

**ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
EQUIPMENT AND PROCUREMENT DIVISION
BID INVITATION**

Contract Number: **H-16-329H**

BID OPENING LOCATION:
AHTD Equipment and
Procurement Division
11302 West Baseline Road
Little Rock, AR 72209

MAIL TO:
AHTD Equipment and
Procurement Division
P.O. Box 2261
Little Rock, AR 72203

DELIVER TO:
AHTD Equipment and
Procurement Division
11302 West Baseline Road
Little Rock, AR 72209

Bid Opening Date: **May 10, 2016** Time: **11:00 a.m.**

Sealed bids for furnishing the commodities and/or services described below, subject to the Conditions on page 2 of this Bid Invitation will be received at the above-noted mail and delivery locations until the above-noted bid opening date and time, and then publicly opened at the above-noted bid opening location. **Bids must be submitted on this form, with attachments when appropriate, or bids will be rejected. Late bids and unsigned bids will not be considered.**

In compliance with this Bid Invitation and subject to all the Conditions thereof, the undersigned offers and agrees to furnish any and all items upon which prices are quoted, at the price set opposite each item.

Company Name: _____

Name (Type or Print): _____

Address: _____

Title: _____

Phone: _____ Fax: _____

City: _____ State: _____ Zip: _____

E-Mail: _____

Federal Tax ID or Social Security No.: _____

Signature: _____

Signature must be legible, original (not photocopied) and in ink.
Unsigned bids will be rejected.

Multi-Purpose Excavating and Grading Machine, on 4 X 2 Carrier

Bid prices shall include delivery of all **Equipment** to the Arkansas State Highway and Transportation Department at the F.O.B. location(s) shown on attached Bid Sheet.

Contract may be renewed or extended upon mutual agreement of the parties, but shall not exceed limitations allowed by Arkansas State Procurement Law.

Literature Submittals – Item A2 of Bid Specifications shall supersede Item #10 of Standard Bid Conditions.

Bid Bond in the amount of \$1,000 required of all bidders at time of bid opening or bid will be rejected. **Personal and company checks are not acceptable as Bid Bonds.** See Condition 3 on page 2 of bid invitation.

Performance Bond in the amount of 5% of the total awarded to the respective bidders must be furnished within 10 days after receipt of notice of intent to award as a guarantee of delivery in accordance with the specifications and within the time established in the bid. **Personal and company checks are not acceptable as Performance Bonds.** See Condition 3 on page 2 of bid invitation.

Additional Bonding Requirement: If additional units are purchased from this contract, a separate Performance Bond will be required under the same conditions as stated in this Bid Invitation.

Bidder shall specify guaranteed delivery date for all vehicles/equipment in the space provided under each item number for which a price is being submitted. Successful bidder shall furnish Warranty Data for each vehicle/equipment delivered. The Warranty Data shall contain all necessary information such as motor and/or serial numbers and shall be signed by the selling dealer at the time vehicle/equipment is delivered to the Highway Department. Certificate of Origin, Federal Excise Tax Exemption Certificates, Odometer Disclosure Statement and five (5) copies of the Invoice for each vehicle/equipment to be furnished to Equipment & Procurement Division, P.O. Box 2261, Little Rock, AR 72203.

The successful bidder will be required to complete delivery within **180** days after award.

Bids and Specifications are available on-line by going to the AHTD Web Site – www.arkansashighways.com and clicking on “Commodities & Services Bids/Contract Information”. Tabulations will also be available at this site within 72 hours after bid opening. If you have any questions, call this office at 501-569-2667.

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STANDARD BID CONDITIONS

H-16-329H

1. **ACCEPTANCE AND REJECTION:** The Arkansas State Highway and Transportation Department (AHTD) reserves the right to reject any or all bids, to accept bids in whole or in part (unless otherwise indicated by bidder), to waive any informalities in bids received, to accept bids on materials or equipment with variations from specifications where efficiency of operation will not be impaired, and to award bids to best serve the interest of the State.
2. **PRICES:** Unless otherwise stated in the Bid Invitation, the following will apply: (1) unit prices shall be bid, (2) prices should be stated in units of quantity specified (feet, each, lbs., etc.), (3) prices must be F.O.B. destination specified in bid, (4) prices must be firm and not subject to escalation, (5) bid must be firm for acceptance for 30 days from bid opening date. In case of errors in extension, unit prices shall govern. Discounts from bid price will not be considered in making awards.
3. **BID BONDS AND PERFORMANCE BONDS:** If required, a **Bid Bond** in the form of a cashier's check, certified check, or surety bond issued by a surety company, in an amount stated in the Bid Invitation, must accompany bid. **Personal and company checks are not acceptable as Bid Bonds.** Failure to submit a Bid Bond as required will cause a bid to be rejected. The Bid Bond will be forfeited as liquidated damages if the successful bidder fails to provide a required Performance Bond within the period stipulated by AHTD or fails to honor their bid. When a bidder claims and can show clear and convincing evidence that a material mistake was made in the bid and was not the bid intended, the bidder may be permitted to withdraw their bid prior to award without forfeiture of bid bond. Cashier's checks and certified checks submitted as Bid Bonds will be returned to unsuccessful bidders; surety bonds will be retained. The successful bidder will be required to furnish a **Performance Bond** in an amount stated in the Bid Invitation and in the form of a cashier's check, certified check, or surety bond issued by a surety company, unless otherwise stated in the Bid Invitation, as a guarantee of delivery of goods/services in accordance with the specifications and within the time established in the bid. **Personal and company checks are not acceptable as Performance Bonds.** In some cases, a cashier's check or certified check submitted as a Bid Bond will be held as the Performance Bond of the successful bidder. Cashier's checks or certified checks submitted as Performance Bonds will be refunded shortly after payment has been made to the successful bidder for completion of all terms of the bid; surety bonds will be retained. Surety bonds must be issued by a surety company authorized to do business in Arkansas, and must be signed by a Resident Local Agent licensed by the Arkansas State Insurance Commissioner to represent that surety company. Resident Agent's Power-of-Attorney must accompany the surety bond. Certain bids involving labor will require Performance Bonds in the form of surety bonds only (no checks of any kind allowed). These bonds shall not only serve to guarantee the completion of the work, but also to guarantee the excellence of both workmanship and material until the work is finally accepted and the provisions of the Plans, Specifications, and Special Provisions fulfilled. In such cases, the company issuing the surety bond must comply with all stipulations herein and must be named in the U. S. Treasury listing of companies holding Certificates of Authority as acceptable sureties on Federal Bonds and as acceptable reinsuring companies. Any excess between the face amount of the bond and the underwriting limitation of the bonding company shall be protected by reinsurance provided by an acceptable reinsuring company. Annual Bid and Performance Bonds on file with E & P Division must have sufficient unencumbered funds to meet current bonding requirements, or the bid will be rejected, unless the balance is submitted as set forth above, prior to bid opening.
4. **TAXES:** The AHTD is not exempt from Arkansas State Sales and Use Taxes, or local option city/county sales taxes, when applicable, and bidders are responsible to the State Revenue Department for such taxes. These taxes should not be included in bid prices, but where required by law, will be paid by the AHTD as an addition thereto, and should be added to the billing to the AHTD. The AHTD is exempt from Federal Excise Taxes on all commodities except motor fuels; and excise taxes should not be included in bid prices except for motor fuels. Where applicable, tax exemption certificates will be furnished by the AHTD.
5. **"ALL OR NONE" BIDS:** Bidders who wish to bid "All or None" on two or more items shall so stipulate on the face of bid sheet; otherwise, bid may be awarded on an individual item basis.
6. **SPECIFICATIONS:** Complete specifications should be attached for any substitution or alternate offered, or where amplification is necessary. Bidder's name must be placed on all attachments to the bid.
7. **EXCEPTIONS TO SPECIFICATIONS:** Any exceptions to the bid specifications must be stated in the bid. Any exceptions to manufacturer's published literature must be stated in the bid, or it will be assumed that bidder is bidding exactly as stated in the literature.
8. **BRAND NAME REFERENCES:** All brand name references in bid specifications refer to that commodity or its equivalent, unless otherwise stated in Bid Invitation. Bidder should state brand or trade name of item being bid, if such name exists.
9. **FREIGHT:** All freight charges should be included in bid price. Any change in common carrier rates authorized by the Interstate Commerce Commission will be adjusted if such change occurs after the bid opening date. Receipted common carrier bills that reflect ICC authorized rate changes must be furnished.
10. **SAMPLES, LITERATURE, DEMONSTRATIONS:** Samples and technical literature must be provided free of any charge within 14 days of AHTD request, and free demonstrations within 30 days, unless AHTD extends time. Failure to provide as requested within this period may cause bid to be rejected. Samples, literature and demonstrations must be substantially the same as the item(s) being bid, unless otherwise agreed to by AHTD. Samples that are not destroyed will be returned upon request at bidders expense. Samples from successful bidders may be retained for comparison with items actually furnished.
11. **GUARANTY:** Unless otherwise indicated in Bid Invitation, it is understood and agreed that any item offered or shipped on this bid shall be newly manufactured, latest model and design, and in first class condition; and that all containers shall be new, suitable for storage or shipment and in compliance with all applicable laws relating to construction, packaging, labeling and registration.
12. **BACKORDERS OR DELAY IN DELIVERY:** Backorders or failure to deliver within the time required may constitute default. Vendor must give written notice to the AHTD, as soon as possible, of the reason for any delay and the expected delivery date. The AHTD has the right to extend delivery if reasons appear valid. If reason or delivery date is not acceptable, vendor is in default.
13. **DEFAULT:** All commodities furnished will be subject to inspection and acceptance by AHTD after delivery. Default in promised delivery or failure to meet specifications authorizes the AHTD to cancel award or any portion of same, to reasonably purchase commodities or services elsewhere and to charge full increase, if any, in cost and handling to defaulting vendor. Applicable bonds may be forfeited.
14. **ETHICS:** *"It shall be a breach of ethical standards for a person to be retained, or to retain a person, to solicit or secure a State contract upon an agreement of understanding for a commission, percentage, brokerage, or contingent fee, except for retention of bona fide employees or bona fide established commercial selling agencies maintained by the contractor for the purpose of securing business."* (Arkansas Code, Annotated, Section 19-11-708).

**ARKANSAS STATE HIGHWAY
AND TRANSPORTATION DEPARTMENT**

NOTICE OF NONDISCRIMINATION

The Arkansas State Highway and Transportation (Department) complies with all civil rights provisions of federal statutes and related authorities that prohibit discrimination in programs and activities receiving federal financial assistance. Therefore the Department does not discriminate on the basis of race, sex, color, age, national origin, religion or disability, in the admission, access to and treatment in the Department's programs and activities, as well as the Department's hiring or employment practices. Complaints of alleged discrimination and inquiries regarding the Department's nondiscrimination policies may be directed to Joanna P. McFadden, Section Head - EEO/DBE (ADA/504/Title VI Coordinator), P. O. Box 2261, Little Rock, AR 72203, (501) 569-2298, (Voice/TTY 711), or the following email address: Joanna.mcfadden@ahtd.ar.gov.

Free language assistance for Limited English Proficient individuals is available upon request.

This notice is available from the ADA/504/Title VI Coordinator in large print, on audiotape and in Braille.

**ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
LITTLE ROCK, ARKANSAS
EQUIPMENT AND PROCUREMENT DIVISION
BID SHEET**

Contract No.: H-16-329H

BIDDER: _____

1. **1** – Multi-Purpose Excavating and Grading Machine on 4 X 2 Carrier
to meet AHTD Spec. **16-222-135**.

FOB: **AHTD – District 8 Headquarters, 372 Aspen Lane, Russellville, AR 72801**

Bid Price (Do not include any Local, State or Federal Taxes) Each \$ _____

Total for **1** Hydraulic Excavator \$ _____

Hydraulic Excavator **proposed as meeting specifications:**

Make _____ Model _____ Warranty _____

Guaranteed Delivery Date _____

Additional Units may be purchased at the same pricing and
conditions through _____
(Date)

BID TOTAL \$ _____

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

SPECIFICATION 16-222-135

FOR

MULTI-PURPOSE EXCAVATING AND GRADING MACHINE

ON 4 x 2 CARRIER

A. General Conditions:

1. **Current Model:** Units furnished under this specification shall be the latest improved model in current production, as offered to commercial trade, built for the U.S. market, and shall be of quality workmanship and material. Machines manufactured for foreign markets will not be accepted. All equipment offered under this specification shall be new. Used, reconditioned, shopworn, demonstrator, prototype or discontinued models are not acceptable. Manufacturers of the units supplied must have been in the business of producing operational units for at least two years and must have recently sold similar units to domestic governmental agencies. The model furnished must have been in production for a minimum of one year, or be the latest version of a previous model. Bidder/s may be required to submit documentation substantiating the aforementioned requirements. A list of user references may also be required.
2. **Literature:** **Manufacturers literature, verifying adherence of proposed unit to each line item addressed in this specification, shall be submitted with the bid. If any literature and/or specifications of items conflict with AHTD specifications, the conflict(s) shall be specifically noted, corrected and submitted with the bid.**
3. Any deviations from specifications and requirements herein must be clearly pointed out by bidder. Otherwise it will be considered that equipment offered is in strict compliance with these specifications and requirements, and successful bidder will be held responsible therefor. Deviations must be explained in detail on an attached sheet. However, no implication is made by the Arkansas State Highway and Transportation Department that deviations will be acceptable.
4. **Manuals:** The successful bidder shall furnish one (1) Operator's Instruction Manual with each unit delivered and one (1) copy each of Shop Repair Manual and Parts Book to each FOB point.

The successful bidder may provide Shop Repair Manuals and Parts Manuals on computer media (CD, DVD, USB Drive, etc.) in lieu of printed manuals.
5. **Training:** The successful bidder shall furnish qualified personnel to instruct AHTD operators and service technicians on operation and maintenance of units purchased under this specification.

In addition, the successful bidder shall furnish information on any factory service schools which would be available for AHTD service technicians.
6. Unit shall be assembled, adjusted and made ready for continuous operation at time of delivery.
7. All equipment necessary for efficient operation of unit shall be furnished whether or not they are specifically mentioned in this specification. All standard equipment as regularly furnished by manufacturer and as shown on printed literature and specification sheets shall be furnished unless specifically excluded by this specification.
8. **Parts Inventory & Service Facilities:** The successful bidder shall maintain a representative inventory of replacement parts and service facilities for servicing equipment bid on.
9. **Demonstration:** The Arkansas State Highway & Transportation Department reserves the right to require a demonstration, under actual working conditions, of equipment bid under this specification before award is made. The demonstration would be performed (free of any charge) by the bidder or an authorized representative at a mutually acceptable location. If requested, the bidder should be prepared to demonstrate the equipment within thirty (30) days after notification. Failure of the bidder to perform a satisfactory demonstration within the specified time may be grounds for rejection of the bid.
10. **Cooperative Purchasing:** Other tax-supported entities* in Arkansas (cities, counties, state agencies, school districts, etc.) may purchase from this Contract on an individual basis under the same specifications and conditions, and at the pricing set forth by each vendor, all at the discretion of each vendor in each case. Prices could be reduced by a vendor for minor alterations in conditions (changing order quantities, deleting options, etc.) as agreed by both parties, but could not be raised above the contract bid price except for any additional freight charges. Vendors would not be required to sell to any such entity under this contract, and those entities would not be obligated to purchase from the contract.

Each entity wishing to purchase from the contract must make contact directly with the appropriate vendor(s). The Highway Department shall remain "out of the loop" for such transactions: all contact, orders, invoices, payments, etc. regarding such transactions must take place exclusively between the tax-supported entity and the vendor. The Department shall be held harmless of any and all liability arising from such transactions.

* Tax-supported entities are defined as those receiving more than half of total funding from appropriated tax funds.

B. Unit Specifications:

1. General: This specification is intended to cover a Multi-purpose Earth Mover consisting of an upperstructure unit with control cab and hydraulically operated telescoping boom with hydraulic controls that will allow bucket or tool to be rotated through no less than 180° arc - minimum 90° each way from centerline of boom; all mounted on a 4 x 2 self-propelled carrier. The upperstructure unit shall be powered by the carrier engine. Unit to have remote hydraulic control from upper cab to control movement of carrier for one man operation.
2. CARRIER:
 - A. GVWR: 41,000 pounds, minimum.
 - B. Wheelbase: 160", minimum.
 - C. Engine: Liquid cooled, turbocharged, four cycle diesel with a minimum piston displacement of 6.6 liters. Shall have an advertised rating of no less than 215 SAE gross horsepower and a minimum of 625 lb. ft. SAE gross torque. Governed speed shall be no less than 2,200 RPM. Engine shall have 24 volt electric system and include starter, no less than two (2) batteries with a minimum rating each of 1,000 cold cranking amps at 0° F, and not less than 70 amp alternator. Shall have lube oil and fuel filters, approved type air cleaner, pre-cleaner, muffler, block heater rated at no less than 1,000 watts which will operate on 120 volts AC, automatic shutdown system which senses low oil pressure or high coolant temperature, and all other accessories or equipment necessary for efficient operation.
 - D. Cooling: As regularly furnished by carrier manufacturer with engine specified above. Cooling system shall have anti-freeze protection to -20° F., or lower.
 - E. Transmission: Allison 3500 RDS automatic with six (6) speed programming and PTO provision. Transmission shall have synthetic lubricant and be equipped with transmission oil cooler.
 - F. Steering: Hydraulic power steering as regularly offered by manufacturer.
 - G. Front Axle And Suspension: I Beam Type axle with a minimum capacity of 16,000 pounds. Suspension shall consist of heavy duty leaf type springs. Shall be equipped with hydraulic lock-out cylinders which automatically engage and disengage on remote travel.
 - H. Rear Axle And Suspension: Single speed full-floating type with wet seals, outboard mounted drums and a minimum capacity of 23,000 pounds. Shall be equipped with no-spin type differential or cab controlled differential lock. Axle shall be rigidly mounted to carrier frame.

Ratio of rear axle furnished shall provide a minimum top speed of 53 mph.
 - I. Frame: Beam or box type as regularly furnished by manufacturer.
 - J. Brakes: Air operated two shoe type with automatic slack adjusters on all wheels. Shall have spring set parking brake on rear axles. Air compressor shall have a minimum capacity of 13.2 cfm and draw air through the engine air cleaner. Air system shall be equipped with a heated air dryer. Brake system shall meet ICC Regulations.
 - K. Cab: Shall be steel, left-hand mount, one person type, as regularly furnished by manufacturer, equipped with heater-defroster unit, tinted safety glass and sun visor.
 - (1) Instruments: Shall include the following as a minimum:
 - (a) Speedometer/odometer
 - (b) Tachometer
 - (c) Electric hour meter
 - (d) Ammeter or voltmeter
 - (e) Oil pressure gauge
 - (f) Coolant temperature gauge
 - (g) Fuel gauge
 - (h) DEF gauge
 - (i) Brake system pressure gauge
 - (2) Tilt Steering Column: Factory installed.

- (3) Air Conditioning: Factory installed.
 - (4) Windshield Wipers: Electric windshield wiper with washer.
 - (5) Seat: Adjustable suspension seat. Shall include seat belt
 - (6) Mirrors: Dual West Coast Sr. type mirrors with adjustable brackets and auxiliary convex mirrors.
 - L. Front Tires And Wheels: Two (2) 385/65R22.5 - load range "J" tubeless radials with on/off highway tread. Shall be mounted on 22.5" diameter hub piloted steel disc wheels with 285.75 mm 10 hole bolt circle diameter and a rim section of no less than 11.25".
 - M. Rear Tires And Wheels: Four (4) no less than 11R22.5 - load range "H" tubeless radials with traction type tread. Wheels shall be 24.5" diameter hub piloted steel disc with 285.75 mm 10 hole bolt circle diameter and a rim section of no less than 11.25".
 - N. Spare Wheel: One (1) spare rear wheel (with tire) shall be furnished.
 - O. Fuel Tank(s): Minimum fuel capacity of 100 gallons.
 - P. Lights: Shall be equipped with dual beam headlights, tail lights, stop lights, reflectors, clearance lights, and directional turn signals with column mounted switch and hazard flasher switch.
 - Q. Backup and Travel Alarm: Shall be equipped with an electric backup and remote travel alarm meeting the requirements of SAE J994 with a minimum sound level output of 97 decibels.
 - R. Mud Flaps: Shall have mud flaps (without advertising) mounted behind rear wheels.
 - S. Equipment: Boom rack, front and rear tow hooks, top frame decking, and air horn(s). Shall have necessary tools and air hose for filling tires.
3. UPPERSTRUCTURE:
- A. Hydraulic System: Variable flow hydraulic system for power to boom, swing and bucket control. Swing to be 360° continuous, driven by hydraulic motor. Power for the hydraulic system shall be supplied by the carrier engine. Shall have a minimum of one (1) load sensing axial piston pump of size and capacity to perform all required operations. Hydraulic system shall allow simultaneous operation of any combination of boom functions when utilizing the boom controls in the upperstructure cab. Hydraulic cylinders shall be double acting type. All circuits shall have safety relief valves to prevent overloading. Minimum oil capacity of hydraulic system and reservoir shall be 40 gallons. Reservoir shall be equipped with a visual oil level gauge. Hydraulic system shall be equipped with a filtration system with replaceable filter elements of adequate capacity for system furnished and an oil cooler with thermostatically controlled fan.
 - B. Auxiliary Hydraulics: A two (2) line hydraulic circuit to furnish auxiliary hydraulic power for attachments at the boom end shall be provided. Hydraulic circuit shall have quick connecting terminals for attachments located at the boom's end. Lines shall be protected by routing in a protective trough through the boom.
 - C. Controls: Hydraulic joystick type controls for hoist, bucket, telescope and swing functions. Shall be self-centering type that will automatically stop machine movements and hold boom when controls are released. A quick change joystick pattern switch shall be located on the instrument panel.
 - D. Hydraulic Remote Control: The unit shall be equipped with a hydraulic remote control in the upperstructure cab to propel, steer, set brakes and control front axle lockout on the carrier. Controls shall be conveniently located to the operator.
 - E. Boom: The unit shall be equipped with a two section, telescoping boom assembly. The boom assembly shall be hydraulically actuated and self-contained. Boom shall have a telescoping action of no less than 10' 6". Surface digging reach from axis of rotation with boom retracted and bucket level at ground line shall not exceed 11' 1". Maximum surface reach from axis of rotation with boom extended shall be no less than 27'. Maximum digging depth shall be no less than 18'.

Boom tool cylinder shall have capability to operate bucket through 165° arc. Bucket tilt control shall provide bucket rotation through no less than 180° arc - 90° each way from centerline of boom.
 - F. Operating Range & Capacity: Boom angle at highest position above ground level shall be no less than 30°. Angle at lowest position below ground level shall be no less than 75°. Ball bearing type turntable shall have full 360

degree uninterrupted swing. Lifting capacity over side at ground level shall be no less than 6,700 pounds at 15' radius, no less than 4,400 pounds at 20' radius.

- G. Cab: All weather type, fully enclosed with full vision tinted safety glass windows (front window to be sliding type which slides to overhead storage), air conditioning, electronic AM/FM radio, heater-defroster, electric windshield wiper with washer, rear view mirrors, adjustable suspension seat and seat belt. All controls shall be easily accessible to operator including engine start, stop and throttle controls and gauges or indicators.
- H. Travel Height: Shall not exceed 12' 10" with bucket installed and boom on rack in traveling position.
- I. Attachments: The attachments listed below shall be furnished with machine including any pins, bolts or accessories necessary for their hook-up to boom.
 - (1) Ditch Cleaning Bucket: One (1) Heavy Duty Ditch Cleaning/Grading Bucket; minimum 60" wide with a minimum SAE rating of 7/8 cubic yards.
 - (2) Excavating Bucket: One (1) Digging/Excavating Bucket w/Teeth; no less than 36" wide.
 - (3) Grapple: One (1) all steel, fixed thumb grapple attachment capable of grasping, holding and dumping various types of brush and debris shall be provided with the unit. All components necessary to properly mount and operate the attachment shall be furnished.
- 4. Weight: Weight of complete unit - upperstructure, carrier, boom, counterweight and 60" ditch cleaning bucket shall be no less than 40,000 pounds.
- 5. Vandalism Protection: Shall be equipped with vandalism protection including the following items as a minimum:
 - A. Locking cab doors and locking filler cap for the fuel tank, hydraulic tank and radiator. Filler caps located behind locking panels are acceptable in lieu of individual locking caps.
 - B. Lockable engine enclosure.
 - C. Lockable battery box cover(s) if batteries are not mounted inside lockable engine enclosure.
 - D. All lockable panels and compartments shall be equipped with an integrated locking system or padlocks. All locks shall be keyed alike.
- 6. Color: Manufacturer's standard color is acceptable. Anti-slip paint is required on all walking surfaces.
- 7. Warranty: Units purchased under this specification shall be warranted against defects in material and workmanship for a minimum period of twelve (12) months (365 days) from date unit is placed in operation by AHTD.
 - A. Warranty shall include all parts, labor and transportation costs to the location of equipment.
 - B. If equipment cannot be repaired on location, warranty shall include cost of transport to the facility where the repair work will be done.
 - C. It will be the responsibility of the successful bidder to insure that repairs are completed in a timely manner.
 - D. If any warranty literature submitted with the bid conflicts with AHTD warranty requirements, the conflict(s) shall be specifically noted, corrected and included with the bid or the conflict(s) will be considered an exception to warranty specifications and the bid rejected.
 - E. Recent prior failure to provide warranty-work, parts, replacement parts or service, in a timely manner, for equipment from the same manufacturer or dealer shall be grounds for the rejection of any submitted bid, or for the denial of any otherwise qualified low bidder, whether such failure is attributable to the manufacturer or the dealer of the equipment. For the purposes of this paragraph "timely manner" means a period of time not exceeding thirty (30) calendar days to provide requested warranty-work, parts, replacement parts, or service. For the purposes of this paragraph "manufacturer" means the original manufacturer of the equipment and its successor or successors, regardless of number, and whether acquired by sale, merger, or otherwise. For the purposes of this paragraph "replacement part" means a part redesigned by a manufacturer to correct a design or engineering defect and which replacement part is capable of providing dependable performance in normal operation conditions for its normal service life without failure. Such bid or bids may be rejected by the Department until such failure or failures have been remedied to the satisfaction of the Department and until such manufacturer or dealer is providing such warranty-work, parts, replacement parts, and service in a timely manner.

8. Manuals, Certificate of Origin and Invoice: The successful bidder shall furnish an Operator's Instruction Manual with each unit delivered and one (1) copy each of Shop Repair Manual and Parts Book to each FOB point (Shop repair manual and parts book to be furnished for engine as well as machine and related components.). Certificate of Origin and one (1) Invoice to be furnished to Equipment & Procurement Division, P.O. Box 2261, Little Rock, AR 72203 (11302 W. Baseline Road, Little Rock, AR 72209, if shipping UPS, FedEx, etc.).

The successful bidder may provide Shop Repair Manuals and Parts Manuals on computer media in lieu of printed manuals.

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

SPECIFICATION 16-222-135

FOR

MULTI-PURPOSE EXCAVATING AND GRADING MACHINE

ON 4 x 2 CARRIER

A. General Conditions:

1. **Current Model:** Units furnished under this specification shall be the latest improved model in current production, as offered to commercial trade, built for the U.S. market, and shall be of quality workmanship and material. Machines manufactured for foreign markets will not be accepted. All equipment offered under this specification shall be new. Used, reconditioned, shopworn, demonstrator, prototype or discontinued models are not acceptable. Manufacturers of the units supplied must have been in the business of producing operational units for at least two years and must have recently sold similar units to domestic governmental agencies. The model furnished must have been in production for a minimum of one year, or be the latest version of a previous model. Bidder/s may be required to submit documentation substantiating the aforementioned requirements. A list of user references may also be required.
2. **Literature:** **Manufacturers literature, verifying adherence of proposed unit to each line item addressed in this specification, shall be submitted with the bid. If any literature and/or specifications of items conflict with AHTD specifications, the conflict(s) shall be specifically noted, corrected and submitted with the bid.**
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10. **Cooperative Purchasing:** Other tax-supported entities* in Arkansas (cities, counties, state agencies, school districts, etc.) may purchase from this Contract on an individual basis under the same specifications and conditions, and at the pricing set forth by each vendor, all at the discretion of each vendor in each case. Prices could be reduced by a vendor for minor alterations in conditions (changing order quantities, deleting options, etc.) as agreed by both parties, but could not be raised above the contract bid price except for any additional freight charges. Vendors would not be required to sell to any such entity under this contract, and those entities would not be obligated to purchase from the contract.

Each entity wishing to purchase from the contract must make contact directly with the appropriate vendor(s). The Highway Department shall remain "out of the loop" for such transactions: all contact, orders, invoices, payments, etc. regarding such transactions must take place exclusively between the tax-supported entity and the vendor. The Department shall be held harmless of any and all liability arising from such transactions.

* Tax-supported entities are defined as those receiving more than half of total funding from appropriated tax funds.

B. Unit Specifications:

1. General: This specification is intended to cover a Multi-purpose Earth Mover consisting of an upperstructure unit with control cab and hydraulically operated telescoping boom with hydraulic controls that will allow bucket or tool to be rotated through no less than 180° arc - minimum 90° each way from centerline of boom; all mounted on a 4 x 2 self-propelled carrier. The upperstructure unit shall be powered by the carrier engine. Unit to have remote hydraulic control from upper cab to control movement of carrier for one man operation.
2. CARRIER:
 - A. GVWR: 41,000 pounds, minimum.
 - B. Wheelbase: 160", minimum.
 - C. Engine: Liquid cooled, turbocharged, four cycle diesel with a minimum piston displacement of 6.6 liters. Shall have an advertised rating of no less than 215 SAE gross horsepower and a minimum of 625 lb. ft. SAE gross torque. Governed speed shall be no less than 2,200 RPM. Engine shall have 24 volt electric system and include starter, no less than two (2) batteries with a minimum rating each of 1,000 cold cranking amps at 0° F, and not less than 70 amp alternator. Shall have lube oil and fuel filters, approved type air cleaner, pre-cleaner, muffler, block heater rated at no less than 1,000 watts which will operate on 120 volts AC, automatic shutdown system which senses low oil pressure or high coolant temperature, and all other accessories or equipment necessary for efficient operation.
 - D. Cooling: As regularly furnished by carrier manufacturer with engine specified above. Cooling system shall have anti-freeze protection to -20° F., or lower.
 - E. Transmission: Allison 3500 RDS automatic with six (6) speed programming and PTO provision. Transmission shall have synthetic lubricant and be equipped with transmission oil cooler.
 - F. Steering: Hydraulic power steering as regularly offered by manufacturer.
 - G. Front Axle And Suspension: I Beam Type axle with a minimum capacity of 16,000 pounds. Suspension shall consist of heavy duty leaf type springs. Shall be equipped with hydraulic lock-out cylinders which automatically engage and disengage on remote travel.
 - H. Rear Axle And Suspension: Single speed full-floating type with wet seals, outboard mounted drums and a minimum capacity of 23,000 pounds. Shall be equipped with no-spin type differential or cab controlled differential lock. Axle shall be rigidly mounted to carrier frame.

Ratio of rear axle furnished shall provide a minimum top speed of 53 mph.
 - I. Frame: Beam or box type as regularly furnished by manufacturer.
 - J. Brakes: Air operated two shoe type with automatic slack adjusters on all wheels. Shall have spring set parking brake on rear axles. Air compressor shall have a minimum capacity of 13.2 cfm and draw air through the engine air cleaner. Air system shall be equipped with a heated air dryer. Brake system shall meet ICC Regulations.
 - K. Cab: Shall be steel, left-hand mount, one person type, as regularly furnished by manufacturer, equipped with heater-defroster unit, tinted safety glass and sun visor.
 - (1) Instruments: Shall include the following as a minimum:
 - (a) Speedometer/odometer
 - (b) Tachometer
 - (c) Electric hour meter
 - (d) Ammeter or voltmeter
 - (e) Oil pressure gauge
 - (f) Coolant temperature gauge
 - (g) Fuel gauge
 - (h) DEF gauge
 - (i) Brake system pressure gauge
 - (2) Tilt Steering Column: Factory installed.

- (3) Air Conditioning: Factory installed.
 - (4) Windshield Wipers: Electric windshield wiper with washer.
 - (5) Seat: Adjustable suspension seat. Shall include seat belt
 - (6) Mirrors: Dual West Coast Sr. type mirrors with adjustable brackets and auxiliary convex mirrors.
 - L. Front Tires And Wheels: Two (2) 385/65R22.5 - load range "J" tubeless radials with on/off highway tread. Shall be mounted on 22.5" diameter hub piloted steel disc wheels with 285.75 mm 10 hole bolt circle diameter and a rim section of no less than 11.25".
 - M. Rear Tires And Wheels: Four (4) no less than 11R22.5 - load range "H" tubeless radials with traction type tread. Wheels shall be 24.5" diameter hub piloted steel disc with 285.75 mm 10 hole bolt circle diameter and a rim section of no less than 11.25".
 - N. Spare Wheel: One (1) spare rear wheel (with tire) shall be furnished.
 - O. Fuel Tank(s): Minimum fuel capacity of 100 gallons.
 - P. Lights: Shall be equipped with dual beam headlights, tail lights, stop lights, reflectors, clearance lights, and directional turn signals with column mounted switch and hazard flasher switch.
 - Q. Backup and Travel Alarm: Shall be equipped with an electric backup and remote travel alarm meeting the requirements of SAE J994 with a minimum sound level output of 97 decibels.
 - R. Mud Flaps: Shall have mud flaps (without advertising) mounted behind rear wheels.
 - S. Equipment: Boom rack, front and rear tow hooks, top frame decking, and air horn(s). Shall have necessary tools and air hose for filling tires.
3. UPPERSTRUCTURE:
- A. Hydraulic System: Variable flow hydraulic system for power to boom, swing and bucket control. Swing to be 360° continuous, driven by hydraulic motor. Power for the hydraulic system shall be supplied by the carrier engine. Shall have a minimum of one (1) load sensing axial piston pump of size and capacity to perform all required operations. Hydraulic system shall allow simultaneous operation of any combination of boom functions when utilizing the boom controls in the upperstructure cab. Hydraulic cylinders shall be double acting type. All circuits shall have safety relief valves to prevent overloading. Minimum oil capacity of hydraulic system and reservoir shall be 40 gallons. Reservoir shall be equipped with a visual oil level gauge. Hydraulic system shall be equipped with a filtration system with replaceable filter elements of adequate capacity for system furnished and an oil cooler with thermostatically controlled fan.
 - B. Auxiliary Hydraulics: A two (2) line hydraulic circuit to furnish auxiliary hydraulic power for attachments at the boom end shall be provided. Hydraulic circuit shall have quick connecting terminals for attachments located at the boom's end. Lines shall be protected by routing in a protective trough through the boom.
 - C. Controls: Hydraulic joystick type controls for hoist, bucket, telescope and swing functions. Shall be self-centering type that will automatically stop machine movements and hold boom when controls are released. A quick change joystick pattern switch shall be located on the instrument panel.
 - D. Hydraulic Remote Control: The unit shall be equipped with a hydraulic remote control in the upperstructure cab to propel, steer, set brakes and control front axle lockout on the carrier. Controls shall be conveniently located to the operator.
 - E. Boom: The unit shall be equipped with a two section, telescoping boom assembly. The boom assembly shall be hydraulically actuated and self-contained. Boom shall have a telescoping action of no less than 10' 6". Surface digging reach from axis of rotation with boom retracted and bucket level at ground line shall not exceed 11' 1". Maximum surface reach from axis of rotation with boom extended shall be no less than 27'. Maximum digging depth shall be no less than 18'.

Boom tool cylinder shall have capability to operate bucket through 165° arc. Bucket tilt control shall provide bucket rotation through no less than 180° arc - 90° each way from centerline of boom.
 - F. Operating Range & Capacity: Boom angle at highest position above ground level shall be no less than 30°. Angle at lowest position below ground level shall be no less than 75°. Ball bearing type turntable shall have full 360

degree uninterrupted swing. Lifting capacity over side at ground level shall be no less than 6,700 pounds at 15' radius, no less than 4,400 pounds at 20' radius.

- G. Cab: All weather type, fully enclosed with full vision tinted safety glass windows (front window to be sliding type which slides to overhead storage), air conditioning, electronic AM/FM radio, heater-defroster, electric windshield wiper with washer, rear view mirrors, adjustable suspension seat and seat belt. All controls shall be easily accessible to operator including engine start, stop and throttle controls and gauges or indicators.
- H. Travel Height: Shall not exceed 12' 10" with bucket installed and boom on rack in traveling position.
- I. Attachments: The attachments listed below shall be furnished with machine including any pins, bolts or accessories necessary for their hook-up to boom.
 - (1) Ditch Cleaning Bucket: One (1) Heavy Duty Ditch Cleaning/Grading Bucket; minimum 60" wide with a minimum SAE rating of 7/8 cubic yards.
 - (2) Excavating Bucket: One (1) Digging/Excavating Bucket w/Teeth; no less than 36" wide.
 - (3) Grapple: One (1) all steel, fixed thumb grapple attachment capable of grasping, holding and dumping various types of brush and debris shall be provided with the unit. All components necessary to properly mount and operate the attachment shall be furnished.
- 4. Weight: Weight of complete unit - upperstructure, carrier, boom, counterweight and 60" ditch cleaning bucket shall be no less than 40,000 pounds.
- 5. Vandalism Protection: Shall be equipped with vandalism protection including the following items as a minimum:
 - A. Locking cab doors and locking filler cap for the fuel tank, hydraulic tank and radiator. Filler caps located behind locking panels are acceptable in lieu of individual locking caps.
 - B. Lockable engine enclosure.
 - C. Lockable battery box cover(s) if batteries are not mounted inside lockable engine enclosure.
 - D. All lockable panels and compartments shall be equipped with an integrated locking system or padlocks. All locks shall be keyed alike.
- 6. Color: Manufacturer's standard color is acceptable. Anti-slip paint is required on all walking surfaces.
- 7. Warranty: Units purchased under this specification shall be warranted against defects in material and workmanship for a minimum period of twelve (12) months (365 days) from date unit is placed in operation by AHTD.
 - A. Warranty shall include all parts, labor and transportation costs to the location of equipment.
 - B. If equipment cannot be repaired on location, warranty shall include cost of transport to the facility where the repair work will be done.
 - C. It will be the responsibility of the successful bidder to insure that repairs are completed in a timely manner.
 - D. If any warranty literature submitted with the bid conflicts with AHTD warranty requirements, the conflict(s) shall be specifically noted, corrected and included with the bid or the conflict(s) will be considered an exception to warranty specifications and the bid rejected.
 - E. Recent prior failure to provide warranty-work, parts, replacement parts or service, in a timely manner, for equipment from the same manufacturer or dealer shall be grounds for the rejection of any submitted bid, or for the denial of any otherwise qualified low bidder, whether such failure is attributable to the manufacturer or the dealer of the equipment. For the purposes of this paragraph "timely manner" means a period of time not exceeding thirty (30) calendar days to provide requested warranty-work, parts, replacement parts, or service. For the purposes of this paragraph "manufacturer" means the original manufacturer of the equipment and its successor or successors, regardless of number, and whether acquired by sale, merger, or otherwise. For the purposes of this paragraph "replacement part" means a part redesigned by a manufacturer to correct a design or engineering defect and which replacement part is capable of providing dependable performance in normal operation conditions for its normal service life without failure. Such bid or bids may be rejected by the Department until such failure or failures have been remedied to the satisfaction of the Department and until such manufacturer or dealer is providing such warranty-work, parts, replacement parts, and service in a timely manner.

8. Manuals, Certificate of Origin and Invoice: The successful bidder shall furnish an Operator's Instruction Manual with each unit delivered and one (1) copy each of Shop Repair Manual and Parts Book to each FOB point (Shop repair manual and parts book to be furnished for engine as well as machine and related components.). Certificate of Origin and one (1) Invoice to be furnished to Equipment & Procurement Division, P.O. Box 2261, Little Rock, AR 72203 (11302 W. Baseline Road, Little Rock, AR 72209, if shipping UPS, FedEx, etc.).

The successful bidder may provide Shop Repair Manuals and Parts Manuals on computer media in lieu of printed manuals.