ALLEGAN COUNTY ROAD COMMISSION

SPECIFICATIONS FOR WESTERN STAR 2018 MODEL TANDEM REAR AXLE DUMP TRUCK

TRUCK GVWR IS __________________________

The following is a list of Minimum Acceptable Requirements for trucks that are to be bid under this proposal. All blank spaces listing options or dimensions are to be filled in. If it is impossible to provide certain items that are required list all exceptions and options below. All bids are to include delivery of units to the Road Commission.

1. **Engine** – (Shall be 2018 emissions compliant) Detroit Diesel DD-13, 450 HP, 1650 lb-ft torque minimum.

   Engine Bid Make ______________________, Model _______________ HP _______________

   Torque ______________________, @ ______________________ RPM

2. **Engine Requirements** -
   (a) Automatic shutdown for low oil pressure and coolant
   (b) "Fleet Guard" spin-on type filters or equal
   (c) Front crankshaft adapter for P.T.O. – “Spicer” Flange #2-2-479
   (d) Engine to be retro-fitted for overhead fuel tank system
   (e) Engine and after treatment system warranty, 7 yr, 250,000 mile, 100% parts and labor
   (f) Engine software cables, adapters and paper manuals

   NOTE: P.T.O. shaft & pump to be installed by fabricator.

3. **Radiator & Grill** - Heavy duty radiator to accommodate front mounted P.T.O. pump, shaft, and joint assembly.

   NOTE: Hole in radiator and grill is unnecessary if radiator is mounted above pump shaft alignment.

4. **Allison Automatic Transmission**
   (a) 6-speed model 4500 RDS with synthetic Allison fluid
   (b) Push button shift control
   (c) Low oil level sensor
   (d) 5-yr, 200,000 mile extended warranty
   (e) Transmission ECU mounted inside the cab (performed by dealer, all factory connections with sealer, no splices)

5. **Drive Line** – Spicer 1810HD drive line with two-section shaft with center bearing and half round u joints.

6. **Rear Axle** - "Rockwell" RT-46-160, driver operated differential lock in both rear axles and magnetic drain plugs.
   Gear Ratio 5.63 for a road speed not to exceed 60 M.P.H. AT 1900 RPM

7. **Rear Suspension** – 46,000 lb Nuway ADZ-246 air ride height control valve, one valve per side shall control both axles, right side linkage shall be adjustable.

8. **Front Axle** - Minimum capacity 20,000 lbs. Set back type set at approximately 33 inches in back of grill. (see wheel base dimensions, section 12)
   (a) Vented hub caps

9. **Front Springs** - Taper-leaf type Yes ____ No ____ 10,000 lbs. each spring.
   (a) Shackle pins, minimum diameter - 1 inch.

10. **Power Steering** - Hydraulic Assisted, TRW
   Turning Radius Degree _______, outer circumference _________ feet


11. Air Brakes - Spring-set parking brake with warning light & buzzer.
   (a) Compressor shall be a Bendix BA-921 or equal.
   (b) Front Brakes: 16 1/2 X 6” Rockwell TQ, S-Cam with dust shields and Haldex automatic slack adjuster.
   (c) Rear Brakes: 16 1/2 X 7” Rockwell TQ, S-Cam with dust shields and Haldex automatic slack adjuster.
   (d) Haldex Gold Seal Brake Chambers.
   (e) Heated air dryer “Wabco” spin on type

12. Frame - Double channel __________________________, continuous for entire length.
    R.B.M. __________________________, Section Modulus __________________________,
    Strength __________________________

**DOUBLE CHANNEL:** Frame to have all seams sealed

(a) Main channel 3/8” X 10 ¾” minimum-secondary channel-1/4” X 9 15/16” minimum.
(b) Frame to have one (1) cross member behind rear axle
(c) Frame to have two (2) cross members in cab to axle section minimum
(d) Frame to have one (1) cross member at rear cab support and one (1) cross member at front of motor.
(e) Wheelbase - 209 inches minimum
(f) Cab-to-axle - 134 inches minimum
(g) Set back front axle
(h) AF 65” minimum.
(i) No holes shall be placed in frame that are not necessary for assembly or attachment.
(j) Frame to extend 20” ahead of grill (bolt on frame extensions are NOT acceptable).
(k) Frame rails to be bolted together with flange bolts & nuts
(l) All frame mounted equipment to have minimum 24” ground clearance.
(m) Top of frame shall be straight from front to rear.

13. Shock Absorbers – Six shocks required, two per axle

14. Tires, Hubs, and Wheels –
   (a) Front tires shall be size of 315-80R-22.5
   (b) Front wheels shall be heavy duty steel ten (10) hole disc hub piloted
   (c) Dual rear tires shall be size of 12R-22.5
   (d) Rear wheels shall be heavy duty ten (10) hole disc hub piloted unimount

15. Electrical System ** multi-plex wiring is not acceptable **
   (a) 12 volt, negative ground
   (b) 160 AMP heavy duty Delco alternator
   (c) Four (4) batteries minimum 2500 CCA
   (d) Batteries mounted externally on truck
       (minimum of 130 inches from center of rear axle to side of battery box closest to rear of truck)

16. Gauges (direct reading type) - (a) Oil pressure (b) Water temperature (c) Ammeter or Voltmeter (d) Air pressure,
    (e) Dash mounted air filter restriction gauge, (f) Tachometer, (g) Fuel gauge and (h) Engine hour-meter.

17. Warning lights and/or buzzers for safety - (a) for low air pressure, (b) engine overheating, (c) low oil pressure,
    (d) back-up alarm

18. Truck Cab
   (a) 123 inch BBC steel conventional cab
   (b) Cab to be corrosion and rust protected between inner and outer walls
   (c) Air ride cab
   (d) Key code D610
   (e) Fiberglass sun visor
   (f) Rear cab glass to be safety coated

19. Cab Insulation - Complete insulation package to include floor, roof, back wall, firewall and doors.

20. Tinted Windshield
21. **Fenders** - Fender-hood combination assembly is desired. If bid, a minimum of 36 inch wide opening must be provided with stationary grill.
   (a) A tip-ahead, pit-type fender with butterfly hood and stationary grill is optional.
   (b) Fiberglass fenders

22. **Exhaust System**
   (a) Vertical after treatment system with vertical tailpipe mounted behind right rear corner of cab.

23. **Cab** - Air conditioning, heater with shut off valve, cruise control, power windows, tilt wheel, Radio: AM/FM/CD/USB with blue tooth connect, spotlight on left side, both outside heated mirrors west coast type with double brackets, spot mirrors, 12-V power point, marker lights, four extra ignition controlled switches, snowplow headlight prep package, low hydraulic oil level light, two 2” holes in dash for hydraulic gauges, air ride cab, grab handles both sides, left side roof mounted dual air horns, engine fan override switch, electric intermittent wipers, stainless cab skirts and single cup holder.

   Left side air cleaner YES ________________, NO __________, must be capable of drawing inside or outside air.

24. **Front Bumper** - Not required

25. **Driver’s Seat** - National 2000, Cloth Mid Back Air Suspension with arm rests


29. **Fuel Tank** - Non-returnable temporary tank for transporting truck only.
   **NOTE:** Do not drill frame - **band tank to frame**

30. **Paint Color** - Flame Red #8554, Paint top of truck hood flat black

31. **Air Tank and Exhaust Pipe** - to be mounted no lower than bottom of frame (24” minimum ground clearance)

32. **Parts Books, Parts CD Rom**, and shop repair manuals must be furnished before final payment is made.

33. **Bidders** - Order to manufacturer to be checked and signed by Allegan County Road Commission before final construction order is submitted.

**EXCEPTIONS:**

**OPTIONS:**

Tire size noted above, make options to be listed here, either Good Year G289 and G622 or Michelin XZUS and XND
Necessary Dimensions To Be Provided by Bidder

1. Distance between seats _______ inches
2. Length of hood ahead of "doghouse" or fire wall ______ inches
3. Length and width of "doghouse" in cab _________ inches _______ inches
4. Distance from back of cab to drive wheel base __________ inches
5. Distance of DEF tank from drive wheel base __________ inches
6. Distance from frame bottom to ground ________ inches

**WARRANTY**

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<th>Parts &amp; Labor Coverage</th>
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<th>Years</th>
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*The Allegan County Road Commission reserves the right to request any specification or component measurements*

*The Allegan County Road Commission reserves the right to request any specification reviews with the county, manufacturer and finishing fabricators*