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

Bid Number: H-17-022H

Bid Opening Date: December 13, 2016 Time: 11:00 a.m.

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

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

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

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:_____

Address:_____

_____

City:_____ State:_____ Zip:_____

Federal Tax ID or Social Security No.:_____

Name (Type or Print):_____

Title:_____

Phone:_____ Fax:_____

E-Mail:_____

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

Truck Mounted Paint Striping Machine 4 ea. Amount_____

To meet the requirements of Arkansas State Highway and Transportation Department Specifications 17-066 attached to and made a part of this bid.

FOB: AHTD – Equipment & Procurement, 11302 Baseline Road, Little Rock 72209

Truck proposed to furnish:

Make:_____ Model:_____ Warranty:_____

Striping Machine proposed to furnish:

Make:_____ Model:_____ Warranty:_____

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.

Bid Bond in the amount of 5% of total bid price 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. **Performance Bond** in the amount of 5% of total bid price will be required of successful bidder prior to providing goods/services. **Personal and company checks are not acceptable as Performance Bonds**. See Condition 3 on page 2.

The successful bidder will be required to complete delivery within 240 days after award.

Bids and Specifications are available on-line by going to the AHTD Web Site – www.arkansashighways.com and clicking on "Commodities and Services Bids/Contracts Information". Tabulations will also be available at this site after award of bid/contract. If you have any questions, call this office at 501-569-2667.

64-7032,64-7033, 64-7034, 64-7035
01-02

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

STANDARD BID CONDITIONS

M-17-022H

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. 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). 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 (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 (not applicable as a protected group under the Federal Motor Carrier Safety Administration Title VI Program), disability, Limited English Proficiency (LEP), or low-income status 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

SPECIFICATION 17-066

FOR

TRUCK MOUNTED PAINT STRIPING MACHINE

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. Units 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) will 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. Drawings: Professional quality drawings which depict the layout of the chassis will be provided with the bid**.**
5. Manuals: The successful bidder shall furnish two (2) copies each of the following literature for each unit delivered: Operator's Instruction Manual, Shop Repair Manual and Parts Book for Paint Striping Machine and all components. The successful bidder may provide Shop Repair Manuals and Parts Manuals on computer media (CD, DVD, USB Drive, etc.) in lieu of printed manuals
6. Unit 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 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. Training: The successful bidder shall furnish qualified personnel to instruct AHTD operators and service technicians on operation and maintenance of machine.
10. Technical Support: The manufacturer shall have a technical service and parts support group available through a toll free 800 number.
11. 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.
12. Delivery Requirements: It will be the responsibility of the Successful Bidder to guarantee delivery of the cab & chassis as specified, including items or equipment installed by a third party contractor, within the quoted time.
13. 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. Truck Mounted Paint Striping Machine:

1. General: This specification is intended to cover the purchase of a truck-mounted, self-contained striping machine to meet the following specifications and to apply line marking material utilizing waterborne paint and glass beads. The machine shall have the capability to apply reflectorized lines having a wet film thickness of .015" of line marking material at temperatures as low as 45° F at speeds up to 10 mph, with the optimal speed being 8 mph, on dry, clean pavement and shall be capable of applying three lines in two colors in either a solid or skip pattern, or a combination of these patterns, and of simultaneously or separately applying a center and edge line marking. It shall be equipped with a hand spray gun and the necessary plumbing to permit the painting of channelization by hand spray gun. This hand spray equipment shall be permanently mounted.
2. Chassis: Tandem axle tilt cab and chassis with low COE type cab.
   A. GVWR: 60,000 pounds, minimum.
   B. Cab to Center of Tandem Axle: Minimum effective CA of 162". This is the minimum acceptable CA. If the manufacturer of the paint striping machine requires or recommends a longer CA, it shall be provided.
   C. Rear Tires And Wheels: Eight (8) no less than 11R22.5 - load range "H" steel belted tubeless radials. Wheels shall be 22.5" diameter ten (10) hole, hub piloted steel disc with a rim section of no less than 8.25".
   D. Front Tires And Wheels: Two (2) no less than 425/65R22.5 steel belted tubeless radials - load range "L" minimum. Shall be mounted on 22.5" diameter ten (10) hole, hub piloted steel disc wheels with a rim section of no less than 12.25".
   E. Spare Wheel: One (1) spare rear wheel and tire shall be furnished. Tire shall be the same as rear tires described above.
   F. Engine: Turbocharged four cycle diesel with a minimum piston displacement of 10.8 liters developing no less than 385 SAE gross horsepower at rated RPM with SAE gross torque rating of no less than 1,350 lb/ft. Shall have a minimum governed speed of 2,000 RPM. Shall have full flow oil filter(s), fuel filters, dry type air filter, 12 volt electrical equipment with not less than 160 amp alternator and maintenance free batteries as regularly furnished with engine specified.
      (1) Engine Brake: Engine to be equipped with compression brake system designed to use engine compression to retard engine speed. Shall be capable of utilizing all engine cylinders for braking effect.
      (2) 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.
      (3) Cooling System: Heavy duty cooling system recommended by the manufacturer for use with the engine size specified above, equipped with engine coolant filter and conditioner. Shall have anti-freeze protection to -20° F, or lower.
      (4) 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.
      (5) Exhaust System: Vertical exhaust stack with rain cap or curved outlet. Exhaust stack to be equipped with a heat shield.
   G. Low Speed Throttle Control: Shall provide an electronic low and high speed control which, when activated, will assist in maintaining a constant ground speed within the normal striping range of five (5) to ten (10) miles per hour (mph) and normal highway speeds.
   H. Transmission: Allison HD 4500RDS-P automatic with a minimum of six (6) forward speeds. Transmission shall have synthetic lubricant and be equipped with transmission oil cooler.
   I. Steering: Hydraulic actuated power steering as regularly offered by manufacturer.
   J. Front Axle: I Beam type with wet seals, outboard mounted drums and a minimum capacity of 20,000 pounds.
   K. Front Suspension: Leaf springs with a minimum capacity of 20,000 pounds.

L. Rear Axle: Tandem axles with power divider and inter-axle differential with lock out. Shall be full floating type with wet seals, synthetic lubricant, outboard mounted drums and have a minimum capacity of 40,000 pounds. Shall have a ratio of 5.02, 5.12, 5.29 or 5.38 to 1. Alternate ratio may be provided if approved by AHTD prior to delivery.

M. Rear Suspension: Air ride suspension with a minimum capacity of 40,000 pounds. Shall include dual instant response rear suspension leveling valves.

N. Air System: Shall be equipped with an air compressor with a minimum capacity of 16.5 cfm. Air compressor shall draw air through the engine air cleaner. Air system shall be equipped with a heated air dryer.

O. Brakes: Front brakes shall be factory installed full air operated heavy duty disc brake. Rear brakes shall be factory installed full air operated two shoe type with dust shields and automatic slack adjusters. Rear brakes shall have spring set parking brakes.

P. Frame: Section modulus and yield strength of frame material shall provide a minimum RBM of 3,200,000.

Q. Cab: Shall be low COE tilt cab design 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 lock on right and left doors, factory installed fresh air heater-defroster unit, grab handles on each side, right and left sun visors, right and left arm rests and fitted rubber floor mats.

(1) Instruments: Speedometer/odometer, electric tachometer, ammeter or voltmeter, oil pressure gauge, coolant temperature gauge, transmission oil temperature gauge and air brake pressure gauge.

(2) Windshield Wipers: Dual electric intermittent windshield wipers with washers.

(3) Heated Mirrors: Dual West Coast Sr. type heated mirrors no less than 6" x 16" with adjustable brackets and auxiliary convex mirrors.

(4) Suspension Seats: Driver's and passenger's air suspension seats with seat adjustment including back cushion. Shall include driver's and passenger's seat belts.

(5) Tilt Steering Column: Factory installed tilt steering column with telescoping capability.

(6) Air Conditioning: Shall be equipped with factory installed air conditioning and include tinted glass all around.

Each operator shall have separate air vents and vent controls.

(7) Horn: Single-base, dual trumpet air horn.

(8) Radio: AM / FM / CD

R. Turn Signals: Class A directional turn signals with hazard flasher switch. Rear signals to be wired for stop and tail lights in addition to directional signals.

S. Fuel Tank/s: Minimum fuel capacity of 80 gallons. Shall have an instrument panel fuel gauge.

T. 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.

U. Rear View Camera: Unit shall be equipped with a factory installed color rear view camera system with an in-cab mounted screen. The camera shall be mounted center of the rear face of the bed just below the operator's enclosure door.

V. Color: Cab and Wheels shall be Sherwin Williams F8W2030 Frost White Acrylic Enamel, or equal. Grill, front bumper, mirrors and frame shall be as regularly furnished by manufacturer.

3. Platform:

A. The vendor shall supply and install on the chassis a steel platform of adequate size and strength to accommodate all paint striping equipment. The bed shall not exceed 96" in total width, and shall be approximately 270" long. At a minimum the platform shall be constructed of 3" structural channel cross-members welded to two 4" structural channel longitudinal frame rail members. Spacing of the cross-members shall not exceed 16". Shall have three (3) 3" channels supporting the paint tank. The outside of the structural cross-members on each side of the truck platform shall have a minimum of a 3" steel channel welded in place or the tread plate decking may be rolled to create a C channel.

(1) The platform shall have a non-skid, 11 gauge minimum, steel safety tread plate surface.

(2) The platform shall be mounted to the chassis frame with a minimum of 8" high risers constructed of steel. The riser shall be engineered to withstand the forces applied when the unit is fully loaded. These risers shall be

welded to the platform and bolted to the truck rail side members with 5/8" diameter grade eight bolts. A 1/8" x 2-1/2" x 10" aluminum crush plate shall be inserted between the riser and the top flange of the frame rail to protect the rail from fretting.

B. A minimum of three (3) ladders shall be furnished on the sides of the platform: one (1) on the curbside front and one (1) on each side at the rear area of the platform, just forward of the operator's enclosure. Ladder rungs shall be of a safety tread design. Ladders to be flip up design with spring loaded latch pins to secure the ladders in the stored position.

C. A steel rail, 42" high, shall be installed around all deck areas requiring protection. The deck rail shall have a cross member 21" above the floor plate. The railings shall be bolted in place.

D. Two (2) operator's seats shall be high-back with armrests mounted on the vehicle platform. They shall be high quality air suspension type seats. Covering shall be vinyl. Each seat shall be fitted with a seat belt in accordance with SAE and Federal Standards.

E. Two (2) weatherproof tool boxes with a drop type door and a lockable safety latch shall be supplied. Tool boxes shall be provide loose for AHTD operator to install in preferred location. Minimum dimensions shall be 16" deep x 16" wide x 13" high.

4. Operators Enclosure: An insulated, air conditioned and heated, ROPS certified rear operator enclosure shall be provided that will completely house the operators and operators' controls. The operators enclosure shall be rectangular, approximately 96" wide x 60" deep, with an overall height of approximately 78". Operator's enclosure shall be insulated throughout including an insulated floor mat. The ROPS structure shall be an integral part of the enclosure. Access steps shall be a minimum of 30" wide, constructed of no less than 11 gauge safety tread plate, shall be mounted at the rear. A steel hand rail shall also be provided.

   A. Two (2) separate and complete roof mounted heater/air conditioner units shall be installed. The heater portion of each unit shall have a minimum output rating of 28,000 BTU. The air conditioning portion of each unit shall have a minimum output rating of 14,000 BTU.

   B. The frame for the rear shelter shall be constructed of 1 1/2" minimum aluminum tubing no less than 1/8" thick, bolted and welded.

   C. The roof and sides of the shelter shall be covered with 11- gauge minimum aluminum sheeting.

   D. The shelter shall have two lockable access doors. One shall provide access to the rear of the shelter to allow access to and from the rear platform, and the second shall provide access to the striping platform. Each door shall have a locking mechanism and windows that are no less than 14" x 20".

   E. The shelter shall have two (2) windows per side. One (1) no less than 28" x 25" high sliding opening window per side for easy viewing of the gun carriages and one (1) no less than 18" wide x 22" high non-opening window in the front corner per side. All glass shall be laminated and tinted, no less than 1/8" thick.

   F. A removable bubble window shall be installed on each side of the enclosure. This window shall project out approximately 6", allowing the operator to view the spray guns.

   G. The shelter shall have two non-opening windows in the back of the shelter. The windows shall be no less than 21" wide x 30" tall.

   H. The shelter shall have two 12 volt dome lights for illumination during night operations.

   I. The entire shelter shall be bolted to the platform.

   J. Two (2) air ride type high back bucket seats with armrests and seat belts shall be installed in the operator's enclosure.

   K. Two (2) 12 volt power outlets shall be provided in the operator's enclosure, one on either side of the main control console.

   L. One (1) hinged, two piece steel construction control console will be mounted in the shelter between the rear operator's stations. The console shall be visible from both operators' stations. The hinged console design will enable easy access to console mounted controls for maintenance. Access to the inside of the console shall require no tools. Bidders shall provide photo documentation showing hinged console system in both closed and tilted position.

5. Front Guide: A front mounted adjustable pointer guide shall be provided. The pointer shall be adjustable in length from 7' 8" to 13'. The unit shall be mounted directly on the front bumper, and so designed that it can be easily swung and secured to brackets attached to the bumper face for easy transport. The guide shall be movable from the left hand

side to the right hand side operating positions. The guide shall be constructed of tubular steel and have a pneumatic rubber tired caster wheel, an adjustable pointer guide, and a flag socket located at its forward end.

A. The pointer shall be equipped with a hydraulic lift capable of lifting the pointer off the ground approximately 45^{o} - 60^{o} for transporting or maneuvering the striper. The controls for controlling the pointer shall be located in the truck cab, and be easily accessible to the operator. In order that the pointer will follow the road contour there shall be a float position in the hydraulic controls when in the lower position.

B. Hydraulic power from the chassis power steering is not acceptable.

6. Paint Supply:

A. The machine shall have a minimum paint capacity of 900 gallons in two (2) separate unpressurized containers designed for a two color application. The yellow paint container shall have a minimum capacity of 450 gallons and the white paint container shall have a minimum capacity of 450 gallons. A splash area of 6" must be provided above the paint after it is filled to the designated capacity.

(1) The two separate containers shall extend across the width of the truck platform. The covers, sides and ends shall be constructed of no less than 10 gauge stainless steel sheet. The sides must have sufficient reinforcement to prevent bulging when the containers are full. The bottom shall slope to the discharge opening to allow complete emptying of each compartment, and be constructed of no less than 10 gauge stainless steel plate. The interior of the tank shall be coated with a graphite based material to prevent paint build up.

(2) Each compartment will have a removable cover the full area of the tank opening. Each tank shall also have an inspection opening no less than 10" in diameter with a removable lid held in place with adjustable quick-opening safety latch. Tanks shall be equipped with pressure equalization vents.

(3) Each tank shall be clearly labeled as to paint color.

B. Each compartment shall be equipped with a minimum of two (2) hydraulic operated stainless steel paddle type agitators with no less than two paddles, one (1) upper and one (1) lower, on each unit. The speed of the hydraulic motor driven agitators shall be controlled by adjustable speed control valve(s). An agitator on/off switch shall be located on the console in the operator's enclosure.

C. The material supply system shall permit the simultaneous operation of one (1) or more spray guns on the left carriage and one (1) spray gun on the right carriage.

D. Two (2) stainless steel strainers, having a minimum surface area of 100 square inches each, shall be installed in each system.

(1) One (1) strainer in each yellow and white system shall be installed on the discharge side of the transfer pumps.

(2) One (1) strainer in each yellow and white system shall be mounted on the discharge side of the Heat Exchangers. The strainer shall also act as a manifold to distribute paint to the spray guns. Strainer shall have threaded caps.

(3) The strainers shall have a quick removable cover and be readily accessible. Valving shall be provided to isolate the strainers from the feed line for cleaning.

E. Each tank shall be equipped with one (1) anti-stalling, air operated 2" diaphragm type pumps. The pumps shall be ARO PD20A with no exceptions.

(1) Each pump shall be equipped with Teflon balls and Teflon diaphragms. The pump construction shall have stainless steel for all paint wetted parts.

(2) The pumps shall be mounted on the curb side of the truck.

(3) One (1) pump per tank shall be utilized to transfer paint from an external source to the paint tanks on the striping unit.

(4) Two (2) 15' sections of 2" diameter multi-chemical suction hose, each with a basket strainer on one end and a stainless steel coupler with plug on the other end, shall be supplied.

(5) Provision shall be made to clean each pump by recirculating cleaning solution from a bucket through the pump and back into the bucket.

F. The paint pumps for supplying paint to the spray guns shall be hydraulic powered with a nominal rating of 15 gpm, permanently mount and shall be provided and connected into the system so that material from the container is pressurized to provide the required line width and wet film thickness. The pumps shall be Graco Viscount II 400 model 243-753 Stainless Steel with Graco Back Pressure valve model 208-997 Series E. Pumps shall be stainless

steel fitted. Paint pumps shall be equipped with an automatic TSL (Throat Seal Lubricant) oiler devise. Hydraulic power shall be supplied by a high pressure gear-driven pump, driven directly from the accessory drive on the air compressor engine. A belt driven hydraulic pump will not be acceptable.

G. A control valve, for each pump, shall have means to control the paint pressure to provide a 6" line width and wet film thickness of 0.015 inches (15 mils), when operating in the range of 6 to 10 miles per hour. Each pump shall be equipped with an adequate dampening device.

H. All lines and equipment shall be impervious to all standard cleaning solutions. Paint lines from pumps to tanks, pumps to heat exchangers and heat exchangers to manifolds shall be no less than 2" diameter, schedule 40, 304 stainless steel pipe.

I. For servicing, a minimum of one union and one valve shall be installed within 18" of the inlet and outlet side of each major component. Welded pipe plumbing is not acceptable.

J. Paint lines from the manifolds to the paint guns shall be non-metallic, flexible nylon lined hose. They shall be capable of withstanding pressure up to 200 psi and shall be no less than 3/4" in diameter. The lines shall be insulated from the manifolds to the spray guns.

K. Ball valves in the paint system shall be full port stainless steel.

7. Air Compressor:

A. The air compressor shall be the rotary screw type capable of supplying a minimum of 185 cubic feet of free air per minute at 100 psi. The compressor shall be directly mounted to a liquid cooled, four-cylinder, overhead valve diesel engine. Engine shall be equipped with a safety shutdown system that monitors oil pressure and coolant temperature.

B. An A.S.M.E. certified air receiver oil separator shall be included.

C. Protective Circuit: Compressor shall automatically shut down in case of high compressor temperature or over pressurization. An automatic blow down valve and minimum pressure orifice shall also be provided.

D. The compressor shall be mounted on a skid base so it may be handled and mounted as a unit. The compressor shall be located so air blows out of the left (driver's side) and does not blow on the operators when loading. A complete housing including doors shall be supplied for weather protection.

E. The operating control panel shall be located at the end of the compressor so they are located on the curb side of the platform. They must be readily accessible from the ground. In addition to operating controls, the compressor must have gauges showing oil and air pressure, water temperature, an ammeter and an electric hour-meter. A sight gauge or oil level dip stick shall be included in the air sump to indicate oil level. A moisture separator, adjustable oiler, automatic blow-down valve, and a minimum pressure valve shall be included as standard equipment.

F. System shall include a Laman 140F or approved equivalent extractor/drier with auto drain shall be included and a coalescent tank of sufficient size and capacity to adequately handle system demands.

G. A manual valve shall be located on the curb side to cut the compressor off from the remainder of the air system.

H. An air take-off will be provided on both the right hand and left hand side of the truck with a quick disconnect air chuck.

I. Adjustable oilers shall be installed in the lines that supply air to the gun activation solenoids. Oilers shall be mounted in a convenient location for servicing.

J. A multiport aluminum conical air saving blow-off jet shall be installed in front of each row of paint guns on front of each carriage. The blow-off jets shall be controlled from the manufacturer's skipline system control boxes and be activated in conjunction with the paint gun(s) it use.

8. Hydraulic System:

A. The hydraulic system shall consist of pump(s) mounted to the auxiliary drive of the air compressor engine. The pump(s) shall power the steering orbital, material pumps, guidance bar cylinder and all other hydraulic systems.

B. The hydraulic system shall be equipped with a hydraulic reservoir equipped with a sight gauge, magnetic particle separator, interior baffles, removable lid and "cleanout" fittings.

C. The hydraulic system shall be equipped with an oil to air type hydraulic cooler of sufficient size for the system. Oil cooler shall be equipped with a suction fan assembly. It shall be mounted on top of the air compressor housing to allow for maximum air flow.

D. Two (2) hydraulic steering orbitals with steering wheels will be installed to enable the right and left side rear operators to control the hydraulic cylinders that provide lateral movement of the gun carriage assemblies. The hydraulic steering orbital assemblies shall be equipped with tilt and telescope features.

E. A hydraulic cylinder will be installed on the front bumper mounted guidance bar. The striper driver will be capable of electrically controlling this cylinder with raise, lower, and float functions.

F. One (1) external hydraulic filter mounted in the oil return plumbing to the hydraulic reservoir will be provided.

9. Glass Supply: A certified A.S.M.E. pressure vessel and lid with a total capacity of 7,200 pounds of glass spheres shall be installed on the truck platform. The container shall have a working pressure of 100 psi and a maximum test pressure of 165 psi. The container shall be all steel construction with a top opening no less than 14" in diameter. Lid shall be hinged and be fitted with a lifting handle. It shall be equipped with an air release valve, a 0-160 psi air gauge located on the control console, and a 110 psi pressure relief valve. Tank shall be clearly labeled "BEAD TANK".

10. Vacuum Bead Loading System:

A. A vacuum bead loading system with a minimum capacity of 200 pounds of glass beads per minute will be included in the glass supply system. This vacuum bead system shall be operated using compressed air into a venturi pump. No moving parts other than control valves shall be allowed. A muffler shall be installed on the venturi pump to assure quiet operation at all times.

B. A safety system shall be installed in the bead tank suction line to prevent opening of the valve while the tank is under pressure.

C. The glass filling system shall include:

(1) A 20' long, 2" diameter fill hose with a 36" long steel tube attached to the suction end.

(2) A new, unused 24" diameter 55 gallon metal drum with a combination bag splitter and screen strainer.

D. Bead loading shall be from the right hand side of the truck.

11. Cleaning Solution System:

A. An air-operated gun cleaning system shall be installed on the striping machine. It shall consist of a 60 gallon minimum ASME stainless steel pressure tank with a 65 psi safety valve and be complete with gauge, regulator, and all valves and piping necessary to introduce cleaner into each paint line. The tank shall have a working pressure of 100 psi and a maximum test pressure of 165 psi. The tank shall be clearly labeled "CLEANING SOLUTION".

(1) The tank shall be constructed with a 3" minimum threaded top opening and a full steel skirt support.

(2) A quarter turn drain valve shall be located at the bottom of the tank.

(3) A 3/4" minimum stainless steel check valve shall be located near the tank outlet to prevent paint back-up into the cleaning tank.

B. Cleaning shall be available to all paint wetted lines.

(1) There shall be a 3/4" minimum ball valve located within 18" of each tank outlet to flush the downstream paint system.

(2) After the final strainer, each line shall be flushed individually.

(3) An air blow down system shall be incorporated after the cleaner tank to allow air to be forced through each individual line before and after flushing with cleaner.

(4) A heavy duty retractable spring return hose reel with 25' of line and a cleaner gun shall be provided for cleaning of components and spills.

C. The cleaning solution lines shall be UV protected nylon; color coded red, meeting SAE J844 type B, and DOT FMVSS 571.106 requirements. The lines shall be equipped with push to connect or air brake fitting connections.

12. Heat System: The paint heating system shall be capable of maintaining a paint temperature of 110^{o} F at the paint spray guns at an ambient temperature of 70^{o} F.

A. The two-stage system shall allow separate, automatic heat control at each exchanger and at insulated paint hoses to insure the maintenance of desired paint temperature without overheating paint in the heat exchangers.

B. The paint heating installation shall consist of three separate four-pass heat exchangers. The water glycol to paint heat exchangers requires a heat transfer area of not less than 64 square feet for maximum heat exchange. These

exchangers shall be vertically mounted at the rear of the truck behind the operator's cab. The 34 sq. ft. water glycol to water glycol heat exchanger will act as a buffer between the auxiliary engine cooling system and the paint system.

C. Each heat exchanger shall be equipped with its own free flow control valve and solenoid-operated valve to allow heating of the paint only as required to supply sufficient material to the paint guns. Heat exchangers shall be insulated.

D. The Unit shall be complete with two (2) thermostats, temperature indicators, hot water hoses and controls. The two (2) paint heat exchanger tubes, end bonnets, and paint plumbing shall be constructed of 304 stainless steel.

E. The heat exchanger thermostats, digital temperature readout, and control devices shall be installed in operator's control console. The control panel shall provide necessary controls for the exchangers and shall indicate when the heating system is turned on and when the paint is at the proper spraying temperature in each exchanger.

F. A 12 volt DC centrifugal type circulator pump shall be installed in the glycol system. The pump shall have a minimum capacity of 25 gpm and have inlet and outlet valves to allow servicing the pump. An indicator light shall be located at the operator control console to indicate pump flow.

G. An expansion or overflow tank shall be included in the glycol system. This tank shall have nominal dimensions of 8" diameter x 12" high and be mounted in a convenient location to both fill and check the fluid level. A 14 pound automotive type pressure cap shall be used to pressurize the glycol system. An overflow tube from the cap neck down through the platform shall safety vent any overflow.

13. Carriage Assembly: Two spray gun carriage assemblies shall be supplied and mounted behind the vehicle's rear wheels to support and align the spray guns.

A. The main carriage, mounted on the left hand side of the vehicle, shall have provisions for attaching four (4) paint spray guns and three glass sphere guns. Two of the spray guns on the left hand side of the carriage shall be mounted in tandem with the front gun plumbed for white paint and the rear gun for yellow paint, the remaining guns shall be plumbed for yellow.

(1) Two (2) wheels mounted on individual castering axles shall support the carriage and maintain it at a fixed height from the road surface. The caster wheels shall consist of 5.00 – 5/10/160 pneumatic 13" minimum diameter tires, steel wheels with greasable bearings, and heavy duty front mounted swivel forks. A parallel linkage system shall connect the carriage to the cross slide and maintain the spray guns normal to the road surface at all times. An electronic actuator shall be installed horizontally on the centerline carriage to allow the operator to adjust the outermost wheel incrementally in a range of wheel spacing from 24" to 36" to avoid rumble strips or raised pavement markers on the roadway surface. The control switch to modify wheel spacing shall be mounted in the operator's console.

(2) A pneumatic lift cylinder with a minimum diameter of 3" and a minimum stroke of 9", controlled from the operator's position, shall be used to raise the carriage to a transport position. An auto-lock storage bracket shall be provided to hold it in this position during transport. The cylinder shall also maintain a constant down pressure on the carriage wheel assembly during operation.

(3) The cross slide supporting the carriage shall allow the carriage to be positioned for transport within the width of the vehicle platform, and permit its use anywhere from this location outward for a distance of no less than 60". The slide shall be a dual telescoping tube in tube structure fabricated from 3-1/2" square tubing x 2-1/2" square tubing with the moving portion supported by UHMW Polyethylene bearing blocks requiring no lubrication.

(4) All bearings or pivots on the carriage or linkage, where relative motion occurs, shall be fitted with replaceable bearings or bushings. All bearings that are not pre-lubricated and sealed shall have pressure lubrication fittings.

B. A second carriage shall be provided and mounted along the right side of the striping unit approximately on the same lateral axis as the main carriage to align and support one (1) single color paint spray gun and one (1) glass sphere gun. The paint gun shall be plumbed for white paint only. The design of this carriage shall be identical to the main carriage, and it shall also extend no less than 60" from the edge of the platform. A single wheel mounted on a castering axle shall support the carriage and maintain it at a fixed height from the road surface. The caster wheel shall consist of a 5.00 – 5/10/160 pneumatic 13" minimum diameter tires, steel wheels with greasable bearings, and heavy duty front mounted swivel fork.

C. Each carriage slide shall be equipped with a hydraulic cylinder for moving the carriage to any point within its operating range. The cylinder shall be double acting with a minimum diameter of 2", controlled by a power

steering control and steering wheel conveniently located for the operator. The steering wheel shall be no less than 14" in diameter and be tilt adjustable.

D. Hydraulic power for the operation shall be supplied by a high pressure gear-driven pump driven directly from accessory drive on the air compressor engine. A belt driven hydraulic pump will not be acceptable.

E. Provisions shall be made to prevent the carriage assemblies from drifting out when not in use.

F. Each carriage shall be equipped with a machined aluminum air manifold to support all paint and bead gun on/off solenoids.

(1) There shall be an individual solenoid with stainless steel body and 1/4" NPT ports for each gun.

(2) The air control line to each gun shall be 3/8" OD UV protected nylon meeting the requirements of SAE J844 type B and DOT FMVSS 571.106. The line shall be color coded blue and be equipped with push to connect or air brake fitting connections.

14. Paint Guns: The paint spray guns shall be capable of processing material in quantities which will yield 6" line width, .015" wet film at speeds up to 10 mph. The guns shall be Kambar 38-15 convertible from bleeder to non bleeder. Tip material shall be designed to reduce clogging and minimize wear. Flushing shall be accomplished by utilizing toggle switches mounted on the steering arm. The gun needle packing nut must be adjustable thus enabling the operation to compress the packing's to ensure continuous sealing of the needle through the wear period. The fluid body and wetted parts of the paint guns shall be solid stainless steel. All ports shall conform to NPT standards. Each gun shall be equipped with a shroud to protect the spray fan from the wind.

15. Bead Guns: The glass bead guns shall be Binks model 30 with no exceptions. Each glass sphere gun shall be equipped with a smooth surfaced deflector to assure full line coverage with the glass spheres. A minimum of three (3) adjustment tips for each bead gun shall be furnished to assure proper operation and set up of the unit in varied conditions.

16. Hand Held Paint Gun: A Binks 2001 hand held paint gun shall be included with the striper along with 50' of air and paint hose. Hoses shall be mounted on a heavy duty retractable spring return hose reel. This equipment shall be permanently installed and plumbed and valved so that either color of paint or cleaning solution can be introduced into paint hose with shut-off valves.

17. Control Console:

A. The control console shall consist of an integral sheet metal covered framework providing space for control panel, electrical controls, spray equipment connections, spray gun atomizing controls, heater controls and any other auxiliary parts required by the spray equipment. The control panel shall be mounted in an inclined position so that it can be observed from either operator's position. All the necessary regulators, gauges and switches shall be front mounted on the console. An easily removable, latchable panel(s) shall allow access to the interior for service.

B. There shall be one toggle switch to turn off glass bead guns without turning off the paint guns. Each glass gun shall be equipped with a toggle switch that allows each glass gun to be tested without the paint guns turning on.

C. A master control switch controlling power to all functions shall be located in the chassis cab and an additional master switch located at the operator control console shall control power to all rear station controls.

D. Two (2) portable hand boxes shall be provided. Boxes shall be aluminum construction approximately 7" x 7" and have environment-proof sealing. A bracket for storing the hand boxes shall be conveniently located at each operator's station.

(1) The boxes shall be equipped with a "Solid / Off / Skip" solenoid control switch for each paint gun.

(2) Skipline system display shall notify the operator when the system is ready for use.

(3) An advance/retard control for the skipline mechanism to register new line over old line shall also be provided.

E. Provision shall be made so that any glass sphere guns may be controlled from the same system for simultaneous spray gun and glass gun operation.

F. All electrical wiring shall be enclosed in conduit type protective case or corrugated split loom. Any wires passing through the deck shall have grommets around them.

G. All electrical controls shall be 12 volt DC power only and be protected by fuses or manual reset circuit breakers mounted in the console or other readily accessible area.

H. Wiring shall be number coded and color coded.

18. Electronic Skipline System:

A. Two solid-state electronic gun controllers and microprocessors shall be supplied, one each for left and right side skip operation. Skipline model SC-12 or approved equal.

B. The controllers shall be adjustable by the operator while the machine is in motion or standing still. The operator should be able to time skip patterns for left and right synchronized or independent operation if striping from both sides.

C. The controllers shall be adjustable so that any combination of skip and paint may be obtained from 00.1 to 99.9 feet, adjustable by 0.1 ft. increments.

D. The controllers shall be equipped with an "advance" and "retard" switch, which will advance or retard the cycle in increments of 0.20 of a foot per actuation of the respective switch. This switch shall be located in the remote control operator panels.

E. A provision to start the cycle with the paint portion of the cycle or with the skip portion shall be selectable.

F. On command, the controllers shall immediately reset to "ready" or "start cycle" position. The reset switch shall be located in the remote control operator panels. There shall also be an off position.

G. All adjustments must be so that these functional changes can be made readily by the operator while the machine is in motion or stopped.

H. Timing system shall operate at speeds up to 10 MPH minimum at ambient temperatures from thirty three (33) to one-hundred-forty (140) degrees F.

I. The controllers shall have a digital full color display with pattern preview and simple controls and inputs.

J. All components must be solid state and there shall be no moving parts, except the encoder, and this shall be electrically connected with no mechanical connections. The system shall be pulsed from a magnet wrap on the drive shaft.

K. The system shall provide for bead gun delay to fully cover the paint line.

L. Controller shall keep a constant cycle for 2 line striping when a skip line switches from one paint gun to the other as the gun switch goes through neutral.

M. A six (6) digit, digital reset, footage and gallon meter capable of measuring actual feet of line applied per gun and gallons per color applied. These meters shall be integral to the master control center. Footage counters shall accumulate and display upon command the total feet (or meters) painted by each striping gun to the nearest foot.

N. Two (2) handheld thumb control switches with spring coiled cord shall be provided for control of skip patterns using a manual, automatic, or semi-automatic setting when activated by a 3 position switch in each controller.

O. Push button control for manual operation.

19. Data Logging System:

A. The skipline control system shall be capable of identifying and logging, at a minimum, the date, time, GPS location, gun number, and paint color for each instance any gun is used. The information shall be stored in the skipline controller's memory. The skipline control shall be equipped with USB connection ports to allow a digital mass storage device to be used to copy the information for further processing. The imported data shall be formatted in Microsoft Excel.

B. The data logging system, through the use of digital load cells under each bead tank, shall provide readout in the chassis cab of the pounds per gallon of glass bead applied. A digital scale shall provide a reading of total pounds used and pounds remaining in the bead tank. These readings shall be available to the operator at any time. The system shall have an overall accuracy within 10 pounds.

C. Non-contact stroke counters shall provide readouts of gallons of paint used per mile. These readings shall be available to the operator at any time. The system shall display a total of gallons used on a job or in a day. The system shall have an overall accuracy within 10 gallons.

D. The data logging system shall allow the operator to input logging information such as road number and time. The following readings shall be automatically logged and included in the data recorded;

(a) ambient temperature

(b) road surface temperature

(c) humidity level.

E. Unit shall include a high resolution GPS with an accuracy of two meters.

F. Unit shall be equipped with built in Wi-Fi.

G. The display monitor shall be an industrial grade 15" touch screen with automotive power supply.

H. A paper printer shall be installed in the operator's enclosure to provide a hard copy of footage and gallons counter data accumulated by the system.

20. Intercom System:

A. A wireless intercommunication system shall be furnished to provide a means of vocal communication between the driver of the vehicle and the operators of the striping equipment. This system shall provide open communications for all operator stations.

B. Two (2) dual ear headsets for the rear operators and one (1) single ear headset for the front cab operator shall be provided. The headsets shall be equipped with noise canceling microphone and on/off/microphone controls for hands free communication.

21. Rear Message Sign: The striping unit shall have a portable changeable message sign mounted on the rear.

A. The portable changeable message sigh shall be an ADDCO VMS 5x2 V HD with a full matrix display of 40 x 24 pixels. Dimensions shall be 74 ¾" x 44 ½". Shall have three lines of eight characters. Lights shall be LED, amber in color and powered from the truck chassis electrical system.

B. Controller shall be a hand held terminal located in the cab of the truck. Hand held unit shall have the capability to create, edit and display message. Shall be capable of performing all message sign operations and store up to 200 messages.

C. The sign shall power pivot to a horizontal, lights down, position for storage and transport.

D. A 12 volt electric actuator, controlled from the front cab, shall pivot the sign.

E. The sigh shall be mounted so when in the raised position, the maximum height is 12'.

F. Rubber stops shall provide support in the operating and storage positions.

22. Fenders:

A. Rear fenders shall be mounted over each rear wheel and tire to protect the plumbing and other components beneath the platform. The fender shall radius and cover an area of approximately 180^{o}. Mud flaps (without advertising) shall be mounted to the rear skirt extensions and cover the full width of the tires. The fenders shall be bolted in place and be easily removable for servicing the paint components.

B. Front fenders shall be as per chassis with mud flaps mounted to the rear skirt extension covering the full width of the tires.

23. Rear Bumper: The rear bumper shall be approximately 16" wide at the steps, tapered to no less than 2" wide at the ends, and extend across the rear of the truck platform. The bottom of the bumper shall be at least 15" above the road surface with the truck fully laden. The bumper shall be constructed of a minimum of 11 gauge tread plate. The bumper shall have conspicuity tape across the full width of the rear facing surface. The top of the bumper surface that aligns with the staircase to the operator's enclosure shall have a non-slip surface. The bumper shall be supported by 4"-5.4 pounds per foot structural steel channel bolted to the longitudinal frame rails.

24. Digital Speedometer: A digital speedometer shall be included on the striping unit that will allow the truck operator to read his speed in three (3) digits to aid in maintaining a desired speed. The speedometer shall have an LCD display capable of reading 0 – 99.9 mph.

25. Auxiliary Lighting: The following auxiliary equipment shall be furnished:

A. Two Whelen 700 series, 180 degree LED strobe shall be flush mounted on the rear corners of the operator's enclosure.

B. Whelen series LINV2A 180 degree, horizontal mounted, LED flashing lights shall be installed on the outermost framework of each carriage.

C. Two Whelen 700 series, 180 degree LED strobe shall be mounted on the front bumper

D. Bar light: An amber, LED, bar light, 70" minimum length, is to be mounted on the top of the cab using manufacturers mounting kit. Suitable make and model is Whelen Freedom, FX2AAAA with QTY6 of FLDAA or approved equivalent.

E. All light shall be wired to auxiliary switch in the instrument panel of the cab.

26. Finish: The complete machine and all components, including tanks, compressor, etc., shall have the following minimum protective coatings applied:

    A. All metal parts and components, unless cadmium, zinc or chromium plated, shall have one prime coat and one finish coat of paint. The prime coat material shall be specifically compounded for the respective metals to which it is applied.

    B. Finish Coat Color: Sherwin Williams F8W2030 Frost White Acrylic Enamel, or equal.

    C. All Wooden components shall receive one coat of primer sealer and one finish coat of paint.

    D. All fasteners shall be chromium, zinc or cadmium plated.

27. Materials and Workmanship: All equipment furnished and the parts thereof shall be of the manufacturer's latest listed and published stock models, which meet all the applicable requirements of the specification.

    A. All design, workmanship and materials shall in every respect be in accordance with the best current practice in the industry, and all materials used shall be new. All design, workmanship and materials shall be at all times and places subject to the inspection of the purchaser. Should they fail to meet these specifications, they shall be forthwith made good, replaced or corrected, as the case may be, by the vendor at his own expense.

    B. All hoses, fittings, fasteners, bolts, and miscellaneous hardware used shall be properly designed and engineered for the purpose in which it is being used.

    C. The vehicle shall conform to all the latest Federal and State Safety standards.

    D. Prior to acceptance and payment, it shall be demonstrated that the vehicle being furnished meets the requirements of the specifications and will undergo an on-site technical review to insure that all specifications have been fully and precisely met without deviation.

    E. All fabrication, assembly and paint techniques will provide a finished unit consistent or exceeding common industry standards.

28. Technical Services: Successful bidder shall furnish necessary factory trained personnel for a minimum period of four (4) days for each machine delivered, to instruct Arkansas State Highway and Transportation Department personnel in the use, operation and maintenance of the striper.

29. 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 striper and other incidental equipment 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. 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.

30. References: A list of at least six (6) users of the specified machine with contact names and telephone numbers will be supplied.

31. Certificate of Origin and Invoice:

    A. Manufacturer's Certificate of Origin, Federal Excise Tax Exemption Certificate, Odometer Disclosure Statement and Five (5) copies 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.).

32. Pre-Delivery Service: Truck shall be completely serviced when delivered to Arkansas State Highway and Transportation Department.

33. Inspection Trip: The manufacturer shall provide transportation and lodging for two (2) Arkansas State Highway & Transportation Department representatives to inspect the first unit reaching approximately 80% completion. Any required modifications noted during the inspection of this machine shall be applicable to remaining units.

34. Delivery Requirements: It will be the responsibility of the Successful Bidder to guarantee delivery of the unit as specified within the quoted time.

    A. The striper will be either shipped on an appropriate lowboy tractor trailer or driven by a qualified driver from the manufacturer's facility to the purchasers designated destination at the manufacturer's expense.

    B. Liquidated Damages in the amount of $50.00 per day may be assessed for late delivery.