

ADDENDUM #1
IFB#: 24-10-3484LE

NAVAJO NATION FISCAL RECOVERY FUND OFFICE
INVITATION FOR BID (IFB)
IFB #: 24-10-3484LE
FOR PURCHASE OF HEAVY EQUIPMENT
USING RRR FUNDING FOR THE NAVAJO NATION CHAPTERS (7)

Addendum is as follows:

- **Removal of (1) John Deere 50G Mini Excavator**
- **Due Date is extended to October 14, 2024**

All other terms as outlined in the IFB remain the same.

Bid Questions shall be emailed ONLY in writing to the following individual:

Dawnell Begay
Planner/Estimator
Email: dbegay@nndcd.org

**NAVAJO NATION FISCAL RECOVERY FUND OFFICE
INVITATION FOR BID (IFB)
IFB #: 24-10-3484LE
FOR PURCHASE OF HEAVY EQUIPMENT
USING RRR FUNDING FOR THE NAVAJO NATION CHAPTERS (7)**

I. BID INSTRUCTIONS

Bid Proposal shall be delivered, electronically, via email ONLY to the following individual:

Attention: Dawnell Begay, Planner/Estimator
Division of Community Development ARPA/FRF Office
Administration Building #2, 2nd Floor South
Window Rock, AZ 86515
EMAIL: dbegay@nndcd.org

Bid Proposal shall be provided in the following format:

1. Subject Title of Email shall state: “IFB # (BID FOR PURCHASE OF HEAVY EQUIPMENT USING RRR FUNDING FOR THE NAVAJO NATION CHAPTERS (7)”
2. The following documents should be labeled subject to the following name format:
 - a. Heavy Equipment_(Name of Vendor)_(Name of File)
3. The following documents (files) are required to be submitted as separate file attachments. Failure to comply with this formatting will subject the bid to being disqualified:
 - a. Letter of Interest
 - b. Specifications (Attachment 1)
 - c. Navajo Nation Suspension and Debarment Form (Exhibit A)
 - d. W-9 (Exhibit B)
 - e. Vendor Quote

Navajo Nation businesses bidding under the Navajo Business Opportunity Act shall clearly note their Priority 1 or Priority 2 status in the letter of interest.

Any bids or portion thereof received after the submittal deadline will not be considered and returned to the submitting entity.

Bid Questions shall be emailed ONLY in writing to the following individual:

Dawnell Begay
Planner/Estimator
Email: dbegay@nndcd.org

The due date for bids is October 14, 2024 at 5:00 pm

II. SCOPE OF WORK

The NNDCD is soliciting bids under this IFB to accomplish the purchase and delivery of heavy equipment for various chapters on the Navajo Indian Reservation as part of the American Rescue Plan ACT (ARPA) funding from the federal government. The specific equipment under this IFB are as follows:

- (7) John Deere Model 772GP motor grader or equivalent with ripper attachment.
- (2) John Deere Model 850L crawler dozer or equivalent with ripper attachment.
- (1) John Deere Model 450LGP crawler dozer or equivalent.
- (2) John Deere 320P backhoe or equivalent with forks

The following are additional requirements to be included in the bid and priced, as applicable, with the aforementioned equipment:

- Standard warranty with terms and conditions.
- Optional warranty with pricing (separately).
- Operator training at time of delivery.
- Anticipated equipment delivery timeframe.
- Length of bid price is valid.

III. BID SCHEDULE

Issuance of Invitation for Bids:	October 4, 2024
Bids Due:	October 14, 2024
Bid Opening:	TBD
Notice of Selection:	TBD

IV. BASIS FOR AWARD

1. Completeness of the Bid Proposal, including the completed Suspension and Debarment and W9 Forms.
2. Proposal meets the specifications defined in Attachment 1
3. Proposal meets the Maximum Feasible Cost per equipment.
4. Proposal meets all the terms and conditions specified herein, including equipment availability.

IV. REQUIREMENTS/SPECIFICATION

Bidders responding to this solicitation shall ensure the equipment proposed meets the following requirements:

1. Equipment shall be new.
2. Equipment shall meet the minimum specifications defined in Attachment 1 of this solicitation. Deviations to these specifications shall be clearly noted in accordance with paragraph XVII below.

V. WARRANTY

The manufacturer's published warranty shall be documented in the bid. The price for a 5-year Extended Warranty must be in the response. The Bidder shall explain the specific coverage of each Warranty, including where maintenance covered under the Warranty will be performed.

VI. SHIPPING AND DELIVERY

The Backhoe is expected to be delivered to the Navajo Nation within 90 days after receiving a signed Purchase Order.

The Navajo Nation shall take delivery of the equipment at the Division of Community Development ARPA/FRF Office Administration Building #2, Window Rock, AZ 86515

At time of delivery, equipment training, vehicle title, warranty, operating manual, and other licensing documentation shall be included.

Shipping and delivery costs are considered the responsibility of the bidder and shall be included in the bid proposal.

VII. INSPECTION AND ACCEPTANCE

Inspection and Acceptance of each equipment shall be performed by the receiving Chapter at time of delivery. The Bidder(s) shall coordinate three business days in advance of each delivery to ensure the Chapter will have representatives available to perform Inspections and Acceptance.

VIII. BUY AMERICAN ACT

The bid shall include a statement in the letter of interest that the equipment complies with the requirements of the Buy American Act.

IX. FULLY LICENSED DEALERSHIP

Bidders must be an authorized and fully certified licensed equipment dealership that meets all the standards and qualifications required by the equipment manufacturers. All bidders shall include a statement certifying their Dealer licensing.

X. PREFERENCE OF NAVAJO AND INDIAN-OWNED BUSINESS

Preference of Navajo and Indian-owned businesses will be given under the Navajo Nation Business Opportunity Act, 5 NNC §201 et. Seq. and the Navajo Nation Procurement Act 12 NNC §303. Certification of Navajo Owned Business will be assured by certificate held by the Navajo Business Regulatory Department. It is the responsibility of the offeror to identify themselves as certified under the Navajo Nation Business Opportunity Act in the letter of interest. As specified in the previous paragraph, vendors must demonstrate they are certified dealerships.

XI. PROPRIETY INFORMATION

Any restrictions on the use of data contained within any proposals must be clearly stated in the proposal itself. Proprietary information submitted in response to this IFB will be handled in accordance with applicable purchasing procedures. Each and every page of the proprietary material must be labeled or identified with the word "Proprietary".

XII. RESPONSE MATERIAL OWNERSHIP

All material submitted in this IFB shall become property of the Navajo Nation and will not be returned to the business.

XIII. AWARD OF BID – REJECTION OF BID

The Navajo Nation reserves the right to accept bids all or in part. At the time of acceptance, the Navajo Nation also reserves the right to increase or decrease quantities of any item at the same price bid. The Navajo Nation reserves the right to reject any and all proposals not within the projected budget.

XIV. NOTIFICATION OF AWARD OF BID

Upon Selection, the winning Bidder will be contacted by the Navajo Nation to arrange the formal contract documents (Purchase Order) to complete the purchase.

XV. NAVAJO NATION SALES TAXES

All goods delivered within the territorial jurisdiction of the Navajo Nation are subject to the six percent (6%) Navajo Sales TAX. 24 N.N.C §601 et. Seq. These taxes shall be included and itemized on the FEE schedule for all Bidders.

Bidders shall apply for exemptions of any Federal, State, and local taxes (including Federal Excise Taxes (FET)) at their own cost, including obtaining AZ5000 tax exempt forms in AZ, and equivalent exemptions in NM, Utah, or other US States. The Navajo Nation shall not be responsible for obtaining or providing tax exemptions.

XVI. WITHDRAWAL OF BID

No bid proposal shall be withdrawn for a period of 90 calendar days after the submission of the bid without the consent of the owner.

XVII. DEVIATIONS

All specifications listed in Attachment 1 are intended to be the preferred design and performance requirements. Where deviations from the specification are necessary, Bidder will annotate equivalent reliability or performance. If there is insufficient room for detailing a deviation, please indicate "see deviation" and attach, clearly indicating the requirement on any such attachments. Failure to detail all such deviations will provide a basis for rejections of the entire proposal. Substantial deviations will not be considered.

XVIII. BILLING AND PAYMENTS

Billing and payment shall conform with all Navajo Nation Procurement procedures. To receive timely payment, the winning Bidder has an obligation and responsibility to present invoices that are timely and accurate. The payment procedures established by the Division of Finance shall be adhered to and are to begin whenever Goods or Services are delivered and accepted.

XIX. DISCLAIMER

Nothing in this IFB is intended to or shall have the effect of waiving Navajo Nation sovereignty. The Navajo Nation is a sovereign government, and all procurements shall comply with Navajo Nation laws, regulations, including the Navajo Nation Business Opportunity Act, Navajo Preference in Employment, and applicable federal laws and regulations.

Bid specifications for Deere 450 LGP or Equal Crawler Dozer

Compliance Additional supplemental information explaining compliance can be added as an attachment to the bid. Please reference the Compliance Number. Listed below in bold are the attachments that are required to be included with the bid.

Overall Machine

1 yes_ no_ **Made in the U.S.A.**

Engine

The crawler engine shall meet EPA Final Tier 4/EU Stage IV emissions. It will have a minimum of 71 SAE net

2 yes_ no_ hp (53 kW), with four cylinders and beturbocharged.

3 yes_ no_ The crawler engine shall have a minimum displacement of 4.0 liters (244 cubic inches)

4 yes_ no_ Engine shall have wet-sleeve cylinder liner design for maximum cooling and engine life.

The crawler engine shall meet EPA Final Tier 4/EU Stage IV emissions without the use of Diesel Exhaust

5 yes_ no_ Fluid (DEF).

The pressurized liquid cooling system shall have a water pump driven with an automatically adjusting belt.

Radiator shall be filled with manufacturer's approved anti-freeze solution that provides protection to at least -

6' yes_ no_ 34° F (-37° C).

The fuel system shall have a fuel shut-off valve to prevent fuel loss during filter changes. The system shall

7 yes_ no_ have a water separator located between the fuel tank outlet and the fuel filters.

The exhaust after treatment device shall consist of both a Diesel Oxidation Catalyst (DOC) and a Diesel

Oxidation Catalyst (DPF). Both the DOC and DPF shall be serviced independently in the event of a repair or

8 yes_ no_ replacement.

Diesel Particulate Filter (DPF) shall be rated to last the life of the engine. Please Provide as an attachment

9 yes_ no_ the warranty on the exhaust after treatment system.

10 yes_ no_ Dozer engine shall have a programmable automatic engine shutdown system

11 yes_ no_ Dozer shall have an automatic turbo cool-down system that protects the engine from damage.

The primary and secondary fuel filters shall be remote mounted outside of the engine compartment for easy

12 yes_ no_ access and a reduced risk of fuel leaks near the engine.

Severe duty fuel filter - water separator will be available if required which will include a heating element to

13 yes_ no_ prevent freezing of separated water

14 yes_ no_ Engine Air Precleaner-Rotary Style

The engine lubrication shall be of adequate design to permit operation on slopes up to 45° in any direction.

15 yes_ no_ The engine oil and filter change interval shall be 500 hours

Electrical

Batteries shall have a minimum capacity of 950 CCA, 190-min. rated reserve. Electrical system must be 24

16 yes_ no_ volts

17 yes_ no_ Unit shall have cab mounted lights Front Mounted (2), Rear Mounted (2), and 2 rear reflectors

Transmission

18 yes_ no_ Dual-path hydrostatic drive with infinite speed capability, dynamic braking, full power turns and counter

19 yes_ no_ A load sensing system that works to downshift and upshift automatically

The transmission system shall be sealed and have a reservoir independent of hydraulic system. There shall

be adequate filtration and cooling of the hydraulic system to support 4,000 hour oil and filter changes. Oil

20 yes_ no_ shall be multi-viscosity engine oil.

Transmission shall have the ability for the operator to easily adjust operating parameters such as: FNR shift

21 yes_ no_ rate, Steering rate, Steering Modulation, Decel pedal response and ReverseRatio.

Dozer shall have an automatic hill hold feature that automatically applies the parking brake when the

transmission is in neutral and motion is detected. Parking must automatically be released upon shifting from

22 yes_ no_ neutral.

23 yes_ no_ A sight gauge shall be provided for checking the hydrostatic fluid.

24 yes_ no_ Transmission filter restriction shall be displayed in the cab

The single pedal decelerator will allow the operator to choose between slowing travel speed and engine rpm

or travel speed only to help maintain traction without affecting engine power and hydraulic response. Fully

25 yes_ no_ depressing the pedal applies the brakes.

Steering

Hydrostatic drive is preferred for full power turns and counter rotation. Steering shall be fully modulated at all

26 yes_ no_ speeds to provide smooth operation. Steering brakes shall be oil-cooled .

Final Drive

27 yes_ no_ Triple reduction, bull gear final drives must be isolated from the track frames.

Bid specifications for Deere 450 LGP or Equal Crawler Dozer

Tracks and Undercarriage

- 28 yes_ no_ Six track rollers with front and rear track guides and sprocket guards. The dozer shall have one carrier roller on each side. Sealed and life-time lubricated rollers, idlers and track chain.
LGP Track gauge 1651 mm (65 in.). The track length on the ground shall be a minimum 2433 mm (96 in.)
LGP. Track shall be 406 MM(16 in.) grouser track shoes. Ground pressure not to exceed 31.3 kPa (4.5 psi).
- 29 yes_ no_ Minimum ground clearance of 329 mm (13 in.).
Sealed and lubricated with Moderate Service Shoes- With Maximum extended Life Undercarriage. Max Life undercarriage with SC2 Bushings along with larger track links, rollers, and idlers to increase component life
- 30 yes_ no_ before replacement in needed.

Dozer

- The dozer shall be a hydraulically actuated, inside mounted all hydraulic blade (power-angle-tilt PAT). The blade hydraulic system shall provide raise, lower, tilt, angle and float. The blade capacity shall be a minimum
- 31 yes_ no_ 3.1 cu. yd. (2.3 m³ for an LGP machine).
- The dozer tilt shall be a minimum of (15.7 in.) for LGP. The minimum blade height 1067 mm (42 in.) for LGP,
32 yes_ no_ and minimum blade width of 3150 mm (124 in.) for LGP track frame.
- The dozer blade must be equipped with a three-piece replaceable cutting edge. The dozer shall have
- 33 yes_ no_ adjustable blade pitch from 52° cutting edge angle in the back position to 60° in the forward position .

Hydraulic System

- 34 yes_ no_ The system shall have a maximum flow of 16 gpm (60.1 Umin .) flow and provide adequate cooling .
The hydraulic system shall be sealed and have a reservoir independent of transmission system. There shall be adequate filtration and cooling of the hydraulic system to support 4,000 hour oil and filter changes. Oil
- 35 yes_ no_ shall be multi-viscosity engine oil.
- 36 yes_ no_ All hoses shall be of an a-ring seal design to reduce leakage and facilitate repairs.
- 37 yes_ no_ 4 Function Manual Hydraulic controls for the Power-Angle-Tilt (PAT)

Operator's Station

- The enclosed operator's station shall be ROPS (ISO 3471 - 2008) and FOPS (ISO 3449 - 2005) certified. It shall be isolation mounted and include a roof panel. Instrumentation vandal protection shall be included on
- 38 yes_ no_ ROPS canopy unit.
- The operator seat shall have adjustments for operator height and weight, and lumbar adjustment in the
- 39 yes_ no_ backrest.
- The cab shall include air conditioning with two fresh air filters and a separate recirculation air filter for
- 40 yes_ no_ operator protection .
- EH controlled machines shall have touchscreen primary monitor displaying gauges and monitoring system that will include: transmission temperature , engine coolant temperature, engine oil pressure, transmission charge pressure, hydraulic filter restriction, transmission filter restriction, electric voltage , engine RPM ,
- 41 yes_ no_ transmission speed range/direction and hour meter.
- 42 yes_ no_ The cab shall have continuous and unobstructed glass from roofline to floor for visibility in tight quarters.
- Cab shall have two cup holders. Personal cooler holder/storage compartment for operator's manual and a
- 43 yes_ no_ rubber floor mat
- The operator station shall have an electronic touchscreen monitor system with audible and visual warning for:
low alternator voltage; engine oil pressure; engine coolant temperature; indicator; hydraulic oil filter restriction; transmission oil filter restriction; transmission oil temperature; engine air restriction indicator;
- 44 yes_ no_ fasten seat belt and park brake warning.
- 45 yes_ no_ 3" retractable seat belt shall be standard equipment with an operator presence safety system
- 46 yes_ no_ The footrests and full-length armrests shall be adjustable
- 47 yes_ no_ Rear Wiper and Washer for rear cab class.
- 48 yes_ no_ Rear Camera includes touchscreen POU

Additional Equipment

- 49 yes_ no_ Key-less start with multiple security modes
- 50 yes_ no_ Horn
- 51 yes_ no_ 12 Volt power port
- Cold weather Package with ether starting aid, engine block heater (110V}, and All season oil good for -40F to
- 52 yes_ no_ 104F
- 53 yes_ no_ Dry-type air cleaner with safety element and restriction indicator
- 54 yes_ no_ Perforated engine side shields

Bid specifications for Deere 450 LGP or Equal Crawler Dozer

- 55 yes_ no_ Reverse warning alarm
56 yes_ no_ Vandal protection providing lockable protection to all openable panels and fuel fill
57 yes_ no_ Heavy-duty bottom guard to include protection to the engine, mid-frame and transmission.
58 yes_ no_ Front idler shaft guards
59 yes_ no_ Front pull hook, bolt on.
Periodic maintenance and lube chart shall be posted for easy reference to ensure that maintenance is
60 yes_ no_ performed according to schedule.
61 yes_ no_ Full-Length Rock Guards
62 yes_ no_ Front Counterweight 240lbs
63 yes_ no_ Heavy-duty Parallelogram ripper with 5-shank Pockets and (3) Shank/teeth.
64 yes_ no_ Fluid sampling ports for engine oil, hydraulic, and hydrostatic systems.
Quick Service Package with ports and plumbing for quick evacuation and fill of hydraulic oil, engine oil, and
65 yes_ no_ engine coolant.
66 yes_ no_ Heavy Duty Front Grille

Additional Equipment

- Weight of the dozer must be minimum of 24,200 lbs. Must include base weight with standard equipment, rollover protections structure (ROPS) full fuel tank, 175lb. Operator plus the dozer blade, ripper and other
67 yes_ no_ optional components.

Safety

- 68 yes_ no_ In Cab mounted 2.5 lb. Fire Extinguisher and Bracket.
69 yes_ no_ Rear Camera includes touchscreen POU

Warranty and Machine Maintenance Plan

- 70 yes_ no_ Include in the price and list Standard Factory Warranty.
71 yes_ no_ Include in the price 60-Months/3000 Hour Extended Powertrain Plus Hydraulics Warranty.
**Include as an attachment the Extended Warranty Options for more years and hours of both powertrain plus hydraulics and Full Machine (Comprehensive). Include what the deduct for the 60/3000 hour Powertrain plus hydraulics warranty quoted in bid would be if another extended
72 yes_ no_ warranty option is selected.**

- Include in the price a 60-Month/3000 Hour Maintenance Plan with travel included up to 100-Miles. **Please
73 yes_ no_ list what is covered under the Maintenance Plan on the quote or as a separate attachment.**

Additional Trailer Bid to Haul Dozer

- 74 yes_ no_ 30,000 lbs. 15-Ton Capacity Pintle Hithch Trailer with Beavertail with Trailer Weight of 8,100 lbs.
75 yes_ no_ Deck width 8'6" with 34" deck height and 21' Length
76 yes_ no_ Deck to have 2" aptong outside with DSS pine Center
77 yes_ no_ two speed jack standard equipment
78 yes_ no_ 20Ton Ramps with Apitong Wood filled Ramps, standard springs.
Frame Mainrails W14'x22 lbs. wide flange I-Beam, one piece cold formed Hi-tensile 50,0000 PSI steel
79 yes_ no_ Mainrails from front to drawbar to rear of trailer 8Deg. Tail (safe low loading angel)
80 yes_ no_ Crossmembers 6"x 3.7 lbs. per ft. I-Beam pierced through mainbeam
81 yes_ no_ Headboard 8" High, Full width of trailer with Drawbar Storage Area
Lights sealed L.E.D., 12 volt DOT approved with USA star plus sealed Modular Wiring Harness w/ 7-Way
82 yes_ no_ ATA Plug
83 yes_ no_ Hitch one piece solid cast steel (adjustible) lunette eye and flange mount
84 yes_ no_ Two Safety Chains 1/2" blue-Krome Plated high test, safety hook with Latch
85 yes_ no_ 70,000 lbs. Static/ 40,000 lbs. lift (Heavy Duty 2-Speed screw type)
5-tie downs per side with Rota Rings with 360Deg. Swivel 2-Tie Downs each sid on the beavertail for total of
86 yes_ no_ 7 each side.
87 yes_ no_ Eight 215/75R147.5 (H) Steel belted Radials
88 yes_ no_ Four disc typ hubs, egith 6.75 x17.5, 8-Bolt Hub Piloted disc wheels, oil seals
89 yes_ no_ Hutch H-9700, Three Leaf, capacity 50,000 lbs. tandem
90 yes_ no_ Two Heavy Duty Dexter, 15,000 lbs. each
91 yes_ no_ 12 1/4" x 5" Electric Brakes
92 yes_ no_ Break-away 12 Volt, wet cell battery with integrated battery charging system
93 yes_ no_ Standard Factory Warranty

Bid specifications for Final Tier 4 Compliant Deere 850L or Equal Crawler Dozer

Compliance

Additional supplemental information explaining compliance can be added as an attachment to the bid. Please reference the Compliance Number. Listed below in bold are the attachments that are required to be included with the bid.

Overall Machine

1 yes_ no_ **Made in the U.S.A.**

Engine

2 yes_ no_ Engine meets EPA Final Tier 4/EU Stage IV Emission Standards

3 yes_ no_ Six cylinder engine with variable geometry and fixed turbochargers in series.

Engine shall have a wet-sleeve cylinder liner design for improved cylinder cooling over dry sleeve and cast-in-bore

4 yes_ no_ design and for improved cylinder and piston ring durability

5 yes_ no_ Engine SAE net rated power at 1700 RPM shall be no less than 225 hp (168 kW)

6 yes_ no_ The system shall have a water separator located between the fuel tank outlet and the fuel filters.

7 yes_ no_ The engine shall be isolation mounted to reduce vibration and operator fatigue.

8 yes_ no_ The engine lubrication shall be of adequate design to permit operation on slopes up to 45° Fore-Aft, 30° Side Slope.

9 yes_ no_ The engine oil and filter change interval shall be no more than 500 hours to reduce operating costs.

Cooling

10 yes_ no_ Unit shall have a proportionally controlled, hydraulically driven fan with auto reversing function.

To reduce plugging, the radiator, hydrostatic and hydraulic coolers shall all be rated at no more than 7 fins per inch

11 yes_ no_ and turbo aftercooler shall be no more than 6.5 fin per inch. All coolers shall be configured in a single plane.

The pressurized liquid cooling system shall have a water pump driven with an automatically adjusting belt. Radiator

12 yes_ no_ shall be filled with manufacturer's approved anti-freeze solution that provides protection to at least -34° F (-37° C).

13 yes_ no_ Machine must have a heavy duty grill for protection of cooling fan.

Powertrain/Brakes

Transmission shall have the ability for the operator to easily adjust operating parameters such as: FNR shift rate,

14 yes_ no_ Steering rate, Steering Modulation, Decel pedal response and Reverse Ratio.

Dual-path hydrostatic drive with infinite speed capability, dynamic braking, full power turns and counter rotation is preferred. The dozer shall be capable of achieving a speed of 6.8 mph (11.0 km/h) for forward and reverse. Design

15 yes_ no_ must permit unrestricted speed and direction changes under full engine rpm and load.

Automatic, dual-path, hydrostatic drive; load-sensing feature automatically adjusts speed and power to match changing load conditions; each individually controlled track is powered by a variable-displacement piston pump and motor combination; ground speed selection buttons on single-lever steering and direction control; independently

selectable reverse speed ratio presets of 100% ,115% or 130% of forward ground speed, or independent forward and

16 yes_ no_ reverse speeds; decelerator pedal controls ground speed to stop and includes service brake function.

17 yes_ no_ The transmission filter shall be no more than 10 micron rated, vertically mounted, spin-on, for quick no-spill changes.

The dozer steering will have a single-lever, direction control and counter rotation with full power turns and infinitely

18 yes_ no_ variable track speeds to provide optimum control and maneuverability.

The single pedal decelerator will allow the operator to choose between slowing travel speed and engine rpm or travel speed only to help maintain traction without affecting engine power and hydraulic response. Fully depressing the

19 yes_ no_ pedal applies the service brakes.

Exclusive safety feature engages wet, multiple-disk brakes whenever the park brake button is selected, whenever the engine stops, whenever the decelerator is depressed to the end of travel, or whenever the transmission control switch is placed in the neutral position and motion is detected; machine cannot be driven with brake applied, reducing wear out or need for adjustment; spring-applied, hydraulic release. The operator presence system will only release the park

20 yes_ no_ brake after the operator is seated with the seatbelt fastened.

21 yes_ no_ The park brake shall be sufficient capacity to hold weight of crawler on slope.

22 yes_ no_ Diagnostic ports available to check the transmission system

Double-reduction, planetary final drives transfer torque loads over three planet gears; mounted independently of track

23 yes_ no_ frames and dozer push frames for isolation from shock loads

24 yes_ no_ Machine must be capable of counter-rotation while if Forward, Neutral, or Reverse.

Hydraulic System

25 yes_ no_ Hydraulic filter shall be spin-on, vertical mounting, no more than 10 micron rated filtration.

26 yes_ no_ The hydraulic system shall be variable displacement piston pump with load-sensing proportional pump flow.

27 yes_ no_ The hydraulic pump flow will be 41 gpm (155L/pm) to deliver precise metering to low-effort pilot controls.

28 yes_ no_ Hydraulic reservoir shall have adequate cooling and filtration to permit 4,000 hour oil drain intervals

29 yes_ no_ The hoses shall use O-ring face seals to provide maximum leak prevention

Electrical

- 30 yes_ no_ Batteries shall have a minimum CCA rating of 950
- 31 yes_ no_ Alternator shall be sealed with and have a minimum of 130 amps
- 32 yes_ no_ The dozer shall come with LED work lights (10 LED lights total) 26,000 lumens

Undercarriage

- Eight track rollers on all PAT and OSD configurations with front and rear track guides and sprocket guards. The dozer shall have a minimum of two carrier rollers on each side. Sealed and life-time lubricated rollers, idlers and track chain.
- 33 yes_ no_ chain.
 - 34 yes_ no_ resistance
The dozer shall have two carrier rollers on each side, through-hardened, sealed and lubricated for added wear
 - 24" Extreme Service Shoes and Extended Life Undercarriage for use in highly abrasive material and rocky conditions. Heavy-duty sealed and lubricated rollers, idlers and track chain. Chains must be Sealed and lubricated with SC2
 - 35 yes_ no_ Bushings.
 - 36 yes_ no_ Full Length Rock Guards
 - 37 yes_ no_ Sprocket Segments with Recesses for heavy mud conditions.

Operator Station

- 38 yes_ no_ The enclosed operators station shall be ROPS/FOPS certified.
The operators seat shall have adjustments for operator height and weight and lumbar adjustment in the backrest, heat and ventilation with heavy-duty air suspension.
- 39 yes_ no_ and ventilation with heavy-duty air suspension.
- 40 yes_ no_ Operators station will be mounted using viscous style cab isolators and be equipped with a 3 in (76 mm) seat belt.
- 41 yes_ no_ Two 12 volt power ports will be provided.
The dozer instrumentation will include dash mounted gauges and/or monitoring system that will include: transmission temperature, engine coolant temperature, engine oil pressure, hydraulic filter restriction, transmission filter restriction, fuel, DEF , electric voltage, and hour meter.
- 42 yes_ no_ fuel, DEF , electric voltage, and hour meter.

- Machine shall be equipped with Eco Mode that is operator enabled to save fuel with no loss in performance. Eco Mode can be permanently turned on or off by the owner so the operator can not override Eco Mode status.
- 43 yes_ no_ Mode can be permanently turned on or off by the owner so the operator can not override Eco Mode status.
The operator station shall have electric, illuminated gauges for engine coolant temperature , engine oil pressure; fuel, DEF level and hour meter
 - 44 yes_ no_ DEF level and hour meter
The cab shall include air conditioning with one fresh air filter and a separate recirculation air filter for operator protection.
 - 45 yes_ no_ protection.
 - 46 yes_ no_ The cab HVAC system shall be equipped with Auto Temperature Control (ATC).
 - 47 yes_ no_ An HVAC powered precleaner for harsh environments.
 - 48 yes_ no_ Machine must have a keyless starting feature with the ability to store up to 10 operator codes.
 - 49 yes_ no_ Machine must have operator presence detection integrated with the seat belt to release the park brake.
 - 50 yes_ no_ Factory integrated rear-view camera that is displayed via the main machine monitor.
Operator's station must be able to be tilted up to 65 degrees to the rear of the machine by use of an integrated jack system to allow full access to the components below the cab. **Please supply operation and procedure to lift Cab as an attachment to the bid.**
 - 51 yes_ no_ **as an attachment to the bid.**

General Specifications

- Periodic maintenance and lube chart shall be posted for easy reference to ensure that maintenance is performed according to schedule.
- 52 yes_ no_ according to schedule.
Unit shall have a vandal protection package that includes a lockable battery compartment, engine access doors, fuel tank, hydraulic and transmission access door.
 - 53 yes_ no_ tank, hydraulic and transmission access door.
The unit will be equipped with all standard equipment and shall include: Keyless ignition switch with safety start, horn, 12 volt power port, engine after treatment device, heavy-duty hinged and lockable engine side shields, reverse warning alarm, engine fuel filter, mounting steps and safety hand-holds, front idler shields.
 - 54 yes_ no_ warning alarm, engine fuel filter, mounting steps and safety hand-holds, front idler shields.
The unit shall come with a factory installed Telematics Machine Monitoring System with lifetime Message Service. If life time is not offered please supply longest time period with bid. **Please provide cost of perscriptions and/or fees for this service to be life time as an attachment to the bid.**
 - 55 yes_ no_ **for this service to be life time as an attachment to the bid.**
 - 56 yes_ no_ Unit shall have a 146" wide PAT blade with cutting edges for finish grading applications.
 - 57 yes_ no_ Unit shall have a Heavy Duty Parallelogram Ripper with 5-Shank Pockets and 5-Shanks/Teeth

Safety Specifications

- 58 yes_ no_ In Cab mounted 2.5 bs. Fire Extinguisher and bracket.
- 59 yes_ no_ Rear Camera
- 60 yes_ no_ Beacon Light

Warranty and Machine Maintenance Plan

61 yes_ no_ Include in price and list Standard Factory Warranty

62 yes_ no_ Include a 60-Months/3000 Hour Extended Powertrain Plus Hydraulics Warranty

Include as an attachment the Extended Warranty Options for more years and hours of both powertrain plus hydraulics and Full Machine (Comprehensive). Include what the deduct for the 60/3000 hour Powertrain plus

63 yes_ no_ hydraulics warranty quoted in bid would be if another extended warranty option is selected.

64 yes_ no_ Include in price a 60-Month/3000 Hour Maintenance Plan with travel included up to 100-Miles.

65 yes_ no_ Supply what is covered and what is not covered with the Plan.

Bid specifications for Deere 320 P or Equal Backhoe Loader

Compliance Additional supplemental information explaining compliance can be added as an attachment to the bid. Please reference the Compliance Number. Listed below in bold are the attachments that are required to be included with the bid.

Overall Machine

yes_ no_ **Made in the U.S.A.**

Engine

- yes_ no_ Four cylinder, turbocharged isolation mounted diesel engine designed and built by the manufacturer
Engine shall be certified to EPA Final Tier 4/EU Stage IV emissions without requiring the use of a DPF (Diesel Particulate Filter)
- 2 yes_ no_ or EGR (Exhaust Gas Recirculation) aftertreatment components for increased uptime
Engine shall have an individually replaceable, wet-sleeve cylinder liner design to dissipate heat for reduced ring wear and oil
- 3 yes_ no_ breakdown
- 4 yes_ no_ Engine displacement shall be no less than 4.5 liters (276 cu. in.)
- 5 yes_ no_ Engine net peak power (ISO9249) shall be no less than 113 hp (84 kW) @ 1900 rpm
- 6 yes_ no_ Engine shall develop at least a 30% torque rise and should have at least 339 lb-ft (459 Nm) net torque @ 1600 rpm
- 7 yes_ no_ Daily check points shall be accessible from the right side of the engine and shall be done from ground level
- 8 yes_ no_ Engine shall have a serpentine belt with automatic belt tensioner reducing required maintenance
Under-hood engine air cleaner shall be dry type, dual element with evacuator valve, restriction sensor and in-cab restriction
- 9 yes_ no_ warning light
- 10 yes_ no_ The backhoe shall have a one-piece tilt hood for easy engine access without having to remove engine side shields
- 11 yes_ no_ The backhoe shall have an under hood after treatment device (DOC) with curved-end exhaust stack
- 12 yes_ no_ Engine shall have no more than 10-micron rated primary fuel filter with water separator

Cooling

- 13 yes_ no_ Engine coolant shall be rated to -40 degrees (-40 C)
- 14 yes_ no_ The backhoe shall be equipped with an oil-to-water engine oil cooler
- 15 yes_ no_ Unit shall have a coolant recovery tank provided
- 16 yes_ no_ Unit shall have an electronically-controlled, variable rate suction-type fan with fan-guard
The AC condenser will be swing-out for fast radiator clean-out. Remote mounted transmission and hydraulic coolers will offer
- 17 yes_ no_ better air exchange and fewer stacked cores.
The hydraulic circuit is oil-to air system and transmission circuits will be water cooled for fast winter warm-up for increased
- 18 yes_ no_ productivity

Powertrain

- The transmission shall be a hydraulically actuated powershift with Autoshift control and a torque converter with maximum transport speed of 24.9 mph. Clutch-free; fully synchronized five forward (automatically shifts between 2nd and 5th gear when
- 19 yes_ no_ Autoshift is engaged), three reverse speeds
- The sealed axle, with no breather, will be mechanical -front-wheel-drive with traction control limited-slip differential with electric
- 20 yes_ no_ on/off control
The machine will disengage MFWD in 4th gear to allow for longer life of tires and drive train but will engage MFWD when brakes
- 21 yes_ no_ are applied for four wheel braking
- 22 yes_ no_ The axle will be sealed to protect against contamination
- 23 yes_ no_ The driveshaft will be painted for protection, and will have an optional, factory installed, full guard.
- 24 yes_ no_ Full MFWD driveshaft Guard
- 25 yes_ no_ The clutch engaged MFWD can be engaged on the fly during operation.
- 26 yes_ no_ The transmission shall be isolation mounted to the mainframe to minimize shock load stress
- 27 yes_ no_ The rear axle shall be 100% hydraulically locking
The single electric Transmission Control Lever will have gear selection fully integrated in the lever as well as forward, neutral and
- 28 yes_ no_ reverse (FNR power shuttle).
- 29 yes_ no_ Transmission oil cooler shall be provided as standard equipment
- 30 yes_ no_ The backhoe shall have hydrostatic power steering with emergency manual mode
The machine will have a dial throttle that will allow the operator to road the machine on cruise control. Upon engagement of the
- 31 yes_ no_ brake pedal, the engine RPMs return to idle
The final drives shall be heavy-duty outboard planetary distributing loads over three gears sealed in cooling oil bath for long-life
- 32 yes_ no_ and trouble free service.
- 33 yes_ no_ The front axle shall have remote grease bank for front axle for easy access.
- 34 yes_ no_ The rear axle bearings shall be self-lubricating and shall not need to be greased
The service brakes shall be inboard, wet-multiple disk, self-adjusting and self equalizing and hydraulically actuated for a long and
- 35 yes_ no_ trouble-free life, sealed from water, mud and dust contamination
The parking brake shall be independent of service brakes, spring applied, hydraulically released, wet multi-disk, and sealed from
- 36 yes_ no_ water, mud and dust contamination.
- 37 yes_ no_ Tires shall be 19.5-24, 12.5/80

Bid specifications for Deere 320 P or Equal Backhoe Loader

Compliance Additional supplemental information explaining compliance can be added as an attachment to the bid. Please reference the Compliance Number. Listed below in bold are the attachments that are required to be included with the bid.

Hydraulic System

Hydraulic cooler will have an independent reservoir for continuous running of attachments at high ambient outside air

- 38 yes_ no_ temperatures
- 39 yes_ no_ The hydraulic fittings shall have "O"-ring face seal connectors to secure a tight, leak-free seal
- 40 yes_ no_ Machine shall be equipped with Auto Idle to lower rpm when hydraulics are not active to conserve fuel and reduce noise levels. Machine shall be equipped with Economy Mode with dual feature that can be applied to backhoe or loader functions separately or together for improved fuel economy.
- 41 yes_ no_ The hydraulic filter shall be no more than 4 micron and will be vertically mounted, spin on design for ease of installation and leak-free replacement.
- 42 yes_ no_ free replacement.
- 43 yes_ no_ An automatic bucket return-to-dig control will be standard
- 44 yes_ no_ Hydraulic pump shall be 43 gpm (163L/min.) @ 2,200 rpm at 3,625 psi (24 993 kPa) closed center hydraulic pressure compensated load sensing (PSLS), axial piston driven

Electrical

- 45 yes_ no_ The backhoe shall have a 12 volt system with 145 amp alternator
- 46 yes_ no_ Dual maintenance free batteries shall be included, 12 volt, 1900 CCA, 350-min. rated reserve with disconnect and jump posts
- 47 yes_ no_ The machine shall have blade type, multi-fused circuits
- 48 yes_ no_ The starter shall have a bypass start safety cover
- 49 yes_ no_ Cab will be pre-wired for rotating beacon magentic mounted and radio-ready
- 50 yes_ no_ Unit shall be equipped with 10 halogen driving/working lights, (4) front driving/working; (4) rear; (2) side docking lights .The front lights shall be adjustable and the bulbs shall be no less than 32,500 candlepower each.
- 51 yes_ no_ Unit shall be equipped with two front and two rear turn signal/flashing and two rear stop and tail lights and two rear reflectors
- 52 yes_ no_ Machine connectivity to be free from subscriptions or annual renewals that can provide machine data, tack utilization, and review diagnostic alerts remotely. **Please provide cost of subscriptions and/or fees for this service to be life time as an attachment to the bid.**

Operator Station

- 53 yes_ no_ Unit shall be equipped with isolation mounted modular design ROPS/FOPS canopy and molded roof
- 54 yes_ no_ Access to the cab shall be from the right and left side with protected, wide, rigid, slip-resistant steps and ergonomically located hand-holds
- 55 yes_ no_ 3" (76mm) retractable seat belt shall be provided
- 56 yes_ no_ Coat hook, built-in beverage holder, operator manual storage compartment, interior rearview mirror and two 12 volt outlet shall be provided
- 57 yes_ no_ Unit shall be equipped with illuminated electronic gauges with audible warning for: engine coolant temperature, oil temperature and fuel level.
- 58 yes_ no_ The monitor system shall have audible and visual warnings: engine air restriction, low alternator voltage, engine oil pressure, hydraulic filter restriction, hydraulic oil temperature, parking brake on/off, and low brake pressure. The seat belt will have a visual warning.
- 59 yes_ no_ Machine manufacturer will provide a factory installed onboard security system for total machine integration. System will have the ability to accommodate no less than ten operator codes.
- 60 yes_ no_ The keyless start will have an electric fuel shut-off and ability to have auto shutdown setup in monitor
- 61 yes_ no_ The monitor will have a multi-language (English, French and Spanish) digital monitor for diagnostics (including diagnostic messages and fault code readings), calibrations and machine information.
- 62 yes_ no_ Unit will have a machine security electronic protection system provided through the monitor or sealed switch module.
- 63 yes_ no_ Unit will have a sealed switch module for easy location of controls on the right hand console and increased durability.
- 64 yes_ no_ Unit shall have digital display for: engine rpm, engine hours, system voltage, and hydraulic oil temperature
- 65 yes_ no_ The foot throttle shall be suspended
- 66 yes_ no_ The machine will have a cab and air conditioner available from the factory.
- 67 yes_ no_ Machine shall have 2-Lever Mechanical Controls .
- 68 yes_ no_ The seat shall be air suspension cloth swivel, with fully adjustable armrests and lumbar support.

General Specifications

- 69 yes_ no_ Vandal protection lockable for Cab, Engine hood, toolbox, hydraulic reservoir and fuel filler..
- 70 yes_ no_ The tilt hood shall have two service positions for easy operation
- 71 yes_ no_ An easy to read periodic maintenance and grease chart shall be easily accessible on the machine
- 72 yes_ no_ Fuel tank capacity shall be no less than 34 gallons (128.7 L) and shall be accessible from the ground and lockable. DEF tank to be no less than 3.6 gallons and accessible from ground and lockable.
- 73 yes_ no_ Factory installed fluid sampling valves.
- 74 yes_ no_ Operating weight shall be no more than 15,754 lbs without optional equipment.

Bid specifications for Deere 320 P or Equal Backhoe Loader

Compliance

Additional supplemental information explaining compliance can be added as an attachment to the bid. Please reference the Compliance Number. Listed below in bold are the attachments that are required to be included with the bid.

Frames and Structures

- 75 yes_ no_ The mainframe shall be a one-piece unitized construction for maximum strength
- 76 yes_ no_ Unit shall have four built-in vehicle tie downs, two in front and two in rear for safe transport between jobs
- 77 yes_ no_ The side plate thickness on the loader boom, backhoe boom and mainframe shall be 4.5 mil or greater
- 78 yes_ no_ Machine shall be equipped with an exterior mounted, ground level accessed and lockable storage compartment
- 79 yes_ no_ Optional, replaceable , bolt-on rubber bumpers will be available to protect the grille frame for severe loading applications

Backhoe

- 80 yes_ no_ The backhoe with standard dipperstick digging depth shall be at least 14 ft 3 in (4.34 m)
- 81 yes_ no_ The boom lift capacity at ground level shall be no less than 3283 lb (1489 kg)
- 82 yes_ no_ Maximum SAE dig depth with extendable dipperstick extended shall be no less than 18 ft 2 in (5.53m)
- 83 yes_ no_ The lift capacity at full height with standard dipperstick shall be no less than 7415 lb (3364 kg) with Lift Mode
- 84 yes_ no_ The swing lock pin shall be stored in the operator's station
- 85 yes_ no_ The stabilizers shall have reversible Heavy Duty pads
- 86 yes_ no_ Extendible dipperstick shall extend no less than 3 ft 6 in (1.07 m)
- 87 yes_ no_ The backhoe boom shall be a curved design.

- 88 yes_ no_ The backhoe boom shall be a power curve design, hourglass shape for maximum strength and optimized visibility to the work tool.
- 89 yes_ no_ Digging force with standard backhoe, bucket cylinder shall be at least 12,356 lb (55.0 kN)
The backhoe shall be equipped with a rubber bumper/linkage style boom locks to keep the backhoe from vibrating on the swing
- 90 yes_ no_ frame
- 91 yes_ no_ Unit shall be equipped with two lever mechanical (ISO) backhoe controls.
- 92 yes_ no_ The swing casting shall have dual yokes: on top and on the bottom
- 93 yes_ no_ 24" HD Backhoe Bucket
- 94 yes_ no_ Standard Quick Coupler (non-hydraulic)

Loader

- 95 yes_ no_ Lift Capacity with 1.3 cu yd at full height shall be at least 7390 lbs (3352 kg)
- 96 yes_ no_ Dump Clearance@ 45 deg. shall be no less than 8 ft 10 in (2.7 m)
- 97 yes_ no_ Digging depth below ground, bucket level shall be no less than 5.0 in. (128mm)
- 98 yes_ no_ Bucket breakout force shall be no less than 10,541 lb (46.9 kN)
- 99 yes_ no_ Single, greaseless bucket tilt cylinder and bucket level indicator
- 100 yes_ no_ The loader shall have hydraulic self-leveling and bucket-level indicator.
- 101 yes_ no_ The loader shall have divergent loader arms for excellent visibility to the bucket
- 102 yes_ no_ For truck loading , the loader arms will have a curved-knee design for loading into the center of the truck bed
- 103 yes_ no_ The loader control will be single-lever with electric clutch disconnect
- 104 yes_ no_ Factory installed loader coupler will be available that will fit CAT IT, or current Deere attachments.
- 105 yes_ no_ Loader shall have a single cylinder and linkages for tilt and curl on bucket
- 106 yes_ no_ The loader shall have a non-removable, hinged loader boom service lock.
- 107 yes_ no_ 1.3 Cyd. Coupler Bucket with bolt on cutting edge.
- 108 yes_ no_ Coupler 60x60 Set of HD Pallet Forks

Warranty and Machine Maintenance Plan

- 109 yes_ no_ Include in the price and list Standard Factory Warranty.
- 110 yes_ no_ Include in the price a 60-Months/3000 Hour Extended Powertrain Plus Hydraulics Warranty
Include as an attachment the Extended Warranty Options for more years and hours of both powertrain plus hydraulics and Full Machine (Comprehensive). Include what the deduct for the 60/3000 hour Powertrain plus hydraulics warranty
- 111 yes_ no_ **quoted in bid would be if customer chooses to add any of the longer options.**
Include in the price a 60-Month/3000 Hour Maintenance Plan with travel included up to 100-Miles. **Please list what is covered**
- 112 yes_ no_ **under the maintenance plan on the quote or as a separate attachment.**

**Bid specifications for Final Tier 4 compliant Deere Motor Grader
772GP or Equal Grader**

Compliance Additional supplemental information explaining compliance can be added as an attachment to the bid. Please reference the Compliance Number. Listed below in bold are the attachments that are required to be included with the bid.

Overall Machine

yes_ no_ **Made in the U.S.A.**

Engine

- 2 yes_ no_ Engine meets EPA Final Tier 4 and European Union Stage IV standards
 3 yes_ no_ The engine shall have dual safety air cleaner elements, radial seal, dry type
 Engine shall have a wet-sleeve cylinder liner design for improved cylinder cooling over dry sleeve and cast-in-bore design and
 4 yes_ no_ for improved cylinder and piston ring durability.
 Engine shall be a turbo-charged direct injection, four stroke, 6-cylinder diesel engine with 4 valves per cylinder designed and
 6 yes_ no_ built by the manufacturer
 7 yes_ no_ Engine displacement for standard engine shall be no less than 9.0 liters (548 cu. in.)

- Engine shall reach no less than SAE net horsepower in the gears 1-8:
 8 yes_ no_ 1st 210hp, 2nd 225hp, 3rd 240hp, 4th 250hp, 5th 255hp, 6th 265hp, 7th 275hp, 8th 265hp; 6WD is active in gears 1-7 only
 9 yes_ no_ Engine will have a minimum torque rise of 55% in all gears
 Unit shall be equipped with Engine Power Management System for variable horsepower for up to 265 SAE net and shall meet
 11 yes_ no_ FT4 standards
 12 yes_ no_ Ether starting aid must automatically meter ether injection to prevent engine damage.
 Machine shall be equipped with electronic over-speed protection to prevent the engine and transmission from over speeding, as
 13 yes_ no_ a standard feature.
 Electronic Throttle Control (cruise control) shall be available, and shall be controlled by a switch, located on the right-hand
 14 yes_ no_ console for resuming and decreasing throttle set.
 15 yes_ no_ Unit shall be equipped with engine stall prevention (ESP) as standard equipment
 16 yes_ no_ Engine will offer on-the-fly exhaust filter cleaning
 17 yes_ no_ Engine will offer automatic de-rating
 18 yes_ no_ Engine shall be rubber isolation mounted to reduce noise and vibration
 19 yes_ no_ Engine will offer a lifetime viscous crankshaft damper
 20 yes_ no_ Adjustable height engine pre-cleaner. Rotary Ejector Precleaner

Cooling

- 21 yes_ no_ Coolant levels should be easily checked by an overflow tank
 22 yes_ no_ Engine coolant shall be Cool Guard™ II Extended Life or equivalent for temperatures to -34 F
 23 yes_ no_ The engine shall have an air-to-air after cooling for low engine speed lugging
 24 yes_ no_ Unit shall have charged air cooler with restriction sensor and in-cab restriction warning light
 Engine fan shall automatically adjust fan speed via a variable displacement hydraulic fan pump to meet engine cooling
 requirements to minimize power demand from the engine, reduce vehicle noise levels, improve fuel economy, and improve
 25 yes_ no_ vehicle performance.
 Engine power shall automatically compensate for power draw of the fan system to maintain a constant horsepower available to
 26 yes_ no_ maintain vehicle performance independent of cooling system power draw.
 Engine fan shall be able to automatically reverse and allow the operator to choose the time interval for the reversal to occur
 27 yes_ no_ through the vehicle monitor.
 28 yes_ no_ Cooling system shall be isolated from the engine compartment
 Pivoting coolers provide access for quick cleanout of dust and debris. **Please provide cleaning procedure of coolers as an**
 29 yes_ no_ **attachment named "Coolers and Radiator Cleaning Procedure."**
 A rear access fan door shall be provided to provide quick air cleanout of dust and debris for the engine radiator, charge air
 cooler, transmission cooler, axle cooler, hydraulic oil cooler and fuel cooler. **Please provide cleaning procedure of coolers as**
 30 yes_ no_ **an attachment named "Coolers and Radiator Cleaning Procedure."**

Power Train

- 31 yes_ no_ Direct-Drive Power Auto-Shift Plus Transmission
 32 yes_ no_ Machine shall have no drive shafts that cross over the articulation hitch
 33 yes_ no_ The transmission shall have eight forward and eight reverse speeds with built-in diagnostics
 34 yes_ no_ Transmission shall have 5 working gears between 0-10.2 mph (0-16.4 km/h), for dirt applications
 35 yes_ no_ Machine shall be equipped with an electronic inching pedal for improved modulation and machine control
 36 yes_ no_ The transmission system shall have an independent oil reservoir, filtration and cooling system with 31 GPM hydraulic gear pump
 37 yes_ no_ Transmission shall be event based shifting (EBS) or use load sensing electronic shift modulation with over speed protection
 Transmission shall have clutch overheating protection to prevent clutch failures due to excessive and overuse of the inching
 38 yes_ no_ pedal
 39 yes_ no_ Transmission shall be equipped with built-in self-diagnostic capability
 40 yes_ no_ A guard to protect the machine's transmission from debris as standard equipment
 41 yes_ no_ 6WD: Automatic dual-path hydrostatic drive with separate left and right systems
 42 yes_ no_ 6WD: Operator-selectable 15-position rotary aggressiveness control

**Bid specifications for Final Tier 4 compliant Deere Motor Grader
772GP or Equal Grader**

- 43 yes_ no_ 6WD: Inching capability down to 0 mph and precision mode (propelled by front wheels only)
6WD: Precision mode is front wheel drive only and allows for seamless shifting from front wheel drive to 6wd on-the-fly without stopping the machine.
- 44 yes_ no_ stopping the machine.
- 45 yes_ no_ 6WD: Effective Gears 1 - 7 forward and reverse

Axles/Brakes/Tandems

- 47 yes_ no_ The brakes shall be continuously pressurized, filtered, oil cooled
- 48 yes_ no_ The brakes shall be internal self-adjusting maintenance free, wet multi-disc, inboard of tandem pivot
- 49 yes_ no_ The park brake shall have an independent oil reservoir, filtration and cooling system
- 50 yes_ no_ The parking brake shall be automatic, spring-applied, hydraulic released
- 51 yes_ no_ Service brakes shall be multi-disc, oil-cooled and completely sealed
- 52 yes_ no_ Service brakes shall be hydraulically actuated, utilizing dual independent brake circuits
- 53 yes_ no_ Entire braking system shall meet all requirements of ISO 3450
- 54 yes_ no_ Differential Lock/Unlock shall be electro-hydraulically controlled, as a standard feature
Differential Lock/Unlock shall be capable of being engaged or disengaged at any time during vehicle operation without incurring damage to the differential and differential lock system. Engagement shall not be restricted or determined by vehicle speed, vehicle shifts, or tandem tractive conditions (tandems slipping).
- 55 yes_ no_ Differential Lock/Unlock shall be a multi-disc design
Unit shall be equipped with system capable of automatically engaging and disengaging differential lock to optimize tractive capability, while at the same time providing the operator with the ability to manually engage differential lock during any vehicle operation
- 56 yes_ no_ Parking brake shall be multi-disc, oil-cooled, spring-applied, hydraulically released, sealed, adjustment-free, and integrated into the transmission
- 57 yes_ no_ Parking brake shall be serviceable without removing the transmission
- 58 yes_ no_ Engaged parking brake shall neutralize the transmission
- 59 yes_ no_ The axles shall be planetary single reduction final drive
The rear axle shall have clutch style hydraulic differential lock that can be engaged on the go to achieve maximum traction instantly when required
- 60 yes_ no_ The rear-axle shall be a bolt-on modular design offering easy access to differential components, improving serviceability and contamination control
- 61 yes_ no_ Final drive shall be a planetary design
- 62 yes_ no_ Front axle shall be an arched design for maximum ground clearance while maintaining performance
- 63 yes_ no_ Front wheel steering angle shall be no less than 48.5 degrees left or right
- 64 yes_ no_ Front wheel spindle bearings shall be a large diameter taper roller bearing for radial and axial load
Tandems shall be capable of oscillating 15 degrees front tandem up and 15 degrees front tandem down, with full machine articulation and having no interference between tandem wheel and machine structure
- 65 yes_ no_ Distance between center of tandem wheels shall be no less than 60.8 in (1540 mm)
- 66 yes_ no_ Maximum front wheel lean shall be no less than 20 degrees left or right
- 67 yes_ no_ Replaceable, sealed bushings shall be used at the axle and wheel pivot points

Hydraulic System

- Motor grader shall have an option of up to six auxiliary control valves and control levers integrated into the main control rack and valve stack, 14 possible control levers on main control rack.
- 72 yes_ no_ Left and right blade lifts shall have hydraulic float control.
- 73 yes_ no_ A sight gauge will be provided for checking hydraulic reservoir fluid
The hydraulic tank shall have a baffling system to improve reservoir effectiveness to prevent aeration, contaminant settling, and heat dispersion and dissipation.
- 74 yes_ no_ Hydraulic system shall be fully sealed, using O-ring seals to prevent contamination and spillage.
- 75 yes_ no_ Hydraulics system shall be a closed center, load sensing type, with a variable displacement, axial piston-type pump.
The maximum hydraulic system pressure shall be no less than 2,750 psi (18.961 kPa) and the hydraulic system shall have a 56.0 gpm (212 L/min) main hydraulic axial piston pump.
- 76 yes_ no_ Implement valves shall be proportional priority pressure compensating for consistent response, when multi-functioning any combination of implement controls and independent of engine speed.
- 77 yes_ no_ Lock valves shall be integrated into the main implement valve to prevent cylinder drift.
- 78 yes_ no_ Steering capabilities shall be ISO 5010

- 82 yes_ no_ The hydraulic system filter shall have a minimum filtration rating of 5 micron rating to protect hydraulic system components

Electrical

- 83 yes_ no_ The electrical system shall be 24 volt with 200 amp alternator.
- 84 yes_ no_ Machine shall have 1400 CCA extra heavy-duty batteries with 440 minute reserve capacity
- 85 yes_ no_ A 24V to 12V converter with 25-amp continuous, 30-amp peak capacity. For use with CB Radios.
- 86 yes_ no_ All core machine systems shall be electronically connected optimizing performance and preventing machine damage
- 87 yes_ no_ LED turn signal, marker and brake lights shall be provided
Unit shall be equipped with LED driving lights, two high and two low beam LED headlights with front and rear turn signals, front and rear marker lights, brake lights and hazard warning lights.
- 88 yes_ no_ Premium LED (high intensity) light grading package. Includes (in addition to those listed above) 14 additional work lights all LED (2 - bottom cab, 2 - mid-frame, 2 - reversing lights on rear grill), 4 - corner cab, 2 front cab and 2 - right side cab roof) Total of 18-LED Lights.
- 89 yes_ no_ 18-LED Lights.

**Bid specifications for Final Tier 4 compliant Deere Motor Grader
772GP or Equal Grader**

- Unit shall have indicator or warning for: high beams, seat belt, turn signals, cruise control, low alternator voltage, engine air filter
- 90 yes_ no_ restriction, engine oil pressure, engine coolant temperature, wait to start (glow plugs), hydraulic filter restriction
- 91 yes_ no_ Machine shall have back-up lights and sounding alarm as standard when reverse gears are selected
- Unit shall be equipped with a single LCD monitor displaying gauges for: DPF cleanliness level, engine coolant temperature, transmission oil temperature, hydraulic oil temperature, rear steer articulation angle and fuel level with low level visual warning. The LCD monitor should also be capable of displaying vehicle performance data, diagnostic information, and diagnostic trouble
- 92 yes_ no_ codes.
- Unit shall have digital readout displayed on a single LCD monitor for: engine rpm, odometer, transmission gear indicator,
- 93 yes_ no_ speedometer, hour meter
- 94 yes_ no_ Starting system shall be a 24V direct electric type
- 95 yes_ no_ All light and wiper switches will be solid-state distribution
- 96 yes_ no_ The in-cab switch module shall be sealed to keep out dirt, dust and airborne debris
- 97 yes_ no_ The unit shall have an electric key fuel shut-off switch
- Electrical system shall have a master disconnect switch with a padlock provision (in addition to the ignition switch), accessible
- 98 yes_ no_ from the ground level
- 99 yes_ no_ Cab shall have two beacons LH and RH side with Flip Down Brackets
- 100 yes_ no_ The unit shall have a LH and RH side engine compartment light

Operator Station (GP)

- Grade control ready package is standard from the factory. This package shall include integrated mounting brackets, hydraulic valves, electrical harnesses, circle rotate and slope sensors for quick, easy installation of your preferred grade control system
- 101 yes_ no_ (Topcon, Trimble, Leica). systems.
- 102 yes_ no_ Dual Joystick Controls with steering Wheel included.
- 103 yes_ no_ Available Fingertip armrest-mounted electro-hydraulic controls including steering lever as an option to Joystick Controls.
- 104 yes_ no_ Steering wheel and control console shall be tiltable
- The ergonomically designed steering wheel with EH Joystick controls or EH Fingertip Controls the steering wheel shall take 6
- 105 yes_ no_ 1/4 turns (lock to lock).
- 106 yes_ no_ Steering wheel included as standard equipment
- 107 yes_ no_ Left and right side cab doors are standard
- 108 yes_ no_ Cab doors shall have a hold-open clasp with a ground-level release and in addition to, a release in the cab
- 109 yes_ no_ Machine shall provide dual exits allowing for emergency egress should one side become obstructed
- 110 yes_ no_ Cab shall have cup holder, personal cooler holder/storage compartment for operator's manual, with a molded floor mat
- 111 yes_ no_ Air vents shall be provided for all front and side tinted windows
- 112 yes_ no_ Cab air pre-cleaner shall be installed to extend filter life by pre-cleaning outside air
- 113 yes_ no_ Three rear view mirrors shall be provided, one interior and two breakaway exterior mounted adjustable heated mirrors.
- 114 yes_ no_ AM/FM/WB Radio with Bluetooth, AUX, two speakers, antenna and wiring.
- 115 yes_ no_ A front window sun visor and a rear window sun shade.
- The motor grader shall be equipped with low ROPS/FOPS enclosed air conditioned cab, isolation frame mounted for noise and
- 116 yes_ no_ vibration reduction
- Premium heated, leather/fabric, high wide back, air-suspension seat with armrest, with adjustments for fore-aft position, seat
- 117 yes_ no_ height, seat back angle, thigh support, and lumbar support and 3-inch (76 mm) retractable seat belts,
- A machine security system shall be available to electronically code keys selected by the user to limit usage by individuals or by
- 118 yes_ no_ time parameters.
- Left and right side tandem case assemblies shall be covered with punched steel plate to provide an adequate platform for
- 119 yes_ no_ standing and walking.
- 120 yes_ no_ The unit will come standard with front and rear window defrost
- 121 yes_ no_ Decelerator pedal.
- 122 yes_ no_ The upper front and rear windshield washers with intermittent wipers shall be standard
- Grade Pro cab with Fixed lower front and Side Opening windows, Laminated Glass and Lower front Intermittent Wiper &
- 123 yes_ no_ Washer.
- 124 yes_ no_ Cross-slope simplifies holding a consistent slope by reducing operation to single lever as standard equipment.
- 125 yes_ no_ Return to straight automatically straightens an articulated frame.

General Specifications

- 126 yes_ no_ Machine Wheel Base (distance from front axle to mid tandem) shall not be less than 243.0 in (6,172 mm).
- 127 yes_ no_ Machine shall be designed and built by the manufacturer.
- 128 yes_ no_ Transmission shall be designed and built by the machine manufacturer.
- 129 yes_ no_ Machine height to top of the cab shall not exceed 125 in (3,180 mm).
- 130 yes_ no_ Turning radius will be no greater than 284 in (7,214 mm)
- Max operating weight of the machine shall not be more than 55,000 lbs (21 772 kg). Weight shall be the heaviest possible
- 131 yes_ no_ combination of compatible attachments, also including lubricants, full fuel tank and operator of 175 lbs (79 kg).
- Typical operating weight of the machine shall be 44,570 lbs (20 217 kg). Weight shall include the base machine weight as well
- 132 yes_ no_ as the front Dozer Blade, rear ripper/scarifier and other equipment
- Base Machine Weight shall not be less than 38,585 lbs (17,382kg). Weight shall include: standard machine configuration,
- 133 yes_ no_ lubricants, coolants, full fuel tank and operator of 175 lbs (79 kg).
- 134 yes_ no_ Six Cylinder, turbocharged with air-to-air after cooler diesel engine and shall be designed and built by the manufacturer

**Bid specifications for Final Tier 4 compliant Deere Motor Grader
772GP or Equal Grader**

- 135 yes_ no_ Hydraulic disconnect (soft start) and transmission valve solenoid guards shall be standard equipment
136 yes_ no_ Ground level fueling and filling for diesel and diesel exhaust fluid shall be standard equipment
Standard grey glare-reducing paint shall be used on the front frame and engine enclosure to decrease glare from other
137 yes_ no_ equipment lights and reflection from the sun and snow.
138 yes_ no_ The frame shall be ready for snow wing attachment as standard equipment.

Frames and Structures

- 139 yes_ no_ The angle of articulation shall be no less than 22 degrees
140 yes_ no_ The articulation joint shall have mechanical locking device to prevent frame articulation while servicing or transporting machine
141 yes_ no_ Unit will be provided with seven-position pin-locking saddle
142 yes_ no_ Unit shall be equipped with 5 tie-down locations for ease of transporting

Circle and Mold Board

- Circle shall be a fully sealed bearing style system. **Please provide maintenance and adjustment procedures for circle being
143 yes_ no_ quoted.**
144 yes_ no_ Circle teeth contact surfaces shall be induction-hardened on the front 120 degrees of the circle
145 yes_ no_ Circle shall have no circle adjustments or wear inserts
146 yes_ no_ The unit shall have a circle drive slip clutch to protect the drive pinion from shock loads
147 yes_ no_ Circle shall be rotated by a hydraulic driven motor
Circle maintenance shall have five greaseable points serviced on a 500 hour interval and a 4000 hour gearbox oil change
148 yes_ no_ interval. No other adjustments or maintenance needed.
The draft frame pivot connection shall have a double Ball-in-Socket design with a minimum ball diameter of 6.0 in (152.4 mm)
149 yes_ no_ and minimum stem diameter of 2.88 in (73 mm)
The standard moldboard shall be at least 14 ft (3657 mm) long, 24 in (610 mm) high and no less than 7/8 in (22 mm) thick with
150 yes_ no_ 5/8 in (16 mm) hardware. 8" Culling Edges
151 yes_ no_ Shall have Reversible Overlay End Bits.
152 yes_ no_ The mold board shall be pre-stressed during manufacturing for superior strength and durability
153 yes_ no_ The mold board will have quick change side shift wear inserts, capable of being replaced using only a 9/16" wrench.
154 yes_ no_ Moldboard shall have a bank slope angle capability of at least 90 degrees to both sides.
155 yes_ no_ Slide rails shall be hardened, continuously welded, and have replaceable bronze-alloy wear inserts top and bottom.
156 yes_ no_ Moldboard slide rails shall be constructed of a heat-treated, high carbon steel.
157 yes_ no_ Moldboard shall have a hydraulic tip control through a range of 42 degrees fore and 5 degrees aft.
158 yes_ no_ Throat clearance with standard moldboard shall be at least 4.8 in (123 mm)
Blade lift accumulators for added protection of the moldboard and draft frame from impacts with stationary objects shall be apart
159 yes_ no_ of machine
Machine shall have Machine Damage Avoidance to prevent the moldboard from contacting the tires, cab and cab steps. In
160 yes_ no_ addition prevents the saddle linkage from contacting the top of the draft frame. Operator can override as needed.

Serviceability

- Daily check points shall be accessible from the left side of the engine behind one service door and shall be done from ground
161 yes_ no_ level with a light as standard equipment.
162 yes_ no_ Access to engine will be open from both sides with hinged engine side shields and full access servicedoors
163 yes_ no_ Engine enclosure and daily service points shall be accessible from ground level, and grouped on the left side of the machine.
Vandal protection package shall include locking for cab doors, engine side shields (4), top tank radiator access door, engine
164 yes_ no_ coolant surge tank, hydraulic reservoir cap, fuel tank cap and tool box.
165 yes_ no_ The dip stick for checking transmission fluid shall be at ground-level
166 yes_ no_ Engine shall have environmentally friendly fuel drain valves
Equipped with quick service fluid ports for engine oil, transmission oil, hydraulic oil, axle oil and coolant with ground level quick
167 yes_ no_ connectaccess.
168 yes_ no_ Hydraulic tank capacity shall not be more than 16 gallons (60.6 L).
169 yes_ no_ Fuel tank capacity shall not be less than 110 gallons (416 L).
170 yes_ no_ Diesel exhaust fluid (DEF) tank capacity shall not be less than 6 gallons (22.5L)
171 yes_ no_ Cooling system capacity shall not be less than 14.5 gallons (55.0 L).
172 yes_ no_ Engine oil capacity shall not be less than 7.1 gallons (27.0 L).
173 yes_ no_ Tandem housing capacity shall not be less than 19.5 gallons (74.0 L) each.
174 yes_ no_ Circle gearbox capacity shall not be less than 1.5 gallons (5.7 L) with an 4000 Hr. Gearbox oil change interval.
175 yes_ no_ Engine primary and final fuel filters shall have 500-hour service replacement interval.
Engine shall have primary fuel filter with fuel water separator and electronicsensor; quick release dual stage filter and primer
176 yes_ no_ pump
177 yes_ no_ Hydraulic, transmission, and differential filters shall be banked and easily assessable through the engine compartment doors.
178 yes_ no_ Engine oil filter shall be a 500-hour, vertical spin-on
179 yes_ no_ Engine oil shall have a service interval of no less than 500 hours
180 yes_ no_ Hydraulic oil filter shall have a service interval of no less than 2000 hours
181 yes_ no_ Hydraulic oil change service interval shall be no less than 4000 hours
182 yes_ no_ Transmission oil change service interval shall be no less than 2000 hours

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- 183 yes_ no_ Transmission oil filter service replacement interval shall be 2000 hours
184 yes_ no_ Tandem oil shall have a service interval of no less than 4000 hours
185 yes_ no_ Engine coolant shall have a service interval of no less than 6000 hours
186 yes_ no_ Transmission, hydraulic, fuel and axle filter restriction indicator shall be displayed in the cab
187 yes_ no_ The centralized lube bank shall be at the articulation joint to give access to difficult to reach zerks
- 188 yes_ no_ Sampling ports shall be accessible from the tandem level and provide access to the engine, hydraulic, coolant, and fuel ports. A two-way communication tool shall give service technicians easy access to stored diagnostic data and allow configuration of machine parameters.
189 yes_ no_ Unit shall be equipped with OEM provided wireless communication system capable of monitoring and communicating machine location, fuel burn, as well as multiple other vehicle performance data. In addition, the system shall be capable of updating system control software wirelessly. Life Time Service. **Please provide how long service is good for and price out life time if available. Please provide subscription cost with bid as an attachment.**
190 yes_ no_ Diesel particulate filter (DPF) ash service interval as needed (can go up to 15,000 hours between diesel particulate filter ash removal) **Please provide DPF warranty statement on this component as an attachment.**

Tires/ Rims

- 192 yes_ no_ A 14 in (35.6 cm) by 25 in (63.5 cm) size multi-piece tire rim shall be available to provide mounting for 17.5R25 tires.
193 yes_ no_ 17.5 R 25 L2 Single Start Radial Tires w/3pc. Rims
194 yes_ no_ Spare tire and rim mounted but shipped loose.
195 yes_ no_ 1-full set of 4-link tire chains and tighteners.

Safety

- Standard grey 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.
196 yes_ no_ The unit shall have a fan finger guard
197 yes_ no_ Machine shall have both a Front and Rear high resolution Cameras with ability to show either front or rear in the main monitor
198 yes_ no_ Machine shall come with a mounted 5.0 lbs. multi purpose (ABC) Dry Chemical Fire Extinguisher
199 yes_ no_ Machine shall have installed a slow moving sign
200 yes_ no_ Machine shall have wheel chocks that can be mounted and stored on the machine
201 yes_ no_ Machine shall have wheel chocks that can be mounted and stored on the machine

Other Equipment

- 202 yes_ no_ A front mounted Dozer Blade 105" x 37.6" shall be part of the machine
203 yes_ no_ Rear ripper Combination with rear hitch and pin, shall have five ripper shank holders and 9 scarifier shank holders
204 yes_ no_ Rear ripper shall come with five ripper shanks/teeth and 9-scarifier shanks/teeth
Rear ripper shall have a working penetration of maximum 16.8 in (426 mm) and a minimum penetration force of 21,137 lb (9587 kg) at typically equipped operating weight
205 yes_ no_ A toolbox shall be provided
206 yes_ no_ Machine shall come with Front Fenders
207 yes_ no_ Machine shall come with Front Fenders

Warranty and Machine Maintenance Plan

- 208 yes_ no_ Include in the price and list Standard Factory Warranty.
209 yes_ no_ Include in the price a 60-Months/3000 Hour Extended Powertrain Plus Hydraulics Warranty
Include as an attachment the Extended Warranty Options for more years and hours of both powertrain plus hydraulics and Full Machine (Comprehensive). Include what the deduct for the 60/3000 hour Powertrain plus hydraulics warranty quoted in bid would be if another extended warranty option is selected.
210 yes_ no_ Include in the price a 60-Month/3000 Hour Maintenance Plan with travel included up to 100-Miles. **Please list what is covered under the maintenance plan on the quote or as a separate attachment.**
211 yes_ no_ Include in the price a 60-Month/3000 Hour Maintenance Plan with travel included up to 100-Miles. **Please list what is covered under the maintenance plan on the quote or as a separate attachment.**