

# MARSHALL COUNTY

Malinda S. White, CPA, CGFM  
Director of Accounts & Budgets  
2205 Courthouse Annex  
Lewisburg, Tennessee 37091-3371  
Office (931) 359-2300  
Fax (931) 359-0551  
mwhite@marshallcountyttn.com

## INVITATION TO BID

Marshall County Government is soliciting bids for a New Emergency Medical Vehicle – Type III, Gasoline, 160" x 94" Module. The attached specifications are considered as "minimum specifications" and are not intended to exclude any company from providing bids for the requested materials, supplies and/or work. Materials, supplies and/or work which meet, *or exceed*, the minimum specifications will be considered.

The following listed materials are considered to be an integral part of this "Bid Invitation":

"Narrative and Instructions to Bidders" 36 pages  
"Bid Form" 1 page

**NOTE:** The above listed materials will be available after August 5, 2016 by contacting the Budget Office at 931-359-2300.

Bids will be accepted by the Marshall County Budget Office, 2205 Courthouse Annex, Lewisburg, TN 37091 until 3:00 P.M. local prevailing time, Thursday, August 25, 2016, at which time and place all received bids will be publicly opened and read aloud. ***Bids must be submitted in a sealed envelope clearly marked "BID – NEW EMERGENCY MEDICAL VEHICLE" in the lower left corner.*** When applicable, all appropriate licensing and other required information must appear on the exterior of the submittal envelope, as required by T.C.A. 62-6-119.

**When bid submittals are sent via U. S. Mail, FedEx, UPS or any other carrier; the sealed bids must be identified as above and then placed inside of the appropriate shipping envelope, and then clearly marked "Sealed Bid Enclosed – New Emergency Medical Vehicle" on the exterior of the shipping envelope.** This is necessary in order to prevent the accidental opening of bids by separating bids from regular package delivery.

Bids arriving after the announced opening time or absent of the aforementioned markings will not be accepted.

***Marshall County reserves the right to disregard all nonconforming, non-responsive, or conditional bids; to reject any or all bids; to limit quantities; to waive formalities and informalities; and to evaluate proposals and accept any proposal or any part of any proposal that is judged, in our opinion, to be of the best quality, value and service to Marshall County. It is also understood that the "apparent low bidder" will be announced at the bid opening; however the "successful bidder", who may or may not be the lowest bidder, will not be announced until all issues, which include, but are not limited to quality, service, conformity to specifications, etc. have been resolved and until a period of review has been completed by the County. The "review period" is normally completed within ten business days following the bid opening; however, under some circumstances, a longer review period may be required.***

The bidder must submit his bid on the "Bid Form" provided. ***Bids not submitted on the provided form may be rejected.*** The Bid Form is not to be changed in any manner, nor is any unauthorized additions, conditions

etc. to be added. All applicable charges, including delivery, fees and surcharges must be included in the original proposal. Product warranties, where applicable, should be noted for each item. Any warranty to be provided on the materials, supplies and/or work are to be explained in detail by attaching a "Warranty Page" to the Bid Form. Blue or black ink must be utilized in the completion of the Bid Form.

The County's evaluation should be completed by 4:00 PM on or before September 8, 2016. Interested bidders should contact the County to schedule an appointment to inspect the bid file. The bidder inspection period will be for five days following the evaluation". Inspection by bidders will be closed after this time and the records will be moved to "Closed Bid Files", but shall remain opened and accessible to the public during the regular office hours of the County. Inspection of the purchase records shall not disrupt the normal work routine of the office. The individual requesting to inspect the records must first provide a written request describing those records to be inspected, and establish a date and time to inspect the records within the normal office hours of the Budget Office. Any copies made at the interested parties request shall be assessed a charge at the prevailing rate for duplication of County records.

All requested documentation is to be included with the bid submittal. Failure to provide the requested documentation may result in bid rejection. *When requested, complete specifications and product brochures for the items bid are to be provided with the bid submittal.*

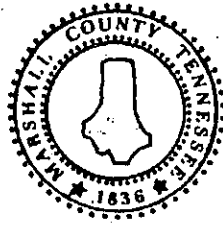
Bids must be executed in the Company name and signed by an officer or individual that has authority to bind the Company. No bid may be withdrawn for a period of thirty (30) days after the opening date.

*Title VI of the Civil Rights Act of 1964:* All interested parties, without regard to race, color or national origin, shall be afforded the opportunity to bid and shall receive equal consideration. Title VI states "No person in the United States shall, on the ground of race, color or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program activity receiving Federal financial assistance." Marshall County is often the beneficiary of Federal financial assistance in the areas of education, health care and social services, public transportation, and parks and recreation. Marshall County strives to protect individuals' civil rights through active compliance with the requirements of Title VI. Any questions, concerns or complaints related to Title VI should be directed to the Marshall County Budget Director, who will review and forward all materials to the Title VI Coordinator. Please assist us with our compliance efforts by completing the optional statistical information requested on the Bid Form provided.

Additional information may be obtained by contacting the Budget Office at 931-359-2300.

Requested by,

Malinda White  
Budget Director



**Marshall County Government**  
**Narrative & Instructions to Bidders**  
**& Minimum Specifications**

**Item: New Emergency Medical Vehicle – Type  
III, Gasoline, 160” x 94” Module**  
**Department: Ambulance Service**

Thursday, August 25, 2016

3:00 PM Local Prevailing Time

**NARRATIVE:**

The Marshall County Ambulance Service desires to purchase a New Emergency Medical Vehicle – Type III, Gasoline, 160” x 94” Module.

Marshall County participates in the Ford Fleet Program and our FIN Number is QB168. This program can be used for discount pricing on a Ford Chassis. This is available to use but not a requirement of this bid specification.

The intent of Marshall County Ambulance Service is to provide ambulance manufacturers with our minimum or preferred specifications. Minor deviance in measurements, brands or manufacturing processes are acceptable but should be documented in the bid.

**INSTRUCTIONS to BIDDERS:**

**Bid Submittal:**

The bidder must submit his proposal on the “Bid Forms” provided with the “Invitation to Bid”. The bid price must be written in blue or black ink, in numerals, and in words. The words, unless obviously incorrect, will govern. No qualifying letters or statements attached to the bid form will be considered. The bids will be received by Marshall County Government until the day, date and time as set forth in the “Bid Invitation”. Local time shall prevail in all openings. The bid due date and time will be strictly observed. It is the responsibility of the bidder to ensure that his bid is delivered via mail, carrier, by hand or other method prior to the scheduled bid opening day, date and time.

Before submitting a bid or proposal each bidder shall carefully examine the specifications (if any) and inform himself fully concerning the existing conditions, and shall make his bid or proposal to provide the items covered at the lowest cost while offering the best service and quality.

**BID WITHDRAWAL:**

Any bid may be withdrawn *prior* to the day, date and time as set forth in the “Bid Invitation”. Any bid may be withdrawn as a result of any authorized postponement by the Owner.

**BID OPENING:**

A bid opening will occur at the time and on the date as scheduled in the “Invitation to Bid”. At the “Bid Opening”; an “Apparent Low Bidder” will be announced. A “Successful Bidder” will be announced after a review period in which all elements of the bid are taken into consideration to include, but not be limited to, alternate or option bids which the Owner *may* want to include in the Work and which were bid on as alternate or option items in the original bid request, delivery schedules, service factors, and other pertinent data. The “Apparent Low Bidder” *may or may not be* the “Successful Bidder”.

Bids submitted will be immediately rejected when:

- The bidder fails to use the provided bid form,
- Bid form is not signed by an authorized representative of the bidding company,
- Conditions are placed upon the bid by the bidder,
- Unauthorized additions to the bid by the bidder,
- Lack of appropriate documents as required or requested in the Invitation to Bid,

A “Bid Tabulation” will be made available to the attendees at the “Bid Opening” showing all bids submitted. Individual bids will not be available for inspection until after the review period has occurred as outlined in “Bid Inspection” below.

#### **BID INSPECTION:**

A record shall be kept, listing each bidder by name and address and indicating their bid amounts. These records are to be open to public inspection after review and after the award to the successful bidder.

Evaluation Period:

- a. The review period is for ten (10) business days following the bid opening, during which time the bids are closed to public inspection.
- b. During the period when evaluation is being made, all bid analysis is confidential, thereby maintaining the integrity of the bidding system.
- c. No County personnel in any office should discuss information pertinent to any bid during this period, other than at scheduled meetings of County personnel specifically intended for review with regard to the bid and/or project.
- d. Violation of the confidentiality of bids pending award seriously compromises the County’s position in establishing contractual agreements.

During the bid review period, certain issues may be discussed with the potential “successful” Bidder. Any failure to come to an agreement on the discussed issues may result in the rejection of that bidder’s bid and force the Owner to move to the next bidder in line, when deemed by the Owner as being in the best interest of the Owner.

#### **AWARD of BUSINESS:**

A bid shall be considered an offer subject to acceptance by Marshall County. If a bidder fails to state the time within which a bid may be accepted, Marshall County shall have a minimum of thirty (30) days to accept.

Any award of business shall be to the lowest and best bidder, taking into consideration the qualities of the articles or services to be supplied, their conformity with specifications, their suitability to the requirements of the Owner and the delivery terms. Any or all bids may be rejected for good cause.

#### **QUALITY:**

All items offered under this invitation shall be of the highest quality, shall be in strict accordance with the manufacturer’s published specifications and shall be to the Owner’s satisfaction. The bidder shall ensure that all items offered shall be of superior quality.

## **MINIMUM SPECIFICATIONS**

Ambulance – Type III, Gasoline, 160” x 94” Module

### **Table of Contents**

1.0	SCOPE & GENERAL REQUIREMENTS
2.0	CHASSIS
3.0	MODULE CONFIGURATION
4.0	MODULE CONSTRUCTION – GENERAL
5.0	FLOOR CONSTRUCTION
6.0	SIDE STRUCTURE
7.0	ROOF CONSTRUCTION
8.0	DOOR CONSTRUCTION
9.0	COMPARTMENT CONSTRUCTION & CONFIGURATION
10.0	CORROSION: Anti-electrolysis procedures
11.0	REAR BUMPER
12.0	BODY PROTECTION
13.0	CABINETRY
14.0	CABINET CONFIGURATION
15.0	UPHOLSTERY
16.0	INTERIOR HARDWARE
17.0	OXYGEN, VACUUM SYSTEMS
18.0	ELECTRICAL SYSTEM - 12-Volt Direct Current
19.0	ELECTRICAL SYSTEM - 125-Volt Alternating Current
20.0	ENVIRONMENTAL
21.0	CONSOLES, SWITCH PANELS
22.0	VISUAL CONSPICUITY - EXTERIOR LIGHTING
23.0	AUDIBLE CONSPICUITY
24.0	INTERIOR LIGHTING
25.0	COMMUNICATIONS EQUIPMENT
26.0	PAINT, LETTERING, DECALS, MISCELLANEOUS
27.0	REFERENCES AND STANDARDS
APPENDIX STANDARD MODEL DRAWINGS	

\*\*\*\*\*

## Ambulance Bid Specifications

Ambulance – Type III, Gasoline, 160” x 94” Module

### 1.0 SCOPE & GENERAL REQUIREMENTS

This specification describes a commercial cutaway chassis with a transferable modular body converted into a Type III, 4X2 ambulance configuration as defined in the FEDERAL SPECIFICATION FOR STAR-OF-LIFE AMBULANCE, KKK-A-1822F, dated August 1, 2007. Unless otherwise specified, this vehicle shall be manufactured in accordance with the ambulance design criteria of the National Highway Traffic Administration, U.S. Department of Transportation in Washington D.C and the GSA - Federal Ambulance Specification KKK-A-1822F. Documentation shall be submitted with the bid that validates the manufacturer's current and full compliance with KKK-A-1822F. The ambulance described herein shall be type and model tested to and in compliance with the National Truck Equipment Association's Ambulance Manufacturing Division, Standards 001 - 025. Certifications must be current to manufacturer's most recent manufacturing/engineering design criteria.

The standard for the configuration and design of this ambulance exceeds the current KKK Federal Specification due to the requirements of this department. Manufacturers, who are unwilling or unable to meet the requirements herein, will not be considered.

The purpose of these specifications is to provide a set of minimum general requirements and test parameters for the manufacture of an emergency medical ambulance that meets the needs and desires of Marshall County. The bidder is responsible for understanding that this specification establishes the general criteria for design, performance, equipment and appearance of the ambulance. This specification requires an all-aluminum modular exterior. The compartment and cabinet sizes are general and changes will be allowed if noted. It is not the intent of this specification to preclude any qualified bidder, it must be clear that compartment and cabinet layout should resemble the specifications with minimal deviation in measurements. All exterior designs involving paint, lettering, chevron and decals must match current Marshall County ambulance design. Photos are available upon request.

Does Your Bid Comply?                      Yes \_\_\_\_                      No \_\_\_\_

This specification requires the manufacturer to provide a new, commercially produced, medical care vehicle, hereinafter referred to as an "ambulance". This vehicle shall be manufactured in accordance with the ambulance design criteria of the National Highway Traffic Administration, U.S. Department of Transportation in Washington D.C and the GSA - Federal Ambulance Specification KKK-A-1822F. Documentation shall be submitted with the bid that validates the manufacturer's current and full compliance with KKK-A-1822E. **NO EXCEPTIONS.**

The manufacturer of this vehicle:

1.1 Shall be a modified vehicle Upfitter approved by the OEM chassis manufacturer whose chassis is used to complete this Specified vehicle. Additionally, the manufacturer shall hold current certification in the Ford Motor Company Qualified Vehicle Modifier Program, and shall submit a copy of the QVM certificate as part of the bid proposal. This certification insures the integrity of the "conversion" of a vehicle into an ambulance regardless of chassis make.

1.2 Shall submit a copy of current certification of compliance with Federal Specification KKK-A-1822F for the type vehicle described herein, as prepared by an ISO/IEC 17025:2005 certified, independent, third-party testing laboratory.

1.3 Shall carry not less than ten million dollars (\$10,000,000.00) in product liability insurance.

1.4 Shall employ full-time Parts personnel.

1.5 Shall employ a full-time Electrical Troubleshooter.

1.6 Shall employ a full-time Service/Warranty Representative.

1.7 Shall furnish custom Computer Aided Design (CAD) interior and exterior construction drawings specific to the vehicle to be produced under this Specification. Drawing dimensions must comply with AMD Standard 019- Measuring Guidelines: Cabinets and Compartments

1.8 Shall furnish custom CAD electrical illustrations (including physical layouts of switch panels and electrical component mounts) and electrical schematics specific to the vehicle to be produced under this Specification.

1.9 Shall furnish proof of manufacturing complete ambulance packages for a minimum of 10 years.

Does Your Bid Comply? Yes \_\_\_\_ No \_\_\_\_

The ambulance and the allied equipment required by this specification shall be the manufacturer's current commercial ambulance model of the type and class specified. The ambulance shall be complete with the required options and accessories as specified herein. Items will be furnished with such modifications as may be necessary and specified to enable the ambulance to function reliably and efficiently in a strenuous, sustained operation. The design of the vehicle and the specified options shall permit accessibility for servicing, replacement and adjustment of components and accessories with minimum disturbance to other components and systems. The term "heavy-duty" as used, shall describe equipment or items that are in excess of the usual quality or capacity that is normally supplied with standard production vehicles or components.

The bidder shall be obligated to provide an estimated delivery time from award of bid and a selection of flooring, upholstery and Scotchlite colors for the customer to make the appropriate selections. These color selections shall become a part of the customers order and the bidders manufacturing document.

Does Your Bid Comply? Yes \_\_\_\_ No \_\_\_\_

This is an engineer, design, construct and delivery type specification and it is not the intention of this agency to write out vendors or manufacturers of similar or equal equipment of the types specified. It should be noted, however, that this specification is written around specific needs of this agency. With the intent to standardize certain components, therefore, in numerous places we have named specific brands of components. This has been done to establish a certain standard of quality. Other brands will be accepted providing the vendor provides documentation in the bid that the particular brand offered meets or exceeds the quality of the actual brand called for in the specification.

Does Your Bid Comply?                      Yes \_\_\_\_              No \_\_\_\_

Bidder must furnish all information as requested. Additionally the bidder shall supply descriptive literature and complete specifications covering the products offered.

Does Your Bid Comply?                      Yes \_\_\_\_              No \_\_\_\_

All bid prices shall be complete and include warranty and delivery of the completed vehicle to the purchaser. Payment shall be made in accordance with the terms, and conditions of these specifications. Payment will be made upon delivery and acceptance of the vehicle(s) and equipment specified herein.

All bid prices and conditions must be specified on the Bid Proposal Form. Bid prices shall be valid for 30 days from the date of the bid opening, or as otherwise specified in the bid proposal. Payment in full will be made as each unit is received, inspected and found to comply with these specifications. The vehicles(s) shall be free of damage and properly invoiced.

Does Your Bid Comply?                      Yes \_\_\_\_              No \_\_\_\_

By submission of this signed bid response, the bidder certifies under penalty of perjury, that to the best of his/her knowledge that the pricing in this bid response has been prepared independently without collusion, consultation, communication, or agreement for the purpose of restricting competition, as to any matter relating to such pricing with any other bidder or competitor. The bidder also acknowledges that the pricing quoted has not been discussed with or disclosed by the bidder prior to the opening of the bid, either directly or indirectly.

Does Your Bid Comply?                      Yes \_\_\_\_              No \_\_\_\_

The bidder's proposal packet shall include a copy of the ambulance manufacturer's current insurance certificate. The manufacturer shall provide proof of \$10 Million dollars of product liability insurance coverage. No Exception.

Does Your Bid Comply?                      Yes \_\_\_\_              No \_\_\_\_

The bidder's proposal packet shall include copies of all warranties listed in these following detailed specifications. The minimum acceptable required warranties are: Conversion Warranty, Electrical Warranty, Modular Structural Warranty and Paint Warranty. The bidder shall include a copy of these warranties within the proposal package. If the bidder does not include a copy of the warranties, the bid will automatically be rejected.



Does Your Bid Comply?                      Yes \_\_\_\_\_ No \_\_\_\_\_

## 2.0 CHASSIS

2.1 TYPE III AMBULANCE: The apparatus shall be a Type III, Class 1, 2-door, Gasoline powered, Cutaway van with a transferable, modular ambulance body.

Does your bid comply?                      Yes \_\_\_\_\_ No \_\_\_\_\_

2.2 AMBULANCE PREPARATON PACKAGE: The chassis provided shall be equipped with an ambulance preparation package designed and installed by the O.E.M. The package shall be designed to meet the demands and duty cycles inherent in Emergency Medical Vehicles.

Does your bid comply?                      Yes \_\_\_\_\_ No \_\_\_\_\_

2.3 THROTTLE – HIGH IDLE: An O.E.M. throttle control shall be provided. The throttle shall be programmed for charge protect. The throttle control module shall be located in the console base.

Does your bid comply?                      Yes \_\_\_\_\_ No \_\_\_\_\_

2.4 GROSS VEHICLE WEIGHT RATING (GVWR): The GVWR of the chassis supplied shall be at least 11,500 pounds.

Does your bid comply?                      Yes \_\_\_\_\_ No \_\_\_\_\_

2.5 FRONT AXLE WEIGHT RATING (GAWR-F): The GAWR-F shall be rated at no less than 5,000 pounds.

Does your bid comply?                      Yes \_\_\_\_\_ No \_\_\_\_\_

2.6 REAR AXLE WEIGHT RATING (GAWR-R): The GAWR-R shall be rated at no less than 9,600 pounds.

Does your bid comply?                      Yes \_\_\_\_\_ No \_\_\_\_\_

2.7 REAR AXLE TYPE AND RATIO: The axle type shall be limited slip differential with a 4.56:1 gear ratio.

Does your bid comply?                      Yes \_\_\_\_\_ No \_\_\_\_\_

2.8 ENGINE: A V-10, Gasoline engine with 305HP @ 4,250RPM / 420 lb.-ft. torque at 3,250RPM and a minimum displacement of 6.8 liters (414 cu in) shall be provided. The engine performance shall comply with or exceed KKK-A-1822F and AMD Standards 005- 12-Volt DC Electrical System Test, 014- Engine Cooling System Test, 017- Road Test and 022- Cold Engine Start Test.

Does your bid comply?                      Yes \_\_\_\_\_ No \_\_\_\_\_

2.9 TRANSMISSION: A 6-speed, electronic automatic transmission with overdrive shall be provided.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

2.10 BATTERIES: Two batteries shall be mounted to provide easy access for servicing. The batteries shall be at least 650 CCA each.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

2.11 BRAKES: 4-wheel anti-lock, power assisted hydraulic brakes shall be supplied by the O.E.M. The brakes shall be 4-wheel Disc type. The parking brake shall be an independent mechanical brake, provided by the O.E.M.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

2.12 TIRES: All tires shall be identical make, tread type, size and load range. For aforementioned GVWR the tires shall be LT225/75R16E. A label with the recommended tire pressure shall be located above each wheel opening, unless specified otherwise by the purchaser. All tires shall be balanced per KKK-A-1822F 3.6.10.

2.13 STAINLESS STEEL WHEEL INSERTS: Stainless Steel Wheel Inserts shall be installed. Both rear wheels shall have braided valve extenders installed. Wheel inserts shall not be attached to the wheels utilizing the OEM lug nuts.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

2.14 MUD FLAPS: Heavy duty rubber Mud Flaps shall be provided behind the rear dual wheels.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

2.15 SPARE TIRE: Two (2) spare tire and wheel assembly shall be supplied. When the tire is to be carried on the unit, the tire hold down and O.E.M. jack and tire tools shall be provided with the spare.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

2.16 OCCUPANT RESTRAINT SYSTEM: The front, forward facing cab seats shall be equipped with O.E.M. installed Type II lap and shoulder belt assemblies.

The seat belts shall have pre-tensioners built into the seatbelt assembly to take up belt slack during a frontal collision. The seat belt assemblies shall meet or exceed F.M.V.S.S. 208 and 209. Any transition trim panels installed in the cab shall not interfere with the swivel arc of the shoulder rings.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

2.17 SUPPLEMENTAL RESTRAINT SYSTEM: An O.E.M. air bag shall be installed on the driver and passenger side. Permanent or quick release ambulance conversion components shall not interfere with air bag deployment. The air bags must be completely operational. Modifications by the secondary manufacturer are not acceptable.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

2.18 FUEL TANK: The fuel capacity shall be at least 50 U.S. gallons. The fuel range shall be at least 250 miles per KKK-A-1822F 3.4.8.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

2.19 CAB SEATS: O.E.M. High back, stain-resistant cloth covered bucket type seats shall be provided in the cab. The seats shall adjust forward and aft. Seat base must be O.E.M. After-market seats and/or bases are not acceptable due to certified requirements regarding S.R.S. (Air bag) deployment geometry. The seats shall have external moisture repellant in case of contact with blood or body fluids.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

2.20 CAB STEREO: An O.E.M. AM/FM/CD in dash radio shall be included with the chassis.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

2.21 MIRRORS: Dual electrically controlled extending mirrors with built in convex mirror shall be provided.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

2.22 DOOR LOCKS: The cab doors shall have O.E.M. power door locks. A momentary rocker type switch shall activate (Lock/Unlock) all exterior compartment and entry doors. A hidden/stealth switch will be located in driver's side grill area to unlock doors.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

2.23 TRIM PACKAGE: The highest level trim package shall be supplied from the O.E.M. The package shall include high quality chrome-like bright work on the grille face. Chrome plated steel bumper(s) shall also be supplied by the O.E.M. Argent or painted bumpers are not acceptable.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

2.24 RUNNING BOARDS: Running boards shall be constructed of .125(minimum) aluminum diamond plate and provide "splash guard" components to protect the running board surfaces from front wheel wash.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

2.25 UNDERCOATING: Chassis and module shall be fully undercoated in accordance with the chassis manufacturer's guidelines.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

2.26 WINDSHIELD SUN VISORS: OEM, stain resistant cloth covered sun visors shall be installed over the driver's and passenger's sides of the windshield.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

### 3.0 MODULE CONFIGURATION

3.1 OVER ALL LENGTH: The overall length of the vehicle shall not exceed two hundred eighty inches (280"). The finished vehicle shall meet or exceed KKK-A-1822F 3.4.10.4 for Angle of Departure, Ramp Break Over and Angle of Approach.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

3.2 MODULE LENGTH: The module length shall be at least one hundred sixty-four (164") inches.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

3.3 MODULE WIDTH: The module width shall comply with State requirements regarding width of vehicles permitted on its roads and highways. The module shall be a minimum of ninety (94") inches wide, excluding lights and accessories. The rear wheels of the chassis shall not extend further than 2.5" from the vertical sidewall and be covered by fender flares as cited in Item 10.5 of this Specification.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

3.4 PATIENT COMPARTMENT HEADROOM: The headroom within the module shall be a minimum of (72") inches. The measurement shall be taken from the center of the patient compartment floor to the ceiling panel.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

3.5 BULKHEAD CONFIGURATION: The bulkhead shall be a solid wall broken only by an 18"W x 46"H walk-thru opening. There shall be a sliding door with a Lexan window of at least 150 square inches of viewing area. The window shall be transparent and shatterproof. The sliding door shall lock in place in both the open and closed positions.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

3.6 COMPARTMENT CONFIGURATION: The minimum compartment dimensions shall be as described within this specification.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

3.7 SPARE TIRE STORAGE: Unless otherwise specified, two (2) full size, fully inflated spare tires matching the wheels and tires mounted on the chassis shall be shipped loose. An O.E.M. jack and tire tools shall also be provided and shipped loose.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

#### 4.0 MODULE CONSTRUCTION - GENERAL

All frame and structural members shall be MIG (metal inert gas shielded) welded together to form a "roll cage" type structure. No rivets, screws, adhesive or other mechanical fasteners shall be used for the attachment of any structural or frame member used to form this critical structure.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

4.1 BODY STRUCTURE ALLOY: The side, roof, front and rear sheets shall be derived from a minimum .090 thick 5052-H-32 Aluminum sheet. The roof sheet shall be one piece, from roof rail to roof rail. The side structure and structural shapes shall be extruded of 6063-T6 aluminum. This Agency will not accept bids from ambulance manufacturers that sub-contract the manufacture the ambulance body being bid.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

4.2 BODY WARRANTY: The body shall carry a minimum, 15-year warranty following the date of delivery to the end user. The warranty shall cover repairs or replacement of body elements or components that fail due to structural defects in materials and workmanship. "Life Time Warranties" must clearly specify the coverage and will meet this specification as a minimum. Unclear "Warranties" are not acceptable.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

4.3 STRUCTURAL INTEGRITY: The body shall be capable of providing impact, deformation and penetration resistance in the event of a collision. The body structure shall be capable of passing a stand-alone static load test on a type-tested body. The test shall be conducted in accordance to AMD Standard 001. The test weight shall be applied at no less than 2.5 times the curb-weight of the finished vehicle to both the top and either the streetside or curbside of the ambulance module.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

4.4 BODY PANEL MANUFACTURE: Each body panel, front wall, rear wall, two side walls, and roof panel, shall be manufactured utilizing a minimum of .090" aluminum sheet, 2"x2"x.125" and 1"x2"x.125" extruded aluminum framework with voids between the tubular structure filled with 2" thick block Styrofoam and covered with .125" laminated plywood. These panel components shall be integrated utilizing high strength adhesives. The aluminum sheet shall be attached to the wall structure with a Methacrylate adhesive with at shear and tensile strength of 3,000 psi and the block foam and ply shall be attached with a urethane adhesive with

a tensile strength of 300 psi minimum tensile strength. The entire assembly shall be vacuum-pressure cured to form a solid, penetration resistant composite body panel.

Four vertical corners shall be full-seam welded outside. Four vertical corners shall be stitch-welded every 5" inside. Four sides at roofline shall be full-seam, full perimeter welded to roof panel on the outside juncture.

Four sides at roofline shall be stitch-welded every 5" inside. Four full-welded vertical corner seams and four full-welded horizontal roof seams shall be covered with .125" extruded aluminum, radius corner extrusion bonded with Lord's 406-17 acrylic adhesive with a tensile strength of 4,650 psi and an elastic modulus of 130,000 psi creating an integrated corner support column. The cast aluminum corner caps shall be seam-welded in place. All exterior body holes for lighting or other appliances shall be routed, drilled or punched prior to prime and paint process to assure complete coverage of raw metal on edges of holes. Marshall County realizes there are different manufacturing processes. Please explain your process if it differs.

Does your bid comply?      Yes\_\_\_\_\_      No\_\_\_\_\_

4.5      MODULE INSULATION: The insulation material shall be a minimum of 2" thick, 1-lb. density foam block insulation, providing full perimeter insulation with no voids.

Does your bid comply?      Yes\_\_\_\_\_      No\_\_\_\_\_

4.6      REMOUNTABLE: The body shall be designed to be remounted to like chassis with same cab-to-axle dimensions.

Does your bid comply?      Yes\_\_\_\_\_      No\_\_\_\_\_

4.7      WELD QUALITY: All welds within the modular body shall meet American Welding Society codes for structural and sheet welding. All weld sites shall be cleaned prior to welding. All welds shall be free of cracks, cavitations, oxidation and foreign substances. All MIG welds shall be shielded with Argon, during the process.

Does your bid comply?      Yes\_\_\_\_\_      No\_\_\_\_\_

## 5.0 FLOOR CONSTRUCTION

5.1      FLOOR MEMBERS: The floor shall be at the lowest level permitted by clearances and shall meet the floor height requirements of KKK-A-1822F, 3.4.10.6. The lateral and longitudinal floor structure shall consist of 2" x 2" x .125" and 1" x 2" x .125" - 6063-T6 structural aluminum tubing. The finished assembly shall be securely welded to the wall structures and exterior compartments. There shall be .50" aluminum plates welded into the floor structure to facilitate mounting of the Technician's seat base and cot retention hardware. The floor weight bearing capability shall be compliant with AMD Standard 020- Floor Distributed Load Test, S4.3 Bariatric Load.

Does your bid comply?      Yes\_\_\_\_\_      No\_\_\_\_\_

5.2 MOISTURE BARRIER: Over the floor substructure there shall be applied a moisture barrier of .060 inch thick aluminum skin. This skin shall be attached to the floor structure by a full bed of industrial adhesive. This adhesive bed shall be adequate to eliminate any material vibration and to completely seal the patient compartment from fumes and moisture penetrating the interior.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

5.3 CARBON MONOXIDE PROTECTION: To prevent carbon monoxide penetration into the patient compartment, it is imperative that the entire underside of the modular body be sealed. All hollow corner structural materials shall be sealed with either expansion moisture resistant foam or sealed metal plates. This completed vehicle shall be compliant with AMD Standard 007- Patient Compartment Carbon Monoxide Test.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

## 6.0 SIDE STRUCTURE

SHEET: The skin covering the front, sides, and rear walls shall be a single aluminum sheet with an alloy and temper strength of 5052 H32 for strength, ease of welding, and corrosion resistance. **Modular bodies fabricated from "multi-piece" front, rear or side skins are not acceptable to this agency.**

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

6.1 SIDE STRUCTURAL MEMBERS: The side assembly shall be reinforced vertically with square aluminum extruded structural on an average of twelve (12) inch centers. These structural members shall be 2"x2" extruded box tubing with an equivalent wall thickness of .125 inch. To minimize the possibility of the extrusion bending, twisting or suffering other deformation when stressed, the extrusion shall be designed that each boxed formed corner extrusion on the sides, front, rear, and roof overlap the opposing extrusion, thus allowing for full length vertical welds on the entire outside of the body and the inside of the body. There shall be 4" x .50" aluminum plates welded into the curbside wall structure to facilitate the mounting of the seat belt assemblies. These structures shall be MIG welded together to form the body's roll cage and corner impact protection

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

## 7.0 ROOF CONSTRUCTION

7.1 PERIMETER EXTRUSIONS: The roof's substructure assembly shall consist of perimeter extrusions, lateral roof bows, and interconnecting corner caps.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

7.2 ROOF SHEET: The roof skin shall have an alloy and temper strength of 5052 H32. The skin shall be attached to the lateral roof bows with a combination high strength urethane and Methacrylate adhesives applied prior to a vacuum bonding process to provide even and

consistent adhesion of the wall skin to the structural extrusions. In no case may screws, rivets or other mechanical fasteners be used to attach the skin to the lateral roof bows.

Does your bid comply?      Yes \_\_\_\_\_      No \_\_\_\_\_

7.3      ROOF BOWS: The lateral roof bows shall be 2" x 2" x .125" primary and 1" x 2" x .125" secondary extruded aluminum tubing. These structures shall be MIG welded together to form the body's "roll cage". These structural members shall be located so that the roof skin is supported on a minimum "center" distance of 14 inches. The roof bows shall interconnect with the roof side rails and be continuously welded at all contact points. In no case shall a lateral roof bow have free span of more than 42 inches. There shall be eight (8) .125" aluminum plates welded into the roof structure to facilitate mounting of the patient compartment dome lights. There shall also be .250" aluminum plates welded into the roof structure to facilitate mounting of the overhead grab rail and a cargo net at the head of the squad bench. There shall be 1" x 2" x .125" tubing welded into the roof structure to provide secure mounting support for four CPI model 2008 folding IV hangers and for mounting potential recessed fluorescent fixtures.

Does your bid comply?      Yes \_\_\_\_\_      No \_\_\_\_\_

7.4      ROOF CORNERS: The roof rail extrusions shall be welded together along the roof bow mating walls at the corners. In addition, the outer surfaces of the roof rail extrusions shall be continuously MIG welded to cast aluminum corner castings. The castings shall have integral flanges behind the weld sites to interlock the joint.

Does your bid comply?      Yes \_\_\_\_\_      No \_\_\_\_\_

## 8.0      DOOR CONSTRUCTION

8.1      DOOR SKIN: The door skin shall be a minimum .090 thick 5052-H32 aluminum sheet CNC cut and formed to create a robust, crevice free environment to mirror the mating surface of the door jamb extrusions and to provide optimum paint adhesion and corrosion resistance. The formed edges shall not have elongation cracks due to forming but shall have edges uniformly rounded for strength and aesthetic appeal. The forming process will produce a door with an integral surface for mounting a pliable air core rubberized neoprene gasket around the full perimeter of the door that will seat and seal against the mating surface on the door jamb. The CNC process will provide the cut-out for windows, latches, door panel mounting holes and hinge mounting points all machined into the finished raw door. The CNC cut, fold and weld process provides a guaranteed consistent tolerance within 1/5,000<sup>th</sup> of an inch which yields a finished product that is consistently repeatable and easily replaceable in the event of damage.

Does your bid comply?      Yes \_\_\_\_\_      No \_\_\_\_\_

8.2      DOOR PANELS: The inside door panels shall be made of a minimum .090" aluminum sheet laminated to match the interior of the unit. There shall be an aluminum diamond plate kick panel installed to protect the lower portion of the entry doors. Exposed, raw, sheared, unfinished sheet-metal edges are not acceptable. The panels shall be fastened to the door with Phillips head stainless steel, #10-32 machine screws with rubber washers to assist in cushioning the impact of door closure. The kick panel shall measure approximately 8" x 20".



Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

8.3 DOOR JAMB: The door jamb shall be an extruded aluminum extrusion measuring approximately 2.725" x 3" with no less than .1875" wall thickness to accommodate rigid fastening of compartment door hinges, and the TriMark cage nut assemblies that are used to secure nadir pens. The corners of the extruded door jamb shall be CNC mitered, fixture fit and welded full perimeter to hold the door opening square. The mounting and access points for the nadir pens shall be CNC routed for precision and repetitive consistency. The door jamb shall have a full perimeter flange that shall be secured to the body side skin with a Methacrylate adhesive rated at no less than 3,200PSI along with 1/4" x 20 Type Of self-tapping sheet metal screws around the full perimeter of the framed door opening.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

8.4 HINGE: All doors shall have stainless steel, continuous, piano hinges. The pin diameter shall be .250" and staked into place to prevent drifting out of the hinge leaves. The knuckle lengths shall be 1". Alternating mounting slots shall be incorporated in the hinge to facilitate fine adjustment. The hinge attachment bolts shall be 1/4-20 x 1" long stainless steel Type F pan head screws. The screws shall be spaced 4 inches apart on each leaf for the full length of the hinge. The tapping points along the door and jamb shall be designed in and CNC placed for consistently repetitive production and ease of replacement. The hinges for each individual door shall be identically cut for all common door heights and the CNC process used to fabricate the door and jamb shall insure that all of the door components are easily replaceable and interchangeable.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

8.5 LATCHES: All exterior door latches shall be TriMark two stages, rotary type latches that meet FMVSS 206 requirements for door locks and door retention components. The latches shall be through bolted to the door with 5/16 UNC countersink, machine type bolts and lock nuts that comply with the latch manufacturer's requirements. All entry doors shall have two rotary latches per door. To assure uniform latch timing and functional door reliability, only straight, 3/16" diameter rods shall connect the latches to the handle. All latch timing shall be set at the handle site. Other than at the latch site, bends in door latch rods are NOT acceptable.

The Nader pins for each door latch shall be installed through the door jamb into TriMark cage nut assemblies designed to be through bolted into the door jamb extrusion with grade 8 machine type bolts per the manufacturer's requirements. The cage nut assembly will support the mounting nut should the Nader pin need to be removed for maintenance or service.

All single, short compartment doors shall have one rotary latch. All double doors or tall compartment doors shall have two rotary latches per door. All Nader pins shall be headed to prevent the door(s) from opening under impact.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

8.6 EXTERIOR HANDLES: TriMark powder coated black finished, free floating exterior paddle handles shall be provided to open all doors. Blind fasteners shall be used to fasten the

handles to the door. Exposed fasteners to the outside are unacceptable for security reasons. Paddle handles shall have an isolation gasket between the paddle body and the door skin. All door skin surfaces shall be CNC cut to produce a uniform fit and shall be painted prior to installation of the hardware. The handle shall be long enough to accommodate four gloved fingers for door actuation. All paddles on single doors and leading double doors shall be locking type and keyed the same. Trailing doors shall have non-locking paddle handles mounted on the interior door panel. The inner side of all exterior handles shall have a strip of 3M Safety Grip material installed to provide a slip resistant surface in bad weather. When locked, the paddle handle shall "float" to prevent unnecessary pressure being applied which may damage the handle and function as a signal that the handle is locked.

The rotary latches for each door shall be fit with metal rods, individually clipped to both the latches and the paddle handles. The rods shall be designed to be adjustable; however, they will be secured when adjusted so that they cannot voluntarily move. The door latching assemblies as a whole shall be fully tested to comply with FMVSS 206 requirements including 30G testing, no exceptions. A copy of the testing certificate validating the door system and testing shall be provided with the bid.

Power door locks shall be installed on all of the modular compartment and entry doors. The power door locks shall be wired to and work in conjunction with the OEM chassis power door locks. There will be a stealth switch located in the OEM grille area to provide an emergency "open" circuit for the power door locking system. There will be a lock/unlock switch mounted on the curbside wall near the side entry door and the rear entry door.

Does your bid comply?      Yes \_\_\_\_\_ No \_\_\_\_\_

8.7    INTERIOR HANDLES: TriMark powder coated black matching interior paddle handles shall be supplied on all module entry doors. The interior handles shall be powder coated black.

Does your bid comply?      Yes \_\_\_\_\_ No \_\_\_\_\_

8.8    WINDOWS: All entry doors shall be equipped with an upper window. The curbside entry door shall have a fixed pane window with a nominal area of 320 square inches. The rear access doors shall each have a fixed pane window with a nominal area of 320 square inches. All windows shall have anodized frames and blind inner mounting ring screws, fastened from the inside. The exterior portion of the frame shall have a full perimeter seal mated against the door skin. All glass shall be dark tinted safety glass compliant with FMVSS 205. Privacy window film shall be installed on all exterior modular windows as shown in attached pictures.

Does your bid comply?      Yes \_\_\_\_\_ No \_\_\_\_\_

8.9    DOOR CHECKS: All doors shall be equipped with a door check (hold open). The curbside entry door and exterior compartment doors shall have a type of door check. The door check shall keep positive pressure on the door in the open and closed position. Door check brackets shall be bolted through overhead structure to provide a solid attachment to the door frame. All doors shall open 90 to 110 degrees, unless otherwise specified by the user.

Rear access doors shall open at least 150 degrees. The door checks shall be two pieces, heavy duty grabber type assemblies. The door shall have a ½" thick cast aluminum loop that plunges into a positive rubber/cast aluminum socket mounted on the body. Each component of the door checks shall be insulated from the skin with a rubber gasket. Each door-check component shall be rigidly mounted on the door or body into tapping plates behind the skin positioned for that purpose.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

8.10 DOOR HANDLES: All entry doors shall be equipped with two-point, 1" diameter stainless steel, "handicap" style grab handles to aid in door closure and entry assistance. The handles shall run horizontally, directly above the inside door latch. The door handles shall be fastened directly to the horizontal door structure that is welded into the door assembly.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

8.11 DRIP RAILS: A drip rail shall be provided over each compartment to prevent water roll off from spilling into the opened compartment door. Drip rails shall be attached with double-sided adhesive for ease of replacement. Full height compartments are exempt because the perimeter roof rail drip rails cover these compartments.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

## 9.0 COMPARTMENT CONSTRUCTION & CONFIGURATION

9.1 MATERIALS: All exterior compartment walls, back and floor shall be constructed of a minimum .090" smooth aluminum with a spray-on rubberized bed liner material. The ceilings and floors shall form around the sides and back to provide an overlapping joint. The floors and ceilings are bonded to the walls and back and intermittently welded along the exterior surface of the joints.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

9.2 COMPARTMENT CONFIGURATION: The exterior compartment layout on this vehicle shall be similar to the photographs attached to this Specification, with option of compartment #4 being a single door that allows access to battery compartment also.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

9.3 OXYGEN COMPARTMENT: An M-size cylinder retention bracket shall be provided to secure a vertically stored cylinder. The retention bracket shall be through bolted to the compartment wall backed by ½" aluminum plate with four 3/8-16 grade 8 bolts with grade 8 nuts. The retention bracket shall be powder coated steel and remain rust free for the life of the ambulance. The oxygen cylinder shall be attached to the bracket with three (3) spring-buckle, webbed retention straps. The retention bracket shall be in compliance with AMD Standard 003-Oxygen Tank Retention System Static Test.

Compartment #1 shall be approximately: 14.50"W x 68.00"H x 14"D

Does your bid comply? Yes\_\_\_\_\_ No\_\_\_\_\_

9.4 #2 STORAGE COMPARTMENT: This compartment shall be located just aft of the O2 compartment on the streetside of the module. It shall be configured for general storage or as specified by this agency.

Compartment #2 shall be approximately: 40.00"W x 38.00"H x 18.0"D

Does your bid comply? Yes\_\_\_\_\_ No\_\_\_\_\_

9.5 #3 STORAGE COMPARTMENT: This compartment shall be located aft of the rear wheel well on the streetside of the module. It shall be configured for general storage.

Compartment #3 shall be approximately: 30.00"W x 54.00"H x 18.00"D

Does your bid comply? Yes\_\_\_\_\_ No\_\_\_\_\_

9.6 #4 INSIDE/OUTSIDE COMPARTMENT: This compartment shall be located at the forward most curbside of the module. It shall be configured to provide exterior access to the interior ALS cabinet and the battery storage area located below the floor level of the ALS storage. There shall be a separate access door located below the floor level for maintenance and service to the vehicles battery storage area.

Compartment #1 shall be approximately: 19.00"W x 58.00"H

Does your bid comply? Yes\_\_\_\_\_ No\_\_\_\_\_

9.7 #5 BACKBOARD COMPARTMENT: This compartment shall be located at the rear most curbside of the module. It shall be configured to provide exterior access to the backboards.

Compartment #5 shall be approximately: 17.75"W x 75.75"H x 20"D

Does your bid comply? Yes\_\_\_\_\_ No\_\_\_\_\_

## 10.0 CORROSION: Anti-electrolysis procedures

10.1 EXTERIOR FASTENERS: Dissimilar metal contact is known to cause corrosion at fastener sites. All exterior device fasteners, especially light fasteners, shall not contact the painted aluminum surface. All fasteners that are not aluminum or plastic bodied are considered dissimilar. Each hole drilled after the prime and paint process shall be treated with an electrolysis corrosion control compound, ECK or equivalent prior to installation of the mounting screws. All mounting screws shall be stainless steel and shall be coated with the electrolysis corrosion control compound prior to installation.

Does your bid comply? Yes\_\_\_\_\_ No\_\_\_\_\_

## 11.0 REAR BUMPER

11.1 FRAMING: The rear step bumper shall meet or exceed KKK-A-1822F 3.9.6 and be compliant with AMD Standard 018. The bumper shall be bolted directly to the chassis frame. In addition the top of the bumper shall be mounted below the body skirt-line, so that minor

collisions do not damage the body. The steel bumper frame shall be powder coated black for a durable, corrosion resistant finish.

Does your bid comply?      Yes \_\_\_\_\_ No \_\_\_\_\_

11.2 CENTER STEP: A flip up step shall be provided to allow closer access to the patient compartment floor. The step shall be as wide as the rear access door jamb. The step shall have a grip strut surface for aggressive traction. Snow and ice shall not compromise the level of traction on the center step. A stainless steel piano hinge shall have a staked in, 1/4" diameter pin, one inch knuckles and Type-F 1/4"-20 stainless steel bolts every four inches.

Does your bid comply?      Yes \_\_\_\_\_ No \_\_\_\_\_

11.3 OUTER BUMPER PODS: The step bumper shall have an aesthetically pleasing appearance. The outer bumper pods shall be polished aluminum diamond plate. The outer corners shall be rounded to eliminate sharp corners around the working area. Each pod shall have a heavy duty rubber rear dock bumper attached to further protect the bumper.

Does your bid comply?      Yes \_\_\_\_\_ No \_\_\_\_\_

## 12.0 BODY PROTECTION

12.1 FRONT OF BODY: The front of the body shall have protection plates made of aluminum diamond plate fitted between the contour of the cab and the corner posts. The corner posts shall have 12" high formed diamond plate protection panels.

Does your bid comply?      Yes \_\_\_\_\_ No \_\_\_\_\_

12.2 REAR OF BODY: An aluminum diamond plate kick panel shall run from rear corner post to corner post and house a recessed, cast aluminum, license plate holder. The kick panel shall be 12" in height and shall extend downward from below the rear door jamb to the bottom edge of the body. The corner posts shall have 12" high formed diamond plate protection panels.

Does your bid comply?      Yes \_\_\_\_\_ No \_\_\_\_\_

12.3 LOWER BODY RUB RAILS: The entire skirt-line of the body, forward and aft of the rear wheels shall have extruded aluminum skirt rails installed to protect the edge of the lower body. Each rail shall be chamfered 45 degrees at each end. The rails shall be mounted with 1/4" x 20 stainless steel machine screws through nylon spacers to prevent contact between the rub rail and the modular body.

Does your bid comply?      Yes \_\_\_\_\_ No \_\_\_\_\_

12.4 REAR ENTRY DOOR: At the rear entry doors, a full width, formed, stainless steel threshold protection plate shall be provided to prevent the cot frames from causing damage to the body and the entry level floor. The threshold shall have a high quality anti-skid material applied in full width strips to provide a slip resistant step into the patient compartment.

Does your bid comply? Yes\_\_\_\_\_ No\_\_\_\_\_

12.5 SIDE ENTRY DOOR: An aluminum diamond plate threshold shall be installed at the transition point between the side entry step well and the patient compartment floor. The threshold shall have a high quality anti-skid material applied in full width strips to provide a slip resistant step into the patient compartment.

Does your bid comply? Yes\_\_\_\_\_ No\_\_\_\_\_

12.6 FENDER FLARES: The rear fender flares shall be stainless steel. The fender flares shall be through bolting around the wheel well opening with 1/4"-20 stainless steel pan head bolts coated with an anti-corrosion chemical.

Does your bid comply? Yes\_\_\_\_\_ No\_\_\_\_\_

### 13.0 CABINETRY

Please document any cabinet construction that varies.

13.1 SUBSTRATES: The interior cabinets and components shall be constructed of high quality, domestic grade plywood. The exposed layers shall be hard wood on both sides of the sheet. The layers shall be free of voids between layers. Cabinet interiors shall be made from 3/8" or 1/2" thick, 5-ply plywood determined by the application for each. Bench lids, doors and the primary cabinet fascia shall be made from 3/4" thick, 7-ply plywood.

Does your bid comply? Yes\_\_\_\_\_ No\_\_\_\_\_

13.2 CABINET INTERIOR FINISH: Cabinet interior shall be laminated with white colored, high impact, abrasion resistant laminate. The contact adhesive shall be a high bond contact adhesive, specifically designed to bond plastic laminates to wood. Painted cabinet interiors are not acceptable.

Does your bid comply? Yes\_\_\_\_\_ No\_\_\_\_\_

13.3 FLOOR AND SUBSTRATE: The sub floor of the module shall be 3/4" thick, 7-ply, marine grade plywood. The vinyl floor covering shall be Lonseal Flecks.

Does your bid comply? Yes\_\_\_\_\_ No\_\_\_\_\_

13.4 LAMINATE: A high impact, phenol backed, abrasion resistant laminate shall be used. The laminate shall be .028"-.048" thick determined by the application in which it is to be used. This material as well as all interior components shall meet or exceed F.M.V.S.S. #302 (Burn Rate of Interior Components).

Does your bid comply? Yes\_\_\_\_\_ No\_\_\_\_\_

13.5 CABINET ASSEMBLY: To maximize fastener bite, cabinet substrate parts shall be stapled with pneumatic fired equipment. Staples shall be placed on two-inch intervals along the corner joints. In addition to staples, the entire cabinet assembly must be screwed together with a

minimum #8 screw size and a length not less than 2 times the thickness of the pierced substrate. Screw heads shall be counter-sink type and driven flush. Cabinet fascia shall be CNC cut or drop cut to eliminate the use of cleats or stick built components. The use of stick built components or dowel pin type assembly to create cabinet components will not be acceptable.

Does your bid comply?      Yes\_\_\_\_\_      No\_\_\_\_\_

13.6 CABINET TRIM: All trim throughout the interior conversion shall be anodized aluminum or formed stainless steel. All exposed corners within the patient compartment shall have either padded or rounded corners. Excess adhesive-sealant shall be removed. Intermittent placement of screws is not acceptable due to cleaning difficulty inherent in screw head design.

Does your bid comply?      Yes\_\_\_\_\_      No\_\_\_\_\_

13.7 FIT AND FINISH: Mitered joints throughout the interior conversion shall have a gap-less, hairline fit. **Openings and misalignments at the corners are not acceptable.** Misapplied trim to cover manufacturing mistakes is not acceptable solutions to poor design and/or workmanship. Doors shall be warp free. Sliding polycarbonate door assemblies shall be scratch free and all edges shall be smooth and free of saw marks and sharp edges. Cabinet to cabinet joints shall not require more than 7/32" diameter welting to create a finished/well-fit look. Cabinets shall fit tightly against the ceiling without the use of vinyl covered trim pieces to cover the seam between cabinets and ceiling.

Does your bid comply?      Yes\_\_\_\_\_      No\_\_\_\_\_

13.8 FUNCTION: Doors shall fit the opening. Flush fitting doors shall have even door to opening spacing around the perimeter. All doors shall open and close bind-free. All hinged wood-core doors shall have positive latches.

Does your bid comply?      Yes\_\_\_\_\_      No\_\_\_\_\_

13.9 SLIDING POLYCARBONATE DOORS: Polycarbonate shall hereinafter be identified as "Lexan". All interior cabinets requiring the sliding, transparent Lexan door assembly shall have a mitered, anodized aluminum frame. The Lexan shall be a minimum of 3/16 inch thick.

Each door shall be fitted with a full height, extruded aluminum door handle. The door pull extrusion shall also stiffen the ends of the doors. The door track/frame extrusion shall incorporate a flocked natural rubber track insert to prevent the doors from sliding free during transit. All extrusions shall be anodized.

Does your bid comply?      Yes\_\_\_\_\_      No\_\_\_\_\_

13.9 HINGED ACRYLIC DOORS: All interior cabinets requiring a hinged, transparent Acrylic door assembly shall have a 1/2" smoked acrylic door installed.

Does your bid comply?      Yes\_\_\_\_\_      No\_\_\_\_\_

## 14.0 CABINET CONFIGURATION

14.1 STREET SIDE: As required by this purchaser, a CPR seat shall be provided on the street side cabinet wall. The cabinets shall be easily accessible over the primary cot.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

14.2 CURB SIDE: A two position squad bench shall be installed. Two sets of EVS V-4 four point belts shall be supplied. The belts shall restrain two seated occupants or one secondary patient, on a back board. All seat belts and anchorages shall comply with F.M.V.S.S. 209 and 210. A padded back and head rest shall be supplied for all seated personnel along the squad bench. Squad bench lid shall utilize gas struts as support when opened and shall have a positive paddle latch to hold the lid in the closed position. A commercially available, cargo net style man catcher shall be installed at forward end of squad bench.

There shall be two cabinet mounted on the wall above the squad bench. These cabinets shall be approximately 8.25"H x 30"L x 7"D. The cabinets shall be mounted end to end and shall include a hinged ½" acrylic door with flip latch mounted on each section.

Located in the forward section of the squad bench shall be a separate locking door with a drop in area for sharps and trash containers. Access to these containers shall be through a flip up Lexan lid – red in color and marked with the "BIOHAZARD" symbol.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

14.3 REAR OVERHEAD CABINET: A cabinet will be installed over the rear doors to provide additional storage the cabinet will have Lexan sliding doors and be configured as shown in the attached CAD drawings. The cabinet shall be approximately 6.25"H x 43.25"L x 7.5"D.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

14.4 RIGHT FRONT CABINET: The right front cabinet is hereinafter known as "ALS Cabinet". The ALS cabinet shall be finished in color keyed laminate. The cabinet shall extend from the ceiling to the floor and shall be separated into three sections. The upper section shall approximately 20"H x 25.5"W x 22.5"D. It shall have two solid ¾" wood doors with Southco chrome flip latches to secure the doors. The center section shall be approximately 27.25"H x 25"W x 22.5"D and shall be open storage with one adjustable shelf. The lower section shall be approximately 14.75"H x 25"W x 22.5"D with a locking lower section secured by a Southco lever latch on a bottom hinged ¾" wood door. All areas in the ALS Cabinet shall be accessible from the exterior of the vehicle which will have a full height locking door.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

14.5 STREETSIDE WALL CABINETRY:

Cabinet "A1" shall be located at the upper rear of the CPR seat. The cabinet shall have sliding Lexan doors and shall include 1 adjustable shelf. Cabinet "A1" shall be approximately 22.25"H x 22"W x 15"D

Cabinet "B1" shall be located aft of the CPR seat and above the monitor shelf aft of the CPR seat. The cabinet shall have sliding Lexan doors and shall include 1 adjustable shelf. Cabinet "B1" shall be approximately 15.25"H x 25.5"W x 15"D



Cabinet "B2" shall be located aft of the CPR seat and below the monitor shelf. The cabinet shall have sliding Lexan doors. Cabinet "B2" shall be approximately 11"H x 25.5"W x 18"D

Cabinet "C" shall be located above the action area for storage of medical tubing, air ways, and ventilation face masks. This cabinet will hereinafter be described as the "Action Area Overhead cabinet". The Action Area Overhead cabinet shall have the dimensions as shown on the attached CAD drawings. The Action Area Overhead cabinet will include 1 adjustable shelf. Cabinet "C" shall be approximately 17.5"H x 39.75"W x 15"D.

The CPR seat shall be approximately 27"W. The seating area shall be equipped with a hinged lid for access to the storage area below the seat. The seat/lid shall include a 2" cushion approximately 18" x 18" and shall be secured by a TriMark powder coated black, recessed latch. The back wall of the seating area shall include a backrest approximately 24"W x 30"H. An automotive style EVS V-4 harness/belt assembly shall be provided.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

14.6 ACTION AREA COUNTERTOP: The countertop surface shall be a color coordinated laminate. The edge of the action area shall have a lip to prevent items from sliding to the floor. Action areas will be located on both sides of the CPR seat. The action area forward of the CPR seat will hereinafter be called the EMSP Action Area. The action area shelf shall be approximately 43.5"L x 18"D.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

14.7 TECHNICIAN'S SEAT: The Technician's seat shall be steel framed, high back contoured style captain's chair with Type II lap/shoulder belt assembly. The seat shall be color matched to other upholstery within the patient compartment. The seat base shall be a black, powder coated steel box. The Technician's seat shall be fastened with Grade 8 fasteners through the top of the seat base which is secured with Grade 8 fasteners through the floor and through ¾" aluminum mounting plates welded into the floor structure.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

14.8 WALK-THRU CABINETS: Located in the pass-thru area of the module behind the Technician's Seat shall be two additional storage cabinets. These cabinets shall each be designated as general storage. The upper cabinet "D" shall have a keyed locking latch and be approximately 23.5"H x 20.75"W x 17.25"D. The lower cabinet "E" shall be approximately 23.75"H x 20.75"W x 17.25"D. Cabinet "E" shall include the onboard battery charger, the pre-wire for the inverter and the vacuum pump.

The lower cabinet shall be the mounting location for the inverter pre-wire and the electric vacuum pump. The upper cabinet shall be for general storage.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

14.9 WALK-THRU OVERHEAD CABINET: Located above the walk-thru area shall be one cabinet designated for the 12VDC electrical control panels. The cabinet shall be fitted with

hinged ¾" plywood door and Southco chrome flip latches to secure the door. The latch on the cabinet shall be locking.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

14.10 OCCUPANT HEAD CLEARANCE ZONES: All designated occupant seating positions in the vehicle described in the Specification shall be in compliance with AMD Standard 025-Measuring Guidelines: Occupant Head Clearance Zones.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

## 15.0 UPHOLSTERY

15.1 UPHOLSTERY MATERIALS: All padding and upholstered seating shall be covered in vacuum formed vinyl. Sewn, exposed seams in the seat covers and cushions are not acceptable.

The color shall be selected by the purchaser to coordinate with the laminate selected.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

15.2 SEAT / BACKREST CORE MATERIAL: The foam shall meet Federal Specification KKK-A-1822F 3.11.4. All seating and trim materials shall meet or exceed FMVSS 302-Flammability of Interior Materials.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

## 16.0 INTERIOR HARDWARE

16.1 OVERHEAD ASSIST RAIL: This rail shall be naturally accessible to assist working attendants in maintaining their balance. The rail shall meet or exceed Federal Specification KKK-A-1822F and comply with AMD Standard 008- Patient Compartment Grab Rail Static Load Test. The rail shall be approximately 1.25" diameter, stainless steel and 72" long. The rail shall be located over the primary patient.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

16.2 COT RETENTION DEVICE & PRIMARY COT: The main cot retention device shall be a Stryker Power Load System. It is understood that a Power Load system will be included in this bid and installed in the new ambulance at the factory. The installed cot retention device shall be in compliance with AMD Standard 004 and change notice #8 of the most current KKK Federal specification.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

16.3 MEDICAL EQUIPMENT POLE: To facilitate the mounting of miscellaneous medical equipment, i.e. IV-pump, etc., a stainless steel pole approximately 1" diameter shall be installed on the inboard rear corner of the Action Area. The equipment pole shall extend from the horizontal surface of the action area to the ceiling above and be secured top and bottom with circular stanchion feet screwed in place.

Does your bid comply?      Yes\_\_\_\_\_ No\_\_\_\_\_

## 17.0 OXYGEN, VACUUM SYSTEMS

17.1 MAIN OXYGEN SUPPLY: The manufacturer shall provide a certified cylinder mount designed for storage of one (1) M-sized oxygen cylinder. The cylinder and its retention components shall be located in the streetside front exterior compartment as specified in 9.3 of this Specification.

The Oxygen System shall also include a 50 PSI, pre-set Oxygen Regulator.

The retention bracket shall be positioned so that the cylinder's main valve and regulator are visible through a Lexan viewing window in the forward end of the EMSP Action Area.

Does your bid comply?      Yes\_\_\_\_\_ No\_\_\_\_\_

17.2 OXYGEN OUTLETS: The oxygen supply system shall be installed in the patient compartment in compliance with KKK-A-1822E. Unless otherwise specified, the system shall consist of three Ohio style oxygen outlets in raised trim rings. Two outlets shall be located on the action wall and one outlet shall be located on the forward end of the curb side wall above the squad bench. This system shall be set up so a change in outlet style is readily made by just removing the front plate, thereby not compromising integrity of the system with field changes.

Does your bid comply?      Yes\_\_\_\_\_ No\_\_\_\_\_

17.3 OXYGEN HOSES: All oxygen system service hoses, fittings and devices shall be made of non-ferrous materials. Hoses used to pipe Medical Oxygen shall be ¼" inside diameter with an abrasion resistant, green colored, electrically conductive outer jacket. All hoses shall withstand a system test pressure of 200 PSI test as prescribed in Federal Specification KKK-A-1822F 4.4.1 and AMD Standard 015- Ambulance Main Oxygen System Test. Each ambulance shall be tested. "Type Testing/Certification" is not acceptable.

Does your bid comply?      Yes\_\_\_\_\_ No\_\_\_\_\_

17.4 VACUUM (SUCTION) SYSTEM: A 12-Volt DC electric vacuum pump shall be installed in the lower walk-thru cabinet forward of the Technician's Seat. The pump shall meet performance guidelines set forth by Federal Specification KKK-A-1822F 3.12.2 and AMD Standard 021- Aspirator System Test, Primary Patient. A variable vacuum regulator and gauge panel shall be installed in the action area control panel. The vacuum regulator shall control the vacuum pressure delivered to a Rico RS-4X collection system with a disposable collection canister. The Vacuum gauge shall not be mounted on the collection canister but on the Action Area wall and be hard-plumbed to the electric vacuum pump. Each ambulance shall be tested. "Type Testing/Certification: is not acceptable.

Does your bid comply?      Yes\_\_\_\_\_ No\_\_\_\_\_

## 18.0 ELECTRICAL SYSTEM – 12-Volt Direct Current

The 12 VDC Electrical system installed in this vehicle must comply with AMD Standard 005-12-Volt DC Electrical System Test. This electrical System shall be covered under the manufacturer's Warranty for a minimum of 72 months (6 yrs) or 72,000 miles which ever shall occur first.

18.1 BODY GROUNDING: A minimum of (2) two 1" wide braided ground straps shall be bolted through the chassis frame and the floor structure of the modular body. The bolts shall be 3/8" diameter. A flat washer shall be provided under the head of the bolt, over the strap lug and an internal tooth lock washer shall be installed under the lug to preclude loosening. Chassis frames with asphalt/wax coating or E-coating shall have grounding sites prepared by lightly grinding or sanding the coating away to reveal raw metal.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

18.2 GENERAL GROUNDS: To comply with federal specification KKK-A-1822F 3.7.12 plus enhance ground quality and reduce trouble shooting time, all devices wired within the ambulance conversion shall be centrally grounded on a ground bar located in the Electrical Cabinet. The ground bar is grounded to the chassis frame by a 2/0 AWG cable and attached in the same manner as the braided body ground cables. Each device shall have a separate ground wire routed to a central buss bar then grounded via fine strand cable to the module body.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

18.3 12 VOLT WIRE: All wires within the ambulance harnesses shall meet Federal Specification KKK-A-1822F 3.7.2 and 3.7.2.1. All wire insulation shall be GXL cross-linked polyethylene.

Permanent wire identification and wire function shall be stamped on 4" centers along the full length of the wire. Wire conductors shall be stranded copper. Single strand copper conductors are not acceptable due to vibration concerns and stiffness which promotes loosening of the terminals.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

18.4 WIRE PROTECTION: All wire within the conversion shall be protected and run in split convoluted loom with a melting temperature of 300 degrees Fahrenheit. All wire harnesses shall be clamped and routed to eliminate possibility of damage due to cut/chaffed wire. Grommets made of rubber or plastic shall be used where harnesses pass through metal or wood. Large holes and irregular shaped wire passages shall use automotive edge trim to protect the wire conduit/loom. Wire harnesses shall be neatly clamped into protective routing areas away from heat sources, unfriendly edges or moving devices.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

18.5 CIRCUIT BREAKERS: All conversion 12VDC circuits shall be protected by non-proprietary, manual reset, circuit breakers. The trip value for the breaker shall not exceed 80% of

the amperage rating of the weakest component in the circuit. Branch circuit wire sizes shall be rated 125% of the expected load per KKK-A-1822F 3.7.2.1.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

18.6 12 VOLT DC OUTLETS: Two 12 Volt DC, 20 Ampere, cigarette style outlets shall be supplied; one (1) in the action area and one (1) in the ALS compartment. Each outlet shall be separately protected and shall be electrically isolated from other electrical functions on the vehicle. The outlets shall be wired per Federal Specification KKK-A-1822F 3.7.7.3.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

## 19.0 ELECTRICAL SYSTEM- 125 VOLT Alternating Current

19.1 The 125 VAC Electrical System described in this Specification shall comply with AMD Standard 009- 125-Volt AC Electrical Systems Test. This electrical System shall be covered under the manufacturer's Warranty for a minimum of 72 months (6 yrs) or 72,000 miles which ever shall occur first.

19.2 PRIMARY SHORELINE INLET: The 110V electrical system shall be furnished with a 110VAC 20 amp straight blade shore power inlet incorporating a male plug and shall be located on the street side of the module aft of the #1 compartment and above the #2 compartment. Inlet must be an auto-eject type inlet that ejects shoreline when starter is engaged. The inlet shall have a spring-loaded, weather proof cover. The circuit shall be ground fault and circuit breaker protected incorporating a manual reset switch control (GFI) with a UL approved QO type single phase load center located behind the driver seat in the cab. All 125VAC wiring shall be 12 gauge. All 125 volt AC wiring connections shall be made in UL approved junction boxes. A battery charger pigtail with female plug will be routed to the battery charger prewire area.

A permanent, aluminized vinyl label, stating voltage and amperage shall be located above the inlet in compliance with KKK-A-1822F 3.7.8, 3.7.8.1.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

19.3 INVERTER: A 1050 W Vanner inverter with 55 amp battery charger shall be installed in the vehicle. The wiring for the inverter shall include a wired connection to the shoreline inlet and output wiring to all 125 Volt AC outlets provided in the vehicle. There shall be a single on/off switch located on the rear action panel. This pre-wiring shall be in accordance to KKK-A-1822F 3.7.8.3 and Section 250-6 (Portable and Vehicle Mounted Generators) of the National Electrical Code (NEC).

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

19.4 125 OUTLET No.1: A 125 Volt, Hospital grade, Straight blade outlet shall be provided on the wall of the main Action Area. The outlet must be grounded and protected by a G.F.I. (Ground Fault Interrupter) Breaker. The outlet must illuminate a green indicator light when power is applied to the outlet.

Does your bid comply?      Yes \_\_\_\_\_ No \_\_\_\_\_

19.5 125 OUTLET No.2: A 125 Volt, Hospital grade, Straight blade outlet shall be provided on the wall of cardiac monitor shelf, aft of CPR seat. The outlet must be grounded and protected by a G.F.I. (Ground Fault Interrupter) Breaker. The outlet must illuminate a green indicator light when power is applied to the outlet.

Does your bid comply?      Yes \_\_\_\_\_ No \_\_\_\_\_

19.6 125 OUTLET No. 3: A 125 Volt, Hospital grade, Straight blade outlet shall be provided in the ALS cabinet. The outlet shall be grounded and protected by a G.F.I. (Ground Fault Interrupter) Breaker. The outlet must illuminate a green indicator light when power is applied to the outlet.

Does your bid comply?      Yes \_\_\_\_\_ No \_\_\_\_\_

## 20.0 ENVIRONMENTAL

20.1 REAR AIR CONDITIONING: The design of the environmental system is to provide optimal air flow and distribution of conditioned air to the module interior. Conditioned air shall be discharged from one vent area and shall be distributed through five vents evenly spaced across the face of the upper section of the ALS cabinet. The module shall have an additional, self-contained A/C evaporator unit complete with dual blower, motor driven, high output fans. The fans shall be three speeds and shall contain a 720 CFM fan. The A/C unit shall also incorporate a hot water heater core for heat. All heater hoses shall be 3/4 inch QVM approved Nomex for improved circulation. Hot water flow shall be controlled by one (1) vacuum actuated inline water valves. All A/C fittings shall be ferruled, banded, or snap ring type. Clamps will not be acceptable.

The valves shall operate with the heater/defrost controls. The unit shall be rated at least 32,000 British Thermal Units (BTU) in A/C Mode and 36,000 BTU in Heater Mode. The Vehicle A/C – Heater system must meet or exceed federal specification KKK-A-1822F 3.13.1 thru 3.13.3 and must be compliant with AMD Standards 011- Equipment Temperature Test, 012- Interior Climate Control Test.

Does your bid comply?      Yes \_\_\_\_\_ No \_\_\_\_\_

20.2 REAR AC CONTROLS: An ON/OFF switch shall be located in the action area. The aforementioned switch will not control fan speed, but indicate the selection of Heat/Off/Cool. A separate three-speed fan speed control switch shall be located in the action area control panel. Temperature settings shall be controlled by a simple rheostat controlled thermostat mounted on the Action Area switch panel.

Does your bid comply?      Yes \_\_\_\_\_ No \_\_\_\_\_

## 20.3 HVAC SYSTEM INSTALLATION & WARRANTY:

The auxiliary heating and air conditioning system shall be installed in the ambulance at the ambulance manufacturer's facilities by technicians employed by the manufacturer of the HVAC equipment. Said technicians shall document the installation on forms provided by the HVAC manufacturer and on forms required by the ambulance manufacturer. Warranty on the installation of, and the equipment content and performance of the equipment, shall be the sole responsibility of the HVAC manufacturer.

Does your bid comply?      Yes \_\_\_\_\_ No \_\_\_\_\_

## 21.0 CONSOLES, SWITCH PANELS

21.1 CAB CONSOLE: The ambulance conversion control console shall be ergonomically designed, ABS plastic and molded to the contours of the engine cover. Sharp and other unfriendly edges shall be rounded. The body of the console shall be color keyed to the O.E.M. interior color. The console shall be easily removed from the engine cover to minimize engine repair time. The console shall include an electronic siren and a contoured switch panel.

The siren control head and contoured switch panel shall be within easy reach of the passenger and driver.

Does your bid comply?      Yes \_\_\_\_\_ No \_\_\_\_\_

21.2 CUP HOLDERS: Two (2) large sized cup holders will be provided at the base of the cab console.

Does your bid comply?      Yes \_\_\_\_\_ No \_\_\_\_\_

21.3 SWITCH PANEL, CAB CONSOLE: A switch panel made from a thick, composite/acrylic sheet shall be installed on the forward end of the floor console. All switches and controls shall have back lighted legends indication function and status. The Switch Panel shall have the following minimum controls and indicators:

- |                                       |                            |
|---------------------------------------|----------------------------|
| 1. Compartment Open indicator         | 8. Rear Flood Switch       |
| 2. Battery On indicator               | 9. Right Flood Switch      |
| 3. Door Open indicator                | 10. Back-Up Alarm Switch   |
| 4. MASTER Emergency Switch, red bezel | 11. Spare                  |
| 5. Primary Secondary Mode Switch      | 12. Digital Volt/Amp Meter |
| 6. Siren/Horn/Air Horn Switch         |                            |
| 7. Left Flood Switch                  |                            |

Does your bid comply?      Yes \_\_\_\_\_ No \_\_\_\_\_

21.3A SWITCH PANEL, ACTION AREA: A switch panel made from a thick, composite/acrylic sheet shall be installed on the outboard wall of the Action Area. All switches and controls shall have back lighted legends indication function and status. The Switch Panel shall have the following minimum controls and indicators:

- |                                      |                             |
|--------------------------------------|-----------------------------|
| 1. Dome Lights, Cot Switch (Hi/Lo)   | 6. AC/Heat Selector Switch  |
| 2. Dome Lights, Bench Switch (Hi/Lo) | 7. AC/Heat Fan Speed Switch |
| 3. Vacuum System Switch, red bezel   | 8. Digital Clock            |

- 4. Exhaust Vent Switch
- 5. Inverter

- 9. Spare Switch
- 10. Thermostat

Does your bid comply?      Yes\_\_\_\_\_      No\_\_\_\_\_

21.4 BACK UP CAMERA: A Zone Defense rear back up camera shall be installed on the rear wall of the ambulance. The monitor shall be integrated into the rearview mirror. The monitor shall activate automatically whenever the vehicle is placed in reverse.

Does your bid comply?      Yes\_\_\_\_\_      No\_\_\_\_\_

## 22.0 VISUAL CONSPICUITY - EXTERIOR LIGHTING

22.1 WARNING LIGHTS: The warning light system shall meet or exceed KKK-A-1822F as demonstrated with the documentation provided by the lighting manufacturer. Unless otherwise specified, the warning lights shall be configured like, and flash in compliance with, KKK-A-1822F 3.8.2.1, and Table 1.

22.2 DUAL MODE FLASHER: A dual mode Primary/Secondary flasher shall be provided for the vehicle emergency warning light system as required in KKK-A-1822F. Lights shall be configured as depicted in attached pictures and as described below:

(Front) The front wall shall be configured with seven Whelen 9" x 7" Series LED-flashing lights mounted on the front of the body. The configuration of the LED warning lights on the front of the module shall be R/CR Split / R / C/ R /CR Split / R. All lenses shall be clear. These lights shall be wired to flash in primary/secondary modes as required. There shall be two Whelen LINZ6R Red LED flashers mounted on the center chrome cross member of the O.E.M. grill. These two LEDs shall be wired to the primary mode only.

Does your bid comply?      Yes\_\_\_\_\_      No\_\_\_\_\_

(Sides) There shall be four Whelen 9" x 7" LED flashers mounted two on each side at the upper outboard corners. There shall be two Whelen 7" x 3" Red LED flashers mounted one (1) on each front fender as intersection warning lights. These lights shall be wired to the primary mode only. There shall be two Whelen 7" x 3" Red LED flashers mounted one (1) over each rear wheel well. These lights shall be wired to the primary mode only.

Does your bid comply?      Yes\_\_\_\_\_      No\_\_\_\_\_

(Rear) There shall be five Whelen 9" x 7" LED flashers mounted on the rear. They shall be two red in the upper outboard corners, two red at rear window level to show through window of open doors and one amber centered over the rear doors. The two red flashers located at the rear window level shall be wired to the brake override circuit.

Does your bid comply?      Yes\_\_\_\_\_      No\_\_\_\_\_



22.3 TAIL LIGHTS: Tail light configuration shall be 7" x 3" LED Tail/Brake, Turn Signals and Back-up Lights installed w/chromed bezels. These lights shall be stacked vertically above the diamond plate rear kick plate in the order presented above.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

22.4 I.C.C. LIGHTS: LED Clearance lights shall be provided per FMVSS and D.O.T. Standards. The lights shall indicate the height and width of the vehicle and define the vehicle centerline. These lights will be mounted on the uppermost margins of the front and rear body in armored housings. To avoid breaking paint, the lights shall be ¾" round LED lights mounted in rubber grommets. There shall be five (5) amber lights forward facing and five (5) red lights rear facing. Lighting fixtures that are surface mounted requiring screws to penetrate the painted surface of the body are unacceptable.

The vehicle shall include side directional marker and turn indicator lights mounted on the outside rear area of the module. These lights shall be wired to the turn signals and to the emergency hazard warning circuits. There will be on amber turn and one red side body marker light. They will be ¾" round LED lights mounted in rubber grommets matching the front and rear ICC clearance lights.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

22.5 LICENSE PLATE LIGHT: The license plate holder shall be equipped with LED lighting to provide illumination to the license plate with the chassis park light circuit on.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

22.6 SCENE LIGHTS: Two Whelen 900 series scene lights shall be provided on each side of the module. The lights shall be 9" x 7" w/8-32-degree downward illumination. The curbside lights shall come on when the curbside entry door is opened.

Streetside and curbside scene lights may be turned ON/OFF with (2) two separate, right and left scene rocker switches on the cab console Switch Panel. There shall be a momentary disconnect switch located on wall near entry door for disabling scene lights.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

22.7 LOAD LIGHTS: Two Whelen 900 series load lights shall illuminate the rear of the module. The lights shall be 9" x 7" w/ 8-32-degree downward illumination. Both rear lights shall come on with the opening of the leading rear access door. These rear load lights will also activate when the vehicle transmission is placed in reverse or when the rear load switch in the cab console Switch Panel is activated. There shall be a momentary disconnect switch located on curb side wall near entry door for disabling load lights.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

22.8 PERIMETER LIGHTING CERTIFICATION: To assure that the exterior work lighting is adequate to perform EMS functions in a variety of settings which may require exterior

illumination, the Scene and Load lights installed on this vehicle shall comply with AMD Standard 024- Perimeter Illumination Test.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

22.9 SPOT LIGHT: A hand held 400,000 candle power, blue-eye spot light shall be provided in the cab. A chromed hook with spring retainer shall be included to stow the light.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

22.10 COMPARTMENT LIGHTING: (1) one light shall be mounted in each compartment. The lights shall be surface mount or recessed and shall be LED. Each light shall not draw more than 2.1 amperes at 12 volts. The light in the back board compartment shall be recessed in the compartment ceiling.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

## 23.0 AUDIBLE CONSPICUITY

23.1 ELECTRONIC SIREN: The ambulance shall be equipped with an ignition powered 200 watt siren mounted in the engine cover console.

There shall be a set of (2) polished cast aluminum 100 watt speakers mounted through the front bumper. The siren speakers shall not block air-flow into the grille per the OEM chassis manufacturer's guidelines. The siren and speakers shall meet or exceed KKK-A-1822F 3.14.4 and be compliant with AMD Standard 023- Siren Performance Test and AMD Standard 006- Patient Compartment Sound Level Test.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

23.2 BACK UP ALARM: The apparatus shall include a minimum 97 decibel back up alarm device. The alarm shall be automatically activated by shifting the vehicle transmission into reverse. The backup alarm shall include a rocker type cut-off switch located in the cab console Switch Panel. The alarm device shall be provided as required in KKK-A-1822F 3.15.2 and shall be compliant with SAE Standard J994.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

23.3 AIR HORNS: Duel Buell Air Horns shall be installed through the bumper of the ambulance. The left side trumpet shall be 12" and the right side trumpet shall be 10". The compressor tank for the air horns shall be housed in the exterior street side #2 compartment. A three position switch shall be installed in the front console allowing the air horns to be activated through the horn ring.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

## 24.0 INTERIOR LIGHTING

24.1 ACTION AREA LIGHTING: A 12-volt LED light shall be provided directly over the forward, street side work surface. A near flush, 18 inch type fixture shall be provided. The light shall have an on-off rocker switch on the body of the light housing.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

24.2 STEPWELL ILLUMINATION: A 12 VDC LED light shall illuminate the curbside stepwell per Federal Specification KKK-A-1822F 3.10.12.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

24.3 PATIENT COMPARTMENT DOME LIGHTS: The patient compartment shall have a minimum of eight 8" Whelen 18 diode LED dome lights in the ceiling. The lights shall be arranged in two longitudinal rows of (4) lights each. The streetside row shall provide light directly over the patient; the curbside row shall provide light directly over the aisle and squad bench. The four curbside lights shall be activated when the side or rear module entrance doors are opened on a five minute timer circuit. The dome lights and configuration shall meet KKK-A-1822F 3.8.4, 3.8.4.1 and be compliant with AMD Standard 016- Patient Compartment Lighting Level Test.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

24.4 CHECK-OUT TIMER: A 5 minute check-out timer shall activate by opening the rear or side entry door when the battery switch is off. The curbside bank of dome lights shall turn on in the "high" mode. Following the first 5-minute cycle the lights will deactivate. The cycle can be reactivated by closing, then re-opening the side or rear entry door.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

## 25.0 COMMUNICATIONS EQUIPMENT

25.1 COMMUNICATIONS RADIO ANTENNA PRE-COAX: The vehicle shall be equipped with two (2) RG58-U coaxial cables with termination location to be determined by the purchaser. A 12VDC power and ground lead shall also be provide for each coaxial cable. There shall be an 18" service loop at the starting point and a 36" termination loop. The radio power wires shall originate in the power distribution area and will be labeled appropriately for future installation by a radio technician.

Does your bid comply? Yes \_\_\_\_\_ No \_\_\_\_\_

## 26.0 PAINT, LETTERING, DECALS, MISCELLANEOUS

26.1 The primer, paint and paint finishing materials utilized by the manufacturer shall be components of the PPG "Delfleet" Paint System. In order to ensure system process integrity and full warranty coverage, the entire body process from body preparation to final sand, buff and glaze shall be a process that is designed and approved by PPG for the manufacturer.

All surface body welds and imperfections shall be ground flush and body filled as needed to provide a smooth even surface that facilitates a flat smooth paint finish.

The entire exterior surface of the module shall be sanded with a minimum 150 grit sand paper and then washed to provide a clean, unblemished surface prior to the chemical wash process.

The entire exterior surface of the module shall be washed with a cleaner/degreaser to remove any metal, oil or contaminant residue prior to the application of the seam seal process.

All seams shall be caulked with a high quality seam sealer and then allowed to completely cure to provide a stable application environment for the primer and final paint processes.

The entire exterior surface of the module shall be coated with a primary coat of PPG "Delfleet" etch-coat primer, flash dried and then coated with a high performance PPG "Delfleet" primer sealer and baked to dry. The primer sealer coat shall be sanded to a flat smooth finish to eliminate all nibs and imperfections, inspected and etch primer/sealer applied where necessary and washed with a cleaner/degreaser to provide a clean, smooth surface prior to the application of the base coat application.

The entire exterior surface of the module shall be coated with an application of PPG "Delfleet" color mixed base coat. The base coat will be baked to dry and inspected for imperfections.

The entire exterior surface of the module shall be coated with an application of a PPG - "Delfleet" clear coat finish that will provide an enhanced gloss, durable finish. The clear coat finish shall be baked per PPG "Delfleet" process instructions prior to the finished surface process application.

The manufacturer shall monitor the entire application process with mil-thickness measurements at numerous random locations across the body to insure that the total paint thickness including the primer/sealer, base coat and clear coat shall be a minimum of 5 mils dry build, without runs or sags, after the unit has gone through the sand and buff process.

The entire exterior surface of the module shall be painted to match the customer's specified color requirements. Unless otherwise specified by the customer, the standard application process will insure that the module, module roof and cab are all painted the same color.

All of the module entry and compartment doors shall be removed prior to painting and be painted separately and identically to the module process to insure complete coverage and electrolysis protection between the stainless steel hinge and the aluminum door and frame surfaces.

All light holes, the license plate bracket hole, gas filler bracket hole, all door window and handle holes and exhaust fan and any other option required mounting holes shall be cut in the module prior to beginning the PPG "Delfleet" paint process. Intersection light holes shall be cut in the chassis fenders and cut out must be coated with a corrosion resistant material to comply with Ford QVM requirements to prevent oxidation and rusting of the OEM metal surface. NO EXCEPTIONS

The successful bidder will be required to paint match the customer's existing units. The manufacturer shall match paint, striping, lettering and decals.

The standard modular ambulance paint finish shall be produced by the application of a certified PPG Delfleet System paint process. The standard process shall produce a white finish to match the standard OEM chassis white. The finished paint process shall provide a single color, solid surface paint application.

Does your bid comply?      Yes\_\_\_\_\_      No\_\_\_\_\_

### 26.3 PAINT AND SCOTCHLITE DESIGN

The standard ambulance body shall be painted PPG "Delfleet" white to match the OEM chassis color.

The successful bidder will be required to apply graphics to match the customer's existing units.

Does your bid comply?      Yes\_\_\_\_\_      No\_\_\_\_\_

26.3 LETTERING & DECALS: Federal Specification KKK-A-1822F "Star-of-Life" and "Ambulance" lettering shall be provided and installed, including the roof mounted Star-of-Life decal, roof mounted unit number, 6" Orange and White reflective chevrons shall cover the rear of the ambulance.

The following labels shall be provided as standard.

'Shore Inlet 110VAC 60 HZ'

'110VAC Outlet'

'12VDC Outlet'

'Gasoline Only'

'No Smoking/Oxygen Equipped'

(2) 'Fasten Seat Belt' signs provided: (1) located in the cab and (1) in the module.

Does your bid comply?      Yes\_\_\_\_\_      No\_\_\_\_\_

26.4 FIRE EXTINGUISHERS: In compliance with the Federal Specification KKK-A-1822F, there shall be two (2) 5lb. ABC rated fire extinguishers with mounting brackets. These extinguishers shall be shipped loose with the completed ambulance for installation by this agency.

## 27 REFERENCES AND STANDARDS

### 27.1 MANUALS

An Ambulance Manufacturer's Owner's Manual, along with the OEM chassis manufacturers supplied items shall be provided with each vehicle. The information should consist of the following items:

1. Chassis Warranty Card & Owner's Information
2. Chassis Maintenance and Operating Tips
3. Extra Set of Keys
4. Module Warranty
5. Conversion Warranty
6. Electrical Warranty
7. Paint Warranty

8. Care and Maintenance Instruction
9. Heater/AC Information & Warranty
10. OEM Chassis Manual
11. Schematics for Standard Systems:
  - Charging System
  - Power Distribution
  - Front Switch Panel
  - Rear Switch Panel
  - Climate Control System
  - OEM Drawings
  - Wire Harness list
  - Circuit Diagrams for all Systems
12. Conversion Component Information
13. Operations Manual
14. Warranty and Parts List - Siren, Etc.

Does your bid comply?      Yes \_\_\_\_\_      No \_\_\_\_\_

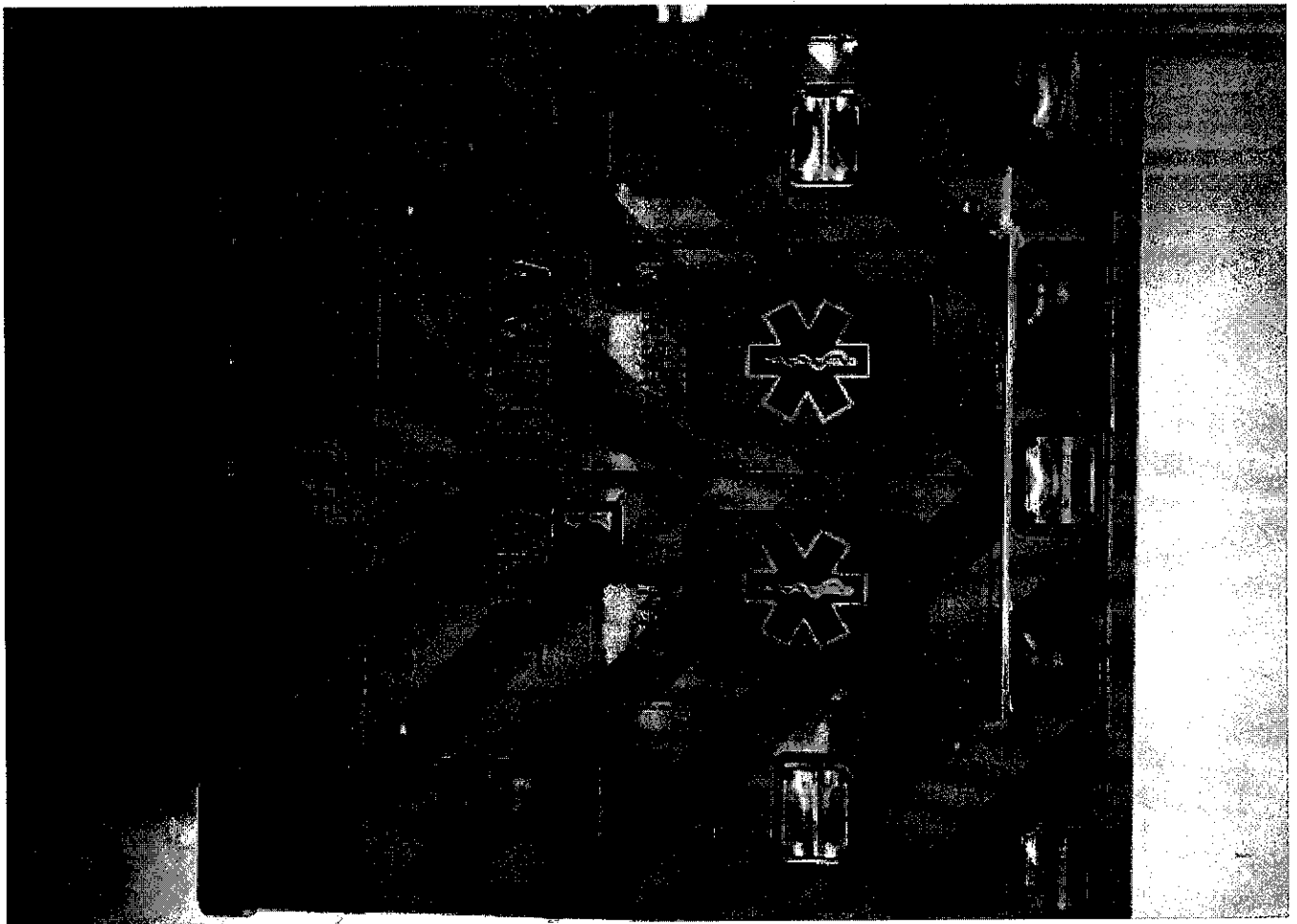
## 27.2 VEHICLE DRAWINGS

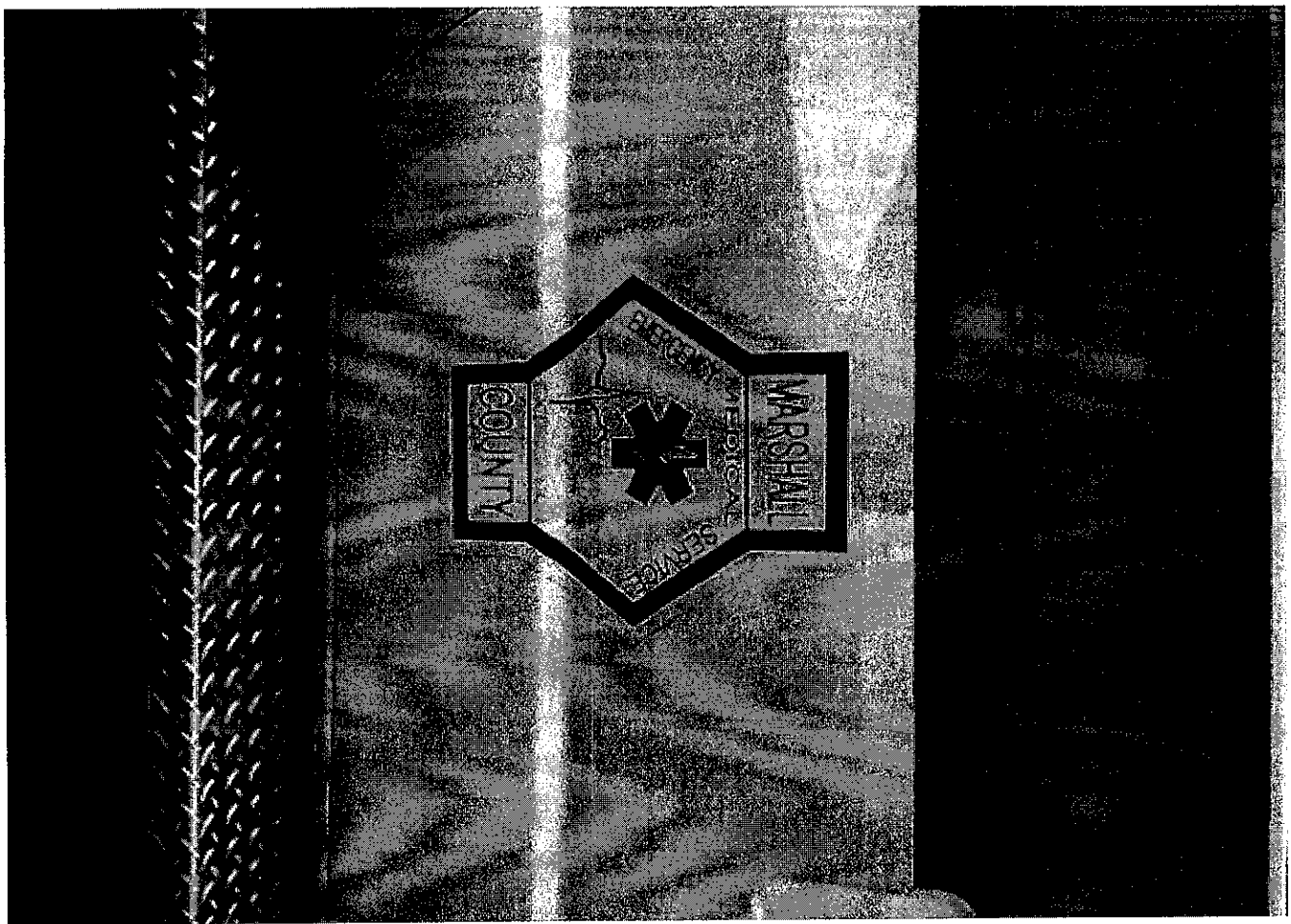
The following drawing views shall be provided with bid

1. Street side Exterior Detail
2. Curbside Exterior Detail
3. Front & Rear Exterior Detail
4. Street side Interior Detail
5. Curbside Interior Detail
6. Front & Rear Interior Detail
7. Overhead Floor Detail
8. Overhead Ceiling Detail

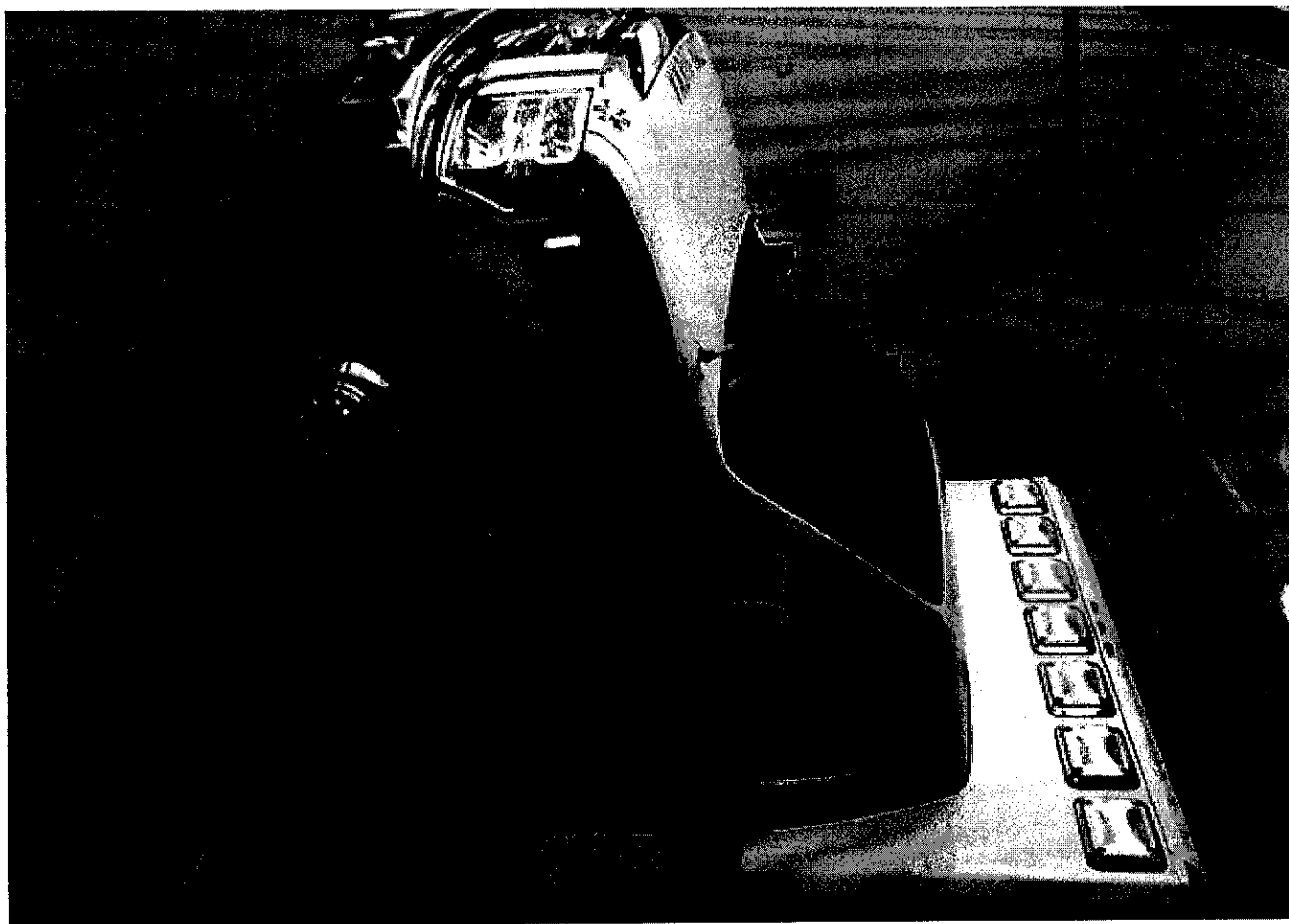
Does your bid comply?      Yes \_\_\_\_\_      No \_\_\_\_\_

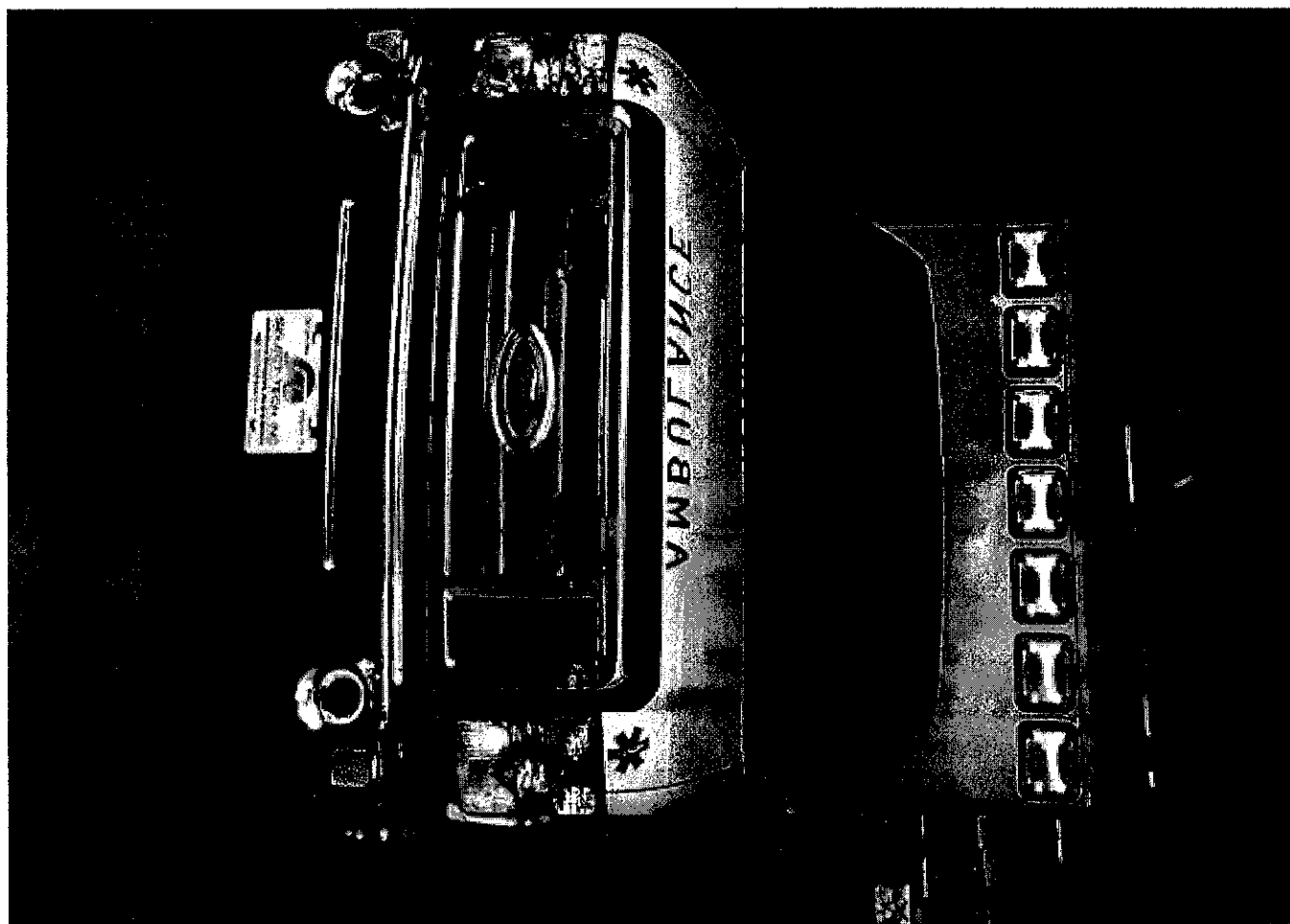
The intent of Marshall County EMS is to provide ambulance manufacturers with our minimum or preferred specifications. Minor deviance in measurements, brands or manufacturing processes are acceptable but should be documented in the bid.

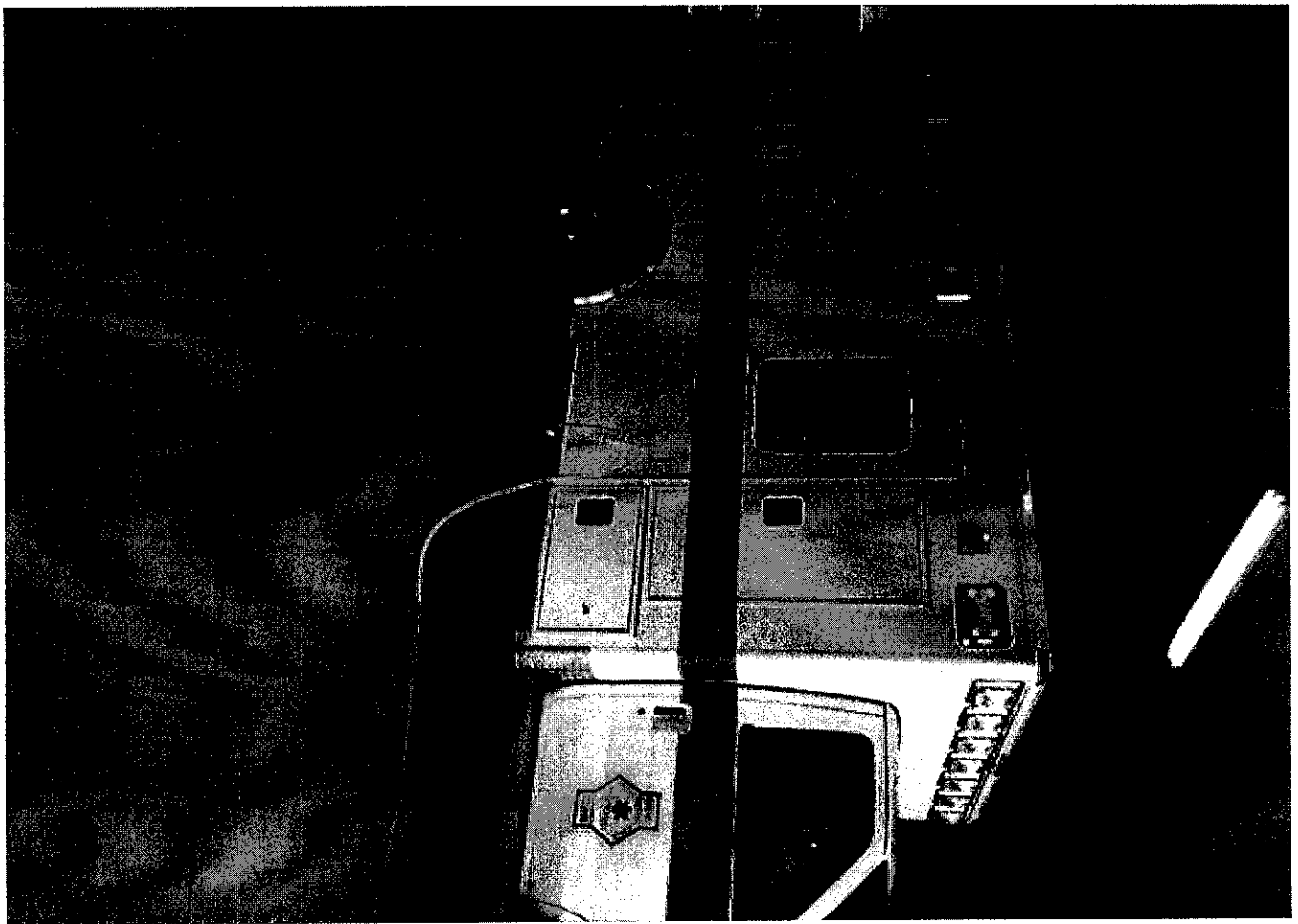




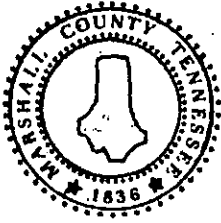












**Marshall County Government**  
**Bid Form**

**Item: New Emergency Medical Vehicle – Type  
III, Gasoline, 160” x 94” Module**  
**Department: Ambulance Service**

Thursday, August 25, 2016

3:00 PM Local Prevailing Time

**1. The undersigned BIDDER proposes and agrees, if this bid is accepted and successful, to enter into an agreement with Marshall County, Tennessee to perform and/or furnish the goods and/or services at the prices indicated below in accordance with the terms and conditions detailed in the Invitation to Bid.**

**2. This bid is genuine and not made in the interest or on behalf of any undisclosed person, firm, or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; BIDDER has not directly or indirectly induced or solicited any other bidder to submit a false or sham bid; BIDDER has not solicited or induced any person, firm or corporation to refrain from bidding; and BIDDER has not sought by collusion to obtain for itself any advantage over any other bidder or over Marshall County, Tennessee.**

**3. Title VI of the Civil Rights Act of 1964.** All interested parties, without regard to race, color or national origin, shall be afforded the opportunity to bid and shall receive equal consideration. Please assist us with our compliance efforts by completing the optional statistical information requested below.

Item	Item Price	Comments (if any)
New Emergency Medical Vehicle – Type III, Gasoline, 160” x 94” Module		
Delivery Cost		
Est. Delivery Date		
Warranty		

Company Name \_\_\_\_\_

Phone \_\_\_\_\_

Address \_\_\_\_\_

Fax \_\_\_\_\_

Authorized Signature \_\_\_\_\_

Title \_\_\_\_\_

Printed Name \_\_\_\_\_

Submitted On \_\_\_\_\_

**Optional Title VI Information for Bidder:**

<b>Sex:</b>	Male _____	Female _____	Other _____
<b>Race:</b>	White Non-Hispanic _____	Hispanic _____	Black Non-Hispanic _____
	Asian _____	American Indian _____	Other _____