and application.
23. System shall be relieved to protect operator.
24. Handgun shall be supplied that allows for changing of flow pattern from a fine mist to a steady stream.
25. Handgun shall come equipped with quick connect couplers.
26. An additional 1" water relief valve shall be provided.
27. A mid-ship quick disconnect handgun couplers shall be provided.

H. Vacuum/Vacuum Drive System:

1. The system shall include a positive displacement rotary lobe type pump capable of 3600 CFM @ 200 inches of water column inlet volume. The pump shall be of quality of Roots 821 ,16” blower or approved equal. Bidder shall provide with the bid documents certification and curves indicating the vacuum rating in inches of water column, maximum CFM with vacuum system operating at peak condition, rpm and horsepower required to perform at standard operating conditions. The system shall be capable of vacuum debris, sludge, stones and silt while underwater without the need for reduced size intake tubes, nozzles or requiring the liquid be removed first.
2. For added protection, the vacuum system shall have three (3) relief valves set at 16" hg, heavy duty horizontal mounted noise muffler, removable and cleanable stainless steel filter screen, and shall be enclosed with a steel cage guard for safety.
3. Transfer case shall be activated by air via a one touch control located in cab with animated confirmation on screen.

4. A secondary hydro-pneumatic nitrogen charged accumulator system shall be provided with all control valves, piping, and hoses for either continuous flow at lower pressures or jackhammer rodding.
5. Ball valve drains shall be provided for both the final filter and silencer to be able to drain any carryover that comes from the debris body.

I. Vacuum Boom System:

1. The unit must be provided with a front mounted boom and front mounted hose reel. The boom may not raise with the debris body during dumping. Boom lock down shall be provided to keep booms stationary while unit is in transit.
2. The boom will telescope a minimum of 10 feet out and extend the debris hose 15 feet with 7" diameter debris hose . The boom and hose will have ability to transport with collection tube attached All actions are to be hydraulically controlled. The boom is to have an electric-over-hydraulic solenoid system, with a means of adjusting speeds of the boom actions; there must be an override on the hydraulic circuit to relieve the boom should it fall at any telescoped or rotated positions. It is to be hydraulically driven in all directions and controlled with a remote push button control station with a cable connected to the lower frame of the hose reel.
3. Sufficient pipe to vacuum to depths or lengths of 20 feet is to be supplied and is to include a specially tipped vacuum nozzle. Sufficient pipe storage is to be supplied to accommodate a minimum of 20' of extra pipe.
4. All connections between the debris body and vacuum system must be self-adjusting, pressure fittings couplings.

J. Hose Reel:

1. The front rear mounted hose reel assembly will be mounted on an independent frame. The reel will not require any other form of support than the frame mounting. Use of an outrigger for stability of the hose reel when extended is an acceptable method of additional support. Further, it will be mounted at a height that will assure the operator a good visibility while driving the unit. A 1/4" spun steel design is required and it should have a minimum capacity of 500 feet of 1" inside diameter jet rodder hose. It is to be hydraulically driven via hydraulic motor with dual sprockets and chain system. The hose shall be located behind the steel housing and provided with a flexible leader hose for ease of placement and protection of the hose within the manhole.
2. The reel is to telescope and retract 15" on a straight line along the centerline axis of the truck with the reel in its fixed position parallel to the truck grill. Arced lines of travel do not meet this requirement. The reel is to rotate about the centerline on a large diameter ball bearing through 270 degrees to afford an unobstructed line along which the rodder hose can reach the working end of the boom in any of the work positions along the booms 180 degrees of rotation. The extension will allow the operator to check fluids on tilt type cabs without tilting the reel.
3. For operator safety and productivity, the hose reel must be equipped with controls on each side. Under no circumstances, may the reel extend beyond the safe width of the truck in any of its working positions. The reel will have auto level wind with tensioning device .

K. Washdown Equipment:

1. Hand sprayer with adjustable spray-pattern to be provided with trigger-style gun.

L. Front Operating Station and Controls:

1. Primary operator station will be located at front of hose reel.
2. All front operator controls shall be accessible while operating either front or rear side of reel assembly. All operations to either side of unit shall position operator in front of vehicle affording protection from oncoming traffic.
3. All operator controls should be located on a single control panel that can be rotated on a 90-degree arc for an operator customizable location. The control panel shall also feature the ability to raise and lower through a range to accommodate operators of different height.
4. Station shall include truck engine throttle, water pump (on/off), water pump mode, water pump flow meter, hose reel control valve (forward / reverse), adjustable hose reel speed control, oil dampened water pressure gauge, boom controls, digital water pump flow meter, and low water warning light.
5. Station shall include a Touch enabled display screen with corresponding tactile buttons for reading critical machine data including (hose footage, hose reel speed settings, water pressure, water flow. Air mover information, chassis data, mode indicator, chassis fuel level, and diagnostic controls), Back lit button keypads with, laser etched function icons, and 4 light feedback indicators. These buttons shall operate the following functions: All setup functions (remote/panel selector, work lights, hose reel extend/retract, hose reel lock, and pinch roller activation) and Vacuum functions. Additionally, there will be separate sealed rocker switches for Water Pump on/off and Throttle up/down. There shall be a multi flow control dial for controlling the full range of the water pump.
6. There shall be a hose reel joystick to control the pay in and pay out of the hose reel, this joystick shall offer speed control that increases the further the joystick is moved in either direction. There shall be an additional hose reel speed dial for setting specific speed ranges of the reel. There shall be a boom joystick that controls all function of the boom including up/down, left/right, and extend/retract. There shall be a E-Stop button to bring all machine
7. Tachometer and hour meter for chassis engine provided at control station shall be provided.
8. All Hydraulic Functions - Color Coded, Sealed Electric/Hydraulic NEMA 4 switches shall be provided.
9. Front control screen shall display a water level indicator to show level of water through the range of the tank.
10. Front control screen shall display the debris body level.

M. Front Operating Station and Controls:

7” In –Cab Touch screen control with Tactile buttons – Single viewing screen for camera, controls for lighting, Recirculation, and PTO transfer case activation are all accessed on control screen. The operator can view operating mode, recirculation status, flows, and pressure. One touch park and clean / PTO Transfer case engaged. Operator can gain function of the water and air system by pressing one button on control screen. Front hose reel control panel gives operator the option to adjust controls to most individually comfortable position. The operator has full access to controls at any point in a 90degree arc. The operator can see their dashboard data on screen while operating the hose reel and boom functions. The 7” dashboard screen offers all of the information, water pressure , and flow, hose footage , chassis RPM, Vacuum information, water level , debris tank level.

- Boom Controls (Left/Right/Up/Down)
- Water Pump (Rodder) On/Off
- Boom joystick
- Hose Reel-Out/Reel-In Control
- Hose Reel Telescope In/Telescope out
- Engine Throttle Control
- Multi-flow variable GPM
- Hose Reel Speed Control Knob
- Hose Reel Rotation

Vacuum Combination Storm Sewer

- Lock/Unlock
- Hose Reel Pinch Roller Lock/Unlock
- Hose Footage Counter digital
- Hose reel rotation and speed control
- Sewer jet pump control valve
- Handgun control valve
- Vacuum blower
- Vacuum gauge
- High pressure water gauge
- Boom remote pendant plug-in
- Vacuum breaker controls
- Digital flow meter
- Electronic E- stops at each control station

N. Paint
Exterior paint shall be acrylic. The color shall be white as selected by the Borough. Paint shall be warranted not to chip, flake, fade, bubble or otherwise deteriorate for a period of not less than 5 years. All modules are to be painted prior to assembly.

O. In Cab Controls:

1. All In cab controls are to be located on a single in cab control screen. This shall be a full color display screen. It shall utilize 12 back lit tactile (glove ready) buttons on the sides of the screen as well as feature touch screen operation.
2. All Back up camera Features shall be displayed on the In Cab Control Screen.
3. All work lights shall be able to be activated or deactivated in cab with on screen controls.
4. All work lights shall be able to be activated or deactivated in cab with on screen controls.
5. Jet or Combo mode shall be activated via one touch button on the control panel. Control screen must display an on screen representation of the chassis drive system and must animate to show as drive systems activate or deactivate.

P. ACCESSORIES
- Tow hooks - To be mounted at the front and rear of the chassis
- Rear mounted Arrow board
- Cold weather recirculation system is to be provided on the unit to prevent freezing of the jet rodder water supply while driving to and from work sites. The system must be operable at all vehicle road speeds and while the chassis is stationary. It must be driven from a hydraulic source other than the chassis engine or via a front mounted crank shaft drive. It must be capable of recirculating a minimum of 20 gallons per minute through the entire water system, including the high pressure pump and hose reel.
- Hydraulic shut off valves
- (1) cone rack
- Low water warning alarm
- PUMP DRAINS (2).
- 3'' Y strainer at water pump
- Final filter and silencer ball drain valve
- Fold down pipe storage racks / Curbside and street side

- For greater pipe storage capacity and for operator safety to avoid potential injury while removing or replacing pipe, a spring-loaded, fold down storage rack design must be provided at curbside location as required in this specification. .
- Front blower controls @ operator station
- One full width aluminum tool box Mounted behind cab / 96x 30x 16
- Toolbox subframe 18x24x24
- Continuous fill
- Vacuum relief system
- Rear and front Mounted camera
- Lube manifold system
- High pressure hose reel with 35 ft hose max 3000 psi
- Front joystick boom control
- LED lights, stop. Tail and turn
- Digital footage counter
- LED boom lights
- Quad cyclone separators two on each side rear mounted
- Belly pack wireless remote
- Debris body flush out system
- 1- Additional 7'x 3' extension and 7'x5
- 4 additional hose clamps
- Rear door splash shield
- Lighting package Led work light /rear door / operator station / hose reel / curb side
- Street side and 6 light strobe package / Hand light with plug
- Rear door valve flush out with full rear door swinging screen
- Hydraulic trash pump /with lay flat hose

Q. Electrical & Safety Lighting:

1. The entire system shall be vapor sealed to eliminate moisture damage, "Nema-4" type or equal.
2. All electrical connections shall be void of exposed wires or terminals nor should they be painted. Paint process shall be completed prior to installation of wiring.
3. All wiring shall be color-coded and encased in conduit to scaled terminal boxes with circuit breakers.
4. All other lights required by State and Federal Laws.
5. A pistol grip hand light with bumper plug and 25' coiled cord shall be provided.
6. Handheld, Pistol Grip LED Spotlight with rechargeable Lithium Ion battery.
7. Operator station work lights shall be provided
8. Operator station shall have back lit buttons for low light operation.
9. (2) L.E.D. Boom work lights shall be provided.
10. L.E.D. Lights, Clearance, Back-Up, Stop, Tail & Turn shall be provided.
11. A LED split arrow board shall be installed at the rear of the unit to provide directional control for approaching traffic.

R. Safety Equipment:

1. E-stop shall be located at each operator interface location.
2. Standard locations to include front hose reel, mid-ship curbside dump controls, & wireless controller (if equipped.)

3. Electrical system controls shall be configured to allow for single point operation only. Upon engagement of controls at specified locations, additional controls shall be disabled.
4. Electrical system must enable self-check to ensure all switches are in home position prior to critical function enablement. System must "lock out" controls when switch is not in home position.
5. (1) Emergency Flare Kit
6. (1) 5 lb Fire Extinguisher.
7. 7" dash monitor, 2-camera system shall be provided. A Front Hose Reel Color Camera with 130 deg Viewing Angle shall be provided to provide a front visual of the manhole cover to aid in equipment set-up. A rear back-up color camera with 130 deg viewing angle shall be provided. Camera to have automatic activation when the unit is switched to reverse.
8. Debris Body Out of Position Alarm to indicate when debris body is not in the proper stowed position.

S. Sewer Tools and Accessories:

1. (1) 30 Sand Nozzle
2. (1) 30 deg. Sanitary Nozzle
3. (1) 15 deg. Penetrator Nozzle
4. (1) 1" Small finned nozzle pipe skid

T. Vacuum Tools and Accessories:
1. The basic vacuum tube package shall include the following:
2. (1) 3' aluminum pipe
3. (2) 5' aluminum pipe
4. (1) 6'6" catch basin tube
5. (4) quick clamps

U. Chassis Specification:

1. 10 ¾” Steel rails/steel crossmembers (3/8” rail thickness) (10.75 x 3.5 x 3.75) RBM = 2,136,000 Section Modulus = 17.8
2. Full length stl inner liner RMB = 3,175,000
3. Section Modulus = 14.8 cubic inched
4. Huck bolt all accessible frame components
5. Three Piece cross members
6. 24’’ bumper extension
7. 46,000 lb GVWR
8. 20,000 lb. Frt. Axle Set forward / with 38’’ bumper to axle
9. Taper Leaf Springs w/shocks 20,000 lbs.
10. Power Steering TRW THP60 Dual
11. PHP10 Iron HB/Cast Drums/16.5x 6.0" Cam Brakes
12. Haldex/Dana Auto Slack Adjusters
13. Standard oil seals
14. 26,000 lbs. Rear axle
15. Magnetic Rear Axle Oil Drain Plug
16. Outboard mounted brake drums
17. PHP10 Iron HB/Cast Drums/16.5x7.0 Cam Brakes
18. Parking Brakes Both Axles
19. Auto Slack Adjusters

20. Oil Seals
21. Anti-Lock Braking System (ABS) 4S4M W/SBM
22. Bendix Smart ATC (Automatic Traction Control)
23. Synthetic Axle Lubricant-All Axles
24. Reyco spring 26,000 lbs. Suspension
25. Paccar PX-9 Diesel Engine (2024 Emissions)
26. 370 Gross Horse Power @ 1900 rpms 1250 lb-ft Torque @ 1400 rpm
27. Belly Pan
28. Remote PTO & Throttle Provision
29. CARB Engine Idling Compliance (Includes factory installed serialized sticker)
30. Magnetic Engine Oil Drain Plug
31. Paccar 160 Amp Alternator, Brushed
32. Immersion Type Pre-Heater 110-120V (Phillips)
33. 12V Starter
34. (3) Optima DT31T Batteries 2700 CCA Threaded mounted in cab.
35. Battery Disconnect Switch mounted in cab.
36. 18.7 CFM Air Compressor
37. VGT Exhaust Brake. (Variable Geometry Turbo)
38. Cruise Control
39. High Efficiency Cooling System Radiator
40. Silicone Radiator Hoses
41. Engine Protection Shutdown (Includes oil pressure, oil temperature, coolant temperature, & intake manifold temperature)
42. Exhaust Single RH Side of Cab
43. DPF/SCR RH under cab. Includes cab entry RH under cab & full round stainless steel exhaust guard.
44. Single Curved Chromed Standpipe
45. Radial Seal, Dry Type Air Cleaner, Frontal Air Intake.
46. Spin-on Fuel Filter Frame Mounted Heated
47. Allison 3000 RDS
48. Magnetic Transmission Oil Drain Plug
49. Six speed / dash board mounted push button
50. Bendix AD-IS EP Air Dryer W/Heater
51. Nylon Chassis Hose
52. FF: ACCUR 29806PK 22.5x12.25” Aluminum
53. RR: ACCUR 29300PK 22.5x9.00” Aluminum
54. FF: GY 20 ply 425/65R22.5 G296 MSA or Equal
55. RR: GY 16 ply 12R22.5 G751 MSA or Equal
56. On off road tires
57. Alum 80 Gallon Fuel Tank LH under Cab
58. Wire Braided Fuel Line
59. Battery Box & Bumper
60. Battery disconnect
61. Aluminum. Cab 109” BBC CAB &SMC Fepto hood w/ stationary grill (Galvanizing will not be accepted)
62. One Piece Hood Minimum 90 deg. Tilt
63. Sever Service Cab Package to include: Alum. Side Skins, Alum. Rear Skin, Alum. Windshield Mask, Steel Firewall, Steel Front Floor Sheet, Steel Isolator Insert
64. 2-Piece Windshield (Cuts Down on Cost)
65. Bulkhead Style Doors (85 deg. Door opening)

Vacuum Combination Storm Sewer

66. Inside Grab Handles
67. 3-Pt. Seat Belt/Shoulder Harness
68. 2 Inside Sun visors
69. Steering Wheel with Adjustable Column – Tilt/Telescope
70. Extended Rear Window
71. View Window RH Door
72. Power Package includes power door locks & power windows
73. Air Horn
74. Plug in Auto Reset Circuit Breakers
75. CB Term Wiring
76. Cab Mate Cab Air Suspension
77. Dual Door Stops driver & passenger
78. Driver seat Ultraride Hiback Vinyl Air
79. Passenger Seat Ultraride Hiback Vinyl Non-Air
80. Stainless Steel Mirrors 7x16" w/Heat Element
81. (2)Convex 8" SS Mirror w/Heat Element
82. AM/FM w/Weather band
83. Oil Temp Gauge Transmission
84. Water Temp Gauge
85. Oil Pressure Gauge Engine
86. Fuel Level Gauge
87. Warning Light Parking Brake
88. Electronic Speedometer
89. Electronic Tachometer
90. Voltmeter
91. Hour meter
92. (2) Air Press Gauges (Primary & Secondary)
93. Combo Fresh Air Htr./Air Conditioner
94. Headlights Composite Fender Mounted w/Integral park, turn, & side marker
95. Daytime Running Lights
96. (5) Marker Lights
97. Paint Color (WHITE)

Warranty:

Truck chassis shall be covered by a (1) One year base warranty 100% parts & labor. Base warranty shall include (1)Year towing coverage for up to 500.00 per occurrence. Diesel engine warranty shall be Five (5) years / 100,000 miles 100% parts and labor. Coverage shall include: turbocharger, injectors, engine electronics, and water pump as well as the Emission Aftertreatment System. Chassis/Frame warranty shall be five (5) years/ unlimited miles 100% parts and labor

PART 3 – EXECUTION

3.01 GENERAL

A. All equipment and materials shall be assembled in accordance with the manufacturer’s recommendations.

B. Prior to acceptance, Owner shall inspect and test all equipment. The manufacturer's warranties shall commence upon acceptance by the Owner.

C. The bidder shall demonstrate that he is in a position to render prompt service to the equipment and to be able to furnish replacement parts. The bidder shall have a service facility located in the State of New Jersey.

3.02 OPERATOR TRAINING

An eight (8) hour training instruction at the Borough of Seaside Park Department of Public Works (exact location to be provided by Borough) including operation and safety shall be provided to the Owner by the bidder upon delivery of the equipment.

3.03 MANUALS

Deliver with Machine:

1. One paper parts book shall be delivered with the machine.
2. One shop service manual shall be delivered with the machine.
3. Two operator / maintenance manuals shall be delivered with the machine.

PART 4 – QUANTITY AND PAYMENT

4.01 GENERAL

The item "Stormwater Inlet Vacuum Truck, 10 CY Debris Capacity" shall be measured for payment on a Unit Basis, which price shall include all labor, equipment, materials, delivery to the Borough of Seaside Park, in Seaside Park, New Jersey, warranty, training, and all else as specified herein.

Note please include all chassis warranty and body warranty information with bid.

END OF SECTION 11200

SECTION 11300

THREE WHEEL STREET SWEEPER

PART I – GENERAL

1.01 SUMMARY

This section includes the requirements for furnishing and delivering a Elgin Pelican Sweeper (or approved equal). The contractor shall perform all necessary operations and furnish all tools, equipment, labor, and materials in strict accordance with the Bid documents to complete the required work of this section. The unit shall be a new model. No discontinued models will be accepted. The equipment must be BABA (Build America, Buy America) compliant. Federal infrastructure investments obligated on or after May 14, 2022, must comply with the Build America, Buy America (BABA) Act, which requires the use of domestic iron and steel, manufactured products, and construction materials in covered infrastructure projects. Products that qualify for a de minimis waiver cumulatively may comprise no more than a total of five percent of the total project cost, otherwise a project specific SRF Waiver must be obtained.

Bids will be accepted for consideration on any make or model that is equal or superior to the equipment specified. Decisions of equivalency will be at the sole interpretation of the Purchasing and Public Services Director.

Bidder may be required to demonstrate a reasonable likeness of the equipment being offered within a reasonable time of request. The equipment demonstrated shall be equipped with all accessories and components required in this specification to ascertain equivalence.

1.02 RELATED SECTIONS

1. Appendix: The Appendix, located within the Technical Specifications, contains a Compliance Worksheet for Contractor's submitting "approved equal" equipment and accessories.

1.03 SERVICE AND SUPPORT

1. Location of warranty service center and amount of inventory shall be noted which may be verified and inspected.

1.04 SUBMITTALS

A. **A submittal shall be made with the Bid Package** for the proposed Street Sweeper. The submittal shall consist of one concise document containing the following:

1. Cover page
2. An information section for the Street Sweeper containing at least the following:
   a. Catalog Cut containing descriptive literature of model features
   b. Equipment Specifications (Debris capacity, body color, tool storage, transmission, controls, broom specifications, camera system specifications, dimensions, operating specifications, cab features, and Engine specifications)
   c. Manufacturer warranty information (see 1.05C)
   d. Completed compliance worksheet found in the appendix for Contractor's seeking an approved equal street sweeper and accessories.

1.04 DELIVERY, STORAGE, AND HANDLING

A. Schedule delivery of the street sweeper and associated equipment as to avoid delays and disruptions to the Borough.

B. Schedule by coordinating with the Engineer's Office. Delivery will be at a location specified by the Borough of Seaside Park.

C. Handle and transport equipment in compliance with the manufacturer's recommendation and in a manner satisfactory to the Engineer.

D. If damage, theft, or loss of materials occurs prior to documented completion of unit delivery, the Contractor shall be held responsible with no additional payment(s). Damage after documented completion of unit delivery, if by fault of the Contractor or related parties shall also be the Contractor's responsibility.

1.05 WARRANTY

A. The machine shall be covered by a standard manufacturer 24 month warranty.

B. Copies of all warranty certificates shall be submitted with the bid to allow personnel to compare warranties. If no warranty certificates are submitted, the bid will be considered incomplete and will be rejected.

C. The bidding dealer shall be perform all warranty work and shall not sub-contract any warranty work.

PART 2 – PRODUCTS

2.01 MANUFACTUERED UNITS

The equipment shall be of the quality and rating as specified herein, and the manufactured units shall be as follows:

A. THREE WHEEL SINGLE ENGINE BROOM STREET SWEEPER:

1. Elgin Pelican Sweeper with 3.6 CY front high dumping hopper
2. Approved Equal

2.02.1 COMPONENTS AND FEATURES

A. Chassis:

1. Configuration shall be three wheel, rear steer. Front steer configurations shall not be acceptable.

2. For safety, steering strut shall have dual tires. Single tire steer wheels shall not be acceptable in case of flat tire.

3. To protect the target vehicle receiving the hopper discharge, sweeper shall have permanently fixed heavy duty steel bumpers with rubber padding, capable of limiting the forward movement of the sweeper before the sweeper drive wheels or chassis can impact the target vehicle.

4. For maximum strength, chassis shall be fully welded; formed channel and boxed tube style. Bolt together chassis shall not be acceptable due to limited structural strength.

5. Chassis shall have front and rear tow hooks.

6. Engine compartment cover shall have two raising assist cylinder.

7. Rear axle shall be strut; incorporates single-sided swing arm suspension type, having a minimum capacity of 7,400 lbs.

8. Front axles shall be stub type, each having a minimum capacity of 10,000 lbs.

B. Chassis Engine:

1. Diesel engine shall be 4 cylinders, turbocharged, dynamically counter balanced, 276 cu/in. (John Deere 4045T or equal). Engine must be EPA Tier 4 "final" and CARB emission compliant and be capable of operating on biodiesel up to B20.

2. Horsepower rating shall be 74 HP @ 2400 RPM.

3. Engine shall have ECU for throttle control and management of after treatment system.

4. Engine shall be rubber mounted.

5. For greater heat dissipation and lower cost of maintenance, engine shall have individually replaceable wet sleeve cylinder liners.

6. Air cleaner shall be dual element safety dry-type.

7. Anti-freeze/water mixture shall be rated at -20 degrees.

8. Diesel fuel tank shall have a minimum capacity of 35 U.S. gallons.

9. For operator safety in the event of engine cutout, steering system shall have a manual override.

10. An engine shutdown shall be included which protects against damage when either low oil pressure or high coolant temperature conditions occur.

11. The battery can be positively disconnected from the sweeper with an in-cab switch for safety reasons during service and maintenance work and for not draining the battery in case the sweeper is not being used for a longer period of time.

12. Engine Block Heater

C. Hydrostatic Transmission:

1. Pump shall be variable displacement with separate variable displacement wheel drive motors.

2. Power shall be evenly distributed through planetary torque hubs.

3. Power shall be transferred from wheel drive motors to planetary torque hubs without side loading.

4. Single foot pedal shall automatically produce required torque at a set pressure.

5. To prevent the possibility of contamination and the resulting damage to the transmission system, transmission shall be protected by 10 micron filter with cab restriction indicator.

6. Single foot pedal shall control both forward and reverse directions.

7. Hydrostatic transmission shall be computer controlled to optimize propel system to engine power.

D. Tires and Wheels
   1. Front drive tires shall be tubeless radial tires, 11R22.5 (Load range H) mounted on disc wheels.

   2. Dual rear tires shall be tubeless radial tires, 215/75 R17.5 (Load range H) mounted on disc wheels.

   3. Sweeper shall be equipped with rear suspension, providing smooth ride for operation, while reducing chassis fatigue.

   4. Rear suspension shall be single-sided swingarm type - design allows for ease of tire accessibility - utilizing heavy duty twin spring coils with shock absorbers - for superior dampening of ground input during operation.

   5. Rear suspension shall have 3 inches of effective travel for maximum jounce.

   6. Rear suspension shall have single convolution hollow rubber spring to prevent hard stop of suspension at jounce limit for increased ride quality.

E. Brakes
   1. Service brakes shall be full power, hydraulically applied, twin-caliper disk type.

   2. For safety, the hydrostatic system shall be equipped with a priority relief valve to enable the sweeper to gradually coast to a stop when the accelerator pedal is released. The Ocean County Northern Recycling has determined that systems that abruptly stop the sweeper by dynamically braking when the accelerator pedal is in the neutral position are potentially dangerous to our operators and following vehicles and will not be accepted.

   3. For safety, loss of engine power shall not automatically engage brakes.

4. For safety, loss of hydraulic power shall not automatically engage brakes.

5. For safety, neither brake engagement nor disengagement shall be dependent upon the engine running.

6. For safety, neither brake engagement nor disengagement shall be dependent on any electrical circuit.

7. To safely provide redundancy, parking brake shall be positively and mechanically applied to drive axle.

8. Neither parking brake engagement nor disengagement shall be dependent on any electrical circuit.

F. Cab:
1. To maximize operator visibility, cab glass area shall be not less than 8,500 square inches.
2. For safety and maximum operator visibility, doors shall be all glass. The doors should be capable of latching completely sealed.
3. Front windows shall be tinted. Front window area shall be a minimum of 2,300 square inches for optimum forward visibility
4. For safety, minimum cab visibility shall be approximately 360 degrees without using mirrors.
5. For operator safety, cab doors shall be rear opening (hinged at front).
6. Cab interior environment shall be fully conditioned by filtered fresh air heater pressurizer / defroster and air conditioner (A/C) with adjustable vents.
7. Sweeper shall include one (1) inside rear view mirror and two (2) outside west coast type mirrors.
8. To maximize operator visibility, outside mirrors shall be mounted forward of the cab enclosure.
9. For safety during night sweeping, rocker switches shall be internally illuminated so that they can be readily identified without the use of the cab dome light.
10. Windshield wiper shall be two speed intermittent with washer.
11. Interior of cab shall be lined with acoustical insulation, have automotive type trim, and center console.
12. Dash shall be faced with soft molded plastic.
13. There shall be a soft textured steering wheel with center horn at the operator position with tilt and telescopic steering wheel for safer operation.
14. Sweeper shall have an automatic electronic back-up alarm.
15. Sound levels within the cab shall not exceed OSHA standards.
16. Doors and ignition shall be keyed alike.
17. Unheated and hand controlled west coast cab mirrors and standard hopper cross view unheated mirrors shall be provided.
18. An AM/FM radio with blue tooth capability and USB Port, 2 speakers with two map lights is added to the truck.

19. License plate holders are mounted on the rear of the sweeper and on the front of the body.
20. The rear mounted holder is illuminated.
21. The standard recessed door latch to open and close the engine compartment is replaced by a key lockable recessed door latch.
22. The rear window of the cab slides open for ventilation and is in lieu of the standard fixed window.
23. The standard truck seat is replaced with Dual mid back, black vinyl, air suspension seat (with armrests) for the right side or left side.
24. An in-cab mounted 2.5 lb. (1.1 kg) ABC fire extinguisher.

G. Side Brooms:

1. Side broom shall be hydraulic, direct drive, vertical digger type mounted on right and left sides.
2. To provide flexibility for varying sweeping conditions, broom speed shall be variable, (90 RPM to 160 RPM), by operator from cab while moving independent of sweeping speed.
3. Broom down pressure shall be adjustable by operator from the cab while sweeping.
4. Each broom shall consist of four (4) replaceable plastic segments, filled with 26" long tempered wire.
5. Broom diameter shall be not less than 36", protruding not less than 13" beyond outside of tire while sweeping.
6. Electrically operated tilting mechanism allows operator to change inward/outward tip of the right Side broom. Angle can be changed from the cab while sweeping. This allows efficient sweeping of irregular surface that could require special manual setting of the broom.

H. Main Broom:

1. Broom shall be hydraulic, direct drive, not less than 35" diameter and not less than 68" long.
2. To provide flexibility for varying sweeping conditions, broom speed shall be variable, (80 RPM to 140 RPM), by operator from cab while moving independent of sweeping speed.
3. Sweeping path shall be not less than 8 feet wide with one gutter broom activated.
4. To protect the broom mechanism, the main broom shall raise automatically when the sweeper is reversed. The broom will return to its sweep position and set down pressure when a forward direction is resumed.
5. The standard main broom is replaced with a United Rotary Brush brand brush, paddle type strip broom.

I. Conveyor

1. Conveyor with Chevron style cleats and shall be hydraulically driven and able to load hopper to 100% of rated useable capacity.
2. Conveyor shall be reversible in direction without stopping or reversing any broom.
3. Conveyor shall be capable of effectively sweeping debris of varying sizes (from large bulky trash 6" in height to fine sand) without the need to make any adjustments to the conveyor system.

4. To reduce wear on all conveyance components, a conveyor belt having molded Chevron style cleats and sipes shall carry, not drag, debris to the hopper.
5. To protect the broom mechanism, the main broom shall raise automatically when the sweeper is reversed. The broom will return to its position and down pressure when a forward direction is resumed.
6. Cleans lower conveyor roll by diverting fill water, at hydrant pressure, through the conveyor roll area.
7. In-cab dash mounted audio and visual alarm to indicate if the conveyor stalls.

J. Hopper

1. For safety, the hopper shall be front dumping, allowing an operator to observe the dump target and surrounding area at all times from the cab, without the use of mirrors.
2. Hopper shall dump at varying heights ranging from ground level through a height of 9-1/2 feet.
3. Hopper shall have a dumping reach of 33 in. forward.
4. To extend wear life, tilt arm bearings shall be permanently - lube Teflon impregnated Composite.
5. Dump cycle shall be not more than 60 seconds.
6. Volumetric capacity shall be not less than 3.6 cubic yards, useable capacity not less than 3.5 cubic yard.

K. Water System:

1. Tank capacity shall be not less than 220 U.S. gallons.
2. Tank shall be constructed of non-rusting material (polyethylene or equal).
3. Pump shall be a Five chamber diaphragm pump that is self-priming and capable of running dry.
4. Water fill gauge shall be visible from normal operating position.
5. Sweeper shall be equipped with an automatic internal hopper/conveyor flush and wash down system.
6. Water fill hose shall be not less than 16'8" in length, equipped with 2-1/2" NST hydrant coupler.
7. Storage basket shall be provided for fill hose.
8. Quick coupling for the water fill hose. Instead of threaded on connection, the water fill hose can be quickly connected and disconnected to the sweeper's water fill connector.
9. Tool for opening and closing the fire hydrant for filling up the water tank.

L. Hydraulic System

1. Power shall be provided by shaft and gear driven pumps.
2. Hydraulic reservoir shall be not less than 33 gallons, baffled and with sight gauge.
3. Test ports shall be at staggered height, including individual ports for sweeping functions, hopper functions and propulsion.
4. To prevent contamination of the reservoir during the dump cycle, the reservoir vent shall be equipped with 10 micron, spin on filter.
5. To prevent the possibility of contamination and the resulting damage to the hydraulic system, return lines for drive to have 10 micron filter with cab mounted restriction indicator.

6. To prevent contamination of the reservoir when adding hydraulic fluid, all oil added shall pass through a 10 micron filter located within the fill spout.
7. To maximize cooling efficiency and permit thorough cleaning, the hydraulic cooler shall be mounted alongside the water radiator.
8. Cooler shall be protected by a 125 PSI bypass valve.
9. To minimize environmental damage caused by leaking hydraulic fittings, all pressure hydraulic fittings shall be flat-face "O" ring or "O" ring boss type.
10. All circuits shall have quick-disconnect check ports.
11. A warning indicator shall be supplied to warn operator if the hydraulic oil in the reservoir falls below the acceptable level required.

M. Electrical:

1. Unitized alternator/regulator shall be not less than 90 ampere.
2. Battery shall be maintenance free, 12 volt, 180 minimum reserve, 925 CCA.
3. For safety, all electrical circuits shall be protected with automatically self-resetting circuit breakers which do not require any action by the operator to reset.
4. All lighting shall be D.O.T. approved including combination stop and tail lights, sealed multiple beam headlights, high beam-low beam switch, adjustable side broom spotlights, illuminated gauges and instrument panel, internally illuminated rocker switches, self-canceling directional signals, and hazard switch.
5. For ease of electrical "trouble shooting", all wiring shall be harnessed, identified by color coded and word coded wires (i.e. "Ignition", "Headlight" etc.)
6. All terminals shall be properly crimped and splices ultrasonically welded.
7. All electrical connections shall be sealed with weatherproof, polarized connector.
8. Electrical system shall have complete plug-in diagnostics that includes fault
9. codes and troubleshooting.
10. Two LED flood lights mounted on the top of the cab facing forward for extra
11. forward illumination, to view in the body or for extra light when dumping.
12. The lights can be controlled by an in-cab dash mounted switch.
13. Two rear facing lights allow illuminated rear view during nighttime operation. This option also turns on when the sweeper is reversed and is also manually controllable by a switch on the control panel.
14. Sweeper shall be provided with rear mounted strobe with guard with front and rear visibility.
15. Four clearance lights are installed on the sides of the sweeper (two lights on each side) for safety reasons. An amber colored light is mounted in the front and in the middle of the sweeper.

N. Controls:

1. All sweeper controls shall be mounted on a central control console with locking ignition for use from either the right or left position. This allows the operator to view all important information from either operating position.
2. The controls shall include all sweep, spray water, and lighting functions.
3. The controls for sweep, spray water (if equipped with a water system), and lighting functions shall be conventional rocker switches.
4. Rocker switches shall be clearly identified by name and international symbol.

5. Hydraulic functions shall be controlled by electric rocker switches.
6. Hopper dump functions shall be controlled by a single joystick that meets the SAE standard. Multiple levers shall not be acceptable.

O. Instruments:

1. Instrument panel shall be full vision illuminated with tachometer, hour meter, speedometer, odometer, fuel gauge, hydrostatic oil temperature gauge, water temperature gauge, oil pressure gauge, voltmeter gauge, hydraulic filter/drive filter indicator and engine air intake restriction indicator.
2. An automatic rear view camera with full color 5.6" LCD monitor shall be provided. Camera shall monitor display the area behind the sweeper whenever the sweeper is moving in reverse. The display shall be selectable to allow continuous rear view at all times. The display shall have an additional camera input to allow future expansion of additional cameras. The camera shall be equipped with infrared lamps to allow night vision.

P. Paint:

1. All visible exterior metallic surfaces shall be coated prior to assembly with polyester powder coat. The paint must be a minimum of two (2) mils thick. The uses of acrylic enamels and/or polyurethane's shall not be acceptable.
2. Color to be specified from Standard Color Chart or Purchase Order when ordering.
3. Vehicle shall have an accent color of Grey on the lower portions of the unit.

Q. Accessories / Manual:

1. Sweeper parts manuals shall be provided.
2. Sweeper operation manuals shall be provided.
3. Repair, service and trouble shooting manuals shall be provided.
4. John Deere Powertech parts manuals shall be provided.
5. John Deere Powertech operator's manuals shall be provided.
6. John Deere Powertech service manuals shall be provided.

R. Warranty:

1. Manufacturer's warranty shall be not less than one years on entire sweeper, including all parts and labor.
2. 2 years engine and transmission, including engine after treatment.

S. Quality:

1. Sweeper shall be manufactured by a company with a registered quality standard no less than ISO 9001.

T. Sweeper Option to be included:

1. Slow moving emblem.
2. Operator training shall be provided to the requesting department for sweeper operators

PART 3 – EXECUTION

3.01 GENERAL

A. All equipment and materials shall be assembled in accordance with the manufacturer's recommendations.

B. Prior to acceptance, Owner shall inspect and test all equipment. The manufacturer's warranties shall commence upon acceptance by the Owner.

C. The bidder shall demonstrate that he is in a position to render prompt service to the equipment and to be able to furnish replacement parts. The bidder shall have a service facility located in the State of New Jersey.

3.02 OPERATOR TRAINING

An eight (8) hour training instruction at the Seaside Park Department of Public Works (exact location to be provided by Borough) including operation and safety shall be provided to the Owner by the bidder upon delivery of the equipment.

3.03 MANUALS

Deliver with Machine:

1. One paper parts book shall be delivered with the machine.
2. One shop service manual shall be delivered with the machine.
3. Two operator / maintenance manuals shall be delivered with the machine.

PART 4 – QUANTITY AND PAYMENT

4.01 GENERAL

The item "Mechanical Street Sweeper" shall be measured for payment on a Unit Basis, which price shall include all labor, equipment, materials, delivery to the Borough of Seaside Park, in Seaside Park, New Jersey, warranty, training, and all else as specified herein.

Note please include all chassis warranty and body warranty information with bid.

END OF SECTION 11300

SECTION 11400

COMPACT STREET SWEEPER

PART I – GENERAL

1.01 SUMMARY

This section includes the requirements for furnishing and delivering a Multihog VC350 Compact Street Sweeper (or approved equal). The contractor shall perform all necessary operations and furnish all tools, equipment, labor, and materials in strict accordance with the Bid documents to complete the required work of this section. The unit shall be a new model. No discontinued models will be accepted. The equipment must be BABA (Build America, Buy America) compliant. Federal infrastructure investments obligated on or after May 14, 2022, must comply with the Build America, Buy America (BABA) Act, which requires the use of domestic iron and steel, manufactured products, and construction materials in covered infrastructure projects. Products that qualify for a de minimis waiver cumulatively may comprise no more than a total of five percent of the total project cost, otherwise a project specific SRF Waiver must be obtained.

Bids will be accepted for consideration on any make or model that is equal or superior to the equipment specified. Decisions of equivalency will be at the sole interpretation of the Purchasing and Public Services Director.

Bidder may be required to demonstrate a reasonable likeness of the equipment being offered within a reasonable time of request. The equipment demonstrated shall be equipped with all accessories and components required in this specification to ascertain equivalence.

1.02 RELATED SECTIONS

1. Appendix: The Appendix, located within the Technical Specifications, contains a Compliance Worksheet for Contractor's submitting "approved equal" equipment and accessories.

1.03 SERVICE AND SUPPORT

1. Location of warranty service center and amount of inventory shall be noted which may be verified and inspected.

1.04 SUBMITTALS

A. **A submittal shall be made with the Bid Package** for the proposed compact street sweeper. The submittal shall consist of one concise document containing the following:

1. Cover page
2. An information section for the compact Street Sweeper containing at least the following:
   a. Catalog Cut containing descriptive literature of model features
   b. Equipment Specifications (Debris capacity, body color, tool storage, transmission, controls, broom specifications, camera system specifications, dimensions, operating specifications, cab features, and Engine specifications)
   c. Manufacturer warranty information (see 1.05C)

d. Completed compliance worksheet found in the appendix for Contractor's seeking an approved equal street sweeper and accessories.

1.04 DELIVERY, STORAGE, AND HANDLING

A. Schedule delivery of the street sweeper and associated equipment as to avoid delays and disruptions to the Borough.

B. Schedule by coordinating with the Engineer's Office. Delivery will be at a location specified by the Borough of Seaside Park.

C. Handle and transport equipment in compliance with the manufacturer's recommendation and in a manner satisfactory to the Engineer.

D. If damage, theft, or loss of materials occurs prior to documented completion of unit delivery, the Contractor shall be held responsible with no additional payment(s). Damage after documented completion of unit delivery, if by fault of the Contractor or related parties shall also be the Contractor's responsibility.

1.05 WARRANTY

A. The machine shall be covered by a standard manufacturer warranty.

B. Copies of all warranty certificates shall be submitted with the bid to allow personnel to compare warranties. If no warranty certificates are submitted, the bid will be considered incomplete and will be rejected.

C. The bidding dealer shall be perform all warranty work and shall not sub-contract any warranty work.

PART 2 – PRODUCTS

2.01 MANUFACTUERED UNITS

The equipment shall be of the quality and rating as specified herein, and the manufactured units shall be as follows:

A. COMPACT MULTI-PURPOSE STREET SWEEPER:

1. Multihog CV350 Sweeper with a hopper gross volume of 1.5m^3 (2yd^3).
2. Approved Equal

2.02.1 COMPONENTS AND FEATURES

A. Dimensions and Weights

- Overall length: Maximum 4405mm (173.4")
- Overall width: 51.2"
- Wheelbase: maximum 1750mm (68.9")
- Unladen weight: maximum 2600kg (5732 lbs)

- Front axle capacity: minimum 2500kg (5511 lbs)
- Rear axle capacity: minimum 2500kg (5511 lbs)
- Gross vehicle weight: minimum 3500kg (7716 lbs)

B. Engine

- Power: minimum 55.4Kw (74HP)
- Displacment: minimum 1952cc (119 cubic inch)
- Number of cylinders: minimum 4
- Torque: minimum 240Nm (177 lb-ft) @ 1600rpm
- Engine shall meet Stage V Final emission regulations
- Engine shall not be equipped with ad-blue/DEF
- Alternator output: minimum 150amps
- Fuel tank capacity: minimum 60 Litres (15.8 gallons)
- Fuel tank shall be made of durable XLPE plastic
- The vehicle shall have a minimum 500hr service interval
- Rear chassis shall have three hinged lockable panels to give access to engine compartment for ease of service
- The vehicle shall be equipped with a rear mounted battery isolate switch.
- Engine air filter shall be easily accessible and can be removed without any tools
- Rear chassis panel shall be easily removable to give access to engine belt.

C. Cooling

- The vehicle shall be approved for an ambient operation temperature of minimum 50°C (122°F)
- The vehicle shall have dual hydraulic driven cooling fans which are temperature controlled to reduce noise levels and reduce fuel consumption when cooling requirements are lower.
- Speed of cooling fans shall automatically adapt as cooling requirements change
- The vehicle shall be equipped with 4 separate coolers for the following
    - Liquid cooling for engine
    - Diesel fuel cooler
    - Charged air cooling
    - Hydraulic oil cooling

D. Drive and Steering

- Drive shall be fully hydrostatic with no mechanical gearbox or mechanical differential
- The vehicle shall be 4-wheel drive with 4 wheel motors. One wheel motor per wheel
- Top speed: minimum 40km/hr (25mph)
- The vehicle shall have a minimum of 3 drive speeds
    - Speed 1 shall be up to 18km/hr (11mph)
    - Speed 2 shall be up to 28km/hr (17mph)
    - Speed 3 shall be up to 40km/hr (25mph)
- The vehicle shall have two separate drive modes. Work mode for sweeping and drive mode for transport
- The vehicle shall have fully independent suspension with an incorporated anti-roll bar on the rear for added stability

- The suspension shall use a heavy duty shock and coil design and shall be capable of operating throughout the fully stated GVW range without the requirement of any bump stops for optimized operator comfort and safety. (Pictures/diagram shall be submitted with the tender to show suspension design)
- The vehicle shall have 3 height settings that can be adjusted on the axle to raise or lower the machine. Each step shall have an increment of 20mm
- Gradeability: minimum 50%
- The vehicle shall have articulated steering
- Articulation angle: minimum 50°
- Main articulation pin shall be of a low maintenance design with a simple adjustment mechanism to remove any tolerance in the articulation point that may occur over the lifetime of the vehicle.
- Articulated steering shall be power assisted
- The vehicle shall have 4 wheel braking with disc brakes on front and rear axles
- The vehicle shall also have a multi-disc parking brake on the front axle.
- The vehicle shall also have hydrostatic braking when the operator depresses the accelerator pedal. Rear brake lights shall also activate under hydrostatic braking.
- The vehicle must have a manual park brake release to allow the machine to be moved in the event of a breakdown.

E. Cabin

- Cabin volume: minimum 1.7m^3 (2.2yd^3)
- The vehicle shall have a ROPS certified cab tested in accordance with OECD no. 7 as specified by directive 1322/2014 in accordance with directive 167/2013
- The vehicle shall have an air suspension seat with high back and 3-point seat belt
- The vehicle shall be equipped with a rear view camera with a dedicated display. It must be possible to select the rear-view camera to stay on permanently and also possible to trigger the display when reverse gear is selected
- The control console shall be incorporated into the seat armrest and shall float with the seat to reduce arm and shoulder movement for the operator.
- The control console shall have two mini joystick for individual brush arm control.
- The top of the mini-joystick must incorporate buttons to allow for control of additional functions
- All sweeping controls shall be accessible from this console to allow for fingertip control for increase ergonomics
- The cab shall have adjustable heater vents for driver, windscreen, and driver's feet
- The cab doors shall have sliding windows
- The cab shall have two doors that must allow the operator full unimpeded entry and egress of the cab.
- The control console shall easily fold up to allow operator full unimpeded entry and egress to the left side of the cab.
- Cab shall have air conditioning and heating
- Cab shall be equipped with Bluetooth radio with handsfree and two roof mounted speakers
- The cab shall have full roof to floor visibility with glass on the front window and doors to allow full vision of the sweeping brush and surrounding areas.
- The cab shall have two rear windows giving the operator 360° visibility.

- The cab shall be equipped with an internal cab light and shall be activated when either door is opened.
- The steering column shall have 3-way adjustment, tilt, angle, and height.
- The digital dash shall have built-in on-board diagnostics for the Engine, Hydraulic Drive, and all electric/hydraulic inputs and outputs.
- The cab shall be equipped with integrated document holder behind the seat.
- The cab shall have fully equipped road lights.
- The cab shall have 2 x front mounted LED work lights to illuminate the brush area.
- The seat shall have a seat safety switch that will automatically switch off the hydraulic PTOs and engage the park brake when the operator is not in the seat.
- It must be possible to bypass the seat safety switch from the digital dash to allow one man operation for cleaning.
- The cab shall be equipped with a two-speed windscreen wiper with intermittent mode.

F. Hydraulics

- The vehicle shall be equipped with Variable flow load-sensing hydraulic pump to front and must be capable of up to 100 litre per minute at 220bar, suitable for use with various front mounted attachments.
- Variable flow load-sensing hydraulic pump to rear and must be capable of up to 60 litre per minute at 220bar, suitable for use with various rear mounted attachments.
- All hydraulic coupling shall be quick release flat faced couplers.
- The vehicle shall have a built in function for reducing hydraulic pressure on the coupling to make change over of attachments easier.
- The vehicle shall have at least 2 sets of double acting couplings available on the front of the machine and at least 1 set of doubling acting coupling available on the rear.
- Hydraulic tank capacity: minimum 60L.

G. Sweeping

- Sweeping width: minimum 2.35m (2.57yd)
- Variable brush speed up to 150rpm
- Brush diameter: minimum 900mm
- Brush arms shall be capable of mounting a heavy 750mm weed brush
- Vehicle shall be delivered with 900mm Poly/Steel mixed brushes.
- Brush arms shall have adjustable ground pressure from inside cab to reduce brush wear
- Two (2) water nozzles per brush for dust suppression with in-cab flow control
- Suction hood width: minimum 635mm
- The suction hood shall be able to float across uneven gradient on two front mounted rotating jockey wheels for better agility when turning.
- The suction hood shall raise up down hydraulically.
- The suction hood shall be equipped with an electrically adjustable flap to allow collection of larger items.
- The vehicle shall have an additional camera mounted facing the suction hood opening to give the operator a clear view of the suction hood mouth.
- Vehicle shall have 200L fresh water tank mounted on rear of the cab.

- The fresh water shall be piped to front brushes for dust suppression and must be piped to the suction hood as a back up for the recirculation system
- Recirculation water capacity: minimum 200L
- Recirulation system shall be a pumped system for increase water flow and dust suppression
- The vehicle shall be PM10/2.5 4 start certified.
- Hopper gross volume: minimum1.5m^3 (2yd^3)
- Hopper net volume: minimum 1.2m^3 (1.5yd^3)
- Hopper turbine speed: minimum 3750rpm
- Airflow: minimum 8000m^3/hr (4708 CFM)
- Vacuum: minimum 90 millibar (36 inch of water)
- Turbine shall be made of Hardox steel
- Hopper inlet shall have a replaceable rubber lining on the roof reducing wear on the hopper.
- All mesh filter panels inside the hopper shall be cleanable without removal
- Hopper shall be made of aluminium magnesium for increased payload.
- Hopper lid shall open automatically when tipping.
- Hopper tip heigh: minimum 1600mm (63")
- The Hopper mounting frame shall have a frame that is designed in a way that a forklift can drive in and easily remove the hopper so that no hopper removal trolley is required.
- Suction hose diameter: minimum 180mm (7.1")
- Suction hose shall have a direct/straight path from suction box to hopper inlet to optimize suction power and prevent blockages.

H. Sweeper Controls

- There shall be a one button sweep auto start - Engine sets to required RPM, lowers suction hood, brushes placed in float, suction engages and water suppression begins
- The brush arms shall be independently controlled via two (2) mini-Joysticks. Left/right and up/down. Brush arms should have individual float control on each arm.
- There shall be 3 potentiometers on the armrest to give stepless control of the following
    - Brush speed
    - Suction Power
    - Ground Pressure
- Control console shall have a boost mode button to increase the suction power to absolute maximum for heavy duty sweeping
- There shall be an individual button for suction hood lift up and down. This button shall have a quick tap function to allow for clearing blockages in the suction without leaving the cab.
- The suction hood flap shall have stepless control from a rocker switch.
- The vehicle shall have a quick stop function to lift suction hood and brushes for stopping at a traffic light. The suction turbine should remain on when in quick stop mode so when the traffic light turns green the sweeping operation can restart immediately so as to prevent traffic delay.
- Hopper tipping shall be controlled by a safety pendant requiring two hand operation. This control pendant shall be on an elasticated wire to allow for tipping of hopper while outside of the vehicle.

I. OPTIONS

- Vehicle shall be equipped with a high pressure washer with a minimum pressure of 170 bar (2465 psi)
- Vehicle shall be equipped with Rear LED Work lights
- There shall be a vacuum gauge mounted inside the cab to indicate the suction power of the turbine
- The Hopper shall be equipped with a manual Hopper Hand Pump to allow for raising the hopper in the even of a break down
- The 200L fresh water tank shall be equipped with a Clean Water Low Level Indicator to display the water level in the digital dash
- The vehicle shall be equipped with a manual central greasing system
- The hopper shall be equipped with a 5m Wander Hose that can be attached on both the left and right side of the hopper. The Wander hose shall store away internally on the hopper so as not increase width or heigh of the vehicle.
- The brush arms shall be equipped with electrical tilting for in cab adjustment of the brush angle

PART 3 – EXECUTION

3.01 GENERAL

A. All equipment and materials shall be assembled in accordance with the manufacturer's recommendations.

B. Prior to acceptance, Owner shall inspect and test all equipment. The manufacturer's warranties shall commence upon acceptance by the Owner.

C. The bidder shall demonstrate that he is in a position to render prompt service to the equipment and to be able to furnish replacement parts. The bidder shall have a service facility located in the State of New Jersey.

3.02 OPERATOR TRAINING

An eight (8) hour training instruction at the Seaside Park Department of Public Works (exact location to be provided by Borough) including operation and safety shall be provided to the Owner by the bidder upon delivery of the equipment.

3.03 MANUALS

Deliver with Machine:

1. One paper parts book shall be delivered with the machine.
2. One shop service manual shall be delivered with the machine.
3. Two operator / maintenance manuals shall be delivered with the machine.

PART 4 – QUANTITY AND PAYMENT

4.01 GENERAL

The item “Compact Street Sweeper” shall be measured for payment on a Unit Basis, which price shall include all labor, equipment, materials, delivery to the Borough of Seaside Park, in Seaside Park, New Jersey, warranty, training, and all else as specified herein.

Note please include all chassis warranty and body warranty information with bid.

END OF SECTION 11400