

CPA – Statewide Procurement

Revised: May 2022

Attachment I

SWEEPER, ROAD, SELF-PROPELLED

PART I

GENERAL INFORMATION, REQUIREMENTS, AND CONDITIONS

1. The equipment furnished under this specification shall be the latest improved model in current production, as offered to commercial trade, and shall be of quality workmanship and material. The Contractor represents that all equipment offered under this specification shall be new. USED, SHOPWORN, DEMONSTRATOR, PROTOTYPE, REMANUFACTURED, RECONDITIONED, OR DISCONTINUED MODELS ARE NOT ACCEPTABLE.
2. All parts not specifically mentioned which are necessary for the unit to be complete and ready for operation or which are normally furnished as standard equipment shall be furnished by the Contractor. All parts shall conform in strength, quality and workmanship to the accepted standards of the industry
3. The unit provided shall meet or exceed all federal and State of Texas safety, health, lighting and noise regulations and standards in effect and applicable to equipment furnished at the time of manufacture.
4. It is the intent of the agency to purchase goods, equipment and services having the least adverse environmental impact, within the constraints of statutory purchasing requirements, agency needs, availability, and sound economic considerations. Suggested changes and environmental enhancements for possible inclusion in future revisions of this specification are encouraged.
5. Any example shown is listed to show type and class of equipment desired. Contractors are cautioned to read the specifications carefully, as there may be special requirements not commonly offered by the equipment manufacturer. DO NOT ASSUME YOUR STANDARD EQUIPMENT MEETS ALL DETAILED SPECIFICATIONS MERELY BECAUSE IT IS LISTED AS AN EXAMPLE. Contractors are cautioned that units which do not meet specifications in every aspect will not be accepted.

PART II

SPECIFICATIONS

1. SCOPE: This specification describes a self-propelled road sweeper with a hydraulically driven brush assembly, able to sweep at left and right angles. At time of delivery the unit shall be rated at the latest Tier Rating required by the federal government. The unit will be used to sweep roads for surface preparation for seal coat and overlay (multi-course treatment) operations, and for general sweeping operations, including but not limited to, sweeping of dried packed soil, debris, and sand or aggregate spread on roads and bridges during icy conditions. The fully loaded unit shall climb a minimum 15 percent grade from a standing start for loading on equipment trailers and shall provide a mandatory 36 percent gradeability at 20 mph. A unit furnished to this specification shall meet or exceed all the following requirements.

EXAMPLES: Broce Broom Highway Sweeper RJ-350
 Rosco RB-50
 Superior DT74J
 or CPA approved equal.

2. LIQUID-COOLED DIESEL ENGINE: Unit shall be equipped with:

- 2.1. A certified Tier 4 Final or higher emission standard four cycle automotive or industrial type liquid-cooled diesel engine. TWO CYCLE OR MARINE ENGINES ARE NOT ACCEPTABLE. Contractors wishing to have other engines considered for future purchases should contact the Equipment Purchasing Section of the Texas Department of Transportation, Austin, Texas.

ENGINES: Cummins Model 4B3.3T
 John Deere Model 4045
 Hatz H450TIC
 Or CPA approved equal

- 2.2. Horsepower, minimum 74 gross HP at governed rpm.
- 2.3. 12V or 24V electrical system consisting of a starter and heavy-duty alternator which shall be highest rated available from the manufacture. The alternator shall be capable of fully powering all electrical components simultaneously, including accessories, while they operate under maximum load.
- 2.4. Sealed, spill-proof (no free electrolyte) maintenance-free type battery with spiral wound cells and a sufficient cold cranking amperes (CCA) total battery rating to reliably start the unit in zero-degree Fahrenheit weather. Shall be covered by minimum 12-month full replacement warranty and minimum 36 month prorated warranty. Replacement battery shall be furnished by Contractor during 12-month initial warranty period at no cost (including shipping or environmental fees) to CPA.

EXAMPLE: Optima YellowTop
 or CPA approved equal

- 2.5. A keyed ignition or password protected push button ignition system, with neutral safety switch to prevent engine starting while the transmission is in gear.

- 2.6. Dry type air cleaner system, including a primary element, a safety element, and a restriction (service) indicator. Indicator shall be easily visible from the operator station. The pre-cleaner shall be substantially braced to withstand machine vibration.

EXAMPLES: Donaldson Cyclopac Series with safety element
Donaldson "The Informer" type service indicator
or CPA approved equal.

NOTE: "The Informer" type indicates the percentage of contamination.

- 2.7. Diesel engine fuel filtration system including a screen at the fuel tank or transfer pump and a minimum of two stages of filtration. Filter stages may consist of a primary and a secondary filter, or a two-stage filter in a common housing. A minimum of one drain shall be provided in the system to prevent water damage to the injection system. All items shall be factory approved and factory installed.
- 2.8. The unit shall be equipped with a cold weather starting aid. The following types are acceptable:
- 2.8.1. ECM controlled charge air grid heater
 - 2.8.2. An engine block cooling system heater.

EXAMPLE: Hotstart 110V
Or CPA approved equal

NOTE: Ether is not acceptable.

- 2.9. Full-flow oil filtration system with replaceable filter and provision for bypassing oil to the engine as the filter becomes clogged. Lubrication system shall be pressurized. Splash type system is not acceptable.
- 2.10. Muffler and exhaust pipe of sufficient length to exhaust fumes away from the operator. If muffler is vertical, exhaust pipe shall be angled at the top to prevent rain from directly entering the exhaust system.
- 2.11. Cooling system with extended life antifreeze protection to -30°F or lower.
- 2.12. Fuel tank shall be sufficient for eight hours of continuous operation and constructed of cross-linked polyethylene or steel, anodized or treated by some other suitable means to prevent internal rust. Tank shall be mounted in a manner which will protect it from excessive heat generated by the engine exhaust system, not inhibit normal maintenance of other systems, and provide the operator with unobstructed view of the entire broom assembly from the operator's position.
3. ENCLOSED CAB WITH ROPS: Manufacturer's regularly advertised fully enclosed cab, constructed of steel and glass. ROPS built into the cab shall meet current SAE J1040. Cab shall be equipped with the following, as a minimum:

- 3.1. Powered windshield wipers, one front and one rear, with spray washer for both front and rear windshield. Washer fluid containers shall be installed within the enclosure or, if installed outside the enclosure, shall be encased to protect the containers from sunlight damage.
- 3.2. Heater, minimum 13,000 BTU/hr, and defroster with fan.
- 3.3. Inside rear-view mirror, a minimum of 6 inch x 9 inch, West Coast type outside rear view mirrors for left and right sides, a minimum of 6 inch x 15 inch. Convex mirrors are not acceptable.
- 3.4. Safety non-skid steps and insulated cab floor with rubber grommets or boots around cab components that extend through the floor.
- 3.5. Rubber grommets between the underside of the floor of the cab and the chassis. Direct mount is not acceptable.
- 3.6. Adequate windows to give the operator a full 360-degree vision with minimum post or panel interference. Additional glass in the lower half is required to provide full vision of the broom assembly. Cab and sweeper frame construction shall provide operator with unrestricted visibility to properly position broom in close proximity to obstacles.
- 3.7. All glass shall be tinted safety glass. Film tinted glass is not acceptable.
- 3.8. Two (2) windows or two window equipped cab doors to provide cross ventilation. Window frames shall have rubber seals to help absorb impact in the event the door is opened or closed with a sudden force.
- 3.9. If one cab door is furnished, knock-out windows shall be furnished to provide an emergency exit in the event of a rollover.
- 3.10. Door jambs with rubber seals to help absorb impact when the door is closed with a sudden force.
- 3.11. Cab shall be pressurized, and incoming air 100 percent filtered.
- 3.12. Noise level within the enclosure shall not exceed 85 decibels while in operation at recommended sweeping mode of 1,800 to 2,000 RPM.
- 3.13. Cab shall house the electrical fuse/ relay box. Fuse/relay box shall not be mounted in engine compartment due to extreme working conditions.
- 3.14. Factory installed air conditioning (dealer installed system is not acceptable) with a minimum BTU rating of 18,000 and shall provide a minimum 255 CFM air flow. System shall include all necessary components and controls for the system to be complete and ready for operation. System shall use R134A freon or latest technology. System shall comply with the performance requirements and design guidelines of the current SAE J169 and SAE J1503 standards.

- 3.14.1. The components shall be positioned in such a manner that they will not hamper the operator when entering or leaving the enclosure, or while operating the equipment. Air intake location shall ensure exhaust gas will not be drawn into the operator enclosure.
- 3.14.2. The thermostat controls shall be located on the control console and shall be within easy reach of the operator.
- 3.14.3. If unit is roof mounted, cab roof shall be sufficiently reinforced to support the weight of the air conditioning unit and prevent structural vibration cracks. Components shall not exceed 9 inches above the roofline.
- 4. INSTRUMENTATION: The unit shall be equipped with, but not limited to, the following gauges, indicators and alarms. Wherever gauges are specified, indicator lights are not acceptable. If an electronic monitoring system is furnished which monitors the following minimum conditions, it is acceptable. All instrumentation shall be located inside the cab, easily visible to the operator, and labeled in English or show a universally recognized symbol for each specific gauge, indicator, or alarm function. Units equipped with instrumentation gauges shall have non-glare illumination for nighttime visibility. Units shall come equipped with a WARNING label / decal placed near the hydraulic fluid temp gauge that reads "WARNING: DO NOT OPERATE THE UNIT UNTIL HYDRAULIC FLUID TEMPERATURE HAS REACHED ADEQUATE TEMPERATURE RANGE".
 - 4.1. Engine coolant temperature gauge
 - 4.2. Engine oil pressure gauge
 - 4.3. Hydraulic oil temperature gauge
 - 4.4. Ammeter or voltmeter
 - 4.5. Hourmeter, either of the following types are acceptable
 - 4.5.1 OEM, integrated into an electronic instrument display system
 - 4.5.2 Aftermarket, electric quartz, shock proof, totally sealed case, with readout up to 9,999.9 hours. Three screw or flush mount to accommodate equipment system voltage range between 10-80V.

EXAMPLE: Hobbs Model 85001-02
or CPA approved equal

 - 4.6. Fuel quantity gauge
 - 4.7. Audible alarm and warning light for the following engine conditions
 - 4.7.1. High engine coolant temperature
 - 4.7.2. Low engine oil pressure

5. SWEeper DRIVE: Sweeper drive shall be by hydrostatic transmission through a truck differential and shall provide speeds of up a minimum of 20 mph. The transmission shall be equipped with a positive neutral detent or some other means to prevent inadvertent movement of the sweeper while starting the engine or when the sweeper is stationary with the engine running.
6. STEERING: Unit shall be equipped with:
 - 6.1. Hydraulic or hydrostatic type power steering
 - 6.2. Outside turning radius, maximum 22 feet
 - 6.3. Inside turning radius, maximum 13 feet
 - 6.4. A steering column from the steering wheel to the hydraulic power steering motor sufficiently braced to eliminate any side movement.
7. BRAKES: Equipped with a hydraulic master brake cylinder acting on a minimum of two wheels, and a mechanical parking brake. Return spring(s) shall be provided on the brake pedal. Brake lines shall be constructed of zinc or other type of non-corrosive metal. Brakes shall consist of disk or rotor type. Additional Emergency brake safety system – Hydrostat must be disengaged to prevent the machine from moving while the parking brake is engaged.
8. FRONT AXLE: Minimum 3,500 lb. Gross Axle Weight Rating (GAWR), oscillating type. Protective shielding installed on rear side of axle to prevent brush thrown rock and debris from damaging the front brake and steering components.
9. REAR AXLE: Minimum 4,800 lb. Gross Axle Weight Rating (GAWR), semi or full floating type.

EXAMPLE: Model Dana 60-Series carrier
or CPA approved equal
10. TIRES AND WHEELS: Steel belted radial tires, highway tread, minimum 225/75R-15, six ply rating (Load Range C). Implement tires are not acceptable. All same size wheels with identical bolt pattern for both front and rear axle mounting positions.
11. SPRINKLER SYSTEM: The sweeper shall be equipped with a water sprinkler system consisting of a minimum 150-gallon water tank, water pump, spray bar with nozzles, and controls easily accessible to the operator's position.
 - 11.1. Water tank shall have rubber stripping between tank and hold down straps.
 - 11.2. Tank shall have an easily accessible drain valve.
12. BRUSH DRIVE AND CONTROL: The brush shall be driven by a hydraulic motor through hydrostatic direct drive.
 - 12.1. Hand or foot actuated, hydraulic control valves shall be provided at the operator station to control the rotation, angle, raising and lowering of the brush assembly. Controls shall be clearly marked as to their intended functions. All controls for brush movements shall be metered to assure smooth operation of the brush assembly to all positions.

- 12.2. Brush assembly shall be vertically adjustable to any desired position within its operating range, with float detent and a positive down pressure hydraulic control valve. Brush shall be equipped with an automotive shock absorber. The brush must wear evenly across the bristles over the entire length of the brush.
 - 12.3. Brush angle range shall be a minimum of 45 degrees left to a minimum of 45 degrees right. If the unit utilizes brush turntable, it must be sufficiently shielded to eliminate rocks and dirt from entering the guides and binding the angling mechanism.
 - 12.4. All hydraulic hoses and lines shall be routed in such a manner and sufficiently clamped to prevent vibration and chafing.
13. BRUSH: Brush core shall be a minimum 8-1/2 inches in diameter and a minimum 7-1/2 feet in length. The brush assembly shall produce a minimum 77 inch sweeping width when angled 30 degrees left or right.
 - 13.1. All steel construction and filled with convoluted polypropylene type brush wafers with 32 inch diameters.
 - 13.2. Brush assembly to include a wrap-around type metal shield the length of the brush core and covering a minimum of 140 degrees of the top of the brush wafers with protective end plates.
 - 13.3. Brush assembly including wrap-around shield shall not come in contact with the sweeper frame or interfere with any component of the sweeper when angled left or right.
 - 13.4. In addition to the wrap-around shield, the unit shall have a rubber skirt or “mud flap” type deflector that will help prevent the sweeper from kicking up debris onto the sweeper frame and traveling public passing by. The skirt shall run the length of the wrap-around metal shield. Skirt shall be a bolt-on type so it can be replaced when worn or damaged. Rubber skirt shall be a minimum of eight (8) inches long.
14. HYDRAULIC SYSTEM: System as normally provided by the manufacturer and shall be of sufficient size and capacity to perform all hydraulic functions simultaneously, as required.
 - 14.1. Sealed against all contaminants and any necessary air vents shall be filtered. A means shall be provided to maintain hydraulic oil at satisfactory operating temperatures up to at least 110°F ambient temperature.
 - 14.2. Relief valves
 - 14.3. Replaceable element type filter, ten micron or finer.
 - 14.4. Minimum 22 gallon hydraulic oil reservoir with sight level gauge with thermometer. Dipstick is not acceptable.
 - 14.5. Oil cooler shall be mounted to allow for easy clean out of dirt and debris
 - 14.6. Interior walls of reservoir anodized or treated by some other suitable means to prevent rust.
 - 14.7. Hydraulic reservoir mounted outside and away from the operator’s compartment.

- 14.8. Hydraulic system must have an audible alarm that is temperature activated and does not allow operation of the unit until the hydraulic fluid reaches the manufacturers minimum required temperature.
15. SAFETY AND SPECIAL EQUIPMENT: Unit shall be equipped with:
 - 15.1. Seat, cushioned, adjustable type, hydraulic or spring suspension or CPA approved equal, with padded backrest and seat belts meeting the current SAE J386 standard.
 - 15.2. Front and rear bumpers. Rear bumper mounted to the frame.
 - 15.3. Rear fenders.
 - 15.4. Spare wheel and tire mounted on the frame and identical in brand name and type and size as those mounted on the front and rear axles.
 - 15.5. Electric horn.
 - 15.6. Vandalism protection group to include as a minimum, locking filler caps for the fuel tank, hydraulic tank, oil supply, and radiator. Filler caps located behind a locking panel are acceptable in lieu of individual locking caps.
 - 15.6.1. Lockable cab doors: Cab doors and door jambs sufficiently cushioned to prevent glass shattering when the door is opened or closed with a sudden force. Cab doors equipped with door latches that are designed to keep the door closed when in the closed position and open when in the open position.
 - 15.6.2. Lockable windows, if unit is equipped with windows that open.
 - 15.6.3. Lockable engine side-panels
 - 15.6.4. Lockable battery box covers, if batteries are mounted outside lockable engine side panels.
 - 15.6.5. Lockable spare wheel and tire.
 - 15.7. Lockable panels and compartments equipped with integrated locking systems, keyed alike, or padlocks. If padlocks are furnished, two brass keys per lock shall be provided. All padlocks shall be keyed alike. The padlocks furnished shall be of quality construction, greater than or equal to a Master Lock #3.
 - 15.8. Operator's platform shall include grab handles for safe and easy access to operator's platform. Grab handles and steps will be positioned so the operator, when exiting or entering, will maintain a three-point contact with the unit at all times. All walking platforms and steps shall include anti-skid tape.
16. LIGHTING AND SAFETY: The sweeper shall be equipped with, but not limited to, the following items:
 - 16.1. Two halogen or LED, high-low, sealed beam headlights.

- 16.2. The rear of the sweeper shall be equipped with a red tail lamp, a red stop lamp, a turn indicator and a red reflector on each side. The lamps or reflectors may be incorporated and shall be as widely spaced laterally as practicable. The lamps shall be located at a height of not less than 15 inches or more than 72 inches above the ground. If separate reflectors are provided in lieu of an incorporated unit, they shall be housed type with screw or bolt type mounting. The stick-on type is not acceptable. A metal license plate holder and white light shall be provided at center or left side.
- 16.3. Amber turn signal lamps located at the front of the sweeper.
- 16.4. Turn signal controls: 4-way flasher type for off, flash left, flash right and flash both lights.
- 16.5. Amber side marker lamps located on the front side of cab body.
- 16.6. Red side marker lamps located at approximately the rear vertical line of the cab and at the same level as the amber front side marker lamps.
- 16.7. A horn and a backup alarm system distinguishable from the surrounding noise level. Backup alarm shall meet current ISO 9533 standard.
- 16.8. Front bumper, side frame rails, and rear bumper shall include reflective DOT-C2 standard conspicuity tape.

EXAMPLES: 3M Diamond Grade
Avery Dennison
Nippon Carbide Industries Nikkalite
or CPA approved equal

- 16.9. The ROPS cab shall be equipped with two amber LED strobe warning lights meeting Class I SAE J845 requirements. The strobe lights shall be mounted on hinged brackets for lowering the lights below the top of the cab during transport. The lights shall be mounted with one light located on the front left corner and the second light located on the right rear corner. A metal branch guard shall be installed over the strobe lights and not deter full visibility. A fuse, on-off switch, and on-indicator light shall be located in the cab convenient to the operator. The strobe lights shall be an omnidirectional quad flash visible from all directions.

EXAMPLES: Star 255 HTL
Whelen L21 HAC
PSE CL199
ECCO 7900
or CPA approved equal.

- 16.10. All electrical wiring shall be insulated and enclosed in a fibrous loom, plastic loom or flexible conduit for protection from external damage and short circuits. Wiring shall be securely fastened at sufficient intervals to prevent sagging and insure clearance of mechanical parts. Routing of the wiring through the sub-frame, body, deck, etc. shall not interfere with normal operation and use or present a safety hazard. A sealed splice-free modular wiring harness is acceptable. Rubber grommets shall be used wherever wires or harnesses pass through metal. Cab shall house the electrical fuse/ relay box. Fuse/relay box shall not be mounted in engine compartment due to extreme working conditions.

17. RADIO FREQUENCY (RF) INTERFERENCE SUPPRESSION: The vehicle and all equipment and components mounted to the chassis shall incorporate RF interference suppression so as to provide RF interference immunity to and from land mobile radio transceivers operating in the following bands: High Frequency (2 to 30 MHz), Low band (30 to 50 MHz), high band (140 to 174 MHz), UHF band (440 to 512 MHz) and the 700/800/900 MHz band (700 to 975 MHz) and comply with the following requirements:
 - 17.1. Typical land mobile radio transceivers will utilize a 3dB gain antenna with up to a 125 watt RF power output. Antennas will be mounted on the roof, front fender, and/or rear fender of the unit.
 - 17.2. VEHICLE COMPONENT RF SUPPRESSION: All equipment electronic circuits shall be designed to suppress, bypass or otherwise prevent interference from affecting the radio transceiver. The RF immunity requirement shall apply to all Contractor supplied equipment and components thereof including, but not limited to, ignition, AM/FM radio receivers, computers, emission controls, fuel pumps, wiper motors, alternative fuel electronic components, air bag systems, and ABS controllers, etc.
 - 17.3. VEHICLE COMPONENT RF IMMUNITY: The vehicle electronic equipment including, but not limited to, ignition, AM/FM radio receivers, computers, emission controls, fuel pumps, wiper motors, alternative fuel electronic components, air bag systems, and ABS controller, shall not be adversely affected in operation, safety, or control by radio frequency (RF) energy generated and radiated by the transmitter portion of installed transceivers (up to 125 watt output)
 - 17.4. Contractor will be assessed any and all charges associated with the testing and remediation of vehicles which fail to meet Radio Frequency Immunity requirements at any time during the warranty period.
18. WEIGHT CENTERLINE: The weight centerline, computed with the unit in the stowed position, with full fuel tank, without operator, shall be clearly marked on each side of the unit with a green vertical line 3 inches wide and 5 inches high.
19. OVERALL HEIGHT AND TOTAL WEIGHT: The overall height and total weight of the unit as delivered, including standard equipment and all specified options, shall be stenciled in 2 inch high green letters and numerals on each side of the unit in a conspicuous location.

EXAMPLE: Overall Height = 8 feet, 3 inches
Total Weight = 9,650 pounds
20. EQUIPMENT TIE DOWNS: Unit shall be equipped with four tie-downs or four lashing rings for safely securing the unit during trailer transport. Each tie-down or lashing ring shall be a minimum of 3 inches in diameter and shall be welded to the unit as close as practicable to each of the unit's lower four corners. The four tie-downs or lashing rings, as an integral part of the unit, shall have an aggregate rated strength one and one-half times the unit's gross weight.

21. INSTRUCTION ON SAFETY, OPERATION AND PREVENTIVE MAINTENANCE: Contractor shall provide the Customer a minimum one-half day (4 hours) of instruction on safety, operation and preventive maintenance of the unit by factory-trained personnel after the unit has been delivered and is ready for operations, but prior to payment.
22. SAFETY PLAQUES OR DECALS
 - 22.1. Product safety plaques or decals shall be furnished and affixed at the operator station and at any hazardous area. The safety plaques or decals shall describe the nature of the hazard, level of hazard seriousness, how to avoid the hazard, and the consequence of human interaction with the hazard. Permanent plaques are preferred to decals. Type, size and location of product safety plaques or decals shall be in accordance with current ANSI Z535.4 standard.
 - 22.2. A permanent lubrication plaque shall be furnished and visible from the outside of the unit. The plaque shall note all lubrication points and recommended periodic oil changes and lubrication intervals.
 - 22.3. Unit shall be equipped with a triangular slow moving emblem mounted on the rear of the sweeper with unobstructed view and shall not be mounted on or cover any portion of the rear radiator guard. Emblem shall be mounted with a removable or foldable bracket not less than 3 feet or more than 5 feet above the road surface that will allow the emblem to be removed from display during transport.
23. SERVICE POINT ACCESSIBILITY: All lubrication and frequent service items, as recommended by the manufacturer's operators manual, must be readily and easily accessible to the operator/technician.
24. PAINTING: The unit shall be painted with lead free manufacturers paint except for glass, rubber and those accessories or fixtures constructed of rust-resistant or plated material not normally painted. ROPS or FOPS structures may be painted manufacturers standard black color. Areas of the unit normally painted matte gray or matte black by the manufacturer to reduce glare are acceptable.
25. MANUALS: Original manuals in paper format shall be delivered with the unit. It is requested but not required that the manual be printed on recycled paper. Manuals shall include:
 - 25.1. An illustrated parts list covering all components of the unit identifying parts by part number, description and component location.
 - 25.2. Hydraulic schematics.
 - 25.3. Electrical schematics.
 - 25.4. All necessary operating instructions and maintenance procedures for the unit and engine.
 - 25.5. The following additional information shall be provided by the Contractor at time of delivery if not included in the manual required above.
 - 25.5.1. Manufacturer's recommended service/preventive maintenance intervals.

- 25.5.2. Recommended fluids, lubricants and their SAE/API equivalents.

NOTE: OVERHAUL OR TECHNICAL MANUALS ARE NOT REQUIRED.

26. REPLACEMENT FILTERS AND BELTS: A complete replacement set of filters and belts shall be provided for each unit furnished to this specification (not required for cab and chassis). Each filter and belt shall be labeled with the equipment manufacturer's part number as shown in the manufacturer's parts book and shall be furnished at the time of delivery. **ONLY OEM FILTERS AND BELTS ARE ACCEPTABLE.** The part numbers provided on the form shall correspond with the part numbers found in the parts manual for the equipment.
- 26.1. The set of filters shall include, but not be limited to the air, fuel, oil, and hydraulic filters used on the equipment.
- 26.2. The set of belts shall include, but not be limited to the alternator, water pump, and power steering belts used on the equipment.
- 26.3. The Filter and Belt Identification Forms should be completed and submitted in duplicate for informational purposes only. The form can be found at www.dot.state.tx.us/gsd/purchasing/purchasing.htm.
27. MANUFACTURER'S STATEMENT OF ORIGIN (MSO): Contractor shall furnish MSO to the receiving district with each unit at time of delivery. **CUSTOMER WILL NOT ACCEPT THE UNIT AND PROCESS PAYMENT WITHOUT THE MSO.**
28. TITLE APPLICATION FORM: Contractor shall furnish a completed State of Texas Form 130-U, Application for Texas Title and/or Registration, to the receiving district with each unit at time of delivery. The Form 130-U must be the most current version available. **CUSTOMER WILL NOT ACCEPT THE UNIT AND PROCESS PAYMENT WITHOUT THE COMPLETED FORM 130-U.**
29. DATA SHEETS: Data Sheet should be completed and submitted for informational purposes only.

PART III

DELIVERY AND ACCEPTANCE

1. DELIVERY REQUIREMENTS: Delivery of all equipment on this order shall be completed within the number of days specified on the purchase order. Any unit(s) not delivered within this time frame may be canceled from the purchase order or, at the Customer's option, an extension may be granted in writing, whichever is in the Customer's best interest.
 - 1.1. If any unit is canceled for non-delivery, the needed equipment may be purchased elsewhere and the Contractor may be charged any additional increase in cost and handling.
 - 1.2. LIQUIDATED DAMAGES: Unless a delivery extension is granted for acceptable reasons due to circumstances beyond the Contractor's control, liquidated damages of \$160 per unit will be deducted from the invoice for every working day after the expiration of the number of days shown on the purchase order until the units are delivered. This provision is not intended as a penalty but for ease of administration and the avoidance of disputes. The parties agree that \$160 per day is the nearest practicable estimate of cost to rent replacement equipment.
2. ACCEPTANCE INSPECTION: All equipment ordered will be subject to acceptance inspection and performance testing upon receipt. Acceptance inspection and performance testing will not take more than five working days, weather permitting. The Contractor will be notified within this time frame of any units not delivered in full compliance with the purchase order specifications. If any units are canceled for non-acceptance, the needed equipment may be purchased elsewhere and the Contractor may be charged any additional increase in cost and handling.
3. WORKING DAY: A working day is defined as a calendar day, not including Saturdays, Sundays, or regularly observed state and federal holidays.

PART IV WARRANTY

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| <p>1. <u>WARRANTY</u>: The unit shall be warranted against all defects in material and workmanship for a period of not less than 12 months or 1,200 hours of use, whichever comes first, and shall cover 100% parts and labor for the unit. If the manufacturer's standard warranty period exceeds 12 months or 1,200 hours, then the standard warranty period shall be in effect. The warranty begins on the date the unit is determined to meet specifications and accepted into the Customer's fleet.</p> | <p>Warranty
_____Months
_____Hours
whichever
comes first</p> |
|--|--|

NOTE: A delayed warranty in service start date may be requested.

2. INTENT: During the warranty period the Contractor shall be responsible for labor, materials, and other costs as outlined below associated with required warranty repair. It is the intent of this warranty that the Contractor performs warranty repair work. At the Customer's option, the Customer may perform minor warranty repairs to the unit at the Contractor's expense.
 - 2.1. EXCLUSIONS: The Customer will assume the expense for replacement tires and tubes, tire repairs, lubricating oils, hydraulic fluids, greases, filters, fuel, antifreeze, batteries, lights, hoses, belts, cleaning, painting and other minor items normally consumed in day-to-day operations. The Customer will assume responsibility for cost of repairs resulting from collision, theft, vandalism, operator negligence or acts of God.
 - 2.2. EQUIPMENT MAINTENANCE: It is the Customer's practice to maintain the equipment in accordance with the manufacturer's published recommendations.
 - 2.3. MINOR WARRANTY REPAIRS: It is the intent of this warranty that the Contractor performs minor warranty repairs; however, at Customer's option, warranty repairs deemed by the Customer to be minor in nature may be performed by the Customer at the Contractor's expense. Parts required for repairs made by the Customer will be OEM parts and obtained from the Contractor or any commercial source, at no cost to the Customer. Only the actual time required for repairs shall be reimbursed. The Customer will not request reimbursement for additional time incurred such as mechanic's travel time or diagnostic time. Reimbursement by the Contractor to the Customer for the cost of warranty repairs shall be computed as follows:
 - 2.3.1. Labor: Labor for warranty repairs will be calculated at the composite rate for the mechanic in effect at the time of the warranty repairs. Labor rate will not exceed \$40 per hour. The time allowed for each repair will be determined by the manufacturer's standard time schedule. Manufacturer's time schedule shall be furnished to the receiving district with the unit at the time of delivery (if available). If a manufacturer's time schedule is not available, the actual time for repairs, as noted above, will be used.
 - 2.3.2. Warranty Repair Claims The Customer may track and bill warranty repairs through the Customer's fleet management software or on the Contractor's standard forms. .

- 2.3.3. Parts: Replaced parts will be held 30 calendar days and will be available for inspection by the Contractor or authorized representative. Copies of invoices for all parts will be provided to the Contractor. The cost of parts other than those furnished to the Customer at no cost by the Contractor will be billed at actual cost.
- 2.4. **MAJOR WARRANTY REPAIRS**: When major warranty repairs are required, the Customer will notify a representative of the Contractor's Texas dealer by telephone at the location and the telephone number designated by the Contractor on the attached Data Sheet as the point of contact. Major warranty repair work for the purpose of this specification means major repairs to the engine and major repairs to any other components of the unit. Diagnosis of the actual repairs required shall be the responsibility of the Contractor. The unit will be made available at a Customer's facility within a 100-mile radius of the FOB point shown on the purchase order. The repair work may be performed by the Contractor or Contractor's authorized representative.
 - 2.4.1. At the Contractor's option, the unit may be taken by the Contractor to a commercial repair facility. The Contractor shall be responsible for the cost of the round trip transportation of the unit to and from that location.
 - 2.4.2. If mutually agreed upon between the Contractor and the Customer, the Customer may transport the unit to the Contractor's location or authorized repair facility, within the boundaries of the state of Texas. The cost of equipment and manpower necessary to haul the unit for the round trip will be billed back to the Contractor at the rental rate of the equipment and composite hourly rate for the driver in effect at the time for the equipment required. The composite hourly rate for the driver will not exceed \$30 per hour. Rental rate for the truck and trailer will not exceed \$0.80 per mile for the truck and \$8 per hour for the trailer.
- 3. RESPONSE TIME: Warranty repair action shall begin within two working days after notification is made to the Contractor for need of warranty repairs. A representative of the Contractor's Texas dealer will be notified by telephone at the location and telephone number designated by the Contractor on the attached Data Sheet as the point of contact. The Contractor shall notify the Customer immediately of any changes in this location and telephone number. The warranty repairs should be completed and the unit returned to the Customer (or picked up by the Customer at the Contractor's expense as outlined above) within a reasonable period of time. For the purpose of the specification eight working days is defined as a reasonable period of time. Excessive delays incurred for the performance of warranty repairs by the Contractor may adversely affect the Contractor's status as a qualified Contractor.
- 4. BILLING AND PAYMENT FOR WARRANTY REPAIR EXPENSES: Cost will be accumulated for transportation of the unit by the Customer to the Contractor's location or authorized repair facility. Payment for transportation costs as provided for in this section shall be made within 30 calendar days of the billing date.
- 5. PARTS AND SERVICE: The manufacturer of the equipment furnished shall have an authorized dealer within the state of Texas. The authorized dealer shall have factory-trained personnel available for warranty repairs and the performance of service. The dealer shall also maintain an inventory of high-usage parts and a quick source for low-usage parts.

PART V

OPTIONAL EQUIPMENT

1. OPTION NO. 1 – STEEL AND POLYPROPYLENE WAFER BRUSH FILLER: In lieu of the polypropylene brush wafers required in Part II, Paragraph 13.1, the steel brush core shall be filled with alternating 32-inch diameter steel and polypropylene brush wafers. The brush wafers at each end of the brush core shall be polypropylene.
2. OPTION NO. 2 – FRONT SCRAPER BLADE: Shall be hydraulically operated with hydraulic lift and float. Shall be a minimum of 7-1/2 feet wide by 19 inch high and have an angled shaft of 22 degrees left to right. Shall have replaceable scraping edge and be mounted to the front of the sweeper.
3. OPTION NO. 3 – TOW PACKAGE: The sweeper shall be equipped with a tow bar and safety chains for transporting. Unit shall either have a neutral gear for towing or a quick disconnect gear box to make the transition from the sweeping to the transporting mode. Towing package shall include an emergency breakaway system that will engage the sweeper brakes in the event that the sweeper becomes disengaged from the towing vehicle.
 - 3.1. SAFETY CHAINS: Two (2) safety chains, equipped with integral safety hooks and spring-type hook latches shall be attached to the tongue.
 - 3.2. Each chain shall be of sufficient length for the coupled towing truck and sweeper to make full turns without binding.
 - 3.3. Each chain shall be of sufficient length for crossing beneath the tongue to form a cradle which shall prevent the tongue from coming into contact with the road surface if the hitch becomes disconnected.
 - 3.4. Two (2) twin clevis links shall be provided for adjusting chain length.
 - 3.5. Chains shall not be welded to the sweeper.
 - 3.6. All welds shall be cleaned, ground to a smooth finish and painted.
 - 3.7. Cold shut, quick link, lap link, and missing link couplers are not acceptable.
 - 3.8. All chains, welds, and attachments to the sweeper shall be an aggregate breaking strength greater than the gross weight of the unit being towed and shall meet or exceed the requirements of 49 CFR § 393.70.
4. OPTION NO. 4 – CURB BRUSH: The sweeper shall be equipped with a minimum 27-inch diameter heat-treated steel brush to be powered by either a hydraulic or hydrostatic motor which will fold up out of the way when not in use.
5. OPTION NO. 5 – ADDITIONAL SET OF MANUALS: In addition to the manual sets required in Part II, Para. 25, one additional set of operators, service and parts manuals shall be provided at time of delivery.
6. OPTION NO. 6 – COMPLETE SET OF OVERHAUL MANUALS: In addition to the manuals required in Part II, Para. 25, one complete set of specialized major overhaul and technical manuals for the engine, transmission, hydraulic system, electrical system, etc., shall be provided at time of delivery.
7. OPTION NO. 7 – BACK-UP CAMERA: Rear mounted rear facing camera wired to minimum 7" in-cab monitor. Camera shall be able to operate automatically when in reverse and operator shall have the option to operate in forward gear. Placement of camera and monitor shall be approved by the Customers prior to delivery.

EXAMPLE: Zone Defense ZD.323.1CH
 Or CPA approved Equal.

Authorized Warranty Service Provider

Name and address of firm nearest the FOB point that will provide warranty service and repair parts. If there is more than one line item on the solicitation, respondent shall provide information on servicing dealer nearest each FOB point:

 Firm Name

 Address

 City, State, Zip

 Individual Contact Name

 Phone

 Email Address

 Fax Number

 Website – URL

 If servicing dealer furnishes parts for minor repairs by Customer personnel, will this affect the warranty? (Y/N)

If answer is “yes” please attach explanation.

 Name of Firm Submitting Response

 Individual Contact Name

 Phone Number

 Fax Number

 Email Address

 Website URL

 Respondent’s Signature

 Print or Type Respondent’s Name