health

Department:
Health
REPUBLIC OF SOUTH AFRICA

NATIONAL TREASURY: REPUBLIC OF SOUTH AFRICA

EMERGENCY MEDICAL SERVICES

AMBULANCE CONVERSION TECHNICAL SPECIFICATION: PANEL VAN

EMS 001/2021

OPTION 4 (High Roof more than $10m^3$)

NOTE:

1. **All materials used in the construction of the ambulance conversion must meet relevant SANAS/SABS standards.**
2. **Conversion to be approved by the relevant End-User Department after a "prototype" has been inspected and met approval**
3. **Contractor must be an accredited ISO 9001 manufacturer – registered MIB converter and registered with the OEM providers**
4. **All conversion aspects and related workmanship must carry at least 36 months warranty**
5. **Contractors to submit detailed project plan which should include midway inspection or at any time during production of each vehicle by the end user**
6. **Sign off will depend on end user acceptance as per the prototype specification**

List of abbreviations

LHS	-	Left hand side (passenger side)
RHS	-	Right hand side (driver side)
OEM	-	Original equipment manufacturer
CNC	-	Computer Numerical Control
SMD	-	Surface mount device
LED	-	Light-Emitting Diode

Interior layout for option 2 – Large Panel Van

Detailed interior and exterior specifications for large panel van

	General notes	COMMENTS	YES	NO
	Equipment Equipment shall be provided by the relevant end-user department and procured from the relevant RT4 Contract and must be aligned to the EMS Ambulance Regulations 2017. Provisioning for fitment and sufficient pack/storage space of equipment and consumables shall be made as per end-user defined requirements pertaining to shelving, cupboards and additional storage space			
	Storage and work area A storage/work area is to be fitted at the forward most section of the patient's compartment. It should form a division between the driver cab and patient compartment, and should run the entire width and height of the vehicle. Storage areas must be manufactured from aluminium, with all exposed corners radiused at 32 mm. Although the following specifications are vehicle specific, these minimum values must be considered during design: • Height – 1850mm • Length – 3260mm • Width – 1740mm • Loading height to not exceed 600mm from the ground (if exceeding this height, fold out steps or			

	bumper steps to be provided) **The final design should be executed in conjunction with the end-user**, but the basic arrangement **must** include: • A bulkhead panel constructed to follow the same shape as vehicle, the bulkhead should hold various items and electrical components • Bulkhead to have a clear sliding window to allow communication between front and back compartments • An open aperture to the right of cupboard to house various items such as a scoop, chair stretcher (Ferno Washington 107C or similar), traction splint and KED. The aperture should have a retaining rubber bungee with hooks to hold equipment in place • Full coverage of the driver on the RHS to avoid rear impact from loose objects in patient compartment. • A cupboard with storage space for consumables and 1x slide-out waste bin			

	• A pull-out drawer for consumables should run the length of the cupboard. Alternatively – 2 smaller drawers can replace a single long drawer • The top of the work area must be covered with the same reinforced vinyl transport sheeting as used on the floor • Secure strapping for defibrillator/monitor on the upper work surface, single hook and spring buckle type, centred on the top work surface • A second cupboard top cupboard above bottom cupboard for additional storage. • All cupboards will have a black plastic roller door system to close the cupboard's opening • Check for 2 x single opening doors with latches All of the above should be conveniently accessible, and all fittings should be of industrial quality			
SECTION ONE: VEHICLE EXTERIOR				

1.1	Fit rear bumper step on rear of vehicle- not obscuring PDC sensors			
1.2	Place 3M reflective tape on rear bumper step			
1.3	Remove 3M reflective tape on side of vehicle and replace after decals have been applied			
1.4	Wheel arches that are cut down for the stretcher, should be cleaned and sealed. Polyurethane / anti-corrosive undercoat is to be applied to wheel arches, and they are then to be repainted to match the colour of the vehicle underneath.			
1.5	Rear doors must be capable of opening fully to allow easy access for patient loading			
1.6	Cut LHS sliding door and rear door window apertures. All cut outs need to be treated against rust.			
1.7	220V caravan socket needs to be cut out behind driver side door and rust treated			
SECTION TWO: VEHICLE BODY				
2.1	**Reinforcement** Reinforce roof, body sides, floor and front sections of vehicle in order to accept numerous fittings			
2.2	The wheel arches need to be altered to accept Ferno model 19 or equivalent stretchers, stone chipped and painted the same as the interior of vehicle			

	A stainless-steel rubbing plate to be bonded on both side wheel arches.			
2.3	The patient compartment shall be fitted with CNC cut panels. The side panels should be manufactured from a non-porous, smooth, white high-gloss material, equivalent to PST (high impact Polystyrene sheeting). Fibreglass is not acceptable. The panels should be washable and scratch resistant. The side walls should have a minimum thickness of 4mm. The panels must be secured with 8 x 20 mm dual location plugs or other suitable securing method.			
2.4	Insulation (against heat and cold) needs to be placed behind all panels. Minimum requirement of this industrial insulation should comply with the following standards: • Thermal and acoustic insulation • Thermal conductivity (EN12667) • Fire spread (EN 13501-1) • Water absorption (EN 1609) • Airflow resistance (EN 29053)			
2.5	Where the interior panels intersect with the body or fittings, a sealant (silicone-based sealant) should be used to form a non-porous seal			
2.6	**Right Hand Side Body Panel**			

	Waist Rail A custom manufactured waist rail is fitted to the RHS of the vehicle. This provides reinforcing along the length of the RH body side. The waist rail is epoxy coated in white to match the finish of the interior panels and is constructed from a minimum thickness of 1.6mm mild steel Integrated into the waist rail are the following: - Dual retaining brackets for the trauma board and scoop stretcher. The brackets are to be suitably lined to provide protection for the equipment. The equipment must be held in place with at least 32mm heavy duty strapping with spring buckle - Full length trauma board (1830 x 410 x 40 mm) - Strapping must be heavy duty and should last the duration of the vehicle's lifespan - Electrical and mounting points for the PDT connection. (Location provided by end user) - A minimum of 1 x USB charging point must be fitted, placement as required by end user - Hella socket 12V			
2.7	**Gabbler Rail** A Gabbler rail of at least 1800mm must be fitted on the RHS. The rail should be			

	mounted in a way which provide sufficient space for medical equipment to be attached to the rail. The Gabbler rail should be fastened securely to the side with 3 x 8mm stainless steel fasteners, and should be spaced away from the body side by a minimum of 40mm. The Gabbler rail should have a minimum load capacity of 30kg. **H-Frame to be placed above the Gable rail for the storage of additional medical equipment- end user to communicate with converter during conversion period which vehicles to be installed.**			
2.8	**Left Hand Side Body Panel**			
	Waist Rail A custom manufactured waist rail is fitted to the LHS of the vehicle. This provides reinforcing along the length of the LH body side, in between the LHS sliding door and rear door apertures. The waist rail is epoxy coated in white to match the finish of the interior panels and is constructed from a minimum of 1.6mm mild steel. Integrated into the waist rail should be the following: - Mounting points for 3 x passenger inertia lap belt fastenings. Three **SABS / E marked approved Inertia cap type seat belts** are to be supplied and fitted			

	- 1 Hella sockets (end-user to specify location) - Mounting points for backrest			
2.9	**Back Rest** A backrest is to be securely fitted above the Waist rail. Length: 1750 mm (may require adjusting according to vehicle type), Height: 200 mm x minimum of 12mm ply, Depth: 60 mm. It should have a high-density foam insert and be trimmed in a non-absorbent vinyl material. Vinyl colour to be determined by end-user			
2.10	**Side Panel Finishing** **a)** The LHS and RHS panels, in between the rear edge of the front sliding door apertures and the rear door aperture edge, should be fitted with a custom-manufactured section incorporating diffused LED lighting strips. LHS should run from the back door to the edge of the sliding door, and the RHS from the back door to the edge of the UV light LED lighting detailed in electrical section. **b)** 2 x Purpose built dual IV drip bag holders should be fitted mid stretcher area at the ceiling / wall junction. Each IV point should feature a “pig tail” hook for hanging the bag, and a waist strap for securing the IV bags. The waist strap should be fastened with Velcro			

2.11	**Interior Trim** All door posts will be trimmed in vinyl. Colour to be determined by end-user Head Bumpers: High density foam head bumpers should be fitted above all door openings. They should be the full length of the door apertures, and trimmed in the same colour vinyl as the back rest and door trimming			
2.12	**Flooring** The original vehicle floor should be prepared to accept a 15mm thick waterproof plywood floor panel. The plywood floor panel should be precisely cut to fit the original floor. Separate floor panels should be joined by a half-lap method of 20mm. The completed floor sections should be bonded into the vehicle using a suitable polyurethane adhesive. Floor to be levelled to facilitate stretcher handling and should have a tough, hard-wearing and waterproof finish. Floor finish to be a suitable dark colour as specified by the end-user Fibre-reinforced vinyl transport sheeting which meets the following standards should be used wherever transport sheeting is referred to: • Minimum of 1.9mm thickness (ISO24346)			

	• Reaction to fire (118R02) • Abrasion resistance (H18 ISO 9352 • Chemical resistance (ISO 26987) Transport sheeting must be used and must cover the entire floor and fold up all vertical surfaces (coving), at least 80mm in the front and 40mm on the sides. Transport sheeting to be fitted by an approved contractor or suitable fitter. Transport sheeting must be secured to the waterproof plywood with a Transport sheeting appropriate non-flammable adhesive. All joints must be seam-welded. All exposed seams must be sealed with a liquid resistant sealer that is capable of withstanding continuous, extended vibrations (gravel road driving) The extensions from the floor to the sides must be 1-piece with no joints in the corners. High wear and edge floor areas are to be fitted with an extruded aluminium step edging.			
SECTION THREE: INTERIOR FITTINGS				
3.1	Vehicle must include the supply and installation of an UV light effective against micro-organisms which is equivalent to the Sani 18. UV lamp capable of emitting UV-C light at a wavelength of 253.7/254 nm and should be 12-24 Volt.			

	Must have own on/off switch in patient compartment The unit must have a twelve-month guarantee and a second-year service plan			
3.2	**Attendant Seat** A commuter 2000 single seat in non-absorbent vinyl material (colour should match the door trimming and back rest) must be fitted. The seat must be secured by 4 x 10mm, 8.8 grade bolts with heavy duty galvanized fender washers and Nylock nuts to underside of vehicle. Seat positioned at the head of the primary stretcher facing the rear doors, sufficient space for attendance legs should be considered within the available interior space. **1 (one) SABS / E marked approved Inertia cap type belt** is to be supplied and fitted onto the seat. SABS approved child seatbelt/restraint made available as an optional extra.			
3.3	The sharps container should be readily accessible without endangering the attendant or clients in the vehicle while in motion, near the sliding door is preferable, but position should be dictated by end-user			
3.4	A suction unit should be mounted securely near the attendant seat, either underneath the seat or flush against the seat			

3.5	**Hand Rail Provision** Extensive hand rails should be provided throughout the vehicle, securely fastened to predetermined, reinforced points within the cabin. Hand rails to be powder coated in the colour determined by the end-user The rear door and LHS sliding door should each have 2 x diagonal rails facing into the door aperture, each with a minimum length of 400mm. Each door rail should have a minimum of 2 x mounting points, each fastened with 8mm steel fasteners. <u>Hand rails should have the following features</u>: • High visibility • Non-slip • Manufactured from metal with a minimum wall thickness of 1.6mm and • External diameter of 25mm • **Hand rail mounted to the roof**			
3.6	**Primary Stretcher (Right Hand Side)**			
	Stretchers must be provided by the end-user and should be procured off the relevant RT4 contract **a)** <u>Stretcher fitment specification</u> Self-loading ambulance stretcher with elevating head and fixed end must be fitted Fitment should be in accordance to manufacturing standard/regulation of the selected stretcher's manufacturer			

	Fitted with head section closest to the driver's cab Fitment should allow sufficient space at the head of the of the primary stretcher for an attendant seat and sufficient leg room for the treating attendant			
	<u>Front stretcher fastening system should consist of:</u> A passive ankler type fastener located in a forward position. The ankler should be securely fastened to the floor of the vehicle in accordance with the stretcher manufacturer's guidelines. The ankler bracket should provide directional stability and guidance when loading a stretcher. <u>Rear stretcher fastening system should consist of:</u> A quick-release, positively located fastener. Securing options may vary depending on the stretcher selected and provided by the end-user • The vehicle body should have been pre-provisioned during manufacture to accommodate the stretcher fasteners and provide reinforcement for the fastening system. • Stretcher and bracket positioning should be determined and installed in consultation with the end user according to			

	manufacturer specifications. • All stretcher retaining brackets should be specific to and compatible with the selected stretcher, and should be of the same manufacturer as the stretcher			
3.7	**Secondary Stretcher (Left Hand Side)**			
	Stretchers must be provided by the end-user and should be procured off the relevant RT4 contract **a)** <u>Stretcher specification</u> A trolley-type ambulance stretcher with elevating head and fixed end will be fitted. Fitted with head section closest to the driver's compartment • This stretcher should be able to function as a 3-seater bench with lap belts as previously mentioned			
3.8	**Water Hand Washing Unit** The unit should have a minimum capacity of providing 3 litres of warm water. The unit should provide external drainage of waste water. The unit should be accompanied by a manual liquid soap dispenser/or hand sanitizer dispenser. The dispenser should have a minimum volume of 500ml with an approximate			

	diameter of 65mm (standard 500ml D-germ or similar type bottle should fit into the holder). An epoxy coated bracket needs to be made to hold dispenser bottle and be securely fastened in a suitable place close to the hand washing unit. (Optional. The unit should be accompanied by a transparent paper towel holder and securely fastened to the bulkhead, to hold a minimum of 30 x regular folded hand towels, KIMDRI or equivalent) <u>Placement of hand washing unit:</u> Hand wash unit and its accessories are to be placed on to the bulkhead and placed in such a way as to not interfere with the sliding door operations from the inside of the vehicle			
3.9	1 x 2.5kg, SABS approved, fire extinguisher with steel retaining bracket with a R-clip fastener to be fitted on the LHS in patient compartment next to large oxygen brackets – placement in consultation with end user			
3.10	A slim line, 12V Air-conditioning unit should be fitted on the ceiling in the rear (patient compartment) of the vehicle, above the rear door, and should function with the vehicle's existing Air-conditioning system. Or OEM supplied air-conditioning system If not already installed by the OEM			

SECTION FOUR: OXYGEN				
4.1	2x large oxygen cylinder retaining brackets to be located on the LHS of cupboard			
4.2	An oxygen regulator with Pin-index is to be supplied by end user and the end-point fitting is fitted by converter (see point 4.3 below) The regulator is to be piped via certified (ISOTC 121CS6) oxygen piping from the bracket area into two (2x) wall-mounted Heyer connectors to allow oxygen supply in the patient compartment (1 Heyer connection located upper LHS at the edge of the sliding door and 1 Heyer connection on the RHS in line with LHS) Provided by end user: The wall mounted flow meters shall be complete with oxygen ports and oxygen dial-stop meters with flow rate parameters ranging from 1 to 25 litres and must be provided in time to allow the oxygen flow test, see 4.3			
4.3	**The oxygen system should be certified (BS EN ISO 5359:2008 and BS ISO 22196:2011 and ISO 9001:2008), and a test certificate should be issued with the vehicle**			
4.4	A dual portable (small) oxygen bracket is to be fitted on the RHS, next to the attendant's chair.			

4.5	Oxygen pipe should have the following requirements or equivalent in accordance with the relevant safety standards: • Reinforced anti-static, low toxic liner. • Specially selected high tensile polyester fibres used at the optimum braid angle of 54° 44' (54.73°) creates an effective and balanced pressure hose. • Exceptional performance and renowned for reliability. • Conforms to BS EN ISO 5359:2008 / BS ISO 22196:2011 meeting the current criteria for use with low pressure medical gases • Cadmium and silicone free. • Carefully selected materials conforming to BS ISO 2878:2005 Electrical Conductivity. • Medical colour standards. • Striped hoses for mixed gases. • Resistant to a wide range of chemicals			
4.6	All pipe connections must be clamped with **OERTIKA** type clamps or equivalent.			
NOTE: Oxygen bottles and any oxygen equipment other than stated would be end-user supplied.				
SECTION FIVE: WINDOWS				
5.1	Rubber fitted or bonded window on the left of the patient compartment shall be provided within the sliding door apertures. The window shall be able to slide fully and must have shatterproof			

	safety glass. The size of the window should be determined by the size of the aperture in accordance with the vehicle manufacturer. The upper two thirds should be double sliding, and the lower one third fixed. The bottom two thirds should be frosted and the top third tinted 5% black to ensure patient privacy All windows to have interior locking devices			
5.2	Both rear doors to be fitted with individual fixed glass. Glass to conform to shape and radius of rear doors. Fixed rear windows and the window in the LHS sliding door of the compartment must be two thirds frosted (lower) and one third tinted 5% black (upper) to ensure privacy			
5.3	All windows to be shatterproof safety glass with an automotive certification stamp			
5.4	The patient compartment should be sealed sufficiently to decrease dust as much as possible			
5.5	Converter should have sufficient stock to replace glass as and when required			
5.6	The driver and passenger door windows shall be fitted with Anti Smash and Grab safety film 100mic clear or a maximum of 35% tint Safety Film or equivalent			
5.7	Cab slider to be fitted between the front and rear			

	compartment for communication.			
	SECTION SIX: ELECTRICAL CONFIGURATION			
6.1	220V AC Power			
	a) A 12V DC to 220V AC, 35-70amp, 800-2000W **Pure Sine Wave** inverter must be fitted. Advisable to use large Watt inverter for ICU type vehicles, decision made in conjunction with end-user and vehicle's specific purpose			
	b) The inverter shall incorporate a multi stage intelligent battery charger capable of 35A at 12V. Minimum of 800W – 2000W Power inverter – 12 volts to 220-volt AC **Pure Sine Wave** inverter Output frequency: 50/60Hz switch selections Input and output fully isolated design Power saving mode to conserve energy High efficiency 89-94% Tri-colour indicators show input voltage and output load level Loading controlled cooling fan Advanced microprocessor and Protection for: • Input low voltage • Overload • Short circuit • Low battery alarm • Input over voltage • Over temperature			
	c)			

	The inverter/charger shall conform to EN 60335-1:2010 safety standards (minimum) and 2004/104/EC automotive EMC directive			
	d) A remote On/Off switch for the inverter must be located within the driver compartment. An indicator light is to be provisioned to indicate the presence of 220V power from the inverter. End-user to specify location			
	e) Using the caravan plug, the vehicle must be able to connect to grid power. A 2.5mm² wire x 20-meter extension lead with matching coupler and real is to be provided by convertor			
	f) An indicator light is to be fitted inside the power inlet to indicate the presence of grid power			
	g) 220V AC is to be distributed via a distribution board to 3 outlets. The distribution board shall be fitted with an earth leakage circuit breaker and a suitably rated overload protection breaker (6A max). 3 outlets to be configured to have: • 2x3pin (2x16A – Type M) socket • 3pin & 2x 2pin socket (2.5A type C & 16A Type C)			

	• 3pin, 2pin & 2x USB socket • Each outlet to have its own on/off switch			
6.2	**12V DC Power**			
	a) A second, auxiliary battery (12V) is to be fitted. The battery must be **deep cycle battery** with a minimum rating of 80A/h. The second battery is to be connected to the vehicle's main battery via an automatic isolator/combiner.			
	b) The isolator/combiner must engage when either one of the batteries' voltage exceeds 13.1V and disengage when combined battery voltage is below 12.8V. The Isolator/combiner is to have a continuous current rating of 120A (minimum). Both main and auxiliary side of the isolator/combiner to be fused (100A). The auxiliary battery 12V DC is to be distributed via a distribution board.			
	c) A battery monitor/indicator light should be placed inside the driver cab to allow visual confirmation of both batteries' charging status			
	d) The Water Hand Washing Unit must switch on/off with the vehicle's ignition switch. Power must be provided by the auxiliary battery. A separate main switch must be located on the distribution board			

	e) A 6-way blade fuse panel is to be fitted near the auxiliary battery. This fuse holder will be used for third party connections. The fuse panel must make provision for: • 2-Way radio – 2A • Vehicle tracking device – 5A • MI System – 5A • 3 x Spares			
6.3	MI System			
	a) **The vehicle's MI system should meet the following requirements:** (MDT and PDT references currently only necessary for Western Cape vehicles) • 12V Power is to be provided to the dashboard and patient compartment in preparation for MDT and PDT installation • The MDT power point should be fitted with a 12V to 5V DC • The PDT power point should be fitted with a 12V to 5V DC • Optional: docking station to allow charging of the PDT unit at a conveniently located area in the patient compartment – position to be confirmed by end user • 12V power and ignition sense wire should be provisioned for the connection of a router.			

	• All MI System power is to be provided by the auxiliary battery via a battery protector. • The battery protector must disconnect power if the battery voltage drops below 12.2V • The battery protector must reconnect power if the battery voltage rises above 13.1V • The battery protector shall have a continuous current rating of 5A (minimum).			
	b) A distribution board shall be provided and fitted in a suitable place within the driver compartment – end user to determine placement			
	c) All electrical wiring shall be a minimum of 2.5 mm³ diameter			
	d) All wiring shall be covered with acceptable plastic sleeving			
	e) All electrical circuits for accessories must be routed through appropriate amperage fuses / breakers			
6.4	Emergency Lighting			
	a) 6-LED Red Clusters to be used throughout except where otherwise noted. Cluster rows must be individually controlled			
	b)			

	9-LED clusters generation 4 or newer to be used in light bar**.** Light bar above windscreen to have five forward facing clusters. One cluster at 45° and one cluster at 90° to be fitted on the left and right of the light bar. LED Spot lights to be fitted on the R/H and L/H sides of light bar			
	c) On each side of the vehicle, one cluster to be positioned top rear and top middle			
	d) On the rear door(s), one cluster at top left, top right, waist high left and waist high right If, by opening the rear door(s), the top clusters are obscured, additional clusters must be fitted inside the door recess – one left and one right (vehicle dependent)			
	e) Four clusters to be fitted in the radiator grill (left and right). These clusters to be red/white			
	f) A single, high intensity, dome style, flashing LED (red) to be fitted on each of the 4 corners of the vehicle at or near bumper height. These to be positioned for maximum protection from accidental damage			
	g) A two-channel flasher unit is to be used to flash all clusters			

	h) Single colour clusters must flash both rows simultaneously. Dual colour cluster must flash each colour alternately			
6.5	Interior Lighting			
	a) All interior lighting should be rigid LED strip lights. Strip light 1m bar 30x5050 LED			
	b) All LED lights should be mounted behind a light diffuser lens			
	c) Lights should be independently switched on/off in the patient compartment for the LHS and RHS and be clearly marked. Interior light switches to be located on the bulkhead near the LHS sliding door			
	d) LED interior strip lights behind light diffusers should run: LHS should run from the back door to the edge of the sliding door, and the RHS from the back door to the edge of the UV light/cupboard			
	e) The step inside the sliding door is to be lit by LED strip lighting which should switch on when the sliding door is opened and switch off when the sliding door is closed (using existing door switches)			

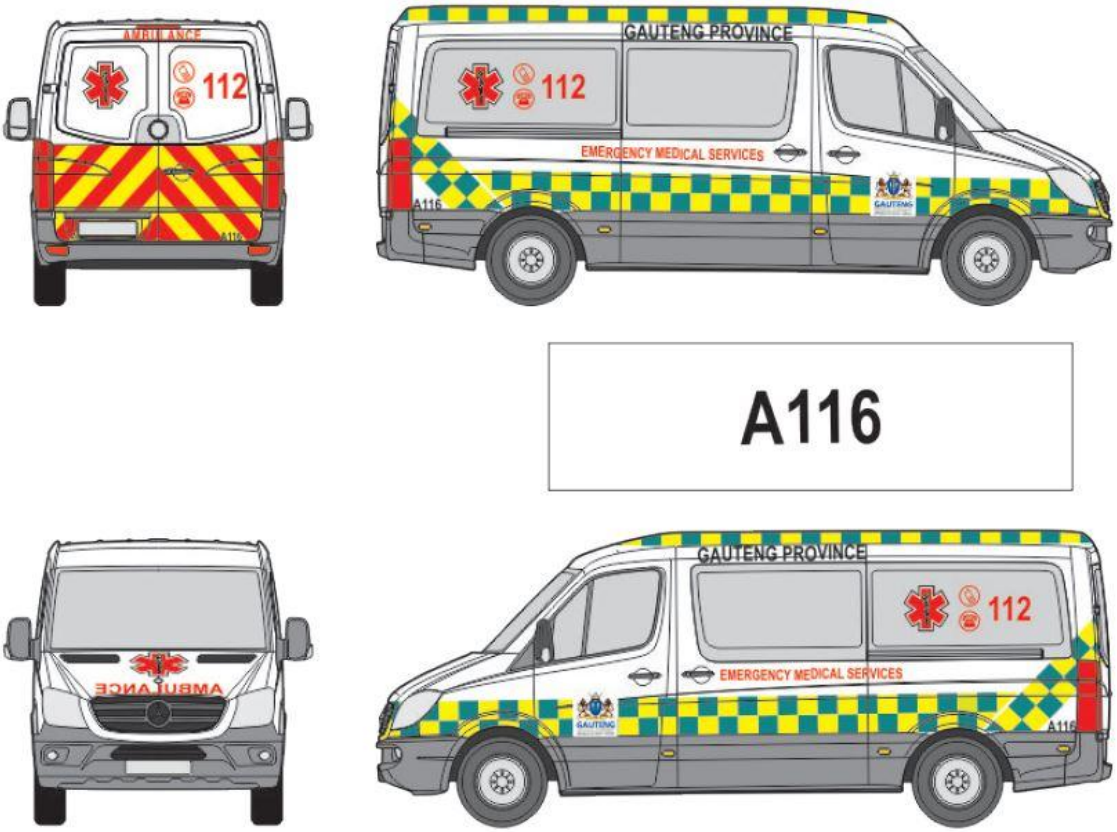
	f) A master cut off for the patient compartment lights must be placed in the driver cab to allow the driver to switch lights off when needed			
	g) A LED 27 watt loading light should be fitted, based on vehicle type, but must allow visibility during loading operations. Switch should be easily accessible from the rear			
6.6	**Exterior Lighting** The driver and passenger door to be fitted with red LED strip light along the trailing edge of the door. 20cm per strip; 6 x 50/50 SMD LED per strip. Strip light to switch on when door is opened and off when door is closed (using existing door switches)			

6.7	**Siren**
	Output 200W with 2 speakers (placed in engine compartment, as close as possible to grill and facing outward in the direction of the grill)
	
	• Wail, yelp & phaser tones
	• Dual tone (stereo) - one tone through speaker
	• Touch control panel
	• Horn ring control
	  ○ press twice to activate response mode - lights & siren on
	  ○ press again to change tone			

	○ press twice to silence siren ○ press once to switch lights off			
6.8	**Park Distance control** Park distance control supplied as an optional extra if not supplied by the OEM			
6.9	**Rear Camera** A rear facing camera shall be mounted on the rear above the doors. The screen for the camera shall be incorporated into the dash			
6.10	**Central Locking** All doors must be centrally lockable from inside the driving cab and from the key.			
SECTION SEVEN: PAINTING AND MARKING				
7.1	Yellow and green segmented Battenberg style, high visibility markings made from reflective material on the LHS and RHS of vehicle			
7.2	Star of life on RHS with Protekta Glaze clear coat for added scratch resistance and UV protection			
7.3	To be indicated on the LHS and RHS respectively: 1. Emergency Medical Services 2. Fleet number			
7.4	Telephone icon with '112' on LHS and RHS			
7.5	SA flag depicted on LHS and RHS			

7.6	EMS emblem (End-user to determine) to be displayed on both side panels (LHS/RHS). With Protekta Glaze clear coat for added scratch resistance and UV protection			
7.7	Star of life on Bonnet with Protekta Glaze clear coat for added scratch resistance and UV protection			
7.8	The word ‘Ambulance’ to be displayed on bonnet, with a reflective strip below. Size: 600mm x 150mm as well as on the rear of vehicle			
7.9	The word ‘Diesel/Petrol’ (vehicle dependent) to be displayed below the fuel cap			
7.10	High visibility segmented chevron patterned reflective marking to cover the entire back panel of the vehicle. Vinyl specification: Orange and lime green 3M			
7.11	Large call sign to be displayed on vehicle roof (approximately 785 x 355mm)			
7.12	The words “No Smoking” decal to be stuck on the inside where visible (or alternatively the international “No Smoking” pictograph sign may be applied). This will also be required in the driver compartment			
7.13	All vehicles will be marked as per provincial end-user requirements in 3M Vehicle reflective materials as per			

	the national branding specifications			
7.14	The words “Emergency Exit” to be displayed on rear and sliding doors			
SECTION EIGHT: ADDITIONAL REQUIREMENTS				
8.1	A high-quality wrap around Bull bar shall be fitted directly to the chassis of the vehicle. OEM approved and fitted			



Vinyl Specifications :

3M IJ680-10 Cast Reflective Digital Print Vinyl - White

CMYK breakdown :

	Yellow Reflective	Y - 100
	Red Reflective	C - 0 M -100 Y -100 K - 20
	Black	K - 100
	Green Reflective	C - 84 M - 26 Y - 43 K - 10