

## SPECIFICATIONS FOR MECHANICAL STREET SWEEPER

### REQUIREMENTS

Each street sweeper shall be a new, latest current model of the manufacturer's current standard production. Though they are not specifically covered herein, all parts necessary to provide a complete and efficient sweeper shall be furnished with a unit of this type. Such parts shall conform to current engineering practices of the industry relative to design, strength, quality of materials, and workmanship.

Each unit shall be complete when delivered to the Idaho Transportation Department, with all accessories and equipment in place or furnished. All equipment and accessories shall be as approved by the vehicle manufacturer.

Exemption certificates for all allowable excise taxes will be furnished by Idaho Transportation Department.

Demonstrators will not be considered.

Delivery of sweeper is required within 250 days of receipt of purchase order.

Liquidated Damages: The successful bidder agrees to delivery of items as required in this bid. Failure to deliver as required constitutes an event of default. The actual damages to the Idaho Transportation Department for the delay will be difficult or impossible to determine. Therefore, in lieu of actual damages, the successful bidder shall pay to the Idaho Transportation Department liquidated damages for each calendar day of delay an amount of \$100.00 per unit, up to a maximum of 90 calendar days. Should the successful bidder be unable to complete the delivery at the end of the 90-day period, the Idaho Transportation Department may, at its option, treat the contract as breached, terminate the contract, purchase substitute goods elsewhere, and charge the full increase, if any, in cost and handling for such purchase to the defaulting vendor and seek such additional relief as provided by law. The successful bidder shall not be charged for liquidated damages when delay arises out of cause beyond the control and without the fault or negligence of the successful bidder.

Complete specifications and descriptive literature shall accompany each bid, along with Questionnaire Appendix A. The Item Description Column shall also be completed describing the item in sufficient detail to distinguish what is being supplied from the vendor. **If the aforementioned requirement is not submitted with bid, the bidder will have 48 hours following written notice to submit the literature. Failure to comply will render bid non-responsive.**

## MECHANICAL STREET SWEEPER (Contd)

For the sake of clarity, the truck and points system for cost saving items will be listed under their appropriate sections.

- Section I - General Description
- Section II - Truck Chassis
- Section III - Sweeper
- Section IV - Delivery Location

### GENERAL

The sweeper furnished under these specifications shall be a six-wheel, self propelled pickup street sweeper. It will be used for sweeping all types of debris-type materials from state highways. The unit shall meet or exceed the following minimum specifications:

### SECTION I – GENERAL DESCRIPTION

		<u>Item Description</u>
A.	<u>Description</u>	
1.	Type – Manufacturer’s standard two gutter (left and right) high dump mechanical broom.	YES
2.	Configuration – Six-wheel type.	YES
3.	Engine – Dual engine design.	YES
4.	Sweeping Width – 120 inches minimum.	YES
5.	GVW Rating – 32,000 pounds.	EXCEEDS/32,900
6.	Warranty – Shall be for the duration as described below at the delivered destination. Technician travel time and mileage shall be included as part of the warranty to the machine delivered destination as described in Section IV of this specification.	YES
a.	Chassis – Three (3) years parts and labor on complete truck chassis.	YES
b.	Power Train – Three (3) years on engine, transmission and rear differential including all parts and labor.	YES
c.	Sweeper – Two (2) years or 2,000 hours parts and labor on entire sweeper, including engine.	YES
d.	Water Tank - Manufacturer’s warranty shall not be less than life time protection against rust-through of the water tank.	YES

**MECHANICAL STREET SWEEPER (Contd)**

	<u>Item Description</u>
e. Bidders submitting literature stating warranties which do not fully comply with warranty requirements of this specification, must submit a letter from the manufacturer certifying warranty compliance as an integral part of their proposal.	We Fully Comply
7. Color	
a. Cab and Body – Manufacturer’s Standard Winter White.	YES
b. Chassis – Polyurethane Black.	YES
c. Wheels – Manufacturer’s standard powder coated White.	YES/see addendum
d. Color chip shall be supplied and approved by the Equipment Superintendent prior to ordering.	YES
e. Warranty – Paint shall be warranted for a period of two (2) years against fading and peeling.	YES
8. Lube System – Automatic type to provide timed grease application to all greaseable points for the chassis and sweeper. System shall have a two quart capacity and individual nylon hoses to each grease point. Shall be a “Mid West” centralized lubrication system.	YES

**SECTION II – TRUCK CHASSIS**

	<u>Item Description</u>
A. <u>Description</u>	
1. Type – Cab over engine design.	YES
2. Wheelbase – 135 inches maximum.	YES/132”
3. Cab to Axle Dimension – 105 inches maximum.	YES/101”
4. Tow Hooks – Manufacturer’s standard.	YES
5. Frame:	
a. Type – High strength, heavy-duty full continuous one-piece channel.	YES
b. Section Modulus – 17.2 minimum.	EXCEEDS/35.7

## MECHANICAL STREET SWEEPER (Contd)

		<u>Item Description</u>
	c. Resisting Bending Moment – 1,800,000 in lbs. minimum.	Exceeds/1,828,000
6.	Fuel Tank – One (1) fifty gallon tank shared by both engines, easily accessible without raising or shifting any components to fill with lockable cap.	YES
7.	Exhaust – Vertical right hand behind cab.	YES/see addendum
8.	Travel Speeds – Shall be capable of maintaining all legal highway speeds.	YES
<b>B. <u>Engine</u></b>		
1.	Type – Shall be in-line, six cylinder, turbocharged, electronic controlled diesel.	YES
2.	Rating – 230 horsepower gross.	YES
3.	Torque – 500 ft. lbs.	EXCEEDS/506 FT/LB
4.	Air Filter – Shall be a two-stage dry type equipped with cab mounted restriction indicator.	YES
5.	Fuel Filters -	
	a. Primary – Replaceable canister or spin-on type.	YES/see addendum
	b. Secondary – Replaceable spin-on type fuel/water separator with restriction indicator mounted in operator’s cab.	YES/see addendum
6.	Oil Filter – Full flow, vertical mounted spin-on type.	YES
7.	Cooling System – Heavy-duty type designed for 110° F temperatures and protected to –30° F with permanent type anti-freeze.	YES
8.	Block Heater – Minimum 1,000 watt with stationary receptacle.	YES
9.	Cold Starting Aid – Ether pressure can type with 1-inch fitting, manual operated quick-start with thermostat control. An engine manufacturer’s standard electric manifold pre-heater is acceptable.	YES
10.	Fan Clutch – Shall be a viscous type.	YES
11.	Oil Sampling Valve – Titan Laboratories Model OD1014 or equal installed for easy access.	YES

## MECHANICAL STREET SWEEPER (Contd)

		<u>Item Description</u>
<b>C. <u>Transmission</u></b>		
1.	Type – Allison Series 2500 five speed overdrive electronic with heavy-duty oil cooler.	YES
2.	Filter – Vertical mounted replaceable spin-on type.	YES
3.	Requirement – Must be designed for heavy-duty truck application.	YES
4.	Oil Sampling Valve – Titan Laboratories Model OD1014 or equal installed for easy access.	YES
<b>D. <u>Axles</u></b>		
1.	Front – 11,500 lbs. rated capacity and equipped with 11,500 lbs. springs, shock absorbers and a front stabilizer bar.	EXCEEDS/11,900
2.	Turning Radius – 20 ft. maximum.	YES/18'
3.	Rear – 21,000 lbs rated capacity 2-speed and equipped with 21,000 lbs. air spring or Chalmers suspension and a magnetic drain plug.	YES
4.	Requirement – Air suspensions shall allow solid axle performance during sweeping modes and full suspension during transport modes. Shall be controlled by a single switch located on the control console. This requirement is NOT required on units provided with a Chalmers suspension.	YES
5.	Gear Ratio – Shall be geared for ideal sweeping speeds and having a minimum road speed of 55 miles per hour. The use of the foot service brake to achieve slowest sweeping speeds is not acceptable.	YES
6.	Alignment – Unit must be chassis aligned prior to delivery. Documentation will be required prior to acceptance.	YES
7.	Unit must meet Federal Motor Vehicle Safety Standards (FMVSS) and an FMVSS sticker must be affixed to unit upon delivery.	YES
<b>E. <u>Driveline</u></b>		
1.	Requirement – Driveline torque rating must exceed engine's maximum torque rating of engine being furnished.	YES

## MECHANICAL STREET SWEEPER (Contd)

		<u>Item Description</u>
2.	Main Shaft – Spicer 1700 series or equal. No section shall exceed 60 inches in length.	YES
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F.	<u>Wheels and Tires</u>	
1.	Wheels - 10-bolt steel disc type with 8.25" base width.	YES
2.	Tires - Steel radial type, 11R x 22.5 14-ply with regular highway tread on front and rear. Shall be Goodyear or Michelin only. Tire and wheel assembly shall be interchangeable between front and rear axles.	YES
3.	Requirement – Rear axle shall include dual tires for load capacity. Single tires will not be accepted.	YES
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G.	<u>Brakes</u>	
1.	Requirement - Brake system to conform to ICC regulations.	YES
2.	Service - Anti-lock (ABS) full air-operated.	YES
3.	Compressor - 15-CFM capacity.	EXCEEDS/20.8cfm
4.	Type - Shall be Meritor "Q" Plus S-cam brakes on rear with manufacturer's standard for front.	YES
5.	Rear Brake Actuators - Shall be sealed, internally vented Haldex 3030 brake chambers.	YES
6.	Slack Adjusters - Automatic type for all axles.	YES
7.	Brake Drums - Outboard mounted for all axles.	YES
8.	Air Dryer – Desiccant type with heater. Shall be a "Nabco" DR-3 or equal.	YES
9.	Reservoir Drain - Manual type moisture ejector.	YES
10.	Brake Lines – Manufacturer's standard.	YES
11.	Brake Actuator Turnbuckles - Shall be one-piece threaded unit and mounted to brake actuator with jam nut. Quick disconnect style is not acceptable.	YES
12.	Plumbing Components – All air brake hardware connections shall have brass fittings. Steel fittings are not acceptable.	YES
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H.	<u>Cab</u>	
1.	Type – Manufacturer's standard two position cab-over design pressurized for dust and weather sealed protected.	YES

## MECHANICAL STREET SWEEPER (Contd)

	<u>Item Description</u>	
2.	Sound Suppression – Manufacturer’s standard acoustical insulation to meet 85 dba levels maximum and finished in automotive type trim.	YES
3.	Steering – Shall be full power, dual position for both seating positions with dual operator controls. Cross bar steering is not acceptable. Each position shall be fully independent and shall include separate steering gear boxes, separate drag links, and separate pitman arms.	YES
4.	Steering Column – Manufacturer’s standard for both operator positions.	YES
5.	Heater – Manufacturer’s heavy-duty fresh air type with dual defrosters and side window defoggers. Shall have flow through ventilation for optimal temperature control and operator comfort.	YES
6.	Air Conditioner – Manufacturer’s standard factory installed heavy-duty for sustained operation in 110° F ambient temperature.	YES
7.	Seats – Air ride suspension high back type with cloth upholstery, headrests, and three point seat belts for both seating positions.	YES
8.	Mirrors – Two (2) heated, motorized west coast type mirrors with quick disconnect plug mounted forward of front wheels. Shall be adjustable from operator’s position and equipped with 12 inch convex mirror.	YES
9.	Windshield Wipers – Shall be heavy-duty two speed intermittent type.	YES
10.	Windshield Washers – Manufacturer’s standard electric with washer nozzle mounted on wiper arm.	YES
11.	Glass – Shall be tinted safety type.	YES
12.	Sun Visors – Two (2) total, one for each operator position.	YES
13.	Door Windows – Shall be roll down type and must roll down completely.	YES
14.	Radio – Manufacturer’s standard factory installed AM/FM stereo with clock.	YES

## MECHANICAL STREET SWEEPER (Contd)

		<u>Item Description</u>
15.	Cigarette Lighter – Manufacturer’s standard with ash receiver.	YES
16.	Front Bumper – Manufacturer’s standard.	YES
17.	Fire Extinguisher – 5 pound capacity installed in cab.	YES
18.	Flare Kit - Manufacturer's standard with triangle shaped emergency reflectors.	YES
19.	Hour meter – Manufacturer’s standard mounted in operator cab.	YES
20.	Operator’s Controls – Manufacturer’s standard for both operator positions to enable operator to view curb location on either the left or right side when sweeping.	YES
21.	Air Horn – Manufacturer’s standard dual trumpet mounted to roof of cab.	YES
I.	<u>Electrical</u>	
1.	Type – 12-volt negative ground.	YES
2.	Battery – Dual maintenance free batteries rated at 900 CCA each.	EXCEEDS/1250ea
3.	Alternator – Shall be 130 ampere rating minimum.	YES
4.	Chassis Lighting – Shall include sealed multi-beam halogen headlights, stop lights, tail lights, backup lights, license plate light, clearance lights, directional lights with hazard switch, and illuminated gauges and instrument panel.	YES
5.	Requirement – All lighting must comply with Federal Standards.	YES
6.	Switches – Rocker type for hydraulic functions mounted in a control panel located in the operator’s cab. Switches shall be clearly identified by name and international symbol and illuminated so they can be readily identified without the use of the cab dome light.	YES
7.	Backup Alarm – Shall be a Preco-Matic ambient automatic type.	YES
8.	Circuit Breakers – Shall be supplied in lieu of fuses where available.	YES

## MECHANICAL STREET SWEEPER (Contd)

### SECTION III - SWEEPER

		Item Description
A.	<u>Engine</u>	
1.	Type – Shall be an in-line, four cylinder, wet sleeve design.	YES
2.	Rating – Shall be a minimum of 45 HP @ 2500 RPM, and 100 ft. lbs of torque @ 2000 RPM.	EXCEEDS/49hp
3.	Air Cleaner – Shall be dual stage dry type equipped with a Turbo II pre-cleaner with a cab mounted restriction indicator.	YES
4.	Fuel Filters-	
	a. Primary – Replaceable canister or spin-on type.	YES/see addendum
	b. Secondary – Replaceable spin-on type with fuel/water separator.	YES/see addendum
5.	Oil Filter – Full flow spin-on type matched to engine.	YES
6.	Cooling System – Heavy-duty type designed for 110° F temperatures and protected to –30° F with permanent type anti-freeze.	YES
7.	Cold Starting Aid – Ether pressure can type with 1-inch fitting, manual operated quick-start with thermostat control. An engine manufacturer’s standard electric manifold pre-heater is acceptable.	YES
8.	Oil Sampling Valve – Titan Laboratories Model OD1014 or equal installed for easy access.	YES
9.	Emergency Shut Down – Shall be equipped to shut down engine in the event of low oil pressure, high water temperature and low coolant level.	YES
10.	Block Heater – 750 watt with stationary receptacle.	YES
11.	Mounting – Engine, radiator and auxiliary engine shall be resilient mounted through a dedicated engine frame.	YES
12.	Engine Cover – Shall be supplied to minimize vandalism. Doors accessing engine compartment shall be lockable. The cover shall be aluminum with hinged sections that can be completely folded over to allow easy access to components.	YES
B.	<u>Electrical</u>	

## MECHANICAL STREET SWEEPER (Contd)

	Item Description
1. Requirement – Sweeper electrical system shall be independent from the electrical system of the chassis.	YES
2. Type – 12 volt negative ground.	YES
3. Battery – One (1) 1000 CCA rated.	YES
4. Alternator – “Delco” 33SI, 90 amp rated.	YES
5. Warning Lights – Shall include hydraulic filter restriction, low hydraulic oil, air filter restriction, low water level, hopper up, hopper full, voltage, fuel/water restriction and shall be located in operator’s cab.	YES
6. Hour meter – Manufacturer’s standard mounted in operator’s cab.	YES
7. Circuit Breakers – Shall be supplied in lieu of fuses.	YES
<b>C. <u>Hydraulic System</u></b>	
1. Type – Manufacturer’s standard open or closed circuit.	YES
2. Filter – 10 micron vertical mounted disposable spin-on with bypass.	YES
3. Cooler – Manufacturer’s standard air to oil or liquid to oil.	YES
4. Reservoir – Twenty (20) gallon capacity with pressurized vent, 10 micron fill filter, magnetic drain plug, external sight gauge, shut-off valve and suction strainer.	YES
5. Requirement – For testing, all hydraulic circuits shall have quick disconnect check ports.	YES
6. Oil Sampling Valve – Titan Laboratories Model OD1014 or equal installed for easy access.	YES
<b>D. <u>Gutter Brooms</u></b>	
1. Mountings – Left and right.	YES
2. Type – Plastic, quick change, disposable segments.	YES
3. Size – 42 inches.	YES
4. Drive – Full hydraulic with variable speed control independent of vehicle speed adjustable from inside the operators cab while sweeping.	YES

## MECHANICAL STREET SWEEPER (Contd)

	<u>Item Description</u>
5.	Lift Control – Hydraulic or pneumatic to compensate for sweeping pressure and broom wear, adjustable from inside the operators cab while sweeping and equipped with gauges mounted in operators cab to monitor down pressure. For safety, side brooms shall automatically stop and raise when the transmission is placed in reverse or when the sweeper is put in the transport mode.
6.	Variable Tilt Pitch Control – Electronically controlled linear actuator shall allow the operator tilt the side broom inward and outward while sweeping.
7.	Broom Rotation – Shall include forward and reverse and shall be selectable from the operators cab.
8.	Curtain – Manufacturer’s standard to contain material under sweeper.
<b>E.</b>	<b><u>Pickup Broom</u></b>
1.	Diameter – 34 inches.
2.	Length – 58 inches minimum.
3.	Drive – Hydraulic motor directly mounted to broom core with overload protection.
4.	Type – Strip broom type with polypropylene filler.
5.	Lift Control – Hydraulic or pneumatic to compensate for cleaning pressure and broom wear, broom adjustments shall be adjustable from inside the operators cab while sweeping. For safety, the pickup broom shall automatically stop and raise when the transmission is placed in reverse or when the sweeper is put in transport mode.
6.	Speed – Shall be variable and adjustable from inside the operator’s cab while sweeping.
7.	Hood – Shall be steel and shall be designed to prevent material from being overthrown into traffic.
<b>F.</b>	<b><u>Conveyor</u></b>
1.	Type – Manufacturer’s standard high strength “No Jam” rubber belt with molded rubber cleats. Cleats shall be designed to “funnel” material to the center of the belt.

**MECHANICAL STREET SWEEPER (Contd)**

	<u>Item Description</u>
2.	Requirement – Conveyor must carry, not drag, debris to hopper, must be able to handle debris of varying sizes without making adjustments to the conveyor system, and shall be able to load hopper to 100% of rated useable capacity.
3.	Stall Alarm – Unit shall be equipped with a conveyor stall alarm located in operator cab.
4.	Drive – Hydraulic reversible with variable speed control adjustable from operators cab.
5.	Bottom Plate – Bolt-on replaceable type made of abrasion-resistant steel.
6.	Overload Protection – Manufacturer’s standard.
7.	Adjustable Height – Unit shall be capable of raising conveyor eight (8) inches while sweeping.
8.	Safety – Conveyor shall automatically stop and raise when the truck transmission is placed in reverse or when the sweeper is put in the transport mode.
<b>G. <u>Dirt Hopper</u></b>	
1.	Type – High dump with a dump height of 120 inches.
2.	Requirement – Unit shall dump from the right side and controlled from inside the operators cab allowing operator to observe dump target and surrounding area at all times without the use of mirrors.
3.	Capacity – 3 cubic yard self-load capacity.
4.	Construction – Floor shall be constructed of 7 gauge abrasion resistant steel with 11 gauge top, sides and door.
5.	Dump Angle – Hopper shall tilt to a dump angle of not less than 50 degrees to ensure complete removal of all debris.
6.	Lift Capacity – Shall have a lift capacity of 11,000 lbs. minimum.
7.	Full Indicator – Shall be equipped with a full indicator that is activated by the weight of the material in the hopper.

## MECHANICAL STREET SWEEPER (Contd)

		<u>Item Description</u>
8.	Hopper Window – Hopper load shall be visible from the cab through a front facing window in the hopper and an upward facing skylight.	YES
9.	Safety -	
a.	Interlock – Shall be equipped with an interlock to prevent dumping hopper without engaging park brake.	YES
b.	Grade Indicator – Shall be equipped with an “Unlevel Grade” indicator in operator cab.	YES
10.	Dump – Unit shall dump without the use of outriggers and other aids.	YES
11.	Lubrication – All lift joints and hopper pivots shall be greasable or shall be constructed using self lubricating bronze bushings.	YES
<b>H. <u>Water System</u></b>		
1.	Type – Manufacturer’s standard corrosion resistant spray system on both gutter and pickup brooms including a front mounted spray bar for increased water supply during extreme sweeping conditions. Spray system shall be designed to meet PM-10 regulations.	YES
2.	Tank – 250 gallon capacity constructed of non-rusting material.	EXCEEDS/280 gal.
3.	Fill Hose – Twenty-five (25) ft. of 2-1/2” file hose with hydrant coupler.	YES
4.	Filter – Tank fill shall be equipped with a filter to prevent contaminants from entering the water tank during filling.	YES
5.	Anti-siphon – Tank shall be equipped with an anti-siphon device compliant to American National Standard Air Gaps in Plumbing Systems ASME A112.12-1991.	YES
6.	Wash Down Hose – A 25 ft. wash down hose shall be provided.	YES
7.	Pump – Shall be an aluminum centrifugal type, (containing no ferrous parts) capable of running dry indefinitely without damage.	YES

## MECHANICAL STREET SWEEPER (Contd)

	Item Description
8. Spray Nozzles – Water system shall include three (3) brass spray nozzles on each broom and three (3) brass spray nozzles on the spray bar.	YES
9. Wash Down System – Shall be equipped with an automatic internal hopper/conveyor flush and wash down system. System shall include a manual bypass valve to divert hydrant water into system. Bypass valve shall be located on the curb side of the vehicle.	YES
10. Spray Bar Controls – Broom spray bars and nozzles shall be controlled from inside the operators cab by electrical activation switches. Water flow control valves shall be non-ferrous heavy-duty “agricultural” type.	YES
11. Hydrant Wrench – Shall be supplied with unit.	YES
I. <u>Emergency Lighting</u>	
1. Warning Lights – Shall consist of the following lights. Rotating lights shall have a separate switch from the alternating lights.	YES
a. Rotating Lights – Two (2) total 15” Ecco “Blaze” Model 5135A dual rotating, halogen, amber, light bars. Each light shall be mounted on the centerline of the vehicle, one fore and on aft.	YES
b. Alternating Flashing Lights – Four (4) “Ecco” No. 3860A 6" oval LED directional style amber warning lights mounted to the rear of the sweeper.	YES
i. Flashing Lights shall incorporate an “Alternating Flasher Delay System”. This system is designed to momentarily cancel the flashing lights when the truck brake pedal or turn signal is activated. The system shall be comprised of the “Crouzet”– No. 88-867-100, 12V AC/DC (OUR4) adjustable timer and eight (8) pin relay base “Crouzet” No. 25-622-128.	YES
<a href="http://www.crouzet.com/crouzet-microcontrole/html/en/crouzet-homepage-EN.htm">http://www.crouzet.com/crouzet-microcontrole/html/en/crouzet-homepage-EN.htm</a>	
2. Switches – Manufacturer’s standard illuminated with labels.	YES

## MECHANICAL STREET SWEEPER (Contd)

	<u>Item Description</u>
3.	Slow Moving Emblem – Manufacturer’s standard mounted to rear of unit. <hr/>
J.	<u>Manuals</u>
1.	The following manuals and schematics are to be supplied for <u>EACH</u> unit provided: <hr/>
a.	Two (2) operators and preventive maintenance manuals. <hr/>
b.	One (1) parts manual in CD-Rom format if available. <hr/>
c.	Two (2) complete shop service, trouble shooting and repair manuals in CD-Rom format if available. <hr/>
d.	One (1) electrical schematic for truck chassis and sweeper. <hr/>
e.	One (1) air and/or hydraulic schematic for sweeper. <hr/>
f.	Two (2) truck chassis and sweeper lubrication charts. <hr/>
g.	Two (2) sets of manufacturer’s instructional videos showing proper safety procedures, maintenance, adjustments, and operation. <hr/>
K.	<u>Service and Training</u>
1.	Successful bidder will be required to furnish a factory employed and trained representative capable of making any needed final adjustments to the unit at time of delivery. <hr/>
2.	A qualified technician shall provide complete training covering safety features, operational, and preventative maintenance to ITD personnel at the at the time of delivery or at a time requested by the Equipment Superintendent at each delivered destination. Training shall be no less than four (4) hours. <hr/>
3.	Department shall be notified two (2) weeks in advance of scheduled delivery. <hr/>

## MECHANICAL STREET SWEEPER (Contd)

### SECTION IV – DELIVERY LOCATION

1 Unit Each Delivered to:	Idaho Transportation Department District 3 Yard 8150 Chinden Blvd. Boise, Idaho 83714	YES
1 Unit Each Delivered to:	Idaho Transportation Department District 4 Yard 216 Date St. Shoshone, Idaho 83352	YES
1 Unit Each Delivered to:	Idaho Transportation Department District 6 Yard 206 N. Yellowstone Rigby, Idaho 83442	YES

## MECHANICAL STREET SWEEPER (Contd)

### QUESTIONNAIRE APPENDIX A

#### SECTION I - TRUCK CHASSIS

1. Make and Model NISSAN UD3300
2. Rated GVW 32,900 lbs
3. Wheel Base 132 in.
4. Sweeping Width 120 in.
5. Lube System: Make and Model MID- WEST AC3
6. Frame: Section Modulus 51,200PSI / 35.7 section RBM 1,828,000 in/lbs.
7. Engine:  
Make and Model HINO MD230  
Horsepower 230 Torque Rating 506 ft/lbs
8. Transmission: Make and Model Allison 2500 Series Electronic / 5 Speed Overdrive
9. Axle Capacity: Front 12,000 lbs Rear 21,000 lbs
10. Name of Dealer Furnishing Truck Chassis Chicago Mack

#### SECTION II - SWEEPER

1. Make and Model ELGIN EAGLE "F" DUAL
2. Engine:  
Make and Model JOHN DEERE MODEL 4024 TF270  
Horsepower 49 Torque Rating 127 ft/lbs
3. Broom Diameter: Gutter 42 in. Pickup 35 in.
4. Pickup Broom Length 60in.
5. Conveyor Type Heavy duty belt type with molded-in "chevron style" rubber cleats
6. Hopper Capacity 4.5 volumetric / 3.3 material Cu. Yd
7. Required delivery is 250 days after receipt of order.  
Can you meet the required delivery? YES