



STANDARD BID CONDITIONS

H-16-260P

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@arkansashighways.com](mailto:joanna.mcfadden@arkansashighways.com).

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-16-260P**

**BIDDER:** \_\_\_\_\_

1. **1** – Asphalt Distributor, 1,900 Gallon Capacity, Truck Mounted,  
Hydraulic Driven to meet AHTD Spec. **16-290-060.**

FOB: **AHTD – District 6 Headquarters, 8900 Mabelvale Pike, Little Rock, AR 72209**

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

Total for **1 Asphalt Distributor** \$ \_\_\_\_\_

Asphalt Distributor **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 16-290-060**

**FOR**

**TRUCK MOUNTED BITUMINOUS DISTRIBUTOR  
WITH COMPUTERIZED AUTOMATIC APPLICATION RATE CONTROL SYSTEM**

**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 machine.  
  
In addition, the successful bidder shall furnish information on any factory service schools which would be available for AHTD service technicians.
6. Shall be assembled, adjusted and made ready for continuous operation at time of delivery.
7. All parts, accessories and tools necessary for satisfactory operation of this unit shall be furnished whether or not they are specifically mentioned in this specification (including standard equipment as regularly furnished by manufacturer as shown on printed literature and specifications - 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.

**Unit Specifications:**

1. General: This specification is intended to cover a 1,900 gallon minimum capacity hydrostatic drive bituminous distributor, equipped with a computerized automatic application rate control system, completely mounted on a truck chassis and ready for use.
2. Distributor:
  - A. Tank: Tank shall have a minimum capacity of 1,900 gallons. Shall be oval in cross section, constructed of tank quality steel. Tank shell to be constructed of no less than 10 gauge steel with not less than 10 gauge steel heads. All seams to be electrically welded. Size of oval and length of tank shall be selected so as to give the best load distribution on the chassis to be used. Tank shall be equipped with full-circumference surge plate(s) constructed of no less than 10 gauge steel. Surge plates to be spaced to provide adequate tank strength and proper surge control. Openings, with staggered placement to minimize surging of material and large enough for a man to crawl through, shall be provided in the surge plates for the free flow of material to the pump. Tank design and construction shall meet all applicable federal cargo tank regulations, including DOT-406, HM-183 and HM-198A, with consideration for hot asphalt products, including rollover protection.
  - B. Insulation: Shall be no less than 2" thick fiberglass protected by a minimum .040" thick weatherproof aluminum jacket.
  - C. Manhole: No less than 20" inside diameter with hinged, quick-opening cover with gasket.
  - D. Overflow: An overflow no less than 3" in diameter shall be furnished, extending at least 6" above the liquid, and draining internally through the bottom of the tank in such a location as to clear all chassis members.
  - E. Tank Gauges: Two (2) float type, with dial calibrated in 50 gallon increments, one (1) at front and one (1) at rear, with low level indicator in truck cab.
  - F. Measuring Stick: Steel or Aluminum, calibrated in 25 or 50 gallon increments.
  - G. Circulating System: The circulating system shall permit the following operations:
    - (1) Filling tank by pump from outside source.
    - (2) Circulating material in tank.
    - (3) Circulating material in bar.
    - (4) Spraying at a constant desired application rate, regardless of variance in truck speed.
    - (5) Transferring from an outside source to another outside source without having material enter distributor tank.
    - (6) Hand spraying
    - (7) Returning material in spray bar to tank.
    - (8) Returning material in hand spray to tank.
    - (9) Pumping back to supply source.Circulating System shall be located at the rear of the tank. Provision shall be made for easily draining the circulating system independent of the tank and for flushing all parts completely.
  - H. Asphalt Pump: To be located at rear of tank. Shall have 4" minimum suction opening and 4" minimum discharge with a minimum capacity of 400 gpm. Pump shall be of the positive displacement rotary gear type, designed for the efficient handling of all types of bituminous material.
  - I. Strainers: Removable strainers including a cone type strainer in the fill line and a 9" minimum diameter strainer for the manhole opening.

- J. Power Unit: Power to drive asphalt pump shall be furnished by a Hydrostatic Transmission consisting of the following as a minimum:
- (1) Hydraulic Pump: Infinitely variable displacement axial piston type hydraulic pump with a minimum displacement of 6.0 cubic inches per revolution. Hydraulic pump shall be mounted at the front of the truck on frame extensions and be driven by the engine crankshaft. Shall include PTO shaft, necessary shields, and all additional items required for operation.
  - (2) Hydraulic Motor: Fixed displacement hydraulic motor with a minimum displacement of 2.60 cubic inches per revolution to drive the asphalt pump.
  - (3) Reservoir: Minimum capacity of 20 gallons, complete with temperature gauge and level indicator. Adequate Filters, all Lines, Hose and Fittings shall be furnished and completely installed.
- K. Flues: Shall have two (2) sets of return type flues running the full length of tank. Flues shall have a minimum diameter of 8", or 8" tapered to 6" on the return. Exhaust stack(s) shall be constructed from stainless steel.
- L. Burners: Shall have two (2) forced air diesel fired burners producing a minimum of 425,000 BTU's each. The burners shall have electric spark igniters and be equipped with sensors that detect a lack of burn or ignition and shuts down the fuel supply. Fuel tank shall be located with consideration for operator and equipment safety and have sufficient capacity to operate the burners for a minimum of eight (8) hours.
- M. Flushing Tank: A self contained, self flushing line, connected to fill line for cleaning asphalt pump, shall be included. A flushing tank with a minimum capacity of 20 gallons complete with all valves, piping and controls necessary for flushing shall be furnished. Tank shall be located away from burners for safe operation.
- N. Controls:
- (1) Distributor shall be equipped with a computer based automatic application rate control system in which application rates ranging from a minimum of not more than .03 gallons per square yard to a maximum of not less than 0.60 gallons per square yard can be entered and will then be maintained regardless of distributor speed, bar width or transmission gear changes during operation. System shall allow application rates to be entered and automatically maintained without requiring the use of a hand held slide rule or calculator. Shall have capability of storing up to five (5) application rates in memory and shall retain all data in the event of a power loss. Unit shall have a diagnostic trouble shooting system for pinpointing malfunctions. Operation of the trouble shooting system shall be explained in the operations manual.
  - (2) All necessary controls for spray operation and related pump operation shall be located in the truck cab convenient to the driver-operator. The cab controls shall allow the driver-operator to turn the spray bar on or off incrementally in 1' sections, control the circulating system to either spray or to circulate material through the spray bar, circulate material in the tank, return material in spray bar to tank (spray bar suck back), transfer, load, unload, hand spray, lift the spray bar, shift the spray bar horizontally, fold the spray bar wings (either end or both ends simultaneously) and preset the desired application rate. The spray bar on/off control shall be electric over air. Remaining functions may utilize electric over air or electric over hydraulic controls.
  - (3) Shall have controls located in a panel at the street side rear of the distributor in addition to the controls located in the truck cab. Rear controls shall allow the driver-operator to circulate material through the spray bar, circulate material in the tank, return material in spray bar to tank (spray bar suck back), transfer, load, unload, hand spray, lift the spray bar, horizontally shift the spray bar and fold the spray bar wings (either end or both ends simultaneously). Any manual valves or controls required to set the circulating system for loading, unloading, etc., shall be located on street side within easy reach of the operator from ground level and designed for quick opening and closing.
  - (4) A pump override control shall be provided at the rear of the distributor and in the truck cab. Override control shall allow increase in asphalt pump output for filling, sucking back, etc., without affecting application rate setting.
  - (5) Spray bar control shall provide incremental, instantaneous on/off throughout the spray bar. On/off controls shall be based on maximum 1' sections throughout the entire length of the spray bar, including any additional extensions.
    - (a) The automatic application rate control system shall allow spray bar sections to be turned on or off throughout the length of the spray bar, including any additional extensions, and still automatically maintain the selected application rate.
    - (b) When a section (or sections) of the spray bar is turned on, all nozzles in the section(s) shall immediately and simultaneously open to produce uniform fan-shaped spray patterns without drips or distortions. This no-drip actuation shall occur when the unit is starting a shot from a stationary position.

- (c) When a section (or sections) of the spray bar is turned off, all nozzles in the section(s) shall immediately and simultaneously close to terminate the uniform fan-shaped spray patterns without drips or distortions. This no-drip actuation shall occur whenever the unit is terminating a shot.
  - (6) All air solenoid valves and hydraulic solenoid valves shall be equipped with manual overrides for the solenoids.
  - (7) All units utilizing air pressure for control functions shall have a reservoir separate from the truck's air brake reservoir, complete with check or safety valve to prevent loss of air on truck chassis brakes in case lines are ruptured.
- O. Instruments: Shall include the following:
- (1) Digital LCD Readouts for cab monitoring of application rate, gallons per minute, speed in feet per minute and total distance traveled in feet. Shall accumulate total distance traveled in feet and total gallons sprayed until operator resets to zero by clearing the memory. Shall be capable of displaying pump rate in gallons per minute, feet traveled and application rate in gallons per square yard simultaneously. Information on vehicle ground speed in feet per minute, gallons sprayed and square yards sprayed to be available on selectable, alternate screens. The display shall be back lighted and shall have an operating temperature range of -22° F to 185° F.
  - (2) Radar Sensing Unit for measuring ground speed and total distance traveled.
  - (3) Pressure Gauge to show pump discharge pressure, if recommended by manufacturer.
  - (4) Pencil Thermometer: Armored engraved pencil type capable of registering 50° to 450° F. Thermometer Well to be on the left side of the tank, located so as to give the true average temperature of the tank contents.
  - (5) Dial Thermometer: A minimum 4" diameter dial type thermometer, capable of registering 50° to 450° F. Thermometer shall be protected and so located to be readily observed from ground level.
- P. Spray Bar: Full circulating type spray bar with incremental on/off in 1' sections, controlled from cab of truck.
- (1) Spray bar shall be comprised of a center section (or sections) and a folding wing or extension on each end. Center section(s) shall be 6 feet or 8 feet in length with one (1) folding extension on each end to provide a spray bar length of 10 feet. Extensions shall fold vertically approximately 90° for transport, either hydraulically or pneumatically without the use of tools. Means shall be provided to secure the extensions in the transport position. In the transport position, with extensions folded, overall width shall not exceed 8 feet.
  - (2) Spray bar shall have the capability of accepting additional sections or extensions and shall be equipped with the necessary 1' incremental on/off control provisions to allow the spray bar to be extended to a length of 20 feet.
    - (a) Although control provisions are required for up to 20 feet of spray bar, it will only be necessary to furnish sufficient extensions for 16 feet of spray bar.
    - (b) The following extensions shall be furnished to increase bar length in 1' increments on each side up to a total bar length of 16 feet:
      - 1' Extensions ----- One (1) left and One (1) right
      - 2' Extensions ----- One (1) left and One (1) rightTwo (2) 1' extensions may be substituted for each of the 2' extensions if desired by the bidder.
  - (3) Nozzles to be spaced on 4" centers on spray bar and shall have an individual valve for each spray nozzle. Each nozzle valve to have flip lever control allowing individual valves to be disconnected without the use of tools, or pulling pins.
  - (4) Bar carrying mechanism shall be designed for raising bar for traveling clearance. Shall have air or hydraulic cylinders for bar lift, bar shift and wing folding with controls located in truck cab and at rear. The spray bar wings shall automatically shut off when raised. Bar shall have vertical adjustment of no less than 6" and lateral shift of no less than 9" either side of center. Spray bar to have safety breakaway to prevent damage to bar when striking an obstruction while traveling either forward or in reverse.



- Q. Hand Spraying: Minimum of 25' of no less than ¾" flexible rubber hand spray hose shall be furnished, with union connection and valve on the distributor, and hand spray gun with valve and cold handle. Hand spray gun shall have a minimum of three (3) nozzles.
- R. Transfer and Fill Lines:
- (1) Rear Transfer and Fill: A transfer line and a fill line shall be located on street side at rear of distributor. Lines shall be equipped with quick connect couplers for connecting a 3" loading hose.
  - (2) Front Fill: Shall be equipped with a front fill line with inlet located on streetside at the front bumper of the truck. Inlet shall be equipped with a quick connect coupler for connecting a 3" loading hose.
- S. Sampling Valve: Shall be equipped with a liquid sampling valve designed for taking hot samples of material.
- T. Power Wash Down: Shall be equipped with a power wash down system with hand held wand for cleaning the spray bar and rear end of unit.
- U. Ladder and Catwalk: A ladder shall be provided to allow access from ground level to the top of the tank. Ladder shall be accessible without the need to climb on truck tires, wheels, etc. A catwalk shall be provided on the top of the tank from the ladder to the manhole.
- V. Fenders: Full fenders, constructed of steel or aluminum, shall be furnished on units which do not have catwalks on sides of tank or where catwalks or platforms are not designed with wheel well openings to serve as fenders.
- W. Application Charts: Application charts or a sliding type computer for calculating the amount of material required, travel speed and length of spray bar shall be provided.
- X. Additional Equipment: The following shall be included in the bid:
- (1) Storage Box for spray bar sections.
  - (2) Tool Box, lockable, on side of tank.
  - (3) 15 feet of 3 inch neoprene or rubber filling hose, complete with quick connect couplers for connecting to transfer line or fill lines.
    - (a) Provision shall be made for storing and transporting the loading hose assembly when not in use.
    - (b) Loading hose shall be stored in a manner and location which does not obstruct operation of the unit.
  - (4) All necessary wrenches.
  - (5) Two complete sets of spray nozzles (one set in spray bar and all extensions and one additional set for spray bar and all extensions). All nozzles furnished shall be of the same size and type. Nozzles furnished shall be V-slot type nozzles with an orifice suitable for application rates of .20 to .55 gallons per square yard.
  - (6) Extra supply of gaskets.
- Y. Color: All surfaces requiring paint shall be properly primed and painted black enamel.
3. Cab & Chassis:
- A. GVWR: No less than 35,000 pounds.
  - B. Wheelbase: Minimum of 185", maximum of 205".
  - C. Cab to Axle: Minimum nominal effective CA of 120" with vertical exhaust stack.
  - D. Tires: Seven (7) no less than 11R22.5 - "H" Load Range Tubeless Steel Belted Radial; Single Front and Dual Rear. Tires shall be one of the following: Bridgestone; Continental; Goodyear; Michelin. (Alternate tires from other manufacturers may be provided if approved by AHTD prior to delivery. If alternate tires are proposed, quality must equal or exceed that of the tires specified above.)
  - E. Wheels: Seven (7) 22.5" Diameter, tubeless type, hub piloted steel disc with 220 mm center hole, 285.75 mm 10 hole bolt circle diameter and no less than 8.25" rim section.

- F. Engine: Turbocharged 4 Cycle diesel with a minimum piston displacement of 7.6 liters developing no less than 250 SAE gross horsepower at rated RPM and no less than 800 lb. ft. SAE gross torque. Shall have a minimum governed speed of 2,200 RPM. Shall have full flow oil filter(s), fuel filters, dry type air cleaner, 12 volt electrical equipment with no less than 160 amp alternator and maintenance free batteries as regularly furnished with engine specified.
- (1) Front Power Take-Off: Engine to be equipped with provision for front PTO drive. Shall include the necessary crankshaft adapter for attaching a shaft type drive and any other items required for this provision. If the PTO driveshaft passes through the radiator, charge air cooler, and/or air conditioning condenser it shall be shielded by a steel encasement of sufficient strength to prevent damage to surrounding components in the event of driveshaft failure. The encasement shall be mounted to the chassis frame rails.
  - (2) Exhaust System: Vertical exhaust stack with rain cap or curved outlet. Exhaust stack to be equipped with a heat shield.
  - (3) Engine Shutdown: Engine safety shutdown system with manual or automatic override to include the following features: low oil pressure - warning bell/buzzer plus shutdown, high coolant temperature - warning bell/buzzer plus shutdown and low coolant level - warning bell/buzzer plus light or shutdown.
  - (4) Cooling System: As recommended and regularly furnished by the manufacturer for use with the engine size and PTO provision specified above with anti-freeze protection to -20° F, or lower.
  - (5) Block Heater: Engine shall be equipped with a block heater rated at no less than 1,000 watts which will operate on 120 volts AC.
- G. Fuel Tank(s): Single or dual fuel tanks with instrument panel fuel gauge. Minimum fuel capacity of 100 gallons
- H. Transmission: Allison 3500 RDS automatic with six speed programming. Transmission shall have synthetic lubricant and be equipped with a transmission oil cooler.
- I. Auxiliary Transmission: Fuller AT-1202 two speed auxiliary transmission with air control shifting. Shall provide gear ratios of 2.04 to 1 and 1.00 to 1.
- J. Steering: Hydraulic actuated power steering as regularly offered by manufacturer.
- K. Front Axle: I beam type with wet seals, outboard mounted drums and a minimum capacity of 12,000 pounds.
- L. Rear Axle: Single speed full-floating type with wet seals, outboard mounted drums and a minimum capacity of 23,000 pounds. Ratio of 6.14 or 6.17 to 1. Alternate ratio may be provided if approved by AHTD prior to delivery. (Axle ratio should provide a maximum theoretical geared speed of no less than 66 MPH and still provide acceptable startability under load.)
- M. Springs: As required to meet GVWR and axle rating specified above. Rear springs to consist of main and auxiliary or overloads.
- N. Air System: 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.
- O. Brakes: Factory installed full air operated two shoe type with automatic slack adjusters and dust shields on front and rear. Rear brakes shall have spring set parking brakes.
- P. Frame: Section modulus and yield strength of frame material shall provide a minimum RBM of 1,700,000. Shall have 20" minimum front frame extension.
- Q. Cab: Conventional cab as regularly furnished by manufacturer, complete with insulation and all interior trim. Cab glass shall include windshield, roll-up windows in doors and rear cab glass as a minimum. Shall have key type locks on right and left doors, factory installed fresh air heater-defroster unit, grab handle on each side, right and left sun shades and fitted rubber floor mats.
- (1) Instruments: Shall include the following as a minimum:
    - (a) Speedometer/odometer
    - (b) Electric tachometer
    - (c) Electric engine hourmeter
    - (d) Ammeter or volt meter
    - (e) Oil pressure gauge
    - (f) Coolant temperature gauge

- (g) Transmission oil temperature gauge or warning light
  - (h) Air brake pressure gauge.
  - (2) Air Conditioning: Factory installed air conditioning. Shall include tinted glass all around.
  - (3) Cab Mounts: Air suspension type rear cab mounts.
  - (4) Tilt Steering Column: Factory installed.
  - (5) Windshield Wipers: Dual electric intermittent windshield wipers with washers.
  - (6) Auxiliary Switches: Shall be equipped with a minimum of six (6) rocker switches mounted in the instrument panel for use by bodybuilder or end user to supply power to work lights, warning lights and other auxiliary electrical devices.
  - (7) Seats: Air suspension driver's seat and non-suspension passenger's seat. Shall include driver's and passenger's seat belts
  - (8) Radio: Factory installed electronic AM/FM radio.
  - (9) Mirrors: Dual Heated West Coast Sr. type mirrors with 4-way power control no less than 7" x 16" with adjustable brackets and auxiliary convex mirrors.
  - (10) Air Horn: Single or dual trumpet air horn.
  - R. Hood: Tilting fiberglass or composite hood and fenders with stationary grill.
  - S. Front Bumper: Swept back front bumper compatible with front frame extension.
  - T. Lights: Shall be equipped with dual beam headlights, parking lights, clearance lights, automatic backup lights, directional turn signals with column mounted switch and hazard flasher switch. Rear signals to be wired for stop and tail lights in addition to directional signals.
  - U. Backup Alarm: Shall be equipped with an electric backup alarm meeting the requirements of SAE J994 with a minimum sound level output of 97 decibels.
  - V. Color: Cab, Hood, Fenders & Wheels shall be Sherwin Williams F8W2030 Frost White Acrylic Enamel, or equal. Grill, bumper and mirrors shall be as regularly furnished by manufacturer.
4. Warranty:
- A. Cab and chassis shall have truck manufacturer's regular warranty. Warranty data shall be furnished with each unit. 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 is delivered to the Highway Department.
  - B. The distributor purchased under this specification shall be warranted against defective material and workmanship for a minimum period of twelve (12) months (365 Days) from date unit is placed in operation by AHTD. In addition, manufacturer's standard warranty period on certain machine components that exceeds the 12 months warranty shall remain in effect.
    - (1) Warranty shall include all parts, labor and transportation costs to the location of equipment.
    - (2) If equipment cannot be repaired on location, warranty shall include cost of transport to the facility where the repair work will be done.
    - (3) It will be the responsibility of the successful bidder to insure that repairs are completed in a timely manner.
  - C. 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.
  - D. 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.

5. Manuals, Certificate of Origin and Invoice:

- A. The successful bidder shall furnish an Operator's Instruction Manual for the distributor and for the truck with each unit delivered. One (1) copy each of Shop Repair Manual and Parts Book for the distributor and one (1) copy of Shop Repair Manual for the truck shall be furnished to each FOB point.
- B. Manufacturer's Certificate of Origin, Federal Excise Tax Exemption Certificate, Odometer Disclosure Statement and one (1) copy of the 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.).
- C. The successful bidder may provide Shop Repair Manuals and Parts Manuals on computer media (CD ROM, Floppy Disks, etc.) in lieu of printed manuals.