Boone County Purchasing
601 E. Walnut, Room 209
Columbia, MO 65201

Request for Bid (RFB)

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Bid Data

Bid Number: **20-19MAY11**
Commodity Title: **Tandem Axle Dump Trucks**

DIRECT BID FORMAT OR SUBMISSION QUESTIONS TO THE PURCHASING DEPARTMENT

Bid Submission Address and Deadline

Day / Date: **Thursday, May 19, 2011**
Time: **1:15 P.M.** Central Time. (Bids received after this time will be returned unopened)
Location / Mail Address: Boone County Purchasing Department
Boone County Johnson Building
601 E. Walnut, Room 209
Columbia, MO 65201

Directions: The Johnson Building is located on the Northeast corner at 6th St. and Walnut St. Enter the building from the East Side. Wheel chair accessible entrance is available on the West side of the building.

Bid Opening

Day / Date: **Thursday, May 19, 2011**
Time: **1:30 P.M.** Central Time.
Location / Address: Boone County Commission Chambers
Roger E. Wilson Boone County Government Center
801 E. Walnut
Columbia, MO 65201

Bid Contents

1.0: **Introduction and General Conditions of Bidding**
2.0: **Primary Specifications**
3.0: **Response Presentation and Review**
4.0: **Response Form**
Certification of Individual Bidder
Debarment Form
Standard Terms and Conditions
No Bid Response Form

1. *Introduction and General Conditions of Bidding*

1.1. **INVITATION** - The County of Boone, through its Purchasing Department, invites responses, which offer to provide the goods and/or services identified on the title page, and described in greater detail in Section 2.

1.2. **DEFINITIONS**

1.2.1. **County** - This term refers to the County of Boone, a duly organized public entity. It may also be used as a pronoun for various subsets of the County organization, including, as the context will indicate:
Purchasing - The Purchasing Department, including its Purchasing Director and staff.
Department/s or Office/s - The County Department/s or Office/s for which this Bid is prepared, and which will be the end user/s of the goods and/or services sought.
Designee - The County employee/s assigned as your primary contact/s for interaction regarding Contract performance.

1.2.2. **Bidder / Contractor / Supplier** - These terms refer generally to businesses having some sort of relationship to or with us. The term may apply differently to different classes of entities, as the context will indicate.
Bidder - Any business entity submitting a response to this Bid. Suppliers, which may be invited to respond, or which express interest in this bid, but which do not submit a response, have no obligations with respect to the bid requirements.
Contractor - The Bidder whose response to this bid is found by Purchasing to meet the best interests of the County. The Contractor will be selected for award, and will enter into a Contract for provision of the goods and/or services described in the Bid.
Supplier - All business/s entities which may provide the subject goods and/or services.

1.2.3. **Bid** - This entire document, including attachments. A Bid may be used to solicit various kinds of information. The kind of information this Bid seeks is indicated by the title appearing at the top of the first page. An "Invitation For Bid" is used when the need is well defined. An "Invitation For Proposal" is used when the County will consider solutions, which may vary significantly from each other or from the County's initial expectations.

1.2.4. **Response** - The written, sealed document submitted according to the Bid instructions.

1.3. **BID CLARIFICATION** - Questions regarding this Bid should be directed in writing, preferably by fax, to the Purchasing Department. Answers, citing the question asked but not identifying the questioner, will be distributed simultaneously to all known prospective Bidders. Note: written requirements in the Bid or its Amendments are binding, but any oral communications between County and Bidder are not.

1.3.1. **Bidder Responsibility** - The Bidder is expected to be thoroughly familiar with all specifications and requirements of this Bid. Bidder's failure or omission to examine any relevant form, article, site or document will not relieve them from any obligation regarding this Bid. By submitting a Response, Bidder is presumed to concur with all terms, conditions and specifications of this Bid.

1.3.2. **Bid Amendment** - If it becomes evident that this Bid must be amended, the Purchasing Department will issue a formal written Amendment to all known prospective Bidders. If necessary, a new due date will be established.

1.4. **AWARD** - Award will be made to the Bidder/s whose offer/s provide the greatest value to the County from the standpoint of suitability to purpose, quality, service, previous experience, price, lifecycle cost, ability to deliver, or for any other reason deemed by Purchasing to be in the best interest of the County. Thus, the result will not be determined by price alone. The County will be seeking the least costly outcome that meets the County needs as interpreted by the County.

1.5. **CONTRACT EXECUTION** - This Bid and the Contractor's Response will be made part of any resultant Contract and will be incorporated in the Contract as set forth, verbatim.

1.5.1. **Precedence** - In the event of contradictions or conflicts between the provisions of the documents comprising this Contract, they will be resolved by giving precedence in the following order:

1) the provisions of the Contract (as it may be amended);
2) the provisions of the Bid;
3) the provisions of the Bidder's Response.

1.7. **COMPLIANCE WITH STANDARD TERMS AND CONDITIONS** - Bidder agrees to be bound by the County's standard "boilerplate" terms and conditions for Contracts, a sample of which is attached to this Bid.

2. *Primary Specifications*

2.1. **ITEMS TO BE PROVIDED** – Six (6) 2012 or current model Tandem Axle 6x4 Dump Trucks with dump body and spreader/plow control system.

2.1.1. **QUANTITY – Six (6) Note: Vendor will be bidding on Six (6) complete trucks.**

2.2. **GENERAL REQUIREMENTS**

2.2.1. Unit(s) shall consist of a one-person operated control and loading system and shall be designed and constructed for performance, durability, dependability and safety.

2.2.2. Equipment shall be bid as a complete package and prepared for use with turnkey operation prior to delivery. Equipment shall be new, current year manufacture of latest design and production that conforms in strength, quality of material and workmanship equal to equipment that is usually provided to the trade in general.

2.2.3. All items bid will include installation.

2.2.4. The unit(s) shall be constructed for easy removal of a v-box material spreader from the truck.

2.2.5. Control system electronic/electrical cables and hydraulic line disconnects are required unless otherwise specified.

2.2.6. The automatic snow and ice control system shall be a ground speed controlled system.

2.2.7. The unit(s) shall include all inspection coupons, certifications, or warranty identification cards furnished in accordance with standard warranty policies.

2.3. **TANDEM AXLE DUMP TRUCK MINIMUM SPECIFICATIONS**

2.3.1. **Wheelbase:** selected 213.0 – 216.0 inch; 65-inch axle to frame, and 129.5 ± 1 inch cab to axle length.

2.3.2. **Frame Rails:** Heat treated Alloy Steel (120,000 PSI Yield)
Frame Extension: Front integral; 20" in front of grill.
NOTE: Frame will exceed 3,200,000 RBM all the way through the truck frame. If dealer cannot supply 3,200,000 RBM all the way through, it is the responsibility of the bidder to submit in written form with their response, a guarantee of the frame breaking for as long as Boone County owns the truck.

2.3.3. **Tow Hook:** front, two (2), frame mounted

2.3.4. **Bumper:** Steel, swept back design.

2.3.5. **Front Axle:** (Meritor MFS-18-133A) SFA (Set Forward Axle), I-Beam type, 18,000 lb. minimum capacity, Wide track.

2.3.6. **Front Shocks:** heavy-duty.

2.3.7. **Front Springs:** parabolic, taper leaf; 18,000 lb. minimum capacity.

2.3.8. **Front Spring Pins:** pins and rubber bushings, maintenance-free.

2.3.9. **Brake System:** ABS Full vehicle wheel control system (4-channel) with automatic traction control. Bendix air brakes, anti-locking (ABS), Q-plus linings; dual service brake system for straight truck applications. Air dryer with heater (Bendix AD-IP), standard location. Gauge: air pressure, dual. Air compressor air supply line through air cleaner. Brake lines color-coded nylon. Haldex or Gunite automatic slack adjusters in front and rear. Drain valve: Automatic (Bendix DV-2) for air tank. Inversion valve with integral check valve. Front brakes: air cam, S-cam, 16.5.0" x 6.0"; includes 24 sq. in. long stroke brake chambers. Omit front brake dust shields. Rear brakes: air cam, S-cam, 16.5" x 7.0"; includes 30/30 sq. in. long stroke brake chambers and heavy-duty spring actuated parking brake. Brake chamber to located inside rear tire envelope for clearance to the hitches. Air compressor 15.9 CFM minimum. Parking brake valve shall have color-coded knob located on instrument panel. Air pressure gauge shall have Air 1 and Air 2 Gauges located in instrument cluster.

2.3.10. **Steering:** dual steering gears, power steering able to handle axle ratios; includes 2-spoke steering wheel, 18" minimum diameter and tilt/telescoping steering column.

2.3.11. **Exhaust:** Single, horizontal after treatment device frame mounted outside right under cab; includes vertical tail pipe and bright stainless steel guard.

2.3.12. **Trailer Package:** Units shall be equipped with trailer connections – four (4) wheel with hand control valve and tractor protection for straight truck applications. Unit shall have 7 way heavy duty

trailer plug. Hitch location to be completed except for supplying and installation of hitch.

2.3.13. **Electrical System(s):** 12-Volt Standard equipment, heavy-duty wiring to rear of frame with stop, tail, turn and marker lights circuits, ignition controlled auxiliary feed and ground; chassis wiring coded throughout; turn signal switch with hazard flasher overrides brake (to be done with programming system controller); includes extra heavy duty electronic turn signal flasher system(s) that will be capable of signal and hazard flashing multiple lamps with turn signal switch self-canceling with integral hazard switch and data link connector in cab for vehicle programming and diagnostics. Headlight dimmer switch integral with turn signal switch. Five (5) amber LED roof marker lights flush mounted on cab. Windshield wipers switch 2-speed integral with turn signal switch with mist wiper/washer and intermittent wiper feature. Windshield wipers single motor, electric, cowl mounted. Fuses and breakers: SAE blade type. Auxiliary harness for auxiliary front headlights and turn signals for front snowplow application; includes lighted toggle or rocker switch and wiring for snowplow lights. Cigar type power source receptacle. Power source, terminal type 2-post. Headlights: two (2) Halogen. Parking lights integral with front turn signals and rear taillights. Stop, turn and dual rear combination with reflector backup lights. Starter switch electric, key operated. Turn signals front flush mounted. Exterior cab mounted pedestal type adjustable drivers side work light; includes lighted toggle or rocker switch on instrument panel and wiring. Electrical systems shall include heavy-duty wiring body builder's connections in back of cab at frame; includes sealed electrical wiring connectors for tail/amber turn, marker, back-up, accessory power, ground and sealed connector for stop/turn. Circuit breakers with manual reset (Main Panel). Include separate auxiliary factory installed low washer fluid warning indicator/alarm, and factory installed electrical circuits for heated mirrors, and auxiliary work light and aux. strobe lights; includes, wiring, switch and all necessary mounting hardware. Tail light wiring modified to include separate wiring for standard left and right taillights with 8' of extra cable and separate wiring for left and right body mounted taillights. Electrical disconnect front harness for guidepost lights with connectors located at headlight connection.

2.3.14. **Optional:** Two-way/CB radio power to the center overhead console, antenna installed on mirror bracket and coaxial cable routed to same overhead console.

2.3.15. **Horn, Air:** air single trumpet minimum. Electric city horn on steering wheel.

2.3.16. **Alternator:** 12-volt, 160 amp capacity minimum.

2.3.17. **Battery System:** maintenance free, three (3) Group 31, 3300 CCA minimum total. Battery box, steel and mounted on driver's side behind/under cab.

2.3.18. **Radio System:** AM/FM stereo with weather band, electronic tuning and clock; includes two (2) dual cone speakers.

2.3.19. **Front End:** Fiberglass, tilting, includes easy tilt hood and stationary grille.

2.3.120 **Torque Converter:** Application to match engine to automatic transmission mechanical ratios.

2.3.121 **PTO Effects:** Front PTO provision on engine.

2.3.22. **Engine:** Diesel engine 12.4 L minimum, electronic, wet-sleeved cylinders, high torque, 410 HP @ 1700 governed RPM, 1450 lb.-ft. Torque @1000 RPM; includes Bell Housing, electric engine shutdown, governor close regulated, starter motor, air cleaner restriction gauge, magnetic engine oil drain plug, fan drive with nylon fan, engine block heater 120-volt/1250-1500 watt, air cleaner single element with integral snow valve and in-cab control; hand throttle engine speed control for PTO with electronic mobile variable speed control mounted on steering wheel. Automatic On/Off Type Control, Fan Drive. Internal Jacobs compression brake.

2.3.23. **Radiator:** Adequate for cooling specified engine and components effectively.

2.3.24. **Transmission:** heavy-duty automatic wide ratio (Allison 4500-RDS-P wide ratio) programmed as 6-speed with push button shift control with double overdrive, less retarder. Allison WT spare input/output for dump truck application. Transmission shall not up-shift above 3rd gear when central hydraulic system is put into snowplow mode. Appropriate wires shall be supplied in a body builder's plug so truck equipment company can complete transmission hold. A bracket mounted removable push-button shift control shall be supplied. Shall have Allison approved synthetic fluid.

2.3.25. **Rear Axle, Tandem:** (Meritor RT-40-145 or equal) single reduction, 40,000-lb. minimum capacity with 200 wheel ends. Rear axle gear ratio of 4.33 shall be setup to maintain truck highway speed at 70 mph fully loaded; includes magnetic rear axle drain plug,. Electric over air operated power divider. Locking differential in rear axle. Shall have synthetic fluid.

2.3.26. **Rear Suspension, Tandem:** (Hendrickson RT-403) Walking Beam with rubber center bushings or Tuftrac or equal type. Minimum 52"Axle Spacing; 40,000-lb. capacity.

2.3.27. **Fuel Tank:** One (1) single top draw; aluminum (non-polished), 80 U.S. gallon minimum capacity with quick connect outlet and center and bottom steps, mounted on left side under cab.

2.3.28. **Cab, Cowl, Body:** Paint schematic: single color **RED**, design 100 AG; paint type, base coat/clear coat, 1-2 tone. Cab conventional steel, wide-body. Cab interior trim, premium; includes thermometer and compass. Arm rest on each door. Black rubber floor covering. Grab handle: one(1) towel bar type. Anti-slip rubber for cab entry mounted left. Glass: all windows, tinted. Mirrors: two (2) heated, power adjust, rectangular, brackets breakaway type with integral convex mirror heads on both and thermostatically controlled, bright finish heads and brackets. Gauge cluster: English with electronic engine oil pressure, fuel, water temperature, speedometer and tachometer for air brake chassis and voltmeter gauge. Must include odometer display to read miles, trip miles, engine hours and trip hours to be used in conjunction with on-board automated snow and ice control system. Must include a visual and audible warning/alert system for low fuel, low oil pressure, high engine coolant temperature and low battery voltage. Seat for driver should be air suspension (National Series 2000), high-back with integral headrest, cloth, isolated with two (2) position front cushion adjustment, -3 to 19 degree seat back adjustment and air lumbar support, includes 3-point seat belt, lap and shoulder belt type. Seat for passenger should be fixed, cloth, standard (National or equal) non-suspension, high-back with integral headrest and folding back; includes 3-point seat belt. Padded dash. Air conditioner with integral heater and defroster. Cab interior and trim: deluxe application with overhead console. Cab rear suspension, air bag type. Fenders shall have flare extensions.

2.3.29. **Wheels:** Front: disc; 22.5" steel, 10-stud hub-piloted, flanged nut, metric mount, 9.00 DC rims with steel hubs; Powder coated white. Rear: dual disc; 22.5" steel, 10-stud hub-piloted, flanged nut, metric mount, 8.25 DC rims with steel hubs; powder coated white. Wheel seals in front and back include; oil-lubricated wheel bearings.

2.3.30. **Tires:** Rear: eight (8),11R22.5 , load range H, 16 ply. Mud and snow type. Front: two (2), 315/80R22.5, load range L, 20 ply.

2.3.31. **Auxiliary Components:** All factory installed electrical wiring and connectors necessary for installation of automated plow and spreader controls.

2.3.32. **Mudflaps:** front, standard equipment.

2.3.33. **Trailer Hitch:** Truck shall have all items installed for a 90,000 lb. air chamber hitch with counter-sunk sockets for gladhands and electrical connect minus the hitch (to be provided and installed by County).

2.3.34. **Warranty:** Base vehicle warranty, 24 Months/Unlimited miles. Engine extended service warranty, 5 years/200,000 miles including injectors and turbo. Transmission warranty, 5 years/unlimited miles. Frame rails, cowl and cab structure warranty against corrosion, 5 years/unlimited miles. If warranty does not meet these specifications please outline and describe any differences in section 4.8. Include any additional warranty cost to make this bid meet these minimum specifications.

Note: Successful vendor shall be responsible for transporting truck to and from their repair facility for warranty maintenance and repair; includes all applicable service and transport fees and/or charges.

2.3.35. **Manuals:** A service manual, parts manual, wiring diagram and bodybuilder's book for trucks, and line sheet of parts used to build the truck shall be included. A custom parts and Service DVD shall be provided.

2.3.36. **Training:** Any training video's that apply to the truck shall be supplied (engine, transmission operation). Any CD's or DVD's used for engine, transmission, and ABS brake diagnosis shall be supplied.

2.4. **DUMP TRUCK BODY MINIMUM SPECIFICATIONS**

2.4.1. All electronic/electrical wiring shall be soldered, sealed with heat shrink tubing and placed in looms. Component wiring connections shall be run to a sealed junction box(s) to prevent corrosion and ease of repair.

2.4.2. **Dump Body:** (DuraClass HPT 316 or equal) 15 foot, 12 yard body with side-wall shaped into a continuous top rail, side and running board configuration and radius corners; all made of 3/16" hi-tensile physical quality steel. Sloped run-board type body with side braces in body and 3/16" hi-tensile steel cross-memberless sub-frame that accepts a single telescopic underbody hoist. The body ends shall be higher than the sides with pockets for extension sideboards. Oak 2" thick sideboards shall be included with two (2) upright spaced evenly apart supports to keep sideboards from flexing during loading of materials into dump body. The body shall be equipped with three (3) holes, 3" in diameter for the rear side marker light. The body shall have elongated stop, directional and taillights flush mounted in the rear posts. Elongated amber strobe lights shall be mounted in the rear posts directly above the stop/tail lights as well as in the top of the three bend head sheet (on the 45 degree corners) of the body in front and on each side corner right and left. Step welded inside on each side for operator.

2.4.3. **Front Head:** The front head shall be one-piece with a 3-bend top, 3" wide and 2" deep with a return flange of 1 3/8" and reinforced mid-height with a horizontal "V" section, all 8-gauge hi-tensile steel.

2.4.4. **Floor:** The floor shall be 1-piece with 5" vertical flanges at the sides and is made of 3/16" AR 450 hi-tensile steel.

2.4.5. **Sides:** The 36" sides shall be 3/16" hi-tensile steel shaped into a top rail, side and running board configuration of one steel sheet to eliminate the outside seam weld below the top rail and to prevent troublesome moisture and freeze problems. Shall have smooth sloped radius corners. The front and rear corner posts shall be fully enclosed for added strength and resistance to corrosion. Rear corner posts shall be full-depth. The sides shall have 6" high pockets provided front and rear for extension sideboards.

2.4.6. **Tailgate:** Reinforced 2-panel straight-type tailgate, multi-position, double-acting with air operated positive action tailgate control and flush mounted offset upper tailgate hinges. The tailgate cross braces shall be sloped for self-cleaning. The tailgate shall be 2-Panel with vertical and horizontal braces. The tailgate shall be made of 3/16" AR450 hi-tensile steel. The tailgate upper hinge pin shall be 1" in diameter. A piece of 1-1/2" angle iron shall be welded full length on top of tailgate to act as a self-cleaning device. The spreader chains shall be 3/8" in diameter proof coil and long enough to support the tailgate in a horizontal position. A ½" rod size folding D-ring device shall be positioned and welded in the center along the outside top edge of the top cross-member of the tailgate for use in removal and installation of tailgate.

2.4.7. **Sub-frame:** The sub-frame shall be fabricated of 3/16" steel and cross-memberless. The long member shall be a trapezoidal section boxed with a 3" width on the bottom. The long member shall have a "wrapped" reinforced section at the bed pivot pins.

2.4.8. **Operating Device:** The operating device shall be an air operated locking device with positive latches to evenly secure lower tailgate pins to body for a good seal. A push switch shall operate the device and shall be mounted on the driver's control console to his right. The tailgate lower hardware shall be of the overshot design made of ½" plate and equipped with air cylinders for operation. Grease fittings for cross shaft across back for tailgate must be accessible for maintenance. The cross shaft shall have nuts fastened to ends to provide a manual override for air operated tailgate.

2.4.9. **Tarp System:** A fully automatic, quiet, smooth running, electrically powered ribbed aluminum (Aero) tarp covering system shall be installed. The tarp cover must be of heavy quality cloth mesh, proper length and width to accommodate the size of dump body opening. The tarp framework system aluminum with arm guard rubber bumpers and rests. Aero Series 550 Easy Cover tarp system with Aero heavy mesh tarp cover is acceptable. The following items shall be included with the system: A switch mounted near the plow controls, forward and reverse power operated, direct drive, automatic reset circuit breakers, 18 oz. minimum cloth mesh tarp cover with loop in rear to slide over tarp, and underbody spring loaded bars to accommodate rolling and unrolling of the tarp system. The switch shall control a solenoid installed in a weather proof box mounted in the rear truck frame area.

2.4.10. **Tool Box:** 24" x 24" x 24" shall be mounted on the driver's side of the truck frame adjacent to the battery box. The box shall be vertically mounted and hinged toward the front. Tool box to be primed and painted black. The box shall be mounted with ¼" x 3" x 3" angle brackets.

2.4.11. **Lighting:** Oval amber flashing 2"x6" LED strobe lights shall be mounted in the top outer flange of the 45 degree headboard cab protector (on each side) and in the rear corner posts above the stop/tail lights. Round LED side marker lamps mounted in rear corner posts. Oval 2" x 6" red LED stop/taillights shall be installed in rear of dump body upright posts. Shall include all electrical wiring switch, controller and hardware necessary to make operational. A bed up warning light shall be installed. All switches shall be illuminated push-button type and mounted in at a location designated by the County.

2.4.12. **Hoist:** A 5" diameter w/ 130" stroke high pressure front mounted, three-stage telescopic cylinder, hard chrome plated; hoist frame approximately 6" deep of 5/16" steel; supporting cross-members gussets front and rear to long members; hoist capacity to match body and payload. Body raised indicator light in cab, backup alarm, factory installed body props. Optional removable after-market bed props shall be priced per pair. An acceptable model is made by Dump-Lok (www. Dump-lok.com).

2.4.13. **Additional Body Specifications:** A 3/4" thick x width of rear frame steel plate welded into place to house electrical plugs, hydraulic fittings, and D-rings . A 2" diameter chipper bar shall be installed down from the steel plate. Ladder on driver's side of dump body, directly behind cab, running up through the body and constructed of 1/4" x 2" flat steel (3 steps: 2 above bottom and one below). Bed shall have a removable, bolt on asphalt lip constructed with 3/16" steel with 3 gussets for support. The end brackets for the asphalt lip shall extend above the lip. A 16" cab protector constructed of 8-gauge steel shall be installed on the body with 1 grab handles welded just below the tarp cover motor. Step mounted inside the dump body and under the front corner of the dump body on the street side. The entire body shall be primed with a salt corrosive inhibitor primer and painted with gloss black urethane paint and with all mounting hardware and welding points painted appropriately. The underside of the body and hoist frame shall be primed with a salt corrosive inhibitor primer and painted gloss black. Mud flaps shall be installed behind the front tires on the truck with ¼" material acceptable. Mud flaps, anti-sail shall be installed on rear of dump body, ½"x 24" x 36"(secured with stainless steel continuous hinge - rear only) and in front of the intermediate dual rear wheels on the dump body, ½" x 24" x 30", includes ant-sail brackets and holders. Four ratcheting tie-downs shall be welded to the bed sides (horizontally near top) in order to secure a material spreader to the bed. The location of the tie downs will be designated by the County. Bed shall also have a stainless steel shovel holder welded at a location designated by the County. Warning decals and stickers shall be placed where required. Standard equipment supplied as required by OSHA and the Federal Transportation Department.

2.4.14. **Plow Hitch:** Shall be Henke Quick-Attach type. Unit shall also have the adapter(swivel) that fits the Henke plow to the quick hitch.

2.4.15. **Warranty:** Body, hydraulic components, and labor shall be for One (1) year from the date of delivery against manufacturer's defects. Hoist shall be three (3) years from the date of delivery. Warranty shall be the responsibility of the truck equipment installer. The warranty shall cover all items provided and/or installed to the dealer's truck chassis. Dealer/Builder shall state at what facility and location the warranty work will be performed.

2.5. **CENTRAL HYDRAULIC and AUTOMATIC CONTROLLER SYSTEM MINIMUM SPECIFICATIONS**

2.5.1. All items bid will include installation. Component Technology system components acceptable and presently utilized on all trucks in the fleet.

2.5.2. All electronic/electrical wiring shall be soldered, sealed with heat shrink tubing and placed in asphalt type looms. Component wiring connections shall be run to sealed junction box(s) to prevent corrosion and ease of repair. All electronic solenoids shall be protected from salt corrosion.

2.5.3. **Hydraulic Pump:** The hydraulic pump will be crankshaft driven using a 1280/1310 driveline assembly. Piston pump (load sensing type) must be capable of 52 GPM and 3000 PSI at 2500 RPM (5.48 CID). Pump must have side ports to avoid multiple 90 degree bends in suction line (rear ports unacceptable). Case drain must be positioned as high as possible and directed back to the reservoir without passing through the return line filter. Pump must have the ability to have an internal bleed down compensator, a 1 ¼" keyed shaft with a tapped hole in the end of the shaft to hold the pump yoke on, a 1" split flange pressure port and a 2" split flange suction port. A bolt on N/C low oil shut down valve shall be attached to the pump pressure port that is 12VDC activated. Acceptable model: Sauer-Danfoss model FRL090.

2.5.4. **Pump Drive:** Driveline must be 1280/1310 series solid shaft style. Driveline shall come with all crosses, pump end yoke and flange for engine. Pump shall be driven off the engine crankshaft. Driveline shall have a companion flange that un-bolts from the driveshaft for easy belt replacement.

2.5.5. **Hydraulic Stack Valve:** The valve shall be a mobile stackable design, load sensing type and shall be capable of a nominal 35 GPM with published flow curves to 40 GPM. Valves must be pressure and flow compensated. Inlet and outlet ports to be 1" o-ring, all working ports shall be ¾" and 5/8" o-ring. Valve to be arranged as follows: Inlet cap with pressure, tank, and load sense port; Single acting cylinder spool for hoist, spring return to neutral pressure compensated with a 32 GPM main spool, shall be remote cable controlled. Hoist must raise in 20 seconds or less at 1200 RPM; Double acting cylinder spool for plow angle, spring return to neutral pressure compensated with a 10 GPM main spool, shall be remote cable controlled; For the spreader functions there shall be a manifold assembly that is an integral part of the stack valves that will have a cartridge valve for the auger with a manual override 12VDC proportional controlled 1-15 GPM. The spinner will be 0-7 GPM 12VDC proportional controlled also with a manual override. The manifold assembly shall have the ability to have 2 more cartridges added at a later date for a pre-wet system or anti-ice system without valve disassembly.

2.5.6. **Hydraulic Reservoir:** Reservoir shall be a 30-gallon minimum capacity with the breather cap mounted to an inspection lid. Inspection lid shall also provide for an in-tank mounted return line filter. Breather cap fill neck must be screened and mounted on a riser. Reservoir shall be complete with a sight temperature gauge and a magnetic drain plug. Suction port will allow for installation of a 2" NPT 50 GPM suction screen. Suction screen will have a 3 to 5 PSI by-pass spring. Reservoir to be constructed of 10-gauge steel. As and integral part of the reservoir there shall be an area for mounting of the hydraulic stack valve. Reservoir must be of template style for bulkhead "through" mounting of the valve and be completely free from internal tubing or hoses from the work ports and inlet of the valve. Valve must be removable as a unit with template through the top of the reservoir for service and accessibility. All electrical connections must be made via IP68 rated connectors on the front (cab) side of the reservoir. The enclosure must have a fully potted output module installed in it for all electrical connections for the complete system. This module must be the master for the complete controlling system that operates on a CAN open platform. All hydraulic fittings must exit the bottom of the enclosure and be male JIC bulkheads. Access to the enclosure must be by a removable top lid that is held in place with 2 rubber tie downs. The reservoir filter and fill cap must be accessible without removing a lid or cover. Assembly must be mounted on the driver's side of the vehicle.

2.5.7. **Hydraulic Return Filter:** Filter shall be top tank mounted type 10 microns with a by-pass and replaceable cartridge element. Filter shall be capable of 80 GPM flow capacity. Filter shall have one 1 ¼" SAE port with the ability to be machined for another. A bypass condition pressure switch is required and shall light a "Change Filter" message on the system display, switch shall be 22 PSI and have a DIN connector.

2.5.8. **"TPE" Wiring Specification:** Wiring and harness system shall meet ISO rating IP68 and NEMA 6. The connectors should have three sealing points (lock ring, raised portion of the molded plastic around each pin, and a viton o-ring) that seals the whole connector. The cable jacket should be TPE-thermoplastic elastomer and molded to the connectors. Connector and harness to be rated and tested for a temperature range from -30 Deg. C. to + 70 Deg. C. Water tight when submerged in 6' of water for 24 hours, in 275' of water for 1 hour, and when subjected to a 1000 PSI pressure wash.

The connectors shall be tested to have NO corrosion after 500 hours in a 35 Deg. C. salt spray. Cabling shall be rated excellent in low temperature flexibility and in it's resistance to oxidation, heat, oil, weather, sun, ozone, abrasion, electrical priorities, flame, water, acid, alkali, gasoline, benzol, toluol, degreaser solvents, alcohol, and weld slag. All cabling must meet this style.

2.5.9. **Spreader Control System:** The system shall be a CANBUS system that communicates using CAN Open protocol and not a proprietary communications protocol. The control shall be capable of accurately spreading granular and pre-wetting liquid material. Control shall be capable of 6 different material types, capable of closed loop operation on both the augur and spinner, capable of gate control. The display shall alert the operator of any errors in the input signals detected by the microprocessor self diagnostic system. The use of numeric error codes is not acceptable. All codes shall be displayed in English. Control shall be capable of both automatic and manual modes. In the event of an auger, spinner, or liquid sensor failure, the control shall be capable of switching to an open loop mode. Manual mode may be locked out by administrator. System shall be configured for auger and spinner both running in open loop, no sensors. Display shall be mounted where it is easy to see by the operator and the operator panel must be located so it is very easy to reach by the operator without taking their eyes off the road. The system shall consist of four primary modules that reside on the Bus and allow flexibility in mounting configurations. The system is completely expandable and allows for additional modules to be added to the CAN Bus. All four primary components of the system are software upgradeable using a laptop and interface cable. The configuration file of a calibrated system can be saved for transfer to other systems or as a backup providing the ability to use specific configurations for varying vehicle use or operator skill level. The original configuration is maintained at the factory as a secondary backup and is traceable by part number.

2.5.10. **Display:** The display shall be a minimum 4" x 6" TFT LCD graphic display with auto dimming backlight, user adjustable position, and Ethernet port for accessing a built in Web server. The Web server can be used to configure or troubleshoot a system by connecting to a PC. Interface shall utilize Internet Explorer and not require any proprietary software to connect to the system. The display provides a built in diagnostic feature allowing technicians to view all input signals real time. The display also provides error logging and system status change logging for reviewing operator inputs. A status window provides the operator with system status messages. The display shall incorporate "soft key" switches that are defined by the system program via the display. The keys shall include a "plus" pattern buttons used to navigate in the system software easily. When configured, the display will incorporate granular rates, both pre-wet and anti-ice rates, anti-ice lane configuration, road/air temperature, hydraulic pressure when designated, system status, error messages, plow float indication, auto/manual mode indication, and material currently being used. Active functions that are not in use shall show "off" and the graphic be "grayed out" for ease of operator interpretation.

2.5.11. **Operator Panel:** The operator panel shall be of molded silicone rubber keypad utilizing high lif magnetic snap action switches and three high life magnetic 16 position detented encoders used for rate, lane, and liquid control separately. The detented positions will be user programmable as to the value of each increment in the setup menu. The operator panel provides input capabilities to support RS232, RS422, truck speed input, and multiple digital I/O. The panel shall have provisions for the road/air temperature sending unit. The panel has built in LED backlighting that automatically dims with the display for night viewing. The panel shall incorporate the already integrated functions of blast and pause. The panel shall also incorporate integral mode, product, and select switches.

2.5.12. **Valve Driver Module:** The IP68 assembly shall be mounted to the valve enclosure providing both interior and exterior electrical connections. The valve driver module drives up to 14 PWM channel, accept a 4-20mA input, 4 closed loop feedback signals, and multiple digital inputs. All PWM outputs are software configurable and can be controlled by closed loop operation, proportional input devices, or digital input devices. The module has built-in over temperature shutdown, over current shutdown, and low voltage shutdown. All electrical connections are IP68 sealed when mated utilizing threaded connections for positive retention. The valve driver module will reside on the

BUS as the "master" and all truck values and configurations will be saved in this module.

2.5.13. **Software:** The system shall incorporate three levels of security and access that is password protected and defined by the user. The three levels of access called operator, technician, and administrator shall give the user varying levels of access to the system setup, data, configuration fields, and parameters based upon access given. The "administrator" shall have full access to all menus in the system and have the ability to make system configuration changes as well as system parameter changes. Spreader and liquid functions when controlled utilizing closed loop feedback will incorporate and "auto trim" feature that will allow the system to automatically se the PWM minimums and maximums when engaged. The software shall incorporate a "test speed" mode for use in testing the system safely without requiring the truck to be moving or the drive axles engaged.

2.5.14. **Optional System Addition:** Additional price for plow and hoist functions to be controlled 12VDC proportionally and integrated into the above described control system. The option shall include a complete control console assembly with all modules of the system mounted in the console.

2.5.15. **Snow Plow Cushion Valve:** A double relief cushion valve must be installed for the angle plow. Valve shall be set at 2000 PSI and have #8 SAE o-ring ports. Valve shall be constructed of a high-tensile cast iron body with ball and spring style relief that has a hardened seat. Valve shall be plumbed at the front of the truck for snowplow angle.

2.5.16. **Cable Controls:** Sections 1-3 of the stack valve assembly shall be actuated by the remote valve cable control system. Cables shall be mounted beside driver and easily accessible. Single axis control lever for dump body up/down. Dual axis control lever "+" pattern for plow lift and angle with 2 momentary push buttons for blast and pass. Control levers to be labeled with decals for operation. Controls to be mounted in factory style stand.

2.5.17. **Plow Balance Valve:** System to be supplied with plow balance valve. Valve shall reduce the weight on the cutting edge when activated. Valve to be of cartridge and manifold design, electrically activated. Valve shall tee into pressure line between pump and valve. Valve to be designed to offset a specific (adjustable) plow weight when activated. The plow balance system must not affect operation of any other hydraulic function on the vehicle or have an adverse effect on the performance of other hydraulically operated equipment. All normal operations of the plow raise and lower must be maintained without additional tasks. The plow balance system will remain electrically active when lifting the plow from the road surface, valves that require deactivation to raise are not acceptable. Plow lift must be immediate, it is not necessary to turn off the system for plow lift. Plow balance valve shall hold plow in the air indefinitely. The plow balance manifold shall be of cartridge style valving utilizing "floating" style cartridges. The solenoid on/off valve shall have a manual override and will include a test port for checking balance pressure. System must be capable of working off system "Standby Pressure".

2.5.18. **Road/Air Temperature Sensor:** System to be supplied with a remotely mounted air-pavement temperature sensor. Air sensor and pavement sensor must be able to be mounted in different areas on the truck. Temperature sensor must interface with the control system and be displayed on the in-cab display. The sensor must be able to be calibrated in the field by the user with no special tools.

2.5.19. **Hydraulic Lines for Spreader:** Two supply and one common return hydraulic lines shall be run to the rear of the bed secured to a flat steel support (running on top of the truck frame cross-members) and terminate in the side of the rear of the dump bed (driver's side). All lines shall be capped off – County will install quick attach couplers at a later date.

2.5.20. **Warranty:** The warranty of the central hydraulic system shall be a full manufacturer's warranty for a period of 1 year (minimum) unless otherwise covered by a separate component warranty. The warranty of the spreader control system (includes any software and hardware applications) shall be a full manufacturer's warranty for a period (minimum) of 1 year unless otherwise covered by a separate component warranty. This shall include all parts, labor and trip charge.

2.5.21. **Manuals:** A service manual, parts manual, hydraulic and electrical schematic shall be included.

2.5.22. **Training:** Any training video's that apply to the truck spreader and computerized control system shall be supplied. Any CD's or DVD's used for fault diagnosis shall be supplied. Vendor shall schedule through the shop superintendent employee general maintenance and operation of the material spreader computerized control system at time of delivery or startup. Subsequent initial

mechanical and supervisory training shall be scheduled with the shop superintendent and again when equipment updates become necessary.

2.6. **DEVIATIONS**

2.6.1. It is the bidder's responsibility to submit a bid that meets all mandatory specifications stated within. Because of the complexity and number of required specifications, the bidder must compare their product bid with the required listed minimum specifications and identify any deviations. **Failure to properly identify deviations may render the bidder's proposal non-responsive and not capable of consideration for award.** Bidders should note that a descriptive brochure of the model bid may not be acceptable as proper identification of deviations from the written specifications.

2.7. **Designee** – Boone County Public Works

2.7.1. **Contact** – Tyson Boldan, Buyer, Boone County Purchasing Department, 601 E. Walnut, Room 209, Columbia, MO 65201. Telephone: 573-886-4392; Facsimile: 573-886-4390 or email: tboldan@boonecountymo.org

2.8. **Delivery:** Units shall be delivered with Bill of Sale and Title of Ownership.

2.8.1. **Delivery Terms:** FOB Destination - Boone County Public Works Department, Maintenance Operations, 5551 Highway 63 South, Columbia, MO 65201

2.9. **ADDITIONAL TERMS AND CONDITIONS:**

2.9.1 Equipment shall be properly serviced, including grease and oil to the proper levels.

2.9.2. Vendor to include product literature for each proposed piece of equipment.

2.9.3. Bid evaluation will be based on quality, reliability, delivery time ARO, and cost. Quality and reliability may be determined by using information contained in product reviews from established publications.

3. *Response Presentation and Review*

3.1. **RESPONSE CONTENT** - In order to enable direct comparison of competing Responses, Bidder must submit Response in strict conformity to the requirements stated herein. Failure to adhere to all requirements may result in Bidder's Response being disqualified as non-responsive. All Responses must be submitted using the provided Response Sheet. Every question must be answered and if not applicable, the section must contain "N/A." Manufacturer's published specifications for the items requested shall be included with the response.

3.2. **SUBMITTAL OF RESPONSES** - Responses MUST be received by the date and time noted on the title page under "Bid Submission Information and Deadline". NO EXCEPTIONS. The County is not responsible for late or incorrect deliveries from the US Postal Service or any other mail carrier.

3.2.1. **Advice of Award** - If you wish to be advised of the outcome of this Bid, the results are posted and may be viewed on our web page www.showmeboone.com. (Purchasing/Bid Awards)

3.3. **BID OPENING** - On the date and time and at the location specified on the title page, all Responses will be opened in public. Brief summary information from each will be read aloud, and any person present will be allowed, under supervision, to scan any Response.

3.3.1. **Removal from Vendor Database** - If any prospective Bidder currently in our Vendor Database to whom the Bid was sent elects not to submit a Response and fails to reply in writing stating reasons for not bidding, that Bidder's name may be removed from our database. Other reasons for removal include unwillingness or inability to show financial responsibility, reported poor performance, unsatisfactory service, or repeated inability to meet delivery requirements.

3.4. **RESPONSE CLARIFICATION** – The County reserves the right to request additional written or oral information from Bidders in order to obtain clarification of their Responses.

3.4.1. **Rejection or Correction of Responses** – The County reserves the right to reject any or all Responses. Minor irregularities or informalities in any Response which are immaterial or inconsequential in nature, and are neither affected by law nor at substantial variance with Bid conditions, may be waived at our discretion whenever it is determined to be in the County's best interest.

3.5. **EVALUATION PROCESS** – The County's sole purpose in the evaluation process is to determine from among the Responses received which one is best suited to meet the County's needs at the lowest possible cost. Any final analysis or weighted point score does not imply that one Bidder is superior to another, but simply that in our judgment the Contractor selected appears to offer the best overall solution for our current and anticipated needs at the lowest possible cost.

3.5.1. **Method of Evaluation** – The County will evaluate submitted Responses in relation to all aspects of this Bid.

3.5.2. **Acceptability** – The County reserves the sole right to determine whether goods and/or services offered are acceptable for County use.

3.5.3. **Endurance of Pricing** – Bidder's pricing must be held until contract execution or 60 days, whichever comes first.

4. *Response Form*

4.1. Company Name: _____

4.2. Address: _____

4.3. City/Zip: _____

4.4. Phone Number: _____

4.5. E-mail Address: _____

4.6. Fax Number: _____

4.7. Federal Tax ID: _____

4.7.1. ( ) Corporation
( ) Partnership - Name _____
( ) Individual/Proprietorship - Individual Name _____
( ) Other (Specify) _____

4.8. **Describe Warranty Features (include locations for service) for all components.**

_____
_____
_____
_____
_____
_____

4.9. **The undersigned offers to furnish and deliver the articles or services as specified at the prices and terms stated and in strict accordance with all requirements contained in the Request for Bid which have been read and understood, and all of which are made part of this order.** By submission of this bid, the vendor certifies that they are in compliance with Section 34.353 and, if applicable, Section 34.359 ("Missouri Domestic Products Procurement Act") of the Revised Statutes of Missouri.

4.9.1. Authorized Representative (Sign By Hand):

_____ Date:_____

Print Name and Title of Authorized Representative

_____

4.10. Will you honor the submitted prices for purchase by other entities in Boone County who participate in cooperative purchasing with Boone County, Missouri?

_____ Yes _____ No

4.11. Delivery ARO: _____

4.12.	***PRICING***	***Unit Price***	***Qty***	***Extended Price***
4.12.1.	*2011 Tandem Axle Dump Truck*	*$*	*6*	*$*
4.12.2.	*Dump Truck Body*	*$*	*6*	*$*
4.12.3.	*Central Hydraulic/Controller System*	*$*	*6*	*$*
4.12.4.	*Option A (Dump-Lok Bed props)*	*$*	*2pr*	*$*

4.13.	***Optional Trade-In Vehicles***	***Price***
4.13.1.	2002 International 7400 Tandem axle Truck w/ 14 foot dump bed w/hoist VIN# 1HTWHADR22J050514 Vehicle # 1724 Mileage: approx. 270,000	*$*
4.13.2.	2002 International 7400 Tandem axle Truck w/ 14 foot dump bed w/hoist VIN# 1HTWHADR02J050513 Vehicle # 1734 Mileage: approx. 240,000	*$*
4.13.3.	2002 International 7400 Tandem axle Truck w/ 14 foot dump bed w/hoist VIN# 1HTWHADR92J050512 Vehicle # 1735 Mileage: approx. 270,000	*$*
4.13.4.	2004 International 7400 Tandem axle Truck w/ 14 foot dump bed w/hoist VIN# 1HTWHADR94J079978 Vehicle # 1736 Mileage: approx. 290,000	*$*
4.13.5.	2003 International 7400 Tandem axle Truck w/ 14 foot dump bed w/hoist VIN# 1HTWHADR03J079155 Vehicle # 1767 Mileage: approx. 250,000	*$*
4.13.6.	2004 International 7400 Tandem axle Truck w/ 14 foot dump bed w/hoist VIN# 1HTWHADR08J080750 Vehicle # 1768 Mileage: approx. 235,000	*$*
4.13.7.	***Trade-in Total***	*$*
4.14.	***Total (4.12.1+4.12.2+4.12.3.)***	*$*
4.15.	***Grand Total (4.14.-4.13.7.)***	*$*

(Please complete and return with Contract)

Certification Regarding
Debarment, Suspension, Ineligibility and Voluntary Exclusion
Lower Tier Covered Transactions

This certification is required by the regulations implementing Executive Order 12549, Debarment and Suspension, 29 CFR Part 98 Section 98.510, Participants' responsibilities. The regulations were published as Part VII of the May 26, 1988, Federal Register (pages 19160-19211).

(BEFORE COMPLETING CERTIFICATION, READ INSTRUCTIONS FOR CERTIFICATION)

(1) The prospective recipient of Federal assistance funds certifies, by submission of this proposal, that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

(2) Where the prospective recipient of Federal assistance funds is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

_____
Name and Title of Authorized Representative

_____ _____
Signature Date

Boone County Purchasing
601 E. Walnut, Room 209
Columbia, MO 65201

Tyson Boldan, Buyer
(573) 886-4392 – Fax: (573) 886-4390

Standard Terms and Conditions

1. Responses shall include all charges for packing, delivery, installation, etc., (unless otherwise specified) to the Boone County Department identified in the Request for Bid and/or Proposal.

2. The Boone County Commission has the right to accept or reject any part or parts of all bids, to waive technicalities, and to accept the offer the County Commission considers the most advantageous to the County. Boone County reserves the right to award this bid on an item-by-item basis, or an "all or none" basis, whichever is in the best interest of the County.

3. Bidders must use the bid forms provided for the purpose of submitting bids, must return the bid and bid sheets comprised in this bid, give the unit price, extended totals, and sign the bid.

4. When products or materials of any particular producer or manufacturer are mentioned in our specifications, such products or materials are intended to be descriptive of type or quality and not restricted to those mentioned.

5. Do not include Federal Excise Tax or Sales and Use Taxes in bid process, as law exempts the County from them.

6. The delivery date shall be stated in definite terms, as it will be taken into consideration in awarding the bid.

7. The County Commission reserves the right to cancel all or any part of orders if delivery is not made or work is not started as guaranteed. In case of delay, the Contractor must notify the Purchasing Department.

8. In case of default by the Contractor, the County of Boone will procure the articles or services from other sources and hold the Bidder responsible for any excess cost occasioned thereby.

9. Failure to deliver as guaranteed may disqualify Bidder from future bidding.

10. Prices must be as stated in units of quantity specified, and must be firm. Bids qualified by escalator clauses may not be considered unless specified in the bid specifications.

11. No bid transmitted by fax machine or **e-mail** will be accepted. **U.S. mail only.**

12. The County of Boone, Missouri expressly denies responsibility for, or ownership of any item purchased until same is delivered to the County and is accepted by the County.

13. The County reserves the right to award to one or multiple respondents. The County also reserves the right to not award any item or group of items if the services can be obtained from a state or other governmental entities contract under more favorable terms.

14. The County, from time to time, uses federal grant funds for the procurement of goods and services.

Accordingly, the provider of goods and/or services shall comply with federal laws, rules and regulations applicable to the funds used by the County for said procurement, and contract clauses required by the federal government in such circumstances are incorporated herein by reference. These clauses can generally be found in the Federal Transit Administration's Best Practices Procurement Manual – Appendix A. Any questions regarding the applicability of federal clauses to a particular bid should be directed to the Purchasing Department prior to bid opening.

15. In the event of a discrepancy between a unit price and an extended line item price, the unit price shall govern.

"No Bid" Response Form

Boone County Purchasing
601 E. Walnut, Room 209
Columbia, MO 65201

Tyson Boldan, Buyer
(573) 886-4392 – Fax: (573) 886-4390

"NO BID RESPONSE FORM"

NOTE: COMPLETE AND RETURN THIS FORM ONLY IF YOU DO NOT WANT TO SUBMIT A BID

If you do not wish to respond to this bid request, but would like to remain on the Boone County vendor list **for this service/commodity**, please remove form and return to the Purchasing Department by mail or fax.

If you would like to FAX this "No Bid" Response Form to our office, the FAX number is (573) 886-4390.

Bid: 20-19MAY11 – Tandem Axle Dump Truck

Business Name: _____
Address: _____
_____
_____
Telephone: _____
Contact: _____
Date: _____

Reason(s) for Not Bidding:

_____
_____
_____
_____
_____
_____