



CITY OF HOUSTON INVITATION TO BID

Issued: October 23, 2009

Bid Opening:

Sealed bids, in duplicate, will be received by the City Secretary of the City of Houston, in the City Hall Annex, Public Level, 900 Bagby, Houston, Texas 77002, until **10:30 a.m. Thursday, November 19, 2009** and all bids will be opened and publicly read in the City Council Chamber, City Hall Annex, Public Level, 900 Bagby at 11:00 a.m. on that date for the purchase of:

**AMBULANCE AND SQUAD CABS & CHASSIS AND AN AMBULANCE
FOR THE HOUSTON FIRE DEPARTMENT
BID INVITATION NO. S34-N23444
NIGP: 072-30-10**

Buyer:

Questions regarding this solicitation package should be addressed to **Buyer Larry Benka**, at **(832) 393-8727**, or e-mail to **larry.benka@cityofhouston.net**.

Bidding forms, specifications, and all necessary information should be downloaded from the Internet at **<http://purchasing.houstontx.gov>** by registering and downloading this solicitation document, all updates to this solicitation document will be automatically forwarded via e-mail to all registered bidders. This information may also be obtained from the Supplier Assistance Desk, Strategic Purchasing Division, 901 Bagby, Concourse Level, Houston, Texas 77002.

Electronic Bidding:

In order to submit a bid for the items associated with this procurement, you must fill in the pricing information on the "PLACE BID" page.

Pre-Bid Conference:

A Pre-Bid Conference will be held for all Prospective Bidders in the Strategic Purchasing Division, Conference Room No. 1, City Hall Basement Tunnel, City Hall, 901 Bagby, at **1:30 p.m.** on **Thursday, November 5, 2009**.

All Prospective Bidders are urged to be present. It is the bidder's responsibility to ensure they have secured and thoroughly reviewed the solicitation documents prior to the Pre-Bid Conference. Any revisions to be incorporated into this solicitation document arising from discussions before, during and subsequent to the Pre-Bid Conference will be confirmed in writing by Letter(s) of Clarification prior to the bid due date. Verbal responses will not otherwise alter the specifications, terms and conditions as stated herein.

The place of the bid opening may be transferred in accordance with Paragraph (b), (5) of Section 15-3 of The Code of Ordinances, Houston, Texas. The bid opening meeting may be rescheduled in accordance with Paragraph (b), (6) of said Section 15-3.

The City reserves the right to reject any or all bids or to accept any bid or combination of bids deemed advantageous to it.

City Employees are prohibited from bidding on this solicitation in accordance with the Code of Ordinances, Section 15 - 1.

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SECTION C: GENERAL TERMS & CONDITIONS

***NOTE 1: Actual page numbers for each Section may change when the solicitation document is downloaded from the Internet or because of Letters of Clarification. Therefore, Bidders must read the bid document in its entirety and comply with all the requirements set forth therein.**

***NOTE 2: To be considered for award, please submit the electronic bid form and the forms listed in Section A, including the official signature page, which must be signed by a company official authorized to bind the company.**

INSTRUCTIONS for BIDDING and TERMS & CONDITIONS

NOTE: It is the policy of the City of Houston that a sealed, signed bid must be submitted to the City Secretary by the due date. After you submit your bid online, please print the online Official Bid Form and signature page, sign, and turn in to the City Secretary.

1. All bids must show the full name of the firm bidding and must be on the online Official Bid Form. Bids should be filed in duplicate and at least one copy of the online Official Bid Form must be manually signed in ink by an authorized officer of the company and their title must be shown. Obligations assumed by the signature must be fulfilled. **The bid number, title of the bid, and the bid due date must be shown on the front of the envelope(s) containing the Bid Form(s) when submitted to the Office of the City Secretary, Public Level, Room No. P101, City Hall Annex, 900 Bagby Street, Houston, TX 77002.**
2. **TIME AND DATE:** Bids **MUST** be in the Office of the City Secretary, City Hall Annex, Public Level, 900 Bagby, Houston, Texas 77002 at or before 10:30 A.M. on the day bids are due; an early postmark will not suffice. Be sure you have allowed ample time for postal delivery. **CAUTION:** Bids mailed on the day before bids are due may not be received in time to be considered.
3. **WITHDRAWAL OF BID OFFER:** If the bid has been submitted to the City Secretary, a bidder may withdraw its offer before the expiration of the time during which the offer may be submitted, without prejudice, by submitting a written request for its withdrawal to the City Secretary. The bidder should follow instructions listed on the Strategic Purchasing Division website to withdraw any bid submitted through the online bidding process.
4. The online Official Bid Form should indicate the Unit Price for the specified item(s). The Unit Price shall be inclusive of all costs, insurance and freight. **Cash discounts will not be considered in the award of bids.**
5. No change in price will be considered after bids have been opened.
6. Provisions of the City's online Official Bid Form, Specifications, and General Terms & Conditions shall not be altered. Any alteration of figures or terms may invalidate the bid on the item which the alteration is made. Submission or attachment of company "QUOTATION FORMS" containing alternative terms and/or conditions is not acceptable and may result in your bid being determined non-responsive.
7. If bidder wishes to submit more than one bid on the same item, separate online City Official Bid Forms for each bid, complete with its own original signature page, must be submitted both online and to the City Secretary.
8. All bids are for delivery not later than the time stated in the specifications, Prepaid F.O.B. Destination, the point of delivery stated in the Specifications and/or Bid Form.
9. Bidders are invited to be present at the opening of bids. After opening, bids may be inspected in the City Secretary's Office, City Hall Annex, Public Level, 900 Bagby, Houston, Texas 77002.
10. **Cost of Bid/Proposal Preparation** The City shall not reimburse the cost of developing, presenting or providing any response to this solicitation. Offers submitted for consideration should be prepared simply and economically, providing adequate information in a straightforward and concise manner.

SECTION A



FLEET FORMAL BID

**AMBULANCE AND SQUAD CABS & CHASSIS AND AN AMBULANCE
FOR THE HOUSTON FIRE DEPARTMENT
BID INVITATION NO. S34-N23444
NIGP: 072-30-10**

To the Honorable Mayor
and City Council Members
of the City of Houston, Texas (the "City")

The undersigned hereby offers to furnish and deliver prepaid F.O.B. destination point Houston, Texas, the item(s) listed on the **electronic bid form** and on individual Purchase Orders, in accordance with the price(s) bid and other conditions shown herein, and in accordance with the City's Specifications and General Terms & Conditions and/or samples/drawings provided herein. When issued by the City of Houston, Letters of Clarification shall automatically become part of this bid document and shall supersede any previous specifications or provisions in conflict with the Letters of Clarification. It is the responsibility of each bidder to ensure it has obtained all such Letters. By submitting a bid on this project, bidder shall be deemed to have received all Letters of Clarification and to have incorporated them into the bid.

The City may accept this bid offer by issuance of a Notice of Award Letter and/or a Purchase Order at any time on or before the 120th day following the day this Official Bid Form is opened by the City. This offer shall be irrevocable for 120 days after bid opening or for 90 days after City Council awards the bid, whichever comes last, but this period may be extended by written agreement of the parties.

The City reserves the option, after bids are opened, to adjust the quantities listed on the following page(s) upward or downward, subject to the availability of funds, and/or make award(s) on a line item basis.

The City reserves the right to INCREASE quantities during the twelve-month period following the issuance of the first purchase order subject to agreement in writing by the Prime Contractor/Supplier to honor the same bid price.

SECTION A

Documents/forms must be downloaded from the City's Website
<http://purchasing.houstontx.gov>

Additional Required Forms to be Included with this Bid:

In addition to the electronic Bid Form and the Official Signature Page, the Forms listed in Table 1 **must be completed and submitted to the Office of the City Secretary on or before the date and time the bid is due:**

Table 1 - Required Forms
Affidavit of Ownership.doc
Fair Campaign Ordinance.doc
Statement of Residency.doc
Conflict of Interest Questionnaire.doc
Bidders Attachments Fleet.doc

Table 2 lists other documents and forms that should be viewed/downloaded from the City's website, but are not required to be submitted with the bid. The City will request these forms, as applicable, to be completed and submitted to the City by the recommended/successful bidder:

Table 2 - Documents and Forms
Drug Form.doc
EEOC.doc
Equipment Inspection & Receiver.doc

SECTION B
SPECIFICATIONS

PART I
GENERAL SPECIFICATIONS

1.0 Scope:

- 1.1 This specification covers ambulance cabs & chassis, ambulance modular bodies and squad cabs & chassis required by the Houston Fire Department.
- 1.2 The term of this agreement shall commence on the date City Council approves issuance of purchase orders pursuant to this Bid and shall continue for the twelve-month period following the issuance of the first purchase order subject to agreement in writing by the Prime Contractor/Supplier to honor the same bid price. During this period, purchase orders will be issued for these items as needed. It is emphasized that the City of Houston does not guarantee any quantities; rather, the quantities may vary depending upon the actual needs of the various city departments.
- 1.3 Prime Contractor/Supplier shall be responsible for fulfilling all purchase orders pertaining to each series for which a manufacturer build-out/order deadline has not been provided in accordance with the requirements listed below.
 - 1.3.1 Prime Contractor/Supplier(s) shall furnish the Strategic Purchasing Division with order deadlines in writing a minimum of three weeks before the order deadline.

2.0 Applicable Specifications:

- 2.1 The applicable specifications are comprised of the "Instructions for Bidding and Terms & Conditions", "Official Bid Forms", the "General Specifications", the "Technical Equipment Specifications", the "General Terms and Conditions", and other specifications that may be included herewith and the purchase orders which refer to these specifications.
- 2.2 LEV Vehicles:
 - 2.2.1 All Low Emission Vehicles (LEV) must meet or exceed the Federal Low Emission Vehicle Certification.
- 2.3 **E85 FLEX FUEL ENGINES:** All vehicles are to be delivered with E85 Flex fuel engines if available from OEM at no additional cost to dealers.

3.0 Bidding:

- 3.1 Pricing for Specified Item(s):
 - 3.1.1 Bidders may bid on one or more of the specified items listed.
 - 3.1.2 Bids submitted must contain a unit price for the specified item(s). For any bid solicitation that contains a request for separate pricing of options for the specified item(s), pricing must be provided for both the specified item(s) and option(s) listed. If pricing is provided for only the listed option(s), the bid for that specified item will be deemed as non-responsive and will be rejected.
 - 3.1.3 The unit price for any specified item shall be defined as the price for the manufacturer's standard model, furnished complete with all standard equipment and factory installed accessories listed in the manufacturer's printed literature for the respective unit, and any additional equipment defined herein by the City of Houston that is to be included.

SECTION B – PART 1 GENERAL SPECIFICATIONS (CONTINUED)

- 3.2 Pricing for Listed Option(s): (If Applicable)
 - 3.2.1 A unit price is required on every listed option for the specified item(s).
 - 3.2.2 If a bidder “no bids” any listed option for which bids are requested for a specified item and the option is available for the specified item(s) , the bid for that specified item will be deemed as non-responsive and will be rejected.
- 3.3 The City may accept this bid offer by issuance of a Notice of Award Letter and/or a Purchase Order covering award of bid to the Prime Contractor/Supplier at any time on or before the 120th day following the day the Official Bid Form is opened by the City. This offer shall be irrevocable for 120 days after bid opening or for 90 days after City Council awards the bid, whichever comes last, but this period may be extended by written agreement of the parties.
- 3.4 Prices quoted shall remain firm through delivery and shall not be subject to increases (or supplemented on Prime Contractor/Supplier’s invoice(s) for payment).
- 3.5 The City reserves the option, after bids are opened, to adjust the quantities listed on the City’s Official Bid Form upward or downward, subject to the availability of funds, and/or make award by line item. Therefore, the City shall not be liable for any contractual agreements/obligations the Prime Contractor/Supplier enters into based on the City purchasing all the quantities specified herein.
- 3.6 The City reserves the right to INCREASE quantities during the twelve-month period following the issuance of the first purchase order subject to agreement in writing by the Prime Contractor/Supplier to honor the same bid price.

4.0 Award:

- 4.1 Award will be made on the basis of the low total bid price for the specified item(s) meeting all specifications referenced herein plus listed options, if any.

5.0 Applicable Specifications:

- 5.1 The applicable specifications are comprised of the “Instructions for Bidding and Terms & Conditions”, "Official Bid Forms", the “General Specifications”, the “Technical Equipment Specifications”, the "General Terms and Conditions" and other specifications that may be included herewith and the purchase orders which refer to these specifications.

6.0 Units Bid:

- 6.1 The unit(s) bid shall be new, manufacturer’s latest make and model in current production as offered to commercial trade and shall be furnished complete with all factory-installed standard equipment and accessories listed in the manufacturer’s latest literature for the respective unit and any additional optional equipment as may be defined in the detailed Technical Specifications.
- 6.2 Prime Contractor/Supplier, by affixing their signature on the Official City Bid Form, has offered to furnish the equipment as specified herein in accordance with these specifications and all provisions set forth in this bid document. As such, it is the Prime Contractor/Supplier’s responsibility to adhere to these specifications. **Any exceptions or conditions to the specifications set forth in the bid documents will deem the bid non-responsive, and the bid will be rejected.**
- 6.3 The unit(s) bid shall be in full and complete compliance with all applicable safety and pollution requirements and regulations in effect at the time of bid submittal. This includes but is not limited to standards established by the United States Department of Transportation, including the Federal Motor Vehicle Safety Standards (FMVSS), the Occupational Safety and Health Administration (OSHA), the Environmental Protection Agency (EPA), the Texas Department of Transportation and the Texas Commission on Environmental Quality (TCEQ).

SECTION B – PART 1: GENERAL SPECIFICATIONS: (Continued)

6.0 Units Bid (Continued):

- 6.4 **The City of Houston requires that the unit(s) bid be the lowest emission unit(s), i.e. Nitrogen Oxides (NOx) and Fine Particulate Matter (PM) without increasing Hydrocarbons (HC), available on the market for the specified equipment.** The emission standards established by the EPA shall be considered only as minimum standards. In the absence of EPA standards or if California Air Resources Board (CARB) standards provide lower emissions, CARB standards will be considered as the minimum if the specified unit and any required fuel is available to the City of Houston. **Federally regulated engines must be covered by an EPA-issued Certificate of Conformity certifying the engine to be in compliance with federal emission standards and the Prime Contractor/Supplier shall provide the Certificate of Conformity with their bid or within three calendar days from the written request of the City.** EPA emission label must be affixed to the vehicle and/or engine and be readily visible.
- 6.5 The term “Heavy Duty”, or “HD” as may be applied to these specifications shall be interpreted to mean that the item referred to shall exceed the usual quality, quantity or capacity of that supplied with standard production units and shall be able to withstand the unusual strain, exposure, wear and use to be expected in the intended service. Where specification requirements are given, they shall be considered minimum requirements unless otherwise indicated.
- 6.6 Throughout these specifications, compatibility is of the essence and any modification, accessory, device, material or type of construction, whether to existing or to the specified equipment, which may be necessary to incorporate the specified equipment into the existing equipment shall be considered to be a part of these specifications whether detailed by item or not.
- 6.7 Units provided shall not have any decal, plate, sign, stencil, stamping, molding, or marking of any type pertaining to advertisement other than trademarks, trade names, or model designation normally installed by the manufacturer on equipment delivered to the City of Houston. No accessory item furnished on equipment shall advertise the name of the Prime Contractor/Supplier.

7.0 Technical Literature:

- 7.1 To evaluate the bids, the user department and the City purchasing staff may require product literature/specification sheets. Technical literature may be provided with the bid submittal but is not required. However, the City reserves the right to request and require literature and/or clarifications, as needed, after bid submittal.
- 7.2 If required, Bidder must submit a minimum of TWO SETS of the requested catalogue information, descriptive literature specifications and/or (if applicable) engineering drawings that completely identify the items bid. Bidder(s) shall furnish the requested literature within seven (7) calendar days after the receipt of the City’s written request. **FAILURE ON BIDDER'S PART TO FURNISH THE REQUESTED TECHNICAL DATA IN THE TIME LIMIT SPECIFIED MAY BE CAUSE FOR REJECTION OF THE BID.**

8.0 Warranty:

- 8.1 A minimum twelve (12) month warranty on both materials and workmanship shall be provided. The warranty period shall commence the date the City officially accepts the completed item(s). **When extended warranties are available as standard, they shall be included as a part of the bid for the benefit of the City.** Any and all documents necessary to effect warranty shall be properly applied for and submitted by the Prime Contractor/Supplier.
- 8.2 Additional warranties, if required, are listed in the Technical Specifications for each item.

SECTION B – PART 1: GENERAL SPECIFICATIONS: (Continued)

8.0 Warranty (Continued):

- 8.3 With respect to any goods, materials, equipment, supplies and parts furnished by it, Prime Contractor/Supplier warrants:
- That all items are new and free of defects in title, design, material and workmanship.
 - That each item meets or exceeds the manufacturer's specifications and requirements for the equipment, structure, or other improvement in which the item is installed and conforms in all respects to the terms of the City Purchase Order and Specifications.
 - That each replacement item is new, in accordance with original equipment
 - Manufacturer's specifications are of a quality of at least as good as the quality of the item that it replaces (when the replaced item was new).
 - That no item or its use infringes any patent, copyright or proprietary right.
- 8.4 The Prime Contractor/Supplier's product shall be supported by an authorized service facility that can provide warranty repair, service and maintenance work within 24 hours from notification by the City.
- 8.5 Any warranty work shall be completed without cost to the City. Prime Contractor/Supplier shall be responsible for all shipping and/or freight expense from the City's designated location to the Prime Contractor/Supplier's facility for all warranty repair and/or maintenance and return to the City's designated location.
- 8.6 Prime Contractor/Supplier shall provide a Manufacturer's Authorized Facility located within the Houston-Galveston Region (Harris County and its seven adjacent counties, Brazoria, Chambers, Fort Bend, Galveston, Liberty, Montgomery and Waller) for all warranty and maintenance service.

9.0 Licenses and Permits:

- 9.1 Prime Contractor/Suppliers are to adhere to all applicable federal, state as well as local laws and regulations. It is the Prime Contractor/Supplier's responsibility to acquire all necessary licenses and permits required by law.
- 9.2 Prime Contractor/Supplier shall be responsible for securing any and all inspections required by law, including State Inspection stickers. Any fee charged for these inspections shall be the responsibility of the Prime Contractor/Supplier and not the City of Houston.
- 9.3 At the time of delivery to the City of Houston, Prime Contractor/Suppliers are required to provide temporary paper license tags/plates for motor vehicles or other equipment required by the State of Texas to be registered for operation on public highways.
- 9.4 **MOTOR VEHICLE COMMISSION CODE Texas Revised Civil Statutes, Annotated, Article 4413 (36) and 4413 (36a) (If Applicable):**
- 9.4.1 **License Requirement:** Section 4.01. (a), "Except as provided by this Section, no person shall engage in business as, serve in the capacity of, or act as a dealer, manufacturer, distributor, converter, representative, ... in this state ..., without obtaining a license therefore as provided in this Act and the rules of the Board."
- 9.4.2 **Sale of New Motor Vehicles:** Section 5.04. (a), "No person may engage in the business of buying, selling, or exchanging new motor vehicles unless that person: (1) holds a valid **franchised dealer's license** issued by the Commission for the make or makes of new motor vehicles being bought, sold, or exchanged; or (2) is acting as a bona fide employee of the licensee."

SECTION B – PART 1: GENERAL SPECIFICATIONS: (Continued)

9.0 Licenses and Permits (Continued):

- 9.4.3 **Licensed Franchised Dealers** submitting bids for new cabs & chassis with installed bodies, by this Statute, are required to employ **properly licensed converters** for the conversions of the new motor vehicles.
- 9.4.4 **The Act of Submitting a Bid is regarded as doing business, as the entity is soliciting a sale.** Accordingly, each bidder must be a **licensed franchised dealer** at the time the bid is submitted.

10.0 Delivery / Inspection:

- 10.1 The item(s) specified herein, with delivery tickets and/or other required documents shall be delivered Prepaid F.O.B. Destination to the location(s) shown on the purchase order(s) **within the delivery time(s) as listed in the Technical Specifications** after receipt of City of Houston Purchase Order.
- 10.2 The Prime Contractor/Supplier shall notify the City Contact listed in the "Ship To" section of the purchase order not less than three (3) days prior to expected delivery/arrival to permit inspection scheduling. The City Contact shall advise Prime Contractor/Supplier as to the date, time and location of authorized delivery/location. An authorized representative of the Prime Contractor/Supplier shall supervise delivery to the City. The City will not assume any liability for vehicle/equipment delivered to an unauthorized location.
- 10.3 **Documentation at time of Delivery:**
Prime Contractor/Supplier shall provide the following documentation **per purchase order** upon delivery:
- Copy of purchase order(s) and invoice(s).
 - Manufacturer's Certificate of Origin shall be made out to "City of Houston, Texas", 611 Walker, 11th Floor, Houston, TX 77002-2527 and delivered to the City's Fleet representative at the time of delivery of the vehicle/equipment, if applicable.
 - Temporary paper license tags/plates paperwork, if applicable for equipment being delivered.
 - Warranty policy (ies) and/or certifications as may be required in the Specifications.
 - Parts, service, operator and maintenance manual(s) as may be required in the Technical Specifications.
- 10.4 Line Tickets:
- 10.4.1 Vehicles (If Applicable):
- 10.4.1.1 Line sheets/line tickets from the manufacturer of the vehicle shall be provided for each vehicle and delivered along with other City-required documents and manuals. Each line sheet/line ticket shall list all components that make up the vehicle chassis and shall include the make, model, and serial number of each component. In addition, line sheets/line tickets shall be provided for all mounted bodies specified for cabs & chassis, and shall include but not be limited to manufacturer, serial number, size, and tare weight. All mounted equipment and components shall be listed by the manufacturer, serial number, weight restrictions (lifts, booms, hydraulic arms etc) and all other relevant data that identifies the component.

SECTION B – PART 1: GENERAL SPECIFICATIONS: (Continued)

10.0 Delivery/Inspection (Continued):

10.4.2 Other Equipment (If Applicable):

10.4.2.1 Line sheets/line tickets from the manufacturer of the equipment specified shall be provided for all equipment delivered along with other City-required documents and manuals. Each line sheet/line ticket shall list all components that make up the equipment and shall include the make, model, and serial number of each component.

10.5 Each unit shall be delivered clean and shall be complete with all equipment operable. Each unit shall be inspected by the City before tender of delivery to determine its compliance with the specifications and/or to test its ability to perform its intended use.

10.6 Upon acceptance and receipt of the vehicle/equipment unit by the City, Prime Contractor/Supplier shall obtain the signatures and employee numbers of the City's receiving employees on the City's Equipment Inspection/Receiver Report.

11.0 Liquidated Damages:

11.1 Under the terms of this Contract (Purchase Order), the Prime Contractor/Supplier certifies to complete delivery of any vehicle/equipment within the specified calendar days, listed in the Delivery Section of the Technical Specifications, counting from the date the City of Houston purchase order is received by the Prime Contractor/Supplier. Prime Contractor/Supplier agrees that time is of the essence in performance of this Contract. The Prime Contractor/Supplier and the City of Houston understand and agree that a breach of contract as to completion on time will cause damages to the City and that the actual damages from the harm would be difficult to estimate accurately.

Therefore, for each and every calendar day that the vehicle/equipment is not delivered and/or accepted by the City beginning sixty-one (61) calendar days after the expiration of the time limit set in the Contract, the Prime Contractor/Supplier shall be liable for and shall pay to the City the sum of **Fifty dollars (\$50.00)** per vehicle/equipment per calendar day, or portion thereof, as liquidated damages and not as a penalty. It is further agreed that the sum stipulated as liquidated damages is a reasonable estimate of the damage that will result from a failure of the Prime Contractor/Supplier to deliver the product/service in accordance with the Contract. The amount of the liquidated damages due may be deducted by the City from any payment or payments due to the Prime Contractor/Supplier, or if all payments otherwise due to the Prime Contractor/Supplier have been made, the amount of the liquidated damages shall be immediately due and payable upon demand.

11.2 Prime Contractor/Supplier will not be liable for delays in performing its obligations to the extent such delays are caused by unforeseeable conditions that are beyond the Prime Contractor/Supplier's reasonable control and directly interfere with performance, and are without Prime Contractor/Supplier's fault or negligence (force majeure). However, Prime Contractor/Supplier shall provide written notice to the City of the cause and extent of an **excusable delay** resulting from unforeseeable conditions. Upon cessation of the event causing the delay, Prime Contractor/Supplier shall provide written notice to the City of the actual delay incurred. Determination of force majeure shall rest solely with the City Purchasing Agent and the receiving department.

SECTION B - PART I: GENERAL SPECIFICATIONS: (Continued)

12.0 Conflict in Terms:

12.1 Should there be any conflict between the General Specifications and the Technical Specifications, the Technical Specifications shall prevail.

13.0 Miscellaneous:

13.1 For purposes of this Contract (Purchase Order), the phrase "City Purchasing Agent" shall be deemed to include both the City Purchasing Agent, and his or her designated representative(s).

13.2 Prospective bidders may propose "equivalent equipment" as additional item(s) for City-approved equipment listings of acceptable equipment in this bid document. Prospective bidders must submit, in writing to the City Purchasing Agent, 1) a request for approval of proposed equipment, 2) Equipment Manufacturer's literature, and 3) a detailed comparison documenting that the equipment proposed is equivalent to existing equipment in the City-approved equipment listings. The approval request and all required documentation shall be in the Office of the City Purchasing Agent no later than 14 calendar days before the bids for this Contract are scheduled to be opened and publicly read. Requests for equipment approval not received by the time specified above will not be considered for this Contract. Determination as to whether the equipment proposed is equivalent to the items in the City-approved equipment listings shall rest solely with the City Purchasing Agent.

14.0 Prime Contractor/Supplier References (See Exhibit No. 1):

14.1 In order to receive bid award consideration, the bidder must be able to demonstrate that it has provided, as a prime contractor/supplier, products that are similar to those offered on the electronic bid form to governmental agencies or other entities within the last two years.

EXHIBIT NO. 1

PRIME CONTRACTOR/SUPPLIER REFERENCES

In order to receive bid award consideration, the bidder must be able to demonstrate that it has provided, as a prime contractor/supplier, products that are similar to those offered on the electronic bid form to governmental agencies or other entities within the last two years. The references should be listed in the space provided below. Please attach additional pages as necessary. If references are not included with the bid, the bidder shall be required to provide such references to the City of Houston within five working days from receipt of a written request from the City of Houston to do so. **Bidder's capability and experience shall be a factor in determining the Contractor's responsibility.** The City of Houston reserves the right to determine if such products are appropriately similar to those offered.

1. Entity Name: _____
Address: _____
City & State: _____
Name & Phone Number of Contact: _____
2. Entity Name: _____
Address: _____
City & State: _____
Name & Phone Number of Contact: _____
3. Entity Name: _____
Address: _____
City & State: _____
Name & Phone Number of Contact: _____
4. Entity Name: _____
Address: _____
City & State: _____
Name & Phone Number of Contact: _____
5. Entity Name: _____
Address: _____
City & State: _____
Name & Phone Number of Contact: _____

SECTION B
SPECIFICATIONS

PART II
TECHNICAL SPECIFICATIONS

ITEM NO. 1: AMBULANCE CAB & CHASSIS

1.0 GENERAL SCOPE:

These specifications provide for construction of a slightly modified commercial cab and chassis that, when mounted or remounted with a modular body, will be used by the Houston Fire Department for responding to medical emergencies and transporting victims of emergencies to hospital and trauma centers.

All operational and performance requirements shall be met with the chassis and module loaded to meet or exceed the minimum specified payload including all specified equipment and devices installed and operating at the maximum power consuming condition (i.e. air conditioning, warning lights, etc.) with the chassis performing in accordance with the specified chassis manufacturer's technical data.

1.1 Grounds for Rejection:

Where it is indicated that certain information shall accompany the bid, failure to include such information with the bid can constitute grounds for rejection. These specifications, and any additions or clarifications, shall become part of the final contract.

1.2 Intent/Technical Conference:

The successful vendor shall arrange a technical conference to go over specification details prior to initial fabrication.

1.3 Brand Names:

Brand names are not intended to be restrictive but merely descriptive of the type needed. The City shall make the final decision on the acceptability of any alternatives requested by a vendor as an "or equal" item.

2.0 CHASSIS SPECIFICATIONS:

2.1 Chevrolet Silverado 3500 Regular Cab DRW 4x2

2.2 1WT Standard Equipment Package

2.3 Wide Track Rear Axle (GTY)

2.4 4.10 Axle Ratio

3.0 ENGINE:

3.1 6.0 L /364 CID Gas V8

4.0 EQUIPMENT OPTIONS:

4.1 Chrome Grill

4.2 Clean Fuel Fleet LEV Option

SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED)

ITEM NO. 1: AMBULANCE CAB & CHASSIS (Continued)

4.0 EQUIPMENT OPTIONS (Continued):

- 4.3 Cab Step-Black Tubular
- 4.4 Sliding Rear Window
- 4.5 Daytime Running Lights
- 4.6 1WT Decor Group
- 4.7 Graphite Interior Color
- 4.8 HD Vinyl Bucket Seats (no center console)
- 4.9 Graphite Color Floor Mats
- 4.10 Black camper style mirror extra wide load large mirror
- 4.11 Factory installed dual batteries (770 CCA).

5.0 PAINT:

- 5.1 GM50U White Clearcoat Paint

6.0 TIRES:

- 6.1 LT 215/85Rx16D BSW All-Season Radials

7.0 TRANSMISSION:

- 7.1 Electronic 6-speed automatic (MYD)

8.0 REAR AXLE/SUSPENSION:

- 8.1 A Granning rear air suspension (RD 855C-4) with Gast compressor shall be installed or Air Lift Suspension System Model #39201 or most current production type.
- 8.2 The tailpipe must be re-routed to accommodate the air suspension.

9.0 FUEL TANKS:

- 9.1 Dual factory fuel tanks (15/25) will be provided.
- 9.2 The Onan generator will be tied into the front factory chassis fuel tank. The fuel line shall be encased in flexible metal conduit and secured. A fuel fill hose kit shall be provided.

SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED)

ITEM NO. 1: AMBULANCE CAB & CHASSIS (Continued)

10.0 CAB CONSOLE:

- 10.1 A fabricated powder coated aluminum console with a computer mount/ MDT plate, swivel MDT mount, plate with cutout for radio, recessed Whelen siren (model #295HFSC9, or current production, or HFD approved equivalent), single switch panel to control emergency lights (including Opticom), door and compartment open warning light, Onan panel, double blank insert, and dual cup-holder, as well as a fabricated modem and amplifier bracket shall be provided and installed. One single row of lighted switches shall contain all of the switches. Opticom shall be wired to emergency master. Opticom will deactivate when vehicle is in park, will reactivate when vehicle is placed in drive. The console shall be secured with front and rear braces to the cab seat braces. Location and design shall be approved by HFD.
- 10.2 The sirens will be recessed into the console with appropriate trim piece provided.
- 10.3 One hand held 200,000 CP spotlight with momentary switch, coiled cord and safety shroud shall be provided.

11.0 WIRING AND CABLING:

- 11.1 All cabling penetrating any wall, panel or any sheet metal, shall be protected by being covered with split loom or equivalent. Openings made in the wall of the module for routing of cables and wiring between the various units of electrical equipment, shall be sealed with RTV.
- 11.2 Primary wiring shall be of a wire size adequate for the "worst case" amperage load which may be encountered. All primary wiring shall be terminated and connected with solder-less "crimp-on" wire terminals. Such terminals shall be of the proper size for the wire to which they are being connected. The terminals shall be attached to the wire by use of crimping tools specially designed for the terminals used.
- 11.3 Cables (12v+ and -) shall be provided from the under hood batteries to reach to the Onan compartment (passenger's side) and to the electrical compartment (driver's side). An Onan remote cable shall be provided to the Onan compartment.

12.0 EMERGENCY FUNCTIONS: LIGHTING AND SOUND:

- 12.1 All emergency-flashing lights shall be surface mounted, current production linear LED lights (Whelen M Series, 600 Series; current production, maximum intensity, or HFD approved equivalent) with chrome flanges. All emergency LEDs shall have clear lenses. Emergency lights shall be switched through one master switch located in the console. The rocker switch shall be a two-position lighted type. Switches are to be laid out at pre-construction. The Whelen siren amplifier shall also be located in the console.
- 12.2 There will be four (4) warning lights (Whelen M Series, 400 Linear Super LED, current production, maximum intensity, or HFD approved equivalent) installed on a bumper mounted black Ranchhand (or HFD approved equivalent) grille guard. Two lights will be facing forward; two will be angled toward the intersection. All emergency LEDs shall have clear lenses
- 12.3 Two (2) Whelen SA314P (or current production) siren speaker housings with 100-watt speakers and appropriate brackets shall be installed on the grille guard.

SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED)

ITEM NO. 1: AMBULANCE CAB & CHASSIS (Continued)

13.0 LETTERING AND STRIPING:

13.1 Driver Side and Passenger Side View:

The letters "HFD" (size: 10"; color: red; font: Arial Bold, in a 15-degree slant to the right) shall be adhered on both sides of the cab/chassis door. A partial flame shall be attached to the letter "D" on the driver side and to the letter "H" on the passenger side. Location and design shall be approved by HFD.

13.2 Belt Line:

A red belt line reflective tape stripe (3M or equivalent) approximately 10 inches high shall encircle the entire cab (except the area directly behind the cab).

14.0 MISCELLANEOUS EQUIPMENT:

14.1 Aluminum plates for installation of the pass-through boot shall be provided. Rubber strips for mounting between the module and chassis frame shall be provided. Fill spout kits shall be provided for dual tanks.

15.0 OEM MANUALS:

15.1 Vendor shall provide with each purchase order; two (2) sets of OEM service and parts manuals in CD format and three (3) sets of OEM service manuals in hard copy format, (No exceptions).

SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO. 2: AMBULANCE CAB & CHASSIS WITH MOUNTED MODULAR BODY

- 1.0 GENERAL SCOPE:**
THESE SPECIFICATIONS PROVIDE FOR THE CONSTRUCTION, DELIVERY AND MOUNTING OF A GENERATOR-POWERED AMBULANCE MODULAR BODY TO A MINIMUM 11,400-LB. GVWR AMBULANCE CAB & CHASSIS. THE AMBULANCE CAB & CHASSIS SPECIFICATIONS ARE THE SAME AS ITEM NO. 1 AS SHOWN ABOVE.

The apparent silence of these specifications as to any detail or the apparent omission from them of a detailed description concerning any point shall be regarded as meaning that only the best commercial practice shall prevail and that only material and workmanship of the first quality are acceptable. All interpretations of these specifications shall be made upon the basis of this statement.

- 1.1 **NOMINAL IDENTIFICATION:**
The ambulance modular body shall be of such a design that the commercial cab/chassis and the mounted, detachable, modular body, as described herein, shall conform as applicable for nominal identification as a Type 1, Class 1 Ambulance as described by Federal Specification for "Star of Life Ambulance", KKK-A-1822E, dated June 1, 2002 and as most recently amended (hereafter referred to as KKK-A-1822E). In the event of any conflict between HFD detailed specifications and the referenced Federal guideline specification, the City of Houston specification shall prevail without exception.
- 1.2 **VERIFY GENERAL CONFORMANCE:**
The modular body and equipment as furnished shall be tested to verify general conformance to performance tests of KKK-A-1822E by an independent testing laboratory or a professionally registered engineer. To assure the safety of pre-hospital patients and the technicians working in the module, the successful supplier must provide documentation prior to delivery verifying that the ambulance body module has been fully certified as may be applicable.
- 1.3 **DOCUMENTATION:**
Certifications(s) and other documentation of tests must be submitted within ten days of written request unless otherwise stated in these specifications. Minimal results of this testing must verify the stability of installation, oxygen handling equipment installations, and stability of the cabinet installations. Equivalent test methods, approved, recommended for approval or recognized by the National Highway Traffic Safety Administration Office or Ambulance Manufacturer's Division Standards of Crash Worthiness, must be provided to qualify as equivalent. Test data submitted must be appropriately documented and/or certified by a registered professional engineer. Failure to provide certification and test documentation that will provide the City of Houston reasonable assurance that the generator-powered ambulance modular body proposed is a stable and safe pre-hospital patient working apparatus may be sufficient cause for rejection of any bid.
- 1.4 **NOTARIZED STATEMENT:**
Documentation certifying performance to a standard of any part of the modular body, upon request or accompanying any proposal of "or equivalent" alternatives, must also be accompanied by a notarized statement that the certifying agency is in no way affiliated with or on the payroll of the bidder.

SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO. 2: AMBULANCE CAB & CHASSIS WITH MOUNTED MODULAR BODY

1.0 GENERAL SCOPE (Continued):

- 1.5 DESCRIPTION OF TEST PROCEDURE:
Provision of certification(s) indicating conformance to standards of the Ambulance Manufacturers Division of NTEA must accompany delivery documents. Also attached must be a complete description of the test procedures used including verifying photographs. No exceptions to these provisions will be allowed.
- 1.6 APPROVAL BEFORE FABRICATION:
Preliminary shop drawings and plans showing the material of construction, size and location of compartments, doors, seats, and any other equipment not specifically described in these specifications should be submitted with bid. Final shop drawings and plans showing the material of construction, size and location of compartments, doors, seats, and any other equipment not specifically described in these specifications shall be submitted by the successful supplier for final approval by HFD no later than 21 working days after pre-construction conference.
- 1.7 INTENT/TECHNICAL CONFERENCE:
In order to reduce the possibility of unnecessary dispute over "intent", implied or specified, the successful supplier shall arrange a technical conference between their plant technician(s) and manager(s) and HFD's quality assurance supervisor(s) prior to initial "fabrication".
- 1.8 PROGRAM MANAGER:
The successful supplier shall designate an experienced and competent individual, acceptable to the purchaser, to perform the supplier's program management function. The designated program manager shall provide a single point interface between the purchaser and the successful supplier on all matters concerning the required generator-powered ambulance body module(s).
- 1.9 PROGRAM STATUS REPORT:
The stipulated program manager shall present a written status report to the purchaser on the progress of the fabrication, mounting, delivery schedule and any perceived potential or existing problems. The scheduled frequency of these written status reports will be determined by HFD's ambulance section manager.
- 1.10 MANUFACTURER'S PRIOR EXPERIENCE:
The modular body manufacturer must have prior experience in the construction of generator-power ambulance modular bodies and have built a minimum of fifty (50) modular bodies that have been operational for at least eighteen months. A provider's list shall be submitted where modular bodies are operating with a contact person's name and phone number upon request.
- 1.11 UNACCEPTABLE ALTERNATIVES:
All parts, that are specified by model and/or manufacturer's number in the bid specifications or approved by the City of Houston as being equivalent, shall be delivered as specified. Failure to comply with "or HFD approved equivalent" will be deemed as unacceptable alternatives.
- 1.12 REPLACEMENT PARTS:
Each bidder should submit with bid an indication of the scope of their ability and intention to stock replacement parts for the ambulance modular body offered. If not submitted with bid, same shall be submitted to Finance and Administration Department, Strategic Purchasing Division, within seven calendar days after receipt of written notice. Failure to furnish this information within the time period requested may be just cause of disqualification of the bid.

SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO. 2: AMBULANCE CAB & CHASSIS WITH MOUNTED MODULAR BODY

1.0 GENERAL SCOPE (Continued):

1.13 MOUNTED MODULE INSPECTION:

1.13.1 Each mounted module shall be inspected by HFD before shipment to determine compliance with the specifications and to test its ability to perform its intended use. Each unit shall comply with all applicable regulations and laws of the State of Texas. Successful supplier shall notify HFD not less than ten (10) working days prior to expected unit(s) completion date(s).

1.13.2 INSPECTION EXPENSES:

Expenses for these inspection(s) by HFD personnel (e.g., travel fare, lodging [if required], meals, etc.) will be paid by City of Houston, and is not to be included as part of the bidder's unit price bid for any mounted ambulance body module.

1.14 SUPPLIER DELIVERY REQUIREMENTS:

A representative of the manufacturer shall supervise delivery to the City and shall within five (5) days of physical delivery to the City:

1.14.1 Demonstrate for each completed module mounted on a cab/chassis that the mechanical systems are performing to specifications and operating correctly to the satisfaction of HFD.

1.14.2 Demonstrate for each module that the electrical systems are performing to specifications and operating correctly to the satisfaction of HFD.

1.14.3 Occupy a minimum of one (1) working day instructing a representative of HFD on proper maintenance procedures for the module.

1.14.4 Provide one (1) copy of the module manufacturer's comprehensive maintenance manual, which shall be inclusive of component and generator servicing.

1.14.5 Provide any additional and pertinent maintenance information known to the manufacturer but not routinely included in the manufacturer's maintenance manual.

1.14.6 Provide one (1) parts catalog with appropriate identification numbers and descriptions and/or drawings of parts. Parts catalogs shall be inclusive of any modification component parts as well as generator parts.

1.15 SUPPLIER DELIVERY COMPLETION:

Delivery and acceptance of any mounted ambulance modular body shall not be complete until requirement 1.14 and all other specified requirements have been met to the satisfaction of HFD.

2.0 MODULE SPECIFICATION:

2.1 The intent of this specification is to describe an advanced type ambulance body module capable of transporting Emergency Medical Service (EMS) personnel and multiple patients in multiple transport configurations.

2.2 The design of the ambulance body module must be capable of all of the following patient configurations:

2.2.1 The ambulance body module must be capable of transporting two (2) EMS personnel in the module and two (2) "average sized" adult patients in a supine position (i.e., on backboards).

2.2.2 The ambulance body module must also be capable of transporting two (2) EMS personnel in the module and three (3) "average sized" adult patients (excluding a patient on the stretcher) in a secured seated position. In this configuration, no patients would be placed in a supine position (i.e., on backboards).

SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO. 2: AMBULANCE CAB & CHASSIS WITH MOUNTED MODULAR BODY

2.0 MODULE SPECIFICATION (Continued):

- 2.2.3 The ambulance body module must also be capable of transporting two (2) allowing EMS personnel and allowing EMS personnel to place patients in a combination of supine and seated patients (e.g., one supine and three sitting; etc.).
- 2.3 EMS personnel must be able to access each patient without undue effort. Ambulance length-width-height deminsions must not exceed the capabilities (under normal operating conditions) of the Ambulance Cab/Chassis specification. The described, fully mounted body module will also display an extremely high level of overall reliability with maximized longevity and must be ergonomically appealing.
- 2.4 HFD has a 21-year history of successfully utilizing ambulance body modules that receive their electrical power from a generator mounted in an exterior compartment. Prior to that time, ambulance body modules that received their electrical power from the cab/chassis engine, performed poorly. Due to the high call volume, HFD requires a "back-up" means of power in case of cab/chassis failure while on an emergency response. Therefore, HFD requires a generator-powered module.
- 2.5 All references to "must meet the approval of HFD" or "HFD approved equivalent" will mean that approval or disapproval will occur within ten (10) business days after bid opening, to allow adequate time for HFD to complete the evaluation process.
- 2.6 MOUNTING
The ambulance modular bodies shall be constructed and fully mounted by the supplier on the specified truck chassis. Mechanical mounting shall be at not less than eight (8) tie down locations, four (4) each side of frame. Tie down locations shall comply with the chassis manufacturer's recommendations so as not to weaken the base frame or void OEM warranty. Tie down bolts must be readily accessible for removal. Builder shall use 3/8" thick x 4" wide steel plate bolted to the base frame of the module and into the side of chassis rail with minimum 5/8", grade 8 bolts and locknuts. Module design shall provide "lift-off" capability by means of four (4) topside lift points with 1/2" aluminum plate welded to the structural frame. The lift point plates shall be drilled and tapped for a 5/8" bolt that can be replaced easily with a conventional eyebolt. Delivered unit shall be provided with hex-head bolts in place at lift points. Supplier shall provide suitable isolator material to prevent galvanic action between two dissimilar metals.
 - 2.6.1 COMPATIBILITY TO CHASSIS
Supplier shall coordinate with designated HFD personnel to ensure that each modular body is completely compatible to current model year cab/chassis.
 - 2.6.2 CHASSIS RELEASE POINT
The supplier shall be responsible for all shipping and/or freight charges for body mounting, processing and completion.
 - 2.6.3 COMMERCIAL TRANSPORT
The cab/chassis shall be transported by commercially accepted carrier, as necessary, so as to not increase the amount of mileage of each cab/chassis by approximately 100 miles. Odometer readings will be verified during inspection.

SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO. 2: AMBULANCE CAB & CHASSIS WITH MOUNTED MODULAR BODY

2.0 MODULE SPECIFICATION (Continued):

2.7 MODULAR BODY CONSTRUCTION:

2.7.1 FRAMING:

The base frame shall be constructed of 3" x 1½" x .188" wall tubing aluminum and 3" x .188" wall channel aluminum. Wall channels to be appropriately located at the eight respective, tie point locations. Wall structures are 1½" x 1½" x .125" aluminum tubing on maximum of 14" centers. Roof structure is 1" x 2" x .125" aluminum tubing on maximum of 14" centers. Two tubing members are to be located in each vertical and horizontal corner eliminating any void areas in the corners and thereby increasing structural strength. All structural members shall be fully welded at each 90-degree joint.

2.7.2 EXTERIOR PANELS:

The exterior body side panels shall be .080" sheet aluminum firmly attached to structure with VHB (very high bond) tape and sealed at joints with commercial grade sealer. Roof cover shall be .080" sheet aluminum attached (adhesive) to structure and sealed at all joints. The body, roof and panel joints shall be watertight.

2.7.3 STRUCTURAL STRENGTH and INTEGRITY:

2.7.3.1 The exterior of the body shall be finished smooth with slight radius on corners and edges. Ambulance body, as a unit, shall be designed and built to provide impact resistance and patient compartment resistance. The body shall be of sufficient strength to support the entire weight of the fully loaded vehicle on its top or side if overturned, without crushing, separation of joints or excessive deformation of roof bows or reinforcements, body parts, doors, streamers, stringers, floor inner linings, outer panels, and other reinforcements.

2.7.3.2 As evidence that ambulance body meets the above criteria, the module manufacturer shall furnish a certification, by a registered professional engineer or independent testing laboratory, that the ambulance body meets Static Load Test Code for Ambulance Body AMD Standard No. #001. Certification shall be submitted within 21 working days after completion of the first unit.

2.7.4 FASTENERS:

All parts of the ambulance body, whenever applicable, shall be fastened together with rust-resistant fasteners in a manner which will preclude loosening of bolts, screws and rivets and cracking of welded joints. It is preferable that fasteners (bolts, nuts, screws, rivets) for body module be American manufactured.

2.7.5 SECURING PLATES:

Metal tapping plates welded to the walls, floors or ceiling structures to provide firm securing for installed equipment (cabinets, benches, partition, cylinders, etc.) shall be employed in the ambulance structure. Self-tapping screws shall not be used where subjected to stress.

2.7.6 FILL TUBE ENCLOSURE:

One or two gasoline fill tube shrouds, fully recessed, shall be provided on driver's side of module. Design to incorporate a provision whereby small spills will not run down the outside wall of the module and in any event, the design shall be in strict compliance with FMVSS #301. Fuel caps must be flush (or slightly recessed) with module. Manufacturer shall install aluminum protective cover over fuel filler hoses. (Ref.: Sketch #1)

SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO. 2: AMBULANCE CAB & CHASSIS WITH MOUNTED MODULAR BODY

2.0 MODULE SPECIFICATION (Continued):

- 2.7.7 STONE GUARDS:
Aluminum stone guards shall be located on all four lower outside corners to protect body from debris thrown by tires. Stone guards to be rolled to fit contour of corner posts. (Ref.: Sketch #1, #2, #3, & #4)
- 2.7.8 WHEEL WELL TRIM:
Aluminum stone guards shall be provided around each rear wheel well opening with a rounded cut-out to easily accommodate removal of tire. (Ref.: Sketch #1 & #2)
- 2.8 APPROXIMATE OVERALL EXTERIOR DIMENSIONS:
All dimensions are approximate. Actual dimensions should be ± 1 " of approximate dimension and are measured as unmounted to cab/chassis.
 - 2.8.1 Length: 144 inches (not including rear bumper or emergency lighting).
 - 2.8.2 Width: 96 inches (not including emergency lighting).
 - 2.8.3 Height: 86 inches (not including antenna).
- 2.9 EXTERIOR DOORS:
 - 2.9.1 All exterior body module doors shall be flush type. On inside face, provide a minimum 10" wide reflectorized red stripe at belt-line for protection when doors are open (except compartment doors B, C, D, F, and G).
 - 2.9.2 All compartment doors, excluding compartment F and G, shall be constructed of .100" aluminum panels formed to provide a 1½" thick door. All entry doors shall be constructed of .100" aluminum panels formed to provide a 2" thick door. Doors shall close on an automotive type weather strip providing watertight integrity (Unigrip SD-352, or equivalent). Compartment F door shall be constructed of a single .100" aluminum beveled edge material.
 - 2.9.3 All compartment doors, excluding compartment F and G, shall be insulated with block polystyrene. A horizontal reinforcement plate shall retain the inside release handle. Exterior door panels shall be covered on the inside with minimum .063" aluminum attached to the outer door lip.
- 2.10 DRIP RAILS:
There shall be drip rails or suitable deflectors over all entry doors.

SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO. 2: AMBULANCE CAB & CHASSIS WITH MOUNTED MODULAR BODY

2.0 MODULE SPECIFICATION (Continued):

2.11 PATIENT COMPARTMENT ACCESS (ENTRY DOORS):

For simplicity, patient compartment access doors will be referred to as entry doors. A passenger side door and two rear doors shall provide access to the patient area. Each door shall be equipped with a slam type latch complying with FMVSS 206. Door latches shall engage the body structure at the top and bottom of the doors. All door hardware linkage to be reinforced and shall operate in tension when handle is operated to release. All latches shall have removable access panels inside door at lock and latching points. Self-locking nuts shall be used on all latches. Attachment between door latches and handles shall utilize aluminum structural flat bar and bracket assembly; no exceptions allowed. Doors shall comply with FMVSS 206 and must meet or exceed AMD Standard #002 (Body and Door Retention Components Test). Door hinges shall be stainless steel continuous hinge with minimum 3/16" stainless steel pin and attached with maximum 2" spacing. Padded vinyl covered head bumpers shall be above both doorways. Bumpers shall be high enough and thick enough to reduce head injuries. (Ref.: Sketch #7)

2.11.1 PASSENGER SIDE DOOR:

The passenger side door shall provide a minimum clear opening of 72" in height and 30" in width. Door shall have inside and outside lockable door handle and shall hinge at the forward side. The passenger side door shall have a heavy duty door hold open device mounted at the top. Doorstep shall be 1/8" structural tubing lined with .100" aluminum and painted with anti-skid material.

2.11.2 REAR DOORS:

The rear doors shall provide a minimum clear opening of 56" in height and 48" in width. Doors shall work in conjunction with each other and shall not have a center post to obstruct insertion of stretcher. Doors shall hinge at the outboard sides. The passenger side rear door shall have inside and outside lockable door handle. Driver side door shall have inside handle only. Both rear doors shall be equipped with two point latch assemblies complying with FMVSS 206. Each rear door shall have a door hold open device (Cast Products "Grabber", or HFD approved equivalent). Rear doorstops shall be mounted with aluminum plate reinforcements behind exterior skin

2.12 EXTERIOR WINDOWS:

2.12.1 All windows shall have safety float, solid tempered, dark, smoke-colored glass with screens (E-Z Eye Glass, or equivalent). Glazing shall comply with FMVSS 205. All upper windows shall open and shall have provisions to prevent accidental closure. Passenger side door and rear doors shall have windows with one (1) sliding panel each. All ambulance body doors shall be equipped with not less than 250 square inches of safety glass per door. Door window area shall be minimum 16" high. The window framing shall be extruded aluminum with an inner and outer frame for clamping type installation or gasket type installation. Window width shall be approved by HFD prior to assembly.

2.12.2 There shall be an opening in the front wall of body module designed to interface with the sliding window in the cab to permit visual and audio contact between driver and attendant(s).

SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO. 2: AMBULANCE CAB & CHASSIS WITH MOUNTED MODULAR BODY

2.0 MODULE SPECIFICATION (Continued):

2.13 COMPARTMENTS:

For simplicity, exterior access storage spaces will be referred to as "compartments" and interior access storage spaces will be referred to as "cabinets". Compartment doors will hinge forward unless otherwise specified. Door bumpers shall be installed on module to prevent damage to body when doors are opened. Compartments A, B, and E shall be automatically lighted when opened. All compartment locations and designs must meet the approval of HFD prior to assembly.

2.13.1 COMPARTMENT A (OXYGEN):

Approximate I.D. is 20" wide x 43" high x 21" deep. This compartment shall be located at the floor line of the module on the driver side and shall be forward to the module front wall. This will allow for horizontal (laying down) mounting of a standard "H" oxygen cylinder (244 cu. ft.) with access through the driver side door. Door bumpers shall be installed on module top and bottom. Door must be vented from inside to outside with one (1) stainless steel vent (Perko #870-2, or equivalent). A shelf shall be installed approximately 18" above floor line. Supplier shall provide three (3) marine-type rollers and three (3) ratchet type restraints for securing oxygen cylinder into its appropriate place. (Ref.: Sketch #1)

2.13.2 COMPARTMENT B (FORWARD LOWER DRIVER SIDE):

Approximate I.D. is 55" wide x 11" high x 21" deep. This compartment shall be located directly below the floor line on the driver side and shall butt up against the module forward wall. Door will hinge at bottom with appropriate restraint(s) to allow door to be at a minimum angle of 90-degrees when fully open. Compartment shall have an inverted pan attached to the floor to raise the stored items above the level of the lip and thereby decrease the chance for items getting wet. In addition, compartment shall have a ribbed rubber mat that covers the entire floor section of that compartment. (Ref.: Sketch #1)

2.13.3 COMPARTMENT C (ELECTRICAL):

Approximate I.D. is 34" wide x 24" high x 21" deep. This compartment is located aft of compartment A and above compartment B. Suitable durable tags or labels shall be used to identify all wiring and cabling between terminations throughout the module. Access shall be through the driver side compartment door (not through the interior). (Ref.: Sketch #1)

2.13.4 COMPARTMENT D (MISC. STORAGE):

Approximate I.D. is 18" wide x 15" high x 21" deep. This compartment is located aft of compartment C and above the wheel well (Ref.: Sketch #1)

2.13.5 COMPARTMENT E (FIREFIGHTER GEAR):

Approximate I.D. is 34" wide x 50" high x 21" deep. This compartment shall be located to the extreme rear (aft) of the module on the driver side. Door shall be hinged at left forward side. A shelf shall be installed approximately 39" above the bottom of the compartment. Compartment shall have a ribbed rubber mat that covers the entire floor section of that compartment. Compartment is designed to store 2 or 3 sets of firefighter gear in the bottom section and stretcher sheets and blankets in the upper section. Due to the potential for noxious fumes from fire fighting gear, a seal shall insure fumes do not enter the upper section and/or the module. (Ref.: Sketch #1)

SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO. 2: AMBULANCE CAB & CHASSIS WITH MOUNTED MODULAR BODY

2.0 MODULE SPECIFICATION (Continued):

2.13.6 COMPARTMENT F (BACKBOARDS):

Approximate I.D. is 19" wide x 7" high x 72" deep. This compartment shall be located at the rear of the module on the passenger side and sitting on top generator compartment (G) for the aft section and on top of the wheel well for the forward section. The exterior door opening shall be located next to the rear passenger side exterior door and to be hinged on the right side (passenger side). Gas tube hold open devices shall be installed to door. The preliminary design of the compartment is to store 2 to 3 backboards and 1 Scoop stretcher. (Ref.: Sketch #4 & #7)

2.13.7 COMPARTMENT G (GENERATOR):

2.13.7.1 Passenger side, aft of wheel well, minimum 37" wide x 21" deep x 21" high and not to extend into backboard storage compartment (F). Bottom bolted mount assembly shall be provided of adequate strength to support entire generator weight and provide easy removal from compartment. Mount assembly shall provide for quick removal of entire generator, if necessary.

2.13.7.2 Provide plunger type with swivel post hold open device for compartment door. Compartment door shall provide for an unrestricted 90 square inch area of fresh airflow. Decibel level shall not exceed 70 dB inside module when generator is running. Tailpipe shall exit through compartment door, not below module. (Ref.: Sketch #2)

2.13.8 COMPARTMENT H (FRONT WALL INTERIOR/EXTERIOR ACCESS):

Approximate outside door opening is 23" wide x 53" high x 35" deep (12" deep below floor line). Interior of compartment attaches to the front wall (passenger side) and has one (1) shelf approximately 22" from module floor line. The floor shall extend to the door to provide a division between middle and lower sections. Supplier shall provide on upper section, a wall plug, appropriately wired with #12 gauge wire. Appropriate guard at door shall be provided at floor line of door to prevent damage to floor edge. The outside access door is hinged at the forward edge of the module. The interior aft side shall be open for access to the equipment stored inside but no door or containment device will be provided for interior access except a lip on the shelf and on the floor of the compartment. Sufficient padding on driver side and at side (top edges and approximately 12" down from top edges) shall be installed to decrease chance of head injury.

2.13.9 LOCKING SYSTEM:

The electrical (C), and generator compartment (G) doors on all modules shall be keyed alike (i.e., key #513), but shall not be keyed similarly to any other module compartment doors. Both entry doors (i.e., side door and passenger side rear door) and all remaining compartment doors (i.e., compartments A, B, D, E, F, and H) shall be keyed alike.

2.14 INTERIOR BODY MODULE:

2.14.1 APPROXIMATE OVERALL INTERIOR DIMENSIONS:

All dimensions are approximate. Actual dimensions should be $\pm 1"$ of approximate dimension.

Length: 140" (not including inner liner or cabinets at upper wall).

Width: 93" (at upper wall not including inner liner or cabinets).

50" (between wheel wells before cot installation).

Height: 67" (not including lights, grab rail, I.V. hangers, etc.).

SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO. 2: AMBULANCE CAB & CHASSIS WITH MOUNTED MODULAR BODY

2.0 MODULE SPECIFICATION (Continued):

2.14.2 INTERIOR BODY INSULATION:

Interior body insulation shall be a combination of block polystyrene (1½" thick) and reflective radiant barrier applied to the roof and four (4) sidewalls. All requirements for self-extinguishment shall be met. Headliner in ambulance module shall be approved fiberglass or plastic, "flat" white color. Additionally, the area behind the step well and Compartment H shall be insulated with Zero Clearance brand (or HFD approved equivalent) insulation for additional heat and acoustic properties.

2.14.3 INTERIOR FLOOR and COVERING:

Interior floor underlayment shall be an Alucabond composite material consisting of two (2) pre-finished aluminum cover sheets heat-bonded to a core made of polyethylene plastic. Vinyl flooring shall extend up sidewalls approximately 4" and have a smooth radius from floor to sidewall. Vinyl flooring shall be Lonseal "Lonfloor", or equivalent, (color to be approved by HFD) and be attached to the Alucabond with an appropriate adhesive (e.g., contact cement). Doorsills shall be stainless steel covered with a non-slip surface. Plywood or wood products are not acceptable.

2.14.4 INTERIOR TRIM and LINING:

2.14.4.1 Walls shall be covered with .090" fiberglass wallboard (Lasco-Glass Product, or equivalent). Doors shall be covered with powder coated aluminum. The material furnished shall be completely smooth and shall be white in color and shall meet the approval of HFD prior to assembly. An aluminum (.063") backing plate must be provided for additional backing for window installation.

2.14.4.2 All exposed edges to be finished with snag free design. Laminated plastic is unacceptable for cabinets due to its tendency to crack and chip in emergency medical vehicular use. Abrasion resistant polycarbonate sliding doors shall have appropriate opening/closing fixtures. Placement, type and function of fixtures shall be approved by HFD prior to assembly.

2.14.5 CEILING:

Interior ceiling cover piece shall be constructed of fiberglass, and laid out with a void area to allow recessing of lights and fixtures, and easy removal of wiring should it become necessary to replace interior or exterior lighting fixtures.

2.14.6 INTERIOR COLOR:

The interior color shall be white. The finish of the entire patient compartment must be impervious to soap, water, and disinfectants to permit field cleaning, washing and disinfecting. Supplier shall submit color samples to be approved by HFD.

SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO. 2: AMBULANCE CAB & CHASSIS WITH MOUNTED MODULAR BODY

2.0 MODULE SPECIFICATION (Continued):

2.15 CABINETS:

2.15.1 GENERAL:

Interior cabinets shall be constructed of formed .100" aluminum and firmly secured within module to structural frame by rust resistant fasteners in a manner that will preclude loosening of bolts, screws and rivets or cracking of welded joints. Inner corners to be finished with trim molding. Metal tapping plates welded to wall or ceiling structures are not required in areas in which direct screw fastening to structural frame is accomplished. Self-tapping screws may not be used in areas where they will be subjected to stress. Interior cabinets to be finished in white color polyurethane enamel. All interior cabinets (except lock box) shall have sliding abrasion resistant polycarbonate doors (minimum 3/16" thick, clear). All dimensions as given are approximate.

2.15.2 CABINET 1 DRIVER SIDE REAR (stretcher sheets, blankets):

Approximate I.D. is 34" wide x 13" high x 20" deep and is located in conjunction with compartment E and below the A/C compartment. Opening shall be 32" wide x 11" high with double sliding doors. (Ref.: Sketch #6)

2.15.3 CABINET 2 DRIVER SIDE WALL (drugs/oxygen delivery):

Approximate I.D. is 48" wide x 24" high x 12" deep and is located directly above wall area 4 and is approximately 33" aft of the front wall. Two shelves, evenly spaced, shall be installed creating three equal levels of cabinet storage. (Ref.: Sketch #6)

2.15.4 CABINET 3 DRIVER SIDE CORNER (gloves, large dressings, gowns):

Approximate I.D. is 21" wide x 20" high x 21" deep. This cabinet is located between cabinet 2 and 5 and on top of oxygen compartment (A) creating a corner. No abrasion resistant polycarbonate door will be needed. A diagonal cut shelf shall be installed creating near-equal upper and lower levels. (Ref.: Sketch #6)

2.15.5 AREA 4 DRIVER SIDE "ACTION" WALL / COUNTER TOP:

Approximate dimensions of the false wall are 45" wide x 18" high x 4" deep. The false wall will hide radio wiring/cabing, electrical wiring, oxygen hoses, suction hoses, etc. Installed on the action wall shall be an electrical outlet, switches, oxygen quick connect outlets, wall mounted suction, etc. Cut-out slots will be provided for rear mobile radio and pass-through wiring from laptop docking station (location to be approved by Communication Management Division Manager). Radio speaker with appropriate holes will be mounted. Approximate dimensions of the counter top space are 56" wide x 21" deep (excluding false front) and shall have with a minimum 1/2" lip around counter top. Counter top shall be powder-coated aluminum or HFD approved equivalent. (Ref.: Sketch #6)

2.15.6 CABINET 5 FRONT WALL-CENTER (bandages):

Approximate I.D. is 36" wide x 24" high x 12" deep. This cabinet is secured to the front wall and is located between cabinet 3 and 6. Two shelves evenly spaced shall be provided creating three equal levels of cabinet storage. (Ref.: Sketch# 8)

2.15.7 CABINET 6 FRONT WALL-PASSENGER SIDE (I.V. supplies):

Approximate I.D. is 36" wide x 24" high x 12" deep. This cabinet is secured to the front wall and to the passenger sidewall. Two shelves evenly spaced, providing three equal levels of cabinet storage shall be provided. Cabinets 5 and 6 will create two near-identical side-by-side cabinets. (Ref.: Sketch #8)

SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO. 2: AMBULANCE CAB & CHASSIS WITH MOUNTED MODULAR BODY

2.0 MODULE SPECIFICATION (Continued):

2.15.8 CABINET 7 OXYGEN:

Approximate I.D. is 30" wide x 16" high x 15" deep. Top will be a lid that is hinged at front wall. Floor edge shall be sealed to prevent seepage under compartment. "H" size oxygen cylinder shall be secured in horizontal position with two (2) straps accessible from underneath top lid. A suitable yoke will be provided for securing the neck of the oxygen cylinder. (Ref.: Sketch #8)

2.15.9 CABINET 8 SHARPS HOLDER:

Cutout on topside of cabinet is approximate 10 ¼" long x 4 ¼" wide and will house a sharps container. (Ref.: Sketch #7)

2.15.10 CABINET 9 SQUAD BENCH CABINET:

Above the squad bench shall be two (2) side-by-side cabinets. Each cabinet shall be approximately 30" long x 10" high x 8" deep with padding on the lower interior edge of both cabinets to reduce head injuries. (Ref.: Sketch #7)

2.15.11 CABINET 10 AC/ HEAT CABINET:

Containment shroud for air conditioner/ wall heater unit attaches to structural members welded to the wall framing. The evaporator shall have two white registers with adjustable louvers for adequate air volume and direction. One register will be mounted on the upper forward section to provide air to the CPR seat, the upper torso of the patient, and the Captain's seat. The other register will be mounted on the upper medial section to provide air to the squad bench seat area and the lower torso of the patient.

2.16 PASSENGER SIDE BENCH SEAT:

2.16.1 Bench seat shall be approximately 72" long x 17" high from the floor x 21" wide with three (3) sets of lap (Type I) self-retracting safety belts (Indiana Mills F10290, or equivalent). Seat belts shall be configured to restrain three (3) side-by-side sitting occupants. Configuration must also be able to restrain and secure a supine patient utilizing three (3) safety belts receivers (positioned at the patient's chest, hips, and legs) in combination with the self-retracting safety belts used for sitting occupants. The bench seat does not open from the inside (no lid).

2.16.2 Bench seats and backrests shall be seamless, vinyl covered (color to match other upholstery) and padded with 3" and 2" foam (respectively). Supplier shall submit color samples to be approved by HFD. Bench seat and backrest shall be secured with magnetic strips. (Ref.: Sketch #7)

2.17 DRIVER SIDE JUMP ("CPR") SEAT:

Bench seat and backrest shall be seamless, vinyl covered (color to match other upholstery) and padded with 3" and 2" foam (respectively). Cushioned top shall be 22" wide x 22" deep x 3" high. Aft edge of jump seat shall be 41" forward of rear wall and butt up against cabinet 1. Bench seat and backrest shall be secured with magnetic strips. One set of lap (Type I) self-retracting safety belts (Indiana Mills F10290, or equivalent) shall be installed for passenger restraint. The bench seat cushion shall cover the lid for a cabinet under the bench seat (over compartment D) and shall be hinged on the driver sidewall. The depth of the cabinet shall be approximately 7" deep. (Ref.: Sketch #6)

SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO. 2: AMBULANCE CAB & CHASSIS WITH MOUNTED MODULAR BODY

2.0 MODULE SPECIFICATION (Continued):

- 2.18 **TECHNICIAN'S SEAT (CAPTAIN'S CHAIR):**
Seat shall be a seamless, vinyl covered (color to match other upholstery) high back "Captain's chair" style without fold-down arm rests capable of transporting children as well as adults (Hi-BAC Safety Seat from E.V.S. Ltd., or equivalent). The child seat portion shall have a 5-point safety harness with a push button release for use with children. The technician's seat shall be mounted on a heavy-duty swivel base. It shall also be capable of adjustment forward and aft and have a lap (Type I) self-retracting safety belt attached to the chair. Chair must meet or exceed all applicable FMVSS standards. Location and positioning shall be approved by HFD prior to assembly. (Ref.: Sketch #6 & #7)
- 2.19 **MISCELLANEOUS EQUIPMENT:**
- 2.19.1 **OVERHEAD SAFETY BAR and GRAB HANDLES:**
Provide one brushed stainless steel overhead safety bar approximately 72" long x 1¼" diameter slightly off center over normal stretcher position. On the inside surface of passenger side access door provide a minimum 1¼" brushed stainless steel boomerang bar type grab handle. On the inside surface of both rear access doors provide a minimum 1¼" brushed stainless steel bar type grab handle. Additionally, on rear wall (passenger side) above bench seat, provide a minimum 1¼" brushed stainless steel bar grab handle. (Ref.: Sketch #6)
- 2.19.2 **RETAINING BAR (PASSENGER SIDE):**
Mount a 1¼" or 1½" brushed stainless steel safety rail located at the forward end of the bench seat and above cabinet 8. Location and design shall be approved by HFD. (Ref.: Sketch #7)
- 2.19.3 **STRETCHER, FASTENERS and FLOOR PLATES:**
- 2.19.3.1 **Stretcher:** HFD will furnish the latest edition of the selected stretcher (Stryker, MX-PRO 3, model #6082).
- 2.19.3.2 **Fasteners:** All required fasteners, hardware, and brackets (including "antlers", rear fastener rail, safety hooks, and Stryker single position stretcher fasteners, model #6370) shall be provided and mounted by the supplier. Aluminum plates, minimum thickness 3/8", shall be built into floor to secure all stretcher fasteners and brackets, using manufacturer approved bolting means. Absolutely no self-tapping fasteners shall be permitted. Mounting dimensions shall be as per stretcher manufacturer's specifications. The safety hook shall be mounted by the supplier in accordance with the Stryker recommendations.
- 2.19.3.3 **Floor Plates:** To protect stretcher wheels from damaging floor, protective stainless steel floor plates shall be provided under wheels when stretcher is secured in place. Floor plates shall be flush mounted in the floor of the module and provided with a water-tight seal.

SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO. 2: AMBULANCE CAB & CHASSIS WITH MOUNTED MODULAR BODY

2.0 MODULE SPECIFICATION (Continued):

2.19.4 STATIONARY SUCTION ASPIRATOR DEVICE:

Supplier shall securely mount an electrically operated 12-volt suction aspiration device (Impact 324 K "on-board" suction system, or equivalent) in Area 4. Suction location shall be approved by HFD. The aspirator system shall provide a free air flow of at least 30 LPM and achieve a minimum of 300 mm Hg vacuum within four seconds after the suction tube is closed. The suction's power shall be activated by an illuminated switch located on the action wall or a switch attached to the suction device, itself. The tubing from the pump must be provided with approved non-collapsible vibration isolating hose and approved tube couplings. The tube shall be well secured to frame and/or body, to protect it from vibration and other possible damage. The suction system shall use 1200cc disposable collection canisters with appropriate filtering devices. (Ref.: Sketch #6)

2.19.5 I.V. HANGERS:

Vendor shall mount two (2) near-flush style, rubber I.V. ceiling holders specifically designed for holding I.V.'s, with a Velcro type strap to hold and control movement of I.V. bags. The ceiling holders shall be located directly over the patient's waist/ knee of the primary stretcher and passenger side bench seat. I.V. ceiling holders shall not protrude more than 1". Swing down metal IV hangers that can cause injury shall not be furnished.

2.19.6 WALL MOUNT SUPPLY HOLDERS:

Supplier to supply and mount three (3) canvas type wall hanging EMS supply holder with multiple pockets (pouches). There shall be a minimum of four (4) rows of Velcro (or equivalent) strips used for attachment. Tops of the supplies should be visible above the pockets and also visible through a transparent flap. Primary material to be used will be Cordura® and color to match other upholstery.

2.19.6.1 WALL MOUNT SUPPLY HOLDER DRIVER'S SIDE:

Wall supply holder is designed to store various ALS supplies (e.g., IV catheters, blood tubes, syringes, etc.). Holder shall be securely mounted below the air conditioning cabinet to allow access from the driver side jump "CPR" seat and designed as follows:

Assuming a 1" trim at the top and a 1" trim at the bottom; plus ½" space between levels; and 1/8" between pockets, then overall length is 19" and overall height is 21½".

Three (3) rows of pockets, each row containing six (6) pockets, for a total of eighteen (18) individual pockets. The top row will have 4" high pockets with a flap attached 3" above the top of the pocket. The middle row will have 3½" high pockets with a flap attached 2½" above the top of the pocket. The bottom row will have 3½" high pockets with a flap attached 2" above the top of the pocket. Pockets will be formed by utilizing 5" of material sewn in a 3" space to accommodate various items.

Flaps will be made of clear vinyl material and will have Velcro strips sewn along the entire length of the bottom of the flaps. A minimum of 3 pockets per row will have the corresponding part of Velcro strips to adhere to the flaps. (Ref.: Sketch #6, AA and #9)

SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO. 2: AMBULANCE CAB & CHASSIS WITH MOUNTED MODULAR BODY

2.0 MODULE SPECIFICATION (Continued):

2.19.6.2 WALL MOUNT SUPPLY HOLDER (DRIVER SIDE) (6 Pockets-double row):
Wall supply holder is designed to store various ALS supplies (e.g., Sodium Bicarbonate and 50% Dextrose). Wall mount supply holder shall be securely mounted to aft, lower side of Cabinet 2 (Driver Side Wall) (exact location to be approved by HFD). Assuming a 1" trim at top and bottom, plus ½" space between levels, and 1/8" between pockets, then overall length is 12" and overall height is 22". Two rows of pockets, each row containing three (3) pockets, for a total of 6 pockets. All 6 pockets are 8" tall with clear vinyl flaps and Velcro. (Ref.: Sketch #6, BB)

2.19.6.3 WALL MOUNT SUPPLY HOLDER (PASSENGER SIDE) (6 Pockets-single row):
Wall mount supply holder shall be securely mounted between the back cushion and seat cushion towards the back of the module.

Assuming a 1" trim at the top and at the bottom, the overall length is 19" and overall height is 8".

This holder will consist of one row of six (6) pockets. The pockets will be 3½" high and will have a flap attached 2½" above the top of the pocket. Pockets will be 5" of material sewn in a 3" space to accommodate various items.

The flap will be made of clear vinyl material and will have Velcro strips sewn along the entire length of the bottom of the flap. Two pockets will have the corresponding part of Velcro strips to adhere to the flap. (Ref.: Sketch #7, JJ)

2.19.7 PORTABLE OXYGEN BRACKETS FOR COMPARTMENT A:
One (1) two-high "D" size oxygen cylinder brackets shall be mounted horizontally. Bracket is cylindrical in design and shall be at a slight angle of 15-20 degrees to assist in retaining cylinders and secured to the aft side of the lower section of compartment A. (Ref.: Sketch #1)

2.19.8 PORTABLE OXYGEN BRACKETS FOR COMPARTMENT H:
One (1) three-high "D" size oxygen cylinder brackets shall be mounted horizontally and at a slight angle of 15-20 degrees to assist in retaining cylinders. Bracket is cylindrical in design and allows cylinders to lie near horizontal. Brackets shall be secured to the floor next to the dividing wall between compartment H and cabinet 7). In the units designated as "Medics", the three-high "D" cylinder holder shall be moved aft 6" (Ref.: Sketch #8)

2.19.9 SHARPS CONTAINER HOLDER:
Supplier shall install two sharps containers in two different locations. One shall be located forward of the CPR seat. Location of bracket shall allow EMS personnel to insert sharps container into the bracket without a locking mechanism. The other sharps container shall be located in cabinet 8. Location must meet with the approval of HFD. (Ref.: Sketch #6 & #7)

SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO. 2: AMBULANCE CAB & CHASSIS WITH MOUNTED MODULAR BODY

2.0 MODULE SPECIFICATION (Continued):

2.19.10 LOCK BOX:

Supplier shall furnish and mount a lockable container for controlled substances. There shall be a punch-pad locking device that contains a key to access the lock box. Location of lock box shall be directly below Cabinet 5 and aside to Compartment A with easy access from the Captain's chair. Location shall be ergonomically appropriate and meet the approval of HFD. (Ref.: Sketch #8)

2.19.11 FIRE EXTINGUISHER:

On the floor, in the passenger side corner of compartment A and compartment H, supplier shall provide and mount a fire extinguisher (multi-purpose dry chemical, Class 3-A, 40 B-C, 5 lb.) in a well secured, quick release bracket in accordance with KKK-A-1822E, 3.15.2 a., and in a location that is ergonomically appropriate and meets the approval of HFD. (Ref.: Sketch #8)

2.19.12 GLOVES CONTAINER:

Supplier shall furnish and mount a gloves container for the three (3) different sizes of gloves, inside the module above compartment "H" (Interior/ Exterior access). Location shall be ergonomically appropriate and meets the approval of HFD. (Ref.: Sketch #7)

2.19.13 PAPER TOWEL DISPENSER:

Supplier shall securely mount a paper towel dispenser (Combo Towel Cabinet, by Continental Manufacturing Co., model #990W) to the rear wall (passenger side) utilizing support members or backing plate, if necessary. Location must be in an ergonomically accessible location allowing EMS personnel access to opening mechanism and to be able to pull down towels without complications or interference. Location must meet with the approval of HFD. (Ref.: Sketch #7, KK)

2.19.14 WALL-MOUNT FAN:

Supplier shall furnish, mount, and wire a 12-volt DC fan for circulating air in the module. Location of fan will be close to the ceiling on the rear wall above the paper towel dispenser.

2.19.15 WASTE CONTAINER:

Supplier shall furnish a waste container (Rubbermaid, model #2956-00) that will be located in side door well.

2.19.16 REFRIGERATOR:

HFD will supply a mounting bracket for all modules designated as "Medics" for the purpose of securing a refrigerator (Engel DC 14 quart, model MRFD-015D-A). Supplier will mount bracket on top of oxygen compartment and will wire an accessory (12-volt) plug for the unit. Location must meet with the approval of HFD.

2.20 OXYGEN SYSTEM:

2.20.1 Supplier shall install, flush, and make ready an oxygen delivery system in accordance with C.G.A. pamphlet G-4.1 and National Standards for Medical Grade Oxygen Service. All hose and tubing shall be approved for medical oxygen service with a minimum rating of not less than 150 psi. The oxygen cylinder valve must be accessible from inside module (Cabinet #7).

SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO. 2: AMBULANCE CAB & CHASSIS WITH MOUNTED MODULAR BODY

2.0 MODULE SPECIFICATION (Continued):

2.20.2 An approved flush mounted dual wall outlet unit to be provided on driver sidewall (action wall area #4) near the technician's seat (captain's chair). A single outlet shall be installed on passenger side above cabinet #8 and the bench seat (close to the ceiling). All holes through which system tubing must travel shall be lined with rubber grommets. Hose must be run in split loom protective conduit.

2.21 HEATING and AIR CONDITIONING:

The body module heater and air conditioner shall be an integral, independent unit and separate from the ambulance cab and chassis or from any subsequent remount cab/chassis. The system shall provide total environmental temperature control by incorporating a 115-volt heating-cooling unit which can operate in ambient temperatures ranging from 0 degrees to 95 degrees F. The unit controls shall be mounted on the action wall with the temperature sensor near the return air opening.

2.22 AIR CONDITIONER:

2.22.1 Module air conditioner shall be a self-contained, 14,000 BTU AC and 8,500 BTU electric heater, 115-volt, (Dometic #EHCED-14-2.5, or HFD approved equivalent). The unit is to be located in the upper rear (aft) corner of the module on the driver side. Containment shroud for air conditioner/ wall heater unit attaches to structural members welded to the wall framing. The evaporator shall have two white registers with adjustable louvers for adequate air volume and direction. One register will be mounted on the upper forward section to provide air to the CPR seat, the upper torso of the patient, and the Captain's seat. The other register will be mounted on the upper medial section to provide air to the squad bench seat area and the lower torso of the patient. Air circulation shall be provided with a blower control with 420 CFM (minimum) as well as air directional control. All wiring shall be quick disconnect type with all plugs easily accessible. Location and dimensions to be approved by HFD prior to assembly.

2.22.2 Noise level to be such that attendant can perform necessary functions without hindrance. Blower assembly housing shall be metal or other material not subject to distortion. Drainage is to the outside via a hose(s) connected to an evaporator drain pan so that spillage or overflow into the module is prevented.

2.22.3 Air conditioning shall comply with AMD Standard 012 for performance in the patient area.

2.22.4 The warranty period for the module air conditioner shall be a minimum of four (4) years.

2.23 ELECTRICAL EQUIPMENT:

2.23.1 All wiring shall be stranded copper with electrical thermoplastic insulation, sized for amp load and connected in accordance with A.S.A.E. standards, minimum size 14-gauge. No wires shall be spliced and wires shall extend from service point to the use point of terminal blocks in such a manner to facilitate replacement. Whenever possible, wires to be run in loom and where wire passes through metal panels, shall use insulating grommets. Solderless connectors of the compression type, or equivalent, shall be used on all wire insulation. All 115-volt wiring in the body module shall be run in a minimum of 12/3 SO cord.

SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO. 2: AMBULANCE CAB & CHASSIS WITH MOUNTED MODULAR BODY

2.0 MODULE SPECIFICATION (Continued):

2.23.2 115-VOLT RECEPTACLES:

- 2.23.2.1 Three (3) 115-volt receptacles shall be mounted and appropriately wired with #12 gauge wire to electrical panel in the module for medical devices and/or battery charging systems.
- 2.23.2.2 One wall plug receptacle shall be located in area 4 on the driver sidewall.
- 2.23.2.3 One wall plug receptacle shall be mounted on front wall of compartment H for use of EMS personnel in charging the portable suction unit.
- 2.23.2.4 One wall plug receptacle shall be mounted on the passenger side-wall centered above the backboard compartment (F).

2.23.3 CONNECTIONS:

- 2.23.3.1 Body module's primary electrical circuit(s) shall be separate and distinct from vehicle (cab/chassis) circuits. Electrical connections for the body module shall be provided in such a manner as to permit transfer of body module from one cab/chassis to another without having to cut or splice service lines.
- 2.23.3.2 All wiring shall be color coded and routed in high temperature conduit or looms conforming to SAE J562 as applicable. All wiring shall be located in an accessible enclosed and protected location and kept at least six (6) inches away from exhaust system (or high heat) components.
- 2.23.3.3 Electrical wiring and components shall not terminate in the oxygen storage compartment (compartment A). All conduits, looms and wiring shall be secured to the body or frame with insulated metal cable straps in order to prevent sagging and movement which may result in chafing, pinching, snagging or other damage. All apertures on the module shall be properly and fully grommited for passing wire to conform to SAE1292. Location of electrical panel shall be approved by HFD prior to assembly.

2.23.4 BREAKER PANEL:

- 2.23.4.1 All wiring shall be configured the same for all module bodies purchased and shall be color-coded in accordance with a detailed wire schematic diagram. All schematic diagrams on all module bodies purchased shall be configured the same and shall be displayed on the inside of the electrical compartment door, protected by abrasion resistant polycarbonate. A master circuit breaker panel shall be supplied in electrical compartment of module. This panel shall be labeled for ease in trouble-shooting. Approved solenoids or relays will be permitted in the individual lighting circuits.
- 2.23.4.2 Damage to sensitive equipment due to voltage spikes shall be minimized by using an acceptable, engineered, industry standard protective device.

SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO. 2: AMBULANCE CAB & CHASSIS WITH MOUNTED MODULAR BODY

2.0 MODULE SPECIFICATION (Continued):

2.23.5 BATTERY CHARGER:

Supplier shall install a 30-amp, 115-volt, automatic cut off battery charger (Progressive Dynamics, Intelli-Power, model #PD9130A; or HFD approved equivalent) to safely recharge and maintain batteries. The battery charger shall be powered from shore power and generator.

2.23.6 SHORE POWER:

Supplier shall provide a 30-amp, 115-volt, twist lock male receptacle AC shore power circuit. When connected by extension cord to an appropriate outlet (and generator is turned off), the shore power will allow all electrical accessories, including the AC/heater, to be operational, when necessary, while the ambulance is ready to respond from the fire station or while being serviced at the maintenance facilities. Receptacle shall have a spring loaded cover assembly suitable for wet locations and shall be installed on the driver's side of the ambulance module in close proximity to driver's door. Female connector shall be provided.

2.23.7 ELECTROMAGNETIC RADIATION:

2.23.7.1 All electrical components, electronic equipment and devices used and installed on or in the module shall be electromagnetic radiation suppressed filtered, or shielded to prevent interference with radio and telemetry equipment aboard the ambulance and in the surrounding areas. Such devices and equipment shall be tested and certified to confirm that their RFI does not exceed the maximum limits of SAE J551.

2.23.7.2 The body module shall have an electrical margin of safety. The delivery documents shall be accompanied by a margin of safety check list, which includes every item of electrical equipment on the module and a margin of safety calculation, which results in a positive margin of safety.

2.23.8 ELECTRICAL POWER TAKE-OFF TERMINALS:

2.23.8.1 Supplier shall provide three (3) heavy-duty electrical power take-off terminals for supplying DC voltage to various communications and electronic devices installed in the ambulance. One terminal shall be switched, one shall be "hot", and one shall be fail-safe.

2.23.8.2 Chassis only auxiliary 12-volt DC circuits located on the truck fuse block shall be powered through the chassis alternator/battery system when the ignition is on.

2.23.8.3 Module 12-volt DC circuits located on the fail-safe fuse block shall be powered through a 115-volt AC to 12-volt DC 80-amp regulated, power supply (Progressive Dynamics PD9180A, or equivalent). The power supply shall be mounted in the electrical compartment (C) a minimum of four (4) feet above ground level when mounted on the vehicle. The power supply is to receive its AC power from the generator installed in the ambulance body module or from activation of the shore power circuit. However, if shore power is activated, generator must be automatically disconnected via the shore power relay which must be wired for G.F.I. (i.e., hot and neutral must be isolated).

SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO. 2: AMBULANCE CAB & CHASSIS WITH MOUNTED MODULAR BODY

2.0 MODULE SPECIFICATION (Continued):

2.23.8.4 In the event of failure of the generator unit, the DC power source for both module electrical systems and radio equipment in the module will be switched from the power supply to the chassis alternator/battery power source. This power source change shall be accomplished automatically and instantly if power is lost from the generator. The DC power supply unit must have current limiting and over voltage protection with a means of adjusting the current and over voltage levels for correct current and voltage levels, as required.

2.23.9 WIRING and CABLING:

All cabling penetrating any wall, panel or any sheet metal, shall be protected by being covered with split loom or equivalent. Openings made in the wall of the module for routing of cables and wiring between the various units of electrical equipment, shall be sealed with RTV.

2.23.10 FUSES/RELAYS:

2.23.10.1 All primary voltage (12-volt DC) wiring shall be fused. Fuses shall be installed near the voltage source terminal in electrical compartment (C). No primary voltage wiring shall penetrate any metal panel without being fused first.

2.23.10.2 Fuses under 12-ampere capacity may be "in-line" fuse-holder type. Fuses rated at more than 12-amperes shall be of the stationary mounting, "snap-in" type. 12-volt DC circuits must also utilize relay switching. Relays and fuse blocks must have screw terminals for positive attachment of wires relative to crimped connections. Relays with screw terminals shall be Bosch (or HFD Approved equivalent) 75-amp.

2.23.10.3 Circuit breakers shall be used where recommended by the manufacturer of the electronic device and as normally furnished by the manufacturer. All fuses and circuit breakers shall be located in the electrical compartment (C) and conveniently, accessible for prompt fuse replacement and/or resetting. No protective device shall be located in a manner that requires removal of any equipment to restore voltage after a voltage interruption.

2.24 COMMUNICATIONS:

2.24.1 EQUIPMENT:

HFD requires wiring to support one (1) UHF mobile radio, one (1) Mobile Data system, a Global Positioning System (GPS), and one (1) laptop with docking station. Vendor shall supply and install wiring at the locations specified by the Communication Management Division Manager (CMDM):

SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO. 2: AMBULANCE CAB & CHASSIS WITH MOUNTED MODULAR BODY

2.0 MODULE SPECIFICATION (Continued):

2.24.2 INSTALLATION:

Supplier shall run from the studs in the electrical compartment:

- One 8-gauge red wire with fail-safe 12-volt to a brass stud at the console;
- One 8-gauge red wire with constant 12-volt to a brass stud at the console; and
- One 10-gauge black wire from vehicle ground to a ground stud at the console.

All wiring shall be fused at the source with a fuse capable of supplying the maximum rating of the wire. The Communication Management Division Manager (CMDM), before installation, shall approve all equivalent items in writing. Documentation of the supplier's recommended cable routing and terminal strip locations shall be submitted to the CMDM for written approval. Supplier shall install all equipment at a facility approved by the CMDM and submit documentation of the communications installation experience of all personnel installing electronic equipment. Documentation of the supplier's recommended cable routing and terminal strip locations including blueprints depicting locations of equipment, wiring, and antenna locations shall be submitted to the CMDM for written approval. The intent of HFD is to have all wiring pre-run allowing HFD to simply install the communication equipment at the terminal end of the wiring. The CMDM shall approve all "or equivalent" submissions.

2.24.3 MOUNTING and BACKING PLATES:

All mounting plates and/or brackets shall be securely bolted into place by the use of bolts, nuts, and locking washers. No self-tapping screws shall be used for mounting equipment components (base plates, etc.). Backing plates shall be required where heavy components are mounted to sheet metal panels.

2.24.4 DOCKING STATION:

Vendor shall mount docking station and accompanying equipment (supplied by HFD) for the laptop onto the action wall counter top in an ergonomical location that meets the approval of HFD.

2.24.5 GROUNDING:

All components requiring connection to the vehicle electrical system shall be grounded to the vehicle electrical ground.

2.24.6 MOBILE ROOFTOP ANTENNA:

2.24.6.1 EQUIPMENT:

Vendor shall mount five (5) low profile, impact-resistant transit dome antennas and cable on top of the module in locations to be approved by the CMDM.

- Three (3) UHF (Radial Larsen, model LP450NMO[W]) and
- Two (2) 800 MHz (Radial Larsen, model LP800NMO [black])

Vendor shall also furnish and mount the GPS Antenna SRV-16 with 5 meters of RG 174/U cable and TNC plugs for each end (#10001396) in a location to be approved by the CMDM. All antenna cables terminate in the radio console, electrical compartment, or at the action wall per CMDM. HFD requires the easy removal and replacement of all antenna and power cabling to minimize the time required for cable repairs. (Ref.: Sketch #5)

2.24.6.2 COAXIAL CABLE:

The coaxial cable shall be Belden 8240 type RG-58/u, or equivalent, and shall have a shield effect of 95% or more.

SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO. 2: AMBULANCE CAB & CHASSIS WITH MOUNTED MODULAR BODY

2.0 MODULE SPECIFICATION (Continued):

2.25 REAR STEP BUMPER:

2.25.1 A full width, three piece, rear step and bumper shall be provided, fabricated from "grip strut" aluminum, minimum seven (7) inches deep. The support shall be designed with sufficient strength to support a test weight of 500 pounds without flexing and shall be capable of folding upward. Separate, outer ends of bumper are to be fabricated out of .188" aluminum plate in a smooth, snag-free manner. All edges to be rounded or ground smooth.

2.25.2 Bumper with rubber dock guards must be of sufficient strength to withstand 5 mph impact without damage. Bottom of bumper must not extend below module body, nor may any structural attachment to module or chassis extend below module body.

2.26 MODULE ENGINE / GENERATOR:

2.26.1 NORMAL FUNCTIONS:

The body module generator shall be capable of being individually started from within both the generator compartment (G) and from within the driver compartment of the cab/chassis. Generator shall provide the primary electrical source of power for all module functions, including, but not limited to:

- Air conditioning,
- Heating,
- All exterior emergency lights
- Interior module lights,
- Radios, and
- Wall-mount (electrical) suction.

2.26.2 FAIL SAFE FUNCTIONS:

In the event module generator should fail, electrical power will automatically switch back to the cab/chassis alternator system through two (2) heavy-duty relays; thereby providing electrical power for:

- All exterior emergency lights,
- Interior module lights,
- Radios, and
- Wall-mount (electrical) suction.

2.26.3 REFERENCE BRAND:

Module generator shall be an Onan "Commercial 5.5HGJAD 2138A", or latest original equipment manufacturer's fuel injected model, or a HFD approved equivalent.

2.26.4 EXHAUST SYSTEM:

The exhaust system shall consist of heavy-duty wall exhaust pipe appropriately mounted to the engine with exhaust pipe extending out the passenger side of the module. Tailpipe shall not protrude below module body. Tailpipe shall exit through generator compartment door (G). The vent area below the generator shall be per manufacturer's recommendations.

2.26.5 ENGINE MOUNTING:

Generator shall be securely mounted and vented per manufacturer's specifications.

SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO. 2: AMBULANCE CAB & CHASSIS WITH MOUNTED MODULAR BODY

2.0 MODULE SPECIFICATION (Continued):

2.27 115-VOLT AC CIRCUITS:

2.27.1 Each 115-volt circuit will be protected by a minimum 15-amp breaker, except for the AC/Heater circuit, which will be protected by a 25-amp breaker. All 115-volt wiring will be done per National Electrical Code(s). The 115-volt wiring from the generator and shore power line will be a minimum 10-gauge wire. The 115-volt wiring for all individual circuits will be a minimum 12-gauge wire.

2.27.2 Five (5) 115-volt AC circuits in the breaker panel shall provide power for the:

- Module air conditioning/heater unit,
- Module 115-volt to 12-volt 80-amp regulated power supply,
- blank (for future use),
- Module 115-volt receptacles, and
- Side scene light circuits.

2.27.3 A 30-amp locking male plug shall be installed on the generator to connect to the module load center. All 115-volt wiring from the generator shall be encased in a metal conduit and properly secured with metal clamps. A 30-amp female plug shall be installed from the generator to allow for quick connection to a service center load bank.

2.28 LIGHTS; INTERIOR AND EXTERIOR:

2.28.1 INTERIOR DOME LIGHTS:

Eight (8) LED recessed interior dome lights (Grote, DC, all white, or HFD approved equivalent) shall be installed in the ceiling of the module. These lights are to be controlled by appropriate switches inside module on the driver side action wall (Ref.: Sketch #6). Interior lights to be dim-able to 50% with opaque lens. All interior light sockets are to be insulated to prevent internal shorting between socket and housing. These lights and the switching configuration shall meet the approval of HFD.

2.28.2 REAR LOADING LIGHTS:

Two (2) surface mounted LED load lights (Whelen 600 Series, 60COELZR, or HFD approved equivalent), clear in color, shall be mounted above the rear doors, but shall not protrude above roof line. Switching for load lights shall be wired to meet the following requirements:

- Load lights will turn on when the cab/chassis is shifted into reverse gear and shall turn off when shifted to a different gear.
- Load lights will turn on when the passenger-side rear door is opened and turn off when the door is closed. (Ref.: Sketch #4)

2.28.3 SIDE SCENE LIGHTS:

Two (2) 12-volt high intensity discharge (HID) side scene lights to be mounted one per side. Both lights shall be operated from a single lighted switch installed on the cab console. (Ref.: Sketch #1 & #2)

2.28.4 EMERGENCY FLASHING LIGHTS:

All emergency-flashing lights shall be surface mounted, current production linear LED lights (Whelen 600 Series; maximum intensity, or HFD approved equivalent) with chrome flanges and shall not protrude above roofline. All emergency LED's shall have clear lenses.

SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO. 2: AMBULANCE CAB & CHASSIS WITH MOUNTED MODULAR BODY

2.0 MODULE SPECIFICATION (Continued):

- 2.28.4.1 CORNERS: Two (2) red lights with clear lenses shall be installed on each side of the upper corners of the module body for a total of eight (8) lights. Lights shall be capable of 125 flashes per minute. (Ref.: Sketch #1, #2, #3 and #4)
- 2.28.4.2 FRONT: Five (5) lights shall be mounted in-line on the front wall of the module body below the level of the corner lights. Sequence shall be red-blue-red-blue-red, all with clear lenses. (Ref.: Sketch #3)
- 2.28.4.3 REAR: Three (3) lights shall be mounted on the rear wall of the module body. One (1) amber LED with a clear lens shall be centered between and in-line with corner lights. Two (2) red/ clear split LED's with clear lenses shall be in-line with rear door windows (one on each side) so that lights are visible through window when door(s) are open. (Ref.: Sketch #4)
- 2.28.4.4 SIDES: One (1) red LED with a clear lens shall be mounted above each wheel well. (Ref.: Sketch #1 & #2)
- 2.28.5 BRAKE/TURN SIGNAL LIGHTS:
All emergency-flashing lights shall be surface mounted, current production linear LED lights (Whelen 600 Series; maximum intensity, or HFD approved equivalent) with chrome flanges. (Ref.: Sketch #2)
 - 2.28.5.1 UPPER: On the rear of the module, on either side of the doors, between the upper and lower LED emergency flashing lights, install one (1) red LED light.
 - 2.28.5.2 LOWER: On the rear of the module, in the lower aluminum, install one (1) clear halogen backup light (Grote 62181, or HFD approved equivalent) and one (1) red brake light (4" round, or HFD approved equivalent). Lights shall be mounted side-by-side, one set per side. Sequence shall be clear on the inside and red on the outside.
- 2.28.6 CLEARANCE LIGHTS:
LED clearance lights shall be mounted on all upper corners of module as required by State Of Texas Motor Vehicle Code (forward-amber; rear-red).
- 2.28.7 BACKUP ALARM:
One (1) electronic sound level adjusting backup alarm (Ecco SA914, or HFD approved equivalent) shall be mounted to operate when vehicle is placed in reverse to warn individuals behind, that ambulance is backing.
- 2.28.8 OPTICOM:
One (1) Opticom emitter shall be mounted on the front wall between the upper two LED corner lights. This emitter shall be activated when the emergency warning light switch on the console is "On" and deactivated when the emergency warning light switch is "Off". In addition, while the emergency warning light switch is "On", the emitter shall be deactivated when the transmission is in "Park" and reactivated when the transmission is in "Drive".

SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO. 2: AMBULANCE CAB & CHASSIS WITH MOUNTED MODULAR BODY

2.0 MODULE SPECIFICATION (Continued):

2.29 METAL PREPARATION FOR PAINT:

The surface shall be prepared, primed and painted per paint manufacturer's urethane enamel system (e.g., PPG, Sikkens, etc.).

2.30 LETTERING AND STRIPING:

All lettering shall be decal type reflective material (3M, or HFD approved equivalent). The words "MEDIC" and "AMBULANCE" (along with the 2 or 3 digit corresponding numbers) designate the specific module to a specific station and medical classification. Because of HFD's dynamic arrangement, ambulances are moved around periodically. Therefore, the word, letter, and number combinations will be provided to successful bidder at a later date by HFD (as close to completion date as practical). Bubbles under lettering, striping, and decals will not be acceptable. Layout shall be approved by HFD prior to assembly.

2.30.1 DRIVER SIDE AND PASSENGER SIDE VIEW:

The words "HOUSTON FIRE" (size: 6"; color: red; font: Arial Bold) in an arched format over the EMS logo decal shall be adhered on both sides of the module.

2.30.1.1 The word "MEDIC" or "AMBULANCE" (size: 4"; color: blue; font: Arial Bold) shall be adhered on both sides of the module, and to the right of the words "HOUSTON FIRE" on the driver side and to the left on the passenger side. The corresponding station numbers (size: 12"; color: blue; font: Arial Bold) shall be centered below the word "MEDIC" or "AMBULANCE" and centered between the roofline and the top of the red beltline stripe. (Ref.: Sketch #1 & #2)

2.30.1.2 The letters "EMS" (size: 10"; color: blue; font: Arial Bold, in a 15-degree slant to the right) shall be adhered on both sides of the module below the EMS logo decal. A short EKG rhythm strip (portraying a normal sinus rhythm) shall be attached, on both sides, to the letters "EMS". (Ref.: Sketch #1 & #2)

2.30.1.3 The word "Emergency" and the numbers "911" (size appropriate to fit inside the 10" red beltline stripe, color: white) shall be located on both sides toward the front of module.

2.30.1.4 The letters "HFD" (size: 10"; color: red; font: Arial Bold, in a 15-degree slant to the right) shall be adhered on both sides of the cab/chassis door below the red beltline stripe. A partial flame shall be attached to the letter "D" on the driver side and to the letter "H" on the passenger side.

2.30.2 FRONT VIEW:

2.30.2.1 One letter (either "M" or "A") shall be adhered close to the roofline on the passenger side (size: 10"; color: red; font: Arial Bold). (Ref.: Sketch #3)

2.30.2.2 Two (2) or three (3) corresponding station numbers shall be adhered close to the roofline on the driver side (size: 12"; color: red; font: Arial Bold).

SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO. 2: AMBULANCE CAB & CHASSIS WITH MOUNTED MODULAR BODY

2.0 MODULE SPECIFICATION (Continued):

- 2.30.3 REAR VIEW:
- 2.30.3.1 The letters "HFD EMS" shall be adhered on the rear doors below the rear door windows and above the red belt line (size: 6"; color: red; font: Arial Bold).
 - 2.30.3.2 One letter (either "M" or "A") shall be adhered below the surface mounted LED lights but above the red belt line on the driver side (size: 12"; color: red; font: Arial Bold).
 - 2.30.3.3 Two (2) or three (3) numbers, corresponding to the station, shall be adhered below the surface mounted LED lights but above the red belt line on the passenger side and an additional set adhered to the inside surface of the passenger side rear door (size: 12"; color: red; font: Arial Bold).
 - 2.30.3.4 The word "Emergency" and the numbers "911" (size appropriate to fit inside the 10" red beltline stripe, color: white) shall be located on the rear of module. (Ref.: Sketch #4)
- 2.30.4 TOP VIEW:
The letter, either "M" or "A" and two (2) or three (3) corresponding station numbers shall be adhered to the roof to enable personnel to recognize the vehicle when viewing from above (e.g., helicopter, roof top, etc.)(size: 16"; color: red; font: Arial Bold). (Ref.: Sketch #5)
- 2.30.5 BELT LINE:
A red belt line reflective tape stripe (3M or equivalent) approximately ten (10) inches high shall encircle the entire unit (except the area directly behind the cab). Belt line stripe shall be bordered above and below with a ¼" black pin stripe. (Ref.: Sketch #1, #2, & #4)
- 2.30.6 DECALS and STICKERS:
- 2.30.6.1 The EMS logo (approximately 12" diameter round) shall be adhered on both sides of the module, in between the words "HOUSTON FIRE" and the letters "EMS". (Ref.: Sketch #1 & #2)
 - 2.30.6.2 The Houston Fire Department emblem/shield (furnished by HFD) shall be applied to both cab/chassis doors, centered above the letters "HFD". (Ref.: Sketch #1 & #2)
 - 2.30.6.3 "NO SMOKING – OXYGEN IN USE" danger signs with adhesive backing shall be attached to both sides of the interior walls above the backrests. One additional sign shall be attached in the cab of the ambulance in plain sight of the passenger. The approximate size shall be 6" x 12".
 - 2.30.6.4 "COURAGE, COMMITMENT AND COMPASSION" decal (furnished by HFD) shall be applied to both sides of the module, up high in line with the side scene lights.



SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO. 2: AMBULANCE CAB & CHASSIS WITH MOUNTED MODULAR BODY

2.0 MODULE SPECIFICATION (Continued):

2.31 INSTALLATION OF AMBULANCE CAB/CHASSIS ITEMS:

Supplier shall be responsible for installing and/or connecting all items that are specified in the Ambulance Cab/Chassis specification as requiring connection to the module. For example, but not limited to:

1. Air suspension compressor and related components
2. Cab bellows
3. Gas tank filler hose
4. Electrical system

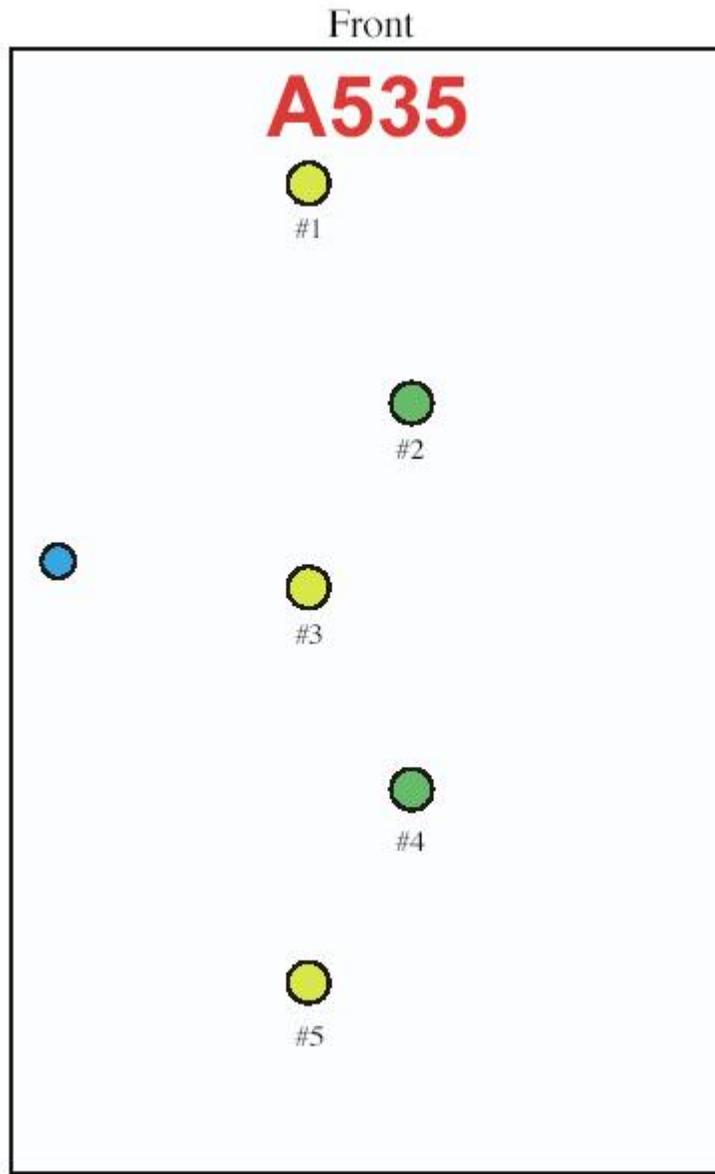
SKETCH #3: EXTERIOR – FRONT VIEW



SKETCH #4: EXTERIOR – REAR VIEW



SKETCH #5: EXTERIOR – TOP VIEW



#1 - 450 - 470 MHz Main Radio
(terminated in cab console)

#2 - 800 MHz Mobile Data
(terminated in cab console)

#3 - 450 - 470 MHz(Spare, coiled
up in side box compartment)

#4 - 800 MHz Main Radio(Spare, coiled
up in side compartment)

#5 - 450 - 470 MHz Rear Radio
(terminated in side compartment)

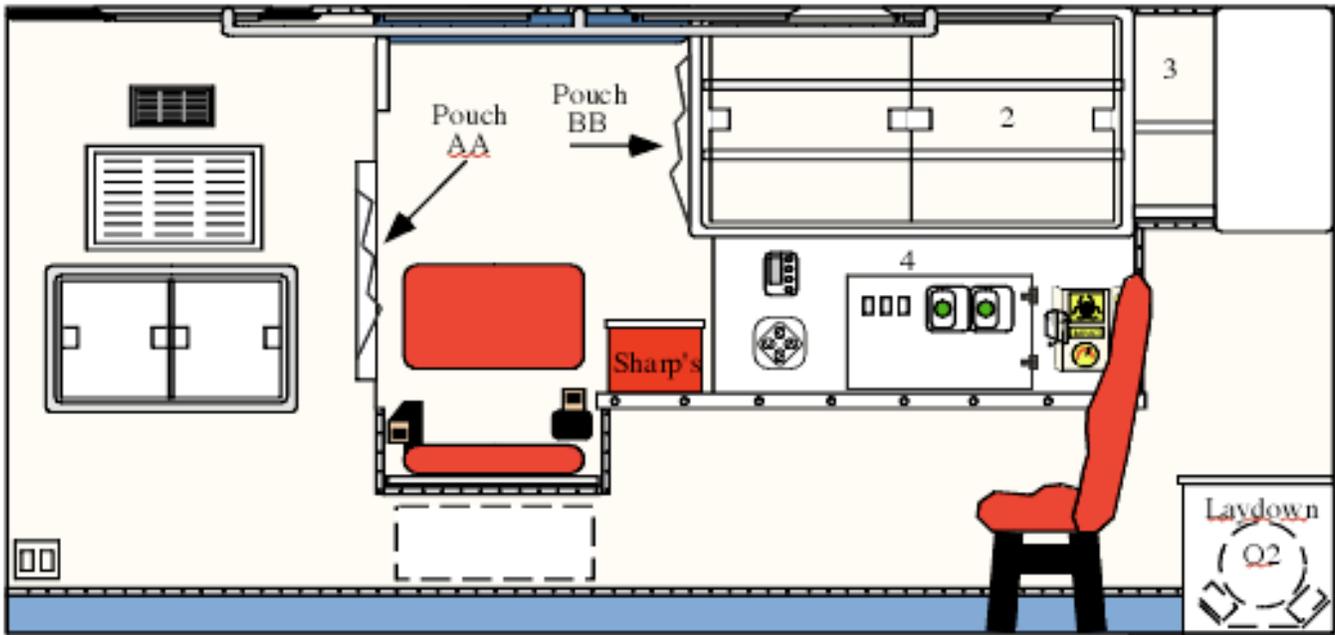
GPS Antenna - terminated in cab
console

Antenna Part #s:

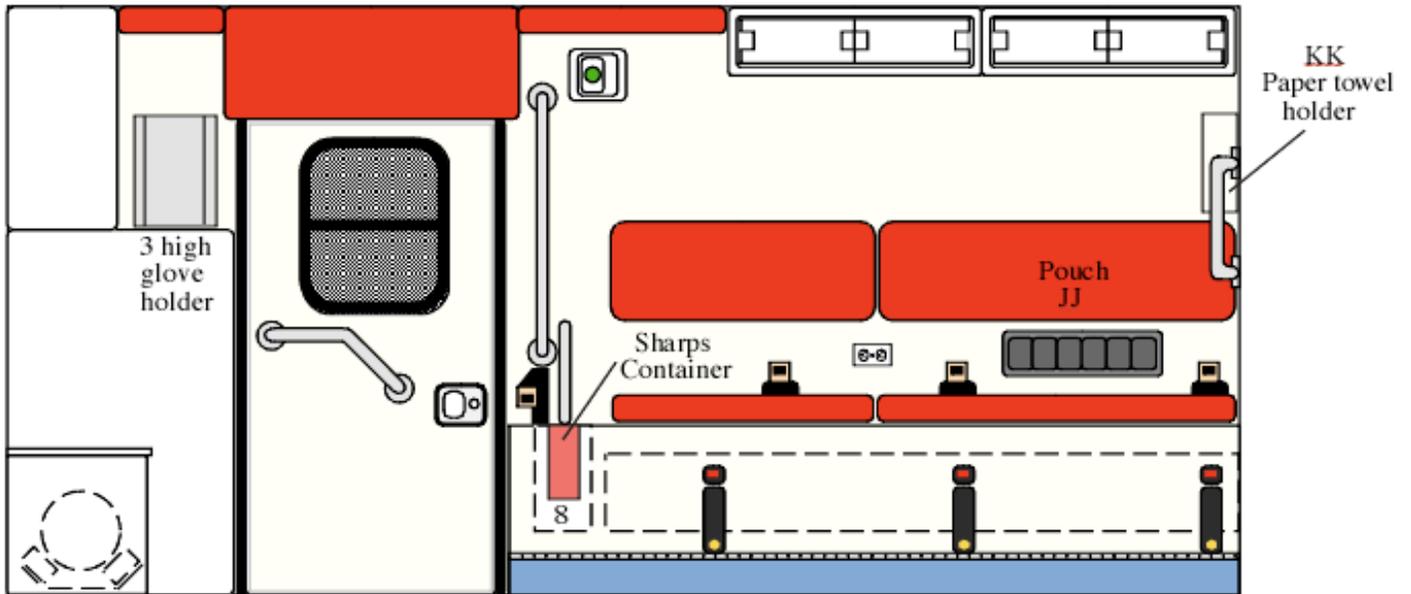
1, 3, & 5 - 450 - 470 MHz
Part No: [LP450NMO\(W\)](#)

2 & 4 - 800 MHz
Part No: [LP800NMO\(W\)](#)
Vendor: Radial Larsen
1.800.268.3662 or on the web @
www.radiallarsen.com

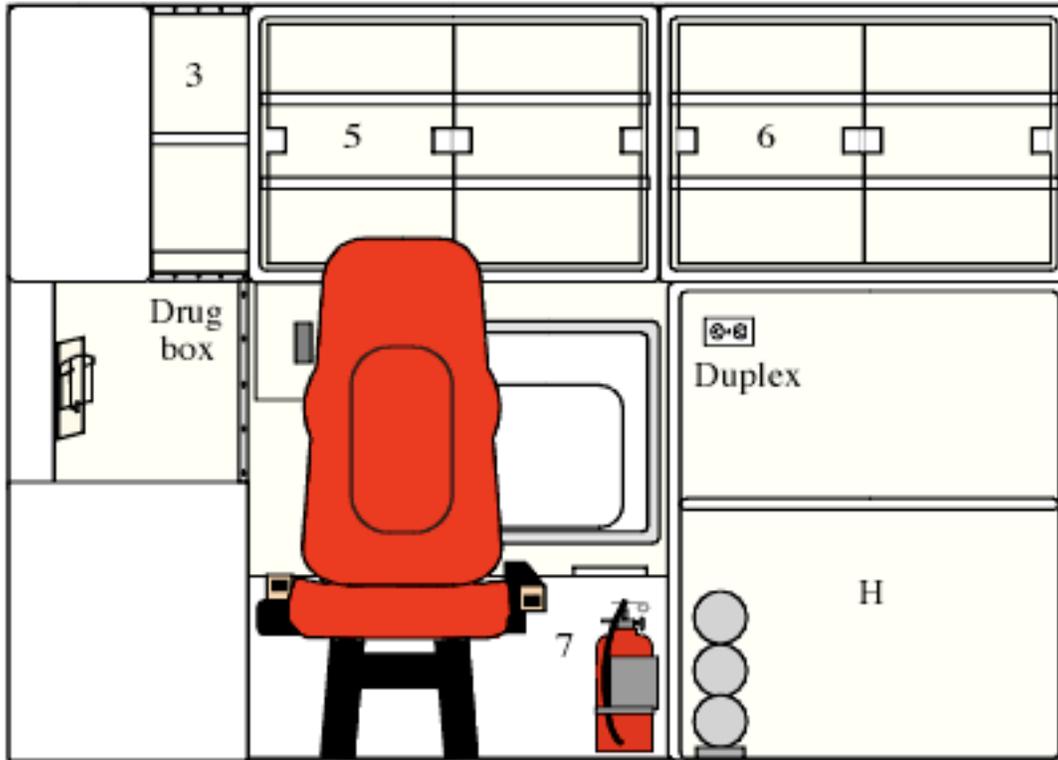
SKETCH #6: INTERIOR – DRIVER'S SIDE VIEW



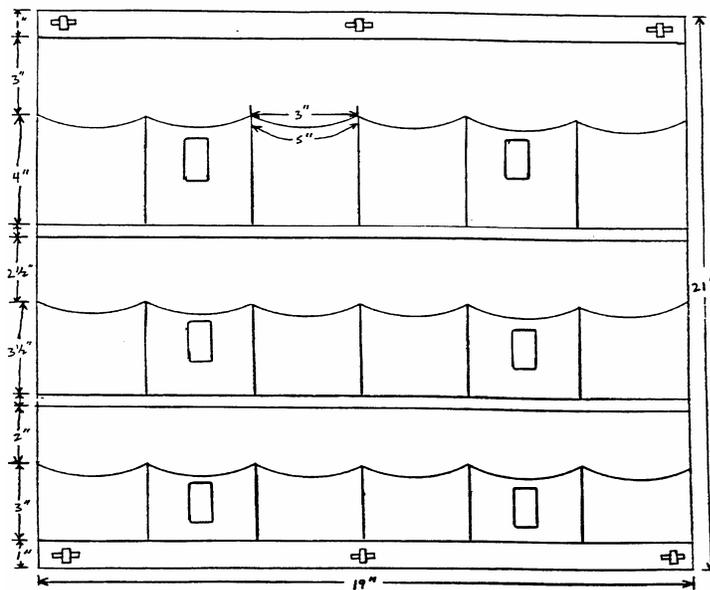
SKETCH #7: INTERIOR – PASSENGER SIDE VIEW



SKETCH #8: INTERIOR – FRONT WALL VIEW



SKETCH #9: WALL MOUNT SUPPLY HOLDER



SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO. 3: SQUAD CABS & CHASSIS

1.0 GENERAL SCOPE:

These specifications provide for construction of a slightly modified commercial cab and chassis that, when mounted or remounted with a modular body, will be used by the Houston Fire Department for responding to medical emergencies. All operational and performance requirements shall be met with the chassis and module loaded to meet or exceed the minimum specified payload including all specified equipment and devices installed and operating at the maximum power consuming condition (i.e. air conditioning, warning lights, etc.) with the chassis performing in accordance with the specified chassis manufacturer's technical data.

1.1 Grounds for Rejection:

Where it is indicated that certain information shall accompany the bid, failure to include such information with the bid can constitute grounds for rejection. These specifications, and any additions or clarifications, shall become part of the final contract.

1.2 Intent/Technical Conference:

The successful vendor shall arrange a technical conference to go over specification details prior to initial fabrication.

1.3 Brand Names:

Brand names are not intended to be restrictive but merely descriptive of the type needed. The City shall make the final decision on the acceptability of any alternatives requested by a vendor as an "or equal" item.

2.0 CHASSIS SPECIFICATIONS:

2.1 Chevrolet Silverado 2500 Crew Cab SRW 4x2

2.2 1WT Standard Equipment Package

2.3 Wide Track Rear Axle (GTY)

2.4 4:10 Axle Ratio

3.0 ENGINE:

3.1 6.0 L /364 CID Gas V8

4.0 EQUIPMENT OPTIONS:

4.1 Chrome Grill

4.2 Clean Fuel Fleet LEV Option

4.3 Cab Step-Black Tubular

4.4 Daytime Running Lights

4.5 1WT Decor Group

4.6 Graphite Interior Color

4.7 HD Vinyl Bucket Seats (no center console)

4.8 Graphite Color Floor Mats

4.9 Black camper style mirror extra wide load large mirror

4.10 Factory installed dual batteries (770 CCA)

SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO. 3: SQUAD CABS & CHASSIS

5.0 PAINT:

5.1 Victory Red Clearcoat Paint

6.0 TIRES:

6.1 LT 215/85Rx16D BSW All-Season Radials

7.0 TRANSMISSION:

7.1 Electronic 6-speed automatic (MYD)

8.0 FUEL TANKS:

8.1 Single factory fuel tank (32 gallon) will be provided.

9.0 CAB CONSOLE:

9.1 A fabricated powder coated aluminum console with a computer mount/ MDT plate, swivel MDT mount, plate with cutout for radio, recessed Whelen siren (model #2956HFSC9, or current production, or HFD approved equivalent), switch panel to control emergency lights (including Opticom), door and compartment open warning light, single blank panel, and dual cup-holder, as well as a fabricated modem and amplifier bracket shall be provided and installed. One single row of lighted switches shall contain all of the switches. The Opticom will be wired to the emergency light master switch; there will not be a separate switch for the Opticom. The Opticom will operate as identified in 11.4 The console shall be secured with front and rear braces to the cab seat braces. Location and design shall be approved by HFD.

9.2 The siren will be recessed into the console with appropriate trim piece provided.

9.3 One hand held 100,000 CP spotlight with momentary switch, coiled cord and safety shroud shall be provided.

10.0 WIRING AND CABLING:

10.1 All cabling penetrating any wall, panel or any sheet metal, shall be protected by being covered with split loom or equivalent. Openings made in the wall of the module for routing of cables and wiring between the various units of electrical equipment, shall be sealed with RTV.

10.2 Primary wiring shall be of a wire size adequate for the "worst case" amperage load which may be encountered. All primary wiring shall be terminated and connected with solder-less "crimp-on" wire terminals. Such terminals shall be of the proper size for the wire to which they are being connected. The terminals shall be attached to the wire by use of crimping tools specially designed for the terminals used.

10.3 Cables (12v+ and -) shall be provided from the under hood batteries to reach to the electrical compartment (driver's side).

11.0 EMERGENCY FUNCTIONS, LIGHTING AND SOUND:

11.1 All emergency-flashing lights shall be surface mounted, current production linear LED lights (Whelen M7 Series; red with clear lens, current production, maximum intensity, or HFD approved equivalent) with chrome flanges. Emergency lights shall be switched through one master switch located in the console. The rocker switch shall be a two-position lighted type. Switches are to be laid out at pre-construction. The Whelen siren amplifier shall also be located in the console.

SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO. 3: SQUAD CABS & CHASSIS

11.0 EMERGENCY FUNCTIONS; LIGHTING AND SOUND (Continued):

- 11.2 There will be four (4) warning lights (Whelen M4 Series, red with clear lens, current production, maximum intensity, or HFD approved equivalent) installed on a bumper mounted black Ranchhand (or HFD approved equivalent) grille guard. Two lights will be facing forward; two will be angled toward the intersection.
- 11.3 Two (2) Whelen SA315P (or current production) siren speaker housings with 100-watt speakers and appropriate brackets shall be installed on the grille guard.
- 11.4 One lightbar (Whelen FN60VLED with FLD20000 and a 3M Opticom, current production, or HFD approved equivalent) shall be provided and mounted on the roof of the chassis. The Opticom emitter shall be activated when the emergency, warning light switch on the console is "ON" and deactivated when the emergency warning light switch is "OFF" and door is opened. In addition, while the emergency warning light switch is "ON", the emitter shall be deactivated when the transmission is in "Park" and reactivated when the transmission is in "Drive".
- 11.5 Driver Side and Passenger Side View:
The letters "HFD" (size: 10"; color: white; font: Arial Bold, in a 15-degree slant to the right) shall be adhered on both sides of the cab/chassis door. A partial flame shall be attached to the letter "D" on the driver side and to the letter "H" on the passenger side. Location and design shall be approved by HFD.
- 11.6 Belt Line:
A white belt line reflective tape stripe (3M or equivalent) approximately 3½ inches high shall encircle the entire cab (except the area directly behind the cab). In addition a white belt line reflective tape stripe (3M or equivalent) approximately one (1) inch high shall encircle the entire unit (except the area directly behind the cab) approximately one inch above the wider beltline stripe. Both belt line stripes shall make a "Z" pattern on the rear passenger doors.

12.0 MISCELLANEOUS EQUIPMENT:

Aluminum plates for installation of the pass-through boot shall be provided. Rubber strips for mounting between the module and chassis frame shall be provided. Fill spout kits shall be provided for dual tanks.

13.0 OEM MANUALS:

Vendor shall provide with each purchase order; two (2) sets of OEM service and parts manuals in CD format and three (3) sets of OEM service manuals in hard copy format, (No exceptions).

SECTION C

GENERAL TERMS AND CONDITIONS

1.0 **COMPETITIVE BIDDING:**

It is the intent of the City of Houston to solicit the lowest and best responsible bid or price under competitive conditions. All materials and/or equipment shall be new unless stated otherwise. Prospective bidders are advised that the specifications within this bid invitation are not to be considered restricted to any referenced manufacturer.

2.0 **AWARD:**

- 2.1 The City reserves the right to consider and make awards of bids on articles of similar nature that will in all respects serve the purpose for which the purchase is being made. The City reserves the right to be the sole judge as to whether such articles will serve the purpose.
- 2.2 Unless otherwise specified, the City reserves the right to accept or reject in whole or in part any bid submitted or to waive any informalities that are in the best interests of the City.

3.0 **CONDITIONS PART OF BID:**

- 3.1 In the event of any conflict, the terms and provisions incorporated in the bid specifications shall control over the terms and provisions of the General Terms & Conditions for any or all purposes. Otherwise, all the terms and provisions appearing within the General Terms & Conditions shall be given full effect and shall be construed in harmony to the maximum extent by the parties hereto.
- 3.2 The failure of the City to insist, in any one or more instances, upon performance of any of the terms, covenants or conditions of this Contract (Purchase Order), General Terms & Conditions or Specifications shall not be construed as a waiver or relinquishment of the future performance of such term, covenant or condition by the City, but the obligation of the Prime Contractor/Supplier with respect to such future performance shall continue in full force and effect.

4.0 **SHIPPING TERMS:**

Prices shall be prepaid F.O.B. destination to the delivery locations, Houston, TX, as indicated on individual City of Houston purchase orders. Prime Contractor/Supplier shall retain title and control of all goods until they are delivered and the contract of coverage (Purchase Order) has been completed. All risk of transportation and all related charges shall be the responsibility of the Prime Contractor/Supplier. All claims for visible or concealed damage shall be filed by the Prime Contractor/Supplier. The City will notify the Prime Contractor/Supplier promptly of any damaged goods and shall assist the Prime Contractor/Supplier in arranging for inspection.

5.0 **SILENCE OF SPECIFICATIONS:**

The apparent silence of these specifications as to any detail or the apparent omission from them of a detailed description concerning any point shall be regarded as meaning that only the best commercial practice shall prevail and only materials and workmanship of first quality are acceptable. All interpretations of these specifications shall be made upon the basis of this statement.

6.0 **SPECIFIED EQUIPMENT, OR EQUIVALENT:**

- 6.1 Wherever in the specifications any materials or processes are 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 performance, materials and/or processes desired and shall be deemed to be followed by the words, "or equivalent", if not so stated in the specifications herein.
- 6.2 The burden of proof shall rest with the bidder, in the course of a technical evaluation, to prove that the proposed item(s) are equivalent to the performance, materials, processes, or articles specified.
DETERMINATION AS TO WHETHER THE ITEM(S) BID IS(ARE) EQUIVALENT TO THOSE SPECIFIED SHALL REST SOLELY WITH THE CITY PURCHASING AGENT AND THE RECEIVING DEPARTMENT.

GENERAL TERMS & CONDITIONS: (CONTINUED)

7.0 BRAND NAMES:

Any manufacturer's names, trade names, brand names, or catalog numbers used in the specifications are for the purpose of describing and establishing the general quality level, design and performance desired. Such references are not intended to limit or restrict bidding by other Prime Contractor/Suppliers, but are intended to approximate the quality design or performance that is desired. Any bid that proposes like quality, design or performance, will be considered. Equivalent products will be considered, provided a complete description and product literature is provided. Unless a specific substitution is made, the assumption will be that the item bid is exactly as specified on the Invitation to Bid.

8.0 PATENTS:

THE PRIME CONTRACTOR/SUPPLIER AGREES TO INDEMNIFY AND SAVE HARMLESS THE CITY, ITS AGENTS EMPLOYEES, OFFICERS, AND LEGAL REPRESENTATIVES (COLLECTIVELY THE "CITY") FROM ALL SUITS AND ACTIONS OF EVERY NATURE AND DESCRIPTION BROUGHT AGAINST THEM OR ANY OF THEM, FOR OR ON ACCOUNT OF THE USE OF PATENTED APPLIANCES, PRODUCTS OR PROCESSES, AND IT SHALL PAY ALL ROYALTIES AND CHARGES WHICH ARE LEGAL AND EQUITABLE. EVIDENCE OF SUCH PAYMENT OR SATISFACTION SHALL BE SUBMITTED, UPON REQUEST OF THE CITY PURCHASING AGENT, AS A NECESSARY REQUIREMENT IN CONNECTION WITH THE FINAL ESTIMATE FOR PAYMENT IN WHICH SUCH PATENTED APPLIANCE, PRODUCTS OR PROCESSES ARE USED.

9.0 RELEASE:

PRIME CONTRACTOR/SUPPLIER AGREES TO AND SHALL RELEASE THE CITY, ITS AGENTS, EMPLOYEES, OFFICERS, AND LEGAL REPRESENTATIVES (COLLECTIVELY THE "CITY") FROM ALL LIABILITY FOR INJURY, DEATH, DAMAGE, OR LOSS TO PERSONS OR PROPERTY SUSTAINED IN CONNECTION WITH OR INCIDENTAL TO PERFORMANCE UNDER THIS AGREEMENT, EVEN IF THE INJURY, DEATH, DAMAGE, OR LOSS IS CAUSED BY THE CITY'S SOLE OR CONCURRENT NEGLIGENCE AND/OR THE CITY'S STRICT PRODUCTS LIABILITY OR STRICT STATUTORY LIABILITY.

10.0 INDEMNIFICATION:

10.1 PRIME CONTRACTOR/SUPPLIER AGREES TO AND SHALL DEFEND, INDEMNIFY, AND HOLD THE CITY, ITS AGENTS, EMPLOYEES, OFFICERS, AND LEGAL REPRESENTATIVES (COLLECTIVELY THE "CITY") HARMLESS FOR ALL CLAIMS, CAUSES OF ACTION, LIABILITIES, FINES, AND EXPENSES (INCLUDING, WITHOUT LIMITATION, ATTORNEYS' FEES, COURT COSTS, AND ALL OTHER DEFENSE COSTS AND INTEREST) FOR INJURY, DEATH, DAMAGE, OR LOSS TO PERSONS OR PROPERTY SUSTAINED IN CONNECTION WITH OR INCIDENTAL TO PERFORMANCE UNDER THIS AGREEMENT INCLUDING, WITHOUT LIMITATION, THOSE CAUSED BY:

- (1) PRIME CONTRACTOR/SUPPLIER'S AND/OR ITS AGENTS', EMPLOYEES', OFFICERS', DIRECTORS', CONTRACTORS', OR SUBCONTRACTORS' (COLLECTIVELY IN NUMBERED PARAGRAPHS 1-3, "PRIME CONTRACTOR/SUPPLIER") ACTUAL OR ALLEGED NEGLIGENCE OR INTENTIONAL ACTS OR OMISSIONS;**
- (2) THE CITY'S AND PRIME CONTRACTOR/SUPPLIER'S ACTUAL OR ALLEGED CONCURRENT NEGLIGENCE, WHETHER PRIME CONTRACTOR/SUPPLIER IS IMMUNE FROM LIABILITY OR NOT; AND**
- (3) THE CITY'S AND PRIME CONTRACTOR/SUPPLIER'S ACTUAL OR ALLEGED STRICT PRODUCTS LIABILITY OR STRICT STATUTORY LIABILITY, WHETHER PRIME CONTRACTOR/SUPPLIER IS IMMUNE FROM LIABILITY OR NOT.**

10.2 PRIME CONTRACTOR/SUPPLIER SHALL DEFEND, INDEMNIFY, AND HOLD THE CITY HARMLESS DURING THE TERM OF THIS AGREEMENT AND FOR FOUR YEARS AFTER THE AGREEMENT TERMINATES. PRIME CONTRACTOR/SUPPLIER'S INDEMNIFICATION IS LIMITED TO \$500,000 PER OCCURRENCE. PRIME CONTRACTOR/SUPPLIER SHALL NOT INDEMNIFY THE CITY FOR THE CITY'S SOLE NEGLIGENCE.

GENERAL TERMS & CONDITIONS: (CONTINUED)

10.0 INDEMNIFICATION: (Continued)

10.3 INDEMNIFICATION PROCEDURES:

- (1) Notice of Claims. If the City or Prime Contractor/Supplier receives notice of any claim or circumstances which could give rise to an indemnified loss, the receiving party shall give written notice to the other party within 10 days. The notice must include the following:
- (a) a description of the indemnification event in reasonable detail,
 - (b) the basis on which indemnification may be due, and
 - (c) the anticipated amount of the indemnified loss.

This notice does not estop or prevent the City from later asserting a different basis for indemnification or a different amount of indemnified loss than that indicated in the initial notice. If the City does not provide this notice within the 10 day period, it does not waive any right to indemnification except to the extent that Prime Contractor/Supplier is prejudiced, suffers loss, or incurs expense because of the delay.

(2) Defense of Claims

(a) Assumption of Defense. Prime Contractor/Supplier may assume the defense of the claim at its own expense with counsel chosen by it that is reasonably satisfactory to the City. Prime Contractor/Supplier shall then control the defense and any negotiations to settle the claim. Within 10 days after receiving written notice of the indemnification request, Prime Contractor/Supplier must advise the City as to whether or not it will defend the claim. If Prime Contractor/Supplier does not assume the defense, the City shall assume and control the defense, and all defense expenses constitute an indemnification loss.

(b) Continued Participation. If Prime Contractor/Supplier elects to defend the claim, the City may retain separate counsel to participate in (but not control) the defense and to participate in (but not control) any settlement negotiations. Prime Contractor/Supplier may settle the claim without the consent or agreement of the City, unless it (i) would result in injunctive relief or other equitable remedies or otherwise require the City to comply with restrictions or limitations that adversely affect the City, (ii) would require the City to pay amounts that Contractor does not fund in full, (iii) would not result in the City's full and complete release from all liability to the plaintiffs or claimants who are parties to or otherwise bound by the settlement.

11.0 INSURANCE: (See Exhibit No. 2, Sample of Certificate of Insurance)

11.1 Prior to award and/or starting work, Prime Contractor/Supplier must present a Certificate of Insurance evidencing the insurance coverage specified herein. This is a mandatory requirement. Only unaltered, original insurance certificates are acceptable. Photocopies are unacceptable.

***Exception:** Proof of insurance coverage is not required by Prime Contractor/Supplier if the specified equipment will be dropped-shipped by manufacturer, or delivered by a common carrier, and this contract agreement (Purchase Order) does not require Prime Contractor/Supplier to perform a labor or service component at a City facility. Prior to award, Prime Contractor/Supplier must present a written statement attesting to this exception.

11.2 The Prime Contractor/Supplier shall have insurance coverage as follows:

- **Commercial General Liability** shall be \$500,000 per occurrence; \$1,000,000 aggregate, per 12-month policy period.

GENERAL TERMS & CONDITIONS : (CONTINUED)

11.0 INSURANCE: (Continued)

- **Automobile Liability Insurance for autos furnished or used in the course of performance of this Contract (Purchase Order), including Owned, Non-Owned, and Hired auto coverage.** (Any Auto coverage may be substituted for Owned, Non-Owned and Hired Auto coverage.) If no autos are owned by Prime Contractor/Supplier, coverage may be limited to Non-Owned and Hired Autos. If Owned Auto coverage cannot be purchased by Prime Contractor/Supplier, Scheduled Auto coverage may be substituted for Owned Auto coverage. EACH AUTO USED IN PERFORMANCE OF THIS CONTRACT (PURCHASE ORDER) MUST BE COVERED IN THE LIMITS SPECIFIED: \$1,000,000 - Combined Single Limit per occurrence; \$1,000,000 aggregate, per 12-month policy period.
- **Worker's Compensation including Broad Form All States endorsement shall be in statutory amount and**
- **Employer's Liability:** Bodily Injury/Accident \$100,000; Bodily Injury / Disease \$100,000 (per employee); Bodily Injury / Disease \$100,000 (policy limit).

11.3 The issuer of any policy (1) shall have a Certificate of Authority to transact insurance business in the State of Texas, or (2) shall be an eligible non-admitted insurer in the State of Texas, and shall have a Best's rating of B+ or better and a Best's Financial Size Category of Class VI or better, according to the most current edition of Best's Key Rating Guide.

11.4 All insurance policies required by this Contract (Purchase Order) shall require that 1) the City of Houston is named as an additional insured on the General Liability, Auto Liability and any Umbrella policies; 2) waiver of subrogation is provided for the City of Houston on General Liability, Auto Liability, any Umbrella policies, and Worker's Compensation; and 3) thirty (30) days advance written notice shall be provided **by the Prime Contractor/Supplier** to the City before any policy required by this Contract (Purchase Order) is cancelled or non-renewed. Within such thirty (30) day period, Prime Contractor/Supplier covenants that it will provide other suitable policies in lieu of those about to be cancelled or non-renewed to maintain in effect the coverage required under the provisions hereof. Failure or refusal of the Prime Contractor/Supplier to obtain and keep in force the above-required insurance coverage shall authorize the City, at its option, to terminate this Contract (Purchase Order) at once.

11.5 **REQUIREMENTS FOR CERTIFICATE OF INSURANCE:**

- 11.5.1 Name and Address of Producer writing coverage.
- 11.5.2 Name of each insurance company providing coverage (as listed on company's Certificate of Authority on file with the Texas Department of Insurance, or in Best's Key Rating Guide).
- 11.5.3 Name and address of Insured (as shown on policy).
- 11.5.4 Letter in the column must reference the insurer of the policy being described.
- 11.5.5 Must be a policy number; no binders will be accepted.
- 11.5.6 Date policy became effective.
- 11.5.7 Expiration date of policy must be at least 30 days from date of delivery of certificate.
- 11.5.8 Name and file number of project (Bid Name and Bid Number).
- 11.5.9 Name of project manager (Buyer).
- 11.5.10 Signature or facsimile signature of authorized representative of Producer (blue ink preferred).

**FORWARD CERTIFICATE TO BUYER AT: City of Houston/Administration & Regulatory Affairs Department
Strategic Purchasing Division
P.O. Box 1562
Houston, Texas 77251-1562**

GENERAL TERMS & CONDITIONS: (CONTINUED)

12.0 DRUG DETECTION AND DETERRENCE PROCEDURE: (See Online Forms)

- 12.1 It is the policy of the City to achieve a drug-free workforce and to provide a workplace that is free from the use of illegal drugs and alcohol. It is also the policy of the City that the manufacture, distribution, dispensation, possession, sale or use of illegal drugs or alcohol by Prime Contractor/Suppliers while on City premises is prohibited. By executing this Contract (Purchase Order), Prime Contractor/Supplier represents and certifies that it meets and shall comply with all the requirements and procedures set forth in the Mayor's Policy on Drug Detection and Deterrence, City Council Motion No. 92-1971 ("Mayor's Policy") and the Mayor's Drug Detection and Deterrence Procedures for Contractors, Executive Order No. 1-31 ("Executive Order"), both of which are on file in the Office of the City Secretary.
- 12.2 Prime Contractor/Supplier shall provide, prior to execution of this Contract (Purchase Order) by the City, 1) a copy of its drug-free workplace policy, 2) the Drug Policy Compliance Agreement substantially in the format set forth in Attachment "A", 3) a written designation of all safety impact positions, or if applicable, Certification of No Safety Impact Positions substantially in the format set forth in Attachment "C", and 4) if a written designation of safety impact positions is filed, a declaration substantially in the format set forth in Attachment "B" shall be filed.
- 12.3 SAFETY IMPACT POSITION means a Prime Contractor/Supplier's employment position involving job duties that if performed with inattentiveness, errors in judgment, or diminished coordination, dexterity, or composure may result in mistakes that could present a real and/or imminent threat to the personal health or safety of the employee, co-workers, and/or the public.

13.0 MINORITY AND WOMEN BUSINESS ENTERPRISES: (Not Applicable)

These provisions apply to goal oriented Contracts (Purchase Orders). A goal oriented Contract (Purchase Order) means any Contract (Purchase Order) awarded for the supply of goods or non-professional services of approximately \$100,000.00 for which competitive bids are required by law and which the City Purchasing Agent has determined to have City of Houston Certified MWBE subcontracting potential.

Prime Contractor/Supplier agrees to comply with the City's Minority and Women Business Enterprise programs as set out in Chapter 15, Article V of the City of Houston Code of Ordinances insofar as such programs apply to this Contract (Purchase Order). Prime Contractor/Supplier further agrees that it will make good faith efforts to award subcontracts or supply agreements in at least 0% of the value of this Contract (Purchase Order) to Minority and Women-owned Business Enterprises certified by the City's Affirmative Action Division. In addition, Prime Contractor/Supplier acknowledges that it has reviewed the requirements for good faith efforts that are on file with the City's Affirmative Action Division, is familiar with such requirements, and will comply with them.

Prime Contractor/Supplier shall require written subcontracts with all MWBE subcontractors and suppliers, which must contain the terms set out in the documents attached herein. If Prime Contractor/Supplier is an individual person (as distinguished from a corporation, partnership, or other legal entity), and the amount of the subcontract is \$50,000 or less, then the subcontract must also be signed by the attorneys of the respective parties.

Refer to the "City of Houston Goal-Oriented Minority and Women Business Enterprises Contract Provisions" attachment, which is incorporated in the specifications herein by this reference for all purposes, for more detailed information on this requirement.

14.0 REJECTIONS:

- 14.1 Articles not in accordance with samples and specifications must be removed by the Prime Contractor/Supplier and at his expense. All disputes concerning quality of supplies delivered under this offer will be determined by the City Purchasing Agent or designated representative.
- 14.2 All articles enumerated in the offer shall be subject to inspection on delivery by an officer designated for the purpose and if found inferior to the quality called for, or not equal in value to the Department's samples, or deficient in weight, measurements, workmanship or otherwise, this fact shall be certified to the City Purchasing Agent who shall have the right to reject the whole or any part of the same.

GENERAL TERMS & CONDITIONS: (CONTINUED)

15.0 TAXES:

The City is exempt from the Federal Excise and Transportation Tax, and the limited Sales and Use Tax. Unless the Bid Form or Specifications specifically indicate otherwise, the bid price must be net exclusive of above-mentioned taxes. A Prime Contractor/Supplier desiring refunds of, or exemptions from, taxes paid on merchandise accepted by the City, must submit the proper forms, and the City Purchasing Agent, if satisfied as to the facts, may approve or issue the necessary certificates.

16.0 INVOICING:

16.1 In order to expedite payments all invoices must be submitted in triplicate, itemized as to quantity, part and/or model number, description in the same order and form as in the City of Houston Purchase Order. Variations will only delay payment. In addition, invoices must show the name of the Department, Division or Section to which the merchandise was delivered, and the City of Houston Purchase Order Number.

16.2 All delivery tickets must have a description of the item delivered.

16.3 Mail invoices and a copy of the signed City of Houston Equipment/Receiver Report to the Accounts Payable Section of the Department and to the address, as noted on individual purchase orders.

16.4 Delivery tickets and packing slips will contain the same information as the invoice.

16.5 The City of Houston Equipment/Receiver Report must be signed by the receiving employee with their City Employee Number and must be signed by Prime Contractor/Supplier Representative.

17.0 PAYMENT:

Payment is due thirty (30) days after the City has approved the invoice or after the City has accepted the equipment and all required documents, whichever occurs later. Invoices received that do not agree with the provisions set forth herein shall be returned for correction and will result in payment being delayed.

18.0 PAYMENT OF SUBCONTRACTORS:

Prime Contractor/Supplier shall make timely payments to all persons and entities supplying labor, materials or equipment for the performance of this Contract (Purchase Order). Prime Contractor/Supplier agrees to protect, defend, and indemnify the City from any claims or liability arising out of Contractor's/Supplier's failure to make such payments. (Disputes relating to payment of M/WBE subcontractors shall be submitted to arbitration in the same manner as any other disputes under the M/WBE subcontract. Failure of the Prime Contractor/Supplier to comply with the decisions of the arbitrator may be deemed, at the sole discretion of the City, a material breach leading to termination of this Contract (Purchase Order)).

19.0 INSPECTIONS AND AUDITS:

19.1 The City reserves all rights to review all payments made to Suppliers by auditing at a later date. Subject to such audit, any overpayments may be recovered from the Supplier.

19.2 City representatives may have the right to perform, or have performed, (1) audits of Supplier's books and records, and (2) inspections of all places where work is undertaken in connection with this Agreement. Supplier shall keep its books and records available for this purpose for at least three years after this Agreement terminates. This provision does not affect the applicable statute of limitations.

19.3 City representatives have the right to examine the books of all subcontractors and/or suppliers supplying goods and/or services under the prime (Purchase Order) insofar as those books and records relate to performance under the prime contract (Purchase Order).

20.0 CONTRACTOR DEBT:

If Prime Contractor/Supplier, at any time during the term of this agreement, incurs a debt, as the word is defined in Section 15-122 of the Houston City Code of Ordinances, it shall immediately notify the City Controller in writing. If the City Controller becomes aware that Prime Contractor/Supplier has incurred a debt, the City Controller shall immediately notify Prime Contractor/Supplier in writing. If Prime Contractor/Supplier does not pay the debt within 30 days of either such notification, the City Controller may deduct funds in an amount equal to the debt from any payments owed to Prime Contractor/Supplier under this agreement, and Prime Contractor/Supplier waives any recourse therefor.

21.0 SUCCESSORS & ASSIGNS:

Prime Contractor/Supplier may not assign this (Purchase Order) or dispose of substantially all of its assets without the written consent of the City Purchasing Agent. Prime Contractor/Suppliers failure to obtain such consent shall be an event of default, authorizing the Purchasing Agent to terminate this contract (Purchase Order) according to its terms.

GENERAL TERMS & CONDITIONS: (CONTINUED)

22.0 CHANGE ORDERS:

- 22.1 At any time during the Agreement Term, the City Purchasing Agent, or designated representative, may issue a change order to increase or decrease the scope of services, or change plans and specifications, as may be necessary to accomplish the general purposes of this Agreement. Prime Contractor/Supplier shall furnish the services or deliverables in the change order in accordance with the requirements of this Agreement plus any special provisions, specifications, or special instructions issued to execute the additional work.
- 22.2 Prime Contractor/Supplier shall not make any changes to the specifications contained herein without written authorization from the City Purchasing Agent or designated representative.
- 22.2.1 The City may refuse to accept all or part of the work performed or equipment/supplies delivered if changes are made to the specifications without the written authorization of the City Purchasing Agent or designated representative. The City shall not be responsible for costs incurred by the Prime Contractor/Supplier on unauthorized change orders.
- 22.2.2 A letter with supporting documentation of the requested change(s) shall be submitted to the City Purchasing Agent, and the City Purchasing Agent must approve any requested changes by written authorization PRIOR TO ANY CHANGES BEING PERFORMED. Documentation acceptable to the City Purchasing Agent as evidence of Prime Contractor/Supplier's change(s) shall reference the City's bid specification by section(s) and page number(s). The face of the envelope containing this letter shall clearly state "CHANGE ORDER REQUEST". The letter shall reference the CITY BID INVITATION NUMBER, EQUIPMENT DESCRIPTION and CITY PURCHASE ORDER NUMBER(S). Failure to provide clear and concise evidence as stated above and in the format requested will result in denial until Prime Contractor/Supplier complies with these provisions. Documentation shall be mailed to:

City Purchasing Agent
City of Houston, Administration & Regulatory Affairs Department
Strategic Purchasing Division
P. O. Box 1562
Houston, TX 77251-1562

- 22.3 The City Purchasing Agent, or designated representative, may issue change orders, subject to the following limitations:
- 22.3.1 City Council expressly authorizes the City Purchasing Agent to approve change orders of \$50,000 or less. A change order of more than \$50,000 over the approved contract (Purchase Order) amount must be approved by City Council.
- 22.3.2 The total of all change orders issued under this section may not increase the Original Agreement amount by more than 25%.
- 22.3.3 For any items described in a change order that the Prime Contractor/Supplier is otherwise required to provide under the Original Agreement, the City shall not pay additional money to Prime Contractor/Supplier.

GENERAL TERMS & CONDITIONS: (CONTINUED)

23.0 TERMINATION OF AGREEMENT:

23.1 By the City for Convenience:

23.1.1 The City Purchasing Agent may terminate this Contract (Purchase Order) at any time upon 30 calendar days notice in writing to the Prime Contractor/Supplier. Upon receipt of such notice, Prime Contractor/Supplier shall, unless the notice directs otherwise, discontinue all services in connection with the performance of the Contract (Purchase Order) and shall proceed to cancel promptly all existing orders and contracts insofar as such orders and contracts are chargeable to this Contract (Purchase Order). As soon as practicable after the receipt of notice of termination, the Prime Contractor/Supplier shall submit a statement to the appropriate department(s) showing in detail the services performed or items delivered under this Contract (Purchase Order) to date of termination. The City agrees to compensate the Prime Contractor/Supplier for that portion of the prescribed charges for which the services were actually performed or items delivered under this Contract (Purchase Order) and not previously paid.

23.2 By the City for Default by Prime Contractor/Supplier:

23.2.1 In the event that the materials and/or services furnished by the Prime Contractor/Supplier do not conform to the standard set forth herein, or if the deliveries and servicing of this Contract (Purchase Order) do not conform to the requirements detailed herein, the City through a written notice from the Purchasing Agent to the Prime Contractor/Supplier describing such default may as its options:

- (1) Terminate the Contract (Purchase Order) for default and the City shall have no further obligation under the Contract (Purchase Order).
- (2) Allow the Prime Contractor/Supplier to cure default within 30 calendar days from receipt of notice unless the City Purchasing Agent specifies a longer period of time in the notice. The City, at its sole option, may extend the proposed date of termination to a later date. If prior to the proposed date of termination, Prime Contractor/Supplier cures such default to the City's satisfaction, then the proposed termination shall be ineffective. If Prime Contractor/Supplier fails to cure such default prior to the proposed date of termination, then the City may terminate its performance under this Contract (Purchase Order) as of such date and have no further obligation under the Contract (Purchase Order).

23.2.2 In the event of failure to deliver any or all of the items or to perform required services, the City may cover its loss by reasonably procuring from another source the items not delivered or the services not performed. Prime Contractor/Supplier shall be responsible for, and shall pay to the City immediately upon demand, the difference in price between that offered by the Prime Contractor/Supplier and that which the City was forced to pay for covering Prime Contractor/Supplier's failure to deliver or perform services.

23.3 By the Prime Contractor/Supplier for Default by City:

23.3.1 Default by the City shall occur if the City fails to perform or observe the terms and conditions of this Contract (Purchase Order) required to be performed or observed by the City, and the Prime Contractor/Supplier gives notice in writing to the City of the act or omission claimed by the Prime Contractor/Supplier to constitute default on the part of the City.

23.3.2 Upon receipt of such notice in writing from the Prime Contractor/Supplier; however, the City shall have 30 calendar days to cure such default. The Prime Contractor/Supplier, at its sole option, may extend the proposed date of termination to a later date.

23.3.3 If City cures such default prior to the proposed date of termination, the proposed termination shall be ineffective. If the City fails to cure such default prior to the proposed date of termination, then the Prime Contractor/Supplier may terminate its performance under this Contract (Purchase Order) as of such date.

EXHIBIT NO. 2

SAMPLE ACCORD CERTIFICATE OF INSURANCE

Issue Date (MM/DD/YY)

PRODUCER:
ISSUERS OF POLICIES. THE ISSUER MUST HAVE A RATING OF **B+ OR BETTER AND FINANCIAL SIZE OF CLASS VI OR BETTER ACCORDING TO THE CURRENT YEAR'S BEST RATING**, OR HAVE A CERTIFICATE OF AUTHORITY TO CONDUCT INSURANCE BUSINESS IN THE STATE OF TEXAS

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

INSURED:

SAMPLE FORM

COMPANIES AFFORDING COVERAGE

-
COMPANY A
-
COMPANY B
-
COMPANY C
-
COMPANY D
-
COMPANY E

COVERAGES:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED, NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN. THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

CO LTR.	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS
General Liability					
A.	(X) Commercial General Liability Claims Made (X) Occur. Owners & Contractors Prot.				General Aggregate \$1,000,000 Products-Comp/Op Agg. \$1,000,000 Personal & Adv. Injury \$1,000,000 Each Occurrence \$ 500,000 Fire Damage (Any one fire) \$ 50,000 Med. Expense \$ 5,000 (Any one person)
Automobile Liability					
A.	(X) Any Auto All Owned Autos Scheduled Autos (X) Hired Autos (X) Non-Owned Autos Garage Liability		Auto Liability Insurance for autos furnished or used in the course of performance of this Contract. Including Owned, Non-owned, and Hired Auto coverage. (Any Auto coverage may be substituted for Owned, Non-owned and Hired Auto coverage.) If no autos are owned by Contractor, coverage may be limited to Non-owned and Hired Autos. If Owned Auto coverage cannot be purchased by Contractor, Scheduled Auto coverage may be substituted for Owned Auto coverage. EACH AUTO USED IN PERFORMANCE OF THIS CONTRACT MUST BE COVERED IN THE LIMITS SPECIFIED.		Combined Single Limit \$1,000,000 Bodily Injury (Per person) \$ Bodily Injury (Per Accident) \$ Property Damage \$
Excess Liability					
	Umbrella Form Other than Umbrella Form				Each Occurrence \$ Aggregate \$
Worker's Compensation					
	And Employee Liability		Statutory Limits	(X) Statutory Limits	Each Accident \$ 100,000 Disease - Policy Limit \$ 100,000 Disease - Each Employee \$ 100,000
Other					

DESCRIPTION OF OPERATION/LOCATIONS/VEHICLES/SPECIAL ITEMS

City of Houston is named as **additional insured** on Auto, General Liability and Umbrella policies. **Waiver of Subrogation** is provided on Auto, General Liability, Worker's Compensation and Umbrella policies. The terms of the policies described by this certificate as to advance notification of cancellation and non-renewal are in compliance with the Contract terms between the City and the Insured for the project/service covered by this certificate and such advance notification will be provided.

CERTIFICATE HOLDER:

**CITY OF HOUSTON/ADMIN. & REGULATORY AFFAIRS DEPT.
STRATEGIC PURCHASING DIVISION
P.O. BOX 1562
HOUSTON, TX 77251**

CANCELLATION: (MODIFIED AS INDICATED ABOVE)

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED, BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL 30-DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUY FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, IT'S AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE: