



**TENDER PW 2019-08
ONE NEW 2018 OR 2019 MOTOR GRADER**

PLEASE NOTE: BID REGISTRATION

Bid Registration is provided and mandatory to assist in the issuance of any addendum/addenda (via fax or email), should the need arise. Prospective Proponents are required to register and also check the Municipality's Website for any addendum(s) that may have been issued prior to submission of their final documents. The Municipality of Brighton is not responsible for the Proponent's failure to register for updates or addendum/addenda to the originally posted Bid; it is the Proponent's responsibility.

To Register Bid Please Email: lisa@brighton.ca



TENDER PW 2019-08
ONE NEW 2018 OR 2019 MOTOR GRADER

PART I – INVITATION TO BID

The Corporation of the Municipality of Brighton (later referred to as "the Municipality") invites qualified and experienced bidders to submit a Tender for ONE NEW 2018 OR 2019 MOTOR GRADER

All inquiries are to be submitted in writing to: Murney Gibson, Mechanic
The Municipality of Brighton
67 Sharp Road
Brighton, Ontario K0K 1H0
mgibson@brighton.ca

Sealed envelopes, clearly marked as to the contents, will be received at the Brighton Public Works and Development Office, 67 Sharp Road, Brighton, Ontario, until **2:00 p.m.** local time on **Thursday, April 25, 2019**. The Bidders name and address are to be clearly indicated on the left top corner on the front of the envelop.

THE MUNICIPALITY RESERVES THE RIGHT TO REJECT ANY OR ALL TENDERS WITHOUT FURTHER QUESTIONS OR REDRESS FROM ANY RESPONDENTS AND RESERVES THE RIGHT TO ACCEPT ANY TENDER OTHER THAN THE LOWEST BIDDER. ALL TENDERS ARE AWARDED BY RESOLUTION OF COUNCIL.

Table of Contents

<u>Part</u>	<u>Description</u>
I	Invitation to Bid
II	Information for Bidders
III	Form of Tender
IV	Specifications for One New 2018 or 2019 Motor Grader
V	Experience and Sub-Contractors
Appendix 'A'	Definitions

PART II – INFORMATION FOR BIDDERS

<u>Section Number</u>	<u>Title</u>
1.0	Delivery of Tenders
2.0	Overview
3.0	Inquiry
4.0	Definitions
5.0	Preparation of plans and specifications and supervision of work
6.0	Items
7.0	Subcontractors
8.0	Right to accept or reject Tender/sub-contractors
9.0	Ability and Experience of Bidder
10.0	Unbalanced or Incorrect Tenders
11.0	Tender Left Open
12.0	Award and Execution of Contract
13.0	Payments
14.0	Alterations, Extras, Deductions and Claims
15.0	Default and Termination
16.0	Delivery of Vehicles
17.0	Canadian Motor Vehicle Standards

1.0 DELIVERY OF TENDERS

1.1 Tenders will be received at:

The Municipality of Brighton
Public Works and Development Office
Attention: Murney Gibson, Mechanic
67 Sharp Road
Brighton, Ontario K0K 1H0

Tenders will be publicly opened on **Thursday, April 25, 2019 at 2:00 p.m.** local time, at the same location.

Note: The use of the mail, or courier services, or any third party for delivery of a Tender will be at the risk of the Bidder. A Tender must be received at the Municipality of Brighton, Public Works and Development Office, by the closing date and time, or it will be returned to the Bidder unopened.

- 1.2 Tenders shall be submitted on the supplied Form of Tender, which shall be completed in every respect, with all blank fields filled in legibly. Tenders must be properly signed and sealed; otherwise the Tender may be rejected as informal. Sealed envelopes, clearly marked with "Tender PW 2019-08, One New 2018 or 2019 Motor Grader", must be submitted.
- 1.3 Tenders may be withdrawn, by written notice to Murney Gibson, Mechanic, at a time no greater than two (2) hours prior to the opening of the first Tender.
- 1.4 Tenders will not be accepted if submitted by fax or email.
- 1.5 Claims for extras, on the basis that Work was noted in one or more of the Contract Documents and not shown or noted in another, shall not be entertained.
- 1.6 Tenders must be submitted without any knowledge, comparison of figures or arrangements with any other person making any Tender or estimate for the same purpose. Tenders must also be submitted without collusion or fraud and that no officer of the Municipality shall become interested, directly or indirectly, as a contracting party, partner, surety or otherwise in or in the performance of the Contract, or in the supplies, work or business to which it relates, or in any of the monies to be derived therefrom.

- 1.7 The Bidder shall give the unit price both in words and in figures, except as permitted otherwise, shall fill in all blank spaces for unit prices, item prices, Time of Completion and other information.
- 1.8 A Bidder who has already submitted a Tender may submit a revised Tender at any time prior to the official closing time. The last Tender received shall supersede and invalidate all Tenders previously submitted by that Proponent.
- 1.9 Tenders which are unbalanced, incomplete, conditional or obscure, or which contain additions not called for, erasures, alterations or irregularities of any kind, may be rejected as informal.

2.0 OVERVIEW

- 2.1 The purpose of this Tender document is to solicit interested parties to provide all services necessary to supply the Municipality with One New 2018 or 2019 Motor Grader.
- 2.2 Materials and work which are not specifically described, or shown, in the Contract Documents, but the necessity of which can be reasonably inferred from the Contract Documents, shall be supplied and performed by the Bidder at no additional cost to the Municipality and the Bidder shall not claim extra payment, or an extension of the time for completion on account thereof.

3.0 INQUIRY

- 3.1 Any questions regarding this Tender must be received in writing, by email, no later than **2:00 p.m. on Thursday, April 18, 2019** and must be directed to Murney Gibson, Mechanic, Municipality of Brighton, at mgibson@brighton.ca. Inquiries with a response that may result in a change(s) of the interpretation of the Tender will be addressed in an addendum, a copy of which all plan takers can obtain from the municipal website after 2:00 p.m. on Friday, April 19, 2019.

4.0 DEFINITIONS

- 4.1 See Appendix 'A' for definitions that apply hereto.

5.0 PREPARATION OF PLANS AND SPECIFICATIONS AND SUPERVISION OF WORK

- 5.1 Should a Tenderer find discrepancies, omissions, or ambiguities, or not agree that the materials and construction methods specified will provide an installation which meets the requirements of the intended vehicle, the Tenderer shall notify the Municipality in writing at least seven (7) calendar days prior to the Tender opening date. No oral interpretation made by the Municipality will be effective to modify any aspect of the Contract Documents. Each addendum (if any issued) shall be acknowledged by the Tenderer, signed and included with the Tender.

6.0 ITEMS

- 6.1 All items are contained in the Form of Tender. Please provide a unit price and total cost for each item and a cost for the project completion.

7.0 SUBCONTRACTORS

- 7.1 Should the Bidder choose to employ subcontractors to perform work under this Project, a list of proposed subcontractors shall be included with the Tender submission for approval from the Municipality.
- 7.2 Bidders are to complete the attached Subcontractor Form and submit it with their Tender package. The Municipality reserves the right, in its sole discretion, not to recommend an award to any Bidder whose named subcontractor(s) is/are deemed to be unsuitable, or has/have an unsatisfactory health and safety record and/or record of performance. Proponents using subcontractors shall be responsible for the subcontractor's quality of work and rectification of substandard work.
- 7.3 The successful Bidder will be responsible to the Municipality to guarantee that each Subcontractor carries the required amount of insurance, subject to the inclusive limits, as noted in this document. The Bidder will obtain, for the benefit of the Municipality as requested, certificates of insurance from each subcontractor. Each certificate of insurance is to be submitted with the Tender package.

8.0 RIGHT TO ACCEPT OR REJECT TENDERS/SUB-CONTRACTORS

- 8.1 The Municipality reserves the right to reject any or all Tenders or to accept any Tender if it is in the best interest of the Municipality to do so.

- 8.2 By submitting a Tender, the Bidder acknowledges that there shall be no claims against, or entitlement to damages from, the Municipality by reason of the Municipality's rejection of any bid or all bids.

9.0 ABILITY AND EXPERIENCE OF BIDDER

- 9.1 The Municipality does not intend to award the Contract to any Bidder who does not furnish satisfactory evidence that the Bidder has the ability and experience required in this class of work and that the Bidder has sufficient capital to execute the Work successfully and to complete it in the time required by the Contract. The appropriate schedule in the Form of Tender must be completed; otherwise the Tender may, but shall not necessarily, be rejected as informal.

10.0 UNBALANCED OR INCORRECT TENDERS

- 10.1 The unit price on the Form of Tender shall be a reasonable unit price for each item. The Municipality shall be the sole judge of such matters. Any Tender considered by the Municipality to be unbalanced may be rejected.
- 10.2 When the amount for an item does not agree with the extension of the estimated quantity and the Tendered unit price, the unit price shall govern and both the item amount and the total Tender price shall be corrected accordingly. If the unit price is left blank, but a total price is shown for the item, then the unit price shall be determined by dividing the total price by the estimated quantity.
- 10.3 If both the unit price and the total price for an item are left blank, then the Tender submission shall be considered unbalanced.
- 10.4 Notwithstanding the values that may have been read out at the Tender opening, the corrected Tender values, as determined by the procedures contained herein, shall be used to establish the ranking of the Tender submissions.

11.0 TENDER LEFT OPEN

- 11.1 The Bidder shall keep its Tender submission open for acceptance for thirty (30) days after its submission, unless the submission has been withdrawn in accordance with article 1.3.

12.0 AWARD AND EXECUTION OF CONTRACT

- 12.1 For the purpose of this Contract, the date of award of the Contract shall be deemed to be the date when the Municipality has, in writing notified the successful Bidder by registered mail, courier or fax that the Condition Precedent to Award has been satisfied. Award of this Contract will be by Council Resolution and the date that it will be presented to Council, will be on or about **May 6, 2019**.
- 12.2 Without limitation and to summarize the requirements of other paragraphs of the Information for Bidders, the following documentation is required from the Contractor prior to execution of the Contract:
- i. Bidder's HST Registration Number;
 - ii. List of sub-contractors, if applicable; and
 - iii. Proof of insurance.
- 12.3 The successful Bidder will be required to execute three (3) copies of the Contract within ten (10) working days of the date of award of the Contract.
- 12.4 If the Bidder refuses or fails to execute the Contract within ten (10) working days of the date of award, it will be considered that the Bidder has abandoned all rights and interests in the Contract. The Municipality shall, in such event, be free to award the Contract to another Bidder or to re-bid the Work.

13.0 PAYMENTS

- 13.1 The Municipality will receive an invoice/payment certificate from the successful Proponent once the vehicle(s) has/have been delivered to the Municipality of Brighton, complete with all equipment, with no defects and deficiencies, as well as after inspection by our Equipment Supervisor. Payment will be made 30 days after delivery to the Municipality.

14.0 ALTERATIONS, EXTRAS, DEDUCTIONS AND CLAIMS

- 14.1 Any extra work must be approved by the Municipality in writing prior to commencing the extra work.
- 14.2 In the event of any circumstances arising at any time which, in the Proponent's opinion would entitle the Proponent to additional compensation and which are not fully provided for herein, the Proponent shall at once, on the discovery of such circumstances, notify the Municipality, in writing and shall state clearly and fully the circumstances, and the additional sum or

compensation demanded, or otherwise there shall be no claim in respect thereof.

15.0 DEFAULT AND TERMINATION

15.1 In the event the successful Proponent does not follow the work specified in the Contract Documents, then:

15.1.1 the Municipality reserves the right to terminate any Contract, in whole or in part, and in the event of such termination no payment will be owing by the Municipality on account of said Contract and the Proponent will be liable for any and all expenses or loss resulting from such failure or delay and will return all monies paid by the Municipality; or

15.1.2 if the Municipality does not terminate this Contract for lateness, the Municipality may deduct and setoff from any payments owing to the Proponent all additional costs the Municipality reasonably incurs on account of the lateness.

15.2 The Municipality may, by written notice at any time, cancel the Contract with respect to the item which, as of the date of cancellation, has not been received, and/or completed.

15.3 If the Municipality terminates the Contract, then the Municipality may:

15.3.1 Enter into contracts with other persons to complete the vehicle;

15.3.2 Withhold payment of any amount owing to the Proponent under the Contract for the performance of the work;

15.3.3 Setoff the total cost of completing the Work incurred by the Municipality against any amounts owing to the successful Proponent under the Contract, and at the completion of the Work pay to the Proponent any balance remaining; and

15.3.4 If the total cost to complete the Work exceeds the amount owing to the successful Proponent, charge the Proponent the balance, which amount the Proponent will forthwith pay.

16.0 DELIVERY OF VEHICLES

- 16.1 Delivery of the completed Grader to be **no later than July, 30, 2019**, and will be delivered to the Municipality of Brighton, 67 Sharp Road, Brighton, Ontario, K0K 1H0.

17.0 CANADIAN MOTOR VEHICLE STANDARDS

- 17.1 The item offered should meet or surpass the mandatory requirements of the "Canadian Motor Safety Regulations" and the latest applicable S.A.E., I.E.M.C. and O.S.H.A. recommended practices, where the use of such item may be covered by these regulations.

PART III – FORM OF TENDER

COMPANY INFORMATION

NOTE: PLEASE USE INK OR PRINTER

Name of Company: _____

Address/City/Town: _____

_____ Postal Code

Telephone Number: _____ Fax Number: _____

E-Mail Address: _____

Name of Person Signing for Company: _____

Position of Person Signing for Company: _____

Name of Contact Person: _____

HST Number: _____

TENDERS RECEIVED BY:

The Municipality of Brighton
Public Works and Development
Attention: Murney Gibson, Mechanic
67 Sharp Road
Brighton, Ontario K0K 1H0

Date: _____

We acknowledge that we have received addenda numbered ____ to ____ inclusive, and the prices Tendered include provisions set out in such addenda.

NOTE: Your Tender will be rejected in its entirety if the addenda, if any, are not acknowledged and provided for in the prices submitted.
Respondents must include ALL APPLICABLE SECTIONS of the Quotation Package at the time of closing.

THIS PAGE TO BE INCLUDED WITH YOUR QUOTATION PACKAGE

**To: The Corporation of the Municipality of Brighton, Public Works and Development
67 Sharp Road
BRIGHTON, Ontario
K0K 1H0**

The undersigned, being a body corporate, duly incorporated and authorized to carry on business in the province of Ontario, hereinafter called the Bidder, having carefully examined the Specification, the plans attached thereto, all addenda thereto and all other information and documents pertaining to the proposed project covering the work requirements and being aware of all the conditions affecting the cost of the work, hereby offer to furnish all labour, supervision, materials, tools, construction equipment and other facilities (other than those specifically stated in the specification as being supplied by others) and to perform all necessary work and proper for or incidental to the project and associated work at the site together with the guaranteeing of same in conformity with the Contract to be entered into upon acceptance of this Tender.

Make _____

Model _____

Price for Grader and all other Options (**Basis of Award**) \$ _____

H.S.T. \$ _____

TOTAL \$ _____

TOTAL AMOUNT IN WORDS, FOR THE STIPULATED SUM OF:

_____ DOLLARS

All of which is submitted and duly executed under the corporate seal, this _____ day of _____, 2019.

The total has been calculated using Part IV, specifications of a New Motor Grader. The final valuation of the vehicle will be made on the basis of the specifications.

PART IV – Specifications for One New 2018 or 2019 Motor Grader

The successful Bidder shall supply and deliver manufacturer’s standard equipment for One New 2018 or 2019 Motor Grader.

Option packages attached to items must include a detailed outline of all options. Brochures are not acceptable for outlining options.

Options, weights and dimensions must be included in separate list as brochures do not clearly identify the items.

1.0 YEAR, MAKE, MODEL

State year, make and model of grader.

YEAR _____

MAKE _____

MODEL _____

2.0 STANDARD EQUIPMENT

Grader must be delivered with all manufacturer’s standard equipment in regards to comfort, utility, safety and convenience.

3.0 REQUIRED OPTIONAL EQUIPMENT

In addition to the standard equipment, the grader must be equipped with the following options:

Compliant?

BASIC SPECIFICATIONS:

- Y___ N___ Machine shall be designed and built by the manufacturer.
- Y___ N___ Base Machine Weight shall not be less than 38,191 lbs (17,323 kg). Weight shall include standard machine configuration, lubricants, coolants, full fuel tank and operator of 200 lbs (91 kg).
- Y___ N___ Machine height to top of the cab shall not exceed 130 in (3,308 mm).
- Y___ N___ Machine length from the front outside edge tire to end of tow hitch shall not be less than 351 in (8,912 mm).
- Y___ N___ Machine Wheel Base (distance from front axle to mid tandem) shall not be less than 241 in (6123 mm).
- Y___ N___ The rear frame shall have two box section channels with an integrated bumper as standard.
- Y___ N___ A toolbox shall be provided.

BASIC SPECIFICATIONS-OPTIONAL ATTACHMENTS

- Y___ N___ Machine shall have vandal protection standard including locks for cab doors, engine side shields (4), top tank radiator access door, engine coolant surge tank, hydraulic reservoir cap, and fuel tank cap and tool box.
- Y___ N___ An optional rear hitch shall be provided
- Y___ N___ Machine length from counterweight to ripper shall not exceed 399 in (10,136 mm).

ENGINE

- Y___ N___ Engine shall be designed and built by the manufacturer.
- Y___ N___ Engine shall be a turbo-charged, direct injection, four stroke, 6-cylinder diesel engine.
- Y___ N___ Engine shall be certified EPA Tier 4 Final and European Union Stage IV
- Y___ N___ Engine shall be electronically controlled for more efficient fuel injection and fuel burn.
- Y___ N___ Engine shall achieve rated power requirement with engine displacement not less than 9.3L (568 in³) for better performance and fuel economy.
- Y___ N___ Engine shall develop as standard a rated net flywheel power of at least 200 HP (149 kW) in 1st gear, 210 HP (156 kW) in 2nd gear, 220 HP (164 kW) in 3rd gear, 231 HP (172 kW) in 4th gear, 236 HP (176 kW) in 5th gear, 241 HP (180 kW) in 6th gear, 247 HP (184 kW) in 7th gear and 252 HP (188 kW) in 8th gear.
- Y___ N___ Engine will increase its low idle speed to 1,000 rpm when the battery voltage is below 24.5 volts for more than 5 minutes to ensure adequate system voltage and battery reliability.

- Y___ N___ Altitude deration will not occur at altitudes less than 10,000 ft (3050 m). The deration rate above 10,000 ft (3050 m) shall be 1.5% per 1000 ft (305 m).
- Y___ N___ Peak engine power shall not be achieved at an engine speed greater than 1800 rpm.
- Y___ N___ Rated engine power shall not be achieved at an engine speed greater than 2000 rpm.
- Y___ N___ Engine will have a minimum torque rise of 47% from 2000 rpm to peak torque following SAE J1349 (net power with max fan).
- Y___ N___ Engine enclosure and daily service points shall be accessible from ground level and grouped on the left side of the machine.
- Y___ N___ Engine fan shall automatically adjust fan speed via a variable hydraulic fan pump to meet engine cooling requirements thus reducing demand on the engine, putting more horsepower to the ground, reducing noise, improving fuel economy, and reducing heat.
- Y___ N___ Engine shall allow for at least 500 hours of operation between oil changes.
- Y___ N___ Engine shall be isolation/resilient mounted to minimize sound and vibration.
- Y___ N___ Engine compartment doors shall be lockable without the use of external locks.
- Y___ N___ Engine shall automatically lower engine torque and alert the operator if critical conditions are detected.
- Y___ N___ Engine shall have an air-to-air after cooler for superior engine performance.
- Y___ N___ Engine oil cooler shall be a water to oil shell and tube cooler system.
- Y___ N___ Machine shall have a 12000 hour coolant interval from factory.
- Y___ N___ The cooling package air intake shall have 2.8 mm perforated inlet screen.
- Y___ N___ The charged air cooler (ATAAC) shall have 6 fins per inch.
- Y___ N___ Economy mode shall be available directly from factory to increase net efficiency.
- Y___ N___ Economy mode shall be able to be enabled and disabled by the operator through the onboard Message Display.
- Y___ N___ Economy mode shall be lockable via onboard programmable password protection.
- Y___ N___ DEF tank reservoir shall have a heater to thaw DEF fluid.
- Y___ N___ DEF lines should be heated to prevent freezing during extremely cold ambient conditions.

ENGINE-OPTIONAL ATTACHMENTS

- Y___ N___ An engine coolant heater shall be available to assist in cold weather starting.

POWERTRAIN/TRANSMISSION

- Y___ N___ Transmission shall be designed and built by the machine manufacturer.
- Y___ N___ Transmission shall be a direct drive, power shift, countershaft type.
- Y___ N___ Transmission shall be equipped with built-in self-diagnostic capability.
- Y___ N___ Transmission shall have no less than 8 forward speeds and 6 reverse speeds (for added safety).
- Y___ N___ Transmission shall have 5 working gears between 0-10.6 mph (0-17.1 km/h), for dirt applications.
- Y___ N___ Transmission shall be isolated/resilient mounted to reduce sound and vibration.
- Y___ N___ A controlled throttle shifting system shall be standard to smooth directional gear changes without use of the inching pedal.

- Y___ N___ Electronic Throttle Control (cruise control) shall be standard and shall be controlled by a push button, located on a 3-axis joystick as standard on the right joystick control for resuming and decreasing throttle set.
- Y___ N___ Electronic Throttle Control modes, set and accelerate functions, shall be located on the right control column for easy access.
- Y___ N___ A load compensating system for the transmission shall be standard to ensure consistent shift quality in all applications.
- Y___ N___ Automatic Differential Lock/Unlock feature shall be standard and shall not have speed, shuttle shifting or tandem spinning restrictions for engaging/disengaging. System must be load-sensing for optimal performance.
- Y___ N___ Automatic mode shall not be overridden via manual intervention for optimal performance and to prevent unintended differential engagement
- Y___ N___ Differential Lock/Unlock shall be electro-hydraulically controlled, as a standard feature.
- Y___ N___ Differential Lock/Unlock shall be a multi-disc design.
- Y___ N___ Final drive shall be a planetary design.
- Y___ N___ The rear axle shall be a bolt-on modular design offering easy access to differential components, improving serviceability and contamination control.
- Y___ N___ The total surface area of all the transmission clutch packs shall not be less than 1831 in² (11,812cm²).
- Y___ N___ Diameter at the output end of the transmission shaft shall be no less than 2.29 in (58.1 mm).
- Y___ N___ Machine shall be equipped with an electronic inching pedal for improved modulation and machine control.
- Y___ N___ Machine shall be equipped with electronic over-speed protection to prevent the engine and transmission from over speeding, as a standard feature.
- Y___ N___ Machine shall have no drive shafts that cross over the articulation hitch.

POWERTRAIN/TRANSMISSION-OPTIONAL ATTACHMENTS

- Y___ N___ An autoshift transmission option shall be available on all forward and reverse gears.

STEERING & IMPLEMENT CONTROLS

- Y___ N___ Steering wheel shall not be required to operate machine.
- Y___ N___ Joystick Steering capabilities shall be ISO 5010:1992.
- Y___ N___ Machine shall employ a friction pack style steering mechanism, utilizing the follow steer concept.
- Y___ N___ The left 3-axis joystick shall control wheel lean with individual left and right wheel lean buttons as standard.
- Y___ N___ Primary steering shall be achieved via a left-hand, multifunction, 3-axis joystick as standard, using an intuitive steering control system that automatically adjusts steering sensitivity as machine ground speed increases.
- Y___ N___ Articulation to the right or left shall be achieved by a multifunction, 3-axis left joystick with the twist of such to the right or left by the left-hand, multifunction, 3-axis joystick.

- Y___ N___ An articulation return-to-center button on the left-hand, multifunction, 3-axis joystick shall return the machine to a straight frame position from any articulation angle with the touch of a single button.
- Y___ N___ The right 3 axis joystick shall primarily control the Drawbar, Circle, and Moldboard.
- Y___ N___ Machine, Drawbar, Circle, and Moldboard shall be control shall be achieved via a right hand multifunction, 3-axis, joystick, including moldboard slide and tip, drawbar center shift through a 4 way hat switch and circle turn by a left or right twist intuitively.
- Y___ N___ Blade lift cylinders shall be individually controlled by the multifunction, 3 axis joysticks; Lift and drop of cylinders shall be achieved by the forward and back motion of the respective joystick. Forward (left joystick) lowers left lift cylinder, back (left joystick) raises the left lift cylinder, forward (right joystick) lowers the right lift cylinder, and back (right joystick) raises the right lift cylinder.
- Y___ N___ Joystick controls shall be mounted to electronically adjustable pedestals, which are hard mounted to the cab floor, independent of the operator seat.
- Y___ N___ Secondary steering shall have a primary and secondary power supply in the event the primary source is lost.
- Y___ N___ Transmission direction control shall be a 3-position rocker switch for selecting forward, neutral, and reverse incorporated into a single, 3-axis, multi-function, left-hand joystick control.
- Y___ N___ Transmission gear selection shall be controlled by dual push buttons for up shifting and downshifting and shall be incorporated into a single, 3-axis, multi-function, left-hand joystick control.
- Y___ N___ Manual Differential Lock/Unlock shall be operator controlled, via a push-button, located on a single, 3-axis, multi-function, right-hand joystick control.
- Y___ N___ The machine shall have two redundant articulation sensors.
- Y___ N___ Two redundant sensors shall be standard in the steering cylinders (one in each).
- Y___ N___ Three redundant sensors shall be provided in the steering joystick for additional safety.

BRAKES

- Y___ N___ Machine shall have primary and secondary service brakes.
- Y___ N___ Entire braking system shall meet all requirements of ISO 3450: 1996.
- Y___ N___ Two separate left and right hydraulic brake accumulators shall be standard for safety.
- Y___ N___ Parking brake shall be multi-disc, oil-cooled, spring-applied, hydraulically released, sealed, adjustment-free, and integrated into the transmission. Park brake shall not be externally located.
- Y___ N___ Parking brake shall be serviceable without removing the transmission.
- Y___ N___ Service brakes shall be multi-disc, oil-cooled and completely sealed; they will also provide access to check and determine brake wear without removing or disassembling the brake assembly.
- Y___ N___ Service brake disc surfaces shall be grooved and carry oil between discs and plates with brakes fully applied.
- Y___ N___ Service brakes shall be hydraulically actuated, utilizing dual independent brake circuits.
- Y___ N___ Brakes shall be continuously pressurized, filtered, oil cooled.

- Y___ N___ Machine shall have individual brake pods for each rear wheel, located at each rear wheel inside the tandem box, independent of tandem chains.
- Y___ N___ Compensation components shall be required at all four tandem brake pods in addition to the brake wear indicator.
- Y___ N___ Brake line protection, including tandem walkways and hydraulic brake line guarding, shall be required to prevent line damage.
- Y___ N___ Service brakes shall provide a minimum of 620 in² (4,003 cm²) of friction material surface area at each of the four tandem wheels to eliminate braking loads on the power train.

HYDRAULIC SYSTEM

- Y___ N___ A standard triple-redundant hydraulic relief system shall protect machine hydraulic components.
- Y___ N___ Hydraulic implement pump shall produce between 0 and 55.0 gal/min (210 L/min) of oil flow at 1,800 RPM.
- Y___ N___ Hydraulics system shall be a closed center, load sensing type with a variable displacement, axial piston-type pump.
- Y___ N___ Hydraulic system shall be fully sealed, using Duo-cone and O-ring face seals to prevent leaks, contamination, and spillage.
- Y___ N___ The hydraulic tank shall have a baffling system to reduce potential pump cavitation.
- Y___ N___ The maximum hydraulic system pressure shall be no more than 3,500 psi (24,150 kPa).
- Y___ N___ Implement valves shall be electro-hydraulic, designed and built by the machine manufacturer.
- Y___ N___ Implement pump shall not be mounted under cab floor, minimizing sound and vibration.
- Y___ N___ Implement valves shall be proportional priority pressure compensating for consistent response when multi-functioning any combination of implement controls and independent of engine speed.
- Y___ N___ Implement pump shall be solely dedicated to implement controls and not shared with any other components.
- Y___ N___ Lock valves shall be integrated into the main implement valve to prevent cylinder drift.
- Y___ N___ The hydraulic stand-by pressure shall be no more than 885 psi (6100 kPa) at 1,800 RPM.
- Y___ N___ There shall be a provision to install up to 15 modulating hydraulic valves, controlled by two multifunction, 3-axis joystick controls and auxiliary controls inside the cab.
- Y___ N___ Hydraulic valves shall not be mounted under the cab floor, minimizing sound and vibration.
- Y___ N___ Left and right blade lift cylinders shall have independent float capability, actuated by two multifunction, 3-axis joystick controls inside the cab, as a standard feature.
- Y___ N___ A sight gauge will be provided for checking hydraulic reservoir fluid.
- Y___ N___ Hydraulic oil change service interval shall be no less than 6000 hours with oil sampling
- Y___ N___ Hydraulic system shall have a separate oil tank solely dedicated to the implement pump.

FRONT AXLE AND TANDEMS

- Y___ N___ Front axle oscillation shall be no less than 32 degrees total, per side 16 degrees up and 16 degrees down.
- Y___ N___ Front axle shall be an arched design for maximum ground clearance.

- Y___ N___ Wheel spindle shall be a "live" spindle design and rotate inside a sealed (with Duo-Cone seals) compartment with lightweight oil for lubrication of the bearings.
- Y___ N___ Front spindle shall be heat induction hardened.
- Y___ N___ Front wheel spindle bearings shall be a double-tapered design with the larger diameter bearing mounted closest to the centerline of the front tire.
- Y___ N___ Front wheel spindle maintenance intervals shall be no less than 2000 hrs.
- Y___ N___ Front wheel steering angle shall be no less than 50.0 degrees left or right.
- Y___ N___ Maximum front wheel lean shall be no less than 18 degrees left or right.
- Y___ N___ Machine turning radius shall not exceed 25 ft. 7 in. (7.8 m) using front steering, full articulation and unlocked differential.
- Y___ N___ Distance between center of tandem wheels shall be no greater than 60.0 in (1523 mm) for optimum clearance and mobility.
- Y___ N___ Tandem drive chain pitch shall not be less than 2.0 in (50.8 mm).
- Y___ N___ Tandems shall be capable of oscillating 15 degrees front tandem up and 25 degrees front tandem down, with full machine articulation and having no interference between tandem wheel and machine structure.
- Y___ N___ Electronic and mechanical steering stops located at each wheel and steering cylinder relief valves shall be present to prevent steering system damage during normal operation.
- Y___ N___ Steering tie rod ends shall be heat induction hardened.
- Y___ N___ Machine shall provide 2 steering cylinders for maximum steering force.
- Y___ N___ When equipped with a ripper, the machine shall have a minimum ramp angle of 15.9 degrees.

TIRES AND RIMS

- Y___ N___ A 10 in (25.4 cm) by 24 in (60.96 cm) size 3-piece tire rim shall be standard to provide mounting for 14.00-24 tires and 14.00R24 conventional tires

OPERATORS STATION

- Y___ N___ A 42,075 BTU/h (12.3 kW) heater shall have an integral pressurizer and four-speed fan along with A/C.
- Y___ N___ Cab shall have angled floor design allowing direct visibility to moldboard.
- Y___ N___ Seat shall be a cloth-covered suspension seat with 3 in (76 mm) retractable seat belts, with adjustments for fore-aft position, seat height, seat back angle, thigh support, and lumbar support.
- Y___ N___ An enclosed cab with ROPS (Rollover Protective Structure) according to ISO 3471: 1986-1997 shall be provided.
- Y___ N___ Cab doors shall have a hold-open clasp with a ground-level release in addition to a release in the cab.
- Y___ N___ Cab shall be isolation-mounted to the front frame section of the machine.
- Y___ N___ Cab shall have fixed front window of laminated glass with intermittent wiper.
- Y___ N___ FOPS (Falling Object Protective Structure) shall be provided according to ISO 3449.
- Y___ N___ Machine shall have no less than 17 adjustable vents, positioned to direct air to front windows and operator.

- Y___ N___ Radio ready arrangement will include 24V to 12V converter, two speakers, antenna and wiring.
- Y___ N___ An instrument cluster shall be provided that includes a speedometer, tachometer, coolant temperature, fuel and articulation angle gauge.
- Y___ N___ Operator cab fresh air-filter shall be accessible for clean out and replacement, from outside of the cab at ground level.
- Y___ N___ Machine shall have the AccuGrade™ system fully integrated into the machine design with integral hydraulic and electrical components.
- Y___ N___ A real-time information system shall monitor all system data and alert the operator of any faults through a digital text display. This performance and diagnostic information system shall be programmable for multiple languages.
- Y___ N___ Left and right side cab doors shall be provided.
- Y___ N___ Wipers shall be provided on side and rear windows.
- Y___ N___ Digital machine hour meter shall be provided.
- Y___ N___ An electronic message system shall provide real-time machine performance and diagnostic data.
- Y___ N___ The forward visibility shall be continuous and unobstructed glass from roofline to floor providing visibility of the blade, heel and toe, back of the cutting edge, and front tires.
- Y___ N___ Access to cab shall be three anti-skid steps.
- Y___ N___ Cab shall have cup holder, personal cooler holder/storage compartment for operator's manual, with a molded floor mat.
- Y___ N___ Window washer fluid bottle refill spout shall be located external of the cab.
- Y___ N___ DEF gauge must be visible to the operator at all times.

OPERATORS STATION-OPTIONAL ATTACHMENTS

- Y___ N___ An auxiliary control pod, with implement float control capability, shall be available.
- Y___ N___ Auxiliary controls shall be available for control of attachment implements and/or work tools and shall be programmable via computer software.
- Y___ N___ Auxiliary controls shall be a finger-tip control type and located beside the right-hand joystick control.
- Y___ N___ An auxiliary, 2-axis joystick shall be available for control of a snow wing.
- Y___ N___ Integrated Cross Slope System shall be available from the factory in order to ensure proper calibration and installation for improved accuracy and performance.
- Y___ N___ Integrated display and wiring for a rear vision camera shall be available with capability to view at all times without interfering with the gauge and diagnostic display.
- Y___ N___ A rear sun shade shall be available.
- Y___ N___ A rear defroster fan shall be available.
- Y___ N___ A machine security system shall be available to electronically code keys selected by the user to limit usage by individuals or by time parameters.
- Y___ N___ An air suspension seat shall be available.
- Y___ N___ Anti-icing glass shall be available for front windshield and RH door.
- Y___ N___ A heated or both heated/ventilated seat shall be available.
- Y___ N___ Machine shall have integrated Grade Control Cross Slope available from the factory.
- Y___ N___

Machine shall have an integrated cross slope system with cross coupling software to prevent automatic response lag (or saw-toothing) in order to maintain consistency and ensure accuracy.

Y___ N___ Machine shall have an integrated cross slope system that is fully upgradeable to other 2D/3D blade control systems, to increase machine resale value.

Y___ N___ Machine shall have a display for cross slope information that is separate from critical machine information such as engine RPM, ground speed and fluid temperature monitoring to ensure safe operation.

CIRCLE & MOLDBOARD

Y___ N___ Drawbar, circle, and moldboard shall be controlled with a maximum of two multifunction, 3-axis joysticks, as standard.

Y___ N___ Drawbar wear strips shall be replaceable drop-in inserts made from nylon composite material, replaceable and adjustable from the top of the drawbar plate via removable cover plates.

Y___ N___ The drawbar shall feature welded protective wear plates to prevent lift group contact with the primary drawbar structure.

Y___ N___ The standard moldboard shall be at least 12 ft (3657 mm) long, 24 in (610 mm) high and no less than 7/8 in (22 mm) thick.

Y___ N___ Moldboard shall have a bank slope angle capability of at least 90 degrees to both sides.

Y___ N___ Moldboard side-shift cylinder shall be installed on the left-hand side to prevent snow wing interference with the cylinder rod.

Y___ N___ Moldboard shall have no less than 16.3 in (413 mm) arc radius (blade curvature) for optimum productivity.

Y___ N___ The moldboard retention system shall have no more than two retention points located on the left and right side of the moldboard. The surface area shall not be less than 50408 mm² (78.13 in²).

Y___ N___ Moldboard shall have a hydraulic tip control through a range of 40 degrees fore and 5 degrees aft.

Y___ N___ Moldboard wear strips shall be adjusted with lock screws, providing shim-less adjustment capability both vertical & horizontal.

Y___ N___ The moldboard shall be pre-stressed during manufacturing for superior strength and durability.

Y___ N___ Moldboard slide rails shall be constructed of a heat-treated, high carbon steel and have replaceable bronze alloy wear inserts on top and bottom.

Y___ N___ Circle shall be a single piece, rolled-ring forging with raised wear surfaces on the top and bottom.

Y___ N___ Circle shall be rotated by a hydraulically driven motor (pinion gear) with a minimum circle pinion torque capability of 44253 ft-lb (60,000 N-m).

Y___ N___ Circle teeth contact surfaces shall be induction-hardened on the front 240 degrees of the circle.

Y___ N___ Blade lift and center shift cylinders shall have replaceable bronze-alloy wear inserts in the ball sockets with removable shims to ensure the ability to remove free play throughout the useful wear insert life.

- Y___ N___ The lift cylinder casting shall be welded to the front frame for added strength and structural integrity.
- Y___ N___ The standard mounting hardware for cutting edges and end bits shall be 3/4 in (19 mm)
- Y___ N___ All 7 Link Bar positions have replaceable bushings.
- Y___ N___ Link bar pin shall be separate from pin pulling mechanism for easier service and lower O&O costs.
- Y___ N___ The draft frame pivot connection shall have a single ball stud with grease zerk. Ball stud shall be bolt-on, shimable and adjustable to allow for quick and easy field serviceable design.
- Y___ N___ There shall be 3 side shift anchor positions shall be provided for extended reach capability as standard.
- Y___ N___ Pinion Gear shall be separate from the Pinion Shaft to allow for a quick and easy serviceable design.
- Y___ N___ Circle outside diameter shall be no less than 60.2 in (1530 mm).
- Y___ N___ Throat clearance with standard moldboard shall be at least 153 mm.
- Y___ N___ There will be no more than 6 replaceable wear inserts between the circle and drawbar providing at least 163 in² (1051 cm²) of wear surface area.

CIRCLE & MOLDBOARD-OPTIONAL ATTACHMENTS

- Y___ N___ Blade lift accumulators shall be provided, protecting cutting edge and other components from damage from shock loads as an option.

ELECTRICAL

- Y___ N___ Machine shall have a 145 amp-hour, 1125 CCA heavy-duty battery.
- Y___ N___ Machine shall have a minimum 150-amp alternator at 24 volts provided which is brushless for increased life and durability.
- Y___ N___ Six 3 x 3 in (76 x 76 mm) halogen mounted cab lights shall be provided.
- Y___ N___ A 24 V to 12 V converter with 10-amp capacity shall be provided.
- Y___ N___ Starting system shall be a 24V direct electric type.
- Y___ N___ LED white reversing lamps and LED stop lamps shall be provided.
- Y___ N___ Electrical system shall have a master disconnect switch with a removable key (in addition to the ignition switch), accessible from the ground level.
- Y___ N___ All core machine systems shall be electronically connected, optimizing performance and preventing machine damage.
- Y___ N___ All wiring shall be arranged and located so as to facilitate regular visual inspections, not be in contact with hot surfaces and not routed with other services lines (e.g. fuel, oil, etc.).
- Y___ N___ All harnesses / cabling are secured with clipping clamps providing a gap between the conduit/harness and the mounting surface preventing material build-up.
- Y___ N___ Power must remain available upon key off to purge DEF system lines and protect components.

ELECTRICAL-OPTIONAL ATTACHMENTS

- Y___ N___ Machine shall have a 280-amp alternator at 24 volts available which is brushless for increased life and durability.
- Y___ N___ High and low bar headlights with front turn signals shall be available.
- Y___ N___ An amber LED high-speed strobe beacon shall be available.
- Y___ N___ 24V to 12V converter with 25-amp capacity shall be available.

SERVICEABILITY

- Y___ N___ Machine shall have a lockable swing-out cooling fan housing featuring a latch-style mechanism (shall not be of a bolted design), allowing easy access to cores. Ability to open/close shall be ground level accessible, eliminating need to climb on machine.
- Y___ N___ The dip stick for checking transmission fluid shall be at ground level.
- Y___ N___ Hydraulic tank site gauge shall be readable from the ground.
- Y___ N___ Hydraulic tank filter shall be a cartridge style filter providing a separate filter element, housing, and drain valve for quick and clean servicing.
- Y___ N___ Ability for ground level fueling shall be provided.
- Y___ N___ Sampling ports shall be accessible from the tandem level and provide access to the engine, hydraulic, coolant, and fuel ports.
- Y___ N___ A two-way communication tool shall give service technicians easy access to stored diagnostic data and allow configuration of machine parameters.
- Y___ N___ Machine shall provide 3 points of contact on all areas of the machine, for mounting and dismounting.
- Y___ N___ The articulation joint shall have mechanical locking device to prevent frame articulation while servicing or transporting machine.
- Y___ N___ Left and right side tandem case assemblies shall be covered with punched steel plate to provide an adequate platform for standing and walking.
- Y___ N___ Engine oil filter shall be a 500 hour, vertical spin-on
- Y___ N___ Engine primary and final fuel filters shall have 500 hour service replacement interval.
- Y___ N___ Engine shall have primary fuel filter with fuel water separator and electronic sensor, quick release dual stage filter and primer pump.
- Y___ N___ The centralized lube bank shall be at the articulation joint to give access to difficult zerks.
- Y___ N___ Transmission filter restriction indicator shall be displayed in the cab.
- Y___ N___ Lock out Tag out capabilities shall be provided standard and increase the safety levels during down time. This ensures that an energy isolating device and the machine which are being worked on and cannot be operated
- Y___ N___ DEF tank fill shall be located on the same side of the fuel tank fill, and be easily accessible from ground level.

SERVICEABILITY-OPTIONAL ATTACHMENTS

- Y___ N___ A guard shall be available to protect the machine's transmission from debris.
- Y___ N___ A guard shall be available to suppress sound from the engine.

MINIMUM SERVICE FILL CAPACITIES

- Y___ N___ Standard fuel tank capacity shall not be less than 104 gallons (394 L).
- Y___ N___ Standard cooling system capacity shall not be less than 15.0 gallons (57.0 L).
- Y___ N___ Standard hydraulic tank capacity shall not be less than 16.9 gallons (64.0 L).
- Y___ N___ Standard engine oil capacity shall not be less than 7.9 gallons (30.0 L).
- Y___ N___ Standard tandem housing capacity shall not be less than 20.0 gallons (76.0 L) each.
- Y___ N___ Standard front wheel spindle bearing housing capacity shall not be less than 0.13 gallons (0.5 L).
- Y___ N___ Standard circle drive housing capacity shall not be less than 1.8 gallons (7 L).
- Y___ N___ Standard DEF tank capacity shall not be less than 5.8 gallons (22 L).

SAFETY AND ENVIRONMENTAL

- Y___ N___ A circle drive slip clutch shall be provided to reduce horizontal moldboard impact damage.
- Y___ N___ Black glare-reducing paint shall be used on the front frame and engine enclosure to decrease glare from other equipment lights and reflection from the sun and snow.
- Y___ N___ Operator not present monitoring system will lockout implements, shall not allow gear shift out of neutral, and lock parking brake if system detects operator not present for increased safety.
- Y___ N___ Hydraulic implement lockout shall be achieved by actuating a single electrical switch within the operator station.
- Y___ N___ An external emergency kill switch shall be available for ground level engine shut down.
- Y___ N___ Secondary, electric steering pump with redundant wiring shall be provided as a backup to the primary implement hydraulic pump.
- Y___ N___ Machine shall have laminated glass for the front windows and doors, to protect the operator from shattered glass.
- Y___ N___ Machine shall provide dual exits allowing for emergency egress should one side become obstructed.
- Y___ N___ Electrical system shall have a master disconnect switch with a removable key and lock for added safety. (in addition to the ignition switch).
- Y___ N___ Machine shall have a steering software system shall automatically reduce steering sensitivity as the ground speed increases.
- Y___ N___ Machine shall have back-up lights and sounding alarm when reverse gears are selected.
- Y___ N___ Environmentally friendly drain valves shall be provided for the hydraulic oil, engine oil, engine coolant, transmission, differential and fuel tank.
- Y___ N___ Cooling fan shall have both a shroud and rear grill for protection during service.
- Y___ N___ Machine shall allow cab interior and exterior lights to remain on separate from ignition switch, for safe exit of the machine during night operation.
- Y___ N___ Engine and transmission shall be rubber isolation mounted to reduce noise and vibration.

SAFETY AND ENVIRONMENTAL-OPTIONAL ATTACHMENTS

- Y___ N___ A guard shall be available to protect the machine's transmission from debris.
- Y___ N___ Rear vision camera with integrated display and wiring shall be available.
- Y___ N___ Blade lift accumulators shall be available as an option, to reduce vertical impact damage.

- Y___ N___ Drop down rear lights (stop/turn signal lights) shall be available to span the profile of the machine for increased safety
- Y___ N___ Outside mounted mirrors (optional heated) shall be available.
- Y___ N___ A engine compartment light shall be available
- Y___ N___ A seatbelt indicator sensor and light shall be available

ADDITIONAL FEATURES

- Y___ N___ Rear ripper shall have 5 ripper shank holders and 9 scarifier shank holders.
- Y___ N___ Rear ripper shall have a working penetration of maximum 16.8 in (428 mm) and a penetration force of at least 20,693 lb (9386 kg).
- Y___ N___ Rear fenders shall meet ISO-3457 requirements and shall not interfere with the ability to fully open any cab/engine enclosure or service access doors.
- Y___ N___ All core machine systems shall be electronically connected optimizing performance and preventing machine damage.
Machine shall have no drive shafts that cross over the articulation hitch.
- Y___ N___ Machine shall have an Auto greaser system on all components except drive shafts.

OPTIONAL ATTACHMENTS

- Y___ N___ An integrated communication tool providing flow of vital machine data and location shall be available. This system shall give automatic updates on machine parameters such as machine hours, machine condition, location, fault codes and alarms.
- Y___ N___ Machine shall have an engine coolant circulating heater available.
- Y___ N___ Machine shall have a transmission solenoid valve guard available.
- Y___ N___ A rear ripper/scarifier shall be available.

PROVISIONAL ITEMS:

ITEM NUMBER ONE:

One rear mounted Ripper/Scarifier, complete with hydraulics' plumbed, ready to operate.

Make: _____

Model: _____

Subtotal:\$ _____

H.S.T.:\$ _____

Total:\$ _____

ITEM NUMBER TWO:

One 90 inch wide rear mounted roller/packer that will attach to Ripper/scarifier hitch. Roller Packer will have an approximate weight of 3900 lbs.

Make: _____

Model: _____

Subtotal:\$ _____

H.S.T.:\$ _____

Total:\$ _____

ITEM NUMBER THREE:

Extended Warranty Coverage for entire Grader.
Extended Warranty Coverage for entire Grader shall cover entire grader
For Eight (8) Year's Five Thousand (5000) hours.

Type of Warranty: _____

Subtotal:\$ _____

H.S.T.:\$ _____

Total:\$ _____

5.0 WARRANTY (basic warranty)

All Bidders must attach warranty details with the Tender submission.

A PREBUILD MEETING WITH MUNICIPAL STAFF IS MANDATORY BEFORE SUCCESSFUL BIDDER COMMENCES SOURCING OR BUILDING MOTOR GRADER.

SUCCESSFUL BIDDER MUST PROVIDE OPERATOR AND MAINTENANCE PERSONNEL WITH TRAINING ON MOTOR GRADER - COST TO BE INCLUDED IN FINAL PRICE OF MOTOR GRADER.

PART V – EXPERIENCE and SUB-CONTRACTORS

1. Experience Summary

Provide a list of vehicles similar size and type that have been completed by your company during the past five (5) years.

2. Sub-Contractors

Provide a list of sub-contractors for the approval of The Municipality that you propose to use on this contract.

3. Completion of the Projects

Delivery of completed Grader to be no later than July 30, 2019.

We, (Bidder's Name) _____ agree to commence work within _____ calendar days from the date of entering into an agreement with the Municipality of Brighton.

APPENDIX 'A' – DEFINITIONS

Contract/Contract Documents – collection of documents representing a commitment from both the successful Bidder and the Owner to complete Work as described in the documents

Contractor – successful Bidder

Engineer – Municipal Director of Public Works and Development, or designate

The Municipality – the Corporation of the Municipality of Brighton

Sub-contractor – person or corporation having a contract with the Contractor or another sub-contractor, for execution of a part or parts of the Work included in the Contract

Work – the supply of all material, equipment and labour as described in the Contract Document(s), including provisional items, where appropriate