GENERAL INFORMATION

Southeast apparatus is proud to be an all American owned and operated custom builder of fire and rescue apparatus with main offices located in Corbin, Kentucky. This factory has been engaged in building fire service vehicles for over 20 years and operates from a 30,000 sq/ft facility.

Descriptions and specifications of the following apparatus including the equipment detailed or described herein are intended to outline the design, quality and integrity of this all American custom manufactured apparatus.

The following specifications are intended to cover only this particular newly constructed custom firefighting apparatus and the latest production design of this unit.

All Southeast Fire Apparatus shall be constructed entirely within the Continental United States utilizing every American made material or product available at time of production.

All fabrication and final preparations for this apparatus shall take place at the main production facility located in Corbin, Kentucky, USA.

APPARATUS SERVICE CENTER

The apparatus manufacturer operates a full service maintenance center to include engine and mechanical repair, preventative maintenance, full capacity fabrication shop, full paint and body shop, fire pump maintenance and repair, collision repair, electrical service and repair as well as a full service custom graphics shop.

There are multiple service centers across the United States that are authorized by the factory to perform service repairs. Southeast Apparatus and its authorized service centers operate fully capable mobile service vehicles so repairs can be made on site at your facility at your convenience.

If there is a service center outside of our current network that you prefer to use, Southeast Apparatus will coordinate service work with any qualified repair station to meet your specific needs.

FAMA MEMBERSHIP

Southeast Apparatus is a current 2025 member of the Fire Apparatus Manufacturer's Association.

NON-PROPRIETARY PARTS

The finished apparatus shall be manufactured with parts that are commonly used by the heavy-duty trucking industry in order to assist the department in the future with cost and availability of replacement parts.

COOPERATIVE PURCHASING

The apparatus manufacturer shall honor the specifications and pricing of this proposed build for other agencies that wish to purchase similar apparatus through cooperative purchasing.

Changes of chassis, year model, equipment and/or additional change orders shall be reflected in the new contract.

PRIME (SINGLE SOURCE) BODY BUILDER

The apparatus manufacturer shall be the prime (single source) builder of this severe duty all aluminum fire apparatus quality body.

All engineering, design, fabrication, testing, paint and finish shall take place at the apparatus manufacturer's privately owned top tiered manufacturing facility.
NO EXCEPTIONS

Bodies that are mass produced from lower quality materials such as thin stamped utility style designs, bolted together designs or those that are manufactured by a third party for the apparatus manufacturer shall be considered sub-standard and shall not be acceptable for this project. **NO EXCEPTIONS**

The body shall be designed and manufactured entirely from formed and welded aluminum plate and aluminum extrusions to ensure a high quality design and finish that shall provide years of uninterrupted service. Bodies that incorporate steel as structural support or that utilizes steel in any way shall be considered sub-standard and shall not be acceptable for this project. **NO EXCEPTIONS**

RE-MOUNTING

The body shall be designed, manufactured and installed on the chassis to allow for complete removal for future re-mounting onto another chassis.

CAD DRAWINGS

There shall be a full set of CAD drawing provided to the department for approval prior to the start of fabrication.

The drawings shall include a minimum of left, right and rear views of the proposed apparatus cab and body. The drawings shall be shown to scale with all apparatus details and dimensions.

Following the pre-build meeting, there shall be an updated set of CAD drawings submitted to the department for final approval.

APPARATUS WARRANTY

The finished apparatus shall carry full product warranty as it is provided by the individual component manufacturers. The following minimum warranties shall be included as listed below:

- Overall Apparatus - 1 Year Full Warranty
- Southeast Extreme Duty Body Perforation - 10 Year Warranty
- Southeast Extreme Duty Sub-Structure Perforation - 20 Year Warranty
- Paint and Finish - 7 Year Pro-Rated Warranty
- Roll Door Mechanical Warranty - 3 Year Warranty
- Roll Door Electrical Warranty - 3 Year Warranty
- Chassis - New Factory Warranty
- Whelen Electrical, Lights, Wiring - 5 Year Warranty

- Misc. Components - Individual Manufacturer Warranties Shall Apply

CAB AND CHASSIS WARRANTY

The cab and chassis shall be provided with the following minimum warranty:

- Overall Chassis: Three (3) Year Warranty
- Engine: Five (5) Year Warranty
- Transmission: Five (5) Year Warranty

All chassis related issues during this period shall be covered under the warranty as provided by the chassis/component manufacturer and not by the apparatus builder.

APPARATUS DELIVERY - FACTORY

The department shall take delivery of the finished apparatus at the factory following the final inspection visit to the plant in Corbin, Kentucky unless other arrangements are made prior to contract signing.

In order to ensure a proper break-in period on the engine, transmission and driveline components, it is recommended that the department drive the apparatus back under its own power.

FACTORY DELIVERY TRAINING

During the delivery process at the factory, there shall be a representative on site a minimum of four (4) hours to provide initial instruction in proper operation of all components on the apparatus.

PRE-BUILD MEETING

There shall be a pre-build meeting held between Southeast Apparatus representatives and representatives of the department to finalize details prior to the start of fabrication.

This meeting shall be held in person or through a teleconference at the discretion of the department.

PERIODIC APPARATUS INSPECTIONS

At any time during the build process, representatives of the department are always encouraged to visit the factory at any time during business hours to check-in on the progress of their new custom built apparatus.

A factory representative will always be on site to give updates and let department members see their truck as it is being built.

Appointments are never necessary for these periodic visits, but for safety reasons we do ask that you arrive wearing appropriate clothing in order to enter the fabrication areas.

Eye protection and additional safety equipment will be provided as needed.

FINAL INSPECTION VISIT

Prior to the delivery process of the new apparatus, representatives from the department will be able to perform a final inspection while the vehicle is still at the factory. This visit shall be at the discretion of the department.

Following the final inspection visit, the vehicle will be available for delivery.

PERFORMANCE TESTS AND REQUIREMENTS

A road test shall be conducted with the apparatus fully loaded and a continuous run of ten (10) miles or more shall be made under all driving conditions, during which time the apparatus shall show no loss of power or overheating.

The transmission drive shaft or shafts, and rear axle shall run quietly and be free from abnormal vibration or noise throughout the operating range of the apparatus. Vehicle shall adhere to the following parameters:

- The apparatus, when fully equipped and loaded, shall have not less than 25 percent or more than 50 percent of the weight on the front axle, and not less than 50 percent nor more than 75 percent on the rear axle.

- The apparatus shall be capable of accelerating to 35 mph from a standing start within 25 seconds on a level concrete highway without exceeding the maximum governed rpm of the engine.

- The service brakes shall be capable of stopping a fully loaded vehicle in 35 feet at 20 mph on a level concrete highway. The air brake system shall conform to Federal Motor vehicle Safety Standards (FMVSS) 121.

- The apparatus, fully loaded, shall be capable of obtaining a speed of 60 mph on a level concrete highway with the engine not exceeding the governed rpm (full load).

MANUALS AND SERVICE INFORMATION

The apparatus manufacturer shall supply, at time of delivery, a minimum of one (1) full set of operational and maintenance manuals covering the apparatus and components as it is being delivered.

A permanent plate shall be mounted in the driver's compartment which specifies the quantity and type of fluid required on the apparatus including engine oil, engine coolant, transmission, pump transmission lubricant, pump primer oil (if applicable), chassis tire pressures, and drive axle lubricant.

GENERAL CONSTRUCTION

The apparatus shall be designed with due consideration to distribution of load between the front and rear axles, so that all specified equipment and a full complement of personnel will be carried without injury to the apparatus. Weight balance and distribution shall be in accordance with the recommendations of NFPA.

The apparatus shall be designed so that the operator could perform all recommended daily maintenance checks easily without the need for hand tools.

Apparatus components that interfere with repair or removal of other major components must be attached with fasteners (cap, screws, nuts, etc.) so that the components can be removed and installed with normal hand tools. These components must not be welded or otherwise permanently secured into place.

The GAWR and GVWR of the chassis shall be adequate to carry the fully equipped apparatus including unequipped personnel weight and a miscellaneous equipment allowance per NFPA criteria. It shall be the responsibility of the purchaser to provide the contractor with the weight of equipment to be carried if it is in excess of the allowance as set forth by NFPA.

The height of the fully loaded vehicle's center of gravity shall not exceed the chassis manufacturer's maximum limit.

The apparatus shall be so designed that the various parts are readily accessible for lubrication, inspection, adjustment and repair. Where special tools manufactured or designed by the contractor and are required to provide routine service on any component of the apparatus built or supplied by the contractor, such tools shall be provided with the apparatus.

QUALITY

Workmanship and materials provided shall be of a quality unsurpassed for this apparatus.

All components requiring regular maintenance, lubrication and visual inspections shall be readily accessible.

This Southeast fire apparatus shall be designed and manufactured for ease of operation and the highest level of safety available.

All aluminum welding shall follow American welding Society and ANSI D1.2-2003 requirements for structural welding of aluminum.

All sheet metal welding shall follow American Welding Society B2.1-2000 requirements for structural welding of sheet metal. Flux core arc welding to use alloy rods, type 7000, American welding Society standards A5.20-E70T1.

Employees classified as welders are tested and certified to meet the American Welding Society codes upon hire and every three (3) years thereafter.

FAILURE TO MEET TEST

In the event the apparatus fails to meet the test requirements of these specifications on the first trial, second trials may be made at the option of the bidder within 30 days of the date of the first trial.

Such trials shall be final and conclusive and failure to comply with these requirements shall be cause for rejection.

Failure to comply with changes to conform to any clause of the specifications, within 30 days after notice is given to the bidder of such changes, shall also be cause for rejection of the apparatus.

INSURANCE REQUIREMENTS

Southeast Apparatus shall defend any and all suits and assume all liability for the use of any patented process including any device or article forming a part of the apparatus or any appliance furnished under the contract.

COMMERCIAL GENERAL LIABILITY INSURANCE

During the performance of the contract and for three (3) years following acceptance of the product, Southeast Apparatus shall keep in force at least the following minimum limits of commercial general liability insurance:

- Each Occurrence: $1,000,000
- Products/Completed Operations Aggregate: $2,000,000
- Personal and Advertising Injury: $1,000,000
- General Aggregate: $2,000,000

COMMERCIAL AUTOMOBILE LIABILITY INSURANCE

During the performance of the contract, Southeast Apparatus shall keep in force at least the following minimum limits of commercial automobile liability insurance:

- Each Accident Combined Single Limit: $1,000,000

UMBRELLA/EXCESS LIABILITY INSURANCE

During the performance of the contract and for three (3) years following acceptance of the product, Southeast Apparatus shall keep in force at least the following minimum limits of umbrella liability insurance:

- Aggregate: $5,000,000
- Each Occurrence: $5,000,000

CERTIFICATION OF NFPA 1900 COMPLIANCE

As per NFPA 1900, the purchaser shall assume the responsibility of determining, prior to the purchase of the apparatus, which will be responsible for ensuring that all aspects of NFPA 1900 are met. The manufacturer shall be responsible for providing or performing only the items requested by the purchaser in the documents provided to the manufacturer by the purchaser.

Written certification shall be provided by the manufacturer stating that the delivered apparatus complies with the NFPA standard. If the purchaser has elected to provide, perform, outsource and/or contract with a third party, any item required by NFPA (per the previous paragraph), the manufacturer shall provide, upon delivery, a "Statement of Exceptions". This "Statement of Exceptions" shall include the following:

1. A separate specification of the section of the NFPA Standard for which the apparatus is lacking compliance.

2. A description of the particular aspect of the apparatus that is not compliant.

3. A description of the further changes or modifications to the delivered apparatus which must be completed to achieve full compliance.

4. An identification of the entity that will be responsible for making the necessary post-delivery changes or modifications to the apparatus to achieve full compliance with the applicable standard.

The responsibility shall rest with the purchaser to ensure that the apparatus not be placed into active emergency service until fully compliant with NFPA 1900.

FLUID CAPACITY LABEL

A permanent placard shall be placed in the driver's compartment specifying the quantity and type of the following fluids used in the apparatus (if applicable) for normal maintenance:

1. Engine Oil.
2. Engine Coolant.
3. Transmission Fluid.
4. Pump Transmission Fluid.
5. Pump Primer Fluid (if applicable).
6. Drive Axle Fluid.
7. Air Conditioning Refrigerant.
8. Air Conditioning Lubrication Oil.
9. Power Steering Fluid.
10. Cab Tilt Mechanism Fluid (if applicable).
11. Transfer Case Fluid.
12. Equipment Rack Fluid (if applicable).
13. Generator System Lubricant (if applicable).
14. Front and Rear Tire Pressures.

OCCUPANCY LABEL

A permanent plate or label stating the maximum number of personnel allowed to ride on the apparatus at any one time shall be provided and installed in clear view of the driver.

The label shall state “**VEHICLE MAXIMUM SEATING CAPACITY IS FIVE (5)”**

The label shall be visible from each seated position.

SEATED AND BELTED LABEL

Permanent plate or label shall be provided stating "**OCCUPANTS MUST BE SEATED AND BELTED WHEN APPARATUS IS IN MOTION**".

The label shall be visible from each seated position.

DO NOT RIDE LABEL

A permanent plate or label shall be attached to the appropriate areas of the apparatus stating that riding on the rear step or any exterior position on the apparatus is prohibited.

DO NOT WEAR HELMET LABEL

Permanent plate or label shall be provided stating "**DO NOT WEAR HELMET WHILE SEATED".**

The label shall be visible from each seated position.

VEHICLE HEIGHT - WIDTH LABEL

There shall be a travel clearance warning label located in the chassis cab in easy view of the driver.

The travel clearance warning label to include the following information:

1. Overall travel clearance height in feet and inches.
2. Overall travel clearance width in feet and inches.

NEW DODGE RAM 5500 CAB AND CHASSIS

6.7L Cummins Turbo Diesel Engine
Turbo Exhaust Auxiliary Engine Brake
6-Speed Aisin HD Automatic Transmission
4-Door Crew Cab
4-Wheel Drive Transfer Case with Skid Plate - Electronic Shift On The Fly
Front Bucket Seats
Rear Passenger Bench Seating
5-Passenger Seating
7,000-lb GAWR Front - 13,500-lb GAWR Rear - 19,500 GVWR
197" WB - 84" Cab to Axle Spacing
Dual Rear Wheels
Anti-Lock Braking System (ABS) with Traction Control
AM/FM Stereo
A/C – Heat – Defrost
HD Vinyl Seats and HD Vinyl Floor Covering
All Season HD 19.5" Tires
Chrome Grill - Chrome Bumper
Power Equipment Group - Windows, Locks, Mirrors
12 Volt Electrical System - HD Alternator system - Dual Battery Upgrade
52 Gallon Aft Fuel Tank
Polished Aluminum Wheels
Single Tone Cab Color: Flame Red
Cold Weather Prep
Trailer Brake Control
Ambulance Prep Group
PTO Prep Group

HIGH IDLE FUNCTION

The chassis shall be delivered to the customer with a high idle module installed.

The high idle module shall be configured to increase engine RPM for times of extended use with higher than normal electrical loads.

The module shall feature an automatic high idle function for this vehicle.

BACK-UP ALARM

One (1) back-up alarm shall be provided and installed on the apparatus.

The minimum 97db backup alarm shall automatically activate when the apparatus transmission is placed into reverse.

The backup alarm shall exceed all NFPA and SAE J994 Type D requirements.

CAB STEP BARS

There shall be a pair of cab step bars provided and installed on the finished apparatus.

The step bars shall be sized appropriately to fit this exact chassis and shall fill in the entire area under the cab door(s).

VEHICLE TOP SPEED - N/A

The GVWR of this vehicle shall not exceed 33,000-lb and speed limiting per NFPA recommendations shall not apply.

The top speed of the vehicle shall be the factory default as set by the manufacturer of the chassis.

DIESEL FUEL ONLY LABEL

There shall be a label affixed near the fuel fill well that states: **DIESEL ONLY**

This feature shall be integrated into the fill cap when available.

DEF ONLY LABEL

There shall be a label affixed near the fuel fill well that states: **DEF ONLY**

This feature shall be integrated into the fill cap when available.

TIRE PRESSURE MONITORS

There shall be a tire alert pressure management system provided that shall monitor each tire's pressure individually.

A negative change in tire pressure shall be evident of a visible color change on the head of the sensor.

The color change shall be evident when performing the daily truck check.

EXHAUST HEAT SHIELD

A heat shield shall be installed under the body in the areas where the exhaust system is routed as needed.

REAR VIEW CAMERA

There shall be a color rear view camera system provided and installed on the finished apparatus.

The system shall feature a color display with an infrared camera for night visibility.

The display shall be mounted in clear view of the driver without blocking forward visibility.

The rear view camera system shall automatically activate when the chassis transmission is placed into reverse gear.

GENERAL BODY DETAILS

The entire assembled body shall have an overall length of 13 feet and 0 inches from the front of the body to the rear of the 12” step bumper.

The entire assembled body shall have an overall width of no more than 8 feet and 6 inches.

The entire assembled body shall have an overall height of no more than 8 feet and 0 inches from the ground to the top of the finished body.

All compartments shall be constructed in a sweep out design to be water and dust proof.

Body shall be manufactured for maximum possible storage capacity.

Body and sub-structure shall be a fully formed and welded ***ALL*** aluminum design for increased strength.

There shall be no steel used in the body structure or sub-frame. ***NO EXCEPTIONS***

PAINTED BODY FINISH

The complete outer surface of the body shall be constructed of 3/16”, 5052 alloy, smooth aluminum plate which shall provide superior quality and strength that will allow for the proper amount of flexion without the possibility of forming cracks.

The outer surface shall receive a high gloss coating of base/clear paint to match the color of the cab and chassis.

The inner surfaces (including compartments) of the body shall be constructed of 3/16", 5052 alloy, smooth aluminum plate which shall provide superior quality and strength that will allow for the proper amount of flexion without the possibility of forming cracks.

The inner compartment surfaces shall have a spatter coating finish.

12' EXTREME DUTY BODY CONSTRUCTION

The apparatus body shall be constructed of 3" x 3" x .25" 6061 extruded aluminum tubing, 3/16" 5052 aluminum plate as well as .187" and .125" polished diamond tread aluminum.

The sheet metal (3/16"aluminum) shall be formed and welded to produce smooth symmetrically rounded corners and edges.

The polished diamond tread aluminum plate shall have an embossed, non-slip surface on all walking and standing surfaces.

The body shall be designed and manufactured with tubing and channel reinforcement as necessary for rigidity. Angle shall not be used in any area for structural integrity.

All body parts and attachments shall be fastened with rust resistant fasteners to preclude loosening of bolts and screws and/or the cracking of welded joints.

The body shall be reinforced as necessary where hose reels, hose troughs or ladder brackets are attached.

The body shall be an all welded structure with some components bolted in place. All components shall be constructed to allow the removal of any non-body component for service and/or repair.

The body and components thereof shall be bolted to the frame of the chassis with coated grade 8 automotive u-bolts.

All welds shall be cleaned of any weld residue prior to coating or when presenting a natural finish in order to present a clean appearance on all surfaces.

The front and top of the body shall be covered polished diamond tread aluminum plate to prevent these areas from becoming damaged by road debris.

All seams shall be sealed with silicon based body sealer to prevent seepage of moisture into the covered area.

EXTREME DUTY SUB-FRAME

The all-*aluminum* integrated body and sub-frame shall assure strength, durability and longevity to provide years of uninterrupted service.

The support system shall consist of individual assemblies fastened together utilizing a jig system for precision welding to insure sturdiness with proper dimensions and minimal distortion.

The Sub-Frame shall be constructed of 3”x3” x.25” 6061, crush resistant, extruded square aluminum tubing running parallel to the chassis frame rails and underneath the full length of the rear.

The 6061 grade of aluminum tubing allows for the minimal and proper level of flexion during operation to prevent the formation of cracks.

This Sub-Frame design is the heaviest built in the industry and shall be welded on maximum spacing distance of 15” center to center.

BODY MOUNTING

The Sub-Frame shall be bolted to the chassis frame rails with grade 8, 5/8” U-Bolts incorporating shear plates and rubber (anti-vibration) isolation pads as necessary.

The entire assembly shall be constructed and mounted in such a manner to allow for complete removal without the need for any major modifications.

BODY ROOF CONSTRUCTION

The outer portions of the apparatus body roof shall be an integral portion of the main apparatus body.

NFPA COMPLIANT STEPPING SURFACES

All exterior surfaces designated as stepping, standing, and walking areas shall comply with the required average slip resistance of the current NFPA standards.

These areas shall incorporate grip-strut or embossed diamond plate aluminum.

FENDERETTES

An all aluminum polished fenderette shall be installed around both rear wheel openings.

The fenderettes shall have a neoprene welt installed between the trim and the body and shall be bolted in place for easy removal and replacement.

WHEEL WELL LINER

The rear wheel well shall be lined with a sheet of aluminum to prevent damage to the body from road debris.

The liner shall be riveted or bolted in place for easy removal in the event they become damaged.

REAR STEP BUMPER - 12”

The tailboard shall be constructed of 1/8” polished embossed aluminum diamond plate.

The tailboard shall be a minimum of 12” deep and run the full width of the body.

The exterior sides shall be flanged down for increased rigidity of tailboard structure.

The height from the ground to the top of the step bumper shall not exceed 24” when fully loaded.

AGGRESSIVE WALKING SURFACE

All exterior surfaces designated as stepping, standing, and walking areas shall comply with the required average slip resistance of the current NFPA standards.

These areas shall incorporate grip-strut or embossed diamond plate aluminum.

MUD FLAPS

Heavy-duty rubber mud flaps shall be provided behind the rear wheels.

The mud flaps shall be a heavy duty black rubber type for dual wheel trucks.

The mud flaps shall be bolted in place.

RUB RAIL

An aluminum “C” channel rub rail shall be bolted at the bottom of the body, using nylon washers between the metal surfaces, along each side of the body.

The rail shall be approximately 2” tall and extend approximately 1”.

The rail shall extend the entire length of the body except between the wheel openings.

The rail shall be taper cut on each end for appearance.

The rail shall have a satin finish for a durable finish that resists wear marks.

RUB RAIL REFLECTIVE PANELS

There shall be a white reflective stripe applied to the interior flat surface of the apparatus rub rail.

The reflective stripe shall meet all FMVSS and NFPA recommendations.

NFPA HANDRAILS

There shall be NFPA compliant handrails provided in all areas that require climbing on the apparatus.

In the event there is telescoping scene light, ladder or folding step installed in the same location(s), these items may be substituted in an effort to conserve mounting space on the body.

DIAMOND TREAD ALUMINUM BODY GUARDS

There shall be a solid covering of polished diamond tread aluminum in the following locations of the apparatus body:

- Front of Body
- Top of Body
- Rear Body Between Step Bumper and Rear Compartment

COMPARTMENT LOUVERS

Louvered panels shall be installed into each into compartment to aid in ventilation.

The louvers shall be turned in such a way to prevent unwanted water from entering the compartments.

COMPARTMENT CONSTRUCTION

The compartments shall be constructed of formed and welded 3/16”, 5052 formed aluminum plate and shall allow for the proper amount of flexion without the possibility of forming cracks.

All compartment sizes are very close approximations and may vary as much as +/- 3” to accommodate certain chassis features and/or department requested options.

DUAL WALL COMPARTMENTS

The front and rear lower body compartments shall be constructed with a dual wall for accessing and servicing the electrical system as it is installed on the apparatus.

The removable panels shall be readily accessible and shall be removable with the use of common hand tools.

COMPARTMENT FLOOR TILES

As standard equipment each compartment shall have interlocking rubberized tiles (Turtle Tile) cut and installed (on the lowest level) in such a manner to provide a cushion to cargo and protect the floor of the compartment.

The tiles shall be readily removed, without the use of tools, for cleaning.

The color of the tiles shall be black.

ROLL-UP COMPARTMENT DOORS - SATIN FINISH

Roll-up compartment doors shall be manufactured and assembled in the United States.

Doors shall be front roll and shall have an anodized satin finish.

There shall be an aluminum drip rail above each compartment door with a non-abrasive seal (or) there shall be a brush seal.

Magnetic door-ajar system must be integrated in lift bar handle and the retainer block to signal open door. No mechanical sensors or switches interior to the compartment shall be used.

Every slat must have interlocking end shoes to prevent slats from moving side to side and binding the door.

Between each slat must be a co-extruded PVC inner seal to prevent metal-to-metal contact and to repel moisture. This inner seal shall not be visible from the exterior to detract from the appearance of the door.

Slats shall have interlocking joints with a folding locking flange to provide security and prevent penetration by sharp objects.

Slats shall be double-wall extrusion 1.366” high by .315” thick. Exterior surfaces are to be flat and interior surface are to be concave to prevent loose equipment from interfering with door operation.

The latch system shall be a one piece full width aluminum lift bar with a two point exterior latch. The latch shall be operable by one hand. A 2” wide finger pull will be integrated into the bottom rail extrusion for easy one hand opening and closing of the compartment door. **NO EXCEPTIONS**

A clip system shall connect the curtain slats to the operator drum which will allow for easy tension adjustments without the use of tools.

Each roll-up door shall have a four inch diameter counterbalance operator drum to assist in lifting the door and assist in the prevention of accidental closure.

Compartment lighting system integrated into door track. Compartment lights shall activate individually when door is opened and there shall not be a master compartment light switch.

Door tracks shall be a one-piece aluminum extrusion that has an attaching flange and finishing flange incorporated into its design.

The drip rail will have a specially designed seal that prevents the seal from scratching the door. Bottom rail to have a “V” shaped sill to prevent water and debris from entering the compartment. Each door shall have a rubber seal installed at the outside edge to prevent moisture from entering the storage area.

Bottom rail extrusion must have a smooth back to prevent loose equipment from jamming the door.

COMPARTMENT LIGHTING

Each body compartment shall be equipped with LED compartment lighting.

The lighting shall be mounted vertically along the side of each door to extend the full height of the compartment.

There shall be one full height light located in each compartment.

Opening the compartment door shall automatically turn the compartment lighting on.

LEFT COMPARTMENT - L1

Immediately behind the cab on the driver side of the body shall be a compartment with the following approximate usable door dimensions:

- 51” high X 51” wide X 22” deep at the lowest floor.

Compartment shall be equipped with LED lighting that shall be activated when the door is opened.

This compartment shall transverse into compartment R1.

LEFT COMPARTMENT - L2

Immediately behind **L1** on the driver side of the body, over the rear wheel well, shall be a compartment with the following approximate usable door dimensions:

- 30” high X 39” wide X 22” deep at the lowest floor.

Compartment shall be equipped with LED lighting that shall be activated when the door is opened.

LEFT COMPARTMENT - L3

Immediately behind compartment **L2** on the driver side of the body shall be a compartment with the following approximate usable door dimensions:

- 51” high X 32” wide X 22” deep

Compartment shall be equipped with LED lighting that shall be activated when the door is opened.

RIGHT COMPARTMENT - R1

Immediately behind the cab on the passenger side of the body shall be a compartment with the following approximate usable door dimensions:

- 51” high X 51” wide X 22” deep at the lowest floor.

Compartment shall be equipped with LED lighting that shall be activated when the door is opened.

This compartment shall transverse into compartment L1.

RIGHT COMPARTMENT - R2

Immediately behind **R1** on the passenger side of the body, over the rear wheel well, shall be a compartment with the following approximate usable door dimensions:

- 30” high X 39” wide X 22” deep at the lowest floor.

Compartment shall be equipped with LED lighting that shall be activated when the door is opened.

RIGHT COMPARTMENT - R3

Immediately behind compartment **R2** on the passenger side of the body shall be a compartment with the following approximate usable door dimensions:

- 51” high X 32” wide X 22” deep

Compartment shall be equipped with LED lighting that shall be activated when the door is opened.

REAR COMPARTMENT - B1 - OPEN COMPARTMENT

Directly behind both compartments **L3** and **R3** on the extreme rear of the vehicle shall be an open compartment of the following approximate dimensions:

- 50” wide X 104” deep x Open Top

NOTE: This compartment shall finished with a color matched spray-in bedliner.

ADJUSTABLE SHELF TRACK

There shall be a set of uni-strut track mounted in each compartment that receives adjustable shelves.

The track shall be vertically installed and shall be installed in the upper section of the compartment(s).

The track system shall provide infinite adjustment throughout the track range in order to allow proper spacing of the shelves for future installation of department owned equipment. The adjustment shall be quickly and easily performed with common hand tools.

The track shall not be painted and shall retain a natural finish for an even appearance that resists wear marks.

ADJUSTABLE SHELVES

There shall be a total of four (4) adjustable shelf pans provided and installed on the finished apparatus.

Each shelf shall have a minimum weight capacity of 250 pounds.

The shelves shall be fabricated of 3/16” flat plate aluminum and have a satin aluminum finish for increased durability. The shelves shall have a minimum of a 2” lip on front and rear.

The mounting location shall be determined at the pre-build meeting.

BODY PAINT PROCEDURE - BASE COAT/CLEAR COAT

After the apparatus body has been fully assembled and all mounting holes, etc. have been punched, machined, or drilled, the apparatus shall be fully disassembled for the paint process.

The apparatus body shall not be mounted on the chassis during the paint process.

All seams or flanges on the apparatus body shall be caulked or properly sealed to prevent moisture accumulation in flanged areas.

PAINT PROCESS

The apparatus body paint procedure shall consist of an eight (8) step finishing process as follows:

1. Manual Surface Preparation: All exposed metal surfaces on the apparatus exterior shall be thoroughly cleaned. All imperfections on the exterior metal surface shall be removed or filled prior to the priming process. All exposed metal shall be thoroughly abraded using a dual orbital air power sander.

2. Cleaning and Treatment: All surfaces shall be chemically cleaned per manufacturer specification to ensure proper adhesion.

3. Self-etching Primer Application: Acid etching primer shall be applied to the bare metal per manufacturer specification.

4. Primer/Surfacer Application: Urethane primer/surfacer shall be applied to the acid etching primer.

5. Dual Orbital Sanding: The primer/surfacer shall be thoroughly sanded to a superior smooth surface.

6. Cleaning: After sanding in step #5, all surfaces shall be chemically cleaned again per manufacturer specifications. The surface to be painted shall be clean of all oil, grease, and dirt to ensure proper adhesion.

7. Primer Sealer Application: Urethane primer/sealer shall be applied over the thoroughly sanded and cleaned primer/surfacer as per bulletin DFT-054.

8. Topcoat Application: Two coats of base coat color two component polyurethane paint shall be applied to the primer sealer. The base color shall be followed by two coats of two component polyurethane clear coat finish.

PAINT - ENVIRONMENTAL IMPACT

Southeast Apparatus meet or exceeds all current Kentucky regulations concerning paint operations.

Pollution control shall include measures to protect the atmosphere, water and soil.

Controls shall include the following conditions:

- Topcoats and primers must be chrome and lead free.
- Metal treatment chemicals must be chrome free. The wastewater generated in the metal treatment process must be treated to remove any other heavy metals.
- Particulate emissions from painting operations must be collected by a dry filter or water wash process.
- Solvents used in clean-up operations must be collected, sent off-site for distillation and returned for reuse.

Additionally, the finished apparatus shall not be manufactured with or contain products that have ozone depleting substances.

Contractor shall, upon demand, present evidence that the manufacturing facility meets the above conditions and that it is in compliance with the State EPA rules and regulations.

CHASSIS FRAME ASSEMBLY PAINT

The chassis frame assembly shall be painted black by the chassis manufacturer. It shall remain the commercial grade finish as provided.

REFLECTIVE STRIPE

There shall be a minimum of a 6.00" vinyl reflective band provided along the sides, front and rear of the chassis cab and apparatus body.

The design and color shall be determined at the pre-build meeting.

CHEVRON STRIPING, REAR - DIAMOND GRADE

There shall be alternating chevron striping located on the rear-facing vertical surface of the apparatus.

The rear surface excluding the rear compartment door shall be covered.

The colors shall be red and fluorescent yellow green.

Each stripe shall be 6.00" in width.

This shall meet the requirements of NFPA 1900 which states that 50% of the rear surface shall be covered with chevron striping.

REFLECTIVE STRIPE, CAB DOORS

A vinyl reflective stripe shall be provided on the interior of each cab door.

This stripe shall be a minimum of 96.00 square inches and shall meet NFPA recommendations.

LETTERING AND LOGO

The lettering shall be totally encapsulated between a layer of clear protective UV resistant vinyl.

Up to eighty (80) vinyl letters per side, 3.00" high with outline and shading shall be provided.

There shall be department logos provided and installed on each of the front cab doors as standard.

GRAPHICS APPROVAL

The vinyl graphics layout, design and color shall be approved by the department prior to application.

COMMUNICATIONS PRE-WIRE

There shall be radio pre-wire provisions provided in the apparatus cab to include the following:

- 12 VDC Power Wires
- Antenna Coax Base and Cable

The coax and power wires shall terminate at the cab center console for future installation of department supplied communications equipment.

ENGINE COMPARTMENT LIGHT

There shall be one (1) LED engine compartment light provided and installed on the finished apparatus.

The light shall either be automatically controlled or shall have a switch located on the housing to illuminate the light. This shall be provided by the chassis manufacturer.

BODY MASTER DISCONNECT SWITCH

An automatic body master battery switch shall be provided and integrated into the ignition circuit of the chassis.

The switch shall completely disconnect power between the chassis electrical system and the body electrical system and there shall be a battery on indicator light located on the console.

This system shall not interface the chassis electrical system to prevent voiding any of the factory chassis warranties.

Activation shall be automatic when the chassis key is in the “ON” position.

BODY ELECTRICAL SYSTEM

All 12-volt electrical equipment installed by the apparatus manufacturer shall conform to modern automotive practices.

All wiring shall be high temperature crosslink type.

All exposed wiring shall be run in a loom with a minimum 289 degrees rating or conduit and have grommets where wire passes through sheet metal.

Wiring shall be individually color coded to easily identify its function.

Exterior exposed wire connectors shall be positive locking, and environmentally sealed to withstand elements such as temperature extremes, moisture and automotive fluids.

Electrical wiring and equipment shall be installed utilizing the following guidelines:

- All holes made in the roof shall be caulked with silicon. Rope caulk is not acceptable. Large fender washers, liberally caulked, shall be used when fastening equipment to the underside of the cab roof.

- Any electrical component that is installed in an exposed area shall be mounted in a manner that shall not allow moisture to accumulate in it. Exposed area shall be defined as any location outside of the cab or body.

- Electrical components designed to be removed for maintenance shall not be fastened with nuts and bolts. Metal screws shall be used in mounting these

devices. Also a coil of wire shall be provided behind the appliance to allow them to be pulled away from mounting area for inspection and service work.

- Corrosion preventative compound shall be applied to all terminal plugs located outside of the cab or body. All non-waterproof connections shall require this compound in the plug to prevent corrosion and for easy separation (of the plug).

- All lights that have their sockets in a weather exposed area shall have corrosion preventative compound added to the socket terminal area.

- All electrical terminals in exposed areas shall have silicon (1890) applied completely over the metal portion of the terminal. All emergency light switches shall be mounted on a separate panel installed in the cab. A master warning light switch and individual switches to be provided to allow pre-selection of emergency lights. The light switches shall be "rocker" type with an internal indicator light to show when switch is energized. All switches shall be properly identified and mounted in a removable panel for ease in servicing. Identification of the switches shall be done by either printing or etching on the switch panel. The switches and identification shall be illuminated.

All lights and reflectors, required to comply with Federal Motor Vehicle Safety Standard #108, shall be furnished.

Lights and wiring mounted in the rear bulkheads shall be protected from damage by installing a false bulkhead inside the rear compartments.

An operational test shall be conducted to ensure that any equipment that is permanently attached to the electrical system is properly connected and in working order.

All wiring shall connect at a 12 volt electrical junction box located on the driver's side in the first left side compartment (L-1) in the left wall.

CENTER CONSOLE

There shall be an aluminum console provided and installed in the front center of the apparatus cab.

The console shall contain the siren and lighting switches as well as cup holders and radio as space allows based on other selected options.

The console shall be finished with a black spatter coating.

The console shall take the place of the center front seat section and be as large as possible to fit in the usable space provided.

EMERGENCY SWITCH PANEL - WHELEN CORE

There shall be an integrated switch panel for all emergency lighting installed on the cab center console.

The panel shall be designed specifically to control all operations of this exact truck.

The switches shall illuminate when activated by the user.

CAB CHARGING PORTS

There shall be the following charging ports located in the cab of the apparatus:

- 12 VDC Charging Outlet(s) - Chassis Supplied
- Dual USB Charging Ports - Console Mounted

OPEN DOOR INDICATOR LIGHT - DOOR AJAR

An "open door" indicator light shall be provided inside the cab, in clear view of the driver, to warn of an open compartment door.

KUSSMAUL BATTERY MAINTAINER

There shall be a Kussmaul 1000 battery maintainer provided and installed on the finished apparatus.

The system shall maintain a change in the apparatus batteries while connected to the station 110 volt shoreline through the provided 20 amp Kussmaul Super Auto-Eject receptacle.

There shall be a LED bar graph provided and installed to indicate the charge in the apparatus batteries.

There shall be a NEMA 5-20 plug end provided with the apparatus on delivery for customer installation to the station shoreline.

EXTERIOR LIGHTING

Exterior lighting shall meet or exceed Federal Department of Transportation, Federal Motor Vehicle Safety Standards and National Fire Protection Association requirements in effect at time of proposal.

Front headlights shall be halogen type and comply with all FMVSS requirements.

Five (5) LED clearance and marker lights shall be installed across the leading edge of the cab if applicable to the chassis size rating.

REAR FMVSS LIGHTING

There shall be three (3) LED lights installed as identification lights located at the center rear of the apparatus.

There shall be two (2) LED lights installed at the side rear of the apparatus used as clearance lights located at the rear of the apparatus.

There shall be two (2) LED lights installed on each side at rear of the apparatus.

There shall be four (4) red reflectors installed as applicable around the body.

TAIL/STOP/TURN LIGHTING

There shall be stop/tail/turn/back-up LED lighting provided and installed on the rear of the apparatus as follows:

- Two (2) Whelen, 600 series red LED combination stop/tail lights.
- Two (2) Whelen, 600 series amber LED arrow turn signal lights.
- Two (2) Whelen, 600 series clear LED backup lights.

LICENSE PLATE LIGHT

There shall be one (1) license plate mounting platform provided at the rear of the body.

There shall be a white LED light with deflector installed to illuminate the license plate.

WARNING LIGHTS

An all new Whelen LED warning light package is included and shall be installed on the finished apparatus.

All flashing lights shall be colored appropriately to match the department's lighting colors.

All lights shall be flush mounted on the cab and body with chrome trim bezels.

VISUAL WARNING ZONES

The apparatus shall be divided into warning zones as recommended by NFPA 1900. The upper and lower zones shall correspond to the apparatus as follows:

- Zone "A": Front
- Zone "B": Right Side
- Zone "C": Rear
- Zone "D": Left Side

VISUAL WARNING MODES

The use of the apparatus warning lights shall be broken into two separate modes of use.

The permissible colors or combination of colors in each zone for each signaling mode (for fire departments) shall be as follows:

- Calling for Right-of-Way
  - Red - Any Zone
  - Yellow - Any Zone Except A
  - White - Any Zone Except C

- Blocking Right-of-Way
  - Red - Any Zone
  - Yellow - Any Zone
  - White - Not Permitted

VISUAL WARNING MODE SWITCHING

The ability to switch between warning modes shall be provided on the apparatus.

There shall be a sensor that detects the position of the parking brake and changes modes as follows:

- Parking Brake Engaged: "Blocking Right of Way Mode"
- Parking Brake Not-Engaged: "Calling for Right of Way"

Switching between the two visual warning system modes shall require no action by the operator other than setting the chassis parking brake.

WARNING LIGHT LENS COVERS - COLOR

The warning lights on the apparatus shall all have colored lenses with the exception of the cab lightbar which shall remain clear with internally colored lights.

ZONE A UPPER WARNING LIGHTING - WHELEN JUSTICE

One (1) Whelen SUPER LED light bar shall be mounted on the top of the cab roof.

The light bar shall be a 56" Whelen NFPA Justice and shall be populated on the front and sides with flashing LED modules.

The front center section shall have white LED lights that shall function only when the parking brake is released.

ZONE A LOWER WARNING LIGHTING – FRONT

Two (2) Whelen 700 series 3”x7” SUPER LED warning lights shall be provided and mounted on the apparatus.

A chrome bezel shall be provided around the lights.

Two (2) red lights shall be mounted in the front grill area.

ZONE B LOWER WARNING LIGHTING – RIGHT

Two (2) Whelen 500 series 2”x5” SUPER LED warning light shall be provided and mounted on the apparatus.

A chrome bezel shall be provided around the lights.

One (1) light shall be mounted as low and as far forward on the apparatus cab as possible and one (1) light shall be mounted as low as possible in the rear wheel well area.

ZONE B UPPER WARNING LIGHTING – RIGHT

Two (2) Whelen 600 series 4"x6" SUPER LED warning lights shall be provided and mounted on the apparatus.

A chrome bezel shall be provided around the lights.

One (1) light shall be mounted as high and as far forward on the apparatus body as possible and one (1) light shall be mounted as high and as far rearward as possible on the apparatus body.

ZONE C UPPER WARNING LIGHTING – REAR

Two (2) Whelen 600 series 4"x6" SUPER LED warning lights shall be provided and mounted on the apparatus.

A chrome bezel shall be provided around the lights.

One (1) light shall be mounted as high as possible on the rear of each side of the apparatus body - Total of two (2) lights.

ZONE C LOWER WARNING LIGHTING – REAR

Two (2) Whelen 600 series 4"x6" SUPER LED warning lights shall be provided and mounted on the apparatus.

A chrome bezel shall be provided around the lights.

One (1) light shall be mounted as low as possible on the rear of each side of the apparatus body - Total of two (2) lights.

ZONE D LOWER WARNING LIGHTING – LEFT

Two (2) Whelen 500 series 2”x5” SUPER LED warning light shall be provided and mounted on the apparatus.

A chrome bezel shall be provided around the lights.

One (1) light shall be mounted as low and as far forward on the apparatus cab as possible and one (1) light shall be mounted as low as possible in the rear wheel well area.

ZONE D UPPER WARNING LIGHTING – LEFT

Two (2) Whelen 600 series 4"x6" SUPER LED warning lights shall be provided and mounted on the apparatus.

A chrome bezel shall be provided around the lights.

One (1) light shall be mounted as high and as far forward on the apparatus body as possible and one (1) light shall be mounted as high and as far rearward as possible on the apparatus body.

ELECTRONIC SIREN - WHELEN CORE

A Whelen Core electronic siren shall be provided and installed.

The siren shall be mounted on the cab center console.

The controller shall feature multiple siren and air horn sounds that are programmable to meet the department's specifications.

A noise canceling microphone for the public address function shall be provided.

SIREN SPEAKER

There shall be one (1) 100 watt siren speaker provided and installed on the finished apparatus.

The speaker shall be mounted behind the front bumper and/or grill area of the apparatus.

PERIMETER GROUND LIGHTS

There shall be a total of six (6) LED weatherproof lights provided on the apparatus.

Two (2) lights shall be provided under the side body area, two (2) lights shall be provided under the pump panel running boards and two (2) lights shall be provided under the rear step bumper to light all areas around the apparatus.

The perimeter ground lights shall be activated automatically when the parking brake is applied.

SIDE STATIONARY SCENE LIGHTS

There shall be six (6) Whelen 600 Series 4”x6” SUPER LED stationary scene lights mounted in the following locations:

- Two (2) Left Body
- Two (2) Right Body
- Two (2) Rear Body

The lights shall be switched in the cab to operate the left, right or rear.

MINIMUM ONE (1) YEAR MATERIAL AND WORKMANSHIP

Each new apparatus shall be provided with a minimum one (1) year basic apparatus material and workmanship limited warranty. The warranty shall cover such portions of the apparatus built by the manufacturer as being free from defects in material and workmanship that would arise under normal use and service.

CHASSIS WARRANTY

The chassis warranty shall be for a total of:

- Three (3) Years

This warranty is offered by the chassis manufacturer and not the apparatus builder.

CHASSIS PAINT WARRANTY

The commercial chassis manufacturer's paint warranty applies to the chassis only.

ENGINE WARRANTY

The engine shall have a five (5) year warranty. This warranty is provided by the engine manufacturer and not the apparatus builder.

TRANSMISSION WARRANTY

The transmission shall have a five (5) year warranty. This warranty is provided by the transmission manufacturer and not the apparatus builder.

BODY STRUCTURAL WARRANTY

Each new Southeast Apparatus body shall be provided with the following warranties:

- Ten (10) year material and workmanship limited warranty on the apparatus body.

- Twenty (20) year material and workmanship limited warranty on the apparatus sub-structure.

The warranty shall cover such portions of the apparatus built by the manufacturer as being free from defects in material and workmanship that would arise under normal use and service.

SEVEN (7) YEAR PRO-RATED PAINT AND CORROSION

Each new apparatus shall be provided with a seven (7) year pro-rated paint and corrosion limited warranty on the apparatus body.

The warranty shall cover painted exterior surfaces of the body to be free from blistering, peeling, corrosion, or any other adhesion defect caused by defective manufacturing methods or paint material selection that would arise under normal use and service.

EQUIPMENT PROVIDER

Any NFPA equipment items that are not specifically detailed in this proposal shall be supplied and mounted by the department.

EQUIPMENT MOUNTING

All equipment items provided in this proposal shall be mounted by the apparatus manufacturer unless otherwise specified in the item description.

The mounting locations shall be determined by the department at the pre-build meeting unless otherwise stated in the description.

MISCELLANEOUS HARDWARE

There shall be a bag of miscellaneous nuts, bolts and screws as used in the construction of the apparatus.

This hardware shall be supplied at the time of final delivery.

EQUIPMENT ITEMS INCLUDED

The following equipment items shall be provided by the apparatus manufacturer and shall be mounted on the apparatus at time of delivery.

- (2) Aluminum Wheel Chocks with Mounting Brackets

PURCHASER'S RESPONSIBILITY

These specifications are as complete, accurate and up to date as possible; however, it is the purchaser's responsibility for the safe, legal operation and maintenance of this apparatus and equipment.

PAYMENT

There shall be no pre-payment requirement for this apparatus and no performance bond shall be required.

The finished apparatus shall be paid for in full prior to leaving the apparatus manufacturer's facility.

In the event dealer-representatives are up-fitting the apparatus with tools and/or equipment after completion at the factory, payment can be broken into two segments to cover the manufacturing process and then the up-fitting that takes place after the apparatus build is complete.

****END OF BASE BID SPECIFICATIONS****