SPECIFICATIONS
ONE (1) 6 CU.YD. DUMP BODY AND PLOW WITH WING

GENERAL:

It is the intent of this specification to provide the Town of New Windsor with a new 6 cubic yard dump body and plow with wing. The unit is to be furnished and installed on a truck chassis provided by the Town and shall conform with all Federal and State of New York standards for such vehicles. In addition, all manufacturer standard equipment and accessories, whether or not specified herein, unless specifically modified or deleted by the specifications, shall be furnished. All components, equipment and accessories hereinafter specified shall be fabricated, constructed, manufactured or assembled and installed in accordance with the requirements of the severity of service to which such vehicles are normally subjected.

Each bid will be submitted with a guarantee/warranty for the equipment and installation provided clearly defining the terms and conditions of the warranty.

All proposed truck equipment must meet or exceed all of the following minimum specifications before consideration for award. Any deviation from the specifications shall be provided in typed form clearly shown on the form in the right-hand column provided. All bids shall include catalog information for the dump body and plow assembly with wing, clearly identifying the model to be provided and the specifications proposed for the equipment.

DUMP BODY

The body shall be a traditional dump as well as a material spreader in one. _____

It shall be 10’ x 88” inside dimensions. _____

The side shall have a capacity of 6 yards and the tailgate shall be 7.5 yards. _____

The entire body shall be manufactured of 3/16” steel. _____

The Floor, Sides, Tailgate, Bulkhead shall be of 3/16" 205,000 P.S.I (HARDOX -450) steel with radius sides. _____

Rear Corner Posts SHALL BE **201 STAINLESS STEEL**. _____

There shall be a cab shield mounted integrally with the headboard. _____

The top rails of the body shall be a minimum 4" X 3" structural tubing. _____

There shall be provisions for sideboards at the top of the top rails. _____

The curbside rear post shall be tied to the front post with a structural tubing located near the top of the posts. _____

There shall be a ladder mounted roadside at the front of the body. _____

The tailgate shall be a 6-panel design and shall be double acting. _____

The tailgate shall be level with the floor when horizontal. _____

There shall be an air tailgate locking system. _____

The air tailgate controls shall be installed within reach of the operator. _____

Spreader chains shall be provided. _____

There shall be a body up safety prop for servicing the body. _____

There shall be mud flaps on both front and rear of the wheels. _____

The front flaps shall have anti-sail brackets. _____

The understructure shall have a 10” I-beam 25.4 #/Ft. _____

Long-members or greater. (NO CHANNEL).

There shall be a conveyor assembly roadside. _____

This conveyor shall move the materials forward to the spinner frame mounted behind the driver's door. _____

The material conveyor shall run roadside of the body and shall be 18" wide. _____

The chain shall be pintle type and shall have 3/8 x 1 ¼" bar flights. _____

The chain shall have a break-formed cover and not be exposed to the load material. _____

The drive shall have a bronze gears and shall have a 25:1 ratio. _____

The conveyor gearbox shall be superior aluminum. _____

This Aluminum drive box shall be driven with a hydraulic motor of ample size. _____

The torque capacity shall be 13740 psi/inch at 100 RPMs. _____

The body shall be constructed to allow the gearbox, bearings, drive shaft and sprockets to be removed in one piece. _____

Material shall flow forward through an adjustable door with hand crank jack for adjustment. _____

Door opening shall be a minimum of 182 cu./ins. _____

There shall be a built-in 2 section hinged cover plate for the conveyor. _____

The chain adjustment shall be accomplished with grease cylinders, not screw type adjuster. _____

The grease cylinders shall be nitrated and have grease fitting to 600 PSI. _____

There shall be a trap door at the rear of the body to allow the entire rear chain idler assembly to be removable. _____

There shall be a truck frame-mounted spinner with the hydraulic motor mounted at the top of the drive shaft and a polyurethane spinner disc to spread the material. _____

The spinner shall have hydraulic quick couplers for ease of removal. _____

The material shall be feed to the spinner with a plastic tenelene or equal material chute. _____

There shall be 5 - 3" structural channel cross members at the cylinder attachment points and a series of 2 -15/16" X 3/ 16" break formed cross members making a honeycomb design for floor supports. _____

The long members shall be tied at the top with 3" X 3" structural tubing and at the bottom with break-formed plate for added strength. _____

The floor and curbside of the body shall be designed to lift, and move material to the roadside conveyor. _____

The floor and hinge shall be bolted to the body long members, welded hinges are not acceptable. _____

The three hinge blocks shall be held by 4" X 5/8" Grade 5 bolts. _____

The floor hinge shall be a minimum of 1-3/4" hard chrome induction rod with cast steel blocks. _____

These hinges shall be bolted directly to the 10" I-beam long members. _____

The entire floor and curbside shall be removable with bolts. _____

There shall be grease fittings on each block. _____

The remaining stationary outside long member shall be 3" X 4" structural tubing. _____

There shall be two 3—1/2" X 28”double-acting cylinders to lift the floor. _____

The combined lifting capacity of the floor cylinders shall be 19 tons at 2000 PSI. _____

These cylinders shall be factory-plumbed to the rear of the body with steel pipe. _____

For safety and strength, these cylinders shall attach to the outside of the long member with cast steel attachments not a fabricated piece. _____

The cylinder rods shall be manufactured using the HYDRAUNITE method to minimize wear and corrosion. _____

The cylinders shall have a full two-year warranty from its original manufacture. _____

The floor in the fill-lift position shall be at approximately 40 degrees. _____

The body lift hoist shall be telescopic three-stage. _____

The barrels of each stage shall be manufactured using HYDRAUNITE method to minimize wear and corrosion. _____

The cylinders shall have a full two-year warranty from its original manufacture. _____

It shall have a capacity of 20 tons double acting. _____

It shall be saddle mounted to the truck frame. _____

At the rear of the body, there shall be a 12" bolt-on spreader plate. _____

There shall be stop, turn, tail, back-ups and amber L.E.D. strobe lights in the rear corner posts-oval-shaped. _____

TOP GRADE SCREENS: BY TENCO MACHINERY, LTD.

The body shall be fitted with four (4) section top grate screens supported by a heavy-duty tubular center brace. The design of the screen system shall allow the tailgate to be operated with the top grate screens installed on the body. _____

PLOW FRONT HITCH: VIKING CUSTOM "POWER TILT" HITCH

The plow frame shall be designed so as to keep the plow attachment points as close to the front of the truck as feasible. The custom truck attachment shall consist of minimum 1/2"side plates, reinforced and bolted as far back on the truck frame as possible. The vertical risers of the "A" frame shall be from minimum 4" by 3" by 1/2" A—36 structural steel angle material. The horizontal member to which the base of the lift cylinder pins shall be a minimum of 4" by 4" by 1/2" angle boxed in with 1/4" by 5" bar. The hitch shall provide a minimum of three (3) plow drive heights on 30-1/2" push lug centers. The bottom of the hitch behind the connecting lugs shall be adequately braced and reinforced to transmit plowing forces to the truck frame. The hitch shall be designed to accommodate a front wing post of either patrol or fill leveling design. The front hitch shall be of "power tilt" design with the plow lift cylinder being capable of being locked out for tilting. Hitch must be capable of full power tilt to allow for routine engine maintenance.

PLOW LIFT CYLINDER

The plow lift cylinder shall be a 4” bore by 10” stroke double acting design. _____

HYDRAULIC REAR SUPPORT

The rear support vertical beam shall be fabricated from a 7” x 4” x 3/8” rectangular tubing. This vertical beam shall be integrally welded to, and supported by, a horizontal member of 7” x 4” x 3/8” which is welded to a 1/2” thick H.R.M.S. mounting plate. A 1” thick H.R.M.S. stiffener plate shall be welded to the support and shall span the width of the truck frame. Further support shall be provided by an 8-gauge H.R.M.S. formed support plate and a diagonal member from 7” channel at 12.25 lbs. /ft.

There shall be a removable bracket that provides a connecting location for the lift cylinder and (2) possible locations for a single standoff arm. The standoff arm bracket shall be held in place by a 1” diameter cold rolled steel pin and a retaining pocket fabricated from 1/2” thick H.R.M.S. plate. The standoff arm and cylinder shall be pinned to (2) 1/2” thick H.R.M.S. ribs on the standoff arm bracket with 1 1/4” diameter cold rolled steel pins.

The bracket shall pin to a hydraulic cylinder and two (2) standoff arms. The cylinder shall be not less than a 3” diameter x 14 7/3" stroke double acting type. It shall attach between the mounting bracket and a sliding collar at the upper standoff arm. Adjustable flow restrictors shall be installed between the hydraulic control valve and this cylinder so to provide for variation of speed. The cylinder shall be fitted with an integral counter balance valve at its base to protect against impact load and the possibility of the wing dropping due to pressure line failure.

Meets above specifications: _____

EXCEPTIONS:

WING: VIKING MODEL 144W-HD

The nose height of the wing shall be 29” and the discharge height shall be 38”. The overall length of the wing shall be 144”. The wing moldboard shall be fabricated from 8-gauge HR sheet. The top of the wing shall incorporate a formed channel as a continuation of the moldboard for added strength. The bottom backer angle shall be 6” by 4” by ¾” (with ½” steel plate gussets equally spaced between each cutting-edge hole) which shall be welded to the 8” gauge sheet. The moldboard shall have five (5) vertical ½” flame cut plate ribs. Located between the fourth and fifth vertical rib shall be four (4) horizontal stiffener plates with a series of vertically punched holes that allow the standard arm pivot block to be bolted directly to the horizontal stiffener plates. For connection to the front post hinge, there will be three (3) 21 9/16” drilled holes through the nose plate, utilizing a 1 1/2” hex head wing bolt. The wing shall be equipped with a ½” by 6” by 132” C-1085 cutting edge punched on 12” centers and a 10-degree moldboard shoe made from abrasion resistant steel (minimum BRINELL 36) on the discharge end, both to be bolted to the backer angle by Grade 5 heat treated carriage bolts.

WING ARMS: VIKING FULL-TRIP WING ARMS

The inner arms shall be fabricated from 2-1/8” solid bar stock. The outer arms shall be fabricated from 2 1/2” schedule 80 pipe. The upper arm will have a 3-3/16” CD. by 19/32” diameter wing trip spring. It must be fabricated from alloy steel; the trip spring shall be a minimum of 29” long. Both upper and lower arms shall be equipped with a swivel to prevent damage to the arms when folding in tight to the chassis. The arms shall be adjustable in length from 55” to 75”. The upper arm offering nine (9) positions and the lower arm offering nine (9) positions.

POWER REVERSIBLE TRIP-EDGE PLOW: TENCO MODEL TCP-11-T-42-E2-HA2

The plow shall be 11’ long by 40” high and shall clear a path of 9’—0” at 30 degrees. The top of the moldboard shall have a 2-1/2” by 1’ 1/2” tubular reinforcement running the full length parallel to the ground. Welded to the top reinforcement shall be a minimum of seven (7) 3/8” flame cut plate ribs. The bottom of the ribs shall be welded to a 6” by 4” by 5/8” boxed hinge and spring support. The hinge shall be from minimum 4” by 4” by 3/4” angle supported by a minimum of six (6) plate hinges from flame cut 5/8” plate. The trip section shall be utilized as either a one (1) piece unit or three (3) piece section by removal of 1” section bolts. The trip-edge shall be reset after hitting an obstruction by six (6) vertically mounted coil springs installed behind the trip edge. The springs shall be of compression type from minimum 7/8” spring wire with a minimum of either (8) coils each. There shall be two (2) spring retainer holes to allow from spring tension adjustment. The backer angle for the cutting edge shall be punched to accept either 8” or 3”- 3” -12” (AASHO) punched blades. There shall be two (2) moldboard shoes and two (2) curb shoes, one

(1) on each side of the plow moldboard. The curb shoes shall be a minimum 65K Rockwell hardness. The moldboard skin material shall be a minimum of 3/8" polymer material. The A-frame sector shall be fabricated from 4" by 4" by 3/8" structural tubing and shall pin to the mainframe support through a 1" pin. The mainframe support shall be 4" by 4" by 3/8" structural tubing. The A-frame reversing table shall be fabricated from flame cut 1/2" steel plate and shall be a minimum of 9" wide. Welded to the truck side of the A-frame shall be a 3/4" by 4" by 36" plate which forms the pivot point for the evener plate. The evener plate shall also be fabricated from 3/4" by 4" plate. The evener plate shall have stops to restrict the plow from listing more than 25 degrees. There shall be 1" thick ears for attachment to the plow to the chassis located on the evener plate assembly. These ears shall be on 31" centers.

The plow shall be capable of power reversing through a range of 30 degrees right to 30 degrees left discharge. There shall be two (2) industrial type cylinders with a minimum 3" bore and 20" stroke with a 1-1/2" rod. The cylinders shall be protected by a frame mounted cushion valve.

The plow shall be capable of moldboard cutting edge adjustment at 10 degrees, 15 degrees and 20 degrees from vertical. The entire plow and frame shall be sandblasted prior to application of finish coat -flat black.

OIL RESERVOIR: FRAME MOUNT OIL RESERVOIR

There shall be a thirty (30) gallon stainless steel frame mounted oil reservoir with hydraulic valve enclosure, The reservoir shall be equipped with a return line filter assembly, oil level sight gauge magnetic drain plug and vented 2" fill cap with integral strainer.

SOLID AND PRE-WET CONTROLLER

Spreader controller must capable of 3 proportional PWM outputs (Auger, Spinner, Pre-wet and Auger reverse).

Control shall be by microprocessor for high control accuracy. The microprocessor must incorporate redundant circuitry and be housed in a sealed cast aluminum housing. The manufacturer must have published specifications that meet or exceed the following:

RF Immunity	ISO 11452-2 400-1000 MHz, 80% mod. 1 kHz
Conducted Immunity	ISO 7637-2 (2004) System Pulse 1, 2a, 2b, 3b, 4
RF Emissions	CISPR 25:2002—08 30 MHz-1GHz acc. to 72/245/EC EN 55025
Vibration	ISO 16750—3 10-2000 Hz at 58m/s; IEC 60068-2-72 40G for 11 ms
Operating Temperature	-30 85° C
Storage Temperature	-40 85° C
UV Resistance	DIN 75220
Media Resistance	ISO 16750-5
Protection Category	IEC 60529, IP63

*The controller shall have 5 modes of operation for solid material application. They shall be closed loop, open loop, manual, groundspeed triggered manual and 12 volt triggered manual.
*The controller shall have the following modes of operation for liquid application. They shall be closed loop, manual, groundspeed triggered manual, 12 volt triggered manual, fixed and anti-ice. .
*The spreader control shall have a 5.5" organic light emitting diode (OLED) display that shows Auger/Conveyor application rates, Spinner set point, Liquid application rate and Ground Speed.
*The controller shall have 9 programmable application rates for solid material and liquids.
*The controller shall have 4 different material options for solid and liquid.
*The controller shall have access to remove past spreading information
*USB key or password-protected calibration values
*Operating parameters and event data can be retrieved by USB memory stick
*On—screen display of storm and season totals

Audible error indication with text explanation. Current compensated and protected outputs. Solenoid and cable failure detection. Firmware upgradeable via USB.

To ensure complete system compatibility, spreader controller, hydraulic valve and hydraulic pump shall be from a single manufacturer. Items that are manufactured by one entity and "branded" with another manufacturer's name shall not be accepted as being from a single manufacturer. Manufacturer shall be ISO 9001 and ISO 14001 certified.

Compu-Spread CS 530 Solids & Liquid Controller

HYDRAULIC VALVES

VALVE LAYOUT

Inlet	
Hoist	DA relief set 500 psi Air
Tilt	DA relief set 500 psi Air
Plow	DA Air
Plow Angle	DA Air
Wing Toe	DA Air
Wing Heel	DA with Adjustable Reliefs Air
Auger	SA Electrical Proportional
Sinner	SA Electrical Proportional

Valve Must be stackable up to 9 sections. Valve is to be Cast Iron design. Must be capable of working pressures of 6000 PSI. Use of Spreader Blocks or Hybrids are unacceptable. Inlet must be capable of Open center or Closed center Hydraulic systems.

Pump will be an 80cc wet spline pump. _____

There will be a low oil sensor in the tank to protect the pump from running dry. _____

There will be a low oil control console that will allow the pump to be engaged if the oil goes below the sensor. _____

PRE-WET SYSTEM WITH TW 160 GALLON RESERVOIR

Pre-wetting system shall dispense and measure amounts of calcium chloride, salt brine and /or other chemicals used in snow and ice control. _____

The system shall have a 160-gallon poly reservoir tank mounted in the cab shield. _____

The cab shield/bulk head shall be a proven design capable of supporting the addition weight of the reservoir tank. _____

All components used shall be non-ferrous, austenitic and corrosion resistant. _____

The system shall be complete with pump, pump control, nozzles, hoses, tank fittings, wiring and mounting hardware as required and provided by one supplier. _____

The electric pump shall be mounted near the liquid reservoir, in a NEMA fiberglass enclosure. _____

The enclosure shall be mounted in a location that will not hinder normal spreader maintenance or operation. _____

A 5-PSI check valve shall be installed as close to the nozzles as possible to prevent siphoning of the liquid chemical. _____

Two nozzles shall be located inside the conveyor discharge box just above the conveyor chain. _____

Plumbing components shall be constructed of heavy-duty glass reinforced polypropylene or brass, except check valves. _____

The hose for the suction line to the pump shall be 3/4” EPDM. All pressure hoses shall be 1/2” EPDM. _____

A 3/4” filter with 304 stainless steel reinforced screen shall be installed in the suction line. _____

HOSES
All hoses shall be manufacturer's standard sizes and shall be of a recognized manufacturer: AEROQUIP or equal. All suction and return lines shall meet or exceed a rating of SAE100R—4. All pressure lines shall meet or exceed a rating of SAE100R-5. All lines shall be run so that they do not interfere with either the exhaust system or driveline of the chassis. Lines shall be adequately supported and fastened to frame members. Lines shall be covered with flexible armor material where they may be chafed. _____

CONTROLS: DEL AIR
Air Controls for all Plow/Wing/Body functions, JOY STICK type for the plow and wing on a pedestal, and a Floor Mount stand for body hoist and side tilt with a safety lock out for hoist. _____

MISCELLANEOUS _____

PLOW LIGHTS: The unit shall be equipped with a set of metal frame plow lights installed on the top cross-member of the custom truck attachment.

ROOF STROBE: There shall be an amber strobe light installed on the chassis. _____

BODY STROBES: There shall be amber, oval shaped, strobe lights installed in the rear corner posts of the dump body. _____

WORK LIGHTS: There shall be (2) Wing lights and (l) Spinner light installed. _____

LOAD COVER: There shall be a PIONEER model EDD1500D ELECTRIC load cover with wind deflector, asphalt tarp. _____

ASPHALT PAN: There shall be a 12" wide asphalt pan, fabricated from ¼" plate material installed on the body. _____

PAINTING: The body shall be painted to match chassis cab, Under side and 6" up the sides of the body shall be painted with 26 P. The plow/wing attachments shall be painted gloss black. The plow frame shall be orange with a black polymer and the wing moldboard shall be painted Omaha orange, under body and chassis SHALL THEN GET Z-BARTED. _____

INSTALLATION: All equipment shall be installed in a professional manner with proper hydraulic fluids furnished. _____

LIGHTS: All DOT required clearance lights and/or reflectors shall be installed on the body. _____

POLY FENDERS over Rear Axles of the chassis. _____

ALL electric wires shall be HEAT Shrunk connectors. _____

Ladder on front left side of body. _____

Extended Grease kit for combination body. _____

STAINLESS STEEL QUICK DISCONNECTS, for plow and spinner _____

STAINLESS STEEL HYDRAULIC LINES WITH HOSE AT FLEXPOINTS _____

PINTLE HOOK: 25 TON PINTLE HOOK
With safety “D” Rings, Install Glad Hands for air brakes, 7 wire trailer plug with electric brake controller in chassis cab, to be installed on 8” ship channel on rear of chassis, The chassis from truck manufacture shall have air supply to rear axle with a trolley brake. _____

BID SHEET

Gentlemen:

The undersigned, as bidder, declares that he has carefully examined the specifications attached hereto and that he proposes and agrees, if this proposal is accepted, to contract with the Town of New Windsor for furnishing the following:

ONE (1) – 6 CU.YD. DUMP BODY AND PLOW WITH WING INSTALLED.

_____ $_____

WRITING NO CENTS FIGURES

TIME OF DELIVERY AND INSTALLATION:

The bidder shall be responsible to coordinate the delivery and installation of the specified equipment with the Owner and the Owner's supplier of the vehicle chassis, delivery and installation of the specified equipment shall in no case extend 60 days beyond the Town's receipt of the chassis.

The Town Board of the Town of New Windsor reserves the right to reject any and or all bids.

Date: _____

Address: _____

_____

Telephone: _____

_____

Authorized Signature Date

_____

Company

NON-COLLUSION FORM

Pursuant to Section 103-d of the General Municipal Law of the State of New York; the undersigned in connection with the annexed bid of the Town of New Windsor does hereby affirm under penalty of perjury as follows:

A. This bid or proposal has been independently arrived at without collusion with any other bidder or with any competitor or potential competitor;

B. This bid or proposal has not been knowingly disclosed and will not be knowingly disclosed, prior to the opening of bids or proposal for this project, to any other bidder, competitor or potential competitor.

C. No attempt has been or will be made to induce any other person, partnership, or corporation to submit or not to submit a bid or proposal:

D. The person signing this bid or proposal certifies that he/she has fully informed themselves regarding the accuracy of the statements contained in this certification, and under the penalties of perjury, affirms the truth thereof, such penalties being applicable to the bidder as well as the person signing in its behalf.

E. That attached hereto (if a corporate bidder) is a certified copy of resolution authorizing the execution of this certificate by the signator of this bid or proposal in behalf of the corporate bidder.

Resolved that _____, be authorized to sign and submit the bid or proposal of this corporation for the following project:

ONE (1) – 6 CU.YD. DUMP BODY AND PLOW WITH WING

And to include in such bid or proposal the certificate as to non-collusion required by Section 103–d of the General Municipal Law as the act and deed of such corporation, and for any inaccuracies or misstatements in such certificate this corporate bidder shall be liable under the penalties of perjury.

The foregoing is a true and correct copy of the resolution adopted by _____ corporation at a meeting of its Board of Directors held on the _____ day of _____, 2_____.

_____ _____

Secretary Bidder

Date: _____

THIS FORM MUST BE COMPLETED BY BIDDER

ADVERTISEMENT FOR BIDS

THE TOWN OF NEW WINDSOR, ORANGE COUNTY, NEW YORK, WILL RECEIVE SEALED BIDS FOR:

ONE (1) - 6 CU.YD. DUMP BODY AND PLOW WITH WING

AT THE OFFICE OF THE TOWN CLERK, TOWN OF NEW WINDSOR, ORANGE COUNTY, NEW YORK, UNTIL 10:00 A.M. EASTERN TIME, ON JANUARY 25, 2022 AT WHICH TIME ALL BIDS RECEIVED WILL BE PUBLICLY OPENED AND READ ALOUD.

INFORMATION FOR BIDDERS, FORM OF BID AND SPECIFICATIONS MAY BE EXAMINED AT, AND COPIES THEREOF OBTAINED, AT SAID TOWN CLERK'S OFFICE.

THE TOWN BOARD OF THE TOWN OF NEW WINDSOR RESERVES THE RIGHT TO WAIVE ANY INFORMALITIES IN, OR TO REJECT ANY OR ALL OF THE BIDS RECEIVED.

BIDS FOR SERVICES SHALL NOT INCLUDE EXCISE, SALES, OR COMPENSATING USE TAXES.

NO BIDDER MAY WITHDRAW HIS BID WITHIN 60 DAYS AFTER ACTUAL DATE OF BID OPENING.

BY ORDER OF THE TOWN BOARD
TOWN OF NEW WINDSOR

KELLY ALLEGRA, TOWN CLERK
TOWN OF NEW WINDSOR