

# **Solicitation 12657-822**

## **Type 1 Fire Rescues**

### **Bid Designation: Public**



## **City of Fort Lauderdale**

## Bid 12657-822 Type 1 Fire Rescues

Bid Number **12657-822**

Bid Title **Type 1 Fire Rescues**

Bid Start Date **Jun 6, 2022 10:39:52 AM EDT**

Bid End Date **Jul 7, 2022 2:00:00 PM EDT**

Question & Answer End Date **Jun 20, 2022 5:00:00 PM EDT**

Bid Contact **Laurie Platkin, NIGP-CPP, CPPB  
Senior Procurement Specialist  
Finance - Procurement Division  
954-828-5138  
lplatkin@fortlauderdale.gov**

Contract Duration **One Time Purchase**

Contract Renewal **Not Applicable**

Prices Good for **120 days**

Bid Comments **The City of Fort Lauderdale, Florida hereinafter referred to as the “City”, is seeking competitive bids from qualified Type 1 Rescue providers, hereinafter referred to as the “Bidder”, to provide four (4) Type 1 Rescues as described herein for the City’s Fire Rescue Department, in accordance with the terms and conditions and specifications/scope of services contained in this Invitation to Bid (ITB).**

**For additional information go to [www.BidSync.com](http://www.BidSync.com).**

**BID OPENING:**  
[https://teams.microsoft.com/join/19%3ameeting\\_ZjNiMDAwYmQtOTIIZi00NTA2LWFIY2QtMGNkZTQ3MmJmMTBj%40thread.v2/0?context=%7b%22Tid%22%3a%228de03ec9-e412-4fb8-9a79-1b8f7a4bea90%22%2c%22Oid%22%3a%22a4ab02d4-f501-4f59-a0c5-34af53b513ff%22%7d](https://teams.microsoft.com/join/19%3ameeting_ZjNiMDAwYmQtOTIIZi00NTA2LWFIY2QtMGNkZTQ3MmJmMTBj%40thread.v2/0?context=%7b%22Tid%22%3a%228de03ec9-e412-4fb8-9a79-1b8f7a4bea90%22%2c%22Oid%22%3a%22a4ab02d4-f501-4f59-a0c5-34af53b513ff%22%7d)

Or call in (audio only) [+1 954-686-7296](tel:+19546867296),[594292620#](tel:+1954292620) United States, Fort Lauderdale - Phone Conference ID: 594 292 620#

**Added on Jun 22, 2022:  
ADDENDUM 1**

**Section III has been revised in the following Section III changes:**

**3.1.1.10.2  
3.1.1.12.7  
3.1.1.12.11  
3.1.1.14.1  
3.1.1.14.2  
3.2.1.5.11  
3.2.1.12.5  
3.2.1.12.7  
3.2.1.12.9  
3.2.1.12.11  
3.2.1.14.1  
3.2.1.14.2  
3.2.1.19.1.3**

- 3.2.1.19.2.1
- 3.2.1.19.2.3
- 3.2.3.1
- 3.3.1.5.11
- 3.3.1.12.5
- 3.3.1.12.11
- 3.3.1.14.1
- 3.3.1.14.2
- 3.3.1.16.1
- 3.3.1.16.3
- 3.3.1.19.1.3
- 3.3.1.19.2.3
- 3.3.2.35
- 3.3.3.1

All other terms, conditions, and specifications remain unchanged.

**Item Response Form**

Item **12657-822--01-01 - Option 1 - Fire Rescue - Type 1: Standard Cab**  
 Quantity **4 each**  
 Unit Price   
 Delivery Location **City of Fort Lauderdale**  
     See ITB Specifications  
     See ITB Specifications  
     Fort Lauderdale FL 33301  
     **Qty 4**

**Description**

See Section III - Technical Specification 3.1 for a full description.

Bidder shall attach a comprehensive line item quote including line item pricing as well as all warranty information with their bid. Additional information to include: Blueprints/drawings, details on service requirements and procedures for service(s). Bidder shall also provide the anticipated number of days for delivery once PO is issued. Failure to do so may result in the City deeming your bid non-responsive.

Item **12657-822--02-01 - Option 2 - Fire Rescue - Type 1: Extended Cab**  
 Quantity **4 each**  
 Unit Price   
 Delivery Location **City of Fort Lauderdale**  
     See ITB Specifications  
     See ITB Specifications  
     Fort Lauderdale FL 33301  
     **Qty 4**

**Description**

See Section III - Technical Specification 3.2 for a full description.

Bidder shall attach a comprehensive line item quote including line item pricing as well as all warranty information with their bid. Additional information to include: Blueprints/drawings, details on service requirements and procedures for service(s). Bidder shall also provide the anticipated number of days for delivery once PO is issued. Failure to do so may result in the City deeming your bid non-responsive.

Item **12657-822--03-01 - Option 3 - Fire Rescue - Type 1: Crew Cab**  
 Quantity **4 each**

Unit Price

Delivery Location

**City of Fort Lauderdale**

See ITB Specifications

See ITB Specifications

Fort Lauderdale FL 33301

**Qty 4**

**Description**

See Section III - Technical Specification 3.3 for a full description.

Bidder shall attach a comprehensive line item quote including line item pricing as well as all warranty information with their bid. Additional information to include: Blueprints/drawings, details on service requirements and procedures for service(s). Bidder shall also provide the anticipated number of days for delivery once PO is issued. Failure to do so may result in the City deeming your bid non-responsive.

City of Fort Lauderdale  
Type 1 Fire Rescues  
ITB # 12657-822

## SECTION I – INTRODUCTION AND INFORMATION

### 1.1 Purpose

The City of Fort Lauderdale, Florida (City) is seeking bids from qualified, experienced, and licensed firm(s), hereinafter referred to as the Contractor or Bidder, to provide four (4) Type 1 Fire Rescues for the City, in accordance with the terms, conditions, and specifications contained in this Invitation to Bid (ITB).

- 1.1.2** The purpose of this document is to provide minimum specifications and test parameters for the manufacture of custom fire pumpers that meet the needs and desires of the City. It establishes essential criteria for the design, performance, equipment, and appearance of the vehicle. The object is to provide a vehicle that is in accordance with all applicable and nationally recognized standard guidelines.

City Staff have researched various trucks on the market and selected features that staff feels are beneficial for their needs. These features have been compiled into the specifications that make up this ITB. *We have referenced quality levels, safety items, etc. that we desire, but they are not intended to be of a proprietary nature.* Staff have made attempts to be careful not to include items that were of a proprietary nature in this document; however, a few specifications may inadvertently remain. If, upon your review of this document, you see a requirement that you feel is proprietary to only one vendor, please bring that to our attention for our review. It is our hope that we have prepared a competitive specification that is as impartial as possible, without compromising necessary and desired features and attributes for which Fire-Rescue had expressed a strong need to do their job safely and efficiently.

In an area where the bidder's proposed apparatus varies or doesn't meet the specifications within the ITB then please provide clarification on how the bidder's specifications meet the intended result(s).

### 1.2 Point of Contact

For information concerning procedures for responding to this solicitation, contact Senior Procurement Specialist, Laurie Platkin, at (954) 828-5138 or email at [lplatkin@fortlauderdale.gov](mailto:lplatkin@fortlauderdale.gov). Such contact shall be for clarification purposes only.

For information concerning technical specifications, please utilize the question / answer feature provided by BidSync at [www.bidsync.com](http://www.bidsync.com). Questions of a material nature must be received prior to the cut-off date specified in the ITB schedule. Material changes, if any, to the scope of services or bidding procedures will only be transmitted by written addendum. (See addendum section of BidSync Site). Bidders please note: No part of your bid can be submitted via FAX. No variation in price or conditions shall be permitted based upon a claim of ignorance. Submission of a bid will be considered evidence that the Bidder has familiarized themselves with the nature and extent of the work, and the equipment, materials, and labor required. The entire bid response must be submitted in accordance with all specifications contained in this solicitation. The questions and answers submitted in BidSync shall become part of any contract that is created from this ITB.

### 1.3 Pre-bid Conference and/or Site Visit

There will not be a pre-bid conference or site visit for this ITB.

It will be the sole responsibility of the Bidder to become familiar with the scope of the City's requirements and systems prior to submitting a bid. No variation in price or conditions shall be

permitted based upon a claim of ignorance. Submission of a bid will be considered evidence that the Bidder has familiarized themselves with the nature and extent of the work, equipment, materials, and labor required.

#### **1.4 BidSync**

The City of Fort Lauderdale uses BidSync ([www.bidsync.com](http://www.bidsync.com)) to administer the competitive solicitation process, including but not limited to soliciting proposals, issuing addenda, posting results and issuing notification of an intended decision. There is no charge to register and download the ITB from BidSync. Bidders are strongly encouraged to read the various vendor Guides and Tutorials available in BidSync well in advance of their intention of submitting a proposal to ensure familiarity with the use of BidSync. The City shall not be responsible for a Bidder's inability to submit a Proposal by the end date and time for any reason, including issues arising from the use of BidSync.

It is the sole responsibility of the Bidder to ensure that their bid is submitted electronically through BidSync at [www.bidsync.com](http://www.bidsync.com) no later than the time and date specified in this solicitation. PAPER BID SUBMITTALS WILL NOT BE ACCEPTED. BIDS MUST BE SUBMITTED ELECTRONICALLY VIA [WWW.BIDSYNC.COM](http://WWW.BIDSYNC.COM).

#### **1.5 Electronic Bid Openings**

Please be advised that effective immediately, and until further notice, all Invitation to Bids, Request for Proposals, Request for Qualifications, and other solicitations led by the City of Fort Lauderdale will be opened electronically via [BIDSYNC.COM](http://BIDSYNC.COM) at the date and time indicated on the solicitation. All openings will be held on the BIDSYNC.COM platform.

Anyone requesting assistance or having further inquiry in this matter must contact the Procurement Specialist indicated on the solicitation, via the Question-and-Answer forum on Bidsync.com before the Last Day for Questions indicated in the Solicitation.

*END OF SECTION*

## SECTION II - SPECIAL TERMS AND CONDITIONS

### 2.1 General Conditions

ITB General Conditions (Form G-107, Rev. 09/20) are included and made a part of this ITB.

### 2.2 Addenda, Changes, and Interpretations

It is the sole responsibility of each firm to notify the Procurement Specialist utilizing the question / answer feature provided by BidSync and request modification or clarification of any ambiguity, conflict, discrepancy, omission, or other error discovered in this competitive solicitation. Requests for clarification, modification, interpretation, or changes must be received prior to the Question and Answer (Q & A) Deadline. Requests received after this date may not be addressed. Questions and requests for information that would not materially affect the scope of services to be performed or the solicitation process will be answered within the question / answer feature provided by BidSync and shall be for clarification purposes only. Material changes, if any, to the scope of services or the solicitation process will only be transmitted by official written addendum issued by the City and uploaded to BidSync as a separate addendum to the ITB. Under no circumstances shall an oral explanation given by any City official, officer, staff, or agent be binding upon the City and should be disregarded. All addenda are a part of the competitive solicitation documents, and each firm will be bound by such addenda. It is the responsibility of each to read and comprehend all addenda issued.

### 2.3 Changes and Alterations

Bidder may change or withdraw a Bid at any time prior to Bid submission deadline; however, no oral modifications will be allowed. Modifications shall not be allowed following the Bid deadline.

### 2.4 Bidder's Costs

The City shall not be liable for any costs incurred by Bidders in responding to this ITB.

### 2.5 Pricing/Delivery

All pricing should be identified on the Cost page provided in this ITB. No additional costs may be accepted, other than the costs stated on the Cost page. Failure to use the City's Cost page and provide costs as requested in this ITB may deem your bid non-responsive.

Bidder shall quote a firm, fixed price for all services stated in the ITB. All costs including travel shall be included in your cost. The City shall not accept any additional costs including any travel associated with coming to the City of Fort Lauderdale.

All pricing must include delivery and installation and be quoted FOB: Destination.

The chassis and body shall be ordered within 15 business days following receipt of purchase order. Verification of order shall be sent to Fleet Services at [sleonard@fortlauderdale.gov](mailto:sleonard@fortlauderdale.gov).

### 2.6 Price Validity

Prices provided in this Invitation to bid (ITB) shall be valid for at least One-Hundred and Twenty (120) days from time of ITB opening unless otherwise extended and agreed upon by the City and Bidder. The City shall award contract within this time period or shall request to the recommended awarded vendor an extension to hold pricing, until products/services have been awarded.

### 2.7 Invoices/Payment

The City will accept invoices no more frequently than once per month. Each invoice shall fully detail the related costs and shall specify the status of the particular task or project as of the date of the

invoice with regard to the accepted schedule for that task or project. Payment will be made within forty-five (45) days after receipt of an invoice acceptable to the City, in accordance with the Florida Local Government Prompt Payment Act. If, at any time during the contract, the City shall not approve or accept the Contractor's work product, and agreement cannot be reached between the City and the Contractor to resolve the problem to the City's satisfaction, the City shall negotiate with the Contractor on a payment for the work completed and usable to the City.

Partial billing will not be accepted. The City will pay 100% of the contract price after all items/services have been delivered and accepted.

## **2.8 Related Expenses/Travel Expenses**

Any travel costs of City personnel related to this ITB shall be borne by the City. The awarded vendor will be responsible for any and all expenses related to delivering the vehicle(s) to the City upon completion.

## **2.9 Payment Method**

The City of Fort Lauderdale will pay by check or ACH payment.

## **2.10 Mistakes**

The Bidder shall examine this ITB carefully. The submission of a bid shall be prima facie evidence that the Bidder has full knowledge of the scope, nature, and quality of the work to be performed; the detailed requirements of the specifications; and the conditions under which the work is to be performed. Ignorance of the requirements will not relieve the Bidder from liability and obligations under the Contract.

## **2.11 Acceptance of Bids / Minor Irregularities**

**2.11.1** The City reserves the right to accept or reject any or all bids, part of bids, and to waive minor irregularities or variances to specifications contained in bids which do not make the bid conditional in nature and minor irregularities in the solicitation process. A minor irregularity shall be a variation from the solicitation that does not affect the price of the contract or does not give a bidder an advantage or benefit not enjoyed by other bidders, does not adversely impact the interests of other firms, or does not affect the fundamental fairness of the solicitation process. The City also reserves the right to reissue an ITB.

**2.11.2** The City reserves the right to disqualify Bidder during any phase of the competitive solicitation process and terminate for cause any resulting contract upon evidence of collusion with intent to defraud or other illegal practices on the part of the Bidder.

## **2.12 Modification of Services**

**2.12.1** While this contract is for services provided to the department referenced in this ITB, the City may require similar work for other City departments. Successful Bidder agrees to take on such work unless such work would not be considered reasonable or become an undue burden to the Successful Bidder.

**2.12.2** The City reserves the right to delete any portion of the work at any time without cause, and if such right is exercised by the City, the total fee shall be reduced in the same ratio as the estimated cost of the work deleted bears to the estimated cost of the work originally planned. If work has already been accomplished and approved by the City on any portion of a contract resulting from this ITB, the Successful Bidder shall be paid for the work completed on the basis of the estimated percentage of completion of such portion to the total project cost.



**2.12.3** The City may require additional items or services of a similar nature, but not specifically listed in the contract. The Successful Bidder agrees to provide such items or services and shall provide the City prices on such additional items or services. If the price(s) offered are not acceptable to the City, and the situation cannot be resolved to the satisfaction of the City, the City reserves the right to procure those items or services from other vendors, or to cancel the contract upon giving the Successful Bidder thirty (30) days written notice.

**2.12.4** If the Successful Bidder and the City agree on modifications or revisions to the task elements, after the City has approved work to begin on a particular task or project, and a budget has been established for that task or project, the Successful Bidder will submit a revised budget to the City for approval prior to proceeding with the work.

**2.13 Non-Exclusive Contract**

Bidder agrees and understands that the contract shall not be construed as an exclusive arrangement and further agrees that the City may, at any time, secure similar or identical services from another vendor at the City's sole option.

**2.14 Sample Contract Agreement**

A sample of the formal agreement template, which may be required to be executed by the awarded vendor can be found at our website:

<https://www.fortlauderdale.gov/home/showdocument?id=1212> .

**2.15 Responsiveness**

In order to be considered responsive to the solicitation, the firm's bid shall fully conform in all material respects to the solicitation and all of its requirements, including all form and substance.

**2.16 Responsibility**

In order to be considered as a responsible firm, firm shall be fully capable to meet all of the requirements of the solicitation and subsequent contract, must possess the full capability, including financial and technical, to perform as contractually required, and must be able to fully document the ability to provide good faith performance.

**2.17 Minimum Qualifications**

To be eligible for award of a contract in response to this solicitation, the Bidder must demonstrate that they have successfully completed services, as specified in the Technical Specifications / Scope of Services section of this solicitation, are normally and routinely engaged in performing such services, and are properly and legally licensed to perform such work. In addition, the Bidder must have no conflict of interest with regard to any other work performed by the Bidder for the City of Fort Lauderdale.

**2.17.1** Firm or principals shall have no record of judgments, pending lawsuits against the City or criminal activities involving moral turpitude and not have any conflicts of interest that have not been waived by the City Commission.

**2.17.2** Neither firm nor any principal, officer, or stockholder shall be in arrears or in default of any debt or contract involving the City, (as a party to a contract, or otherwise); nor have failed to perform faithfully on any previous contract with the City.

**2.18 Lobbying Activities**

ALL CONTRACTORS PLEASE NOTE: Any contractor submitting a response to this solicitation must comply, if applicable, with City of Fort Lauderdale Ordinance No. C-11-42 & Resolution No. 07-101, Lobbying Activities. Copies of Ordinance No. C-11-42 and Resolution No. 07-101 may be obtained from the City Clerk's Office on the 7th Floor of City Hall, 100 N. Andrews Avenue, Fort Lauderdale, Florida. The ordinance may also be viewed on the City's website at:

<http://www.fortlauderdale.gov/home/showdocument?id=6036>.

**2.19 Local Business Preference**

**2.19.1** Section 2-186, Code of Ordinances of the City of Fort Lauderdale, provides for a local business preference. In order to be considered for a local business preference, a Bidder must include the Local Business Preference Certification Statement of this ITB, as applicable to the local business preference class claimed at the time of Bid submittal:

**2.19.2** Upon formal request of the City, based on the application of a Local Business Preference the Bidder shall within ten (10) calendar days submit the following documentation to the Local Business Preference Class claimed:

- a. Copy of City of Fort Lauderdale current year business tax receipt, or Broward County current year business tax receipt, and
- b. List of the names of all employees of the Bidder and evidence of employees' residence within the geographic bounds of the City of Fort Lauderdale or Broward County, as the case may be, such as current Florida driver license, residential utility bill (water, electric, telephone, cable television), or other type of similar documentation acceptable to the City.

**2.19.3** Failure to comply at time of Proposal submittal shall result in the Bidder being found ineligible for the local business preference.

**2.19.4** The complete local business preference ordinance may be found on the City's web site at the following link:

<https://www.fortlauderdale.gov/government/departments-a-h/finance/procurement-services>.

**2.19.5 Definitions**

- a. The term "Class A business" shall mean any business that has established and agrees to maintain a permanent place of business located in a non-residential zone, staffed with full-time employees within the limits of the city, and shall maintain a staffing level for the proposed work of at least fifty percent (50%) who are residents of the City of Fort Lauderdale.
- b. The term "Class B business" shall mean any business that has established and agrees to maintain a permanent place of business located in a non-residential zone, staffed with full-time employees within the limits of the city, or shall maintain a staffing level for the proposed work of at least fifty percent (50%) who are residents of the City of Fort Lauderdale.
- c. The term "Class C business" shall mean any business that has established and agrees to maintain a permanent place of business located in a non-residential zone, staffed with full-time employees within the limits of Broward County.

- d. The term "Class D business" shall mean any business that does not qualify as a Class A, Class B, or Class C business.

## **2.20 Disadvantaged Business Enterprise Preference**

**2.20.1** Section 2-185, Code of Ordinances of the City of Fort Lauderdale, provides for a disadvantaged business preference. In order to be considered for a disadvantaged business preference, a Bidder must include a certification from a government agency, as applicable to the disadvantaged business preference class claimed at the time of Bid/Proposal submittal:

**2.20.2** Upon formal request of the City, based on the application of a Disadvantaged Business Preference the Bidder shall within ten (10) calendar days submit the following documentation to the Disadvantaged Business Enterprise Preference Class claimed:

- a. Copy of City of Fort Lauderdale current year business tax receipt, or the Tri-County (Broward, Dade, West Palm Beach) current year business tax receipt, or proof of active Sunbiz status and
- b. List of the names of all employees of the Bidder and evidence of employees' residence within the geographic bounds of the City of Fort Lauderdale or the Tri-County, as the case may be, such as current Florida driver license, residential utility bill (water, electric, telephone, cable television), or other type of similar documentation acceptable to the City.

**2.20.3** Failure to comply at time of Bid/Proposal submittal shall result in the Bidder being found ineligible for the Disadvantaged Business Enterprise Preference business preference.

**2.20.4** The complete disadvantaged business preference ordinance may be found on the City's web site at the following link: <https://www.fortlauderdale.gov/government/departments-a-h/finance/procurement-services>.

### **2.20.5 Definitions**

- a. The term "Disadvantaged Class 1 Enterprise" shall mean any disadvantaged business enterprise that has established and agrees to maintain a permanent place of business located in a non-residential zone, staffed with full-time employees within the limits of the city, and provides supporting documentation of its City of Fort Lauderdale business tax and disadvantaged certification as established in the city's Procurement Manual.
- b. The term "Disadvantaged Class 2 Enterprise" shall mean any disadvantaged business enterprise that has established and agrees to maintain a permanent place of business within the limits of the city with full-time employees and provides supporting documentation of its City of Fort Lauderdale business tax and disadvantaged certification as established in the city's Procurement Manual.
- c. The term "Disadvantaged Class 3 Enterprise" shall mean any disadvantaged business enterprise that has established and agrees to maintain a permanent place of business located in a non-residential zone, staffed with full-time employees within the limits of the Tri-County area and provides supporting documentation of its City of Fort Lauderdale business tax and disadvantaged certification as established in the City's Procurement Manual.

- d. The term “Disadvantaged Class 4 Enterprise” shall mean any disadvantaged business enterprise that does not qualify as a Class A, Class B, or Class C business, but is located in the State of Florida and provides supporting documentation of its disadvantaged certification as established in the City’s Procurement Manual.

## **2.21 Protest Procedure**

**2.21.1** Any Bidder who is not recommended for award of a contract and who alleges a failure by the city to follow the city’s procurement ordinance or any applicable law, may follow the protest procedure as found in the city’s procurement ordinance within five (5) days after a notice of intent to award is posted on the city’s web site at the following link: <https://www.fortlauderdale.gov/government/departments-a-h/finance/procurement-services/notices-of-intent-to-award>.

**2.21.2** The complete protest ordinance may be found on the city’s web site at the following link: [https://library.municode.com/fl/fort\\_lauderdale/codes/code\\_of\\_ordinances?nodeId=COOR\\_CH2AD\\_ARTVFI\\_DIV2PR\\_S2-182.1PRSO](https://library.municode.com/fl/fort_lauderdale/codes/code_of_ordinances?nodeId=COOR_CH2AD_ARTVFI_DIV2PR_S2-182.1PRSO).

## **2.22 Public Entity Crimes**

Bidder, by submitting a bid, certifies that neither the Bidder nor any of the Bidder’s principals has been placed on the convicted vendor list as defined in Section 287.133, Florida Statutes (2018), as may be amended or revised. A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid, proposal, or reply on a contract to provide any goods or services to a public entity; may not submit a bid, proposal, or reply on a contract with a public entity for the construction or repair of a public building or public work; may not submit bids, proposals, or replies on leases of real property to a public entity; may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity; and may not transact business with any public entity in excess of the threshold amount provided in s. 287.017 for CATEGORY TWO for a period of 36 months following the date of being placed on the convicted vendor list.

## **2.23 Sub-Contractors**

**2.23.1** If the Contractor proposes to use sub-contractors in the course of providing these services to the City, this information shall be a part of the bid response. Such information shall be subject to review, acceptance, and approval of the City, prior to any contract award. The City reserves the right to approve or disapprove of any sub-contractor candidate in its best interest and to require Contractor to replace sub-contractor with one that meets City approval.

**2.23.2** Contractor shall ensure that all of Contractor’s sub-contractors perform in accordance with the terms and conditions of this Contract. Contractor shall be fully responsible for all of Contractor’s sub-contractors’ performance, and liable for any of Contractor’s sub-contractors’ non-performance and all of Contractor’s sub-contractors’ acts and omissions. Contractor shall defend, at Contractor’s expense, counsel being subject to the City’s approval or disapproval, and indemnify and hold harmless the City and the City’s officers, employees, and agents from and against any claim, lawsuit, third-party action, or judgment, including any award of attorney fees and any award of costs, by or in favor of any Contractor’s sub-contractors for payment for work performed for the City.

**2.23.3** Contractor shall require all of its sub-contractors to provide the required insurance coverage as well as any other coverage that the Contractor may consider necessary, and any

deficiency in the coverage or policy limits of said sub-contractors will be the sole responsibility of the Contractor.

## 2.24 Bid Security

**2.24.1** A bid security payable to the City of Fort Lauderdale shall be submitted with the bid response in the amount of five percent (5%) of the total bid amount for Option 3 – Fire Rescue Type 1 – Crew Cab. A bid security can be in the form of a bid bond or cashier's check. Bid security will be returned to the unsuccessful contractor as soon as practicable after opening of bids. Bid security will be returned to the successful Bidder after acceptance of the Payment and Performance Bond, if required; acceptance of insurance coverage, if required; and full execution of contract documents, if required; or other conditions as stated in Special Conditions or elsewhere in the ITB.

**2.24.2** BidSync allows bidders to submit bid bonds electronically directly through their system using **Surety 2000**. For more information on this feature and to access it, contact BidSync customer care department.

**2.24.3** The bidder may choose to mail their original executed bid bond or upload the bid bond on BidSync to accompany their electronic proposal and then deliver the original, signed, and sealed bid bond within five (5) business days from the solicitation end date or it will be determined as non-responsive. A bid security in the form of a cashier's check must be an original document and must be submitted at time of the bid due date. If choosing the cashier's check method, plan in advance to send via United States Postal Service or air freight carrier to ensure cashier's check arrives on or before bid opening deadline.

- a. Deliver via United States Postal Service or air freight carrier to City of Fort Lauderdale City Hall, Procurement Services Division, 6<sup>th</sup> Floor, Suite 619, 100 N. Andrews Avenue, Fort Lauderdale, FL 33301.
- b. Include company name, solicitation number and title clearly indicated outside of the envelope.

**2.24.4** Failure of the successful Bidder to execute a contract, provide a Performance Bond, and furnish evidence of appropriate insurance coverage, as provided herein, within thirty (30) days after written notice of award has been given, shall be just cause for the annulment of the award and the forfeiture of the proposal security to the City, which forfeiture shall be considered, not as a penalty, but as liquidation of damages sustained.

## 2.25 Payment and Performance Bond

**2.25.1** The Bidder shall within fifteen (15) working days after notification of award, furnish to the City a Payment and Performance Bond, in the amount of the bid price as surety for faithful performance under the terms and conditions of the contract. If the bond is on an annual coverage basis, renewal for each succeeding year shall be submitted to the City thirty (30) days prior to the termination date of the existing Payment and Performance Bond. The Performance Bond must be executed by a surety company or recognized standing to do business in the State of Florida and having a resident agent.

**2.25.2** The Bidder must have a Financial Size Categories (FSC) rating of no less than "A-" by the latest edition of Best's Key Rating Guide, or acceptance of insurance company that holds a valid Florida Certificate of Authority issued by the State of Florida, Department of Insurance, and are members of the Florida Guarantee Fund.

**2.25.3** Acknowledgement and agreement is given by both parties that the amount herein set for the Payment and Performance Bond is not intended to be nor shall be deemed to be in the nature of liquidated damages nor is it intended to limit the liability of the Contractor to the City in the event of a material breach of this Agreement by the Contractor.

## **2.26 Insurance Requirements**

**2.26.1** As a condition precedent to the effectiveness of this Agreement, during the term of this Agreement and during any renewal or extension term of this Agreement, the Contractor, at its sole expense, shall provide insurance of such types and with such terms and limits as noted below. Providing proof of and maintaining adequate insurance coverage are material obligations of the Contractor. The Contractor shall provide the City a certificate of insurance evidencing such coverage. The Contractor's insurance coverage shall be primary insurance for all applicable policies. The limits of coverage under each policy maintained by the Contractor shall not be interpreted as limiting the Contractor's liability and obligations under this Agreement. All insurance policies shall be through insurers authorized or eligible to write policies in the State of Florida and possess an A.M. Best rating of A-, VII or better, subject to approval by the City's Risk Manager.

**2.26.2** The coverages, limits, and endorsements required herein protect the interests of the City, and these coverages, limits, and/or endorsements shall in no way be relied upon by the Contractor for assessing the extent or determining appropriate types and limits of coverage to protect the Contractor against any loss exposures, whether as a result of this Agreement or otherwise. The requirements contained herein, as well as the City's review or acknowledgement, are not intended to and shall not in any manner limit or qualify the liabilities and obligations assumed by the Contractor under this Agreement.

**2.26.3** The following insurance policies and coverages are required:

### **Commercial General Liability**

Coverage must be afforded under a Commercial General Liability policy with limits not less than:

- \$1,000,000 each occurrence and \$2,000,000 aggregate for Bodily Injury, Property Damage, and Personal and Advertising Injury
- \$1,000,000 each occurrence and \$2,000,000 aggregate for Products and Completed Operations

Policy must include coverage for contractual liability and independent contractors.

The City, a Florida municipal corporation, its officials, employees, and volunteers are to be covered as an additional insured with a CG 20 26 04 13 Additional Insured – Designated Person or Organization Endorsement or similar endorsement providing equal or broader Additional Insured Coverage with respect to liability arising out of activities performed by or on behalf of the Contractor. The coverage shall contain no special limitation on the scope of protection afforded to the City, its officials, employees, and volunteers.

### **Business Automobile Liability**

Coverage must be afforded for all Owned, Hired, Scheduled, and Non-Owned vehicles for Bodily Injury and Property Damage in an amount not less than \$1,000,000 combined single limit each accident.

If the Contractor does not own vehicles, the Contractor shall maintain coverage for Hired and Non-Owned Auto Liability, which may be satisfied by way of endorsement to the Commercial General Liability policy or separate Business Auto Liability policy.

### **Garage Keepers Legal Liability**

Coverage shall be purchased for the Contractor's liability for damage or other loss, including comprehensive and collision risks, to the vehicles while in the care, custody, and control of the Contractor. Coverage form must be on a direct primary basis with limits equal to the highest possible replacement cost value of vehicles in the care, custody, and control of the Contractor at any one time.

### **Garage Liability**

Coverage must be afforded in an amount not less than \$1,000,000 per occurrence and must cover the Contractor and the Contractor's employees for the Contractor's garage and related operations while any and all vehicles covered under this Agreement are in the care, custody, and control of the Contractor.

### **Workers' Compensation and Employer's Liability**

Coverage must be afforded per Chapter 440, Florida Statutes. Any person or entity performing work for or on behalf of the City must provide Workers' Compensation insurance. Exceptions and exemptions will be allowed by the City's Risk Manager, if they are in accordance with Florida Statute.

The Contractor waives, and the Contractor shall ensure that the Contractor's insurance carrier waives, all subrogation rights against the City, its officials, employees, and volunteers for all losses or damages. The City requires the policy to be endorsed with WC 00 03 13 Waiver of our Right to Recover from Others or equivalent.

The Contractor must be in compliance with all applicable State and federal workers' compensation laws, including the U.S. Longshore Harbor Workers' Act and the Jones Act, if applicable.

#### **2.26.4 Insurance Certificate Requirements**

- a. The Contractor shall provide the City with valid Certificates of Insurance (binders are unacceptable) no later than ten (10) days prior to the start of work contemplated in this Agreement.
- b. The Contractor shall provide to the City a Certificate of Insurance having a thirty (30) day notice of cancellation; ten (10) days' notice if cancellation is for nonpayment of premium.
- c. In the event that the insurer is unable to accommodate the cancellation notice requirement, it shall be the responsibility of the Contractor to provide the proper notice. Such notification will be in writing by registered mail, return receipt requested, and addressed to the certificate holder.
- d. In the event the Agreement term or any surviving obligation of the Contractor following expiration or early termination of the Agreement goes beyond the expiration date of the insurance policy, the Contractor shall provide the City with an updated Certificate of Insurance no later than ten (10) days prior to the expiration of the insurance currently in effect. The City reserves the right to suspend the Agreement until this requirement is met.
- e. The Certificate of Insurance shall indicate whether coverage is provided under a claims-made or occurrence form. If any coverage is provided on a claims-made form, the Certificate of Insurance must show a retroactive date, which shall be the effective date of the initial contract or prior.

- f. The City shall be named as an Additional Insured on all liability policies, with the exception of Workers' Compensation.
- g. The City shall be granted a Waiver of Subrogation on the Contractor's Workers' Compensation insurance policy.
- h. The title of the Agreement, Bid/Proposal/Contract number, event dates, or other identifying reference must be listed on the Certificate of Insurance.

The Certificate Holder should read as follows:

City of Fort Lauderdale  
Procurement Services Division  
100 N. Andrews Avenue  
Fort Lauderdale, FL 33301

- 2.26.5** The Contractor has the sole responsibility for all insurance premiums and shall be fully and solely responsible for any costs or expenses as a result of a coverage deductible, co-insurance penalty, or self-insured retention; including any loss not covered because of the operation of such deductible, co-insurance penalty, self-insured retention, or coverage exclusion or limitation. Any costs for adding the City as an Additional Insured shall be at the Contractor's expense.
- 2.26.6** If the Contractor's primary insurance policy/policies do not meet the minimum requirements, as set forth in this Agreement, the Contractor may provide evidence of an Umbrella/Excess insurance policy to comply with this requirement.
- 2.26.7** The Contractor's insurance coverage shall be primary insurance as respects to the City, a Florida municipal corporation, its officials, employees, and volunteers. Any insurance or self-insurance maintained by the City, a Florida municipal corporation, its officials, employees, or volunteers shall be non-contributory.
- 2.26.8** Any exclusion or provision in any insurance policy maintained by the Contractor that excludes coverage required in this Agreement shall be deemed unacceptable and shall be considered breach of contract.
- 2.26.9** All required insurance policies must be maintained until the contract work has been accepted by the City, or until this Agreement is terminated, whichever is later. Any lapse in coverage shall be considered breach of contract. In addition, Contractor must provide to the City confirmation of coverage renewal via an updated certificate should any policies expire prior to the expiration of this Agreement. The City reserves the right to review, at any time, coverage forms and limits of Contractor's insurance policies.
- 2.26.10** The Contractor shall provide notice of any and all claims, accidents, and any other occurrences associated with this Agreement shall be provided to the Contractor's insurance company or companies and the City's Risk Management office as soon as practical.
- 2.26.11** It is the Contractor's responsibility to ensure that any and all of the Contractor's independent contractors and subcontractors comply with these insurance requirements. All coverages for independent contractors and subcontractors shall be subject to all of the applicable requirements stated herein. Any and all deficiencies are the responsibility of the Contractor.



**2.27 Insurance – Sub-Contractors**

Contractor shall require all its Sub-Contractors to provide the aforementioned coverage as well as any other coverage that the Contractor may consider necessary, and any deficiency in the coverage or policy limits of said Sub-Contractors will be the sole responsibility of the Contractor.

**2.28 Insurance for Collection of Credit Card Payments**

The successful Contractor will need to provide proof that they maintain insurance coverage in an amount of not less than \$1,000,000 specifically for cyber related crimes relating to the transmission of credit card information over their website that can include but are not limited to criminal activity involving the information technology infrastructure, including illegal access (unauthorized access), illegal interception (by technical means of non-public transmissions of computer data to, from or within a computer system), data interference (unauthorized damaging, deletion, deterioration, alteration or suppression of computer data), systems interference (interfering with the functioning of a computer system by inputting, transmitting, damaging, deleting, deteriorating, altering or suppressing computer data), misuse of devices, forgery (ID theft), and electronic fraud.

**2.29 Award of Contract**

Contractor must bid on all items. Partial bids will not be considered.

The City also reserves the right to accept or reject any or all bids, part of bids, and to waive minor irregularities or variations to specifications contained in bids, and minor irregularities in the bidding process. The City also reserves the right to award the contract on a split order basis, lump sum basis, individual item basis, or such combination as shall best serve the interest of the City.

A Contract (the "Agreement") may be awarded by the City Commission. The City reserves the right to execute or not execute, as applicable, a contract with the Bidder(s) that is determined to be in the City's best interests. The City reserves the right to award a contract to more than one Bidder, at the sole and absolute discretion of the in the City.

**2.30 Damage to Public or Private Property**

If applicable, extreme care shall be taken to safeguard all existing facilities, site amenities, irrigation systems, vehicles, etc. on or around the job site. Damage to public and/or private property shall be the responsibility of the Contractor and shall be repaired and/or replaced at no additional cost to the City.

**2.31 Safety**

If applicable, the Contractor(s) shall adhere to the Florida Department of Transportation's Uniform manual on Traffic Control for construction and maintenance work zones when working on or near a roadway. It will be the sole responsibility of the Contractor to make themselves and their employees fully aware of these provisions, especially those applicable to safety.

**2.32 Uncontrollable Circumstances ("Force Majeure")**

The City and Contractor will be excused from the performance of their respective obligations under this agreement when and to the extent that their performance is delayed or prevented by any circumstances beyond their control including, fire, flood, explosion, strikes or other labor disputes, act of God or public emergency, war, riot, civil commotion, malicious damage, act or omission of any governmental authority, delay or failure or shortage of any type of transportation, equipment, or service from a public utility needed for their performance, provided that:

**2.32.1** The non-performing party gives the other party prompt written notice describing the

particulars of the Force Majeure including, but not limited to, the nature of the occurrence and its expected duration, and continues to furnish timely reports with respect thereto during the period of the Force Majeure;

**2.32.2** The excuse of performance is of no greater scope and of no longer duration than is required by the Force Majeure;

**2.32.3** No obligations of either party that arose before the Force Majeure causing the excuse of performance are excused as a result of the Force Majeure; and

**2.32.4** The non-performing party uses its best efforts to remedy its inability to perform. Notwithstanding the above, performance shall not be excused under this Section for a period in excess of two (2) months, provided that in extenuating circumstances, the City may excuse performance for a longer term. Economic hardship of the Contractor will not constitute Force Majeure. The term of the agreement shall be extended by a period equal to that during which either party's performance is suspended under this Section.

### **2.33 Canadian Companies**

In the event Contractor is a corporation organized under the laws of any province of Canada or is a Canadian federal corporation, the City may enforce in the United States of America or in Canada or in both countries a judgment entered against the Contractor. The Contractor waives any and all defenses to the City's enforcement in Canada, of a judgment entered by a court in the United States of America. All monetary amounts set forth in this Contract are in United States dollars.

### **2.34 News Releases/Publicity**

News releases, publicity releases, or advertisements relating to this contract, or the tasks or projects associated with the project shall not be made without prior City approval.

### **2.35 Approved Equal or Alternative Product Bids**

The Technical Specifications contained in this solicitation are to be used as a reference only and are not to be considered of a proprietary nature. These specifications represent a level of quality and features that are desired by the City of Fort Lauderdale. The City is receptive to any product that would be considered by qualified City personnel as an approved equal.

The Contractor must state clearly in their bid pages any variance to the specifications. If proposing an approved equal or alternate product, it will be the Contractor's responsibility to provide adequate information in their proposal to enable the City to ensure that the Contractor meets the required criteria. If adequate information is not submitted with the bid, it may be rejected.

The City of Fort Lauderdale will be the sole judge in determining if the product proposed qualifies as approved equal. The City reserves the right to award to that Contractor which will best serve the interest of the City as determined by the City. The City further reserves the right to waive minor variations to specifications and in the bidding process.

**2.36 Contract Period – N/A**

**2.37 Cost Adjustments – N/A**

**2.38 Service Test Period – N/A**

### **2.39 Contract Coordinator**

The City may designate a Contract Coordinator whose principal duties shall be:

Liaison with Contractor.  
 Coordinate and approve all work under the contract.  
 Resolve any disputes.  
 Assure consistency and quality of Contractor's performance.  
 Schedule and conduct Contractor performance evaluations and document findings.  
 Review and approve for payment all invoices for work performed or items delivered.

#### **2.40 Contractor Performance Reviews and Ratings**

The City Contract Coordinator may develop a Contractor performance evaluation report. This report shall be used to periodically review and rate the Contractor's performance under the contract with performance rating as follows:

Excellent	Far exceeds requirements.
Good	Exceeds requirements
Fair	Just meets requirements.
Poor	Does not meet all requirements and contractor is subject to penalty provisions under the contact.
Non-compliance	Either continued poor performance after notice or a performance level that does not meet a significant portion of the requirements. This rating makes the Contractor subject to the default or cancellation for cause provisions of the contract.

The report shall also list all discrepancies found during the review period. The Contractor shall be provided with a copy of the report and may respond in writing if he takes exception to the report or wishes to comment on the report. Contractor performance reviews and subsequent reports will be used in determining the suitability of contract extension.

#### **2.41 Substitution of Personnel – N/A**

#### **2.42 Ownership of Work – N/A**

#### **2.43 Condition of Trade-In Equipment – N/A**

#### **2.44 Conditions of Trade-In Shipment and Purchase Payment – N/A**

#### **2.45 Verification of Employment Status**

Any Contractor/Consultant assigned to perform responsibilities under its contract with a State agency is required to utilize the US Department of Homeland Security's E-Verify system (per Executive Order Number 11-02) to verify the employment eligibility of: (a) all persons employed during the contract term by the Contractor to perform employment duties within Florida; and (b) all persons (including subcontractors) assigned by the Contractor to perform work pursuant to the contract with the State agency.

E-VERIFY Affirmation Statement must be completed and submitted with Bidder's response to this ITB.

#### **2.46 Service Organization Controls – N/A**

#### **2.47 Warranties of Usage**

Any estimated quantities listed are for information and tabulation purposes only. No warranty or guarantee of quantities needed is given or implied. It is understood that the Contractor will furnish the City's needs as they arise.

**2.48 Rules and Submittals of Bids**

The signer of the bid must declare that the only person(s), company or parties interested in the proposal as principals are named therein; that the bid is made without collusion with any other person(s), company or parties submitting a bid; that it is in all respects fair and in good faith, without collusion or fraud; and that the signer of the bid has full authority to bind the principal bidder.

**2.49 Bid Tabulations/Intent to Award**

Notice of Intent to Award Contract/Bid, resulting from the City's Formal solicitation process may be found at: <https://www.fortlauderdale.gov/government/departments-a-h/finance/procurement-services/notices-of-intent-to-award>. Tabulations of receipt of those parties responding to a formal solicitation may be found at: <https://www.fortlauderdale.gov/government/departments-a-h/finance/procurement-services/bid-results>, or any interested party may call the Procurement Services Division at 954-828-5933.

**2.50 Public Records**

All bids will become the property of the City. The Bidder's response to the ITB is a public record pursuant to Florida law, which is subject to disclosure by the City under the State of Florida Public Records Law, Florida Statutes Chapter 119.07 ("Public Records Law"). The City shall permit public access to all documents, papers, letters, or other material submitted in connection with this ITB and any resulting Contract to be executed for this ITB, subject to the provisions of Chapter 119.07 of the Florida Statutes. Any language contained in the Bidder's response to the ITB purporting to require confidentiality of any portion of the Bidder's response to the ITB, except to the extent that certain information is in the City's opinion a Trade Secret pursuant to Florida law, shall be void. If a Bidder submits any documents or other information to the City which the Bidder claims is Trade Secret information and exempt from Florida Statutes Chapter 119.07 ("Public Records Laws"), the Bidder shall clearly designate that it is a Trade Secret and that it is asserting that the document or information is exempt. The Bidder must specifically identify the exemption being claimed under Florida Statutes 119.07. The City shall be the final arbiter of whether any information contained in the Bidder's response to the ITB constitutes a Trade Secret. The city's determination of whether an exemption applies shall be final, and the Bidder agrees to defend, indemnify, and hold harmless the city and the city's officers, employees, and agent, against any loss or damages incurred by any person or entity as a result of the city's treatment of records as public records. In the event of Contract award, all documentation produced as part of the Contract shall become the exclusive property of the City.

**IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT [PRRCONTRACT@FORTLAUDERDALE.GOV](mailto:PRRCONTRACT@FORTLAUDERDALE.GOV), 954-828-5002, CITY CLERK'S OFFICE, 100 N. ANDREWS AVENUE, FORT LAUDERDALE, FLORIDA 33301.**

Contractor shall:

1. Keep and maintain public records required by the City in order to perform the service.
2. Upon request from the City's custodian of public records, provide the City with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at

a cost that does not exceed the cost provided in Chapter 119, Florida Statutes (2017), as may be amended or revised, or as otherwise provided by law.

3. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of this contract if the Contractor does not transfer the records to the City.
4. Upon completion of the Contract, transfer, at no cost, to the City all public records in possession of the Contractor or keep and maintain public records required by the City to perform the service. If the Contractor transfers all public records to the City upon completion of this Contract, the Contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the Contractor keeps and maintains public records upon completion of this Contract, the Contractor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the City, upon request from the City's custodian of public records, in a format that is compatible with the information technology systems of the City.

#### **2.51 PCI (Payment Card Industry) Compliance – N/A**

#### **2.52 Pre-Award Inspection**

The City may conduct a pre-award inspection of the bidder's site or hold a pre-award qualification hearing to determine if the bidder is capable of performing the requirements of this bid solicitation.

*END OF SECTION*

## SECTION III - TECHNICAL SPECIFICATIONS/SCOPE OF SERVICES

### 3.0 Project Definition and Objective

- 3.0.1** The City of Fort Lauderdale, Florida hereinafter referred to as the “City”, is seeking competitive bids from qualified Type 1 Rescue providers, hereinafter referred to as the “Bidder”, to provide four (4) Type 1 Rescues as described herein for the City’s Fire Rescue Department, in accordance with the terms and conditions and specifications/scope of services contained in this Invitation to Bid (ITB).
- 3.0.2** All specifications within this document are meant to be minimum, but not all inclusive, list of equipment. Any deviations from what is listed must be notated, explained and if there is a price change due to it then it must be listed as well.
- 3.0.3** The chassis specification will have 3 components.
- 3.0.3.1** Section 3.1 is considered the standard specification and should be used as your price offering. This consists of Freightliner M2 with standard cab configuration.
- 3.0.3.2** Section 3.2 will be chassis specifications to upgrade to a Freightliner M2 in extended cab configuration and should be priced as the cost to upgrade to extended cab configuration and specifications over the price of the base unit in 3.1.1.
- 3.0.3.3** Section 3.3 will be chassis specifications to upgrade to a Freightliner M2 in full 4-door crew cab configuration and should be priced as the cost to upgrade to extended cab configuration and specifications over the price of the base unit in 3.1.1.

### 3.1 Chassis – Freightliner M2 Chassis, Conventional

#### 3.1.1 General Specifications for **Standard Cab** Configuration

- 3.1.1.1** Model Year 2023 or newer
- 3.1.1.2** Set Back Axle
- 3.1.1.3** Left Hand Steering
- 3.1.1.4** Standard Cab Configuration
- 3.1.1.5** Powertrain
- 3.1.1.5.1** **Cummins 6.7L 260HP @ 2,400 RPM**
- 3.1.1.5.2** Cummins CM2450 with on Engine Acumen
- 3.1.1.5.3** 2016 Onboard Diagnostics/2020 EPA/CARB/GHG21 Configuration
- 3.1.1.5.4** Standard Oil Pan
- 3.1.1.5.5** Engine Mounted Oil Check and Fill
- 3.1.1.5.6** Side of Hood Air Intake with NFPA Compliant Ember Screen and Fire Retardant
- 3.1.1.5.7** Donaldson Air Cleaner
- 3.1.1.5.8** Delco 12V 20MT Starter with Integrated Magnetic Switch
- 3.1.1.5.9** Air Powered on/off Fan Clutch
- 3.1.1.5.10** Non-Engine Mounted Cummins Spin-on Filter
- 3.1.1.5.11** Full Flow Oil Filter
- 3.1.1.5.11** 700 Square Inch Aluminum Radiator
- 3.1.1.5.12** Gates Blue Stripe Coolant Hoses, or Equivalent
- 3.1.1.5.13** Constant Tension Hose Clamps for Coolant Hoses
- 3.1.1.5.14** Aluminum Flywheel Housing
- 3.1.1.5.15** Electronic Parameters
- 3.1.1.5.15.1** 75 MPH road speed limit
- 3.1.1.5.15.2** Cruise control speed limit same as road speed limit
- 3.1.1.5.15.3** PTO mode engine RPM limit – 1,100 RPM
- 3.1.1.5.15.4** PTO RPM with cruise set switch – 700 RPM
- 3.1.1.5.15.5** PTO RPM with cruise resume switch – 800 RPM
- 3.1.1.5.15.6** PTO mode cancel vehicle speed – 5 MPH
- 3.1.1.5.15.7** PTO governor ramp rate – 250 RPM per second
- 3.1.1.5.15.8** PTO minimum RPM – 700 RPM
- 3.1.1.5.15.9** Regen inhibit speed threshold – 5 MPH

- 3.1.1.6** Transmission
  - 3.1.1.6.1** Allison 3000EVS Automatic Transmission with PTO Provision
  - 3.1.1.6.2** Allison Vocational Package 170 - Vocational Rating for Emergency Vehicle Applications
  - 3.1.1.6.3** Vehicle Interface Wiring Connector with PDM and Blunt Cuts, At Back Of Cab
  - 3.1.1.6.4** PTO Mounting access on LH Side of Transmission.
  - 3.1.1.6.5** Electronic Transmission Customer Access Connector Firewall Mounted
  - 3.1.1.6.6** Magnetic Plugs, Engine Drain, Transmission Drain, Axle(s) Fill And Drain
  - 3.1.1.6.7** Fuel Sense 2.0 disabled - performance - table based
  - 3.1.1.6.8** Push Button Electronic Shift Control, Dash Mounted
  - 3.1.1.6.9** Transmission Prognostics - Enabled 2013
  - 3.1.1.6.10** Water to Oil Transmission Cooler, in radiator end tank
  - 3.1.1.6.11** Transmission Oil Check and Fill with electronic oil level check
  - 3.1.1.6.12** Synthetic Transmission Fluid (TES-295 Compliant)
- 3.1.1.7** Electrical System
  - 3.1.1.7.1** Four (4) Minimum 1,900CCA, 350RC, Threaded Stud Batteries
  - 3.1.1.7.2** Standard Battery Jumpers
  - 3.1.1.7.3** LH Battery Box frame mounted, as far aft as possible, no greater than 60 inches back of cab
  - 3.1.1.7.4** LN 12V 320AMP 4962PA Pad Mount Alternator
- 3.1.1.8** Exhaust System
  - 3.1.1.8.1** RH Outboard Vertical Mounted Exhaust/Aftertreatment System Assembly Engine After Treatment Device, Automatic Over the Road Active Regeneration and Dash Mounted Single Regeneration Request/Inhibit Switch
  - 3.1.1.8.2** Standard Exhaust System Length
  - 3.1.1.8.3** RH Vertical Tailpipe, Exit Behind Cab
  - 3.1.1.8.4** Six (6) Gallon Diesel Exhaust Fluid Tank
  - 3.1.1.8.5** 100% Diesel Exhaust Fluid Fill
  - 3.1.1.8.6** LH Medium Duty Standard Diesel Exhaust Fluid Tank Location
- 3.1.1.9** Air System
  - 3.1.1.9.1** Cummins Turbocharged 18.7CFM Air Compressor with Internal Safety Valve
  - 3.1.1.9.2** Standard Mechanical Air Compressor Governor
  - 3.1.1.9.3** Air Compressor Discharge Line
- 3.1.1.10** Front Axle and Components
  - 3.1.1.10.1** Detroit DA-F-8.0-2 8,0000 lbs. FC1 72.0 KPI/3.74 Drop Single Front Axle
  - 3.1.1.10.2** Bosch Hydraulic Pin-Slide Disc Front Brakes
  - 3.1.1.10.3** Fire and Emergency Service, non-asbestos front lining front disc rotors
  - 3.1.1.10.4** Vented Front Hub Caps with Window, center and side plugs-oil
  - 3.1.1.10.5** Standard spindle nuts for all axles
  - 3.1.1.10.6** TRW THP-45 Power Steering/Pump
  - 3.1.1.10.7** Two (2) quart see through power steering reservoir
- 3.1.1.11** Front Suspension
  - 3.1.1.11.1** 8,000 lb. Taperleaf Front Suspension
  - 3.1.1.11.2** Maintenance Free Rubber Bushings Front Suspension
  - 3.1.1.11.3** Front Shock Absorbers
- 3.1.1.12** Rear Axle and Components
  - 3.1.1.12.1** Detroit DA-RS-17.5-2, 17,500 lb L. Series Single Rear Axle
  - 3.1.1.12.2** Rear Axle Ratio of 4.10:1
  - 3.1.1.12.3** Iron Rear Axle Carrier with Standard Axle Housing
  - 3.1.1.12.4** MXL 16T Meritor Extended Lube Main Driveline with Half Round Yokes
  - 3.1.1.12.5** Driver Controlled Differential Lock Rear Valve for Single Drive Axle
  - 3.1.1.12.6** Blinking lamp with each mode switch, differential unlock with ignition off, active <5 mph

- 3.1.1.12.7 Bosch hydraulic pin-slide disc rear brakes
- 3.1.1.12.8 Fire and emergency severe service non-asbestos rear brake lining
- 3.1.1.12.9 Rear Disc Brake Rotors
- 3.1.1.12.10 Rear oil seals
- 3.1.1.12.11 Rear axle mounted air operated park brake
- 3.1.1.12.12 Mineral SAE 80/90 rear axle lube
- 3.1.1.13 Rear Suspension
  - 3.1.1.13.1 A LiquidSpring LLC kneeling Compressible Liquid Adaptive Suspension System (LCLASS) shall be provided and installed on the rear axle of the chassis. It shall include a heavy duty, high capacity 12V power module with a fluid reservoir, designed to bolt on the chassis frame rail. The fill time for the kneeling feature shall not exceed 20 seconds. GAWR 15,000. The system shall be wired to kneel whenever the left rear entry door is opened. When the door is closed, the system shall automatically return to designed ride height. Chassis must be ordered to allow the installation of the LCLASS.
- 3.1.1.14 Brake System
  - 3.1.1.14.1 Hydraulic Brake Package with Optional Air Supply
  - 3.1.1.14.2 Wabco hydraulic 4S/4M ABS without traction control
  - 3.1.1.14.3 Standard air system pressure protection system
  - 3.1.1.14.4 BW AD-9SI brake line air dryer with heater
  - 3.1.1.14.5 Air dryer mounted under hood
  - 3.1.1.14.6 One (1) aluminum air brake reservoir mounted inside rail
  - 3.1.1.14.7 Clear frame rails from back of cab to front rear suspension bracket, both rails outboard
  - 3.1.1.14.8 BW DV-2 auto drain valve without heater on all tanks
- 3.1.1.15 Trailer Connections
  - 3.1.1.15.1 Upgraded chassis multiplexing unit
  - 3.1.1.15.2 Upgraded bulkhead multiplexing unit
- 3.1.1.16 Wheelbase & Frame
  - 3.1.1.16.1 Wheelbase 174" (4,425 MM)
  - 3.1.1.16.2 11/32x3-1/2x10-3/16 in. steel frame (8.73mmx258.8/0.344x10.19 in.) 80ksi
  - 3.1.1.16.3 Rear Frame Overhang 61" (1,700 MM)
  - 3.1.1.16.4 Square end of frame
  - 3.1.1.16.5 Front closing crossmember
  - 3.1.1.16.6 Standard weight engine crossmember
  - 3.1.1.16.7 Standard crossmember back of transmission
  - 3.1.1.16.8 Standard midship #1 crossmember(s)
  - 3.1.1.16.9 Standard rearmost crossmember
  - 3.1.1.16.10 Standard suspension crossmember
- 3.1.1.17 Chassis Equipment
  - 3.1.1.17.1 Omit front bumper, customer installed special bumper
  - 3.1.1.17.2 Front tow hooks, frame mounted
  - 3.1.1.17.3 Fender and front of hood mounted front mudflaps
  - 3.1.1.17.4 Grade 8 threaded hex headed frame fasteners
  - 3.1.1.17.5 Level frame rails (+1%, 0%) when chassis is loaded to front and rear suspension
- 3.1.1.18 Fuel Tanks
  - 3.1.1.18.1 Aft fuel tank with left fill
  - 3.1.1.18.2 Detroit fuel/water separator with water in fuel sensor and hand primer
  - 3.1.1.18.3 Equiflo inboard fuel system
  - 3.1.1.18.4 High temperature reinforced nylon fuel line
  - 3.1.1.18.5 In tank fuel level sender(s)



**3.1.1.19** Wheels & Tires**3.1.1.19.1** Front Axle**3.1.1.19.1.1** Michelin XZE 245/70R19.5 16 ply radial front tires**3.1.1.19.1.2** Conmet preset iron front hubs**3.1.1.19.1.3** Alcoa 76542x 19.5x6.75 8-hub pilot 4.72 inset 8-hand aluminum disc front wheels, polished, include mounting nuts**3.1.1.19.2** Rear Axle**3.1.1.19.2.1** Michelin XDS2 245/70R19.5 16 ply radial rear tires**3.1.1.19.2.2** Conmet preset iron rear hubs**3.1.1.19.2.3** Alcoa 76542x aluminum outside, Accuride 50180 steel inside; 19.5x6.75 8-hub pilot disc rear wheels, polished outside of outer wheel**3.1.1.19.2.4** Nylon wheel guards between rear dual wheels, inner valve extension, outboard air with stabilizer, include mounting nuts**3.1.2** Cab Interior**3.1.2.1** Opal gray vinyl interior**3.1.2.2** Standard HVAC ducting**3.1.2.3** Heater, defroster and air conditioner**3.1.2.4** Gray/charcoal flat dash**3.1.2.5** Main HVAC controls with recirculation switch**3.1.2.6** (1) Valeo heavy duty and (1) Sanden compact refrigerant compressors**3.1.2.7** Solid-state circuit protection and fuses**3.1.2.8** 12V negative ground electrical system**3.1.2.9** Dome door activate LH and RH dual reading lights, forward cab of roof**3.1.2.10** LH and RH electric door locks**3.1.2.11** Basic (11) ISRI high back air suspension driver's seat with mechanical lumbar and integrated cushion extension**3.1.2.12** Basic high back air suspension passenger seat with mechanical lumbar and integrated cushion extension**3.1.2.13** Black Cordura plus cloth driver and passenger seat cover**3.1.2.14** High visibility orange seatbelts**3.1.2.15** Adjustable tilt and telescoping steering column**3.1.2.16** 4-spoke 18-inch (450mm) steering wheel**3.1.2.17** Driver and passenger interior sun visors**3.1.2.18** Woodgrain driver and center instrument panel**3.1.2.19** Engine remote interface with park brake and neutral interlocks**3.1.2.20** Black gauge bezels**3.1.2.21** Low air pressure indicator light and audible alarm**3.1.2.22** Engine compartment mounted air restriction indicator with graduations, with warning light in dash**3.1.2.23** Electronic cruise control with switches in LH switch panel**3.1.2.24** Key operated ignition switch and integral start position; 4 position off/run/start/accessory**3.1.2.25** ICU3S, 132x48 display with diagnostics, 28 LED warning lamps and data linked**3.1.2.26** Heavy duty onboard diagnostics interface connector located below LH dash**3.1.2.27** 2-inch electric fuel gauge**3.1.2.28** Engine remote interface connector in engine compartment**3.1.2.29** Electrical engine coolant temperature gauge**3.1.2.30** 2-inch transmission oil temperature gauge**3.1.2.31** Engine and trip hour meters integral within driver display**3.1.2.32** Electric engine oil pressure gauge**3.1.2.33** AM/FM/WB world tuner radio with Bluetooth, USB and aux inputs, J1939**3.1.2.34** Dash mounted radio, two (2) radio speakers in cab, AM/FM antenna

- 3.1.2.35 Electronic MPH speedometer with secondary kph scale, without odometer standard vehicle speed sensor
- 3.1.2.36 Electronic 3000 RPM tachometer
- 3.1.2.37 Ignition switch-controlled engine stop
- 3.1.2.38 Two (2) foot switches: one (1) officer air horn and one (1) driver air horn
- 3.1.2.39 Digital voltage display integral with driver display
- 3.1.2.40 Single electric windshield wiper motor with delay
- 3.1.2.41 Marker light switch integral with headlight switch
- 3.1.2.42 Alternating flashing headlamp system with body builder-controlled engagement
- 3.1.2.43 One valve parking brake system with dash valve control auto neutral and warning indicator
- 3.1.2.44 Self-canceling turn signal switch with dimmer, washer/wiper and hazard in handle
- 3.1.2.45 Integral electronic turn signal flasher with hazard lamps overriding stop lamps
- 3.1.2.46 Interior convenience package

### 3.1.3 Cab Exterior

- 3.1.3.1 106" BBC flat roof aluminum conventional cab with rubber cab mounts
- 3.1.3.2 Cab roof reinforcements for roof mounted components
- 3.1.3.3 LH and RH exterior grab handles with single rubber insert
- 3.1.3.4 Hood mounted chromed plastic grille with chrome air intake grille
- 3.1.3.5 Fiberglass hood with hoodliner
- 3.1.3.6 Dual 25" round stutter tone hood mounted air horns
- 3.1.3.7 Dual electric horns with horn shields
- 3.1.3.8 Door locks and ignition switch keyed the same, quantity of 4 included
- 3.1.3.9 LED aerodynamic marker lights
- 3.1.3.10 Integral factory LED headlights/marker assembly with chrome bezel
- 3.1.3.11 Headlights off with ignition off
- 3.1.3.12 LH and RH bright finish convex mirrors mounted under primary mirrors
- 3.1.3.13 RH down view mirror
- 3.1.3.14 Dual level cab entry steps on both sides
- 3.1.3.15 No Rear Window
- 3.1.3.16 Tinted door glass LH and RH with tinted non-operating wing windows
- 3.1.3.17 RH and LH electric powered windows, passenger switches mounted on door(s)
- 3.1.3.18 One (1) piece solar green glass windshield
- 3.1.3.19 Two (2) gallon windshield washer reservoir, frame mounted

### 3.1.4 Color

- 3.1.4.1 Cab color: 00835390EY Race Red
- 3.1.4.2 Polyurethane chassis paint
- 3.1.4.3 Standard E coat/undercoating

## 3.2 Specifications for Optional Extended Cab Configuration

- 3.2.1.1 Model Year 2023 or newer
- 3.2.1.2 Set Back Axle
- 3.2.1.3 Left Hand Steering
- 3.2.1.4 Extended Cab Configuration – 132" BBC High-Roof Extended Aluminum Conventional Cab
- 3.2.1.5 Powertrain
  - 3.2.1.5.1 **Cummins L9 270HP @ 2,400 RPM**
  - 3.2.1.5.2 Cummins CM2450 with on Engine Acumen
  - 3.2.1.5.3 2016 Onboard Diagnostics/2020 EPA/CARB/GHG21 Configuration
  - 3.2.1.5.4 Standard Oil Pan
  - 3.2.1.5.5 Engine Mounted Oil Check and Fill
  - 3.2.1.5.6 Side of Hood Air Intake with NFPA Compliant Ember Screen and Fire Retardant
  - 3.2.1.5.7 Donaldson Air Cleaner
  - 3.2.1.5.8 Delco 12V 20MT Starter with Integrated Magnetic Switch

- 3.2.1.5.9** Air Powered on/off Fan Clutch
- 3.2.1.5.10** Non-Engine Mounted Cummins Spin-on Filter
- 3.2.1.5.11** Full Flow Oil Filter
- 3.2.1.5.11** 700 Square Inch Aluminum Radiator
- 3.2.1.5.12** Gates Blue Stripe Coolant Hoses, or Equivalent
- 3.2.1.5.13** Constant Tension Hose Clamps for Coolant Hoses
- 3.2.1.5.14** Aluminum Flywheel Housing
- 3.2.1.5.15** Electronic Parameters
  - 3.2.1.5.15.1** 75 MPH road speed limit
  - 3.2.1.5.15.2** Cruise control speed limit same as road speed limit
  - 3.2.1.5.15.3** PTO mode engine RPM limit – 1,100 RPM
  - 3.2.1.5.15.4** PTO RPM with cruise set switch – 700 RPM
  - 3.2.1.5.15.5** PTO RPM with cruise resume switch – 800 RPM
  - 3.2.1.5.15.6** PTO mode cancel vehicle speed – 5 MPH
  - 3.2.1.5.15.7** PTO governor ramp rate – 250 RPM per second
  - 3.2.1.5.15.8** PTO minimum RPM – 700 RPM
  - 3.2.1.5.15.9** Regen inhibit speed threshold – 5 MPH
- 3.2.1.6** Transmission
  - 3.2.1.6.1** Allison 3000EVS Automatic Transmission with PTO Provision
  - 3.2.1.6.2** Allison Vocational Package 170 - Vocational Rating for Emergency Vehicle Applications
  - 3.2.1.6.3** Vehicle Interface Wiring Connector with PDM and Blunt Cuts, at Back Of Cab
  - 3.2.1.6.4** PTO Mounting access on LH Side of Transmission.
  - 3.2.1.6.5** Electronic Transmission Customer Access Connector Firewall Mounted
  - 3.2.1.6.6** Magnetic Plugs, Engine Drain, Transmission Drain, Axle(s) Fill And Drain
  - 3.2.1.6.7** Fuel Sense 2.0 disabled - performance - table based
  - 3.2.1.6.8** Push Button Electronic Shift Control, Dash Mounted
  - 3.2.1.6.9** Transmission Prognostics - Enabled 2013
  - 3.2.1.6.10** Water to Oil Transmission Cooler, in radiator end tank
  - 3.2.1.6.11** Transmission Oil Check and Fill with electronic oil level check
  - 3.2.1.6.12** Synthetic Transmission Fluid (TES-295 Compliant)
- 3.2.1.7** Electrical System
  - 3.2.1.7.1** Four (4) Minimum 1,900CCA, 350RC, Threaded Stud Batteries
  - 3.2.1.7.2** Standard Battery Jumpers
  - 3.2.1.7.3** LH Battery Box frame mounted, as far aft as possible, no greater than 60 inches back of cab
  - 3.2.1.7.4** LN 12V 320AMP 4962PA Pad Mount Alternator
- 3.2.1.8** Exhaust System
  - 3.2.1.8.1** RH Outboard Vertical Mounted Exhaust/Aftertreatment System Assembly Engine After Treatment Device, Automatic Over the Road Active Regeneration and Dash Mounted Single Regeneration Request/Inhibit Switch
  - 3.2.1.8.2** Standard Exhaust System Length
  - 3.2.1.8.3** RH Vertical Tailpipe, Exit Behind Cab
  - 3.2.1.8.4** Six (6) Gallon Diesel Exhaust Fluid Tank
  - 3.2.1.8.5** 100% Diesel Exhaust Fluid Fill
  - 3.2.1.8.6** LH Medium Duty Standard Diesel Exhaust Fluid Tank Location
- 3.2.1.9** Air System
  - 3.2.1.9.1** Cummins Turbocharged 18.7CFM Air Compressor with Internal Safety Valve
  - 3.2.1.9.2** Standard Mechanical Air Compressor Governor
  - 3.2.1.9.3** Air Compressor Discharge Line
  - 3.2.1.10** Front Axle and Components
  - 3.2.1.10.1** Detroit DA-F-10.0-3 10,000# FF1 71.5KPI/3.74 Drop Single Front Axle

- 3.2.1.10.2 Front Disc brake rotors
- 3.2.1.10.3 Fire and Emergency Service, non-asbestos front lining front disc rotors
- 3.2.1.10.4 Vented Front Hub Caps with Window, center and side plugs-oil
- 3.2.1.10.5 Standard spindle nuts for all axles
- 3.2.1.10.6 TRW THP-60 Power Steering/Pump
- 3.2.1.10.7 Two (2) quart see through power steering reservoir
- 3.2.1.11 Front Suspension
  - 3.2.1.11.1 10,000 lb. Taperleaf Front Suspension
  - 3.2.1.11.2 Maintenance Free Rubber Bushings Front Suspension
  - 3.2.1.11.3 Front Shock Absorbers
- 3.2.1.12 Rear Axle and Components
  - 3.2.1.12.1 MS-17-14X 17,500# R-Series Quiet Ride Single Rear Axle
  - 3.2.1.12.2 Rear Axle Ratio of 4.33:1
  - 3.2.1.12.3 Iron Rear Axle Carrier with Standard Axle Housing
  - 3.2.1.12.4 MXL 17T Meritor Extended Lube Main Driveline with Half Round Yokes
  - 3.2.1.12.5 Driver Controlled Differential Lock Rear Valve for Single Drive Axle
  - 3.2.1.12.6 Blinking lamp with each mode switch, differential unlock with ignition off, active <5 mph
  - 3.2.1.12.7 Bosch hydraulic pin-slide disc rear brakes
  - 3.2.1.12.8 Fire and emergency severe service non-asbestos rear brake lining
  - 3.2.1.12.9 Rear Disc Brake Rotors
  - 3.2.1.12.10 Rear oil seals
  - 3.2.1.12.11 Rear axle mounted air operated park brake
  - 3.2.1.12.12 Mineral SAE 80/90 rear axle lube
- 3.2.1.13 Rear Suspension
  - 3.2.1.13.1 A LiquidSpring LLC kneeling Compressible Liquid Adaptive Suspension System (LCLASS) shall be provided and installed on the rear axle of the chassis. It shall include a heavy duty, high capacity 12V power module with a fluid reservoir, designed to bolt on the chassis frame rail. The fill time for the kneeling feature shall not exceed 20 seconds. GAWR 15,000. The system shall be wired to kneel whenever the left rear entry door is opened. When the door is closed, the system shall automatically return to designed ride height. Chassis must be ordered to allow the installation of the LCLASS.
- 3.2.1.14 Brake System
  - 3.2.1.14.1 Hydraulic Brake Package with Optional Air Supply
  - 3.2.1.14.2 Wabco hydraulic 4S/4M ABS without traction control
  - 3.2.1.14.3 Standard air system pressure protection system
  - 3.2.1.14.4 BW AD-9SI brake line air dryer with heater
  - 3.2.1.14.5 Air dryer mounted under hood
  - 3.2.1.14.6 One (1) aluminum air brake reservoir mounted inside rail
  - 3.2.1.14.7 Clear frame rails from back of cab to front rear suspension bracket, both rails outboard
  - 3.2.1.14.8 BW DV-2 auto drain valve without heater on all tanks
- 3.2.1.15 Trailer Connections
  - 3.2.1.15.1 Upgraded chassis multiplexing unit
  - 3.2.1.15.2 Upgraded bulkhead multiplexing unit
- 3.2.1.16 Wheelbase & Frame
  - 3.2.1.16.1 Wheelbase 221" (5625 MM)
  - 3.2.1.16.2 9/32x3-7/16x10-1/16 in. steel frame (7.14mmx255.6/0.281x10.06 in.) 80ksi
  - 3.2.1.16.3 Rear Frame Overhang 70" (1750 MM)
  - 3.2.1.16.4 Square end of frame
  - 3.2.1.16.5 Front closing crossmember

- 3.2.1.16.6** Standard weight engine crossmember
- 3.2.1.16.7** Standard crossmember back of transmission
- 3.2.1.16.8** Standard midship #1 crossmember(s)
- 3.2.1.16.9** Standard rearmost crossmember
- 3.2.1.16.10** Standard suspension crossmember
- 3.2.1.17** Chassis Equipment
  - 3.2.1.17.1** Omit front bumper, customer installed special bumper
  - 3.2.1.17.2** Front tow hooks, frame mounted
  - 3.2.1.17.3** Fender and front of hood mounted front mudflaps
  - 3.2.1.17.4** Grade 8 threaded hex headed frame fasteners
  - 3.2.1.17.5** Level frame rails (+1%, 0%) when chassis is loaded to front and rear suspension
- 3.2.1.18** Fuel Tank
  - 3.2.1.18.1** Aft fuel tank with left fill
  - 3.2.1.18.2** Detroit fuel/water separator with water in fuel sensor and hand primer
  - 3.2.1.18.3** Equiflo inboard fuel system
  - 3.2.1.18.4** High temperature reinforced nylon fuel line
  - 3.2.1.18.5** In tank fuel level sender(s)
- 3.2.1.19** Wheels & Tires
  - 3.2.1.19.1** Front Axle
    - 3.2.1.19.1.1** Michelin XZE 11R22.5 14 ply radial front tires
    - 3.2.1.19.1.2** Conmet preset iron front hubs
    - 3.2.1.19.1.3** Alcoa 77362X 19.5x7.50 10-hub 5.23 inset aluminum disc front wheels, polished outside, include mounting nuts (qty 2)
  - 3.2.1.19.2** Rear Axle
    - 3.2.1.19.2.1** Michelin XDS2 245/70R19.5 16 ply radial rear tires
    - 3.2.1.19.2.2** Conmet preset iron rear hubs
    - 3.2.1.19.2.3** Alcoa 77362X 19.5x7.50 10-hub pilot aluminum disc rear wheels, polished outside of outer wheel (qty 4)
    - 3.2.1.19.2.4** Nylon wheel guards between rear dual wheels, inner valve extension, outboard air with stabilizer, include mounting nuts
- 3.2.2** Cab Interior
  - 3.2.2.1** Opal gray vinyl interior
  - 3.2.2.2** Standard HVAC ducting
  - 3.2.2.3** Heater, defroster and air conditioner
  - 3.2.2.4** Gray/charcoal flat dash
  - 3.2.2.5** Main HVAC controls with recirculation switch
  - 3.2.2.6** (1) Valeo heavy duty and (1) Sanden compact refrigerant compressors
  - 3.2.2.7** Solid-state circuit protection and fuses
  - 3.2.2.8** 12V negative ground electrical system
  - 3.2.2.9** Dome door activate LH and RH dual reading lights, forward cab of roof
  - 3.2.2.10** LH and RH electric door locks
  - 3.2.2.11** Basic (1) ISRI high back air suspension driver's seat with mechanical lumbar and integrated cushion extension
  - 3.2.2.12** Basic high back air suspension passenger seat with mechanical lumbar and integrated cushion extension
  - 3.2.2.13** Black Cordura plus cloth driver and passenger seat cover
  - 3.2.2.14** High visibility orange seatbelts
  - 3.2.2.15** Adjustable tilt and telescoping steering column
  - 3.2.2.16** 4-spoke 18 inch (450mm) steering wheel
  - 3.2.2.17** Driver and passenger interior sun visors
  - 3.2.2.18** Woodgrain driver and center instrument panel
  - 3.2.2.19** Engine remote interface with park brake and neutral interlocks

- 3.2.2.20** Black gauge bezels
- 3.2.2.21** Low air pressure indicator light and audible alarm
- 3.2.2.22** Engine compartment mounted air restriction indicator with graduations, with warning light in dash
- 3.2.2.23** Electronic cruise control with switches in LH switch panel
- 3.2.2.24** Key operated ignition switch and integral start position; 4 position off/run/start/accessory
- 3.2.2.25** ICU3S, 132x48 display with diagnostics, 28 LED warning lamps and data linked
- 3.2.2.26** Heavy duty onboard diagnostics interface connector located below LH dash
- 3.2.2.27** 2-inch electric fuel gauge
- 3.2.2.28** Engine remote interface connector in engine compartment
- 3.2.2.29** Electrical engine coolant temperature gauge
- 3.2.2.30** 2-inch transmission oil temperature gauge
- 3.2.2.31** Engine and trip hour meters integral within driver display
- 3.2.2.32** Electric engine oil pressure gauge
- 3.2.2.33** AM/FM/WB world tuner radio with Bluetooth, USB and aux inputs, J1939
- 3.2.2.34** Dash mounted radio, two (2) radio speakers in cab, AM/FM antenna
- 3.2.2.35** Electronic MPH speedometer with secondary kph scale, without odometer standard vehicle speed sensor
- 3.2.2.36** Electronic 3000 RPM tachometer
- 3.2.2.37** Ignition switch-controlled engine stop
- 3.2.2.38** Two (2) foot switches: one (1) officer air horn and one (1) driver air horn
- 3.2.2.39** Digital voltage display integral with driver display
- 3.2.2.40** Single electric windshield wiper motor with delay
- 3.2.2.41** Marker light switch integral with headlight switch
- 3.2.2.42** Alternating flashing headlamp system with body builder-controlled engagement
- 3.2.2.43** One valve parking brake system with dash valve control auto neutral and warning indicator
- 3.2.2.44** Self-canceling turn signal switch with dimmer, washer/wiper and hazard in handle
- 3.2.2.45** Integral electronic turn signal flasher with hazard lamps overriding stop lamps
- 3.2.2.46** Interior convenience package
- 3.2.3** Cab Exterior
  - 3.2.3.1** 132" BBC high-roof aluminum conventional cab with rubber cab mounts
  - 3.2.3.2** Cab roof reinforcements for roof mounted components
  - 3.2.3.3** LH and RH exterior grab handles with single rubber insert
  - 3.2.3.4** Hood mounted chromed plastic grille with chrome air intake grille
  - 3.2.3.5** Fiberglass hood with hood liner
  - 3.2.3.6** Dual 25" round stutter tone hood mounted air horns
  - 3.2.3.7** Dual electric horns with horn shields
  - 3.2.3.8** Door locks and ignition switch keyed the same, quantity of 4 included
  - 3.2.3.9** LED aerodynamic marker lights
  - 3.2.3.10** Integral factory LED headlights/marker assembly with chrome bezel
  - 3.2.3.11** Headlights off with ignition off
  - 3.2.3.12** LH and RH bright finish convex mirrors mounted under primary mirrors
  - 3.2.3.13** RH down view mirror
  - 3.2.3.14** Dual level cab entry steps on both sides
  - 3.2.3.15** No Rear Window
  - 3.2.3.16** Tinted door glass LH and RH with tinted non-operating wing windows
  - 3.2.3.17** RH and LH electric powered windows, passenger switches mounted on door(s)
  - 3.2.3.18** One (1) piece solar green glass windshield
  - 3.2.3.19** Two (2) gallon windshield washer reservoir, frame mounted
- 3.2.4** Color
  - 3.2.4.1** Cab color: 00835390EY Race Red

- 3.2.4.2 Polyurethane chassis paint
- 3.2.4.3 Standard E coat/undercoating

### 3.3 Specifications for **Optional Crew Cab** Configuration

- 3.3.1.1 Model Year 2023 or newer
- 3.3.1.2 Set Back Axle
- 3.3.1.3 Left Hand Steering
- 3.3.1.4 Crew Cab Configuration – 154” BBC High-Roof Aluminum Conventional Crew Cab
- 3.3.1.5 Powertrain
  - 3.3.1.5.1 Cummins L9 280HP
  - 3.3.1.5.2 Cummins CM2450 with on Engine Acumen
  - 3.3.1.5.3 2016 Onboard Diagnostics/2020 EPA/CARB/GHG21 Configuration
  - 3.3.1.5.4 Standard Oil Pan
  - 3.3.1.5.5 Engine Mounted Oil Check and Fill
  - 3.3.1.5.6 Side of Hood Air Intake with NFPA Compliant Ember Screen and Fire Retardant
  - 3.3.1.5.7 Donaldson Air Cleaner
  - 3.3.1.5.8 Delco 12V 20MT Starter with Integrated Magnetic Switch
  - 3.3.1.5.9 Air Powered on/off Fan Clutch
  - 3.3.1.5.10 Non-Engine Mounted Cummins Spin-on Filter
  - 3.3.1.5.11 Full Flow Oil Filter
  - 3.3.1.5.11 700 Square Inch Aluminum Radiator
  - 3.3.1.5.12 Gates Blue Stripe Coolant Hoses, or Equivalent
  - 3.3.1.5.13 Constant Tension Hose Clamps for Coolant Hoses
  - 3.3.1.5.14 Aluminum Flywheel Housing
  - 3.3.1.5.15 Electronic Parameters
    - 3.3.1.5.15.1 75 MPH road speed limit
    - 3.3.1.5.15.2 Cruise control speed limit same as road speed limit
    - 3.3.1.5.15.3 PTO mode engine RPM limit – 1,100 RPM
    - 3.3.1.5.15.4 PTO RPM with cruise set switch – 700 RPM
    - 3.3.1.5.15.5 PTO RPM with cruise resume switch – 800 RPM
    - 3.3.1.5.15.6 PTO mode cancel vehicle speed – 5 MPH
    - 3.3.1.5.15.7 PTO governor ramp rate – 250 RPM per second
    - 3.3.1.5.15.8 PTO minimum RPM – 700 RPM
    - 3.3.1.5.15.9 Regen inhibit speed threshold – 5 MPH
- 3.3.1.6 Transmission
  - 3.3.1.6.1 Allison 3000EVS Automatic Transmission with PTO Provision
  - 3.3.1.6.2 Allison Vocational Package 170 - Vocational Rating for Emergency Vehicle Applications
  - 3.3.1.6.3 Vehicle Interface Wiring Connector with PDM and Blunt Cuts, at Back Of Cab
  - 3.3.1.6.4 PTO Mounting on LH Side of Transmission
  - 3.3.1.6.5 Electronic Transmission Customer Access Connector Firewall Mounted
  - 3.3.1.6.6 Magnetic Plugs, Engine Drain, Transmission Drain, Axle(s) Fill And Drain
  - 3.3.1.6.7 Fuel Sense 2.0 disabled - performance - table based
  - 3.3.1.6.8 Push Button Electronic Shift Control, Dash Mounted
  - 3.3.1.6.9 Transmission Prognostics - Enabled 2013
  - 3.3.1.6.10 Water to Oil Transmission Cooler, in radiator end tank
  - 3.3.1.6.11 Transmission Oil Check and Fill with electronic oil level check
  - 3.3.1.6.12 Synthetic Transmission Fluid (TES-295 Compliant)
- 3.3.1.7 Electrical System
  - 3.3.1.7.1 Four (4) Minimum 1,900CCA, 350RC, Threaded Stud Batteries
  - 3.3.1.7.2 Standard Battery Jumpers
  - 3.3.1.7.3 LH Battery Box frame mounted, as far aft as possible, no greater than 60 inches back of cab

- 3.3.1.7.4** LN 12V 320AMP 4962PA Pad Mount Alternator
- 3.3.1.8** Exhaust System
  - 3.3.1.8.1** RH Outboard Vertical Mounted Exhaust/Aftertreatment System Assembly Engine After Treatment Device, Automatic Over the Road Active Regeneration and Dash Mounted Single Regeneration Request/Inhibit Switch
  - 3.3.1.8.2** Standard Exhaust System Length
  - 3.3.1.8.3** RH Vertical Tailpipe, Exit Behind Cab
  - 3.3.1.8.4** Six (6) Gallon Diesel Exhaust Fluid Tank
  - 3.3.1.8.5** 100% Diesel Exhaust Fluid Fill
  - 3.3.1.8.6** LH Medium Duty Standard Diesel Exhaust Fluid Tank Location
- 3.3.1.9** Air System
  - 3.3.1.9.1** Cummins Turbocharged 18.7CFM Air Compressor with Internal Safety Valve
  - 3.3.1.9.2** Standard Mechanical Air Compressor Governor
  - 3.3.1.9.3** Air Compressor Discharge Line
- 3.3.1.10** Front Axle and Components
  - 3.3.1.10.1** Detroit DA-F-10.0-3 10,000# FF1 71.5KPI/3.74 Drop Single Front Axle
  - 3.3.1.10.2** Bosch Hydraulic Pin-slide Disc Front brakes
  - 3.3.1.10.3** Fire and Emergency Service, non-asbestos front lining front disc rotors
  - 3.3.1.10.4** Vented Front Hub Caps with Window, center and side plugs-oil
  - 3.3.1.10.5** Standard spindle nuts for all axles
  - 3.3.1.10.6** TRW THP-60 Power Steering/Pump
  - 3.3.1.10.7** Two (2) quart see through power steering reservoir
- 3.3.1.11** Front Suspension
  - 3.3.1.11.1** 10,000 lb. Taperleaf Front Suspension
  - 3.3.1.11.2** Maintenance Free Rubber Bushings Front Suspension
  - 3.3.1.11.3** Front Shock Absorbers
- 3.3.1.12** Rear Axle and Components
  - 3.3.1.12.1** MS-17-14X 17,500# R-Series Quiet Ride Single Rear Axle
  - 3.3.1.12.2** Rear Axle Ratio of 4.33:1
  - 3.3.1.12.3** Iron Rear Axle Carrier with Standard Axle Housing
  - 3.3.1.12.4** MXL 17T Meritor Extended Lube Main Driveline with Half Round Yokes
  - 3.3.1.12.5** Driver Controlled Differential Lock Rear Valve for Single Drive Axle
  - 3.3.1.12.6** Blinking lamp with each mode switch, differential unlock with ignition off, active <5 mph
  - 3.3.1.12.7** Bosch hydraulic pin-slide disc rear brakes
  - 3.3.1.12.8** Fire and emergency severe service non-asbestos rear brake lining
  - 3.3.1.12.9** Rear Disc Brake Rotors
  - 3.3.1.12.10** Rear oil seals
  - 3.3.1.12.11** Rear axle mounted air operated park brake
  - 3.3.1.12.12** Mineral SAE 80/90 rear axle lube
- 3.3.1.13** Rear Suspension
  - 3.3.1.13.1** A LiquidSpring LLC kneeling Compressible Liquid Adaptive Suspension System (LCLASS) shall be provided and installed on the rear axle of the chassis. It shall include a heavy duty, high capacity 12V power module with a fluid reservoir, designed to bolt on the chassis frame rail. The fill time for the kneeling feature shall not exceed 20 seconds. GAWR 15,000. The system shall be wired to kneel whenever the left rear entry door is opened. When the door is closed, the system shall automatically return to designed ride height. Chassis must be ordered to allow the installation of the LCLASS.



- 3.3.1.14 Brake System**
  - 3.3.1.14.1** Hydraulic Brake Package with Optional Air Supply
  - 3.3.1.14.2** Wabco hydraulic 4S/4M ABS without traction control
  - 3.3.1.14.3** Standard air system pressure protection system
  - 3.3.1.14.4** BW AD-9SI brake line air dryer with heater
  - 3.3.1.14.5** Air dryer mounted under hood
  - 3.3.1.14.6** One (1) aluminum air brake reservoir mounted inside rail
  - 3.3.1.14.7** Clear frame rails from back of cab to front rear suspension bracket, both rails outboard
  - 3.3.1.14.8** BW DV-2 auto drain valve without heater on all tanks
- 3.3.1.15 Trailer Connections**
  - 3.3.1.15.1** Upgraded chassis multiplexing unit
  - 3.3.1.15.2** Upgraded bulkhead multiplexing unit
- 3.3.1.16 Wheelbase & Frame**
  - 3.3.1.16.1** Wheelbase 221" (5625 MM)
  - 3.3.1.16.2** 9/32x3-7/16x10-1/16 in. steel frame (7.14mmx255.6/0.281x10.06 in.) 80ksi
  - 3.3.1.16.3** Rear Frame Overhang 70" (1750 MM)
  - 3.3.1.16.4** Square end of frame
  - 3.3.1.16.5** Front closing crossmember
  - 3.3.1.16.6** Standard weight engine crossmember
  - 3.3.1.16.7** Standard crossmember back of transmission
  - 3.3.1.16.8** Standard midship #1 crossmember(s)
  - 3.3.1.16.9** Standard rearmost crossmember
  - 3.3.1.16.10** Standard suspension crossmember
- 3.3.1.17 Chassis Equipment**
  - 3.3.1.17.1** Omit front bumper, customer installed special bumper
  - 3.3.1.17.2** Front tow hooks, frame mounted
  - 3.3.1.17.3** Fender and front of hood mounted front mudflaps
  - 3.3.1.17.4** Grade 8 threaded hex headed frame fasteners
  - 3.3.1.17.5** Level frame rails (+1%, 0%) when chassis is loaded to front and rear suspension
- 3.3.1.18 Fuel Tank**
  - 3.3.1.18.1** Aft fuel tank with left fill
  - 3.3.1.18.2** Detroit fuel/water separator with water in fuel sensor and hand primer
  - 3.3.1.18.3** Equiflo inboard fuel system
  - 3.3.1.18.4** High temperature reinforced nylon fuel line
  - 3.3.1.18.5** In tank fuel level sender(s)
- 3.3.1.19 Wheels & Tires**
  - 3.3.1.19.1 Front Axle**
    - 3.3.1.19.1.1** Michelin XZE 11R22.5 14 ply radial front tires
    - 3.3.1.19.1.2** Conmet preset iron front hubs
    - 3.3.1.19.1.3** Alcoa 77362X 19.5x7.50 10-hub 5.23 inset aluminum disc front wheels, polished outside, include mounting nuts (qty 2)
  - 3.3.1.19.2 Rear Axle**
    - 3.3.1.19.2.1** Michelin XDS2 11R22.5 14 ply radial rear tires
    - 3.3.1.19.2.2** Conmet preset iron rear hubs
    - 3.3.1.19.2.3** Alcoa 77362X 19.5x7.50 10-hub pilot aluminum disc rear wheels, polished outside of outer wheel (qty 4)
    - 3.3.1.19.2.4** Nylon wheel guards between rear dual wheels, inner valve extension, outboard air with stabilizer, include mounting nuts
- 3.3.2 Cab Interior**
  - 3.3.2.1** Opal gray vinyl interior
  - 3.3.2.2** Standard HVAC ducting

- 3.3.2.3** Heater, defroster, and air conditioner
  - 3.3.2.4** Gray/charcoal flat dash
  - 3.3.2.5** Main HVAC controls with recirculation switch
  - 3.3.2.6** (1) Valeo heavy duty and (1) Sanden compact refrigerant compressors
  - 3.3.2.7** Solid-state circuit protection and fuses
  - 3.3.2.8** 12V negative ground electrical system
  - 3.3.2.9** Dome door activate LH and RH dual reading lights, forward cab of roof
  - 3.3.2.10** LH and RH electric door locks
  - 3.3.2.11** Basic (11) ISRI high back air suspension driver's seat with mechanical lumbar and integrated cushion extension
  - 3.3.2.12** Basic high back air suspension passenger seat with mechanical lumbar and integrated cushion extension
  - 3.3.2.13** Black Cordura plus cloth driver and passenger seat cover
  - 3.3.2.14** High visibility orange seatbelts
  - 3.3.2.15** Adjustable tilt and telescoping steering column
  - 3.3.2.16** 4-spoke 18-inch (450mm) steering wheel
  - 3.3.2.17** Driver and passenger interior sun visors
  - 3.3.2.18** Woodgrain driver and center instrument panel
  - 3.3.2.19** Engine remote interface with park brake and neutral interlocks
  - 3.3.2.20** Black gauge bezels
  - 3.3.2.21** Low air pressure indicator light and audible alarm
  - 3.3.2.22** Engine compartment mounted air restriction indicator with graduations, with warning light in dash
  - 3.3.2.23** Electronic cruise control with switches in LH switch panel
  - 3.3.2.24** Key operated ignition switch and integral start position; 4 position off/run/start/accessory
  - 3.3.2.25** ICU3S, 132x48 display with diagnostics, 28 LED warning lamps and data linked
  - 3.3.2.26** Heavy duty onboard diagnostics interface connector located below LH dash
  - 3.3.2.27** 2-inch electric fuel gauge
  - 3.3.2.28** Engine remote interface connector in engine compartment
  - 3.3.2.29** Electrical engine coolant temperature gauge
  - 3.3.2.30** 2-inch transmission oil temperature gauge
  - 3.3.2.31** Engine and trip hour meters integral within driver display
  - 3.3.2.32** Electric engine oil pressure gauge
  - 3.3.2.33** AM/FM/WB world tuner radio with Bluetooth, USB and aux inputs, J1939
  - 3.3.2.34** Dash mounted radio, two (2) radio speakers in cab, AM/FM antenna
  - 3.3.2.35** Electronic MPH speedometer with secondary kph scale, without odometer standard vehicle speed sensor
  - 3.3.2.36** Electronic 3000 RPM tachometer
  - 3.3.2.37** Ignition switch-controlled engine stop
  - 3.3.2.38** Two (2) foot switches: one (1) officer air horn and one (1) driver air horn
  - 3.3.2.39** Digital voltage display integral with driver display
  - 3.3.2.40** Single electric windshield wiper motor with delay
  - 3.3.2.41** Marker light switch integral with headlight switch
  - 3.3.2.42** Alternating flashing headlamp system with body builder-controlled engagement
  - 3.3.2.43** One valve parking brake system with dash valve control auto neutral and warning indicator
  - 3.3.2.44** Self-canceling turn signal switch with dimmer, washer/wiper and hazard in handle
  - 3.3.2.45** Integral electronic turn signal flasher with hazard lamps overriding stop lamps
  - 3.3.2.46** Interior convenience package
- 3.3.3 Cab Exterior**
- 3.3.3.1** 132" BBC high-roof aluminum full 4-door conventional cab with rubber cab mounts
  - 3.3.3.3** Cab roof reinforcements for roof mounted components

- 3.3.3.3 LH and RH exterior grab handles with single rubber insert
- 3.3.3.4 Hood mounted chromed plastic grille with chrome air intake grille
- 3.3.3.5 Fiberglass hood with hood liner
- 3.3.3.6 Dual 25" round stutter tone hood mounted air horns
- 3.3.3.7 Dual electric horns with horn shields
- 3.3.3.8 Door locks and ignition switch keyed the same, quantity of 4 included
- 3.3.3.9 LED aerodynamic marker lights
- 3.3.3.10 Integral factory LED headlights/marker assembly with chrome bezel
- 3.3.3.11 Headlights off with ignition off
- 3.3.3.12 LH and RH bright finish convex mirrors mounted under primary mirrors
- 3.3.3.13 RH down view mirror
- 3.3.3.14 Dual level cab entry steps on both sides
- 3.3.3.15 No Rear Window
- 3.3.3.16 Tinted door glass LH and RH with tinted non-operating wing windows
- 3.3.3.17 RH and LH electric powered windows, passenger switches mounted on door(s)
- 3.3.3.18 One (1) piece solar green glass windshield
- 3.3.3.19 Two (2) gallon windshield washer reservoir, frame mounted

### 3.3.4 Color

- 3.3.4.1 Cab color: 00835390EY Race Red
- 3.3.4.2 Polyurethane chassis paint
- 3.3.4.3 Standard E coat/undercoating

## 3.4 Ambulance Body - Exterior

3.4.1 The body length to be considered is 176" - 180" Module 75" Headroom – Mounted on 2023 Freightliner M2 Chassis. All dimensions are based on 176" body. If a body length exceeds 176" then all body measurement and chassis specs shall reflect the necessary changes and should be noted.

3.4.2 Each exterior storage compartment will include two adjustable shelves. The shelves shall be mounted on four sections of aluminum Unistrut and be fully adjustable.

### 3.4.3 Exterior, Aluminum Body Construction

3.4.3.1 The module body shall consist of an electric welded, unitized aluminum roll cage structure throughout. The framework shall consist of six individual frames that are constructed in such a manner to ensure squareness and flatness before being assembled into a box configuration.

3.4.3.2 All material used on any frame member, corner and upper cove shall be high strength aluminum alloy. This alloy shall be 6061-T6 with tensile strength of 45,000 psi. The use of lesser materials such as 6063 is not allowed due to its lesser mechanical properties. The ultimate strength of 6061-T6 is approximately 25% greater than 6063 alloy. Material certifications showing 6061-T6 alloy shall be provided upon request to verify the use of this material for all frame members.

3.4.3.3 All welding done on any part of the frame structure shall be done by welders tested in welding this alloy and type of structure. Welders testing certifications shall be provided upon request. All butt welds shall have 100% weld penetration using a filler wire approved for this alloy aluminum. All welding shall be done in accordance with American Welding Society (AWS), Structural Welding Code.

### 3.4.4 Floor Frame

3.4.4.1 The main floor structure shall consist of a primary load bearing support frame. This primary frame shall consist of 2"x3"x.250" square wall tubular aluminum. This primary frame is of critical importance to the structural integrity of the module. The use of channel sections or frame members less than 2" x 3" x .125" is not acceptable due to its moment of inertia and section modulus calculations are less than minimum acceptable. The secondary support frames of the floor frames shall consist of 2"x 2" x .250" (square) and 1 1/2" x 2" x .125" (rectangular) wall tubular aluminum. Areas between exterior compartments and sub-floor support members shall be a minimum of 2"x 2" x .250 (square).

3.4.4.4 A heat shield made of 22 GA galvanized steel is attached to the underside of the Floor

Frame. The shield is creased for stiffness and deflects the heat of the exhaust from the modular body. The heat shield is required for compliance with Ford QVM and good practice design.

### 3.4.5 Vertical Frames

**3.4.5.1** The vertical left and right-side frames shall consist of heavy-duty custom aluminum extrusion members. The vertical corner and horizontal upper "**Main Beam**" shall consist of an extrusion with the minimum dimensions of 5 3/4 by 3 7/8 inches with a cross section across the web of .1875 inches. Built into the inside edge of the vertical and horizontal section shall be an area where the exterior door seal shall mate. This door jamb area shall be designed into and be part of the main corner extrusion. Door jamb sections which are welded in place are unacceptable due to the possibility of the welds cracking which in turn leads to door and or exterior paint cracking and failure. The inside door jamb which is part of the structural member (not a welded section) shall have minimum dimensions of 1 inch wide by 1 1/4 inches deep and have minimum side vertical wall thicknesses of .1875 inches. This door seal and jamb section shall be recessed behind the exterior surface of the body approximately 7/8 of an inch to allow the door seal to be placed outboard of the door latches and provide for a full uninterrupted hollow core door seal mounted on every door. Each door of the vehicle shall seal on this integrated section of the extrusion. The outer exterior mounted finish trim shall be sealed to the body during fabrication. The sealant used shall be a high strength automotive product which can be painted. All parts which utilize sealant shall not be structural members but just trim sections. The Federal Motor Vehicle Safety Standards (FMVSS) 206 Rated door closure bolt shall be mounted directly to this structural member and not to a welded door jamb section. Door alignment shall be maintained by discrete alignment grooves extruded in the custom shape. This designed in feature eliminates the need for excessive adjustment allowance which could become maintenance issues at some future time. The area of the structural member which is in contact with the roof box beams shall incorporate a 1/2-inch flange to carry the load of the roof structure and resulting static load when applied. This support flange is utilized to prevent the need for the roof and roof structure to be held in place by the welds only.

**3.4.5.2** The main support, structural members around the door openings shall incorporate a built-in door seal and jamb surface like the one found around the main corner extrusion, with all the strength and design features the same. Two distinctly different types of structural members shall be used for different types of door configurations. Doors which are placed in the modular body which are not adjacent to any other door shall utilize an extrusion with the overall dimensions of 3 inches wide by 2 inches deep. This extrusion shall form the two vertical and two horizontal door seal, and jamb surfaces. Doors of this type which are placed on the forward most or rear most positions of the body, shall utilize the main corner extrusion with its built-in door seal to act as one side of the structural door seal and jamb surface. For the same reason a door which extends the full height of the modular body shall utilize the upper most main corner extrusion for the top horizontal door seal and jam surface. Door configurations which have two doors adjacent to one another shall utilize a structural body extrusion with minimum dimensions of 4 inches wide by 2 inches deep. Between each door shall be a minimum of a 2-inch structural wall and floor support. Under no circumstances shall two adjacent compartments do not include this 2-inch structural member. Like previous door structural extrusions this member shall incorporate two built in door sealing surfaces without the need for welding additional parts as stated previously.

**3.4.5.3** The remaining structural members of the vertical side frames shall utilize 2 inch by 2 inch by .125-inch-thick wall and 1-1/2 inch by 2 inch by .125-inch-thick wall structural box beam members. All members of the side vertical frames shall be placed at a maximum of 12 inches on center. Closer spacing shall be utilized in areas of critical strength requirements.

- 3.4.5.4** Along the floor line, shall be 2 inch by 2 inch by .1875-inch structural angle attached to the side frame, which then during assembly into a module shall be fully welded to the floor frame. These members shall act as the main attachment point for the side frames, where the vertical frames meet the floor frame, and at this point of attachment full welds shall be utilized.
- 3.4.5.5** The front and rear frames shall be fabricated utilizing the same main structural corner extrusion as the side vertical frame along the horizontal top edge. The remaining structural members of this frame shall utilize 2 inch by 2 inch and 2 inch by 1-1/2 inch by .125-inch structural box beam members. These structural members shall be placed on a minimum of 20 inches on center. A closer spacing shall be utilized in areas of critical strength. Rear facing door openings shall utilize custom aluminum extrusions in place of box beam members as required. The door openings shall be exactly as specified for the doors located on the vertical side frames as described previously.
- 3.4.5.6** The roof frame of the vehicle shall be fabricated from 2 inch by 1 1/2 inch by .125-inch box beam structural members. The transverse frame members shall be spaced a maximum of 12 inches on center.
- 3.4.5.7** The six frames, as previously stated, shall be assembled into a module, including the floor, front, rear, two sides and roof sub frame before any of the exterior skin is applied. The structural framework shall be a self-supporting body and not require the use of the exterior skin for structural integrity. The body shall be capable of supporting the required static load of the vehicle per SAE J 3057 specifications.
- 3.4.5.8** The floor frame shall be welded to the two vertical side frames at the area of the floor, in front and behind the wheel box area. This welding shall be 100% continuous in these areas.
- 3.4.5.9** The full perimeter welding and center bonding of the exterior panels shall enhance the overall strength of the modular body.
- 3.4.5.10** Per Federal Motor Vehicle Safety standards, the vehicle shall be designed to protect the occupants or equipment from side impacts. This shall be accomplished by: (a) Two side impact rails with minimum dimensions of, 2 inch by 5 inch by .125 inch 6061-T6 aluminum alloy, structural box beam member located approximately 24 inches from the lower side rail; and approximately 18 inches from the upper side (b) full structural members which extend across the body in the transverse direction between the compartments. Modular bodies that do not provide this protection at each compartment location shall be cause for rejection of the vehicle.
- 3.4.5.11** In addition to the vertical body sides, each door with a vertical height greater than 30 inches, on the left and right sides of the vehicle shall incorporate a 2 inch by 5 inch by .125 inch 6061-T6 aluminum alloy, structural box beam members. Each member shall be welded to the interior door extrusions. The structural members shall be placed approximately 24 inches from the lower side rail. There shall be no exceptions to side impact protection in modular body doors.
- 3.4.6 Exterior Panels**
- 3.4.6.1** The two sides, front and rear shall be covered with .125" thick 5052-H34 stretcher leveled aluminum alloy sheet with tensile strength of 38,000 psi. The center areas of the sheets shall be applied using "Very High Bond" structural bonding tape.
- 3.4.6.2** Before any tape is applied to the structure, both the sheets and the structure shall be thoroughly cleaned with an approved solvent. In addition to the structural bonding tape the exterior skin shall be welded along the perimeter corners and along all door openings. This welding is only done in areas that will not show dimple on the finished body module.
- 3.4.6.3** The side panels of the vehicle shall be single piece and not welded or fabricated.
- 3.4.6.4** Additional welding shall be done at the lower rub rail area where the body exterior panels meet the lower structural support members. This welding is done to completely bond the exterior panel to the substructure in an area where weld dimples will not show on the finished vehicle.

- 3.4.6.5** The roof sheet shall be a one-piece sheet of .125" 5052-H34 aluminum. There shall be no seams in the roof panel or any overlapping seams. The roof sheet shall be fully welded to the roof sub frame from the inside. The outside perimeter of the roof sheet where it meets the upper cove shall be 100% welded prior to painting. This 100% welding eliminates the need for caulks or sealers and the possibilities of water leaks into the body.
- 3.4.6.6** The exterior body corners and coves shall be an extruded aluminum section made of 6061-T6 aluminum. Both the corners and roof corner extrusions shall have a 1 5/8" radius hollow extrusion design with an inside flat mating surface. The exterior surface shall be designed to form a smooth transition at all corners of the body. The corners shall be designed in such a way as to provide an interlocking surface with the "Main Beam" extrusion. This surface contact shall provide a weld surface to attach the corners to the main beam. The process of attachment shall include threaded mechanical fasteners to pull the two surfaces tight prior to the welding. This provides a completely tight interface surface. To enhance the corner waterproof integrity a recessed sealant groove shall be incorporated into the exterior flanged surface which is in contact with the body and roof exterior panels. This groove allows the surfaces to be sealed to prevent water infiltration and pre-vent corrosion.
- 3.4.6.7** The upper four corners of the module shall have a cast aluminum ball corner that matches the radius of the corner extrusions. This ball corner shall be completely 100% welded in place to pre-vent water leaks and finished to have a smooth transition at the corner.
- 3.4.6.8** High polished .100 aluminum diamond plate stone guards shall be installed on the front body corners. The guards shall be one piece & contoured to fit the 1 5/8" outside radius of the body. The stone guards shall be removable for repair in event of damage. The edges of the diamond plate panels shall be sealed with a closed cell gasket around the perimeter, to prevent moisture from getting behind panels. All panels shall be removal if required.
- 3.4.6.9** High polished .100 aluminum diamond plate stone guard shall be installed on the front body. The guard shall be one piece & fit the width of the body between the corner extrusions. The stone guard shall be removable for repair in event of damage. The edges of the diamond plate panels shall be sealed with a closed cell gasket around the perimeter, to prevent moisture from getting behind panels. All panels shall be removal if required.
- 3.4.6.10** "C" Shaped rub rails shall be installed on the lower body skirt panels under the door line with open Flanges pointing away from the body. The rub rails shall be Custom Aluminum Channel. The ends shall be chamfered, and all sharp edges sanded. The aluminum shall be protected with an anodized Bright-Dip finish. The rub rails shall be attached to the body with .625 deep rubber spacers that hold the channel off the body, additional spacers shall be added over the entry/egress areas. This spaced design prevents debris from accumulating between the Rub Rails and the painted body. Designs that are not offset from the body are unacceptable due to their tendency to accumulate debris. The rub rails shall span the left and right side of the ambulance body on either side of the rear wheel opening.
- 3.4.7** Exterior Compartment Construction
- 3.4.7.1** The exterior compartments shall be fabricated from fully enclosed aluminum sheets. The floor and ceiling material shall be fabricated from .125" aluminum sheets. Each compartment shall be its own independent unit with two sides, rear, top and bottom, and not share a common wall with an adjoining compartment. All vertical seams of the compartment shall be continuous one-piece bend or 100% welded construction. Overlapping caulked vertical seams are unacceptable. Each compartment unit shall be welded to the inside of the structural door jamb.
- 3.4.7.2** All compartments shall have AudioGuard® acoustical coating applied to the back side surface for increased sound deadening.
- 3.4.7.3** All compartments shall incorporate a flush sweep out design. No compartment floor lips, or door gaskets shall come above or protrude into the compartment opening at all.
- 3.4.6.4** The rear and two side walls of the interior surface of the exterior compartments shall be

- fabricated from 100% welded, .080" polished aluminum diamond plate panels.
- 3.4.6.5** All shelves as specified in exterior compartments shall be fabricated from .125" formed aluminum diamond plate with a 1" flange bent up on both the front and rear of the shelf. The shelf shall be mounted to heavy duty UNISTRUT shelving standards to allow for full adjustment. The front edge of the shelf shall be finished with a Trim-Lock snap on vinyl edging.
- 3.4.6.6** Areas within the body that have equipment mounted or items bolted shall have additional structural members welded in place. The areas are as follows:
- 3.4.6.6.1** A .250" thick 1.25" by 2.5" structural angle to mount squad bench and seat belt restraints shall be installed on the side interior walls, including left side attendant seat. The entire assembly shall be tested and certified to F.M.V.S.S. 210. Documentation shall be provided upon request.
- 3.4.6.6.2** Cot mounts shall be mounted/bolted to structural members welded within the floor structure. Floor structure shall be tested and meet SAE J3102. Documentation shall be provided upon request.
- 3.4.6.6.3** Rear facing attendant seat pedestal shall be mounted to a reinforced structural channel members between the frame members of the floor structure. The entire assembly shall be tested to and certified to F.M.V.S.S. 210. Documentation shall be provided upon request.
- 3.4.6.6.4** The oxygen bottle retention bracket shall be bolted to a reinforcing structure within the storage compartment. Under No Circumstances shall an oxygen bottle be secured to interior cabinets only; they must always be bolted to a structural member of the module body. The entire assembly shall be tested to SAE J3043 and A.M.D. - 003.
- 3.4.6.6.5** Reinforcing plates for ceiling dome lights shall be installed between the roof frame members.
- 3.4.6.6.6** Double laminated reinforcing plates shall be installed in the front body frame for added strength in the areas where the body is bolted to the cab, in addition to structural angles in the front frame above the cab roof.
- 3.4.7** Wheel Well Construction
- 3.4.7.1** The rear wheel well housings shall be designed to OEM manufacturers recommended clearances. The inner well shall be formed to follow the contours of the wheel and be fabricated from .125 aluminum sheet and extend down to the lower body skirt level. Tolerances shall include clearance for full tire chains. All wheel well housings shall be completely sealed and undercoated prior to mounting the body.
- 3.4.7.2** SAE J3057 Compliant
- 3.4.8** Door Construction
- 3.4.8.1** All doors including personnel and compartment doors shall be constructed of a custom designed extrusion made of 6061- T6 aluminum alloy, used in combination with a "Bent Box Pan" exterior door panel. The bent exterior door panel shall be fabricated from .125" aluminum alloy panels that have the exact properties and quality as the exterior side panels. Each door pan shall be manufactured with an inside corner bend of approximately 3/4". The custom extrusion shall be 45- degree miter cut and assembled to fit into the 3/4" recessed area of the pan. The framed extrusion shall be welded prior to bonding into the door pan. A 2-component acrylic adhesive with a minimum tensile strength of 3000PSI (per ISO 527-3) shall be applied between the door pan and the entire extrusion to bond and seal each door.
- 3.4.8.2** The door shall have an overall dimension of 2 1/2", with the primary door seal being mounted to the door at the 3/4" dimension of the door exterior pan. The door latching hardware shall be mounted inboard of the seal in all cases. The door shall have gussets welded from the inside and shall be reinforced in areas where windows are to be installed and for areas where heavy objects might be hung from them.
- 3.4.8.3** Door configurations requiring double doors, shall utilize a structural member attached to

the adjoining edge of the second opening door. This structural member shall match the seal surface of the door jambs on the balance of the door opening. Add-on or bolted double door dividers are unacceptable.

- 3.4.9** The door shall incorporate a continuous seal permanently attached around the entire perimeter of the door. Automotive latching hardware shall not interrupt the seal surface. The seal shall be a custom designed hollow core seal specifically designed for hinged doors. Flat open or closed cell solid rubber "Static" seals are not acceptable for hinged doors.
- 3.4.10** Each door shall be hung with stainless steel continuous hinges. The hinge shall have a 1/4" pin which is staked every six inches to prevent the pin from sliding. The hinges shall be held to the door and to the body using 1/4-20 stainless steel threaded machine fasteners every, 4" on both sides, use of rivets on hinges is not acceptable. All hinges installed on the body shall include a closed cell foam barrier between the dissimilar stainless steel hinge surface and the painted aluminum body. A closed cell gasket shall be added between hinge and body to seal any gaps caused by securing the hinge.
- 3.4.11** Door Latch Hardware
- 3.4.11.1** Every door shall utilize an automotive type rotary slam latch. All doors used for personnel access shall utilize two latches; one located on the top of the door the other at the bottom. All compartment doors taller than 70" shall utilize two latches; one located on the top of the door and the other at the bottom. Single point hardware for this type or any other type of door hardware is unacceptable. The latches shall meet FMVSS 206 standard and shall not be modified in any way to jeopardize its integrity. Latch pins without heads intact shall be cause for immediate rejection of vehicle.
- 3.4.11.2** All rotary slam latches shall be activated by adjustable steel rods. Cable activated rotary latches are unacceptable. All door hardware and rod assemblies shall be designed to minimize hardware rattle.
- 3.4.11.3** Compartments that require double opening doors shall incorporate (2) point latches on first closing door in addition to second closing door. The latches shall be activated by a handle in **each** compartment door on the exterior which matches the other exterior handles on the vehicle.
- 3.4.11.4** All door hardware, including rods and latches, shall be concealed within the inner door panel. Doors with any exposed latching hardware are unacceptable.
- 3.4.12** Anodized extruded aluminum drip moldings shall be provided above all exterior compartment and entrance doors. The moldings shall be attached without the use of unsightly screws and shall be easily replaceable if damaged. This molding shall direct excess water away from the compartment and entrance door opening.
- 3.4.13** Heavy duty tape on type rubber (Styrene butadiene rubber (SBR) bumpers shall be installed on all compartments that may meet one another.
- 3.4.14** Trimark Power Locking Entrance Door Handles
- 3.4.14.1** The right side and right and left rear entrance doors shall incorporate a Trimark 1875 automotive style free floating paddle handle. This handle shall activate an F.M.V.S.S. approved rotary style automotive door latch, two latches per door. Single point door latches for entrance doors are unacceptable. The exterior handle shall have a chrome housing and chrome release paddle with non-slip tape in inner surface for secure opening of the door. Mounting hardware shall not be exposed to the outside for security reasons. The inside handles on all entrance doors including the left rear door, shall be a matching automotive design, flush paddle release type designed specifically for use with this system. Door hardware shall incorporate a rod activated power door locking system. All rods used for interior door release mechanisms shall incorporate anti-rattle devices to prevent door hardware noise.
- 3.4.14.2** All entrance doors shall incorporate a power locking unlocking feature. The control of the power door locks shall be from a switch located on the driver's console. All handles shall have key activated override of power locking feature.
- 3.4.14.3** The door system shall include emergency override latch levers in upper and lower



locations of each entrance door. Levers are visible with red coating and intended for emergency use in the event of a non-functioning handle.

**3.4.15 Trimark Power Locking Compartment Door Handles**

**3.4.15.1** All compartment doors shall incorporate Trimark 1875 automotive style free floating paddle handles. This handle shall activate an F.M.V.S.S. approved rotary style automotive door latch. The exterior handle shall have a chrome housing and chrome release paddle with non-slip tape on inner surface for secure opening of the door. Mounting hardware shall not be exposed to the outside for security reasons. Door hardware shall incorporate a rod activated power door locking system.

**3.4.15.2** All compartment doors shall incorporate a power locking - unlocking feature. The control of the door locks shall be from a switch located on the driver's console. All handles shall have key activated override of power locking feature.

**3.4.15.3 Keyless Entry Touchpad, Rear Entrance Door**

**3.4.15.3.1** Keyless entry touchpad will be mounted to right of rear entrance door, between turn signal and window level light.

**3.4.16** All hinged compartment doors and right-side entrance door shall incorporate a pneumatic gas spring door holder. The mounting bracket, piston end for the door side, shall be secured to the 1/4" gusset within the door. The door holder gas spring end shall be attached to compartment ceiling. The gas spring shall be installed with a 10-degree pitch downward to improve function and extend life of gas spring.

**3.4.17 Compartments**

**3.4.17.1** Drivers side "A, B, C", (Passenger side E") COMPARTMENTS "A, C, E" TO CHECK PAST 90 DEGREES

**3.4.17.2** The Gas spring door check on compartment "A, B, C, E" shall be set beyond the standard 90-degree, open default position to allow easier access into this compartment.

**3.4.17.3** "D" Passenger side Right Front Roll -up COMPARTMENT TO CHECK PAST 90 DEGREES

**3.4.17.4** The Gas spring door check on compartment "D" shall be set beyond the standard 90-degree, open default position to allow easier access into this compartment. This allows needed clearance for battery and pull-out tray slides (where applicable) and allows for ease of moving larger equipment in and out of the right front in/out access

**3.4.18** The rear entrance doors shall incorporate a Polished Aluminum Cast Products Grabber door holder device. This device shall hold the door at approximately 170 degrees. For each door, (1) set of door holders shall be securely bolted to the top edge of the doors and the vehicle substructure of the body.

**3.4.19 Exterior Compartments - dimensions reflect wall to wall measurements.**

**3.4.19.1** Unistrut rails shall be installed in all the compartment such that shelves may be installed in the future.

**3.4.19.2** Compartment "A" - Left front compartment with the dimensions of 20"w x 75"h x 21.75"d.

**3.4.19.2.1** The Oxygen bracket as described shall be installed within compartment "A".

**3.4.19.2.2** An adjustable shelf shall be added to the left front exterior compartment. The shelf shall be mounted on four sections of aluminum Unistrut and be fully adjustable.

**3.4.19.3** Compartment "B" – 46"w x 42"h x 21.75"d

**3.4.19.4** Compartment "C" – Left rear half high compartment with the dimensions 30.5"w x 39"h x 21.75"d.

**3.4.19.4.1** Compartment "C" shall be equipped with a full height divider. The divider shall be fabricated from a 0.125" aluminum panel with flanges on top and bottom and back edge for better attachment to the compartment. Dividers will be finished off with a "Powder Coat" paint process.

**3.4.19.5** Compartment "D" – Passenger side right front FULL HEIGHT

**3.4.19.5.1** Right front inside/outside storage compartment, with the width and height dimensions of 20"w x 86"h. The exterior door shall be full height to allow

- for in/out access to both the lower and upper portion of the interior right front cabinet. Above the vehicle floor level, access shall be from either the exterior or the interior of the vehicle with a depth of 33". Below floor level shall be outside only access, of the lower compartment with a depth of 14".
- 3.4.19.5.2** Compartment "D" Roll-up door, full height in/out access. It is our preference that the door lock on compartment "D" be electric.
- 3.4.19.6** Compartment "E" – Right rear compartment with the dimensions 24"w x 83"h x 21.75"d. The compartment shall provide inside outside access from the center isle of the vehicle.
- 3.4.19.6.1** Compartment "E" shall be equipped with a full height divider. The divider shall be fabricated from a 0.125" aluminum panel with flanges on top and bottom and back edge for better attachment to the compartment. Dividers will be finished off with a "Powder Coat" paint process.
- 3.4.19.6.2** The right rear full height compartment shall be provided with (2) black rubber friction mounts for securing two (2) backboards. The mount shall be fabricated from an "L" shaped (45"h x 16"d) 2" aluminum channel. The channel will be bolted to the interior compartment. The rubber friction mount shall be press fitted onto each side of the 2" channel, full length. Proper spacing shall be provided to allow for Long Boards with runners.
- 3.4.19.6.3** The right rear full height compartment shall be provided with a rubber coated "Ferno EXL" Scoop hanger for hanging of a Ferno Washington #65 Scoop Stretcher or Ferno #65 EXL Scoop Stretcher.
- 3.4.19.6.4** The compartment as listed shall be equipped with a full height divider 12" off front wall, with one side for long equipment storage and two 10.25" adjustable shelves on the other side of the divider. The divider shall be fabricated from a 0.125" aluminum panel with flanges on top and bottom and back edge for better attachment to the compartment. Dividers will be finished off with a "Powder Coat" paint process. The shelves shall be mounted on four sections of aluminum Unistrut and be fully adjustable.
- 3.4.19.7** Compartment "J"
- 3.4.19.7.1** Right side skirt compartment behind right rear wheel with the dimensions 22"w x 25"h x 20"d.
- 3.4.19.7.2** The compartment description as roll-up doors shall be "Roll-O-Matic" Robinson Shutter type. The door shall have a painted finish, full length door seals and nylon shoes on every slat. The tracks and trim shall be anodized. The door shall be configured in the compartment with the front roll design, and a full front lift bar. The lift bar shall have an integral proximity door switch mounted in the handle of the lift bar release mechanism. The door shall include a full-length drip rail above, to aid in rain runoff.
- 3.4.19.8** The body doors shall be key locking. All doors shall be keyed locked and keyed the same.
- 3.4.20** Body Mounting Rubber Donuts, Type I
- 3.4.20.1** The modular ambulance body shall be mounted to the chassis in such a manner to facilitate easy removal for future remounting with other manufacturer's vehicle chassis having the cab to axle dimensions. Mounting devices shall be ten (10) high strength 5/8" Grade 8 bolts, five (4) on each side. Such bolts shall secure the body to the frame via rubber isolation mounting donuts. The rubber donuts shall be mounted to the frame rail of the chassis utilizing steel outriggers secured to the frame with (2) grade 8 bolts on the side and (1) through the donut.
- 3.4.20.2** Frame to body supports are fabricated from ASTM A36 3/8" steel plate with 1/4" steel gussets for maximum strength. Mounting surface for the donut has a reinforced thickness of 7/8". ASTM A36 Steel Plate has a Tensile strength of 58000 to 80000 PSI, and a Yield strength 36000 PSI minimum – which is equal to the chassis frame specifications.

- 3.4.20.3** A full length 2" x 5" x 1/4" mounting channel is attached with Grade 8 bolts through the donut. Body floor frame is fully welded to the mounting channel at all cross members. Floor frame tubes are a minimum of 2" x 2" x .250 (1/4") tubular aluminum 6061T6.
- 3.4.20.4** THIS MOUNTING SYSTEM SHALL MEET OR EXCEED ALL FMVSS REQUIREMENTS.
- 3.4.21** The right and left side skirts of the body, forward of the rear wheels, shall be 3" lower than the right and left skirts aft of the rear wheels. This is to allow easier access into the side entrance door and the left side forward compartment of the vehicle.
- 3.4.22** Stepwell Compartment/ Intermediate Step
- 3.4.22.1** Inside the side entrance door shall be a recessed step well compartment. The compartment shall extend into the body approximately 20 7/8" and be the full width of the side entrance door. An intermediate step shall be fabricated as part of the step well area. This intermediate step shall be an 8 1/2" step from the floor of the step well, and the actual floor of the ambulance shall be another 8 1/2" step.
- 3.4.22.2** The vertical sides of the compartment shall be fabricated from .080 polished aluminum diamond plate. The floor shall include non-skid turtle tile, removable with a drain/sweep out plug for ease of cleaning. The intermediate step shall also be provided with the same nonskid turtle tile on the horizontal stepping surface. Aluminum diamond plate on the floor is unacceptable due to the slippery surface when wet.
- 3.4.22.2.1** The Stepwell compartment shall also provide for recessed storage with access from the side entrance door. The stepwell area shall be integrated into the head of the squad bench resulting in a diamond plate recessed storage area with approximate dimensions of 5"d x 12"w x 24"h. The intermediate step shall be fabricated with a 45-degree angle to allow for easy placement and removal of the portable oxygen cylinders stored in the recessed area.
- 3.4.22.3** The sub-floor of the compartment shall be fabricated from 3/16" aluminum plate to provide a heavy duty walk surface which will not flex under foot. The upper edge where the step well meets the flooring material shall include non-slip polished aluminum threshold trim which is screwed in place.
- 3.4.23** All interior door panels on compartment doors shall be made of brushed aluminum plate held on with threaded fasteners that provide access for repairs or replacement of hardware.
- 3.4.24** The lower edge and sill of side entrance and compartment door openings shall be treated with a heavy duty sprayed on urethane coating. Coating shall continue into the compartment floors and full length of body behind the rub rail. The urethane coating has a coarse texture and is chemical and UV resistant.
- 3.4.25** The exterior compartments shall be vented to the exterior of the vehicle. The vents shall be located in the lower portion of the compartments. Vents are installed to allow air to escape and allow the compartment door to close with ease. The vents are added to an area above floor level to prevent road debris from entering the compartment. The vents shall have a total of 25 square inches.
- 3.4.26** Dri-Dek material, black in color, shall be installed on all floors of the exterior compartments. The Dri-Dek shall be custom cut to fit around oxygen bottles and mounted equipment. The flush sweep-out floor edges shall include the Dri-Dek tapered edges.
- 3.4.27** A .125" rubber mat material shall be installed on all shelves of the exterior compartments. The rubber matting material shall be custom cut to fit each compartment shelf.
- 3.4.28** The floor of the step well compartment shall be lined with nonskid Turtle Tile mat. The mat shall be removable for ease of cleaning.
- 3.4.29** Rear step bumper
- 3.4.29.1** A full length reinforced rear bumper shall be installed on the rear of vehicle. The bumper shall be fabricated from 3" aluminum 6061-T6 structural channel and securely bolted to the vehicle frame using high strength, grade 8, 1/2" bolts. The bumper shall have contoured ends and be covered with polished aluminum diamond plate end caps. In addition, two full end gussets shall be provided to support the bumper ends in the event of minor impact. The gussets shall be fabricated from 3" x 2" x 1/4" structural aluminum tube 6061-T6. No exceptions to size of gussets.

- 3.4.29.2** The bumper shall incorporate a design that allows it to be recessed under the rear of the body. Any rear bumper design that does not have a recessed design shall be unacceptable. The under body recessed bumper design allows the chassis frame to absorb minor impact without any damage to ambulance body.
- 3.4.29.3** The rear step bumper shall incorporate a 44" long by 9 1/2" deep, lift-up center section made of extruded aluminum, "Diamond Back" safety grating. The step shall hinge on a full-length stainless-steel piano hinge. Note: When the step is in the load position the step shall be totally within the exterior of the body and shall not protrude beyond the door sill. The diamond plate riser shall incorporate two (2) 4" illumination lights in 15-degree bezels. The lights will activate when vehicle is in reverse or rear doors open.
- 3.4.30** 4" recessed Lights to activate when vehicle is in reverse or rear doors open.
- 3.4.31** A Transportation Products, Inc. 18"W x 22"H window shall be installed in the side entrance door. It shall have sliding, 31% tinted automotive safety glass and be mounted within an aluminum black powder coated frame. The window shall be completely sealed and held to the door via an inside clamp ring which matches the exterior of the window. The window shall incorporate a sliding removable screen.
- 3.4.32** Two (2) Transportation Products, Inc. 15"W x 22"H windows shall be installed in the rear entrance doors. They shall have sliding automotive 31% tinted safety glass with perforated vinyl with star of life design to provide passenger privacy and thermal relief and be mounted with an aluminum black powder coated frame. The windows shall be completely sealed and held to the door via an inside clamp ring, which matches the exterior of the window. The windows shall also incorporate a sliding removable screen.
- 3.4.33** The side and rear entrance door windows shall be dark privacy tinted with perforated vinyl with star of life design, by the addition of a MYLAR film to the inside of the door windows. The installation shall be free of air bubbles and other defects.
- 3.4.34** Rubber mud flaps shall be provided behind the rear wheels of the vehicle. They shall be Heavy Duty Truck type and bolted to the inner fender liners of the modular body, behind the rear tires.
- 3.4.35** A cab to body pass-thru window shall be installed in the front of the body and rear of cab. In the front of the body the module framework shall be positioned to allow for a minimum opening of 18" wide x 18" high. The opening shall have a full perimeter 5/8" flange on the body side with 2" radius in the corners.
- 3.4.36** The rear of the cab shall be modified by adding a flange to the rear glass center framework section. The frame flange shall have a matching 5/8" flange to align with the opening in the body and provide approximately a 1 3/4" gap between the cab and body for flexing.
- 3.4.37** Attached to the flange shall be an automotive quality EPDM rubber bellows material with steel spring carrier attachments completely sealed at the seam. The seal shall be semi-permanent and removable if required at some future time.
- 3.4.38** Two (2) Heavy duty black rubber dock bumpers shall be installed on the rear bumper ends, (1) each side. The bumpers shall be 2" high, 10" long and protrude 2" outward from rear bumper. The dock bumpers shall be bolted to the structural channel of the rear step bumper.
- 3.4.39** Heavy Duty Rubber, fenderettes shall be installed around the rear wheel opening, sized to allow for proper tire clearance. The fenderettes shall be bolted on for easy removal. All hardware shall be concealed. Exposed mounting hardware is unacceptable.
- 3.4.40** A polished chrome, surface mounted license plate holder shall be installed on the center rear step riser of the ambulance. It shall include (1) LED license plate light activated with the running/headlights of the vehicle.
- 3.4.41** There shall be five (5) station unit number placard holders permanently attached to the body of the truck. One (1) shall be in the front, two (2) along drivers' side, one (1) in rear and one (1) on passenger side. The holders shall be 13"x13" dimensionally to accept a 12"x12" placard insert with a viewable area of 11.5"x11.5". The placement will be confirmed by department personnel prior to installation.
- 3.4.42** The underside of the modular body, including frame members and compartment lower panels shall be undercoated with Audio Guard® Acoustical Coating P8060. The material shall be applied prior to the body being mounted to the chassis to ensure maximum coverage. Material application will be evenly

sprayed to a minimum of 40 mils under body and 80-100 mils in the wheel box and stepwell areas. The back side of the body skin behind the area of the fenderettes will be coated for increased corrosion prevention. As will the back sides of all exterior compartments for additional acoustical insulation.

- 3.4.43** After the body has been mounted to the chassis 40 mils of Audio Guard ® material will be applied under the cab and to the body aluminum sub floor.
- 3.4.44** AUDIOGUARD® ACOUSTIC COATINGS P8060 is a one-component, waterborne, sprayable, coating designed to reduce structure-borne vibrations and associated sound transmission. The characteristics of the coating provide a tough material that can prevent chipping, cracking or marring of painted or unpainted surfaces. The coating is useful wherever a reduction in airborne noise is desired
- 3.4.45** A polished aluminum diamond plate kick panel shall be installed above the rear step bumper and below the rear doors. The panel shall overlap. The step riser panel shall be removable.
- 3.4.46** Polished aluminum diamond plate panels shall be installed on the rear body corners. Panels shall extend to the rear step riser and protect the lower area of the body around the rear recessed bumper step. The panel height shall be approximately 4" in height.
- 3.4.47** Additional trim lock on the side entrance door Second step edge of diamond plate.
- 3.5** Modular Body Interior
- 3.5.1** Cabinet construction
- 3.5.1.1** The interior cabinets of the vehicle shall be completely constructed of 3/4" and 1/2" premium grade, cabinet birch plywood and in non-stress areas 1/4" plywood. Assembly of the cabinets shall be with 1 1/4 inch #8 zinc screws through 1/2 inch plywood and 1 1/2 inch through 3/4 inch plywood. 1 1/4 staples are utilized for both applications. 3/4 inch staples are utilized for 1/4 plywood. The staples are spaced approximately 2 inches apart and the screws should be 6-8 inches apart. All wood-to-wood joints are glued. Each cabinet shall include a reinforced attachment point where it is secured to the vehicle framework. All cabinets shall be attached directly to the vehicle framework and all mounting bolts shall be placed on a maximum of 12" centers for any cabinet.
- 3.5.1.2** All cabinets shall be covered with AEON Enhanced Performance high pressure 1.35mm plastic laminate and trimmed with aluminum moldings for a finished appearance. Raw wood or unfinished edges of any kind including aluminum panels are unacceptable.
- 3.5.1.3** When a full height left front cabinet, full height right rear cabinet, or a full height cabinet in the right front exists in the vehicle, it will have rounded corners of radius 1.5" on the vertical edges. The rounded corner will be constructed from two extrusions made from 6061-T6 aluminum. The interior extrusion is designed to attach two perpendicular sheets of furniture grade laminated plywood. The exterior or visible extrusion will be satin anodized and designed to snap into the interior extrusion, so that it may be replaced if damaged. If the full height left front cabinet, right rear cabinet, or full height cabinet in the right front have specific components preventing the cabinet from incorporating the rounded corner design it will have the edge of the cabinet finished with anodized aluminum three quarter round molding.
- 3.5.1.4** All cabinets shall be labeled to reflect the rated weight capacity in accordance with the requirements of SAE J3058.
- 3.5.2** All walls of the vehicle shall be fabricated using 1/4" plywood covered with color coordinated high pressure AEON enhanced performance plastic laminates. Walls shall be attached to the body framework using threaded fasteners.
- 3.5.3** Adjustable Shelves
- 3.5.3.1** All adjustable shelves within the interior cabinets shall be constructed from 1/2", high-density polyethylene material. The shelves will be mounted to Unistrut shelving standards. Each cabinet shall be equipped with four adjustable standards for each cabinet and have (4) retaining clips for each shelf. The shelf will have 2 securing screws attached to retaining clips. The shelf shall be the full width and depth of the cabinet and shall include a 1" anodized aluminum angle on the shelf front edge, creating a full length 5/8" high retaining lip.

**3.5.4 Hinged Doors**

**3.5.4.1** All hinged doors shall be equipped with hinges and a locking Southco stainless steel positive latching device to prevent opening while in motion. All surfaces of the door including the edges shall be finished to match the interior of the vehicle cabinets.

**3.5.5 Wire Raceway**

**3.5.5.1** A full-length drop-down wire raceway shall be installed down the center of the ceiling. It shall be finished with 1/8" padded vinyl material to match the upholstery in the vehicle. Vehicles which utilize wire raceways above or behind interior cabinets are unacceptable.

**3.5.6 Soffit trim**

**3.5.6.1** A vinyl covered soffit trim piece shall be installed around the perimeter of the interior cabinets where they meet the ceiling. This trim shall be added to allow access to the cabinet mounting bolts and provide a finished transition between the ceiling and cabinet surfaces.

**3.5.7 Cushion and upholstery foam padding**

**3.5.7.1** The foam padding on all head bumpers and upper padded surfaces shall be a Volara 2A, closed cell foam which is laminated and layered to a 1/2" thickness, to provide both compression resistance and compression density. This laminated, closed cell foam creates a padded surface that acts as an air-spring when compressed. This specialty foam naturally resists force and will not "bottom out" upon impact and provides positive resistance to pressures applied in any dimension.

**3.5.7.2** The foam padding on all side attendants, squad-bench seating and all seating backrests shall be a 3" Nimbus open cell foam with a # 1865 grade standard, which provides maximum rigidity while still maintaining comfortable seating upon a variety of weight compression. This grade of open cell foam allows the air to escape the foam under compression, thus providing a comfortable seating surface. Also, the density of the foam does not allow the foam to "bottom out" upon compression. The foam types used have low water absorption and vapor transmission rating and excellent thermal insulation and chemical resistant properties

**3.5.8 Additional Foam Padded Surfaces**

**3.5.8.1** A 1/8" thickness of Volara 2A closed cell foam shall be applied to the radius area of the ceiling. Heat and Air Conditioning duct work to provide a softer surface while enhancing the thermal properties of the heating and cooling system.

**3.5.8.2** The upholstered center section of the side and rear body entrance doors shall also include the 1/8" Volara 2A closed cell foam to provide a uniform appearance and a softer surface with an increase in thermal resistance.

**3.5.9 Modular Body Insulation**

**3.5.9.1** The entire inside surface of the modular body, including walls and ceiling, shall be insulated with a minimum of 1.7" (44mm) thick, AU 6020-2 High Performance Acoustic Thinsulate. The thermal property of this insulation installation is R 9.1.

**3.5.9.2** The insulation shall completely fill the voids between the frame members and the exterior skin. Areas behind heat generating light fixtures shall not be insulated.

**3.5.9.3** In addition to the modular body Thinsulate insulation, the interior surfaces of the rear wheel wells and the back sides of all exterior compartments shall be provided with AUDIOGUARD<sup>®</sup> ACOUSTIC COATINGS P8060 a one-component, waterborne, sprayable, coating designed to reduce structure-borne vibrations and associated sound transmission.

**3.5.9.4** Material application will be evenly sprayed to a minimum of 40 mils under body and 80-100 mils in the wheel box and stepwell areas.

**3.5.9.5** The Interior surfaces of the entrance door panels shall be provided with an adhesive backed composite acoustical sound deadening material. This material is specifically designed for the reduction of transmitted sound in single skin aluminum panels.

**3.5.10 Additional Radiant Barrier, Body Insulation**

**3.5.10.1** The entire inside surface of the modular body, including walls and ceiling, shall be insulated with Reflectix, an additional aluminum faced radiant barrier insulation. This is

to be installed in addition to the Thinsulate insulation to form an extra radiant barrier. The Thermal property of this combined (Thinsulate and reflectix) insulation package is R12.3. Areas behind heat generating light fixtures shall not be insulated. The insulation shall completely fill the voids between the frame members and the exterior skin.

**3.5.11 Modular Body Entrance Door Insulation**

**3.5.11.1** All exterior patient compartment entrance doors shall be sound deadened with a composite acoustical sound deadening material. The internal skin surface of the interior door shall have this material bonded to it. The modular entrance doors shall have an additional thermal insulation of 2" thick "Thinsulate" bonded in place with clearance provided for door hardware.

**3.5.11.2** Interior door panels are provided with vibration isolators for the internal rods connecting the door handles to the latching mechanisms.

**3.5.12 Modular Body Compartment Door Insulation**

**3.5.12.1** All exterior compartment doors shall be insulated, and sound deadened with a slow rise foam in place insulation material which has an R value of 6.2. The interior skin surface of the door shall have this material sprayed and bonded to it. The use of fiberglass or undercoating type material is unacceptable in this exterior door application.

**3.5.13 Floor**

**3.5.13.1** The floor shall consist of ¾" Expanded PVC Polymer material. This material shall have .016 lbs. per cu. In. density and be impervious to fluid intrusion. An aluminum sub-floor shall be installed between the floor material and the floor frame members.

**3.5.14 Front Bulkhead Wall**

**3.5.14.1** Latch for cab to body window

**3.5.14.1.1** The cab to body window shall have a latch that allows opening of the window from the cab side and prevents opening of the window from the body side per KKK.

**3.5.14.2** Cab to body pass-thru

**3.5.14.2.1** A cab to body pass-thru window shall be installed in the front of the body and rear of cab. In the front of the body the module framework shall be positioned to allow for a minimum opening of 17" wide x 13" high. The opening shall have a full perimeter 5/8" flange on the body side with 2" radius in the corners.

**3.5.14.2.2** The opening shall include a hinged 1/2" acrylic transparent window for privacy. The window shall be held open by a magnet and steel catch and held closed by a Southco "D" ring type, slam latch assembly. The window frame shall be lined with rubber gasketing that the window will rest against when closed.

**3.5.14.2.3** The rear of the cab shall be modified by adding a flange to the rear glass center framework section. The frame flange shall have a matching 5/8" flange to align with the opening in the body and provide approximately a 1 3/4" gap between the cab and body for flexing.

**3.5.14.2.4** Attached to the flange shall be an automotive quality EPDM rubber bellows material with steel spring carrier attachments completely sealed at the seam. The seal shall be semi-permanent and removable if required at some future time.

**3.5.14.2.5** Hinged Tinted Acrylic window. With standard, wood cabinet construction, the window will open into a recessed pocket. The window will rest against rubber gasketing lining the window frame when closed.

**3.5.15 Heater/air conditioner cabinet**

**3.5.15.1** The Heater/Air Conditioner cabinet shall be provided in the upper most area, centered above the cab to body pass thru. This cabinet shall be designed in such a way to allow for quick easy removal of Heater/Air Conditioner unit without the removal of any other equipment. The interior of the cabinet shall be designed to allow fresh air intake from the front of the exterior body and exit to a closable vent located under the cabinet platform. The vent allows fresh air from the exterior of the vehicle to shut off in the summer months

for maximum air conditioning performance. The lower platform shall also allow adequate return air flow to the Heater/Air Conditioner unit. The air return shall have a minimum air opening in the cabinet for two 6" by 10" filtered return grills.

**3.5.16 Right Front Interior Cabinet (Upper Section)**

**3.5.16.1 Right front upper compartment hinged doors**

**3.5.16.1.1** The right front upper inside access cabinet shall incorporate double hinged 1/2" acrylic transparent doors. The doors shall have hinges that resist motion when moved to prevent doors from swinging freely when the vehicle is moving. The doors shall also incorporate (1) Southco Polished Stainless Steel positive type locking latch in each hinged door.

**3.5.16.1.2** The cabinet shall extend from the top of the inside outside portion of the right front to the ceiling of the vehicle. Includes one (1) adjustable shelf.

**3.5.16.2 Right front lower, in/out access storage compartment**

**3.5.16.2.1** The interior right front storage cabinet of the vehicle shall be designed to provide access from both the inside of the vehicle or through the exterior compartment door. The size of the compartment shall align with the exterior height and width of the exterior compartment door area above the floor level of the vehicle. The width of the compartment from the inside shall extend to the pass thru area to the cab. Approximate dimensions 39 3/4" high by 31 7/8" wide by 19" deep.

**3.5.16.3 Right front cabinet, adjustable shelves**

**3.5.16.3.1** The right front inside/outside compartment shall be equipped with two (2) adjustable shelves. The shelves shall be fully adjustable within the inside area of the cabinet.

**3.5.16.3.2** Shelves to be lined with ribbed rubber mat.

**3.5.16.4 Right Front In/Out Compartment Hinged Doors**

**3.5.16.4.1** The right front inside/outside access cabinet shall incorporate double hinged 1/2" acrylic transparent doors. The doors shall have hinges that resist motion when moved to prevent doors from swinging freely when the vehicle is moving. The doors shall also incorporate (1) Southco Polished Stainless Steel positive type locking latch in each hinged door.

**3.5.16.4.2** Upper and lower cabinets to be in/out access.

**3.5.17 Right Side Squad**

**3.5.17.1 Squad bench**

**3.5.17.1.1** A full-length squad bench shall be provided on the right-side wall. It shall have dimensions of approximately 74" long x 19" high x 20" deep. The squad bench shall be bolted to reinforced members of the framework utilizing 7/16" high strength bolts. The storage area of the squad bench shall be accessible by lifting the seat cushions. The inside area of the squad bench shall be laminated with high pressure plastic laminates.

**3.5.17.1.2** The bench shall have upholstered padded 3" thick seat cushions. The seat cushions shall be approximately 18" wide x 72" long. The lower cushion shall be removable and easily cleaned or replaced if damaged. The cushions shall be held to the platform with #8 screw type mechanical fasteners, which is permanently attached to the underside of the cushion and platform surface of the squad bench. The cushion/lid shall be held open and closed by two (2) gas spring hold opens and hinged at the rear with full length piano hinges. The mounts for the gas spring shall be installed into reinforced areas within the seat lid platform.

**3.5.17.1.3** Squad bench, rectangular backrest, individual headrests. The right-side backrest shall be a two-section backrest, consisting of an upper headrest and lower full-width backrest, to be used with 6-point seat belts. The headrest sections are to be horizontally centered on the 6-point seat belt; the lower



section will span the width of the squad bench and is to be mounted below the top strap pulleys and not interfere with operation of the straps; the upper section is to be mounted above the top strap pulleys. The backrest shall match the squad bench cushion and be mounted so that it can be easily removed.

- 3.5.17.1.4** Recessed storage shall be provided at head of the squad bench. The stepwell area shall be integrated into the head, (forward portion) of the squad bench thus providing a diamond plated, recessed storage area. The approximate dimensions of this recessed area shall be 5"d x 12"w x 30"h.
- 3.5.17.1.5** At the head of the squad bench there shall be a floor to ceiling (cargo style) net in place. The net will be secured to the bench seat, ceiling and the side wall. The net is to be adjustable and must be able to be disconnected in the event a patient needs to be removed from the side body entrance door. The net is designed to prevent seated personnel from sliding off the bench into the step well or front bulkhead cabinet area. The net is certified to sustain a 2000 lbs. load.
- 3.5.17.1.6** The step well of the vehicle shall be modified to extend under the right-side platform. The recessed area shall provide a storage location for two "D" size oxygen cylinders.
- 3.5.17.1.7** The lid of the squad bench shall be equipped with a slam type positive closure device. This closure device shall prevent opening of squad bench lid in the event of an accident. The release shall be a stainless-steel slam type Trimark paddle handle located on the outside surface of the squad bench and incorporate a catch device on the underside of the lid.
- 3.5.17.1.8** A Tip-out Sharps Container shall be provided within the squad bench base cabinet. It shall be custom built into the squad bench and provide a hinged tip outdoor and flush Southco Polished Stainless-Steel latch to access a disposable 8 qt. and shall be mounted under the passenger side squad bench, forward area near step well.
- 3.5.17.1.9** An overhead storage cabinet with Austin Life Defender Lift Up Restocking Doors shall be provided and installed in the area above the squad bench. The cabinet shall have two (2) shelves, one on each side of the center support / divider. The interior cabinet shall be provided with a full framed sliding transparent cabinet door which is also capable of lifting for full restocking access to the cabinet. The door shall be held open with two gas springs and held closed with a positive slam latch that interacts with the striker in the event of an impact. The frame shall be made of a custom designed aluminum extrusion with one handed operation and positive slam closing with auto latching feature. The doors are to be .220" poly carbonate material. The entire lower edge corner shall be padded to prevent sharp corners. Includes one (1) adjustable shelf.

**3.5.18** Left side attendant seat-double wide

- 3.5.18.1** A "DOUBLE WIDE" left side attendant seat shall be built into the left wall cabinets. It shall incorporate a 40" wide x 20" deep seat area with a cushion which is 21" above the floor, a backrest, and a separate headrest. The seat shall be designed for a single seating position.
- 3.5.18.2** In order to prevent injury during vehicle motion both the forward and rear cabinets that are immediately adjacent to the left side attendant, seat shall include full size padded head bumpers with a 1" thick padding. Designs which do not include this padding are unacceptable.
- 3.5.18.3** All vertical surfaces to the front and rear of the seat cushion shall be fully padded and wrap around the top of the counter to provide a full armrest.
- 3.5.18.4** Left side double wide attendant seat rectangular backrest, individual headrests
  - 3.5.18.4.1** A left side attendant seat shall be a two-section backrest, consisting of an

upper headrest and lower full-width backrest, to be used with 6-point seat belts. The headrest sections are to be horizontally centered on the 6-point seat belt; the lower section will span the width of the double wide attendant seat and is to be mounted below the top strap pulleys and not interfere with operation of the straps; the upper section is to be mounted above the top strap pulleys. The backrest shall match the squad bench cushion and be mounted so that it can be easily removed.

**3.5.18.4.2** The Double Wide left side attendant seat cushion shall be permanently fixed to the base of the cabinet.

**3.5.18.5** An overhead storage cabinet with Austin Life Defender Sliding Doors shall be installed above the left side attendant seat. The width of the cabinet shall be the width of the left side attendant seat area. The cabinet shall be equipped with double sliding transparent doors. The frame shall be made of a custom designed aluminum extrusion with one handed opening and positive slam closing with auto latching feature. The doors are to be .220" polycarbonate material. The entire lower edge shall be padded to prevent sharp edges.

\*Prior to final design the overhead storage cabinet and left side attendant seat configuration will need to be confirmed with the City. Overall depth: 8 5/8"\*

**3.5.18.6** Life Support Station (LSS)

**3.5.18.6.1** The rear Life Support control and switch panel shall be mounted to the underside of the upper cabinet. The oxygen outlets shall be mounted in the panel to provide use of a ball type flow meter with humidifier bottle attached. The entire panel shall be hinged to provide full access of components for servicing. An adequate area shall be provided alongside the switches for permanent built-in installation of two-way communications radio.

**3.5.18.6.2** The switch panel shall be covered with padded vinyl covering which matches the upholstery in the vehicle. The padding shall be 1/8" thick and glued in place prior to the installation of the custom-made stitched vinyl cover.

**3.5.18.6.3** The Rear Main Switch Panel shall be located in the Life Support Station Switch Pod.

**3.5.18.6.4** A storage cabinet shall be provided at the head of the Life Support Switch Panel. The storage cabinet shall have a hinged transparent door with a Southco Polished Stainless Steel positive latch and one (1) adjustable shelf within the cabinet.

**3.5.18.6.5** A storage cabinet with Austin Life Defender Lift Up Restocking Door shall be provided above the Life Support Control Panel. The rear most edge shall have a 45-degree angled panel to eliminate any obstructive corners in the area of the Life Support Station working area. The rear surface shall be covered with a padded head bumper surface. The storage cabinet shall be provided with a full framed sliding transparent cabinet door which is also capable of lifting for full restocking access to the cabinet and one (1) adjustable shelf within the cabinet. The door shall be held open with two gas springs and held closed with a positive slam latch that interacts with the striker in the event of an impact. The frame shall be made of a custom designed aluminum extrusion with one handed opening and positive slam closing with auto latching feature. The doors are to be .220" polycarbonate material. The entire lower edge shall be padded to prevent sharp edges.

**3.5.18.6.6** The Interior Height of this cabinet will approximately be 18-1/2" High Pass thru opening approx. 15-1/2".

**3.5.18.7** Solid Surface Countertop Front Counter Area

**3.5.18.7.1** The counter surface in the front Life Support Station shall be covered with genuine "Chai Cream Mirage" color, Wilsonart Solid Surface countertop material. The Solid Surface shall be permanently bonded and sized to cover

the entire surface of the counter area. The countertop shall have a 1" built-in lip around the entire perimeter for containment purposes. The edge of the countertop facing inboard shall be a 1.5" radius. ABS or other plastic counter surfaces are not acceptable. Wood Drawer with Metal Face

**3.5.18.7.2** Location: Below LSS boxed into "B" Approximate Dimensions: 12"w x 4"h. Includes 12" Slides in place of standard cabinet, there will be a Knox Box and Medicoool micro refrigerator will require outlet fan to cool refrigerator fan, stacked vertically.

\* Location to be discussed prior to final design. \*

**3.5.18.7.3** Fan to be mounted on the forward side of medic unit. (1) 5x5 vent to be on forward face and 1) CPR seat side. Supply and Install "Knox Box" Med Vault, Head LSS Cabinet Recessed mount with standard Wi-Fi. Model #5530H3RK. Head LSS Cabinet, vertical to Mermaid unit.

**3.5.18.7.4** Medi-Kool MK-Micro/H Micro Depth, hinged on left, compressor on right hinge to be on left. Compressor to be installed on right.

**3.5.18.7.5** A Medi-Kool refrigerator, system is to be install in Head LSS cabinet below the Knox Box. The unit shall include kit lock. The power for the Medi-Kool refrigerator shall be interruptible with a switch that turns power off to the Medi-Kool for ~ 10 minutes and then restores power automatically.

### **3.5.18.8** Cabinets

**3.5.18.8.1** A storage cabinet with Austin Life Defender Lift Up Restocking Door shall be provided in the upper left rear corner of the body. The cabinet shall have sliding transparent doors and one (1) adjustable shelf. The interior cabinet shall be provided with a full framed sliding transparent cabinet door which is also capable of lifting for full restocking access to the cabinet. The door shall be held open with two gas springs and held closed with a positive slam latch that interacts with the striker in the event of an impact. The frame shall be made of a custom designed aluminum extrusion with one handed opening and positive slam closing with auto latching feature. The doors are to be .220" polycarbonate material. The entire lower edge corner shall be padded to prevent sharp corners.

**3.5.18.8.2** A storage cabinet with Austin Life Defender Sliding Doors shall be provided in the lower left rear corner of the body above counter level. The cabinet shall have sliding transparent doors and one (1) adjustable shelf. The frame shall be made of a custom designed aluminum extrusion with one handed opening and positive slam closing with auto latching feature. The doors are to be .220" polycarbonate material.

\* Includes Austin Life Defender Lift Up Restocking Door.

**3.5.18.8.3** Right rear interior cabinet

**3.5.18.8.3.1** Inside access shall be provided to right side rear exterior compartment "E". A 1/2" hinged acrylic door with polished stainless steel Southco latch shall be provided.

**3.5.18.8.3.2** Dimensions: 8" wide 40 1/2" high - (with 72" & 75" Headroom and In/Out to Center Aisle) Dimensions: 8" wide 36 1/2" high - (with 68" Headroom and In/Out to Center Aisle)

**3.5.18.8.3.3** In / Out: Dimensions: 8" wide 40 1/2" high - (with 72" & 75" Headroom) Dimensions: 8" wide 36 1/2" high - (with 68" Headroom) with Hinged Acrylic Door.

**3.5.18.8.4** Transparent Doors

**3.5.18.8.4.1** All transparent doors where specified in this specification shall be clear.

**3.5.18.8.4.2** All sliding doors shall have Austin Life Defender anodized

aluminum full length pull handles with slam closing and auto latching feature. The use of finger holes or screw on cabinet handles is unacceptable. SAE J3058 Compliant.

- 3.5.18.8.4.3** All hinged doors shall be equipped with a positive closure device such as a polished stainless steel Southco slam latch. Magnet or roller type catches are unacceptable hardware for this application. The use of positive latching types of hardware will prevent inadvertent opening when in motion.
- 3.5.18.8.5** The interior cabinets of the vehicle shall be provided with Unistrut shelving standards. The standards shall be aluminum with the approximate dimensions of 3/8" by 1" wide. The Unistrut shall be securely fastened to the interior of the cabinets with #10 threaded fasteners. Austin Door Lock Left Rear upper Cabinet.
- 3.5.18.9 Entrance Doors**
- 3.5.18.9.1** All entrance door panels shall be mounted with machine screw threaded fasteners which are installed with thread locking, Loc-Tite material.
- 3.5.18.9.2** Interior Entrance Door Panels, with brushed aluminum lower panels
- 3.5.18.9.2.1** The inside surface of the entrance doors shall have three (3) sections.
- 3.5.18.9.2.2** The upper shall be an aluminum panel covered with high pressure plastic laminates which matches the interior cabinets.
- 3.5.18.9.2.3** The center area which covers the door hardware shall be a padded vinyl.
- 3.5.18.9.2.4** The side Entrance and the rear LOWER panels shall be brushed aluminum to accommodate Chevron Striping. The panels shall be held in place with threaded mechanical fasteners and be removable for servicing of door hardware, Brushed Aluminum, Lower panel to replace diamond to accommodate Chevron Striping.
- 3.5.18.9.3** Hoop style trash can holder mounted on inboard side of lower diamond plate door panel. Includes (1) Rubbermaid 21qt. trash can.
- 3.5.18.9.4** A cushioned, matching vinyl covered "bump protection" head bumper shall be mounted in the interior of the side entrance door area. It shall be designed to provide both onward and upward contact protection.
- 3.5.18.9.5** A cushioned, matching vinyl covered "bump protection" head bumper shall be mounted in the interior above the Rear entrance doors. It shall be designed to provide both onward and upward contact protection.
- 3.5.18.9.6** All ceiling grab rails installed in the ambulance shall meet the requirements of the A.M.D. grab rail retention test. Test documentation shall be provided upon request.
- 3.5.18.9.7** A 120" full length satin finish stainless steel grab rail shall be installed in the ceiling over the squad bench. It shall be full length of the interior x 1 1/4" in diameter with welded stanchions every 24". It shall have fully radiused ends to eliminate a head injury hazard. The use of grab rails which do not have fully welded construction is unacceptable. The grab rail shall be bolted directly to the structural members of the ceiling framework.
- 3.5.18.9.8** A 120" full length satin finish stainless steel grab rail shall be installed in the ceiling over the cot. It shall be full length x 1 1/4" in diameter with welded stanchions every 24". It shall have fully radiused ends to eliminate a head injury hazard. The use of grab rails which do not have fully welded construction is unacceptable. The grab rail shall be bolted directly to the structure members of the ceiling framework.
- 3.5.18.9.9** One (1) 18" satin finish stainless steel grab handle shall be installed at each

rear entrance door. Each shall be fabricated from 1 1/4" diameter tube and have radiused ends, which match the over-head grab rail.

**3.5.18.9.10** The side entrance door shall be equipped with a custom built 45-degree grab handle which extends from under the door window in the horizontal plane and then diagonally to the lower outside corner of the door. The grab rail shall be fabricated from satin finish stainless steel 1-1/4" diameter tube with fully welded construction. The grab handle shall be bolted directly to the structural members with the door with the use 1/4-20 threaded fasteners.

**3.5.18.9.11** The rear entrance doors shall be equipped with two custom built 45-degree grab handle which extends from under the door window in the horizontal plane and then diagonally to the lower outside corner of the door. The grab rails shall be fabricated from satin finish stainless steel 1-1/4" diameter tube with fully welded construction. The grab handles shall be bolted directly to the structural members with the door with the use 1/4-20 threaded fasteners.

### **3.5.18.10 Restraint Systems**

**3.5.18.10.1** One (1) lap seat belt shall be installed at the rear facing attendant seat. The seat belt shall have enclosed male automatic locking retractor with a push button release and a fixed female buckle. The seat belt and seat belt mount shall be tested to F.M.V.S.S. 210 and Federal Specifications KKK-A-1822. Documentation shall be available upon request.

**3.5.18.10.2** Three (3) matching seat belts shall be installed on the face of the squad bench which can be used for securing a second patient. The belts shall be securely attached to the structure of the ambulance and be automatic adjusting.

Feasibility of this option is based on seat positions and options in squad bench face. Patient restraint straps are not provided on bench with length shorter than 72".

**3.5.18.10.3** Interteck Industrial Corp 6-point seat belt as certified to SAE J3026 shall be installed at the location specified. The seat belt shall have enclosed automatic locking retractors with push button releases. Each position includes a backrest and an additional headrest.

Qty: (2) Loc: (2) Curbside Seating

Qty: (1) Loc: Streetside Seating

Curbside to have full backrest with Six-point seat belts.

Streetside to have full backrest with Six-point seat belts.

### **3.5.18.11 Cot Mounting**

**3.5.18.11.1** The ambulance manufacturer shall supply and install SAE J3027 Compliant Stryker Power Load Floor Plate and Mini Rail Plate. Includes charging circuit for use with Powe Load fasteners. Circuit will always remain hot. Includes cutout in the floor for the installation of a Mini Rail Plate.

**3.5.18.11.2** One (1) Cast Products Rubber "Recessed" dual IV holder shall be installed in the ceiling over cot. The holder shall be bolted to reinforcing plates located within the ceiling and include a Velcro strap for securing IV during transport.

**3.5.18.11.3** One (1) Cast Products Rubber "Recessed" dual IV holder shall be installed in the ceiling over squad bench. The holder shall be bolted to reinforcing plates located within the ceiling and include a Velcro strap for securing IV during transport.

**3.5.18.11.4** The (2) Cast Products Rubber "Recessed" dual IV holders shall be installed perpendicular to the center raceway. Turn the two IV holders 90 degrees. Dropping towards center raceway.

**3.5.18.12** The ceiling panel of the ambulance shall be high impact thermoplastic panel laminated to a 1/4" subpanel. The entire assembly shall be bolted directly to the ceiling structural

framework. The panel shall be the fire-retardant grade. All components (Including Lights, IV Holders and Grab Rails) mounted to the ceiling shall be mounted to the structural framework of the ceiling. Under no circumstances shall anything be mounted to the ceiling panel only. The ceiling panel shall be attached to the vehicle framework without the use of visible hardware.

- 3.5.18.13** The interior color of the upper laminated cabinets shall be Fashion Grey with a high gloss finish. The interior color of the lower laminated cabinets shall be Fashion Grey with a high gloss finish.
- 3.5.18.14** Vinyl padded head bumpers shall be installed in areas where head injury can occur. One (1) located at the rear door, one at the side door and one (1) at the cab to body door. Full padding shall be provided around the cabinets on the left side attendant seat area.
- 3.5.19** A full length by 9 1/4" high polished stainless steel wall protection panel shall be installed along the left side cabinet wall above the rolled-up floor. The panel shall be held in place without the use of visible screws or fasteners and shall have all edges completely deburred prior to installation.
- 3.5.19.1**
- 3.5.20** Upholstery
- 3.5.20.1** All upholstery used in the vehicle shall be a High-Quality Automotive Grade Vinyl Upholstery. All upholstery shall be seamless flat upholstery utilizing minimal stitching on the outside corners. All material shall meet the requirements of FMVSS 302.
- 3.5.20.2** Upholstery Color: Gray
- 3.5.21** Rear Facing Attendant Seat
- 3.5.21.1** The ambulance shall be provided with an EVS brand, model 18703 rear facing attendant seat. The seat shall include a built-in child seat, three-point harness, ABS seat back and be mounted on an EVS brand, model SB-2 base. Seat shall have forward and back adjustment. All seats and seat installations shall be tested and certified to meet FMVSS standards. It shall be covered in sewn gray upholstery to match the balance of the vinyl in the ambulance.
- 3.5.22** Flooring
- 3.5.22.1** A Commercial Quality LONSEAL Mfg. Lonplate II diamond plate floor covering shall be installed. It shall be applied over a prepared Polymer floor surface, with all seams filler patched, to eliminate holes or bubbles in the flooring surface. Color shall be Gun Metal.
- 3.5.22.2** The flooring on both the left side wall and right-side squad bench shall incorporate a three (3) inch roll-up section of the vinyl flooring material. The flooring material shall be finished with an anodized aluminum trim. The trim shall be secured in place with mechanical fasteners and have a tapered top surface to prevent accumulation of dirt and foreign material. The underside shall be designed in such a way to prevent infiltration behind the trim. This is required to eliminate the possibility of foreign liquid material from becoming trapped behind the flooring where it cannot be disinfected.
- 3.5.23** Signage
- 3.5.23.1** Two (2) large face "No Smoking" signs and one (1) Fasten Seat Belt sign shall be installed in the patient compartment of the ambulance.
- 3.5.24** Oxygen and Aspiration
- 3.5.24.1** The Oxygen delivery system shall consist of a permanent mount DOT approved Medical Oxygen Cylinder. The oxygen line from the cylinder to the distribution outlets shall be oxygen cleaned, high pressure electrically conductive, "Green" hose with swaged fittings. All fittings and hardware used shall be Medical Oxygen Quality and cleaned for oxygen use.
- 3.5.24.2** All oxygen hose shall be encased in high temperature protective loom to avoid chafing and physical damage. All fittings shall be completely accessible for service or inspection without the removal of any cabinets or wall panels.
- 3.5.24.3** The entire system shall be installed, inspected, tested and labeled per the requirements of Federal Specifications KKK-A- 1822.
- 3.5.24.4** The oxygen storage cylinder shall be accessible through a transparent door for manual on/off control of the main valve and to visually monitor the tank pressure on the regulator gauge.

- 3.5.24.5** The oxygen, vacuum and air systems in the vehicle shall be compatible with OHIO equipment unless otherwise specified.
- 3.5.24.6** One (1) Amico AMIZTH0202 dual oxygen outlet shall be flush mounted within the Life Support Station panel. The distance from the primary patient to the Life Support Station shall not exceed 35" per the requirements of KKK-A-1822.
- 3.5.24.7** One (1) single Amico AMIZTH0101 oxygen outlet shall be provided on the right side of the ambulance above the forward squad bench. The outlet shall be built in flush and not protrude more than 1" beyond the wall.
- 3.5.24.8** An Amico AMIZTH0120 electric powered oxygen shut off solenoid shall be installed and mounted on the output of the oxygen bottle regulator. It shall be controlled by a switch located at the rear Life Support Panel. The solenoid shall be approved for medical oxygen use and be equipped with a manual override valve (in the event the electric solenoid may fail to open the valve). An electrical rectifier shall be installed in the circuit to prevent voltage spikes from entering the electrical system.
- 3.5.24.9** The vehicle shall be equipped with a permanently installed Suction/Aspiration System. The system shall be equipped with a high-volume Thomas electric suction pump certified for use in all states, with a 30 liter per minute flow rate. The pump shall be activated from a relay-controlled circuit and switch, on the Rear Main switch panel. The pump shall be mounted in an enclosed compartment using rubber isolators to minimize any noise and vibration when in use. The pump shall be connected to an onboard collection bottle permanently attached to the counter near the primary patient. The connecting hose shall be fiber reinforced medical hose and loomed to prevent chafing. The entire system shall be tested and meet the criteria of KKK-A-1822. Test Documentation shall be available upon request. As with the oxygen delivery system all fittings and lines shall be accessible for inspection and service without the removal of cabinets or walls.
- 3.5.24.10** On Board suction shall be provided with a SSCOR disposable system. System shall include SSCOR wall mounted white faced injection molded regulator PN 23001, disposable Bemis 1200cc canister mounted in injection molded bracket PN 23003, secured by an onboard canister clip PN 230-00003, and shall be mounted on wall per customer location.
- 3.5.24.11** The vehicle shall be equipped with a Ziamatic QR-OTS-U Quick-Release Oxygen Tank Lift System to load and unload the main oxygen cylinder in and out of the vehicle. The device shall be located in the oxygen compartment of the vehicle and operate in the up and down mode by an electrical linear actuator device. The up/down control shall be a handheld pendant style controller supplied by the device manufacturer. The linear actuator shall extend a pair of parallel arms which extend first, outward then, downward. Attached to the arms shall be a Ziamatic Universal oxygen bottle holder. The ultimate lifting capacity of the loading device shall be 160 pounds.  
Unless otherwise specified, the electric actuator motor and operating latch will be located on the left side of the bracket. The handheld up/down switch controller will be mounted using the Ziamatic provided bracket on the right-side compartment wall for easy access.

As a safety feature, the ZICO Quick-Release Oxygen Tank Lift System motor is designed to allow being back-driven in the event the device has been deployed with the truck initially at a height that can drop, such as with Air Ride.

The tank system as well as the structural mounting in the ambulance compartment shall be certified to the requirements of SAE J3043. With ZICO hand-held switch mounted in compartment. ZICO tank lift comes with hydraulic ram that can be "back driven." This prevents the ram from being damaged if it is extended, or the body is lowered.

Oxygen Tank Size required: "H" size

- 3.5.24.12** One (1) Model # PLC-9662 (Western), large tank oxygen bottle regulator shall be provided

and installed as needed for the H type Oxygen tank.

Oxygen wrench to be mounted to Compartment "A" right wall

### 3.5.25 Stryker Cot System

**3.5.25.1** Supply and install Stryker model 639005550001 Power Load cot system.

## 3.6 Electrical Systems

**3.6.1** Manufacturer will warranty to original purchaser that the supplied electrical equipment as listed below are sound and free of all defects of both materials and workmanship, for the life of the vehicle or 100,000 miles whichever occurs first. This electrical equipment includes body door post switches, all wire terminals and crimps, main vehicle wiring harness and battery harness cables, relays, switches, automatic/manual reset circuit breakers, voltmeter, ammeter, battery disconnect switches, solenoids, all terminal strips, manufacturer installed electrical connections and power distribution panel. The warranty shall be transferable subject to inspection by manufacturer. Bidder must include statement of warranty policy with bid. The Electrical System shall be warranted for the life of the unit, so long as the original purchaser shall own it.

**3.6.2** The entire 12-volt Electrical System shall comply with the recommended standards and practices per FMVSS, Federal Specifications KKK-A-1822 & SAE where applicable.

**3.6.3** Electrical system provided by the ambulance Manufacturer shall have Lifetime Electrical Warranty.

**3.6.4** The entire 12-volt DC Electrical System shall incorporate GXL High Temperature Copper wire. Each wire shall be color coded with function imprinted every four inches for immediate identification. All exposed wiring shall be covered with Packard Flec or equal, black with gray stripe, convoluted loom with minimum of 300-degree F. Temperature rating. Loom with a lower temperature rating is cause for rejection. Large Heyco type or rubber insulators shall be used where wires pass through sheet metal or structural members. All circuits shall be protected with circuit breakers suitable to the circuit demand. Any wire carrying a load to an appliance in the 12-volt Electrical System shall be 16-gauge wire minimum.

Electrical System shall consist of five main wiring harnesses which terminate at the Electrical Distribution Panel. Distribution Panel shall be centrally located with connections resulting through 45 pin Connectors. Harnesses shall include:

Rear body, referred to as Harness #1 (standards: dome, fluorescent, floods, vent, compt. lights/ switches)

Rear body, referred to as Harness #2 (flashing lights, air compressors, cancel switches, options)

Rear switch panel, referred to as Harness #3

Front console, referred to as Harness #4

Cab/ chassis/ under-hood, referred to as Harness #5

All Electrical components shall be mounted using a "plug in" type assembly which affords speedy replacement of failed components. The entire unit shall be housed in a readily accessible maintenance cabinet built into front wall of the personnel compartment. Attached to inside of door shall be complete documentation of 12-volt Electrical System. The use of exterior compartment mounted electrical distribution panel is unacceptable.

The main power distribution panel shall consist of a plug-in modular system which includes locations for 42 plug-in circuit breakers and 60 plug-in relays, as standard equipment. This type of system is utilized to have standard circuit configuration while remaining totally flexible for custom circuits when required. All circuits shall consist of plug-in relays and plug-in circuit breakers only. The use of diodes, rectifiers, heat sinks, or other than automotive type relays is unacceptable.



- 3.6.5** All circuit breakers 30 amp or less, shall be plug in Manual and or Auto Reset type. All circuits which require greater capacity shall utilize a Cooper Electric or equal 40 or 50 amp "MAXI-AMP" manual or auto reset circuit breaker, dependent on electrical application.
- 3.6.6** Devices being switched with loads in excess of one (1) amp (12 watt) shall be accomplished through Potter & Brumfield or equal, 40-amp SPDT 12-volt automotive relay switching devices. All relays used in the panel shall be of the same type to insure complete compatibility and ease of re-placement. Relays shall be controlled through a ground signal from all switches, including door post switches. All relays shall be plugged into the modular panel assembly including the 70- amp power relays where required. All relay circuits utilizing the SPDT relays and SPST 70-amp relay shall include internal suppression to eliminate voltage spikes in the electrical system.
- 3.6.7** All Modular Bodies shall be grounded to the vehicle chassis with two (2) 0 GA braided, tinned copper grounding straps Circular copper conductors (battery cables) shall not be used. These ground straps meet requirements of KKK-1822- F.

Each appliance (i.e., Lights, fans) shall be grounded to the body structure in close proximity to its location or by a ground harness as required. The ground shall be equivalent to its feed wire size and be minimized in length. Each ground attached directly to the vehicle structure shall use machine screws with star washers or ring terminals with serrated ring to insure a positive contact at all times.

All Body harnesses shall be contained within the body. Harnesses shall not run on the underside exterior of the body. Under hood harness shall be protected within high temperature convoluted loom. All connections exposed to the elements, or under hood, shall be made within "waterproof" heat shrink connections. This type of connection shall also be used on all heavy-duty battery cables. All battery cables, both positive and ground shall be machine crimped and fully soldered prior to addition of waterproof heat shrink tubing. Any exposed connections not in heat shrink and battery connections not soldered shall be rejected.

All Electrical Systems shall include three (3) spare relays and spares of the correct size circuit breakers utilized, shall be mounted within the Electrical Distribution Panel.

- 3.6.8** All harnesses, relays, circuit breaker terminal junction points and circuits shall be drawn on individual 8 1/2 x 11 size drawings. Each individual circuit shall be on (1) drawing, for ease of troubleshooting. A single drawing overall schematic is unacceptable. All electrical systems shall be designed for each vehicle. Generic or similar drawings are cause for rejection of vehicle. All schematics shall include only what circuits are provided in the proposed vehicle.
- 3.6.9** Proper balance of the electrical system output and vehicle draw is critical in the design of all emergency vehicles. Vehicle proposed shall be provided with a detailed electrical analysis generated by the manufacturer of the ambulance and specific to this proposed vehicle and specific electrical equipment requested. General statements will not be acceptable.
- 3.6.10** Sealed door post switches shall be installed in all entrance and compartment doors. All switches shall be sealed from the elements to prevent moisture damage and to prolong service life. The switches shall be warranted for lifetime of vehicle. All door post switches shall activate the grounds of relays only. Under no circumstances shall the door post switch carry more than 140 milliamp of electrical current.
- 3.6.11** A high current disconnect device shall be installed per the requirements of KKK-A-1822 to power all ambulance vehicle conversion and modular body functions. The device shall be activated by the chassis ignition signal and shall have a 5 minute off delay for module functions when the chassis ignition switch is turned off.
- 3.6.12** Electrical connectors used on added circuits of less than 20 Amps under the chassis hood and the chassis fenders shall be high quality, waterproof Deutsch type. Unsealed connectors in these areas are unacceptable. Sockets and pins shall be machined type. Stamped contacts are unacceptable.
- 3.6.13** An analog type voltmeter shall be installed within easy view of driver. The voltmeter shall be circuit breaker protected. The use of digital voltmeters is unacceptable due to its difficulty to read at a glance.

The voltmeter shall be tied to the battery side of the master disconnect switch to allow a constant reading on the voltmeter when the switch is off.

- 3.6.14** A Low Voltage System with a dual indicator light green/red shall be installed in the driver's console. The Green indicates voltage system is above 11.8 volts. The Red shall indicate when system voltage drops below 11.8 volts for more than 2 minutes and vehicle needs to reduce load. At that time an audible alarm will sound. The alarm will be provided with a cancel switch to momentary silence the alarm. The red light will remain on both the switch legend and the indicator until the system returns to 12.8 or above.

All switches shall be 12-volt two (2) or (3) position heavy duty Carling Contura V, Full size, Sealed Rocker switches. Each switch shall have an integral pilot light which shall activate in the "On" position, including the Horn/Siren switch. The only switches that shall not have a pilot light are momentary switches, where they are not available. No switch shall carry more than one (1) Amp of power, (12 watts).

For ease of service and supporting a lifetime electrical warranty, all switches shall have a plug-in connector on the bottom of the switch contacts.

All switches shall be mounted in a custom designed one piece panel for each vehicle. The switch panel shall be backlit Light Emitting Diode lighting behind the individual switch legends. The switch panels shall be finished in a black matte finish. All custom legends shall be made of matte black Lexan inserts with translucent lettering to designate each function. When complete, the surface of the panel shall have a look of a homogeneous surface without the need for white legends which appear to be an added-on feature. All switch circuits shall be designed for the life of the vehicle.

- 3.6.15** A Master battery "On" indicator shall be installed on the driver's console of vehicle. The indicator shall be a minimum of 1/2" in diameter and glow whenever the batteries are connected to the system.
- 3.6.16** A Red indicator light shall be installed in the drivers switch console to indicate that an entrance door is ajar. The light will activate whenever the master battery disconnect switch is activated and an entrance door is opened. The indicator shall be a minimum of 1/2" in diameter. The door open indicator shall be relay controlled and the door post switches shall activate the relay.
- 3.6.17** An Amber indicator light shall be installed in the drivers switch console to indicate that a compartment door is ajar. The light will activate whenever the master battery disconnect switch is activated and a compartment door is opened. The indicator shall be a minimum of 1/2" in diameter. Compartment open indicators shall be relay controlled and the door post switches shall activate the relay.
- 3.6.18** A high decibel, electronic beeper alarm shall be installed and activate, when a module entrance door or compartment door is opened. The alarm shall sound only when the vehicle is placed in drive or reverse and be independent of the door open/compartment open warning lights in the console. The warning lights shall activate anytime an entrance or compartment door is opened.
- 3.6.19** The vehicle shall be equipped with a Dual-Mode alarm that will sound when the vehicles transmission is in Neutral, and the Parking Brake is not applied. Secondly, the alarm will sound when the vehicle transmission is in reverse, or a forward drive gear and the Parking Brake is applied. The alarm shall include an indicator light in the driver's console and an audible alarm that will sound when the condition exists when the vehicle is in the run mode and when the emergency sequencer switch is on.
- 3.6.20** The OEM Chassis has a throttle which shall activate under the following conditions: Parking brake set, engine running, and vehicle in neutral. The throttle shall not activate whenever vehicle is in a transmission drive position or when the vehicle service brake is applied, or accelerator pedal is depressed. While the console throttle switch is on, anytime the park brake is engaged and the other OEM parameters are satisfied, the throttle will engage. If the console throttle switch is off, the throttle will not engage regardless of the park brake condition. The foot brake will also disengage throttle and require the console throttle switch to be cycled to re-engage the throttle if the park brake was not disengaged. Switch in the console to enable OEM High idle
- 3.6.21** An ECCO 610N with 97 dB rating back-up alarm shall be installed under the rear step area of the vehicle. The back-up alarm shall have encapsulated electronics and no exposed terminals-all connections shall be water-tight. The back-up alarm shall be activated any time the vehicle is shifted

into reverse gear. A relay controlled momentary cancel switch shall be installed in the drivers console to disable the back-up alarm when it may not be required. The circuitry shall be designed to allow the alarm to be reset automatically and function the very next time the vehicle is placed in reverse. On-Off type switch is not acceptable.

- 3.6.22** A combination Load Manager/Sequencer shall be installed in the driver's console. The Load Manager shall automatically shed load to maintain balance between alternator output and draw, by turning predetermined functions to the off position. The Load Manager shall include an override emergency bypass switch in the main electrical panel.

The sequencer function turns the emergency lighting on, one at a time in a predetermined order, and turns them off in reverse order.

A Rotary Switch located in switch position one of the front console enables the Load Manager and activates the Sequencer.

#### RESPONSE AND SCENE AMPS CANNOT EXCEED 230 AMP

##### FULL TIME Load Management of Emergency Lights

- 3.6.23** The Body manufacturer shall supply necessary activation switch wiring Requires air horns to be air solenoid operated. Please see the OEM Chassis Specification.
- 3.6.24** The air horn electric solenoid shall be activated by a momentary switch labeled "Air Horn" mounted on the steering wheel. Only electric operated systems are permitted, a Mechanical Air Valve is unacceptable. The air horn shall also be operated by a foot pedal switch located within reach of the drivers' feet.
- 3.6.25** The power door lock mechanisms (if so equipped) shall be controlled by the OEM door switches
- 3.6.26** The power door lock switch located on the drivers' and passengers' side cab doors shall be wired to activate the power lock/unlock function of the ambulance body entrance doors (and compartment doors when power feature is specified). The switch shall be tied to the battery side of the master disconnect switch and function whenever depressed.

In addition to the cab door control of the power door locks, a remote keyless entry system shall be installed. The system shall lock and unlock the cab and ambulance doors as specified above. The vehicle shall be delivered with two remote keyless entry devices and programmed to operate with the vehicle. The remote device shall be capable of being attached to the key ring of the vehicle. OEM door switches control cab & body doors.

- 3.6.27** A double throw momentary switch shall be provided inside the side door area near the load light cancel switch - above the fluorescent light timer, for activating the power lock/unlock function of the ambulance body entrance doors (and compartment doors when power feature is specified). Press up for lock, push down for unlock.
- 3.6.28** A double throw momentary switch shall be provided on the left side near the load light cancel switch for activating the power lock/unlock function of the ambulance body entrance doors (and compartment doors when power feature is specified). Press up for lock, push down for unlock.
- 3.6.29** A concealed emergency override switch shall be provided and located in the front grille area. This switch location is KKK compliant.

### 3.7 Emergency Warning Systems

#### 3.7.1 Opticom

- 3.7.1.1** A GTT Opticom High Priority Radio/GPS shall be installed in the center console.

GPS Preemption Vehicle Kit (High Priority) - series 2000 includes:  
 Model 2100 High Priority Radio/GPS Control Unit 76-1000-1155-0  
 Model 1050 GPS Antenna  
 Model 2171 Vehicle Interface Cable

**3.7.2 Siren Warning System**

**3.7.2.1** A Whelen Engineering Company Model 295SLSA1 Siren shall be provided and installed flush in the driver's console. The siren shall include standard siren tones, public address, air horn, and radio rebroadcast. The siren shall be backlit for night operation and include a hard-wired microphone. Siren shall include a self-diagnostics mode which warns the driver of a potential problem with the siren or speaker system.

**3.7.2.2** A switch shall be installed in the driver's console to select between OEM Horn ring function of the vehicle Horn or Horn ring activation of the electronic Siren or Horn ring activation of the vehicle air horn. The switch shall be a three-position type and have two lighted indicators. The switch shall control two SPST relays located within the electrical distribution cabinet. A relay-controlled circuit is required to eliminate any potential voltage drop problems due to high amperage draw of the OEM Horns.

**3.7.3 Siren Speaker System**

**3.7.3.1** The front bumper of the Freightliner chassis shall be equipped with two (2) Cast Products speaker assemblies. The speakers shall be installed into openings cut into the swept back portion of the front bumper. The openings shall be cut with a smooth edge and be properly treated to prevent corrosion and peeling of surface finish. The speaker assemblies shall include two (2) high efficiency 100-watt speaker drivers.

**3.7.4 Vehicle Lighting**

**3.7.4.1** No front lightbar required

**3.7.4.2** No rear lightbar required

**3.7.4.3** Cab Mounted Warning Lights

**3.7.4.3.1** Two (2) lights shall be placed in the grille of the vehicle in flange housings. The lights shall be located in the upper, portion of the grille area, set a minimum of 18" apart. The lights shall be Whelen WION Linear LED, Red with a Clear lens cover. \*\*\* Flange included with WION Light \*\*\* No Grille Flange Provided

**3.7.4.3.2** Two (2) lights shall be placed in the grille of the vehicle in flange housings. The lights shall be located in the lower, portion of the grille area, set a minimum of 18" apart. The lights shall be Whelen WION Linear LED, Red with a Clear lens cover.

**3.7.4.3.3** A chrome grille flange shall be supplied with the lighthouse. No Grille Flange Provided

**3.7.4.4** LED Flashing Warning Lights, Intersection

**3.7.4.4.1** The vehicle shall be equipped with LED flashing warning lights. Two lights shall be installed, one each side front fender as far forward as possible. All lights shall include integrated metalized flange chrome housing, designed for this fixture. Cast aluminum housings are unacceptable. The lights shall be Whelen 700 Super LED, Red with a Clear lens cover. Whelen WION Grille Lights two (2), Red w/ chrome flange.

**3.7.4.5** Body Lighting

**3.7.4.5.1** On each side of the ambulance body mounted to the underside between the cab and the rear wheels, there should be Whelen Tracer Series lights facing outwards. The lights should be in the configuration of R – W – R – W – R.

**3.7.4.5.2** The vehicle shall be equipped with a Whelen 600 Series Super-LED Amber Arrow lights with clear lenses. The vehicle shall include (2) Light assemblies located on the upper area of the front body. All lights shall include metalized flange chrome housing, designed for this fixture.

**3.7.4.5.3** All Body & Cab flashing LED flashing lights will be provided a switched primary /secondary circuit, which will supply a steady source of power instead of a flashing output to the flashing lights.

All Body and cab warning lights will flash in an unsynchronized, random pattern, as set by the internal flash of each individual light head. The Flashing lights shall be considered compliant with KKK recognized alternate flash patterns. Primary is all warning lights on, secondary mode will shut down all lower-level lights (beltline and below). All lighthoods are flashed randomly using internal flashing program, without light-to-light synchronization.

- 3.7.4.5.4** The vehicle shall be equipped with a Whelen 900 Series Linear Super-LED warning light. The vehicle shall include one (1) light assembly on the front, upper left portion of the body. All lights shall include metalized flange chrome housing, designed for this fixture. The Light shall be Red with a clear lens cover.
- 3.7.4.5.5** The vehicle shall be equipped with a Whelen 700 Series Linear Super-LED warning light. The vehicle shall include one (1) light assembly on the front, upper center of the body. All lights shall include metalized flange chrome housing, designed for this fixture. The Light shall be White with a clear lens cover.
- 3.7.4.5.6** The vehicle shall be equipped with a Whelen 700 Series Linear Super-LED warning light. The vehicle shall include one (1) light assembly on the Front, upper Center of the body. All lights shall include metalized flange chrome housing, designed for this fixture. The Light shall be Red with a clear lens cover.
- 3.7.4.5.7** The vehicle shall be equipped with a Whelen 900 Series Linear Super-LED warning light. The vehicle shall include one (1) light assembly on the front, upper right portion of the body. All lights shall include metalized flange chrome housing, designed for this fixture. The Light shall be Red with a clear lens cover.
- 3.7.4.5.8** Whelen M7 Super-LED Light, Red clear lens, on Front Body Condenser. Qty: (2) Location: One each side of front body condenser.
- 3.7.4.5.9** The vehicle shall be equipped with a Whelen 900 Series Linear Super-LED warning light. The vehicle shall include one (1) light assembly on the left side, upper left, forward portion of the body. All lights shall include metalized flange chrome housing, designed for this fixture. The Light shall be a horizontal split light, Red/ White with a clear lens cover.
- 3.7.4.5.10** The vehicle shall be equipped with a Whelen 900 Series Linear Super-LED warning light. The vehicle shall include one (1) light assembly on the left side, upper left, aft portion of the body. All lights shall include metalized flange chrome housing, designed for this fixture. The Light shall be a horizontal split light, Red/ White with a clear lens cover.
- 3.7.4.5.11** The vehicle shall be equipped with a Whelen 900 Series Linear Super-LED warning light. The vehicle shall include one (1) light assembly on the right side, upper forward portion of the body. All lights shall include metalized flange chrome housing, designed for this fixture. The Light shall be a horizontal split light, Red/ White with a clear lens cover.
- 3.7.4.5.12** The vehicle shall be equipped with a Whelen 900 Series Linear Super-LED warning light. The vehicle shall include one (1) light assembly on the right side, upper aft portion of the body. All lights shall include metalized flange chrome housing, designed for this fixture. The Light shall be a horizontal split light, Red/ White with a clear lens cover. \*\*Whelen Independent, Rear Body Flashing Lights - CLEAR Lens.
- 3.7.4.5.13** The vehicle shall be equipped with a Whelen 900 Series Linear Super-LED warning light. The vehicle shall include one (1) light assembly on the rear upper left portion of the body. All lights shall include metallized flange

- chrome housing, designed for this fixture. The Light shall be Red with a clear lens cover.
- 3.7.4.5.14** One (1) Whelen 24, LED # 90C0ENZR, 8-32 degree Scene lights shall be installed on the rear, left upper area, inboard of the outermost light.
- The lights shall include metalized chrome flange housings specifically designed for this light fixture. Cast aluminum housings are unacceptable.
- 3.7.4.5.15** The vehicle shall be equipped with a Whelen 900 Series Linear Super-LED warning light. The vehicle shall include one (1) light assembly on the rear upper left portion of the body, out-board of the center light. All lights shall include metalized flange chrome housing, designed for this fixture. The Light shall be Red with a clear lens cover.
- 3.7.4.5.16** The vehicle shall be equipped with a Whelen 900 Series Linear Super-LED warning light. The vehicle shall include one (1) light assembly on the Rear, upper Center of the body. All lights shall include metalized flange chrome housing, designed for this fixture. The Light shall be Amber with a clear lens cover.
- 3.7.4.5.17** The vehicle shall be equipped with a Whelen 900 Series Linear Super-LED warning light. The vehicle shall include one (1) light assembly on the rear upper right portion of the body, out-board of the center light. All lights shall include metalized flange chrome housing, designed for this fixture. The Light shall be Red with a clear lens cover.
- 3.7.4.5.18** The front Pioneer lights and 900 series Scene lights to be on two switches, right front and left front.
- 3.7.4.5.19** One (1) Whelen 24, LED # 90C0ENZR, 8-32 degree Scene lights shall be installed on the rear, right upper area, inboard of the outermost light.
- The lights shall include metalized chrome flange housings specifically designed for this light fixture. Cast aluminum housings are unacceptable.
- 3.7.4.5.20** The vehicle shall be equipped with a Whelen 900 Series Linear Super-LED warning light. The vehicle shall include one (1) light assembly on the rear upper right portion of the body. All lights shall include metalized flange chrome housing, designed for this fixture. The Light shall be Red with a clear lens cover. Rear Lights at Window Level
- 3.7.4.5.21** The vehicle shall be equipped with a Whelen 900 Series Linear Super-LED warning light. The vehicle shall include one (1) light assembly on the Rear left panel. The light is situated so when the back door is open, the light shall be visible through the center portion of the door window. All lights shall include metalized flange chrome housing, designed for this fixture. The Light shall be a horizontal split light, Red/ Amber with a clear lens cover.
- 3.7.4.5.22** The vehicle shall be equipped with a Whelen 900 Series Linear Super-LED warning light. The vehicle shall include one (1) light assembly on the Rear right panel. The light is situated so when the back door is open, the light shall be visible through the center portion of the door window. All lights shall include metalized flange chrome housing, designed for this fixture. The Light shall be a horizontal split light, Red/ Amber with a clear lens cover.
- 3.7.4.5.23** The vehicle shall be equipped with M7 Whelen LED, Mini-Size flashing warning lights. Two lights shall be provided, one over each rear wheel area. Red/White Split Color with clear Lens. The lights shall incorporate integrated metalized flange chrome housing. Cast aluminum or other flanges are unacceptable.
- 3.7.4.5.24** The vehicle shall be equipped with ten (10) Whelen ION -LED Lights, Red, In "C" Channel Rub-Rails Five on each side, Red with Clear Lens. Model

## Whelen WIONSMCR

- 3.7.4.5.25** The two (2) rear entrance doors shall be equipped with three (3) OS Series LED flashing light. The lights will activate and randomly flash when the vehicle's master switch is on, and the entrance doors are open. Each door shall operate their lights independently. The lights shall be semi-recessed with chrome housings, with 3 lights spaced on the lower portion of each door. The operation of each light assembly shall be dedicated to each door circuit independently. Lights shall be active anytime power is on, and doors are open.
- 3.7.4.5.26** The side entrance door shall be equipped with three (3) OS Series LED flashing lights. The lights will activate and randomly flash when the vehicle's master switch is on, and the entrance doors are open. Each door shall operate their lights independently. The lights shall be semi-recessed with chrome housings, with 3 lights spaced on the lower portion of each door. The operation of each light assembly shall be dedicated to each door circuit independently. Color: Amber. Lights are to be active anytime power is on, and doors are open.
- 3.7.4.5.27** Exterior vehicle Rear Stop/Tail & Turn light heads will have Clear Lenses.
- 3.7.4.5.28** The vehicle shall be equipped with two (2) Whelen 600 Series LED red stop/taillights. The lights shall be located on the lower outboard corners of each side of the rear of the vehicle. The body shall be designed in such a way to eliminate the lights from being exposed to the elements from the backside.
- 3.7.4.5.29** The vehicle shall be equipped with two Whelen 600 Series Maximum Intensity rear backup lights, one each side on the inboard side of the lower panel. The lights shall operate any time the vehicle is placed in reverse. The light shall include integrated metalized chrome housing. The body shall be designed in such a way to eliminate the lights from being exposed to the elements from the backside.
- 3.7.4.5.30** A pair of Whelen 600 Series LED amber arrow directional signal lights shall be installed on the rear of the vehicle directly above the stop/tail and back-up lights. The lights shall include integrated metalized chrome flange housing on each fixture.
- 3.7.4.5.31** Heavy Duty Lighting, LED, Mini Oval w/ Chrome Bezel, Marker and Clearance lights shall be installed on the front rear and both sides of the body to meet all Federal lighting requirements FMVSS 108.
- 3.7.4.5.32** Two (2) Lower marker clearance lights shall be installed on each side at the belt line area of the vehicle, one front, and one rear. The lights shall be wired to the side directional lights and activate any time the vehicles directional switch is activated. The marker clearance light shall also include an integrated reflex reflector into the lens.
- 3.7.4.5.33** The rear step bumper lights shall be 4" LED lights
- 3.7.4.5.34** Lights: Whelen 2G LED  
The two (2) rear red flashing warning lights in the upper most portion of the body, shall be activated whenever the vehicles service brake is applied, and the red flashing warning lights are on. These lights shall be activated through a transfer relay circuit which under no circumstances shall they be powered by the vehicles stop lamp switch only. The stop lamp switch shall power the coil of the transfer relay only.
- 3.7.4.6** Upper Body Lighting
- 3.7.4.6.1** Two (2) Whelen # PFP1 Scene/Flood lights shall be installed on the right upper center of the rear body and each side of the vehicle. The flood lights shall include semi-recessed housings specifically designed for each light. Mounted in Whelen, Semi Recessed Housing, one each side of body.
- 3.7.4.6.2** The right-side scene lights of the vehicle shall be controlled by two modes.

The first mode of operation is the right-side scene lights shall function from the relay-controlled circuit and lighted switch located in the driver's console. The second mode is the scene lights shall be activated when the right-side entrance door is opened. All circuits shall be relay controlled. No load current shall pass through the door post switch.

- 3.7.4.6.3** The left side scene lights of the vehicle shall function by the relay-controlled circuit activated by the left scene lighted switch in the driver's console.
- 3.7.4.6.4** The rear scene lights shall automatically activate when the rear door is opened or when the vehicle is placed in reverse. All scene light circuits shall be relay controlled.
- 3.7.4.6.5** The rear scene lights mounted on the rear of the vehicle shall be controlled "on/off" by a single pole lighted switch located in the driver's console. The rear scene light switch shall override both backup function and the scene lights "on" with the door open function and shall not be affected by those circuits. Rear floods switch shall also activate reverse lights.
- 3.7.4.6.6** A right-side scene light cancel switch shall be installed directly inside the side entrance door. The switch shall be mounted within the interior wall or cabinet. The switch shall be a single pole momentary switch. The circuit shall automatically turn off the right-side scene lights and the step well light with a single touch of the switch. The circuit shall automatically re-arm itself the next time the side entrance door is opened. The circuit shall be relay controlled. The use of a manual canceling door post switch is an unacceptable substitution.
- 3.7.4.6.7** A scene light cancel switch shall be installed directly inside the rear entrance door. The switch shall be mounted within the cabinet adjacent to the door. The switch shall be a single pole momentary switch. The circuit shall automatically turn off the flood lights with a single touch of the switch. The circuit shall automatically re-arm itself the next time the rear entrance doors are opened. The circuit shall be relay controlled. The use of a manual canceling door post switch is an unacceptable substitution.
- 3.7.4.6.8** The left and right, rear side, flood lights shall activate when the vehicle is placed in reverse. The lights shall illuminate to provide better side illumination when backing up the vehicle during periods of darkness. The circuit shall be relay controlled, without the use of voltage reducing diodes or rectifiers. All flood and reverse circuits shall function independently when the vehicle is not in reverse.
- 3.7.4.6.9** Two (2) Whelen 700 Series LED scene lights shall be installed on the Front of the vehicle. The flood lights shall include metallized chrome flange housings specifically designed for each light. Cast aluminum housings are unacceptable.

### **3.8 HVAC System**

#### **3.8.1.1**

The Ambulance Climate Control System in the chassis, shall only function when the vehicle is in the run mode. This shall be done to reduce the electrical load on the vehicle when the engine is not running.

#### **3.8.1.2**

A high-volume power exhaust ventilation system shall be installed on the left rear side panel of the vehicle. It shall consist of a 280 CFM, (2) speed blower motor, connected to a welded aluminum, transfer plenum. This plenum is directly connected to a set of dual closeable intake vents mounted in the face of the interior rear corner cabinet. On the exterior, a Cast Products polished aluminum cowl vent with an internal, rubber back flow flap shall be installed on the exterior of the modular body. The cowl vent shall be installed using an EPDM 40 to 60 durometer rubber gasket. Single speed blowers or blowers with resistor type speed control are unacceptable. Installations which produce excessive noise due to vibration shall be cause for rejection.



**3.8.1.3** The unit shall have a minimum capacity of 38,000 BTU Air Conditioner, and 60,000 BTU Heat operating in 12-volt mode with the vehicle engine running. The unit will have a high performance 650 CFM Brushless blower fan with a five-year warranty. The heater/air conditioner unit shall be permanently attached to the double ductwork system running the full length of the ceiling of the vehicle. Each duct shall be fully contoured with approximate dimensions of 5" wide and not protrude more than 2 3/4" from the ceiling. In addition, each duct shall have four (4) equally spaced, front to rear fully adjustable 4-way adjustable louvers with shut off feature at each register. The duct work shall be covered with a fully padded vinyl covering and incorporate the vehicle's drop-down wire raceway cover in the center. The heater/air conditioner unit shall be located in the front of the vehicle centered above the cab to body pass through. An air cleaner filter shall be installed above the return air grille located in the underside of the cabinet.

All heater hoses shall be OEM style EPDM rubber type. The use of lesser quality hose or silicone hose is an unacceptable substitution. The system heater shall include an automatic electrically activated heat shut-off valve which only opens when the heater unit is "On". The heater shut off valve shall also include an emergency shut-off switch located within the rear power distribution panel. All Air Conditioner hoses shall be Goodyear Galaxy Type 4890. Barrier type hose shall be unacceptable.

No exceptions or deviations to this system will be allowed due to its superior air distribution system and low noise characteristics. Bidder/manufacturer must provide proof that this is an operating climate control system, offered as a standard component in their emergency vehicle production.

**3.8.1.4** A digital electronic Climate Control thermostat shall be used to monitor and control both air conditioning and heating in the rear patient compartment. The following features are to be included:

- 3.8.1.4.1** A 1/2" backlit digital display, which displays both ambient and set temperatures. Ambient readout is displayed by default.
- 3.8.1.4.2** Temperature adjustment is 50° F to 99° F or 10° C to 37° C.
- 3.8.1.4.3** Seven (7) fan speeds standard. Three (3) or Five (5) speed options also available.
- 3.8.1.4.4** The fan speed is easily controlled by using the color coded tactile up or down arrows.
- 3.8.1.4.5** Manual mode and two (2) Automatic operation modes which maintain  $\pm 2^\circ$  ambient temperature from the set point.
- 3.8.1.4.6** In Auto 1 mode the fan speeds shall be automatically increased or decreased depending on the temperature differential in the vehicle. Fan speeds are also manually selectable.
- 3.8.1.4.7** In Auto 2 mode the fan speeds shall be automatically increased or decreased depending on the temperature differential in the vehicle. Fan speeds are NOT manually selectable.
- 3.8.1.4.8** LED Indicators- Auto-Light Blue, A/C-Blue, Heat-Red
- 3.8.1.4.9** Operation shall be activated by chassis ignition with two (2) start-up modes available:
  - 3.8.1.4.9.1** Thermostat turns on using settings from the last use, including the 'OFF' condition.
  - 3.8.1.4.9.2** Thermostat turns on in Auto 1 mode with a set temperature of 72° regardless of previous settings.
- 3.8.1.4.10** The thermostat unit temperature probe shall be located mid-level in the patient compartment.
- 3.8.1.4.11** An additional control panel and remote fan speed switch are available.
- 3.8.1.4.12** The use of spring or bimetallic household thermostat is unacceptable. Only automotive type units shall be used.

- 3.8.1.5** The unit shall also be capable of 110 VAC shore power operation in both the heating and cooling modes. The unit shall be equipped with a separate evaporator coil and condenser for the 110 VAC air conditioning system. In 110 VAC mode the unit shall have a cooling capacity of 24,000 BTU and a heating capacity of 14,000 BTU. The 110 VAC air conditioning compressor and condenser shall be mounted underbody. The 12-volt condenser shall be mounted to the front of the body and have a cooling capacity of 40,000 BTU. Add-on systems are not desired due to loss of cabinet space. Only units capable of both 110 VAC and 12 VDC heating and cooling in one unit shall be acceptable.
- 3.8.1.6** Digital thermostat for 110 VAC operation included. Front body condenser is for 12-volt system only. 110v system condenser located under body.
- 12-volt cooling BTU 38,000  
110-volt cooling BTU 24,000  
12-volt heat BTU 60,000  
110-volt heat BTU 14,000
- 3.8.1.7** A Gorman-Rupp (GRI) auxiliary coolant pump with brushless motor shall be installed to increase coolant flow to the rear heater core. The pump shall be sized to provide required heat to rear unit, while not reducing the effective heat in the vehicle cab. A motorized hot water/coolant valve is part of this system to shut off the flow of hot water when not using heat. The pump and valve shall be controlled by the vehicle climate control system thermostat. The pump and valve shall be located in a protected location in a body compartment and easily serviceable if required.
- 3.8.1.8** The air conditioning condenser shall be mounted to the front of the body with a custom designed 3/16" aluminum fabricated tray style one piece bracket. The bracket shall be thru bolted to the front body. The area shall be reinforced with a backing plate to support this structure. The bracket will include design for mounting of auxiliary lighting equipment as listed below.
- 3.8.1.8.1** Front Body Condenser to be Painted to Match Body Color
- 3.8.1.8.2** Provisions for M7 lights on sides.
- 3.8.1.8.3** 700 LED front floodlights mounted in the F2 and F6 position.
- 3.8.1.8.4** Lights to be activated with switch in front console labeled "Front Flood Lights" Whelen Pioneer Plus PCPSM1C Flood Light, Front body
- 3.8.1.8.5** Location: Lights to be mounted on angled corners of condenser tray.
- 3.9** 12-Volt Ambulance Body Interior and Compartment Utility Lighting
- 3.9.1** Six (6) Whelen 80C0EHCR, Multiple-LED dome lights shall be equally spaced down both sides of the ceiling. Each light shall include the High/Low intensity feature. The lights shall be relay controlled and have a lighted double throw switch in the rear Life Support panel. All lights to be mounted to vehicle frame, not to ceiling panel material.
- 3.9.2** The dome lights mounted in the ceiling of the vehicle shall be activated to the low intensity position when the personnel entrance doors are open. The circuit shall be relay controlled and the dome light current shall not be controlled by the door post switch.
- 3.9.3** All exterior compartments shall be provided with TecNiq E44 LED adhesive backed strip lights. Each compartment shall have the lights installed on both the left and right vertical side of the compartment. Lights shall be mounted on angled brackets for maximum illumination into the compartment. The compartment lights shall be controlled by an automatic door post switch in each door. The compartment open indication light shall activate anytime any compartment door is opened. The door post switch shall activate the compartment lighting relays. The door post switch shall not carry the current of the compartment lights.
- 3.9.4** There shall be a separate, individual control switch in the vehicle to independently control the light within the oxygen compartment. The switch shall be located in the Rear Main Switch Panel.
- 3.9.5** An indirect light located above the Life Support Station counter shall be used to illuminate the action area. The light shall be a LED 10" high intensity model and be switched by a switch in the rear main switch panel.

- 3.9.6 There shall be a separate, individual control switch in the vehicle to independently control the Panel Light in the Life Support Station area. The switch shall be located in the Rear Main Switch Panel.
- 3.9.7 An independent, recessed LED step well light shall be provided in the rear side of the diamond plate step well and be automatically activated whenever the side entrance door is open. The exterior shall be protected from weather and damage. All connections shall be weatherproof, sealed connectors.
- 3.9.8 Four (4) 17", 42 LED fixtures shall be installed and equally spaced in between the (6) dome lights. The fixtures shall have reinforced housings with a plastic diffuser which locks in place. The lights shall be relay controlled and switched by a lighted single pole switch in the rear Life Support switch panel. All lights shall be mounted to the vehicle ceiling structural members and not to the ceiling panel material alone.
- 3.9.9 A 60-minute mechanical timer shall be provided at the side door of the vehicle to control the ceiling lights.

If Rectangular lights are selected, the timer will allow them to be turned to the on position when the vehicle exterior power source is connected and shall be powered by the vehicles 12 volt battery charger. The lights shall be controlled by an additional transfer relay to prevent the lights from discharging the vehicle batteries when the shoreline is not plugged in. The timer shall only function when the shoreline is plugged in and will not function when the battery switch is activated.

If there are only dome lights, the timer will allow all dome lights to be turned to the on to the "High" switch position when the vehicle 120 VAC exterior power source is connected and shall be powered by the vehicles 12-volt battery charger. The timer shall only function when the shoreline is plugged in and will not function when the battery switch is activated.

60-minute windup timer at side door, active with shoreline only

- 3.9.10 A timer shall be provided at the side door of the vehicle to allow the rectangular lights to be turned to the on position when the vehicle exterior power source is connected and shall be powered by the vehicles 12-volt battery charger. The lights shall be controlled by an additional transfer relay to prevent the lights from discharging the vehicle batteries when the shoreline is not plugged in. The timer shall only function when the shoreline is plugged in and will not function when the battery switch is activated.
- 3.9.11 Per the requirements of KKK-A-1822, two independent dome light circuits with two independent switches shall be provided to control two banks of (3) dome lights each. The switches shall be marked in the Life Support panel as left dome light and right dome light. Each switch shall power the low mode of the fixtures independently.
- 3.9.12 One (1) 12-volt Power Point outlet shall be provided. The outlet shall be circuit breaker protected and provide a source directly from the vehicle batteries and bypass the vehicles master battery disconnect switch. **The outlet shall be located at the Life Support Station.**
- 3.9.13 One (1) 12-volt Power Point outlet shall be provided. The outlet shall be circuit breaker protected and provide a source directly from the vehicle batteries and bypass the vehicles master battery disconnect switch. **The outlet shall be located in the right front in/out access compartment.**
- 3.9.14 One (1) 12-volt Power Point outlet shall be provided to charge 12-volt equipment. The outlet shall be circuit breaker protected and provide a source directly from the vehicle batteries and bypass the vehicles master battery disconnect switch. **The outlet shall be located in the right front upper compartment.**
- 3.9.15 One (1) 12-volt Power Point outlet shall be provided. The outlet shall be circuit breaker protected and provide a source directly from the vehicle batteries and bypass the vehicles master battery disconnect switch. **The outlet shall be located on the left rear wall of the vehicle.** Outlet to be mounted 14" above the rear counter.
- 3.9.16 One Kussmaul 091-219-5, Dual Port 12VDC/4.8amp USB shall be installed in the front switch plate. For USB charging, Hot with body power or shoreline.
- 3.9.17 One Kussmaul 091-219-5, Dual 12VDC/4.8-amp USB shall be installed in the LSS switch panel. For USB charging, Hot with body power or shoreline.
- 3.9.18 A Coaxial Antenna lead shall be prewired from a location in the wire raceway to the location of the

two-way communication radios. City provided. The antenna lead in the roof shall include a connector soldered to end of cable for install of two-way communication radio antenna.

- 3.9.19** Two (2) coaxial cable antenna lead with base and cap shall be installed; they shall be positioned within the body roof, in numerical order, as indicated by the associated PDF drawing file. They shall terminate in the following location(s):

Unless otherwise specified, lead will route to:

One (1) Front console, One (1) LSS Factory will drill a hole, mount base and cap at antenna location(s) specified above.

Antenna bases are installed with nominal height adjustment. Persons installing antenna whip may be required to perform final adjustment.

- 3.9.20** A 10-gauge constant power positive lead and 10-gauge ground shall be provided with 30-amp circuit protection located in the Rear Main Switch Panel.

Includes: (1) Red 10 gauge marked radio 12 volt Hot, 30-amp, (1) Black 10 gauge marked radio ground, (1) Orange 12 gauge marked 12 volt switched, 20 amp.

- 3.9.21** A 10-gauge constant power positive lead and 10-gauge ground shall be provided with 30-amp circuit protection. Includes: (1) 12-volt Hot wire with 30-amp circuit protection, (1) 12 volt switched wire with 20-amp circuit protection.

**3.9.22** Radio Power Leads

**3.9.22.1** An 8-gauge constant power positive lead and 8-gauge ground shall be provided with 40-amp circuit protection. Includes: (1) 12-volt Hot wire w/fuse holder & 40-amp fuse, (1) 12 volt switched wire w/fuse holder and 40-amp fuse.

**3.9.22.2** Supply and run CAT 5 cables with RJ45 plugs at each end, Qty (4): 1- Med Vault to driver seat, 1- cab headliner driver side to behind driver seat for GPS, 1- front console to behind driver seat for a computer, 1- A/C shelf to behind map box for Knox box.

**3.9.22.3** Install customer supplied antennas, Qty (5): 2 - will mount to PL supplied coax on body roof, 1- GPS mounted on cab roof driver side and run to front console, 1 - 6 wire antenna mounted on cab roof passenger side run to front console, 1- 3 wire antenna mount to front interior body wall above pass thru window and run to behind the passenger seat.

**3.9.22.4** Run customer supplied radio cable, Qty (1): LSS switch pod to front console. Mount dealer supplied trunnion mount for Motorola APX 8500 under LSS switchpod.

**3.9.23** Back-up 2-camera System and Monitor:

**3.9.23.1** The vehicle shall be equipped with an Audiovox Backup 2-Camera/ LCD Observation System. The cameras and Monitor shall be capable of full color display. One of the cameras shall be mounted on the back of the vehicle and include a waterproof switch for mirror or normal image, the other camera shall be mounted in the interior of the vehicle. The cameras shall be capable of 110 degrees of horizontal image and 90 degree of vertical image.

**3.9.23.2** The monitor shall be mounted on a 4" pivot pedestal from the cab ceiling between cab sun visors. The monitor shall be a 6.8-inch full color LCD display screen. The monitor shall be connected by a shielded cable to minimize interference.

**3.9.23.3** The Backup Camera system shall automatically activate every time the vehicle is shifted into the reverse gear provided the control switch is set to the standby mode. Continuous monitoring is provided when the control switch is set to the manual mode, and not dependent on the reverse gear selection. The Monitor system shall provide an A-B selector switch to select between interior and exterior cameras.

**3.9.23.4** Monitor to mount on 4" Pedestal in cab ceiling between sun visors. Audiovox System Interior camera to be located on the front head bumper.

- 3.9.24** Two (2) low profile, flush mounted, AM-FM Stereo Radio Speakers shall be installed in the ceiling in the forward portion of the vehicle. The speakers shall be spaced with other equipment provided, (1) each side. The speakers shall be connected to the stereo radio within the cab

dashboard. A "Volume Control" rheostat shall be provided in the rear switch panel to allow speakers to operate independent of front speakers.

- 3.9.25** An Intellitec digital clock with sweep second hand and elapsed timer shall be installed over the rear doors. The clock shall be powered by a constant, protected, 12-volt source directly from the batteries.
- 3.9.26** The clock shall have a 4-digit display to allow for easy viewing when seated in any position in the rear of the ambulance. The clock is 6.75 x 4.75 x 1.25 mounted in a 6" x 5" panel cut out using 4 screws. Location: Above rear entry doors, centered under raceway.
- 3.9.27** A switch shall be installed to enable the rear suspension kneeling feature. It shall be an on/off style switch which, when in the "on" position, will allow the system to kneel whenever the left rear entry door is open. When this switch is in the "off" position, the kneeling feature will be disabled. The switch shall be installed street side low by rear doors.
- 3.9.28** Supply and install FireCom 5100D. The unit will have (3) headsets - model FH-51 (2) in cab (1) on the A wrapper above the 02 window. Includes 5100D mounted behind driver seat and (1) four (4) foot radio interface cable and five (5) foot extension cable.
- 3.9.29** The vehicle shall be pre-wired with a 12-volt HOT power lead terminating behind the driver's seat area. The wiring shall be 12AWG and include a power and ground conductor encased loom. The ends shall be capped, and the circuit labeled.
- 3.9.30** The vehicle shall be pre-wired with a 12-volt HOT power lead terminating behind the driver's seat. The wiring shall be 12AWG and include a power and ground conductor encased loom. The ends shall be capped, and the circuit labeled. Location: Behind the driver's seat with 6ft lead. 20-amp Max capacity.
- 3.9.31** The vehicle shall be pre-wired with a 12-volt HOT power lead terminating inside the front Cab console. The wiring shall be 12AWG and include a power and ground conductor encased in loom. The ends shall be capped, and the circuit labeled.
- 3.9.32** The vehicle shall be pre-wired with a 12-volt HOT power lead terminating inside the cab front console. The wiring shall be 12AWG and include a power and ground conductor encased loom. The ends shall be capped, and the circuit labeled. Location: Inside the cab front console with 6ft lead. 20-amp Max capacity.
- 3.9.33** The vehicle shall be pre-wired with a 12-volt HOT power lead terminating in the exterior compartment "B". The wiring shall be 12AWG and include a power and ground conductor encased loom. The ends shall be capped, and the circuit labeled.
- 3.9.34** The vehicle shall be pre-wired with a 12-volt HOT power lead terminating in the exterior compartment "B". The wiring shall be 12AWG and include a power and ground conductor encased loom. The ends shall be capped, and the circuit labeled. Location: Upper Rear Right Corner of compartment with 6ft lead exposed in the Compartment. 20-amp Max capacity.

Qty: (1)

Locate: Cab, on floor behind passenger's seat.

Qty:(2)

Location # 1 - (1) In cab behind passenger seat. Location # 2 - (1) Compartment "B", rear side wall.

Note: Installation in any Oxygen compartment is NOT permitted.

### **3.10 115-Volt AC Electrical**

- 3.10.1** The vehicle shall include a 115-volt AC Electrical system separate and distinct from the vehicles 12-volt electrical system.
- 3.10.2** The entire system shall be designed and tested to meet the requirements of the NFPA National Electrical Code (NEC) where applicable and use the balance of the NEC for general practices and procedures associated with high voltage 115/230-volt AC Electrical wiring and devices.
- 3.10.3** The vehicle shall also meet and be tested to all requirements of AMD standard 009. Test documentation and verification shall be provided upon request.
- 3.10.4** A complete wiring schematic shall be provided which indicates the systems entire 115-volt Electrical System. The schematic shall be done in the same format as the 12 volt wiring schematics and be

provided upon delivery of the vehicle.

**3.10.5** All wiring shall be three (3) conductors, 10 GA or 12 GA minimum stranded copper cable as required by the circuit requirements. All conductors shall have a 105 Celsius rated insulation, with tinned conductors rated at 600 volt. All cable wiring shall be encased in high temperature protective loom where exposed.

**3.10.6** A 20-Amp Kussmaul "Super Auto-Eject" Shoreline Male Motor Base Model 091-55-20-120 shall be installed on the driver's side of the body above compartment "C". The Shoreline shall be waterproof type with spring loaded gasketed cover. The Shoreline shall be wired to the junction circuit breaker box located within the power distribution panel compartment. The Shoreline auto-eject solenoid shall be connected to the starter solenoid of the vehicle and only be activated when the key is in the start mode. The Shoreline shall be equipped with a matching female connector designed for use with the auto- eject shoreline and shipped loose with the vehicle. An indicator light shall be added to indicate charging is occurring.

**3.10.7** \*\*Mounting Location: Drivers side rear above compartment "C" mounted Next to 20 Amp Shoreline. Dual operation indicator lights shall be provided to indicate both live power of the shoreline and battery charger "charging". This shall be located at the shoreline input connector. The "Live Power Shoreline" indicator shall be a "rounded" 3/8" LED amber indicator and the "Battery Charger" indicator shall be a "rounded" 3/8" green LED. The 115-volt indicator shall indicate power has reached the interior outlets, not just the shoreline.

Shoreline - Amber Indicator Battery Charger - Green Indicator

**3.10.8** A 115-volt power distribution box shall be installed in the vehicle's main electrical cabinet. The distribution box shall consist of an enclosure with a 20-amp magnetic type circuit breaker installed. The circuit breaker shall power duplex receptacles also mounted within the distribution box. All wiring and circuits provided shall be sized for a 20-amp capacity, 12-gauge conductor minimum.

**3.10.9** 115-volt AC Duplex Ground Fault Circuit Interrupter receptacle shall be installed in the vehicle for protection of personnel. The GFCI shall be "Lighted" duplex type. The Green light within the outlet shall glow when live power is at the outlet and extinguish to indicate when the GFCI is tripped. All other outlets within the vehicle shall be wired downstream and be GFCI protected. The location of the GFCI shall be as follows, one (1) located on the back wall of the Life Support Station.

**3.10.10** 115-volt AC Duplex Electrical outlet shall be installed in the vehicle. The outlets shall be "Lighted" hospital grade duplex type. The Neon light within the outlet shall glow when live power is at the outlet. All outlets within the vehicle shall be GFCI protected. The location of the outlet shall be as follows, one (1) located in the right front compartment.

**3.10.11** 115-volt AC Duplex Electrical outlet shall be installed in the vehicle. The outlets shall be "Lighted" hospital grade duplex type. The Neon light within the outlet shall glow when live power is at the outlet. All outlets within the vehicle shall be GFI protected. The location of the outlet shall be as follows, one (1) located in the right front upper compartment.

**3.10.12** A 30-Amp Kussmaul "Super Auto-Eject" Shoreline Male Motor Base Model 091-73-30-120 and matching 091-73-CON-3P, shall be installed in the vehicle and mounted on the driver's side rear above compartment 'C'. The Shoreline shall be waterproof type with spring loaded gasketed cover. The Shoreline shall be wired to the junction circuit breaker box located within the power distribution panel compartment. The Shoreline auto-eject solenoid shall be connected to the starter solenoid of the vehicle and only be activated when the key is in the start mode. The Shoreline shall be equipped with a matching female connector designed for use with the auto-eject shoreline and shipped loose with the vehicle. An indicator light shall be added to indicate charging is occurring.

### **3.11 Battery Charging Equipment 12 Volt To 115 Volt Inverter**

**3.11.1** A Vanner Model 20-1050 CUL, 1050-watt inverter shall be installed in the rear electrical equipment cabinet of the vehicle. The inverter shall have a built-in transfer switch to power equipment from both the shoreline or vehicle power. The unit shall also include a 55-amp battery charger built into the unit.

All battery leads to inverter shall be powered by a 2 GA SXL battery cable, minimum, directly from the battery side of the vehicles master disconnect switch.

Note: Delete Standard Battery Charger

### 3.12 Truck Cab

#### 3.12.1 Drivers Console

3.12.1.1 Type I: Lower

3.12.1.2 An individually custom designed Radio and Siren Console shall be provided and mounted to the floor of the cab. It shall be equipped with a removable lid for access when servicing. The Console shall follow the contours of the floor to minimize its protrusion. The console shall be covered with a 1/4" padded black vinyl to match interior. All switches and controls shall be within easy reach of both the driver and passenger.

3.12.1.3 The ambulance manufacturer shall provide (1) Motorola APX8500 Radio all band with 7/800 and UHF turn-on, custom fit cutout and mounting of the Radio /Siren Cab Console, including the required mounting brackets. This shall not include any routing of wiring or technical installation of radio equipment. 17.3 Customer supplied CAT 5 cable will be installed by builder during the prewiring of the body. \* Locations to be provided by the City.

3.12.1.4 A map box shall be fabricated and installed behind the cab console. The box shall be laminated white on the interior and black on the exterior. There shall also be (3) finished map and paper storage slots which are created with the use of removable clear acrylic dividers - includes (2) Lexan dividers.

#### 3.12.2 Cab Steps

3.12.2.1 The curb sidestep shall be covered with a custom fitted, FTQ polish aluminum diamond plate cover which will be bolted on. A latchable hinged access door shall be provided **to gain access to fuel delivery**. The Diesel Emissions Fill shall be finished in the same fashion and incorporated into the step. All seams and corners shall be 100% Heliarc welded for strength and a finished appearance.

3.12.2.2 The street sidestep shall be covered with a custom fitted, FTQ polish aluminum diamond plate cover. The cover shall be bolted on, and all seams and corners shall be 100% Heliarc welded for strength and a finished appearance. C-Channel, additional rubber spacers.

3.12.2.3 Two (2) additional spacers to be added to the C-channel at the side entrance door for increased support.

3.12.3 The Freightliner chassis batteries should be mounted under the cab steps on the left side of the cab. There shall be a total of 4 batteries mounted in a custom diamond plate enclosure with a lockable, hinged door and a pull-out tray that contains the batteries, for ease of maintenance.

3.12.4 Supply and install a Buckstop front bumper, model M020A2, painted to match the chassis.

### 3.13 Vehicle Painting

3.13.1 The entire modular body shall be prepared and painted using a premium paint and process to ensure the paint quality, appearance is smooth, corrosion free, paint flaking doesn't occur on corners of the body and chassis.

\*All edges of the module body, doors, and door openings are to be rounded for maximum paint mils.

\*All body work requires a Quality Assurance inspection to check for pin holes, gaps, scratches, and blemishes. All edges are to be rounded, and all sealant is to be sanded before epoxy primer application.

3.13.2 All exterior fastener locations that penetrate the paint on the modular body are to be treated with Electrolysis Corrosion Kontrol (ECK). Every external fastener hole shall have ECK brushed into and around the hole for full coverage. The perimeter of the hole shall be covered with a minimum of .5 diameter of ECK. This is to protect the head of the fastener from touching the painted surface. All applications of ECK are to take place before component mounting. The fasteners that are included in this process are for the following components: Lights, Light Bars, Hinges, Diamond plate panels, Entrance and compartment door panels, Fuel fill, License plate holder, Shoreline, Vent Covers, Rain Gutters, Rub Rails, Fenderettes and Door Grabbers. Additional items that are mounted to the painted

body will also be included. When an item is cut into the body causing an unpainted edge, the unpainted edge shall be completely coated with ECK prior to component mounting.

- 3.13.3** Manufacturer will warranty to original purchaser that the Paint is free from specific paint defects for 10 years from date the vehicle is delivered. Manufacturer will warranty 100% labor & materials for the following defects: coating system integrity, coating adhesion and UV related degradation. Gloss retention and color retention. Cracking or checking of the paint film. Delaminating from the substrate or intercoat. Manufacturer will warranty materials and labor to repair defects resulting from dissimilar metals and crevice corrosion for a period of 5 years, No mileage exclusion from date of delivery. Bidder must include statement of warranty policy with bid.
- 3.13.4** The manufacturer shall utilize a customized paint adhesion testing procedure to insure and verify that proper bonding of the coatings to the substrate surface, has taken place. This test is performed on an intentional, sacrificial test surface just prior to the final polish stage. The coatings are cross hatch cut down to the substrate on multiple areas of the test surface. An adhesion tape of Permacel 99 (or the equivalent) is bonded and then removed to verify the permanent bond of the coatings. Each test surface panel is dated, logged and saved. The performed adhesion test is designed to exceed the ASTM spec D 3359, "Standard Test Method for Measuring Adhesion by Tape Test".
- 3.13.5** The rear portion of the body shall be painted the primary single solid color only in preparation for Chevron application.
- 3.13.6** The entire modular body will be Red - Paint Code: 00835390EY Race Red
- 3.13.7** The cab color will be the same as the modular body.

\*\* Front Body Condenser to be Painted to Match Body Color

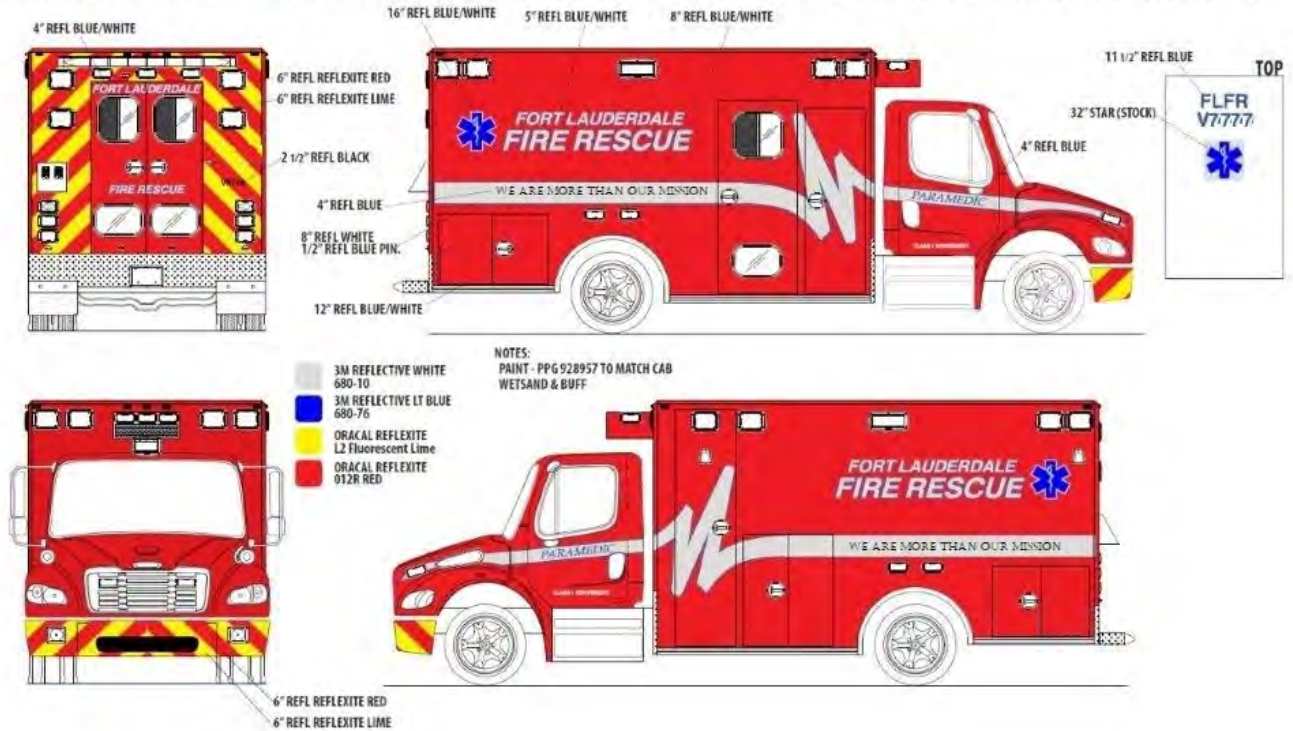
No Additional Paint Required Polycoated Compartment & Entrance Door Sills, Compartment Floors, Area Behind Rub Rails (\*Note\*)

**3.14 Vinyl Reflective Striping**

- 3.14.1** A 3/4" wide vinyl reflective white stripe shall be installed on the outer perimeter edge, of the inner door pan on all (3) entrance doors, reflective white 3/4" outline. This provides the 60 sq. inch required for both general safety and KKK.
- 3.14.2** A Reflexite, chevron stripe shall be installed on the rear body of the vehicles outside \*\*flat panels only, excluding the rear door(s). The applied materials shall be Reflexite V98 Reflective Sheeting. The two colors are red and lime. \*Does not include any curved surfaces, such as the coves, or door trim.
- 3.14.3** A 3" Reflexite, chevron stripe shall be installed on the inside, brushed aluminum door panels on all compartment doors. The Chevron color shall be Red/ Fluorescent Lime. \*Install Reflexite Chevron Design, all Inner Compartment Door Panels
- 3.14.4** Reflexite 6" Chevron Rear Body and Upper Center Panel, no doors. Red & Flour Lime (the two colors are V-98 for red and flour green). \*Does not include any curved surfaces such as the coves or door trim.
- 3.14.5** Reflexite 3" Chevron Design, Inverted "V", (Red/Lime) on the inside, brushed aluminum door panels on all entrance doors.
- 3.15** Body Graphics are to be the standard Ft. Lauderdale Fire Rescue ambulance graphics package (per specifications) including chevron and five (5) removable painted graphics placards. Final design to be approved by the City.



DRAWING IS FOR ILLUSTRATION PURPOSES AND MAY REQUIRE EDITS TO THINGS SUCH AS FONTS, ETC.



**3.16 Finite Element Analysis**

**3.16.1** The Manufacturer shall certify that a Finite Element Analysis, using Solid Works Simulation, has been successfully performed to simulate side impact crash testing to the ambulance body. Loading shall conform to the Code of Federal Regulations, Title 49, Section 571.208, Section 8.2.2, Section 8.3.5, and Section 8.3.6.

**3.16.2** The analysis shall show that the ambulance body will not experience a localized displacement of greater than 3 inches in critical areas.

**3.17 Lifetime Structural Warranty**

**3.17.1** Manufacturer will warranty to original purchaser that the new emergency vehicle body (exclusive of paint finish) is structurally sound and free from all structural defects of both material and workmanship, and further warrants that it will maintain such structural integrity for the life for the body. Warranty transferable subject to inspection by manufacturer. Bidder must include statement of warranty policy with bid.

**3.17.2** Documented proof of the analysis shall be provided at the time of the bid submission. Detailed specifications and the results of FEA shall be provided upon request. This analysis shall be in addition to certification of conformance to KKK-A- 1822, revision F.

**3.17.3** The structural integrity of the body shall be guaranteed for the life of the unit, as long as the original purchaser shall own it.

**3.18 Vehicle Delivery**

**3.18.1** The Chassis shall be checked and adjusted for proper front and rear alignment after the ambulance body is mounted and the vehicle is ready for delivery.

**3.18.2** Equipment to be delivered with the vehicle

**3.18.2.1** VIN Specific Chassis "SHOP-SERVICE MANUAL"

**3.18.2.2** Service Manual CD (Qty: 1)

**3.18.2.3** Parts Manual CD (Qty: 1)

**3.18.2.4** One (1) Zico, Quick Release Strapless "D" Bottle Bracket Model QR-D-2 shall be provided and installed in the recessed stepwell area.

**3.18.3 Dealer Supplied / Installed Items**

- 3.18.3.1** Dealer will supply and install one (1) Motorola APX8500 Radio System with Antennas
  - 3.18.3.2** Dealer will supply and install three (3) SCBA brackets, three (3) coat hooks, three (3) hat hooks and one (1) ax/halligan mount – location will be finalized by the City.
  - 3.18.3.3** Dealer will supply and install two (2) Steamlight Vulcan flashlights, one (1) in cab behind passenger seat and one (1) in compartment B.
  - 3.18.3.4** Dealer will install customer supplied portable radio battery chargers.
  - 3.18.3.5** Dealer will install customer supplied model and antenna.
  - 3.18.3.6** Dealer will install customer supplied Wi-Fi booster antenna in module.
- 3.18.4** The New vehicle shall be cleaned and detailed, both inside and out, for final delivery.
- 3.18.5** Final delivery to: Fleet Services, 2020 SW 14<sup>th</sup> Avenue, Building 8, Fort Lauderdale, FL 33312

**CITY OF FORT LAUDERDALE  
GENERAL CONDITIONS**

These instructions and conditions are standard for all contracts for commodities or services issued through the City of Fort Lauderdale Procurement Services Division. The City may delete, supersede, or modify any of these standard instructions for a particular contract by indicating such change in the Invitation to Bid (ITB) Special Conditions, Technical Specifications, Instructions, Proposal Pages, Addenda, and Legal Advertisement. In this general conditions document, Invitation to Bid (ITB), Request for Qualifications (RFQ), and Request for Proposal (RFP) are interchangeable.

**PART I BIDDER PROPOSAL PAGE(S) CONDITIONS:**

- 1.01 BIDDER ADDRESS:** The City maintains automated vendor address lists that have been generated for each specific Commodity Class item through our bid issuing service, BidSync. Notices of Invitations to Bid (ITB'S) are sent by e-mail to the selection of bidders who have fully registered with BidSync or faxed (if applicable) to every vendor on those lists, who may then view the bid documents online. Bidders who have been informed of a bid's availability in any other manner are responsible for registering with BidSync in order to view the bid documents. There is no fee for doing so. If you wish bid notifications be provided to another e-mail address or fax, please contact BidSync. If you wish purchase orders sent to a different address, please so indicate in your bid response. If you wish payments sent to a different address, please so indicate on your invoice.
- 1.02 DELIVERY:** Time will be of the essence for any orders placed as a result of this ITB. The City reserves the right to cancel any orders, or part thereof, without obligation if delivery is not made in accordance with the schedule specified by the Bidder and accepted by the City.
- 1.03 PACKING SLIPS:** It will be the responsibility of the awarded Contractor, to attach all packing slips to the OUTSIDE of each shipment. Packing slips must provide a detailed description of what is to be received and reference the City of Fort Lauderdale purchase order number that is associated with the shipment. Failure to provide a detailed packing slip attached to the outside of shipment may result in refusal of shipment at Contractor's expense.
- 1.04 PAYMENT TERMS AND CASH DISCOUNTS:** Payment terms, unless otherwise stated in this ITB, will be considered to be net 45 days after the date of satisfactory delivery at the place of acceptance and receipt of correct invoice at the office specified, whichever occurs last. Bidder may offer cash discounts for prompt payment but they will not be considered in determination of award. If a Bidder offers a discount, it is understood that the discount time will be computed from the date of satisfactory delivery, at the place of acceptance, and receipt of correct invoice, at the office specified, whichever occurs last.
- 1.05 TOTAL BID DISCOUNT:** If Bidder offers a discount for award of all items listed in the bid, such discount shall be deducted from the total of the firm net unit prices bid and shall be considered in tabulation and award of bid.
- 1.06 BIDS FIRM FOR ACCEPTANCE:** Bidder warrants, by virtue of bidding, that the bid and the prices quoted in the bid will be firm for acceptance by the City for a period of one hundred twenty (120) days from the date of bid opening unless otherwise stated in the ITB.
- 1.07 VARIANCES:** For purposes of bid evaluation, Bidder's must indicate any variances, no matter how slight, from ITB General Conditions, Special Conditions, Specifications or Addenda in the space provided in the ITB. No variations or exceptions by a Bidder will be considered or deemed a part of the bid submitted unless such variances or exceptions are listed in the bid and referenced in the space provided on the bidder proposal pages. If variances are not stated, or referenced as required, it will be assumed that the product or service fully complies with the City's terms, conditions, and specifications.
- By receiving a bid, City does not necessarily accept any variances contained in the bid. All variances submitted are subject to review and approval by the City. If any bid contains material variances that, in the City's sole opinion, make that bid conditional in nature, the City reserves the right to reject the bid or part of the bid that is declared by the City as conditional.
- 1.08 NO BIDS:** If you do not intend to bid please indicate the reason, such as insufficient time to respond, do not offer product or service, unable to meet specifications, schedule would not permit, or any other reason, in the space provided in this ITB. Failure to bid or return no bid comments prior to the bid due and opening date and time, indicated in this ITB, may result in your firm being deleted from our Bidder's registration list for the Commodity Class Item requested in this ITB.
- 1.09 MINORITY AND WOMEN BUSINESS ENTERPRISE PARTICIPATION AND BUSINESS DEFINITIONS:** The City of Fort Lauderdale wants to increase the participation of Minority Business Enterprises (MBE), Women Business Enterprises (WBE), and Small Business Enterprises (SBE) in its procurement activities. If your firm qualifies in accordance with the below definitions please indicate in the space provided in this ITB.

Minority Business Enterprise (MBE) "A Minority Business" is a business enterprise that is owned or controlled by one or more socially or economically disadvantaged persons. Such disadvantage may arise from cultural, racial, chronic economic circumstances or background or other similar cause. Such persons include, but are not limited to: Blacks, Hispanics, Asian Americans, and Native Americans.

The term "Minority Business Enterprise" means a business at least 51 percent of which is owned by minority group members or, in the case of a publicly owned business, at least 51 percent of the stock of which is owned by minority group members. For the purpose of the preceding sentence, minority group members are citizens of the United States who include, but are not limited to: Blacks, Hispanics, Asian Americans, and Native Americans.

Women Business Enterprise (WBE) a "Women Owned or Controlled Business" is a business enterprise at least 51 percent of which is owned by females or, in the case of a publicly owned business, at least 51 percent of the stock of which is owned by females.

Small Business Enterprise (SBE) "Small Business" means a corporation, partnership, sole proprietorship, or other legal entity formed for the purpose of making a profit, which is independently owned and operated, has either fewer than 100 employees or less than \$1,000,000 in annual gross receipts.

BLACK, which includes persons having origins in any of the Black racial groups of Africa.

WHITE, which includes persons whose origins are Anglo-Saxon and Europeans and persons of Indo-European decent including Pakistani and East Indian.

HISPANIC, which includes persons of Mexican, Puerto Rican, Cuban, Central and South American, or other Spanish culture or origin, regardless of race.

NATIVE AMERICAN, which includes persons whose origins are American Indians, Eskimos, Aleuts, or Native Hawaiians.

ASIAN AMERICAN, which includes persons having origin in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands.

#### 1.10 MINORITY-WOMEN BUSINESS ENTERPRISE PARTICIPATION

It is the desire of the City of Fort Lauderdale to increase the participation of minority (MBE) and women-owned (WBE) businesses in its contracting and procurement programs. While the City does not have any preference or set aside programs in place, it is committed to a policy of equitable participation for these firms. Proposers are requested to include in their proposals a narrative describing their past accomplishments and intended actions in this area. If proposers are considering minority or women owned enterprise participation in their proposal, those firms, and their specific duties have to be identified in the proposal. If a proposer is considered for award, he or she will be asked to meet with City staff so that the intended MBE/WBE participation can be formalized and included in the subsequent contract.

#### 1.11 SCRUTINIZED COMPANIES

As to any contract for goods or services of \$1 million or more and as to the renewal of any contract for goods or services of \$1 million or more, subject to *Odebrecht Construction, Inc., v. Prasad*, 876 F.Supp.2d 1305 (S.D. Fla. 2012), affirmed, *Odebrecht Construction, Inc., v. Secretary, Florida Department of Transportation*, 715 F.3d 1268 (11th Cir. 2013), with regard to the "Cuba Amendment," the Contractor certifies that it is not on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, and that it does not have business operations in Cuba or Syria, as provided in section 287.135, Florida Statutes (2019), as may be amended or revised. As to any contract for goods or services of any amount and as to the renewal of any contract for goods or services of any amount, the Contractor certifies that it is not on the Scrutinized Companies that Boycott Israel List created pursuant to Section 215.4725, Florida Statutes (2019), and that it is not engaged in a boycott of Israel. The City may terminate this Agreement at the City's option if the Contractor is found to have submitted a false certification as provided under subsection (5) of section 287.135, Florida Statutes (2019), as may be amended or revised, or been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List or the Scrutinized Companies that Boycott Israel List created pursuant to Section 215.4725, Florida Statutes (2019), or is engaged in a boycott of Israel, or has been engaged in business operations in Cuba or Syria, as defined in Section 287.135, Florida Statutes (2019), as may be amended or revised.

Rev. 2/2020

Page 1

#### 1.12 DEBARRED OR SUSPENDED BIDDERS OR PROPOSERS

The bidder or proposer certifies, by submission of a response to this solicitation, that neither it nor its principals and subcontractors are presently debarred or suspended by any Federal department or agency.

#### Part II DEFINITIONS/ORDER OF PRECEDENCE:

#### 2.01 BIDDING DEFINITIONS The City will use the following definitions in its general conditions, special conditions, technical specifications, instructions to bidders, addenda and any other document used in the bidding process:

INVITATION TO BID (ITB) The solicitation document used for soliciting competitive sealed bids for goods or services.

INVITATION TO NEGOTIATE (ITN) All solicitation documents, regardless of medium, whether attached to or incorporated by reference in solicitations for responses from firms that invite proposals from interested and qualified firms so the city may enter into negotiations with the firm(s) determined most capable of providing the required goods or services.

REQUEST FOR PROPOSALS (RFP) A solicitation method used for soliciting competitive sealed proposals to determine the best value among proposals for goods or services for which price may not be the prevailing factor in award of the contract, or the scope of work, specifications or contract terms and conditions may be difficult to define. Such solicitation will consider the qualifications of the proposers along with evaluation of each proposal using identified and generally weighted evaluation criteria. RFPs may include price criteria whenever feasible, at the discretion of the city.

REQUEST FOR QUALIFICATIONS (RFQ) A solicitation method used for requesting statements of qualifications in order to determine the most qualified proposer for professional services.

BID – a price and terms quote received in response to an ITB.

PROPOSAL – a proposal received in response to an RFP.

BIDDER – Person or firm submitting a Bid.

PROPOSER – Person or firm submitting a Proposal.

RESPONSIVE BIDDER – A firm who has submitted a bid, offer, quote, or response which conforms in all material respects to the competitive solicitation document and all of its requirements.

RESPONSIBLE BIDDER – A firm who is fully capable of meeting all requirements of the solicitation and subsequent contract. The respondent must possess the full capability, including financial and technical, ability, business judgment, experience, qualifications, facilities, equipment, integrity, capability, and reliability, in all respects to perform fully the contract requirements and assure good faith performance as determined by the city.

FIRST RANKED PROPOSER – That Proposer, responding to a City RFP, whose Proposal is deemed by the City, the most advantageous to the City after applying the evaluation criteria contained in the RFP.

SELLER – Successful Bidder or Proposer who is awarded a Purchase Order or Contract to provide goods or services to the City.

CONTRACTOR – Any firm having a contract with the city. Also referred to as a "Vendor".

CONTRACT – All types of agreements, including purchase orders, for procurement of supplies, services, and construction, regardless of what these agreements may be called.

CONSULTANT – A firm providing professional services for the city.

- 2.02 SPECIAL CONDITIONS:** Any and all Special Conditions contained in this ITB that may be in variance or conflict with these General Conditions shall have precedence over these General Conditions. If no changes or deletions to General Conditions are made in the Special Conditions, then the General Conditions shall prevail in their entirety,

**PART III BIDDING AND AWARD PROCEDURES:**

- 3.01 SUBMISSION AND RECEIPT OF BIDS:** To receive consideration, bids must be received prior to the bid opening date and time. Unless otherwise specified, Bidders should use the proposal forms provided by the City. These forms may be duplicated, but failure to use the forms may cause the bid to be rejected. Any erasures or corrections on the bid must be made in ink and initialed by Bidder in ink. All information submitted by the Bidder shall be printed, typewritten or filled in with pen and ink. Bids shall be signed in ink. Separate bids must be submitted for each ITB issued by the City in separate sealed envelopes properly marked. When a particular ITB or RFP requires multiple copies of bids or proposals they may be included in a single envelope or package properly sealed and identified. Only send bids via facsimile transmission (FAX) if the ITB specifically states that bids sent via FAX will be considered. If such a statement is not included in the ITB, bids sent via FAX will be rejected. Bids will be publicly opened in the Procurement Office, or other designated area, in the presence of Bidders, the public, and City staff. Bidders and the public are invited and encouraged to attend bid openings. Bids will be tabulated and made available for review by Bidder's and the public in accordance with applicable regulations.
- 3.02 MODEL NUMBER CORRECTIONS:** If the model number for the make specified in this ITB is incorrect, or no longer available and replaced with an updated model with new specifications, the Bidder shall enter the correct model number on the bidder proposal page. In the case of an updated model with new specifications, Bidder shall provide adequate information to allow the City to determine if the model bid meets the City's requirements.
- 3.03 PRICES QUOTED:** Deduct trade discounts, and quote firm net prices. Give both unit price and extended total. In the case of a discrepancy in computing the amount of the bid, the unit price quoted will govern. All prices quoted shall be F.O.B. destination, freight prepaid (Bidder pays and bears freight charges, Bidder owns goods in transit and files any claims), unless otherwise stated in Special Conditions. Each item must be bid separately. No attempt shall be made to tie any item or items contained in the ITB with any other business with the City.
- 3.04 TAXES:** The City of Fort Lauderdale is exempt from Federal Excise and Florida Sales taxes on direct purchase of tangible property. Exemption **number for EIN is 59-6000319, and State Sales tax exemption number is 85-8013875578C-1.**
- 3.05 WARRANTIES OF USAGE:** Any quantities listed in this ITB as estimated or projected are provided for tabulation and information purposes only. No warranty or guarantee of quantities is given or implied. It is understood that the Contractor will furnish the City's needs as they arise.
- 3.06 APPROVED EQUAL:** When the technical specifications call for a brand name, manufacturer, make, model, or vendor catalog number with acceptance of APPROVED EQUAL, it shall be for the purpose of establishing a level of quality and features desired and acceptable to the City. In such cases, the City will be receptive to any unit that would be considered by qualified City personnel as an approved equal. In that the specified make and model represent a level of quality and features desired by the City, the Bidder must state clearly in the bid any variance from those specifications. It is the Bidder's responsibility to provide adequate information, in the bid, to enable the City to ensure that the bid meets the required criteria. If adequate information is not submitted with the bid, it may be rejected. The City will be the sole judge in determining if the item bid qualifies as an approved equal.
- 3.07 MINIMUM AND MANDATORY TECHNICAL SPECIFICATIONS:** The technical specifications may include items that are considered minimum, mandatory, or required. If any Bidder is unable to meet or exceed these items, and feels that the technical specifications are overly restrictive, the bidder must notify the Procurement Services Division immediately. Such notification must be received by the Procurement Services Division prior to the deadline contained in the ITB, for questions of a material nature, or prior to five (5) days before bid due and open date, whichever occurs first. If no such notification is received prior to that deadline, the City will consider the technical specifications to be acceptable to all bidders.
- 3.08 MISTAKES:** Bidders are cautioned to examine all terms, conditions, specifications, drawings, exhibits, addenda, delivery instructions and special conditions pertaining to the ITB. Failure of the Bidder to examine all pertinent documents shall not entitle the bidder to any relief from the conditions imposed in the contract.
- 3.09 SAMPLES AND DEMONSTRATIONS:** Samples or inspection of product may be requested to determine suitability. Unless otherwise specified in Special Conditions, samples shall be requested after the date of bid opening, and if requested should be received by the City within seven (7) working days of request. Samples, when requested, must be furnished free of expense to the City and if not used in testing or destroyed, will upon request of the Bidder, be returned within thirty (30) days of bid award at Bidder's expense. When required, the City may request full demonstrations of units prior to award. When such demonstrations are requested, the Bidder shall respond promptly and arrange a demonstration at a convenient location. Failure to provide samples or demonstrations as specified by the City may result in rejection of a bid.
- 3.10 LIFE CYCLE COSTING:** If so specified in the ITB, the City may elect to evaluate equipment proposed on the basis of total cost of ownership. In using Life Cycle Costing, factors such as the following may be considered: estimated useful life, maintenance costs, cost of supplies, labor intensity, energy usage, environmental impact, and residual value. The City reserves the right to use those or other applicable criteria, in its sole opinion that will most accurately estimate total cost of use and ownership.
- 3.11 BIDDING ITEMS WITH RECYCLED CONTENT:** In addressing environmental concerns, the City of Fort Lauderdale encourages Bidders to submit bids or alternate bids containing items with recycled content. When submitting bids containing items with recycled content, Bidder shall provide documentation adequate for the City to verify the recycled content. The City prefers packaging consisting of materials that are degradable or able to be recycled. When specifically stated in the ITB, the City may give preference to bids containing items manufactured with recycled material or packaging that is able to be recycled.

- 3.12 USE OF OTHER GOVERNMENTAL CONTRACTS:** The City reserves the right to reject any part or all of any bids received and utilize other available governmental contracts, if such action is in its best interest.
- 3.13 QUALIFICATIONS/INSPECTION:** Bids will only be considered from firms normally engaged in providing the types of commodities/services specified herein. The City reserves the right to inspect the Bidder's facilities, equipment, personnel, and organization at any time, or to take any other action necessary to determine Bidder's ability to perform. The Procurement Director reserves the right to reject bids where evidence or evaluation is determined to indicate inability to perform.
- 3.14 BID SURETY:** If Special Conditions require a bid security, it shall be submitted in the amount stated. A bid security can be in the form of a bid bond or cashier's check. Bid security will be returned to the unsuccessful bidders as soon as practicable after opening of bids. Bid security will be returned to the successful bidder after acceptance of the performance bond, if required; acceptance of insurance coverage, if required; and full execution of contract documents, if required; or conditions as stated in Special Conditions.
- 3.15 PUBLIC RECORDS/TRADE SECRETS/COPYRIGHT:** The Proposer's response to the RFP is a public record pursuant to Florida law, which is subject to disclosure by the City under the State of Florida Public Records Law, Florida Statutes Chapter 119.07 ("Public Records Law"). The City shall permit public access to all documents, papers, letters or other material submitted in connection with this RFP and the Contract to be executed for this RFP, subject to the provisions of Chapter 119.07 of the Florida Statutes.

Any language contained in the Proposer's response to the RFP purporting to require confidentiality of any portion of the Proposer's response to the RFP, except to the extent that certain information is in the City's opinion a Trade Secret pursuant to Florida law, shall be void. If a Proposer submits any documents or other information to the City which the Proposer claims is Trade Secret information and exempt from Florida Statutes Chapter 119.07 ("Public Records Laws"), the Proposer shall clearly designate that it is a Trade Secret and that it is asserting that the document or information is exempt. The Proposer must specifically identify the exemption being claimed under Florida Statutes 119.07. The City shall be the final arbiter of whether any information contained in the Proposer's response to the RFP constitutes a Trade Secret. The city's determination of whether an exemption applies shall be final, and the proposer agrees to defend, indemnify, and hold harmless the City and the City's officers, employees, and agents, against any loss or damages incurred by any person or entity as a result of the City's treatment of records as public records. In addition, the proposer agrees to defend, indemnify, and hold harmless the City and the City's officers, employees, and agents, against any loss or damages incurred by any person or entity as a result of the City's treatment of records as exempt from disclosure or confidential. Proposals bearing copyright symbols or otherwise purporting to be subject to copyright protection in full or in part may be rejected. The proposer authorizes the City to publish, copy, and reproduce any and all documents submitted to the City bearing copyright symbols or otherwise purporting to be subject to copyright protection.

EXCEPT FOR CLEARLY MARKED PORTIONS THAT ARE BONA FIDE TRADE SECRETS PURSUANT TO FLORIDA LAW, DO NOT MARK YOUR RESPONSE TO THE RFP AS PROPRIETARY OR CONFIDENTIAL. DO NOT MARK YOUR RESPONSE TO THE RFP OR ANY PART THEREOF AS COPYRIGHTED.

- 3.16 PROHIBITION OF INTEREST:** No contract will be awarded to a bidding firm who has City elected officials, officers or employees affiliated with it, unless the bidding firm has fully complied with current Florida State Statutes and City Ordinances relating to this issue. Bidders must disclose any such affiliation. Failure to disclose any such affiliation will result in disqualification of the Bidder and removal of the Bidder from the City's bidder lists and prohibition from engaging in any business with the City.
- 3.17 RESERVATIONS FOR AWARD AND REJECTION OF BIDS:** The City reserves the right to accept or reject any or all bids, part of bids, and to waive minor irregularities or variations to specifications contained in bids, and minor irregularities in the bidding process. The City also reserves the right to award the contract on a split order basis, lump sum basis, individual item basis, or such combination as shall best serve the interest of the City. The City reserves the right to make an award to the responsive and responsible bidder whose product or service meets the terms, conditions, and specifications of the ITB and whose bid is considered to best serve the City's interest. In determining the responsiveness of the offer and the responsibility of the Bidder, the following shall be considered when applicable: the ability, capacity and skill of the Bidder to perform as required; whether the Bidder can perform promptly, or within the time specified, without delay or interference; the character, integrity, reputation, judgment, experience and efficiency of the Bidder; the quality of past performance by the Bidder; the previous and existing compliance by the Bidder with related laws and ordinances; the sufficiency of the Bidder's financial resources; the availability, quality and adaptability of the Bidder's supplies or services to the required use; the ability of the Bidder to provide future maintenance, service or parts; the number and scope of conditions attached to the bid.

If the ITB provides for a contract trial period, the City reserves the right, in the event the selected bidder does not perform satisfactorily, to award a trial period to the next ranked bidder or to award a contract to the next ranked bidder, if that bidder has successfully provided services to the City in the past. This procedure to continue until a bidder is selected or the contract is re-bid, at the sole option of the City.

- 3.18 LEGAL REQUIREMENTS:** Applicable provisions of all federal, state, county laws, and local ordinances, rules and regulations, shall govern development, submittal and evaluation of all bids received in response hereto and shall govern any and all claims and disputes which may arise between person(s) submitting a bid response hereto and the City by and through its officers, employees and authorized representatives, or any other person, natural or otherwise; and lack of knowledge by any bidder shall not constitute a cognizable defense against the legal effect thereof.
- 3.19 BID PROTEST PROCEDURE:** Any proposer or bidder who is not recommended for award of a contract and who alleges a failure by the city to follow the city's procurement ordinance or any applicable law may protest to the chief procurement officer, by delivering a letter of protest to the director of finance within five (5) days after a notice of intent to award is posted on the city's web site at the following url: <https://www.fortlauderdale.gov/departments/finance/procurement-services/notices-of-intent-to-award>

The complete protest ordinance may be found on the city's web site at the following url: [https://library.municode.com/fl/fort\\_lauderdale/codes/code\\_of\\_ordinances?nodeid=coor\\_ch2ad\\_artvfi\\_div2pr\\_s2-182direpr](https://library.municode.com/fl/fort_lauderdale/codes/code_of_ordinances?nodeid=coor_ch2ad_artvfi_div2pr_s2-182direpr)

#### **PART IV BONDS AND INSURANCE**

- 4.01 PERFORMANCE BOND:** If a performance bond is required in Special Conditions, the Contractor shall within fifteen (15) working days after notification of award, furnish to the City a Performance Bond, payable to the City of Fort Lauderdale, Florida, in the face amount specified in Special Conditions for faithful

performance under the terms and conditions of the contract. If the bond is on an annual coverage basis, renewal for each succeeding year shall be submitted to the City thirty (30) days prior to the termination date of the existing Performance Bond. The Performance Bond must be executed by a surety company of recognized standing, authorized to do business in the State of Florida and having a resident agent.

Acknowledgement and agreement is given by both parties that the amount herein set for the Performance Bond is not intended to be nor shall be deemed to be in the nature of liquidated damages nor is it intended to limit the liability of the Contractor to the City in the event of a material breach of this Agreement by the Contractor.

Rev. 2/2020

Page 3

**4.02 INSURANCE:** The Contractor shall assume full responsibility and expense to obtain all necessary insurance as required by City or specified in Special Conditions.

The Contractor shall provide to the Procurement Services Division original certificates of coverage and receive notification of approval of those certificates by the City's Risk Manager prior to engaging in any activities under this contract. The Contractor's insurance is subject to the approval of the City's Risk Manager. The certificates must list the City as an ADDITIONAL INSURED for General Liability Insurance and shall have no less than thirty (30) days written notice of cancellation or material change. Further modification of the insurance requirements may be made at the sole discretion of the City's Risk Manager if circumstances change or adequate protection of the City is not presented. Bidder, by submitting the bid, agrees to abide by such modifications.

**PART V PURCHASE ORDER AND CONTRACT TERMS:**

**5.01 COMPLIANCE WITH SPECIFICATIONS, LATE DELIVERIES/PENALTIES:** Items offered may be tested for compliance with bid specifications. Items delivered which do not conform to bid specifications may be rejected and returned at Contractor's expense. Any violation resulting in contract termination for cause or delivery of items not conforming to specifications, or late delivery may also result in:

- Bidder's name being removed from the City's bidder's mailing list for a specified period and Bidder will not be recommended for any award during that period.
- All City Departments being advised to refrain from doing business with the Bidder.
- All other remedies in law or equity.

**5.02 ACCEPTANCE, CONDITION, AND PACKAGING:** The material delivered in response to ITB award shall remain the property of the Seller until a physical inspection is made and the material accepted to the satisfaction of the City. The material must comply fully with the terms of the ITB, be of the required quality, new, and the latest model. All containers shall be suitable for storage and shipment by common carrier, and all prices shall include standard commercial packaging. The City will not accept substitutes of any kind. Any substitutes or material not meeting specifications will be returned at the Bidder's expense. Payment will be made only after City receipt and acceptance of materials or services.

**5.03 SAFETY STANDARDS:** All manufactured items and fabricated assemblies shall comply with applicable requirements of the Occupation Safety and Health Act of 1970 as amended.

**5.04 ASBESTOS STATEMENT:** All material supplied must be 100% asbestos free. Bidder, by virtue of bidding, certifies that if awarded any portion of the ITB the bidder will supply only material or equipment that is 100% asbestos free.

**5.05 OTHER GOVERNMENTAL ENTITIES:** If the Bidder is awarded a contract as a result of this ITB, the bidder may, if the bidder has sufficient capacity or quantities available, provide to other governmental agencies, so requesting, the products or services awarded in accordance with the terms and conditions of the ITB and resulting contract. Prices shall be F.O.B. delivered to the requesting agency.

**5.06 VERBAL INSTRUCTIONS PROCEDURE:** No negotiations, decisions, or actions shall be initiated or executed by the Contractor as a result of any discussions with any City employee. Only those communications which are in writing from an authorized City representative may be considered. Only written communications from Contractors, which are assigned by a person designated as authorized to bind the Contractor, will be recognized by the City as duly authorized expressions on behalf of Contractors.

**5.07 INDEPENDENT CONTRACTOR:** The Contractor is an independent contractor under this Agreement. Personal services provided by the Proposer shall be by employees of the Contractor and subject to supervision by the Contractor, and not as officers, employees, or agents of the City. Personnel policies, tax responsibilities, social security, health insurance, employee benefits, procurement policies unless otherwise stated in this ITB, and other similar administrative procedures applicable to services rendered under this contract shall be those of the Contractor.

**5.08 INDEMNITY/HOLD HARMLESS AGREEMENT:** Contractor shall protect and defend at Contractor's expense, counsel being subject to the City's approval, and indemnify and hold harmless the City and the City's officers, employees, volunteers, and agents from and against any and all losses, penalties, fines, damages, settlements, judgments, claims, costs, charges, expenses, or liabilities, including any award of attorney fees and any award of costs, in connection with or arising directly or indirectly out of any act or omission by the Contractor or by any officer, employee, agent, invitee, subcontractor, or sublicensee of the Contractor. Without limiting the foregoing, any and all such claims, suits, or other actions relating to personal injury, death, damage to property, defects in materials or workmanship, actual or alleged violations of any applicable statute, ordinance, administrative order, rule or regulation, or decree of any court shall be included in the indemnity hereunder.

**5.09 TERMINATION FOR CAUSE:** If, through any cause, the Contractor shall fail to fulfill in a timely and proper manner its obligations under this Agreement, or if the Contractor shall violate any of the provisions of this Agreement, the City may upon written notice to the Contractor terminate the right of the Contractor to proceed under this Agreement, or with such part or parts of the Agreement as to which there has been default, and may hold the Contractor liable for any damages caused to the City by reason of such default and termination. In the event of such termination, any completed services performed by the Contractor under this Agreement shall, at the option of the City, become the City's property and the Contractor shall be entitled to receive equitable compensation for any work completed in satisfaction of

CIAMI #22-0719  
Exhibit 1

the City. The Contractor, however, shall not be relieved of liability to the City for damages sustained by the City by reason of any breach of the Agreement by the Contractor, and the City may withhold any payments to the Contractor for the purpose of setoff until such time as the amount of damages due to the City from the Contractor can be determined.

- 5.10 TERMINATION FOR CONVENIENCE:** The City reserves the right, in the City's best interest as determined by the City, to cancel any contract by giving written notice to the Contractor thirty (30) days prior to the effective date of such cancellation.
- 5.11 CANCELLATION FOR UNAPPROPRIATED FUNDS:** The obligation of the City for payment to a Contractor is limited to the availability of funds appropriated in a current fiscal period, and continuation of the contract into a subsequent fiscal period is subject to appropriation of funds, unless otherwise authorized by law.
- 5.12 RECORDS/AUDIT:** The Contractor shall maintain during the term of the contract all books of account, reports and records in accordance with generally accepted accounting practices and standards directly related to this contract. The Contractor agrees to make available to the City Auditor or the City Auditor's designee, during normal business hours and in Broward, Miami-Dade or Palm Beach Counties, all books of account, reports, and records relating to this contract. The Contractor shall retain all books of account, reports, and records relating to this contract for the duration of the contract and for three years after the final payment under this Agreement, until all pending audits, investigations or litigation matters relating to the contract are closed, or until expiration of the records retention period prescribed by Florida law or the records retention schedules adopted by the Division of Library and Information Services of the Florida Department of State, whichever is later.
- 5.13 PERMITS, TAXES, LICENSES:** The successful Contractor shall, at his/her/its own expense, obtain all necessary permits, pay all licenses, fees and taxes, required to comply with all local ordinances, state and federal laws, rules and regulations applicable to business to be carried out under this contract.
- 5.14 LAWS/ORDINANCES:** The Contractor shall observe and comply with all Federal, state, local and municipal laws, ordinances rules and regulations that would apply to this contract.

**NON-DISCRIMINATION:** The Contractor shall not, in any of its activities, including employment, discriminate against any individual on the basis of race, color, national origin, age, religion, creed, sex, disability, sexual orientation, gender, gender identity, gender expression, marital status, or any other protected classification as defined by applicable law.

1. The Contractor certifies and represents that the Contractor will comply with Section 2-187, Code of Ordinances of the City of Fort Lauderdale, Florida, (2019), as may be amended or revised, ("Section 2-187"), during the entire term of this Agreement.
2. The failure of the Contractor to comply with Section 2-187 shall be deemed to be a material breach of this Agreement, entitling the City to pursue any remedy stated below or any remedy provided under applicable law.
3. The City may terminate this Agreement if the Contractor fails to comply with Section 2-187.
4. The City may retain all monies due or to become due until the Contractor complies with Section 2-187.
5. The Contractor may be subject to debarment or suspension proceedings. Such proceedings will be consistent with the procedures in section 2-183 of the Code of Ordinances of the City of Fort Lauderdale, Florida.

Rev. 2/2020

Page 4

- 5.15 UNUSUAL CIRCUMSTANCES:** If during a contract term where costs to the City are to remain firm or adjustments are restricted by a percentage or CPI cap, unusual circumstances that could not have been foreseen by either party of the contract occur, and those circumstances significantly affect the Contractor's cost in providing the required prior items or services, then the Contractor may request adjustments to the costs to the City to reflect the changed circumstances. The circumstances must be beyond the control of the Contractor, and the requested adjustments must be fully documented. The City may, after examination, refuse to accept the adjusted costs if they are not properly documented, increases are considered to be excessive, or decreases are considered to be insufficient. In the event the City does not wish to accept the adjusted costs and the matter cannot be resolved to the satisfaction of the City, the City will reserve the following options:
1. The contract can be canceled by the City upon giving thirty (30) days written notice to the Contractor with no penalty to the City or Contractor. The Contractor shall fill all City requirements submitted to the Contractor until the termination date contained in the notice.
  2. The City requires the Contractor to continue to provide the items and services at the firm fixed (non-adjusted) cost until the termination of the contract term then in effect.
  3. If the City, in its interest and in its sole opinion, determines that the Contractor in a capricious manner attempted to use this section of the contract to relieve Contractor of a legitimate obligation under the contract, and no unusual circumstances had occurred, the City reserves the right to take any and all action under law or equity. Such action shall include, but not be limited to, declaring the Contractor in default and disqualifying Contractor from receiving any business from the City for a stated period of time.

If the City does agree to adjusted costs, these adjusted costs shall not be invoiced to the City until the Contractor receives notice in writing signed by a person authorized to bind the City in such matters.

- 5.16 ELIGIBILITY:** If applicable, the Contractor must first register with the Florida Department of State in accordance with Florida Statutes, prior to entering into a contract with the City.
- 5.17 PATENTS AND ROYALTIES:** The Contractor, without exception, shall defend, indemnify, and hold harmless the City and the City's employees, officers, employees, volunteers, and agents from and against liability of any nature and kind, including cost and expenses for or on account of any copyrighted, patented or un-patented invention, process, or article manufactured or used in the performance of the contract, including their use by the City. If the Contractor uses any design, device, or materials covered by letters, patent or copyright, it is mutually agreed and understood without exception that the bid prices shall include any and all royalties or costs arising from the use of such design, device, or materials in any way involved in the work.



- 5.18 **ASSIGNMENT:** Contractor shall not transfer or assign the performance required by this ITB without the prior written consent of the City. Any award issued pursuant to this ITB, and the monies, which may become due hereunder, are not assignable except with the prior written approval of the City Commission or the City Manager or City Manager's designee, depending on original award approval.
- 5.19 **GOVERNING LAW; VENUE:** The Contract shall be governed by and construed in accordance with the laws of the State of Florida. Venue for any lawsuit by either party against the other party or otherwise arising out of the Contract, and for any other legal proceeding, shall be in the courts in and for Broward County, Florida, or in the event of federal jurisdiction, in the Southern District of Florida.
- 5.20 **PUBLIC RECORDS:**

**IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT PRRCONTRACT@FORTLAUDERDALE.GOV, 954-828-5002, CITY CLERK'S OFFICE, 100 N. ANDREWS AVENUE, FORT LAUDERDALE, FLORIDA 33301.**

Contractor shall comply with public records laws, and Contractor shall:

1. Keep and maintain public records required by the City to perform the service.
2. Upon request from the City's custodian of public records, provide the City with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes (2019), as may be amended or revised, or as otherwise provided by law.
3. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of the contract if the Contractor does not transfer the records to the City.
4. Upon completion of the Contract, transfer, at no cost, to the City all public records in possession of the Contractor or keep and maintain public records required by the City to perform the service. If the Contractor transfers all public records to the City upon completion of the Contract, the Contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the Contractor keeps and maintains public records upon completion of the Contract, the Contractor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the City, upon request from the City's custodian of public records, in a format that is compatible with the information technology systems of the City.

**NON-COLLUSION STATEMENT:**

By signing this offer, the vendor/contractor certifies that this offer is made independently and *free* from collusion. Vendor shall disclose below any City of Fort Lauderdale, FL officer or employee, or any relative of any such officer or employee who is an officer or director of, or has a material interest in, the vendor's business, who is in a position to influence this procurement.

Any City of Fort Lauderdale, FL officer or employee who has any input into the writing of specifications or requirements, solicitation of offers, decision to award, evaluation of offers, or any other activity pertinent to this procurement is presumed, for purposes hereof, to be in a position to influence this procurement.

For purposes hereof, a person has a material interest if they directly or indirectly own more than 5 percent of the total assets or capital stock of any business entity, or if they otherwise stand to personally gain if the contract is awarded to this vendor.

In accordance with City of Fort Lauderdale, FL Policy and Standards Manual, 6.10.8.3,

3.3. City employees may not contract with the City through any corporation or business entity in which they or their immediate family members hold a controlling financial interest (e.g. ownership of five (5) percent or more).

3.4. Immediate family members (spouse, parents and children) are also prohibited from contracting with the City subject to the same general rules.

**Failure of a vendor to disclose any relationship described herein shall be reason for debarment in accordance with the provisions of the City Procurement Code.**

**NAME**

**RELATIONSHIPS**



**In the event the vendor does not indicate any names, the City shall interpret this to mean that the vendor has indicated that no such relationships exist.**

Authorized Signature

Title

Name (Printed)

Date

**CONTRACTOR'S CERTIFICATE OF COMPLIANCE WITH  
NON-DISCRIMINATION PROVISIONS OF THE CONTRACT**

The completed and signed form should be returned with the Contractor's submittal. If not provided with submittal, the Contractor must submit within three business days of City's request. Contractor may be deemed non-responsive for failure to fully comply within stated timeframes.

Pursuant to City Ordinance Sec. 2-187(c), bidders must certify compliance with the Non-Discrimination provision of the ordinance.

The Contractor shall not, in any of his/her/its activities, including employment, discriminate against any individual on the basis of race, color, national origin, religion, creed, sex, disability, sexual orientation, gender, gender identity, gender expression, or marital status.

1. The Contractor certifies and represents that he/she/it will comply with Section 2-187, Code of Ordinances of the City of Fort Lauderdale, Florida, as amended by Ordinance C-18-33 (collectively, "Section 2-187").
2. The failure of the Contractor to comply with Section 2-187 shall be deemed to be a material breach of this Agreement, entitling the City to pursue any remedy stated below or any remedy provided under applicable law.
3. The City may terminate this Agreement if the Contractor fails to comply with Section 2-187.
4. The City may retain all monies due or to become due until the Contractor complies with Section 2-187.
5. The Contractor may be subject to debarment or suspension proceedings. Such proceedings will be consistent with the procedures in section 2-183 of the Code of Ordinances of the City of Fort Lauderdale, Florida.

Authorized Signature

Print Name and Title

Date

**LOCAL BUSINESS PREFERENCE CERTIFICATION STATEMENT**

Section 2-186, Code of Ordinances of the City of Fort Lauderdale, (Ordinance No. C-17-26), provides for a local business preference.

In order to be considered for a local business preference, a bidder must include the Local Business Preference Certification Statement of this bid/proposal, as applicable to the local business preference class claimed **at the time of bid submittal**.

Upon formal request of the City, based on the application of a Local Business Preference, the Bidder shall, within ten (10) calendar days, submit the following documentation for the Local Business Preference Class claimed:

- a) Copy of City of Fort Lauderdale current year business tax receipt, **or** Broward County current year business tax receipt, **and**
- b) List of the names of all employees of the bidder and evidence of employees' residences within the geographic bounds of the City of Fort Lauderdale or Broward County, as the case may be, such as current Florida driver license, residential utility bill (water, electric, telephone, cable television), or other type of similar documentation acceptable to the City.

Failure to comply at time of bid submittal shall result in the bidder being found ineligible for the local business preference.

**THE COMPLETE LOCAL BUSINESS PREFERENCE ORDINANCE MAY BE FOUND ON THE CITY'S WEB SITE**

**AT THE FOLLOWING LINK:** [https://library.municode.com/fl/fort\\_lauderdale/codes/code\\_of\\_ordinances?nodeId=COOR\\_CH2AD\\_ARTVFI\\_DIV2PR\\_S2-186LOBUPR&showChanges=true](https://library.municode.com/fl/fort_lauderdale/codes/code_of_ordinances?nodeId=COOR_CH2AD_ARTVFI_DIV2PR_S2-186LOBUPR&showChanges=true)

**Definitions:** The term "Business" shall mean a person, firm, corporation or other business entity which is duly licensed and authorized to engage in a particular work in the State of Florida. Business shall be broken down into four (4) types of classes:

1. Class A Business – shall mean any business that has established and agrees to maintain a permanent place of business located in a non-residential zone and staffed with full-time employees within the limits of the City, **and** shall maintain a staffing level for the proposed work of at least fifty percent (50%) who are residents of the City of Fort Lauderdale.
2. Class B Business - shall mean any business that has established and agrees to maintain a permanent place of business located in a non-residential zone, staffed with full-time employees within the limits of the City, **or** shall maintain a staffing level for the proposed work of at least fifty percent (50%) who are residents of the City of Fort Lauderdale.
3. Class C Business - shall mean any business that has established and agrees to maintain a permanent place of business located in a non-residential zone, staffed with full-time employees within the limits of Broward County.
4. Class D Business – shall mean any Business that does not qualify as either a Class A, Class B, or Class C business.

**LOCAL BUSINESS PREFERENCE CERTIFICATION STATEMENT**

The Business identified below certifies that it qualifies for the local business preference classification as indicated herein, and further certifies and agrees that it will re-affirm its local preference classification annually no later than thirty (30) calendar days prior to the anniversary of the date of a contract awarded pursuant to this bid/proposal. Violation of the foregoing provision may result in contract termination.

(1)   
(Business Name) is a **Class A** Business as defined in City of Fort Lauderdale Ordinance No. C-17-26, Sec. 2-186. A copy of the City of Fort Lauderdale current year Business Tax Receipt **and** a complete list of full-time employees and evidence of their addresses shall be provided within ten (10) calendar days of a formal request by the City.

(2)   
(Business Name) is a **Class B** Business as defined in the City of Fort Lauderdale Ordinance No. C-17-26, Sec. 2-186. A copy of the Business Tax Receipt **or** a complete list of full-time employees and evidence of their addresses shall be provided within ten (10) calendar days of a formal request by the City.

(3)   
(Business Name) is a **Class C** Business as defined in the City of Fort Lauderdale Ordinance No. C-17-26, Sec. 2-186. A copy of the Broward County Business Tax Receipt shall be provided within ten (10) calendar days of a formal request by the City.

(4)   
(Business Name) is a **Class D** Business as defined in the City of Fort Lauderdale Ordinance No. C-17-26, Sec. 2-186, and does not qualify for Local Preference consideration.

(5)   
(Business Name) requests a **Conditional Class A** classification as defined in the City of Fort Lauderdale Ordinance No. C-17-26, Sec.2-186. Written certification of intent to meet the requirements shall be provided to the City within three (3) months of entering into a contract with the City.

(6)   
(Business Name) requests a **Conditional Class B** classification as defined in the City of Fort Lauderdale Ordinance No. C-17-26, Sec.2-186. Written certification of intent to meet the requirements shall be provided to the City within three (3) months of entering into a contract with the City.

BIDDER'S COMPANY:

AUTHORIZED COMPANY PERSON:     
PRINT NAME SIGNATURE DATE

Forms Non-ISO – Revised 7/2/2021



### **DISADVANTAGED BUSINESS ENTERPRISE (DBE) PREFERENCE**

Section 2-185, Code of Ordinances of the City of Fort Lauderdale, provides for a disadvantaged business enterprise preference.

In order to be considered for a DBE Preference, a bidder must include a certification from a government agency, as applicable to the DBE Preference class claimed **at the time of bid submittal**.

Upon formal request of the City, based on the application of a DBE Preference the Bidder shall, within **ten (10)** calendar days, submit the following documentation to the DBE Class claimed:

- a) Copy of City of Fort Lauderdale current year business tax receipt, **or** Broward County current year business tax receipt, **or** State of Florida active registration **and/or**
- b) List of the names of all employees of the bidder and evidence of employees' residences within the geographic bounds of the City of Fort Lauderdale or Broward County, as the case may be, such as current Florida driver license, residential utility bill (water, electric, telephone, cable television), or other type of similar documentation acceptable to the City.

Failure to comply at time of bid submittal shall result in the bidder being found ineligible for the disadvantaged business enterprise preference.

**THE COMPLETE DBE PREFERENCE ORDINANCE MAY BE FOUND ON THE CITY'S WEB SITE AT THE FOLLOWING LINK:** [https://library.municode.com/fl/fort\\_lauderdale/codes/code\\_of\\_ordinances?nodeId=COOR\\_CH2AD\\_ARTVFI\\_DIV2PR\\_S2-185EQOPDIBUEN&showChanges=true](https://library.municode.com/fl/fort_lauderdale/codes/code_of_ordinances?nodeId=COOR_CH2AD_ARTVFI_DIV2PR_S2-185EQOPDIBUEN&showChanges=true)

#### **Definitions**

- a. The term "disadvantaged class 1 enterprise" shall mean any disadvantaged business enterprise that has established and agrees to maintain a permanent place of business located in a non-residential zone, staffed with full-time employees within the limits of the City, and provides supporting documentation of its City of Fort Lauderdale business tax and disadvantaged certification as established in the City's Procurement Manual.
- b. The term "disadvantaged class 2 enterprise" shall mean any disadvantaged business enterprise that has established and agrees to maintain a permanent place of business within the limits of the City with full-time employees and provides supporting documentation of its City of Fort Lauderdale business tax and disadvantaged certification as established in the City's Procurement Manual.
- c. The term "disadvantaged class 3 enterprise" shall mean any disadvantaged business enterprise that has established and agrees to maintain a permanent place of business located in a non-residential zone, staffed with full-time employees within the limits of the Tri-County area and provides supporting documentation of its City of Fort Lauderdale business tax and disadvantaged certification as established in the City's Procurement Manual.
- d. The term "disadvantaged class 4 enterprise" shall mean any disadvantaged business enterprise that does not qualify as a Class 1, Class 2, or Class 3 business, but is located in the State of Florida and provides supporting documentation of its disadvantaged certification as established in the City's Procurement Manual.

**DISADVANTAGED BUSINESS ENTERPRISE CERTIFICATION STATEMENT**

The Business identified below certifies that it qualifies for the disadvantaged business enterprise preference classification as indicated herein, and further certifies and agrees that it will re-affirm its preference classification annually no later than **thirty (30)** calendar days prior to the anniversary of the date of a contract awarded pursuant to this solicitation. Violation of the foregoing provision may result in contract termination.

(1)   
(Business Name)

is a disadvantaged **Class 1** enterprise as defined in the City of Fort Lauderdale Ordinance Section 2-185 disadvantaged business enterprise that has established and agrees to maintain a permanent place of business located in a non-residential zone, staffed with full-time employees within the limits of the City, and provides supporting documentation of its City of Fort Lauderdale business tax and disadvantaged certification as established in the City's Procurement Manual.

(2)   
(Business Name)

is a disadvantaged **Class 2** enterprise as defined in the City of Fort Lauderdale Ordinance Section 2-185 disadvantaged business enterprise that has established and agrees to maintain a permanent place of business within the limits of the City with full-time employee(s) and provides supporting documentation of its City of Fort Lauderdale business tax and disadvantaged certification as established in the City's Procurement Manual.

(3)   
(Business Name)

is a disadvantaged **Class 3** enterprise as defined in the City of Fort Lauderdale Ordinance Section 2-185 disadvantaged business enterprise that has established and agrees to maintain a permanent place of business located in a non-residential zone, staffed with full-time employees within the limits of the Tri-County area and provides supporting documentation of its City of Fort Lauderdale business tax and disadvantaged certification as established in the City's Procurement Manual.

(4)   
(Business Name)

is a disadvantaged **Class 4** enterprise as defined in the City of Fort Lauderdale Ordinance Section 2-185 disadvantaged business enterprise that does not qualify as a Class 1, Class 2, or Class 3 business, but is located in the State of Florida and provides supporting documentation of its disadvantaged certification as established in the City's Procurement Manual.

(5)   
(Business Name)

requests a **Conditional Class 1** classification as defined in the City of Fort Lauderdale Ordinance No. C-17-26, Sec.2-186. Written certification of intent to meet the requirements shall be provided to the City within three (3) months of entering into a contract with the City.

(6)   
(Business Name)

requests a **Conditional Class 2** classification as defined in the City of Fort Lauderdale Ordinance No. C-17-26, Sec.2-186. Written certification of intent to meet the requirements shall be provided to the City within three (3) months of entering into a contract with the City.

BIDDER'S COMPANY:

AUTHORIZED COMPANY PERSON:

PRINT NAME

SIGNATURE

DATE



Forms Non-Iso – revised 7/2/2021

**E-VERIFY AFFIRMATION STATEMENT**

RFP/Bid /Contract No:

Project Description:

Contractor/Proposer/Bidder acknowledges and agrees to utilize the U.S. Department of Homeland Security's E-Verify System to verify the employment eligibility of,

- (a) all persons employed by Contractor/Proposer/Bidder to perform employment duties within Florida during the term of the Contract, and,
- (b) all persons (including subcontractors/vendors) assigned by Contractor/Proposer/Bidder to perform work pursuant to the Contract.

The Contractor/Proposer/Bidder acknowledges and agrees that use of the U.S. Department of Homeland Security's E-Verify System during the term of the Contract is a condition of the Contract.

Contractor/Proposer/ Bidder Company Name:

Authorized Company Person's Signature:

Authorized Company Person's Title:

Date:

9/15/2020

**BID/PROPOSAL CERTIFICATION**

**Please Note:** It is the sole responsibility of the bidder to ensure that his bid is submitted electronically through www.BidSync.com prior to the bid opening date and time listed. Paper bid submittals will not be accepted. All fields below must be completed. If the field does not apply to you, please note N/A in that field.

If you are a foreign corporation, you may be required to obtain a certificate of authority from the department of state, in accordance with Florida Statute §607.1501 (visit http://www.dos.state.fl.us/).

Company: (Legal Registration)  EIN (Optional):

Address:

City:  State:  Zip:

Telephone No.:  FAX No.:  Email:

Delivery: Calendar days after receipt of Purchase Order (**section 1.02 of General Conditions**):

Total Bid Discount (**section 1.05 of General Conditions**):

Check box if your firm qualifies for MBE / SBE / WBE (**section 1.09 of General Conditions**):

**ADDENDUM ACKNOWLEDGEMENT** - Proposer acknowledges that the following addenda have been received and are included in the proposal:

<u>Addendum No.</u>	<u>Date Issued</u>	<u>Addendum No.</u>	<u>Date Issued</u>	<u>Addendum No.</u>	<u>Date Issued</u>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

**VARIANCES:** If you take exception or have variances to any term, condition, specification, scope of service, or requirement in this competitive solicitation you must specify such exception or variance in the space provided below or reference in the space provided below all variances contained on other pages within your response. Additional pages may be attached if necessary. No exceptions or variances will be deemed to be part of the response submitted unless such is listed and contained in the space provided below. The City does not, by virtue of submitting a variance, necessarily accept any variances. If no statement is contained in the below space, it is hereby implied that your response is in full compliance with this competitive solicitation. If you do not have variances, simply mark N/A. **You must also click the "Take Exception" button.**

The below signatory hereby agrees to furnish the following article(s) or services at the price(s) and terms stated subject to all instructions, conditions, specifications addenda, legal advertisement, and conditions contained in the bid/proposal.

I have read all attachments including the specifications and fully understand what is required. By submitting this signed proposal, I will accept a contract if approved by the City and such acceptance covers all terms, conditions, and specifications of this bid/proposal. The below signatory also hereby agrees, by virtue of submitting or attempting to submit a response, that in no event shall the City's liability for respondent's direct, indirect, incidental, consequential, special or exemplary damages,   
Exhibit 1

expenses, or lost profits arising out of this competitive solicitation process, including but not limited to public advertisement, bid conferences, site visits, evaluations, oral presentations, or award proceedings exceed the amount of Five Hundred Dollars (\$500.00). This limitation shall not apply to claims arising under any provision of indemnification or the City's protest ordinance contained in this competitive solicitation.

Submitted by:

Name (printed)

Signature

Date

Title

Revised 4/28/2020



City of Fort Lauderdale • Procurement Services Division  
100 N. Andrews Avenue, 619 • Fort Lauderdale, Florida 33301  
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[purchase@fortlauderdale.gov](mailto:purchase@fortlauderdale.gov)

### ADDENDUM NO. 1

ITB No. 12657-822  
TITLE: Type 1 Fire Rescues

ISSUED: June 22, 2022

This addendum is being issued to make the following Section III change(s):

1. 3.1.1.10.2  
**From:** Bosch Hydraulic Pin-Slide Disc Front Brakes  
**To:** Air Front Brakes
2. 3.1.1.12.7  
**From:** Bosch hydraulic pin-slide disc rear brakes  
**To:** Air disc rear brakes
3. 3.1.1.12.11  
**From:** Rear axle mounted air operated park brake  
**To:** Air operated park brake
4. 3.1.1.14.1  
**From:** Hydraulic Brake Package with Optional Air Supply  
**To:** Air Brakes
5. 3.1.1.14.2  
**From:** Wabco hydraulic 4S/4M ABS without traction control  
**To:** SPEC DELETED
6. 3.2.1.5.11a  
**From:** 700 Square Inch Aluminum Radiator  
**To:** 900 Square Inch Aluminum Radiator
7. 3.2.1.12.5  
**From:** Driver Controlled Differential Lock Rear Valve for Single Drive Axle  
**To:** SPEC DELETED
8. 3.2.1.12.7  
**From:** Bosch hydraulic pin-slide disc rear brakes  
**To:** Air disc rear brakes
9. 3.2.1.12.9  
**From:** Rear Disc Brake Rotors  
**To:** SPEC DELETED
10. 3.2.1.12.11  
**From:** Rear axle mounted air operated park brake  
**To:** Air operated park brake



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11. 3.2.1.14.1  
**From:** Hydraulic Brake Package with Optional Air Supply  
**To:** Air Brake Package
12. 3.2.1.14.2  
**From:** Wabco hydraulic 4S/4M ABS without traction control  
**To:** SPEC DELETED
13. 3.2.1.19.1.3  
**From:** Alcoa 77362X 19.5x7.50 10-hub 5.23 inset aluminum disc front wheels, polished outside, include mounting nuts (qty 2)  
**To:** Alcoa 22.5" 10-hub 5.23 inset aluminum disc front wheels, polished outside, include mounting nuts (qty 2)
14. 3.2.1.19.2.1  
**From:** Michelin XDS2 245/70R19.5 16 ply radial rear tires  
**To:** Michelin Traction Tread X Multi D 16 ply radial rear tires
15. 3.2.1.19.2.3  
**From:** Alcoa 77362X 19.5x7.50 10-hub pilot aluminum disc rear wheels, polished outside of outer wheel (qty 4)  
**To:** Alcoa 22.5" 10-hub pilot aluminum disc rear wheels, polished outside of outer wheel (qty 4)
16. 3.2.3.1  
**From:** 132" BBC high-roof aluminum conventional cab with rubber cab mounts  
**To:** 132" BBC high-roof aluminum conventional with air cab mounting
17. 3.3.1.5.11a  
**From:** 700 Square Inch Aluminum Radiator  
**To:** 900 Square Inch Aluminum Radiator
18. 3.3.1.12.5  
**From:** Driver Controlled Differential Lock Rear Valve for Single Drive Axle  
**To:** SPEC DELETED
19. 3.3.1.12.11  
**From:** Rear axle mounted air operated park brake  
**To:** Air operated park brake
20. 3.3.1.14.1  
**From:** Hydraulic Brake Package with Optional Air Supply  
**To:** Air Brake Package
21. 3.3.1.14.2  
**From:** Wabco hydraulic 4S/4M ABS without traction control  
**To:** SPEC DELETED



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22. 3.3.1.16.1

**From:** Wheelbase 221" (5625 MM)

**To:** Wheelbase appropriate for rescue body dimensions

23. 3.3.1.16.3

**From:** Rear Frame Overhang 70" (1750 MM)

**To:** SPEC DELETED

24. 3.3.1.19.1.3

**From:** Alcoa 77362X 19.5x7.50 10-hub 5.23 inset aluminum disc front wheels, polished outside, include mounting nuts (qty 2)

**To:** Alcoa 22.5" aluminum disc front wheels, polished outside, include mounting nuts (qty 2)

25. 3.3.1.19.2.3

**From:** Alcoa 77362X 19.5x7.50 10-hub pilot aluminum disc rear wheels, polished outside of outer wheel (qty 4)

**To:** Alcoa 22.5" 10-hub pilot aluminum disc rear wheels, polished outside of outer wheel (qty 4)

26. 3.3.2.35

**From:** ICU3S, 132x48 display with diagnostics, 28 LED warning lamps and data linked

**To:** Electronic MPH speedometer with secondary kph scale, without odometer standard vehicle speed sensor

27. 3.3.3.1

**From:** 132" BBC high-roof aluminum full 4-door conventional cab with rubber cab mounts

**To:** 154" BBC high-roof aluminum full 4-door conventional air cab mounting

All other terms, conditions, and specifications remain unchanged.

Laurie Platkin  
Senior Procurement Specialist

Company Name: \_\_\_\_\_  
(please print)

Bidder's Signature: \_\_\_\_\_

Date: \_\_\_\_\_

## Question and Answers for Bid #12657-822 - Type 1 Fire Rescues

### Overall Bid Questions

#### Question 1

These chassis items are not compatible:

3.2 Optional Extended Cab and

3.2.1.5.11 700 Sq" Radiator does not meet the required cooling requirements of the requested 3.2.1.5.1 Cummins L9 270HP. 900Sq" radiator must be used

3.2.1.12.1 MS-17-14X 17,5# R Series Quiet Ride Single Rear Axle. Not available with requested 3.2.1.12.5 Driver Controlled Differential. If Driver Controlled Differential is requested an L or F series axle is required.

3.2.1.12.11 Rear Axle mounted air operated park brake. Not available with 3.2.1.12.1 MS-17-14X 17,5# R Series Quiet Ride Single Rear Axle. Available in Detroit 17,5# axle or Non air operated park brake

3.2.1.19.1.1 11R22.5 Front tire is not compatible with requested 3.2.1.19.1.3 Alcoa 77362X 19.5x7.50 Front Wheel. Must use 245/70R19.5 tire

3.2.2.43 One Valve Parking Brake with dash valve control and auto N and waring. This is not available with requested 3.2.1.14.1 Hydraulic Brake Package with optional air supply. Must have Air Brakes

3.2.3.1 Rubber cab mounts not available with 900Sq" radiator. Cab/Hood is raised to clear for required radiator. Air Cab Mounting is only approved option with the requested engine selection.

3.2.1.19.1.2/3.2.1.19.2.2 Conmet preset iron front/rear hubs. Not available with Hydraulic Brakes. Must have Air brake

3.2.1.19.1.3/3.2.1.19.2.3 Alcoa 77362X 19.5x7.50 10 hub 5.23 inset. Not compatible with requested 3.2.1.14.1 Hydraulic Brake Package with optional air supply due to caliper/rotor clearance. Must have Air brake or use ALCOA 76542X 19.5X6.75 8-HUB PILOT 4.72 INSET 8-HAND ALUMINUM DISC FRONT/REAR WHEELS

No rear cab configuration

3.3 Optional Crew Cab

Same conflicts as 3.2 Optional Extended Cab with the below additional incompatibility

3.3.3.1 132" BBC high roof 4 door. 154" BBC is the only 4 door configuration

3.3.1.16.1 Wheel Base 221" This will not meet the Cab to Axle measurements normally required for rescue bodies.

Need exact CA to determine appropriate (Submitted: Jun 20, 2022 4:33:03 PM EDT)

#### Answer

- See Addendum 1 (Answered: Jun 22, 2022 11:54:25 AM EDT)