



AGENDA REPORT

Meeting Date: December 21, 2010

Item Number: F-18

To: Honorable Mayor & City Council

From: Fred Simonson, Maintenance Operations Manager *FES*
Rene Biadoma, Fleet Manager

Subject: APPROVE A PURCHASE ORDER TO HAAKER EQUIPMENT COMPANY IN THE NOT-TO-EXCEED AMOUNT OF \$300,519.82 FOR THE PURCHASE OF A TRUCK-MOUNTED HIGH-PRESSURE JET RODDER MACHINE

Attachments: 1. Bid Proposal for Bid 10-14 from Haaker Equipment Company

RECOMMENDATION

Staff recommends that the City Council move to approve a purchase order to Haaker Equipment Company in the not to exceed amount of \$300,519.82 for the purchase of a Truck-mounted High-pressure Jet Rodder machine”.

INTRODUCTION

Following an annual evaluation of the City’s vehicle and equipment fleet, staff from the Fleet Services and the Wastewater Maintenance Division have determined that a 1986 Ford C8000/Vactor Jet Rodder has far exceeded its useful and economical life expectancy. This equipment is assigned to the Wastewater Maintenance Program. This one-of-a-kind machine in the Fleet is utilized for clearing obstructions in sewer-lines and for regular maintenance of the City’s drainage infrastructure. Field-crew members have requested that this piece of equipment be replaced with a machine that has the same configuration and operational capabilities as the one they currently have. Additional justifications provided by staff include enhanced operator safety provided by the forward location of the operator station. The operators have also found the machine pump’s ramjet “jack-hammer” action to be extremely effective in dislodging tightly wedged obstructions.

Taking into account the maintenance crew’s request and other items in their “wish list,” staff assembled “Bid 11-14” to solicit proposals for the replacement machine. This formal-bid solicitation also included compliance provisions to the CA Air Resources Board Regulations and the air-quality mandates issued by the South Coast Air Quality Management District.

DISCUSSION

Bid 11-14 garnered two qualified proposals and one no-bid letter. Summary of the vendors' responses is as follows:

| VENDOR NAME | PROPOSED PRICE TO THE CITY |
|--------------------------|----------------------------|
| Haaker Equipment Company | \$268,611.00 |
| Plumbers Depot Inc. | \$277,945.00 |
| Nixon-Egli Equipment Co. | Notification of no bid |

After conducting a comprehensive review of each proposal, the selection committee has determined that each bid proposal is a responsible proposal and meets the criteria of the bid specification. Staff recommends accepting the lowest responsible bid proposal submitted by Haaker Equipment Company. Details of this purchase are summarized below:

| | |
|--|---------------------|
| One (1) new and unused 2012 Freightliner M2-112V with flatbed body; to include all equipment specified in Bid 11-14. | \$268,611.00 |
| Optional CNG engine 5-year warranty: | \$3,950.00 |
| Optional transmission warranty: | \$1,250.00 |
| Subtotal: | \$273,811.00 |
| Tax (9.75%): | \$26,696.57 |
| CA Tire Fee: | \$12.25 |
| FOB City of Beverly Hills Purchase Total Price: | \$300,519.82 |

FISCAL IMPACT

Funding for this purchase is appropriated from the Fiscal Year 2011 Council-approved budget. Fund 84 funds are accruals set aside for vehicle and equipment upgrades. These funds are recognized in the wastewater rate structure.

| Budget Unit | Program Description / No. | Account # | Amount |
|-------------|----------------------------------|-----------|--------------|
| 49 | Vehicle Replacement / 35498502 | 85050 | \$69,798.00 |
| 84 | Wastewater Maintenance / 8405401 | 74110 | \$30,721.82 |
| 84 | Wastewater Maintenance / 8405401 | 74120 | \$200,000.00 |


 Scott G. Miller
 Finance Approval


 David D. Gustavson
 Approved By

Attachment 1



CITY OF BEVERLY HILLS

DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION

BID SUMMARY SHEET

RECEIVED
CITY OF BEVERLY HILLS
2010 DEC - 2 P 2:04
CITY CLERK'S OFFICE

BID NUMBER: 11-14
BID TITLE: RODDER, HIGH-PRESSURE JET, TRUCK MOUNTED
BID OPENING DATE & TIME: December 02, 2010 @ 2:00pm
REQUIRED DOCUMENTS: SEALED BIDS
CITY CLERK REP:
DEPARTMENT REP: Rene Biadoma

| | VENDORS NAME | BID AMOUNT | COMMENT |
|-----|--------------------------|-------------|---------|
| 1. | Nixon-Egli Equipment Co. | No Bid | |
| 2. | Haaker Equipment Co. | \$268,611.- | + tax |
| 3. | Plumbers Depot Inc. | \$277,945.- | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| 12. | | | |

Rodriguez



BID PACKAGE

CITY OF BEVERLY HILLS
OFFICE OF THE CITY CLERK, ROOM 290
455 NORTH REXFORD DRIVE
BEVERLY HILLS, CALIFORNIA 90210
(310) 285-2440

LEGAL NOTICE - BIDS WANTED

Sealed proposals are requested on the list of materials, supplies, equipment or services set forth herein, subject to all conditions outlined in the Proposal Document, including:

- SECTION I:** REQUEST FOR BIDS
- SECTION II:** GENERAL INFORMATION AND INSTRUCTION
- SECTION III:** DETAIL SPECIFICATIONS
- SECTION IV:** BID FORM

(IF YOU CHOOSE NOT TO SUBMIT A BID, PLEASE COMPLETE PAGE 30)

Sealed proposals will be received only at the **Office of the City Clerk**, 455 North Rexford Drive, Beverly Hills, until 2:00 p.m. local time, on the dates hereinafter stated at which time they will be opened and publicly read for furnishing the materials, supplies, equipment or services or for supplying the materials, and/or providing labor for the repair, construction or improvement as the case may be, as indicated by the items hereunder listed and in accordance with the applicable specifications.

SECTION I – REQUEST FOR BIDS

Date of Request: October 25, 2010

Bid Number: 11-14

Item Description: RODDER, HIGH-PRESSURE JET, TRUCK-MOUNTED

Bid Opening: December 02, 2010 @ 2:00 PM

All bids must be delivered by the specified opening time of the bid. Bids arriving after the specified hour will not be accepted. Mailed bids, which are delivered after the specified hour will not be considered regardless of postmarked time on the envelope. All bids must be in writing and must contain an original signature by an authorized officer of the firm - Electronic bids (telephone, FAX, etc.) are **NOT** acceptable.

BID DEPOSIT - NONE REQUIRED WITH THIS BID
PERFORMANCE BOND AND PAYMENT BOND - NONE REQUIRED WITH THIS BID.
THE CITY RETAINS THE RIGHT TO REJECT ANY AND ALL BIDS WITHOUT CAUSE AND/OR ELECT NOT TO AWARD A BID.

CITY OF BEVERLY HILLS
SECTION II - GENERAL INFORMATION AND INSTRUCTION

1. Bid deposits of unsuccessful bidders will be returned after the bid has been awarded. A successful bidder's bid deposit will be returned after he has entered into a written contract, or after a performance bond, if required, has been executed and accepted by the City.
2. The vendor's proposal may be withdrawn at any time prior to the bid opening. No proposal may be withdrawn after the bid opening. Violation of this policy may cause forfeiture of the bid deposit and removal from qualified Bidder's List.
3. Bidders are advised to become familiar with all conditions, instructions and specifications governing this bid. Once the award has been made, a failure to have read all the conditions, instructions and specifications of this contract shall not be cause to alter the original contract or for vendor to request additional compensation.
4. Bidders agree to defend and save the City from and against all demands, claims, suits, costs, expenses, damages and adjustments based on any infringement of any patent relating to goods specified in this contract.
5. Successful bidder shall not assign the contract, or subcontract the whole or any part of the contract without written consent of the City. Such consent shall neither relieve the bidder from his obligation nor change the terms of the contract.
6. The City shall have the right to inspect any material specified herein. Equipment, supplies or services that fail to comply with the specifications herein regarding design, material or workmanship are subject to rejection at the option of the City. Any materials rejected shall be removed from the premises of the City at the expense of the vendor.
7. Bidder shall state the nature and period of any warranty or guarantee. Manufacturer's specifications shall be submitted with the bid and shall be considered a part of this contract where such specifications meet the minimum of the City specifications.
8. Each bidder shall submit in full this completed original BID DOCUMENT and all necessary catalogues, descriptive literature, etc., needed to fully describe the materials or work he proposes to furnish.
9. Bidders shall state the delivery date for commodities in terms of calendar days after notification of award. Where the contract calls for performance of labor, the bidder shall also state the number of calendar days required for completion after notification of award.
10. Cash discounts shall be considered in the evaluation of the bids, except that payment periods of less than thirty (30) days will not be considered in award of this bid. Where cash discounts are offered, the discount date shall begin with the invoice date or delivery date to the City, whichever is later.

11. Upon the award of the bid to the successful bidder, **if** insurance is required by the terms of this bid, the City will require evidence of such coverage be furnished within fourteen (14) days of notification of bid award. The amounts and types of coverage will be specified in Section IV of this bid. **All insurance forms must be in a format acceptable to the City.**
12. The Contractor agrees to indemnify, defend and hold harmless the City, City Council and each member thereof, and every officer, and employee of the City, from any liability or financial loss including, without limitation, attorneys fees and costs, arising in any manner whatsoever from any intentional, reckless, negligent, or otherwise wrongful acts, errors or omissions of Contractor, or any person employed by Contractor, including agents and independent contractors, in the performance of this agreement.
13. Every supplier of materials and services and all contractors doing business with the City shall be an "Equal Opportunity Employer" as defined by Section 2000 (E) of Chapter 21, Title 42 of the United States Code Annotated and Federal Executive Orders #11375, and as such shall not discriminate against any other person by reason of race, creed, color, religion, age, sex or physical or mental handicaps with respect to the hiring, application for employment, tenure, terms or conditions or employment of any person.
14. Prices quoted herein must be firm for a period of not less than ninety (90) days after date of bid opening.
15. Bids calling for other than a "lump sum" total bid may be awarded by single item, by groups of items, or as a whole, as the City deems to be in the best interest of the City.
16. The City will be the sole and exclusive judge of quality, compliance with bid specifications or any other matter pertaining to this bid. The City reserves the exclusive right to award this bid in any manner it deems to be in the best interest of the City.
17. Quantities specified in Section III are approximate only, the City reserves the right, within the period for delivery to increase or decrease the quantity ordered and upon mutual agreement after the period specified for delivery, order additional quantities of items bid.
18. "Contractor shall cooperate with the City in all matters relating to taxation and the collection of taxes. It is the policy of the City to self-accrue use tax associated with its own purchases. The City requests that its contractors self-accrue their use tax, **when applicable**, and report the use tax to the State Board of Equalization with a City-assigned permit number. The City's own use tax which is self-accrued by the City will be remitted to the State of California pursuant to the City's permit with the State Board of Equalization."
19. For any questions regarding this bid, please contact Rene Biadoma at (310) 285-2484 or Craig Crowder at (310) 285-2490.

SECTION III – DETAILED SPECIFICATIONS

SUBSECTION A - TECHNICAL NOTES

IN EVENT OF CONFLICT, THE FOLLOWING SPECIFICATIONS SHALL PREVAIL OVER GENERAL INSTRUCTIONS CONTAINED ELSEWHERE IN THIS BID.

IMPORTANT NOTICE - THIS SECTION III, SUBSECTION A, COMPLETED WITH REQUIRED INFORMATION AND/OR BIDDER'S EXCEPTIONS MUST BE ATTACHED TO AND RETURNED WITH SECTION IV - BID FORM.

BIDDER MUST EXPLAIN IN DETAIL ALL ITEMS OFFERED WHICH DO NOT CONFORM TO SPECIFICATIONS CONTAINED HEREIN. IF NO EXCEPTIONS ARE LISTED, IT WILL BE ASSUMED BIDDER IS BIDDING "AS SPECIFIED."

SPECIFICATIONS FOR A NEW AND UNUSED TRUCK-MOUNTED HIGH-PRESSURE JET RODDER MACHINE

BIDDER'S EXCEPTIONS

PART A: INTRODUCTION

I. GENERAL REQUIREMENTS

- a) The intent of the specification is to define the minimum performance requirements for a Truck-mounted High-pressure Jet Rodder machine.
- b) It is the CITY's goal to standardize its fleet in order to maximize operational and maintenance efficiency. Specific make or model listed herein is specifically intended to attain that goal.
- c) Unit must be able to remove blockages caused by stone, bottles, cans, grease, sludge and other debris from sanitary sewer and/or storm drain lines by the flushing action of high-pressure water.
- d) The machine will be equipped with a self-contained, separate water supply as the water source for the high-pressure pump.
- e) The machine shall be capable of being operated by one person, with all operating controls for high-pressure water, hose reel, and engine RPM, located at the operator's station at the front of the machine. No exception.
- f) In all cases the entire machine must conform to all Federal, State, and local laws applicable to this type of equipment.
- g) Bidders are required to state their compliance to these specifications at the end of each section. Any deviations, changes or exceptions must be noted.

AS SPECIFIED



AS SPECIFIED

BIDDER'S EXCEPTIONS

- h) The entire machine furnished to the City of Beverly Hills shall be a new, unused, latest model, serviced, and ready for operation upon delivery. AS SPECIFIED
- i) Equipment will be utilized by the Department of Public Works & Transportation Wastewater Maintenance Division in the maintenance of the City's sewer/drainage infrastructure. As such, equipment shall be able to withstand the rigors of a sewer cleaning operation typically performed in a municipal environment. AS SPECIFIED
- j) Expected gradeability: 8%

PART B: CHASSIS & CAB

I. CHASSIS SPECIFICATIONS

- a) Specifications listed herein are for a Freightliner M2 Chassis, 4X2, construction-service chassis, and tanker or pumper body application. Approved equal may be considered. Specify:
 MANUFACTURER: FREIGHTLINER
 MODEL: M2-112V
 YEAR: 2012
- b) GVWR to be determined by bidder. GVW shall be the maximum allowable and most efficient rating for the type of the equipment specified.
 Indicate GVWR: 41,000 GVWR
- c) Engine & Fuel
 - 1. Shall be a Cummins ISL G compressed natural gas (CNG) engine. Indicate engine offered:
 Make: CUMMINS WESTPORT
 Model: ISL G
 Displacement: 8.9L
 Rated Horsepower: 320 HP
 Rated Torque: 1000 LB/FT
 - 2. CNG engine shall meet the 2010 EPA, CARB, and SCAQMD emission standards with maintenance-free after treatment. AS SPECIFIED
 - 3. CNG engine must be compliant to ATA and/or J1939 data communications link to ensure dashboard and other peripheral compatibility. AS SPECIFIED

BIDDER'S EXCEPTIONS

4. CNG engine must be serviced locally during warranty and post warranty. Specify location of nearest service center for engine: AS SPECIFIED

Name: ENVIROMECH INDUSTRIES

Address: LONG BEACH, CA.

5. CNG engine ECU must be accessible to the City of Beverly Hills technicians to access engine diagnostic codes for trouble shooting. AS SPECIFIED

6. CNG engine must interface with existing CNG fuel fast-fill dispensers. AS SPECIFIED

7. CNG tanks shall meet the standards set in the ANSI/CSA NGV2 (Compressed Natural Gas vehicle Fuel Containers) regulation. AS SPECIFIED

8. CNG engine must support tanks that meet Type-3 standards. Tanks shall be constructed of metal liner reinforced by composite wrap around the entire tank (full wrapped), such as SCI or equal, and be rated for 3600 psi. AS SPECIFIED

Indicate type of CNG tanks: TYPE-3

AS SPECIFIED

9. CNG Tank/s shall be mounted in such a manner that it achieves the shortest possible vehicle length. Note: Shorter length is desired for better maneuvering in City alleys and confined thoroughfares.

Indicate vehicle overall length: 350' ~~4~~

10. CNG tank/s shall be at least 60-gallon Diesel gallon equivalent (DGE). AS SPECIFIED - FREIGHTLINER FACTORY INSTALLED ENVIROMECH SUPPLIED CNG TANK SYSTEM

Indicate DGE: 60 dge GL

11. CNG engine must be capable of sustained operation for the Jet Rodder's maximum operational criteria. AS SPECIFIED

12. CNG tanks protective enclosure shall incorporate access door panel to allow easy access to the each tank's shut-off valve. AS SPECIFIED

d) Additional Engine Features

1. Engine protection (shutdown) system AS SPECIFIED

2. Extra heavy-duty cooling to compensate for reduced forced-air flow due to stationary operation. AS SPECIFIED

3. Heavy-duty alternator. Specify: AS SPECIFIED

Alternator output: 160 Amps

BIDDER'S EXCEPTIONS

- | | | |
|-----|--|-------------------|
| 4. | Group 31 batteries, two minimum. | AS SPECIFIED |
| 5. | Battery disconnect switch. | AS SPECIFIED |
| 6. | CARB anti-idling rule compliant. | AS SPECIFIED |
| 7. | Vertical exhaust pipe, with stainless guard, to minimize venting of hot exhaust fumes around work area. | AS SPECIFIED |
| e) | <u>Transmission</u> | |
| 1. | Allison automatic transmission. State: Model: <u>3000 RDS</u> Requires PTO provision (Check) <input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No | |
| 2. | Water-to-oil transmission cooler | AS SPECIFIED |
| 3. | Synthetic Transmission lubricant | AS SPECIFIED |
| f) | <u>Air Brake System</u> | |
| 1. | Anti-lock brake system. State: Make/Model: <u>MERITOR-WABCO</u> | |
| 2. | Air compressor. State: Make: <u>CUMMINS</u> Output Capacity: <u>18.7</u> | |
| 3. | Filtered air intake. | AS SPECIFIED |
| g) | <u>Chassis, Suspension, Driveline, & Axles</u> | |
| 1. | In all cases, the chassis' design and component configurations shall comply with <i>Federal Bridge Gross Weight Formula</i> and US DOT requirements. | AS SPECIFIED |
| 2. | Front axle. State: Make/Model <u>MERITOR MFS-18-133A</u> Rated Capacity (lbs): <u>18,000 LBS</u> | |
| 3. | Front Shock Absorbers | AS SPECIFIED |
| 4. | Synthetic front axle lubricant | AS SPECIFIED |
| 5. | Freightliner TufTrac rear suspension, or approved equal. Specify: Make/Model: <u>FREIGHTLINER FLAT-LEAF WITH RADIUS ROD</u> Rated capacity: <u>23,000 LBS</u> | |
| 6. | Most efficient rear-axle ratio. State ratio: <u>5.86; 6.14</u> | |
| 7. | Chicago Rawhide Plus XL drive oil seals | AS SPECIFIED |
| 8. | Synthetic rear axle lubricant | AS SPECIFIED |
| 9. | Reinforced front frame. | AS SPECIFIED 1/4" |
| 10. | Most efficient wheelbase. State WB(inches): <u>210"</u> | |
| 11. | State after-frame overhang (inches): <u>85"</u> | |

BIDDER'S EXCEPTIONS

- | | |
|--|---------------|
| 12. Steel front bumper at normal position in front of cab – Black | AS SPECIFIED |
| 13. Two (2) front towing hooks | AS SPECIFIED |
| 14. Tow hooks rear | NOT AVAILABLE |
| 15. Rear D.O.T. bumper – black. | HAAKER EQUIP |
| 16. Rear mud flaps. | HAAKER EQUIP |
| h) <u>Wheels & Tires</u> | |
| 1. Hub-piloted front and rear wheels. | |
| 2. State front-tire size and make: <u>315/80R22.5</u> 20 PLY MICHELIN XZY-3 | |
| 3. State rear-tire size and make: <u>315/80R22.5</u> 20 PLY MICHELIN XZY-3 | |
| 4. Full-size spare-tire assembly; mounted loose. AS SPECIFIED | |
| i) <u>Cab and Other Miscellaneous Features</u> | |
| 1. Day cab shall be low-entry, with high-visibility throughout, and aluminum/steel construction. State cab type: <u>CONVENTIONAL ALUMINUM</u> | |
| 2. 97 Decibels back-up alarm: GROTE #73030 or approved equal. | AS SPECIFIED |
| 3. LED clearance and marker lights. | AS SPECIFIED |
| 4. Grab handles L&R | AS SPECIFIED |
| 5. Tinted Glass | AS SPECIFIED |
| 6. Dual air horns | AS SPECIFIED |
| 7. LH&RH convex wide angle mirrors | AS SPECIFIED |
| 8. Dual west coast mirrors | AS SPECIFIED |
| 9. Buckets seats. National Comfort air-suspension high-back driver's seat with lumbar support and armrests. | AS SPECIFIED |
| 10. Air conditioning min 593 CFM air flow | AS SPECIFIED |
| 11. Low air pressure light and audible alarm | AS SPECIFIED |
| 12. Air cleaner restriction indicator | AS SPECIFIED |
| 13. Gauges for: temp - oil - speed - tach - hours - odometer - fuel - volts - air pressure | AS SPECIFIED |
| 14. AM/FM radio with dual speakers | AS SPECIFIED |
| 15. Electric windshield wipers with delay | AS SPECIFIED |
| 16. Exterior color: White Imron paint, including cab and installed equipment. | AS SPECIFIED |
| 17. Interior color: Darkest trim available. | GREY |
| 18. License-plate brackets – front & rear. | AS SPECIFIED |

BIDDER'S EXCEPTIONS

PART B: CHASSIS-MOUNTED EQUIPMENT

I. HIGH-PRESSURE JET RODDER

a) WATER STORAGE TANK

AS SPECIFIED

1. Water storage tank shall have a minimum capacity of 1,500 U.S. gallons minimum.
2. The water storage tank shall be an elliptical body design for optimum rigidity and maximum resistance to flexing.
3. For strength and durability the water storage tank shall be constructed out of #304 stainless steel (10 gauge minimum) and shall be equipped with no less than four (4) stainless steel anti-surge baffles, welded as an integral part of the tank for added strength.
4. The water tank shall have 3/16" end plates.
5. The water storage tank shall have a ten (10) year warranty against defects in workmanship, rust, cracking, UV Rays, and other forms of fatigue. Warranty shall be non-prorated.
6. Plastic water tanks will be deemed unacceptable.
7. The water storage tank shall be located directly behind the truck cab and shall be bolted to the unit sub-frame by a minimum of four (4) heavy duty mounting brackets. The sub-frame shall be bolted to the truck chassis.
8. The four (4) mounting brackets shall be permanently mounted to two (2) radial "saddle type" plates welded to the underside of the water storage tank.
9. The water storage tank shall be independently mounted on the sub-frame and shall not provide structural support for the pump compartment or pump compartment shroud.
10. The water storage tank shall be equipped with:
 - A 24" diameter, removable manway hatch for tank access;
 - An integral ladder, accessible from the ground and mounted at curbside, for accessing the manway hatch.
 - (2) 4" anti-siphon air gap with water fill located curbside and street side with (2) 3" Y-strainer;

AS SPECIFIED

AS SPECIFIED

AS SPECIFIED

AS SPECIFIED

AS SPECIFIED

AS SPECIFIED

BIDDER'S EXCEPTIONS

AS SPECIFIED

DRAIN LOCATED ON CURBSIDE
AS SPECIFIED

- A water level sight gauge;
- And a 3" lever type gate valve with handle, located streetside, to allow complete drainage of the water tank without the operator crawling under the vehicle.
- Low water light and alarm

AS SPECIFIED

11. Shall include (2) water fill locations located on the street side of the unit and a (2 1/2") diameter, twenty-five foot (25') fill hose with hydrant connector with storage rack.
12. Each water fill port shall have a Laval water separator one for potable water and the second for reclaimed water.

b) HIGH PERFORMANCE WATER PUMP

1. The high-pressure water pump shall be a double-acting, single-piston pump, and hydraulically driven.
2. The hydraulic flow to drive the water pump will be from a hydraulic oil pump, driven by the truck engine via a hot-shift, power-take-off (PTO).
3. The water pump shall operate with an oil-to-water ratio of 1 to 1.
4. The PTO shall engage the hydraulic pump, but not the water pump. The water pump shall have the capability of being engaged or disengaged from the driving mechanism at the control panel by turning on or off an electric switch.
5. The rated design capacity of the high-pressure water pump shall be 100 GPM at 2500 PSI. A certification by the pump manufacturer for continuous duty shall be provided.
6. The hydraulic pump and water pump shall be sized to allow the water system to operate at the following delivery rate: 80 GPM at 2500 PSI continuous-duty operation.
7. The water pump shall have a hydraulic control valve located at the operator station to allow the water pump to work at a varying flow of 20-80gpm. This multi-flow control system will allow the operator to work a various pressures and using different nozzles.

AS SPECIFIED

AS SPECIFIED

AS SPECIFIED

AS SPECIFIED

BIDDER'S EXCEPTIONS

- 8. The water pump shall cycle approximately every 4 ½ seconds. This pump cycle shall provide an automatic "Jack-Hammer" action to assist the nozzle in breaking through obstructions.
- 9. The Water pump shall be equipped with a nitrogen-charged accumulator to allow for smooth operation of water pressure or a jack-hammer action. A valve to be installed to supply on-demand jack-hammer action. Accumulator must be rated to work at 1200-1800 PSI. The accumulator valve shall be located at the front bumper.
- 10. The water pump location shall provide a flooded suction inlet until the "Low Water" warning light is illuminated. The water pump location shall be certified by the pump manufacturer.
- 11. The high-pressure water pump will be designed so no damage will occur if run at normal operating conditions or speed without water for 30 minutes. A certification by the original water pump manufacturer to operate in such a manner shall be provided.
- 12. A monitor light shall be provided to indicate when the designed pressure is exceeded.
- 13. The water system is to be protected by an adjustable water pressure relief valve, allowing the system to operate at 2500 PSI.
- 14. A 3" Y-type filter with an 80 mesh stainless steel filter element shall be located in the pump suction line with lever gate valve for shut off.
- 15. Two (2) drain/ball valves shall be located at the bottom of the water pump for draining and cleaning of pump.

AS SPECIFIED

AS SPECIFIED

AS SPECIFIED

AS SPECIFIED

AS SPECIFIED

c) HOSE REEL ASSEMBLY

- 1. The hose reel shall be located in the front of the truck. Because of the design and forward visibility, a low profile hose reel shall be provided. No exception.
- 2. The hose reel shall extend a minimum of 14" from the front of the truck to allow the cab forward chassis to be tilted for maintenance.

AS SPECIFIED

BIDDER'S EXCEPTIONS

- 3. The hose reel shall rotate a minimum of 270 degrees for accessibility to manholes on the curbside and street side of the truck. AS SPECIFIED
 - 4. The hose reel shall have dual controls on both sides of the hose reel. AS SPECIFIED
 - 5. Reel capacity shall be a total of 600' of one-inch (1") I.D. sewer hose. AS SPECIFIED
 - 6. The hose reel shall have a digital hose footage counter along with 2 standard mechanical Hose-footage Counters mounted on the front and rear of the reel. AS SPECIFIED
 - 7. The hose reel shall be constructed of ¼" spun steel. AS SPECIFIED
 - 8. The hose reel shall be powered in both directions by a hydraulic motor and double roller chain drive. HYDRAULIC DRIVEN / DIRECT DRIVE
 - 9. The reel shall be equipped with a TM swivel with adjustable and greaseable packing. AS SPECIFIED
 - 10. A variable speed control knob, which allows control over the speed that, the hose is reel in or out will be furnished. When the actuator for the hose reel is released it will return to the neutral "off" position.
 - 11. System shall be capable of retrieving the entire length of hose, under full pressure, without stressing the truck frame and suspension. AS SPECIFIED
 - 12. The hose reel shall also have an automatic rewind guide to assist the operator in winding the hose on the reel.
 - 13. The hose reel shall have an air assisted pinch roller to keep the hose tight on the reel.
 - 14. The operator station shall have one (1) work light located in front of the unit and a second light to illuminate the manhole. AS SPECIFIED
- d) **SEWER CLEANING HOSE**
- 1. 600' of one-inch (1") sewer hose with a working pressure of 2500 PSI and a burst pressure of 6250 PSI will be provided. AS SPECIFIED
 - 2. A single ten-foot (10') x 1" double braid, flexible leader hose will be provided.
- e) **HANDGUN WASHDOWN SYSTEM**
- 1. The washdown system shall include a quick connect fitting at the front and rear of the unit AS SPECIFIED

BIDDER'S EXCEPTIONS

AS SPECIFIED

with a pressure relief valve preset by the factory at 600 PSI.

2. 50' spring-operated handgun hose reel mounted on curbside midship of the unit.
3. Provide one (1) adjustable spray handgun, 35' of ½" 2000 PSI rated hose with a quick connect fitting.

AS SPECIFIED

f) HYDRAULIC SYSTEM

1. The hydraulic pump shall be driven by the chassis engine, via a power-take-off (PTO) bolted on the transmission. The hydraulic pump shall have a minimum output of 80 GPM @ 2500 PSI.
2. The system shall power the hose reel and shall provide the capability of retrieving the entire length of hose, under full pressure in a maximum of ten (10) minutes.
3. The hydraulic reservoir shall be a minimum of sixty (60) U.S. gallons and include a spin-off and sight eye.
4. There shall be (3) hydraulic shut off valves at the suction, return and filter line.

AS SPECIFIED

g) OPERATOR'S STATION

1. The operator's station will be located at the front of the unit to allow a single operator to control all functions of the sewer cleaning operation. At a minimum, control station shall include the following items:
 - NEMA-4 compliant panel with lighting.
 - Reel speed control and directional payout/retrieve lever.
 - Low water warning light and alarm.
 - Variable speed engine throttle.
 - Multi flow water pump control
 - On/Off water pump control.
 - Liquid filled water pressure gauge.
 - Sewer hose/handgun water selection control valves.
 - Tachometer with hour meter.
 - Hose reel location lock switch.

AS SPECIFIED

AS SPECIFIED

AS SPECIFIED

BIDDER'S EXCEPTIONS

- Digital footage counter with mechanical footage counters AS SPECIFIED
- Dual controls on rear of reel AS SPECIFIED
- 2. Hand light with plug and work light at hose reel. AS SPECIFIED
- 3. 7-ft wide umbrella, made of high-quality yellow vinyl and with metal tilting pole (Grainger Catalog item# 1UFG3 or approved equal). Tube-type mounting receptacle, with screw type locking device, mounted on an appropriate location at the operator station. Lockable tube-type storage receptacle for umbrella shall be installed. AS SPECIFIED

h) TOOL TRAYS AND STORAGE

- 1 Trays shall be constructed from twelve (12) gauge minimum steel. TRAYS ARE ALUMINUM RHS & LHS
- 2 Tool Trays: Full length of tank area, an undivided shelf, 24" wide by full tank length, located curbside and street side. Tool trays shall be made from aluminum. AS SPECIFIED
- 3 Two (2) maximum sized tool boxes shall be mounted below the frame rails on the right and left hand sides of the unit. Tool boxes shall be made of aluminum lockable and weather proof. Tool boxes size and location shall be finalized at a pre-production meeting. State:
Dimension: Approx 36x18x18 AS SPECIFIED
- 4 Shall also have tool tray in the rear full width made from expanded metal.
- 5 There shall be a cab guard located behind the CNG tank storage. This guard shall be used to store (4) 3" PVC tubes designed to hold shovels, etc AS SPECIFIED
- 6 There shall also be (2) 6" aluminum long tool storage racks located on each side of the water tank they shall run full length of water tank located above the tool trays. These shall be a minimum of 8' in length.

i) TOOL ACCESSORIES

- 1. One (1) 30 degree sanitary sewer nozzle.
- 2. One (1) 15 degree sanitary sewer nozzle.
- 3. One Spinner nozzle (wart hog) or equal
- 4. Nozzle Pipe assembly. AS SPECIFIED

BIDDER'S EXCEPTIONS

AS SPECIFIED

5. Flexible hose guide (tiger tail).
6. Hydrant wrench.
7. Hand light with Bumper Plug
8. Work light at Operator Station
9. Work light at manhole

j) SAFETY & VISIBILITY EQUIPMENT

1. One 5-lb Class ABC Fire Extinguisher mounted in cab.
2. Post style cone racks (2) on the rear of the truck.
3. Circuit breakers in lieu of fuses.
4. Code 3, Model 468A, 6"x4" REF12 LED PriZm lighthouse, Amber lens / Amber LEDs, Rear Mounted (1 on each side, 2 total). Autonomous control mounted in cab.
5. Code 3, Model 468A, 6"x4" REF12 LED PriZm lighthouse, Amber lens / Amber LEDs, Side Mounted (2 on each side, 4 total). Autonomous control mounted in cab.
6. Code 3, Model RX2769-ALRC-107, 69" PriZm LED lightbar W / Amber Top Covers, W / Four Intersection and Seven Forward Facing REF12 Amber LED lighthouses, mounted with LIT3KIT-00 W / dual side facing amber 3-up Optix Modules, installed on cab roof. Independent control mounted in cab.
7. Sound Off, Model EL3D12A20A, 12 Module, Ultralight Exterior Directional Arrow, W/ Dual-warning End Modules, installed on rear of vehicle.
8. Sound Off, Model ETSWDAS01, Directional Arrow Controller, installed in cab.
9. Triangle kit.
10. Flare Kit.
11. "Inverted-V" chevrons installed on entire rear surface of water tank. Chevrons shall be made of 2-inch Red reflective tape with 2-inch spacing.
12. One set of wheel chocks.

AS SPECIFIED

AS SPECIFIED

AS SPECIFIED

AS SPECIFIED

AS SPECIFIED

k) TRAINING

BIDDER'S EXCEPTIONS

1. The successful bidder shall provide factory authorized training, to include operation and maintenance procedures to be held at a designated location in the City of Beverly Hills.
2. Factory training available: YES / NO

All training to be done at customers location.

l) WARRANTY

1. The entire unit shall be warranted against defects in materials and workmanship. The warranties shall cover both parts and labor and begin at the in-service date.
2. State standard warranties

| | |
|---------------------------|-------------------------|
| Bumper-to-bumper: | 1 YEAR |
| Chassis CNG Engine: | 2 YEARS / 250,000 MILES |
| CNG tanks: | 1 YEAR (20 YEAR LIFE) |
| Transmission: | 2 YEARS |
| Water Tank: | 10 YEARS |
| High-pressure water pump: | 5 YEARS |
| Hydraulic pump: | 1 YEAR |

3. Optional warranty offerings:

| | |
|---------------------------|-----------------------------------|
| Bumper-to-bumper: | |
| Chassis CNG Engine: | 5 YEARS / 150,000 MILES \$3950.00 |
| CNG tanks: | |
| Transmission: | 5 YEARS \$1250.00 |
| Water Tank: | N/A |
| High-pressure water pump: | N/A |
| | |

m) MISCELLANEOUS REQUIREMENT

1. Keys: Four (4) key sets shall be furnished with unit. AS SPECIFIED
2. A line setting ticket or invoice, and one certified weight ticket with front axle, rear axle and tire weight shall be provided with the vehicle. AS SPECIFIED
3. 2 sets of maintenance and parts manuals in digitized form or hard copy. AS SPECIFIED
4. 2 sets of hardcopy operator's manual. AS SPECIFIED
5. Information for mounted accessories. AS SPECIFIED

6. State name and contact information for at least five (5) local municipal agencies that currently use a similar machine being offered.

a. CITY OF GLENDALE

(Agency Name)

DAVE COLE (818) 548-3952

(Contact name & telephone number)

b. CITY OF ANAHEIM

(Agency Name)

GLEN BOWERS (714) 765-6834

(Contact name & telephone number)

c. CITY OF LOS ANGELES

(Agency Name)

LARRY THOMPSON 323-526-9232

(Contact name & telephone number)

d. CITY OF HUNTINGTON BEACH

(Agency Name)

MARK BIRCHFIELD (714) 536-5921

(Contact name & telephone number)

e. CITY OF IRVINE

(Agency Name)

CURTIS SMITH (949) 724-7762

(Contact name & telephone number)

(End of technical specification)

SUBSECTION B - SPECIAL REQUIREMENTS

1. The successful bidder will complete all documents and / or file all applications necessary to obtain exempt registration and license plates for vehicle(s) covered by this bid from the California Department of Motor Vehicles in the name of the **City of Beverly Hills, 455 North Rexford Drive, Beverly Hills, California 90210**, before the vehicles(s) are delivered. Ownership Certificate(s), Registration(s) and license plates must be delivered with the vehicle(s).
2. Delivery is an important consideration in award of this bid. Bidder will be strictly bound to his commitments.
3. Vehicle(s) covered by this bid, including all equipment and accessories, must comply with all requirements of the California Vehicle and Federal Motor Vehicle Safety Standards for 2006 vehicles, safety orders of the California Division of Industrial Safety, and American National Standards Institute for the manufacture, reconstruction, modification, maintenance, service, operation, and installation (where applicable) of combination machine, including all amendments thereto.
4. Bidder is to state warranty period(s) on all vehicle(s).
5. City shall be the sole and final judge of compliance with bid specifications and reserves the exclusive right to award this bid in any manner it deems to be in the best interests of the City.

proposed materials or equipment may be required to acknowledge by written conformation that the minimum requirements of the specifications are included in the Bidder's proposal before the award of the bid.

EXCEPTIONS

Any bidder's exceptions to these terms or conditions or deviations from the written specifications shall be shown in writing and attached to bid form. However, such exceptions or deviations may result in bid rejection.

INSURANCE (applicable to successful bidder who may come into the City)

(1) **Commercial general liability** coverage at least as broad as Insurance Services Office Commercial General Liability occurrence coverage ("occurrence" form CG0001, Ed. 11/85) with a limit of not less than \$2,000,000 (Two Million Dollars) per occurrence. If the insurance includes a general aggregate limit, that limit shall apply separately to this contract or it shall be at least twice the required per occurrence limit.

(2) **Business automobile liability** insurance at least as broad as Insurance Services office form CA 0001 (Ed. 1/87) covering Automobile Liability, code 1 "any auto" and endorsement CA 0029 (Ed. 12/88) with a limit not less than \$1,000,000 (One Million Dollars) per accident.

(3) **Workers Compensation** Insurance as required by the State of California and **employers liability** insurance with a limit not less than \$1,000,000 (One Million Dollars) per accident.

All insurance coverages shall be provided by insurers with a rating of B+; VII or better in the most recent edition of Best's Key Rating Guide, Property-Casualty Edition.

Work on City property covered by a purchase order cannot be commenced until certificates of insurance have been approved.

Please use the official City of Beverly Hills certificate of insurance form (attached). If you use another form, the following requirements must be met to make the certificates acceptable to the City:

| | |
|---|---|
| 1 | name the City of Beverly Hills as additional insured for both GENERAL liability and AUTO liability; and |
| 2 | have at least thirty (30) days written notice of cancellation. |

All certificates of insurance must remain current until the purchase order expires or is sooner cancelled.

AFTER THE ACCEPTANCE AND AWARD OF THE BID BY THE CITY COUNCIL UPON RECEIPT OF A WRITTEN PURCHASE ORDER EXECUTED BY A PROPER OFFICER OF THE CITY, THIS DOCUMENT WILL CONSTITUTE THE LEGAL CONTRACT BETWEEN THE CITY AND THE SUCCESSFUL BIDDER.

If your response is **"NO BID"**, please explain below:

COMPANY NAME: _____

ADDRESS: _____

CITY, STATE, ZIP CODE: _____

TELEPHONE NUMBER: _____

FAX NUMBER: _____

BY: _____

(Print Name)

(Signature)

(Title)

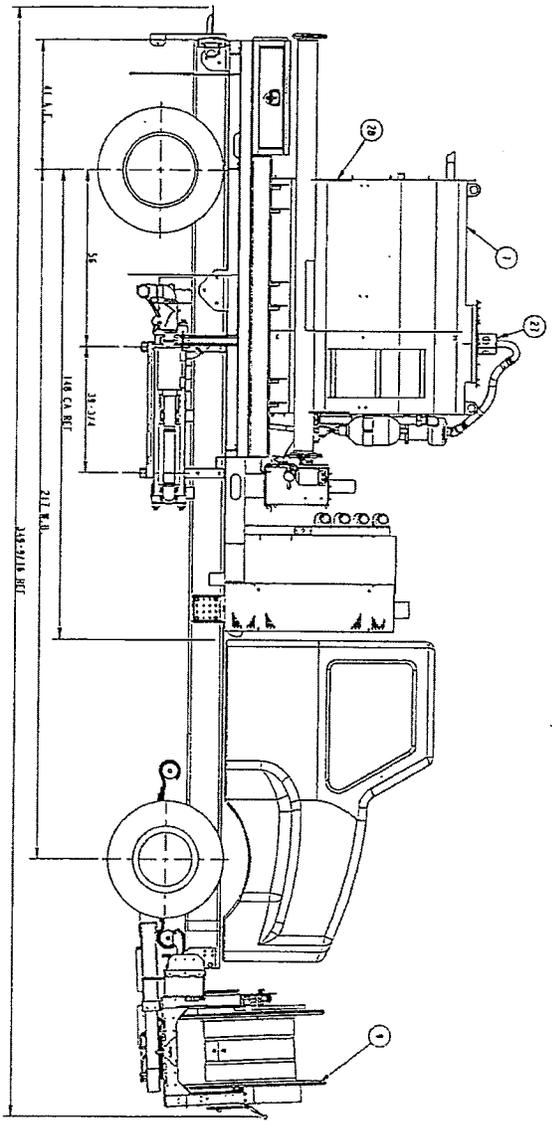
(Date)

PLEASE RETURN TO:

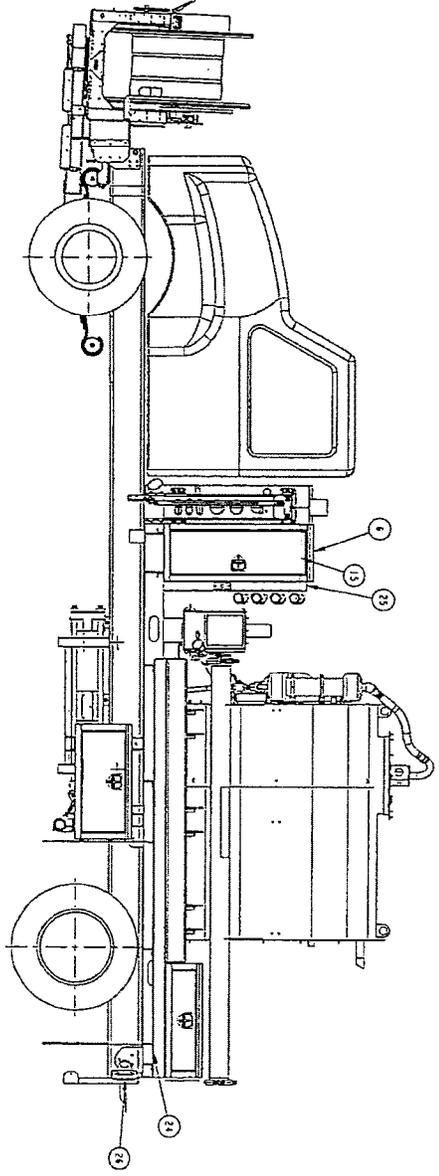
CITY OF BEVERLY HILLS
OFFICE OF THE CITY CLERK, ROOM 290
 455 NORTH REXFORD DRIVE
 BEVERLY HILLS, CA 90210
 (Attn: **Bid 11-14**)

(END)

TENTATIVE LAYOUT PENDING BEVERLY HILLS APPROVAL



PASSENGER SIDE

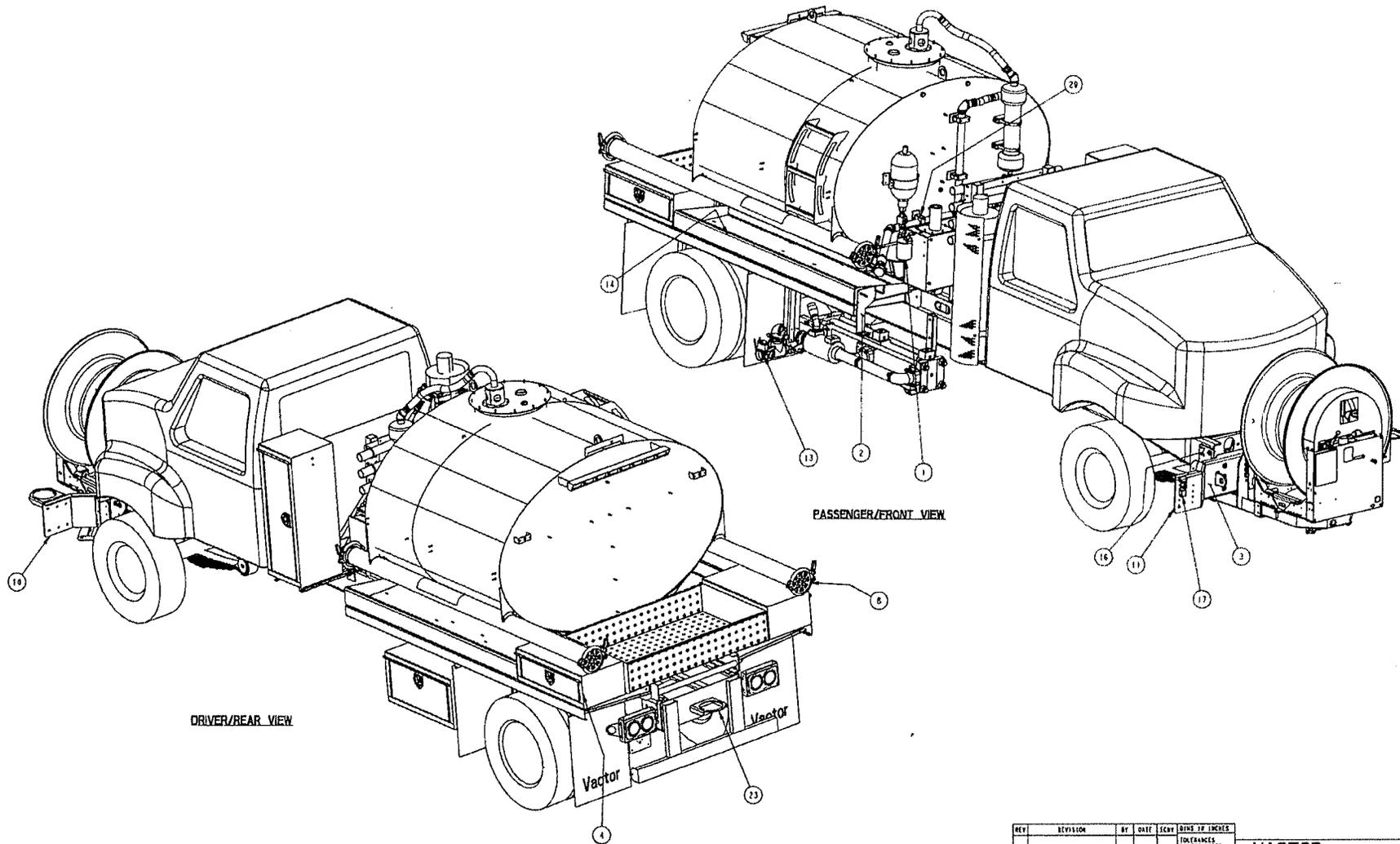


DRIVER SIDE

| ITEM | PART NO | DESCRIPTION | QTY | UNIT |
|------|----------|---|-----|------|
| 1 | 52445 | FILTER ASSY W/RESTRIC. | 1 | REF |
| 2 | 82319 | HANGON STORAGE BRACKET, LOCKABLE | 1 | REF |
| 3 | 13530CE | FRONT BUMPER W/LO. CENTER SECTION W/ DOWT ENDS | 1 | REF |
| 4 | 4483502 | TOOL BOX - 38" x 12" x 18" ALUM. HASP LOCK | 2 | REF |
| 5 | 4484324 | | | |
| 6 | 4484387 | | | |
| 7 | 4704194A | CNG STORAGE | 1 | REF |
| 8 | 50130C | END PLATE, STORAGE, HINGE | 4 | REF |
| 9 | 50130C | HOSE REEL, REGULATION, 80' | 1 | REF |
| 10 | 50130C | HOSE REEL, REGULATION, 80' | 1 | REF |
| 11 | 53438A | BUMPER W/RE W/DRUM, DRIVER'S SIDE | 1 | REF |
| 12 | 6039320 | STRIP ASSEMBLY, 1 STRIP | 1 | REF |
| 13 | 83258AV | ROBBER PUMP RUNNING ASSEMBLY, 5/8" HOUSING | 1 | REF |
| 14 | 841920K | TOOL TRAY W/LO. AL. 55° LG. JETTER | 2 | REF |
| 15 | 844104S | TOOLBOX MOD. SCORING HANDLE | 1 | REF |
| 16 | 8483510K | FRONT HOSE REEL, INST., STEERING 150' (EQU/1000') | 1 | REF |
| 17 | 12030C | HAND PUMP ASSEMBLY | 1 | REF |
| 18 | 874940 | TOOL BOX INSTALL. AL. 180° x 180° x 38" | 1 | REF |
| 19 | 82891C | TOOL BOX INSTALL. | 1 | REF |
| 20 | 82891C | TOOL W/DRUM | 1 | REF |
| 21 | 855420 | ORIENTS DASHET W/DRUM | 1 | REF |
| 22 | 082350 | STORAGE TOOL INSTAL. - JETTER | 1 | REF |
| 23 | 084044 | SHIELD CONC STORAGE RACE PLATE, L. 31L | 1 | REF |
| 24 | 891459 | SHIELD CONC STORAGE RACE PLATE, L. 31R | 1 | REF |
| 25 | 891459 | SUPPLEMENT WELD - L. SERVICE - L.A.S | 1 | REF |
| 26 | 891459 | SUPPLEMENT WELD - R. SERVICE - L.A.S | 1 | REF |
| 27 | 891459 | CLASSIC MOD. F. SERVICE, 1980 DUAL, 14 | 1 | REF |
| 28 | 891459 | ALIS GUP - 183 INCH. DRAG TAIL, CAVEL | 1 | REF |
| 29 | 891459 | WATER TANK MOD. 100L DRAL. COOR/LUMES | 1 | REF |
| 30 | 891459 | W/1 MOD. DUAL TAIL. LAYAL. SEPARATION | 1 | REF |

| REV | DATE | BY | CHKD | DESCRIPTION |
|-----|----------|----|------|----------------|
| 1 | 01/11/88 | | | INITIAL DESIGN |
| 2 | 01/11/88 | | | REVISED DESIGN |
| 3 | 01/11/88 | | | REVISED DESIGN |
| 4 | 01/11/88 | | | REVISED DESIGN |
| 5 | 01/11/88 | | | REVISED DESIGN |
| 6 | 01/11/88 | | | REVISED DESIGN |
| 7 | 01/11/88 | | | REVISED DESIGN |
| 8 | 01/11/88 | | | REVISED DESIGN |
| 9 | 01/11/88 | | | REVISED DESIGN |
| 10 | 01/11/88 | | | REVISED DESIGN |
| 11 | 01/11/88 | | | REVISED DESIGN |
| 12 | 01/11/88 | | | REVISED DESIGN |
| 13 | 01/11/88 | | | REVISED DESIGN |
| 14 | 01/11/88 | | | REVISED DESIGN |
| 15 | 01/11/88 | | | REVISED DESIGN |
| 16 | 01/11/88 | | | REVISED DESIGN |
| 17 | 01/11/88 | | | REVISED DESIGN |
| 18 | 01/11/88 | | | REVISED DESIGN |
| 19 | 01/11/88 | | | REVISED DESIGN |
| 20 | 01/11/88 | | | REVISED DESIGN |
| 21 | 01/11/88 | | | REVISED DESIGN |
| 22 | 01/11/88 | | | REVISED DESIGN |
| 23 | 01/11/88 | | | REVISED DESIGN |
| 24 | 01/11/88 | | | REVISED DESIGN |
| 25 | 01/11/88 | | | REVISED DESIGN |
| 26 | 01/11/88 | | | REVISED DESIGN |
| 27 | 01/11/88 | | | REVISED DESIGN |
| 28 | 01/11/88 | | | REVISED DESIGN |
| 29 | 01/11/88 | | | REVISED DESIGN |
| 30 | 01/11/88 | | | REVISED DESIGN |
| 31 | 01/11/88 | | | REVISED DESIGN |
| 32 | 01/11/88 | | | REVISED DESIGN |
| 33 | 01/11/88 | | | REVISED DESIGN |
| 34 | 01/11/88 | | | REVISED DESIGN |
| 35 | 01/11/88 | | | REVISED DESIGN |
| 36 | 01/11/88 | | | REVISED DESIGN |
| 37 | 01/11/88 | | | REVISED DESIGN |
| 38 | 01/11/88 | | | REVISED DESIGN |
| 39 | 01/11/88 | | | REVISED DESIGN |
| 40 | 01/11/88 | | | REVISED DESIGN |
| 41 | 01/11/88 | | | REVISED DESIGN |
| 42 | 01/11/88 | | | REVISED DESIGN |
| 43 | 01/11/88 | | | REVISED DESIGN |
| 44 | 01/11/88 | | | REVISED DESIGN |
| 45 | 01/11/88 | | | REVISED DESIGN |
| 46 | 01/11/88 | | | REVISED DESIGN |
| 47 | 01/11/88 | | | REVISED DESIGN |
| 48 | 01/11/88 | | | REVISED DESIGN |
| 49 | 01/11/88 | | | REVISED DESIGN |
| 50 | 01/11/88 | | | REVISED DESIGN |
| 51 | 01/11/88 | | | REVISED DESIGN |
| 52 | 01/11/88 | | | REVISED DESIGN |
| 53 | 01/11/88 | | | REVISED DESIGN |
| 54 | 01/11/88 | | | REVISED DESIGN |
| 55 | 01/11/88 | | | REVISED DESIGN |
| 56 | 01/11/88 | | | REVISED DESIGN |
| 57 | 01/11/88 | | | REVISED DESIGN |
| 58 | 01/11/88 | | | REVISED DESIGN |
| 59 | 01/11/88 | | | REVISED DESIGN |
| 60 | 01/11/88 | | | REVISED DESIGN |
| 61 | 01/11/88 | | | REVISED DESIGN |
| 62 | 01/11/88 | | | REVISED DESIGN |
| 63 | 01/11/88 | | | REVISED DESIGN |
| 64 | 01/11/88 | | | REVISED DESIGN |
| 65 | 01/11/88 | | | REVISED DESIGN |
| 66 | 01/11/88 | | | REVISED DESIGN |
| 67 | 01/11/88 | | | REVISED DESIGN |
| 68 | 01/11/88 | | | REVISED DESIGN |
| 69 | 01/11/88 | | | REVISED DESIGN |
| 70 | 01/11/88 | | | REVISED DESIGN |
| 71 | 01/11/88 | | | REVISED DESIGN |
| 72 | 01/11/88 | | | REVISED DESIGN |
| 73 | 01/11/88 | | | REVISED DESIGN |
| 74 | 01/11/88 | | | REVISED DESIGN |
| 75 | 01/11/88 | | | REVISED DESIGN |
| 76 | 01/11/88 | | | REVISED DESIGN |
| 77 | 01/11/88 | | | REVISED DESIGN |
| 78 | 01/11/88 | | | REVISED DESIGN |
| 79 | 01/11/88 | | | REVISED DESIGN |
| 80 | 01/11/88 | | | REVISED DESIGN |
| 81 | 01/11/88 | | | REVISED DESIGN |
| 82 | 01/11/88 | | | REVISED DESIGN |
| 83 | 01/11/88 | | | REVISED DESIGN |
| 84 | 01/11/88 | | | REVISED DESIGN |
| 85 | 01/11/88 | | | REVISED DESIGN |
| 86 | 01/11/88 | | | REVISED DESIGN |
| 87 | 01/11/88 | | | REVISED DESIGN |
| 88 | 01/11/88 | | | REVISED DESIGN |
| 89 | 01/11/88 | | | REVISED DESIGN |
| 90 | 01/11/88 | | | REVISED DESIGN |
| 91 | 01/11/88 | | | REVISED DESIGN |
| 92 | 01/11/88 | | | REVISED DESIGN |
| 93 | 01/11/88 | | | REVISED DESIGN |
| 94 | 01/11/88 | | | REVISED DESIGN |
| 95 | 01/11/88 | | | REVISED DESIGN |
| 96 | 01/11/88 | | | REVISED DESIGN |
| 97 | 01/11/88 | | | REVISED DESIGN |
| 98 | 01/11/88 | | | REVISED DESIGN |
| 99 | 01/11/88 | | | REVISED DESIGN |
| 100 | 01/11/88 | | | REVISED DESIGN |

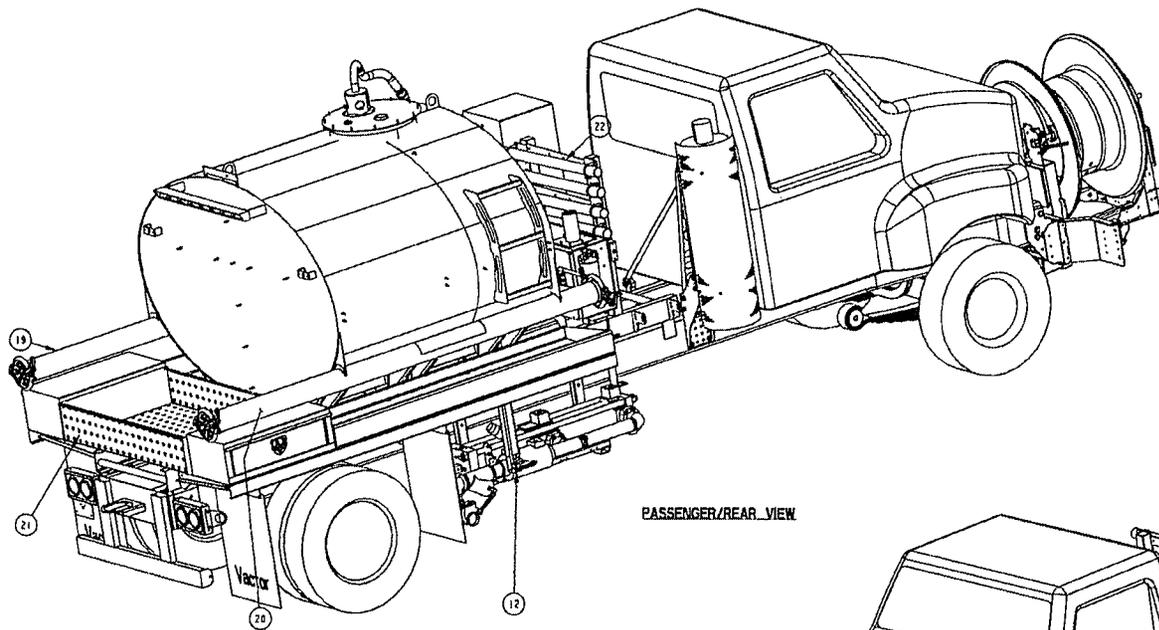
VACTOR MANUFACTURING CO. STERLING, VA.
 DATE: 01/11/88
 TIME: 11:00
 DRAWN BY: J. J. JONES
 CHECKED BY: J. J. JONES
 SCALE: 1" = 1'-0"



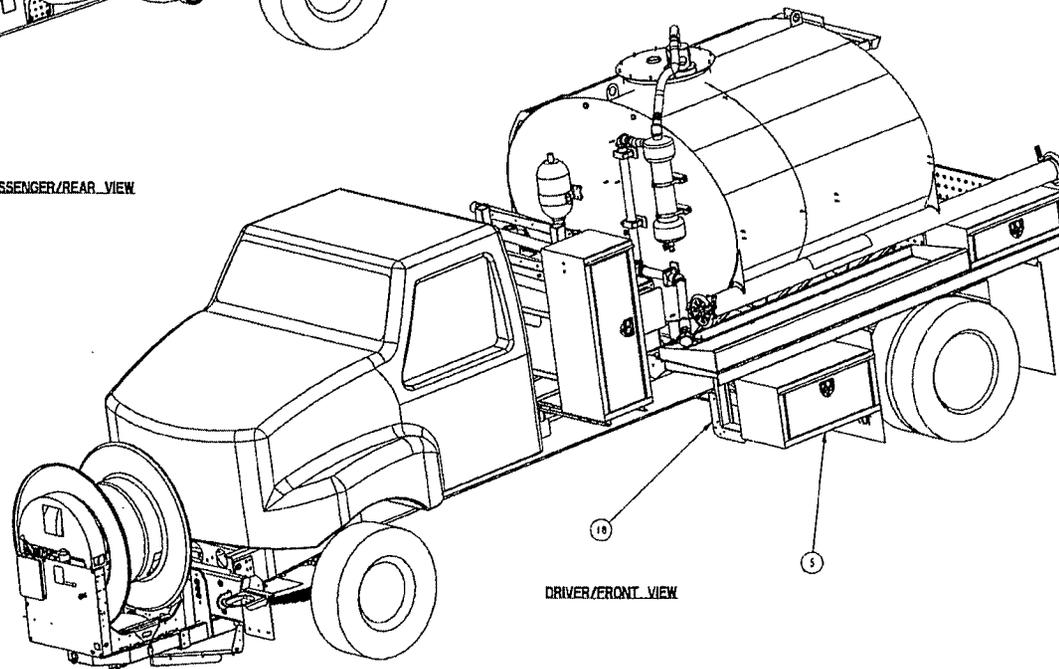
DRIVER/REAR VIEW

PASSENGER/FRONT VIEW

| REV | REVISION | BY | DATE | ICBY | DIMS IN INCHES | UNIT |
|---|----------|----|------|------|-----------------------------|------|
| | | | | | TOLERANCES: UNLESS NOTED | |
| | | | | | DECIMALS: .010 | |
| | | | | | FRACTIONS: 1/32 | |
| | | | | | ANGLES: .5° | |
| <small>THIS DRAWING IS UNLESS OTHERWISE SPECIFIED TO BE IN ACCORDANCE WITH THE ASME Y14.5-1994 DIMENSIONING AND TOLERANCE PRACTICES. ALL DIMENSIONS ARE TO UNLESS OTHERWISE SPECIFIED. DIMENSIONS ARE TO UNLESS OTHERWISE SPECIFIED. DIMENSIONS ARE TO UNLESS OTHERWISE SPECIFIED.</small> | | | | | | |
| <small>FOR MOUNTING OF THIS DRAWING PLEASE REFER TO ELECTRIC DRAWING.</small> | | | | | | |
| <small>ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED ARE IN INCHES AND DECIMALS THEREOF.</small> | | | | | | |
| <small>THIS DRAWING IS THE PROPERTY OF VECTAR MANUFACTURING INC. IT IS TO BE KEPT IN CONFIDENCE AND NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM.</small> | | | | | | |
| <small>VECTOR MANUFACTURING INC. STURMONT, IL</small> | | | | | | |
| <small>DATE: 8/11/20</small> | | | | | | |
| <small>SCALE: 1/16" = 1'</small> | | | | | | |
| <small>PART NO: SDB6 FA</small> | | | | | | |
| <small>REV: 0</small> | | | | | | |
| <small>SHEET 3 OF 4</small> | | | | | | |



PASSENGER/REAR_VIEW



DRIVER/FRONT_VIEW

| REV | REVISION | BY | DATE | ECN# | SIZE IN INCHES |
|---|----------|---------|-------|------|--|
| | | | | | FOR FRAMES AND SSC-BODIES |
| | | | | | DECIMAL & BIP |
| | | | | | FRACTIONS & 1/32 |
| <small>THIS DRAWING CONTAINS PROTECTED INFORMATION WHICH IS THE PROPERTY OF VECTOR MANUFACTURING INC. AND IS NOT TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF VECTOR MANUFACTURING INC.</small> | | | | | PATENT: TRADE MARK: P/N: U. O. I. SHEET 4 OF 4 |
| VECTOR MANUFACTURING INC. BIRMINGHAM, AL. | | | | | |
| <small>THE ABOVE COPY OF THIS DRAWING BEARING AN ELECTRONIC SYMBOL IS UNCONTROLLED.</small> | | | | | |
| | | DATE | SCALE | SIZE | PART NO. |
| | | 8/11/08 | 1/16 | D | SD861A |
| | | | | | REV |
| | | | | | 0 |