

ALLEGAN COUNTY ROAD COMMISSION

SPECIFICATIONS FOR WESTERN STAR 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 2016 emissions compliant) Detroit Diesel DD-13, 410 HP, 1450 lb-ft torque @ 2100 RPM maximum or equal.
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 aftertreatment 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) Console 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)

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 6:43 for a maximum road speed of 60 M.P.H. AT 2100 RPM

7. Rear Suspension – 46,000 LB Nuway AD-246-10 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
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 3/4" 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 Goodyear 315-80R-22.5 G289 Dura-Seal
 - (b) Front wheels shall be heavy duty steel ten (10) hole disc hub piloted
 - (c) Dual rear tires shall be Goodyear 12R-22.5 G622
 - (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 right side of 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) Conventional type with heavy-duty cab mounts front and rear.
 - (b) Cab to be corrosion and rust protected between inner and outer walls
 - (c) Air ride cab
 - (d) Key code D610
 19. Cab Insulation - Complete insulation package to include floor, roof, backwall, 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) Fender material:

Fiberglass _____ Steel Plate _____

22. Exhaust System

(a) Vertical aftertreatment 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, AM/FM/CD/USB radio, antenna mounted on left side, spotlight on left side, both outside heated mirrors west coast type with double brackets, 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.

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

26. Passenger Seat - Standard cloth seat, tool box under seat.

29. Fuel Tank - Non-returnable temporary tank for transporting truck only.

NOTE: **Do not drill frame - band tank to frame**

30. Paint Color - Imron 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:

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

<u>Component</u> <u>Years</u>	<u>Parts & Labor Coverage</u>	<u>Miles</u>	
ENGINE	100% Parts & Labor	250,000	7
ALLISON TRANSMISSION	100% Parts & Labor	200,000	OR 5
TOTAL VEHICLE	_____	_____	_____
DRIVETRAIN	_____	_____	_____
FRAME	_____	_____	_____
CAB CORROSION	_____	_____	_____
CAB STRUCTURE	_____	_____	_____
RADIATOR & COOLING SYSTEM	_____	_____	_____
EXHAUST & AFTERTREATMENT SYSTEMS	_____	_____	_____

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