

VEHICLE SPECIFICATIONS
AND
BID REQUIREMENTS
FOR A
MODIFIED MINIVAN, TYPE 4
AND
MODIFIED VAN, TYPE 5



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TYPE 4, MODIFIED MINI VAN SPECIFICATION REQUIREMENTS

1.0 Scope; MINIVAN-TYPE IV

The Modification shall result in increased interior headroom, and clearances and improved passenger accessibility provisions for persons with disabilities. The vans are to be converted in accordance with this specification. No modifications beyond the scope of this specification will be allowed. The van shall be a complete, operating vehicle, at a minimum it shall conform in strength, quality of material and workmanship as provided by the automobile industry. The Manufacturer shall be ISO 9001:2000 certified for the design, sale, manufacture of customized buses and multipurpose passenger vehicles. A copy of the certification must accompany the bid submittals. All parts added as a result of the modification process shall be new. The basic van must be a current model year factory production vehicle that is cataloged by the OEM manufacturer and for which published literature and printed specifications are currently available.

This specification is intended for use in purchasing a completed vehicle(s) with all equipment and accessories needed for its operation. All parts, equipment and accessories shall be completely installed, assembled and /or adjusted as needed/required.

The vehicle shall conform in all respects to the following standards, law and regulations:

- Federal Motor Vehicle Safety Standards (FMVSS) Compliance shall be provided prior to bid award.
- Code of Federal Regulations, Title 49, Chapter V-National Safety Bureau
- California Code of Regulations (CCR), Title 13
- Americans With Disabilities Act (ADA) Accessibility Specifications for Transportation Vehicles, 49 CFR, Part 38, Subpart B-Buses, Vans and Systems
- State of California Vehicle Code
- California Health and Safety Code
- California Air Resources Board Regulations
- Original Equipment Manufacturer (OEM) Body Builders Book

1.1 CAPACITY: This minivan shall be capable of carrying in one trip at least two (2) ambulatory adult forward-facing seated passengers and two (2) passengers seated in mobility aids, in addition to the driver. The vehicle must be convertible to at least five (5) ambulatory passengers, plus the driver. Conversion to a full ambulatory/mobility aid capacity will be achieved by the use of an "ADA", FTA, and FMVSS compliant center mounted, fold up seat.

- 1.2 **ADDITIONAL CAPACITY:** An ambulatory passenger capacity that exceeds five (5) is desired, providing all specification requirements are met herein. Should a capacity larger than five (5) be offered, there shall be no additional price increase. No additional bid preference will be given.
- 1.3 **MODIFICATION:** This minivan shall be made ADA compliant through a modification whereby the vehicle floor area is cut from the engine firewall to the rear most passenger seat and lowered to meet minimum ADA 56" door opening requirement. There shall be no extrusion to any portion of the vehicle roof in meeting the ADA 56" door-opening requirement. A manual, fold up mobility aid ramp is to be mounted off of the curbside sliding door, and two mobility aid positions will be provided.
- 1.4 **REQUIREMENTS:** All labor, parts, materials, and other items used shall be the best quality available in commercial practice.
- a) All equipment is required to be new and the latest model in current production. Used, shopworn, demonstrator, prototype, or discontinued models are not acceptable.
 - b) Engineering changes and modifications shall conform to accepted practices of the Society of Automotive Engineers and other professional organizations, which may establish relevant standards.
 - c) The minivan interior and exterior shall be aesthetically pleasing.
 - d) All exposed metal shall be primed and painted. All metal shall be thoroughly cleaned and primed, including welded joints. Metal parts shall be free of dirt and rust.
- 1.5 **CHASSIS AND PACKAGES:** The model shall be a Chevrolet Uplander with OEM option packages that at a minimum contain items listed in section 1.6
- 1.6 **SUB PACKAGES:** Prior to award, The bidder shall provide a listing, published by the OEM, OEM chassis and packages with these items:
- a) Dual Air Conditioning
 - b) AM/FM Stereo with CD
 - c) Dark Tinted Windows
 - d) Cruise Control
 - e) Tilt Steering
 - f) Power Door Locks with Remote Keyless Entry, and Power Windows
 - g) Largest Cooling System Available
 - h) Largest Alternator Available
 - i) And whatever additional sub-packages are necessary to include with these minimum items.
- 1.7 **VEHICLE WEIGHT REQUIREMENTS:** The Contractor shall certify that all vehicles delivered shall not exceed the Original Equipment Manufacturer's Gross Vehicle Weight Rating (GVWR) of the chassis, regardless of the installed options and seating configuration ordered. This shall be submitted with the bid.

etc. will be clearly marked for identification using florescent colored tape or coatings.

- 2.5 **FLUID LINE PROTECTION:** All metal and rubber fluid lines beneath the vehicle that are altered or exposed as a result of floor modification shall be protected from road damage through the use of corrosion resistant covers or shields, where the State determines it is appropriate. All covers and shields shall permit accessibility for repairs and inspections. Final design of covers and shields are subject to approval by the State of California. Hoses under floor shall have a 3-sided cover that protects them and the hardware that supports them.
- 2.6 **BRAKES:** The vehicle shall be equipped with a factory Anti-Lock Brake System (ABS).
- 2.7 **PARKING BRAKES:** The vehicle shall be equipped with the factory OEM parking brake assemblies and dash warning light. Parking brakes shall be properly adjusted to factory specifications upon delivery.
- 2.8 **AXLES:** The axle capacity rating shall be at least equal or exceed the GVWR of the vehicle. In the event that the GAWR ratings exceed the GVWR of the specified chassis, the GVWR rating shall be the basis for all weight calculations.
- 2.9 **DRIVE AXLE ANGLE ALIGNMENT:** Bidder must submit, prior to award, detailed documentation that shows how OEM-factory specification front drive axle angle alignment is maintained (i.e. use of spacers, brackets, etc.) after lowered floor modification.
- 3.0 **WHEEL ALIGNMENT:** Each completed vehicle shall have a four-wheel alignment prior to final delivery. Documentation of wheel alignment with adjustment data shall be furnished at time of inspection. Alignment must comply with OEM specifications, Camber kits must be installed if needed to comply with this requirement. The equipment used to do the alignment shall generate this documentation. This documentation shall include OEM alignment specifications. Hand written documents are not acceptable. Documentation shall include Vehicle ID number. (VIN)
- 3.1 **WHEEL BASE:** The minivan shall have a 121" minimum wheelbase.
- 3.2 **TILT WHEEL AND POWER STEERING:** The vehicle will be provided with an OEM tilt steering wheel and power OEM power steering.
- 3.3 **FUEL TANK CAPACITY:** 20 Gallon minimum capacity.
- 3.4 **REPLACEMENT FUEL TANK:** Tank, fuel and vent lines, and hardware must meet all current FMVSS standards, including FMVSS 301, as well as all current CARB and EPA requirements.(see section 7.7) Documentation from the tank manufacturer is required with the bid. Tank must replicate OEM capacity and shall be fully calibrated with the OEM dash fuel gauge. Tanks shall be treated or coated so as to resist corrosion for the complete applicable warranty period.
- 3.5 **SUSPENSION:** Vehicle will retain the complete OEM/McPherson strut front suspension and components. Rear suspension must be adequate for the payload identified, and vehicle must

maintain a level position once loaded to full capacity. The OEM package "Load Leveling and Height Control", load leveling air shock absorbers are required for this specification.

- 3.51 **POWERTRAIN SUBFRAME INSTALLATION:** Area of contact between powertrain subframe and OEM body structure shall be maintained. Installation of spacers shall replicate OEM contact area between Frame and Unibody.
- 3.6 **ROAD CLEARANCE:** With full capacity load, the vehicle shall be able to clear a conventional public street speed bump without making surface contact with any portion of the vehicle surface, at 10 MPH.
 - a) **Ground Clearance:** With passengers or driver and with all available options installed, there must be a minimum of 5" of clearance between the break over angle position of the vehicle exhaust pipe and level ground.
- 3.7 **WHEELS:** The minivan shall be equipped with five (5) OEM wheels, size 17" minimum.
- 3.8 **WHEEL WELLS:** Wheel wells shall be OEM. Alteration of lower portion of rear wheel wells to accommodate lowered floor shall be done with stainless steel.
- 4.0 **TIRES:** Five identical brand tires shall be furnished. Tires shall be steel belted radials, the size, load rating and the brand as provided by the OEM for the chassis specified.
- 4.1 **SPARE TIRE:** The spare tire shall be OEM conventional type, mounted inside the vehicle and secured in an easily accessible carrier as approved by the State.
- 4.2 **TIRE CHANGING EQUIPMENT:** Tire changing equipment, as provided by the OEM, shall include a jack of sufficient strength/capacity, and other tools necessary for changing the mounted tires shall be stored in a compartment/container within the vehicle. Such storage space shall not diminish passenger capacity nor block accessory access.
- 4.3 **TIRE CHANGE:** Vehicle shall have the necessary configuration and clearance on the frame to allow for the use of the OEM jack in changing the tire. Configuration shall meet or exceed the OEM design, and have provisions to prevent jack slippage. Full instructions on the tire changing procedures and towing of a lowered floor minivan shall be provided.
- 4.4 **BUMPERS:** Front and rear bumpers shall be OEM, shock absorption type.
- 4.5 **ELECTRICAL:** Each vehicle shall have a 12-volt electrical charging system as supplied from the OEM.
- 4.6 **WIRING:** All electrical wiring shall be automotive stranded copper, of sufficient gauge to handle the load, color coded to match the OEM, with no wires of the same color in the same loom or harness. All harnesses that are modified or added to the vehicle will be secured to the frame at a maximum of two feet intervals with insulated clamps. Plastic wire ties are not acceptable. All exposed terminals and wiring shall be protected from the elements using

sealed terminals or heat shrink where necessary. Exposed wires will be wrapped or loomed in corrosion/moisture-proofed material.

- 4.7 **CIRCUIT PROTECTION:** All circuits shall be fuse protected and a schematic diagram of engineering quality indicating color and function shall be included with each vehicle. All electrical accessories except the radio and lights must be wired through the ignition, and must shut off when the engine is off.
- 4.8 **BATTERY:** Vehicle must have the heaviest duty available factory installed battery. Battery cables and connectors shall be OEM.
- 4.9 **ALTERNATOR:** Factory installed, heaviest duty available.
- 5.0 **HORN:** Factory OEM.
- 5.1 **GAUGES:** The vehicle shall be equipped with OEM needle or digital type gauges or OEM warning lights. All gauges will be installed in the OEM manufacturer's designated positions within the vehicle dashboard.
- 5.2 **FRONT AND REAR HEATING:** An OEM heating/defrosting system with vents front and rear shall be provided. All lines and hoses shall be sufficiently fastened, protected, and insulated to ensure against wear from friction and the elements. The interface to the original system must have no more than two coupling points to minimize the potential for leakage. The added/replacement lines/hoses must be continuous. No splices between the front and rear connections will be allowed. The lines must be mechanically attached, with "P" Clamps or other durable fasteners (subject to Caltrans approval), to the vehicle structure at no greater than 18-inch intervals and must be routed so as not to be exposed to wheel spray and not pass within 2 inches of any part of the exhaust system.
- 5.3 **FRONT AND REAR AIR CONDITIONING:** Air conditioning shall be OEM front and rear mounted, with separate fan controls for the front and rear, and OEM roof flush rear ducting. Unit shall use environmentally friendly R134A refrigerant. Conversions shall not impede access to front and rear air conditioning components.
- 5.4 **INTERIOR LIGHTING:** Overhead and lower lighting shall be installed in the interior rear of the vehicle that provides not less than two foot-candles of illumination at the entrance ramp area. This system shall illuminate automatically when the vehicle front and sliding doors are open. A manual switch must be available that overrides any timing device on the interior light system.
 - a) **Seat Lights:** Additional lighting shall be installed in the lower panels of the vehicle that provides a minimum of two foot-candles of floor illumination for the center and rear seats. Interior lighting fixtures shall be reasonably flush with the interior walls and ceiling to prevent being a hazard to passengers. Additional lighting shall be wired to work off of the OEM interior overhead light switches. All additional lighting must be adequately circuit protected.

- 5.5 **EXTERIOR LIGHTING:** Exterior lighting shall be installed in accordance with the Federal Motor Carrier Safety Regulations and the California Code of Regulations, Title 13. All lights shall be sealed from moisture and grounded to the body framing structure. The brake light shall not override emergency flashers or turn signals. An OEM center stoplight, two OEM back-up lights, and OEM running lights shall remain factory installed and complete.
- 5.6 **LIGHT COMPLIANCE:** All accessory vehicle lighting will conform to ADA, 49 CFR, Part 38, Subpart B.
- 5.7 **STEREO:** Shall be OEM AM/FM radio with CD and four factory-installed speakers, 2 front and 2 rear.
- 5.8 **CRUISE CONTROL:** Vehicle will have OEM installed cruise control.
- 6.0 **HEADLIGHT ADJUSTMENTS:** After conversion, the manufacturer will adjust headlights for proper alignment prior to delivery.
- 6.1 **BODY SPECIFICATIONS:** Conversion of a minivan by modifying the sidewalls, or floor, shall require the construction of an internal reinforcement of equal or greater strength that does not destroy or reduce the original integrity or strength of the vehicle against impact. All metal components that are added, as reinforcement shall be professionally seam welded, and shall be made corrosion proof through a commercial primer application or the use of stainless steel material.
- a) Interior Height: Shall provide a maximum clearance of 60" at the vehicle center of the interior roof.
 - b) Body Length: Shall not exceed 205".
- 6.2 **FMVSS TESTING:** Documentation showing successful compliance with FMVSS 571.204,206,208, 214, and 216 standards for the current model requested is required to be provided prior to bid award..
- a) Current FMVSS Documentation: Bidder must submit FMVSS documentation for a "current" production chassis and modification. "Current", for this specification is defined as a chassis that has not undergone a major power train, suspension, or structural change; or, a major modification change that would involve conversion structure re-design or a major change in conversion structure materials.
 - b) State Determination: Based on the definition as provided in Section (6.2 a), the State shall make the final determination as to whether or not "current" FMVSS documentation was submitted by the bidder.
- 6.3 **OEM "PASS THROUGH":** Documentation by an engineering associate must be provided that states the reasons for OEM "Pass Through" where claimed in lieu of required FMVSS testing. The State reserves the right to request re-testing if a pass through claim, based on submitted documentation, is deemed inappropriate.

6.4 **VEHICLE PRODUCTION:** The bidder shall submit with the bid a vehicle modification production work plan with the bid that describes the processes used when OEM vehicle flooring is cut out and accessibility modifications made. The production work plan shall include the method of bracing, type of cutting, welding, and attachments, and reinforcements that would ensure proper alignment and construction.

- a) **Reinforcement:** Any modifications to the floor, roof, or sides shall require reinforcement to prevent vibration, drumming, or flexing.
- b) **Exterior Panels:** Shall be sufficiently stiff to prevent vibration, drumming, or flexing while the minivan is in normal operation.
- c) **Structural Securement:** All points of contact between longitudinal or cross members and other structural materials shall be welded, or bolted with minimum grade 5 zinc plated, cadmium plated, or galvanized fasteners.
- d) **Insulation:** The roof and body shall be fully insulated, OEM is acceptable. Add-on insulation shall be glued or affixed in such a manner that no sagging or bunching of material will occur.
- e) **Road Noise:** At 60 mph the ambient noise level shall not exceed 89.5 DB measured from the geometric center of the passenger compartment.
- f) **Fasteners:** All metal hardware and fasteners shall be non-corrosive high strength steel. Clamps shall be fully insulated to prevent premature wear.

6.5 **MISCELLANEOUS BODY COMPONENTS:**

- a) **Windshield Wipers:** Intermittent with dual jet washers. Multiple speed control.
- b) **Windows:** The windows for the front driver area and rear passenger area shall be OEM, with the darkest factory tint available. All window glass shall meet established State and Federal safety standards for safety and translucency.
- c) **Rear Window Accessories:** The rear window shall have an OEM electric window defogger, wiper and washer.
- d) **Paint:** The basic vehicle factory color shall be OEM standard white, with other OEM factory colors to be made available upon request. Vehicle colors with the exception of white are subject to Contractor availability. Chip guard paint (same color as body) shall be standard. The reference point (for the top) shall be from a point 3 inches above the bottom of an unmodified sliding door. The chip guard shall be applied from this point to the bottom of the rocker panel, and shall extend from the rear of the front wheel opening to the front of the rear wheel opening.

- e) Transit Striping: Transit stripe, 3 inch width, will be installed on each side of the vehicle. Colors available at a minimum shall be: white, red, orange, yellow, green, light blue, and blue. Reference: Stripe shall be 3 M reflective tape series 680, or approved equal. This stripe shall be white if user does not choose another color. This stripe will be installed below the door handles, and will run from the trailing edge of the headlights to the leading edge of the taillights. See Drawing "A" Page 19.
- f) Rear View Mirror: An interior rear-view OEM mirror with a night driving adjustment shall be installed to afford the driver a view of all passengers.
- g) Side View Mirrors: Each minivan shall be equipped with OEM exterior left and right side mirrors, the largest available, containing a convex/wide view mirror on the right side. Mirrors shall have electric adjustment capability.
- h) Sun Visors: Two OEM fully adjustable sun visors shall be provided.
- i) Sealant, Rust proofing and Undercoating: All exposed floor attachment seams shall be sealed with a high rated butyl caulk. The entire surface of exterior lowered floor shall have a rust inhibiting coating, such as an epoxy primer base, applied to cover all welded areas, and then a fresh application of undercoating over the entire surface. Undercoating shall comply with current federal and state flammability standards.

6.6 PASSENGER DOORS AND STEPWELLS: The minivan shall have standard OEM driver and passenger front doors; one manual right side mobility aid accessible rear passenger door, with a minimum opening height of 56", a minimum usable width that will accommodate the ramp platform without causing the ramp to contact the door, and the opening bottom shall be a minimum of 9" above the ground. Door extensions shall be constructed of stainless steel. Both sliding doors shall have a locking mechanism to securely hold doors in open position when vehicle is on a hill.

- a) Passenger Door Tracks: Sliding doors must have reinforced glides with an added stop brace to prevent doors from sliding off track. Door tracks shall be reinforced or strengthened beyond OEM standards as needed in all areas of contact with sliding door arms.
- b) Sliding Passenger Door Arms/Brackets: Reinforcement of the sliding door components shall at a minimum be adequate to support the excess weight created by the floor and door extensions. Under normal closure conditions, there should be no evidence of door track "flexing" or wobbling.
- c) Sliding Doors Closure: The minivan sliding passenger doors shall pass the "one hand" close test, whereby the sliding doors shall be closed and latched by pulling the door handle with one hand. Full instructions shall be provided on the proper maintenance and periodic adjustment of the sliding door(s).
- d) Locks: OEM Remote Keyless entry shall be provided. All access doors shall have power locks with driver single control capability in the interior.

- e) Sliding Left Passenger Door: An OEM-built second sliding door shall be provided on the rear passenger left side of the vehicle. Second stage manufacturer-built sliding doors are not acceptable for this specification. Door height opening shall be a minimum of 52". Door width shall be as provided by the OEM. Door shall be equipped with an interlock system so that door cannot be opened from the inside or outside when fuel door is open.
- f) Rear Door Emergency Exit: The rear cargo door shall be provided with a quick release, manual override for opening the door from inside the vehicle. The vehicle override device shall be mounted on the inside of the rear door to prevent accidental release. The handle shall be coated with a florescent yellow, or bright red, for easy identification, and a permanent label with minimum 1/2" letters shall attached near the handle with opening instructions.
- g) Signage: All emergency exits and signs shall comply with the Federal Motor Vehicle Safety Regulations, the California Motor Vehicle Code, and California Code of Regulations Title 13.

6.7 INTERIOR PANELS: All interior panels shall be OEM vinyl/cloth or equal. Materials and treatments shall be flame retardant to meet FMVSS 571.302 and be surface treated for efficient cleaning. Panel fastening devices shall match the color of the panels.

6.8 INTERIOR COLOR: The interior shall provide a pleasant atmosphere, be aesthetically pleasing, and contain smooth finishes without any unprotected sharp edges. The basic vehicle interior shall be a dark blue/gray, with additional color selections subject to Contractor availability.

6.9 METAL FINISH: The doors and instrument panels shall be painted or otherwise finished with a non-reflective glare finish to match the overall tones of the interior panels, OEM is acceptable.

7.0 FLOORING:

- a) Sub Floor: The interior floor shall be insulated with minimum 3/8" thick marine grade plywood, moisture-proofed, or approved equal, to minimize interior noise. The adhesive used in the production of said plywood must be marine quality.
- b) Floor Pan: The floor pan shall be a minimum #16 gauge stainless steel., with rust inhibiting epoxy primer or equivalent covering the weld joints. The vehicle floor and related components must be structurally sufficient to meet the requirements of FMVSS 207 and 210 for all seating systems and belt anchorages as well as SAE J2249 for the mobility aid restraint system. Said tests must be performed using a representative Floor Pan vehicle structure.(Bench testing of OEM seats, if modified, that utilize unaltered OEM anchorages may be tested independent of the vehicle.) Testing must be done by an American Association for Laboratory Accreditation, Or equal, accredited facility. Seats that do not utilize OEM floor structure must be tested with replacement floor structure, Above testing can be done with floor structure jig mounted if Vendor can validate that this test will satisfy FMVSS requirements. Submit testing results prior to award. The resulting floor must be

continuous and sealed to provide a watertight interior compartment. The replacement vehicle floor and related components must be corrosion resistant, meeting the requirements for 1000-hr exposure as specified in ASTM B117.

- c) Floor Covering Material: The floor surface shall be covered by a commercial grade transit flooring, 1.8mm Altro (Genome) Transfloor Meta, or approved equal, possessing anti-skid properties. The floor covering color, dark grey or ebony, shall be coordinated with the vehicle interior.
- d) Trip Hazards: All areas of the vehicle interior floor shall be level, with no tripping hazards throughout the access area. Mobility Aid restraint tracks, and seat locks shall be beveled, with no sharp edges and will protrude no more than 1/4" above floor surface.

7.1 SEATS AND GRAB HANDLES

- a) FMVSS Compliance: All seats and restraints in the vehicle as specified must comply with current FMVSS standards, including 201, 202, 207, 208, 209, 210, and 214. Documentation of current model year testing and seats as specified within shall be provided prior to award. Testing by an American Association for Laboratory Accreditation, Or equal, accredited test facility of individual components independent of the vehicle will be accepted if done on a representative floor, and vendor can validate that test results meet all FMVSS requirements, and could be duplicated in the production vehicle. Any alterations to OEM seats or mounts that affect these tests must also be tested.
- b) Driver's Seat: Each driver's seat shall be OEM vinyl upholstery or high quality vinyl material (level 3) of not less than 36 oz. per running yard, adjustable forward and back, with vinyl fold up armrests. OEM cloth seat will be available at no extra charge.
- c) Front Passenger Seat: The front passenger seat shall be OEM, matching the driver's seat in design. Seat shall be either vinyl as per drivers seat or OEM cloth, as agency chooses. The seat base shall be adapted to permit easy roll out for mobility aid access, OEM style is acceptable. The seat shall lock and unlock easily from the floor area, and have a positive lock device with visual indicator that assures securement is in place. This shall be highlighted with Yellow or Red to visually identify the latch as not being secure.
- d) Rear Center Seat: The center seat shall be a two passenger fold up type, reference Freedman MV-Foldaway, or approved equal, without outer leg locking floor latch. Seat shall have US arm fold up armrest, or approved equal, on the right side. Fabric and color shall match OEM, or vinyl as per 7.1 b
- e) Rear Center Seat Pedestal Lock: The rear center seat shall have an automatic lock mechanism built into the seat mounting pedestal to prevent seat flipping up during left side boarding. Lock must be engineered and installed by the seat provider and meet all specified test requirements.
- f) Rear Center Seat Clearance: Fully folded, there shall be a minimum of 47 " of clearance from the outer edge of the folded seat bottom cushion/seat structure to the right sliding

door opening at inside ramp edge (when deployed). This shall be measured by drawing an imaginary vertical line from the edge of the seat at its closest point to the door opening.

- g) Rear Passenger Seat: The rear most passenger seat shall be a bench type seat, capable of comfortably accommodating at least two adult size passengers. OEM type is acceptable and covered with vinyl upholstery to match drivers seat specs, or OEM cloth (as agency chooses).
- h) Seat belts; All seats shall have OEM, or equal 3-point seat belts. Each vehicle shall have two seat belt extenders, one 15" belt extender, and one 9" extender. Seat Belts shall meet or exceed FMVSS 209. Passenger restraints shall be furnished for all passengers, consisting of shoulder seatbelts and/or lap belts. Securement devices, both for ambulatory and mobility aid passengers, shall meet all state and federal standards.
- i) Fabric Protection: All cloth upholstery must be protected with Scotch Guard brand fabric protector.
- j) Federal Safety Standards: All seats and seat mountings that are not OEM shall comply with FMVSS 571.302. Submit prior to award.
- k) Seats shall be available for order by agency choice, at no extra charge, as follows; all seats can be cloth, all vinyl, or driver cloth and all others vinyl. OEM cloth acceptable, or Level 3 vinyl, minimum 36 oz. per running yard.
- l) Grab Handles: Grab handles shall be installed, one on each pillar between the front and side sliding doors, one mounted at the rear of each side sliding door (on the pillar), and one mounted in the interior for the curb side front passenger seat, between the front door and the windshield (5 total grab handles) where already installed, OEM are acceptable. Non OEM grab handles shall be padded with a non-slip surface for comfort and safety and conform to ADA requirements as listed in 49 CFR, Part 38, Subpart B.

7.2 MOBILITY AID SECUREMENTS:

- a) Mobility Aid Security and Occupant Restraint Systems: The securement system shall be Q'Straint Securement System model QRT Q 8300-Max, Surelock Titan, or approved equal. These will be by agency choice. Retractors MUST be AUTOMATIC SELF-LOCKING and SELF-TENSIONING. The system(s) shall be flanged "L" continuous track mounted type, capable of securing a variety of common mobility aid designs and accommodate a wide range of occupant sizes. The Contractor shall provide detailed instructions for mobility aid placement, tie-down belt operation, etc. Each vehicle shall come with two retractable tie-down systems.
- b) Mobility Aid Securement and Occupant Restraint System(s): All attachment hardware and anchorages, shall meet or exceed the following requirements:
 - * 30 mph/20 Impact Test criteria per SAE J2249
 - * 36 CFR Part 1192 and CFR Part 38 (ADA)

- * All applicable FMVSS, as amended
- * California Code of Regulations, Title 13

- c) Mobility Aid Securement System: Each vehicle shall be equipped with the number of securement systems as required in Section 1.1 of this specification.
- d) Track Mounting: The system anchorages and/or "L" track shall be mounted to the vehicle floor in accordance with the requirements of the system manufacturer. A copy of the manufacturers installation instructions must be provided to California Department of Transportation (Caltrans) prior to award.
- e) Track Installation: As standard, the vehicle shall be equipped with laterally oriented mobility aid restraint track. A longitudinally oriented track system is also desired, but not required, at no extra cost if available (agency choice) Track shall include end caps. Floor plans illustrating locations of both systems must be available for review and approval prior to the bid award. Both floor plans must comply with requirements as described in "i)" below. See drawing "B", Page 19, for current layout.
- f) Occupant Restraint System: For each mobility aid securement system set installed in the vehicle, a corresponding Occupant Restraint System shall also be provided. The Occupant Restraint System shall consist of adjustable lap (pelvic) belt and a shoulder (upper torso) belt, and shall meet all applicable Federal Motor Vehicle Safety Standards (FMVSS), as amended
- g) Belt Web Cutter: A high quality web cutter, for emergency use, shall be provided with each vehicle, along with instructions for use.
- h) Storage Containers: The Contractor shall furnish and permanently install a container within the rear cargo area behind the rear seat to store First Aid Kit and Reflective Triangles. A container shall also be constructed to store tie downs. Caltrans must approve final designs and placement.
- i) Mobility aid and Passenger Placement: The bidder shall furnish drawings of proposed seating arrangements, including spaces for two (2) mobility aid positions, with one minimum clear area of 30" by 48". The bidder must indicate sufficient space for placing/boarding two mobility aids, one position in the rear passenger area and one position in the front passenger area. At a minimum, the securement location(s) and area(s) shall meet all applicable ADA requirements.

7.3 MOBILITY AID RAMP: The vehicle shall be equipped with a manually operated, folding, mobility access ramp which folds and unfolds through the right side door. The ramp must also swing out of the doorway about a nominally vertical axis providing clear access for ambulatory passengers. Ramp and all components shall leave a clear path to and from the rear and center seats with no trip hazards. Bidders shall provide illustrations of their ramp construction, which must be built to withstand heavy transit use. This ramp shall comply with ADA, 49 CFR Section 38.23(c) and 38.25(b). The fold and unfold motion of the ramp must be counterbalanced so that the force exerted by the operator does not exceed 15 lbs. damped

so that, in the event the ramp is allowed to free fall, no point along the ramp length shall move faster than 18 inch/second.

- a) **Obstruction:** The installed ramp shall not obstruct the view of the driver through any vehicle window.
- b) **Usable Width:** The ramp shall have a minimum usable width of 30" and a slope meeting the requirements of ADA, 49 CFR, Section 38.23(c) Vehicle Ramp (5) Slope.
- c) **Tensioning Device:** The ramp shall have an adjustable tensioning device installed that prevents rattling of the ramp while folded up inside the vehicle, during driving.
- d) **Mechanism:** Both handle and cable or pull mechanism that releases ramp for swing away operation must be reinforced for transit use. Handle must be highlighted with florescent coloring for easy identification.
- e) **Hardware and Ramp Bracket:** The ramp bracket shall be constructed of heavy gauge steel, reinforced to prevent bending and covered with an illumination type paint or coating for easy visibility while boarding. The bracket shall be as streamlined as possible and shall have a cover to remove sharp edges. Self-lubricating bearings will be used where necessary. The ramp bracket attaching hardware shall be a minimum of grade 5, and shall be self-locking type to prevent loosening.

7.5 MISCELLANEOUS RAMP:

- a) **Ramp Surface:** The ramp surface shall be continuous and made skid resistant through an epoxy/powder coating or similar permanent application, have no protrusions from the surface greater than 1/4" and shall accommodate both four-wheel and three-wheel mobility aids.
- b) **Ramp Load:** The ramp shall support a load of 750 lbs., placed halfway up the ramp distributed over an area of 26" by 26", with a safety factor of at least three (3) based on the ultimate strength of the material.
- c) **Ramp Visibility:** An outline of 1" safety approved reflective tape, 3M or equivalent, shall run along both sides of the ramp and the outer and inner edge for increased visibility. Reflective yellow or white is required.

7.6 **VEHICLE PREPARATION:** Upon final delivery, a copy of the weight certificate and wheel alignment shall be provided for the Caltrans inspector's review. The vehicle(s) will be washed externally and cleaned internally, in a professional manner. Vehicles with road dust and mud, dirty carpets and floor, streaked and smudged windows, etc. will not be accepted at the delivery site unless the Contractor offers compensation for the cleaning service and the recipient agrees.

7.7 **CALIFORNIA EMISSIONS:** Vehicle engine and fuel system must have Certified California Emissions; Documentation must be provided prior to award.

- 7.8 SAFETY EQUIPMENT: All safety equipment shall be OSHA and Title 13 compliant, clearly marked, installed and secured to the vehicle, and must be easily accessible to the driver. Installation shall not interfere with passenger or driver boarding or de-boarding.
- a) First Aid Kit: A minimum 10-unit first-aid kit shall be furnished and mounted in the rear storage container that meets the requirements of the California Code of Regulations, Title 13 Section 1243.
 - b) Fire Extinguisher: One metal or plastic constructed California Highway Patrol approved minimum 2.5 lb. 4BC fire extinguisher shall be provided, containing a gauge to indicate the state of charge and an automotive-type bracket with easy release strap for storage/securement. Extinguisher shall be mounted in the rear storage area of the vehicle.
 - c) Reflective Triangles: One set of three triangle warning devices, in a container, meeting the requirements of FMVSS 571.125 and approved by the California Highway Patrol.
 - d) Dash Warning Light: A red, flashing, heavy duty warning light, minimum 1" in diameter, will be installed on the driver's side dash panel, in an area clearly noticeable to the driver in a seated position, and activated when right or left sliding door are open or ajar and the ignition switch on. Light lens or trimming shall be clearly lettered, "door ajar".
 - e) Yellow Safety Tape or Coating: Accessibility features that impair vehicle boarding, or improve operator visibility, such as interior folding ramp pivot hinge, or center folding seat base, shall be covered with a yellow tape or coating to provide contrast.
 - f) Backup Alarm: A heavy-duty, weatherproofed warning alarm, ECCO #530 or 575, or approved equal, shall be provided that is readily audible from the outside when the transmission is in reverse.
 - g) Air Bags: Front airbags shall be installed and equipped for the model specified by the OEM, and will meet all Federal and State Safety Standards.
 - h) Rear Cargo Restraint: The rear cargo area will have web like nylon/elastic netting to secure objects.
 - i) Control Interlock: The curbside sliding door shall be interlocked with the vehicle emergency brakes and transmission to ensure the vehicle cannot be moved when the curbside slide door is open. The interlock shall be a fully automatic, solid state, microprocessor-controlled unit (Ref. Intermotive ILIS 602G) or approved equal capable of Control Interlock self-diagnosis. Interlock shall utilize an LED display panel to show subsystem status. Interlock must prevent driving the vehicle with parking brake left on. Interlock must meet ADA Title 49 Lift Interlock requirements. An Intermotive, or approved equal, PCOM shall be installed to prevent starting the vehicle in Neutral.
- 7.9 TRAINING VIDEO: Upon vehicle delivery, the successful bidder shall provide each recipient agency with a professionally made, technical training video. The video shall be no more than

30 minutes. Video shall be provided to Caltrans for review one week before preproduction meeting for approval. (see 7.9 c)

- a) Video Scope: The video shall review proper functional use of the vehicle, accessories, and options, including, but not limited to, proper techniques for deploying ramp, mobility aid securement, opening/closing and maintenance of sliding doors, operation of folding seat, etc.
- b) Warranty Coverage: The video shall cover vendor warranty procedures, both chassis and conversion. Conversion warranty locations, contacts, and telephone numbers shall be identified.
- c) Video Script, Draft and Approval: One month prior to the preproduction meeting, a video script shall be drafted and submitted to Caltrans for approval. Once approved, a video draft shall be filmed and approved by Caltrans prior to final production.

8.0 PUBLICATIONS AND PRINTED MATERIALS: Each vehicle will have complete set of operation, quality assurance, and warranty publications.

Operation Manual: A complete operations manual will be provided that covers the conversion features on the vehicle as listed in this specification. The manual will provide complete, comprehensive instructions for the mobility aid accessories, mobility aid ramp deployment, deployment of seats, and related equipment.

Quality Assurance Checklist: A quality assurance checklist will be completed by the Contractor that documents a thorough inspection of each vehicle by a company representative immediately after construction and identifies any needed corrective action for specification compliance.

Warranty Information: Each vehicle will have a published listing of Contractor warranty repair locations, including address, telephone number, contact name. & Location maps.

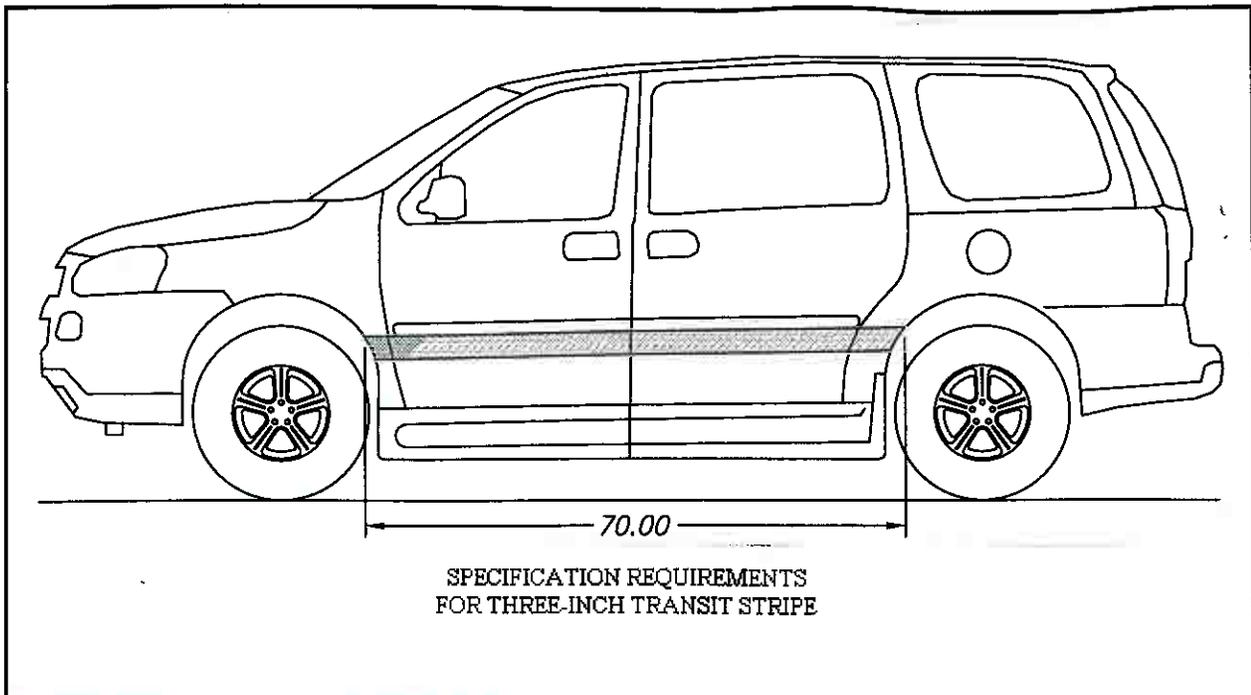
8.1 OPTIONS:

- a) Power sliding curbside door
- b) Portable/removable ramp. This option will result in a credit. Method to secure ramp for transit must be provided prior to award.

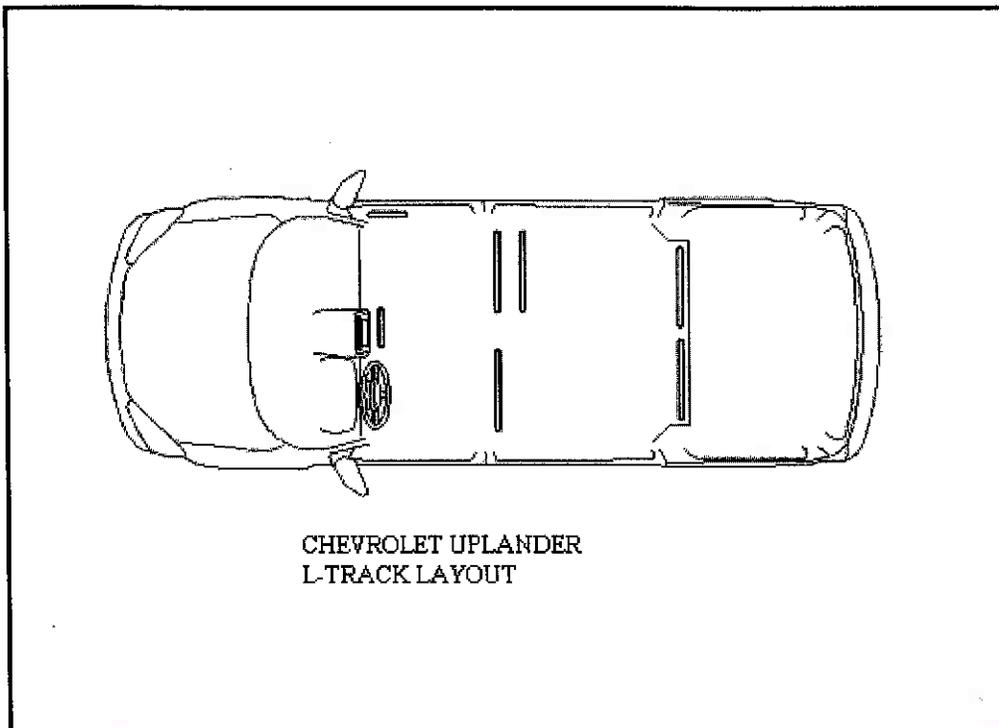
9.1 CONTRACTOR REQUIREMENTS AND NOTES

All requirements in section 10.0, 12.0, and 13.0 of the Type 5 Modified Van Specifications contained in this IFB shall apply to Type 4 Modified Minivan

DRAWING A



DRAWING B



TYPE 5, MODIFIED VAN SPECIFICATION REQUIREMENTS

1.0 Scope: MODIFIED VAN, TYPE V

The modification shall consist of increased interior headroom and clearances and improved passenger accessibility provisions for persons with disabilities. The vans are to be converted in accordance with this specification. No modifications to the van structure that would increase the roof height or modify the copilot door or change the under vehicle wheelchair lift beyond what is contained in these specifications will be allowed. The van shall be a complete, operating vehicle, at a minimum, conform in strength, quality of material and workmanship as provided by the automobile industry. The manufacturer must be ISO 9001:2000 certified for design, sale, manufacture of customized buses and multipurpose passenger vehicles. A copy of the certification must accompany the bid submittals. All parts added, as a part of the modification process shall be new. The basic van must be a current year factory production model that is catalogued by the manufacturer and for which manufacturer's published literature and printed specifications are currently available. This specification is intended for use in the purchase of a complete vehicle unit and all equipment and accessories necessary for its operation. All parts, equipment, and accessories shall be completely installed, assembled and/or adjusted as required. Each unit is to be equipped with a right side wheelchair lift installed in the step area of the double doors under the vehicle floor and incorporate a power step for ambulatory entrance into the van.

2.0 The vehicle shall conform in all respects to the following standards, law and regulations:

- Federal Motor Vehicle Safety Standards (FMVSS)
- Code of Federal Regulations, Title 49, Chapter V-National Safety Bureau
- California Code of Regulations (CCR), Title 13
- Americans With Disabilities Act (ADA) Accessibility Specifications for transportation Vehicles, 49 CFR, Part 38, Subpart B-Buses, Vans and Systems
- State of California Vehicle Code
- California Health and Safety Code
- California Air Resources Board Regulations
- OEM Body Builders Book

3.0 SPECIFICATION REQUIREMENTS

Basic Van: The production vehicle shall be a current Model Year, E350, Extended Super Duty single rear wheel Ford Van Chassis, 9400lb minimum GVWR, 138" wheelbase with the following components and/or options:

- a) Chassis shall be heavy duty and the as-built, fully loaded Gross Vehicle Weight cannot exceed the Original Equipment Manufacturers (OEM) GVWR. In no case shall the vehicle

- k) Each chassis shall be equipped with front and rear, heavy-duty, double-acting gas filled shock absorbers, the highest rating available from the OEM.
- l) Each vehicle shall be equipped with OEM power-assisted steering and power 4 wheel disc brakes. Steering shall incorporate an OEM factory installed tilt wheel and cruise control.
- m) Each vehicle shall be equipped with five matching steel-disc wheels.
- n) Five OEM steel-belted radial ply tires of equal size and rating. The combined load rating of the tires shall equal or exceed the GVWR of the vehicle. The spare tire shall be tied down inside the vehicle for shipping.
- o) Fuel tank shall be a minimum 30-gallon and, any chassis fuel system modifications shall be fully compliant with California Air Resources Board standards, and EPA requirements. Documentation from tank manufacturer shall be submitted with the Bid.
- p) Instrument panel shall have lamps sufficient to illuminate all instruments. All instruments shall be accessible for maintenance and repair and shall be mounted so that each instrument and all indicator lights are clearly visible to the driver. Lights in lieu of the listed gauges will not be acceptable. Each vehicle instrument panel shall be equipped with at least the following:
- Ammeter or voltmeter
 - Oil pressure gauge
 - Fuel capacity gauge
 - Engine temperature gauge
 - Speedometer
 - Emergency brake warning light
- q) Back-up warning devise, ECCO #530, 575, or equal, that is readily audible outside each vehicle when the transmission is in reverse. The warning devise shall be mounted in the rear of each vehicle.
- r) Rear Obstacle Detection: Intermotive, Hawkeye Reverse Assistance System, or approved equal, rear obstacle detection system integrated into the OEM rear bumper (three-stage variable tone) per manufacturers recommendations.
- s) An OEM AM/FM/CD radio with four speakers, two speakers installed in passenger area.
- t) OEM factory tinted glass in windshield. All passenger windows shall be OEM tinted to the darkest tint available and side windows vented where available from OEM.
- u) Protective metal guard for the driveline shaft shall be provided to prevent a broken shaft from touching the ground or any brake/fuel line and prevent the shaft from contacting the floor of the bus.

- v) Front and rear bumpers shall be OEM standard.
- w) Drivers side running board, minimum 9" deep. Design and installation must secure running board to frame and van floor and must support a 300 lb. load. See section 5.0 for restrictions.
- x) Exhaust shall exit the rear of the vehicle, street side, and be stainless steel. Final design subject to Caltrans approval at preproduction meeting.
- y) Vehicle will be equipped with OEM daytime running lights.

4.0 ELECTRICAL REQUIREMENTS

- a) Wiring and Switches: All switches and wiring circuits shall be protected with either fuses or circuit breakers. All fuses and circuit breakers shall be labeled for identification and installed in one central location with a cover (metal or plastic). This location shall be selected and designed to provide protection of all electrical components from any damage/shorting that could be caused by damage to the cover/electrical box such as may occur with impact from a wheel chair, etc. This cover shall be durable, and designed for such impacts if installed in an area likely to be contacted during loading/unloading of passengers. The OEM chassis electrical protection may not be altered or modified in any way. All contractor-installed switches shall be of heavy-duty design. No switches, or other electrical devices, are to be installed on the engine cover and no electrical, stationary or mechanical device may block the removal of the engine cover inside the van. There shall be no exposed wiring inside the vehicle. All wiring must meet SAE standards. All electrical wiring shall be automotive stranded and sufficient size to carry the required current without excessive voltage drop and shall be color, number and function coded at a minimum of eighteen (18) inch intervals. All wiring shall be run inside the body in a protected area. All wiring shall be in a loom and securely clipped for maximum protection. Clips shall be rubber or plastic coated to prevent them from cutting the wiring insulation. Wiring that must be routed under the vehicle, as close to the chassis frame rails as possible, shall be attached to the sub-floor with rubber or plastic coated P clamps every 12 inches and shall not be bundled with hoses. All connections with 3 to 12 circuits shall be environmentally sealed high impact plastic connectors with pull apart locking tabs. All connections containing one or two circuits shall be made with Posi-Lock connectors. No butt connectors will be allowed. Plastic wire ties are not acceptable. An additional ground shall be added between the engine and frame, zero (0) gauge. All grounds shall have the connection properly prepared and then sealed with dielectric grease.
- b) Battery capacity must equal the largest available from the OEM. If a diesel engine is chosen, a pullout tray with battery hold down secured by bolts, or other Caltrans accepted design, shall be provided. The pullout tray shall be easy sliding and be supported with ball bearing roller supported slides, all of which have the capacity to adequately support the weight of the battery equipment. The battery slide tray shall allow sufficient movement to allow the batteries to be serviced outside of the bus body. A support arm will be mounted to keep the access door open while servicing the batteries. The battery compartment shall be totally enclosed and shall be vented. The battery tray shall have a positive latch and the

hinged door shall have a locking latch. The outside of the enclosure and door shall be painted to match the OEM color. The battery compartment or enclosure shall be vented and self-draining. It shall be accessible only from outside the bus. All components within the battery compartment, and the compartment itself, shall be protected from damage or corrosion from the electrolyte and gases emitted by the battery. The inside surface of the battery compartment's access door shall be electrically insulated to prevent terminals from shorting if a battery comes loose, or the door is damaged (such as in an accident).

- c) Largest OEM alternator available shall be provided.
- d) A fast idle system equal to Intermotive Gateway shall be installed. The fast idle must be able to automatically increase the engine speed to 1,500 RPM. The fast idle shall engage only when the vehicle is in park and the vehicle is not in motion (must sense vehicle movement) and activate when vehicle voltage drops below 11.5V. A manual override switch located convenient to the driver to engage the system when the vehicle is in park and vehicle is not in motion, as described above.
- e) All electric wiring passing through the body metal shall have anti-chafing grommets.
- f) A complete "as built" electrical wiring diagram covering all electrical equipment and electrical circuits installed, complete with wiring codes for each Vehicle ordered. A sample shall be provided for review prior to award.

5.0 BODY MODIFICATIONS

- a) Frame Alteration/ Welding: All work must comply with OEM requirements, and have no welds or holes, as a result of the modification, in the frame flanges or within one and one quarter inches of the top of the top flange or the bottom of the bottom flange on the web or radius of the frame.
- b) All modifications shall comply with the FMVSS. The vendors must be certified by the National Traffic Safety Administration to manufacture or alter vehicles in accordance with the Code of Federal Regulations, Title 49, Parts 567-568. The raised roof must be a one-piece aerodynamic design fiberglass raised roof. The roof must be securely fastened to the basic vehicle structure to become an integral part of the basic chassis. The new roof must be completely sealed with an antifungal sealant and offer an interior center aisle height of not less than 60 inches and a maximum of 62 inches. Maximum exterior roof raise shall not exceed 18". The roof shall contain a collapse-resistant steel rollover cage. The steel frame must consist of 1" X 1" tubular steel and have no less than five (5) horizontal stringers and two (2) longitudinal members. The doorframe for the extended passenger entry doors shall be an integral part of the extended roof. The bidder shall submit with the bid a vehicle modification production work plan with the bid that describes the processes used when OEM vehicle flooring is cut out and accessibility modifications made. The production work plan shall include the method of bracing, type of cutting, welding, and attachments, and reinforcements that would ensure proper alignment and construction.
- c) In no case shall sealing of alterations be dependent on caulking alone.

- d) The roof shall include longitudinal molded channels to divert moisture runoff from the side passenger entry doors and the driver's entry door. The drip rail must extend 2" over the center of the double doors and taper to 1" over the hinge side of each door. Drip edge/rail, over side doors shall be stainless steel. The roof shall be constructed of reinforced fiberglass or approved equal.
- e) No water leaks shall be acceptable. Testing shall be done by use of a spray booth with nozzles appropriately placed to apply a minimum of 20 psi of water pressure to roof and all doors at edges/weather sealed areas.
- f) The interior of the roof shall be a smooth finished one-piece seamless fiberglass liner, not less than 1/16 inch in thickness.
- g) The roof construction shall be of sufficient strength to prevent vibration, drumming or flexing. The roof is to be designed to prevent pooling of water on the roof.
- h) The entire unit shall be adequately reinforced and shall meet requirements of FMVSS 220, School Bus Rollover Protection. A current certification must be furnished with the bid. The test results shall not be more than two (2) years old on the production model bid unless the structure has not been significantly modified as defined by 49 CFR 665.
- i) Interior Paneling: All interior walls shall be paneled using OEM ABS plastic or approved equal, including doors. All panels shall be the same color and coordinated with the interior colors of the vehicle. All interior panels shall be flame retardant and have all open areas sealed.
- j) The vehicle body shall be fully insulated in the roof and all body panels to deaden sound and reduce vibration and heat transfers. Equivalent to 1.5" fiberglass insulation shall be used in the top, sidewalls of the top, and the vehicle walls. Insulation shall comply with all federal requirements and shall pass the testing requirements specified in the Federal Transit Administration (FTA) Recommended Fire Safety Practices for Transit Bus and Van Materials Selection. Road Noise: At 60 MPH the ambient noise level shall not exceed 89.5 DB measured from the geometric center of the passenger compartment.
- k) Interior paneling components shall have material installed, as necessary, to prevent and reduce rattles caused by movement. (Example: If a panel makes noise that can be stopped or reduced by placing a hand against it, then it shall have added noise preventative materials, such as rubber material between noise causing components.) This shall be at Caltrans discretion.

6.0 SEATING: Seating shall include Cloth or vinyl, Buyers choice at no extra cost, two, two passenger folding seats and one two passenger fixed seat behind driver, two single passenger seats on the curb side and a drivers seat as shown on floor plan Page 37. Seating shall be Freedman mid high back seats, or approved equal. All seats shall face forward, no exceptions. All seats shall be 18.0 inches, plus or minus 1/2" as measured from the floor to the top of the bottom cushion. All seats shall have the following minimum requirements:

All passenger seats shall be individual modules Freedman Featherweight, or equal, one or two position bench type modules of not less than 17 inches in width, forward facing and have an individual cushion. All back cushions shall be contoured to provide full lumbar support. Prior to award, the Contractor shall submit a sample of the upholstery and cushion material to the State for approval. The vehicle shall contain the number of seats as detailed above. Seat material shall be compliant with Docket 90-A, FTA Recommended Fire Safety Practices for Transit Bus and Van Materials Selection. The seats shall be High quality vinyl (level 3) minimum 36 oz. Per running yard or cloth fabric shall be a minimum 100,000 double rub woven material, anti-bacterial and anti-microbial gray in color. The seat fabric shall have a moisture repellant treatment that prevents liquids from passing through fabric. All seats shall meet the following minimum requirements:

- a) Meet all applicable FMVSS requirements including FMVSS-207, 210, and 302 for all seats and seat belts to be installed in the bus. Submit test certification with Bid.
- b) Cushion and seat cover shall be of the slipcover type, removable and replaceable without removing the entire seat.
- c) Freedman USR (under seat retractable) seatbelts, OEM Lap and Shoulder belts will be acceptable (where available), or approved equal, shall be provided for all seats. Driver seat to be OEM lap/shoulder belt. Two 24" belt extenders, for use with inboard lap style seat belts, shall be provided with each vehicle. Seat belts shall meet or exceed FMVSS 209.
- d) All exposed metal surfaces shall be powder coated.
- e) All seats shall have not less than 27" hip to knee room spacing between seats. All seats shall have a minimum cushion depth of 17", and a thickness of not less than 2.5".
- f) Aisle seats are to have molded energy absorbing grab handles at the top of each forward facing seat. The handles must be securely attached to a welded seat frame structure. Seats along rear wall do not require grab handles.
- g) A minimum clear aisle of 11 inches.
- h) Folding seats must be equal to Freedman mid/high back, three step folding seat. All aisle seats must have hardware in place in the seat back to install an armrest on the aisle side.
- i) Submittal of FMVSS 207 and 210 tests for all seats installed in the bus bid with the seat belts attached to the seat frame. The test must be conducted with the seats mounted in the vehicle being bid, or a representative floor structure mounted in a jig if vendor can validate that this testing method will satisfy all FMVSS testing requirements, and can be duplicated in vehicle being bid With copies of certification that test facility is accredited. Detailed seat installation instructions and test data must be submitted with the bid.
- j) Driver Seat: OEM Captain chair with OEM material to match passenger-seating appearance. (can be cloth with vinyl passenger seats at buyers request with no extra cost).

The copilot seat is to be replaced by a storage area for the driver and cover for the front mounted wheelchair pump. The storage/cover must be securely fastened to the van and provide storage compartments for the driver to use as well as a recessed flat surface area to mount the first aid kit and fire extinguisher.

7.0 FLOOR

- a) The floor overlay shall have a minimum of 1/2" 5 ply APA certified exterior grade plywood of C-C plug grade securely fastened to the cross sills. All edges to be properly sealed for moisture.
- b) Floor Coverings: The floor surface shall be covered with wall-to-wall slip-resistant minimum 1.8mm Altro Gray (Genome) Transflor Meta. All step edges shall have a band of bright yellow running the full width of each step. This shall include the "top step" (floor edge). This step edge shall be powder coated metal for durability. Highlight shall be a minimum of 2" by the step width. The flooring shall be securely bonded to the sub-floor with a waterproof adhesive. All edges shall be sealed to prevent water penetration. Drivers' area to remain OEM.

7.1 DOORS AND ENTRY STEPS

- a) The OEM dual side doors shall be modified to provide a minimum clear entrance height of 56". The extended portion of the door shall be constructed of 11-gauge steel. The extended doorframe shall have vertical members constructed of 16-gauge steel and horizontal members constructed of 11-gauge steel. All members are to be of welded construction. Door extensions shall be painted with a high quality, automotive paint to match the OEM color. Doors must be aligned to maintain the original OEM tolerances and shall not leak water or allow for wind noise at 65 MPH. The doors must be completely sealed with a one-piece construction of the door rubber.
- b) Retractable power steps shall be provided for ambulatory entrance at the side cargo door location. The controls for the power step shall be mounted in the side cargo door for easy access and operation. The bottom step shall be a maximum of 10" from ground level. Additional steps shall not exceed 10" rise. Each step tread shall offer a minimum tread depth of 8" and shall be a minimum of 24" wide. The retractable power steps shall deploy independent of the wheelchair lift and shall be concealed beneath the wheelchair lift in a manner that does not compromise chassis integrity. All steps, including floor edge at step area shall be highlighted in yellow for improved visibility. Highlight shall be a minimum of 2" by width of step, and slip resistant. Door area shall have stanchions, or other barrier that will prevent exiting the side door area unless the user passes through the "threshold warning" protected area, as defined by FMVSS 403. Final design subject to Caltrans approval at pre-production meeting.
- c) The retractable power step shall be interlocked with the vehicle to prohibit operation until the vehicle is in park, the parking brake is depressed, the wheelchair lift master switch is on, and the entrance doors are open. The step shall be interfaced with the wheelchair lift so

it cannot be deployed when the wheelchair lift is not in the stowed position. The power step assembly may be operated manually in case of power failure.

- d) The power step must be enclosed to prevent damage and designed to blend the step enclosure with the OEM body structure.

8.0 PAINT AND TRIM

- a) All painted exterior surfaces shall match the exterior paint color of the basic van. The exterior paint shall be OEM white. The extended roof shall be painted with the OEM body color. All signs required by State and federal law shall be affixed to each vehicle exterior and interior. No decals or painted identification of bus dealer/manufacturer are to be added to the vehicle.
- b) A 3" Reflective Tape Reference 3M 680 series shall run the full length of each side. Stripe shall be above door handles and below the side windows, centered. This shall be white in color, with other colors available to user at no added charge. Color selection to be made available at time of order. Colors available shall be white, black, blue, light blue, green, and orange, red. Contractor may make other colors available at no charge. See Drawing D, Depicted on page 38.

- 8.1 UNDERCOATING: Replacement of OEM undercoating for any area of the van that, during modification, the OEM undercoat protection has been modified or removed.

8.2 AIR CONDITIONING AND HEATING

- a) AIR CONDITIONING: Highest output available from OEM Front and Pro Air Model 935 or equal floor mounted in rear. Minimum rating for rear A/C is 32,000 BTU. The A/C system shall be ducted with adjustable vents for direction and flow control to provide even cooling throughout the van
- b) Any refrigerant lines that run through a wheel well must be hard plumbed. Hoses will not be accepted in wheel wells. All hoses and lines must be reasonably protected from damage from road debris, tire failure, etc. Final evaluation/acceptance will be at Caltrans discretion.
- c) HEATER Highest output available from OEM and Pro Air 32,000 BTU rear. The heating system shall be ducted as in 8.2 (a) no hoses will be accepted in wheel wells. See 8.2 (b) AC, heater "hoses" will comply with same requirements as refrigerant lines.

8.3 WHEELCHAIR LIFT

- a) The lift shall be a cartridge style Braun UVL NUVL 855CFST, or approved equal, mounted under the van. The vehicle body raise shall not exceed 1/2" to complete this installation. Lifts mounted below chassis main rail underside will not be accepted. The lift must be fully automatic and meet the requirements of ADA, and FMVSS. Additional lift

manufacturers that meet the specifications and performance of the reference brand will be considered and must be identified and approved prior to bid opening.

- b) **Mounting of the Wheelchair Lift Assembly:** The wheelchair lift shall be installed in accordance with the lift manufacturer's recommendations and requirements.
- c) **Control Station:** The wheelchair lift system shall have one control station capable of controlling all lift functions. The control switches on the lift control station shall have clear, legible, permanently attached labels identifying their function. Decals will not be allowed. The control station should be conveniently mounted to the entry door with stainless steel bracket and within easy reach of wheelchair lift operator. Lift control cord shall be the coiled type.
- d) The lift electrical system shall be protected by a heavy-duty circuit breaker installed per manufacturers instructions with master control switch located near the driver and clearly labeled with indicator light.
- e) The lift power switch on the pump housing shall be located or protected from accident damage, such as impact during wheel chair loading. Unprotected switches that face the rear of the vehicle will not be accepted. Switches that face the curbside of the vehicle, such as on the pump housing facing the "B" pillar will be accepted without added protective devices (for impact protection). The pump housing and related equipment must be designed to minimize noise/rattles during normal driving conditions. If noise/rattles can be reduced by holding the cover/placing a hand on it during normal driving then added anti rattle material/securement shall be installed.

8.4 **CONTROL INTERLOCK:** The interlock shall be fully automatic InterMotive ILIS or approved equal. Interlock shall be solid state, microprocessor-controlled unit capable of self-diagnosis. Interlock must prevent driving the vehicle with parking brake left on. Interlock must meet ADA Title 49 Lift Interlock requirements. A fully automatic Intermotive PCOM, or equivalent, shall be installed (to prevent starting the vehicle in neutral).

9.0 **WHEELCHAIR SECURITY AND OCCUPANT RESTRAINT SYSTEMS:**

Each vehicle shall be equipped with two forward facing wheelchair securement and occupant restraint systems. The systems shall be capable of securing a variety of common wheelchair designs and accommodate a wide range of occupant sizes. As standard, the spacing of the L track must be maximized to assist with securement and installed laterally as shown on Drawing C, Page 37. A longitudinally oriented track system shall also be available for the rear position, at no extra charge. Floor plans illustrating both systems must be provided prior to award. The final track spacing will be determined at the preproduction meeting. Dedicated wheelchair positions shall have a 12" grab handle placed on the street sidewall. The grab handle is to be made of 1.25" 304 stainless steel with radius at each end and securely attached below window. All attachment hardware and anchorages, shall meet or exceed the following requirements:

- 30 mph/20 G Impact Test criteria per SAE J2249
- 36 CFR Part 1192 and 49 CFR Part 38 and 571 (ADA)

- All applicable FMVSS, as amended
 - California Code of Regulations, Title 13
- a) Each securement system shall consist of four (4) retractor assemblies, automatic self-locking and self-tensioning. Retractors will not depend on knobs for tension or any interaction of attendee. Retractor assemblies attach to the structural frame of the wheelchair at four separate points, and anchor into flanged L track. The securement system shall be Q'Straint Securement System QRT Q 8300 Max series retractors, Surelok Titan or approved equal (at buyers option). For each wheelchair securement system installed in the vehicle, a corresponding occupant restraint system shall also be provided. The occupant restraint system shall consist of adjustable lap (pelvic) belt and a shoulder (upper torso) belt and provided with a shoulder belt height adjustment and be retractable.
 - b) The securement system shall be mounted in flanged L track with end caps on track that does not extend to sidewalls. The L track shall be the same manufacturer of the securement system. The system anchorages and/or track shall be recessed and attached with flush screws in accordance with the requirements of the system manufacturer. A copy of the manufactures installation instructions must be available to Caltrans upon request. Any deviation of track installation will require written approval from securement manufacturer that the installation will not alter required pull testing.
 - c) A training video on proper use of the system must be supplied with every vehicle.

10.0 SECUREMENT/RESTRAINT SYSTEM ACCESSORIES

- a) High Quality web cutter for emergency use shall be provided with each vehicle.
- b) One torso pad approximately 8" X 12" with Thickness of approximately 1", and belt shall be supplied to secure wheelchair users while riding the on the wheelchair lift.
- c) Storage Container: A Freedman Tie Down Storage System (T.D.S.S.) shall be provided for the position under the folding seats, and a storage box, durable in design, subject to Caltrans approval, for the permanent position shall be permanently installed. This shall be located under the rear 2 passenger fixed seat.

10.1 ADDITIONAL SAFETY EQUIPMENT: The following shall be furnished and installed in each unit. The mounting of any of the following items shall not interfere with passenger entry or exit:

- a) One 5-pound ABC fire extinguisher conveniently mounted.
- b) A 16-unit First Aid Kit meeting the minimum requirements of California Code of Regulations, Title 13, Section 1243.
- c) Three bi-directional emergency reflective triangles that conform to the requirements of FMVSS No. 125.

d) Sufficient interior lighting to illuminate the driver and passenger entry area and the interior aisle. The switch for these lamps shall be mounted in the dash and clearly labeled.

11.0 PUBLICATIONS AND PRINTED MATERIALS: Each vehicle will have a complete set of operation, quality assurance, and warranty publications. The information shall be organized in a three ring binder format with each section clearly identified. A draft copy must be available for Caltrans review and acceptance at the pre-production meeting. The following shall be provided at time of delivery:

a) Operation Manual: A complete operations manual and troubleshooting guide with a detailed manufacturers parts list will be provided that covers the conversion features on the vehicle as listed in this specification. The manual will provide complete, comprehensive instructions for the wheelchair accessories, wheelchair lift deployment, deployment of seats, and related equipment

b) A complete schematic diagram of all hydraulic lines and circuits.

c) All manuals for the van accessories and equipment to include wheelchair lift, air-conditioning system, tie downs, seating, heater, etc.

d) Warranty Information: Each vehicle will have a published listing of Contractor warranty repair locations, including address, telephone number, and contact name. Location maps will also be provided.

11.1 TRAINING VIDEO: Upon vehicle delivery, the successful bidder shall provide each recipient agency with a professionally made, technical training video. The video shall review proper functional use of the vehicle, accessories, and options, including, but not limited to, proper techniques for deploying lift, wheelchair securement, opening/closing and maintenance of doors, operation of folding seat, etc.

a) Warranty Coverage: The video shall cover vendor warranty procedures, both chassis and conversion. Conversion warranty locations, contacts, and telephone numbers shall be identified.

b) Video Script, Draft and Approval: One month prior to the preproduction meeting, a video script shall be drafted and submitted to Caltrans for approval. Once approved, a video draft shall be filmed and approved by Caltrans prior to final preproduction. The video shall be no more than 30 minutes.

11.2 OPTIONS-Provide a price for the following options

a) Roof Vents: Equal to Transpec Model 1000 series six way adjustable

b) Energy absorbing Romeo Rim (or approved equal) energy absorbing bumper

Front _____

Rear _____

- c) Diesel engine 6.0L (with dual alternators) with five speed automatic transmission.
- d) 6.8L V10 with five speed automatic transmission

12.0 CONTRACTOR REQUIREMENTS & NOTES

WARRANTY: The warranty of each unit shall include the chassis, engine, drive train, modifications, etc., and shall be equal to the current OEM standard warranty and shall start on the date of acceptance. The Contractor will coordinate warranty issues during the standard warranty period for all OEM and conversion manufacturer products.

Each contractor shall describe his/her policy and procedures concerning warranties, both on workmanship and material, as applying to this equipment, and the contractor's/manufacture's method of adjustment. The final stage manufacturer and or Contractor shall assume the responsibility and warranty for all materials and accessories used in the vehicles, whether they are made by the manufacturer or purchased from an outside source for a minimum warranty of three (3) years or 36,000. A copy of this warranty shall be provided for each unit. The warranty, as well as any recall notifications, shall cover each vehicle of the ultimate purchaser or recipient agency. The California Department of Transportation shall not be considered to be a dealer; however, the Contractor shall provide Caltrans a copy of any recall notice.

Any modification added to the base OEM vehicle that is required to be removed from the vehicle to perform warranty work will be at the cost of the Contractor.

All warranty repairs will be the responsibility of and under the control of the Contractor.

Fleet Defects: A Fleet defect is defined as the failure of identical items covered by the warranty and occurring in the warranty period in a proportion of vehicles delivered under this contract. For the purposes of this bid, identical defects occurring in 60% of the vehicles delivered shall be considered a "Fleet Defect". The Contractor shall correct a fleet defect under the warranty provisions. The Contractor then is responsible to perform inspections and take corrective action for all vehicles that incorporate the item having been found to be a "Fleet Defect". This inspection/repair action shall also be required on any vehicle that is no longer under the standard warranty if it still meets the time OR mileage requirements of the warranty.

SERVICE WARRANTY: Any recognized service or warranty work required, which is performed by the Contractor, under the Contractor's or manufacturer's warranty shall be at a location within the state and will be the responsibility of and paid for by the Contractor. This location must be within two (2) hours travel time of the recipient's location or the Contractor must provide warranty work certification to a local shop capable of performing the work.

PARTS: An adequate stock of repair parts and qualified service facilities must be readily available in California, and must be available and delivered to the transportation providers repair shop within 72 hours of the time requested/ordered from the Contractor.

The Contractor will bear all reasonable financial costs for providing backup service from alternative sources, for failure to provide repair parts within the 72-hour time limit; and will bear all such costs until the parts are received. Freight and transportation for the parts is the responsibility of the Contractor and use of overnight delivery is required when the bus is put out of service due to the needed parts. If overnight delivery is not available the part must be sent by the fastest method available and at a minimum using UPS Ground Trac.

INSPECTION: The intent of this inspection is to resolve as many discrepancies, as possible, on the equipment and allow the manufacturer the opportunity to correct the discrepancies while the equipment is still in the manufacturer's plant and before shipment to California. The cost of these inspections will be paid by the agency identified on the purchase order. This inspection in itself will not constitute acceptance of the vehicle. Final acceptance will be made upon delivery of an acceptable product complying with the specifications at the designated location indicated on the purchase order. Odometer reading cannot exceed 3,500 miles at the time of delivery of completed vehicles to the purchasing agency. There will be a charge of one dollar (\$1.00) per mile for each vehicle with an odometer reading in excess of 3,500 miles payable to the purchasing agency at the time of delivery. Under no circumstances are tow vehicles to be attached to any vehicle.

Upon bid award, a preproduction meeting is required at the manufacturer's facility. The meeting will include at a minimum, representative(s) from the successful manufacturer, dealer and representative(s) from Caltrans. A vehicle built to specification will be available for inspection prior to the start of the meeting. For out-of-state travel the Contractor/manufacturer will pay the travel and per diem expense for the 2 Caltrans representatives to attend the preproduction meetings. Caltrans is to be notified in writing, a minimum of 30 days prior to meeting date. Travel expenses will be paid in accordance with Department of Personnel Administration Regulations: Title 2, California Administrative Code, Chapter 3, Subchapter 1, Article 2.

The Contractor/manufacturer can request additional in-plant inspections during the design and construction of the vehicles, upon award of contract. The Contractor/manufacturer as detailed above must pay all travel costs. Vehicle's inspected out of state at the manufacturer's plant, which do not comply with the specifications, will not be approved for shipment to California. Twenty (20) calendar days will be allowed to correct all deficiencies. Additional inspection trips for compliance will be at the expense of the Contractor at the following rates:

\$50.00 per hour (including travel time) and all expenses (meals, lodging, and cost of transportation).

The above fees may be deducted from the invoice.

SERVICE: Prior to delivery, each vehicle shall be inspected and serviced by the Contractor or by an authorized dealer of the manufacturer in a service shop within California. The service shall include not less than the following:

1. Complete lubrication of chassis, engine and operating mechanisms with manufacturer's recommended grades of lubricants.

2. Check all fluid levels and fill as necessary. This inspection must include engine oil, hydraulic oil, transmission fluid, coolant level and mixture, battery levels, brake fluid, differential oil, washer fluid.
3. Complete wash and detail of the vehicle prior to delivery and inspection.
4. Four wheel alignment and wheels balanced including spare. Wheel alignment must take place after delivery to the Freight On Board (FOB) destination and documentation of alignment must accompany delivery documentation to purchaser. Documentation must be generated by the alignment equipment used; hand written documents will not be accepted. Documentation will include OEM Vin number, before and after alignment readings, and OEM specifications for the alignment, vehicle must meet OEM specifications. This documentation will be made available for review during vehicle inspection.
5. Full tank of fuel at the F.O.B. point.
6. Alignment of headlights.
7. Check to insure proper operation of all accessories, gauges, lights and mechanical and hydraulic features. Particular attention shall be given to door alignment, lift operation, weather-stripping, hardware, paint condition and tagging of cooling system.
8. A copy of the pre-delivery inspection and all subsequent inspections by contract inspectors to be provided to the receiving agency upon delivery.
9. A copy of a certificate from a State (state of final builders location will be accepted for the purpose of Bid review) certified scale showing the unladen weight of the vehicle, with a full fuel tank, as specified must be submitted with the bid.

ACCEPTANCE: Final acceptance will be made upon delivery of acceptable products complying with the specifications at the designated locations in the purchase order and signature of acceptance by the agency listed on the purchase order.

Acceptance of delivery or placement in operation of any equipment shall not release the manufacturer from liability for faulty design, workmanship, or materials appearing even after final payment has been made.

VEHICLE REGISTRATION DOCUMENTS REQUIRED: The Contractor shall register all vehicles. A certification of compliance for vehicle emissions must be supplied at the time of delivery of each unit.

GENERAL: All equipment cataloged as standard for the basic vehicle, unless superseded by these specifications, must be furnished and included in the purchase price of each vehicle.

Complete printed specifications, published literature, and photos, or illustrations of the basic unit or units that the bidder proposes to furnish must be provided prior to Award. Bids will

not be considered if the Contractor's designated F.O.B. delivery destination is other than that stated in the invitation to bid.

Bids will be considered only from a manufacturer having a California representative carrying an adequate supply of repair parts in California. This representative shall have the capability of performing all warranty work in the state of California.

The manufacturer shall provide full and competent engineering services to handle any, and correct all, problems associated with the performance of this equipment. At least one qualified service representative shall be available to render prompt service.

All equipment/options are to be factory installed. If the equipment/options are not available for factory installation, dealer installed equipment/accessories may be acceptable to meet the specifications. Any component added to the vehicle by the dealer must meet manufacturers approved instructions for additions. The bidder is to specify those items that will be dealer installed.

Modifications to the vehicles may be performed by final-stage manufacturers only if National Highway Traffic Safety Administration certifies them and registered to manufacture or alter vehicles in accordance with the Code of Federal Regulations, Title 49, Parts 567-568. In addition, all modifications must be in accordance with the OEM guidelines for building on an incomplete chassis (i.e. Ford's Quality Vehicle Modifiers guidelines and body builder's manual). The vehicle manufacturer must be ISO 9001 certified and a copy of the certifications must be submitted with the bid documents.

Due to the critical nature of this product, the requirements of these regulations and standards will be strictly enforced. It is the Contractor's responsibility to obtain current copies of the regulations for bidding and/or construction purposes.

The Contractor is required to provide certification affixed to each vehicle that each unit meets or exceeds all State and Federal requirements as of the date of manufacture. California Air Research Board (CARB) re-certification must be supplied for any components not supplied with the OEM chassis that effects the fuel or exhaust system. Provide copies prior to award.

The final-stage manufacturer will be required to provide all test data, drawings, etc., relating to the certification of the vehicle as an accessible vehicle. Upon delivery, it shall be the supplier's responsibility to provide any evidence necessary that the product fully meets all requirements of this set of specifications.

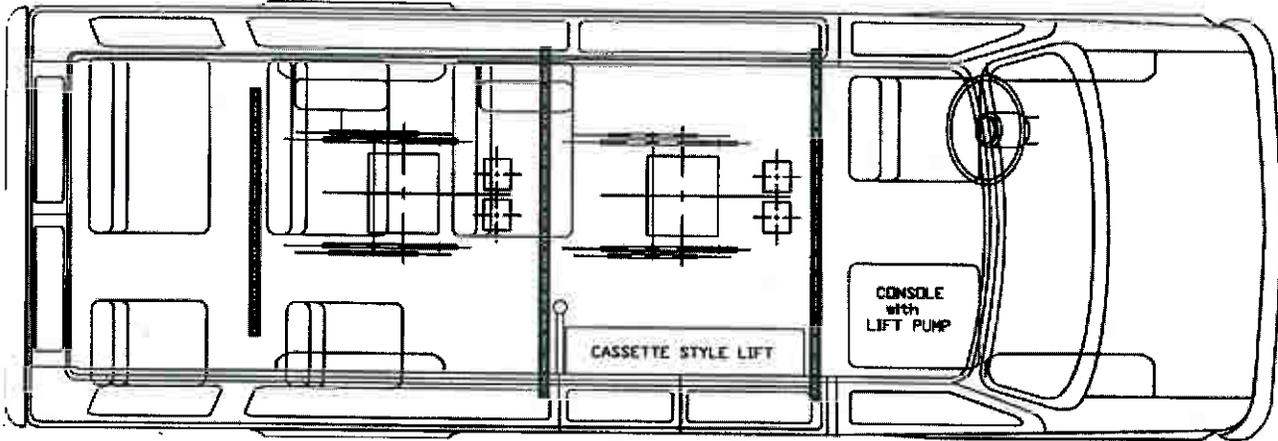
QUALITY OF MATERIALS: Whenever, under the contract documents, it is provided that the Contractor shall furnish materials or manufactured articles or shall do work for which no detailed specifications are set forth, the materials or manufactured article shall be of the best grade in quality and workmanship obtainable in the market from firms of established good reputation.

Welding procedures and materials shall be in accordance with standards of the American Society of Testing Materials and the American Welding Society. All visible welds

shall be ground smooth. Where metal is welded, the contact surface shall be free of scale, spatter, and grease and shall be treated to preclude rusting.

INVOICE PAYMENTS: Manufacturers invoice(s) submitted to the agency identified on the purchase order for payment must include the tax exemption for handicapped equipment (California Revenue and Taxation Code Section 6394.4).

DRAWING C FLOOR PLAN



DRAWING D



13.0 BIDDERS REQUIRED SUBMITTALS

I, _____, of _____ certify that I have read and will comply with all bid materials and requirements as stated in the bid materials. Please initial Next to each item that you have completed, understand, submitted and will comply with the following:

DOT Modified Minivan, Type 4:

To be included with the bid:

- _____ 1) A copy of the Manufacturer's ISO 9001: 2000 Certification
- _____ 2) Vehicle Weight Requirements
 - _____ a) GVWR Certification
 - _____ b) Passenger Load schematic that shows the passenger seat positions
 - _____ c) Unladen Weight certificate from a state certified scale
 - _____ d) Payload Weight detail demonstrating GVWR compliance
 - _____ e) GAWR Compliance
- _____ 3) Replacement Fuel Tank documentation from the tank manufacturer to show compliance with FMVSS standards, CARB and EPA requirements.
- _____ 5) Vehicle Modification Production work plan describing the processes used when OEM vehicle flooring is cut out and modifications made.
- _____ 6) Verification of two years experience

Prior to award:

- _____ 1) Evidence that bidder holds a valid distributor agreement from the bus manufacturer or is the bus manufacturer.
- _____ 2) FMVSS Testing: Documentation showing successful compliance with FMVSS 571 201,202,207,,208,209,210, 214, 216,and 302 standards or OEM "Pass Through" with reasons for OEM "Pass Through") FMVSS Compliance documentation for current model year and seats.
- _____ 3) Certificate of Ca. Emissions compliance
- _____ 4) Floor plans illustrating locations of both laterally oriented track and longitudinally(if available) oriented track systems
- _____ 5) OPTION: Portable/Removable Ramp: Method to secure ramp for transit must be provided prior to award
- _____ 6) Track Mounting; copy of manufacturer's installation instructions.

_____ 7) Documentation that shows how Front Drive Axle Angle Alignment is maintained after lowered floor modification.

_____ 8) Sub Packages-Listing of OEM chassis and packages published by the OEM with listed items.

One month prior to the preproduction meeting:

_____ 1) Video Script drafted and submitted for Caltrans approval. Once approved, a video draft shall be filmed and approved by Caltrans prior to final production. And before first vehicle delivery.

At time of inspection/ delivery (acceptance) of each unit:

_____ 1) A State of California certified weight slip

_____ 2) Documentation of wheel alignment with adjustment data including Vehicle ID number

_____ 3) A schematic diagram of engineering quality indicating color and function of circuit protection

_____ 4) Technical training video

_____ 5) Operation Manual, Quality Assurance Checklist, Warranty Information

_____ 6) Pre-delivery inspection and all subsequent inspections by contract inspectors

_____ 7) Certification of compliance for vehicle emissions

_____ 8) Complete printed specifications, published literature, and photos or illustrations of the units.

_____ 9) Final-stage manufacturer to provide all test data, drawings relating to the certification of the vehicle as an accessible vehicle.

Upon Request:

_____ Any Information That the State Of California deems appropriate.

_____ Continued on page 41 for Type 5

DOT Modified Van, Type 5:

To be included with the bid:

- _____ 1) A copy of the Manufacturer's ISO 9001: 2000 Certification
- _____ 2) a) Weight distribution schematic
_____ b) Loading calculation, Passenger loading schematic, payload weights.
_____ c) Unladen weight certification-A State of California (state of final builders location will be accepted) certified weight slip
- _____ 3) Fuel system modifications – Documentation from Manufacturer to verify compliance with CARB and EPA standards
- _____ 4) Current FMVSS 220, School Bus Rollover Protection Certification The test results shall not be more that two (2) years old on the production model bid unless the structure has not been significantly modified
- _____ 5) Detailed seat installation instructions and FMVSS 207, 210, and 302 test data.
- _____ 6) Verification of two years experience
- _____ 7) Vehicle Modification Production work plan describing the processes used when OEM vehicle flooring is cut out and modifications made.

Prior to award:

- _____ 1) Evidence that bidder holds a valid distributor agreement from the bus manufacturer or is the bus manufacturer.
- _____ 2) California Air Research Board (CARB) re-certification for any components not supplied with the OEM chassis that effects the fuel or exhaust system. Certification that vehicle meets all applicable emissions requirements.
- _____ 3) Floor plans illustrating locations of both laterally oriented track and longitudinally oriented track systems.
- _____ 4) Sample of the upholstery and cushion material.
- _____ 5) A complete "as built" electrical wiring diagram.

One month prior to the preproduction meeting:

- _____ 1) Video Script drafted and submitted for Caltrans approval. Once approved, a video draft shall be filmed and approved by Caltrans prior to final production.

Pre-Production meeting:

- _____ 1) Draft copy of Operation Manual, Quality Assurance Checklist, Warranty publications

At time of delivery (acceptance) of each unit:

- _____ 1) California Certified Weight Slip
- _____ 2) Training video on proper use of the securement system
- _____ 3) Operation Manual, Quality Assurance Checklist, Warranty Information
- _____ 4) Complete schematic diagram of all hydraulic lines and circuits
- _____ 5) All manuals for the van accessories and equipment
- _____ 6) Technical training video
- _____ 7) Documentation of wheel alignment with adjustment data including Vehicle ID number
- _____ 8) Pre-delivery inspection and all subsequent inspections by contract inspectors
- _____ 9) A certification of compliance for vehicle emissions
- _____ 10) Final Stage manufacturer to provide all test data, and drawings related to the certification of the vehicle as an Accessible vehicle.

Upon Request:

- _____ 1) Any information the State deems appropriate.
- _____ 2) Written Guarantee of Performance
- _____ 3) Replacement Fuel Tank Certifications
- _____ 4) Track mounting: Copy of manufacturer's installation instructions