

CITY OF SACRAMENTO



DEPARTMENT OF GENERAL SERVICES
SUPPORT SERVICES DIVISION
5730 24TH STREET SACRAMENTO, CA 95822-3699
BUILDING 4 TELEPHONE (916) 449-5551

CITY MANAGER'S OFFICE
RECEIVED
MAR 18 1982

HOWARD F. ISHIDA
ADMINISTRATOR

March 17, 1982

City Council
Sacramento, California

Honorable Members in Session:

SUBJECT: Recommendation to Adopt Specifications

SUMMARY

Attached is a listing of a proposal with specifications for furnishing equipment to be used by the departments as indicated.

RECOMMENDATION

It is recommended that the City Council adopt the specifications and that bids be called for the date shown.

Respectfully Submitted,

Howard F. Ishida
Howard F. Ishida
Support Services Administrator

Recommendation Approved:

Walter J. Slips
Walter J. Slips, City Manager

APPROVED
BY THE CITY COUNCIL

MAR 30 1982

OFFICE OF THE
CITY CLERK

March 23, 1982
All Districts

1 Attachment

By the City Clerk,
Office of the City Clerk,
Cont 46
3-30-82
MAR 23 1982

<u>Bid No.</u>	<u>Description</u>	<u>Estimated Cost</u>	<u>Bid Date</u>
440	Nine (9) each 20 cubic yard rear loading truck mounted refuse compactors to be used by the Equipment Maintenance/Waste Removal Divisions.	\$551,250.00	April 13, 1982

BIDS MUST BE RECEIVED BY THE
CITY CLERK, ROOM 203, CITY HALL
PRIOR TO 10:30 A.M., TUESDAY
APRIL 13, 1982

**BID TO THE
CITY OF SACRAMENTO, CALIFORNIA
PURCHASING DIVISION**

FOR: 20 CUBIC YARD REAR LOADING TRUCK
MOUNTED REFUSE COMPACTOR

BID NO: 440

Name of Bidder _____ Telephone _____

Type of Business: Corporation, Co-partnership, Individual doing business under his own name,
 Individual doing business using a firm name.

Business Address: _____
Street City State Zip Code

To the City of Sacramento:
The undersigned, as bidder, certifies that the only persons or parties interested in this bid as principals are those named herein as bidder; that this bid is made without collusion with any other person, firm, or corporation; that in submitting this bid he has examined the "General Conditions and Instructions to Bidders" and the specifications; that he proposes and agrees if this bid is accepted, he will execute and fully perform the contract for which bids are called; that he will perform all the work and / or furnish all the materials specified in the contract, in the manner and time therein prescribed, and according to the requirements as therein set forth; and that he will take in full payment therefor, the prices set forth in the attached schedule.

Typed or Printed Name and Title Signature

Address (if different than above business address)

PLEASE READ CAREFULLY BEFORE SIGNING

- To be signed by authorized corporate officer or partner or individual submitting the bid. If bidder is: (Example)
- 1. An individual using a firm name, sign: "John Doe an individual doing business as Blank Company."
 - 2. An individual doing business under his own name, sign: your own name only.
 - 3. A co-partnership, sign: "John Doe and Richard Roe, co-partners doing business as Blank Co., By John Doe, co-partner."
 - 4. A corporation, sign: "Blank Company, by John Doe, secretary," (or other title).

FOR CITY USE ONLY

Bid was opened on above date and at prescribed place.
Bid bond required No Yes Amount _____
Received: Cash Cashiers or Certified Check Surety Bond

City Clerk/Purchasing Agent
Approved as to form and legality

City Attorney

GENERAL CONDITIONS AND INSTRUCTIONS TO BIDDER

NO BID IS IN LEGAL FORM UNLESS THE FOLLOWING INSTRUCTIONS ARE FULLY COMPLIED WITH

1. Bid must be submitted on this printed bid form and sealed in the envelope supplied.
2. All bids shall be clearly and distinctly written without erasure or interlineation, and properly signed by an authorized party, who shall indicate the capacity in which the signature is executed.
3. Alternate bids are invalid unless invited and covered by the specifications.
4. If required, a bid bond in the amount stated on the front of this form must accompany this bid. Payment must be made by cash, cashier's or certified check, or by surety bond.
5. All bids must be delivered to the designated recipient not later than the time specified on the front of this form.
6. No bidder shall be interested in more than one bid as provided by City Code Section 57.302.
7. The right to reject any and all bids is reserved by the City.
8. The City reserves the right to waive any informalities or minor irregularities in connection with bids received.
9. All provisions of Chapter 57 of the City Code are applicable to any bid submitted or contract awarded pursuant thereto.
10. **Faithful Performance Bond.** The successful bidder will [] will not [X] be required to submit a faithful performance bond, in a form approved by the city attorney, in the amount of _____.
11. **Cash Discounts.** Cash discounts offered for payment in less than ten (10) days will not be considered as a basis of award. Cash discounts offered for payment in ten (10) or more days will be subtracted from the total bid price for the purposes of bid evaluation. Any cash discount offered by the successful bidder will be accepted by the City of Sacramento, whether or not it was considered as a basis of award.
12. Bids will be opened, in public, in the City Council Chambers, City Hall, 915 - Eye Street, Sacramento, California, at ^{10:30}~~10:15~~ a.m., April 13, 1982. (Bids must be submitted prior to ^{10:30}~~10:15~~ a.m.)
13. Within thirty (30) days after the bid opening a contract will be awarded by the City to the lowest responsible bidder, subject to the right of the city to reject all bids, as it may deem proper. The time for awarding a contract may be extended an additional thirty (30) days, at the sole discretion of the City, if required to evaluate bids or for such other purpose as the City may determine, unless the Bidder objects to such extension in writing with his bid. The "lowest responsible bidder" is defined as follows:

In addition to price in determining the lowest responsible bidder under the provisions of this chapter, consideration shall be given to: (i) the quality and performance of the supplies to be provided by the bidder; (ii) the ability, capacity and skill of the bidder to perform the contract or effectuate the transaction; (iii) the ability of the bidder to perform the contract or effectuate the transaction within the time specified, without delay; (iv) the character, integrity, reputation, judgement, experience and efficiency of the bidder; (v) the quality of bidder's performance on previous purchases by, or contracts with, the City; and (vi) the ability of the bidder to provide future maintenance, repair parts and services for the supplies provided. (Section 57.102)

In addition to the above considerations, the City will also consider which bids will result in receipt by the City of sales or use tax under the Provisions of Part 1.5 of Division 2 of the California Revenue and Taxation Code and Article III of Chapter 41 of the Sacramento City Code and shall deduct the amount of such sales or use tax which will be received from any such bid. (Ordinance No. 4064)

THE CITY CANNOT ACCEPT A BID FAILING TO COMPLY WITH ANY OF THE ABOVE REQUIREMENTS

Vendors not wishing to bid this particular requirement are encouraged to return the bid package marked "no bid" with a brief statement explaining the reason for non-response: not interested at this time, not our field of manufacture/expertise, etc. This will enable us to maintain a current list of responsive bidders as well as verify receipt of the bid by your company.

CITY OF SACRAMENTO
SACRAMENTO, CALIFORNIA

BIDDING SHEET FOR NINE (9) EACH 20 CUBIC YARD REAR LOADING TRUCK MOUNTED REFUSE COMPACTORS

For furnishing to the City of Sacramento nine (9) each 20 cubic yard rear loading truck mounted refuse compactors in accordance with attached Specification #125-A.

The quantities shown are based upon the best estimates available and are subject to increase or decrease.

<u>Estimated Quantity</u>	<u>Description</u>	<u>Unit Price</u>	<u>Extension</u>
9 each	20 Cubic yard rear loading truck mounted refuse compactor in accordance with attached Specification #125-A	\$ _____	\$ _____
		6% Sales Tax	_____
		TOTAL BID PRICE \$	_____

Manufacturer and Model Number: Cab and Chassis: _____
Front End Loader: _____

Optional Bid Items (Less 6% Sales Tax) Per Attached Specification #125-A

	<u>Price Per Vehicle</u>
A. Automatic service brake slack adjusters at all four (4) wheels	\$ _____
B. All teflon radiator hoses, including cab heaters	\$ _____
C. Available engine of comparable size, other than unit proposed in bid	\$ _____
D. Single exhaust system with vertically mounted muffler and exhaust pipe per Item 10.11 of this specification	\$ _____
E. One (1) sealed beam work light equal to G. E. tractor lamp #4419, Grote housing #64011 installed in the upper portion of the hopper area, sufficiently away from the path of refuse compaction. Switch to be located at left or right rear corner of tailgate and wired to taillight circuit	\$ _____
F. Tail, stop, and directional light of the rubber mounted sealed beam type, minimum size - 4" lens diameter.	\$ _____
G. Backup light (quantity - two) equal to G. E. tractor lamp #4419, Grote housing #64011 installed on the tailgate in an appropriate location as consulted and approved by the City	\$ _____
H. An access hole with bolt on steel plate cover shall be provided on the refuse pushout blade if a clamp lever and spring is utilized as in "Leach bodies" to compress and eject the garbage. Configuration and location shall be as approved by the City as have been done on like units on prior purchases by the City Equipment Maintenance Division. Guide rollers shall also be replaceable without use of cutting torch. Openings at the rear upper corners of the tailgate, adjacent to the tailgate lift cylinder on Leach Sanicruiser shall be closed with a steel plate to preclude garbage from spilling out. Body mount area adjacent to the tailgate shall be of the extra heavy duty configuration.	\$ _____
I. "Stationary operation test" - (mounted unit operating in conjunction with truck but not traveling) combined noise level of the truck and the mounted unit shall be no higher than 75 DB (A) at 50 feet from vehicle, 5 feet above the ground, at all four sides.	\$ _____

BIDDING SHEET FOR NINE (9) EACH 20 CUBIC YARD REAR
LOADING TRUCK MOUNTED REFUSE COMPACTORS - continued

Federal Excise Tax

The prices quoted should exclude all Federal Excise Taxes. The City of Sacramento is exempt and will furnish all necessary Federal Excise Tax exemption certificates.

Award

An award will be made to that lowest responsible bidder whose proposal is most responsive to the needs of the City. The total cost per vehicle, including any selected options and delivery time, will be the basis of award for any resultant contract.

Prompt Payment Discount

Cash discount of _____% for payment within _____ calendar days which will be computed from the date delivery is made or the date a proper invoice is received, whichever is later.

Delivery

Since delivery time is very crucial to the City's operational program, it will be a major determining factor, along with price, in evaluating each proposal. Bidders are therefore required to furnish the earliest realistic delivery time after receipt of order. Delivery will be made within _____ calendar days after receipt of order.

F.O.B. Destination: City of Sacramento
c/o Equipment Maintenance Division
5730 - 24th Street, Building #5
Sacramento, CA 95822-3699

BIDDER'S NAME: _____

DO NOT DETACH THIS SHEET - SUBMIT ENTIRE BID PACKAGE AS YOUR PROPOSAL

CITY OF SACRAMENTO
SACRAMENTO, CALIFORNIA

20 CUBIC YARD REAR LOADING TRUCK MOUNTED REFUSE COMPACTOR
APWA #3020

1.0 SCOPE AND INTRODUCTION:

- 1.1 This specification describes a new, unused, latest model, diesel fueled, two axle, tilt cab truck with twenty (20) cubic yard capacity, rear loading refuse collection compactor body mounted on it. It will be operated in business districts as well as residential areas and will be required to dump in an unimproved land fill site.
- 1.2 Vehicle(s) shall be complete with all equipment and accessories necessary for safe and efficient operation. They are to be delivered as a complete unit, certified and ready for immediate job site operation within the City of Sacramento area.
- 1.3 It is intended that the manufacturer in the selection of components will use material and design practices that are the best available in the industry for the type of operating conditions to which the vehicle(s) will be subjected. Suspension, wheels, tires and other component parts shall be selected to give maximum performance, service life and safety and not merely meet the minimum requirements of this specification. All parts, equipment and accessories shall conform in strength, quality of material and workmanship to recognized industry standards.
- 1.4 The term "heavy duty" as used in these specifications shall mean that the item to which the term is applied shall exceed the usual quantity, quality or capacity supplied with standard production vehicle(s); and it shall be able to withstand unusual strain, exposure, temperature, wear and use.
- 1.5 If any of the equipment bid varies from the specifications, such variation(s) must be listed in writing and attached as part of the proposal. The City of Sacramento reserves the right to waive minor variation(s) if in the opinion of the Equipment Maintenance Superintendent the basic unit meets the general intent of these specifications.
- 1.6 The City reserves the right to reject any and all bids or alternate bids as the best interest of the City may require. Consideration will be given in comparing proposals and in awarding a contract, not only to the amount of the proposal, but also the kind and quality of the equipment offered, its suitability for use in the service intended, as well as the lowest ultimate cost to the City. Time required for delivery is important and may influence the award.

1.7 Specifications on the following pages are written with intent to meet all applicable documents but the final certification to comply shall rest with the vendor and not the City of Sacramento. Should requirements as specified not comply, the manufacturer is required to refigure and revise the specifications to meet all laws, rules and regulations where it applies to items such as the ratings of axles, tires, rims, brakes, etc., and the City of Sacramento is to be notified thereof.

2.0 APPLICABLE DOCUMENTS AND CERTIFICATIONS:

2.1 Federal Motor Vehicle Safety Standard, Department of Transportation.

2.2 State of California Motor Vehicle Code.

2.3 State of California General Industrial Safety Orders.

2.4 State of California Health and Safety Code, Motor Vehicle Pollution Control.

2.5 California Occupational Safety and Health Act (O.S.H.A.).

3.0 SUBSTITUTION FOR SPECIFIED EQUIPMENT:

Whenever in the specifications any material or process is indicated or specified by patent or proprietary name and/or by name of manufacturer, such specifications shall be deemed to be used for the purpose of facilitating descriptions of the material and/or process desired and shall be deemed to be followed by the words "or equivalent". The Contractor may offer any material or process which shall be equal in every respect to that so indicated or specified, provided however, that if the material, process or article offered by the Contractor is not, in the opinion of the City of Sacramento, equal in every respect to that specified, then the Contractor must furnish the material, process or article specified or one that in the opinion of the City of Sacramento is the equal thereof in every respect.

4.0 PAINT FINISH:

Vehicle and packer unit shall be painted with at least one (1) coat of metal primer and at least two (2) finish coats of white comparable to Dupont Dulux #93-28072 or factory equal. (Second coat of white applies to mounted body only.)

5.0 GENERAL:

5.1 Complete specification, published literature and photos or illustrations of unit proposed, e.g., blueprint, name of manufacturer, body I.D. number, etc. shall be furnished with bid.

- 5.2 All equipment and components cataloged as standard by the manufacturer for model quoted shall be furnished whether or not such items are detailed herein, e.g., special wrenches, tool kits, jacks - adequate to safely lift the vehicle when loaded to rated capacity, etc. Option equipment as necessary to meet the following requirements of this specification shall also be supplied.
- 5.3 Successful Contractor shall, at time of delivery, supply to the Equipment Maintenance Department a completed vehicle parts card and predelivery check sheet. (Equipment Maintenance Department will supply both forms to the successful Contractor.)
- 5.4 Noise Level:
- a. "Drive-by and in cab test" - to meet standards established by Local, State and Federal Agencies for both in and outside operator's cab.
 - b. "Stationary operation test" - (mounted unit operating in conjunction with truck but not traveling) combined noise level of the truck and the mounted unit shall be no higher than 83 DB (A) at 50 feet from vehicle, 5 feet above the ground.
 - c. Each complete unit delivered may be tested by the City personnel for noise level and must meet requirements before the unit is accepted.
- 5.5 Equipment Manuals:
- a. One (1) truck and packer operator's manual for each equipment.
 - b. One (1) parts and repair (service) manual for each packer (not truck).
 - c. One (1) engine parts and service manual for total order.
 - d. One (1) electrical wiring schematic for truck.
- 5.6 The body manufacturer must have service facilities and an adequate supply of service parts available at a distance from Sacramento no greater than that to the San Francisco Bay area. Servicemen must be available to the City of Sacramento within eighteen (18) hours after request.
- 5.7 Provide names of three (3) cities using proposed packer units in California.
- 5.8 City reserves the option for an on the job demonstration and evaluation (minimum - 16 working hours) by City personnel before acceptance of contract if performance of unit proposed is not familiar to the City.
- 6.0 DELIVERY:
- 6.1 "Caravan" or "drive-away" delivery from points of manufacture or assembly will not be accepted. (Exception: within radius of 150 miles.)
- 6.2 Delivery shall be made to the City of Sacramento Corporation Yard, 5730-24th Street, Sacramento, California, serviced and operable with minimum 1/4 tank of fuel.

6.3 The original dealer's Report of Sale or certificate of origin, smog certificate (original copy) and certified weight certificate, any or all of which, if required, to obtain tax exempt license shall be furnished to the consignee at time of delivery of the vehicle(s) before payment can be made.

7.0 INSPECTION:

Vehicle(s) will be inspected before acceptance by an authorized representative of the City of Sacramento for workmanship, appearance, proper functioning of all equipment, and systems and conformance to all other requirements of this specification. If deficiencies are found, it shall be the responsibility of the dealer to pick up the vehicle(s), make necessary correction and redeliver the vehicle(s) for reinspection and acceptance. Payment and/or commencement of a discount period (if applicable) will not be made until corrective action is made.

8.0 GUARANTEE:

A manufacturer delivering vehicle(s) against this specification shall guarantee that they meet the minimum requirements set forth herein. If it is found that the vehicle(s) delivered do not meet the minimum requirements of this specification, the manufacturer will be required to correct the same at his expense.

9.0 WARRANTY:

- 9.1 A copy of manufacturer's proposed warranty policy shall be delivered with each vehicle.
- 9.2 Cab chassis and all drive trains shall be guaranteed against defects in material and workmanship for a period of one (1) year or 12,000 miles whichever occurs first from date unit was placed in service.
- 9.3 Engine shall be guaranteed against defects in material and workmanship for a minimum period of two (2) years, 50,000 miles or 1500 engine hours whichever occurs first from date unit was placed in service.
- 9.4 The compactor manufacturer shall warrant for a period of one year after delivery and acceptance of the entire refuse collection unit, that the body and appurtenances shall be free from workmanship and material defects. He shall agree to repair or replace and furnish all labor for all such defective materials for workmanship at no cost to the City.
- 9.5 If the City of Sacramento is required to deliver a unit outside of the immediate Sacramento area for warranty work, vendor shall reimburse City of Sacramento at the rate of \$20.00 per hour for pickup and delivery time involved. City of Sacramento shall be furnished, no-charge, invoice for all work performed under warranty indicating type of work performed and parts replaced.

9.6 Bidders must list the nearest factory authorized service representative(s) who will be responsible for servicing the complete unit or any part thereof.

9.7 No 1,000 mile inspection service policy required.

10.0 REQUIREMENTS - CAB AND CHASSIS:

10.1 Cab - Tilt type. Hydraulic or electric lift.

10.2 GVWR - 35,000 lbs. minimum.

10.3 GAWR (front) - 12,000 lbs. minimum. (To be raised if necessary.)

10.4 GAWR (rear) - 23,000 lbs. minimum, single axle.

10.5 C/A Dimensions - compatible with make and size of body mounted to provide the correct load distribution for maximum legal payload.

10.6 Wheelbase - compatible with make and size of body mounted to provide the correct load distribution for maximum legal payload.

10.7 Springs -

a. Main - heaviest duty available for specified GAWR and shall be provided with enough spring reserve capacity to position itself level or parallel to ground when loaded as well as when empty by use of additional main leaves if required.

b. Auxiliary - to be provided for rear.

10.8 Shock Absorbers -

a. Front - required, if available as standard or optional item.

b. Rear - not required.

10.9 Engine -

a. Number of cylinders - "8" V type or inline "6".

b. Cubic Inch Displacement - 466 minimum.

c. Net horsepower at governed RPM - 184 minimum.

d. Net torque - 476 lbs. minimum at 1800 RPM maximum.

e. Fuel - diesel.

- f. Oil Filter - spin on/off type with external luberfiner filter of adequate capacity mounted at an easily accessible location for service.
- g. Air Filter - replaceable element (dry) type with restriction indicator mounted in the cab at a readily visible location from driver's seat.
- h. Governor - variable speed type.

10.10 Cooling System -

- a. Manufacturer's heaviest available option for the engine furnished; adequate to maintain engine at proper temperature under all operating conditions in the City of Sacramento area.
- b. Heavy duty shrouded radiator provided with adequate capacity to meet above requirements.
- c. Antifreeze - (glycol) protected to minus 20° below freezing.
- d. Corrosion resistor with replaceable spin-on type element (Perry #SA360) shall be provided.

10.11 Single exhaust system with vertical "stack" and adequate guard to prevent personnel from burns. "Stack" to be cut off at exactly 4" above the top of the packer body line and equipped with rain cap.

10.12 Engine protective device to first provide an audible warning and to stop the engine in the event of low oil pressure or high water temperature, without damaging the engine or its components. An automatic override shall be provided to permit driver to move vehicle off roadway.

10.13 The oil and water fill points shall be readily accessible and allow checking without tilting cab.

10.14 Transmission -

- a. Automatic - 5 speed, Allison MT-653 with modulator lockup. A neutral lockup shall also be required for hydraulic pumping operation through side mounted heavy duty power take-off drive gear.
- b. P.T.O. Opening flange to frame clearance shall be adequate for removing and installing spicer "Hotshift" P.T.O. assembly without altering transmission location from its mounting.
- c. Auxiliary oil cooler - Hayden Model No. K1260 or equal located 1½" away and in front of engine radiator.

- d. Transmission shift linkage shall have minimum number of bends and be so routed as to not become overheated by exhaust system.
- e. Oil filter (auxiliary) shall be AC 5576446 or approved equal with 5/8 inch I.D. connecting hoses. Filter element shall be a PF 132 or equal. Filter shall be so located to permit easy access for element replacement.

10.15 Axle ratio - approximately 55 to 60 mph road speed.

10.16 Frame -

- a. Reinforced, alloy steel, with a section modulus of not less than 18.93 per frame side rail and an RBM of 946,500 PSI minimum. If heat treated frame is provided, it shall not be heated or welded.
- b. Frame shall have sufficient number of crossmembers to provide torsional rigidity and to support the frame rails where fuel tanks and rear suspension assemblies will be mounted. An extra heavy duty crossmember shall be provided for the rear spring mounting bolts at the front and rear spring suspension area to preclude stress cracks.

10.17 Steering - power assisted factory standard.

10.18 Wheels and tires -

- a. Wheels: Six (6) steel disc type, 20"x7½", LB or LW, sufficient to meet GVWR per item 10.2 of this specification, 10 hole with 11½" bolt circle.

Note: Firestone RH-5⁰ lock rings will not be accepted.

- b. Tires: Six (6) tube type 11.00x20, 14 ply minimum.

10.19 Brakes -

- a. Service - full air, all wheels without Anti Lock system.
- b. Compressor - 12 CFM minimum.
- c. Spring type emergency brake on rear axle.
- d. Front brake size - 16½"x5" minimum, cam or wedge actuated.
- e. Rear brake size - 16½"x7" minimum, cam actuated.
- f. Air brake system shall have service air and emergency air glad hand connectors installed at the left front portion of the truck cab at or near the bumper area. These glad hands shall be integrally connected with the air braking system to facilitate towing by our in-house tow truck which also is air brake equipped. Glad hand connectors shall be adequately protected and shielded.

Note: Contractor shall provide documented certification that truck and packer combined shall comply with all requirements of FMVSS.

- g. Quantity and capacity of air reservoir tank to meet D.O.T. 121 certification and equipped with non automatic, pull cable type valve equal to Weatherhead #1421 on all tanks with cable positioned for easy access and anchored separately - no closer than 10" apart.

10.20 Electrical

- a. Alternator - 12 volt, 65 amp minimum.
- b. Battery - two (2) 12 volt, 1200 CCA heavy duty type, mounted on left side or under cab floor with enough clearance above battery for servicing and testing.
- c. Lights -
 - 1. Minimum lighting equipment including but not limited to: tail, stop, license, head (multiple beam), all instrument, directional signal of the self cancelling type including hazard switch, backup, clearance, and marker light.
 - 2. The type of service application this equipment will be subjected to results in damage to unduly exposed or protruding part of the body to the rear. Therefore, tail, stop, backup and license plate bracket shall be recessed flush with body or bumper or otherwise protected to prevent damage when backed into piles of debris.
- d. All wiring must be color coded or numbered. All exterior wires, wire harnesses, terminals or connectors subject to road grime, dirt, moisture and rock throw, shall be adequately protected and hermetically sealed. Whenever possible, individual wires shall be grouped into harnesses and properly supported on rigid members to prevent abrasion and flexural failure. Grounding terminals for all circuits shall be securely soldered or crimped to copper terminal and bolted to frame. The same provision shall also be required for the packer body.
- e. Reflectors shall also be provided to meet State of California Vehicle Code.

10.21 Gauges -

One (1) fuel, one (1) coolant temperature, one (1) oil pressure, one (1) ammeter, one (1) speedometer, one (1) transmission temperature gauge in cab showing heat in degrees or percentages with over-temperature indicator light and test button mounted on dashboard, one (1) tachometer and one (1) air pressure. Air pressure gauge must provide audible warning whenever system pressure is below 60 pounds. All gauges must be provided with light for night operation.

10.22 Fuel Tank/Location

Minimum capacity - 50 gallons left side mounted. Its fill spout area shall be protected from winter mud accumulation to prevent contamination of fuel when refueling and shall be mounted on the left side of frame or be of the step tank type for future installation of newspaper rack on the right side of body by the City of Sacramento. Dimension of said rack is 72" long x 33" high x 28" deep; and therefore sufficient space shall be provided on the right side of the frame precluded of all obstructions to accommodate the rack. Tank shall be prominently labeled - "DIESEL FUEL ONLY".

10.23 Seat -

Adjustable and weather resistant for driver and two (2) passengers. Cab floor, seats and doors shall be so arranged as to enable driver to enter and leave the cab with ease and dispatch.

10.24 Cab Steps -

If cab floor is more than 32" above ground level, it shall be equipped with two (2) intermediate steps on both sides. The first step surface area shall have a minimum dimension of 6" in depth and 11" in width, made of metal and be of the self cleaning open grate type. A toe stop shall be a necessary part of this step to prevent foot from slipping through. It shall be strong enough to support a man weighing minimum 225 pounds using the steps to climb in and out of the cab approximately 100 times per day. The first step shall be of the bolt-on design and located no higher than 18" nor lower than 15" above ground level with minimum 10" of space between top of first step and bottom of second step. Design and dimension of the step shall be submitted with the bid proposal for approval and acceptance by the Equipment Maintenance Superintendent.

10.25 Miscellaneous Equipment -

- a. Wipers (Windshield) - electrically or air operated. Minimum two speeds.
- b. Fire extinguisher and bracket - 5# BC dry chemical with metal valves (not plastic) located to be readily accessible to driver.
- c. "Felt" under vinyl floor covering shall be removed and discarded to preclude rust when floor is washed with water.
- d. Door locks - on both doors.
- e. Mirrors - both sides, westcoast standard, 6"x16".
- f. Heater and Windshield Defroster - adequate size and design to keep cab comfortably warm and to keep windshield clear under all adverse weather conditions. Heater blower two (2) speed minimum.

- g. Seat Belts - for operator and one (1) passenger. Outside belts to be equipped with boot type retractors. Anchorage to meet Federal Safety standards.
- h. Horn - dual electric.
- i. Grab Handles - outside cab on right and left sides. Additionally there shall be a heavy duty grab handle located on the inside panel of each door (centered approximately 2" below the window sill) for ease of getting into the cab and of closing the doors upon entering. Exact location shall be as approved by the City.
- j. Fenders and/or Mudflaps - to prevent front tires from kicking road dirt onto body. (Fenders mounted to frame desired.)
- k. Front bumper shall be of adequate strength and construction that vehicle may be picked up by same front bumper and towed to City of Sacramento repair facility under a fully loaded condition.

Note: To meet above requirement, the bidder may incorporate the same modification the City has made in the past. That is to first remove the original bumper and hooks if necessary. Cut 7/16" x 6" angle iron long enough so as to extend 15" (approximate) beyond the side of frame on both sides. Place one leg of the angle iron below the protruding frame with the other in front of the frame. Bolt back original bumper, hooks, etc. with shim stock between bumper and angle iron to take up space between the two members as required.

- l. Tow hooks - two (2) attached to front frame suitable for towing fully loaded vehicle.
- m. Sunvisors - dual.
- n. Cigarette lighter and ash tray.
- o. Back-up indicator - an audible device which can be heard above 80 Dba of background noise when the vehicle moves in reverse. Bullard Reli-Alarm Model MPA-2 for standardization shall be located between the frame in the rear section. (No exception.)
- p. Before delivery to the City of Sacramento and before acceptance by the City - all spring "U" bolts, PTO mounting bolts, rear differential mounting bolts, rear axle flange bolts, etc. shall be re-torqued to factory specification.

10.26 OPTIONAL QUOTES REQUIRED ON FOLLOWING ITEM(S):

- a. Automatic service brake slack adjusters at all four (4) wheels.
- b. All teflon radiator hoses including cab heaters.
- c. Available engine of comparable size, other than unit proposed in bid.
- d. Single exhaust system with vertically mounted muffler and exhaust pipe per item 10.11 of this specification.

11.0 REQUIREMENTS - 20 YARD REAR END LOADER:

- 11.1 Body - (shall conform to American National Safety Standard for Refuse Collection Equipment).
- a. Complete body shall be of all steel construction with a minimum net capacity of 20 cubic yards not including space for loading area and ejection mechanism.
 - b. Body side walls shall be minimum of 11 gauge high tensile steel sheets, and roof of 12 gauge high tensile steel sheets - adequately braced and reinforced horizontally and vertically for maximum strength and rigidity.
 - c. Body floor shall be minimum of 10 gauge high tensile steel sheets adequately supported by longitudinals and crossmembers for good load distribution and body rigidity. Recessed floor - unacceptable on units with telescopic pushout cylinder.
 - d. Spacer used between body and chassis frame shall be steel full length (uncut) To minimize frame flexing, the forward body to frame mounting shall be of the compressed spring type utilizing minimum $\frac{1}{4}$ " steel bracket and 1" O.D. bolts.
 - e. All welds shall be smooth and clean of welding slag inside and outside. Welds to be continuous in all critical areas.
 - f. A quality of material, fabrication and workmanship at least equal to standards generally adhered to in the construction of first quality commercial truck bodies; so constructed and of sufficient strength to prevent bulging when subjected to maximum compaction of refuse within the body.
 - g. Units offered with enclosed front ends shall have on the curb or right hand side, a hinged door not less than 30"x30" in size for interior access used in cleaning and inspection.
 - h. Frame channel - where cut off at the rearmost extremity shall be boxed to preclude refuse deposit on the frame and also for reinforcement.
 - i. Steps shall be provided at rear of the body on each side. It shall have slip resistant edges and surface and be of self cleaning (grip strut type). Each step shall be designed to carry a uniformly distributed load of not less than 1,000 pounds and mounted not more than 22 inches above the road surface. They shall provide a minimum 220 square inches of comfortable riding surface. The depth of each step shall be the maximum obtainable, measured from the side of hopper to the maximum vehicle width allowed by the Vehicle Code of California. Design and dimension of the step shall be submitted with the bid proposal for approval and acceptance by the Fleet Superintendent.

- j. Hand grips (grab handles) are to be provided in conjunction with the steps in Item No. 11.1g at both locations. The hand grips shall be a bar or pipe supported from a wall or partition and shall be so located as to provide employees with safe hand holds for a comfortable ride (minimum size - no less than 9" long nor less than 4" deep) with a pull force of 500 lbs.
- k. Body tailgate shall be the top hinged type and elevated by hydraulic means for load ejection. The mating surfaces between the body opening and tailgate (seal area) shall be free of burrs and crevices, and be perfectly straight for maximum seal life. Seal shall be single or channel type black neoprene gasket along the lower side perimeter and bottom of tailgate assembly. It must be of the extra heavy duty type as provided by the Dempster and the Heil Mark IV model. Standard Leach Sanicruiser seal is unacceptable. All others not familiar to the City will not be accepted unless approved by the Equipment Maintenance Superintendent. Each equipment will be tested with water and correction shall be made before payment will be made.
- l. Rear body braces, adjacent to mechanical tailgate locks, shall be adequately reinforced to prevent weld failures.
- m. A ladder shall be located at or near the rear axle, integrally attached to the side of the body to climb on top with safety. One (1) additional handhold is also required on top of body, 12" in from the top rung for additional safety.

NOTE: Ladder shall be compatible with "California General Industry Safety Orders" for fixed ladders.
- n. Body manufacturer shall install a bracket around the exhaust pipe near the upper extremity and mount it parallel to the top of body. The bracket must be adequate in construction to deflect low hanging tree limbs up to two (2) inches in diameter.
- o. Mud flaps shall be provided behind rear tires to meet State of California Vehicle Code if necessary.
- p. A 14 gauge metal shield with brackets as necessary shall be installed to prevent accumulation of refuse on the truck frame and crossmember during unloading process to preclude corrosion of related parts and accessories if the units proposed requires said item as evaluated by the City of Sacramento, Equipment Maintenance Superintendent.

11.2 Loading Apparatus (General) -

- a. Loading compartment shall not be less than 78 inches in width (without dumper) and the opening above the loading edge shall be unrestricted to permit upturning of 85 gallon carry cans. Approximate vertical opening of 50 inches minimum (without dumper) is required. Loading sill shall not exceed 41" from ground when empty.
- b. The loading hopper shall have a minimum capacity of 2.0 cubic yards measured in conformance with the latest standards published by Truck Body and Equipment Association for hopper capacity. Said capacity is measured without the use of an additional hopper lip extension to increase cataloged standard capacity rating for model proposed.
- c. A packing panel of heavy duty construction with 3/16 inch high tensile steel face, reinforced by plate gussets, powered with hydraulic cylinders exerting pressure either directly or through articulated arms.
- d. A type of load compressing or packing mechanism which will permit resumption of loading operations not later than eighteen (18) seconds after manipulation of the control to start the compressing or packing cycle.
- e. The packing mechanism will be capable of completing the full packing cycle without binding, jamming, or stalling due to materials being wedged between the packer blade and the hopper floor, by the use of a hydraulic pressure relief valve incorporated in the circuit.
- f. The loading hopper shall be of heavy duty construction utilizing T-1 steel of 1/4 inch minimum thickness in the hopper bottom of 10 gauge high tensile steel sides.
- g. Sides of loading hopper shall be braced and reinforced to prevent metal failure in area adjacent to packing panel bushing.
- h. Hopper shall be of the non-moveable type - no exceptions.

11.3 Loading apparatus (Container) -

Tailgate shall be equipped with a hydraulic attachment configuration, whereby a full length steel tubing or rod is used to lift the container into dumping position. Container size varies from one to two cubic yards requiring lifting capacity of minimum 1,000 pounds. Complete dumping operation shall be accomplished without spillage of liquid or garbage on the pavement, using containers presently in use by the City of Sacramento. Containers for trial purposes with units proposed are available by calling the Equipment Maintenance Division, 449-5241, and vendors must make modifications to their respective container lift assemble without any cost to the City.

11.4 Ejection mechanism -

- a. The body shall be equipped with a hydraulically operated ejector panel operable from front to rear as a means of unloading the body. Said panel shall be capable of being utilized to offer controlled resistance to material being compacted during loading in a rear-to-front progression as a means of achieving maximum compaction of material. The control of resistance by the ejector panel, of material being compacted shall be automatic by means of a pre-set pressure relief or sensing valve in the hydraulic system.
- b. The load ejection ram shall be of adequate capacity to insure ejection of maximum loads from front to rear under full continuous control of the operator. Ejection of refuse must be complete without manual assistance by operator. Push out rods if utilized shall be free of paint and grease to prevent slippage.
- c. Guide tracks for the ejector panel shall be of the self-cleaning type and designed to avoid build-up and clogging.
- d. The ejector panel face shall be so designated to provide clean dumping and provide greatest load compaction.

11.5 Hydraulic system -

- a. Hydraulic oil filters - one (1) inline, high pressure (minimum 5,000 lbs.) spin on/off cartridge type of 10 micron filtration, equipped with restriction gauge shall be installed in the high pressure line. Second, of adequate capacity, spin on/off cartridge type of 10 micron filtration shall be installed on the return line inside of the hydraulic sump. Third, of adequate capacity spin on/off reusable 100 mesh screen type shall be installed on the suction side of the hydraulic pump.
- b. Hydraulic oil inline shutoff valve(s) (quantity as required) of sufficient capacity shall be installed between oil reservoir tank and hydraulic pump or any hydraulic oil filter(s) requiring periodic cartridge replacement to minimize oil loss.
- c. Oil reservoir of sufficient capacity to be provided and equipped with a sight gauge. The gauge in its entirety shall be protected from wheel splash if frame mounted, and also from low hanging tree limbs (up to 2" diameter) if mounted higher than five (5) feet from ground level. Location of oil reservoir shall be submitted on bid sheet for approval by City.
- d. All hydraulic cylinders to be of steel tubing, bored and honed for precision fit and of adequate capacity for their respective functions. All shafts shall be free of paint to prevent hydraulic oil sealing problems.
- e. Tailgate hydraulic system shall have a stop check valve, or other safety mechanism acceptable to City which will prevent tailgate from dropping too rapidly.

- f. All hydraulic oil lines shall be protected against cuts and abrasions or excessive heat.
- g. System to be equipped with a remote control device to automatically regulate speed of loading operation. It must be independent of foot throttle linkage and protected from manifold or exhaust pipe heat.

11.6 Controls -

- a. Power take-off control shall be electrically operated, located in the truck cab and easily accessible to the driver without undue strain. An on-off indicator light shall also be provided.
- b. Electric-hydraulic controls for automatic operation or manual control levers at rear of body will be required to actuate the packing mechanism. Packing cycle and positioning of all mechanisms for next load cycle will be automatic.
- c. Lock on tailgate will be manually operated and a "Turnbuckle Guard" shall be installed as pictured in drawing #5 attached as part of this specification.
- d. The tailgate raise and ejection panel controls, including throttle control are to be located at the left front corner of refuse body for operator convenience and visibility.
- e. Two (2) signal switches at rear of body (one on each side) connected to buzzer in truck cab and operable at all times.
- f. All control switches including pushbutton and lever shall be of the waterproof type.
- g. All electrical switch boxes and wire terminal junction boxes shall be vented at the bottom or have minimum of two (2) 3/16" drain holes to preclude moisture condensation. All wires leading into same boxes shall be sealed with silicone rubber and made waterproof.
- h. Each control shall be distinctly labeled as to its functions and be in smooth operating condition without binding or dragging of the control rods due to misalignment or paint overspray.
- i. Operator controls for rear loading compaction equipment shall be designed or located to prevent unintentional activation.

- j. Emergency "stop" buttons or controls will be provided and shall be distinguishable from all other controls by size or color and labeled as to function and not be recessed.
- k. There must be a means of stopping and moving the packer panel away from the pinch point (prior to the pinch point) at any time during packing cycle without use of engine kill switch.
- l. Container hoisting device shall have a means of stopping and reversing its operation during and at any time, independent of the refuse packer operation.
- m. The compacting mechanism shall be guarded during the packing cycle by one or more of the following means:
 - 1. An automatic control that provides an interrupted cycle. Actuation of the control shall cause the packer panel to automatically stop not less than six (6) inches nor more than sixteen (16) inches from the pinch point created by the packer panel as it moves towards the hopper loading sill. The control must manually be reactivated to complete the packing cycle.
 - 2. Dead-man controls from the initiation of the packing cycle to when the panel clears the loading sill and then thereafter shall be automatic without further assistance to end of cycle.
 - 3. Any other means approved by O.S.H.A. and the City which will effectively protect an employee from the pinch point.

11.7 Packer power -

- a. Hydraulic power shall be provided by means of a tandem pump driven by a transmission mounted hydraulic hot shift P.T.O. (Chelsea series #27) and equipped with an interlock system for neutral only operation to prevent actuation of packing while truck is in gear. Pump shall be sized to provide manufacturer's standard advertised cycle time at no more than 1,400 r.p.m. engine speed. An automatic transmission (neutral lockup) valve shall be installed in order to maintain low engine r.p.m. for packer operation. A means shall also be provided whereby one section of the pump will unload directly to the common inlet port of the pump at a predetermined pressure while the other pump continues to supply fluid to the system, thereby limiting the hydraulic horsepower required.

Minimum compaction of refuse shall be 800 pounds per cubic yard.

- b. Front mounted P.T.O. will not be considered.
- c. An overspeed device is also required which will automatically disengage the P.T.O. whenever normal pack cycle speeds are exceeded by approximately 40 percent. Once disengaged, it shall be necessary to manually re-engage the P.T.O. again to continue packing. All relays, switches, and fragile instruments located in vulnerable areas such as by the driver's feet shall be covered or shielded. Protective cover shall be readily removable and configuration shall allow visual inspection of fuses utilized without removal of said protective cover.

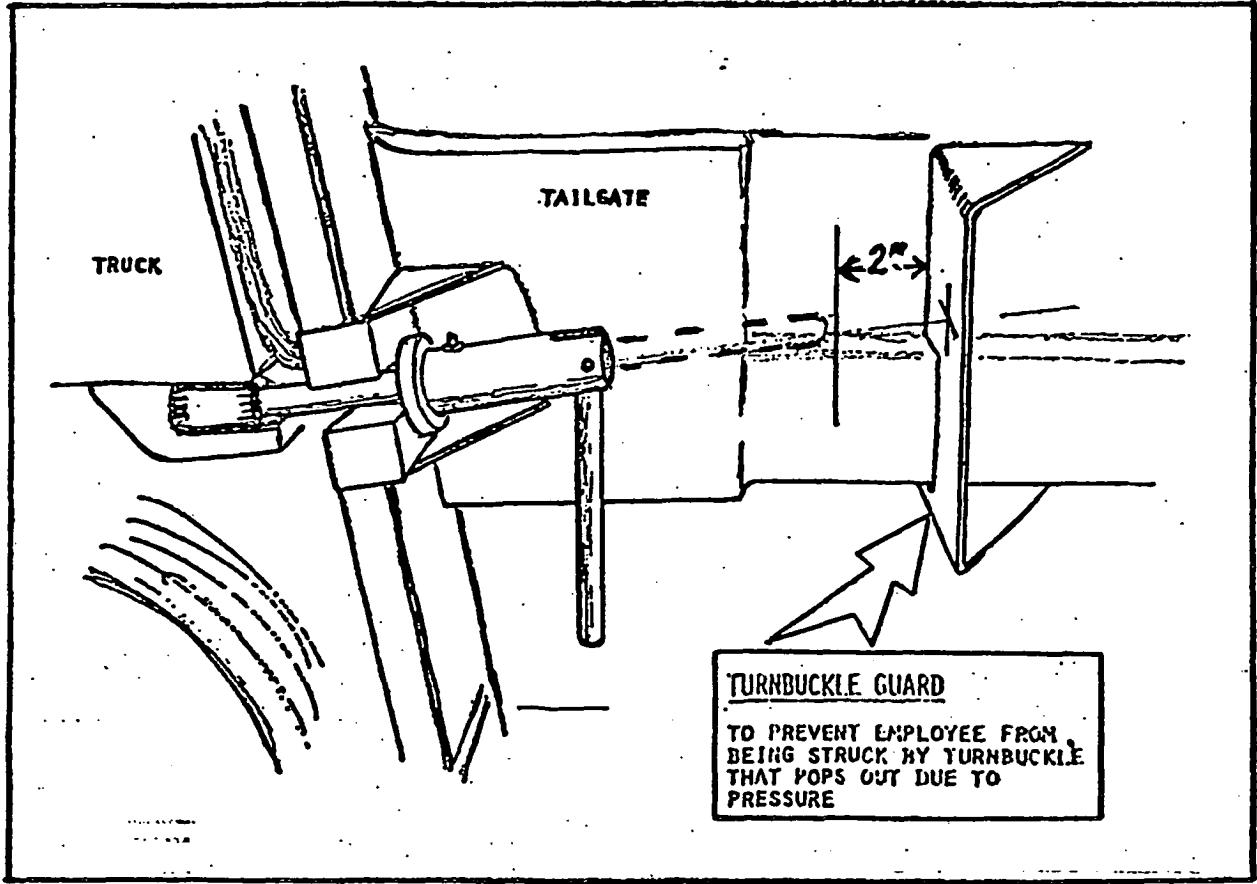
11.8 Miscellaneous Equipment:

- a. Hydraulic oil tank cap, plug or dipstick shall be easily removable by hand (without use of wrenches or pliers) to check or add fluid.

11.9 OPTIONAL QUOTES REQUIRED ON FOLLOWING ITEMS:

- a. One (1) sealed beam work light equal to G. E. tractor lamp #4419, Grote housing #64011 installed in the upper portion of the hopper area, sufficiently away from the path of refuse compaction. Switch to be located at left or right rear corner of tailgate and wired to tail-light circuit.
- b. Tail, stop, and directional light of the rubber mounted sealed beam type, minimum size - 4" lens diameter.
- c. Backup light (quantity - two) equal to G. E. tractor lamp #4419, Grote housing #64011 installed on the tailgate in an appropriate location as consulted and approved by the City.
- d. An access hole with bolt on steel plate cover shall be provided on the refuse pushout blade if a clamp lever and spring is utilized as in "Leach bodies" to compress and eject the garbage. Configuration and location shall be as approved by the City as have been done on like units on prior purchases by the City Equipment Maintenance Division. Guide rollers shall also be replaceable without use of cutting torch. Openings at the rear upper corners of the tailgate, adjacent to the tailgate lift cylinder on Leach Sanicruiser shall be closed with a steel plate to preclude garbage from spilling out. Body mount area adjacent to the tailgate shall be of the extra heavy duty configuration.
- e. "Stationary operation test" - (mounted unit operating in conjunction with truck but not traveling) combined noise level of the truck and the mounted unit shall be no higher than 75 DB (A) at 50 feet from vehicle, 5 feet above the ground, at all four sides.

TRUCK BODY
TAILGATE SAFETY
Turnbuckle Guard



EQUIPMENT PARTS & DATA CARD

MAIN CAB & CHASSIS

Year Make _____ Eng. Air Compr. Belt # _____
 Mfg. Name _____ Trans. Make _____ Mod.# _____
 Eq. Mod. # _____ Trans. No. of Speed _____
 Eq. Ser. # _____ Trans. Lube Type _____
 Tare (curb weight) _____ Trans.(main) Oil Filter # _____
 G V W R (total) _____ Trans.(aux.) Oil Filter # _____
 G A W R (front) _____ Axle (front) Make _____ Mod.# _____
 G A W R (rear) _____ Axle (rear) Make _____ Mod.# _____
 Eng. Make _____ Mod. # _____ Diff. Make _____ Mod.# _____
 Eng. C.I.D. _____ # of Cyl. _____ Diff. Gear Ratio _____
 Eng. Governor Setting _____ Diff. Lube Type _____
 Eng. Valve Gap (int.) _____ Steering Make _____ Mod.# _____
 Eng. Valve Gap (exh.) _____ Steering Lube Type _____
 Eng. Oil Lube Type _____ Steering(power) Filter # _____
 Eng. Oil Filter (main) # _____ Steering(power) Belt # _____
 Eng. Oil Filter (aux.) # _____ Brake Make _____ Mod.# _____
 Eng. Water Filter # _____ Brake Booster Make _____ Mod.# _____
 Eng. Rad.(capacity-qts) _____ Brake Shoe Size (front) _____
 Eng. Rad. Cap. Pressure _____ Brake Shoe Size (rear) _____
 Eng. Points # _____ Gap _____ Tire Size (front) _____ Press. _____
 Eng. Spark Plug # _____ Gap _____ Tire Size (rear) _____ Press. _____
 Eng. Condenser # _____ Rim Size (front) _____ Rear _____
 Eng. Timing _____ Dwell _____ Key (ign.) # _____
 Eng. Elect. Sys.(volts) _____ Gnd. _____ Key (trunk) # _____
 Eng. Alt. Make _____ Mod. _____
 Eng. Alt. Output _____ MOUNTED UNIT
 Eng. V. Reg. # _____ Setting _____ Body Make _____ Mod.# _____
 Eng. Batt. Size _____ Amp Hr. _____ Eng. Make _____ Mod.# _____
 Eng. Fan Belt # _____ Eng. C.I.D. _____ # of Cyl. _____
 Eng. Air Conditioner Belt # _____
 Eng. Clutch Disc # _____ Air Compressor Asy.Make _____ Mod.# _____
 Eng. Clutch P. Plate # _____ Air Compressor Asy Lube Type _____
 Eng. Clutch T.O. Brg. # _____ Air Compressor Asy Filter _____
 Eng. Rad. Hose(top) # _____
 Eng. Rad. Hose(bypass) # _____ Hydraulic Oil-Lube type _____
 Eng. Rad. Hose(bottom) # _____ Hydraulic Oil Filter # _____
 Eng. Air Compr. Make _____ Mod.# _____

PRE - DELIVERY CHECK SHEET
(CHECK APPLICABLE SYSTEMS WHEN COMPLETED)

UNDER HOOD - Engine Off

- Engine Oil level
- Steering gear housing fluid level
- Brake master cylinder fluid level
- Windshield washer reservoir fluid level
- Radiator coolant level
- Battery fluid level
- Carburetor requirements for local altitudes
- Drive belt tensions
- Battery voltage and load-voltage drop
- Point resistance (Coil-to-ground test)
- Ignition bypass circuit resistance

UNDER HOOD - Engine Operating & Hot

- Automatic transmission fluid level
- Distributor dwell
- Condensor condition
- Initial ignition timing
- Alternator and voltage regulator setting
- Primary circuit resistance
- Coil condition
- Distributor cap and rotor condition
- Rotor air gap
- Spark plug & Hi-Tension wire condition

OTHER OPERATIONS

- Carburetor idle mixtire & speed adjustments
- Fast idle speed adjustment
(Automatic choke engines)
- Hydraulic lines, fittings, connections and components for leaks
- Adjust mechanical valve tappet clearance

ON OUTSIDE

- Latches, keys and locks - operation
- Hood, deck and door panels for fit and alignment
- Bumpers and moldings - alignment
- Weather strips - adhesion and fit
- Wheel nut torques

ON INSIDE

- Operation of lights, turn signals, stop signals, courtesy lights, oil pressure & alternator warning lights
- Front seat control - operation (manual or power)
- Station wagon rear seat and floor operation
- Inside locks & door handles - operation
- Windows and vents - operation and fit
- Glass condition
- Cigarette lighter - test

ON HOIST - Or underside

- Axle fluid level
- Hydraulic lines, fittings, connections & components on underside for leaks
- Tire pressures - all
- Steering linkage and connections

ALIGNMENT STALL

- Front wheel toe-in

ROAD TEST

- Neutral switch - operation (Auto. Trans.)
- Parking brake - operation
- Horns, w/s wiper & washers - operation
- Heater & air vents - operation
- Air conditioning - operation
- Brake - operation
- Transmission shift lever - operation
- Automatic transmission shift timing and quality
- Accelerator pedal - operation
- Engine performance
- Drive Belts
- Steering control
- Squeaks, rattles and wind noise
- Speedometer, odometer, fuel and temperature gauge - operation
- Other optional equipment - operation

AFTER ROAD TEST

- Wash vehicle and check for leaks
- Inspect for interior & exterior metal & paint damage
- Check soft trim for soilage and excess sealer

Vehicle warranty shall be the standard warranty furnished by the manufacturer of the vehicle supplier. All vehicle defects covered by factory warranty shall be corrected by Contractor, or any factory authorized dealer for that vehicle, at no cost to the City of Sacramento. Read the warranty covering the new vehicle.

THE VEHICLE SHOULD NOT BE ACCEPTED UNTIL THE CONTRACT VENDOR HAS PERFORMED THE PRE-DELIVERY SERVICE ON THE VEHICLE IN ACCORDANCE WITH THE ABOVE LISTING.

Inspected by
