

REQUEST FOR BIDS

FOR

Combination Sewer Cleaning Unit



June, 2006
Prepared By:
City of Prescott
Wastewater Division
P.O. Box 2059
Prescott, AZ 86302

Notice Inviting Bids

Sealed bids will be received at the Office of the City Clerk, City of Prescott, 201 South Cortez Street (PO Box 2059), Prescott, Arizona 86302, before 2:00 PM on Thursday, June 15, 2006, for the furnishing of One, Combination Sewer Cleaning Unit, All bids will be opened and read aloud at 2:00 PM on Thursday, June 15, 2006, in the Office of the City Clerk.

Any bid received at or after 2:00 PM on the above-stated date will be returned unopened. The City of Prescott reserves the right to accept or reject any and all bids, or any part thereof, and waive any informality deemed in the best interest of the City.

Copies of the Notice Inviting Bids, specifications, and necessary information are available by contacting Purchasing Services, City of Prescott (PO Box 2059), Prescott, Arizona 86302, phone (928) 777-1224, or FAX (928) 777-1234 (TDD: 777-1100). A copy may also be downloaded from the City website at www.cityofprescott.net/business/bids.

The outside of the bid envelope shall indicate the name and address of the bidder, shall be addressed to the City Clerk, City of Prescott, at the above address and shall be marked: "BID – Combination Sewer Cleaning Unit".

Liz Burke, City Clerk
Published: 1TC June 8, 2006

Request for Bids

General Conditions

1. Preparation of Bids

- A. All information requested of the bidder shall be entered in the appropriate space on the enclosed forms. Failure to do so may disqualify your bid.
- B. All information shall be entered in ink or typewritten. Mistakes may be crossed out and corrections inserted before submission of your bid. Corrections shall be initialed, in ink, by the person signing the bid.
- C. Corrections and/or modifications received after the closing time specified will not be accepted.
- D. Time of delivery shall be stated as the number of calendar days following receipt of the order by the bidder to receipt of the goods or services in the City. Time of delivery is a consideration in the award.
- E. Prices will be considered as net if no cash discount is shown.
- F. All bids shall be signed by an authorized officer or employee of the bidder.
- G. Bids must be submitted by the date and prior to the time specified in the Notice Inviting Bids to be considered. No late bids, telegraphic or telephone bids will be accepted.
- H. Submit bids in a sealed envelope with the bid title and closing date and time shown.

2. Brand Names

- A. Brand names and numbers when used are for reference to indicate the character or quality desired.
- B. Equal items will be considered, provided your bid clearly describes the item. Bids for equal items shall state the brand and number or level of quality. The determination of the Purchasing Agent as to what items are equal shall be final and conclusive.
- C. When brand, number, or level of quality is not stated by the bidder, it is understood that the bid is exactly as specified.
- D. The item(s) described in the specification shall be new, unused, manufacturer's latest improvements. The item bid shall include all standard materials and equipment as shown in the manufacturer's printed literature, and shall include all items to provide functional and/or operational units. Items modified or designed specifically to meet these specifications which are not normally standard items in the industry will not be considered. This does not preclude the changing of minor ingredients or components to those specified, so long as proper engineering and testing has occurred and documentation is furnished with the bid and the City is supplied with acceptable, fully functional and operational materials or equipment.
- E. All workmanship and materials shall be of good quality. All materials and equipment shall meet all applicable and current OSHA, EPA, Federal, Arizona State and industry regulations and standards in effect at delivery.
- F. The item bid shall meet or exceed these specifications. Compliance with or exception to the specification shall be indicated on the bid. Any variation from the printed literature supplied shall be indicated on the bid. Exceptions to these specifications as noted by the bidder will be subject to evaluation and consideration by the City as to quality, suitability, compatibility and design integrity in relation to the intended use.
- G. The City will make sole determination as to acceptance of any exceptions. The item will be reviewed for quality, workmanship, materials, and compliance.

- 3. Taxes.** If your company is outside Arizona and collects use tax, please state the amount as a separate item if the City is to remit the tax.

4. **Liabilities.** The bidder shall hold the City of Prescott, its offices, agents, servants and employees harmless from liability of any nature of any kind because of use of any copyrighted or uncopied composition, secret process, patented or unpatented invention, articles or appliances furnished or used under this bid and agrees to indemnify the City at his own expense for any and all actions brought against the City of Prescott because of the unauthorized use of such articles, composition, process, invention, items or appliance, including expert witness fees and attorney fees incurred by the City.
5. **Cash Discounts.** In connection with any cash discount specified on this bid, time will be computed from the date of complete delivery of the supplies or equipment as specified or from date correct invoices are received in the City Finance office if the latter date is later than the date of delivery. For the purpose of earning the discount, payment is deemed to be made on the date of mailing of the City warrant or check.
6. **Default by Bidder.** In case of default by the bidder, the City of Prescott may procure the items or service from other sources any may deduct from any moneys due or that may thereafter become due to the bidder the difference between the price named in the contract or purchase order and the actual cost thereof to the City of Prescott. Prices paid by the City shall be considered the prevailing market price at the time such purchase is made. Periods of performance may be extended if the facts as to the cause of delay justify such extension in the opinion of the Purchasing Agent.
7. **Award.** The City of Prescott reserves the right to (1) award bids received on the basis of individual items or groups of items or on the entire list of items; (2) reject any or all bids, or any part thereof; (3) waive any informality in the bids; and (4) to accept the bid that is in the best interest of the City. The City Council's decision shall be final.
8. **General Conditions.** The intent of this sealed bid is to enter into a Purchasing Contract for One (1) New Unused Combination Sewer Cleaning Unit. The City of Prescott is not responsible for cost errors on the "Bid Form". The total amount shown at the sealed bid opening shall remain in effect for one hundred and eighty days.
8. The parties hereto expressly covenant and agree that in the event of a dispute arising from this Agreement, each of the parties hereto waives any right to a trial by jury. In the event of litigation, the parties hereby agree to submit to a trial before the Court.
9. The parties hereto expressly covenant and agree that in the event of litigation arising from this Agreement, neither party shall be entitled to an award of attorney's fees, either pursuant to the Contract, pursuant to ARS Section 12-341.01 (A) and (B), or pursuant to any other state or federal statute.

10. Exceptions to Specifications

The items bid shall meet or exceed the attached specifications. Compliance with or exception to the specification shall be indicated on the bid. **ANY VARIATION FROM THE PRINTED LITERATURE SUPPLIED BY THE VENDOR SHALL BE INDICATED ON THE BID.** Exceptions to the specification as noted by the bidder will be subject to evaluation and consideration by the City as to quality, suitability, compatibility and design integrity in relation to the intended use. The City will make sole determination as to acceptability of any exceptions.

11. Warranty

All equipment purchased on this bid shall be purchased from one (1) vendor. That one vendor shall be fully responsible for all warranty performance relating to any part or component of the purchased equipment. The vendor's responsibility shall include all warranty involving sub-contractors. The vendor shall supply a warranty on all parts and workmanship from the initial in-service date. The vendor shall guarantee further that the equipment to be supplied complies with all applicable regulations.

- A. Submission of this bid shall constitute a guarantee by the bidder that a complete stock of replacement parts for the specified equipment is available.
- B. Bidder shall include with the bid package a list of locations within Arizona from which warranty work will be administered.
- C. Successful vendor shall supply a minimum twelve-month warranty on all defective parts and workmanship from the initial in-service date as reported by the City of Prescott. Bidder to submit written conditions and duration of warranty, in detail, on attachment to bid.

- D. Insofar as possible, warranty work will be performed at owner's facility. If warranty work is to be provided at the vendor's location, the vendor shall be responsible for transport to and from the owner's facility and any cost incurred therein. All equipment purchased on this bid shall be purchased from one (1) contractor/vendor. That one (1) contractor/vendor shall be full responsible for all warranty performance relating to any part or component of the purchased equipment. The contractor/vendor's responsibility shall include all warranty involving subcontractors.
- E. All manufacturers' warranties shall remain in effect.

12. Manuals

Two (2) copies of each: parts book, operator's manual and service manual are required for each unit purchased. These manuals shall include schematic diagrams for all wiring and all plumbing and/or hoses. The City prefers that hydraulic schematics supplied be for the graphic type per ANSI Y32.10; a component location diagram should also be included.

The manuals and schematics supplied shall provide complete and comprehensive information on all equipment, equipment components and accessories as supplied to comply with this specification. If changes, modifications, additions or alterations of any kind are made on the equipment, the contractor shall provide blueprints, line drawings or descriptive text sufficient to allow one of average skill in general mechanics to diagnose, repair and maintain the equipment and all components.

On equipment assembled from manufactured components, parts manuals shall show the manufacturer of each part and all cross referencing between the contractor and the manufacturer.

14. Safety Standards

All items supplied on this contract must comply with the current applicable occupation safety and health standards of the State of Arizona Industrial commission, the National Electric Code, and the National Fire Protection Association Standards.

1. Cooperative Use Of Contract

This contract may be extended for use by other municipalities, school districts and government agencies in the State of Arizona with the approval of the contracted vendor. Any such usage by other entities must be in accordance with the statutes, codes, ordinances, charter and/or procurement rules and regulations of the respective government agency.

16. Delivery. Delivery is FOB City of Prescott, 1505 Sundog Ranch Road, Prescott, Arizona 86301, Attention: Craig Dotseth.

Bid Form

Name of Organization _____

Address _____

Phone Number _____

Contact Person _____

Questions:

1. Did you meet the warranty specifications? Yes No
2. Did you meet all the specifications? Yes No

If no, please explain: _____

One (1) Combination Sewer Cleaning Unit

Cab & Chassis Price: \$ _____

Cleaning Unit Price: \$ _____

Combined Unit Price: \$ _____

Applicable Tax Rate: _____ % Tax Total: _____

TOTAL PRICE \$ _____

After Receiving Order (ARO) delivery _____ days.

Bidder Certification

By signing below, bidder certifies that submission of this bid did not involve collusion, or other anti-competitive practices, and that s/he had read, understands and will faithfully execute the terms and conditions stated herein. The signer also certifies that s/he is an officer, or fully authorized agent, of the bidding firm with full power and authority to submit binding offers for the goods or services as specified.

Name (Typed or Printed)

Authorized Signature

Date: _____

Title: _____



**City of Prescott
Wastewater Division**

1505 Sundog Ranch Road, Prescott AZ, 86301
Phone: (928) 777-2496 FAX: (928) 777-2482 TDD: (928) 777-1100

**CLEANING UNIT SPECIFICATIONS
(Body)**

GENERAL

The machine will be used for removing sand, stones, bottles, cans, grease, sludge and other debris from sanitary sewer and/or storm drain lines by the flushing action of high pressure water. The unit shall include a positive displacement (vacuum) blower and a high pressure water pump. The machine shall be equipped with self-contained water supply as the water source for the high-pressure pump. The system shall be able to perform simultaneous high pressure flushing of sewer pipe and removal of liquids and solids from the manhole. All operations shall be able to be performed by one operator. All materials from the manhole shall be deposited within one cylindrical debris tank. As it is the intent that this unit will have an anticipated life of ten years the manufacturer should answer the following general questions. Only bids from manufactures that have experience in manufacturing combination sewer cleaners will be considered.

Prior to the installation of the cleaning body and hydraulic system on the truck chassis, the vendor shall submit shop drawings to the City of Prescott Wastewater Superintendent for approval. Any modifications to the approved shop drawings shall be submitted for approval prior to the changes being completed.

How long has manufacturer been in the business of manufacturing combination sewer cleaners? _____YRS

How many units of this type has the manufacturer produced? _____
Is unit bid a current production model? _____YES_____NO

Bidder has enclosed manufactures literature, specifications and all pertinent information concerning this bid? _____YES_____NO

Bid proposal was filled out thoroughly and all pertinent information requested was provided and any deviations thoroughly explained? _____YES_____NO

The successful bidder will conduct at least one in-progress inspection at the manufacturing facility with at least one member of the City of Prescott. This inspection will be completed at the 90% project completion stage. This inspection cost will be included in this proposal.
_____YES_____NO

Response Required On The Following – With “ YES “ “NO “ and or any description needed -

DEBRIS BODY

- The debris storage body shall be constructed of a minimum 3/16” corrosion and abrasion resistant steel with a minimum yield point of 50,000 PSI and a minimum tensile strength of 70,000 PSI. If Corten steel is supplied inside the debris body, it must be coated and carry a 10 year warranty against the coating scuffing or peeling causing accelerated deterioration.
YES_____ NO_____
- The body shall be cylindrical shaped for maximum strength and have a minimum volumetric capacity of 9 cubic yards or 1818 gallons.
YES_____ NO_____
- The body shall have a full size rear door that is hinged at the top and is equipped with a replaceable neoprene type seal to prevent leakage and will hydraulically open to full width and height. This door shall be remotely latched and unlatched so operator is not subjected to sewage when dumping. The door is to be latched and unlatched by means of a single hydraulic cylinder with over-center type control rods and no manual latch of any type will be required or supplied.
YES_____ NO_____
- The debris body will be equipped with a flush out system consisting of a nozzle with minimum of (8) tungsten carbide tipped nozzles mounted at the front of the debris body, sized to utilize the water pump system at full capacity to clean the interior of the body. A separate control valve is to be provided. The body shall be supplied with a load level indicator to show when the body is loaded to capacity.
YES_____ NO_____
- The rear door shall be equipped with a six-inch butterfly type valve and 10ft drain hose, which allows operator to drain off excess liquids while retaining solids. The interior of the door is to include a standpipe and screen for the drain valve.
YES_____ NO_____
- The debris body shall be dumped by raising the body to a 50° angle, utilizing a forward external mounted double acting hydraulic dump cylinder.
YES_____ NO_____

- The body is to have a shield mounted around the outer circumference of the rear door to direct liquid and debris away from the chassis. The shield is to be approximately 8 inches deep and cover the body from the lower 3 to 9 o'clock position.
 YES_____ NO_____
- The debris body shall be fixtured on an independent frame, separate from the chassis frame and mounted via 3 point mounting system to allow flexing to occur without causing frame damage.
 YES_____ NO_____
- Air from the debris body shall exit through a port in the debris body and enter into a cone shaped centrifugal separator with a lower clean-out box and access door.
 YES_____ NO_____
- Controls for latching /unlatching , opening/closing, and raising/lowering the debris body must be located forward of the debris tank.
 YES_____ NO_____
- A 6" de-watering system installed at the front curbside of the debris body. This system to include an internal drain pipe with stainless steel screen. A knife valve with a quick-coupled 30' by 6" lay flat hose (with storage pocket) is to be provided on the outside of the body. If the knife valve control cannot be accessed without climbing on the unit, it is to be air operated.
 YES_____ NO_____

WATER TANKS

- Water tanks must have a minimum capacity of 1500 gallons. The capacity may be achieved via multiple cells.
 YES_____ NO_____
- The aluminum, polyethylene or stainless steel cells shall have a minimum 20" ground clearance and be easily repaired or patched if required. No steel or coated steel tanks are permitted.
 YES_____ NO_____
- The cells shall be secured via rubber lined straps which allow the cells too easily be removed from the unit if required.
 YES_____ NO_____
- The chassis must be of legal weight with a full tank of fresh water.
 YES_____ NO_____

- The water tanks shall be adequately vented and connected to provide complete filling.
YES_____ NO_____
- The water tank shall come equipped with an anti-siphon device and 25' of hydrant fill hose and fittings located on the curb side for filling purposes. A water level sight gauge shall also be provided on the side or front of the debris body.
YES_____ NO_____
- The water tanks shall come supplied with a 2" "Y" pattern filter with an 80-mesh stainless steel strainer to filter the water before it enters the water tank.
YES_____ NO_____
- The water tanks shall carry a 10-year warranty against corrosion or cracking.
YES_____ NO_____

VACUUM SYSTEM

- The system vacuum shall be provided by a positive displacement rotary lobe type blower capable of 4500-CFM inlet volume and maximum 16" of negative Hg. At 2250 RPM. For added protection to vacuum system, two relief valves shall be incorporated, set at 16" Hg. Roots model 824 or equal.
YES_____ NO_____
- The unit shall incorporate a filtration system consisting of a stainless steel ball float shutoff system, a centrifugal or cyclonic separator with clean out box, and a minimum 50 micron cylindrical stainless steel final filter screen. A dropout chamber mounted on the pump inlet with sump will automatically drain moisture and condensation. This chamber provides additional protection to pump against contamination.
YES_____ NO_____
- The vacuum system is to include an electrically operated vacuum relief system, which vents ambient air to the blower intake to relieve vacuum in the body and suction tubes. A control switch is to be provided on both the operator station panel and the remote pendant, which will allow vacuum control by the operator when working at boom locations to the side of the unit.
YES_____ NO_____
- Unit will be equipped with a high efficiency exhaust silencer.
YES_____ NO_____

VACUUM SYSTEM DRIVE

- Blower shall be driven from chassis engine via the transmission and heavy-duty split shaft transfer case to blower.
YES_____ NO_____

- Air operated cylinders are to be used to shift the transfer case and engage and disengage the vacuum system. No cable controls.
YES_____ NO_____

- The blower will be provided with a high efficiency exhaust silencer with exhaust above the cab and engine exhaust system rain cap.
YES_____ NO_____

VACUUM SYSTEM PICK-UP HOSE

- Shall be designed for front-end operation with hose mounted and stored at front mounted workstation.
YES_____ NO_____

- All connections between debris body and vacuum system will be of the self-adjusting pressure fitting type.
YES_____ NO_____

- All hose and tubes shall be 8" I.D. and will remain stationary and not raise with debris body in order to minimize possibility of running vacuum hose into power lines and low hanging branches. The upper debris tube shall consist of an anchored steel tube for additional life.
YES_____ NO_____

- The lift movements shall be accomplished by cylinder-actuated means Chain type rotations are not accepted.
YES_____ NO_____

- The boom shall be hydraulically powered up, down, left and right, extend and retract the boom pendant control shall come equipped with control switches for all directions as well as a safety emergency shutdown button which automatically eliminates power to the boom. The pendant is to also include a switch for operation of a vacuum breaker.
YES_____ NO_____

- A joystick is to be mounted at the hose reel to allow for complete boom operation from the operators station without the boom pendant.
YES_____ NO_____

- A cab protection device, independent of cab, that will protect cab from boom, will be provided.
YES _____ NO _____
- The boom is to extend a minimum of 8 ft. from its retracted position. The boom includes a true telescoping suction tube that extends and retracts without affecting the steel elbow or lower debris hose vertical position.
YES _____ NO _____
- Pipe extensions will be included to allow operator to clean to depths of 30.5 feet. (2 each-6') (2 each-5') (1 each-2' fluidizer) (1 each- 6'6" catch basin nozzle with a reinforced tip) Pipe should include sufficient over-center quick clamps to join the aluminum coupled suction pipe.
YES _____ NO _____
- Vacuum tube extensions are to be stored on the sides and or ends of the debris body and will include a spring or hydraulic fold down system with safety pins to lock the storage rack in the stored position. The safety pins must be easy to remove and install without the need to adjust the storage rack for pin placement. The storage rack(s) must have slots for (6) tubes.
YES _____ NO _____
- The vacuum hose will be mounted on a boom, the boom will rotate a minimum of 180°.
YES _____ NO _____

HIGH PRESSURE WATER PUMP

- The positive displacement, high-pressure water pump shall be a triplex positive displacement reciprocating piston pump. No v-belts are permitted. State type of water pump provided. Piston and/or packing must not require greasing.
YES _____ NO _____
- The hydraulic flow to drive the water pump will be from a hydraulic oil pump or a direct drive connection.
YES _____ NO _____
- The rated design capacity of the high-pressure water pump shall be 80 GPM and 2500 PSI. A certification by the pump manufacturer for continuous duty shall be provided.
YES _____ NO _____
- The water pump shall be sized and set for operation at a minimum 80 GPM at 2000-PSI continuous duty operation.
YES _____ NO _____

- The water pump location shall provide a flooded suction inlet to eliminate potential cavitation damage. The water pump location is to be certified by the pump manufacturer.
YES _____ NO _____
- The high-pressure water pump will be designed so no damage will occur if run at normal operating pressure without water for 30 minutes. A certification by the original water pump manufacturer to operate in such a manner shall be provided.
YES _____ NO _____
- Ball type ¼ turn valves will be provided in the bottom of the water pump and the inlet to provide for complete cold weather draining.
YES _____ NO _____
- The water pump shall be capable of maximum water pressure and flow while achieving maximum vacuum capability. The water pump shall operate independent of vacuum system.
YES _____ NO _____
- State RPM of water pump.

- Water pump shall have capabilities of being engaged and disengaged from driving mechanism at the front control panel by turning on or off an electric switch.
YES _____ NO _____
- A 3" Y-strainer is to be supplied at the water pump inlet.
YES _____ NO _____
- A rebuild able pressure regulator set at 2100 PSI with water return to water tank will be supplied.
YES _____ NO _____

FRONT MOUNTED HOSE REEL

- The hose reel assembly is to be mounted on an independent telescoping or articulating frame that can be removed from brackets attached to the main truck frame members. Hose reels, which are furnished with additional ground supports or are across the front of the chassis, are not acceptable.
YES _____ NO _____
- Hose reel will have a minimum capacity of 600' of 1" I.D. rodder hose.
YES _____ NO _____
- Hose reel will be driven via a hydraulic motor. The motor shall control the reel speed and forward or reverse rotation with direct drive or double roller chain.
YES _____ NO _____

- A hose footage counter is to be provided.
YES_____ NO_____
- Tow hooks shall be integrated with the front mount reel and bumper installation. They shall be capable of allowing the equipment to be towed with the front wheels raised off the ground.
YES_____ NO_____

HIGH PRESSURE JET HOSE

- Jet hose will be supplied that is 1" I.D. and has operating pressure of 2500 PSI and a burst pressure of 6250 PSI. 600 feet of hose will be supplied with unit.
YES_____ NO_____
- A flexible hose guide will be provided with restraining rope, for protection of rodder hose and to provide help in locating nozzles in sewer lines.
YES_____ NO_____

HYDRAULIC SYSTEM

- The hydraulic system shall include a spin on filter system and be operated via a hot shift PTO control.
YES_____ NO_____
- The reservoir shall have an inspection hatch for clean out.
YES_____ NO_____
- An oil level sight gauge shall be supplied.
YES_____ NO_____
- The tank shall be totally modular component and easily removed from its storage.
YES_____ NO_____
- A 10-micron spin on type hydraulic filter shall be supplied.
YES_____ NO_____

HANDGUN MANHOLE CLEANING SYSTEM

- The high-pressure water pump will be utilized to supply minimum 20 GPM at minimum 800 PSI (relieved to protect operator) to the wash down handgun system.
YES_____ NO_____

- A handgun will be supplied that comes equipped with 100' of ½" wire reinforced hose installed on a spring retractable "live" hose reel. The reel is to be located on the curb side of the unit which will allow the operator to deliver water to the area served by the pick-up hose and to the inside of the debris body.
YES_____ NO_____
- The handgun should allow for changing of flow pattern from a fine mist to a steady stream.
YES_____ NO_____

ELECTRICAL

- The entire electrical system shall be vapor sealed to eliminate moisture damage to NEMA 4 (National Electrical Mfg. Assoc.) standards.
YES_____ NO_____
- All electrical connections shall require no exposed wires or terminals.
YES_____ NO_____
- All light bulbs shall be shock mounted to eliminate bulb failure.
YES_____ NO_____
- All wiring shall be color-coded and run in sealed terminal boxes.
YES_____ NO_____

FRONT OPERATING STATION AND CONTROLS

- Operator station will be located at the front of the truck. YES_____ NO_____
- Controls and gauges to include:
- | | | |
|---|----------|---------|
| ▪ High-pressure water pump on-off | YES_____ | NO_____ |
| ▪ Hose reel forward-reverse valve | YES_____ | NO_____ |
| ▪ Adjustable hose reel speed control | YES_____ | NO_____ |
| ▪ Boom control joystick | YES_____ | NO_____ |
| ▪ Oil dampened water pressure gauge | YES_____ | NO_____ |
| ▪ Boom pendant control | YES_____ | NO_____ |
| ▪ Plug socket for hand held light (include hand held light w/coiled cord) | YES_____ | NO_____ |
| ▪ Blower tachometer | YES_____ | NO_____ |
| ▪ Electric Engine Throttle | YES_____ | NO_____ |

MOUNTING

- Unit will be mounted on approved truck chassis at the factory of body manufacturer. There shall not be any equipment mounted lower than 20" from the ground.
YES_____ NO_____
- Lube manifolds are to be provided that allows for ground level greasing of the boom, top door hinges, and debris body hoist cylinder pins. This manifold is to be plumbed with crimp style rubber grease hose. No plastic tubing is permitted.
YES_____ NO_____
- Tow hooks are to be provided at the front of the unit.
YES_____ NO_____
- (2) 36 x 18 x 18 Aluminum toolboxes are to be provided and mounted in operator accessible locations to be determined at the time of manufacturing.
YES_____ NO_____
- Whelan model 1664 arrowboard mounted on rear of debris body with operational controls in cab area.
YES_____ NO_____
- Lighting to illuminate work zone perimeter of the vehicle will be supplied with operational switch mounted in cab area. Minimum of 6 lights mounted as (2) front (2) mid & (2) rear mounting locations.
YES_____ NO_____

PAINT

- All metal surfaces shall be shot or sand blasted prior to painting.
YES_____ NO_____
- All surfaces shall be cleaned by phosphorous wash process prior to painting.
YES_____ NO_____
- Module shall have a minimum of two and one half mil of suitable primer coat applied to both the inside and outside of the unit.
YES_____ NO_____
- Module shall have minimum of two and one half mil finish paint applied. Standard White Color.
YES_____ NO_____

- All electrical, hydraulic lines, glass, aluminum, and rubber components are to be masked or removed before the painting process.
YES_____ NO_____

CAB & CHASSIS SPECIFICATION

Specifications for 6x6 Tandem Axle, Severe Service, Cab and Chassis, 67,000 lbs. GVWR.

These specifications are intended to delineate the basic components necessary for a complete, ready to use, Construction Service / Heavy Duty / Severe Duty type 10 wheel truck. It is the responsibility of the vendor to identify, and then notify the City of Prescott regarding any oversight(s), omission(s) conflicting component(s), or specification(s). The City will make the final decision as to what will be an acceptable adjustment to these specifications.

Minimum Specifications

Base Chassis Dimension

Wheel base: 236" Nominal, CA: 174" Nominal, AF: 90" Nominal

Dimensions required to properly fit the body to the truck specified with a maximum of 2 feet between the cab and the body to be communicated between chassis and body manufactures for exact dimensions. Above dimensions are nominal for the average production of this type of unit.

Frame:

- Frame Rails, heat treated alloy steel (110,000 PSI Yield) 12.250" X 3.375 X 389.4" OAL minimum.
- Frame Reinforcement, outer "C" channel, heat treated alloy steel (110,000 PSI Yield) 12.934" X 3.687 X 0.312" X 415.5" OAL minimum.
- Crossmember, rear AF one additional, steel, for extra long AF dimension minimum.

Front Axle:

- Shall have a Minimum rating 21,000 lbs (Meritor RF21-160) Single reduction, with S-Cam brakes and hub piloted wheel mounting "OR EQUAL".
- Suspension front, spring multileaf, slipper type, 21,000-lb capacity with torque rods "OR EQUAL".
- Shall have Radial tires, 425/65R 22.5 Unisteel G286A (Goodyear) load range L, 20 Ply.
- Shall have Ten stud, 22.5" Non Polished Aluminum, (285.75MM BC) "Hub Piloted" flange nut, metric mount, 12.25 DC rims, with steel hubs.
- Gear ratio to be a standard ratio determined by the vendor to meet the startability and speed requirements. (stall at 50% grade & maximum speed of 70.7 MPH @ 2154 RPM)

Rear Axle:

- Shall be a tandem axle, minimum rating 46,000 lbs. (Meritor RT-46-160) “OR EQUAL” single reduction with driver controlled main locking differential in rear-rear axle and 200 wheel ends.
- Gear ratio to be a standard ratio determined by the vendor to meet the startability and speed requirements. . (stall at 50% grade & maximum speed of 70.7 MPH @ 2154 RPM)
- Includes a power divider lock air operated, cab control with indicator light in cluster.
- Suspension, rear tandem (Hendrickson HMX-460-54) walking beam type 54” axle spacing, 46,000-lb capacity, with rubber end bushings, transverse torque rods “OR EQUAL”
- Suspension rear-axle identity for Meritor tandem rear axles with bar-pin beam attachment type suspensions “OR EQUAL”.
- The rear tires (8) shall be Goodyear 11R-22.5, G-177 tires, load range H 16 ply.
- The rear wheels shall be ten-hole high tensile steel wheels. “Hub Piloted”
-

Brakes:

- Brake system, air dual system for straight truck applications.
- Full “S” cam, type with automatic slack adjusters.
- Brake chambers to be above axle for maximum ground clearance.
- Air compressor to be minimum 18.7 CFM with air dryer and automatic heated air ejectors.
- Front shall have Full air “S” cam, brakes, with automatic slack adjusters, maximum size available, (16.5” X 7” preferred) (16.5” X 6” minimum), includes 30 sq.in brake chambers.
- Rear shall have Full air “S” cam, brakes, with automatic slack adjusters, maximum size available, (16.5 X 8.625” preferred) (16.5” X 7” minimum), includes 30 sq.in brake chambers.
- Pull cord drains on ALL air tanks.
- Air Dryer, (Meritor-Wabco system saver 1200) “OR EQUAL”

Cab:

- Conventional, construction or heavy-duty type cab with a maximum hood length to minimize extensions of engine into cab.
- Cab to have mechanical suspension with shocks.
- Hood to be manufacturer standard design offering the most forward visibility.
- Fender extensions rubber.
- Engine must be readily accessible if extending into cab.
- The hood shall be a tilt hood with a stationery-mounted grille; or access panels shall be provided in the hood that allows for checking fluid levels without opening the tilt hood.
- Cab interior shall be equal to the International classification of 5600i interior trim.
- Driver’s seat shall be a (National 2000 model 295) air suspension “OR EQUAL”

- Passenger seat shall be a (National 2000 model 295) air suspension “OR EQUAL” positioned to allow installation of controls between driver’s and passenger seats.
- Glass all windows to be factory tinted.
- Sunshade, exterior aerodynamic, painted roof color, includes integral clearance / marker lights.
- Windshield Wipers shall be dual, heavy-duty electric type.
- Horns shall be (2) air and (2) Electric single horn.
- Mirrors shall be retractable, two (w) 7” x 16” including convex angle mirror both sides.
- Interior shall possess dual sun visors.
- Steering column tilting and telescoping.
- Batteries (4) maintenance-free 12-volt 2600 CCA total.
- Battery box, aluminum mounted right side under cab.
- Instruments shall be manufacturers standard to include all wheel drive engaged, voltmeter, oil pressure gauge, water temperature, tachometer, speedometer, Hobbs hour meter, oil temp of automatic transmission, and air pressure. Instruments and controls to be group according to RCCC-SAE recommended practices.
- Dome light shall be cab-mounted.
- Factory-installed air conditioning.
- AM/FM radio (minimum)
- Paint to be winter white, chassis to be manufactures black.

Power and Drivetrain:

- The engine shall be a (Cummins ISM-425V). No other configurations will be considered.
- Horsepower: 410 HP @ 2100 RPM Governed speed, 1550 lb-ft torque @ 1200 RPM, 425 peak HP (max).
- Speed governor: As required to ensure maximum road speed of 69 mph.
- Chassis configuration shall be able to accept a front mount PTO unit.
- Gradeability, and altitude duration charts with bid)
- Cooling: maximum, to ensure cooling in ambient conditions, Adequate for cooling of up to 425 HP.
- Fluids: Engine to be delivered with manufacturers recommended permanent anti-freeze and spin on coolant filter and water conditioner.
- Air cleaner with vacuator remote mounted.
- Fuel / water separator with fuel heated fuel heater, thermostatic fuel temperature control.
- Fuel cooler with electronic engines and less thermostat, mounted in front of charge air cooler.
- Safety devices: Over temperature, low coolant, low oil pressure shut down with manual over-ride capability.
- Hoses: All engine, radiator and heater hoses to be premium rubber.

- Transmission: (Allison Automatic 4500_RDS_P) 4th generation controls, wide ratio 5-speed with overdrive and PTO provision, less retarder. Vendor is to supply ratio recommendations to meet gradeability and top speed requirements.
- Transfer Case, (Fabco TC-142) two speed, 14,000 lb-ft capacity with provisions for PTO, remote mount “OR EQUAL”.
- Oil Cooler, auto transmission remote mounted, for use with Allison HD & 4000 series transmission less retarder.
- Oil Cooler, transfer case for fabco transfer cases “OR EQUAL”.
- Diff, Locking, speed switch with driver controlled locking differential, with Allison electronic transmissions and with auxiliary transmission or 2-speed transfer case.
- Electrical System: 12-volt negative ground.
- Alternator: 160 amp, brushless (minimum).
- Starter Motor to be Delco Remy 12 volt.
- Fan override manual, with electric switch on instrument panel, (fan on with switch on).

General Requirements:

- Meet Federal specifications and FCCC recommendations.
- Cab access steps on both sides of the truck to be no higher than 20 inches from ground level.
- Exhaust system – Vertical, single exhaust with turnout spout to be mounted to prevent interference with body mounted behind cab. Adequate heat shield required. Configured in such a manner as to not hamper servicing of Engine, Transmission, drive train and hydraulic system.
- Power steering – Integral adequate for 21,000-pound axle.
- Fuel tank – One (1) 80-gallon minimum non-polished aluminum tank left side mounted.
- Tow hooks – One or two front mounted manufacturers design adequate for 67,000# GVWR; suitable for towing with the front wheels off of the ground.
- Supplier to furnish two (2) copies of Parts Book, Service Manual containing diagrams, details, and codes for all systems in the vehicle. (Systems as described above shall include at a minimum, electrical, fuel, air and brake, engine and transmission cooling, air conditioning, and hydraulic system.
- Supplier to furnish two (2) copies of operators manual; and initial operator / maintenance training plus updates and service bulletins for the life of the vehicle.
- Warranty: Successful vendor will supply a minimum twelve month warranty on all defective parts and workmanship from initial in-service as reported by the City of Prescott. Bidder to submit written conditions and duration of warranty, in detail, on attachment to bid.
- Insofar as possible, warranty work will be performed at owner’s facility. If warranty work is to be performed at vendor’s location, the vendor shall be responsible for transport from and to owner’s facility and any cost incurred therein.

- All equipment purchased on this bid shall be purchased from one contractor / vendor. That one contractor / vendor shall be fully responsible for all warranty performance relating to any part or component of the purchased equipment. The contractor / vendor's responsibility shall include all warranty involving subcontractors.
- The Vendor shall supply two (2) copies each of the Shop and Service Manuals, containing diagrams, details, and codes for all systems in the vehicle. Systems as described above shall include at a minimum, electrical, fuel, air and brake, engine and transmission cooling, AC.