

BIDDER'S PACKAGE

CASCADE COUNTY

**SOLICITATION FOR BIDS FOR
ONE (1) OR MORE 2014 ALL-WHEEL DRIVE MOTOR GRADER(S)**

(Preapproved Models: Caterpillar 160M2AWD, John Deere 872GP, or Equivalent)

OCTOBER 2013

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INVITATION TO BIDDERS

NOTICE IS HEREBY GIVEN, that the Cascade County Board of Commissioners will receive sealed bids for the purchase over time of one (1) or more 2014, diesel powered, articulated frame all-wheel drive motor grader(s). Specifications for the equipment may be obtained by contacting Brian K. Clifton, Director, Cascade County Public Works, 279 Vaughn S. Frontage Road, Great Falls, MT 59404; Phone (406) 454-6920.

Bids will be opened on the 21st day of October, 2013, at the time of 1:00 o'clock p.m. in the office of the Board of Commissioners, in the Cascade County Courthouse Annex, 325 2nd Ave North, Room 111, Great Falls, Montana.

Each bid must be accompanied by a Certified Check, Cashier's Check, or Bid bond payable to Cascade County in the amount of ten percent (10%) of the total amount of the bid for the motor graders without deduction for the value of the possible trade in equipment. The successful bidder shall forfeit to Cascade County their bid security if they fail or refuse to enter into a contract within the time specified. Bid security of unsuccessful bidders shall be returned upon acceptance of the successful bid.

All bids shall remain effective for a period of thirty (30) days from the date of opening. Cascade County reserves the right to consider or reject any and all bids, and further to waive any defects or irregularities. All bidders must use the bid form supplied with the specifications. A contract will be awarded to the lowest and most responsible bidder.

All bidders are expected to be aware of and to abide by all state and federal statutes, rules, and regulations governing the solicitation and acceptance of public contracts, including any such statute, rule or regulation relating to non-discrimination.

The Board of Commissioners reserves the right to reject any or all bids, to waive irregularities, or to accept any bid they deem to be in the best interest of Cascade County.

DATED this 6th day of September, 2013.



Joe Briggs, Chairman
Cascade County Board of Commissioners

(Publish September 15th, 22nd, and 29th, 2013.)

GENERAL INFORMATION FOR BIDDERS

1. Bid Opening. The Cascade County Commissioners will receive bids from persons or entities capable of supplying one (1) or more 2014, diesel powered, articulated frame all-wheel drive motor graders as described in the specifications included herein. Bids shall be opened and read aloud at a meeting of the Commissioners to take place on the 21st day of October, 2013, at the time of 1:00 o'clock p.m. at the Commissioners Office, in the Cascade County Courthouse Annex Room 111. All bids must be received no later than the start of the meeting.

2. Notice. Notice is being published in the Great Falls Tribune, (a copy of the notice is included with this package) with publication dates of September 15th, 22nd, and 29th. All interested and capable persons or entities are invited to submit bids on the bid form included with this package.

3. Bid Security. Pursuant to Section 18-1-201, Montana Code Annotated, the Board of Commissioners must require a bid security. Each bid must be accompanied by security in a form specified below, and in an amount equal to ten percent (10%) of the bid of the bidder, and payable to Cascade County.

According to the above cited statute, bid security is required "as a condition precedent to considering any such bids, as evidence of good faith on the part of the bidder, and as indemnity for the benefit of such public authority against the failure or refusal of any bidder to enter into any written contract that may be awarded upon and following acceptance of (a) bid..." Thus, if a bidder is selected and requested to enter into the contract, and the bidder refuses to enter into the contract, the bid security shall be forfeited in its entirety to Cascade County.

The form of the bid security is specified in Section 18-1-202, Montana Code Annotated, as follows;

"(1) In all cases under 18-1-202 (1), the bidder, offeror, or tenderer shall accompany and bid with either:

(a) lawful money of the United States;

(b) a cashier's check, certified check, bank money order, or bank draft, in any case drawn and issued by a federally chartered or state-chartered bank insured by the federal deposit insurance corporation; or

(c) a bid bond, guaranty bond, or surety bond executed by a surety corporation authorized to do business in the state of Montana. If a financial guaranty bond or surety bond is provided to secure the purchase of indebtedness, the long-term indebtedness of the company executing the financial guaranty bond or surety bond must carry an investment grade rating of one or more nationally recognized

independent rating agencies.

(2) The money or, in lieu of money, the bank instruments or bid bonds, financial guaranty bonds, or surety bonds must be payable directly to the public authority soliciting or advertising for bids.”

The successful bidder’s bid security shall be returned upon the parties entering into a contract. Also, at such time, the bid security of unsuccessful bidders shall be returned.

4. Contract. The successful bidder will be expected to enter into a contract with Cascade County. The form of the contract is included within this package. However, Cascade County reserves the right to make changes to the contract which do not affect the substantial rights of the parties.

All bids shall remain effective for a period of thirty (30) days from the date of opening at some time during said thirty (30) day period, the successful bidder will be expected to enter into the contract.

5. Waiver of irregularities and informalities. Cascade County reserves the right to waive any irregularity or informality in any bid. Further, Cascade County reserves the right to reject any and all bids for any reason.

6. Basis of Award. Shall be dependent on the most responsible bid submitted. Consideration will be given, but is not limited to, cash flow, purchase price, trade in value, delivery date, equipment service guarantees, parts and service availability, parts and service facilities locations, analysis and comparison of equipment specification details, fuel consumption, fuel additive requirements, annual and lifetime operating costs, annual and lifetime ownership costs, resale value, and past experience of Cascade County with similar or related equipment.

7. Resident Bidder Preference. Pursuant to Section 18-1-102, Montana Code Annotated, Cascade County will award the contract “to the lowest responsible bidder without regard to residency. However, a resident must be allowed a preference on a contract against the bid of a nonresident if the state or country of the nonresident enforces a preference for residents. The preference must be equal to the preference given in the other state or country.”

According to Section 18-1-113, Montana Code Annotated, any bidder seeking a preference shall be required to file, along with the bid, an affidavit, specifying in detail, the basis upon which the bidder claims a preference.

8. Non-Discrimination. The successful bidder shall be expected to abide by a all provisions of state and federal law regarding discrimination. One such provision, in Montana law is Section 49-3-207, Montana Code Annotated, which states Non-Discrimination; “(e)very state or local contract or subcontract for construction of public buildings or for other public work or for goods or services must contain a provision that all hiring must be on the basis of merit and qualifications, and a provision that there may not be discrimination on the basis or race, color

religion, creed, political ideas, sex, age, marital status, physical or mental disability, or national origin by the persons performing the contract.

9. Laws and Regulations. Each bidder is expected to be familiar with and abide by all laws of the federal, state and local governments regarding their obligations in bidding and performing public contracts.

10. Trade-in. Each bidder will be expected to state a value for three pieces of equipment that Cascade County may wish to trade in, and which will reduce the purchase price. The three items of equipment are used 2006 CAT 163H Motor Graders, Serial # ARL00429, 2006 CAT 163H Serial # ARL00436, and 2005 CAT 160H Serial # ASD00543. The value stated by the bidder for each piece of equipment must be stated separately on the Bid Form. In accepting the bid from the successful bidder, Cascade County may elect to trade any, all or none of the used equipment, and if Cascade County elects to trade in any such item or items, the successful bidder shall receive such equipment at the time of delivery of the motor grader(s). The successful bidder will be responsible for transporting any such equipment from Cascade County. Any items to be traded in shall be accepted by the bidder “as is”, with no warranties and/or representations whatsoever. Upon reasonable advance notice, any bidder may inspect any of the items proposed for trade-in by contacting Public Works Director Brian Clifton. The transfer of any such item of equipment shall be by bill of sale delivered to the successful bidder at the time of delivery of the motor graders.

11. Warranty. In order to guarantee the cost of repairs and minimize downtime for Cascade County, all bidders shall include with their bid a total machine warranty, for a period of four (4) years or four thousand (4,000) hours of operation from date of delivery, whichever occurs first.

12. Questions. Should any bidder have any questions about the specifications, or any provision or other information contained in the bidder’s package, they may direct inquires to Brian K. Clifton, Director, Cascade County Public Works, 279 Vaughn S. Frontage Road, Great Falls, MT 59404; phone 406-454-6920. Any clarification information, or any changes made to any information in the bidder’s package shall be provided to all potential bidders who have obtained a copy of the specifications from Cascade County.

BIDDER'S SUBMISSION REQUIREMENTS

Sealed bids shall be submitted by each bidder. Sealed bids must be received by Cascade County no later than 1:00 o'clock p.m., October 21st, 2013, which is the time of commencement of the meeting to open bids. Bidders are expected to abide by the following requirements.

Each bid and accompanying documents shall be submitted in a standard 8 1/2 x 12, or larger manila envelope. The manila envelope shall be sealed, and the following information shall be written or typed on the outside of the envelope: (1) the name, address, and telephone number of the bidder: (2) the words "Bid to Cascade County for Motor Grader(s)".

The following documents shall be included in the manila envelope, in the following order:

1. Bid Forms. The Bid Form shall be completely filled out and signed by an authorized agent of the bidding company.
2. Bid Bond. A bid bond must be enclosed and must be in the form as specified in this package. The bid bond must be in the amount bid for the motor graders, without deduction for the value bid for any of the proposed trade-in items.
3. Warranty Information. All warranty information for the equipment must be included.
4. Delivery Date. Bidder must specify delivery date. Delivery shall be F.O.B. Cascade County Shop at Great Falls, Montana.
5. Other Information. Bidders are encouraged, but not required, to include other information about their business and about the equipment in the bid.

BID FORM

The undersigned Bidder hereby covenants and agrees to provide one (1) or more, 2014, diesel powered, articulated frame all-wheel drive motor grader(s), as described in the Specifications, for the price stated. The bidder understands that this bid is effective for thirty (30) days from the date of opening. All lines on the Bid Form must be completed.

Motor Grader Manufacturer _____ Model & Year _____

Net purchase price (without trade) including a total machine warranty which includes parts and labor required for repairs for a period of four (4) year four thousand (4,000) hours, whichever occurs first, from date of delivery, F.O.B. Cascade County Shop at Great Falls, Montana (**each**) \$ _____

Less trade in for:

Used 2006 CAT 163H Motor Grader, Serial # ARL00429 \$ _____

Used 2006 CAT 163H Motor Grader, Serial # ARL00436 \$ _____

Used 2005 CAT 160H Motor Grader, Serial # ASD00543 \$ _____

Additional cost for 5 Yr / 5,000 Hr total machine warranty \$ _____

Additional cost for 6 Yr / 6,000 Hr total machine warranty \$ _____

Additional cost for 7 Yr / 7,000 Hr total machine warranty \$ _____

Proposed delivery date: _____

Current Governmental Fixed Interest Rate: _____ %.

NOTE: CASCADE COUNTY RESERVES THE RIGHT TO KEEP ANY OR ALL OF THE PIECES OF EQUIPMENT FOR PROPOSED TRADE-IN, AND IN SUCH EVENT, THE BALANCE AMOUNT WILL BE INCREASED IN A LIKE AMOUNT, OR AMOUNTS. THE BID BOND SUBMITTED WITH THIS FORM SHALL BE BASED ON THE FULL AMOUNT BID FOR THE MOTOR GRADER, AND MAY NOT BE REDUCED FOR THE VALUE OF ANY OF THE PROPOSED EQUIPMENT FOR TRADE-IN.

Bidder's Name _____

Bidder's Address _____

Bidder's Phone No. _____

Bidder's Signature

AGREEMENT

THIS AGREEMENT is made this _____ day of _____, 2013, by and between Cascade County, and _____, hereinafter referred to as the seller, and is meant to describe the terms and conditions for the sale by seller and the purchase over time by Cascade County of _____, diesel powered, articulated frame all-wheel drive motor graders as described in the specifications.

THE PARTIES COVENANT AND AGREE AS FOLLOWS:

1. Item Purchased. The seller agrees to sell and provide, and Cascade County agrees to purchase the _____ certain motor graders with associated equipment, for the sale price of \$ _____.

The specific equipment to be purchased over time is more specifically described as follows:

2. Payment Terms. Cascade County shall make annual payments for the equipment in the amount of \$ _____ for _____ years to the seller. The first payment will be made within 30 days of delivery by the seller, and all subsequent payments shall be due annually on or before the anniversary date of the first payment. The seller shall be required annually to submit a claim form pursuant to Cascade County policy, with the claim form having been submitted prior the 25th day of the month prior to the month in which the payment is due.

3. Delivery Date. Time is of the essence in this agreement. The seller shall deliver the motor graders and associated equipment to Cascade County no later than _____. If full delivery is not made by such date, the parties hereby agree that Cascade County shall be entitled to liquidated damages in the amount of \$50.00 for each day past such deliver date until full delivery takes place. Cascade County may choose to waive its receipt of liquidated damages.

4. Contract Documents. The parties understand and agree that there are various documents which are an integral part of this contract, and by this reference are fully incorporated herein: to include all of the documents which are part of the Bidder's Package.

5. Insurance. Delivery shall be F.O.B. Cascade County Shop at Great Falls, Montana. The seller shall be responsible for insuring the motor graders until they are delivered and off-loaded to Cascade County. Cascade County shall not be responsible for loss until such time, and then upon unloading the equipment the obligation for insurance shall be the responsibility of Cascade County.

6. Venue for Disputes. Should any dispute arise regarding this contract, proper venue shall be in the District Court of the Eighth Judicial District, in and for Cascade County, Montana.

7. Binding Effect. This contract shall bind and inure to the benefit of the heirs, successors, and assigns of the parties.

Dated this _____ day of _____, 2013.

CASCADE COUNTY:

Joe Briggs, Chairman

ATTEST:

Rina Fontana Moore, Clerk and Recorder

Successful Bidder

SPECIFICATIONS

Please describe all warranties, guarantees, and extended coverage's of the motor graders, including an extended service plan.

Pursuant to the Invitation to Bidders, requesting bids for one (1) or more, 2014, diesel powered, articulated frame, tandem drive motor graders, the following minimum requirements, or substantially similar equivalents, shall be met:

- A. Motor grader(s) shall meet OSHA requirements and specifications on the date of the bid opening.
- B. No bid will be considered unless accompanied by a bid bond, bank draft, money order, or certified or cashiers check, in the amount of not less than ten percent (10%) of the total amount for the total number of machines bid, as further described in paragraph 3 of the General Information for Bidders in the Bidder's Package.
- C. Delivery shall be F.O.B. Cascade County Shop at Great Falls, Montana.
- D. Upon delivery, the successful bidder shall include two (2) copies of the operating manual, and one (1) copy each of service, parts and technical repair manuals.
- E. Bidder must specify delivery date.
- F. All machines shall be the current advertised and produced model, with all the latest changes and features offered as standard, whether or not called for in the bid specifications.

PLEASE INDICATE IN THE FOLLOWING IF THE MACHINES OFFERED CAN MEET THE FOLLOWING MINIMUM DESIRED CONFIGURATIONS. ANY "NO" MUST BE CLARIFIED ON A SEPARATE SHEET IF THE BIDDER DESIRES SUPPORT FOR AND ALTERNATE OR SUBSTANTIALLY SIMILAR SPECIFICATION.

BASIC SPECIFICATIONS

- Y___ N___ Machine shall be designed and built by the manufacturer.
- Y___ N___ Base Machine Weight shall not be less than 40,979 lbs (18,588 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 (3,287 mm).
- Y___ N___ Machine length from the front outside edge tire to end of tow hitch shall not be less than 350.3 in (8,898 mm).
- Y___ N___ Machine Wheel Base (distance from front axle to mid tandem) shall not be greater than 241 in (6,126 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 and attached to the motor grader(s).
- 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, fuel tank cap and tool box.
- Y___ N___ Machine length from counterweight to ripper shall not exceed 399.4 in (10,140 mm).
- Y___ N___ Fuel tank guards equivalent to CAT part number 331-1080 and 331-1081

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 Interim and European Union Stage IIIb
- 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 while AWD is ON a rated net flywheel of at least 233 HP (174 kW) in 1st gear, 253 HP (189 kW) in 2nd gear, 258 HP (192 kW) in 3rd gear, 263 HP (196 kW) in 4th gear, and 283 HP (211 kW) in gears 5 through 8.
- 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 (3048 m). The deration rate above 10,000 ft (3048 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 2100 rpm.
- Y___ N___ Engine will have an minimum torque rise of 60% from 2100 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___ Engine shall not require DEF (diesel exhaust fluid) **No Exception**
- Y___ N___ The cooling package air intake shall have 2.8 mm perforated inlet screen.
- Y___ N___ The charged air cooler (ATAAC) shall have 9 fins per inch.
- Y___ N___ A 120V engine coolant heater shall be provided to assist in cold weather starting.
- Y___ N___ Ether starting aid shall be available and must automatically meter ether injection to prevent engine damage.
- Y___ N___ Precleaner designed to handle large debris fields, including snow shall be provided.

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 0-10.8 mph (0-17.4 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.
- Y___ N___ An autoshift transmission option shall be provided 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 (not spring-loaded), 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. 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___

Y___ N___

Y___ N___

The right 3 axis joystick shall primarily control the Drawbar, Circle, and Moldboard. 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 right lift cylinder, 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. For use with low ambient temperatures below -18C.

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 3,565 in² (23,000 cm²) of total friction material surface area used 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 55.5 gallon/min (210 L/min) of oil flow at high idle.
- 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 less 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 609 psi (4200 kPa).
- 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___ 0W Hydraulic Oil shall be provided. **No Exception**
- Y___ N___ Two hydraulic valves for the snow wing and one hydraulic valve for the front lift group shall be provided.
- Y___ N___ Hydraulic system shall have a separate oil tank solely dedicated to the implement pump.

FRONT AXLE AND TANDEM

- 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 47.5 degrees left or right.
- Y___ N___ Maximum front wheel lean shall be no less than 18 degrees left or right.
- Y___ N___ Machine minimum turning radius shall not exceed 24.10 ft (7.6 m) using front steering, full articulation, full wheel lean and unlocked differential.
- Y___ N___ Distance between center of tandem wheels shall be no greater than 60 in (1523 mm) for optimum clearance and mobility.
- Y___ N___ Tandem 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 degrees.

TIRES AND RIMS

- Y___ N___ 17.5R 25 MX XSNO+ 1* MP tires mounted on 14" x 25" multi-piece rims shall be provided.
- Y___ N___ One (1) spare rear tire rim assembly shall be provided.
- Y___ N___ One (1) spare front tire rim assembly shall be provided.

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___ AM / FM / Weatherband radio arrangement including 24V to 12V converter, two speakers, antenna and wiring shall be provided.
- 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___ 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___ An auxiliary control pod, with implement float control capability, shall be provided.
- 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 display and rear vision camera shall be provided 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.

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 14 ft (4267 mm) long, 27 in (686 mm) high and no less than 1 in (25 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 insure 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___ Linkbar 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 sideshift 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 61.4 in (1553 mm).
- Y___ N___ Throat clearance with standard moldboard shall be at least 131.4 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.
- Y___ N___ Blade lift accumulators shall be provided, protecting cutting edge and other components from damage from shock loads.
- Y___ N___ A two (2) ft right hand side blade extension shall be installed.

ELECTRICAL

- Y___ N___ Six 3 x 3 in (76 x 76 mm) halogen mounted cab lights shall be provided.
- Y___ N___ Starting system shall be a 24V direct electric type.

- Y___ N___ Incandescent 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___ Machine shall have 200 amp-hour, 1400 CCA extra heavy-duty batteries available.
- Y___ N___ Machine shall have a 280-amp alternator at 24 volts available which is brushless for increased life and durability.
- Y___ N___ There will be 2 (3 x 3 in) (76 x 76 mm) halogen mounted on the right-hand side of car roof bar to illuminate a snow wing shall be provided.
- Y___ N___ There will be 2 (3 x 3 in) (76 x 76 mm) halogen heel work lamps mounted underneath the cab shall be provided.
- Y___ N___ There will be 2 (3 x 3 in) (76 x 76 mm) halogen mid-frame toe lamps shall be provided to illuminate moldboard and surrounding area as an option.
- Y___ N___ There will be 2 (3 x 3 in) (76 x 76 mm) halogen ripper work lamps shall be provided.
- Y___ N___ High and low bar headlights with front turn signals shall be provided.
- Y___ N___ An amber LED high-speed strobe beacon shall be provided.
- Y___ N___ A 24V to 12V converter with 25-amp capacity shall be provided.

SERVICEABILITY

- Y___ N___ Access to engine will be open from both sides with hinged engine side shields and full access service doors.
- 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

MINIMUM SERVICE FILL CAPACITIES

- Y___ N___ Standard fuel tank capacity shall not be less than 110 gallons (416 L).
- Y___ N___ Standard cooling system capacity shall not be less than 14.8 gallons (56 L).
- Y___ N___ Standard hydraulic tank capacity shall not be less than 16.9 gallons (64 L).
- Y___ N___ Standard engine oil capacity shall not be less than 7.9 gallons (30 L).
- Y___ N___ Standard tandem housing capacity shall not be less than 16.9 gallons (64 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)

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.
- 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___ Two outside mounted heated mirrors shall be provided.

OPTIONAL ATTACHMENTS

- Y___ N___ Rear ripper shall have 5 ripper shank holders with shanks and 9 scarifier shank holders with scarifier teeth.
- 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___ Front & 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 shall be provided.
- Y___ N___ All core machine systems shall be electronically connected optimizing performance and preventing machine damage.
- Y___ N___ Machine shall have no drive shafts that cross over the articulation hitch.
- 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 a transmission solenoid valve guard provided.
- Y___ N___ Henke or equivalent 12 ft All Hydraulic Postless Snow Wing Installed.
- Y___ N___ Articulation guard shall be provided.
- Y___ N___ Additional hydraulic lines from the ripper valve to the back of the machine shall be provided and the ripper shall be capable of independently floating by being isolated, using the scarifier float switch to operate the float capability on the ripper.

ALL WHEEL DRIVE SYSTEM

- Y___ N___ All Wheel Drive system shall be useable in 1F thru 7F and 1R thru 5R gears.
- Y___ N___ All Wheel Drive (AWD) system shall be provided and provide a constant net power to the Tandems by increasing up to 60 HP (45 kW) when AWD is engaged.
- Y___ N___ All Wheel Drive system – Each front wheel shall be powered utilizing a dedicated variable axial piston pump and variable axial piston motor. Both pumps and motors shall be infinitely variable to provide up to maximum torque in every gear.
- Y___ N___ All Wheel Drive system shall automatically vary individual front wheel speeds by up to 50% during a turn, improving front wheel traction and reducing turning radius.
- Y___ N___ All Wheel Drive system shall produce a max torque of no less than 1,000 lb ft. (1355 Nm).
- Y___ N___ All Wheel Drive system shall provide a hydrostatic front wheel drive only mode neutralizing the transmission for precise low-speed performance. The ground speed shall be infinitely variable between 0 and 5 mph (8 km/h)

**LIST EXPLANATIONS FOR ANY “NO” ANSWERS BELOW
IF CONSIDERATION IS DESIRED.**

MACHINE FUEL CONSUMPTION DATA

Fuel consumption.....gal/hr.
(Please do not enter in a range)

Machine fuel consumption gal/hr figure must be supported by providing written regional fuel consumption results data from like machines. Data must be actual numbers / results retrieved from like machine via a gps or cellular data link. Vendors must provide a copy of the data used.

Total Fuel Cost without DEF for 7,000 hours @\$3.50 gal..... \$_____.
(Calculated by using 7,000 hours x Gal/Hr Rate from above x \$3.50/gal)

WARRANTY & AVAILABILITY GUARANTEE

In order to guarantee the cost of repairs and minimize downtime for the County, all bidders shall include with their bid:

A total machine warranty, including parts and labor for required repairs, for a period of four (4) years four thousand (4,000) hours, whichever occurs first, from date of delivery. Warranty repairs will be provided during regular working hours. If the County requests that work be done outside of regular working hours, which results in overtime, the County will pay the differential between regular time and overtime wage. Lodging, meals, travel time, parts, freight and any transportation of units between County and seller will be at seller's expense.

County will provide seller with Scheduled Oil Sampling for analysis from date of delivery. Seller will provide the oil sample bottles & the expense of processing the oil samples.

Annual machine inspections and adjustments, as prescribed in the maintenance guides, shall be performed in the field (County's location), unless prior more convenient arrangements are made.

95% Guaranteed Machine Availability. Bidder guarantees that the machine shall be operable and available for use by the County for at least 95% of the County's work year, which shall be calculated based on a 2080 hour work year. After any continuous downtime, which exceeds 40 work week hours, Seller shall provide County with a replacement machine that is comparable to the motor grader purchased under this bid proposal. If seller fails to provide County with a comparable replacement machine, County shall charge seller with an hourly assessment of \$60.00 per hour for any downtime in excess of 5% of the work year; such assessment shall be made on the anniversary date of delivery.

County shall make the machines available for repairs and inspection upon reasonable request and notice by the successful bidder.

AFFIDAVIT AND INFORMATION REQUIRED OF BIDDERS

AFFIDAVIT OF NON-COLLUSION

I hereby swear (or affirm) under the penalty; for perjury;

- (1) That I am the bidder (if bidder is an individual), a partner in the bidder (if the bidder is a partnership), or an officer or employee of the bidding corporation having authority to sign on its behalf (if the bidder is a corporation);
- (2) That the attached bid or bids have been arrived at by the bidder independently, and have been submitted without collusion with, and without any agreement, understanding, or planned common course of action with any other vendor of materials, supplies, equipment or services described in the invitation to bid, designed to limit independent bidding or competition;
- (3) That the contents of the bid or bids have not been communicated by the bidder or its employees or agents to any person not an employee or agent of the bidder or its surety on any bond furnished with the bid or bids, and will not be communicated to any such person prior to the official opening of the bid or bids; and
- (4) That I have fully informed myself regarding the accuracy of the statements made in this affidavit.

SIGNED: _____

FIRM NAME: _____

DATE: _____

ADDRESS: _____

SUBSCRIBED AND SWORN TO BEFORE ME

THIS _____ **DAY OF** _____, **20** _____.

NOTARY PUBLIC

Print name:

My commission expires: _____

BIDDER'S E.I NUMBER:
(Number used on Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941)

BIDDER'S CHECKLIST

Please be sure you have completed the following prior to submitting your bid:

1. Read and understood the specifications.
2. Enclosed all documents listed in the Bidder's Submission Requirements (p.5 of Bid Package).
3. Made yourself familiar with any State laws that pertain to this bid.
4. Asked any questions, and received answers, regarding the bid procedure, specifications, or general information.

***** NOTE: Any bid that is not properly addressed (including bidders phone no.), or that is delivered past the date and time indicated on the invitation to bid, will be invalid and will not be opened or considered.*****