



Town of Windham

Fire – Rescue Department

375 Gray Rd
Windham, ME 04062
Business 207-892-1911
Fax 207-892-0544

Request for Proposal

November 3, 2020

2021 Type III Ambulance

The Town of Windham Fire-Rescue Department is seeking a formal bid to purchase one (1) new Type III Ambulances for the intent of treating and transporting patients at the paramedic level.

The specification is attached and is also available on the Town's website (www.windhammaine.us) or by contacting Chief Brent Libby at 207-892-1911 or bjlibby@windhammaine.us

Any specification variations or exceptions must be explained and should be greater or equivalent than specified.

Bidders must submit a proposal, in writing, to the address below in a sealed envelope. It must be addressed as follows:

Attention: *Town of Windham, Purchasing Agent*
2021 Ambulance
8 School Road
Windham, Maine 04062

Proposals must be received no later than 9:00 am, on **Tuesday December 1, 2020**. Faxed and/or emailed proposals are not acceptable. All received bids will be opened publicly at 9 am the same day.

A Bidders failure to submit its proposal prior to the deadline will cause the proposal to be disqualified. Late proposals or amendments will not be opened or accepted for evaluation.

The Town of Windham reserves the right to accept or reject any and all bids and to make the award in the town's best interest.

Sincerely,

Brent J. Libby
Fire-Rescue Chief
bjlibby@windhammaine.us

WINDHAM FIRE DEPARTMENT

TYPE III AMBULANCE SPECIFICATIONS

CHASSIS

CHASSIS SPECIFICATIONS

Ford E-450 Super Duty
Cutaway 158" WB

SELECTED VEHICLE COLORS

93G Interior: Medium Pewter
50U Exterior 1: White

BODY CODE

DRW 47A

ENGINE

V8 7.3 Gas Engine

TRANSMISSION

5 Speed automatic TorqShift Transmission with 0.71 overdrive and selectable Tow/Haul mode

SPARE TIRE

Mounted spare tire shall be included

SEATING ARRANGEMENT

ZX2 SEATING ARRANGEMENT, DRIVER AND FRONT PASSENGER HIGHBACK BUCKET, ADJUSTABLE, includes head restraints

SEAT TYPE

Front bucket seats with cloth trim, with head restraints and in board armrests.

HEATING/AIR CONDITIONING

Standard package

CHROME APPEARANCE PACKAGE

Front chrome bumper and chrome grille with dual composite halogen headlamps.

ADDITIONAL OPTIONS

Power windows, door locks, Tilt-Wheel, inside rearview mirror, Cold Climate Package, Daytime Running lights

WARRANTY

Basic: 3 Years/36,000 Miles

Drivetrain: 5 Years/100,000 Miles

Corrosion: 6 Years/100,000 Miles

FILL FUEL TANK:

The fuel tank shall be filled at the time of vehicle delivery.

EXTERIOR MODULAR BODY

EXTERIOR, ALUMINUM BODY CONSTRUCTION:

The module body shall consist of a welded, unitized aluminum structure throughout.

MATERIAL:

All material used on any frame member, corner and upper cove shall be high strength aluminum alloy. This alloy shall be 6061-T6. The use of lesser materials such as 5052 or 6063 is not allowed due to its lesser mechanical properties.

WELDING:

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

ASSEMBY:

All body construction and assembly will be KKK-A-1822F standards and references.

SIDE IMPACT PROTECTION:

MODULAR BODY PROTECTION

Per Federal Motor Vehicle Safety standards, the vehicle shall be designed to protect the occupants or equipment from side impacts.

ROOF SHEET:

The roof sheet shall be a one piece sheet of .125 5052-H34 aluminum. There shall be no seams in the roof panel or any overlapping seams. The roof sheet shall be fully welded to the roof sub-frame from the inside. The outside perimeter of the roof sheet where it meets the upper cove shall be 100% welded prior to painting. This 100% welding eliminates the need for caulks or sealers and the possibilities of water leaks into the body.

EQUIPMENT MOUNTING LOCATIONS & REINFORCEMENTS:

Areas within the body that have equipment mounted or items bolted shall have additional structural members welded in place.

WHEEL WELL CONSTRUCTION:

The rear wheel well housings shall be designed to OEM manufacturers recommended clearances. The inner well shall be formed to follow the contours of the wheel and be fabricated from .125 aluminum sheet, and extend down to the lower body skirt level. Tolerances shall include clearance for full tire chains. All wheel well housings shall be completely sealed and undercoated prior to mounting the body.

LIFETIME STRUCTURAL WARRANTY

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

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

CAB TO BODY RECESS, 8":

The bulkhead directly behind the driver and passenger seats shall be recessed into the body for a minimum of 8" on driver side and a minimum of 7" on passenger side. This will allow for greater seat recline for drivers seat and provide space for placement of radio transmitters and rain or turnout gear. The recess shall be an integral part of the body construction and formed of aluminum tubing and .090 aluminum sheeting. The outer surface of the wall shall be covered with auto-motive carpet that matches the color of the cab interior. These panels shall not exhibit any sharp edges or corners.

INTERIOR HEADROOM:

The Headroom clearance from the finished floor to the overhead ceiling panel shall be at least **72"**.

EXTERIOR BODY LENGTH:

The exterior length of the modular body shall be at least **170"**.

BODY MOUNTING, TYPE III:

The ambulance body shall be mounted to the chassis utilizing the chassis manufacturer supplied donut mounting system. This system does not require additional welding, drilling or bolting to the frame rail. The body is designed to mount utilizing the position of the Ford provided mounting isolation donuts. Mounting devices shall be twelve (12) high strength bolts six (6) on each side. These bolts shall secure the body to the frame via approved Ford required rubber isolation mounts. Cab and body shall be firmly bolted together as one integral unit. The cab and body shall be bolted with a design that allows the bolts to be unfastened from the cab and the nut side of the fastener will remain intact for remounting of another chassis. No interior cabinets shall need to be removed when doing a remount. THIS MOUNTING SYSTEM MEETS OR EXCEEDS ALL FMVSS REQUIREMENTS AND IS THE ONLY MOUNTING SYSTEM ALLOWED. U-BOLT TYPE MOUNTING SYSTEMS WILL NOT BE CONSIDERED DUE TO THEIR NOISE AND VIBRATION TRANSMISSION INTO THE MODULAR BODY.

LOWERED SIDE SKIRTS:

The right and left side skirts of the body, forward of the rear wheels, shall be lowered 3" for easier access into the side entrance door and the left side forward compartment of the vehicle. An intermediate step shall be provided in the side entrance doorstep well-constructed of aluminum diamond plate with a turtle tile nonskid stepping surface on the intermediate step.

DOOR CONSTRUCTION:

All doors including personnel and compartment doors shall be constructed of a custom designed extrusion made of 6061-T6 aluminum alloy, used in combination with a "Bent Box Pan" exterior door panel. The bent exterior door panel shall be fabricated from .125" 5052-H34 aluminum alloy panels that have the exact properties and quality as the exterior side panels.

DOOR SEALS:

The door shall incorporate a continuous seal permanently attached around the entire perimeter of the door. Automotive latching hardware shall not interrupt the seal surface. The seal shall be a custom designed hollow core seal specifically designed for hinged doors. It shall be a "Dynamic" type seal with vent holes on the outside edge to allow for easier closing of door against seal. Flat open or closed cell solid rubber "Static" seals are not acceptable for hinged doors.

DOOR HINGES:

Each door shall be hung with stainless steel continuous hinges. The hinge shall have a 1/4" pin which is staked every six inches to prevent the pin from sliding. The hinges shall be held to the door and to the body using 1/4-20 stainless steel threaded machine fasteners every, 4" on both sides, use of rivets on hinges is not acceptable. All vehicle hinge bolts shall be installed with the use of LOC-TITE thread lock material. All hinges installed on the body shall include a Dielectric barrier between the dissimilar stainless steel hinge surface and the painted aluminum body. Only dielectric tape specifically designed for this purpose is acceptable. The tape shall have a dielectric barrier of .0035" and have a dielectric strength of 10,000 volt.

EBERHARD COMPARTMENT DOOR HANDLES:

All compartment doors shall incorporate chrome Eberhard door handles. Mounting hardware shall not be exposed to the outside for security reasons. The control of the power door locks shall be from the power door lock switches located on the driver and passenger doors. All handles shall have a key activated override of power locking feature and keyed alike.

PATIENT AREA DOOR OPENINGS:

REAR DOORS:

Two (2) doors shall be provided at the rear of the module body. The overall opening of the access to be a minimum of 60.4" in height x 48.75" in width. Both inside and outside door handles shall be installed on each rear door. Left rear doors that can only be activated from the inside are not acceptable.

SIDE DOOR:

One (1) side door shall be provided on the curb side of the module body. The opening shall have minimum overall dimensions of 80.6" in height x 30" in width. This door shall be mounted as close to the chassis cab as possible.

COMPARTMENT DOOR BUMPERS:

Heavy duty screw on type rubber (Styrene butadiene rubber, SBR) bumpers shall be installed on all compartments that may come in contact with one another.

DOOR SWEEP GASKET:

All modular body entrance doors shall be equipped with a door sweep EPDM rubber gasket. The rubber shall be attached to the top of the door and prevent water from collecting on the top of the door extrusion and dropping on the operator when the door is opened. The gasket/sweep material shall be installed in such a way as to prevent being torn off and increase its sealing potential when hit with a stream of water.

LOC-TITE:

All exterior door hinge bolts, inner door panels on both compartment and entrance door panel, and door latching bolts shall be installed with the use of LOC-TITE thread locking material. (Vehicles that are built without the use of Loc-Tite will be cause for rejection of the vehicle).

EBERHARD POWER LOCKING ENTRANCE DOOR HANDLES:

The right side and right and left rear entrance doors shall incorporate chrome Eberhard door handles two latches per door. There shall be no mounting hardware exposed to the outside. The inside handles on all entrance doors including the left rear door, shall be a matching automotive design, flush paddle release type designed specifically for use with this system. All components used for interior door release mechanisms shall incorporate anti-rattle devices to prevent door hardware noise.

All entrance doors shall incorporate a power locking - unlocking feature. The control of the power door locks shall be from the power door lock switches located on the driver and passenger doors. All handles shall have a key activated override of power locking feature and keyed alike.

GAS SPRING DOOR HOLDERS:

All hinged compartment doors and right side entrance door shall incorporate a pneumatic gas spring door holder.

"L1 & L3" COMPARTMENT TO CHECK PAST 90 DEGREES

The Gas spring door check on compartment "L1& L3" shall be set beyond the standard 90 degree, open default position to allow easier access into this compartment.

REAR ENTRANCE DOOR HOLDER, "GRABBER":

The rear entrance doors shall incorporate a Cast Products, Grabber door holder device. This device shall hold the door at approximately 170 degrees. The door holders shall be securely bolted to the vehicle substructure of the body.

EXTERIOR COMPARTMENTS

COMPARTMENT "L1"

Left front, full height storage of "M" size oxygen cylinder in KKK certified bracket and mounting system.

One SCBA Bracket
Two hooks for turnout gear
Box Light and Charger

COMPARTMENT "L2"

Left side half high storage; in front of left rear wheel, with double doors. Two (2) adjustable aluminum diamond plate shelves shall be mounted on Unistrut shelving standards.

COMPARTMENT "L3"

Left rear 3/4 high compartment; behind left rear wheels. One Fixed aluminum diamond plate adjustable shelf shall be mounted at the top of the compartment. The compartment shall provide outside access only.

One SCBA Bracket Mounted

Two Hooks for Turnout Gear

Charger for Thermal Imaging Camera

Box Light and Charger

Extinguisher Mount (provided)

COMPARTMENT "R1"

Right front inside/outside storage compartment. This compartment shall allow access to contents of the top shelf from the exterior or the interior of the vehicle at the floor level. This Compartment will be located to the rear of the forward side door but ahead of the right rear wheel. This compartment will have one adjustable shelf.

COMPARTMENT "R2"

Right rear compartment; behind right rear wheels for storage of back boards, Scoop Stretcher

Adjustable shelving for "extrication bags"

Door cut out for adequate stow of a Stryker Stair Chair

EXTERIOR COMPARTMENT CONSTRUCTION:

The exterior compartments shall be fabricated from fully enclosed aluminum sheets. The floor and ceiling material shall be fabricated from .125" aluminum sheets. Each compartment shall be its own independent unit with two sides, rear, top and bottom, and not share a common wall with an adjoining compartment. All vertical seams of the compartment shall be continuous one piece bend or 100% welded construction. Overlapping caulked vertical seams are unacceptable. Each compartment unit shall be welded to the inside of the structural door jam.

All compartments shall incorporate a flush sweep out design. No compartment floor lips or door gaskets shall come above or protrude into the compartment opening at all.

EXTERIOR COMPARTMENT SHELVES:

All shelves as specified in exterior compartments shall be fabricated from .125" formed aluminum diamond plate with a 1" flange bent up on both the front and rear of the shelf. The shelf shall be mounted to heavy duty UNISTRUT shelving standards to allow for full adjustment.

EXTERIOR COMPARTMENT FINISH:

The rear and two side walls of the interior surface of the exterior compartments shall be fabricated from 100% welded, aluminum plate panels finished in a light color "Gator Hyde".

COMPARTMENT DOOR PANELS:

Interior door panels on compartment doors shall be made of .100" polished aluminum diamond plate held on with threaded fasteners that provide access for repairs or replacement of hardware.

COMPARTMENT VENTING:

The exterior compartments shall be vented to the exterior of the vehicle. The vents shall be located in the lower portion of the compartments. Vents are installed to allow air to escape and allow the compartment door to close with ease. The vents are added to an area above floor level to prevent road debris from entering the compartment.

DRI-DEK FLOOR MATTING:

Dri-Dek material shall be installed on all floors of the exterior compartments. The Dri-Dek shall be custom cut to fit around oxygen bottles and mounted equipment. The flush sweep-out floor edges shall include the Dri-Dek tapered edges.

RUBBER MATTING SHELVES:

A .125" rubber mat material shall be installed on all shelves of the exterior compartments. The rubber matting material shall be custom cut to fit each compartment shelf.

SIDE ENTRANCE DOOR STEPWELL:

The floor of the step-well compartment shall be lined with nonskid Turtle Tile mat. The mat shall be removable for ease of cleaning.

STEPWELL COMPARTMENT/ INTERMEDIATE STEP:

Inside the side entrance door shall be a recessed step-well compartment. The compartment shall extend into the body approximately 20" and be the full width of the side entrance door. An intermediate step shall be fabricated as part of the step-well area.

SECURING DEVICES FOR EQUIPMENT

BACKBOARD MOUNTS:

The right rear full height compartment shall be provided with (2) black rubber friction mounts for securing two backboards. The mount shall be fabricated from an "L" shaped (45"h x 16"d) 2" aluminum channel. The channel will be bolted to the interior compartment. The rubber friction mount shall be press fitted onto each side of the 2" channel, full length. Proper spacing shall be provided to allow for Long Boards with runners.

MOUNTING HANGER FOR SCOOP STRETCHER:

The right rear full height compartment shall be provided with a rubber coated Scoop hanger.

FULL HEIGHT DIVIDER W/(3) ADJUSTABLE SHELVES:

The compartment as listed below shall be equipped with a full height divider, with one side for long equipment storage and three adjustable shelves on the other side of the divider. The divider shall be fabricated from a 0.125" aluminum panel with flanges on top and bottom and back edge for better attachment to the compartment. Dividers will be finished off with a "Powder Coat" paint process. The shelves shall be mounted on four sections of aluminum Unistrut, and be fully adjustable.

Long Equipment Storage Compartment "R2"
Divider to be 12" off front wall w/10" shelves.

TOOL MOUNTING:

All tools as listed shall be mounted in appropriate brackets.
The exact placement shall be finalized during the Factory Visit.
The tools shall be provided by the customer.

Tools to be mounted:

1. HALIGAN, 30"
2. FLAT HEAD FIRE AXE, 36" handle
3. BOLT CUTTERS, 24"
4. HYDRANT WRENCH

REAR STEP BUMPER:

A full length reinforced rear bumper shall be installed on the rear of vehicle. The bumper shall have contoured ends and be covered with polished aluminum diamond plate end caps. In addition, two full end gussets shall be provided to support the bumper ends in the event of minor impact.

The bumper shall incorporate a design that allows it to be recessed under the rear of the body. The under body recessed bumper design allows the chassis frame to absorb minor impact without any damage to ambulance body.

LIFT-UP REAR STEP; RECESSED STEP RISER:

The rear step bumper shall incorporate a lift-up center section made of extruded aluminum, "Diamond Back" safety grating. The step shall hinge on a full length stainless steel piano hinge

DOCK BUMPERS:

Two (2) Heavy duty black rubber dock bumpers shall be installed on the rear bumper ends, (1) each side. The bumpers shall be 2" high, 10" long and protrude 2" outward from rear bumper. The dock bumpers shall be bolted to the structural channel of the rear step bumper.

FRONT STONE GUARDS:

22" High polished .100 aluminum diamond plate stone guards shall be installed on the front body corners. The guards shall be one piece & contoured to fit the 1 5/8" outside radius of the body. They shall extend to the cab, and follow the contour of the cab. The stone guards shall be removable for repair in event of damage. The edges of the diamond plate panels shall be sealed with a closed cell gasket around the perimeter, to prevent moisture from getting behind panels.

OFFSET RUB RAILS:

Rub rails shall be installed on the lower body skirt panels under the door line. The rub rails shall be fabricated from aluminum bent in channel form. The rub rails shall be attached to the body with spacers that hold the channel and end caps off the body. This design prevents debris from accumulating between the Rub Rails and the painted body.

CAB RUNNING BOARDS W/GRIP STRUT INSERTS:

Polished aluminum NFPA Certified diamond plate running boards with grip strut inserts shall be installed on both cab entrance step areas. The running boards shall have a 2" bent outside flange for strength, and be bolted to the lower cab rocker panel. The running boards shall incorporate into the design an aluminum wheel splash

guard on the forward edge, for protection from the front wheel splash.

A polished aluminum diamond plate kick panel shall be installed above the rear step bumper and below the rear doors. The panel shall fit flush on all sides and not appear to be an add-on part. The step riser panel shall be removable

.125 aluminum diamond plate stone guards shall be installed on the rear body corners. The guards shall be one piece & contoured to fit the 1 5/8" outside radius of the body. The stone guards shall be removable for repair in event of damage. The edges of the diamond plate panels shall be sealed with a closed cell gasket around the perimeter, to prevent moisture intrusion. The height of these taller stone guards shall match the height of the front stone guards

EXTERIOR TRIM

REAR WHEEL FENDERETTES:

Polished Stainless Steel, rolled fenderettes shall be installed around the rear wheel opening sized to allow for proper tire clearance. The fenderettes shall be bolted on for easy removal. All hardware shall be concealed. Exposed mounting hardware is unacceptable.

LICENSE PLATE HOLDER:

One recessed Cast Products polished aluminum license plate holder shall be installed in the left rear body panel and the right rear body panel of the ambulance. It shall include (1) recessed license plate light activated with the running/headlights of the vehicle.

FUEL FILL HOUSING:

A Cast Products Polished Aluminum fuel fill housing shall be installed in the street side body panel. The fuel fill shall be designed to match the O.E.M. mounting procedures and shall not cause any undue stress on any of the fuel components. The fuel fill housing shall be completely sealed from the inside of the vehicle.

EXHAUST VENT COWL:

A left side mounted, polished aluminum type exhaust vent cowl shall be installed on the vehicle. The cowl shall allow air from the power exhaust vent to exit the interior of the vehicle. The inside of the cowl vent shall have a rubber flap to prevent air from back feeding vent when not in use.

ADDITIONAL EXTERIOR EQUIPMENT:

BODY UNDERCOATING:

The entire under side of the modular body, including all frame members, compartment lower panels and aluminum sub floor, shall be undercoated. The undercoating shall be applied to insure proper and complete coverage. The undercoating shall be a high quality automotive type.

EXTERIOR BODY WINDOWS

SLIDING SIDE DOOR WINDOW:

A window shall be installed in the side entrance door. It shall have sliding, 31% tinted automotive safety glass and be mounted within an aluminum black anodized frame. The window shall be completely sealed and held to the door via an inside clamp ring which matches the exterior of the window. The window shall incorporate a sliding removable screen.

FIXED REAR DOOR WINDOWS:

Two (2) windows shall be installed in the rear entrance doors. They shall have fixed automotive privacy safety glass and be mounted with an aluminum black anodized frame. The windows shall be completely sealed and held to the door via an inside clamp ring, which matches the exterior of the window. Windows will have privacy glass for day and night to prevent following vehicles from seeing into the box but allow view from inside the box to the outside.

INTERIOR MODULAR BODY

CABINET CONSTRUCTION:

The interior cabinets of the vehicle shall be completely constructed of aluminum.

All cabinets shall be covered with multi spec

All outside edges of cabinets shall had padded molding to match.

ADJUSTABLE SHELVES:

All adjustable shelves within the interior cabinets shall be mounted to unistrut shelving standards. The shelf shall be the full width and depth of the cabinet, have a 1" lip on the front edge.

HINGED DOORS:

All hinged doors shall be equipped with hinges and a locking positive latching device to prevent opening while in motion.

INSULATION

MODULAR BODY INSULATION:

The entire inside surface of the modular body, including walls and ceiling. Areas behind heat generating light fixtures shall not be insulated. The insulation shall completely fill the voids between the frame members and the exterior skin.

In addition to the modular body insulation the shall be equipped with sound deadened with a sound deadening material. This material is specifically designed for the reduction of transmitted sound in single skin aluminum panels.

MODULAR BODY ENTRANCE DOOR INSULATION:

All exterior entrance doors shall be sound deadened with a sound deadening material. The entire exterior skin surface of the interior door shall have this material bonded to it. The modular personnel entrance doors shall have an additional thermal insulation, with clearance provided for door hardware.

MODULAR BODY COMPARTMENT DOOR INSULATION:

All exterior compartment doors shall be insulated, and sound deadened. The entire exterior skin surface of the interior of the door shall have this material bonded to it.

FLOOR:

The floor shall consist of 3/4" Expanded PVC Polymer material. This material shall have .016 lbs per cu in density and be impervious to fluid intrusion. An aluminum sub-floor shall be installed between the floor material and the floor frame members.

FRONT BULKHEAD WALL **FRONT WALL PASS THRU:**

Centered in the front wall of the modular body shall be a pass-through opening with a closing door or window to isolate the cab from the box.

There will also be a cabinet installed in the in the pass thru. The cabinet will have one adjustable shelf and be enclosed by a set of hinged aluminum doors to be accessed from the side door step well. The cabinet will be secured by a set of Southco locking stainless steel flush pull latches and will have a recessed aluminum countertop with rounded edges to match the rest of the unit.

REAR FACING ATTENDANT SEAT

The ambulance shall be provided with a vacuum formed captain's chair attendant seat with a swivel seat base with child seat.

The rear-facing attendant seat shall be mounted at the front of the box in the center position aligned with cot. Equipped with Per4max occupant restraint harness.

RIGHT SIDE ATTENDANT SEATING

The ambulance shall be provided with a vacuum formed captain's chair attendant seat with a swivel seat base which locks in (8) positions. Equipped with Per4max occupant restraint harness.

The right side attendant seat shall be mounted to the floor by a track on the far right side of the module. In place of a bench seat.

RIGHT SIDE WALL

A Right side wall shall be installed as a finished backing to the right side cabinets. The wall covering shall match the color of the cabinets.

INTERIOR CABINET:

TINTED TRANSPARENT DOORS:

All transparent doors where specified in this specification shall have tinted Lexan sliding doors. All sliding doors shall be installed in double, anodized aluminum tracks with Standard Products rubber flocked inserts to prevent movement and inadvertent sliding. Hinged transparent doors when specified will be provided as 1/2" tinted acrylic.

RIGHT SIDE FORWARD CABINET:

There shall be a cabinet installed between the right-side captain's chair and the forward side door to be accessed by the right side captain's chair when in the seated position that will hold a cardiac monitor, two large drawers and access to the outside compartment at the floor. Cabinet top will be flat.

The right side wall will also have a cabinet or mounting for 4 boxes of various sized gloves.

RECESSED "D" BOTTLES AT HEAD OF THE BOX TO THE RIGHT OF THE FORWARD SIDE ENTRY DOOR:

Recessed storage shall be provided for two (2) "D" bottles at head of the box to provide the recessed are Access to bottles shall be from the step well.

RIGHT SIDE DUPLICATE VISTA SCREEN PANEL:

There shall be a Right-side duplicate Vista Screen panel mounted on the right side wall, angled to the right side captain's chair and within arm's reach of the right side captain's chair.

Radio Controls and Microphone to be included in the same area.

OVERHEAD CABINET ABOVE RIGHT-SIDE ATTENDANT SEAT:

An overhead storage cabinet shall be provided and installed in the area above the right-side attendant seat. The interior cabinet shall be provided with a full framed transparent cabinet door which is also capable of lifting for full restocking access to the cabinet. The door shall be held open with two gas springs and held closed with positive slam latches. The entire lower edge corner shall be padded to prevent sharp corners.

LEFT SIDE WALL:

A left side wall shall be installed as a finished backing to the left side cabinets. The wall covering shall match the laminate color of the cabinets.

LEFT SIDE ATTENDANT SEAT:

A left side attendant seat shall be built into the left wall cabinets. It shall be a double width CPR seat. With two Per4Max occupant restraint harnesses.

All vertical surfaces to the front and rear of the seat cushion shall be fully padded and wrap around the top of the counter to provide a full armrest.

LEFT SIDE ATTENDANT (CPR) SEAT, UNDER SEAT STORAGE:

The underside of the left side attendant seat shall be lined with a brushed aluminum pan and allow for full under seat storage. The seat cushion shall be hinged in the rear and be held open and closed by a single gas spring device. The seat cushion shall be equipped with a slam type positive stainless-steel paddle latch.

“ACTION AREA”

LEFT SIDE DUPLICATE VISTA SCREEN PANEL:

There shall be a Left side duplicate Vista Screen panel mounted on the left side wall at the action area

Radio Controls and Microphone to be included in the same area.

STORAGE CABINET:

A locking storage cabinet shall be provided at the head of the action area. Cabinet is to be installed forward portion of the primary action area. Cabinet is to be enclosed by a right-hinged aluminum door and secured with a push-button Simplex combination lock and a Southco locking stainless steel flush pull latch with a cipher push button lock with key override. The lock shall function without the need for keys and shall be capable of changing the combination at some future time.

LIFE SUPPORT STATION UPPER STORAGE CABINET, WITH SLIDING DOORS:

A storage cabinet shall be provided above the action area. The storage cabinet shall be provided with a full framed cabinet sliding doors .(1) adjustable shelf within the cabinet is included. The entire lower edge shall be padded to prevent sharp edges.

LEFT WALL UPPER STORAGE CABINETS:

The left wall, interior upper cabinet over the CPR Seating area shall be built and Installed. These cabinets shall each be enclosed by a top hinged acrylic door attached to hold-open(s) and each secured with a locking stainless-steel flush pull latch.

LEFT REAR STORAGE CABINETS:

LEFT REAR INTERIOR CABINET, UPPER WITH RESTOCKING LIFT-UP DOOR:

The storage cabinet shall be provided with a full framed transparent cabinet door which is also capable of lifting for full restocking access to the cabinet. The door shall be held open with two gas springs and held closed with positive slam latches.

LEFT BELOW COUNTER STORAGE DRAWERS:

A two (2) drawer cabinet unit shall be installed under the primary action area on the interior left wall. These drawers shall be constructed with .90" thick aluminum. The drawers shall open towards an expanded width CPR seat and be secured with locking stainless-steel flush pull latches. All drawers utilize Locking Southco Polished Stainless-Steel latches

SHARPS AND TRASH:

A sharps container and trash can will be recessed into the action area counter.

IV Warmer Drawer

An IV Warmer drawer to be placed under the action area at the head of the stretcher.

ABOVE DOOR HEAD BUMPER

SIDE ENTRANCE DOOR HEAD BUMPER:

A cushioned, matching vinyl covered "bump protection" head bumper shall be mounted in the interior of the side entrance door area. It shall be designed to provide both onward and upward contact protection

REAR ENTRANCE DOOR HEAD BUMPER:

A cushioned, matching vinyl covered "bump protection" head bumper shall be mounted in the interior above the Rear entrance doors. It shall be designed to provide both onward and upward contact protection

INTERIOR GRAB RAILS

GRAB RAIL RETENTION:

All ceiling grab rails installed in the ambulance shall meet the requirements of the A.M.D grab rail retention test.

(1) 72" CEILING GRAB RAIL OVER LEFT SIDE OF COT:

A polished stainless steel grab rail shall be installed in the ceiling over the cot. It shall be 72" long x 1 1/4" in diameter with welded stanchions every 24". It shall have fully radiused ends to eliminate a head injury hazard. The grab rail shall be bolted directly to the structure members of the ceiling frame work.

(1) 64" CEILING GRAB RAIL OVER RIGHT SIDE OF COT:

A polished stainless steel grab rail shall be installed in the ceiling over the cot. It shall be 64" long x 1 1/4" in diameter with welded stanchions every 24". It shall have fully radiused ends to eliminate a head injury hazard. The grab rail shall be bolted directly to the structure members of the ceiling frame work.

GRAB HANDLES REAR DOORS:

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

SIDE ENTRANCE DOOR GRAB RAIL, 45 DEGREE:

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

COT MOUNTING

COT MOUNT, STRYKER:

A single position STRYKER, completely removable cot mounts shall be installed in the center position of the ambulance.

All cot mount components STRYKER.

Mounting hardware installed to secure a Stryker Model 6080MX-PRO with floor mounted safety hook.

Includes floor mounted safety hook
Hardware Only - Cot not included

*Any provisions needed for future installation of a Stryker "Powerload" style stretcher should be installed.

PERMANENT MOUNTED IV HOLDER

RECESSED DUAL IV HOLDER, AT RIGHT SIDE OF COT:

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

RECESSED DUAL IV HOLDER, AT LEFT SIDE OF COT TOWARDS THE REAR:

Additional Cast Products Rubber "Recessed" dual IV holder shall be installed. The holders shall be bolted to reinforcing plates located within the ceiling and include a Velcro strap for securing IV during transport.

INTERIOR SURFACE FINISHES AND COLORS

INTERIOR COLOR/FINISH:

The interior color polychromatic coating – Marble Stone (MultiSpec color to be #99-7371)

INTERIOR UPHOLSTERY AND PADDED SURFACES

Light Gray

HEAVY DUTY UPHOLSTERY, SEAMLESS:

Spradling "Arctic" Charcoal # 9017

All cushions, head pads and seating surfaces shall be covered with Spradling International "Arctic" Charcoal # 9017 expanded vinyl upholstery material.

INTERIOR FLOORING FINISH

Lonplate II, Non-Slip Embossed Small Grid – Gunmetal #424

DRIVERS CAB CONSOLE

CAB CONSOLE:

An individually designed Cab Console shall be provided and mounted to the engine cover of the cab. It shall be equipped with a quick release to remove it when servicing the engine. The console shall follow the contours of the engine cover to minimize its protrusion.

All switches, controls and radios shall be within easy reach of both the driver and passenger.

MAP BOX W/CUP HOLDERS:

A map box shall be fabricated and installed between the front cab seats to fit just behind the console. The box

shall be fabricated and laminated to match the interior in the ambulance. The map box shall fit between the (2) front seat bases and included two (2) 3 3/4" holes for cup holders on front. There shall also be (2) finished Map and paper storage slots.

INTERIOR MOUNTED EQUIPMENT

GLOVE BOX HOLDERS:

Four Stainless steel hospital quality glove box holders shall be provided in the vehicle.
Location: In the cab behind the cab console and on a location to be determined in the module.

IV WARMER SYSTEM:

A 12 volt IV Warmer system shall be installed in the vehicle as listed.

OXYGEN AND ASPIRATION SYSTEMS

OXYGEN SYSTEM:

The Oxygen delivery system shall consist of a permanent mount DOT approved Medical Oxygen Cylinder. The oxygen line from the cylinder to the distribution outlets shall be oxygen cleaned, high pressure electrically conductive, "Green" hose with swagged fittings. All fittings and hardware used shall be Medical Oxygen Quality and cleaned for oxygen use.

The oxygen storage cylinder shall be accessible through a transparent door for manual on/off control of the main valve and to visually monitor tank pressure on the regulator gauge.

DUAL OXYGEN OUTLET:

One (1) Air Liquide dual oxygen outlet shall be flush mounted within the Life Support Station panel. The distance from the primary patient to the Life Support Station shall not exceed 35" per the requirements of KKK-A-1822.

SINGLE OXYGEN OUTLET RIGHT SIDE WALL:

One (1) single Air Liquide oxygen outlet shall be provided on the right side of the ambulance in the right side wall next to the duplicate switch panel, below the overhead cabinet. The outlet shall be built in flush and not protrude more than 1" beyond the wall.

CEILING MOUNTED OXYGEN OUTLET:

An oxygen outlet shall be installed to the front. The outlet shall be recessed into the ceiling.

OXYGEN SHUT OFF SOLENOID:

An electric powered oxygen shut off solenoid shall be installed and mounted on the output of the oxygen bottle regulator. It shall be controlled by a switch located at the rear Life Support Panel. The solenoid shall be approved for medical oxygen use and be equipped with a manual override valve.

ELECTRIC SUCTION/ASPIRATION SYSTEM:

The vehicle shall be equipped with a permanently installed Suction/Aspiration System. The system shall be equipped with a high volume electric suction pump certified for use in all states, with a 30 liter per minute flow rate. The pump shall be activated from a relay controlled circuit and switch, on the Life Support switch panel. The pump shall be mounted in an enclosed compartment using rubber isolators to minimize any noise and vibration when in use. The pump shall be connected to an onboard collection bottle permanently attached to the counter near the primary patient. The connecting hose shall be fiber reinforced medical hose and loomed to prevent chafing. The entire system shall be tested and meet the criteria of KKK-A-1822. Test Documentation shall be available upon request. As with the oxygen delivery system all fittings and lines shall be accessible for inspection and service without the removal of cabinets or walls.

SSCOR DISPOSABLE COLLECTION SYSTEM:

On Board suction shall be provided with a SSCOR disposable system. System shall include SSCOR wall mounted white faced, regulator and disposable Bemis collection bottle mounted in stainless steel bracket mounted on wall per customer location.

OXYGEN PRESSURE GAUGE, TANK PRESSURE:

An oxygen pressure gauge; 2" analog dial for tank pressure shall be installed in the Life Support Station area of the vehicle. The gauge shall be full scale type for Medical oxygen use. It shall be connected to the main oxygen cylinder with a high pressure (3,000 PSI working pressure) Parflex flexible line with high pressure fittings. (Braided stainless steel not acceptable).

OXYGEN CYLINDER MOUNT, "M":

The vehicle shall be equipped with a mount for an "M" oxygen cylinder in the oxygen storage compartment. The mount shall be of a design which allows the bottle to be released from the mount by releasing a single point, and quickly remove the bottle. The mount shall be fabricated from 1/4" steel channel and firmly hold the bottle in the installed position to eliminate the possibility of a loose bottle and rattling. The mount shall be held to the vehicle framework with four high strength 3/8-16 bolts. The mount shall be located on the "aft" wall of the compartment. The bottle must be removable without the use of tools, with the exception of the bottle nipple nut. The bottle mount must be certified to meet the minimum requirements of AMD standard, AMD-003.

ELECTRICAL SYSTEMS

Electrical 12 VDC, Type III

ELECTRICAL 12 VOLT:

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

GROUNDING:

All Modular Bodies shall be grounded to the vehicle chassis via two (2) 000 GA braided tinned copper grounding straps. Stranded copper conductors i.e.

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

terminals with serrated ring to insure a positive contact at all times.

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

12V - 110 VOLT CIRCUIT SCHEMATIC DOCUMENTATION:

All harnesses, relays, circuit breaker terminal junction points and circuits shall be drawn on individual 8 1/2 x 11 size drawings. Each individual circuit shall be on (1) drawing, for ease of troubleshooting. A single drawing overall schematic is unacceptable. All electrical systems shall be designed for each vehicle. Generic or similar drawings are cause for rejection of vehicle. All schematics shall include only what circuits are provided in the proposed vehicle.

DOOR POST SWITCHES ENTRANCE AND COMPARTMENT DOORS:

Sealed door post switches shall be installed in all entrance and compartment doors. All switches shall be sealed from the elements to prevent moisture damage and to prolong service life. The switches shall be warranted for lifetime of vehicle. All door post switches shall activate the grounds of relays only. Under no circumstances shall the door post switch carry more than 140 milliamp of electrical current.

CAB AND CHASSIS ELECTRICAL MODIFICATIONS

ALTERNATOR:

The alternator shall be installed in the approved Ambulance Prep Chassis. The alternator shall be a dual 145 amp system with total. The charging system shall not be modified in any way to void its warranty.

BATTERIES:

The batteries shall have the required ratings as specified by manufacturer. Two (2) high cycle, heavy duty truck batteries shall be provided.

MODULE DISCONNECT IGNITION CONTROLLED:

A high current disconnect device shall be installed per the requirements of KKK-A-1822 to power all ambulance vehicle conversion and modular body functions. The device shall be activated by the chassis ignition signal, and shall have a 5 minute off delay for module functions when the chassis ignition switch is turned off

LOAD MANAGER/ SEQUENCER:

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

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

RESPONSE AND SCENE AMPS CANNOT EXCEED 230 AMP

FULL TIME Load Management of Emergency Lights

HOURLMETER:

An electronic digital engine Hour meter shall be mounted in the driver's console. The Hour meter shall be powered only when the vehicle ignition is running and shall not be activated by the battery master disconnect switch.

VOLTMETER:

A Transportation Safety Devices 270 degree sweep analog type voltmeter shall be installed within easy view of driver. The voltmeter shall be circuit breaker protected. The use of digital voltmeters is unacceptable due to its difficulty to read at a glance. The voltmeter shall be tied to the battery side of the master disconnect switch to allow a constant reading on the voltmeter when the switch is off. The voltmeter shall be installed with an angled bezel for better viewing by driver.

LOW VOLTAGE ALARM:

A Low Voltage System shall be installed in the driver's console. The alarm will sound when the system voltage drops below 11.8 volts for more than 2 minutes and vehicle needs to reduce load. The alarm will be provided with a cancel switch to momentary silence the alarm.

HIGH IDLE:

The chassis shall have an automatic electronic throttle device installed, which is specifically designed for use in emergency vehicles.

DOOR OPEN INDICATOR

An indicator shall be installed in the center console to indicate that an entrance door is ajar. The door open indicator shall be relay controlled and the door post switches shall activate the relay.

COMPARTMENT OPEN INDICATOR

An indicator shall be installed in the drivers switch console to indicate that a compartment door is ajar. The compartment open indicators shall be relay controlled and the door post switches shall activate the relay.

AUDIBLE DOOR/COMPARTMENT OPEN ALARM

An electronic alarm shall be installed and activate, when a module entrance door or compartment door is opened. The alarm shall sound only when the vehicle is placed in drive or reverse and be independent of the door open/compartment open warning lights in the console. The warning lights shall activate anytime an entrance or compartment door is opened.

BACK-UP ALARM

An audible backup alarm shall be installed under the rear step area of the vehicle. The back-up alarm shall be activated any time the vehicle is shifted into reverse gear.

SPOTLIGHT:

A hard-wired Spot/Scene light shall be mounted on the roof of the cab. The light shall be controlled from inside the cab for on/off, direction and angle.

REMOTE KEYLESS ENTRY:

The power door lock switch located on the drivers' and passengers' side cab doors shall be wired to activate the power lock/unlock function of the ambulance body entrance doors. The switch shall be tied to the battery side of the master disconnect switch and function whenever depressed.

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

POWER DOOR LOCKS OVERRIDE SWITCH:

A concealed emergency override switch shall be provided and located in front grille area.

This switch location is KKK compliant

CLIMATE CONTROL SYSTEM:

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

FLOW-THRU VENTILATION:

A high volume power exhaust ventilation system shall be installed on the left rear side panel of the vehicle. It shall consist of a (2) speed blower motor. The blower shall be mounted to an anti vibration plate welded to the inside wall. Installations which produce excessive noise due to vibration shall be cause for rejection. A Cast Products polished aluminum cowl vent with internal, rubber back flow flap shall be installed on the exterior of the modular body. Dual closeable intake vents shall be placed in the interior rear corner cabinet. A return air intake shall be located on the front of the ambulance body.

HEAT AND AIR CONDITIONING SYSTEM:

The unit shall have a minimum capacity of 30,000 BTU Air Conditioner, and 48,000 BTU Heat combination unit with a high performance pressurizer type 450 CFM blower. The system will be installed so as to distribute air throughout the module from various vents. An air cleaner filter media shall be installed in the return air grille located in the underside of the cabinet.

All heater hoses shall be provided as EPDM rubber, as per recommendation of chassis manufacturer. The use of lesser quality hose or silicone hose is an unacceptable substitution. The systems heater shall include an automatic heat shut off valve which only opens when the heater unit is "On" and when the vehicle is running. The heater shut off valve shall also include an emergency shut off switch located within the rear power distribution panel. All Air Conditioner hoses shall be heavy duty type and have machine crimped ends.

ELECTRONIC DIGITAL DISPLAY THERMOSTAT CONTROL:

An electronic Climate Control thermostat shall be used to monitor and control both air conditioning and heating in the rear patient compartment. The thermostat shall include a digital display which displays ambient temperature in the patient compartment, and will display desired set temperature. The fan speed may be either automatically controlled depending on the temperature differential in the vehicle, or overridden and manually toggled, or turned off by the "Hot Cool" Switch. The thermostat unit temperature probe shall be located in the upper, mid level in the patient compartment.

AUXILIARY COOLANT PUMP CLIMATE CONTROL SYSTEM:

An auxiliary coolant pump shall be added to increase coolant flow to the rear heater core. The pump shall be exactly sized to provide required heat to rear unit, while not reducing the effective heat in the vehicle cab. The pump shall be controlled by the vehicle climate control system thermostat. The pump shall be located in a protected location and easily serviceable if required in the future.

CAMERA SYSTEM:

An outside rear facing back up camera will be placed above the rear doors and be activated when the vehicle is in reverse and when the back doors are opened.

An interior rear facing camera will be placed on the head of the box facing into the patient compartment.

EMERGENCY WARNING SYSTEMS

SIREN WARNING SYSTEM

ELECTRONIC SIREN

A dual amplifier, 200 watt siren with standard tones shall be provided.

LIGHTED HORN/SIREN SWITCH:

A switch shall be installed in the drivers console to select between OEM Horn ring function of the vehicle Horn or Horn ring activation of the Siren. The switch shall have a lighted indicator and control a SPST relay located within the electrical distribution cabinet. A relay controlled circuit is required to eliminate any potential voltage drop problems due to high amperage draw of the OEM Horns.

SIREN SPEAKER SYSTEM

UNDER BUMPER SIREN SPEAKER SYSTEM:

The system shall include two (2) 100 watt speaker drivers. Speaker assemblies shall be installed into the front bumper of the vehicle

RECESSED MOUNTED TRAFFIC EMITTER SYSTEM:

A recessed mounted Tomar Traffic Emitter System shall be installed recessed in the front body. Provide circuitry and install [Tomar](#) 2060 Emitter utilizing 7 x 3 recessed housing

The [Tomar](#) Emitter is to be tied into the sequencer and NOT the load manager. It will have its own switch in the console and is to deactivate when not in a drive gear. A separate switch will allow the traffic emitter to be used when the emergency lights are not activated.

TOMAR TRAFFIC EMITTER

There shall be Tomar Traffic Preemption light mounted on the center of the module in between the 900 Series Whelen LED warning lights.

A Whelen 700 Series Linear Super-LED flashing warning light shall be installed above the emitter.

Color: White

HEADLIGHT WARNING SYSTEM

HEADLIGHT FLASHER:

An alternating headlight flasher shall be installed to alternately flash the vehicles high beam lights. The unit shall be disabled when the headlight switch is in the on position.

WARNING LIGHTS

LIGHTHEAD LENSES:

All exterior cab and body LED warning light lenses colors will be clear.

All LED flashing lights will be provided a switched circuit, and will be supplied a steady source of power instead of a flashing output, allowing the light heads to operate as follows:

All Body and cab warning lights will be set to "ACTIONSCAN" and flash in an unsynchronized, random pattern.

WHELEN LED FLASHING WARNING LIGHTS, LEFT AND RIGHT:

The vehicle shall be equipped with Whelen 900 Series Linear Super-LED flashing warning lights.

The vehicle shall include four (4) light assemblies two on the right side and two on the left side of the vehicle. The lights shall be placed to the outside corners of the body. The color of the lights shall be red.

All lights shall include a metallized flange chrome housing, designed for this light fixture.

WHELEN LINEAR-LED FLASHING WARNING LIGHTS, FRONT:

The vehicle shall be equipped with Whelen 900 Series Linear Super-LED warning lights.

The vehicle shall include two (2) light assemblies on the front outside corners of the body. The color of the lights shall be red.

All lights shall include a metallized flange chrome housing, designed for this fixture.

WHELEN LED FLASHING WARNING LIGHTS, REAR:

The vehicle shall be equipped with Whelen 900 Series Linear Super-LED flashing warning lights.

The vehicle shall include two (2) light assemblies on the rear outside corners of the body. The color of the light on the top left shall be blue the light on the top right shall be red.

All lights shall include a metallized flange chrome housing, designed for this fixture.

WHELEN SUPER-LED FLASHING WARNING LIGHT, FRONT:

The vehicle shall be equipped with a Whelen 900 Series Linear Super-LED flashing warning light. The light shall be centered on the front of the body, below the corner roof radius. The color shall be clear.

The light shall include a metallized flange chrome housing, designed for the light fixture.

WHELEN LED FLASHING WARNING LIGHT, REAR:

The vehicle shall be equipped with a Whelen 900 Series Linear Super-LED flashing warning light.

The light shall be centered on the rear of the body, below the corner roof radius. The color shall be amber.

The light shall include a metallized flange chrome housing, designed for the light fixture.

WHELEN LED FLASHING WARNING LIGHT, REAR

Two (2) flashing, Whelen 900 Series Linear Super-LED lights shall be installed on the rear of the vehicle. The light assemblies shall be installed to project their beam through the rear door windows when the doors are opened.

All lights shall include a metallized flange chrome housing, designed for this light fixture.

Color: Red

WHELEN LED FLASHING LIGHTS, FRONT BODY:

Four (4) Whelen 900 Series Linear Super-LED flashing warning lights shall be installed on the front of the vehicle.

All lights shall include a metallized flange chrome housing, designed for this light fixture.

Color: (2) Red over Amber, (2) Red over Red

WHELEN LED FLASHING WARNING LIGHTS, OVER REAR WHEEL:

The vehicle shall be equipped with Whelen 700 Series Linear Super-LED flashing warning lights. Two lights shall be provided, one over each rear wheel area.

The lights shall incorporate an integrated metallized flange chrome housing. Cast aluminum or other flanges are unacceptable.

Color: Red/Amber

CAB MOUNTED WARNING LIGHTS

WHELEN LED FLASHING WARNING LIGHTS, GRILL:

The vehicle shall be equipped with Whelen 700 Series Linear Super-LED flashing warning lights. The lights shall be placed in the Grille of the vehicle.

Color: Red/White

WHELEN SPLIT LED COMBINATION FLASHING WARNING LIGHTS, INTERSECTION:

The vehicle shall be equipped with Whelen 700 Series Split Linear Super-LED Combination flashing warning

lights. Two (2) lights shall be installed, one each side front fender as far forward as possible.

Color: Red/White.

All lights shall include an integrated metallized flange chrome housing, designed for this fixture.

REAR FACING LIGHTING

12 Whelen red mini LED lights shall be installed, two on each rear facing compartment or passage door, one at the top right of the door and one at the bottom right of the door.

EXTERIOR VEHICLE LIGHTS AND EQUIPMENT

WHELEN LED VEHICLE TAILLIGHTS:

The vehicle shall be equipped with two (2) Whelen 600 Series LED red stop/taillights. The lights shall be located on the lower outboard corners of each side of the rear of the vehicle. The body shall be designed in such a way to eliminate the lights from being exposed to the elements from the backside.

VEHICLE BACK-UP LIGHTS:

The vehicle shall be equipped with two Whelen 600 Series rear backup lights, one each side on the inboard side of the lower panel. The lights shall operate any time the vehicle is placed in reverse. The light shall include an integrated metallized chrome housing. The body shall be designed in such a way to eliminate the lights from being exposed to the elements from the backside.

WHELEN LED AMBER DIRECTIONAL LIGHTS:

A pair of Whelen 600 Series LED amber arrow directional signal lights shall be installed on the rear of the vehicle directly above the stop/tail and back-up lights. The lights shall include an integrated metallized chrome flange housing on each fixture.

MARKER/CLEARANCE LIGHTS:

Whelen OS, LED Marker and Clearance lights shall be installed on the front rear and both sides of the body to meet all Federal lighting requirements FMVSS 108.

LOWER FLASHING MARKER LIGHTS:

Two (2) Lower marker clearance lights shall be installed on each side midway of the vehicle. The lights shall be wired to the side directional lights and activate any time the vehicles directional switch is activated. The marker clearance light shall also include an integrated reflex reflector into the lens.

RUNNING BOARD ILLUMINATION LIGHTS, LED:

The vehicle shall be equipped with two four inch LED lights recessed into the front of the body at the level just above the cab running boards. The lights shall activate when the drivers or passenger side cab doors are open. The circuit shall be relay controlled and include an independent circuit breaker.

REAR EMERGENCY FLASHING LIGHTS, BRAKE LIGHTS:

The two (2) rear red flashing warning lights top tier in the middle portion of the body, shall be activated whenever the vehicles service brake is applied, and the red flashing warning lights are on. These lights shall be activated through a transfer relay circuit and under no circumstances shall they be powered by the vehicles stop lamp

switch only.

Location: Lights at the window level

WHELEN LED AMBER DIRECTIONAL LIGHTS, FRONT BODY:

A pair of Whelen 600 Series LED amber arrow directional signal lights with populated arrow shall be installed on the upper front panel of the vehicle. The lights shall include an integrated metallized chrome flange housing on each fixture. The lights shall be controlled through the use of re-lays to avoid overload of the vehicle turn signal flasher.

EXTERIOR 12 VOLT FLOOD LIGHTS

WHELEN SIDE FLOOD LIGHTS:

Four (4) Whelen 900 Series LED 24 Diode LED scene lights with chrome flanges shall be installed, two on each side of the module, inboard of the warning lights.

RIGHT SIDE FLOOD LIGHT, CONTROL:

The right side flood lights of the vehicle shall be controlled by two modes. The first mode of operation is the right side flood lights shall function from the relay controlled circuit and lighted switch located in the drivers console. The second mode, is the flood lights shall be activated when the right side entrance door is opened. All circuits shall be relay controlled..

RIGHT SIDE FLOOD LIGHT CANCEL SWITCH:

A right side flood light cancel switch shall be installed directly inside the side entrance door. The switch shall be mounted within the interior wall or cabinet. The switch shall be a single pole momentary switch. The circuit shall automatically turn off the right side flood lights and the step well light with a single touch of the switch. The circuit shall automatically re-arm itself the next time the side entrance door is opened. The circuit shall be relay controlled. The use of a manual canceling door post switch is unacceptable substitution.

WHELEN REAR FLOOD LIGHTS:

Two (2) Whelen LED 900 Series LED 24 Diode LED Scene lights with chrome flanges shall be installed above the rear entrance doors.

REAR FLOOD LIGHTS:

The rear flood lights shall automatically activate when the rear door is opened or when the vehicle is placed in reverse.

REAR FLOOD LIGHT SWITCH:

The rear flood lights mounted on the rear of the vehicle shall be controlled "on/off" by a single pole lighted switch located in the drivers console. The rear flood light switch shall override both backup function and the flood lights "on" with the door open function and shall not be affected by those circuits.

REAR FLOOD LIGHT CANCEL SWITCH:

A flood light cancel switch shall be installed directly inside the rear entrance door. The switch shall be mounted within the cabinet adjacent to the door. The switch shall be a single pole momentary switch. The circuit shall

automatically turn off the flood lights with a single touch of the switch. The circuit shall automatically re-arm itself the next time the rear entrance doors are opened. The circuit shall be relay controlled. The use of a manual canceling door post switch is an unacceptable substitution.

INTERIOR AND COMPARTMENT UTILITY LIGHTING

DOME LIGHTING:

Eight (8) Tecniq LED (E08-LC10-1) Dome lights shall be installed in the patient compartment.

DOME LIGHTS WITH DOOR OPEN:

The dome lights mounted in the ceiling of the vehicle shall be activated to the low intensity position when the personnel entrance doors are open. The circuit shall be relay controlled and the dome light current shall not be controlled by the door post switch.

EXTERIOR COMPARTMENT LIGHTS:

Each outside storage compartment shall be equipped with Tecniq E410 LED strip lighting on the downside of each door opening.

ATTENDANT LIGHT:

A Tecniq Silho-X 2.75" round warm white LED light with stainless steel trim ring shall be mounted above the left wall forward area counter and operated by a separate switch.

STEPWELL LIGHT:

An independent, recessed step well light shall be provided in the rear side of the diamond plate step well and be automatically activated whenever the side entrance door is opened. The light shall function as a courtesy light and activate regardless of the position of the module disconnect switch. The exterior shall be protected from weather and damage. All connections shall be weatherproof, sealed connectors.

DUAL DOME LIGHT SWITCHES:

Per the requirements of KKK-A-1822, two independent dome light circuits with two independent switches shall be provided to control two banks of (3) dome lights each. The switches shall be marked in the Life Support panel as left dome light and right dome light. Each switch shall power the low mode of the fixtures independently.

12 VOLT UTILITY AND MEDICAL OUTLETS

12 VOLT MEDICAL OUTLET:

One (1) 12 volt Power Point outlet shall be provided. The outlet shall be circuit breaker protected and provide a source directly from the vehicle batteries, and bypass the vehicles master battery disconnect switch. The outlet shall be located at the Life Support Station.

12 VOLT MEDICAL OUTLET:

One (1) 12 volt Power Point outlet shall be provided. The outlet shall be circuit breaker protected and provide a

source directly from the vehicle batteries, and bypass the vehicles master battery disconnect switch. The outlet shall be located in the right front in/out access compartment.

12 VOLT MEDICAL OUTLET:

One (1) 12 volt Power Point outlet shall be provided. The outlet shall be circuit breaker protected and provide a source directly from the vehicle batteries, and bypass the vehicles master battery disconnect switch. The outlet shall be located on the left rear wall of the vehicle.

12 VOLT MEDICAL OUTLET:

One (1) 12 volt Power Point outlet shall be provided. The outlet shall be circuit breaker protected and provide a source directly from the vehicle batteries, and bypass the vehicles master battery disconnect switch.

Location: On the Electrical Cabinet door

ANTENNA AND COMMUNICATION RADIO EQUIPMENT

ANTENNA:

Coaxial Antenna lead shall be pre-wired to the location of the two-way communication radios.

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

ANTENNA LEADS:

Three (3) coaxial cable antenna leads shall be installed; they shall be positioned within the body roof. They shall terminate in the following locations;

(1) Front console, (1) Life Safety Station, (1) Right Side Switch area.

ANTENNA BASES:

The antenna bases provided shall be mounted in the following locations on the body roof of the vehicle;

Mount # 1 Antenna lead above the Right Front Whelen interior dome Light and route to the front console.

Mount #2 Antenna lead above the Left Rear Whelen interior Dome Light and route to the Life Support Station.

Mount # 3 Antenna Lead above the Left Front Whelen interior Dome Light and route to the back of the drivers seat.

RADIO POWER LEAD:

A 10 gauge constant power positive lead and 10 gauge ground shall be provided with 30 amp circuit protection located in the rear Life Support Panel.

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

RADIO POWER LEADS:

A 10 gauge constant power positive lead and 10 gauge ground shall be provided with 30 amp circuit protection located in the cab switch console.

Includes: (1) 12 volt Hot wire w/fuse holder & 30 amp fuse, (1) 12 volt switched wire w/fuse holder and 30 amp fuse.

RADIO POWER LEADS:

A 10 gauge constant power positive lead and 10 gauge ground shall be provided with 30 amp circuit protection located at the right side switch panel.

Includes: (1) 12 volt Hot wire w/fuse holder & 30 amp fuse, (1) 12 volt switched wire w/fuse holder and 30 amp fuse.

12 VOLT ELECTRICAL EQUIPMENT

24/12 hour clock shall be mounted in the module at the head of the box.

12 VOLT HOT UTILITY POWER LEAD:

The vehicle shall be pre-wired with a 12 volt HOT power lead terminating behind the drivers seat area. The wiring shall be 12AWG, and include a power and ground conductor encased loom. The ends shall be capped, and the circuit labeled.

20 amp max capacity

12 VOLT HOT UTILITY POWER LEAD:

The vehicle shall be pre-wired with a 12 volt HOT power lead terminating in the area behind the Cab passengers seat.. The wiring shall be 12AWG, and include a power and ground conductor encased in loom. The ends shall be capped, and the circuit labeled.

20 amp max capacity

115 VOLT AC ELECTRICAL:

The vehicle shall include a 115 volt AC Electrical system separate and distinct from the vehicles 12 volt electrical system.

The entire system shall be designed and tested to meet the requirements of the NFPA National Electrical Code (NEC) where applicable and use the balance of the NEC for general practices and procedures associated with high voltage 115/230 volt AC Electrical wiring and devices.

The vehicle shall also meet and be tested to all requirements of AMD standard 009. Test Documentation and verification shall be provided upon request.

115 VOLT ELECTRICAL SCHEMATICS:

A complete wiring schematic shall be provided which indicates the systems entire 115 volt Electrical System. The schematic shall be done in the same format as the 12 volt wiring schematics and be provided upon delivery of the vehicle.

115 VOLT WIRING:

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

115 VOLT POWER DISTRIBUTION BOX:

A 115 volt power distribution box shall be installed in the vehicles main electrical cabinet. The distribution box shall consist of a NEMA approved waterproof junction box with a 20 amp magnetic type circuit breaker installed. The circuit breaker shall power two duplex receptacles also mounted within the distribution box. Vehicle Ground Fault protection shall be provided by a lighted 20 amp GFCI outlet. All wiring and circuits provided shall be sized for a 20 amp capacity, 12 gauge conductor, minimum.

115 VOLT GFCI RECEPTACLE INTERIOR:

115 volt AC Duplex Ground Fault Circuit Interrupter receptacle shall be installed in the vehicle for protection of personnel. The GFCI shall be "Lighted" duplex type. The Green light within the outlet shall glow when live power is at the outlet, and extinguish to indicate when the GFCI is tripped. All other outlets within the vehicle shall be wired downstream, and be GFCI protected. The location of the GFCI shall be as follows, Two (2) located on the back wall of the Life Support Station.

115 VOLT OUTLET INTERIOR:

115 volt AC Duplex Electrical outlet shall be installed in the vehicle. The outlets shall be "Lighted" hospital grade duplex type. The Neon light within the outlet shall glow when live power is at the outlet. All outlets within the vehicle shall be GFCI protected. The location of the outlet shall be as follows, one (1) located to the left of the double CPR seat.

115 VOLT OUTLET INTERIOR:

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

KUSSMAUL "SUPER AUTO-EJECT" SHORELINE:

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

SHORELINE POWER AMBER INDICATOR LIGHT:

A waterproof 1/4" diameter NEON Amber indicator light shall be provided to indicate live power at the shoreline input connector. The light shall have a 115 volt lamp and be located directly above the main shoreline inlet.

BATTERY CHARGING EQUIPMENT

BATTERY CONDITIONER/POWER SUPPLY:

The vehicle shall be equipped with a IOTA DLS-30, 30 Amp Battery Conditioner/Power Supply to charge the vehicle batteries when plugged into the external shoreline. The battery charger shall be a fully automatic controlled taper charger and provide no charge when the batteries are completely charged. The Conditioner

shall be a heavy duty, continuous duty, solid state unit.

12 VOLT TO 115 VOLT INVERTER

INVERTER PREWIRE:

The vehicle shall be pre-wired for the future addition of a 12 volt to 115 volt Inverter. The pre-wire shall include two 3/8" electrical terminal studs. One stud shall be wired to the battery side of the master battery disconnect switch with 2 Ga battery cable and the other wired to the ground of the batteries with 2 Ga battery cable.

VEHICLE PAINTING

PAINTING PROCESS:

The entire modular body shall be prepared and painted in strict accordance to Sikkens painting processes for aluminum. All Sikkens products shall be used throughout the preparation and painting stages, eliminating any incompatible products. Paint finish shall be provided with a *ten (10) year warranty* supported by the manufacturer.

PAINT CORROSION PROTECTION:

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

PAINT, CUSTOM TWO-TONE:

The vehicle Body shall be painted Two-tone . The Cab (two-tone) shall be one, "new" secondary color, with the primary or first color being the OEM Cab paint. The paint shall be applied using the Autobase paint process. Primary Color OEM white: FNLA4006

Secondary Color: Red, No. FLNA3225

VEHICLE GRAPHICS & LETTERING

REFLECTIVE LETTERING:

The vehicle shall be provided with custom reflective lettering prior to the delivery of the unit. The lettering shall be finalized at the pre-construction conference prior to construction.

The basic layout shall be;

WINDHAM FIRE RESCUE, both body sides & rear doors

Letter Color: GOLD

Outline Color: BLACK

Shade Color: BLACK
Font: TIMES ROMAN

PINSTRIPES:

A 1/4" reflective vinyl pin stripe shall be provided on the vehicle bordering the different colors of the paint.

Location: At top of paint break
Color: Black

REFLECTIVE STRIPE:

A 4" wide vinyl reflective tape stripe shall be installed on the sides and rear body of the vehicle. The stripe shall be custom cut around all doors and equipment. The stripe shall be free from air bubbles and defects.

Color: White, Location: At the beltline

ENTRANCE DOOR REFLECTORS/ CHEVRONS:

Red and yellow reflective chevron plates shall be secured on each of the rear doors and on the side entrance door, the plate shall be at least 4"x4" and mounted on the lower part of the door.

SOLID REFLECTIVE 2-COLOR CHEVRON DESIGN ON REAR BODY, 6":

A 6" solid reflective 3M 280 Series
The colors shall be Yellow & Red

REFLECTIVE TAPE, OUTLINE DOOR

The side Entrance door shall be outlined with 3/4" reflective tape to outline the inside of the door. The upper part of the door shall be white and the lower part of the door shall be Red. The break shall be consistent with the paint break.

STAR OF LIFE, ROOF MOUNTED:

A 32" Star of Life decal shall be center mounted on the body roof of the vehicle.

FROSTED WINDOW STAR OF LIFE:

Two frosted semi-transparent vinyl; Stars of Life shall be installed on the rear windows of the body.

VEHICLE NUMBERING

Develop with the customer a system to allow for vehicle ID at the right front of the box and right rear of the box that is interchangeable.

RADIO COMMUNICATION:

RADIO CUT-OUTS:

The bidder shall provide custom fit cutouts in appropriate locations with required mounting brackets for customers radio components.

CHASSIS EQUIPMENT

STAINLESS STEEL WHEEL INSERTS:

High Quality "Phoenix" or equal polished stainless steel light duty wheel inserts shall be installed on all four wheels, front and rear.

HEATED/MOTORIZED MIRRORS:

The mirrors shall include both a heating element in both mirror heads, and motorized control from the drivers console. The mirrors shall be powered by an independent circuit breaker and harness.

RUBBER MUD FLAPS:

Rubber mud flaps shall be provided behind the rear wheels of the vehicle. They shall be Light Duty truck type and bolted to the inner fender liners of the modular body, behind the rear tires.

CAB FLOOR MATS: (RUBBER)

High Quality Rubber floor mats shall be installed in both the drivers and passenger side of the cab. The mats shall be custom shaped and made to fit the exact vehicle, rectangular or generic mats are not acceptable. The color shall be Grey.

VALVE EXTENDERS:

The inside tires of the vehicle shall have a valve extender mounted to the outer wheel with a metal stand off bracket. The OEM rubber rear tire valves shall be changed to brass valves as part of the process

PERFORMANCE BOND REQUIRED

TRADE IN VEHICLE:

Option - Allow for trade in credit of (1) 2010 Chevy Type III Horton Ambulance

DELIVERY REQUIREMENTS:

State of Maine
Commercial vehicle Inspection
Application for Title
Temporary Registration - Plate

Included in the contract, shall be an allowance for expenses, for a Pre-Delivery Inspection the manufacturers' facility, for two members of the Department.

OPTIONS NOT INCLUDED IN QUOTE

- (1) Rear facing backup camera, trigger with reverse, standard location above rear doors
- (2) Rear facing interior patient compartment camera