



THE CORPORATION OF THE CITY OF NIAGARA FALLS

**REQUEST FOR TENDER - SUPPLY**

**RFT17-2019 - SUPPLY & DELIVERY OF  
ONE (1) TANDEM AXLE SNOW PLOW SANDER TRUCK**

***SPECIFICATIONS***

**NAME OF COMPANY (DEALER):** \_\_\_\_\_

ITEM/CATEGORY	CITY REQUIREMENTS	BIDDER TO STATE
<p><b>General</b></p>	<p>As required by law under the Motor Vehicle Safety Act, the intermediate or final stage manufacturer(s) that shall install the combination spreader/dump body and snowplow equipment onto the incomplete truck chassis shall possess a valid National Safety Mark registered with Transport Canada and will affix their registered National Safety Mark sticker onto the chassis thus certifying the unit as complete. Specify the name of the company that will complete the spreader body installation and affix the registered National Safety Mark number thus certifying the vehicle as complete and the company's registration number. If requested by the City, proof of registration with Transport Canada by the company affixing the National Safety Mark is to be supplied.</p> <p>The snow and ice control equipment supplied under this specification shall be the manufacturer's latest model standard commercial product and shall have demonstrated industry acceptance by having been manufactured and sold in significant numbers to Ontario Municipalities, and shall have been proven in service for the application for at least one (1) year prior to issuing of this tender document.</p> <p>A demonstration of equipment bid may be required. If requested it will be the responsibility of the bidder to arrange this demonstration at the municipality's location within five (5) working days of written notification. All equipment demonstrated will be the exact models offered by the bidder on this tender document.</p> <p>The company that shall complete the installation of the snow plow equipment onto the truck chassis must be currently actively engaged in this business and references must be supplied for at least 3 prior installations completed by this company in the Niagara Region (list references).</p> <p>Where references are requested in this tender document, the information must be completed in full and all references supplied are to be for the models of equipment offered by the bidder in the answered specifications. The design and operation must incorporate safety devices and attachments necessary to ensure that the equipment provided is capable of being operated within maximum safety.</p>	

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	The City reserves the right to inspect the equipment at any stage of manufacturing and/or installation of equipment onto the truck chassis and to have any deviations corrected upon request. A final inspection will be completed by the consignee at the time of delivery.	
<b>OMVIC Registration</b>	<b>Bidders must be registered under the Motor Vehicle Dealers Act. The City will not consider bids from any bidder who is not specifically named as REGISTERED on the Ontario Motor Vehicle Industry Council (OMVIC) registry at the time of this tender closing.</b>	
<b>Year</b>	Brand New Latest model chassis	
<b>Make</b>		
<b>Model</b>		
<b>Cab</b>	Conventional cab, steel 83" wide minimum. Cab interior width dimension 78" shoulder room minimum. Cab interior height dimension minimum of 56.5". Cab B.B.C. dimension not to exceed 110". Cab suspension, air bag type. Cab sound insulation includes dash insulation and engine cover insulation. Cab shall be Air Conditioned with integral heater and defroster. Driver and passenger seats shall be air suspended, high back with integral headrest, cloth. Preference – National 2000 with lumbar support, cloth, 2 position front cushion adjustment, seat back adjustable and dual shocks. Driver right side arm rest. Passenger left side arm rest. Cab mounted grab handles right and left interior and left side exterior. Rubber floor mat. Dual sun visors. Two (2) styled rectangular mirrors 7.09" X 15.75" breakaway brackets type, 102" wide spacing, integral convex both sides, all heated heads,	

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	thermostatically controlled, clearance lights, powered both sides, flat glass only.	
<b>Engine</b>	<p>6 cylinder diesel turbo-charged, 435 HP minimum at 2000 RPM.            1550 lb. ft. torque at 1400 RPM.            2100 RPM governed speed.            Shall have exhaust brake, automatic engine shutdown with 3 minute delay.            Low coolant level indicator with audible alarm.            Engine block heater required.            Shall be 115 volt/1000 watts.            Extended life coated oil pan.            Anti-freeze permanent to -40 degrees Celsius.            To be equipped with Horton Drive-Master Polar Extreme two speed, with residual torque devise for disengaged fan speed.            To be equipped with electronic hand control throttle electronic.            Radiator to be cross flow, series system, 1300 sq. in. aluminum radiator core and 885 sq. in. charge air cooler and 470 sq.in. Low temp. Radiator down flow, for use with front mount PTO. Chassis OEM radiator manufactured to allow full cooling and increased durability.            PTO effects, includes adapter plate on engine, front mounted.            Engine control, remote mounted includes wiring for body builder installation of PTO controls with ignition switch control.            To meet Federal emissions for engines WITH EPA-CARB CERTIFICATION.</p>	
<b>Frame</b>	<p>Frame shall have a vertical resisting bending moment of 3,200,000 in lbs. minimum            Yield strength of 120,000 PSI.            R.B.M. (design) Specify.            Yield strength. Specify            Frame treated with rust protection, Galvanized treated preferred.            Integral full front frame extensions shall be provided if required for installation of snow plow harness minimum 20".            No trailer hitch plate - filler only on rear frame rail ends.</p>	

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<b>GVW</b>	State	
<b>Hydraulics / Controls</b>	<p>Two separate hydro control sectional valve stack and in cab feather air controls total of eleven sections. One mounted integral with the rear wing harness and one mounted on the front plow harness.</p> <p>The front mounted valve stack shall include all plow and harness functions and the rear wing harness valve shall include the body and rear wing functions.</p> <p>Must have stainless steel tubing manifold for hydraulics.</p> <p>Stainless steel tubing in lieu of hydraulic hose along the length of chassis frame and for spreader body cross conveyor.</p> <p>Stainless steel tubing to front of chassis for hydraulic pump in lieu of hydraulic hose.</p> <p>Stainless steel tubing to be secured by vibration dampening clamps.</p> <p>All lines entering the truck cab shall be properly sealed.</p> <p>Front mount Dowty tandem dry mode pump Model 2PL1582PL220DVTP.</p> <p>High pressure and return line hydraulic filters MP Filtri.</p> <p>Oil reservoir assembly integral with rear wing harness.</p> <p>Low oil level indicator with in cab warning light.</p> <p>Use chassis supplied OEM switches for lighting functions.</p> <p>Latest Model Dickey-John control point automated spreader control with granular 2 section PWM valve.</p> <p>Must be minimum 3/16 floor mounting plate for Dickey-John console support. Dickey-john pulse sensor externally located on the conveyor shaft motor.</p> <p>Dickey-John 2 section Vickers valve mounted with stainless hardware and isolated via 1/8" Neoprene.</p> <p>Road Watch temperature sensor integrated with Dickey-John spreader control.</p> <p>All hydraulic hose SAE 100 R16 Eaton Aeroquip Bruiser FC735 where stainless tube is not used.</p> <p>Hydraulic couplers Safeway S70 series.</p> <p>All Hydraulic cylinders shall have Hallite seals.</p> <p>Cylinder rod material shall be Stelmi 200 HR .001 chrome induction layer hardened to 1045 ksi.</p> <p>Body hoist cylinder shall be Mailhot CS series tonnage for specified Tandem Box.</p>	

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<b>ITEM/CATEGORY</b>	<b>CITY REQUIREMENTS</b>	<b>BIDDER TO STATE</b>
<b>Transmission</b>	Automatic / Allison 4500 RDS Pushbutton shift	
<b>Wheel Base</b>	208 " to be determined by Body Builder	
<b>Helper Spring</b>	Right side front Aeon rubber helper spring.	
<b>Axles</b>	22,000 Front , Set Back Axle 46,000 Rear Axle / Hendrickson	
<b>Steering</b>	Dual Power	
<b>Spare Filters to be supplied</b>	Oil / Air / Fuel / Hydraulic	
<b>Wheels</b>	Wheels shall be power coated finish. Front shall be 22.5, hub piloted disc wheel painted steel with 12.25 DC rims with white powder coat paint. Rear shall be dual 22.5, hub piloted disc wheel painted steel with 8.25 DC rims with white powder coat paint.	
<b>Tires</b>	Front – Michelin XZY-3-425/65/22.5 / 20PLY Rear – Michelin XDE MS-11R22.5 / 16 PLY	
<b>Mud Flaps</b>	Must be plain black not logoed	
<b>Brakes</b>	Wabco ABS	
<b>Electrical System</b>	12 Volt Heavy Duty Alternator Add On Circuits for Body Builder	
<b>Windshield Wipers</b>	Intermittent	
<b>Windows &amp; Mirrors</b>	Power / heated mirrors	
<b>Heater &amp; Air Conditioning</b>	Factory	
<b>Seats</b>	As per Spec.	

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<b>Lighting</b>	<p>All lighting shall conform to Ontario Highway Traffic Act Standards. LED Lights. Two (2) Star Warning.(1) Model 23803 LED &amp; (1) Model 23804 LED series beacon lights shall be supplied and mounted on dump body. Lights shall be mounted on spreader body cab shield behind cab, one (1) amber lens, one (1) blue lens, separate switches. Left and right rear Star LED strobe lights, one (1) blue, one (1) amber, to be mounted in spreader body rear upper box corner posts. LED stop/tail/directional and backup lights to be and installed in spreader body rear corner posts. Spreader body stop/tail/directional and backup lights to be LED. Heated LED plow lights required. Plow lights shall be direct plug into OEM chassis plow light connection with no cutting or splicing of wiring system. Wiring system for spreader body shall be Grote ultra-blue seal.</p>	
<b>Fenders</b>	<p>One pair of aluminum fenders chassis frame mounted over rear dual wheels. Mud flaps fore and aft of rear wheels.</p>	
<b>Tailgate</b>	<p>Air trip rear tailgate actuated by two independent 30/30 brake chambers, .with Asphalt Shut</p>	
<b>Approved Models</b>	<p><b>Viking detachable plow and wing harness with hydraulic lock pins Model VCL500HD.</b> <b>Viking one way front plow Model VCL120HSE9. With rubber deflector</b> <b>Viking cable wing harness Model VCL350SCL.</b> <b>Viking VCL144 WHD wing assembly.</b> <b>Viking Pro-line11 model PL1415LW-AL combination U body, aluminum construction.</b> <b>With coal door</b></p>	
<b>Main Conveyor</b>	<p>The main conveyor centered and recessed along the length of dump box floor. Conveyor chain self-cleaning D667 pintle type with a minimum tensile strength of 30,000 PSI. Cross flights - ½" X 1 ½" welded to every second link (approx. 4.5"spacing). All conveyor flights 100% fully welded to the chain links.</p>	

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	<p>Drive and idler shafts two (2) inch diameter minimum. Planetary drive for main conveyor. Drive motor complete with integral built in speed sensor fully immersed in hydraulic oil. Flow control gate between main and cross conveyor screw adjustable by hand crank from driver's side of dump body. Underside of main conveyor complete with full length guard with wash out opening to prevent material spillage on to chassis components and frame rails. Material scraper to clean chain flights prior to return on underside located at drive end of conveyor system. Main conveyor tensioning system with grease ram adjusters.</p>	
<b>Cross Conveyor</b>	<p>Twin dual auger cross conveyor system shall draw material to the right side spinner, left side spinner or both right and left spinner simultaneously. In the dual spinner operation mode both augers run in opposite directions carrying material to the right and left side spinner assemblies. Division of material flow from the main conveyor is a 50/50 split 50% carried to the right side spinner and 50% carried to the left side spinner. In either the right or the left side only operation mode both of the augers run in the same direction and carry 100% of the material from the main conveyor discharge to the selected right or left side spinner assembly. Auger direction of travel controlled via the operator from inside the chassis cab. Flow division divider shields fitted to ensure precision split of material flow at low application rates. Fitted with removable safety guards. Conveyor trough fabricated from 1/4" thick Cor-ten steel. Conveyor trough fitted with 1/4" UHM polymer abrasion liner. Each of the two augers shall have a shaft diameter of 2 3/8" machined to 1 1/4" on each end and equipped with flange bearings to suit. Overall length of the augers 58" with 3/8" thick auger flights. Outside diameter of the augers 6" with a 6" pitch. For ease of maintenance connection of the orbit motors to the auger shaft shall be via split couplers.</p>	
<b>Dual Spinners</b>	<p>Drivers side front and passenger side front twin spinners to spread ahead</p>	

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	<p>of the rear chassis wheels.                      Spinner assemblies spring assist flip up design to allow loading or off-loading from the multi transfer unit tipping frame.                      Two 18" diameter polyurethane spinner disc's with curved flights.                      Two hydraulic drive motor's 3.0 cu. in.                      Spinner height adjustable from 20 to 28" below the mounting surface of the body.                      Spinner chutes 12 gauge Cor-ten steel.                      Chain adjustment for spinner chutes.                      Anti-caking device for spinner discs.                      Spinner assembly's removable design.</p>	
<p><b>U Hopper Sander Requirements</b></p>	<p>Body overall length 180 inches maximum, measured from outside edge of rear apron to front edge of hoist cradle.                      Body inside length 168 inches minimum.                      Body outside width 96 inches maximum.                      Body inside width 86 inches minimum.                      Body front panel height 60 inches from top of conveyor floor.                      Side height 45" inches from top of conveyor floor.                      Tailgate height 53" inches from top of conveyor floor.                      Capacity 10.7 cubic yards at water level.                      Capacity with 10-inch side boards at water level 13.8 cubic yards.                      Installed body weight 6800 lbs. maximum.                      The installed body shall fit on a chassis CA/CT of 132 inches maximum.</p> <p><b><u>CONSTRUCTION:</u></b></p> <p>Body to be constructed from one-piece head-sheet and side panels fabricated from a minimum 1/4" 5083-H321 aluminum                      Body front panel shall be completely clean and clear of any type of recess and/or protrusions into the body including hoist bulkheads, dog houses, etc.                      Top horizontal rails shall be minimum 4" X 4" X 1/4" 6061-T6 aluminum extrusion.                      Rear vertical corner-posts to be minimum 3/16" 5083-H321 aluminum, fabricated in such a way as to allow for the inclusion of rear facing optional lighting requirements.                      Rear vertical corner-posts to be tied to radius side panels and horizontal top rails and welded 100 percent.</p>	



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	<p>Rear vertical corner-posts to be connected to main conveyor via a rear horizontal 8” 6061-T6 aluminum structural channel tube, spanning the full body width.</p> <p>Body construction shall include integral side fenders fabricated from a minimum 3/16” 5083-H321 aluminum material.</p> <p>Integral fenders to be sloped away from unit to prevent any excess material spilled during loading from building/piling up.</p> <p>Body access via 15-inch wide, two-piece fold-up ladder located at the rear curb (right hand) side of unit.</p>	<p>6061-T6</p> <p>5083-</p> <p>loading</p> <p>side</p>
<p><b>Plow Harness Requirements</b></p>	<p>The front plow harness will tilt forward to allow the chassis hood to tilt forward over center of its pivots and stay open without the need of any additional supports.</p> <p>The harness tilt and return function will be performed by the operator from inside the chassis cab via feather air over hydraulic control.</p> <p>Removable portion of the front harness with plow and wing attached shall be removable or attachable as one complete assembly.</p> <p>Swing arm - the male swing arm to be rotated on the shaft and the hub ends are to be guided by four anti-friction polymer discs in the mounting bracket.</p> <p>The swing arm is to be operated by two double acting hydraulic cylinders with the following specifications -</p> <ul style="list-style-type: none"> <li>Piston diameter 2 1/2"</li> <li>Piston rod diameter 1-1/18"</li> <li>Stroke 6"</li> </ul> <p>These cylinders shall permit the front harness to tilt forward by disengaging the top and engaging the bottom hydraulic operated lock pins.</p> <p>Hydraulic locking shall be achieved by two horizontally mounted double acting, hydraulic cylinders.</p> <p>One cylinder shall provide upper locking and the other cylinder shall perform the lower locking function.</p> <p>Sight holes provide for upper &amp; lower lock pins right &amp; left side of harness to allow for operator sight check of pin engagement.</p> <p>The front plate will be one solid piece of 3/8 inch steel plate with cut out of sufficient size to allow cooling of the chassis radiator.</p> <p>Overall height of the front plate will be 49 inches with a 5.25 inch 90°</p>	

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	<p>degree bend at the bottom.                      Right and left side plates, 15 3/4" maximum width by 49 1/4" high 3/8" plate welded to the front plate.                      Upper cross channel 6" by 52" 13 lbs. /ft. welded to the right and left side plate.                      End plate located on upper cross channel 1/2" material 12" x 6" to provide upper mounting location for wing front post.                      1/2" steel plate pump and tilt cylinder mounting bracket welded to the cheek plate assembly, 24 1/4" wide by 18 1/2".                      Cheek plates will be specified to suite chassis frame rails, 1/2" 44W steel plate and will extend back along the chassis frame rails as far as possible.                      Fasteners attaching cheek plates to the chassis frame rails minimum grade 8 N.C. hex head bolts.                      Two pairs of drive ears 100% welded to the front plate spaced at standard 30 1/2" centers.                      Quick-tack hitch pockets bolted to drive ears.                      Hydraulic plow lift cylinder, double acting 4" diameter with 10" stroke.                      Plow lift yoke 3/4" steel plate, braced with two 1/4" x 2" flat bar diagonal braces.                      Two mounting locations in lift yoke to provide location for mounting of plow hydraulic lift cylinder in winter operating position and stored summer position.                      Mounting plates for plow lift cylinder lift yoke and lift yoke braces all 1/2" steel plate 100% welded to front plate.                      Lift yoke brace mounting plates positioned to provide minimum 23.5" span.</p>	
<p><b>Plow Requirements</b></p>	<p>Path cleared - bulldozing 11'.                      Path cleared - at 35° 9'10".                      Set at 50° attack angle, the overhand from the cutting edge to the front of the moldboard shall be 20" minimum.                      Set at 60° attack angle, the overhang from the cutting edge to the front of the moldboard shall be 25" minimum.                      Moldboard fabricated from 10 ga. steel.                      Eight 44W steel 3/8" thick reinforcing ribs 100% welded to the moldboard.                      The bottom of the moldboard reinforced with a 1/2" x 6" x 4" backer angle.</p>	

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	<p>A second angle 3/8" x 3" x 2" welded above for added strength and rigidity.</p> <p>The safety trip shall consist of two compression coil springs incorporated in the drive frame, which will allow the moldboard to float over obstructions.</p> <p>The two compression trip springs will be 5/8" wire, 5 1/4" OD, 14" free length with a total of 8 active coils.</p> <p>When the plow trips the moldboard will ride up on the drive frame and return to the normal plow position after the trip action is completed.</p> <p>The drive frame shall be of A-frame and sector design.</p> <p>The A-frame will be constructed of 3 1/2" x 3 1/2" x 1/4" square tubing with two 3/4" thick pivot plates.</p> <p>Sector frame constructed of 4" x 4" x 3/8" square tube.</p> <p>The sector angle shall provide a 30° radius and be constructed of 1/2" x 3 1/2" x 2 1/2" steel.</p> <p>To prevent wear, the sector will glide between two low friction replaceable polymer bearings bolted on the A-frame.</p> <p>Four hinge points are to be provided to connect the moldboard to the push frame, spanning a minimum distance of 80".</p> <p>Quick tach oscillating beam shall be supplied.</p> <p>Valley Blades high wear cutting edge.</p> <p>Standard right and left side curb runners.</p> <p>Two height adjustable self-steerable shoe holders &amp; brackets shall be fitted on the drive frame with two standard shoes.</p> <p>These shoes shall carry the weight of the plow when the moldboard trips.</p> <p>Two 3" x 14" double acting hydraulic cylinders to reverse the plow to a maximum of 35° right or left.</p> <p>To prevent damage to the reversing cylinders, a cross-over relief valve shall be supplied.</p> <p>Three 3/8" 70 Proof Coil lift chains shall be provided to lift the plow to the carrying position.</p> <p>These chains must be as wide spread as possible in order to make the plow stable, and the plow must remain level when carried.</p> <p>It will be possible to perform the power angle function with the plow in both the lowered working position and the raised carrying position and the plow will remain level.</p>	

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	<p>½" x 12" full width rubber deflector. Two 36" flexible marker rods florescent orange with inside wire cable.</p>	
<p><b>Wing Harness Requirements</b></p>	<p>Rear of wing spotlight &amp; front post mounted spotlight. Bottom of wing tower protected by shoe, and shall have a ground clearance of 11" minimum, truck empty. The spacing of the holes in the slides for connecting the wing braces approximately 17". 3" x 30" stroke DA cylinder mounted on the inside of the front post and shall operate the front wing slide through 2 (6"dia) sheaves and a cable. Approved size of ram controlling the rear end of wing 3" dia. x 30" stroke cylinder, with a cable and sheave assembly. Approved size of ram controlling wing brace slide 3" dia. x 36" stroke double acting. Wing post 8", i-beam, 18.4 lb/ft minimum. Cross member heavy construction to sustain snow-plowing operation in severe conditions. The rear wing tower shall be heavily braced and gusseted to the frame. All sheave pins shall be provided with oil impregnated bronze bearing and grease fitting. A safety chain shall be provided for securing wing when not in use. Guide bars to contain the rear wing slide shall be welded 100% from the bottom up 2 feet. Front trip hinge with internal wire trip spring. Front slide 7" minimum width. Valve mounting plate ¼" thick welded to the horizontal channel and sloping diagonal brace on driver's side for vertical mounting of the main valve stack assembly. Dual adjustable needle valves for up/down wing speed control.</p>	
<p><b>Wing Requirements</b></p>	<p>Overall length 12 feet. Inside intake height 29". Outside discharge height 39". Moldboard thickness 10 U.S.S ga. minimum. Two drive ribs for connecting the wing braces. The drive ribs located approximately 8'6" and 10'10" from the nose end of the wing.</p>	

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	<p>The plate for mounting the wing to the wing post shall be 1" thick with mounting hole located far enough from the edge of the plate to avoid failure in this area.</p> <p>Lower wing angle shall be 6" X 4" X ¾".</p> <p>Mounting of the nose end of the wing to the wing post shall be by means of a hinge and rectangle spring to allow tipping over the wing.</p> <p>Top edge of the wing shall be boxed in and welded 100% to the ribs and the moldboards so as to avoid all pockets.</p> <p>Two adjustable wing braces.</p> <p>The upper brace shock release type, including a spring retraction. The spring shall provide adequate stability of the wing in normal operating conditions, and shall retract the wing from tip-over position.</p> <p>The distance between the center of the mounting holes of the wing braces shall be as follows -</p> <p style="padding-left: 40px;">Upper brace – extended 90" CC. Collapsed 60" CC.</p> <p style="padding-left: 40px;">Extended distances shall be measured with spring fully retracted.</p> <p style="padding-left: 40px;">Lower brace – extended 88" CC. Collapsed 58" CC.</p> <p>One spare pin for adjusting the wing braces shall be supplied with each brace.</p> <p>Valley Blades high wear wing blade kit with curb shoe model FH1WB-12S.</p> <p>One 36" flexible marker rods florescent orange with inside wire cable.</p> <p>Reflective tape on rear edge of wing and wing braces.</p>	
<b>Equipment</b>	Meeting before Build	
<b>Demonstration</b>	A demonstration of equipment bid may be required and if requested, it will be the responsibility of the bidder to arrange this demonstration at the municipality's location within 5 working days of written notification. All equipment demonstrated will be the models offered by the bidder on this tender document.	
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<b>Parts</b>	OEM spare replacement parts must be stocked in inventory by the successful bidder in sufficient quantity to provide adequate product support and to ensure timely delivery of spare parts orders and if requested, the bidder must be able to provide supporting documentation. State location -	
<b>Mfg.'s Corrosion Warranty</b>		
<b>Paint</b>	Truck Cab to White in color Plow/wing harness rear of plow and rear of wing, drive frames, tipping frame and attachments shall all be gloss black finish. Front face of plow and wing gloss yellow.	
<b>Warranty</b>	Warranty coverage will be for a minimum of one year from the date of delivery. Manufacturer's warranty statement will be included with the bid submission.	
<b>Camera System</b>	<p style="text-align: center;"><b>DICAN Ca SMARTWITNESS KP1S DASH CAMERA SPECIFICATION</b></p> <p><b><u>GENERAL SPECIFICATION:</u></b></p> <p>This unit will be equipped with a SmartWitness KP1S dash camera, part # Di-KP1S designed to provide evidence to protect a driver from many of the issues faced on the roads today; Insurance fraud, staged accidents, false/exaggerated whiplash claims, conflicting reports of actual events, driver offense allegations, (speeding, traffic signal violations, swerving, etc.)</p> <p>Additionally recording the following information: Drivers view of the road, Vehicle Location, Impact Force of Accident, Audio, &amp; Driving Style (speed, acceleration, braking, &amp; steering)</p>	

**THE CORPORATION OF THE CITY OF NIAGARA FALLS  
REQUEST FOR TENDER – SUPPLY**

**RFT17-2019 – SUPPLY & DELIVERY OF  
ONE (1) TANDEM AXLE SNOW PLOW SANDER TRUCK**

**SPECIFICATIONS cont'd.**

**NAME OF COMPANY (DEALER):** \_\_\_\_\_

ITEM/CATEGORY	CITY REQUIREMENTS	BIDDER TO STATE
	<p>This system includes HD (720p) Intelligent Accident Camera 2 Ch. w/ GPS speed sensitive 3 axis G-Sensor, Mic, Dual SD card slots, tamper resistant locking enclosure, power harness &amp; 2 x 64GB <b>Micro</b> SD card and reader.</p> <p><b><u>THE FOLLOWING COLOUR CAMERA SYSTEM and FEATURES SHALL BE SUPPLIED:</u></b></p> <p><b>KP1S (Di-KP1S) Dash Camera (Intelligent Accident Camera)</b></p> <ul style="list-style-type: none"> <li>• 720p HD video resolution capability</li> <li>• Built-in GPS logging (Time/Date, Speed, Location) <ul style="list-style-type: none"> <li>170-degree wide angle lens</li> <li>Compact and rugged design</li> <li>Resistant to extreme heat and cold</li> </ul> </li> <li>• Mounted in an ergonomically appropriate area in the cab</li> <li>• Integrated G-shock sensor</li> <li>• Dual record mode (continuous + event)</li> <li>• Adjustable resolution and frame rate</li> <li>• PC analysis and configuration software</li> <li>• Integrated panic button</li> <li>• Tamper-resistant housing <ul style="list-style-type: none"> <li>Locking SD card cover</li> </ul> </li> <li>• Alarm I/O triggers <ul style="list-style-type: none"> <li>Delayed camera shutdown</li> </ul> </li> <li>• Compatible with SmartWitness Rest API 2.0 <ul style="list-style-type: none"> <li>Compatible with all 3G networks, worldwide</li> </ul> </li> <li>• mera SystemOptional 128GB storage capacity (2 x 64GB SD)</li> </ul>	

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**RFT17-2019 – SUPPLY & DELIVERY OF  
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**SPECIFICATIONS cont'd.**

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ITEM/CATEGORY	CITY REQUIREMENTS	BIDDER TO STATE
	<ul style="list-style-type: none"> <li>• Optional 64GB storage capacity (1 x 64GB SD) Optional 32GB storage capacity (1 x 32GB SD)</li> <li>• Optional 2<sup>nd</sup> camera for side, rear, cargo or driver view</li> <li>• Optional remote panic button Optional audio recording Optional cellular service for cloud connectivity</li> </ul> <p align="center"><b><u>INSTALLATION SPECIFICATIONS:</u></b></p> <p>The camera system will be installed to power up on ignition &amp; fused with an inline fuse rated @ 3Amps.</p> <p>For additional specific installation &amp; compatibility requirements please consult the supplier / manufacturer.</p> <p>Quotation Attached: (required only when not included in the main quote)</p> <p><b><u>ADDITIONAL INFORMATION – RECORDING</u></b></p> <ul style="list-style-type: none"> <li>• HD 170° Wide Angle Lens on primary Camera</li> <li>• Optional 2<sup>nd</sup> Camera can be connected</li> <li>• Several 2<sup>nd</sup> Camera options: weatherproof, infrared, dome, side view, etc.</li> <li>• Dual record mode (continuous + event)</li> <li>• Optional audio recording</li> <li>• Connects directly to vehicle ignition power, automated operation</li> <li>• Tamper-resistant design, key required to access SD card data</li> <li>• GPS data records full time to provide location data, vehicle speed, and accurate time/date</li> <li>• Adjustable resolution &amp; frame rate</li> <li>• Built in G-shock sensor (adjustable sensitivity)</li> <li>• Junction box option for connecting vehicle inputs: left/right turn signals, brakes, reverse, car horn, door opening, taxi meter, emergency lights, etc.</li> <li>• Optional 3G transmission when active SIM card is inserted into KP1S</li> </ul> <p><b><u>PLAYBACK &amp; ANALYSIS</u></b></p> <ul style="list-style-type: none"> <li>• PC analysis software included</li> <li>• Optional 3G: sends up to 20 second MP4 file immediately after incident</li> </ul>	



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**RFT17-2019 – SUPPLY & DELIVERY OF  
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**SPECIFICATIONS cont'd.**

**NAME OF COMPANY (DEALER):** \_\_\_\_\_

ITEM/CATEGORY	CITY REQUIREMENTS	BIDDER TO STATE
	<ul style="list-style-type: none"> <li>• Request HD video on demand from anywhere</li> <li>• Filter data search by time/date, event, vehicle speed, G-Force level</li> <li>• MP4 conversion tool. Data remains watermarked</li> <li>• Privacy masking feature for blurring out faces or license plate numbers</li> <li>• Google maps integration for route tracking</li> <li>• Advanced driver behavior analysis &amp; reporting software</li> <li>• Save/print event reports</li> <li>• OTA software &amp; firmware updates</li> <li>• mAPI available for integration with Telematics/AVL software</li> <li>•</li> </ul> <p>For further information or questions, contact:</p> <p>DICAN Inc. 1100 Burloak Drive, Suite 300 884-7569 Burlington, ON L7L-6B2 9652</p> <p>Web: <a href="http://www.dicaninc.com">www.dicaninc.com</a></p> <p>Contact: Sales Office Phone: Toll Free: 866- Direct Line: 905-937- Fax: 905-938-7406</p> <p>Note: Quotation for equivalent systems must meet and exceed the minimum specifications listed and will be subject to approval by designated staff of the purchaser. When quoting an equivalent system, three references with contact information must be provided and must be included with the request for tender, quote or RFP documents.</p> <p><b>DICAN SINGLE CAMERA SYSTEM SPECIFICATION</b></p> <p><b><u>General Specification:</u></b> This unit will be equipped with a single reversing color camera mounted in a secure, safe, functional area on the unit. The monitor will be mounted in an environmentally and ergonomic appropriate area in the cab for optimal viewing for the operator. Where available and necessary the equipment's reverse trigger circuit will activate the monitor's reverse signal. Where no reverse trigger is available, the camera system will be installed to power up on ignition.</p> <p><b><u>THE FOLLOWING COLOUR CAMERA SYSTEM and FEATURES SHALL BE SUPPLIED:</u></b></p>	

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REQUEST FOR TENDER – SUPPLY**

**RFT17-2019 – SUPPLY & DELIVERY OF  
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**SPECIFICATIONS cont'd.**

**NAME OF COMPANY (DEALER):** \_\_\_\_\_

ITEM/CATEGORY	CITY REQUIREMENTS	BIDDER TO STATE
	<p>Veilig Reversing Camera System, model number <b>RD1CV-007LCD</b>, 7”LCD color monitor, high definition heated color camera, 15m video power harness and Heavy Duty T Bolt Pedestal Monitor Mounts and to also include Heavy Duty (2) two Axis Swivel Camera Mounting Hardware.</p> <p><b><u>LCD MONITOR - RDM-LCDS</u></b> <b>CAMERA WASH SPECIFICATION w/ Manual Air Blow Off</b></p>	
<b>Manuals</b>	One copy of an operation, parts and service manual will be provided. Electric and hydraulic schematics must be provided in the manual and must be specific to the actual completed installation.	
<b>Manuals</b>	Truck Manufacture Repair Manual.	
<b>Soft-Ware</b>	Engine Laptop Software for Diagnostic.	
<b>After Sales</b>	It is a requirement of this tender that the bidder maintains an after sales service facility and employees/staff qualified to perform after sales service work and that the bidder is also capable of providing in field mobile field service at our location. The bidder, if requested, must be prepared to provide a tour of this facility.	
<b>Training</b>	A factory representative shall provide training at our location after delivery of the completed unit.	
<b>Delivery</b>	Date	
<b>License</b>	City to License	