

SPECIFICATIONS:

4 Cubic yard, twin engine, dual gutter broom, 2024 model mechanical street sweeper, truck mounted on a new and unused 2024 or newer model year Diesel 'Cab Over' chassis.

INSTRUCTIONS FOR COMPLETING BID.

The sweeper to be furnished under this proposal shall be a truck chassis mounted type, 4 cubic yard capacity mechanical street sweeper, with dual right and left side gutter brooms and a squeegee type elevator. It shall be the manufacturer's latest model and design, mounted on a new and unused 2024 truck chassis. These specifications shall be regarded as **minimum**. Bidders must furnish all descriptive literature, manufacturer's compliance certificates and all other data on the equipment proposed as required in this specification. Bidder must answer **YES** or **NO** to each specification line item except where asked to state specific data. Failure to answer correctly, or failure to respond, will deem your bid as non-responsive.

All line items with a "NO" response, shall be explained in detail on the "Exceptions to Bid Specifications" pages provided at the end of this document.

BIDDER PROPOSED

YES / NO

1. Truck Cab & Chassis

State:

Chassis Make: _____

Chassis Model: _____

Sweeper Make: _____

Sweeper Model: _____

2. Weights and Dimensions

2.1. GVWR: 19,500 lbs. minimum. _____

2.2 To allow maximum maneuverability, the wheelbase shall not exceed 109" NO EXCEPTIONS. _____

2.3 For maximum maneuverability the sweeper shall have an outside turning radius not to exceed 16' 7". NO EXCEPTIONS. _____

2.4 To ensure maximum visibility and pedestrian safety, the truck shall be 'Cab Over' type. _____

2.5 To permit clearance under low hanging tree branches, the overall sweeper height shall not exceed 102". NO EXCEPTIONS. _____

3. Axles

3.1. Front axle shall be 7,275 lbs. minimum. _____

3.2. Rear axle shall be single speed with a minimum of 14,550lb. capacity. _____

3.3. Front and rear oil seals shall be provided. _____

4. Suspension

4.1 Front suspension shall be 8,440 lbs. minimum at ground load rating. _____

4.2 Front shock absorbers shall be supplied. _____

4.3 Rear suspension shall be combination of leaf springs and Air Bag suspension. NO EXCEPTIONS. _____

5. Brakes – ABS

5.1 Front service brakes shall be hydraulic disc. _____

5.2 Rear service brakes shall be hydraulic disc. _____

6. Steering

6.1. Complete hydraulic power steering with gauges. _____

6.2 Sweeper shall be equipped with power steering. _____

7. Engine

7.1. Engine shall be a turbocharged diesel with a minimum of 5.19L displacement. _____

7.2. Engine shall be rated at 215 H.P at 2,500 RPM, minimum. _____

7.3. Engine shall have a torque rating of 452- ft. lbs. at 1,850 RPM. _____

7.4. Engine shall be water cooled with antifreeze protection to -34 degrees Fahrenheit.

8. Transmission

8.1 Transmission shall be an 6 speed automatic with overdrive.

9. Engine Equipment

9.1 Alternator shall have a minimum of 110 amp output rating.

9.2 Two batteries shall be maintenance free and each rated at 750 CCA.

9.3 A Donaldson single stage air cleaner shall be supplied.

10 Cab

10.1 Cab shall be 'Cab Over' engine type.

10.2 Cab shall have two seats with approved seat belts. Left side seat shall be suspension type.

10.3 Sun visors and arm rests shall be supplied on both sides.

10.4 Cigarette lighter and ash tray to be provided.

10.5 Heater with full width defrosters, fresh air ducts & variable speed fan shall be supplied.

10.6 Dual, two speed electric intermittent windshield wipers with washers, shall be supplied.

10.7 Two West Coast type mirrors 6" x 16" shall be supplied. Two 6" diameter spot mirrors shall be mounted below.

- 10.8 Two 12" convex mirrors shall also be mounted below the west coast mirrors to permit the operator full view of sweeping equipment. _____
- 10.9 Factory air conditioner shall be supplied and mounted in cab. _____
- 10.10 Two cup holders shall be provided. _____
- 10.11 The sweeper shall be supplied with a AM/FM stereo with CD player. _____
- 10.12 The truck shall be equipped with power windows and door locks. _____

11 Fuel Tank

- 11.1 A single 30 gallon fuel tank shall be provided for both the truck and auxiliary engine. _____
- 11.2 A diesel exhaust fluid tank shall also be provided. To prevent accidental filling of wrong fluids, the tank cap shall be blue. _____

12 Lights

- 12.1 All lamps and reflectors shall comply with federal regulations. _____
- 12.2 Four-way hazard warning lights shall be supplied. _____
- 12.3 Back up lights and alarm shall be fitted. _____
- 12.4 Sweepers backup alarm, rear lighting and auto reverse lifting of brush gear shall utilize reverse circuit from truck chassis. _____
- 12.5 The truck chassis rear lights shall be LED _____

13 Frame

- 13.1 High tensile frame shall be supplied. 7.20 S.M. 316,800 RBM, 44,000 PSI yield strength. _____

13.2 Front tow provision shall be supplied. _____

13.3 Steel front bumper shall be supplied. _____

13.4 The sweeper body shall be mounted on it's own subframe and fastened to the chassis _____

14 Wheels & Tires

14.1 **Tires:**
Two front & four rear shall be tubeless radial type 225/70R-19.5 12 ply rated. _____

14.2 Rear tire sets to be protected by H.D replaceable plastic fenders. _____

15 Warranty

15.1 The basic vehicle shall be warranted for 3 years 100% parts and labor. _____

15.2 The truck engine shall be warranted for 3 years 100% parts and labor. _____

15.3 The truck automatic transmission shall be warranted for 3 years 100% parts and labor. _____

15.4 The truck shall be provided with a 3 year Powertrain warranty to include engine, transmission and rear axle. _____

SWEEPER

16. <u>Power Pack</u>	<u>YES</u>	<u>NO</u>
16.1 Power shall be supplied by a heavy-duty turbocharged industrial diesel engine.	_____	_____
16.2 Engine shall be four cylinder, four cycle, water cooled and antifreeze protected to -34 degrees Fahrenheit. A cold weather start aid shall be supplied.	_____	_____
16.3 The auxiliary engine must be Tier 4 EPA compliant.	_____	_____
16.4 For greater productivity, the auxiliary engine exhaust shall not require 'REGENERATION' NO EXCEPTIONS	_____	_____
16.5 To reduce fuel consumption, and lower noise levels the sweeper must be designed to operate between 1600-2400 engine rpm's.	_____	_____
16.6 Engine shall be 65 horsepower minimum, Kubota turbo or equal.	_____	_____
16.7 To increase productivity and reduce complexity, the engine shall be equipped with a diesel oxidation catalyst eliminating the need for engine exhaust 'REGENERATION'	_____	_____
16.8 Heavy duty, two stage air filter shall be supplied.	_____	_____
16.9 To safeguard the engine, a high coolant temperature, low oil pressure shutdown system shall be supplied.	_____	_____
16.10 For greater reliability, the engine speed shall be controlled electronically from the sweeper control panel.	_____	_____
16.11 Engine speed indicator and hour meter shall be supplied.	_____	_____
16.12 To eliminate operator injuries, the sweeper control panel must be horizontally mounted to provide safer ergonomic operation. NO EXCEPTIONS.	_____	_____
16.13 Warning system shall be furnished for low oil pressure, high water temperature.	_____	_____

17 Sweeper Hopper Body

- 17.1 Hopper body shall be fabricated from steel. _____
- 17.2 Sweeper shall have a hopper capacity of 4 cu yds. _____
- 17.3 To eliminate water traps and reduce corrosion, the hopper must be of welded construction. NO EXCEPTIONS _____
- 17.4 To reduce side load on the sweeper subframe, the hopper lift cylinder must be vertically mounted and connected directly to the hopper support structure. Dual cylinders and/or mountings to lift scissors are Not acceptable. NO EXCEPTIONS. _____
- 17.5 A hydraulically operated discharge door shall automatically open when the container is tilted. Door shall be a minimum 36" in length to position the debris load into the center of the dump truck. NO EXCEPTIONS. _____
- 17.6 Safety prop rod(s) shall be furnished. _____
- 17.7 Debris dump angle shall be 50 degrees minimum. _____
- 17.8 Shall be a variable dump height from ground level to 120" as measured to the bottom of the dump door. _____
- 17.9 For maximum visibility and safety during dumping, the sweeper shall dump to the side. Rear and front dump systems are not acceptable. _____
- 17.10 For greater durability and longer life, the hopper scissor mechanism shall incorporate hardened pins and composite bushings. No Grease Fittings permitted. _____
- 17.11 To reduce maintenance, the hopper scissor lift mechanism shall not require any maintenance or greasing. _____
- 17.12 To assist in bulk debris removal, the hopper shall be equipped with a 22" x 18" side mounted access door. _____
- 17.13 To permit carrying of tools, the sweeper shall be equipped with a rear mounted equipment compartment. Minimum length shall be 5 feet _____

18 Gutter brooms – Dual

- 18.1 Gutter brooms shall be five segment, refillable, of steel tine construction, and 42” in diameter. _____
- 18.2 Gutter brooms shall be direct hydraulic drive type and relief valve protected. _____
- 18.3 Minimum swept width shall be 120” Minimum. _____
- 18.4 Gutter brooms shall be hydraulically raised and lowered. _____
- 18.5 Down pressure shall be controlled hydraulically from within the cab. No external Manual controls permitted. NO EXCEPTIONS. _____
- 18.6 A visual indicator in the cab shall indicate each side broom pressure setting. _____
- 18.7 To adapt to changing curb line conditions, the right and left side brooms shall have tilt angle controls adjustable from inside the cab. _____
- 18.8 To prevent damage, the brooms must be trailing arm design with spring kickback. _____
- 18.9 Gutter brooms each shall have three water spray jets for dust control. _____
- 18.10 Gutter brooms shall be capable of being operated independently of other sweep gear. _____
- 18.11 Brooms shall be capable of being retracted from the working position of 120” to legal travel position of 102” from within the cab. NO EXCEPTIONS. _____
- 18.12 Each broom shall be equipped with a work light. _____
- 18.13 To reduce maintenance the entire gutter broom assembly shall not require any greasing. _____

19 Pickup Broom

- 19.1 Polypropylene rear broom shall be supplied. _____
- 19.2 Broom shall be 36" diameter x 58" long minimum. _____
- 19.3 For greater durability the sweeper shall be equipped with steel dirt shoes. _____
- 19.4 Main broom shall be enclosed within its own hood to prevent debris from being ejected. _____
- 19.5 Broom hood shall hinge up without the use of tools to facilitate easier broom replacement. _____
- 19.6 Broom shall be equipped with an adjustable pressure and flotation system. _____
- 19.7 Main broom adjustment shall be adjustable for wear without the use of any tools. NO EXCEPTIONS. _____
- 19.8 To reduce repair and maintenance costs, the broom shall be direct hydraulic motor driven. The use of chain and sprocket drive systems are not acceptable. _____
- 19.9 Pickup broom shall have a minimum of four water sprays for dust control. _____
- 19.10 The sprays shall be removable without the use of tools to permit cleaning of the jets. _____
- 19.11 A bearing must be installed on each side of broom shaft. _____

20 Elevator

- 20.1 Shall be squeegee type design, minimum 58" width. _____
- 20.2 Squeegee elevator shall have a minimum of 10 flights. _____
- 20.3 To reduce repair and maintenance costs, the elevator shall be direct hydraulic motor driven. The use of external chain and sprocket drive systems are unacceptable. _____

- 20.4 For ease of maintenance and cleaning the elevator back plate shall hinge open without the use of tools. _____
- 20.5 For greater durability the elevator floor shall be ¼" abrasion resistant steel. _____
- 20.6 Elevator direction must be forward and reverse with in cab controls. _____
- 20.7 Elevator shall be raised and lowered hydraulically. _____
- 20.8 To reduce cost of ownership and maintenance the elevator shall not have more than two shafts. NO EXCEPTIONS. _____
- 20.9 Provision shall be made to adjust upper and lower elevator bearings to accommodate squeegee wear. _____
- 20.10 For ease of overhauling, the entire elevator shall be removable by disconnecting the elevator motor and 4 bolts. _____
- 20.11 Squeegee flights shall be connected to standard after market metal chain and poly sprocket system. Use of rubber elevator belts is not acceptable. _____
- 20.12 To prevent accidental damage to the sweeper, the elevator must raise automatically when turned off. _____
- 20.13 To ensure the elevator is fully engaged into the debris hopper a fixed position rocker style switch shall be supplied, momentary switches are not acceptable. _____

21 Hydraulic System

- 21.1 For simplicity and safety all sweeper functions shall be controlled hydraulically. Sweepers incorporating pneumatics supplied from the truck air tanks/brakes are not acceptable. NO EXCEPTIONS. _____
- 21.2 Hydraulic oil reservoir capacity shall be 30 gallons minimum and capable of maintaining continuous operation without overheating. _____

- 21.3 Hydraulic system shall incorporate an externally mounted oil cooler with a thermostatically controlled electric fan. To enhance life expectancy of components, continuous running fans are not acceptable. _____
- 21.4 Hydraulic system shall have a tank mounted site gauge indicating oil level. _____
- 21.5 To permit sweeping operation at lower auxiliary engine operating speeds, the sweeper hydraulics shall use a gear pump system. Load sense and pressure compensated systems are NOT ACCEPTABLE _____
- 21.6 The Gear pump shall be triple section with a rated capacity of 31gpm. _____
- 21.7 For maximum sweeping performance, each section of the gear pump shall be dedicated to a particular sweeper function; Side brooms, Main Broom and elevator. NO EXCEPTIONS. _____
- 21.8 All hydraulic valves and manual overrides must be located at ground level without use of ladders. NO EXCEPTIONS. _____
- 21.9 The auxiliary engine shall automatically shut down in the event of low hydraulic system oil level. _____
- 21.10 The auxiliary engine shall return to idle in the event of high hydraulic system temperature level. _____

22 Water System

- 22.1 The water tank shall be constructed of polyethylene. _____
- 22.2 To maximize available sweep time, the water tank capacity shall be a minimum of 220 gallons.NO EXCEPTIONS. _____
- 22.3 A 3gpm self priming water pump shall be supplied and not subject to damage when operated dry. _____
- 22.4 A quick disconnect 16' hydrant hose and coupler shall be provided for water tank filling. _____

- 22.5 Sweeper shall be equipped with a quick fill hydrant connection without having to remove any covers/caps. _____
- 22.6 An external water filter shall be provided. The filter must be accessible with body lowered. A shut off (isolation) valve must be provided to facilitate servicing. _____
- 22.7 To ensure all water is drained from the water tank, the drain location must be in the bottom of the tank, not the side. _____
- 22.8 A storage rack shall be provided for the hydrant fill hose. _____
- 22.8 All water lines shall be nylon to prevent damage and color coded green so that they can be easily identified. _____
- 22.10 To facilitate easy cleaning, all water spray jets shall be removable without the use of tools. _____
- 22.11 To prevent contamination, the supply line from the water tank must originate from the side of the tank and not the bottom of the tank. _____
- 22.12 Spray jets must be located at each gutter broom (3), in front of main rear broom (4) and on front bumper (5). _____

24. Maintenance

- 24.1 All controlling elements for the sweeper's electrics and hydraulics shall be housed in a easily accessible, side compartment. _____
- 24.3 All electrical wiring shall be contained within flame retardant conduit. _____
- 24.4 All wires shall be color & numbered coded for ease of troubleshooting. _____

25. Safety

- 25.1 One rear mounted amber flashing strobe shall be provided. _____
- 25.2 A back up alarm of not less than 107 dB(A) shall be installed and shall sound when reverse gear is selected. _____

- 25.3 To prevent damage, all brush gear must raise automatically when the truck transmission is placed in reverse and must resume to working position automatically when placed in drive gear. NO EXCEPTIONS. _____
- 25.4 The sweeper shall be equipped with a sweep/transport switch to permit quick start/stop sweeping operation. To prevent transport at road speed all sweep functions shall cease and gear raise, when transport mode is elected. NO EXCEPTIONS. _____
- 25.5 The sweeper shall be equipped with a rear camera. the rear view must automatically be shown when the transmission is placed in reverse gear. _____
- 25.6 For safety purposes, hopper dump and tilt functions shall not activate unless the vehicle parking brake is engaged to prevent movement of the sweeper with hopper raised. _____
- 25.7 For safety purposes, a secondary switch must be engaged and held to activate the dump switch to prevent accidental engagement. NO EXCEPTIONS _____
- 25.8 For safety reasons, the sweeper shall be equipped with a weight load audible alarm in cab. NO EXCEPTIONS. _____

26. Paint

- 26.1 To provide corrosion protection, the sweeper must be painted utilizing polyester powder coat. Wet paint systems are not acceptable. NO EXCEPTIONS. _____

27. Warranty

- 27.1 The sweeper auxiliary engine shall carry a two-year warranty, 100% parts and labor minimum. Include warranty statement with your bids. _____
- 27.2 Warranty repairs to be made at customer's premises including all parts and labor, 100% coverage, no pro-rating. _____
- 27.3 The sweeper hydraulic pump and valve assembly shall have a 1 year warranty. _____

