

## **INVITATION TO BID PUMPER TRUCKS**

SEALED BIDS WILL BE RECEIVED BY THE CITY OF KNOXVILLE FOR THE FURNISHING OF ALL NECESSARY LABOR, EQUIPMENT AND MATERIALS FOR PUMPER TRUCKS AS DETAILED IN THE FOLLOWING SPECIFICATIONS. THE CITY INTENDS TO AWARD A FIXED PRICE AGREEMENT TO THE MOST RESPONSIVE, RESPONSIBLE BIDDER FOR THE PERIOD OF TWELVE MONTHS, WITH AN INITIAL PURCHASE OF TWO SUCH VEHICLES IMMEDIATELY UPON AWARD.

BIDDERS SHALL INDICATE FULL COMPLIANCE WITH THE INSTRUCTION AND SPECIFICATIONS DETAILED HEREIN. BIDDERS SHALL INITIAL IN THE APPROPRIATE AREA AS TO COMPLIANCE OR NON-COMPLIANCE.

### **PRE-BID MEETING**

A PRE-BID MEETING WILL BE HELD ON MONDAY, NOVEMBER 21, 2016, AT 10:30 A.M. AT THE FIRE DEPARTMENT ADMINISTRATIVE OFFICES, LOCATED AT 900 HILL AVENUE, SUITE 430, KNOXVILLE, TENNESSEE 37915.

### **INTENT OF SPECIFICATIONS**

IT IS NOT THE INTENT OF THESE SPECIFICATIONS TO LIMIT COMPETITIVENESS BASED ON A SINGLE BRAND OR MANUFACTURER. RATHER, IT IS THE INTENT OF THESE SPECIFICATIONS TO CLEARLY DESCRIBE THE FURNISHING AND DELIVERY TO THE PURCHASER OF A COMPLETE APPARATUS EQUIPPED AS SPECIFIED. THE PRIMARY OBJECTIVE OF THESE SPECIFICATIONS IS TO OBTAIN THE MOST ACCEPTABLE APPARATUS FOR SERVICE IN THE FIRE DEPARTMENT. THESE SPECIFICATIONS COVER SPECIFIC REQUIREMENTS AS TO THE TYPE OF CONSTRUCTION AND TESTS THE APPARATUS MUST CONFORM, TOGETHER WITH CERTAIN DETAILS AS TO FINISH, MATERIAL PREFERENCES, EQUIPMENT AND APPLIANCES WITH WHICH THE SUCCESSFUL BIDDER MUST CONFORM.

**NOTE THAT NO SUBSTITUTIONS WILL BE ACCEPTED FOR BRAND NAMED COMPONENTS/PARTS IN ORDER TO ENSURE REPAIR FLEXIBILITY AND UNIFORMITY OF PARTS INVENTORY.**

### **QUALITY AND WORKMANSHIP**

THE DESIGN OF THE APPARATUS SHALL EMBODY THE LATEST APPROVED AUTOMOTIVE ENGINEERING PRACTICES. THE WORKMANSHIP SHALL BE OF THE HIGHEST QUALITY IN ITS RESPECTIVE FIELD. SPECIAL CONSIDERATION SHALL BE GIVEN TO SERVICE ACCESS TO AREAS NEEDING PERIODIC MAINTENANCE, EASE OF OPERATION, AND SYMMETRICAL PROPORTIONS. CONSTRUCTION MUST BE HEAVY-DUTY AND AMPLE SAFETY FACTORS MUST BE PROVIDED TO CARRY LOADS AS SPECIFIED. THE CONSTRUCTION METHOD EMPLOYED WILL BE IN SUCH A MANNER AS TO ALLOW READY REMOVAL OF ANY COMPONENT FOR SERVICE OR REPAIR.

THE APPARATUS SHALL CONFORM TO THE NATIONAL FIRE PROTECTION ASSOCIATION STANDARD FOR AUTOMOTIVE FIRE APPARATUS, NUMBER 1901, IN ITS MOST RECENT EDITION, UNLESS OTHERWISE SPECIFIED IN THIS DOCUMENT. ONLY THE SPECIFIED FIREFIGHTING SUPPORT EQUIPMENT LISTED IN THESE SPECIFICATIONS SHALL BE PROVIDED.

THE APPARATUS SHALL FURTHER CONFORM TO ALL FEDERAL MOTOR VEHICLE SAFETY STANDARDS WITH NO EXCEPTION.

EACH BID MUST BE ACCOMPANIED BY A SET OF DETAILED CONTRACTOR'S SPECIFICATIONS CONSISTING OF A DETAILED DESCRIPTION OF THE APPARATUS AND EQUIPMENT PROPOSED.

EACH BIDDER SHALL FURNISH SATISFACTORY EVIDENCE OF THEIR ABILITY TO DESIGN, ENGINEER, AND CONSTRUCT THE APPARATUS SPECIFIED AND SHALL STATE THE LOCATION OF THE FACTORY PRODUCING THE APPARATUS.

### **SERVICE, SUPPORT, AND REPLACEMENT PARTS - LIQUIDATED DAMAGES**

THE CRITICAL RESPONSE DUTIES OF THESE VEHICLES URGENTLY REQUIRES THEIR PROMPT REPAIR AND THE RAPID FULFILLMENT OF PARTS REPLACEMENT ORDERS. WHILE THE CITY ANTICIPATES THAT WARRANTY WORK SHALL BY PERFORMED BY THE CITY OF KNOXVILLE DEPARTMENT OF FLEET SERVICES, THE VENDOR SHALL BE REQUIRED TO (1) PROVIDE DIAGNOSTIC AND TECHNICAL SUPPORT WITHIN 24 HOURS OF RECEIVING THE CITY'S CALL FOR

ASSISTANCE, WITH SUCH SUPPORT AVAILABLE EVERY DAY OF THE YEAR, INCLUDING WEEKENDS AND HOLIDAYS; AND (2) REPLACEMENT PARTS SHALL BE DELIVERED TO THE CITY WITHIN 14 DAYS OF PLACEMENT OF ORDER. FAILURE TO PROVIDE SUPPORT RESPONSE OR DELIVERY OF PARTS WITHIN THE TIME FRAMES HERE SPECIFIED SHALL RESULT IN THE ASSESSMENT OF LIQUIDATED DAMAGES AGAINST THE VENDOR IN THE AMOUNT OF FIVE HUNDRED DOLLARS (\$500.00) FOR EACH CONSECUTIVE CALENDAR DAY THEREAFTER THAT, IN THE CASE OF REQUESTED SUPPORT, THE RESPONSE HAS NOT BEEN PROVIDED OR, IN THE CASE OF REPLACEMENT PARTS, THE PART OR PARTS HAVE NOT BEEN DELIVERED. ENTITIES SUBMITTING BIDS TO THE CITY OF KNOXVILLE IN RESPONSE TO THIS INVITATION TO BID AGREE TO THE FOLLOWING: THE TIME FRAMES FOR SUPPORT RESPONSE AND DELIVERY OF REPLACEMENT PARTS AS SET FORTH ABOVE HAVE BEEN FIXED TO PROVIDE FOR THE TIMELY REPAIR OF EMERGENCY VEHICLES. FAILURE TO MEET THESE TIME REQUIREMENTS WITHIN THE LIMITS SPECIFIED WILL INTERFERE WITH THE PROPER AND NECESSARY FUNCTION OF THE VEHICLE BEING REPAIRED, THEREBY PUTTING BOTH LIFE AND PROPERTY AT RISK. FROM THE NATURE OF THE CASE, IT WOULD BE IMPRACTICABLE AND EXTREMELY DIFFICULT TO FIX THE ACTUAL DAMAGES SUSTAINED IN THE EVENT OF ANY SUCH DELAY. THE CITY AND THE VENDOR, THEREFORE, PRESUME THAT IN THE EVENT OF ANY SUCH DELAY, THE AMOUNT OF DAMAGE WHICH WILL BE SUSTAINED FROM A DELAY WILL BE IN THE AMOUNT OF \$500 PER CONSECUTIVE CALENDAR DAY THAT THE REQUESTED RESPONSE/DELIVERY IS NOT MADE; THEY FURTHER AGREE THAT IN THE EVENT OF ANY SUCH DELAY, THE VENDOR SHALL PAY SUCH AMOUNT AS LIQUIDATED DAMAGES AND NOT AS A PENALTY. THE CITY SHALL NOTIFY THE VENDOR IN WRITING OF ANY CLAIM FOR LIQUIDATED DAMAGES PURSUANT TO THIS PARAGRAPH.

A. IF THE CONTRACTOR DOES NOT COMPLETELY FULFILL THE RESPONSE OR DELIVERY IN THE TIME FRAME SPECIFIED, THE CONTRACTOR SHALL PAY TO THE CITY, AS FIXED AND AGREED LIQUIDATED DAMAGES, FOR EACH CALENDAR DAY BETWEEN THE DATE SPECIFIED AND THE DATE OF RESPONSE OR COMPLETED DELIVERY, AN AMOUNT OF **\$500.00 PER DAY**.

B. EXCEPTION: THE CONTRACTOR SHALL NOT BE LIABLE FOR LIQUIDATED DAMAGES WHEN DELAYS ARISE OUT OF ACTS OF GOD OR OF THE PUBLIC ENEMY, ACTS OF THE CITY IN EITHER ITS SOVEREIGN OR CONTRACTUAL CAPACITY, FIRE, FLOODS, EPIDEMICS, QUARANTINE RESTRICTIONS, STRIKES, FREIGHT EMBARGOES, AND UNUSUALLY SEVERE WEATHER: BUT IN EACH OF THESE SPECIFIC CASES, THE DELAYS MUST BE BEYOND THE CONTROL AND WITHOUT THE FAULT OR NEGLIGENCE OF THE CONTRACTOR; NO OTHER SOURCES OR CAUSES OF DELAY WILL BE ACCEPTABLE TO THE CITY. MANUFACTURER SHORTAGES, BACKORDER SITUATIONS, OR COMPETING DEMAND WILL NOT BE ACCEPTABLE AS AN EXCEPTION TO THE ASSESSMENT OF LIQUIDATED DAMAGES. AS AN EMERGENCY RESPONSE AGENCY OF THE CITY OF KNOXVILLE, THE KNOXVILLE FIRE DEPARTMENT EXPECTS PRIORITY RESPONSE OR DELIVERY, AS THE CASE MAY BE, OF REQUESTED SUPPORT OR REQUESTED REPLACEMENT PARTS, AS THE CASE MAY BE.

#### **DELIVERY**

THE BIDDER SHALL STATE THE TIME REQUIRED FOR DELIVERY OF THE COMPLETED UNIT BELOW. THE COMPLETED UNIT SHALL BE DELIVERED TO THE KNOXVILLE FIRE DEPARTMENT WITH FULL INSTRUCTIONS PROVIDED TO FIRE DEPARTMENT AND FLEET SERVICES PERSONNEL ON OPERATION, CARE AND MAINTENANCE OF APPARATUS AT THE KNOXVILLE FIRE DEPARTMENT'S LOCATION.

FAILURE TO DELIVER THE APPARATUS WITHIN THE STATED TIME FRAME WILL RESULT IN LIQUIDATED DAMAGES OF \$100 PER CONSECUTIVE DAY UNDER THE TERMS AND CONDITIONS DETAILED ABOVE.

**Number of Days to Deliver following Issuance of City of Knoxville Purchase Order \_\_\_\_\_**

#### **EXCEPTIONS**

THE FOLLOWING APPARATUS SPECIFICATIONS ARE CONSIDERED MINIMUM DESIGN AND CONSTRUCTION STANDARDS AGAINST WHICH THE APPARATUS WILL BE INSPECTED. IT IS THE INTENT TO RECEIVE BIDS ON EQUIPMENT/APPARATUS THAT MEETS THE ATTACHED DETAILED SPECIFICATIONS IN THEIR ENTIRETY. **IMPORTANT NOTE: ALL DEVIATIONS, NO MATTER HOW SLIGHT, WILL BE CLEARLY EXPLAINED ON A SEPARATE COVER SHEET ENTITLED "EXCEPTIONS TO SPECIFICATIONS."** ANY EXCEPTIONS OR VARIATIONS TO THESE SPECIFICATIONS MUST BE SET FORTH ON SEPARATE SHEETS, **INDICATING PAGE NUMBER(S) OF THE SPECIFICATIONS**, AND MUST BE SUBMITTED WITH THE BID. ANY BIDS DEEMED AS TAKING TOTAL EXCEPTION TO THESE PUBLISHED SPECIFICATIONS WILL RESULT IN IMMEDIATE REJECTION OF THE BID.

FAILURE TO FOLLOW THIS FORMAT, PROVIDED FOR THE CONVENIENCE OF THE CITY OF KNOXVILLE, MAY RENDER THE VENDOR'S BID NON-RESPONSIVE AND INELIGIBLE FOR AWARD OF CONTRACT.

### **ADDITIONAL ITEMS**

THE CITY RESERVES THE RIGHT TO EXERCISE THE OPTION TO PURCHASE ADDITIONAL VEHICLES AS WELL AS ANY AND ALL ASSOCIATED EQUIPMENT AS SPECIFIED HEREIN AT THE SAME TERMS AND CONDITIONS WITHIN THE 12-MONTH PERIOD FOLLOWING AWARD. VENDOR WILL BE GIVEN SUFFICIENT TIME, BASED UPON THE NATURE OF THE ITEMS BEING ACQUIRED, TO MEET THE REQUIREMENTS OF THE CITY IN A REASONABLE AND WORKMAN LIKE MANNER. THE CITY DOES NOT GUARANTEE NOR DOES IT COMMIT TO THE PURCHASE OF ADDITIONAL VEHICLES.

### **ISO COMPLIANCE**

THE MANUFACTURER SHALL OPERATE A QUALITY MANAGEMENT SYSTEM MEETING THE REQUIREMENTS OF ISO 9001:2000.

THE INTERNATIONAL ORGANIZATION FOR STANDARDIZATION (ISO) IS A RECOGNIZED WORLD LEADER IN ESTABLISHING AND MAINTAINING STRINGENT MANUFACTURING STANDARDS AND VALUES. THE MANUFACTURER'S CERTIFICATE OF COMPLIANCE AFFIRMS THAT THESE PRINCIPLES FORM THE BASIS FOR A QUALITY SYSTEM THAT UNSWERVINGLY CONTROLS DESIGN, MANUFACTURE, INSTALLATION, AND SERVICE.

THE MANUFACTURER'S QUALITY SYSTEMS SHALL CONSIST OF, BUT NOT BE LIMITED TO, ALL WRITTEN QUALITY PROCEDURES AND OTHER PROCEDURES REFERENCED WITHIN THE PAGES OF THE MANUFACTURER'S QUALITY MANUAL, AS WELL AS ALL WORK INSTRUCTIONS, WORKMANSHIP STANDARDS, AND CALIBRATION ADMINISTRATION THAT DIRECTLY OR INDIRECTLY IMPACT PRODUCTS OR PROCESSES.

IN ADDITION, ALL APPARATUS ASSEMBLY PROCESSES SHALL BE DOCUMENTED FOR TRACEABILITY AND REFERENCE. THE MANUFACTURER SHALL ALSO ENGAGE THE SERVICES OF A CERTIFIED THIRD PARTY FOR TESTING PURPOSES WHERE REQUIRED AND SHALL PROVIDE EVIDENCE OF SUCH THIRD PARTY TESTING TO THE CITY UPON REQUEST.

IF THE MANUFACTURER OPERATES MORE THAN ONE MANUFACTURING FACILITY EACH FACILITY MUST BE ISO CERTIFIED. BY VIRTUE OF ITS ISO COMPLIANCE THE MANUFACTURER SHALL PROVIDE AN APPARATUS THAT IS BUILT TO EXACTING STANDARDS, MEETS THE CUSTOMER'S EXPECTATIONS, AND SATISFIES THE CUSTOMER'S REQUIREMENTS. A COPY OF THE MANUFACTURER'S CERTIFICATE OF ISO COMPLIANCE FOR EACH MANUFACTURING FACILITY SHALL BE PROVIDED WITH THE BID.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **REFERENCE LIST**

EACH BID SHALL BE ACCOMPANIED BY A LIST OF AT LEAST THREE (3) SIMILARLY CONSTRUCTED APPARATUS PRESENTLY IN SERVICE. EACH REFERENCE MUST BE APPARATUS BUILT OF THE SAME CONSTRUCTION STYLE AS DETAILED IN THESE SPECIFICATIONS. THIS LIST SHALL INCLUDE CUSTOMER NAME, ADDRESS, DATE APPARATUS WAS PLACED IN SERVICE, AND A CURRENT CONTACT WITH PHONE NUMBER.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **BID DRAWING**

THERE SHALL BE A FRONT, REAR, AND VIEW OF BOTH SIDES OF THE APPARATUS INCLUDED WITH THE BID. COMPARTMENT DIMENSIONS SHALL BE LISTED ON THE DRAWING OR ON A SEPARATE PAGE

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **WARRANTY REPAIRS BY CITY OF KNOXVILLE**

IN ORDER TO ENSURE TIMELY REPAIRS, THE MANUFACTURER SHALL AUTHORIZE THE CITY OF KNOXVILLE FLEET SERVICES TO PERFORM ALL WARRANTY REPAIRS AND REIMBURSE THE CITY AT AN AGREED UPON LABOR RATE. ALL NECESSARY REPAIRS SHALL BE PRE-APPROVED BY THE MANUFACTURER'S WARRANTY CENTER

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **NFPA COMPLIANCE**

THE MANUFACTURER, BIDDER, AND/OR THIRD PARTY-SUPPLIED COMPONENTS OF THE APPARATUS SHALL BE COMPLIANT WITH NFPA 1901, CURRENT EDITION.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **BUMPERS**

##### **FRONT BUMPER**

A HEAVY DUTY 10" HIGH STEEL CHANNEL TYPE FRONT BUMPER SHALL BE PROVIDED. THE FRONT CORNERS OF THE BUMPER SHALL BE ANGLED AT 45 DEGREES TO REDUCE SWING CLEARANCE. THE BUMPER SHALL BE PAINTED JOB COLOR.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

##### **FRONT BUMPER EXTENSION**

THE BUMPER SHALL BE EXTENDED APPROXIMATELY 20" FROM THE FACE OF THE CAB.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

##### **BUMPER GRAVEL SHIELD**

THE EXTENDED FRONT BUMPER GRAVEL SHIELD SHALL BE MADE OF 1/8" (.125") ALUMINUM TREADPLATE MATERIAL.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

##### **BUMPER TRAYS**

##### **BUMPER TRAY – CENTER**

A HOSE TRAY CONSTRUCTED OF 1/8" ALUMINUM SHALL BE RECESSED INTO THE FRONT BUMPER EXTENSION. THE TRAY SHALL BE LOCATED IN THE CENTER OF THE BUMPER AND NOT EXTEND BELOW THE BOTTOM EDGE OF THE BUMPER. ONE-INCH THICK ALUMINUM SLATS SHALL BE INCLUDED IN THE BOTTOM OF THE HOSE TRAY TO AID IN THE DISSIPATION OF WATER FROM THE TRAY.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

##### **LID, BUMPER HOSE TRAY**

THE CENTER BUMPER TRAY SHALL HAVE A DIAMOND PLATE LID. THE LID SHALL BE HINGED AND SHALL BE SECURED IN THE CLOSED POSITION BY A D-RING LATCH AND HELD OPEN WITH A PNEUMATIC SHOCK. THE LID SHALL BE CONSTRUCTED TO ENSURE THE FRONT JUMP LINE WILL HOLD 100' OF 1 3/4" HOSE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

##### **HOSE TRAY LID NOTCH**

THE FRONT BUMPER HOSE TRAY LID SHALL BE NOTCHED TO ALLOW FOR PRE-CONNECTED HOSE. THE NOTCH SHALL BE: 5" FRONT TO REAR X 3" SIDE TO SIDE CENTERED ON OFFICER SIDE OF CENTER TRAY LID.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **FRAME ASSEMBLY**

##### **FRAME RAIL CONSTRUCTION**

THE FRAME SHALL CONSIST OF TWO (2) C-CHANNEL FRAME RAILS WITH HEAVY-DUTY CROSS-MEMBERS. EACH FRAME RAIL SHALL HAVE THE FOLLOWING MINIMUM SPECIFICATIONS IN ORDER TO MINIMIZE FRAME DEFLECTION UNDER LOAD AND THEREBY IMPROVE VEHICLE RIDE AND EXTEND THE LIFE OF THE FRAME:

DIMENSIONS: 10-1/4" X 3-1/2" X 3/8"

MATERIAL: 110,000-PSI MINIMUM YIELD STRENGTH, HIGH STRENGTH, LOW ALLOY STEEL

SECTION MODULUS: 16.61 CU. IN.

RESISTANCE TO BENDING MOMENT (RBM): 1,827,045 IN. LBS.

IF LARGER RAILS ARE PROVIDED, THE MAXIMUM HEIGHT OF EACH FRAME RAIL SHALL NOT EXCEED THE 10-1/4" DIMENSION BY MORE THAN 1/2" IN ORDER TO ENSURE THE LOWEST POSSIBLE BODY HEIGHT FOR EASE OF ACCESS AS WELL AS THE LOWEST POSSIBLE VEHICLE CENTER OF GRAVITY FOR MAXIMUM STABILITY.

THERE SHALL BE A MINIMUM OF SIX (6) CROSS-MEMBERS JOINING THE TWO (2) FRAME RAILS IN ORDER TO MAKE THE FRAME RIGID AND HOLD THE RAILS/LINERS IN ALIGNMENT. THE CROSS-MEMBERS SHALL BE A COMBINATION OF A FORMED STEEL C-CHANNEL DESIGN ALONG WITH HEAVY DUTY STEEL FABRICATED DESIGNS AS REQUIRED FOR THE EXACT CHASSIS CONFIGURATION. THE CROSS-MEMBERS SHALL BE ATTACHED TO THE FRAME RAILS WITH NOT LESS THAN FOUR (4) BOLTS AT EACH END ARRANGED IN A BOLT PATTERN TO ADEQUATELY DISTRIBUTE THE CROSS-MEMBER LOAD INTO THE RAIL/LINER AND MINIMIZE STRESS CONCENTRATIONS.

ALL FRAME FASTENERS SHALL BE HIGH-STRENGTH GRADE 8, FLANGED-HEAD THREADED BOLTS AND NUTS FOR FRAME STRENGTH, DURABILITY, AND EASE OF REPAIR. THE NUTS SHALL BE STOVER LOCKNUTS TO HELP PREVENT LOOSENING. THE FRAME FASTENERS SHALL BE TIGHTENED TO THE PROPER TORQUE AT THE TIME OF ASSEMBLY.

THE FRAME RAILS AND FRAME LINERS SHALL BE FINISHED WITH BLACK PAINT. THE FRAME CROSS-MEMBERS AND FRAME MOUNTED COMPONENTS (SUSPENSIONS, AXLES, AIR TANKS, BATTERY BOXES, FUEL TANK, ETC.) SHALL BE PAINTED BLACK.

THE APPARATUS MANUFACTURER SHALL SUPPLY A FULL LIFETIME FRAME WARRANTY INCLUDING CROSS-MEMBERS AGAINST DEFECTS IN MATERIALS OR WORKMANSHIP. WARRANTIES THAT PROVIDE A LIFETIME WARRANTY FOR ONLY THE FRAME RAILS, BUT NOT THE CROSS-MEMBERS, ARE NOT ACCEPTABLE. THE CUSTOM CHASSIS FRAME SHALL HAVE A **WHEEL ALIGNMENT** IN ORDER TO ACHIEVE MAXIMUM VEHICLE ROAD PERFORMANCE AND TO PROMOTE LONG TIRE LIFE. THE ALIGNMENT SHALL CONFORM TO THE MANUFACTURER'S INTERNAL SPECIFICATIONS. ALL WHEEL LUG NUTS AND AXLE U-BOLT RETAINER NUTS SHALL BE TIGHTENED TO THE PROPER TORQUE AT THE TIME OF ALIGNMENT. THE WHEEL ALIGNMENT DOCUMENTATION SHALL BE MADE AVAILABLE AT DELIVERY UPON REQUEST.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **REAR UNDERBODY SUPPORT FRAME**

THE BODY SHALL BE SUPPORTED AT THE REAR BY A STEEL FRAME EXTENSION BOLTED TO THE CHASSIS FRAME RAILS. THE FRAME RAILS AND FRAME EXTENSION SHALL BE ISOLATED FROM THE ALUMINUM BODY EXTRUSIONS BY 5/16" X 2" FIBER REINFORCED RUBBER.

THE FRAME EXTENSION SHALL BE BUILT WITH (2) 2.5" SQ. X .25 WALL THICKNESS X FULL WIDTH CROSS RAILS WELDED TO (2) 2.5" SQ. X .25 WALL THICKNESS SIDE RAILS. THE FRAME EXTENSION ASSEMBLY WILL BE WELDED TO STEEL WELDMENTS, WHICH ARE SECURED TO THE CHASSIS FRAME WITH GRADE 8 5/8" BOLTS. THE FRAME EXTENSION SHALL NOT INTERFERE WITH N.F.P.A. MINIMUM REQUIREMENTS FOR ANGLE OF DEPARTURE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **AXLE OPTIONS**

##### **INDEPENDENT FRONT SUSPENSION**

THE VEHICLE SHALL UTILIZE A REYCO GRANNING INDEPENDENT FRONT SUSPENSION (IFS), WITH A MAXIMUM CAPACITY OF 24,000 LBS. THE SUSPENSION SHALL UTILIZE DUCTILE IRON UPPER AND LOWER CONTROL ARMS WITH SEPARATE CASTER AND CAMBER ADJUSTMENTS. THE FRONT HUBS SHALL BE MADE FROM DUCTILE IRON AND SHALL BE DESIGNED FOR USE WITH 10 HOLE HUB-PILOTED WHEELS IN ORDER TO IMPROVE WHEEL CENTERING AND EXTEND TIRE LIFE. THE HUBS SHALL UTILIZE SYNTHETIC OIL-LUBRICATED WHEEL BEARINGS WITH A SIGHT GLASS ON THE HUB.

THE SUSPENSION SHALL INCLUDE ROLLING LOBE TYPE AIR SPRINGS TO OPTIMIZE RIDE AND HANDLING. THE AIR SPRINGS COUPLED WITH A TRANSVERSE STEEL LEAF SPRING SHALL PROVIDE A MAXIMUM CAPACITY OF 24,000 LBS. AT THE GROUND. DUAL HEIGHT CONTROL VALVES SHALL BE INSTALLED TO PROVIDE A CONSTANT RIDE HEIGHT REGARDLESS OF LOAD. THE SUSPENSION SHALL INCLUDE KONI SHOCKS MOUNTED AT A NEAR ONE-TO-ONE RATIO.

THE APPARATUS SHALL BE EQUIPPED WITH DUAL TRW MODEL TAS85 STEERING GEARS. THE STEERING ASSEMBLY SHALL BE RATED TO STATICALLY STEER UP TO A MAXIMUM FRONT AXLE LOAD OF 24,000 LBS. RELIEF STOPS SHALL BE PROVIDED TO REDUCE SYSTEM PRESSURE UPON FULL WHEEL CUT. THE SYSTEM SHALL OPERATE MECHANICALLY SHOULD THE HYDRAULIC SYSTEM FAIL.

THE VEHICLE SHALL HAVE A NOMINAL CRAMP ANGLE OF 45 DEGREES (PLUS ZERO DEGREES TO MINUS TWO DEGREES) WITH 425/65R22.5 TIRES, INCLUDING APPLICATIONS WITH A FRONT PUMP INTAKE.

THE FRONT GAWR SHALL BE 22,800 LBS DUE TO FRONT TIRE SELECTION.

A 3-YEAR/150,000 MILE/PARTS AND LABOR WARRANTY SHALL BE PROVIDED AS STANDARD.

IN ORDER TO ACHIEVE MAXIMUM VEHICLE ROAD PERFORMANCE AND TO PROMOTE LONG TIRE LIFE, A WHEEL ALIGNMENT SHALL BE PERFORMED ON THE VEHICLE. THE ALIGNMENT SHALL CONFORM TO THE MANUFACTURER'S INTERNAL SPECIFICATIONS. ALL WHEEL LUG NUTS AND AXLE U-BOLT RETAINER NUTS SHALL BE TIGHTENED TO THE PROPER TORQUE AT THE TIME OF ALIGNMENT. THE WHEEL ALIGNMENT DOCUMENTATION SHALL BE MADE AVAILABLE AT DELIVERY.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **REAR AXLE**

THE VEHICLE SHALL BE EQUIPPED WITH AN ARVINMERITOR RS-24-160 SINGLE REAR AXLE WITH SINGLE-REDUCTION HYPOID GEARING AND A MANUFACTURER'S RATED CAPACITY OF 24,000 LBS. THE AXLE SHALL BE EQUIPPED WITH OIL-LUBRICATED WHEEL BEARINGS WITH ARVINMERITOR OIL SEALS. THE REAR AXLE HUBS SHALL BE MADE FROM DUCTILE IRON AND SHALL BE DESIGNED FOR USE WITH 10 HOLE HUB-PILOTED WHEELS TO IMPROVE WHEEL CENTERING AND EXTEND TIRE LIFE.

A 2-YEAR/UNLIMITED MILES PARTS AND 2-YEAR LABOR REAR AXLE WARRANTY SHALL BE PROVIDED AS STANDARD BY ARVINMERITOR AUTOMOTIVE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **SUSPENSIONS**

##### **REAR SUSPENSION**

THE REAR SUSPENSION SHALL BE A PAIR OF LINEAR-RATE LEAF SPRINGS WITH AUXILIARY "HELPER" LEAF SPRINGS AND BRONZE BUSHINGS. THE VARIABLE-RATE SPRINGS WITH AUXILIARY SPRINGS ENSURE THAT THE VEHICLE RIDES AND HANDLES SMOOTHLY UNDER BOTH LOADED AND UNLOADED CONDITIONS. THE SUSPENSION SHALL BE RATED FOR THE MAXIMUM AXLE CAPACITY.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

##### **ON- SPOT TIRE CHAINS- INSTALLED**

THE VEHICLE SHALL BE EQUIPPED WITH ON-SPOT AUTOMATIC TIRE CHAIN. AN ELECTRIC SWITCH MOUNTED IN THE CAB SHALL PROVIDE 12 VOLTS TO AN AIR SOLENOID MOUNTED ON THE VEHICLE'S FRAME RAIL. COMPRESSED AIR TO THE SOLENOID IS SUPPLIED FROM THE VEHICLE'S ONBOARD AIR SYSTEM. WHEN THE DASHBOARD SWITCH IS ACTIVATED, THE SOLENOID OPENS ALLOWING COMPRESSED AIR TO ENTER THE AIR CHAMBER AND LOWER THE CHAIN WHEEL SO IT CONTACTS THE INSIDE OF THE TIRE. SIX LENGTHS OF CHAIN SHALL BE SPACED AT 60-DEGREE INTERVALS ON THE CHAIN WHEEL. WHEN THE DASHBOARD SWITCH IS TURNED OFF, THE SOLENOID EXHAUSTS THE AIR PROVIDED TO THE CHAIN UNITS AND RETURN SPRINGS IN THE AIR CHAMBERS BRING THE CHAIN WHEELS BACK TO THEIR RESTING POSITION.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

## **WHEEL OPTIONS**

### **FRONT WHEELS**

THE VEHICLE SHALL HAVE TWO (2) ACCURIDE OR ALCOA POLISHED (ON OUTER WHEEL SURFACES ONLY) ALUMINUM DISC WHEELS. THEY SHALL BE FORGED FROM ONE-PIECE CORROSION-RESISTANT ALUMINUM ALLOY AND SIZED APPROPRIATELY FOR THE TIRES.

**THE WHEEL SHALL HAVE A LOAD RATING OF UP TO 11,000 LBS. EACH (UP TO 11,400 LB RATING AVAILABLE WITH SPEED LIMITED TO 60 MPH)**

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **REAR WHEELS**

THE VEHICLE SHALL HAVE FOUR (4) ACCURIDE OR ALCOA POLISHED (ON OUTER WHEEL SURFACES ONLY) ALUMINUM DISC WHEELS. THEY SHALL BE FORGED FROM ONE-PIECE CORROSION-RESISTANT ALUMINUM ALLOY AND SIZED APPROPRIATELY FOR THE TIRES.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **FRONT WHEEL TRIM PACKAGE**

THE FRONT WHEELS SHALL HAVE STAINLESS STEEL LUG NUT COVERS (FOR USE WITH ALUMINUM WHEELS) OR CHROME PLATED PLASTIC (FOR USE WITH STEEL WHEELS). THE FRONT AXLE SHALL BE COVERED WITH AMERICAN MADE REAL WHEELS BRAND MIRROR FINISH, 304L GRADE, NON-CORROSIVE STAINLESS STEEL UNIVERSAL BABY MOONS. ALL STAINLESS STEEL BABY MOONS SHALL CARRY A LIFETIME WARRANTY PLUS A 2 YEAR RE-BUFFING POLICY. THERE SHALL BE TWO (2) BABY MOONS AND TWENTY (20) LUG NUT COVERS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **REAR WHEEL TRIM PACKAGE, SINGLE AXLE**

THE REAR WHEELS SHALL HAVE STAINLESS STEEL LUG NUT COVERS (CHROME PLATED STEEL LUG NUT COVERS NOT ACCEPTABLE). THE REAR AXLE SHALL BE COVERED WITH AMERICAN MADE REAL WHEELS BRAND MIRROR FINISH, 304L GRADE, NON-CORROSIVE STAINLESS STEEL, SPRING CLIP BAND MOUNT HIGH HATS, DOT USER FRIENDLY. ALL STAINLESS STEEL HIGH HATS SHALL CARRY A LIFETIME WARRANTY PLUS A 2 YEAR RE-BUFFING POLICY. THERE SHALL BE TWO (2) HIGH HATS AND TWENTY (20) LUG NUT COVERS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

## **TIRE OPTIONS**

### **FRONT TIRES**

THE FRONT TIRES SHALL BE TWO (2) MICHELIN 425/65R22.5 TUBELESS TYPE 20 PR RADIAL TIRES WITH XFE HIGHWAY TREAD.

THE TIRES WITH WHEELS SHALL HAVE THE FOLLOWING WEIGHT CAPACITY AND SPEED RATING:

MAX FRONT RATING 22,800 @ 65 MPH.

MAX FRONT RATING WITH ALCO ALUMINUM WHEELS - 24,400 @ 65 MPH (INTERMITTENT FIRE SERVICE RATING IF GAW IS OVER 22,800)

THE WHEELS AND TIRES SHALL CONFORM TO THE TIRE AND RIM ASSOCIATION REQUIREMENTS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

## **REAR TIRES**

THE REAR TIRES SHALL BE FOUR (4) MICHELIN 11R22.5 TUBELESS TYPE 16 PR (PLY RATING) RADIAL TIRES WITH A NON-HIGHWAY TREAD.

THE TIRES WITH WHEELS SHALL HAVE THE FOLLOWING MAXIMUM WEIGHT AND SPEED CAPACITY:

24,020 LBS. (DUAL) @ 75 MPH.

THE TIRES AND WHEELS SHALL CONFORM TO THE TIRE AND RIM ASSOCIATION REQUIREMENTS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

## **TIRE PRESSURE INDICATORS**

THE APPARATUS SHALL BE PROVIDED WITH AN INTEGRATED ELECTRONIC TIRE PRESSURE MONITORING SYSTEM (TPMS).

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

## **BRAKE SYSTEMS**

### **FRONT BRAKES**

THE FRONT AXLE SHALL BE EQUIPPED WITH MERITOR DISCPLUS EX225H 17 INCH DISC BRAKES.

THE BRAKES SHALL BE COVERED BY THE MANUFACTURER`S STANDARD WARRANTY FOR NO LESS THAN THREE YEARS, UNLIMITED MILEAGE AND PARTS ONLY.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

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**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **BRAKE SYSTEM**

THE VEHICLE SHALL BE EQUIPPED WITH AIR-OPERATED BRAKES AND AN ANTI-LOCK BRAKING SYSTEM (ABS). THE BRAKE SYSTEM SHALL MEET OR EXCEED THE DESIGN AND PERFORMANCE REQUIREMENTS OF THE CURRENT FEDERAL MOTOR VEHICLE SAFETY STANDARD (FMVSS)-121, AND THE TEST REQUIREMENTS OF THE CURRENT NFPA 1901 STANDARD.

A DUAL-TREADLE BRAKE VALVE SHALL CORRECTLY PROPORTION THE BRAKING POWER BETWEEN THE FRONT AND REAR SYSTEMS. THE AIR SYSTEM SHALL BE PROVIDED WITH A RAPID PRESSURE BUILD-UP FEATURE, DESIGNED TO MEET CURRENT NFPA 1901 REQUIREMENTS, TO ALLOW THE VEHICLE TO BEGIN ITS EMERGENCY RESPONSE AS QUICKLY AS POSSIBLE.

A PRESSURE-PROTECTION VALVE SHALL BE INSTALLED TO PREVENT USE OF THE AIR HORNS OR OTHER AIR-OPERATED DEVICES SHOULD THE AIR SYSTEM PRESSURE DROP BELOW 85 PSI. THIS FEATURE IS DESIGNED TO PREVENT INADVERTENT ACTUATION OF THE EMERGENCY/PARKING BRAKES WHILE THE VEHICLE IS IN MOTION.

TWO (2) AIR PRESSURE NEEDLE GAUGES, ONE (1) EACH FOR FRONT AND REAR AIR PRESSURE, WITH A WARNING LIGHT AND BUZZER SHALL BE INSTALLED AT THE DRIVER`S INSTRUMENT PANEL.



THE BRAKING SYSTEM SHALL BE PROVIDED WITH A MINIMUM OF THREE (3) AIR TANK RESERVOIRS FOR A TOTAL AIR SYSTEM CAPACITY OF MINIMUM 5100 CU. IN. ONE (1) RESERVOIR SHALL SERVE AS THE WET TANK AND A MINIMUM OF ONE (1) TANK SHALL BE SUPPLIED FOR EACH OF THE FRONT AND REAR AXLES. THE TOTAL SYSTEM SHALL CARRY A SUFFICIENT VOLUME OF AIR TO COMPLY WITH FMVSS-121.

TANK CAPACITIES IN CUBIC INCHES:

WET	FRONT	REAR	TOTAL
1,738	1,738	1,738	5,214

SPRING-ACTUATED EMERGENCY/PARKING BRAKES SHALL BE INSTALLED ON THE REAR AXLE.

A BENDIX-WESTINGHOUSE SR-1 VALVE, IN CONJUNCTION WITH A DOUBLE CHECK VALVE SYSTEM, SHALL PROVIDE AUTOMATIC EMERGENCY BRAKE APPLICATION WHEN THE AIR BRAKE SYSTEM PRESSURE FALLS BELOW 40 PSI IN ORDER TO SAFELY BRING THE VEHICLE TO A STOP IN CASE OF AN ACCIDENTAL LOSS OF BRAKING SYSTEM AIR PRESSURE.

A FOUR-CHANNEL WABCO ABS SHALL BE PROVIDED TO IMPROVE VEHICLE STABILITY AND CONTROL BY REDUCING WHEEL LOCK-UP DURING BRAKING. THIS BRAKING SYSTEM SHALL BE FITTED TO BOTH FRONT AND REAR AXLES. ALL ELECTRICAL CONNECTIONS SHALL BE ENVIRONMENTALLY-SEALED FOR PROTECTION AGAINST WATER, WEATHER, AND VIBRATION.

THE SYSTEM SHALL CONSTANTLY MONITOR WHEEL BEHAVIOR DURING BRAKING. SENSORS ON EACH WHEEL TRANSMIT WHEEL SPEED DATA TO AN ELECTRONIC PROCESSOR, WHICH SHALL DETECT APPROACHING WHEEL LOCK-UP AND INSTANTLY MODULATE (OR PUMP) THE BRAKE PRESSURE UP TO FIVE (5) TIMES PER SECOND TO PREVENT WHEEL LOCK-UP. EACH WHEEL SHALL BE INDIVIDUALLY CONTROLLED. TO IMPROVE FIELD PERFORMANCE, THE SYSTEM SHALL BE EQUIPPED WITH A DUAL-CIRCUIT DESIGN CONFIGURED IN A DIAGONAL PATTERN. SHOULD A MALFUNCTION OCCUR IN ONE CIRCUIT, THAT CIRCUIT SHALL REVERT TO NORMAL BRAKING ACTION. A WARNING LIGHT AT THE DRIVER'S INSTRUMENT PANEL SHALL SIGNAL A MALFUNCTION.

THE SYSTEM SHALL ALSO BE CONFIGURED TO WORK IN CONJUNCTION WITH ALL AUXILIARY ENGINE, EXHAUST, OR DRIVELINE BRAKES TO PREVENT WHEEL LOCK-UP.

TO IMPROVE MAINTENANCE TROUBLESHOOTING, PROVISIONS IN THE SYSTEM FOR AN OPTIONAL DIAGNOSTIC TESTER SHALL BE PROVIDED. THE SYSTEM SHALL TEST ITSELF EACH TIME THE VEHICLE IS STARTED, AND A DASH-MOUNTED LIGHT SHALL GO OUT ONCE THE VEHICLE IS MOVING ABOVE 4 MPH.

A 3 YEAR/300,000 MILE PARTS AND LABOR ANTI-LOCKING BRAKING SYSTEM (ABS) WARRANTY SHALL BE PROVIDED AS STANDARD BY MERITOR AUTOMOTIVE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**PARK BRAKE RELEASE**

ONE (1) BENDIX-WESTINGHOUSE PP-5 PARKING BRAKE CONTROL VALVE SHALL BE SUPPLIED ON THE LOWER DASH PANEL WITHIN EASY REACH OF THE DRIVER.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**ELECTRONIC STABILITY CONTROL**

THE APPARATUS SHALL BE EQUIPPED WITH A G4 4S4M ELECTRONIC STABILITY CONTROL (ESC) SYSTEM THAT COMBINES THE FUNCTIONS OF ROLL STABILITY CONTROL (RSC) WITH THE ADDED CAPABILITY OF YAW - OR ROTATIONAL - SENSING.

RSC FOCUSES ON THE VEHICLE'S CENTER OF GRAVITY AND THE LATERAL ACCELERATION LIMIT OR ROLLOVER THRESHOLD. WHEN CRITICAL LATERAL ACCELERATION THRESHOLDS ARE EXCEEDED, RSC INTERVENES TO REGULATE THE VEHICLE'S DECELERATION FUNCTIONS. THE ADDED FEATURE OF ESC IS TO AUTOMATICALLY INTERVENE TO REDUCE THE RISK OF THE VEHICLE ROTATING WHILE IN A CURVE OR TAKING EVASIVE ACTION,

PREVENTS DRIFT OUT THROUGH SELECTIVE BRAKING, AND CONTROLLING AND REDUCING VEHICLE SPEED WHEN LATERAL ACCELERATION LIMITS ARE ABOUT TO BE EXCEEDED.

INTERVENTION BY THE SYSTEM OCCURS IN THREE FORMS - ENGINE, RETARDER AND BRAKE CONTROL. THE ESC SYSTEM USES SEVERAL SENSORS TO MONITOR THE VEHICLE. THESE INCLUDE A STEERING WHEEL ANGLE SENSOR, LATERAL ACCELEROMETER, AND YAW POSITION SENSOR. ESC CONSTANTLY MONITORS DRIVING CONDITIONS AND INTERVENES IF CRITICAL LATERAL ACCELERATION IS DETECTED OR IF THE VEHICLE BEGINS TO SPIN DUE TO LOW FRICTION SURFACES. THE SYSTEM PROVIDES CONTROL OF ENGINE AND RETARDER TORQUE AS WELL AS AUTOMATICALLY CONTROLLING INDIVIDUAL WHEELS TO COUNTERACT BOTH OVER STEER AND UNDER STEER.

TO FURTHER IMPROVE VEHICLE DRIVE CHARACTERISTICS, THE UNIT SHALL BE FITTED WITH AUTOMATIC TRACTION CONTROL (ATC). THIS SYSTEM SHALL CONTROL DRIVE WHEEL SLIP DURING ACCELERATION FROM A RESTING POINT. AN EXTRA SOLENOID VALVE SHALL BE ADDED TO THE ABS SYSTEM. THE SYSTEM SHALL CONTROL THE ENGINE AND BRAKES TO IMPROVE ACCELERATION SLIP RESISTANCE. THE SYSTEM SHALL HAVE A DASH MOUNTED LIGHT THAT SHALL COME ON WHEN ATC IS CONTROLLING DRIVE WHEEL SLIP.

3 YEAR/300,000 MILES PARTS AND LABOR WARRANTIES FOR ESC, RSC, AND ATC SHALL BE PROVIDED AS STANDARD BY MERITOR AUTOMOTIVE.

BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS YES\_\_\_\_\_ NO\_\_\_\_\_

#### AIR SYSTEM OPTIONS

**\*\*\*ALL AIR LINES SHALL HAVE COMPRESSION FITTINGS INSTALLED\*\*\***

#### AIR DRYER

THE CHASSIS AIR SYSTEM SHALL BE EQUIPPED WITH A BENDIX-WESTINGHOUSE AD-9 AIR DRYER TO REMOVE MOISTURE FROM THE AIR IN ORDER TO HELP PREVENT THE AIR LINES FROM FREEZING IN COLD WEATHER AND PROLONG THE LIFE OF THE BRAKING SYSTEM COMPONENTS. ***\*\*\*ONLY COMPRESSION FITTINGS WILL BE ACCEPTED\*\*\****

BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS YES\_\_\_\_\_ NO\_\_\_\_\_

#### AIR INLET

A 1/4" BRASS QUICK-RELEASE AIR INLET WITH A MALE CONNECTION SHALL BE PROVIDED. THE INLET SHALL ALLOW A SHORELINE AIR HOSE TO BE CONNECTED TO THE VEHICLE, DISCHARGING AIR DIRECTLY INTO THE WET TANK OF THE AIR BRAKE SYSTEM. IT SHALL BE LOCATED DRIVER DOOR JAMB. ***\*\*\*ONLY COMPRESSION FITTINGS WILL BE ACCEPTED\*\*\****

BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS YES\_\_\_\_\_ NO\_\_\_\_\_

#### AIR OUTLET

AN AUXILIARY AIR OUTLET WITH A FEMALE QUICK-RELEASE SHALL BE PROVIDED. THIS SHALL ALLOW THE USER TO CONNECT ACCESSORIES AND SHALL BE SUPPLIED FROM THE WET TANK. THIS AIR OUTLET SHALL BE LOCATED ON THE DRIVER'S SIDE PUMP PANEL. ***\*\*\*ONLY COMPRESSION FITTINGS WILL BE ACCEPTED\*\*\****

BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS YES\_\_\_\_\_ NO\_\_\_\_\_

#### AIR LINES

AIR BRAKE LINES SHALL BE CONSTRUCTED OF COLOR CODED NYLON TUBING ROUTED IN A MANNER TO PROTECT THEM FROM DAMAGE. ***\*\*\*ONLY COMPRESSION FITTINGS WILL BE ACCEPTED\*\*\****

BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS YES\_\_\_\_\_ NO\_\_\_\_\_

#### AIR HORNS

DUAL GROVER AIR HORNS SHALL BE PROVIDED, CONNECTED TO THE CHASSIS AIR SYSTEM. THE HORNS SHALL BE MOUNTED THROUGH THE FRONT BUMPER. THE FRONT BUMPER SHALL HAVE TWO (2) HOLES PUNCHED TO

ACCOMMODATE THE HORNS. A PRESSURE PROTECTION VALVE SHALL BE INSTALLED TO PREVENT THE AIR BRAKE SYSTEM FROM BEING DEPLETED OF AIR PRESSURE. **\*\*\*ONLY COMPRESSION FITTINGS WILL BE ACCEPTED\*\*\***

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

## **ENGINES & TRANSMISSIONS**

### **ENGINE**

THE VEHICLE SHALL UTILIZE A CUMMINS ISX15 ENGINE AS DESCRIBED BELOW, NO EXCEPTIONS:

- 550 HORSEPOWER
- SIX (6) CYLINDER
- VARIABLE GEOMETRY TURBOCHARGED
- CHARGE AIR COOLED (CAC) 4-CYCLE DIESEL
- CUMMINS XPI HIGH PRESSURE FUEL INJECTION SYSTEM
- FUEL COOLER (WHEN EQUIPPED WITH A FIRE PUMP)
- 912 CU.IN. DISPLACEMENT
- 550 GROSS BHP AT 1800 RPM AND A PEAK TORQUE OF 1850 LB.FT. AT 1200 RPM WITH A GOVERNED RPM OF 2000
- BORE AND STROKE SHALL BE 5.39 X 6.65
- COMPRESSION RATIO SHALL BE 17.2:1
- ENGINE LUBRICATION SYSTEM SHALL HAVE A MINIMUM CAPACITY, TO INCLUDE FILTER, OF 56 QUARTS
- COOLED EXHAUST GAS RECIRCULATION (EGR)
- DELCO-REMY 39 MD-HD 12 VOLT STARTER
- COOLANT FILTER WITH SHUT-OFF AND CORROSION INHIBITING ADDITIVE
- 18.7 CUBIC FOOT PER MINUTE AIR COMPRESSOR
- AFTER TREATMENT SYSTEM CONSISTING OF A OXIDATION CATALYST AND DIESEL PARTICULATE FILTER AND SELECTIVE CATALYST REDUCTION SYSTEM
- EMBER SEPARATOR COMPLIANT WITH CURRENT NFPA 1901 STANDARD
- THE ENGINE SHALL BE COMPLIANT WITH 2016 EPA EMISSION STANDARDS

THE ENGINE AIR INTAKE SHALL DRAW AIR THROUGH THE FRONT CAB GRILL. THE INTAKE OPENING SHALL BE LOCATED ON THE OFFICER (RIGHT) SIDE BEHIND FRONT CAB FACE WITH A PLENUM THAT DIRECTS AIR TO THE AIR FILTER. THE AIR CLEANER SHALL BE AN 11" DIAMETER DRY TYPE THAT IS EASILY ACCESSED FOR SERVICE. AIR CLEANER INTAKE PIPING SHALL BE MADE FROM ALUMINIZED STEEL TUBING WITH FLEXIBLE RUBBER HOSES. AIR CLEANER INTAKE PIPING CLAMPS SHALL BE HEAVY-DUTY, CONSTANT-TORQUE, T-BOLT CLAMPS TO ENSURE PROPER SEALING UNDER ALL TEMPERATURES IN ORDER TO KEEP DUST AND OTHER CONTAMINANTS OUT OF THE ENGINE INTAKE AIR STREAM AND PROTECT THE ENGINE.

THE ENGINE EXHAUST PIPING SHALL BE A MINIMUM OF 5" DIAMETER WELDED ALUMINIZED STEEL TUBING UP TO AND INCLUDING THE PARTICULATE FILTER AND THE CATALYST CANISTERS. THE MUFFLER SHALL BE MOUNTED HORIZONTALLY UNDER THE RIGHT-HAND FRAME RAIL IN BACK OF THE CAB IN ORDER TO MINIMIZE HEAT TRANSMISSION TO THE CAB AND ITS OCCUPANTS. THE EXHAUST SHALL BE DIRECTED AWAY FROM THE VEHICLE ON THE RIGHT SIDE AHEAD OF THE REAR WHEELS IN ORDER TO KEEP EXHAUST FUMES AS FAR AWAY AS POSSIBLE FROM THE CAB AND PUMP OPERATOR POSITION.

A 5-YEAR/100,000 MILES PARTS AND LABOR WARRANTY WILL BE PROVIDED AS STANDARD BY CUMMINS. THE ENGINE INSTALLATION SHALL NOT REQUIRE THE OPERATION OF ANY TYPE OF "POWER-DOWN" FEATURE TO MEET ENGINE INSTALLATION TESTS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **TRANSMISSION**

THE VEHICLE SHALL UTILIZE AN ALLISON EVS4000P, ELECTRONIC, 5-SPEED AUTOMATIC TRANSMISSION. A PUSH BUTTON SHIFT MODULE SHALL BE LOCATED RIGHT SIDE OF THE STEERING COLUMN, WITHIN EASY REACH OF THE DRIVER. THE SHIFT POSITION INDICATOR SHALL BE INDIRECTLY LIT FOR AFTER DARK OPERATION. THE SHIFT MODULE SHALL HAVE A "DO NOT SHIFT" LIGHT AND A "SERVICE" INDICATOR LIGHT. THE SHIFT MODULE

SHALL HAVE MEANS TO ENTER A DIAGNOSTIC MODE AND DISPLAY DIAGNOSTIC DATA. A TRANSMISSION TEMPERATURE GAUGE WITH WARNING LIGHT AND BUZZER SHALL BE INSTALLED ON THE CAB INSTRUMENT PANEL.

THE TRANSMISSION SHALL HAVE A GROSS INPUT TORQUE RATING OF 1850 LB. FT. AND A GROSS INPUT POWER RATING OF 600 HP.

THE GEAR RATIOS SHALL BE AS FOLLOWS:

1 - 3.51  
2 - 1.91  
3 - 1.43  
4 - 1.00  
5 - .74  
R - 4.80

THE TRANSMISSION SHALL BE EQUIPPED WITH A FLUID LEVEL SENSOR (FLS) SYSTEM, PROVIDING DIRECT FEEDBACK OF TRANSMISSION OIL LEVEL INFORMATION TO THE OPERATOR. THE TRANSMISSION SHALL HAVE A LUBRICANT CAPACITY OF 51 QUARTS. A TRANSMISSION OIL COOLER SHALL BE PROVIDED IN THE LOWER TANK OF THE RADIATOR.

THE TRANSMISSION SHALL CONTAIN TWO ENGINE DRIVEN PTO OPENINGS LOCATED AT THE 1 AND 8 O`CLOCK POSITIONS.

THE AUTOMATIC TRANSMISSION SHALL BE EQUIPPED WITH A POWER LOCK-UP DEVICE. THE TRANSMISSION LOCK-UP SHALL PREVENT DOWN SHIFTING OF TRANSMISSION WHEN ENGINE SPEED IS DECREASED DURING PUMP OPERATIONS, THEREBY MAINTAINING A CONSTANT GEAR RATIO. TRANSMISSION LOCK-UP SHALL BE AUTOMATICALLY ACTIVATED WHEN PLACING PUMP IN GEAR. TRANSMISSION LOCK-UP SHALL BE AUTOMATICALLY DEACTIVATED WHEN DISENGAGING PUMP FOR NORMAL ROAD OPERATION.

A 5-YEAR/UNLIMITED MILES PARTS AND LABOR WARRANTY SHALL BE PROVIDED AS STANDARD BY ALLISON TRANSMISSION.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **TRANSMISSION SELECTOR**

A PUSH-BUTTON TRANSMISSION SHIFT MODULE, ALLISON MODEL 29538373, SHALL BE LOCATED TO THE RIGHT SIDE OF THE STEERING COLUMN WITHIN EASY REACH OF THE DRIVER. THE SHIFT POSITION INDICATOR SHALL BE INDIRECTLY LIT FOR AFTER DARK OPERATION. THE SHIFT MODULE SHALL HAVE A "DO NOT SHIFT" LIGHT AND A "SERVICE" INDICATOR LIGHT. THE SHIFT MODULE SHALL HAVE MEANS TO ENTER A DIAGNOSTIC MODE AND DISPLAY DIAGNOSTIC DATA INCLUDING OIL LIFE MONITOR, FILTER LIFE MONITOR, TRANSMISSION HEALTH MONITOR AND FLUID LEVEL. A TRANSMISSION TEMPERATURE GAUGE WITH WARNING LIGHT AND BUZZER SHALL BE INSTALLED ON THE CAB INSTRUMENT PANEL.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **TRANSMISSION FLUID**

THE TRANSMISSION FLUID SHALL BE TRANSSYND SYNTHETIC.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **VEHICLE SPEED**

THE MAXIMUM SPEED SHALL BE ELECTRONIC LIMITED TO 68 MPH AS REQUIRED BY NFPA 1901.

*NOTE: MAXIMUM SPEED MAY BE SET AT 65 MPH DUE TO TIRE RATING.*

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **AUTOMATIC SHIFT TO NEUTRAL**

THE TRANSMISSION SHALL BE PROGRAMMED TO COMPLY WITH NFPA 1901 AND AUTOMATICALLY SHIFT TO NEUTRAL UPON APPLICATION OF THE PARKING BRAKE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**TRANSMISSION PROGRAMMING**

THE TRANSMISSION SHALL INCLUDE THE ALLISON 2ND GEAR PRE-SELECT FEATURE. THIS OPTION WILL DIRECT THE TRANSMISSION TO DOWN SHIFT TO SECOND GEAR WHEN THE THROTTLE IS RELEASED AND THE JACOBS ENGINE BRAKE IS ENGAGED. THIS FEATURE IS DESIGNED TO INCREASE BRAKE LIFE AND AID VEHICLE BRAKING.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**SECONDARY BRAKING**

**JACOBS ENGINE BRAKE**

ONE (1) JACOBS ENGINE BRAKE SHALL BE INSTALLED TO ASSIST IN SLOWING AND CONTROLLING THE VEHICLE AS REQUIRED BY NFPA 1901 FOR VEHICLES WITH GROSS VEHICLE WEIGHT RATINGS (GVWR) OF 36,000 LBS. OR GREATER. AN ON-OFF CONTROL SWITCH AND A HIGH-MEDIUM-LOW SELECTOR SWITCH SHALL BE MOUNTED IN THE CAB ACCESSIBLE TO THE DRIVER.

WHEN ACTIVATED, THE JACOBS ENGINE BRAKE SHALL CUT OFF THE FLOW OF FUEL TO THE CYLINDERS AND ALTER THE TIMING OF THE EXHAUST VALVES. THIS SHALL TRANSFORM THE ENGINE INTO A HIGH-PRESSURE AIR COMPRESSOR, DRIVEN BY THE WHEELS, AND THE HORSEPOWER ABSORBED BY THE ENGINE IN THIS MODE SHALL SLOW THE VEHICLE. THE SELECTOR SWITCH ALLOWS THE DRIVER TO SELECT THE AMOUNT OF RETARDING POWER. WHEN THE ON-OFF SWITCH IS IN THE "ON" POSITION, THE ENGINE BRAKE SHALL BE AUTOMATICALLY APPLIED WHENEVER THE ACCELERATOR IS IN THE IDLE POSITION AND THE AUTOMATIC TRANSMISSION IS IN THE LOCK-UP MODE. IF THE ACCELERATOR IS DEPRESSED OR IF THE ON-OFF SWITCH IS PLACED IN THE "OFF" POSITION, THE ENGINE BRAKE SHALL IMMEDIATELY RELEASE AND ALLOW THE ENGINE TO RETURN TO ITS NORMAL FUNCTION.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**EXHAUST OPTIONS**

**EXHAUST END MODIFICATION**

THE END OF THE EXHAUST TAIL PIPE SHALL BE MODIFIED TO ACCOMMODATE A PLYMOVENT IN-HOUSE EXHAUST EXTRACTION SYSTEM. THE TAIL PIPE WILL BE AT 90 DEGREES AND STRAIGHT OUT BELOW THE SIDE OF BODY. A STOP RING SHALL BE PROVIDED ON THE TAIL PIPE TO PROPERLY POSITION THE PLYMOVENT NOZZLE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**COOLING PACKAGE**

**RADIATOR**

THE ENGINE RADIATOR SHALL BE OF A BOLTED DESIGN AND HAVE A MINIMUM CORE AREA OF 1400 SQUARE INCHES. THE TOP AND BOTTOM TANKS SHALL BE STAMPED 16-GAUGE STEEL. THE TANKS SHALL BE ATTACHED TO THE HEADER ASSEMBLIES WITH A MINIMUM OF FORTY-SIX (46), 5/16" BOLTS. THE SPACING BETWEEN FASTENERS SHALL NOT EXCEED 1.75 INCHES IN ORDER TO MINIMIZE THE POSSIBILITY OF LEAKS.

THE HEADER PLATES SHALL BE MADE OF 16-GAUGE BRASS WHILE THE TUBES SHALL BE .0068-INCH THICK BRASS AND .076 BY .625 INCHES IN SIZE. THE TUBES SHALL HAVE A SMOOTH BORE WITH WELDED SEAMS WHICH ALLOWS FOR CLEANING OF THE RADIATOR.

THE RADIATOR SHALL CONTAIN THREE ROWS OF TUBES WITH A MINIMUM OF 87 TUBES PER ROW FOR A TOTAL OF NOT LESS THAN 261 TUBES. THE TUBES SHALL BE ARRANGED IN AN INLINE PROFILE ACROSS THE CORE. LOUVERED SERPENTINE FINS CONSTRUCTED OF COPPER WITH A DENSITY NOT GREATER THAN 16 FINS PER INCH SHALL BE USED IN THE CONSTRUCTION OF THE RADIATOR.

THE RADIATOR TUBES SHALL BE ATTACHED TO THE HEADER PLATES WITH A DUAL BONDING PROCESS. THE COOLANT SIDE CONNECTION SHALL BE WELDED, WHILE THE AIRSIDE SHALL BE SOLDERED.

THE TOP TANK SHALL INCLUDE AN INTEGRAL DEAERATION TANK, WHICH REMOVES AIR FROM THE ENGINE WATER. THE TOP TANK SHALL INCLUDE A SIGHT GLASS FOR COOLANT LEVEL INSPECTION WITH REMOVING THE RADIATOR CAP. A LOW COOLANT WARNING SHALL BE INCORPORATED TO ALERT THE DRIVER.

THE BOTTOM TANK OF THE RADIATOR SHALL INCORPORATE OIL TO WATER PLATE-TYPE COOLER FOR THE TRANSMISSION. THE COOLER IS DESIGNED TO CAUSE A TURBULENT FLOW OF THE TRANSMISSION OIL THROUGH THE CORE TO FORCE HEAT TRANSFER. THE COOLER SHALL BE SUFFICIENT TO COOL ALLISON TRANSMISSION WITHOUT OUTPUT RETARDERS.

A HIGH EFFICIENCY FAN SHALL BE DIRECT DRIVEN BY THE ENGINE AND SURROUNDED BY A FAN SHROUD. THE SWEEP OF THE FAN SHALL NOT EXCEED THE WIDTH OF THE RADIATOR CORE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **SILICONE HOSES**

ALL RADIATOR AND HEATER HOSES SHALL BE SILICONE. PRESSURE COMPENSATING BAND CLAMPS SHALL BE USED TO ELIMINATE HOSE PINCHING ON ALL HOSES 3/4" DIAMETER AND LARGER. ALL RADIATOR HOSES SHALL BE ROUTED, LOOMED, AND SECURED SO AS TO PROVIDE MAXIMUM PROTECTION FROM CHAFING, CRUSHING, OR CONTACT WITH OTHER MOVING PARTS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **COOLANT**

THE COOLING SYSTEM SHALL BE FILLED WITH A 50/50 MIXTURE OF WATER AND ANTIFREEZE/COOLANT CONDITIONER TO PROVIDE FREEZING PROTECTION TO MINUS 40 (- 40) DEGREES F FOR OPERATION IN SEVERE WINTER TEMPERATURES.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **COOLANT RECOVERY**

THERE SHALL BE A COOLANT OVERFLOW RECOVERY SYSTEM PROVIDED.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **CHARGE AIR COOLER SYSTEM**

THE SYSTEM SHALL INCLUDE A CHARGE AIR COOLER TO ENSURE ADEQUATE COOLING OF THE TURBOCHARGED AIR FOR PROPER ENGINE OPERATION AND MAXIMUM PERFORMANCE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **CHARGE AIR COOLER HOSES**

CHARGE AIR COOLER HOSES SHALL BE MADE FROM HIGH-TEMPERATURE, WIRE-REINFORCED SILICONE TO WITHSTAND THE EXTREMELY HIGH TEMPERATURES AND PRESSURES OF THE TURBOCHARGED AIR. THE HOSES SHALL INCORPORATE A FLEXIBLE HUMP SECTION TO ALLOW MOTION AND MISALIGNMENT OF THE ENGINE RELATIVE TO THE CHARGE AIR COOLER. CHARGE AIR COOLER HOSE CLAMPS SHALL BE HEAVY-DUTY, CONSTANT-TORQUE, T-BOLT CLAMPS TO ENSURE PROPER SEALING UNDER ALL TEMPERATURES IN ORDER TO KEEP DUST AND OTHER CONTAMINANTS OUT OF THE ENGINE INTAKE AIR STREAM AND PROTECT THE ENGINE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **FAN/SHROUD**

THE FAN SHALL BE 30" IN DIAMETER WITH ELEVEN (11) BLADES FOR MAXIMUM AIRFLOW AND DYNAMIC BALANCE. IT SHALL BE MADE OF NYLON FOR STRENGTH AND CORROSION RESISTANCE. THE FAN SHALL BE INSTALLED WITH GRADE 8 HARDWARE WHICH HAS BEEN TREATED WITH THREAD LOCKER FOR ADDITIONAL SECURITY. A FAN SHROUD ATTACHED TO THE RADIATOR SHALL BE PROVIDED TO PREVENT RECIRCULATION OF ENGINE

COMPARTMENT AIR AROUND THE FAN IN ORDER TO MAXIMIZE THE COOLING AIRFLOW THROUGH THE RADIATOR. THE FAN SHROUD SHALL BE CONSTRUCTED OF FIBER-REINFORCED HIGH TEMPERATURE PLASTIC. THE SHROUD SHALL BE SPECIFICALLY FORMED WITH CURVED SURFACES WHICH IMPROVES AIR FLOW AND COOLING.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **TRANSMISSION COOLER**

THE COOLING SYSTEM SHALL INCLUDE A LIQUID-TO-LIQUID TRANSMISSION COOLER CAPABLE OF COOLING THE HEAT GENERATED FROM THE TRANSMISSION. WHEN A TRANSMISSION RETARDER IS SELECTED, THE COOLER SHALL HAVE AN INCREASED CAPACITY TO HANDLE THE ADDITIONAL HEAT LOAD.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **FUEL SYSTEMS**

##### **FUEL SYSTEM**

ONE (1) 50 GALLON FUEL TANK SHALL BE PROVIDED. THE TANK SHALL BE OF AN ALL-WELDED, ALUMINIZED-STEEL CONSTRUCTION WITH ANTI-SURGE BAFFLES AND SHALL CONFORM TO ALL APPLICABLE FEDERAL HIGHWAY ADMINISTRATION (FHWA) 393.65 AND 393.67 STANDARDS. THE TANK SHALL BE MOUNTED BELOW THE FRAME RAILS AT THE REAR OF THE CHASSIS FOR MAXIMUM PROTECTION. THE TANK SHALL BE SECURED WITH TWO (2) WRAP-AROUND T-BOLT TYPE STAINLESS STEEL STRAPS. EACH STRAP SHALL BE FITTED WITH PROTECTIVE RUBBER INSULATION AND SHALL BE SECURED WITH GRADE 8 HARDWARE. THIS DESIGN ALLOWS FOR TANK REMOVAL FROM BELOW THE CHASSIS.

THE FUEL TANK SHALL BE EQUIPPED WITH A 2" DIAMETER FILLER NECK. THE FILLER NECK SHALL EXTEND TO THE REAR OF THE VEHICLE BEHIND THE REAR TIRES AND AWAY FROM THE HEAT OF THE EXHAUST SYSTEM AS REQUIRED BY NFPA 1901 STANDARD FOR AUTOMOTIVE FIRE APPARATUS. THE OPEN END OF THE FILLER NECK SHALL BE EQUIPPED WITH A TWIST-OFF FILLER CAP WITH A RETAINING CHAIN.

THE TANK SHALL BE PLUMBED WITH TOP-DRAW AND TOP-RETURN FUEL LINES IN ORDER TO PROTECT THE LINES FROM ROAD DEBRIS. BOTTOM-DRAW AND/OR BOTTOM-RETURN FUEL LINES ARE NOT ACCEPTABLE. A VENT SHALL BE PROVIDED AT THE TOP OF THE TANK. THE VENT SHALL BE CONNECTED TO THE FILLER NECK TO PREVENT SPLASH-BACK DURING FUELING OPERATIONS. A .50" NPT DRAIN PLUG SHALL BE PROVIDED AT THE BOTTOM OF THE TANK.

THE TANK SHALL HAVE A MINIMUM USEABLE CAPACITY OF 50 GALLONS OF FUEL WITH A SUFFICIENT ADDITIONAL VOLUME TO ALLOW FOR THERMAL EXPANSION OF THE FUEL WITHOUT OVERFLOWING THE VENT.

A MECHANICAL FUEL PUMP SHALL BE PROVIDED AND SIZED BY THE ENGINE MANUFACTURER AS PART OF THE ENGINE.

A SECONDARY RAYCORE FUEL FILTER AND HOUSING SHALL BE INSTALLED IN CONJUNCTION WITH FACTORY PRIMARY AND SECONDARY FILTERS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

##### **FUEL LINE HOSE**

WIRE BRAIDED FUEL HOSE MEETING SAE J-1402 SHALL BE PROVIDED FOR THE CHASSIS FUEL SYSTEM. THE HOSE SHALL HAVE A WORKING TEMPERATURE RATING OF -55 DEGREE F TO 300 DEGREE F.

THE ENDS OF THE HOSE SHALL HAVE CONNECTIONS THAT SHALL ALLOW THE HOSE TO BE REATTACHED IF REMOVED.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

## **ALTERNATOR**

### **320 AMP ALTERNATOR**

THERE SHALL BE A 320 AMP LEECE NEVILLE ALTERNATOR INSTALLED. THE ALTERNATOR SHALL BE A LEECE NEVILLE 4890JB SERIES BRUSHLESS TYPE WITH INTEGRAL RECTIFIER AND ADJUSTABLE VOLTAGE REGULATOR WITH AN OUTPUT OF 275 AMPS PER NFPA 1901 RATING (320 AMPS PER SAE J56).

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

## **BATTERIES**

### **BATTERY SYSTEM**

THE MANUFACTURER SHALL SUPPLY FOUR (4) HEAVY DUTY GROUP 31 12-VOLT AGM BATTERIES. EACH BATTERY SHALL BE INSTALLED AND POSITIONED SO AS TO ALLOW EASY REPLACEMENT OF ANY SINGLE BATTERY. EACH BATTERY SHALL BE EQUIPPED WITH CARRYING HANDLES TO FACILITATE EASE OF REMOVAL AND REPLACEMENT. THERE SHALL BE TWO (2) STEEL FRAME MOUNTED BATTERY BOXES, ONE (1) ON THE LEFT FRAME RAIL AND ONE (1) ON THE RIGHT FRAME RAIL. EACH BATTERY BOX SHALL BE SECURED TO THE FRAME RAIL WITH GRADE 8 HARDWARE. EACH BATTERY BOX SHALL HOLD (2) BATTERIES. THE BATTERIES SHALL HAVE A MINIMUM COMBINED RATING OF 4,000 (4 X 1000) COLD CRANKING AMPS (CCA) @ 0 DEGREES FAHRENHEIT AND 820 (4 X 205) MINUTES OF RESERVE CAPACITY FOR EXTENDED OPERATION. THE BATTERIES SHALL HAVE 3/8-16 THREADED STUD TERMINALS TO ENSURE TIGHT CABLE CONNECTIONS.

THE BATTERY STUD TERMINALS SHALL EACH BE TREATED WITH CONCENTRATED INDUSTRIAL SOFT-SEAL AFTER CABLE INSTALLATION TO PROMOTE CORROSION PREVENTION. THE POSITIVE AND NEGATIVE BATTERY STUD TERMINALS AND THE RESPECTIVE CABLES SHALL BE CLEARLY MARKED TO ENSURE QUICK AND MISTAKE-PROOF IDENTIFICATION.

BATTERIES SHALL BE PLACED ON NON-CORROSIVE RUBBER MATTING AND SECURED WITH HOLD-DOWN BRACKETS TO PREVENT MOVEMENT, VIBRATION, AND ROAD SHOCK. THE HOLD-DOWN BRACKET J-HOOKS SHALL BE CUT TO FIT AND SHALL HAVE ALL SHARP EDGES REMOVED. THE BATTERIES SHALL BE PLACED IN PLASTIC TRAYS TO PROVIDE PRELIMINARY CONTAINMENT SHOULD THERE BE LEAKAGE OF HAZARDOUS BATTERY FLUIDS. THERE SHALL BE TWO (2) PLASTIC TRAYS, EACH CONTAINING (2) BATTERIES. EACH BATTERY TRAY SHALL BE EQUIPPED WITH A RUBBER VENT HOSE TO FACILITATE DRAINAGE. THE RUBBER VENT HOSE SHALL BE ROUTED TO DRAIN BENEATH THE BATTERY BOX. THE BATTERIES SHALL BE POSITIONED IN WELL-VENTILATED AREAS.

ONE (1) POSITIVE AND ONE (1) NEGATIVE JUMPER STUD SHALL BE PROVIDED. BATTERIES SHALL HAVE A MINIMUM WARRANTY OF TWELVE (12) MONTHS THAT SHALL COMMENCE UPON THE DATE OF DELIVERY OF THE APPARATUS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

## **CHASSIS OPTIONS**

### **DRIVELINES**

DRIVELINES SHALL HAVE A HEAVY DUTY METAL TUBE AND SHALL BE EQUIPPED WITH SPICER 1810 SERIES UNIVERSAL JOINTS TO ALLOW FULL-TRANSMITTED TORQUE TO THE AXLE(S). DRIVE SHAFTS SHALL BE AXIALLY STRAIGHT, CONCENTRIC WITH AXIS AND DYNAMICALLY BALANCED.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **REAR TOW EYES**

TWO (2) HEAVY DUTY TOW EYES MADE OF 3/4" (0.75") THICK STEEL HAVING 2-1/2" DIAMETER HOLES SHALL BE MOUNTED BELOW THE BODY AT THE REAR OF THE VEHICLE TO ALLOW TOWING (NOT LIFTING) OF THE APPARATUS WITHOUT DAMAGE. THE TOW EYES WILL BE WELDED TO THE LOWER END OF A 5" STEEL CHANNEL THAT IS BOLTED AT THE END OF THE CHASSIS FRAME RAILS. THE TOW EYES SHALL BE PAINTED CHASSIS BLACK.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**



### **FRONT TOW HOOKS**

TWO (2) HEAVY DUTY PAINTED FRONT TOW HOOKS SHALL BE SECURELY BOLTED TO THE FRONT CHASSIS FRAME RAIL EXTENSIONS TO ALLOW TOWING (NOT LIFTING) OF THE APPARATUS WITHOUT DAMAGE. THEY SHALL BE MOUNTED IN THE DOWNWARD POSITION.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **COLD WEATHER CAB PACKAGE**

ADDITIONAL INSULATION SHALL BE PROVIDED ON THE FRONT CAB WALL. THE INSULATION SHALL CONSIST OF A REFLECTIVE BACKING COVERED AIR CORE INSULATION.

INSULATION SHALL BE PROVIDED ON THE REAR CAB HEATER HOSE LINES (IF EQUIPPED).

A THERMOSTATICALLY CONTROLLED CLUTCH TYPE COOLING FAN SHALL BE INSTALLED ON THE CHASSIS ENGINE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **DEF TANK**

A DIESEL EXHAUST FLUID (DEF) TANK WITH A FIVE (5) GALLON CAPACITY SHALL BE PROVIDED.

THE DEF TANK SHALL INCLUDE A HEATER FED BY HOT WATER DIRECTLY FROM THE ENGINE BLOCK TO PREVENT THE DEF FROM BECOMING TOO COOL TO OPERATE CORRECTLY PER EPA REQUIREMENTS. THE TANK SHALL INCLUDE A TEMPERATURE SENSOR TO CONTROL THE HEATER CONTROL VALVE THAT CONTROLS THE FEED OF HOT WATER FROM THE ENGINE TO THE DEF TANK HEATER.

A SENDER SHALL BE PROVIDED IN THE DEF TANK CONNECTED TO A LEVEL GAUGE ON THE CAB DASH.

THE TANK SHALL BE LOCATED LEFT SIDE BELOW REAR OF CAB.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **POWER STEERING COOLER**

A HEAT EXCHANGER (COOLER) SHALL BE INSTALLED TO MAINTAIN DESIRED POWER STEERING FLUID TEMPERATURE. THE COOLER SHALL BE AN AIR / OIL DESIGN RATED AT 6300 BTU/HR @10 GPM. THE COOLER SHALL BE MOUNTED IN FRONT OF THE RADIATOR AND PLUMBED WITH #10 LINES.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **CAB MODEL**

#### **CAB MEDIUM**

THE VEHICLE SHALL BE DISTINGUISHED BY AN ALL-WELDED ALUMINUM AND FULLY ENCLOSED TILT CAB. THE CAB SHALL BE DESIGNED EXCLUSIVELY FOR FIRE/RESCUE SERVICE AND SHALL BE PRE-ENGINEERED TO ENSURE LONG LIFE. IT SHALL INCORPORATE AN INTEGRAL WELDED SUBSTRUCTURE OF HIGH-STRENGTH ALUMINUM ALLOY EXTRUSIONS THAT CREATES AN OCCUPANT COMPARTMENT THAT IS ESSENTIALLY A PROTECTIVE PERIMETER. THE END RESULT IS A DISTINCTIVE STRUCTURE THAT IS AESTHETICALLY APPEALING, FUNCTIONALLY DURABLE, AND CHARACTERIZED BY INCREASED PERSONNEL SAFETY.

THE CAB SHALL BE CONSTRUCTED FROM 3/16" (0.188") 3003 H14 ALUMINUM ALLOY PLATE ROOF, FLOOR, AND OUTER SKINS WELDED TO A HIGH-STRENGTH 6063-T6 ALUMINUM ALLOY EXTRUDED SUBFRAME. WALL SUPPORTS AND ROOF BOWS ARE 6061 T6 ALUMINUM ALLOY. THIS COMBINATION OF A HIGH-STRENGTH, WELDED ALUMINUM INNER STRUCTURE SURROUNDED ON ALL SIDES BY LOAD-BEARING, WELDED ALUMINUM OUTER SKINS PROVIDES A CAB THAT IS STRONG, LIGHTWEIGHT, CORROSION-RESISTANT, AND DURABLE.

THE INNER STRUCTURE SHALL BE DESIGNED TO CREATE AN INTERLOCKING INTERNAL "ROLL-CAGE" EFFECT BY WELDING TWO (2) 3" X 3" X 0.188" WALL-THICKNESS 6063-T5 ALUMINUM UPRIGHT EXTRUSIONS BETWEEN THE 3" X 3" X 0.375" WALL-THICKNESS 6061-T6 ROOF CROSSBEAM AND THE 2.25" X 3" X 0.375" WALL-THICKNESS 6063-T6 SUBFRAME STRUCTURE IN THE FRONT. AN ADDITIONAL TWO (2) ALUMINUM UPRIGHT EXTRUSIONS WITHIN THE BACK-OF-CAB STRUCTURE SHALL BE WELDED BETWEEN THE REAR ROOF PERIMETER EXTRUSION AND THE SUBFRAME STRUCTURE IN THE REAR TO COMPLETE THE INTERLOCKING FRAMEWORK. THE FOUR (4) UPRIGHT EXTRUSIONS -- TWO (2) IN THE FRONT AND TWO (2) IN THE REAR -- SHALL BE DESIGNED TO EFFECTIVELY TRANSMIT ROOF LOADS DOWNWARD INTO THE SUBFRAME STRUCTURE TO HELP PROTECT THE OCCUPANT COMPARTMENT FROM CRUSHING IN A SERIOUS ACCIDENT. ALL JOINTS SHALL BE ELECTRICALLY SEAM WELDED INTERNALLY USING ALUMINUM ALLOY WELDING WIRE.

THE SUBFRAME STRUCTURE SHALL BE CONSTRUCTED FROM HIGH-STRENGTH 6061-T6 ALUMINUM EXTRUSIONS WELDED TOGETHER TO PROVIDE A STRUCTURAL BASE FOR THE CAB. IT SHALL INCLUDE A SIDE-TO-SIDE C-CHANNEL EXTRUSION ACROSS THE FRONT, WITH 3/4" X 2-3/4" (.75" X 2.75") FULL-WIDTH CROSSMEMBER TUBES SPACED AT CRITICAL POINTS BETWEEN THE FRONT AND REAR OF THE CAB.

THE CAB FLOOR SHALL BE CONSTRUCTED FROM 3/16" (0.188") 3003 H14 SMOOTH ALUMINUM PLATE WELDED TO THE SUBFRAME STRUCTURE TO GIVE THE CAB ADDITIONAL STRENGTH AND TO HELP PROTECT THE OCCUPANTS FROM PENETRATION BY ROAD DEBRIS AND UNDER-RIDE COLLISION IMPACTS.

THE CAB ROOF SHALL BE CONSTRUCTED FROM 3/16" (0.188") 3003 H14 ALUMINUM TREADPLATE SUPPORTED BY A GRID OF FORE-AFT AND SIDE-TO-SIDE ALUMINUM EXTRUSIONS TO HELP PROTECT THE OCCUPANTS FROM PENETRATION BY FALLING DEBRIS AND DOWNWARD-PROJECTING OBJECTS. MOLDED FIBERGLASS OR OTHER MOLDED FIBER-REINFORCED PLASTIC ROOF MATERIALS ARE NOT ACCEPTABLE.

THE CAB ROOF PERIMETER SHALL BE CONSTRUCTED FROM 4" X 6-5/8" (4" X 6.625") 6063-T5 ALUMINUM EXTRUSIONS WITH INTEGRAL DRIP RAILS. CAST ALUMINUM CORNER JOINTS SHALL BE WELDED TO THE ALUMINUM ROOF PERIMETER EXTRUSIONS TO ENSURE STRUCTURAL INTEGRITY. THE ROOF PERIMETER SHALL BE CONTINUOUSLY WELDED TO THE CAB ROOF PLATE TO ENSURE A LEAK-FREE ROOF STRUCTURE.

THE CAB REAR SKIN SHALL BE CONSTRUCTED FROM 3/16" (0.188") 3003 H14 ALUMINUM PLATE. STRUCTURAL EXTRUSIONS SHALL BE USED TO REINFORCE THE REAR WALL.

THE LEFT-HAND AND RIGHT-HAND CAB SIDE SKINS SHALL BE CONSTRUCTED FROM 3/16" (0.188") 3003 H14 SMOOTH ALUMINUM PLATE. THE SKINS SHALL BE WELDED TO STRUCTURAL ALUMINUM EXTRUSIONS AT THE TOP, BOTTOM, AND SIDES FOR ADDITIONAL REINFORCEMENT.

THE CAB FRONT SKINS SHALL BE CONSTRUCTED FROM 3/16" (0.188") 3003 H14 SMOOTH ALUMINUM PLATE. THE UPPER PORTION SHALL FORM THE WINDSHIELD MASK, AND THE LOWER PORTION SHALL FORM THE CAB FRONT. EACH FRONT CORNER SHALL HAVE A FULL 9" OUTER RADIUS FOR STRENGTH AND APPEARANCE. THE LEFT-HAND AND RIGHT-HAND SIDES OF THE WINDSHIELD MASK SHALL BE WELDED TO THE LEFT-HAND AND RIGHT-HAND FRONT DOOR FRAMES, AND THE UPPER EDGE OF THE WINDSHIELD MASK SHALL BE WELDED TO THE CAB ROOF PERIMETER EXTRUSION FOR REINFORCEMENT. THE CAB FRONT SHALL BE WELDED TO THE SUBFRAME C-CHANNEL EXTRUSION BELOW THE LINE OF THE HEADLIGHTS TO PROVIDE PROTECTION AGAINST FRONTAL IMPACT.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **CAB EXTERIOR**

THE EXTERIOR OF THE CAB SHALL BE 94" WIDE X 130" LONG TO ALLOW SUFFICIENT ROOM IN THE OCCUPANT COMPARTMENT FOR UP TO EIGHT (8) FIRE FIGHTERS. THE CAB ROOF SHALL BE APPROXIMATELY 101" ABOVE THE GROUND WITH THE FLAT ROOF OPTION. THE BACK-OF-CAB TO FRONT AXLE LENGTH SHALL BE A MINIMUM OF 58".

FRONT AXLE FENDERETTE TRIM SHALL BE BRUSHED ALUMINUM FOR APPEARANCE AND CORROSION RESISTANCE. BOLT-IN FRONT WHEEL WELL LINERS SHALL BE CONSTRUCTED OF 3/16" (0.188") COMPOSITE MATERIAL TO PROVIDE A MAINTENANCE-FREE, DAMAGE-RESISTANT SURFACE THAT HELPS PROTECT THE UNDERSIDE OF THE CAB STRUCTURE AND COMPONENTS FROM STONES AND ROAD DEBRIS.

A LARGE STAINLESS STEEL COOLING AIR INTAKE GRILLE WITH AN OPEN AREA OF NO LESS THAN 81% SHALL BE AT THE FRONT OF THE CAB.

THE CAB WINDSHIELD SHALL BE OF A TWO-PIECE REPLACEABLE DESIGN FOR LOWERED COST OF REPAIR. THE WINDSHIELD SHALL BE MADE FROM 1/4" (0.25") THICK CURVED, LAMINATED SAFETY GLASS WITH A 75% LIGHT TRANSMITTANCE AUTOMOTIVE TINT. A COMBINED MINIMUM VIEWING AREA OF 2,700-SQ. IN. SHALL BE PROVIDED. FORWARD VISIBILITY TO THE GROUND FOR THE AVERAGE (50<sup>TH</sup> PERCENTILE) MALE SITTING IN THE DRIVER'S SEAT SHALL BE NO MORE THAN 11 FEET 7 INCHES FROM THE FRONT OF THE CAB TO ENSURE GOOD VISIBILITY IN CONGESTED AREAS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **CAB MOUNTS AND CAB TILT SYSTEM**

THE CAB SHALL BE INDEPENDENTLY MOUNTED FROM THE BODY AND CHASSIS TO ISOLATE THE CAB STRUCTURE FROM STRESSES CAUSED BY CHASSIS TWISTING AND BODY MOVEMENTS. MOUNTING POINTS SHALL CONSIST OF TWO (2) FORWARD-PIVOTING POINTS, ONE (1) ON EACH SIDE; TWO (2) INTERMEDIATE RUBBER LOAD-BEARING CUSHIONS LOCATED MIDWAY ALONG THE LENGTH OF THE CAB, ONE (1) ON EACH SIDE; AND TWO (2) COMBINATION RUBBER SHOCK MOUNTS AND CAB LATCHES LOCATED AT THE REAR OF THE CAB, ONE (1) ON EACH SIDE.

AN ELECTRIC-OVER-HYDRAULIC CAB TILT SYSTEM SHALL BE PROVIDED TO PROVIDE EASY ACCESS TO THE ENGINE. IT SHALL CONSIST OF TWO (2) LARGE-DIAMETER, TELESCOPING, HYDRAULIC LIFT CYLINDERS, ONE (1) ON EACH SIDE OF THE CAB, WITH A FRAME-MOUNTED ELECTRIC-OVER-HYDRAULIC PUMP FOR CYLINDER ACTUATION.

SAFETY FLOW FUSES (VELOCITY FUSES) SHALL BE PROVIDED IN THE HYDRAULIC LIFT CYLINDERS TO PREVENT THE RAISED CAB FROM SUDDENLY DROPPING IN CASE OF A BURST HYDRAULIC HOSE OR OTHER HYDRAULIC FAILURE. THE SAFETY FLOW FUSES SHALL OPERATE WHEN THE CAB IS IN ANY POSITION, NOT JUST THE FULLY RAISED POSITION.

THE HYDRAULIC PUMP SHALL HAVE A MANUAL OVERRIDE SYSTEM AS A BACKUP IN THE EVENT OF AN ELECTRICAL FAILURE. LIFT CONTROLS SHALL BE LOCATED IN A COMPARTMENT TO THE REAR OF THE CAB ON THE RIGHT SIDE OF THE APPARATUS. A PARKING BRAKE INTERLOCK SHALL BE PROVIDED AS A SAFETY FEATURE TO PREVENT THE CAB FROM BEING TILTED UNLESS THE PARKING BRAKE IS SET. THE ENTIRE CAB SHALL BE TILTED THROUGH A 42-45 DEGREE ARC TO ALLOW FOR EASY MAINTENANCE OF THE ENGINE, TRANSMISSION AND ENGINE COMPONENTS. A POSITIVE-ENGAGEMENT SAFETY LATCH SHALL BE PROVIDED TO LOCK THE CAB IN THE FULL TILT POSITION TO PROVIDE ADDITIONAL SAFETY FOR PERSONNEL WORKING UNDER THE RAISED CAB. IN THE LOWERED POSITION, THE CAB SHALL BE LOCKED DOWN BY TWO (2) AUTOMATIC, SPRING-LOADED CAB LATCHES AT THE REAR OF THE CAB. A "CAB AJAR" INDICATOR LIGHT SHALL BE PROVIDED ON THE INSTRUMENT PANEL TO WARN THE DRIVER WHEN THE CAB IS NOT COMPLETELY LOCKED INTO THE LOWERED POSITION.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **CAB INTERIOR**

THE INTERIOR OF THE CAB SHALL BE OF THE OPEN DESIGN WITH AN ERGONOMICALLY-DESIGNED DRIVER AREA THAT PROVIDES READY ACCESS TO ALL CONTROLS AS WELL AS A CLEAR VIEW OF CRITICAL INSTRUMENTATION.

THE ENGINE COVER BETWEEN THE DRIVER AND THE OFFICER SHALL BE A LOW-RISE CONTOURED DESIGN TO PROVIDE SUFFICIENT SEATING AND ELBOW ROOM FOR THE DRIVER AND THE OFFICER. THE ENGINE COVER SHALL BLEND IN SMOOTHLY WITH THE INTERIOR DASH AND FLOORING OF THE CAB. AN ALL-ALUMINUM SUBFRAME SHALL BE PROVIDED FOR THE ENGINE COVER FOR STRENGTH. THE OVERALL HEIGHT OF THE ENGINE ENCLOSURE SHALL NOT EXCEED 23" FROM THE FLOOR AT EACH SIDE AND 27" IN THE CENTER SECTION. THE ENGINE COVER SHALL NOT EXCEED 41" IN WIDTH AT ITS WIDEST POINT.

THE REAR PORTION OF THE ENGINE COVER SHALL BE PROVIDED WITH A LIFT-UP SECTION TO PROVIDE EASY ACCESS FOR CHECKING TRANSMISSION FLUID, POWER STEERING FLUID, AND ENGINE OIL WITHOUT RAISING THE CAB. THE ENGINE COVER INSULATION SHALL CONSIST OF 3/4" DUAL DENSITY FIBERGLASS COMPOSITE PANELS WITH FOIL BACKING MANUFACTURED TO SPECIFICALLY FIT THE ENGINE COVER WITHOUT MODIFICATION TO ELIMINATE "SAGGING" AS FOUND WITH FOAM INSULATION. THE INSULATION SHALL MEET OR EXCEED DOT STANDARD MVSS 302-1 AND V-0 (UI SUBJECT 94 TEST).

ALL CAB FLOORS SHALL BE COVERED WITH **LINE-X BRAND** OR **HERCULINER BRAND** THAT PROVIDES AN AGGRESSIVE SLIP-RESISTANT SURFACE IN ACCORDANCE WITH CURRENT NFPA 1901.

A MINIMUM OF 57.25" OF FLOOR-TO-CEILING HEIGHT SHALL BE PROVIDED IN THE FRONT SEATING AREA OF THE CAB AND A MINIMUM OF 55.25" FLOOR-TO-CEILING HEIGHT SHALL BE PROVIDED IN THE REAR SEATING AREA. A MINIMUM OF 36" OF SEATED HEADROOM AT THE "H" POINT SHALL BE PROVIDED OVER EACH FENDERWELL.

THE FLOOR AREA IN FRONT OF THE FRONT SEAT PEDESTALS SHALL BE NO LESS THAN 20.5" SIDE TO SIDE BY 25.0" FRONT TO REAR FOR THE DRIVER AND NO LESS THAN 20.5" SIDE TO SIDE BY 26.0" FRONT TO REAR FOR THE OFFICER TO PROVIDE ADEQUATE LEGROOM.

BATTERY JUMPER STUDS SHALL BE PROVIDED TO ALLOW JUMP-STARTING OF THE APPARATUS WITHOUT HAVING TO TILT THE CAB. ALL EXPOSED INTERIOR METAL SURFACES SHALL BE PRETREATED USING A CORROSION PREVENTION SYSTEM.

THE INTERIOR OF THE CAB SHALL BE INSULATED TO ENSURE THE SOUND (DBA) LEVEL FOR THE CAB INTERIOR IS WITHIN THE LIMITS STATED IN THE CURRENT EDITION OF NFPA 1901. THE INSULATION SHALL CONSIST OF 2 OZ. WADDING AND 1/4" (0.25") FOAM PADDING. THE PADDING BOARD SHALL BE BACKED WITH 1/4" (0.25") THICK REFLECTIVE INSULATION. THE BACKING SHALL BE SPUN-WOVEN POLYESTER. INTERIOR CAB PADDING SHALL CONSIST OF A REAR CAB HEADLINER, AND SIDE PANELS BETWEEN THE FRONT AND REAR CAB DOORS.

THE REAR WALL SHALL HAVE 3/16" 3003 H14 SMOOTH ALUMINUM PLATE, FOR MOUNTING OF TOOLS.

THE OVERHEAD CONSOLE AND HEATER COVER SHALL BE COVERED WITH THERMOFORMED, NON-METALLIC, NON-FIBER TRIM PIECES TO PROVIDE EXCELLENT SCUFF AND ABRASION RESISTANCE, AS WELL AS CHEMICAL STAIN RESISTANCE. THE THERMOFORMED MATERIAL SHALL COMPLY WITH FEDERAL MOTOR VEHICLE SAFETY STANDARD (FMVSS) 302 FOR FLAMMABILITY OF INTERIOR MATERIALS.

THE VEHICLE SHALL USE A SEVEN-POSITION TILT AND TELESCOPIC STEERING COLUMN TO ACCOMMODATE VARIOUS SIZE OPERATORS. AN 18" PADDED STEERING WHEEL WITH A CENTER HORN BUTTON SHALL BE PROVIDED.

A FULL-WIDTH OVERHEAD CONSOLE SHALL BE MOUNTED TO THE CAB CEILING FOR PLACEMENT OF SIREN AND RADIO HEADS, AND FOR WARNING LIGHT SWITCHES. THE CONSOLE SHALL BE MADE FROM A THERMOFORMED, NON-METALLIC MATERIAL AND SHALL HAVE EASILY REMOVABLE MOUNTING PLATES.

STORAGE AREAS, WITH HINGED ACCESS DOORS, SHALL BE PROVIDED BELOW THE DRIVER AND OFFICER SEATS. THE DRIVER SIDE COMPARTMENT SHALL BE APPROXIMATELY 19.25" X 17.75" X 5.75" HIGH AND THE OFFICER SIDE COMPARTMENT SHALL BE APPROXIMATELY 18.25" X 22.5" X 11" HIGH (19.25" X 17.75" X 5.75" W/ AIR RIDE).

THE FRONT CAB STEPS SHALL BE A MINIMUM OF 8" DEEP X 24" WIDE. THE FIRST STEP SHALL BE NO MORE THAN 24.0" ABOVE THE GROUND WITH STANDARD TIRES IN THE UNLOADED CONDITION PER NFPA 1901 STANDARDS. THE REAR CAB STEPS SHALL BE A MINIMUM 12" DEEP X 21" WIDE. THE FIRST STEP SHALL BE NO MORE THAN 24.0" ABOVE THE GROUND WITH STANDARD TIRES IN THE UNLOADED CONDITION PER NFPA 1901 STANDARDS. THE REAR STEPS SHALL INCORPORATE INTERMEDIATE STEPS FOR EASY ACCESS TO THE CAB. THE STEPS ARE TO BE LOCATED INSIDE THE DOORSILL, WHERE THEY ARE PROTECTED AGAINST MUD, SNOW, ICE, AND WEATHER. THE STEP SURFACES SHALL BE ALUMINUM DIAMOND PLATE WITH A MULTI-DIRECTIONAL, AGGRESSIVE GRIPPING SURFACE INCORPORATED INTO THE ALUMINUM DIAMOND PLATE IN ACCORDANCE WITH CURRENT NFPA 1901.

A BLACK RUBBER GRIP HANDLE SHALL BE PROVIDED ON THE INTERIOR OF EACH FRONT DOOR BELOW THE DOOR WINDOW TO ENSURE PROPER HAND HOLDS WHILE ENTERING AND EXITING THE CAB. AN ADDITIONAL BLACK RUBBER GRIP HANDLE SHALL BE PROVIDED ON THE LEFT AND RIGHT SIDE WINDSHIELD POST FOR ADDITIONAL HANDHOLDS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **CAB DOORS**

THERE SHALL BE REFLECTIVE SIGNS ON EACH CAB DOOR IN COMPLIANCE WITH ALL NFPA REQUIREMENTS.

THE CAB DOOR INTERIOR SHALL BE STAINLESS STEEL FINISH. THIS SHALL AID IN LONG LIFE AND CORROSION RESISTANCE.

FOUR (4) SIDE-OPENING CAB DOORS SHALL BE PROVIDED. DOORS SHALL BE CONSTRUCTED OF A 3/16" (0.188") ALUMINUM PLATE OUTER MATERIAL WITH AN ALUMINUM EXTRUDED INNER FRAMEWORK TO PROVIDE A STRUCTURE THAT IS AS STRONG AS THE SIDE SKINS.

FRONT CAB DOOR OPENINGS SHALL BE APPROXIMATELY 36" WIDE X 71.5" HIGH, AND THE REAR CAB DOOR OPENINGS SHALL BE APPROXIMATELY 33.75" WIDE X 73" HIGH. THE FRONT DOORS SHALL OPEN APPROXIMATELY 75 DEGREES, AND THE REAR DOORS SHALL OPEN APPROXIMATELY 80 DEGREES.

THE DOORS SHALL BE SECURELY FASTENED TO THE DOORFRAMES WITH FULL-LENGTH, STAINLESS STEEL PIANO HINGES, WITH 3/8" (0.375") DIAMETER PINS FOR PROPER DOOR ALIGNMENT, LONG LIFE, AND CORROSION RESISTANCE. MOUNTING HARDWARE SHALL BE TREATED WITH CORROSION-RESISTANT MATERIAL PRIOR TO INSTALLATION. FOR EFFECTIVE SEALING, AN EXTRUDED RUBBER GASKET SHALL BE PROVIDED AROUND THE ENTIRE PERIMETER OF ALL DOORS.

STAINLESS STEEL PADDLE-STYLE DOOR LATCHES SHALL BE PROVIDED ON THE INTERIORS OF THE DOORS. THE LATCHES SHALL BE DESIGNED AND INSTALLED TO PROTECT AGAINST ACCIDENTAL OR INADVERTENT OPENING AS REQUIRED BY NFPA 1901.

THE FRONT DOOR WINDOWS SHALL PROVIDE A MINIMUM VIEWING AREA OF 530 SQ. IN. EACH. THE REAR DOOR WINDOWS SHALL PROVIDE A MINIMUM VIEWING AREA OF 500 SQ. IN. EACH. ALL WINDOWS SHALL HAVE 75% LIGHT TRANSMITTANCE AUTOMOTIVE SAFETY TINT. FULL ROLL-DOWN WINDOWS SHALL BE PROVIDED FOR THE FRONT CAB DOORS WITH WORM GEAR DRIVE CABLE OPERATION FOR POSITIVE OPERATION AND LONG LIFE. SCISSORS OR GEAR-AND-SECTOR DRIVES ARE NOT ACCEPTABLE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **CAB INSTRUMENTS AND CONTROLS**

TWO (2) PANTOGRAPH-STYLE WINDSHIELD WIPERS WITH TWO (2) SEPARATE ELECTRIC MOTORS SHALL BE PROVIDED FOR POSITIVE OPERATION. AIR-OPERATED WINDSHIELD WIPERS ARE NOT ACCEPTABLE BECAUSE OF THEIR TENDENCY TO ACCUMULATE MOISTURE, WHICH CAN LEAD TO CORROSION OR TO FREEZING IN COLD WEATHER. THE WIPERS SHALL BE A WET-ARM TYPE WITH A ONE (1) GALLON WASHER FLUID RESERVOIR, AN INTERMITTENT-WIPE FUNCTION, AND AN INTEGRAL WASH CIRCUIT. WIPER ARM LENGTH SHALL BE APPROXIMATELY 28", AND THE BLADE LENGTH APPROXIMATELY 20". EACH ARM SHALL HAVE A 70 DEGREE SWEEP FOR FULL COVERAGE OF THE WINDSHIELD. AN OVERHEAD MOUNTED HEATER AND DEFROSTER WITH A MINIMUM CAPACITY OF 60,000 BTU/HR AND ALL NECESSARY CONTROLS SHALL BE MOUNTED IN THE CAB. THE AIRFLOW SYSTEM SHALL CONSIST OF TWO (2) LEVELS, DEFROST AND CAB, AND SHALL HAVE FRESH AIR AND DEFOGGING CAPABILITIES.

CAB CONTROLS SHALL BE LOCATED ON THE CAB INSTRUMENT PANEL IN THE DASHBOARD ON THE DRIVER'S SIDE WHERE THEY ARE CLEARLY VISIBLE AND EASILY REACHABLE. EMERGENCY WARNING LIGHT SWITCHES SHALL BE INSTALLED IN REMOVABLE PANELS FOR EASE OF SERVICE. THE FOLLOWING GAUGES AND/OR CONTROLS SHALL BE PROVIDED:

- MASTER BATTERY SWITCH/IGNITION SWITCH (ROCKER WITH INTEGRAL INDICATOR)
- STARTER SWITCH/ENGINE STOP SWITCH (ROCKER)
- HEATER AND DEFROSTER CONTROLS WITH ILLUMINATION
- MARKER LIGHT/HEADLIGHT CONTROL SWITCH WITH DIMMER SWITCH
- SELF-CANCELING TURN SIGNAL CONTROL WITH INDICATORS
- WINDSHIELD WIPER SWITCH WITH INTERMITTENT CONTROL AND WASHER CONTROL
- MASTER WARNING LIGHT SWITCH
- TRANSMISSION OIL TEMPERATURE GAUGE
- AIR FILTER RESTRICTION INDICATOR
- PUMP SHIFT CONTROL WITH GREEN "PUMP IN GEAR" AND "O.K. TO PUMP" INDICATOR LIGHTS
- PARKING BRAKE CONTROLS WITH RED INDICATOR LIGHT ON DASH
- AUTOMATIC TRANSMISSION SHIFT CONSOLE
- ELECTRIC HORN BUTTON AT CENTER OF STEERING WHEEL
- CAB AJAR WARNING LIGHT ON THE MESSAGE CENTER ENUNCIATOR

CONTROLS AND SWITCHES SHALL BE IDENTIFIED AS TO THEIR FUNCTION BY BACKLIT WORDING ADJACENT TO EACH SWITCH, OR INDIRECT PANEL LIGHTING ADJACENT TO THE CONTROLS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **FAST IDLE SYSTEM**

A FAST IDLE SYSTEM SHALL BE PROVIDED AND CONTROLLED BY THE CAB-MOUNTED SWITCH. THE SYSTEM SHALL INCREASE ENGINE IDLE SPEED TO A PRESET RPM FOR INCREASED ALTERNATOR OUTPUT.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**ELECTRICAL SYSTEM**

THE CAB AND CHASSIS SYSTEM SHALL HAVE A CENTRALLY LOCATED ELECTRICAL DISTRIBUTION AREA. ALL ELECTRICAL COMPONENTS SHALL BE LOCATED SUCH THAT STANDARD OPERATIONS SHALL NOT INTERFERE WITH OR DISRUPT VEHICLE OPERATION. AN AUTOMATIC THERMAL-RESET MASTER CIRCUIT BREAKER COMPATIBLE WITH THE ALTERNATOR SIZE SHALL BE PROVIDED. AUTOMATIC-RESET CIRCUIT BREAKERS SHALL BE USED FOR DIRECTIONAL LIGHTS, CAB HEATER, BATTERY POWER, IGNITION, AND OTHER CIRCUITS. AN ACCESS COVER SHALL BE PROVIDED FOR MAINTENANCE ACCESS TO THE ELECTRICAL DISTRIBUTION AREA.

A 6 PLACE, CONSTANTLY HOT AND 6 PLACE IGNITION SWITCHED FUSE PANEL AND GROUND FOR CUSTOMER-INSTALLED RADIOS AND CHARGERS SHALL BE PROVIDED AT THE ELECTRICAL DISTRIBUTION AREA. RADIO SUPPRESSION SHALL BE SUFFICIENT TO ALLOW RADIO EQUIPMENT OPERATION WITHOUT INTERFERENCE.

ALL WIRING SHALL BE MOUNTED IN THE CHASSIS FRAME AND PROTECTED FROM IMPACT, ABRASION, WATER, ICE, AND HEAT SOURCES. THE WIRING SHALL BE COLOR-CODED AND FUNCTIONALLY-LABELED EVERY 3" ON THE OUTER SURFACE OF THE INSULATION FOR EASE OF IDENTIFICATION AND MAINTENANCE. THE WIRING HARNESS SHALL CONFORM TO SAE 1127 WITH GXL TEMPERATURE PROPERTIES. ANY WIRING CONNECTIONS EXPOSED TO THE OUTSIDE ENVIRONMENT SHALL BE WEATHER-RESISTANT. ALL HARNESSES SHALL BE COVERED IN A LOOM THAT IS RATED AT 280 DEGREES F TO PROTECT THE WIRING AGAINST HEAT AND ABRASION.

A VEHICLE DATA COMPUTER (VDC) SHALL BE SUPPLIED WITHIN THE ELECTRICAL SYSTEM TO PROCESS AND DISTRIBUTE ENGINE AND TRANSMISSION ELECTRONIC CONTROL MODULE (ECM) INFORMATION TO CHASSIS SYSTEM GAUGES, THE MESSAGE CENTER, AND RELATED PUMP PANEL GAUGES. COMMUNICATION BETWEEN THE VDC AND CHASSIS SYSTEM GAUGES SHALL BE THROUGH A 4 WIRE MULTIPLEXED COMMUNICATION SYSTEM TO ENSURE ACCURATE ENGINE AND TRANSMISSION DATA IS PROVIDED AT THE CAB DASH AND PUMP. THE VDC SHALL BE PROTECTED AGAINST CORROSION, EXCESSIVE HEAT, VIBRATION, AND PHYSICAL DAMAGE.

TWO (2) DUAL RECTANGULAR LED HEADLIGHTS SHALL BE INSTALLED ON THE FRONT OF THE CAB, ONE (1) ON EACH SIDE, MOUNTED IN A POLISHED CHROME-PLATED BEZEL. THE LOW BEAM HEADLIGHTS SHALL ACTIVATE WITH THE RELEASE OF THE PARKING BRAKE TO PROVIDE DAYTIME RUNNING LIGHTS (DRL) FOR ADDITIONAL VEHICLE CONSPICUITY AND SAFETY. THE HEADLIGHT SWITCH SHALL AUTOMATICALLY OVERRIDE THE DRL FOR NORMAL LOW BEAM/HIGH BEAM OPERATION.

SINCE ALL SYSTEMS WILL BE MULTIPLEX, NO POINT-TO-POINT SYSTEMS WILL BE ALLOWED.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**CAB CRASHWORTHINESS REQUIREMENT**

THE APPARATUS CAB SHALL MEET AND/OR EXCEED RELEVANT NFPA 1901 LOAD AND IMPACT TESTS REQUIRED FOR COMPLIANCE CERTIFICATION WITH THE FOLLOWING:

**SIDE IMPACT DYNAMIC PRE-LOAD PER SAE J2422 (SECTION 5).**

TESTING SHALL MEET AND/OR EXCEED DEFINED TEST USING 13,000 FT-LBS OF FORCE AS A REQUIREMENT. THE CAB SHALL BE SUBJECT TO A SIDE IMPACT REPRESENTING THE FORCE SEEN IN A ROLL-OVER. THE CAB SHALL EXHIBIT MINIMAL TO NO INTRUSION INTO THE CAB'S OCCUPANT SURVIVAL SPACE, DOORS SHALL REMAIN CLOSED AND CAB SHALL REMAIN ATTACHED TO FRAME.

CAB TESTING SHALL BE COMPLETED USING 13,776 FT-LBS OF FORCE **EXCEEDING** TESTING REQUIREMENTS.

**QUASI-STATIC ROOF STRENGTH (PROOF LOADS) PER SAE J2422 (SECTION 6) / ECE R29, ANNEX 3, PARAGRAPH 5.**

TESTING SHALL MEET AND/OR EXCEED DEFINED TEST USING 22,046 LBS OF MASS AS A REQUIREMENT. TESTING SHALL BE COMPLETED USING PLATEN(S) DISTRIBUTED UNIFORMLY OVER ALL BEARING MEMBERS OF THE CAB ROOF STRUCTURE.

CAB TESTING SHALL BE COMPLETED USING 23,561 LBS OF MASS **EXCEEDING** TESTING REQUIREMENTS. THE CAB SHALL EXHIBIT MINIMAL TO NO INTRUSION INTO THE CAB'S OCCUPANT SURVIVAL SPACE AND DOORS SHALL REMAIN CLOSED.

ADDITIONAL CAB TESTING SHALL BE CONDUCTED USING 117,336 LBS OF MASS **EXCEEDING** TESTING REQUIREMENTS BY **OVER FIVE (5) TIMES**. THE CAB SHALL EXHIBIT MINIMAL TO NO INTRUSION INTO THE CAB'S OCCUPANT SURVIVAL SPACE AND THE DOORS SHALL REMAIN CLOSED.

**FRONTAL IMPACT PER SAE J2420.**

TESTING SHALL MEET AND/OR EXCEED DEFINED TEST USING 32,549 FT-LBS OF FORCE AS A REQUIREMENT. THE CAB SHALL BE SUBJECT TO A FRONTAL IMPACT AS DEFINED BY THE STANDARD. THE CAB SHALL EXHIBIT MINIMAL TO NO INTRUSION INTO THE CAB'S OCCUPANT SURVIVAL SPACE, DOORS SHALL REMAIN CLOSED AND CAB SHALL REMAIN ATTACHED TO FRAME.

CAB TESTING SHALL BE COMPLETED USING 34,844 FT-LBS OF FORCE **EXCEEDING** TESTING REQUIREMENTS.

ADDITIONAL CAB TESTING SHALL BE CONDUCTED USING 65,891 FT-LBS OF FORCE **EXCEEDING** TESTING REQUIREMENTS BY **OVER TWO (2) TIMES**.

THE CAB SHALL MEET ALL REQUIREMENTS TO THE ABOVE CAB CRASH WORTHINESS.

A COPY OF A CERTIFICATE OR LETTER VERIFYING COMPLIANCE TO THE ABOVE PERFORMANCE BY AN INDEPENDENT, LICENSED, PROFESSIONAL ENGINEER SHALL BE PROVIDED UPON REQUEST.

FOR ANY OR ALL OF THE ABOVE TESTS, THE CAB MANUFACTURER SHALL PROVIDE EITHER PHOTOGRAPHS OR VIDEO FOOTAGE OF THE PROCEDURE UPON REQUEST.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**ISO COMPLIANCE**

THE MANUFACTURER SHALL ENSURE THAT THE CONSTRUCTION OF THE APPARATUS CAB SHALL BE IN CONFORMANCE WITH THE ESTABLISHED ISO-COMPLIANT QUALITY SYSTEM. ALL WRITTEN QUALITY PROCEDURES AND OTHER PROCEDURES REFERENCED WITHIN THE PAGES OF THE MANUFACTURER'S QUALITY MANUAL, AS WELL AS ALL WORK INSTRUCTIONS, WORKMANSHIP STANDARDS, AND CALIBRATION ADMINISTRATION THAT DIRECTLY OR INDIRECTLY IMPACTS THIS PROCESS SHALL BE STRICTLY ADHERED TO. BY VIRTUE OF ITS ISO COMPLIANCE THE MANUFACTURER SHALL PROVIDE AN APPARATUS CAB THAT IS BUILT TO EXACTING STANDARDS, MEETS THE CUSTOMER'S EXPECTATIONS, AND SATISFIES THE CUSTOMER'S REQUIREMENTS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**CAB ROOF TYPE**

**CAB ROOF**

THE CAB SHALL HAVE A FLAT ROOF.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**CAB DOOR OPTIONS**

**REAR CAB DOOR POSITION**

THE CAB REAR DOORS SHALL BE MOVED TO THE REAR OF THE WHEEL OPENING. THIS DOOR PLACEMENT FACILITATES EASIER ENTRY AND EGRESS BY REDUCING THE REAR FACING SEAT PROTRUSION INTO THE DOOR OPENING.

REAR DOOR POSITION TO THE 58" OR MEDIUM CAB.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **CAB FRONT DOOR WINDOWS**

DRIVER AND OFFICER DOOR WINDOWS SHALL HAVE THE SUPPORT PILLAR LOCATED TOWARD THE FRONT OF THE WINDOW. THERE SHALL BE A VENT WITHIN THE WINDOW ITSELF.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS**    YES\_\_\_\_\_ NO\_\_\_\_\_

### **CAB FRONT WINDOWS**

THE FRONT WINDOWS OF THE CAB SHALL HAVE MANUAL ACTUATION.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS**    YES\_\_\_\_\_ NO\_\_\_\_\_

### **CAB DOOR REAR WINDOWS**

THE REAR CAB DOOR WINDOW(S) SHALL BE MANUAL FORE/AFT SLIDER TYPE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS**    YES\_\_\_\_\_ NO\_\_\_\_\_

### **CAB DOOR LOCKS**

EACH CAB DOOR SHALL HAVE A MANUAL OPERATED DOOR LOCK ACTUATED FROM THE INTERIOR OF EACH RESPECTIVE DOOR. EXTERIOR OF EACH CAB DOOR SHALL BE PROVIDED WITH A BARREL STYLE KEYED LOCK BELOW THE CAB DOOR HANDLE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS**    YES\_\_\_\_\_ NO\_\_\_\_\_

### **CAB DOOR LOCKS**

THE CAB SHALL HAVE 1250 KEYED DOOR LOCKS PROVIDED ON EXTERIOR DOORS TO SECURE THE APPARATUS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS**    YES\_\_\_\_\_ NO\_\_\_\_\_

### **EXTERIOR CAB DOOR LATCHES**

ALL EXTERIOR CAB DOOR LATCHES SHALL BE PADDLE STYLE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS**    YES\_\_\_\_\_ NO\_\_\_\_\_

### **CAB DOOR PANELS**

THE INNER DOOR PANELS SHALL BE STAINLESS STEEL FINISH FOR INCREASED DURABILITY, LONGER LIFE AND CORROSION RESISTANCE. THE CAB DOOR PANELS SHALL INCORPORATE AN EASILY REMOVABLE PANEL FOR ACCESS TO THE LATCHING MECHANISM FOR MAINTENANCE OR SERVICE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS**    YES\_\_\_\_\_ NO\_\_\_\_\_

### **CAB DOOR REFLECTIVE MATERIAL**

REFLECTIVE RED/FLUORESCENT YELLOW GREEN 3M DIAMOND GRADE MATERIAL STRIPING SHALL BE SUPPLIED ON EACH OF THE CAB DOORS. THE STRIPES SHALL RUN FROM THE LOWER OUTER CORNER TO THE UPPER INSIDE CORNER OF THE PANEL, FORMING AN "A" SHAPE WHEN VIEWED FROM THE REAR. THE MATERIAL SHALL MEET NFPA 1901 REQUIREMENTS FOR SIZE (96 SQUARE INCHES) AND REFLECTIVITY.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS**    YES\_\_\_\_\_ NO\_\_\_\_\_

### **CAB CABINET DOOR TRIM (QTY: 2)**

A STAINLESS STEEL TRIM SHALL BE LOCATED AT THE BOTTOM EDGE OF THE OVER CAB WHEEL EXTERIOR COMPARTMENT OPENING. THE TRIM SHALL BE MADE FROM 22 GAUGE STAINLESS STEEL WITH A #4 BRUSHED FINISH. THE TRIM SHALL PROVIDE ADDED PROTECTION OF THE PAINTED SURFACE OF THE CAB WHEN EQUIPMENT IS PLACED OR REMOVED FROM THE COMPARTMENT.



**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**MIRRORS**

**CAB MIRRORS HEATED / REMOTE**

TWO (2) RAMCO HEATED REMOTE CONTROLLED POLISHED ALUMINUM MIRRORS SHALL BE INSTALLED. THE MIRRORS SHALL INCORPORATE A TOP MAIN SECTION WITH A MANUALLY ADJUSTABLE CONVEX LOWER MIRROR. THE ADJUSTMENT OF MAIN SECTIONS SHALL BE THROUGH DASH SWITCHES. LOCATION: MOUNTED ON FRONT CORNERS OF CAB.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**MISC EXTERIOR CAB OPTIONS**

**FRONT MUD FLAPS**

BLACK LINEAR LOW DENSITY POLYETHYLENE MUD FLAPS SHALL BE INSTALLED ON THE REAR OF THE CAB FRONT WHEEL WELLS. THE DESIGN OF THE MUD FLAPS SHALL HAVE CORRUGATED RIDGES TO DISTRIBUTE WATER EVENLY.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**HANDRAILS**

CAB DOOR ASSIST HANDRAILS SHALL CONSIST OF TWO (2) 1.25" DIAMETER X 18" LONG 6063-T5 ANODIZED ALUMINUM TUBES MOUNTED DIRECTLY BEHIND THE DRIVER AND OFFICER DOOR OPENINGS ONE EACH SIDE OF THE CAB. THE HANDRAILS SHALL BE MACHINE EXTRUDED WITH INTEGRAL RIBBED SURFACES TO ASSURE A GOOD GRIP FOR PERSONNEL SAFETY. HANDRAILS SHALL BE INSTALLED BETWEEN CHROME END STANCHIONS AND SHALL BE POSITIONED AT LEAST 2" FROM THE MOUNTING SURFACE TO ALLOW A POSITIVE GRIP WITH A GLOVED HAND.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**REAR EXTERIOR CAB WALL CONSTRUCTION**

THE REAR EXTERIOR CAB WALL SHALL BE CONSTRUCTED WITH THE USE OF 3/16" ALUMINUM DIAMOND PLATE INTERLOCKING IN ALUMINUM EXTRUSIONS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**CAB WHEEL WELL**

THE CAB WHEEL WELL SHALL BE INCREASED IN SIZE TO PROVIDE ADDITIONAL CLEARANCE FOR LARGER TIRES. THE FENDER TRIM SHALL BE ADJUSTABLE IN AND OUT TO BETTER ACCOMMODATE VARIOUS WHEEL / TIRE OFFSETS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**RECEPTACLE MOUNTING PLATE**

A MOUNTING PLATE SHALL BE PROVIDED FOR THE BATTERY CHARGER RECEPTACLE, BATTERY CHARGER INDICATOR AND IF APPLICABLE THE AIR INLET. THE PLATE SHALL BE CONSTRUCTED OF 14 GAUGE BRUSHED FINISH STAINLESS STEEL AND BE REMOVABLE FOR SERVICE ACCESS TO THE RECEPTACLE(S) AND INDICATOR.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**HVAC**

**AIR CONDITIONING**

AN OVERHEAD AIR-CONDITIONER / HEATER SYSTEM WITH A SINGLE ROOF MOUNTED CONDENSER SHALL BE SUPPLIED.

THE UNIT SHALL BE MOUNTED TO THE CAB INTERIOR HEADLINER IN A MID CAB POSITION, AWAY FROM ALL SEATING POSITIONS. THE UNIT SHALL PROVIDE TEN (10) COMFORT DISCHARGE LOUVERS, FOUR (4) TO THE BACK AREA OF THE CAB AND SIX (6) TO THE FRONT. THESE LOUVERS WILL BE USED FOR AC AND HEAT AIR DELIVERY. TWO (2) ADDITIONAL LARGE FRONT LOUVERS SHALL BE DAMPER CONTROLLED TO PROVIDE DEFOGGING AND DEFROSTING CAPABILITIES TO THE FRONT WINDSHIELD AS NECESSARY.

THE UNIT SHALL CONSIST OF A HIGH OUTPUT EVAPORATOR COIL AND HEATER CORE WITH ONE (1) HIGH OUTPUT DUAL BLOWER FOR FRONT AIR DELIVERY, AND TWO (2) HIGH PERFORMANCE SINGLE WHEEL BLOWERS FOR REAR AIR DELIVERY.

A SERVICEABLE FILTER SHALL BE INSTALLED ON THE A/C EVAPORATOR. THE FILTER SHALL CONSIST OF A STEEL PERIMETER FRAME WITH A FOAM FILTER.

THE CONTROL PANEL SHALL ACTUATE THE AIR-DISTRIBUTION SYSTEM WITH AIR CYLINDERS, WHICH ARE TO BE SEPARATED FROM THE BRAKE SYSTEM BY AN 85-90 PSI PRESSURE PROTECTION VALVE. A THREE-SPEED BLOWER SWITCH SHALL CONTROL AIR SPEED.

THE CONDENSER SHALL BE ROOF MOUNTED AND HAVE A MINIMUM CAPACITY OF 65,000 BTU`S AND HAVE DUAL FANS WITH A BUILT IN RECEIVER DRIER.

PERFORMANCE DATA: (UNIT ONLY, NO DUCTING OR LOUVERS)

AC BTU: 55,000

HEAT BTU: 65,000

CFM : 1300 @ 13.8V (ALL BLOWERS)

THE COMPRESSOR SHALL BE A TEN-CYLINDER SWASH PLATE TYPE WITH A CAPACITY OF 19.1 CU.IN. PER REVOLUTION.

THE SYSTEM SHALL BE CAPABLE OF COOLING THE INTERIOR OF THE CAB FROM 100 DEGREES AMBIENT TO 75 DEGREES OR LESS WITH 50% RELATIVE HUMIDITY IN 30 MINUTES OR LESS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS YES\_\_\_\_\_ NO\_\_\_\_\_**

**AIR CONDITIONING CONDENSER(S)**

THE AIR CONDITIONING CONDENSER(S) MOUNTED ON THE ROOF OF THE CAB SHALL BE PAINTED JOB COLOR.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS YES\_\_\_\_\_ NO\_\_\_\_\_**

**HEAT, SUPPLEMENTAL**

A SINGLE 40,000 BTU WATER HEATER SHALL BE SUPPLIED IN THE FRONT AREA OF THE CAB. THE UNIT SHALL HEAT THE LOWER SECTION OF THE DRIVER`S AND OFFICER`S FOOTWELL.

DUAL 23,000 BTU WATER HEATERS WITH DIAMOND PLATE COVERS SHALL BE SUPPLIED IN THE REAR OF THE CAB TO HEAT THE REAR CAB LOWER SECTION.

DUAL CLIMATE CONTROL WILL BE ACHIEVED VIA DUAL SWITCHES INSTALLED ON A FRONT INSTRUMENT PANEL. ON UNITS WITH OPTIONAL MULTIPLEX DISPLAY CLIMATE CONTROL, THE FLOOR HEATERS SHALL BE CONTROLLED THROUGH THE HVAC SCREEN IN THE DISPLAY.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS YES\_\_\_\_\_ NO\_\_\_\_\_**

**HVAC CONTROL LOCATION**

HEATING AND AIR CONDITIONING CONTROLS SHALL BE LOCATED IN THE CENTER DASH AREA.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS YES\_\_\_\_\_ NO\_\_\_\_\_**

### **DEFROSTER FANS**

TWO (2) 6" WINDSHIELD DEFROSTER FANS SHALL BE MOUNTED ON THE OVERHEAD CONSOLE, ONE FOR THE DRIVER AND ONE FOR THE OFFICER SIDE OF THE VEHICLE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **SEATS**

#### **CAB SEATS**

ALL CAB SEATS SHALL BE BOSTROM BRAND.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **SEAT, DRIVER**

ONE (1) H. O. BOSTROM SIERRA EX8/ABTS SEAT WITH HIGH BACK STYLING SHALL BE PROVIDED FOR THE DRIVER'S POSITION.

THE ABTS (ALL-BELTS-TO-SEAT) DESIGN SHALL INCLUDE A BRIGHT RED 3-POINT INTEGRATED SEAT BELT WITH AN ADDITIONAL 8-12" OF ADDITIONAL USEABLE BELT WEBBING FOR EASY ACCESS AND COMFORT—INCREASING SEAT BELT USAGE AMONGST FIREFIGHTERS AND RESCUE PERSONNEL.

SEAT FEATURES SHALL INCLUDE:

- POWER FORE/AFT WITH 8" ADJUSTMENT
- POWER HEIGHT WITH 2" ADJUSTMENT
- POWER FRONT SEAT TILT
- POWER REAR SEAT TILT
- POWER BACK RECLINE
- BUILT IN LUMBAR SUPPORT

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **SEAT, OFFICER**

ONE (1) BOSTROM TANKER 450 ABTS SEAT WITH HIGH BACK SCBA STORAGE SHALL BE PROVIDED IN THE OFFICER POSITION.

THE ABTS (ALL-BELTS-TO-SEAT) DESIGN SHALL INCLUDE A BRIGHT RED 3-POINT INTEGRATED SEAT BELT WITH AN ADDITIONAL 8-12" OF ADDITIONAL USEABLE BELT WEBBING FOR EASY ACCESS AND COMFORT—INCREASING SEAT BELT USAGE AMONGST FIREFIGHTERS AND RESCUE PERSONNEL.

SEAT FEATURES SHALL INCLUDE:

- REMOVABLE "STORE-ALL" SIDE CUSHIONS
- AUTO-PIVOT AND RETURN HEADREST TO OPEN FOR IMPROVED EXIT WITH SCBA
- 12.5" WIDE SCBA CAVITY TO STORE LEADING SCBA BRANDS
- SHOULDER STRAP HOLDER
- REPLACEABLE SEAT, SIDE AND HEADREST CUSHIONS

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **SEAT COVER MATERIAL**

ALL SEATS SHALL HAVE DURAWEAR SEAT COVER MATERIAL.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **SEAT FABRIC COLOR**

ALL SEATS SHALL BE GRAY IN COLOR.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS**    YES\_\_\_\_\_ NO\_\_\_\_\_

### **SEATING CAPACITY TAG**

THERE SHALL BE A PERMANENTLY ATTACHED PLATE MOUNTED IN PLAIN VIEW OF THE DRIVER IN ACCORDANCE WITH NFPA 1901 STANDARDS. THE TAG WILL INCLUDE THE FOLLOWING:

OVERALL HEIGHT

OVERALL LENGTH

GVWR

SEATING CAPACITY

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS**    YES\_\_\_\_\_ NO\_\_\_\_\_

### **SEAT, REAR WALL**

TWO(2) FOLD DOWN SEAT WITH BOSTROM RES-Q-BACK SEAT BACK WITH SCBA STORAGE. LOCATION ON THE REAR WALL TO BE DRIVER'S SIDE INBOARD, OFFICER'S SIDE INBOARD. FEATURES SHALL INCLUDE:

- SEAT BOTTOM CONSTRUCTED OF HIGH DENSITY FOAM WITH A HEAVY WEAR RESISTANT COVERING
- AUTOMATICALLY FOLD UP WHEN NOT IN USE TO PROVIDE INCREASED ROOM IN THE REAR OF THE CAB.
- REMOVABLE "STORE-ALL" SIDE CUSHIONS.
- AUTO-PIVOT AND RETURN HEADREST TO OPEN FOR IMPROVED EXIT WITH SCBA.
- 12.5" WIDE SCBA CAVITY TO STORE LEADING SCBA BRANDS.
- BUILT IN LUMBAR SUPPORT.
- REPLACEABLE SEAT, SIDE AND HEADREST CUSHIONS.

ALL SEAT POSITIONS SHALL HAVE A BRIGHT RED RETRACTABLE 3-POINT LAP AND SHOULDER HARNESS, PROVIDING ADDITIONAL SAFETY AND SECURITY FOR PERSONNEL. EXTENSIONS SHALL BE PROVIDED WITH THE SEAT BELTS SO THE MALE END CAN BE EASILY GRASPED AND THE FEMALE END EASILY LOCATED WHILE SITTING IN A NORMAL POSITION.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS**    YES\_\_\_\_\_ NO\_\_\_\_\_

### **SCBA BRACKET SMARTDOCK (QTY: 3)**

A IMMI SMARTDOCK GEN2 SCBA STORAGE BRACKET SHALL BE PROVIDED. THE SMARTDOCK IS A STRAP-FREE DOCKING STATION THAT OFFERS SINGLE-MOTION SCBA INSERTION AND HANDS-FREE RELEASE WHEN THE FIREFIGHTER STANDS UP TO EXIT THE SEAT. SMARTDOCK HAS UNDERGONE EXTENSIVE TESTING TO ENSURE THAT IT MEETS OR EXCEEDS INDUSTRY STANDARDS. WHEN EVALUATED TO THE NFPA 1901 STANDARD FOR AUTOMOTIVE FIRE APPARATUS, SMARTDOCK MET REQUIREMENTS FOR RETAINING BOTH THE CYLINDER AND THE PACK IN DYNAMIC TESTING.

LOCATION: INBOARD DRIVER'S SIDE REAR WALL, INBOARD OFFICER'S SIDE REAR WALL AND OFFICER SEAT.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS**    YES\_\_\_\_\_ NO\_\_\_\_\_

### **MEDICAL CABINETS**

#### **MEDICAL STORAGE CABINET – DRIVER SIDE**

THERE SHALL BE ONE (1) MEDICAL STORAGE CABINET PROVIDED OVER THE DRIVER SIDE WHEEL WELL OF THE CAB. THE MEDICAL STORAGE CABINET SHALL BE CONSTRUCTED OF 1/8" (.125") SMOOTH ALUMINUM PLATE. THE MEDICAL STORAGE CABINET SHALL BE APPROXIMATELY 42" HIGH X 22" WIDE X 28" DEEP. A LIGHT SHALL BE INSTALLED IN THE CABINET ROOF AND OPERATED BY A DOOR SWITCH, POWERED BY 110V POWER SUPPLY IN THE CABINET.

THERE SHALL BE TWO (2) ADJUSTABLE SHELVES PROVIDED IN THE MEDICAL STORAGE CABINET. THE SHELVES SHALL BE CONSTRUCTED OF 1/8" (.125") SMOOTH ALUMINUM PLATE. EACH SHELF SHALL HAVE A 1" FRONT AND

REAR LIP FOR STRENGTH AND REINFORCEMENT. THE SHELVES SHALL BE SIZED TO THE INTERIOR DIMENSIONS OF THE MEDICAL STORAGE CABINET.

THE MEDICAL STORAGE CABINET SHALL BE ACCESSIBLE EXTERNALLY OF THE CAB BY A LOCKING DOUBLE PAN DOOR AND INTERNALLY BY A HORIZONTAL HINGED D & S CUSTOM COVER CARGO NET. THE NET SHALL BE PERMANENTLY MOUNTED AT THE BOTTOM WITH A QUICK RELEASE HANDLE AT THE TOP. THE NET SHALL BE FASTENED ON EACH SIDE TO MEET THE REQUIREMENTS OF NFPA. THE COLOR OF THE NET SHALL BE BLACK.

THE EXTERIOR DOOR SHALL BE CONSTRUCTED USING A BOX PAN CONFIGURATION. THE OUTER DOOR PAN SHALL BEVELED AND SHALL BE CONSTRUCTED FROM 3/16" (0.188") ALUMINUM PLATE. INNER DOOR PAN SHALL BE CONSTRUCTED FROM 1/8" (0.125") SMOOTH ALUMINUM PLATE AND SHALL HAVE NUTSERT FITTINGS TO ATTACH HOLD-OPEN HARDWARE. THE INNER PAN SHALL HAVE A 95-DEGREE BEND TO FORM AN INTEGRAL DRIP RAIL.

THE EXTERIOR DOOR SHALL HAVE A 1" X 9/16" (1" X 0.43") CLOSED-CELL "P" EPDM SPONGE GASKET MEETING ASTM D-1066 2A4 STANDARDS INSTALLED AROUND THE PERIMETER OF THE DOOR TO PROVIDE A SEAL THAT IS RESISTANT TO OIL, SUNLIGHT, AND OZONE.

A DRAIN HOLE SHALL BE INSTALLED IN THE LOWER CORNER OF THE INSIDE DOOR PAN TO ASSIST WITH DRAINAGE.

A POLISHED STAINLESS STEEL HANSEN D-RING STYLE TWIST-LOCK DOOR HANDLE WITH A #459 LATCH SHALL BE PROVIDED ON THE DOOR. THE 4-1/2" (4.5") D-RING HANDLE SHALL BE MOUNTED DIRECTLY TO THE DOOR LATCHING MECHANISM WITH SCREWS THAT DO NOT PENETRATE THE DOOR MATERIAL FOR IMPROVED CORROSION RESISTANCE.

THE EXTERIOR DOOR SHALL BE SECURELY ATTACHED TO THE APPARATUS CAB WITH A FULL-LENGTH STAINLESS STEEL 1/4" (0.25") ROD PIANO-TYPE HINGE ISOLATED FROM THE CAB AND EXTERIOR DOOR WITH A DIELECTRIC BARRIER. THE DOOR SHALL BE ATTACHED WITH MACHINE SCREWS THREADED INTO THE DOOR FRAME. THE DOOR SHALL HAVE A GAS SHOCK STYLE HOLD-OPEN DEVICE.

AN ANODIZED ALUMINUM DRIP RAIL SHALL BE MOUNTED OVER THE COMPARTMENT OPENING TO ASSIST IN DIRECTING WATER RUN-OFF AWAY FROM THE COMPARTMENT.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**MEDICAL STORAGE CABINET – OFFICER SIDE**

THERE SHALL BE ONE (1) MEDICAL STORAGE CABINET PROVIDED OVER THE OFFICER SIDE WHEEL WELL OF THE CAB. THE MEDICAL STORAGE CABINET SHALL BE CONSTRUCTED OF 1/8" (.125") SMOOTH ALUMINUM PLATE. THE MEDICAL STORAGE CABINET SHALL BE APPROXIMATELY 42" HIGH X 22" (25" QUEST) WIDE X 28" DEEP.

THERE SHALL BE TWO (2) ADJUSTABLE SHELVES PROVIDED IN THE MEDICAL STORAGE CABINET. THE SHELVES SHALL BE CONSTRUCTED OF 1/8" (.125") SMOOTH ALUMINUM PLATE. EACH SHELF SHALL HAVE A 1" FRONT AND REAR LIP FOR STRENGTH AND REINFORCEMENT. THE SHELVES SHALL BE SIZED TO THE INTERIOR DIMENSIONS OF THE MEDICAL STORAGE CABINET.

THE MEDICAL STORAGE CABINET SHALL BE ACCESSIBLE EXTERNALLY OF THE CAB BY A LOCKING DOUBLE PAN DOOR AND INTERNALLY BY A HORIZONTAL HINGED D & S CUSTOM COVER CARGO NET. THE NET SHALL BE PERMANENTLY MOUNTED AT THE BOTTOM WITH A QUICK RELEASE HANDLE AT THE TOP. THE NET SHALL BE FASTENED ON EACH SIDE TO MEET THE REQUIREMENTS OF NFPA. THE COLOR OF THE NET SHALL BE BLACK.

THE EXTERIOR DOOR SHALL BE CONSTRUCTED USING A BOX PAN CONFIGURATION. THE OUTER DOOR PAN SHALL BEVELED AND SHALL BE CONSTRUCTED FROM 3/16" (0.188") ALUMINUM PLATE. INNER DOOR PAN SHALL BE CONSTRUCTED FROM 1/8" (0.125") SMOOTH ALUMINUM PLATE AND SHALL HAVE NUTSERT FITTINGS TO ATTACH HOLD-OPEN HARDWARE. THE INNER PAN SHALL HAVE A 95-DEGREE BEND TO FORM AN INTEGRAL DRIP RAIL.

THE EXTERIOR DOOR SHALL HAVE A 1" X 9/16" (1" X 0.43") CLOSED-CELL "P" EPDM SPONGE GASKET MEETING ASTM D-1066 2A4 STANDARDS INSTALLED AROUND THE PERIMETER OF THE DOOR TO PROVIDE A SEAL THAT IS RESISTANT TO OIL, SUNLIGHT, AND OZONE.

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THE EXTERIOR DOOR SHALL BE SECURELY ATTACHED TO THE APPARATUS CAB WITH A FULL-LENGTH STAINLESS STEEL 1/4" (0.25") ROD PIANO-TYPE HINGE ISOLATED FROM THE CAB AND EXTERIOR DOOR WITH A DIELECTRIC BARRIER. THE DOOR SHALL BE ATTACHED WITH MACHINE SCREWS THREADED INTO THE DOOR FRAME. THE DOOR SHALL HAVE A GAS SHOCK STYLE HOLD-OPEN DEVICE.

AN ANODIZED ALUMINUM DRIP RAIL SHALL BE MOUNTED OVER THE COMPARTMENT OPENING TO ASSIST IN DIRECTING WATER RUN-OFF AWAY FROM THE COMPARTMENT.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **MEDICAL STORAGE CABINET FINISH**

THE MEDICAL STORAGE CABINET(S) SHALL HAVE A ZOLATONE GRAY FINISH. THE FINISH SHALL BE APPLIED TO THE INTERIOR, EXTERIOR, SHELVES (IF EQUIPPED) AND TRAYS (IF EQUIPPED) OF THE CABINET.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **MISC INTERIOR CAB OPTIONS**

##### **CAB INTERIOR COLOR**

CAB INSTRUMENT PANEL, OVERHEAD CONSOLE, TRIM PANELS, HEADLINER, AND DOOR PANELS SHALL BE GRAY.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

##### **SUN VISORS**

LEXAN SUN VISORS SHALL BE PROVIDED FOR THE DRIVER AND OFFICER MATCHING THE INTERIOR TRIM OF THE CAB AND SHALL BE FLUSH MOUNTED INTO THE UNDERSIDE OF THE OVERHEAD CONSOLE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

##### **AIR HORN LANYARD**

THERE SHALL BE A "Y" STYLE LANYARD MOUNTED IN THE CENTER OF THE CAB THAT ALLOWS THE DRIVER AND OFFICER TO OPERATE THE AIR HORNS. THE LANYARD SHALL ACTIVATE AN ELECTRICAL AIR SWITCH.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **CAB ROLLOVER PROTECTION - MASTER CONTROL MODULE**

A ROLLTEK ROLLOVER OCCUPANT PROTECTION SYSTEM SHALL BE INSTALLED IN THE APPARATUS CAB. THE SYSTEM SHALL INCLUDE AN INTEGRATED ROLL SENSOR (MASTER MODULE), INTEGRATED HEAD CURTAINS AND INTEGRATED SEAT BELT PRETENSIONERS.

THE INTEGRATED ROLL SENSOR (IRS) SHALL BE A MICROPROCESSOR-CONTROLLED SOLID-STATE SENSING DEVICE THAT UTILIZES VEHICLE-SPECIFIC CALIBRATIONS TO DETECT ROLLOVERS. THE IRS SHALL BE EQUIPPED WITH EIGHT (8) PYROTECHNIC LOOPS FOR CONNECTION TO THE PROTECTIVE COUNTERMEASURES (INTEGRATED HEAD CURTAINS AND INTEGRATED SEAT BELT PRETENSIONERS).

THE IRS SHALL CONTINUALLY MONITOR THE TRUCK'S ACCELERATION AND ANGLE, AND UPON DETECTION OF AN IMMINENT ROLL-OVER, SHALL ACTIVATE PROTECTIVE COUNTERMEASURES IN A PRE-PROGRAMMED SEQUENCE. THE ENTIRE PROCESS FROM ACTIVATION TO DEPLOYMENT SHALL TAKE LESS THAN ¼ OF A SECOND (.234).

IN ADDITION TO ACTING AS THE "BRAIN" OF THE ROLLTEK SYSTEM, THE IRS SHALL ALSO ACT AS A "BLACK BOX," RECORDING CRASH EVENTS FOR POST-CRASH EVALUATION.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**CAB ROLLOVER PROTECTION - SLAVE MODULE FOR MASTER CONTROL**

A SLAVE MODULE SHALL BE INSTALLED WITH THE ROLLTEK INTEGRATED ROLL SENSOR (IRS) TO EXPAND THE SYSTEM'S CAPABILITIES. THE SLAVE MODULE SHALL INCLUDE CONNECTIONS FOR UP TO EIGHT (8) ADDITIONAL PYROTECHNIC LOOPS FOR USE WITH UP TO A TOTAL OF SIXTEEN (16) PROTECTIVE COUNTERMEASURES (INTEGRATED HEAD CURTAINS AND INTEGRATED SEAT BELT PRETENSIONERS).

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**CAB ROLLOVER PROTECTION - SIDE AIR BAGS (QTY: 2)**

ROLLTEK INTEGRATED HEAD CURTAINS (IHC) SHALL BE INSTALLED IN THE APPARATUS CAB. THE PILLOW-SHAPED SIDE AIR BAGS SHALL BE ATTACHED EITHER TO THE ABTS SEATS OR THE REAR CAB WALL. THE AIR BAGS SHALL BE OPTIMALLY PLACED TO DEPLOY ACROSS THE WINDOW AND SIDE OF THE VEHICLE INTERIOR TO PROTECT THE OCCUPANTS HEADS DURING IMPACT. THE AIR BAGS SHALL USE A COMBINATION OF HIGH-PRESSURE STORED ARGON AND OXYGEN (AND A PYROTECHNIC CHARGE FOR INITIATION) TO INFLATE THE BAGS TO A RELATIVELY COOL (120° FAHRENHEIT) INFLATION TEMPERATURE AND REMAIN INFLATED FOR SEVERAL SECONDS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**CAB ROLLOVER PROTECTION - SEAT BELT PRETENSIONERS (QTY: 4)**

ROLLTEK INTEGRATED SEAT BELT PRETENSIONERS (ISB) SHALL BE INSTALLED IN THE APPARATUS CAB. THE SPECIAL SEAT BELT BUCKLES SHALL BE DESIGNED TO RECEIVE A SIGNAL FROM THE INTEGRATED ROLL SENSOR DURING A ROLL FOR THE PRETENSIONERS ON THE BUCKLES TO TIGHTEN THE SEAT BELTS TO THE OCCUPANT, BETTER POSITIONING THE OCCUPANT IN THE SEATS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**MOUNTING PLATE ON ENGINE COVER**

AN EQUIPMENT MOUNTING PLATE SHALL BE PROVIDED BETWEEN THE DRIVER AND OFFICER ON THE CHASSIS ENGINE COVER. THE PLATE SHALL BE MOUNTED TO THE ENGINE ACCESS DOOR SPACED APPROXIMATELY 1/2" UP TO PROVIDE CLEARANCE FOR EQUIPMENT MOUNTING HARDWARE. THE PLATE SHALL BE CONSTRUCTED OF 3/16" ALUMINUM PLATE AND HAVE A SWIRL FINISH.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**STREAMLIGHT 5-BANK CHARGER**

THERE SHALL BE ONE (1) STREAMLIGHT 5-BANK CHARGER FOR SURVIVOR STYLE FLASHLIGHTS MODEL #90400 INSTALLED ON THE APPARATUS. THE CHARGER SHALL BE WIRED TO SHORE POWER AS TO NOT DRAW ANY VOLTAGE FROM THE BATTERIES.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**ENGINE COVER**

THE ENGINE COVER SHALL BLEND IN SMOOTHLY WITH THE INTERIOR DASH AND FLOORING OF THE CAB. THE UPPER LEFT AND RIGHT SIDES SHALL HAVE A SLOPED TRANSITION SURFACE RUNNING FRONT TO REAR PROVIDING INCREASED SPACE FOR THE DRIVER AND OFFICER.

THE ENGINE COVER AND ENGINE SERVICE ACCESS DOOR COVER SHALL BE MOLDED 18 LB/CU. FT. (+/-0.5) FLEXIBLE INTEGRAL SKINNED POLYURETHANE FOAM AT A DUROMETER OF 60 (+/- 5.0) PER ASTM F1957-99. THE COVER SHALL BE APPROXIMATELY .5" THICK WITH A MINIMUM SKIN THICKNESS OF 0.0625 INCHES. THE COVER SHALL BE PROVIDED TO REDUCE THE TRANSMISSION OF NOISE AND HEAT FROM THE ENGINE. THE COVER SHALL BE BLACK AND FEATURE A PEBBLE GRAIN FINISH FOR SLIP RESISTANCE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**CAB DASH - SEVERE DUTY**

THE CENTER AND OFFICER SIDE DASH SHALL BE CONSTRUCTED FROM .125" SMOOTH ALUMINUM PLATE PAINTED TO MATCH THE CAB INTERIOR. A HINGED ACCESS PANEL SHALL BE PROVIDED ON TOP OF THE CENTER DASH TO PROVIDE EASY ACCESS TO COMPONENTS WITHIN. THE OFFICER SIDE DASH SHALL BE NOTCHED TO ACCOMMODATE A MDT SLIDE-OUT BRACKET.

THE LOWER KICK PANELS BELOW THE DASH TO BE CONSTRUCTED FROM .125" ALUMINUM SMOOTH PLATE PAINTED TO MATCH CAB INTERIOR. THE PANELS SHALL BE REMOVABLE TO ALLOW FOR SERVICING COMPONENTS THAT MAY BE LOCATED BEHIND THE PANELS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **CUP HOLDERS**

TWO (2) CUP HOLDERS SHALL BE PROVIDED ON THE CAB ENGINE COVER. THE CUP HOLDERS SHALL BE MOLDED 18 LB/CU. FT. (+/-0.5) FLEXIBLE INTEGRAL SKINNED POLYURETHANE FOAM AT A DUROMETER OF 60 (+/- 5.0) PER ASTM F1957-99 AND WITH A MINIMUM SKIN THICKNESS OF 0.0625 INCHES. THE OUTER SURFACE OF THE CUP HOLDERS SHALL BE BLACK WITH A PEBBLE GRAIN FINISH AND SHALL INCLUDE A REMOVABLE PLASTIC LINER.

THE CUP HOLDERS SHALL BE LOCATED DRIVER AND OFFICER SIDE OF ENGINE COVER SLIGHTLY AHEAD OF ACCESS DOOR SPACED APPROXIMATELY 20" APART (CENTER TO CENTER).

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **FRONT OCCUPANT PROTECTION**

A 4FRONT OCCUPANT PROTECTION SYSTEM SHALL BE INSTALLED IN THE APPARATUS CAB. THE SYSTEM SHALL INFLATE THREE (3) AIR BAGS IN THE FOLLOWING LOCATIONS:

- STEERING WHEEL AIR BAG TO PROTECT THE HEAD AND NECK OF THE DRIVER
- KNEE BOLSTER AIR BAG TO PROTECT THE DRIVER'S LEGS
- KNEE BOLSTER AIR BAG TO PROTECT THE OFFICER'S LEGS

THE AIR BAGS SHALL USE A COMBINATION OF HIGH-PRESSURE STORED ARGON AND OXYGEN (AND A PYROTECHNIC CHARGE FOR INITIATION) TO INFLATE THE BAGS TO A RELATIVELY COOL (120° FAHRENHEIT) INFLATION TEMPERATURE AND REMAIN INFLATED FOR SEVERAL SECONDS.

THE SYSTEM SHALL BE CONNECTED TO THE CRASH DETECTION SENSOR THAT WILL ALSO ACTIVATE THE DRIVER AND FIRST OFFICER INTEGRATED BELT PRETENSIONERS IF IT DETECTS A FRONTAL CRASH.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **CAB ELECTRICAL OPTIONS**

##### **AUTO-EJECT BATTERY CHARGER RECEPTACLE**

THE BATTERY CHARGER RECEPTACLE SHALL BE A KUSSMAUL 40 AMP NEMA 5-20 SUPER AUTO-EJECT #091-55-20-120 WITH A COVER. THE SUPER AUTO-EJECT RECEPTACLE SHALL BE COMPLETELY SEALED AND HAVE AN AUTOMATIC POWER LINE DISCONNECT. UNIT MUST BE COMPATIBLE WITH AGM BATTERIES.

THE RECEPTACLE SHALL BE LOCATED OUTSIDE DRIVER'S DOOR NEXT TO HANDRAIL AND THE COVER COLOR SHALL BE YELLOW.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **HORN BUTTON SWITCH**

A TWO (2) POSITION ROCKER SWITCH SHALL BE INSTALLED IN THE CAB ACCESSIBLE TO THE DRIVER AND PROPERLY LABELED TO ENABLE OPERATOR TO ACTIVATE THE OEM TRAFFIC HORN OR AIR HORN FROM THE STEERING WHEEL HORN BUTTON.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **ENGLISH DOMINANT GAUGE CLUSTER**



THE CAB OPERATIONAL INSTRUMENTS SHALL BE LOCATED IN THE DASHBOARD ON THE DRIVER SIDE OF THE CAB AND SHALL BE CLEARLY VISIBLE. THE GAUGES IN THIS PANEL SHALL BE ENGLISH DOMINANT AND SHALL BE THE FOLLOWING:

- SPEEDOMETER/ODOMETER
- TACHOMETER WITH INTEGRAL HOUR METER
- ENGINE OIL PRESSURE GAUGE WITH WARNING LIGHT AND BUZZER
- ENGINE WATER TEMPERATURE GAUGE WITH WARNING LIGHT AND BUZZER
- TWO (2) AIR PRESSURE GAUGES WITH A WARNING LIGHT AND BUZZER (FRONT AIR AND REAR AIR)
- FUEL GAUGE
- VOLTMETER
- TRANSMISSION OIL TEMPERATURE GAUGE

THIS PANEL SHALL BE BACKLIT FOR INCREASED VISIBILITY DURING DAY AND NIGHT TIME OPERATIONS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**LED CAB HEADLIGHTS**

JW SPEAKER LED HEADLIGHT MODEL 8800 SHALL BE PROVIDED. LED LIGHTS SHALL BE PROVIDED IN THE LOW AND HIGH BEAM POSITION OF THE HEAD LAMP ASSEMBLY.

THE HEADLIGHTS SHALL BE DAY TIME OPERATIONAL.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**BATTERY CHARGER/AIR COMPRESSOR**

A KUSSMAUL AUTO-CHARGE 1200 BATTERY CHARGER AND AIR COMPRESSOR WITH AUTOMATIC BATTERY CHARGER SHALL BE INSTALLED.

THE BATTERY CHARGER SHALL BE COMPLETELY AUTOMATIC WITH AN OUTPUT OF 0-40 AMPS @ 12 VOLTS DC AND AN INPUT CURRENT REQUIREMENT OF 10 AMPS @ 120 VOLTS AC.

A KUSSMAUL AIR COMPRESSOR WITH AUTOMATIC BATTERY CONDITIONER MODEL 091-9-1200 SHALL BE INSTALLED. THE BATTERY CONDITIONER IS COMPLETELY AUTOMATIC WITH A 0-40 AMP OUTPUT TO MAINTAIN THE CHARGE IN THE BATTERY SYSTEM. THE AIR COMPRESSOR SHALL BE POWERED BY A 12 VOLT DC OUTPUT FROM THE BATTERY CHARGER AND HAS AN OUTPUT OF .30 CFM AT 80 PSI. A PRESSURE SWITCH SENSES THE SYSTEM PRESSURE AND OPERATES THE COMPRESSOR WHENEVER THE PRESSURE IN THE AIR BRAKE SYSTEM DROPS BELOW A PRE-DETERMINED LEVEL.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**BATTERY CHARGER LOCATION**

THE BATTERY CHARGER SHALL BE LOCATED UP HIGH IN DRIVER SIDE WHEEL WELL MEDICAL CABINET OFFSET FORWARD.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**AIR COMPRESSOR LOCATION**

THE AIR COMPRESSOR SHALL BE LOCATED UP HIGH IN OFFICER SIDE WHEEL WELL MEDICAL CABINET OFFSET FORWARD.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**CORNERING LIGHT CIRCUIT**

THERE SHALL BE A CIRCUIT TO ACTIVATE THE SCENE LIGHT WITH THE CHASSIS TURN SIGNAL.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **CAB 12 VOLT OUTLET**

A PLUG-IN TYPE RECEPTACLE FOR HAND HELD SPOTLIGHTS, CELL PHONES, CHARGERS, ETC. SHALL BE INSTALLED OFFICER SIDE DASH. THE RECEPTACLE SHALL BE WIRED BATTERY HOT.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **CUSTOMER SUPPLIED RADIO, ANTENNA AND KNOX BOX**

THE RADIO AND KNOX BOX SHALL BE SENT WHEN APPARATUS IS IN PRODUCTION. THE CUSTOMER SUPPLIED EXTERNAL ANTENNA SHALL BE MOUNTED ON THE CAB ROOF. THE ANTENNA SHALL BE LOCATED OFFICER SIDE REARWARD WITH COAXIAL CABLE TERMINATING AT THE CENTER OF THE DASH BOARD. THE RADIO AND KNOX BOX LOCATION WILL BE DETERMINED AT PRE-BUILD MEETING.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **FIRECOM**

THERE SHALL BE PROVIDED A FIRECOM SYSTEM. THIS SYSTEM SHALL HAVE FOUR (4) STATIONS IN THE CAB. THREE (3) WIRED POSITIONS AND ONE (1) WIRELESS FOR THE DRIVER POSITION. THERE SHALL BE ONE (1) STATION (WEATHERPROOF) AT THE PUMP PANEL. THERE SHALL BE FOUR (4) RADIO CAPABLE HEADSETS WITH HANGER BRACKETS SUPPLIED. THERE SHALL BE A COILED EXTENSION CORD SUPPLIED FOR THE PUMP OPERATOR. THERE SHALL BE PROVIDED AND INSTALLED A RADIO INTERCONNECT CABLE FOR THE FIRE DEPARTMENT SUPPLIED RADIO. TRANSMIT AND INTERCOM CAPABLE IN ALL LOCATIONS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **CAB TURN SIGNALS**

THERE SHALL BE A PAIR OF WHELEN M6 LED (LIGHT EMITTING DIODE) TURN SIGNAL LIGHT HEADS WITH POPULATED ARROW PATTERN AND AMBER LENS MOUNTED LOWER HEADLIGHT BEZEL AND WIRED WITH WEATHERPROOF CONNECTORS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **CAB DOOR LIGHTING**

FOUR (4) CLEAR LED STRIP LIGHTS, WHELEN MODEL PSC00FCR SHALL BE VERTICALLY MOUNTED ON THE LOWER CAB STEP WELL AREAS (INTERIOR). THESE STRIP LIGHTS HAVE 14 FLASH PATTERNS, INCLUDING STEADY BURN. THE FRONT DOORS SHALL HAVE (1) LIGHT LOCATED ON FORWARD STEP WELL WALL (BOTH SIDES). THE REAR DOORS SHALL HAVE (1) LIGHT LOCATED ON REAR STEP WELL WALL (BOTH SIDES). ALL (4) LIGHTS SHALL BE WIRED THROUGH THE DOOR SWITCH.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **CAB DOME LIGHTS**

FOUR (4) WHELEN SUPER-LED (LIGHT EMITTING DIODE) CEILING MOUNTED DOME LIGHT ASSEMBLIES MODEL 60CREGCS SHALL BE PROVIDED.

EACH LIGHT SHALL CONSIST DUAL SWITCHING FOR ON/OFF AND COLOR SELECTION WHITE/RED. EACH 6" ROUND LIGHT SHALL CONTAIN TWELVE (12) DIODES, BE SURFACE MOUNTED WITH HI/LOW POWER INTENSITY SETTINGS AVAILABLE.

THE WHITE LIGHT ACTIVATES WITH APPROPRIATE CAB DOOR AND LIGHT ASSEMBLY MOUNTED SWITCH, THE RED LIGHT ACTIVATES WITH ASSEMBLY MOUNTED SWITCH ONLY.

TWO (2) LIGHTS SHALL BE LOCATED IN BOTH THE FRONT AND REAR OF THE CAB. THESE MUST BE COVERED BY A FIVE (5) YEAR WARRANTY.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **DPF REGENERATION OVERRIDE**

A MOMENTARY OVERRIDE SWITCH SHALL BE PROVIDED FOR THE DIESEL PARTICULATE FILTER (DPF) REGENERATION. THE SWITCH WILL INHIBIT THE REGENERATION PROCESS UNTIL THE SWITCH IS RESET OR THE ENGINE IS SHUT DOWN AND RESTARTED. THE SWITCH SHALL BE LOCATED WITHIN REACH OF THE DRIVER.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **STEERING WHEEL SWITCHES**

THE STEERING WHEEL SHALL BE SUPPLIED WITH TWO (2) SWITCH PODS. EACH SWITCH POD SHALL INCLUDE FIVE (5) SWITCHES. THE PODS SHALL INCLUDE SWITCHING FOR WIPERS, MASTER WARNING, AIR HORNS AND AUXILIARY ENGINE BRAKE (ON/OFF). IN ADDITION THERE SHALL BE THREE (3) AUXILIARY SWITCHES THAT CAN BE PROGRAMMED TO MEET DEPARTMENT SPECIFIED FUNCTIONS.

THE WIPER SWITCHES SHALL INCLUDE HIGH / LOW SPEED, INTERMITTENT, WIPE / WASH AND OFF. THE WIPER MOTORS SHALL BE SYNCHRONIZED SO AS TO WIPE EACH WINDSHIELD SIMULTANEOUSLY.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **PROGRAMMING INSTRUCTIONS - SWITCH 1**

AUXILIARY SWITCH 1 ON THE STEERING WHEEL SWITCH POD SHALL BE PROGRAMMED TO OPERATE THE DRIVER SIDE CAB BROW LIGHT. (REQUIRES RELAY OPTION IF LIGHTS ARE NOT 12V).

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **PROGRAMMING INSTRUCTIONS - SWITCH 2**

AUXILIARY SWITCH 2 ON THE STEERING WHEEL SWITCH POD SHALL BE PROGRAMMED TO OPERATE THE FRONT BROW LIGHT(S). (REQUIRES RELAY OPTION IF LIGHTS ARE NOT 12V).

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **PROGRAMMING INSTRUCTIONS - SWITCH 3**

AUXILIARY SWITCH 3 ON THE STEERING WHEEL SWITCH POD SHALL BE PROGRAMMED TO OPERATE THE OFFICER SIDE CAB BROW LIGHT. (REQUIRES RELAY OPTION IF LIGHTS ARE NOT 12V).

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **BODY COMPARTMENT LEFT SIDE**

##### **SL-45 STREAMLIGHT**

THERE SHALL BE TWO (2) STREAMLIGHT MODELS 45107, SL-45 HANDLE FLASHLIGHTS WITH 12 VOLT CHARGING BASE INSTALLED ON THE APPARATUS, HARDWIRED TO THE CHASSIS 12V SYSTEM. THE STREAMLIGHTS SHALL BE CONSTRUCTED OF ABS PLASTIC WITH ADJUSTABLE HALOGEN SPOTLIGHT HEAD. THE COLOR SHALL BE ORANGE. THE STREAMLIGHTS SHALL BE MOUNTED INTO THE COMPARTMENTS. PLACEMENT SHALL BE DETERMINED AT PRECONSTRUCTION MEETING.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **DRIVER SIDE ASSEMBLY**

THE DRIVER SIDE ASSEMBLY SHALL BE CONSTRUCTED ENTIRELY OF ALUMINUM EXTRUSIONS AND INTERLOCKING ALUMINUM PLATES. THIS ALUMINUM MODULAR DESIGN SHALL PROVIDE A HIGH STRENGTH-TO-WEIGHT RATIO FOR INCREASED EQUIPMENT CARRYING CAPACITY.

THE DRIVER SIDE BODY CORNERS SHALL BE 6063-T5 EXTRUDED ALUMINUM CORNER SECTIONS WITH A 3/16" (0.188") WALL THICKNESS. THE SIDE BODY EXTRUSIONS SHALL BE 6063-T5 ALUMINUM TUBING WITH A 3/16" (0.188") WALL THICKNESS AND 3/16" (0.188") OUTSIDE CORNER RADIUS. THE CORNERS AND SIDES SHALL BE WELDED BOTH INTERNALLY AND EXTERNALLY AT EACH JOINT USING AN ALUMINUM ALLOY WELDING WIRE.

THE DRIVER SIDE BODY SHALL BE COMPLETELY SANDED AND DEBURRED TO ASSURE A SMOOTH FINISH AND PAINTED JOB COLOR.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **DRIVER SIDE COMPARTMENTS**

THE THREE (3) DRIVER SIDE COMPARTMENTS SHALL BE CONSTRUCTED FROM 3003 H14 1/8" (.125") SMOOTH ALUMINUM PLATE. THE COMPARTMENTS SHALL BE MODULAR IN DESIGN AND SHALL NOT BE A PART OF THE BODY SUPPORT STRUCTURE.

THERE SHALL BE ONE (1) COMPARTMENT LOCATED AHEAD OF THE REAR WHEELS. THIS COMPARTMENT SHALL BE APPROXIMATELY 30" WIDE X 68" HIGH X 26" DEEP IN THE LOWER 30" HIGH SECTION AND 12" DEEP IN THE UPPER 38" HIGH SECTION. THE COMPARTMENT SHALL CONTAIN APPROXIMATELY 21.5 CU. FT. OF COMBINED STORAGE SPACE. THE DOOR OPENING SHALL BE APPROXIMATELY 30" WIDE X 68" HIGH.

THERE SHALL BE ONE (1) COMPARTMENT LOCATED OVER THE REAR WHEEL. THE COMPARTMENT SHALL BE APPROXIMATELY 56" WIDE X 34" HIGH X 12" DEEP AND CONTAIN APPROXIMATELY 13.2 CU. FT. OF STORAGE SPACE. THE DOOR OPENING SHALL BE APPROXIMATELY 56" WIDE X 34" HIGH.

THERE SHALL BE ONE (1) COMPARTMENT LOCATED BEHIND OF THE REAR WHEELS. THIS COMPARTMENT SHALL BE APPROXIMATELY 50" WIDE X 68" HIGH X 26" DEEP IN THE LOWER 30" HIGH SECTION AND 12" DEEP IN THE UPPER 38" HIGH SECTION. THE COMPARTMENT SHALL CONTAIN APPROXIMATELY 35.8 CU. FT. OF COMBINED STORAGE SPACE. THE DOOR OPENING SHALL BE APPROXIMATELY 50" WIDE X 68" HIGH. EACH COMPARTMENT SEAM SHALL BE SEALED USING A PERMANENT PLIABLE SILICONE CAULK. THE WALLS OF EACH COMPARTMENT SHALL BE MACHINE-LOUVERED FOR ADEQUATE VENTILATION.

AN EXTERNALLY-MOUNTED COMPARTMENT TOP SHALL BE PROVIDED AND CONSTRUCTED OF A 1/8" (.125") ALUMINUM TREADPLATE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **BODY COMPARTMENT RIGHT SIDE**

##### **OFFICER SIDE ASSEMBLY**

THE OFFICER SIDE ASSEMBLY SHALL BE CONSTRUCTED ENTIRELY OF ALUMINUM EXTRUSIONS AND INTERLOCKING ALUMINUM PLATES. THIS ALUMINUM MODULAR DESIGN SHALL PROVIDE A HIGH STRENGTH-TO-WEIGHT RATIO FOR INCREASED EQUIPMENT CARRYING CAPACITY.

THE OFFICER SIDE BODY CORNERS SHALL BE 6063-T5 EXTRUDED ALUMINUM CORNER SECTIONS WITH A 3/16" (0.188") WALL THICKNESS. THE SIDE BODY EXTRUSIONS SHALL BE 6063-T5 ALUMINUM TUBING WITH A 3/16" (0.188") WALL THICKNESS AND 3/16" (0.188") OUTSIDE CORNER RADIUS. THE CORNERS AND SIDES SHALL BE WELDED BOTH INTERNALLY AND EXTERNALLY AT EACH JOINT USING AN ALUMINUM ALLOY WELDING WIRE.

THE OFFICER SIDE BODY SHALL BE COMPLETELY SANDED AND DEBURRED TO ASSURE A SMOOTH FINISH AND PAINTED JOB COLOR.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

##### **OFFICER SIDE COMPARTMENTS**

THE THREE (3) OFFICER SIDE COMPARTMENTS SHALL BE CONSTRUCTED FROM 3003 H14 1/8" (.125") SMOOTH ALUMINUM PLATE. THE COMPARTMENTS SHALL BE MODULAR IN DESIGN AND SHALL NOT BE A PART OF THE BODY SUPPORT STRUCTURE.

THERE SHALL BE ONE (1) COMPARTMENT LOCATED AHEAD OF THE REAR WHEELS. THIS COMPARTMENT SHALL BE APPROXIMATELY 30" WIDE X 46" HIGH X 26" DEEP IN THE LOWER 30" HIGH SECTION AND 12" DEEP IN THE UPPER 16" HIGH SECTION. THE COMPARTMENT SHALL CONTAIN APPROXIMATELY 16.87 CU. FT. OF COMBINED STORAGE SPACE. THE DOOR OPENING SHALL BE APPROXIMATELY 30" WIDE X 46" HIGH.

THERE SHALL BE ONE (1) COMPARTMENT LOCATED OVER THE REAR WHEEL. THE COMPARTMENT SHALL BE APPROXIMATELY 56" WIDE X 16" HIGH X 12" DEEP AND CONTAIN APPROXIMATELY 6.2 CU. FT. OF STORAGE SPACE. THE DOOR OPENING SHALL BE APPROXIMATELY 56" WIDE X 12" HIGH.

THERE SHALL BE ONE (1) COMPARTMENT LOCATED BEHIND OF THE REAR WHEELS. THIS COMPARTMENT SHALL BE APPROXIMATELY 50" WIDE X 46" HIGH X 26" DEEP IN THE LOWER 30" HIGH SECTION AND 12" DEEP IN THE UPPER 16" HIGH SECTION. THE COMPARTMENT SHALL CONTAIN APPROXIMATELY 28.1 CU. FT. OF COMBINED STORAGE SPACE. THE DOOR OPENING SHALL BE APPROXIMATELY 50" WIDE X 46" HIGH.

EACH COMPARTMENT SEAM SHALL BE SEALED USING A PERMANENT PLIABLE SILICONE CAULK. THE WALLS OF EACH COMPARTMENT SHALL BE MACHINE-LOUVERED FOR ADEQUATE VENTILATION.

AN EXTERNALLY-MOUNTED COMPARTMENT TOP SHALL BE PROVIDED AND CONSTRUCTED OF A 1/8" (.125") ALUMINUM TREADPLATE. THE COMPARTMENT TOP SHALL BE REMOVABLE FOR EASY ACCESS TO THE MAIN BODY WIRING HARNESS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **LADDER RACK**

A ZICO QUIC-LIFT LADDER ACCESS SYSTEM (LAS-HA-EL) LADDER RACK SHALL BE PROVIDED OVER THE OFFICER SIDE COMPARTMENT TOP. THE RACK SHALL LOWER LADDERS APPROXIMATELY 31" FROM THE STORED POSITION TO PROVIDE A SAFE AND CONVENIENT HEIGHT FOR UNLOADING AND LOADING.

THE RACK SHALL BE HYDRAULICALLY OPERATED AND CONTROLLED BY A 30 AMP TWO-POLE DOUBLE-THROW MOMENTARY SWITCH LOCATED ON THE OFFICER SIDE PUMP PANEL. THE CONTROL SWITCH LOCATION SHALL ALLOW THE OPERATOR TO MONITOR OPERATIONS AND GROUND PERSONNEL WHILE LOWERING AND RAISING THE RACK. THE LADDER RACK SHALL BE SELF-LOCKING IN ANY POSITION DURING OPERATION.

AN AUDIO ALARM SHALL BE PROVIDED TO SIGNAL WHEN THE LADDER RACK IS IN MOTION. THE RACK SHALL BE WIRED TO THE DOOR AJAR INDICATOR LIGHT IN THE CAB AND SHALL BE INTERLOCKED WITH THE PARKING BRAKE PER NFPA.

THE LADDER RACK SHALL HAVE A MAXIMUM WEIGHT CAPACITY OF (300) THREE HUNDRED POUNDS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **BODY COMPARTMENT REAR**

##### **REAR BODY**

THE REAR BODY SHALL BE CONSTRUCTED ENTIRELY OF ALUMINUM EXTRUSIONS AND INTERLOCKING ALUMINUM PLATES AND INCLUDES A LOWER FULL HEIGHT CENTER REAR COMPARTMENT.

THE REAR BODY FRAME SHALL BE 6063-T5 1.5" X 4" AND 1.5" X 3" ALUMINUM EXTRUSIONS WITH A 3/16" (0.188") WALL THICKNESS AND 3/16" (0.188") OUTSIDE CORNER RADIUS AND 1/8" (0.125") ALUMINUM PLATE. THE REAR EXTRUSIONS SHALL BE WELDED BOTH INTERNAL AND EXTERNAL AT EACH JOINT USING AN ALUMINUM ALLOY WELDING WIRE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

##### **REAR BODY COMPARTMENT**

THE REAR COMPARTMENT SHALL BE CONSTRUCTED FROM 3003 H14 1/8" (.125") SMOOTH ALUMINUM PLATE. THE COMPARTMENT SHALL BE MODULAR IN DESIGN AND SHALL NOT BE A PART OF THE BODY SUPPORT STRUCTURE.

THE COMPARTMENT SHALL BE APPROXIMATELY 38" WIDE X 30" HIGH AND AS DEEP AS APPLICABLE TO REQUIRED TANK DESIGN PER APPLICATION. THE DOOR OPENING SHALL BE APPROXIMATELY 38" WIDE X 30" HIGH. THIS COMPARTMENT SHALL BE TRANSVERSE THROUGH TO THE SIDE REAR COMPARTMENTS.

THE COMPARTMENT SEAMS SHALL BE SEALED USING A PERMANENT PLIABLE SILICONE CAULK. MACHINED LOUVERS SHALL BE PROVIDED FOR ADEQUATE VENTILATION.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **TAILBOARD**

##### **TAILBOARD STEP**

A TAILBOARD STEP SHALL BE PROVIDED AT THE REAR OF THE BODY. THE TAILBOARD SHALL BE 10" IN DEPTH AND IN ACCORDANCE WITH NFPA IN BOTH STEP HEIGHT AND STEPPING SURFACE. THE MAXIMUM REAR STEP HEIGHT TO THE TAILBOARD SHALL NOT EXCEED 24"

THE TAILBOARD STEP SHALL BE FORMED FROM 3/16" (0.188") ALUMINUM TREADPLATE AND SHALL BE REINFORCED WITH 6063-T5 1.5" X 3" ALUMINUM EXTRUSION. THE TAILBOARD SHALL BE IN ACCORDANCE WITH CURRENT NFPA REQUIREMENTS AND SHALL INCLUDE A MULTI-DIRECTIONAL AGGRESSIVE GRIPPING SURFACE INCORPORATED INTO THE DIAMOND PLATE. THE SURFACE SHALL EXTEND IN A VERTICAL DIRECTION FROM THE DIAMOND PLATE SHEET A MINIMUM OF 1/8" (0.125"). GRIPPING SURFACES SHALL BE CIRCULAR IN DESIGN, A MINIMUM OF 1" DIAMETER AND ON CENTERS NOT TO EXCEED 4".

THE TAILBOARD STEP SHALL BE BOLTED ON TO THE BODY FROM THE UNDERSIDE ASSURING A CLEAR SURFACE AND SHALL BE EASILY REMOVABLE FOR REPLACEMENT IN THE CASE OF DAMAGE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **REAR ACCESS HANDRAILS**

HANDRAILS SHALL BE PROVIDED AT THE REAR OF THE BODY TO ASSIST GROUND PERSONNEL ACCESSING THE TAILBOARD STEP AND HOSEBED AREA. EACH HANDRAIL SHALL BE CONSTRUCTED OF 6063T5 1.25" OD ANODIZED ALUMINUM TUBE, WITH AN INTEGRAL RIBBED SURFACE TO ASSURE A GOOD GRIP FOR PERSONNEL SAFETY, AND SHALL BE MOUNTED BETWEEN CHROME STANCHIONS.

THE HANDRAILS SHALL BE LOCATED- TWO (2) HANDRAILS, ONE (1) ON EACH SIDE, APPROPRIATELY SIZED HANDRAIL MOUNTED VERTICAL ON THE TRAILING EDGE OF THE BODY AND APPROPRIATELY SIZED HANDRAIL(S) MOUNTED HORIZONTAL BELOW THE REAR HOSEBED OPENING.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **DOORS**

##### **SINGLE COMPARTMENT DOOR**

A SINGLE COMPARTMENT DOOR SHALL BE CONSTRUCTED USING A BOX PAN CONFIGURATION. THE OUTER DOOR PAN SHALL BEVELED AND SHALL BE CONSTRUCTED FROM 3/16" (0.188") ALUMINUM SMOOTH PLATE. INNER DOOR PAN SHALL BE CONSTRUCTED FROM 1/8" (0.125") SMOOTH ALUMINUM PLATE AND SHALL HAVE NUTSERT FITTINGS TO ATTACH HOLD-OPEN HARDWARE. THE INNER PAN SHALL HAVE A 95-DEGREE BEND TO FORM AN INTEGRAL DRIP RAIL.

THE COMPARTMENT DOOR SHALL HAVE A 1" X 9/16" (1" X 0.43") CLOSED-CELL "P" EPDM SPONGE GASKET MEETING ASTM D-1066 2A4 STANDARDS INSTALLED AROUND THE PERIMETER OF THE DOOR TO PROVIDE A SEAL THAT IS RESISTANT TO OIL, SUNLIGHT, AND OZONE.

A DRAIN HOLE SHALL BE INSTALLED IN THE LOWER CORNER OF THE INSIDE DOOR PAN TO ASSIST WITH DRAINAGE.

A POLISHED STAINLESS STEEL HANSEN D-RING STYLE TWIST-LOCK DOOR HANDLE WITH #459 LATCH SHALL BE PROVIDED ON THE DOOR. THE 4-1/2" (4.5") D-RING HANDLE SHALL BE MOUNTED DIRECTLY TO THE DOOR LATCHING MECHANISM WITH SCREWS THAT DO NOT PENETRATE THE DOOR MATERIAL FOR IMPROVED CORROSION RESISTANCE.

THE COMPARTMENT DOOR SHALL BE SECURELY ATTACHED TO THE APPARATUS BODY WITH A FULL-LENGTH STAINLESS STEEL 1/4" (0.25") ROD PIANO-TYPE HINGE ISOLATED FROM THE BODY AND COMPARTMENT DOOR WITH A DIELECTRIC BARRIER. THE DOOR SHALL BE ATTACHED WITH MACHINE SCREWS THREADED INTO THE DOORFRAME. THE DOOR SHALL HAVE CHAIN STYLE HOLD-OPEN DEVICES.

AN ANODIZED ALUMINUM DRIP RAIL SHALL BE MOUNTED OVER THE COMPARTMENT OPENING TO ASSIST IN DIRECTING WATER RUNOFF AWAY FROM THE COMPARTMENT.

THE DOOR(S) SHALL BE INSTALLED IN THE FOLLOWING LOCATION(S): R2

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

##### **ROLL UP COMPARTMENT DOOR**

AN AMDOR BRAND ROLL UP DOOR WITH SATIN FINISH SHALL BE PROVIDED FOR THE FOLLOWING COMPARTMENT: THE DOOR(S) SHALL BE INSTALLED IN THE FOLLOWING LOCATION(S): B1.

THE DOOR SLATS SHALL BE 1" ALUMINUM DOUBLE WALL SLATS WITH CONTINUOUS BALL & SOCKET HINGE JOINT AND RECESSED DUAL DUROMETER SLAT SEAL, DOUBLE WALL REINFORCED BOTTOM PANEL WITH STAINLESS STEEL LIFT BAR LATCHING SYSTEM, BOTTOM PANEL FLANGE WITH CUT-OUTS FOR EASE OF ACCESS WITH GLOVED HANDS, REUSABLE SLAT SHOES WITH POSITIVE SNAP-IN SECUREMENT, SMOOTH INTERIOR DOOR CURTAIN TO PREVENT EQUIPMENT HANG-UPS. THE SLATS SHALL HAVE INTERLOCKING END SHOES ON EACH SLAT. THE SLATS SHALL HAVE INTERLOCKING JOINTS WITH A PVC/VINYL INNER SEAL TO PREVENT ANY METAL TO METAL CONTACT AND INHIBIT MOISTURE AND DUST PENETRATION.

THE TRACK SHALL BE A ONE-PIECE ALUMINUM DOOR TRACK / SIDE FRAME, TOP GUTTER WITH NON-MARRING SEAL, NON-MARRING RECESSED SIDE SEALS WITH UV STABILIZERS TO PREVENT WARPAGE, DUAL LEG BOTTOM SEAL, WITH ALL WEAR COMPONENT MATERIAL TO BE TYPE 6 NYLON. THE TRACK SHALL HAVE A REPLACEABLE SIDE SEAL TO PREVENT WATER AND DUST FROM ENTERING THE COMPARTMENT.

DOOR AJAR SWITCH SYSTEM SHALL BE MAGNETIC PROXIMITY BASED COMPONENTS. DOOR STRIKER WILL INCLUDE SUPPORT BENEATH THE LIFT BAR TO PREVENT DOOR CURTAIN BOUNCE.

THE DOOR OPENING SHALL BE REDUCED BY 2" IN WIDTH AND APPROXIMATELY 8-9" IN HEIGHT DEPENDING ON DOOR HEIGHT.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**ROLL UP COMPARTMENT DOOR**

AN AMDOR BRAND ROLL UP DOOR WITH PAINTED FINISH SHALL BE PROVIDED FOR THE FOLLOWING COMPARTMENTS: THE DOOR(S) SHALL BE INSTALLED IN THE FOLLOWING LOCATION(S): L1, L3, R1, R3. THE DOOR SLATS SHALL BE 1" ALUMINUM DOUBLE WALL SLATS WITH CONTINUOUS BALL & SOCKET HINGE JOINT AND RECESSED DUAL DUROMETER SLAT SEAL, DOUBLE WALL REINFORCED BOTTOM PANEL WITH STAINLESS STEEL LIFT BAR LATCHING SYSTEM, BOTTOM PANEL FLANGE WITH CUT-OUTS FOR EASE OF ACCESS WITH GLOVED HANDS, REUSABLE SLAT SHOES WITH POSITIVE SNAP-IN SECUREMENT, SMOOTH INTERIOR DOOR CURTAIN TO PREVENT EQUIPMENT HANG-UPS. THE SLATS SHALL HAVE INTERLOCKING END SHOES ON EACH SLAT. THE SLATS SHALL HAVE INTERLOCKING JOINTS WITH A PVC/VINYL INNER SEAL TO PREVENT ANY METAL TO METAL CONTACT AND INHIBIT MOISTURE AND DUST PENETRATION.

THE TRACK SHALL BE A ONE-PIECE ALUMINUM DOOR TRACK / SIDE FRAME, TOP GUTTER WITH NON-MARRING SEAL, NON-MARRING RECESSED SIDE SEALS WITH UV STABILIZERS TO PREVENT WARPAGE, DUAL LEG BOTTOM SEAL, WITH ALL WEAR COMPONENT MATERIAL TO BE TYPE 6 NYLON. THE TRACK SHALL HAVE A REPLACEABLE SIDE SEAL TO PREVENT WATER AND DUST FROM ENTERING THE COMPARTMENT.

DOOR AJAR SWITCH SYSTEM SHALL BE MAGNETIC PROXIMITY BASED COMPONENTS. DOOR STRIKER WILL INCLUDE SUPPORT BENEATH THE LIFT BAR TO PREVENT DOOR CURTAIN BOUNCE.

THE DOOR OPENING SHALL BE REDUCED BY 2" IN WIDTH AND APPROXIMATELY 8-9" IN HEIGHT DEPENDING ON DOOR HEIGHT.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**ROLL UP COMPARTMENT DOOR**

AN AMDOR BRAND ROLL UP DOOR WITH PAINTED FINISH SHALL BE PROVIDED FOR THE FOLLOWING COMPARTMENT: THE DOOR(S) SHALL BE INSTALLED IN THE FOLLOWING LOCATION(S): L2. THE DOOR SLATS SHALL BE 1" ALUMINUM DOUBLE WALL SLATS WITH CONTINUOUS BALL & SOCKET HINGE JOINT AND RECESSED DUAL DUROMETER SLAT SEAL, DOUBLE WALL REINFORCED BOTTOM PANEL WITH STAINLESS STEEL LIFT BAR LATCHING SYSTEM, BOTTOM PANEL FLANGE WITH CUT-OUTS FOR EASE OF ACCESS WITH GLOVED HANDS, REUSABLE SLAT SHOES WITH POSITIVE SNAP-IN SECUREMENT, SMOOTH INTERIOR DOOR CURTAIN TO PREVENT EQUIPMENT HANG-UPS. THE SLATS SHALL HAVE INTERLOCKING END SHOES ON EACH SLAT. THE SLATS SHALL HAVE INTERLOCKING JOINTS WITH A PVC/VINYL INNER SEAL TO PREVENT ANY METAL TO METAL CONTACT AND INHIBIT MOISTURE AND DUST PENETRATION.

THE TRACK SHALL BE A ONE-PIECE ALUMINUM DOOR TRACK / SIDE FRAME, TOP GUTTER WITH NON-MARRING SEAL, NON-MARRING RECESSED SIDE SEALS WITH UV STABILIZERS TO PREVENT WARPING, DUAL LEG BOTTOM SEAL, WITH ALL WEAR COMPONENT MATERIAL TO BE TYPE 6 NYLON. THE TRACK SHALL HAVE A REPLACEABLE SIDE SEAL TO PREVENT WATER AND DUST FROM ENTERING THE COMPARTMENT.

DOOR AJAR SWITCH SYSTEM SHALL BE MAGNETIC PROXIMITY BASED COMPONENTS. DOOR STRIKER WILL INCLUDE SUPPORT BENEATH THE LIFT BAR TO PREVENT DOOR CURTAIN BOUNCE.

THE DOOR OPENING SHALL BE REDUCED BY 2" IN WIDTH AND APPROXIMATELY 8-9" IN HEIGHT DEPENDING ON DOOR HEIGHT.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**DRIP PAN**

DRIP PAN FOR A ROLL-UP DOOR (EA). LOCATION(S): L1, L2, L3, R1, R3, B1.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**SHELVES**

**PERMANENT SHELF**

THERE SHALL BE A PERMANENT MOUNTED ALUMINUM SHELF PROVIDED FOR COMPARTMENT L1 AT OFFSET (ABOVE EXTRUSION IF APPLICABLE), L3 AT OFFSET (ABOVE EXTRUSION IF APPLICABLE). THE SHELF SHALL BE AT THE OFFSET WITHIN THE COMPARTMENT

THE SHELF SHALL BE CONSTRUCTED OF 3/16" (.187") SMOOTH ALUMINUM PLATE. THE SHELF SHALL HAVE A MINIMUM 2" FRONT LIP FOR ADDED STRENGTH AND REINFORCEMENT AND TO ACCOMMODATE OPTIONAL PLASTIC INTERLOCKING COMPARTMENT TILE SYSTEMS.

THE SHELF SHALL BE CAPABLE OF HOLDING 100 LBS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**ADJUSTABLE SHELF**

THERE SHALL BE AN ALUMINUM ADJUSTABLE SHELF PROVIDED IN THE UPPER AREA OF COMPARTMENT L1 UPPER, L3 UPPER, THE SHELF SHALL BE NOTCHED INTO EXTENDED SIDE COMPARTMENT AREA.

THE SHELF SHALL BE CONSTRUCTED OF 3/16" (.187") SMOOTH ALUMINUM PLATE. THE SHELF SHALL HAVE A MINIMUM 2" FRONT AND REAR LIPS TO ACCOMMODATE OPTIONAL PLASTIC INTERLOCKING COMPARTMENT TILE SYSTEMS. THE ADJUSTABLE SHELF SHALL BE CAPABLE OF HOLDING 100 LBS.

THE SHELF SHALL BE SIZED, WIDTH AND DEPTH, TO MATCH THE SIZE AND LOCATION IN THE COMPARTMENT.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**ADJUSTABLE TRACKS**

TRACKS SHALL BE PROVIDED IN L1 LOWER, L3 LOWER, R1 LOWER FOR USE WITH ADJUSTABLE SHELVES AND/OR TRAYS IN DEEP NON-TRANSVERSE COMPARTMENTS. THE TRACKS SHALL BE VERTICALLY MOUNTED AND ATTACHED TO THE SIDE AND/OR REAR WALLS OF THE COMPARTMENTS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**ADJUSTABLE TRACKS**

TRACKS SHALL BE PROVIDED IN L1 UPPER, L3 UPPER FOR USE WITH SHALLOW DEPTH ADJUSTABLE SHELVES. THE TRACKS SHALL BE VERTICALLY MOUNTED AND ATTACHED TO THE SIDE AND/OR REAR WALLS OF THE COMPARTMENTS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**TRAYS / TOOLBOARDS**

**RUNNINGBOARD SUCTION TRAY**

A RUNNING BOARD SUCTION HOSE STORAGE TRAY (APPROX. 35"W) SHALL BE PROVIDED AND LOCATED IN THE DRIVER SIDE RUNNING BOARD, OFFICER SIDE RUNNING BOARD.



THE TRAY SHALL BE RECESSED MOUNTED AND CONSTRUCTED OF 1/8" (.125") ALUMINUM DIAMOND PLATE (EXTERIOR) WITH A SMOOTH SURFACE INTERIOR. THE BOTTOM OF THE TRAY SHALL HAVE REMOVABLE ALUMINUM SLATS AND DRAIN HOLES TO ALLOW WATER DRAINAGE FROM HOSE STORED IN THE TRAY.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **SWING-OUT TOOL BOARD L2**

**DESCRIPTION:** A SWING-OUT TOOL BOARD MOUNTING SYSTEM CONSISTING OF ONE OR MORE PANELS FASTENED TOGETHER WITH A DOOR-LIKE PIVOTING HINGE AND LATCHING DEVICE TO PROVIDE A FLEXIBLE AND SECURE MOUNTING SOLUTION FOR TOOL BRACKETS, TOOLS AND EQUIPMENT.

SWING-OUT TOOL BOARDS COMMONLY USED IN COMPARTMENTS TO PROVIDE ADDITIONAL MOUNTING SURFACES AS BOTH SIDES OF THE TOOLBOARD CAN BE UTILIZED FOR TOOL MOUNTING.

#### **SPECIFICATIONS FOR SWING-OUT TOOL BOARD.**

TOOL BOARDS SHALL BE MANUFACTURED FROM ONE OR MORE 6063-T5 MILL FINISH ALUMINUM EXTRUSION PANELS 5-3/4" WIDE X 1-7/8" THICK.

TOOL BOARD PANELS SHALL HAVE INTEGRATED GROOVES OR CHANNELS FOR USE WITH **PERFORMANCE ADVANTAGE COMPANY (PAC)** TRAC LOK INSERTS P/N 7016 AND A LARGE CENTER CHANNEL FOR USE WITH **(PAC)** CHANNEL NUTS P/N 2023, P/N 3023 AND P/N 3024.

SWINGOUT TOOL BOARDS SHALL BE MOUNTED USING **PERFORMANCE ADVANTAGE COMPANY (PAC)** PIVOT MOUNT ASSEMBLY P/N PM1000.

TOOL BOARDS SHALL BE ASSEMBLED USING **PERFORMANCE ADVANTAGE COMPANY (PAC)** P/N 7009 U-CHANNEL AND P/N 2023 CHANNEL NUTS. THE FINISHED SWINGOUT TOOL BOARD SHALL BE MOUNTED TO THE COMPARTMENT WALLS USING (PAC) MINI DUAL TRAC P/N 7050 ALUMINUM EXTRUSION USING INSTALLER PROVIDED FASTENERS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **ROLL-OUT TRAY**

THERE SHALL BE A FLOOR MOUNTED ROLL-OUT TRAY PROVIDED IN COMPARTMENT R1, R3, B1. THE ROLL-OUT TRAY SHALL BE CONSTRUCTED OF 3/16" (.187") SMOOTH ALUMINUM PLATE WITH A SANDED FINISH AND WELDED CORNERS FOR INCREASED STRENGTH AND RIGIDITY. THE TRAY SHALL BE SIZED IN WIDTH AND DEPTH AS APPLICABLE.

FOR GREATER TRAY ACCESSIBILITY, THE DRAWER SLIDES SHALL FEATURE ONE HUNDRED PERCENT EXTENSION. THE TRAY SHALL UTILIZE A GAS SPRING TO SECURE THE TRAY IN THE OPEN OR CLOSED POSITION.

THE TRAY SHALL HAVE A TOTAL CAPACITY OF 500 LBS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **TRAY DIVIDER**

ROLL OUT TRAY IN R3 TO FEATURE 2 RAISED SIDE BOLT IN BRACKETS, FORWARD AND REARWARD, TO MOUNT TO TRAY LIP AND EXTEND ABOVE TRAY LIP 6 INCHES WITH 2 ADJUSTABLE TRACKS PER LIP MOUNTED OUTBOARD TO INBOARD. AN ADJUSTABLE .188" SMOOTH PLATE ALUMINUM VERTICAL DIVIDER WITH AN "L" BEND FOR ADDED STRENGTH AT EACH END SHALL MOUNT BETWEEN THESE ADJUSTABLE TRACKS AND DIVIDE THE AVAILABLE COMPARTMENT DEPTH IN THE TRAY AS DESIRED TO MEET CHANGING NEEDS OF THE DEPARTMENT. DIVIDER SHALL BE AS LARGE AS COMPARTMENT PERMITS WITH SELECTED DOOR AND TRAY TO CYCLE IN AND OUT OFF COMPARTMENT WITH THIS ADDED VERTICAL DIVIDER AS SET.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **TOOLBOARD MOUNTS – AMKUS**

A PAC TOOL MOUNT BRACKET SHALL BE MADE AVAILABLE FOR AN AMKUS 30CX SPREADER, 25HD CUTTER AND AN AMK30R RAM. THE MOUNTING SHALL BE IN COMPARTMENT R3, AND DETERMINED PRIOR TO DELIVERY.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **ROLL-OUT TRAY**

THERE SHALL BE AN ADJUSTABLE ROLL-OUT TRAY PROVIDED IN COMPARTMENT R1, L1 LOWER, L3 LOWER. THE ROLL-OUT TRAY SHALL BE CONSTRUCTED OF 3/16" (.187) SMOOTH ALUMINUM WITH WELDED CORNERS FOR STRENGTH AND RIGIDITY. THE TRAY SHALL BE SIZED IN WIDTH AND DEPTH AS APPLICABLE. FOR GREATER TRAY ACCESSIBILITY, THE DRAWER SLIDES SHALL FEATURE ONE HUNDRED PERCENT EXTENSION. THE TRAY SHALL UTILIZE A GAS SHOCK TO HOLD THE TRAY IN AN OPEN OR CLOSED POSITION.

THE TRAY SHALL HAVE A TOTAL CAPACITY OF 500 LBS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **ROLL-OUT DRAWER**

THERE SHALL BE A ROLL-OUT DRAWER PROVIDED IN COMPARTMENT L1. THIS DRAWER SHALL BE MOUNTED MID-LEVEL AT THE DEEPEST PORTION OF THE COMPARTMENT INTENDED FOR HOSE ADAPTERS.

THE ROLL-OUT TRAY SHALL BE CONSTRUCTED OF 3/16" (.187) SMOOTH ALUMINUM WITH WELDED CORNERS FOR STRENGTH AND RIGIDITY. THE DRAWER SHALL BE SIZED IN WIDTH AND DEPTH AS APPLICABLE, BEING APPROXIMATELY 9 INCHES DEEP.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **COVERS**

#### **HOSE BED COVER**

D&S CUSTOM COVERS BRAND VINYL HOSE BED COVER WITH REMOVABLE ATTACHED REAR FLAP(S). TOP COVER TO BE HEAVY DUTY RED VINYL WITH SHOCK CORD ATTACHING SYSTEM AND REAR NYLON BUCKLES WITH STRAPS TO ATTACH REAR FLAP. REAR FLAP TO BE HEAVY DUTY RED CARGO NET WITH SHOCK CORDS AND MATING BUCKLES. REAR FLAP TO FEATURE WEIGHTED BOTTOM SKIRTING.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **RUNNING BOARD TRAY SECURING STRAP**

A HEAVY DUTY BLACK NYLON STRAP WITH AN ALUMINUM QUICK-RELEASE BUCKLE SHALL BE PROVIDED FOR THE RUNNING BOARD HOSE TRAY(S). THE STRAP SHALL BE ATTACHED TO THE INBOARD SIDE OF THE TRAY AS LOW AS PRACTICAL TO ALLOW CINCHING OF STRAP FOR SECURING TRAY CONTENTS AND SHALL NOT REDUCE THE OVERALL TRAY CAPACITY.

LOCATION: DRIVER SIDE RUNNING BOARD, OFFICER SIDE RUNNING BOARD.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **PUMP MODULE**

#### **PUMP MODULE WIDTH**

PUMP MODULE SHALL BE AS NARROW AS POSSIBLE TO PERMIT SHORTEST WHEELBASE AVAILABLE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **PUMP MODULE FRAME**

AN EXTRUDED ALUMINUM PUMP MODULE SHALL BE PROVIDED AND LOCATED FORWARD OF THE APPARATUS BODY. THE PUMP MODULE SHALL BE CONSTRUCTED ENTIRELY OF WELDED ALUMINUM ALLOY EXTRUSIONS AND INTERLOCKING ALUMINUM PLATES. THE PUMP MODULE FRAMEWORK SHALL CONSIST OF 1.5" X 3" X .188" WALL, 1.5" X 3" X .375" WALL WITH CENTER WEB AND 3" X 3" X .188" WALL EXTRUSIONS.

THE PUMP MODULE DESIGN AND MOUNTING SHALL BE SEPARATE FROM THE BODY TO ALLOW THE PUMP MODULE AND BODY TO MOVE INDEPENDENTLY OF EACH OTHER IN ORDER TO REDUCE STRESS FROM FRAME TWISTING AND VIBRATION.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**PUMP MODULE MOUNTING**

THE PUMP MODULE SHALL BE ATTACHED TO THE CHASSIS USING FOUR (4) CENTER BONDED ISOLATION MOUNTS AND A STEEL MOUNTING FRAME. THE ISOLATION MOUNTS SHALL BE 2.75" DIAMETER AND MOUNT TO THE CHASSIS WITH TWO (2) 4" X 4" X .312" A36 STEEL ANGLES.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**PUMP ACCESS**

A PUMP SERVICE ACCESS DOOR SHALL BE PROVIDED AT THE FRONT OF THE PUMP MODULE. THE DOOR SHALL BE SECURED WITH TWO (2) THUMB LATCHES.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**PUMP MODULE RUNNING BOARDS**

THE PUMP MODULE SHALL INCLUDE A RUNNING BOARD ON EACH SIDE. THE RUNNING BOARDS SHALL BE IN ACCORDANCE WITH NFPA IN BOTH STEP HEIGHT AND STEPPING SURFACE. THE RUNNING BOARDS SHALL BE FORMED FROM .125" ALUMINUM TREADPLATE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**STEPPING SURFACE**

EACH RUNNING BOARD SHALL INCLUDE A MULTI-DIRECTIONAL, AGGRESSIVE GRIPPING SURFACE INCORPORATED INTO THE TREADPLATE. THE SURFACE SHALL EXTEND VERTICALLY FROM THE DIAMOND PLATE SHEET A MINIMUM OF .125". GRIPPING SURFACES SHALL BE CIRCULAR IN DESIGN, A MINIMUM OF 1" DIAMETER AND ON CENTERS NOT TO EXCEED 4". EACH RUNNING BOARD SHALL BE BOLTED ON TO THE PUMP MODULE AND BE EASILY REMOVABLE FOR REPLACEMENT IN THE CASE OF DAMAGE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**PUMP PANEL OPENING**

THE PANEL OPENING ON THE PUMP MODULE SHALL BE 39" WIDE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**PUMP MODULE HEIGHT**

THE PUMP MODULE HEIGHT SHALL BE 80".

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**PUMP PANELS**

**SIDE MOUNT PUMP PANELS**

THE DRIVER AND OFFICER SIDE PUMP PANELS SHALL BE CONSTRUCTED OF 14 GAUGE STAINLESS STEEL. EACH PANEL SHALL HAVE THE ABILITY TO BE REMOVED FROM THE MODULE FOR EASIER ACCESS AND FOR MAINTENANCE IN THE PUMP AREA.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**PUMP ACCESS DOOR**

THE OFFICER SIDE PUMP MODULE SHALL HAVE A THREE (3) PIECE PANEL, ONE (1) ABOVE THE DISCHARGE OUTLETS, ONE (1) ENCOMPASSING THE DISCHARGES AND INTAKES AND ONE (1) LOW FOR BLEEDER VALVES.

THE UPPER TWO (2) PUMP PANEL SECTIONS SHALL HAVE A VERTICAL STAINLESS STEEL PIANO TYPE HINGE WITH 1/4" PINS ALONG THE FORWARD EDGE OF THE PUMP MODULE. THE HINGES SHALL BE "STAKED" ON EVERY OTHER KNUCKLE TO PREVENT THE PIN FROM SLIDING. THE PANELS SHALL HAVE PUSH BUTTON STYLE LATCHES TO SECURE THE PANELS IN THE CLOSED POSITION. THE UPPER PANEL SHALL HAVE ONE (1) PNEUMATIC SHOCK TO HOLD THE PANEL IN THE OPEN POSITION.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **MISC PUMP PANEL OPTIONS**

##### **PUMP PANEL TAGS**

COLOR CODED PUMP PANEL LABELS SHALL BE SUPPLIED TO BE IN ACCORDANCE WITH NFPA 1901 COMPLIANCE. THE COLORS WILL BE CHOSEN DURING PREBUILD MEETING.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

##### **HOSE REEL BLOW-OUT VALVE**

A 1/4" INNOVATIVE CONTROLS VALVE SHALL BE INSTALLED BETWEEN THE CHASSIS AIR SYSTEM AND THE HOSE REEL. THIS VALVE SHALL BE MOUNTED AT THE PUMP OPERATOR AREA. EACH 1/4 TURN HANDLE GRIP SHALL FEATURE BUILT-IN COLOR-CODING LABELS AND A VERBIAGE TAG THERE SHALL BE A CHECK VALVE IN THE AIR LINE TO PREVENT WATER FROM ENTERING THE CHASSIS AIR SYSTEM. **\*\*\*ONLY COMPRESSION FITTINGS WILL BE ACCEPTED\*\*\***

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **PUMP MODULE OPTIONS**

##### **ROLLERS AND SWITCH**

TWO BOOSTER REEL ROLLER ASSEMBLIES SHALL BE PROVIDED, ONE MOUNTED EACH SIDE OF THE PUMP HOUSING.

THE ROLLER ASSEMBLY SHALL INCLUDE CHROME GUIDES WITH NYLON BUSHINGS AND SHALL BE MOUNTED ON THE SIDE NEXT TO THE BOOSTER REEL.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

##### **FLEX JOINT**

THE AREA BETWEEN THE PUMP MODULES AND BODY SHALL INCLUDE A RUBBER FLEX JOINT.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

##### **MODULE LOGOS**

LOGOS WITH THE OEM BRAND NAME SHALL BE PROVIDED AND SHALL BE MOUNTED ONE (1) EACH SIDE ON PUMP MODULE/PRE-CONNECT PANELS. LOGOS SHALL BE SIZED AS APPLICABLE TO AVAILABLE SPACE ON PANEL(S).

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

##### **AIR HORN SWITCH**

A HEAVY DUTY WEATHERPROOF PUSH-BUTTON SWITCH SHALL BE INSTALLED AT THE PUMP OPERATOR`S PANEL TO OPERATE THE AIR HORNS.

THE SWITCH SHALL BE LABELED "EVACUATION ALERT". LOCATION: DRIVER SIDE PUMP PANEL.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

## **STORAGE PAN**

A STORAGE PAN SHALL BE PROVIDED IN THE UPPER PUMP MODULE AREA. THE PAN SHALL BE CONSTRUCTED OF 3/16" (.188") ALUMINUM TREADPLATE AND BE REMOVABLE TO SERVICE ITEMS IN THE PUMP MODULE BELOW. HOLES SHALL BE PROVIDED IN THE CORNERS OF THE PAN TO FACILITATE DRAINAGE OF WATER. TWO BOOSTER LINES WILL BE PLACED IN THIS AREA.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

## **WATER TANK**

### **MINIMUM 500 GALLON TANK**

A WATER TANK HOLDING A MINIMUM OF 500 GALLONS (U.S.) "L" SHAPED BOOSTER TANK SHALL BE SUPPLIED.

THE BOOSTER TANK SHALL BE CONSTRUCTED OF POLYPROPYLENE MATERIAL. THE BOOSTER TANK SHALL BE COMPLETELY REMOVABLE WITHOUT DISTURBING OR DISMOUNTING THE APPARATUS BODY STRUCTURE. THE TOP OF THE BOOSTER TANK IS FITTED WITH REMOVABLE LIFTING ASSEMBLY DESIGNED TO FACILITATE TANK REMOVAL.

THE BOOSTER TANK TOP, SIDES, AND BOTTOM SHALL BE CONSTRUCTED OF A MINIMUM 1/2" (0.50") THICK BLACK UV-STABILIZED COPOLYMER POLYPROPYLENE. JOINTS AND SEAMS SHALL BE FUSED USING NITROGEN GAS AS REQUIRED AND TESTED FOR MAXIMUM STRENGTH AND INTEGRITY. THE TANK CONSTRUCTION SHALL INCLUDE TECHNOLOGY WHEREIN A SEALANT SHALL BE INSTALLED BETWEEN THE PLASTIC COMPONENTS PRIOR TO BEING FUSION WELDED. THIS SEALING METHOD WILL PROVIDE A LIQUID BARRIER OFFERING LEAK PROTECTION IN THE EVENT OF A WELD COMPROMISE. THE TANK COVER SHALL BE CONSTRUCTED OF 1/2" THICK POLYPROPYLENE AND UV STABILIZED, TO INCORPORATE A MULTI-PIECE LOCKING DESIGN, WHICH ALLOWS FOR INDIVIDUAL REMOVAL AND INSPECTION IF NECESSARY. THE TANK COVER(S) SHALL BE FLUSH OR RECESSED 3/8" FROM THE TOP OF THE TANK AND SHALL BE FUSED TO THE TANK WALLS AND LONGITUDINAL PARTITIONS FOR MAXIMUM INTEGRITY. EACH ONE OF THE COVERS SHALL HAVE HOLD DOWNS CONSISTING OF 2" MINIMUM POLYPROPYLENE DOWELS SPACED A MAXIMUM OF 40" APART. THESE DOWELS SHALL EXTEND THROUGH THE COVERS AND WILL ASSIST IN KEEPING THE COVERS RIGID UNDER FAST FILLING CONDITIONS.

THE TANK SHALL HAVE A COMBINATION VENT AND MANUAL FILL TOWER WITH A HINGED LID. THE FILL TOWER SHALL BE CONSTRUCTED OF 1/2" POLYPROPYLENE AND SHALL BE A TYPICAL DIMENSION OF 8" X 8" OUTER PERIMETER (SUBJECT TO CHANGE FOR SPECIFIC DESIGN APPLICATIONS). THE FILL TOWER SHALL BE BLUE IN COLOR INDICATING THAT IT IS A WATER-ONLY FILL TOWER. THE TOWER SHALL HAVE A 1/4" THICK REMOVABLE POLYPROPYLENE SCREEN AND A POLYPROPYLENE HINGED COVER. THE CAPACITY OF THE TANK SHALL BE ENGRAVED ON THE TOP OF THE FILL TOWER LID.

THE BOOSTER TANK SHALL HAVE TWO (2) TANK PLUMBING OPENINGS. ONE (1) FOR A TANK-TO-PUMP SUCTION LINE WITH AN ANTI-SWIRL PLATE, AND ONE (1) FOR A TANK FILL LINE. ALL TANK FILL COUPLINGS SHALL BE BACKED WITH FLOW DEFLECTORS TO BREAK UP THE STREAM OF WATER ENTERING THE TANK, AND BE CAPABLE OF WITHSTANDING SUSTAINED FILL RATES PER THE TANK FILL INLET SIZE.

THE SUMP SHALL BE CONSTRUCTED OF A MINIMUM OF 1/2" POLYPROPYLENE. THE SUMP SHALL HAVE A MINIMUM 3" N.P.T. THREADED OUTLET FOR A DRAIN PLUG PER NFPA. THIS SHALL BE USED AS A COMBINATION CLEAN-OUT AND DRAIN. ALL TANKS SHALL HAVE AN ANTI-SWIRL PLATE LOCATED APPROXIMATELY 3" ABOVE THE INSIDE FLOOR.

THE TRANSVERSE AND LONGITUDINAL SWASH PARTITIONS SHALL BE MANUFACTURED OF A MINIMUM OF 3/8" POLYPROPYLENE. ALL PARTITIONS SHALL BE EQUIPPED WITH VENT AND AIR HOLES TO PERMIT MOVEMENT OF AIR AND WATER BETWEEN COMPARTMENTS. THE PARTITIONS SHALL BE DESIGNED TO PROVIDE MAXIMUM WATER FLOW. ALL SWASH PARTITIONS INTERLOCK WITH ONE ANOTHER AND ARE COMPLETELY FUSED TO EACH OTHER AS WELL AS TO THE WALLS OF THE TANK. ALL PARTITIONS AND SPACING SHALL COMPLY WITH NFPA 1901. THE WALLS SHALL BE WELDED TO THE FLOOR OF THE TANK PROVIDING MAXIMUM STRENGTH.

INSIDE THE FILL TOWER THERE SHALL BE A COMBINATION VENT/OVERFLOW PIPE. THE VENT OVERFLOW SHALL BE A MINIMUM OF SCHEDULE 40 POLYPROPYLENE PIPE WITH AN I.D. OF 3" OR LARGER THAT IS DESIGNED TO RUN THROUGH THE TANK. THIS OUTLET SHALL DIRECT THE DRAINING OF OVERFLOW WATER PAST THE REAR AXLE, THUS REDUCING THE POSSIBILITY OF FREEZE-UP OF THESE COMPONENTS IN COLD ENVIRONMENTS. THIS DRAIN CONFIGURATION SHALL ALSO ASSURE THAT REAR AXLE TIRE TRACTION SHALL NOT BE AFFECTED WHEN MOVING FORWARD.

THE BOOSTER TANK SHALL UNDERGO EXTENSIVE TESTING PRIOR TO INSTALLATION IN THE TRUCK. ALL WATER TANKS SHALL BE TESTED AND CERTIFIED AS TO CAPACITY ON A CALIBRATED AND CERTIFIED TILTING SCALE.

EACH TANK SHALL BE WEIGHED EMPTY AND FULL TO PROVIDE PRECISE FLUID CAPACITY. EACH TANK SHALL BE DELIVERED WITH A CERTIFICATE OF CAPACITY DELINEATING THE WEIGHT EMPTY AND FULL AND THE RESULTANT CAPACITY BASED ON WEIGHT. ENGINEERING ESTIMATES FOR CAPACITY CALCULATIONS SHALL NOT BE PERMITTED FOR CAPACITY CERTIFICATION. THE TANK MUST BE DESIGNED AND FABRICATED BY A TANK MANUFACTURER THAT IS ISO 9001:2008 CERTIFIED IN EACH OF ITS LOCATIONS. THE ISO CERTIFICATION MUST BE TO THE CURRENT STANDARD IN EFFECT AT THE TIME OF THE DESIGN AND FABRICATION OF THE TANK. THIS CAPACITY SHALL BE RECORDED ON THE MANUFACTURER'S RECORD OF CONSTRUCTION AND THE CERTIFICATION SHALL BE PROVIDED WHEN THE APPARATUS IS DELIVERED.

A TAG SHALL BE INSTALLED ON THE APPARATUS IN A CONVENIENT LOCATION AND CONTAIN PERTINENT INFORMATION INCLUDING A QR CODE READABLE BY COMMERCIALY AVAILABLE SMART PHONES. THE INFORMATION CONTAINED ON THE TAG SHALL INCLUDE THE CAPACITY OF THE WATER AND FOAM (S), THE MAXIMUM FILL AND PRESSURE RATES, THE SERIAL NUMBER OF THE TANK, THE DATE OF MANUFACTURE, THE TANK MANUFACTURER, AND CONTACT INFORMATION. THE QR CODE WILL ALLOW THE USER TO CONNECT WITH THE TANK MANUFACTURER FOR ADDITIONAL INFORMATION AND ASSISTANCE.

THE TANK SHALL HAVE A LIMITED LIFETIME WARRANTY THAT PROVIDES WARRANTY SERVICE FOR THE LIFE OF THE FIRE APPARATUS IN WHICH THE TANK IS INSTALLED. WARRANTIES ARE TRANSFERABLE IF THE APPARATUS OWNERSHIP CHANGES BY REQUESTING THE TRANSFER FROM THE TANK MANUFACTURER.  
TANK CAPACITY IS 530 US GALLON / 441 IMPERIAL GALLONS / 2006 LITERS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **FILL TOWER LOCATION**

FILL TOWER(S) SHALL BE LOCATED OFFSET TO OFFICER SIDE OF WATER TANK.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **TANK PLUMBING**

##### **TANK FILL 2 AKRON VALVE**

ONE (1) 2" PUMP-TO-TANK FILL LINE HAVING A 2" MANUALLY OPERATED FULL FLOW VALVE. THE VALVE CONTROL SHALL BE LOCATED AT THE PUMP OPERATOR'S PANEL AND SHALL VISUALLY INDICATE THE POSITION OF THE VALVE AT ALL TIMES. THE FILL LINE SHALL BE CONTROLLED USING A CHROME HANDLE WITH AN INTEGRAL TAG.

THE VALVE SHALL BE AN AKRON 8800HD SERIES WITH A 316 STAINLESS STEEL BALL AND DUAL POLYMER SEATS FOR EASE OF OPERATION AND INCREASED ABRASION RESISTANCE. THE VALVE SHALL HAVE A SELF-LOCKING BALL FEATURE USING AN AUTOMATIC FRICTION LOCK DESIGN TO BALANCE THE STAINLESS STEEL BALL WHEN IN A THROTTLE POSITION WITH WATER FLOWING THROUGH IT.

THE VALVE SHALL BE OF UNIQUE AKRON SWING-OUT DESIGN TO ALLOW THE VALVE BODY TO BE REMOVED FOR SERVICING WITHOUT DISASSEMBLING THE PLUMBING.

ALL FABRICATED PIPING SHALL BE A MINIMUM OF SCHEDULE 10 STAINLESS STEEL FOR SUPERIOR CORROSION RESISTANCE AND DECREASED FRICTION LOSS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **TANK TO PUMP**

ONE (1) MANUALLY OPERATED 3" AKRON VALVE SHALL BE INSTALLED BETWEEN THE PUMP SUCTION AND THE BOOSTER TANK. INCLUDES FLEX HOSE WITH STAINLESS STEEL HOSE CLAMPS FOR CONNECTION TO THE 4" TANK SUMP OUTLET. THE VALVE CONTROL SHALL BE LOCATED AT THE PUMP OPERATOR'S PANEL AND SHALL VISUALLY INDICATE THE POSITION OF THE VALVE AT ALL TIMES.

THE VALVE SHALL BE AN AKRON 8800HD SERIES WITH A 316 STAINLESS STEEL BALL AND DUAL POLYMER SEATS FOR EASE OF OPERATION AND INCREASED ABRASION RESISTANCE. THE VALVE SHALL HAVE A SELF-LOCKING BALL FEATURE USING AN AUTOMATIC FRICTION LOCK DESIGN TO BALANCE THE STAINLESS STEEL BALL WHEN IN A THROTTLE POSITION AND WATER IS FLOWING THROUGH IT.

THE VALVE SHALL BE OF THE UNIQUE AKRON SWING-OUT DESIGN TO ALLOW THE VALVE BODY TO BE REMOVED FOR SERVICING WITHOUT DISASSEMBLING THE PLUMBING.

ALL FABRICATED PIPING SHALL BE A MINIMUM OF SCHEDULE 10 STAINLESS STEEL FOR SUPERIOR CORROSION RESISTANCE AND DECREASED FRICTION LOSS.

A CHECK VALVE SHALL BE PROVIDED IN THE TANK TO PUMP SUPPLY LINE TO PREVENT THE POSSIBILITY OF "BACK FILLING" THE WATER TANK. THE VALVE CONTROL SHALL BE LOCATED AT THE PUMP OPERATOR'S PANEL AND SHALL VISUALLY INDICATE THE POSITION OF THE VALVE AT ALL TIMES.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**LADDER STORAGE / RACKS**

**EQUIPMENT STORAGE BRACKETS**

BRACKETS SHALL BE PROVIDED THAT ARE CAPABLE FOR STORAGE OF TWO (2) PIKE POLES. THE BRACKETS SHALL BE CONSTRUCTED OF HIGH TENSILE STRENGTH ALUMINUM ALLOY AND SHALL BE LOCATED ON THE TOP OF THE ELECTRIC ZICO DROP-DOWN LADDER RACK.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**ATTIC LADDER STORAGE**

BRACKETS SHALL BE PROVIDED THAT ARE CAPABLE FOR STORAGE OF ONE (1) ATTIC LADDER. THE BRACKETS SHALL BE CONSTRUCTED OF HIGH TENSILE STRENGTH ALUMINUM ALLOY AND SHALL BE LOCATED ON THE TOP OF THE ELECTRIC ZICO DROP-DOWN LADDER RACK.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**PIKE POLE**

THE PIKE POLE(S) CAPABLE OF BEING STORED SHALL BE THE FOLLOWING LENGTH: (1) 6' PIKE POLE AND (1) 8' PIKE POLE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**PIKE POLE BRAND**

THE BRAND OF PIKE POLE SHALL BE NUPLA I-BEAM CONSTRUCTION AND SHALL BE PROVIDED WITH THE VEHICLE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**GROUND LADDERS**

**ALCO-LITE ROOF LADDER**

AN ALCO-LITE PRL-14, 14' ALUMINUM ROOF LADDER SHALL BE PROVIDED. FOLDING STEEL ROOF HOOKS SHALL BE ATTACHED TO ONE END OF THE LADDER WITH STEEL SPIKES ON THE OTHER.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**ALCO-LITE EXTENSION LADDER**

ONE (1) ALCO-LITE PEL-24, 24' ALUMINUM 2-SECTION EXTENSION LADDER SHALL BE PROVIDED. THE LADDER SHALL MEET OR EXCEED THE REQUIREMENTS OF THE CURRENT EDITION OF NFPA 1931.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**ALCO-LITE FOLDING LADDER WITH SHOES**

THIS UNIT SHALL BE SUPPLIED WITH ONE (1) ALCO-LITE FL-10, 10' 6" LONG ALUMINUM FOLDING ATTIC LADDER WITH SAFETY SHOES.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**HOSE BED STORAGE BOX**

TOOL STORAGE BOX SHALL BE LOCATED IN THE HOSE BED BETWEEN DIVIDERS. IT SHALL INCLUDE A DROP DOWN SMOOTH PLATE DA FINISH DOOR (WIRED TO DOOR AJAR) W/D-RING LATCH, TOP OF BOX TO BE SOLID WITH HOSE BED STYLE SLAT FLOORING ADDED TO MINIMIZE ANY WATER INTRUSION INTO BOX. BOX SHALL BE BOLTED IN AND REMOVABLE AND TO BE SIZED ACCORDINGLY FOR WIDTH TO FIT BETWEEN DIVIDERS AS APPLICABLE TO HOSE LOAD AND BE 12 INCHES TALL BY AVAILABLE DEPTH OF THE HOSE BED AS POSITIONED. THIS TO ALLOW FOR THE STORAGE BOX TO BE MOUNTED AT HOSE BED FLOOR HEIGHT AND THE REMAINING SPACE ABOVE THE BOX BETWEEN THE DIVIDERS TO BE UTILIZED AS A HOSE STORAGE AREA AS DEFINED IN LOAD TABLE. THE WIDTH OF BOX SHALL BE marginally more narrow than the divider opening to allow for water shed around box as installed.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**HANDRAILS / STEPS**

**HOSE BED FOLDING STEPS**

DUAL LIGHTED LED FOLDING STEPS SHALL BE POSITIONED TO THE DRIVER SIDE REAR OF THE BODY. THE STEPS SHALL BE NFPA COMPLIANT FOR ACCESS TO THE HOSE BED STORAGE AREA AND IN STEP HEIGHT AND SURFACE AREA. THE STEPS SHALL BE STAGGERED STEPPED AS APPLICABLE WITH TAILBOARD DEPTH, NOT APPLICABLE WITH RECESSED STEP MOUNTING.

DUAL LIGHTED LED FOLDING STEP WITH LED LIGHTS INTEGRAL TO THE STEP ON THE TOP TO PROVIDE NFPA REQUIREMENTS OF 2 FC ON THE STEPPING SURFACE. EACH STEP SHALL ALSO HAVE A LED LIGHT INTEGRAL TO THE BOTTOM OF THE STEP TO MEET NFPA REQUIREMENTS OF A STEPPING SURFACE UP TO 18" BELOW THE STEP.

THE FOLDING STEP SHALL SUSTAIN A MINIMUM STATIC LOAD OF 500 LBS. THE FOLDING STEP SHALL ALSO MEET NFPA SLIP RESISTANCE QUALIFICATIONS.

ONE (1) HAND RAIL SHALL BE INSTALLED (AS APPLICABLE) IN COMPLIANCE WITH CURRENT NFPA. THE HAND RAIL SHALL BE CONSTRUCTED OF 6063T5 1.25" OD ANODIZED ALUMINUM TUBE, WITH AN INTEGRAL RIBBED SURFACE TO ASSURE A GOOD GRIP FOR PERSONNEL SAFETY, MOUNTED BETWEEN CHROME STANCHIONS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**FOLDING STEPS (QTY: 2)**

DUAL LIGHTED LED FOLDING STEP(S) SHALL BE LOCATED OFFICER SIDE FRONT COMPARTMENT FACE, DRIVER SIDE FRONT COMPARTMENT FACE. THE FOLDING STEP(S) SHALL MEET CURRENT NFPA IN STEP HEIGHT AND SURFACE AREA.

DUAL LIGHTED LED FOLDING STEP WITH LED LIGHTS INTEGRAL TO THE STEP ON THE TOP TO PROVIDE NFPA REQUIREMENTS OF 2 FC ON THE STEPPING SURFACE. FOLDING STEP SHALL ALSO HAVE A LED LIGHT INTEGRAL TO THE BOTTOM OF THE STEP TO MEET NFPA REQUIREMENTS OF A STEPPING SURFACE UP TO 18" BELOW THE STEP. THE FOLDING STEP SHALL SUSTAIN A MINIMUM STATIC LOAD OF 500 LBS. THE FOLDING STEP SHALL ALSO MEET NFPA SLIP RESISTANCE QUALIFICATIONS.

ONE (1) HAND RAIL SHALL BE INSTALLED IN COMPLIANCE WITH CURRENT NFPA. THE HAND RAIL SHALL BE CONSTRUCTED OF 6063T5 1.25" OD ANODIZED ALUMINUM TUBE, WITH AN INTEGRAL RIBBED SURFACE TO ASSURE A GOOD GRIP FOR PERSONNEL SAFETY, MOUNTED BETWEEN CHROME STANCHIONS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**MISC BODY OPTIONS**

**REAR MUD FLAPS**

THE REAR TIRES SHALL HAVE A SET OF BLACK MUD FLAPS MOUNTED BEHIND THE REAR CHASSIS WHEELS WITH THE MANUFACTURE LOGO.



**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS** YES\_\_\_\_\_ NO\_\_\_\_\_

**BODY MAINFRAME**

THE BODY MAINFRAME SHALL BE ENTIRELY CONSTRUCTED OF ALUMINUM. THE COMPLETE FRAMEWORK SHALL BE CONSTRUCTED OF 6061T6 AND 6063T5 ALUMINUM ALLOY EXTRUSIONS WELDED TOGETHER USING 5356 ALUMINUM ALLOY WELDING WIRE.

THE BODY MAINFRAME SHALL INCLUDE 3" X 3" 6061-T6 ALUMINUM 3/8" (0.375") WALL CROSSMEMBER EXTRUSION OR 3" X 3" I-BEAM SECTION ALUMINUM EXTRUSION DEPENDING ON THE APPLICATION AT THE FRONT OF THE BODY . A SOLID 3" X 3" "I-BEAM" SECTION ALUMINUM EXTRUSION SHALL BE PROVIDED THE FULL WIDTH OF THE BODY FORWARD AND REARWARD OF THE REAR WHEEL WELL. THE CROSSMEMBERS SHALL BE DESIGNED TO SUPPORT THE COMPARTMENT FRAMING AND SHALL BE WELDED TO 1-3/16" X 3" (1.188" X 3") SOLID 6063-T5 ALUMINUM FRAME SILL EXTRUSIONS. THE FRAME SILL EXTRUSIONS SHALL BE SHAPED TO CONTOUR WITH THE CHASSIS FRAME RAILS AND SHALL BE PROTECTED FROM CONTACT WITH THE CHASSIS FRAME RAILS BY 5/16" X 2" (0.31" X 2") FIBER-REINFORCED RUBBER STRIPS TO PREVENT WEAR AND GALVANIC CORROSION CAUSED WHEN DISSIMILAR METALS COME IN CONTACT.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS** YES\_\_\_\_\_ NO\_\_\_\_\_

**BODY MOUNTING SYSTEM**

THE MAIN BODY SHALL BE ATTACHED TO THE CHASSIS FRAME RAILS WITH SIX (6) OF 5/8" (0.625") DIAMETER STEEL U-BOLTS. THIS BODY MOUNTING SYSTEM SHALL BE USED TO ALLOW EASY REMOVAL OF THE BODY FOR MAJOR REPAIR OR DISASSEMBLY.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS** YES\_\_\_\_\_ NO\_\_\_\_\_

**WATER TANK**

**MOUNTING SYSTEM**

THE BODY DESIGN SHALL ALLOW THE BOOSTER TANK TO BE COMPLETELY REMOVABLE WITHOUT DISTURBING OR DISMOUNTING THE APPARATUS BODY STRUCTURE. THE WATER TANK SHALL REST ON TOP OF A 3" X 3" FRAME ASSEMBLY COVERED WITH RUBBER SHOCK PADS AND CORNER BRACES FORMED FROM 3/16" ANGLED PLATE TO SUPPORT THE TANK. THE BOOSTER TANK MOUNTING SYSTEM SHALL UTILIZE A FLOATING DESIGN TO REDUCE STRESS FROM ROAD TRAVEL AND VIBRATION. TO MAINTAIN LOW VEHICLE CENTER OF GRAVITY THE WATER TANK BOTTOM SHALL BE MOUNTED WITHIN 5" OF THE FRAME RAIL TOP.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS** YES\_\_\_\_\_ NO\_\_\_\_\_

**HOSEBED SIDE ASSEMBLY**

THE HOSEBED SIDE ASSEMBLIES SHALL BE MADE OF 3" X 3" SLOTTED ALUMINUM EXTRUSION AND 3/16" (.188") SMOOTH PLATE. THE HOSEBED SIDE ASSEMBLIES SHALL PROVIDE A 85" HIGH BODY.

THE EXTERIOR HOSEBED SIDE SURFACE SHALL BE COMPLETELY SANDED AND DEBURRED TO ASSURE A SMOOTH FINISH AND PAINTED JOB COLOR. THE INTERIOR HOSEBED SIDE SURFACE SHALL BE COMPLETELY SANDED AND DEBURRED TO ASSURE A SMOOTH SANDED FINISH.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS** YES\_\_\_\_\_ NO\_\_\_\_\_

**HOSE BED CAPACITY**

THE HOSE BED SHALL HAVE THE CAPACITY TO STORE THE FOLLOWING HOSE FROM THE DRIVER SIDE TO THE OFFICER SIDE.

200' EACH 1.75" IN REMOVABLE TRAYS, OFFICER AND DRIVER SIDE

250' 2 ½" ABOVE OFFICER TRAY

250' 2 ½" ABOVE DRIVER TRAY

1000' 5" IN CENTER OF HOSEBED

500' 2 ½" IN CENTER OF HOSEBED

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS** YES\_\_\_\_\_ NO\_\_\_\_\_

## **HOSEBED**

THE AREA ABOVE THE BOOSTER TANK SHALL HAVE A HOSE STORAGE AREA PROVIDED. THE HOSEBED SHALL BE CONSTRUCTED ENTIRELY FROM MAINTENANCE-FREE, 3/4" DEEP X 7.5" WIDE, EXTRUDED ALUMINUM SLATS THAT SHALL BE POP-RIVETED INTO A ONE-PIECE GRID SYSTEM. EACH SLAT SHALL HAVE ALL SHARP EDGES REMOVED AND HAVE AN ANODIZED RIBBED TOP SURFACE THAT SHALL PREVENT THE ACCUMULATION OF WATER AND ALLOW FOR VENTILATION OF WET HOSE.

THE HOSEBED SHALL INCLUDE AN OPEN AREA FOR THE FILL TOWER(S). THE HOSEBED DESIGN SHALL INCORPORATE ADJUSTABLE TRACKS IN THE FORWARD AREA REARWARD OF THE FILL TOWER(S) AND THE REARWARD AREA OF THE HOSEBED FOR THE INSTALLATION OF AN ADJUSTABLE DIVIDER(S). THE ADJUSTABLE TRACKS SHALL HOLD AN ADJUSTABLE DIVIDER(S) MOUNTING NUT STRAIGHT, SO ONLY A PHILIPS HEAD SCREWDRIVER IS REQUIRED TO ADJUST A DIVIDER(S) FROM SIDE TO SIDE (AS IS PRACTICAL WITH OTHER HOSEBED MOUNTED EQUIPMENT).

THE HOSEBED SHALL BE EASILY REMOVABLE TO ALLOW ACCESS TO THE BOOSTER TANK BELOW.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

## **HOSE BED DIVIDER (QTY: 3)**

THERE SHALL BE A HOSE BED DIVIDER PROVIDED THE FULL FORE-AFT LENGTH OF THE HOSE BED.

THE HOSE BED DIVIDER SHALL BE CONSTRUCTED OF 1/4" (0.25") SMOOTH ALUMINUM PLATE WITH AN EXTRUDED ALUMINUM BASE WELDED TO THE BOTTOM. THE REAR END OF THE DIVIDER SHALL HAVE A 3" RADIUS CORNER TO PROTECT PERSONNEL. THE DIVIDER SHALL BE NATURAL FINISH ALUMINUM FOR LONG-LASTING APPEARANCE AND SHALL BE SANDED AND DE-BURRED TO PREVENT DAMAGE TO THE HOSE.

THE DIVIDER SHALL BE ADJUSTABLE FROM SIDE TO SIDE IN THE HOSE BED TO ACCOMMODATE VARYING HOSE LOADS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

## **5" LDH HOSE - KEY**

THERE SHALL BE (10) TEN SECTIONS OF KEY FIRE PRO-FLOW RUBBER COVERED HOSE, 5" DIAMETER X 100' LENGTH, PART #RC50-400, YELLOW IN COLOR, PROVIDED WITH THE APPARATUS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

## **2.5" HOSE - KEY**

THERE SHALL BE (6) SIX LENGTHS OF 50' X 2.5" KEY HOSE PROVIDED WITH THE APPARATUS. THE HOSE CONSTRUCTED IN THE FOLLOWING MANNER: JACKET CONSTRUCTION ELIMINATES MOISTURE ABSORPTION AND PROBLEMS THAT MAKE HANDLING DIFFICULT IN FREEZING WEATHER. PRIOR TO THE JACKETS AND LINERS BEING COMBINED, EACH OUTSIDE JACKET MUST BE COMPLETELY N-FUSED BY A MECHANICAL PROCESS TO PROVIDE COMPLETE COVERAGE OF A HYPALON COMPOUND. THE HEAT APPLIED SHALL BE A MINIMUM OF 400 DEGREES F. THE LINING SHALL HAVE A THICKNESS OF NOT LESS THAN .015". SHORE HARDNESS SHALL NOT EXCEED 40 DUROMETER ON THE "D" SCALE. THE TINSEL STRENGTH OF THE LINING SHALL NOT BE LESS THAN 45 PSI. THE HOSE SHALL BE TESTED TO 800 LBS. THE HOSE WILL BE RED IN COLOR.

THERE SHALL BE (6) SIX LENGTHS OF 50' X 2.5" KEY HOSE PROVIDED WITH THE APPARATUS. THE HOSE CONSTRUCTED IN THE FOLLOWING MANNER: JACKET CONSTRUCTION ELIMINATES MOISTURE ABSORPTION AND PROBLEMS THAT MAKE HANDLING DIFFICULT IN FREEZING WEATHER. PRIOR TO THE JACKETS AND LINERS BEING COMBINED, EACH OUTSIDE JACKET MUST BE COMPLETELY N-FUSED BY A MECHANICAL PROCESS TO PROVIDE COMPLETE COVERAGE OF A HYPALON COMPOUND. THE HEAT APPLIED SHALL BE A MINIMUM OF 400 DEGREES F. THE LINING SHALL HAVE A THICKNESS OF NOT LESS THAN .015". SHORE HARDNESS SHALL NOT EXCEED 40 DUROMETER ON THE "D" SCALE. THE TINSEL STRENGTH OF THE LINING SHALL NOT BE LESS THAN 45 PSI. THE HOSE SHALL BE TESTED TO 800 LBS. THE HOSE WILL BE BLUE IN COLOR.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS** YES\_\_\_\_\_ NO\_\_\_\_\_

**2.5" HOSE - KEY**

THERE SHALL BE (12) TWELVE LENGTHS OF 50' X 2.5" KEY HOSE PROVIDED WITH THE APPARATUS. THE HOSE CONSTRUCTED IN THE FOLLOWING MANNER: JACKET CONSTRUCTION ELIMINATES MOISTURE ABSORPTION AND PROBLEMS THAT MAKE HANDLING DIFFICULT IN FREEZING WEATHER. PRIOR TO THE JACKETS AND LINERS BEING COMBINED, EACH OUTSIDE JACKET MUST BE COMPLETELY N-FUSED BY A MECHANICAL PROCESS TO PROVIDE COMPLETE COVERAGE OF A HYPALON COMPOUND. THE HEAT APPLIED SHALL BE A MINIMUM OF 400 DEGREES F. THE LINING SHALL HAVE A THICKNESS OF NOT LESS THAN .015". SHORE HARDNESS SHALL NOT EXCEED 40 DUROMETER ON THE "D" SCALE. THE TINSEL STRENGTH OF THE LINING SHALL NOT BE LESS THAN 45 PSI. THE HOSE SHALL BE TESTED TO 800 LBS. THE HOSE WILL BE WHITE IN COLOR.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS** YES\_\_\_\_\_ NO\_\_\_\_\_

**1.75" DOUBLE JACKET HOSE - KEY**

THERE SHALL BE (7) SEVEN LENGTHS OF 50' X 1.75" WHITE KEY HOSE PROVIDED WITH THE APPARATUS. THE HOSE CONSTRUCTED IN THE FOLLOWING MANNER: JACKET CONSTRUCTION ELIMINATES MOISTURE ABSORPTION AND PROBLEMS THAT MAKE HANDLING DIFFICULT IN FREEZING WEATHER. PRIOR TO THE JACKETS AND LINERS BEING COMBINED, EACH OUTSIDE JACKET MUST BE COMPLETELY N-FUSED BY A MECHANICAL PROCESS TO PROVIDE COMPLETE COVERAGE OF A HYPALON COMPOUND. THE HEAT APPLIED SHALL BE A MINIMUM OF 400 DEGREES F. THE LINING SHALL HAVE A THICKNESS OF NOT LESS THAN .015". SHORE HARDNESS SHALL NOT EXCEED 40 DUROMETER ON THE "D" SCALE. THE TINSEL STRENGTH OF THE LINING SHALL NOT BE LESS THAN 45 PSI. THE HOSE SHALL BE TESTED TO 800 LBS. THE HOSE WILL BE WHITE IN COLOR.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS** YES\_\_\_\_\_ NO\_\_\_\_\_

**1.75" DOUBLE JACKET HOSE - KEY**

THERE SHALL BE (7) SEVEN LENGTHS OF 50' X 1.75" ORANGE KEY HOSE PROVIDED WITH THE APPARATUS. THE HOSE CONSTRUCTED IN THE FOLLOWING MANNER: JACKET CONSTRUCTION ELIMINATES MOISTURE ABSORPTION AND PROBLEMS THAT MAKE HANDLING DIFFICULT IN FREEZING WEATHER. PRIOR TO THE JACKETS AND LINERS BEING COMBINED, EACH OUTSIDE JACKET MUST BE COMPLETELY N-FUSED BY A MECHANICAL PROCESS TO PROVIDE COMPLETE COVERAGE OF A HYPALON COMPOUND. THE HEAT APPLIED SHALL BE A MINIMUM OF 400 DEGREES F. THE LINING SHALL HAVE A THICKNESS OF NOT LESS THAN .015". SHORE HARDNESS SHALL NOT EXCEED 40 DUROMETER ON THE "D" SCALE. THE TINSEL STRENGTH OF THE LINING SHALL NOT BE LESS THAN 45 PSI. THE HOSE SHALL BE TESTED TO 800 LBS. THE HOSE WILL BE ORANGE IN COLOR.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS** YES\_\_\_\_\_ NO\_\_\_\_\_

**STORAGE PAN**

A STORAGE PAN SHALL BE PROVIDED IN THE FORWARD AREA OF THE HOSEBED. THE STORAGE PAN SHALL BE CONSTRUCTED OF 3/16" (.188") ALUMINUM TREADPLATE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS** YES\_\_\_\_\_ NO\_\_\_\_\_

**HOSE BED DIVIDER HAND HOLD**

THERE SHALL BE A HAND HOLE CUT-OUT(S) ON THE TRAILING EDGE OF EACH HOSE BED DIVIDER. THE CUT-OUT(S) IS SPECIFICALLY SIZED FOR USE IN ADJUSTING OF THE HOSE BED DIVIDER.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS** YES\_\_\_\_\_ NO\_\_\_\_\_

**DIVIDER SUPPORT**

DIVIDER SUPPORT SHALL RUN FULL WIDTH OF HOSEBED (SIDE TO SIDE) AT THE FRONT OF THE HOSEBED AND TOWARDS THE REAR OF THE HOSEBED AT TOP OF THE DIVIDER(S). ATTACH TO EACH HOSEBED DIVIDER TO PROVIDE ADDITIONAL SUPPORT.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS** YES\_\_\_\_\_ NO\_\_\_\_\_

**OVERALL HEIGHT RESTRICTION**

THE APPARATUS **SHALL NOT EXCEED 10 FEET IN HEIGHT.**

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**OVERALL LENGTH RESTRICTION**

THE APPARATUS **SHALL NOT EXCEED 30 FEET IN LENGTH.**

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**FUEL FILL**

A RECESSED FUEL FILL SHALL BE PROVIDED AT THE DRIVER SIDE REAR WHEEL WELL AREA.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**FILL TOWER LOCATION**

THE FILL TOWER(S) SHALL BE LOCATED INSIDE THE HOSE BED STORAGE PAN AS APPLICABLE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**BODY WHEEL WELL**

THE BODY WHEEL WELL FRAME SHALL BE CONSTRUCTED FROM 6063-T5 ALUMINUM EXTRUSION WITH A SLOT THE FULL LENGTH TO PERMIT AN INTERNAL FIT OF 1/8" (0.125") JOB COLOR PAINTED ALUMINUM. THE WHEEL WELL TRIM FENDERETTE SHALL BE CONSTRUCTED FROM 6063-T5 FORMED ALUMINUM EXTRUSION. THE WHEEL WELL LINERS SHALL BE CONSTRUCTED OF A 3/16" (.187") COMPOSITE MATERIAL. THE LINERS SHALL BE BOLT-ON AND SHALL PROVIDE A MAINTENANCE-FREE AND DAMAGE-RESISTANT SURFACE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**RUB RAIL**

THE PUMP AREA MODULE(S) AND BODY SHALL HAVE RUB RAILS MOUNTED ALONG THE SIDES AND AT THE REAR.

THE RUB RAIL SHALL BE C-CHANNEL IN DESIGN AND CONSTRUCTED OF 3/16" THICK 6463T6 ANODIZED ALUMINUM EXTRUSION. THE RUB RAIL SHALL BE 2.75" HIGH X 1.25" DEEP AND SHALL EXTEND BEYOND THE BODY WIDTH TO PROTECT COMPARTMENT DOORS AND THE BODY SIDE. THE RUB RAIL DEPTH SHALL ALLOW MARKER AND/OR WARNING LIGHTS TO BE RECESSED INSIDE FOR PROTECTION.

THE TOP SURFACE OF THE RUB RAIL SHALL HAVE MINIMUM OF FIVE (5) RAISED SERRATIONS. EACH SERRATION BEING A MINIMUM OF .1" IN HEIGHT AND WITH CROSS GROOVES TO PROVIDE A SLIP-RESISTANT EDGE FOR THE TAILBOARD STEP AND PUMP MODULE RUNNING BOARD AREAS. THE RUB RAIL SHALL BE MOUNTED A MINIMUM OF 3/16" OFF THE PUMP MODULE AND BODY WITH NYLON SPACERS. THE ENDS OF EACH SECTION SHALL BE PROVIDED WITH A FINISHED ROUNDED CORNER PIECE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**SMOOTH PLATE BOX**

SMOOTH PLATE BOX FOR A WHELEN DIRECTIONAL LIGHTBAR AND (2) FEDERAL GH SCENE LIGHTS. BOX SHALL BE MOUNTED ON 3" X 3" ALUMINUM ANGLE AT REAR OF HOSEBED STORAGE PAN. LIGHTS SHALL BE SURFACE MOUNTED TO BOX.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

## **DIVIDER HORIZONTAL**

PRE-CONNECT REMOVABLE HORIZONTAL U FORMED DIVIDER TO BE MOUNTED TO HOSE BED DIVIDER AND TO THE HOSE BED SIDE WALL IN FIRST AND LAST HOSE BED LAY POSITIONS TO ACCOMMODATE STORAGE OF REMOVABLE TRAYS (OPTIONED SEPARATELY) IN THE BOTTOM POSITION ON EACH SIDE OF HOSE BED. LOWER AREAS TO HAVE ADDED STOPS INSIDE THE HOSE BED AT THE FORWARD END OF THE TRAY AS LOADED TO PREVENT SHIFT FORWARD IN TRANSIT AND AT THE REARWARD END OF THE HOSE BED TO SECURE LOADED TRAY IN POSITION FROM SHIFTING REARWARD IN TRANSIT. DIVIDER(S) TO BE FABRICATED FROM FORMED .25IN THICK SMOOTH PLATE ALUMINUM WITH DA FINISH WITH DRAINAGE SLOTS TO ALLOW FOR WATER SHED FROM STORED HOSE ABOVE. SIDES OF FORMED DIVIDER SHALL BE FORMED WITH A BEND DOWN 2IN. TO INCREASE RIGIDITY OF THE DIVIDER FOR HOSE WEIGHT. EACH FORMED DIVIDER TO BE BOLT IN. THIS TO ALLOW FOR 2 VERTICAL STACKED HOSE STORAGE AREAS TO ACCOMMODATE HOSE LAYS BELOW IN REMOVABLE TRAYS AT BED LEVEL AND ADDITIONAL HOSE LAY ABOVE FOR A HOSE BED PRE CONNECTED OR DRY LAY AS APPLICABLE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**  
**REMOVABLE SPEEDLAY TRAY (QTY: 2)**

THE SPEEDLAY AREAS SHALL INCLUDE REMOVABLE STORAGE TRAYS. THE TRAYS SHALL BE CONSTRUCTED OF HIGH CARBON (BLACK) POLYPROPYLENE SHEET WELDED TOGETHER. THE FLOOR OF THE TRAY SHALL BE SLOTTED TO PREVENT THE ACCUMULATION OF WATER AND ALLOW FOR VENTILATION OF WET HOSE. POLYPROPYLENE IS A DURABLE, EASILY CLEANED, AND HIGH TENSILE STRENGTH, LONG-WEARING, AND SHATTER/ABRASION/CORROSION-RESISTANT MATERIAL.

THE TRAY SHALL INCLUDE TWO (2) POLYPROPYLENE DOWELS TO ACT AS GRAB HANDLES. THE HANDLES SHALL BE WELDED BETWEEN THE TRAY SIDE WALLS DOWN LOW TOWARD EACH END OF THE TRAY.

THE SIDE WALLS OF THE TRAY SHALL INCLUDE SLOTTED CUT-OUTS TO FACILITATE LIFTING OF THE TRAY.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

## **SCBA BOTTLE STORAGE**

### **WHEEL WELL SCBA STORAGE**

THE BODY WHEEL WELL AREA SHALL STORE UP TO SEVEN (7) SCBA BOTTLES, FOUR (4) ON THE OFFICER SIDE AND THREE (3) ON THE DRIVER SIDE. THE BOTTLES SHALL BE SECURED IN EACH STORAGE AREA BY A VERTICAL HINGED DOOR WHICH SHALL BE SECURED IN THE CLOSED POSITION BY A PUSH BUTTON LATCH. THE DOORS SHALL MATCH THE WHEEL WELL AREA MATERIAL AND FINISH.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **SCBA STRAP (QTY: 7)**

STRAPS SHALL BE PROVIDED IN EACH EXTERIOR STORAGE COMPARTMENT TO PROVIDE SECONDARY MEANS TO HOLD EACH SCBA BOTTLE IN THE COMPARTMENT. THE STRAPS SHALL BE CONSTRUCTED FROM 1" NYLON WEBBING FORMED IN A LOOP. THE STRAP(S) SHALL BE MOUNTED TO THE STORAGE COMPARTMENT CEILING DIRECTLY INSIDE THE DOOR OPENING AT EACH BOTTLE LOCATION.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

## **PUMPS**

**\*\*ALL PLUMBING CONNECTIONS SHALL USE COMPRESSION FITTINGS WHERE APPLICABLE\*\***

### **FIRE PUMP SYSTEM**

THE PUMP SHALL BE A MIDSHIP-MOUNTED HALE QMAX SINGLE STAGE CENTRIFUGAL PUMP. THE PUMP SHALL BE MOUNTED ON THE CHASSIS FRAME RAILS OF CUSTOM TRUCK CHASSIS AND HAVE THE CAPACITY OF 2000 GALLONS PER MINUTE (U.S. GPM) NFPA 1901 RATED PERFORMANCE, AND SHALL BE SPLIT-SHAFT DRIVEN FROM THE TRUCK TRANSMISSION.

THE ENTIRE PUMP BODY AND RELATED PARTS SHALL BE OF FINE GRAIN ALLOY CAST IRON, WITH A MINIMUM TENSILE STRENGTH OF 30,000 PSI (207 MPA). ALL METAL MOVING PARTS IN CONTACT WITH WATER SHALL BE OF HIGH QUALITY BRONZE OR STAINLESS STEEL. PUMP BODY SHALL BE HORIZONTALLY SPLIT IN TWO SECTIONS, FOR EASY REMOVAL OF IMPELLER ASSEMBLY INCLUDING WEAR RINGS AND BEARINGS FROM BENEATH THE PUMP WITHOUT DISTURBING PUMP MOUNTING OR PIPING.

THE PUMP IMPELLER SHALL BE HARD, FINE GRAIN BRONZE OF THE MIXED FLOW DESIGN AND SHALL BE INDIVIDUALLY GROUND AND HAND BALANCED. IMPELLER CLEARANCE RINGS SHALL BE BRONZE, EASILY RENEWABLE WITHOUT REPLACING IMPELLER OR PUMP VOLUTE BODY, AND OF WRAP-AROUND DOUBLE LABYRINTH DESIGN FOR MAXIMUM EFFICIENCY.

THE PUMP SHAFT SHALL BE HEAT-TREATED, CORROSION-RESISTANT STAINLESS STEEL AND SHALL BE RIGIDLY SUPPORTED BY THREE (3) BEARINGS FOR MINIMUM DEFLECTION. THE SLEEVE BEARING IS TO BE LUBRICATED BY A FORCE FED, AUTOMATIC OIL LUBRICATED DESIGN, PRESSURE-BALANCED TO EXCLUDE FOREIGN MATERIAL. THE REMAINING BEARINGS SHALL BE HEAVY-DUTY, DEEP GROOVE BALL BEARINGS IN THE GEARBOX AND SHALL BE SPLASH-LUBRICATED. PUMP SHAFT MUST BE SEALED WITH DOUBLE-LIP OIL SEAL TO KEEP ROAD DIRT AND WATER OUT OF THE GEARBOX.

TWO (2) 6" DIAMETER SUCTION PORTS WITH 6" NST MALE THREADS AND REMOVABLE SCREENS SHALL BE PROVIDED, ONE EACH SIDE. THE PORTS SHALL BE MOUNTED ONE (1) ON EACH SIDE OF THE MIDSHIP PUMP AND SHALL EXTEND THROUGH THE SIDE PUMP PANELS. INLETS SHALL COME EQUIPPED WITH LONG HANDLE CHROME CAPS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **DISCHARGE MANIFOLD**

THE PUMP SYSTEM SHALL UTILIZE A STAINLESS STEEL DISCHARGE MANIFOLD SYSTEM THAT ALLOWS A DIRECT FLOW OF WATER TO DISCHARGE VALVES. THE MANIFOLD AND FABRICATED PIPING SYSTEMS SHALL BE CONSTRUCTED OF A MINIMUM OF SCHEDULE 10 STAINLESS STEEL TO REDUCE CORROSION.

THE APPARATUS MANUFACTURER SHALL PROVIDE A FULL 10 YEAR STAINLESS STEEL PLUMBING COMPONENTS WARRANTY. THIS WARRANTY SHALL COVER DEFECTS IN MATERIALS OR WORKMANSHIP OF APPARATUS MANUFACTURER DESIGNED FOAM/WATER PLUMBING SYSTEM STAINLESS STEEL COMPONENTS FOR 10 YEARS. A COPY OF THE WARRANTY DOCUMENT SHALL BE PROVIDED WITH THE BID.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **PUMP SHIFT**

THE PUMP SHIFT SHALL BE PNEUMATICALLY-CONTROLLED USING A POWER SHIFTING CYLINDER.

THE POWER SHIFT CONTROL VALVE SHALL BE MOUNTED IN THE CAB AND BE LABELED "PUMP SHIFT". THE APPARATUS TRANSMISSION SHIFT CONTROL SHALL BE FURNISHED WITH A POSITIVE LEVER, PREVENTING ACCIDENTAL SHIFTING OF THE CHASSIS TRANSMISSION.

A GREEN INDICATOR LIGHT SHALL BE LOCATED IN THE CAB AND BE LABELED "PUMP ENGAGED". THE LIGHT SHALL NOT ACTIVATE UNTIL THE PUMP SHIFT HAS COMPLETED ITS FULL TRAVEL INTO PUMP ENGAGEMENT POSITION.

A SECOND GREEN INDICATOR LIGHT SHALL BE LOCATED IN THE CAB AND BE LABELED "OK TO PUMP". THIS LIGHT SHALL BE ENERGIZED WHEN BOTH THE PUMP SHIFT HAS BEEN COMPLETED AND THE CHASSIS AUTOMATIC TRANSMISSION HAS OBTAINED CONVERTER LOCK-UP (4TH GEAR LOCK-UP).

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **SYSTEMS**

TWO (2) TEST PLUGS SHALL BE PUMP PANEL MOUNTED FOR THIRD PARTY TESTING OF VACUUM AND PRESSURES OF THE PUMP.

A MASTER DRAIN VALVE SHALL BE INSTALLED AND OPERATED FROM THE PUMP OPERATOR`S PANEL. THE MASTER PUMP DRAIN ASSEMBLY SHALL CONSIST OF A CLASS 1 BRONZE MASTER DRAIN WITH A RUBBER DISC SEAL AND TURNING HANDLE.

THE MANUAL MASTER DRAIN VALVE SHALL HAVE SIX (6) INDIVIDUALLY-SEALED PORTS THAT ALLOW QUICK AND SIMULTANEOUS DRAINING OF MULTIPLE INTAKE AND DISCHARGE LINES. IT SHALL BE CONSTRUCTED OF CORROSION-RESISTANT MATERIAL AND BE CAPABLE OF OPERATING AT A PRESSURE OF UP TO 600 PSI.

THE MASTER DRAIN SHALL PROVIDE INDEPENDENT PORTS FOR LOW POINT DRAINAGE OF THE FIRE PUMP AND AUXILIARY DEVICES.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**GEARBOX COOLER**

A GEARBOX COOLER SHALL BE PROVIDED TO MAINTAIN SAFE OPERATING TEMPERATURES DURING PROLONGED PUMPING OPERATIONS FOR PUMP RATING 1500 GPM AND OVER.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**AUXILIARY ENGINE COOLER**

AN ENGINE COOLER USED TO LOWER ENGINE WATER TEMPERATURE DURING PROLONGED PUMPING OPERATIONS AND CONTROLLED AT THE PUMP OPERATOR`S PANEL SHALL BE PROVIDED.

THE ENGINE COOLER SHALL BE INSTALLED IN THE ENGINE COOLANT SYSTEM IN SUCH A MANNER AS TO ALLOW COOL PUMP WATER TO CIRCULATE AROUND ENGINE WATER, THUS FORMING A TRUE HEAT EXCHANGER ACTION. COOLER INLET AND OUTLET SHALL BE CONTINUOUS, PREVENTING INTERMIXING OF ENGINE COOLANT AND PUMP WATER.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**PUMP RATING**

THE FIRE PUMP SHALL BE RATED AT 2000 GPM.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**FIRE PUMP EXTENDED 3 YEAR WARRANTY**

HALE PUMP PRO-TECH EXTENDED 3 YEAR WARRANTY IN ADDITION TO THE STANDARD 2 YEAR WARRANTY.

COVERS LABOR FOR YEARS THREE, FOUR AND FIVE ABOVE THE STANDARD WARRANTY.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**PUMP CERTIFICATION**

THE PUMP, WHEN DRY, SHALL BE CAPABLE OF TAKING SUCTION AND DISCHARGING WATER IN ACCORDANCE WITH CURRENT NFPA 1901. THE PUMP SHALL BE TESTED AT THE MANUFACTURER`S FACILITY BY AN INDEPENDENT, THIRD-PARTY TESTING SERVICE. THE CONDITIONS OF THE PUMP TEST SHALL BE AS OUTLINED IN CURRENT NFPA 1901.

THE TESTS SHALL INCLUDE, AT A MINIMUM, THE PUMP TEST, THE PUMPING ENGINE OVERLOAD TEST, THE PRESSURE CONTROL SYSTEM TEST, THE PRIMING DEVICE TESTS, THE VACUUM TEST, AND THE WATER TANK TO PUMP FLOW TEST AS OUTLINED IN CURRENT NFPA 1901.

A PIPING HYDROSTATIC TEST SHALL BE PERFORMED AS OUTLINED IN CURRENT NFPA 1901.

THE PUMP SHALL DELIVER THE PERCENTAGE OF RATED CAPACITIES AT PRESSURES INDICATED BELOW:

100% OF RATED CAPACITY AT 150 PSI NET PUMP PRESSURE  
100% OF RATED CAPACITY AT 165 PSI NET PUMP PRESSURE  
70% OF RATED CAPACITY AT 200 PSI NET PUMP PRESSURE  
50% OF RATED CAPACITY AT 250 PSI NET PUMP PRESSURE

A TEST PLATE, INSTALLED AT THE PUMP PANEL, SHALL PROVIDE THE RATED DISCHARGES AND PRESSURES TOGETHER WITH THE SPEED OF THE ENGINE AS DETERMINED BY THE CERTIFICATION TEST, AND THE NO-LOAD GOVERNED SPEED OF THE ENGINE.

A CERTIFICATE OF INSPECTION CERTIFYING PERFORMANCE OF THE PUMP AND ALL RELATED COMPONENTS SHALL BE PROVIDED AT TIME OF DELIVERY. ADDITIONAL CERTIFICATION DOCUMENTS SHALL INCLUDE, BUT NOT LIMITED TO, CERTIFICATE OF HYDROSTATIC TEST, ELECTRICAL SYSTEM PERFORMANCE TEST, MANUFACTURER'S RECORD OF PUMPER CONSTRUCTION, AND CERTIFICATE OF PUMP PERFORMANCE FROM THE PUMP MANUFACTURER.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **PUMP OPTIONS**

##### **PUMP ANODES**

THREE (3) PUMP ANODES SHALL BE INSTALLED FOR CORROSION PROTECTION. THERE SHALL BE ONE ON THE DISCHARGE SIDE AND TWO ON THE INLET SIDE, ONE LEFT AND ONE RIGHT.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

##### **STEAMERS, FLUSH+1**

THE PUMP 6" STEAMER INTAKE(S) SHALL BE MOUNTED APPROXIMATELY 1" FROM THE PUMP PANEL TO BACK OF CAP WHEN INSTALLED. THE "FLUSH+1" DIMENSION CAN VARY + OR - 1-1/4" OR AS PRACTICABLE DEPENDING ON THE PUMP MODULE WIDTH AND OPTIONS SELECTED. (EXAMPLE 72" OR 76" MODULES.)

LOCATION: DRIVER'S SIDE, OFFICER'S SIDE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

##### **INLET VALVE**

A HALE MASTER INTAKE VALVE (MIV-E) SHALL BE PROVIDED FOR THE SPECIFIED INTAKE. THE LARGE DIAMETER INLET VALVE SHALL BE CAPABLE OF ACHIEVING AN NFPA TEST RATING OF 1500 GPM THROUGH A SINGLE 6" SUCTION HOSE.

THE INLET VALVE SHALL BE OPERATED BY A 12 VDC ELECTRIC MOTOR WITH A REMOTE SWITCH PROVIDED AT THE PUMP OPERATOR'S POSITION. THE 12 VDC MOTOR SHALL BE PROVIDED WITH AN AUTOMATIC RESETTING, THERMALLY-COMPENSATED OVER-CURRENT PROTECTION CIRCUIT BREAKER TO PROTECT THE 12 VDC MOTOR AND APPARATUS ELECTRICAL SYSTEM. THE GEAR ACTUATOR ON THE VALVE WILL CYCLE FROM FULL CLOSED TO FULL OPEN IN NOT LESS THAN THREE (3) SECONDS. A HAND CONTROLLED PUMP PANEL MOUNTED MANUAL OVERRIDE (KNOB STYLE) SHALL BE PROVIDED.

AN INDICATOR LIGHT PANEL SHALL BE LOCATED AT THE PUMP OPERATOR'S POSITION TO SHOW VALVE OPEN, CLOSED, OR TRAVERSING FROM OPEN TO CLOSED.

A BUILT-IN ADJUSTABLE PRESSURE RELIEF VALVE SHALL BE PROVIDED. THE PRESSURE RELIEF VALVE SHALL BE FACTORY SET TO 125 PSI. THE PRESSURE RELIEF VALVE SHALL PROVIDE OVERPRESSURE PROTECTION FOR THE SUCTION HOSE EVEN WHEN THE INTAKE VALVE IS CLOSED.

A 3/4" AIR BLEEDER VALVE SHALL BE PROVIDED AND CONTROLLED AT THE PUMP OPERATOR'S POSITION.

A 1/4" WATER BLEEDER SHALL BE SUPPLIED AND CONTROLLED AT THE PUMP OPERATOR'S POSITION.

LOCATION: DRIVER SIDE PUMP PANEL.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**



### **MECHANICAL PUMP SEAL**

THE MIDSHIP PUMP SHALL BE EQUIPPED WITH A HIGH QUALITY, SPRING LOADED, SELF-ADJUSTING MECHANICAL SEAL CAPABLE OF PROVIDING A POSITIVE SEAL TO ATMOSPHERE UNDER ALL PUMPING CONDITIONS. THIS POSITIVE SEAL TO ATMOSPHERE MUST BE ACHIEVABLE UNDER VACUUM CONDITIONS UP TO 26 HG (DRAFT) OR POSITIVE SUCTION PRESSURES UP TO 250 PSI.

THE MECHANICAL SEAL ASSEMBLY SHALL BE 2 INCHES IN DIAMETER AND CONSIST OF A CARBON SEALING RING, STAINLESS STEEL COIL SPRING, VITON RUBBER BOOT, AND A TUNGSTEN CARBIDE SEAT, WITH A TEFLON BACK-UP SEAL PROVIDED.

ONLY ONE MECHANICAL SEAL SHALL BE REQUIRED, LOCATED ON THE FIRST STAGE SUCTION (INBOARD) SIDE OF THE PUMP AND BE DESIGNED TO BE COMPATIBLE WITH A ONE PIECE PUMP SHAFT. A CONTINUOUS COOLING FLOW OF WATER FROM THE PUMP SHALL BE DIRECTED THROUGH THE SEAL CHAMBER WHEN THE PUMP IS IN OPERATION.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **PUMP PRIMER**

THERE SHALL BE AN AIR OPERATED PRIMING SYSTEM SHALL BE INSTALLED. THE UNIT SHALL BE OF ALL BRASS AND STAINLESS STEEL CONSTRUCTION AND DESIGNED FOR FIRE PUMPS OF 1,250 GPM (4,600 LPM) OR MORE. DUE TO CORROSION EXPOSURE NO ALUMINUM OR VANES SHALL BE USED IN THE PRIMER DESIGN. THE PRIMER SHALL BE THREE-BARREL DESIGN WITH ¾" NPT CONNECTION TO THE FIRE PUMP.

THE PRIMER SHALL BE MOUNTED ABOVE THE PUMP IMPELLER SO THAT THE PRIMING LINE WILL AUTOMATICALLY DRAIN BACK TO THE PUMP. THE PRIMER SHALL ALSO AUTOMATICALLY DRAIN WHEN THE PANEL CONTROL ACTUATOR IS NOT IN OPERATION. THE INLET SIDE OF THE PRIMER SHALL INCLUDE A BRASS 'WYE' TYPE STRAINER WITH REMOVABLE STAINLESS STEEL FINE MESH STRAINER TO PREVENT ENTRY OF DEBRIS INTO THE PRIMER BODY.

### **PERFORMANCE, SAFETY, AND NFPA COMPLIANCE**

THE PRIMING SYSTEM SHALL BE CAPABLE TO A VERTICAL LIFT TO 22 INCHES OF MERCURY AND SHALL BE FULLY COMPLIANT TO APPLICABLE NFPA STANDARDS FOR VERTICAL LIFT. THE SYSTEM SHALL CREATE VACUUM BY USING AIR FROM THE CHASSIS AIR BRAKE SYSTEM THROUGH A THREE-BARREL MULTI-STAGE INTERNAL "VENTURI NOZZLES" WITHIN THE PRIMER BODY. THE NOISE LEVEL DURING OPERATION OF THE PRIMER SHALL NOT EXCEED 75 DB.

### **AIR FLOW REQUIREMENTS \*\*\*ONLY COMPRESSION FITTINGS WILL BE ACCEPTED\*\*\***

THE PRIMER SHALL REQUIRE A MINIMUM OF 15.6 CUBIC FOOT PER MINUTE AIR COMPRESSOR AND SHALL BE CAPABLE OF MEETING DRAFTING REQUIREMENTS AT HIGH IDLE ENGINE SPEED. THE AIR SUPPLY SHALL BE FROM A CHASSIS SUPPLIED 'PROTECTED' AIR STORAGE TANK WITH A PRESSURE PROTECTION VALVE. THE AIR SUPPLY LINE SHALL HAVE A PRESSURE PROTECTION VALVE SET BETWEEN 70 TO 80 PSIG.

### **PRIMER CONTROL**

THE PRIMER CONTROL SHALL HAVE A MANUALLY OPERATED, PANEL MOUNTED "PUSH TO PRIME" AIR VALVE; WHICH WILL DIRECT AIR PRESSURE FROM THE AIR BRAKE STORAGE TANK TO THE PRIMER BODY. TO PREVENT FREEZING, NO WATER SHALL FLOW TO AND FROM THE PANEL CONTROL.

### **POWER REQUIREMENTS**

TO REDUCE THE ELECTRICAL POWER REQUIREMENTS ON THE FIRE APPARATUS THE PRIMING SYSTEM SHALL BE AIR POWERED. THE SYSTEM SHALL NOT REQUIRE ANNUAL TEAR-DOWN AND MAINTENANCE, AN ELECTRIC MOTOR OR SOLENOID, ELECTRICAL WIRING, LUBRICATION, BELT DRIVE, OR CLUTCH ASSEMBLY.

### **WARRANTY**

THE PRIMER SHALL BE COVERED BY A FIVE (5) YEAR PARTS WARRANTY.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **PUMP COOLER \*\*\*ONLY COMPRESSION FITTINGS WILL BE ACCEPTED\*\*\***

THE PUMP SHALL HAVE A 3/8" LINE INSTALLED FROM THE PUMP DISCHARGE TO THE BOOSTER TANK TO ALLOW A SMALL AMOUNT OF WATER TO CIRCULATE THROUGH THE PUMP CASING IN ORDER TO COOL THE PUMP DURING SUSTAINED PERIODS OF PUMP OPERATION WHEN WATER IS NOT BEING DISCHARGED. THE PUMP COOLER LINE

SHALL BE CONTROLLED FROM THE PUMP OPERATOR`S PANEL BY A INNOVATIVE CONTROLS 1/4 TURN VALVE WITH "T" HANDLE. EACH 1/4 TURN HANDLE GRIP SHALL FEATURE BUILT-IN COLOR-CODING LABELS AND A VERBIAGE TAG

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **INTAKES**

#### **LEFT INTAKE 2.5 AKRON VALVE**

ONE (1) 2-1/2" SUCTION INLET WITH A MANUALLY OPERATED 2-1/2" AKRON VALVE SHALL BE PROVIDED ON THE LEFT SIDE PUMP PANEL.

THE VALVE SHALL BE AN AKRON 8800HD SERIES WITH A 316 STAINLESS STEEL BALL AND DUAL POLYMER SEATS FOR EASE OF OPERATION AND INCREASED ABRASION RESISTANCE. THE VALVE SHALL HAVE A SELF-LOCKING BALL FEATURE USING AN AUTOMATIC FRICTION LOCK DESIGN TO BALANCE THE STAINLESS STEEL BALL WHEN IN A THROTTLE POSITION AND WATER IS FLOWING THROUGH IT.

THE VALVE SHALL BE OF THE UNIQUE AKRON SWING-OUT DESIGN TO ALLOW THE VALVE BODY TO BE REMOVED FOR SERVICING WITHOUT DISASSEMBLING THE PLUMBING.

THE OUTLET OF THE VALVE SHALL BE CONNECTED TO THE SUCTION SIDE OF THE PUMP WITH THE VALVE BODY LOCATED BEHIND THE PUMP PANEL. THE VALVE SHALL COME EQUIPPED WITH A BRASS INLET STRAINER, 2-1/2" NST FEMALE CHROME INLET SWIVEL, AND SHALL BE EQUIPPED WITH A CHROME PLATED ROCKERLUG PLUG WITH A RETAINER DEVICE.

THE VALVE CONTROL SHALL BE LOCATED AT THE PUMP OPERATOR`S PANEL AND SHALL VISUALLY INDICATE THE POSITION OF THE VALVE AT ALL TIMES.

ALL FABRICATED PIPING SHALL BE A MINIMUM OF SCHEDULE 10 STAINLESS STEEL FOR SUPERIOR CORROSION RESISTANCE, AND DECREASED FRICTION LOSS.

A 3/4" BLEEDER VALVE ASSEMBLY WILL BE INSTALLED ON THE LEFT SIDE PUMP PANEL.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **RIGHT INTAKE 2.5 AKRON VALVE**

ONE (1) 2-1/2" GATED SUCTION INLET WITH A MANUAL OPERATED AKRON VALVE SHALL BE INSTALLED IN THE RIGHT SIDE PUMP PANEL WITH THE VALVE BODY BEHIND THE PANEL. THE VALVE CONTROL SHALL BE LOCATED AT THE INTAKE AND SHALL VISUALLY INDICATE THE POSITION OF THE VALVE AT ALL TIMES.

THE VALVE SHALL BE AN AKRON 8800HD SERIES WITH A 316 STAINLESS STEEL BALL AND DUAL POLYMER SEATS FOR EASE OF OPERATION AND INCREASED ABRASION RESISTANCE. THE VALVE SHALL HAVE A SELF-LOCKING BALL FEATURE USING AN AUTOMATIC FRICTION LOCK DESIGN TO BALANCE THE STAINLESS STEEL BALL WHEN IN A THROTTLE POSITION AND WATER IS FLOWING THROUGH IT.

THE VALVE SHALL BE OF THE UNIQUE AKRON SWING-OUT DESIGN TO ALLOW THE VALVE BODY TO BE REMOVED FOR SERVICING WITHOUT DISASSEMBLING THE PLUMBING.

THE OUTLET OF THE VALVE SHALL BE CONNECTED TO THE SUCTION SIDE OF THE PUMP WITH THE VALVE BODY LOCATED BEHIND THE PUMP PANEL. THE VALVE SHALL COME EQUIPPED WITH A BRASS INLET STRAINER, 2-1/2" NST FEMALE CHROME INLET SWIVEL AND SHALL BE EQUIPPED WITH A CHROME PLATED ROCKERLUG PLUG WITH A RETAINER DEVICE.

ALL FABRICATED PIPING SHALL BE A MINIMUM OF SCHEDULE 10 STAINLESS STEEL FOR SUPERIOR CORROSION RESISTANCE, AND DECREASED FRICTION LOSS.

A 3/4" BLEEDER VALVE ASSEMBLY WILL BE INSTALLED ON THE RIGHT SIDE PUMP PANEL.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**INTAKE OPTIONS**

**HALE INTAKE RELIEF VALVE**

THE PUMP SHALL BE EQUIPPED WITH A HALE STAINLESS STEEL VARIABLE PRESSURE SETTING SUCTION SIDE RELIEF VALVE. IT SHALL BE DESIGNED TO OPERATE AT A MAXIMUM INLET PRESSURE OF 200 PSI. THE VALVE SHALL BE NORMALLY CLOSED AND SHALL LIMIT PRESSURES IN THE PUMPING SYSTEM. WHEN EXCESSIVE INTAKE PRESSURES ARE RECEIVED, THE WATER SHALL BE DIRECTED BELOW THE BODY TO AN AREA VISIBLE TO THE PUMP OPERATOR. THE OUTLET SHALL TERMINATE WITH A MALE 2-1/2" NPT THREADED FITTING.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**DISCHARGES AND PRECONNECTS**

**FRONT JUMP LINE 1.5 AKRON VALVE**

ONE (1) 1-1/2" PRECONNECT OUTLET WITH A MANUALLY OPERATED AKRON VALVE SHALL BE SUPPLIED TO THE EXTENDED FRONT BUMPER. THE PRECONNECT SHALL CONSIST OF A 2" HEAVY DUTY HOSE COMING FROM THE PUMP DISCHARGE MANIFOLD TO A 2" FNPT X 1-1/2" MNST MECHANICAL SWIVEL HOSE CONNECTION TO PERMIT THE USE OF THE HOSE FROM EITHER SIDE OF THE APPARATUS.

THE VALVE SHALL BE AN AKRON 8800HD SERIES WITH A 316 STAINLESS STEEL BALL AND DUAL POLYMER SEATS FOR EASE OF OPERATION AND INCREASED ABRASION RESISTANCE. THE VALVE SHALL HAVE A SELF-LOCKING BALL FEATURE USING AN AUTOMATIC FRICTION LOCK DESIGN TO BALANCE THE STAINLESS STEEL BALL WHEN IN A THROTTLE POSITION WITH WATER FLOWING THROUGH IT.

THE VALVE SHALL BE OF THE UNIQUE AKRON SWING-OUT DESIGN TO ALLOW THE VALVE BODY TO BE REMOVED FOR SERVICING WITHOUT DISASSEMBLING THE PLUMBING.

AN AIR BLOW-OUT VALVE SHALL BE INSTALLED BETWEEN THE CHASSIS AIR RESERVOIR AND THE FRONT JUMP LINE. THE CONTROL SHALL BE INSTALLED ON THE PUMP OPERATOR'S PANEL.

THE DISCHARGE SHALL BE SUPPLIED WITH A CLASS 1 AUTOMATIC 3/4" DRAIN VALVE ASSEMBLY. THE AUTOMATIC DRAIN SHALL HAVE AN ALL-BRASS BODY WITH STAINLESS STEEL CHECK ASSEMBLY. THE DRAIN SHALL NORMALLY BE OPEN AND AUTOMATICALLY CLOSE WHEN THE PRESSURE IS GREATER THAN 6 PSI.

THE VALVE CONTROL SHALL BE LOCATED AT THE PUMP OPERATOR PANEL AND SHALL VISUALLY INDICATE THE POSITION OF THE VALVE AT ALL TIMES.

ALL FABRICATED PIPING SHALL BE A MINIMUM OF SCHEDULE 10 STAINLESS STEEL FOR SUPERIOR CORROSION RESISTANCE AND DECREASED FRICTION LOSS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**SWIVEL ELBOW, POLISHED STAINLESS STEEL**

THERE SHALL BE A POLISHED STAINLESS STEEL SWIVEL ELBOW PROVIDED FOR THE FRONT BUMPER DISCHARGE LOCATED ON TOP OF THE BUMPER OFFICER'S SIDE OF CENTER TRAY.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**LEFT FRONT 2.5 HOSE BED AKRON VALVE**

ONE (1) 2-1/2" PRECONNECT OUTLET WITH A MANUALLY OPERATED AKRON VALVE SHALL BE SUPPLIED TO THE LOWER LEFT OF THE APPARATUS HOSE BED. THE PRE-CONNECT SHALL CONSIST OF A 2-1/2" HEAVY-DUTY HOSE COMING FROM THE PUMP DISCHARGE MANIFOLD TO A 2-1/2" ADAPTER.

THE VALVE SHALL BE AN AKRON 8800HD SERIES WITH A 316 STAINLESS STEEL BALL AND DUAL POLYMER SEATS FOR EASE OF OPERATION AND INCREASED ABRASION RESISTANCE. THE VALVE SHALL HAVE A SELF-LOCKING BALL

FEATURE USING AN AUTOMATIC FRICTION LOCK DESIGN TO BALANCE THE STAINLESS STEEL BALL WHEN IN A THROTTLE POSITION WITH WATER FLOWING THROUGH IT.

THE VALVE SHALL BE OF THE UNIQUE AKRON SWING-OUT DESIGN TO ALLOW THE VALVE BODY TO BE REMOVED FOR SERVICING WITHOUT DISASSEMBLING THE PLUMBING.

THE VALVE CONTROL SHALL BE LOCATED AT THE PUMP OPERATOR PANEL AND SHALL VISUALLY INDICATE THE POSITION OF THE VALVE AT ALL TIMES.

ALL FABRICATED PIPING SHALL BE A MINIMUM OF SCHEDULE 10 STAINLESS STEEL FOR SUPERIOR CORROSION RESISTANCE AND DECREASED FRICTION LOSS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**  
**RIGHT FRONT 2.5 HOSE BED AKRON VALVE**

ONE (1) 2-1/2" PRECONNECT OUTLET WITH A MANUALLY OPERATED AKRON VALVE SHALL BE SUPPLIED TO THE LOWER RIGHT OF THE APPARATUS HOSE BED. THE PRE-CONNECT SHALL CONSIST OF A 2-1/2" HEAVY-DUTY HOSE COMING FROM THE PUMP DISCHARGE MANIFOLD TO A 2-1/2" ADAPTER.

THE VALVE SHALL BE AN AKRON 8800HD SERIES WITH A 316 STAINLESS STEEL BALL AND DUAL POLYMER SEATS FOR EASE OF OPERATION AND INCREASED ABRASION RESISTANCE. THE VALVE SHALL HAVE A SELF-LOCKING BALL FEATURE USING AN AUTOMATIC FRICTION LOCK DESIGN TO BALANCE THE STAINLESS STEEL BALL WHEN IN A THROTTLE POSITION WITH WATER FLOWING THROUGH IT.

THE VALVE SHALL BE OF THE UNIQUE AKRON SWING-OUT DESIGN TO ALLOW THE VALVE BODY TO BE REMOVED FOR SERVICING WITHOUT DISASSEMBLING THE PLUMBING.

THE VALVE CONTROL SHALL BE LOCATED AT THE PUMP OPERATOR PANEL AND SHALL VISUALLY INDICATE THE POSITION OF THE VALVE AT ALL TIMES.

ALL FABRICATED PIPING SHALL BE A MINIMUM OF SCHEDULE 10 STAINLESS STEEL FOR SUPERIOR CORROSION RESISTANCE AND DECREASED FRICTION LOSS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**DECK GUN 3" DISCHARGE AKRON VALVE**

ONE (1) 3" DECK GUN DISCHARGE OUTLET WITH A MANUALLY OPERATED AKRON VALVE AND 3" STAINLESS STEEL PIPE SHALL BE PROVIDED ABOVE THE PUMP COMPARTMENT.

THE VALVE SHALL BE AN AKRON 8800HD SERIES WITH A 316 STAINLESS STEEL BALL AND DUAL POLYMER SEATS FOR EASE OF OPERATION AND INCREASED ABRASION RESISTANCE. THE VALVE SHALL HAVE A SELF-LOCKING BALL FEATURE USING AN AUTOMATIC FRICTION LOCK DESIGN TO BALANCE THE STAINLESS STEEL BALL WHEN IN A THROTTLE POSITION WITH WATER FLOWING THROUGH IT.

THE VALVE SHALL BE OF THE UNIQUE AKRON SWING-OUT DESIGN TO ALLOW THE VALVE BODY TO BE REMOVED FOR SERVICING WITHOUT DISASSEMBLING THE PLUMBING.

THE VALVE SHALL BE EQUIPPED WITH A DEVICE THAT LIMITS THE OPENING AND CLOSING SPEEDS TO COMPLY WITH THE CURRENT EDITION OF NFPA 1901.

THE VALVE CONTROL SHALL BE LOCATED AT THE PUMP OPERATOR'S PANEL AND SHALL VISUALLY INDICATE THE POSITION OF THE VALVE AT ALL TIMES.

ALL FABRICATED PIPING SHALL BE A MINIMUM OF SCHEDULE 10 STAINLESS STEEL FOR SUPERIOR CORROSION RESISTANCE AND DECREASED FRICTION LOSS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **EXTEND-A-GUN**

A TASK FORCE TIPS 18" EXTEND-A-GUN PIPING SHALL BE SUPPLIED FOR THE DECK GUN DISCHARGE TO ALLOW FOR RAISING AND LOWERING THE DECK GUN MONITOR. THE EXTEND-A-GUN SHALL INCLUDE A RAISED MONITOR SENSOR CONNECTED TO THE DOOR AJAR LIGHT.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **DECK GUN LOCATION**

DECK GUN PIPING SHALL BE POSITIONED DUNNAGE PAN CENTERED. THIS LOCATION SHALL ALLOW FOR OPTIMAL OPERATION OF A DECK GUN MONITOR ONCE INSTALLED.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **MONITOR**

AN AKRON APOLLO HI- RISE MONITOR MODEL 3431 LIFT-OFF ONLY SHALL BE MOUNTED ON THE EXTEND-A-GUN MOUNT. THE MONITOR SHALL INCLUDE A 3503 FLANGE MOUNT AND 5160 NOZZLE. AN AKRON MERCURY QUICK ATTACK MONITOR STYLE 3443 SHALL BE SUPPLIED FOR GROUND OPERATIONS IN PLACE OF A GROUND BASE. MERCURY QUICK ATTACK OPTIONS SHALL INCLUDE A STORAGE BRACKET, 2420 TIPS AND A 4447 NOZZLE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **LEFT PANEL 2.5 DISCHARGE AKRON VALVE**

TWO (2) 2-1/2" DISCHARGE OUTLET WITH A MANUALLY OPERATED AKRON VALVE SHALL BE PROVIDED AT THE LEFT HAND SIDE PUMP PANEL.

THE VALVE SHALL BE AN AKRON 8800HD SERIES WITH A 316 STAINLESS STEEL BALL AND DUAL POLYMER SEATS FOR EASE OF OPERATION AND INCREASED ABRASION RESISTANCE. THE VALVE SHALL HAVE A SELF-LOCKING BALL FEATURE USING AN AUTOMATIC FRICTION LOCK DESIGN TO BALANCE THE STAINLESS STEEL BALL WHEN IN A THROTTLE POSITION WITH WATER FLOWING THROUGH IT.

THE VALVE SHALL BE OF THE UNIQUE AKRON SWING-OUT DESIGN TO ALLOW THE VALVE BODY TO BE REMOVED FOR SERVICING WITHOUT DISASSEMBLING THE PLUMBING.

THE VALVE CONTROL SHALL BE LOCATED AT THE PUMP OPERATOR PANEL AND SHALL VISUALLY INDICATE THE POSITION OF THE VALVE AT ALL TIMES.

ALL FABRICATED PIPING SHALL BE A MINIMUM OF SCHEDULE 10 STAINLESS STEEL FOR SUPERIOR CORROSION RESISTANCE AND DECREASED FRICTION LOSS.

LOCATION: LEFT SIDE DISCHARGE 1 AND LEFT SIDE DISCHARGE 2.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **RIGHT PANEL 2.5 DISCHARGE AKRON VALVE**

ONE (1) 2-1/2" DISCHARGE OUTLET WITH A MANUALLY OPERATED AKRON VALVE SHALL BE PROVIDED AT THE RIGHT SIDE PUMP PANEL.

THE VALVE SHALL BE AN AKRON 8800HD SERIES WITH A 316 STAINLESS STEEL BALL AND DUAL POLYMER SEATS FOR EASE OF OPERATION AND INCREASED ABRASION RESISTANCE. THE VALVE SHALL HAVE A SELF-LOCKING BALL FEATURE USING AN AUTOMATIC FRICTION LOCK DESIGN TO BALANCE THE STAINLESS STEEL BALL WHEN IN A THROTTLE POSITION WITH WATER FLOWING THROUGH IT.

THE VALVE SHALL BE OF THE UNIQUE AKRON SWING-OUT DESIGN TO ALLOW THE VALVE BODY TO BE REMOVED FOR SERVICING WITHOUT DISASSEMBLING THE PLUMBING.

THE VALVE CONTROL SHALL BE LOCATED AT THE PUMP OPERATOR PANEL AND SHALL VISUALLY INDICATE THE POSITION OF THE VALVE AT ALL TIMES.

ALL FABRICATED PIPING SHALL BE A MINIMUM OF SCHEDULE 10 STAINLESS STEEL FOR SUPERIOR CORROSION RESISTANCE AND DECREASED FRICTION LOSS.

LOCATION: RIGHT SIDE DISCHARGE 2.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**LEFT REAR 2.5" DISCHARGE AKRON VALVE**

ONE (1) 2-1/2" DISCHARGE OUTLET WITH A MANUALLY OPERATED AKRON VALVE SHALL BE SUPPLIED TO THE LEFT REAR OF THE APPARATUS BY A 2-1/2" STAINLESS STEEL PIPE.

THE VALVE SHALL BE AN AKRON 8800HD SERIES WITH A 316 STAINLESS STEEL BALL AND DUAL POLYMER SEATS FOR EASE OF OPERATION AND INCREASED ABRASION RESISTANCE. THE VALVE SHALL HAVE A SELF-LOCKING BALL FEATURE USING AN AUTOMATIC FRICTION LOCK DESIGN TO BALANCE THE STAINLESS STEEL BALL WHEN IN A THROTTLE POSITION WITH WATER FLOWING THROUGH IT.

THE VALVE SHALL BE OF THE UNIQUE AKRON SWING-OUT DESIGN TO ALLOW THE VALVE BODY TO BE REMOVED FOR SERVICING WITHOUT DISASSEMBLING THE PLUMBING.

THE VALVE CONTROL SHALL BE LOCATED AT THE PUMP OPERATOR PANEL AND SHALL VISUALLY INDICATE THE POSITION OF THE VALVE AT ALL TIMES.

ALL FABRICATED PIPING SHALL BE A MINIMUM OF SCHEDULE 10 STAINLESS STEEL FOR SUPERIOR CORROSION RESISTANCE AND DECREASED FRICTION LOSS.

LOCATION: LEFT REAR DISCHARGE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**TFT BLITZFIRE**

ONE (1) BLITZFIRE PACKAGE XXC-52 SHALL BE SUPPLIED WITH THE APPARATUS. THE PACKAGE SHALL CONTAIN THE BLITZFIRE MONITOR, THE MONITOR MOUNTING BRACKET, MAX-FORCE NOZZLE, AND 3 STACK TIPS. THE TASK FORCE TIPS' BLITZFIRE IS A SIMPLE, LIGHT, AND HIGHLY MANEUVERABLE ATTACK MONITOR. THE BLITZFIRE'S LOW ELEVATION ANGLE MAKES IT SUITABLE FOR USE INDOORS. IT CAN GO ANYWHERE A HANDLINE GOES WHILE DELIVERING MUCH MORE WATER.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**RIGHT REAR 2.5 DISCHARGE AKRON VALVE**

ONE (1) 2-1/2" DISCHARGE OUTLET WITH A MANUALLY OPERATED AKRON VALVE SHALL BE SUPPLIED TO THE RIGHT REAR OF THE APPARATUS BY A 2-1/2" STAINLESS STEEL PIPE.

THE VALVE SHALL BE AN AKRON 8800HD SERIES WITH A 316 STAINLESS STEEL BALL AND DUAL POLYMER SEATS FOR EASE OF OPERATION AND INCREASED ABRASION RESISTANCE. THE VALVE SHALL HAVE A SELF-LOCKING BALL FEATURE USING AN AUTOMATIC FRICTION LOCK DESIGN TO BALANCE THE STAINLESS STEEL BALL WHEN IN A THROTTLE POSITION WITH WATER FLOWING THROUGH IT.

THE VALVE SHALL BE OF THE UNIQUE AKRON SWING-OUT DESIGN TO ALLOW THE VALVE BODY TO BE REMOVED FOR SERVICING WITHOUT DISASSEMBLING THE PLUMBING.

THE VALVE CONTROL SHALL BE LOCATED AT THE PUMP OPERATOR PANEL AND SHALL VISUALLY INDICATE THE POSITION OF THE VALVE AT ALL TIMES.

ALL FABRICATED PIPING SHALL BE A MINIMUM OF SCHEDULE 10 STAINLESS STEEL FOR SUPERIOR CORROSION RESISTANCE AND DECREASED FRICTION LOSS.

LOCATION: RIGHT REAR DISCHARGE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **DISCHARGE 5 WITH 4 AKRON ELECTRIC VALVE (QTY: 1)**

ONE (1) 5" DIAMETER DISCHARGE OUTLET WITH A 4" ELECTRICALLY OPERATED AKRON VALVE SHALL BE PROVIDED AT THE PUMP PANEL.

THE VALVE SHALL BE AN AKRON 8600HD SERIES WITH 316 STAINLESS BALL AND POLYMER SEALS FOR EASE OF OPERATION AND INCREASED ABRASION RESISTANCE. THE VALVE SHALL HAVE A SELF-LOCKING BALL FEATURE USING AN AUTOMATIC FRICTION LOCK DESIGN TO BALANCE THE CHROME-PLATED BRASS BALL WHEN IN A THROTTLE POSITION WITH WATER FLOWING THROUGH IT. THE VALVE SHALL BE OF THE UNIQUE AKRON SWING-OUT DESIGN TO ALLOW THE VALVE BODY TO BE REMOVED FOR SERVICING WITHOUT DISASSEMBLING THE PLUMBING.

THE VALVE SHALL UTILIZE AN ELECTRIC DRIVEN WORM GEAR ACTUATOR WITH A NAVIGATOR 9323 CONTROLLER. THE 9323 CONTROLLER SHALL BE LOCATED AT THE PUMP OPERATOR'S PANEL AND CONTAIN INDICATOR LIGHTS FOR OPEN, CLOSED AND THROTTLED VALVE POSITIONS. THE VALVE MAY ALSO BE OPERATED MANUALLY IN CASE OF ELECTRICAL SYSTEM FAILURE.

THE VALVE CONTROLS AND INDICATORS SHALL BE LOCATED AT THE PUMP OPERATOR'S PANEL.

LOCATION: RIGHT SIDE DISCHARGE 2.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **DISCHARGE OPTIONS**

##### **IC PUSH/PULL CONTROL**

THE APPARATUS PUMP PANEL SHALL BE EQUIPPED WITH INNOVATIVE CONTROLS SIDE MOUNT VALVE CONTROLS. THE ERGONOMICALLY DESIGNED ¼ TURN PUSH-PULL T-HANDLE SHALL BE CHROME-PLATED ZINC WITH RECESSED LABELS FOR COLOR-CODING AND VERBIAGE. AN ANODIZED ALUMINUM CONTROL ROD AND HOUSING SHALL, TOGETHER WITH A STAINLESS SPRING STEEL LOCKING MECHANISM, ELIMINATE VALVE DRIFT. TEFLON IMPREGNATED BRONZE BUSHINGS IN BOTH ENDS OF THE ROD HOUSING SHALL MINIMIZE ROD DEFLECTION, NEVER NEED LUBRICATION, AND ENSURE CONSISTENT LONG-TERM OPERATION. THE CONTROL ASSEMBLY SHALL INCLUDE A DECORATIVE CHROME-PLATED ZINC PANEL-MOUNTING BEZEL WITH AREAS FOR COLOR-CODING.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **BLEEDER DRAIN VALVE (QTY: 12) \*\*\*ONLY COMPRESSION FITTINGS WILL BE ACCEPTED\*\*\***

THE BLEEDER/DRAIN VALVES SHALL BE INNOVATIVE CONTROLS ¾" BALL BRASS DRAIN VALVES WITH CHROME-PLATED LIFT LEVER HANDLES AND ERGONOMIC GRIPS. EACH LIFT HANDLE GRIP SHALL FEATURE BUILT-IN COLOR-CODING LABELS AND A VERBIAGE TAG IDENTIFYING EACH VALVE, ALSO SUPPLIED BY INNOVATIVE CONTROLS. THE COLOR LABELS SHALL ALSO INCLUDE VALVE OPEN AND CLOSE VERBIAGE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **DISCHARGE/INTAKE BEZEL**

INNOVATIVE CONTROLS INTAKE AND/OR DISCHARGE SWING HANDLE BEZELS SHALL BE INSTALLED TO THE APPARATUS WITH MOUNTING BOLTS. THESE BEZEL ASSEMBLIES WILL BE USED TO IDENTIFY INTAKE AND/OR DISCHARGE PORTS WITH COLOR AND VERBIAGE. THESE BEZEL ARE DESIGNED AND MANUFACTURED TO WITHSTAND THE SPECIFIED APPARATUS SERVICE ENVIRONMENT AND SHALL BE BACKED BY A WARRANTY EQUAL TO THAT OF THE EXTERIOR PAINT AND FINISH. THE SPECIFIED ASSEMBLIES FEATURE A CHROME-PLATED PANEL-MOUNT BEZEL WITH DURABLE UV RESISTANT POLYCARBONATE INSERTS. THESE UV RESISTANT POLYCARBONATE GRAPHIC INSERTS SHALL BE SUB-SURFACE SCREEN PRINTED TO ELIMINATE THE POSSIBILITY OF WEAR AND PROTECT THE INKS FROM FADING. ALL INSERT LABELS SHALL BE BACKED WITH 3M PERMANENT ADHESIVE (200MP), WHICH MEETS UL969 AND NFPA STANDARDS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **BOOSTER REELS**

## **(2) BOOSTER HOSE REELS**

(2) HANNAY BOOSTER REELS SHALL BE PROVIDED AND LOCATED ON THE DRIVER SIDE AND OFFICER SIDE OF PUMP HOUSING.

THE BOOSTER REELS SHALL BE CONSTRUCTED UTILIZING AN ALL ALUMINUM WELDED BASE. REEL BUSHINGS SHALL BE MANUFACTURED FROM NYLATRON TO ENSURE MAINTENANCE FREE OPERATION. A 12 VOLT ELECTRICAL MOTOR SHALL BE PROVIDED AND WILL REWIND THE REELS WITH A CHAIN AND SPROCKET DRIVE MECHANISM. ALL ELECTRICAL SWITCH CONNECTIONS SHALL BE COATED TO PROTECT AGAINST MOISTURE. THE BOOSTER REELS SHALL HAVE A CAPACITY FOR UP TO 200' OF 1" BOOSTER HOSE.

PLUMBING TO THE REELS SHALL BE A 1-1/2" FLEXIBLE LINE WITH THE DISCHARGE CONTROLS LOCATED AT THE OPERATOR'S CONTROL PANEL.

ALL FABRICATED PIPING SHALL BE CONSTRUCTED OF A MINIMUM OF SCHEDULE 10 STAINLESS STEEL PIPE TO REDUCE CORROSION OF THE LINES.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

## **PRESSURE GOVERNORS**

### **FRC PUMPSHOCK PRESSURE GOVERNOR**

FIRE RESEARCH PUMPSHOCK MODEL PBA400 PRESSURE GOVERNOR AND MONITORING DISPLAY KIT SHALL BE INSTALLED. THE STANDARD KIT SHALL INCLUDE A CONTROL MODULE, PUMP DISCHARGE PRESSURE SENSOR, AND CABLES. THE CONTROL MODULE CASE SHALL BE WATERPROOF AND HAVE DIMENSIONS NOT TO EXCEED 6-3/4" HIGH BY 4-5/8" WIDE BY 1-3/4" DEEP. INPUTS FOR ENGINE INFORMATION SHALL BE FROM A J1939 DATABUS OR FROM INDEPENDENT SENSORS AND PUMP DISCHARGE PRESSURE INPUT SHALL BE FROM A PRESSURE SENSOR.

THE FOLLOWING CONTINUOUS DISPLAYS SHALL BE PROVIDED:

- \* CHECK ENGINE AND STOP ENGINE WARNING LEDS.
- \* ENGINE RPM; SHOWN WITH FOUR DAYLIGHT BRIGHT LED DIGITS MORE THAN 1/2" HIGH.
- \* ENGINE OIL PRESSURE; SHOWN ON AN LED BAR GRAPH DISPLAY IN 10 PSI INCREMENTS.
- \* ENGINE TEMPERATURE; SHOWN ON AN LED BAR GRAPH DISPLAY IN 10 DEGREE INCREMENTS.
- \* BATTERY VOLTAGE; SHOWN ON AN LED BAR GRAPH DISPLAY IN 0.5 VOLT INCREMENTS.
- \* PSI / RPM SETTING; SHOWN ON A DOT MATRIX MESSAGE DISPLAY.
- \* PSI AND RPM MODE LEDS.
- \* THROTTLE READY LED.

A DOT-MATRIX MESSAGE DISPLAY SHALL SHOW DIAGNOSTIC AND WARNING MESSAGES AS THEY OCCUR. IT SHALL SHOW MONITORED APPARATUS INFORMATION, STORED DATA, AND PROGRAM OPTIONS WHEN SELECTED BY THE OPERATOR.

THE PROGRAM SHALL STORE THE ACCUMULATED OPERATING HOURS FOR THE PUMP AND ENGINE, PREVIOUS INCIDENT HOURS, AND CURRENT INCIDENT HOURS IN A NON-VOLATILE MEMORY. STORED ELAPSED HOURS SHALL BE DISPLAYED AT THE PUSH OF A BUTTON. IT SHALL MONITOR INPUTS AND SUPPORT AUDIBLE AND VISUAL WARNING ALARMS FOR THE FOLLOWING CONDITIONS:

- \* LOW OIL PRESSURE
- \* HIGH ENGINE COOLANT TEMPERATURE
- \* HIGH TRANSMISSION TEMPERATURE
- \* LOW BATTERY VOLTAGE (ENGINE OFF)
- \* LOW BATTERY VOLTAGE (ENGINE RUNNING)
- \* HIGH BATTERY VOLTAGE
- \* HIGH ENGINE RPM

THE GOVERNOR SHALL OPERATE IN TWO CONTROL MODES; PRESSURE AND RPM. NO DISCHARGE PRESSURE OR ENGINE RPM VARIATION SHALL OCCUR WHEN SWITCHING BETWEEN MODES. A CONTROL KNOB THAT USES OPTICAL TECHNOLOGY SHALL ADJUST PRESSURE OR RPM SETTINGS. IT SHALL BE 2" IN DIAMETER WITH NO MECHANICAL STOPS, A SERRATED GRIP, AND HAVE A RED IDLE PUSH BUTTON IN THE CENTER.



A THROTTLE READY LED SHALL LIGHT WHEN THE PUMP ENGAGED INTERLOCK SIGNAL IS RECOGNIZED. THE GOVERNOR SHALL BE IN PRESSURE MODE AND SET THE ENGINE RPM TO IDLE. IN PRESSURE MODE THE GOVERNOR SHALL AUTOMATICALLY REGULATE THE DISCHARGE PRESSURE AT THE LEVEL SET BY THE OPERATOR. IN RPM MODE THE GOVERNOR SHALL MAINTAIN THE ENGINE RPM AT THE LEVEL SET BY THE OPERATOR EXCEPT IN THE EVENT OF A DISCHARGE PRESSURE INCREASE. THE GOVERNOR SHALL LIMIT A DISCHARGE PRESSURE INCREASE IN RPM MODE TO A MAXIMUM OF 30 PSI. OTHER SAFETY FEATURES SHALL INCLUDE RECOGNITION OF NO WATER CONDITIONS WITH AN AUTOMATIC PROGRAMMED RESPONSE AND A PUSH BUTTON TO RETURN THE ENGINE TO IDLE.

THE PRESSURE GOVERNOR AND MONITORING DISPLAY SHALL BE PROGRAMMED TO INTERFACE WITH A SPECIFIC ENGINE.

THE DISPLAY MODULE SHALL BE MOUNTED AT THE PUMP OPERATOR`S PANEL.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **GAUGES**

#### **GAUGE IC 10 LED WATER TANK LEVEL**

ONE (1) INNOVATIVE CONTROLS BRAND WATER TANK LEVEL GAUGE SHALL BE LOCATED AT THE PUMP OPERATOR`S PANEL TO PROVIDE A HIGH-VISIBILITY DISPLAY OF THE WATER TANK LEVEL. TEN (10) HIGH-INTENSITY LIGHT EMITTING DIODES (LED`S) ON THE DISPLAY MODULE SHALL HAVE A 3-DIMENSIONAL LENS ALLOWING THE FULL, 3/4, 1/2, 1/4, AND REFILL LEVELS TO BE EASILY DISTINGUISHED AT A GLANCE WITHIN FULL 180 DEGREE VISIBILITY.

THE DISPLAY MODULE SHALL BE PROTECTED FROM VIBRATION AND CONTAMINATION WITH THE COMPONENTS BEING ENCASED IN AN ENCAPSULATED PLASTIC HOUSING. THE LONG LIFE AND EXTREME DURABILITY OF LED INDICATORS ELIMINATES LIGHT BULB REPLACEMENT AND MAINTENANCE. COLOR CODED COVER PLATES SHALL COMPLETE THE ASSEMBLY OF THE DISPLAY MODULE TO THE PUMP PANEL. EACH DISPLAY LEVEL CAN BE SET INDEPENDENTLY FOR MAXIMUM RELIABILITY.

THE DISPLAY SHALL PROVIDE A STEADY INDICATION OF FLUID LEVEL DESPITE SLOSHING INSIDE OF THE TANK WHEN THE VEHICLE IS IN MOTION DUE TO AN "ANTI-SLOSH" FEATURE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **2.5 DISCHARGE GAUGE (QTY: 8) \*\*\*ONLY COMPRESSION FITTINGS WILL BE ACCEPTED\*\*\***

THE VALVE DISCHARGE GAUGES SHALL BE 2 ½"(63MM) DIAMETER INNOVATIVE CONTROLS PRESSURE GAUGES. EACH GAUGE SHALL HAVE A RUGGED CORROSION FREE STAINLESS STEEL CASE AND CLEAR SCRATCH RESISTANT MOLDED CRYSTALS WITH CAPTIVE O-RING SEALS TO ENSURE DISTORTION FREE VIEWING AND SEAL THE GAUGE. THE GAUGES SHALL BE FILLED WITH A SYNTHETIC MIXTURE TO DAMPEN SHOCK AND VIBRATION, LUBRICATE THE INTERNAL MECHANISMS, PREVENT LENS CONDENSATION AND ENSURE PROPER OPERATION FROM -40F TO +160F. EACH GAUGE SHALL EXCEED ANSI B40.1 GRADE A REQUIREMENTS WITH AN ACCURACY OF +/- 1.5% FULL SCALE AND INCLUDE A SIZE APPROPRIATE PHOSPHOROUS BRONZE BOURDON TUBE WITH A REINFORCED LAP JOINT AND LARGE TUBE BASE TO INCREASE THE TUBE LIFE AND GAUGE ACCURACY.

A POLISHED CHROME-PLATED STAINLESS STEEL BEZEL SHALL BE PROVIDED TO PREVENT CORROSION AND PROTECT THE LENS AND GAUGE CASE. THE GAUGES SHALL BE INSTALLED INTO DECORATIVE CHROME-PLATED MOUNTING BEZELS THAT INCORPORATE VALVE-IDENTIFYING VERBIAGE AND/OR COLOR LABELS. THE GAUGES SHALL DISPLAY A RANGE FROM 0 TO 400 PSI WITH BLACK GRAPHICS ON A WHITE BACKGROUND.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **4" MASTER PRESSURE GAUGES W/BEZEL \*\*\*ONLY COMPRESSION FITTINGS WILL BE ACCEPTED\*\*\***

THE MASTER INTAKE AND MASTER DISCHARGE GAUGES SHALL BE 4"(101MM) DIAMETER IC PRESSURE GAUGES. EACH GAUGE SHALL HAVE A RUGGED CORROSION FREE STAINLESS STEEL CASE AND CLEAR SCRATCH RESISTANT MOLDED CRYSTALS WITH CAPTIVE O-RING SEALS TO ENSURE DISTORTION FREE VIEWING AND SEAL THE GAUGE. THE GAUGES SHALL BE FILLED WITH A SYNTHETIC MIXTURE TO DAMPEN SHOCK AND VIBRATION, LUBRICATE THE

INTERNAL MECHANISMS, PREVENT LENS CONDENSATION AND ENSURE PROPER OPERATION FROM -40F TO +160F. EACH GAUGE SHALL MEET ANSI B40.1 GRADE 1A REQUIREMENTS WITH AN ACCURACY OF +/- 1% FULL SCALE AND INCLUDE A SIZE APPROPRIATE PHOSPHOROUS BRONZE BOURDON TUBE WITH A REINFORCED LAP JOINT AND LARGE TUBE BASE TO INCREASE THE TUBE LIFE AND GAUGE ACCURACY.

THE TWO MASTER GAUGES SHALL BE INSTALLED INTO DECORATIVE CHROME-PLATED ZINC MOUNTING BEZEL THAT ALSO INCORPORATES A TEST PORT MANIFOLD AND A GRAPHIC OVERLAY THAT IDENTIFIES THE MASTER INTAKE AND DISCHARGE GAUGES, THE VACUUM TEST PORT, AND THE PRESSURE TEST PORT. THE TEST PORT MANIFOLD IS SOLID CAST BRASS WITH CHROME PLATED PLUGS. THE MASTER GAUGES SHALL BE INSTALLED ON THE PUMP PANEL NO MORE THAN 6 INCHES APART. THE GAUGE ON THE LEFT SHALL BE THE MASTER PUMP INTAKE GAUGE AND DISPLAY A RANGE FROM 30" VAC TO 400 PSI WITH BLACK GRAPHICS ON A WHITE BACKGROUND. THE GAUGE ON THE RIGHT SHALL BE THE MASTER PUMP DISCHARGE GAUGE AND DISPLAY A RANGE FROM 0 TO 400 PSI WITH BLACK GRAPHICS ON A WHITE BACKGROUND.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **ELECTRICAL SYSTEMS**

##### **MULTIPLEX MODEM**

A MODEM SHALL BE PROVIDED FOR THE MULTIPLEX ELECTRICAL SYSTEM. THE MODEM SHALL ALLOW FOR REMOTE DIAGNOSTIC AND SOFTWARE UPDATES VIA A TELEPHONE LINE OR WIFI. THE MODEM CONNECTION SHALL BE LOCATED BELOW THE DRIVER`S SIDE DASH.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

##### **VEHICLE DATA RECORDER**

A VEHICLE DATA RECORDER SYSTEM SHALL BE PROVIDED TO COMPLY WITH NFPA 1901, 2009 EDITION. THE FOLLOWING DATA SHALL BE MONITORED:

- VEHICLE SPEED MPH
- ACCELERATION (FROM SPEEDOMETER) MPH/SEC.
- DECELERATION (FROM SPEEDOMETER) MPH/SEC.
- ENGINE SPEED RPM
- ENGINE THROTTLE POSITION % OF FULL THROTTLE
- ABS EVENT ON/OFF
- SEAT OCCUPIED STATUS OCCUPIED YES/NO BY POSITION
- SEAT BELT STATUS BUCKLED YES/NO BY POSITION
- MASTER OPTICAL WARNING DEVICE SWITCH ON/OFF
- TIME: 24 HOUR TIME
- DATE: YEAR/MONTH/DAY

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

##### **OCCUPANT DETECTION SYSTEM**

THERE SHALL BE A VISUAL AND AUDIBLE WARNING SYSTEM INSTALLED IN THE CAB THAT INDICATES THE OCCUPANT BUCKLE STATUS OF ALL CAB SEATING POSITIONS THAT ARE DESIGNED TO BE OCCUPIED DURING VEHICLE MOVEMENT.

THE AUDIBLE WARNING SHALL ACTIVATE WHEN THE VEHICLE'S PARK BRAKE IS RELEASED AND A SEAT POSITION IS NOT IN A VALID STATE. A VALID STATE IS DEFINED AS A SEAT THAT IS UNOCCUPIED AND THE SEAT BELT IS UNBUCKLED, OR ONE THAT HAS THE SEAT BELT BUCKLED AFTER THE SEAT HAS BEEN OCCUPIED.

THE VISUAL WARNING SHALL CONSIST OF A GRAPHICAL DISPLAY THAT WILL CONTINUOUSLY INDICATE THE VALIDITY OF EACH SEAT POSITION.

THE SYSTEM SHALL INCLUDE A DISPLAY PANEL WITH LED BACK-LIT ISO INDICATORS FOR EACH SEATING POSITION, SEAT SENSOR AND SAFETY BELT LATCH SWITCH FOR EACH CAB SEATING POSITION, AUDIBLE ALARM AND BRAIDED WIRING HARNESS.

THE DISPLAY PANEL SHALL BE LOCATED DRIVER SIDE OF CENTER DASH ELECTRICAL COVER.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**MULTIPLEX ELECTRICAL SYSTEM**

**ELECTRICAL SYSTEM**

THE APPARATUS SHALL INCORPORATE A WELDON V-MUX MULTIPLEX 12 VOLT ELECTRICAL SYSTEM. THE SYSTEM SHALL HAVE THE CAPABILITY OF DELIVERING MULTIPLE SIGNALS VIA A CAN BUS. THE ELECTRICAL SYSTEM INSTALLED BY THE APPARATUS MANUFACTURER SHALL CONFORM TO CURRENT SAE STANDARDS, THE LATEST FMVSS STANDARDS, AND THE REQUIREMENTS OF THE APPLICABLE NFPA 1901 STANDARDS.

THE ELECTRICAL SYSTEM SHALL BE PRE-WIRED FOR OPTIONAL COMPUTER MODEM ACCESSIBILITY TO ALLOW SERVICE PERSONNEL TO EASILY PLUG IN A MODEM TO ALLOW REMOTE DIAGNOSTICS.

THE ELECTRICAL CIRCUITS SHALL BE PROVIDED WITH LOW VOLTAGE OVER-CURRENT PROTECTIVE DEVICES. SUCH DEVICES SHALL BE ACCESSIBLE AND LOCATED IN REQUIRED TERMINAL CONNECTION LOCATIONS OR WEATHER-RESISTANT ENCLOSURES. THE OVER-CURRENT PROTECTION SHALL BE SUITABLE FOR ELECTRICAL EQUIPMENT AND SHALL BE AUTOMATIC RESET TYPE AND MEET SAE STANDARDS.

ALL ELECTRICAL EQUIPMENT, SWITCHES, RELAYS, TERMINALS, AND CONNECTORS SHALL HAVE A DIRECT CURRENT RATING OF 125 PERCENT OF MAXIMUM CURRENT FOR WHICH THE CIRCUIT IS PROTECTED. THE SYSTEM SHALL HAVE ELECTRO-MAGNETIC INTERFERENCE SUPPRESSION PROVIDED AS REQUIRED IN APPLICABLE SAE STANDARDS.

ANY ELECTRICAL JUNCTION OR TERMINAL BOXES SHALL BE WEATHER-RESISTANT AND LOCATED AWAY FROM WATER SPRAY CONDITIONS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**MULTIPLEX SYSTEM**

FOR SUPERIOR SYSTEM INTEGRITY, THE NETWORKED MULTIPLEX SYSTEM SHALL MEET THE FOLLOWING MINIMUM COMPONENT REQUIREMENTS:

- THE NETWORK SYSTEM MUST BE PEER TO PEER TECHNOLOGY BASED ON RS485 PROTOCOL. NO ONE MODULE SHALL HOLD THE PROGRAMMING FOR OTHER MODULES. ONE OR TWO MODULES ON A NETWORK REFERRED TO AS PEER TO PEER, WHILE THE REST OF THE NETWORK CONSISTS OF A ONE MASTER AND SEVERAL SLAVES IS NOT CONSIDERED PEER TO PEER FOR THIS APPLICATION.
- MODULES SHALL BE IP67 RATED TO HANDLE THE EXTREME OPERATING ENVIRONMENT FOUND IN THE FIRE SERVICE INDUSTRY.
- ALL MODULES SHALL BE SOLID STATE CIRCUITRY UTILIZING MOS-FET TECHNOLOGY AND UTILIZE DEUTSCH SERIES INPUT/OUTPUT CONNECTORS.
- EACH MODULE THAT CONTROLS A DEVICE SHALL HOLD ITS OWN CONFIGURATION PROGRAM.
- EACH MODULE SHOULD BE ABLE TO FUNCTION AS A STANDALONE MODULE. NO "ADD-ON" MODULE WILL BE ACCEPTABLE TO ACHIEVE THIS FORM OF OPERATION.
- LOAD SHEDDING POWER MANAGEMENT (8 LEVELS).
- SWITCH INPUT CAPABILITY FOR CHASSIS FUNCTIONS.
- RESPONSIBLE FOR LIGHTING DEVICE ACTIVATION.
- SELF-CONTAINED DIAGNOSTIC INDICATORS.
- WIRE HARNESS NEEDED TO INTERFACE ELECTRICAL DEVICES WITH MULTIPLEX MODULES.
- THE GROUNDS FROM EACH DEVICE SHOULD RETURN TO MAIN GROUND TRUNK IN EACH SUB HARNESS BY THE USE OF ULTRASONIC SPLICES.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

## **WIRING**

ALL HARNESSING, WIRING AND CONNECTORS SHALL BE MANUFACTURED TO THE FOLLOWING STANDARDS/GUIDELINES..

- NFPA 1901-STANDARD FOR AUTOMOTIVE FIRE APPARATUS
- SAE J1127 AND J1127
- IPC/WHMA-A-620 – REQUIREMENTS AND ACCEPTANCE FOR CABLE AND WIRE HARNESS ASSEMBLIES. (CLASS 3 – HIGH PERFORMANCE ELECTRONIC PRODUCTS)

ALL WIRING SHALL BE COPPER OR COPPER ALLOYS OF A GAUGE RATED TO CARRY 125 OF THE MAXIMUM CURRENT FOR WHICH THE CIRCUIT IS PROTECTED. INSULATED WIRE AND CABLE 8 GAUGE AND SMALLER SHALL BE SXL, GXL, OR TXL PER SAE J1128. CONDUCTORS 6 GAUGE AND LARGER SHALL BE SXL OR SGT PER SAE J1127.

ALL WIRING SHALL BE COLORED CODED AND IMPRINTED WITH THE CIRCUITS FUNCTION. MINIMUM HEIGHT OF IMPRINTED CHARACTERS SHALL NOT BE LESS THAN .082" PLUS OR MINUS .01". THE IMPRINTED CHARACTERS SHALL REPEAT AT A DISTANCE NOT GREATER THAN 3".

A COIL OF WIRE SHALL BE PROVIDED BEHIND ELECTRICAL APPLIANCES TO ALLOW THEM TO BE PULLED AWAY FROM MOUNTING AREA FOR INSPECTION AND SERVICE WORK.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

## **WIRING PROTECTION**

THE OVERALL COVERING OF THE CONDUCTORS SHALL BE LOOM OR BRAID.

BRAID STYLE WIRING COVERS SHALL BE CONSTRUCTED USING A WOVEN PVC-COATED NYLON MULTIFILAMENT BRAIDING YARN. THE YARN SHALL HAVE A DIAMETER OF NO LESS THAN .04" AND A TENSILE STRENGTH OF 22 LBS. THE YARN SHALL HAVE A SERVICE TEMPERATURE RATING OF -65 F TO 194 F. THE BRAID SHALL CONSIST OF 24 STRANDS OF YARN WITH 21 BLACK AND 3 YELLOW. THE YELLOW SHALL BE ORIENTED THE SAME AND BE NEXT TO EACH OTHER.

WIRING LOOM SHALL BE FLAME RETARDANT BLACK NYLON. THE LOOM SHALL HAVE A SERVICE TEMPERATURE OF -40 F TO 300 F AND BE SECURED TO THE WIRE BUNDLE WITH ADHESIVE-BACKED VINYL TAPE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

## **WIRING CONNECTORS**

ALL CONNECTORS SHALL BE DEUTSCH SERIES UNLESS A DIFFERENT SERIES OF CONNECTOR IS NEEDED TO MATE TO A SUPPLIER'S COMPONENT. THE CONNECTORS AND TERMINALS SHALL BE ASSEMBLED PER THE CONNECTOR/TERMINAL MANUFACTURER'S SPECIFICATION. CRIMBLE/SOLDERLESS TERMINALS SHALL BE ACCEPTABLE. HEAT SHRINK STYLE SHALL BE UTILIZED UNLESS USED WITHIN THE CONFINES OF THE CAB.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

## **NFPA REQUIRED TESTING OF ELECTRICAL SYSTEM**

THE APPARATUS SHALL BE ELECTRICAL TESTED UPON COMPLETION OF THE VEHICLE AND PRIOR TO DELIVERY. THE ELECTRICAL TESTING, CERTIFICATIONS, AND TEST RESULTS SHALL BE SUBMITTED WITH DELIVERY DOCUMENTATION PER REQUIREMENTS OF NFPA 1901. THE FOLLOWING MINIMUM TESTING SHALL BE COMPLETED BY THE APPARATUS MANUFACTURER:

### **1. RESERVE CAPACITY TEST:**

THE ENGINE SHALL BE STARTED AND KEPT RUNNING UNTIL THE ENGINE AND ENGINE COMPARTMENT TEMPERATURES ARE STABILIZED AT NORMAL OPERATING TEMPERATURES AND THE BATTERY SYSTEM IS FULLY CHARGED. THE ENGINE SHALL BE SHUT OFF AND THE MINIMUM CONTINUOUS ELECTRICAL LOAD SHALL BE ACTIVATED FOR TEN (10) MINUTES. ALL ELECTRICAL LOADS SHALL BE TURNED OFF PRIOR TO ATTEMPTING TO

RESTART THE ENGINE. THE BATTERY SYSTEM SHALL THEN BE CAPABLE OF RESTARTING THE ENGINE. FAILURE TO RESTART THE ENGINE SHALL BE CONSIDERED A TEST FAIL.

## **2. ALTERNATOR PERFORMANCE TESTS AT IDLE:**

THE MINIMUM CONTINUOUS ELECTRICAL LOAD SHALL BE ACTIVATED WITH THE ENGINE RUNNING AT IDLE SPEED. THE ENGINE TEMPERATURE SHALL BE STABILIZED AT NORMAL OPERATING TEMPERATURE. THE BATTERY SYSTEM SHALL BE TESTED TO DETECT THE PRESENCE OF BATTERY DISCHARGE CURRENT. THE DETECTION OF BATTERY DISCHARGE CURRENT SHALL BE CONSIDERED A TEST FAILURE.

## **3. ALTERNATOR PERFORMANCE TEST AT FULL LOAD:**

THE TOTAL CONTINUOUS ELECTRICAL LOAD SHALL BE ACTIVATED WITH THE ENGINE RUNNING UP TO THE ENGINE MANUFACTURER'S GOVERNED SPEED. THE TEST DURATION SHALL BE A MINIMUM OF TWO (2) HOURS. ACTIVATION OF THE LOAD MANAGEMENT SYSTEM SHALL BE PERMITTED DURING THIS TEST. HOWEVER, AN ALARM SOUNDED BY EXCESSIVE BATTERY DISCHARGE, AS DETECTED BY THE SYSTEM REQUIRED IN NFPA 1901 STANDARD, OR A SYSTEM VOLTAGE OF LESS THAN 11.7 VOLTS DC FOR A 12 VOLT NOMINAL SYSTEM, FOR MORE THAN 120 SECONDS, SHALL BE CONSIDERED A TEST FAILURE.

## **4. LOW VOLTAGE ALARM TEST:**

FOLLOWING THE COMPLETION OF THE ABOVE TESTS, THE ENGINE SHALL BE SHUT OFF. THE TOTAL CONTINUOUS ELECTRICAL LOAD SHALL BE ACTIVATED AND SHALL CONTINUE TO BE APPLIED UNTIL THE EXCESSIVE BATTERY DISCHARGE ALARM ACTIVATES. THE BATTERY VOLTAGE SHALL BE MEASURED AT THE BATTERY TERMINALS. WITH THE LOAD STILL APPLIED, A READING OF LESS THAN 11.7 VOLTS DC FOR A 12 VOLT NOMINAL SYSTEM SHALL BE CONSIDERED A TEST FAILURE. THE BATTERY SYSTEM SHALL THEN BE ABLE TO RESTART THE ENGINE. FAILURE TO RESTART THE ENGINE SHALL BE CONSIDERED A TEST FAILURE.

## **NFPA REQUIRED DOCUMENTATION**

THE FOLLOWING DOCUMENTATION SHALL BE PROVIDED ON DELIVERY OF THE APPARATUS:

- A. DOCUMENTATION OF THE ELECTRICAL SYSTEM PERFORMANCE TESTS REQUIRED ABOVE.
- B. A WRITTEN LOAD ANALYSIS, INCLUDING:
  - A. THE NAMEPLATE RATING OF THE ALTERNATOR.
  - B. THE ALTERNATOR RATING UNDER THE CONDITIONS.
  - C. EACH SPECIFIED COMPONENT LOAD.
  - D. INDIVIDUAL INTERMITTENT LOADS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

## **MULTIPLEX DISPLAY (2)**

THE V-MUX MULTIPLEX ELECTRICAL SYSTEM SHALL INCLUDE A TEXT DISPLAY.

THE DISPLAY SHALL HAVE THE FOLLOWING FEATURES:

- RUGGED VACUUM FLUORESCENT TECHNOLOGY
- TWO TWENTY CHARACTER LINES
- PROGRAMMED TO SHOW DOOR AJAR STATUS AND DIAGNOSTIC INFORMATION

THE DISPLAYS SHALL BE LOCATED ON DRIVER'S SIDE AND OFFICER'S SIDE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

## **LIGHT BARS**

## **LIGHT BAR**

A WHELEN FREEDOM SERIES MODEL FN72QLED 72" ALL LED LIGHT BAR SHALL BE INSTALLED. THE LIGHT BAR SHALL HAVE CLEAR LENSES AND CONTAIN TWO (2) FRONT CORNER MOUNTED RED LED MODULES AND TEN (10) FRONT LED MODULES, SIX (6) RED AND FOUR (4) WHITE, AND TWO (2) END MOUNTED RED LED MODULES. THE LIGHT BAR SHALL BE EQUIPPED WITH MK8 MOUNTS.

THE WHITE LEDS SHALL BE SWITCHED OFF IN BLOCKING RIGHT OF WAY MODE.

THE LIGHT BAR SHALL BE INSTALLED CENTERED ON THE FRONT CAB ROOF.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

## **WARNING LIGHT PACKAGES**

### **LOWER LEVEL WARNING LIGHT PACKAGE**

EIGHT (8) WHELEN M6R SUPER LED RED LIGHT HEADS AND TWO (2) WHELEN M2R SUPER LED RED LIGHT HEADS SHALL BE PROVIDED.

THE LIGHTS SHALL INCLUDE CHROME FLANGES WHERE APPLICABLE. THE LIGHTS SHALL BE WIRED WITH WEATHERPROOF CONNECTORS AND SHALL BE MOUNTED AS CLOSE TO THE CORNER POINTS OF THE APPARATUS AS IS PRACTICAL AS FOLLOWS:

- TWO (2) WHELEN M6R SUPER LED RED LIGHTS ON THE FRONT OF THE APPARATUS FACING FORWARD
- TWO (2) WHELEN M6R SUPER LED RED LIGHTS ON THE REAR OF THE APPARATUS FACING REARWARD
- TWO (2) LIGHTS EACH SIDE OF THE APPARATUS, ONE (1) WHELEN M6R SUPER LED RED EACH SIDE AT THE FORWARD MOST POINT (AS PRACTICAL), AND ONE (1) WHELEN M2R SUPER LED RED EACH SIDE AT THE REARWARD MOST POINT (AS PRACTICAL).
- ONE (1) WHELEN M6R SUPER LED RED LIGHT EACH SIDE OF THE APPARATUS CENTRALLY LOCATED TO PROVIDE MID SHIP WARNING LIGHT.

THE SIDE FACING LIGHTS SHALL BE LOCATED AT FORWARD MOST POSITION, CENTERED IN REAR WHEEL WELL, AND SIDE FACING AT REAR OF BODY IN RUBRAIL IF EQUIPPED.

ALL WARNING DEVICES SHALL BE SURFACE MOUNTED IN COMPLIANCE WITH NFPA STANDARDS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

## **WARNING LIGHTS**

### **UPPER REAR WARNING LIGHTS**

TWO (2) WHELEN MODEL L31H SUPER LED BEACONS WITH RED DOMES SHALL BE SUPPLIED.

THE LIGHTS SHALL BE LOCATED REAR UPPER BODY ON AERIAL STYLE BRACKETS TO MEET ZONE C UPPER REQUIREMENTS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

## **WARNING LIGHTS**

TWO (2) WHELEN M6 SERIES LINEAR SUPER LED RED LIGHT HEADS WITH RED LENS SHALL BE PROVIDED. THE RECTANGULAR LIGHTS SHALL INCLUDE CHROME FLANGES WHERE APPLICABLE.

LOCATION: (1) EACH SIDE OF CAB DOWN LOW JUST AHEAD OF REAR DOORS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

## **WARNING LIGHTS**

TWO (2) WHELEN MODEL M2R SUPER LED RED LIGHT HEADS (RED LEDS WITH RED LENS) SHALL BE PROVIDED.

THE RECTANGULAR LIGHTS SHALL INCLUDE CHROME FLANGES. THE LIGHTS SHALL BE WIRED WITH WEATHERPROOF CONNECTORS.

SPECIFICATIONS INCLUDE:

- SURFACE MOUNTED
- PATENTED LINEAR LED REFLECTOR ASSEMBLY
- SEALED ASSEMBLY
- MOUNTING GASKET
- MULTIPLE SCAN-LOCK FLASH PATTERNS AVAILABLE
- CHROME MOUNTING FLANGE

LOCATION: (1) EACH SIDE BELOW FORWARD COMPARTMENTS IN RUBRAIL IF EQUIPPED, (1) EACH SIDE JUST BEHIND REAR WHEELS IN RUBRAIL IF EQUIPPED.

ALL WARNING DEVICES SHALL BE SURFACE MOUNTED IN COMPLIANCE WITH NFPA STANDARDS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

## **HAZARD (DOOR AJAR) LIGHT**

THERE SHALL BE A WHELEN MODEL M2WR RED LED HAZARD LIGHT WITH BLACK BEZEL INSTALLED AS SPECIFIED.

THE LIGHT SHALL BE LOCATED CENTER OVERHEAD.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

## **DIRECTIONAL LIGHT BARS**

### **DIRECTIONAL TRAFFIC WARNING LIGHT**

ONE (1) WHELEN TAL65 LED 36" LONG TRAFFIC ADVISOR WITH AMBER LENSES SHALL BE PROVIDED.

THE DIRECTIONAL BAR SHALL INCLUDE A TACTLD1 CONTROL HEAD. THE CONTROL HEAD SHALL INCLUDE A REMOTE FLASH CONTROL AND END LAMP ENABLE/DISABLE FEATURE.

THE LIGHT SHALL BE INSTALLED AT THE REAR OF THE BODY TO DIRECT TRAFFIC AROUND THE VEHICLE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **DIRECTIONAL LIGHT BAR CONTROL LOCATION**

THE DIRECTIONAL LIGHT BAR CONTROL HEAD SHALL BE LOCATED IN THE CENTER OVERHEAD CONSOLE OFFSET TO DRIVER SIDE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **DIRECTIONAL LIGHT WIRED TO WARNING LIGHTS**

THE REAR DIRECTIONAL LIGHT BAR SHALL BE ACTIVATED WHEN THE UPPER LEVEL WARNING LIGHTS ARE ACTIVATED TO PROVIDE ADDITIONAL LIGHTING, IN ADDITION TO THE WARNING LIGHTS, WHEN THE VEHICLE IS RESPONDING TO A SCENE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

## **SIRENS**

### **ELECTRONIC SIREN**

A WHELEN 295SLSA1 ELECTRONIC SIREN SHALL BE INSTALLED IN THE CAB. THE SIREN AMPLIFIER AND CONTROL PANEL MODULE SHALL INCLUDE A ROTARY SELECTOR FOR SIX (6) FUNCTIONS, ON/OFF SWITCH, PUSH BUTTON SWITCH FOR MANUAL SIREN OR AIR HORN TONES, AND NOISE CANCELING MICROPHONE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **ELECTRONIC SIREN CONTROL LOCATION**

THE ELECTRONIC SIREN CONTROL SHALL BE LOCATED IN THE CENTER OVERHEAD CONSOLE OFFSET TO OFFICER SIDE. IT MUST HAVE A 150AMP INLINE CIRCUIT BREAKER BETWEEN BATTERIES AND SIREN.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **MECHANICAL SIREN**

A CHROME PLATED AND PEDESTAL MOUNTED FEDERAL Q2B-P COASTER SIREN SHALL BE INSTALLED ON TOP OF THE FRONT BUMPER EXTENSION. AN ELECTRIC SIREN BRAKE SWITCH SHALL BE LOCATED IN THE CAB ACCESSIBLE TO THE DRIVER.

THE SIREN SHALL BE LOCATED DRIVER SIDE FRONT BUMPER.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

## **SPEAKERS**

### **SIREN SPEAKER**

ONE (1) WHELEN MODEL SP123BMC, 100 WATT SPEAKER WITH CHROME GRILL SHALL BE RECESSED IN THE FRONT BUMPER.

THE SPEAKER SHALL PRODUCE A MINIMUM SOUND OUTPUT OF 120 DB AT 10 FEET TO MEET CURRENT NFPA 1901 REQUIREMENTS.

THE SPEAKER SHALL BE LOCATED DRIVER SIDE FRONT BUMPER, OFFICER SIDE FRONT BUMPER.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **WHELEN HOWLER**

A WHELEN HOWLER LOW FREQUENCY SIREN SHALL BE PLACED ON THE APPARATUS ALONG WITH THE OTHER ELECTRONIC SIREN.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

## **DOT LIGHTING**

### **LICENSE PLATE LIGHT**

ONE (1) TRUCK-LITE MODEL 15905 WHITE LED LICENSE PLATE LIGHT MOUNTED IN A TRUCK-LITE MODEL 15732 CHROME PLATED PLASTIC LICENSE PLATE HOUSING SHALL BE MOUNTED AT THE REAR OF THE BODY.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **LED MARKER LIGHTS**

LED CLEARANCE/MARKER LIGHTS SHALL BE INSTALLED AS SPECIFIED.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **UPPER CAB:**

- FIVE (5) AMBER LED CLEARANCE LIGHTS ON THE CAB ROOF.



**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**LOWER CAB:**

- ONE (1) AMBER LED SIDE TURN/MARKER EACH SIDE OF CAB AHEAD OF THE FRONT DOOR HINGE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**UPPER BODY:**

- ONE (1) RED TRUCKLITE LED CLEARANCE LIGHT EACH SIDE, REAR OF BODY TO THE SIDE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**LOWER BODY:**

- THREE (3) RED TRUCKLITE LED CLEARANCE LIGHTS CENTERED AT REAR, RECESSED IN THE RUBRAIL.
- ONE (1) RED TRUCKLITE LED CLEARANCE LIGHT EACH SIDE AT THE TRAILING EDGE OF THE APPARATUS BODY, RECESSED IN THE RUBRAIL.
- ONE (1) AMBER TRUCKLITE LED CLEARANCE/AUXILIARY TURN LIGHT EACH SIDE FRONT OF BODY/MODULE, RECESSED IN THE RUBRAIL.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**TAIL LIGHTS**

THREE (3) WHELEN MODEL M6 SERIES LED (LIGHT EMITTING DIODE) LIGHTS SHALL BE INSTALLED IN A FOUR (4) LIGHT VERTICAL HOUSING EACH SIDE AT REAR AND WIRED WITH WEATHERPROOF CONNECTORS.

LIGHT FUNCTIONS SHALL BE AS FOLLOWS:

- LED RED RUNNING LIGHT WITH RED BRAKE LIGHT IN UPPER POSITION.
- LED AMBER POPULATED ARROW PATTERN TURN SIGNAL IN MIDDLE POSITION.
- LED CLEAR BACK-UP LIGHT IN LOWER POSITION.

A ONE-PIECE CHROME PLASTIC HOUSING SHALL BE MOUNTED AROUND THE THREE (3) INDIVIDUAL LIGHTS IN A VERTICAL POSITION. THE LOWER SPACE WILL BE USED BY THE M6 OR EQUIVALENT LOWER NFPA WARNING LIGHT.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**LICENSE PLATE BRACKET**

THERE SHALL BE BRACKET FABRICATED FROM ALUMINUM DIAMOND PLATE, SECURED TO REAR OF THE BODY TO ACCOMMODATE A LICENSE PLATE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**LIGHTS - COMPARTMENT, STEP & GROUND**

**COMPARTMENT LIGHT PACKAGE**

TWO (2) AMDOR LUMA-BAR LED COMPARTMENT LIGHT STRIPS SHALL BE MOUNTED IN EACH BODY COMPARTMENT GREATER THAN 4 CU. FT. TRANSVERSE COMPARTMENTS SHALL HAVE FOUR (4) LIGHTS, LOCATED TWO (2) EACH SIDE.

COMPARTMENT LIGHTS SHALL BE WIRED TO A MASTER ON/OFF ROCKER SWITCH ON THE CAB SWITCH PANEL.

THE WIRING CONNECTION FOR THE COMPARTMENT LIGHTS SHALL BE MADE WITH A WEATHER-RESISTANT PLUG IN STYLE CONNECTOR. A SINGLE WATER AND CORROSION-RESISTANT SWITCH WITH A POLYCARBONATE ACTUATOR AND SEALED CONTACTS SHALL CONTROL EACH COMPARTMENT LIGHT. THE SWITCH SHALL ALLOW THE LIGHT TO ILLUMINATE IF THE COMPARTMENT DOOR IS OPEN.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **GROUND LIGHTS**

THE APPARATUS SHALL BE EQUIPPED WITH A SUFFICIENT QUANTITY OF LIGHTS TO PROPERLY ILLUMINATE THE GROUND AREAS AROUND THE APPARATUS IN ACCORDANCE WITH CURRENT NFPA REQUIREMENTS. THE LIGHTS SHALL BE EON LED (LIGHT EMITTING DIODE) WITH CLEAR LENSES. THE WIRING CONNECTIONS SHALL BE MADE WITH A WEATHER RESISTANT PLUG IN STYLE CONNECTOR.

ONE (1) GROUND LIGHT SHALL BE SUPPLIED UNDER EACH SIDE OF THE FRONT BUMPER EXTENSION (IF EQUIPPED).

ONE (1) LIGHT SHALL BE SUPPLIED TO ILLUMINATE THE GROUND BELOW EACH CAB DOOR. LIGHTS IN AREAS UNDER THE DRIVER AND CREW AREA EXITS SHALL BE ACTIVATED AUTOMATICALLY WHEN THE EXIT DOORS ARE OPENED.

ONE (1) GROUND LIGHT SHALL BE SUPPLIED UNDER EACH SIDE OF THE PUMP PANEL AREA (IF EQUIPPED).

ONE (1) GROUND LIGHT SHALL BE INSTALLED BELOW EACH SIDE BODY STAIRCASE (IF EQUIPPED).

THREE (3) GROUND LIGHTS SHALL BE SUPPLIED UNDER THE REAR OF THE APPARATUS.

GROUND AREA LIGHTS SHALL BE SWITCHED FROM THE CAB DASH WITH THE WORK LIGHT SWITCH.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **MEDICAL CABINET LIGHT (QTY: 2)**

TWO (2) AMDOR LUMA-BAR LED COMPARTMENT LIGHT STRIPS SHALL BE MOUNTED IN THE MEDICAL CABINET.

THE LIGHT SHALL BE WIRED TO THE COMPARTMENT LIGHT ROCKER SWITCH IN THE CAB.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **LIGHTS - DECK AND SCENE**

#### **HOSE BED LIGHT (QTY: 2)**

ONE (1) FLUSH-MOUNTED LED SCENE LIGHT WITH A CLEAR LENS SHALL BE INSTALLED AT THE FRONT AREA OF THE HOSE BED TO PROVIDE HOSE BED LIGHTING PER CURRENT NFPA 1901. THE LIGHT FIXTURE SHALL BE ADJUSTABLE HORIZONTALLY AND VERTICALLY TO PROVIDE THE DESIRED COVERAGE. ALL ELECTRICAL CONNECTORS ARE TO BE ENCLOSED IN THE HOUSING PROVIDING PROTECTION AGAINST THE ELEMENTS.

THE HOSE BED LIGHT SHALL BE SWITCHED WITH WORK LIGHT SWITCH IN THE CAB.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **CAB SCENE LIGHT SWITCHING**

THE CAB SCENE LIGHTS SHALL BE WIRED TO ACTIVATE THROUGH THE APPROPRIATE SIDE CAB DOOR AJAR SWITCH. THIS APPLICATION ALLOWS THE CAB SCENE LIGHTS TO BE USED AS ADDITIONAL ILLUMINATION OF THE GROUND AREA FOR PERSONNEL ENTERING OR EXITING THE VEHICLE. THE SWITCHING FOR THIS APPLICATION IS IN ADDITION TO THE STANDARD CAB SCENE LIGHT SWITCHING.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **DECK LIGHTS**

TWO (2) WHELEN ROUND 12 SUPER LED MODEL PFBP12C FLOODLIGHTS WITH BLACK HOUSING AND CHROME REAR COVERS SHALL BE INSTALLED AT THE REAR OF THE APPARATUS. THE REAR DECK LIGHTS SHALL BE SWITCHED WITH THE WORK LIGHT SWITCH IN THE CAB.

LOCATION: REAR BODY/BEAVERTAIL AREA ON THE TRAILING EDGE UP HIGH.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

## **SCENE LIGHTS**

TWO (2) WHELEN MODEL M6ZC SERIES LINEAR SUPER LED CLEAR SCENE LIGHTS SHALL BE PROVIDED.

EACH SHALL HAVE LINEAR SUPER LED DIODES WITH INTERNAL LIGHT DEFLECTING OPTICS. THE INTERNAL LIGHT DEFLECTING OPTICS SHALL REDIRECT THE LIGHT WITHOUT THE USE OF ANGLE BRACKETS.

THE LIGHTS SHALL BE LOCATED (1) EACH SIDE OF CAB, REARWARD OF FORWARD DOORS, UP HIGH AND BE CONTROLLED BY A SWITCH IN CAB ACCESSIBLE TO DRIVER (LIGHTS ON SIDES OF APPARATUS TO BE SWITCHED SEPARATELY).

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

## **LIGHTS - NON-WARNING**

### **ENGINE COMPARTMENT LIGHT**

THERE SHALL BE LED LIGHTING PROVIDED IN COMPLIANCE WITH NFPA TO ILLUMINATE THE ENGINE COMPARTMENT AREA.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **PUMP COMPARTMENT LED LIGHT**

AN LED LIGHT SHALL BE PROVIDED IN THE PUMP COMPARTMENT AREA FOR NFPA COMPLIANCE. THE LIGHT SHALL BE WIRED TO OPERATE WITH THE WORK LIGHT SWITCH IN THE CAB.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **LED PUMP PANEL LIGHT PACKAGE**

THREE (3) WELDON MODEL 2631-0000-30 LED LIGHTS SHALL BE MOUNTED UNDER A LIGHT SHIELD DIRECTLY ABOVE EACH SIDE PUMP PANEL. THE WORK LIGHT SWITCH IN THE CAB SHALL ACTIVATE THE LIGHTS WHEN THE PARK BRAKE IS SET.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

## **WHELEN PS TANK STRIP LIGHT**

THERE SHALL BE A PAIR OF PS TANK STATUS LIGHTS, WITH 96 LED'S STEADY BURN GREEN, BLUE, AMBER, AND RED. THE LIGHT PROVIDES BRIGHT, EASY TO IDENTIFY INDICATION OF WATER STATUS. THE UNIT IS SURFACE MOUNTED, HAS LOW CURRENT CONSUMPTION, FULLY ENCAPSULATED, AND CARRIES A FIVE (5) YEAR WARRANTY FROM WHELEN. THE LIGHTS SHALL BE MOUNTED ONE EACH SIDE IN THE REAR CAB. THE UNIT SHALL WORK IN CONJUNCTION WITH THE MASTER ON THE PUMP PANEL.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

## **CONTROLS / SWITCHES**

### **SCBA DOOR AJAR SWITCH (QTY: 4)**

DOOR AJAR INDICATOR SWITCH FOR EACH SCBA AIR BOTTLE STORAGE COMPARTMENT DOOR ON BODY WIRED TO "DOOR OPEN" INDICATOR INSIDE CAB. SWITCHES AS OPTIONED ARE IN ADDITION TO STANDARD SCBA BOTTLE RETAINER STRAPS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **FOOT SWITCH**

A HEAVY DUTY METAL FLOOR MOUNTED FOOT SWITCH SHALL BE INSTALLED TO OPERATE THE Q2B SIREN. THERE SHALL BE ONE ON THE DRIVER SIDE OUTBOARD FLOOR AND ONE ON THE OFFICERS OUTBOARD FLOOR.

**HOSE REEL BUTTON**

TWO (2) HEAVY DUTY RUBBER COVERED ELECTRIC REEL REWIND BUTTONS SHALL BE INSTALLED TO ASSIST WITH REWINDING THE DEPLOYED HOSE.

LOCATION: DRIVER SIDE PUMP PANEL AND OFFICER SIDE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS**    YES\_\_\_\_\_ NO\_\_\_\_\_  
**ADDITIONAL SWITCH**

A 12 VOLT SWITCH SHALL BE PROVIDED.

THE SWITCH SHALL BE LOCATED OFFICER'S SIDE SWITCH PANEL FOR Q2B BRAKE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS**    YES\_\_\_\_\_ NO\_\_\_\_\_  
**THREE WAY SWITCHING (QTY: 2)**

**THREE WAY SWITCHING (QTY: 2)**

AN ADDITIONAL MOMENTARY SWITCH WITH CIRCUITRY SHALL BE PROVIDED TO ALLOW ON/OFF OPERATION OF SPECIFIED DEVICE FROM REMOTE LOCATIONS. THE REMOTE SWITCH SHALL BE MOUNTED OFFICER'S SIDE SWITCH PANEL FOR CAB SCENE LIGHTS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS**    YES\_\_\_\_\_ NO\_\_\_\_\_  
**CAMERAS**

**CAMERAS**

**CAMERA SHIELD**

A DIAMOND PLATE PROTECTIVE SHIELD SHALL BE PROVIDED FOR THE TOP AND SIDES OF A CAMERA. THE SHIELD SHALL BE DESIGNED NOT TO IMPEDE IN THE OPERATIONAL ENVELOPE OF THE CAMERA.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS**    YES\_\_\_\_\_ NO\_\_\_\_\_  
**BACKUP CAMERA**

**BACKUP CAMERA**

A FEDERAL SIGNAL BACK-UP CAMERA SYSTEM MODEL CAMSET70-NTSC-4 SHALL BE PROVIDED. THE SYSTEM SHALL INCLUDE A COLOR CAMERA WITH AUDIO MODEL CAMCCD-REARNTSC AND A COLOR MONITOR MODEL CAMLCD-70. THE MONITOR SHALL BE INSTALLED IN THE FRONT AREA OF THE CAB VISIBLE AT NIGHT AND ALSO IN BRIGHT SUNLIGHT TO THE DRIVER. THE CAMERA SHALL BE MOUNTED UP HIGH AT THE REAR OF THE VEHICLE TO PROVIDE A WIDE ANGLE REAR VIEW. THE SYSTEM SHALL INCLUDE A CABLE WITH METALLIC WATERPROOF THREADED O-RING SEAL CONNECTORS TO ENSURE POSITIVE CONNECTION BETWEEN VIDEO CABLE AND CAMERA TO PREVENT UNPLUGGING DUE TO VIBRATION RESULTING IN VIDEO LOSS TO VEHICLE OPERATOR.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS**    YES\_\_\_\_\_ NO\_\_\_\_\_  
**BACK-UP CAMERA MONITOR LOCATION**

**BACK-UP CAMERA MONITOR LOCATION**

THE BACK-UP CAMERA MONITOR SHALL BE LOCATED ON THE CENTER DASH OFFSET DRIVER.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS**    YES\_\_\_\_\_ NO\_\_\_\_\_  
**PUMP PANEL MOUNTED CAMERA - OFFICER SIDE**

**PUMP PANEL MOUNTED CAMERA - OFFICER SIDE**

A VOYAGER VCMS PUMP PANEL MOUNTED CAMERA HEAD SHALL BE MOUNTED UP HIGH ON THE OFFICER'S SIDE OF THE APPARATUS. A VOYAGER A0M713WP 7" WATER PROOF MONITOR SHALL BE MOUNTED AT THE OFFICER SIDE PUMP PANEL.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **MISCELLANEOUS ELECTRICAL**

##### **BACK-UP ALARM**

AN ELECTRONIC BACK-UP ALARM SHALL BE SUPPLIED. THE 97 DB ALARM SHALL BE WIRED INTO THE CHASSIS BACK-UP LIGHTS TO SIGNAL WHEN THE VEHICLE IS IN REVERSE GEAR.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

##### **12 VOLT DC POWER DISTRIBUTION MODULE**

THERE SHALL BE A 12 PLACE 12 VOLT DC POWER DISTRIBUTION MODULE INSTALLED AS SPECIFIED.

THE MODULE WILL HAVE SIX (6) CIRCUITS WIRED DIRECTLY TO THE BATTERY AND HAVE SIX (6) CIRCUITS WIRED THROUGH THE MASTER BATTERY SWITCH WITH 12 POSITIONS FOR GROUNDS. CONNECTION TO THE POWER MODULE CIRCUIT WILL BE THROUGH A .250 FEMALE SPADE CONNECTOR. EACH BUSS WILL BE PROTECTED WITH A 50 AMP CIRCUIT BREAKER FOR OVERLOAD PROTECTION. THE MODULE WILL ACCEPT ATC BLADE TYPE FUSES OR 22X SERIES CIRCUIT BREAKERS.

DIAGNOSTIC LED'S SHALL BE PRESENT TO INDICATE WHEN THE SWITCH INPUT IS ACTIVATED, THE POLARITY OF THE SWITCH ACTIVATION SIGNAL, POWER TO THE RELAY BUSS, AND POWER THROUGH THE RELAY WHEN ACTIVATED.

THE MODULE SHALL BE LOCATED BEHIND OFFICER'S SEAT.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

##### **LIGHTS - QUARTZ**

##### **WHELEN PIONEER 12V LED FLOOD LIGHT**

(3) THREE WHELEN PIONEER PLUS SERIES 12V FLOOD LIGHT MODEL PFP2 DUAL PANEL LED LIGHT HEADS SHALL BE PROVIDED ON A CAB BROW MOUNT. THE RECTANGULAR EXTRUDED LIGHT FIXTURE WITH DIE CAST END CAPS SHALL MEASURE 14" WIDE BY 4-5/8" HIGH BY 3" DEEP AND HAVE A WHITE POWDER COAT FINISH. THE LIGHT FIXTURE SHALL HAVE DUAL PANEL (4) CLUSTERS OF LED LAMPS WITH MOLDED VACUUM METALIZED REFLECTOR THAT DRAWS 12 AMPS AND PRODUCE 14,000 USABLE LUMENS.

THE LIGHTS SHALL BE LOCATED CENTER OF FRONT CAB BROW, DRIVER AND OFFICER SIDE OVER CANOPY AREA.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

##### **RECEPTACLES**

##### **RECEPTACLE**

A 20 AMP, 110 VOLT 3-PRONG STRAIGHT BLADE NEMA 5-20 DUPLEX HOUSEHOLD RECEPTACLE WITH STAINLESS STEEL COVER PLATE SHALL BE INSTALLED IN A NON-WEATHER EXPOSED AREA AS SPECIFIED BY THE DEPARTMENT. THE RECEPTACLE SHALL BE WIRED TO THE INLET RECEPTACLE WHERE IT WILL HAVE OVERCURRENT PROTECTION FROM AN EXTERNAL SOURCE.

THIS RECEPTACLE WILL BE SUPPLIED WHILE CONNECTED TO SHORELINE POWER.

LOCATION: REAR WALL OF DRIVER SIDE MEDICAL COMPARTMENT UP HIGH, REAR WALL OF OFFICER SIDE MEDICAL COMPARTMENT UP HIGH.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS**    YES\_\_\_\_\_ NO\_\_\_\_\_

**MISCELLANEOUS LOOSE EQUIPMENT**

**DOT REQUIRED DRIVE AWAY KIT**

THREE (3) TRIANGULAR WARNING REFLECTORS WITH CARRYING CASE SHALL BE SUPPLIED TO SATISFY THE DOT REQUIREMENT.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS**    YES\_\_\_\_\_ NO\_\_\_\_\_

**DIAGNOSTIC SOFTWARE AND HARDWARE REQUIREMENTS**

WINNING BIDDER SHALL PROVIDE A CURRENT MODEL PANASONIC TOUGHBOOK LAPTOP. ALL DIAGNOSTIC SOFTWARE SHALL BE PC BASED AND PRE-LOADED ON TO LAPTOP. SOFTWARE IS TO BE THE NEWEST AND MOST ADVANCED VERSION AVAILABLE. ANY SUBSCRIPTIONS TO SOFTWARE SHALL BE PAID BY WINNING BIDDER FOR A MINIMUM OF ONE YEAR WITH THE ABILITY FOR THE CITY TO CONTINUE SUBSCRIPTION. ANY CABLES, USB INTERFACE, ETC. REQUIRED TO USE DIAGNOSTICS SHALL ALSO BE PROVIDED.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS**    YES\_\_\_\_\_ NO\_\_\_\_\_

**BRAKE DIAGNOSTIC SOFTWARE**

ALL OEM DIAGNOSTIC SOFTWARE NEEDED TO DIAGNOSIS AND EVALUATE THE WABCO AND BENDIX BRAKING SYSTEMS SHALL BE LOADED ON BIDDER PROVIDED LAPTOP. USB NEXIQ INTERFACE ALSO TO BE PROVIDED.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS**    YES\_\_\_\_\_ NO\_\_\_\_\_

**ENGINE DIAGNOSTIC SOFTWARE AND HARDWARE**

CUMMINS INSITE PRO (MOST ADVANCED VERSION AVAILABLE) DIAGNOSTIC SOFTWARE SHALL BE LOADED ON BIDDER-PROVIDED LAPTOP.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS**    YES\_\_\_\_\_ NO\_\_\_\_\_

**TRANSMISSION SOFTWARE**

ALLISON TRANSMISSION SOFTWARE MODEL DOCTM OR MOST ADVANCED, NEWEST VERSION AVAILABLE, FOR (PC) SHALL BE LOADED ON TO BIDDER PROVIDED LAPTOP. SOFTWARE SHALL INCLUDE THE FOLLOWING:

- USER SELECTED VIEWS OF MULTIPLE TRANSMISSION PARAMETERS
- VIEW ACTIVE AND HISTORICAL DIAGNOSTIC TROUBLE CODES (DTCS)
- GRAPHICAL INSTRUMENT PANEL VIEW OF TRANSMISSION PARAMETERS
- STRIP CHART FUNCTION
- USER CONFIGURABLE SNAPSHOT FUNCTION
- USER CONFIGURABLE PRINT FUNCTION
- CODE DRIVEN HOTLINKS TO EMBEDDED 1000, 2000, 3000, 4000 PRODUCT FAMILIES (INCLUDING ALLISON 4TH GENERATION CONTROLS), 5610, 6610, 8610, 9610, 9810 SERIES TRANSMISSIONS, 5000, 6000, 8000, 9000 SERIES TRANSMISSIONS AND MT(B)600 SERIES, CL(B)T, V, HT(B)700 SERIES TRANSMISSIONS

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS**    YES\_\_\_\_\_ NO\_\_\_\_\_

**ELECTRICAL SYSTEM DIAGNOSTIC SOFTWARE**

OEM DIAGNOSTIC SOFTWARE MOST ADVANCED AND NEWEST VERSION AVAILABLE SHALL BE PROVIDED AND LOADED ON TO THE BIDDER PROVIDED LAPTOP FOR THE V-MUX ELECTRICAL SYSTEM.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS**    YES\_\_\_\_\_ NO\_\_\_\_\_

**ADDITIONAL DIAGNOSTIC SOFTWARE**

MOST ADVANCED AND NEWEST VERSION AVAILABLE DIAGNOSTIC SOFTWARE FOR THE FOLLOWING SYSTEMS SHALL BE PROVIDED AND LOADED ON TO BIDDER PROVIDED LAPTOP:

- IMMI RESTRAINT SYSTEM
- ROLL OVER PROTECTION SYSTEM
- TPMS (TIRE PRESSURE MONITORING)

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### **EXTERIOR PAINT**

#### **PAINT CUSTOM CAB**

THE APPARATUS CAB SHALL BE PAINTED SIKKENS FLNA3225E-1 RED. THE PAINT PROCESS SHALL MEET OR EXCEED CURRENT STATE REGULATIONS CONCERNING PAINT OPERATIONS. POLLUTION CONTROL SHALL INCLUDE MEASURES TO PROTECT THE ATMOSPHERE, WATER, AND SOIL. CONTRACTOR SHALL, UPON DEMAND, PROVIDE EVIDENCE THAT THE MANUFACTURING FACILITY IS IN COMPLIANCE WITH STATE EPA RULES AND REGULATIONS.

THE ALUMINUM CAB EXTERIOR SHALL HAVE NO MOUNTED COMPONENTS PRIOR TO PAINTING TO ASSURE FULL COVERAGE OF METAL TREATMENTS AND PAINT TO THE EXTERIOR SURFACES. CAB DOORS AND ANY HINGED SMOOTH-PLATE COMPARTMENT DOORS SHALL BE PAINTED SEPARATELY TO ASSURE PROPER PAINT COVERAGE ON CAB, DOOR JAMBS AND DOOR EDGES.

PAINT PROCESS SHALL FEATURE SIKKENS HIGH SOLID LV PRODUCTS AND BE PERFORMED IN THE FOLLOWING STEPS:

- CORROSION PREVENTION - ALL ALUMINUM SURFACES SHALL BE PRE-TREATED WITH THE ALODINE 5700 CONVERSION COATING TO PROVIDE SUPERIOR CORROSION RESISTANCE AND EXCELLENT ADHESION OF THE BASE COAT.
- SIKKENS SEALER/PRIMER LV - ACRYLIC URETHANE SEALER/PRIMER SHALL BE APPLIED TO GUARANTEE EXCELLENT GLOSS HOLD-OUT, CHIP RESISTANCE AND A UNIFORM BASE COLOR.
- SIKKENS HIGH SOLID LVBT650 (BASE COAT) - A LEAD-FREE, CHROMATE-FREE HIGH SOLID ACRYLIC URETHANE BASE COAT SHALL BE APPLIED, PROVIDING EXCELLENT COVERAGE AND DURABILITY. A MINIMUM OF TWO (2) COATS SHALL BE APPLIED.
- SIKKENS HIGH SOLID LVBT650 (CLEAR COAT) - HIGH SOLID LV CLEAR COAT SHALL BE APPLIED AS THE FINAL STEP IN ORDER TO ENSURE FULL GLOSS AND COLOR RETENTION AND DURABILITY. A MINIMUM OF TWO (2) COATS SHALL BE APPLIED.

ANY LOCATION WHERE ALUMINUM IS PENETRATED AFTER PAINTING, FOR THE PURPOSE OF MOUNTING STEPS, HAND RAILS, DOORS, LIGHTS, OR OTHER SPECIFIED COMPONENTS SHALL BE TREATED AT THE POINT OF PENETRATION WITH A CORROSION INHIBITING PRE-TREATMENT (ECK CORROSION CONTROL). THE PRE-TREATMENT SHALL BE APPLIED TO THE ALUMINUM SHEET METAL OR ALUMINUM EXTRUSIONS IN ALL LOCATIONS WHERE THE ALUMINUM HAS BEEN PENETRATED. ALL HARDWARE USED IN MOUNTING STEPS, HAND RAILS, DOORS, LIGHTS, OR OTHER SPECIFIED COMPONENTS SHALL BE INDIVIDUALLY TREATED WITH THE CORROSION INHIBITING PRE-TREATMENT.

AFTER THE PAINT PROCESS IS COMPLETE, THE GLOSS RATING OF THE UNIT SHALL BE TESTED WITH A 20 DEGREE GLOSS METER. COATING THICKNESS SHALL BE MEASURED WITH A DIGITAL MIL GAUGE AND THE ORANGE PEEL WITH A DIGITAL WAVE SCAN DEVICE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **PAINT BODY SMALL**

THE APPARATUS BODY SHALL BE PAINTED SIKKENS FLNA3225E-1 RED. THE PAINT PROCESS SHALL MEET OR EXCEED CURRENT STATE REGULATIONS CONCERNING PAINT OPERATIONS. POLLUTION CONTROL SHALL INCLUDE MEASURES TO PROTECT THE ATMOSPHERE, WATER, AND SOIL. CONTRACTOR SHALL, UPON DEMAND, PROVIDE EVIDENCE THAT THE MANUFACTURING FACILITY IS IN COMPLIANCE WITH STATE EPA RULES AND REGULATIONS.

THE ALUMINUM BODY EXTERIOR SHALL HAVE NO MOUNTED COMPONENTS PRIOR TO PAINTING TO ASSURE FULL COVERAGE OF METAL TREATMENTS AND PAINT TO THE EXTERIOR SURFACES OF THE BODY. ANY VERTICALLY OR

HORIZONTALLY HINGED SMOOTH-PLATE COMPARTMENT DOORS SHALL BE PAINTED SEPARATELY TO ASSURE PROPER PAINT COVERAGE ON BODY, DOOR JAMBS AND DOOR EDGES.

PAINT PROCESS SHALL FEATURE SIKKENS HIGH SOLID LV PRODUCTS AND BE PERFORMED IN THE FOLLOWING STEPS:

- CORROSION PREVENTION - ALL ALUMINUM SURFACES SHALL BE PRE-TREATED WITH THE ALODINE 5700 CONVERSION COATING TO PROVIDE SUPERIOR CORROSION RESISTANCE AND EXCELLENT ADHESION OF THE BASE COAT.
- SIKKENS SEALER/PRIMER LV - ACRYLIC URETHANE SEALER/PRIMER SHALL BE APPLIED TO GUARANTEE EXCELLENT GLOSS HOLD-OUT, CHIP RESISTANCE AND A UNIFORM BASE COLOR.
- SIKKENS HIGH SOLID LVBT650 (BASE COAT) - A LEAD-FREE, CHROMATE-FREE HIGH SOLID ACRYLIC URETHANE BASE COAT SHALL BE APPLIED, PROVIDING EXCELLENT COVERAGE AND DURABILITY. A MINIMUM OF TWO (2) COATS SHALL BE APPLIED.
- SIKKENS HIGH SOLID LVBT650 (CLEAR COAT) - HIGH SOLID LV CLEAR COAT SHALL BE APPLIED AS THE FINAL STEP IN ORDER TO ENSURE FULL GLOSS AND COLOR RETENTION AND DURABILITY. A MINIMUM OF TWO (2) COATS SHALL BE APPLIED.

ANY LOCATION WHERE ALUMINUM IS PENETRATED AFTER PAINTING, FOR THE PURPOSE OF MOUNTING STEPS, HAND RAILS, DOORS, LIGHTS, OR OTHER SPECIFIED COMPONENTS SHALL BE TREATED AT THE POINT OF PENETRATION WITH A CORROSION INHIBITING PRE-TREATMENT (ECK CORROSION CONTROL). THE PRE-TREATMENT SHALL BE APPLIED TO THE ALUMINUM SHEET METAL OR ALUMINUM EXTRUSIONS IN ALL LOCATIONS WHERE THE ALUMINUM HAS BEEN PENETRATED. ALL HARDWARE USED IN MOUNTING STEPS, HAND RAILS, DOORS, LIGHTS, OR OTHER SPECIFIED COMPONENTS SHALL BE INDIVIDUALLY TREATED WITH THE CORROSION INHIBITING PRE-TREATMENT.

AFTER THE PAINT PROCESS IS COMPLETE, THE GLOSS RATING OF THE UNIT SHALL BE TESTED WITH A 20 DEGREE GLOSS METER. COATING THICKNESS SHALL BE MEASURED WITH A DIGITAL MIL GAUGE AND THE ORANGE PEEL WITH A DIGITAL WAVE SCAN DEVICE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **INTERIOR PAINT**

##### **CAB INTERIOR PAINT**

THE INTERIOR OF THE CAB SHALL BE PAINTED ZOLATONE GRAY #20-64. PRIOR TO PAINTING, ALL EXPOSED INTERIOR METAL SURFACES SHALL BE PRETREATED USING A CORROSION PREVENTION SYSTEM.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **STRIPING, DECALS, AND LETTTERING**

##### **DECALS**

THERE SHALL BE TWO (2) 13" GOLD KNOXVILLE FIRE DEPARTMENT MALTESE CROSSES ON EACH FRONT CAB DOOR. THE DECAL SHALL BE REFLECTIVE WITH BLACK LETTERING. PHOTOS WILL BE PROVIDED IF NEEDED.

THERE SHALL BE TWO (2) 6" BLUE STAR OF LIFE DECALS PROVIDED TO BE PLACED ON THE MIDDLE CAB DOOR.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

##### **LETTERING**

THE FOLLOWING LETTERING SHALL BE WHITE REFLECTIVE WITH A BLACK SHADOW TO BE MORE VISIBLE DURING LOW LIGHT CONDITIONS.

THERE SHALL BE 15 - 3" LETTERS  
8 - 6" LETTERS  
25 - 2.5" LETTERS  
8 - 12" LETTERS



THERE SHALL BE 5 - 2.5" LETTERS NON-REFLECTIVE TO BE PLACED AT THE BOTTOM FRONT DOOR HINGE AREA AS THE FLEET NUMBER. NUMBER SHALL BE PROVIDED TO WINNING BIDDER DURING PRE-CONSTRUCTION.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **CAB AND BODY SCOTCHLITE STRIPING**

A REFLECTIVE STRIPE SHALL BE ON THE APPARATUS PER NFPA 1901. THE REFLECTIVE STRIPE SHALL BE A 1", 4", AND 1" DESIGN WITH A "Z" PATTERN ON THE BODY. THE STRIPE WILL BEGIN JUST ABOVE BUMPER ON FRONT OF APPARATUS AND CONTINUE TO REAR OF TRUCK.

COLOR: WHITE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **REAR BODY 3M DIAMOND GRADE STRIPING**

CHEVRON STYLE 3M DIAMOND GRADE STRIPING SHALL BE PROVIDED ON THE REAR OF THE APPARATUS. THE STRIPES SHALL CONSIST OF 6" RED/FLUORESCENT YELLOW GREEN ALTERNATING STRIPES IN AN "A" PATTERN. THE STRIPING SHALL BE LOCATED ON THE REAR FACING EXTRUSIONS, PANELS AND DOORS INBOARD AND OUTBOARD OF THE BEAVERTAILS IF APPLICABLE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **WARRANTY / STANDARD & EXTENDED AT A MINIMUM.**

##### **PARTS & LABOR WARRANTY**

THERE SHALL BE A FIVE-(5) YEAR MECHANICAL PARTS AND LABOR WARRANTY, EXCLUDING WEAR ITEMS SUCH AS LIGHT BULBS, WIPER BLADES, BRAKE PADS, ETC., PROVIDED WITH THE APPARATUS. THE APPARATUS SHALL BE FREE OF DEFECTS IN MATERIAL AND WORKMANSHIP FOR A WARRANTY PERIOD OF FIVE-(5) YEARS AFTER THE DATE ON WHICH THE APPARATUS IS FIRST DELIVERED TO THE KNOXVILLE FIRE DEPARTMENT.

EACH MANUFACTURER SHALL SUPPLY ON COMPANY LETTERHEAD, AS PART OF THEIR BID PACKAGE, A COPY OF THE DETAILED WARRANTY OR WARRANTIES THAT THEY PROPOSE TO PROVIDE, AND IN NO CASE SHALL THE CUSTOM CHASSIS WARRANTY BE LESS THAN FIVE (5) YEARS. IT SHALL INCLUDE AS THE MINIMUM THE A/C, DEFROSTER AND HEATER SYSTEMS, SPRING SUSPENSION COMPONENTS, STEERING GEARS, GAUGE INSTRUMENTATION, SEATS, INSTRUMENT CONSOLES, AND A \$10,000 COLLATERAL DAMAGE WARRANTY ON THE TRANSMISSION COOLER. THE ELECTRICAL SYSTEM, CAB STRUCTURAL, ENGINE, TRANSMISSION, FRAME AND CROSS MEMBERS ARE TO BE COVERED UNDER SEPARATE WARRANTIES DETAILED ELSEWHERE IN THESE SPECIFICATIONS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

##### **LIFETIME FRAME WARRANTY**

THE APPARATUS MANUFACTURER SHALL PROVIDE A FULL LIFETIME FRAME WARRANTY. THIS WARRANTY SHALL COVER ALL APPARATUS MANUFACTURER DESIGNED FRAME, FRAME MEMBERS, AND CROSS-MEMBERS AGAINST DEFECTS IN MATERIALS OR WORKMANSHIP FOR THE LIFETIME OF THE COVERED APPARATUS. A COPY OF THE WARRANTY DOCUMENT SHALL BE PROVIDED WITH THE BID. FRAME WARRANTIES THAT DO NOT COVER CROSS-MEMBERS FOR THE LIFE OF THE VEHICLE SHALL NOT BE ACCEPTABLE.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

##### **10 YEAR 100,000 MILE STRUCTURAL WARRANTY**

THE APPARATUS MANUFACTURER SHALL PROVIDE A COMPREHENSIVE 10 YEAR/100,000 MILE STRUCTURAL WARRANTY. THIS WARRANTY SHALL COVER ALL STRUCTURAL COMPONENTS OF THE CAB AND/OR BODY MANUFACTURED BY THE APPARATUS MANUFACTURER AGAINST DEFECTS IN MATERIALS OR WORKMANSHIP FOR 10 YEARS OR 100,000 MILES, WHICHEVER OCCURS FIRST. EXCLUDED FROM THIS WARRANTY ARE ALL HARDWARE, MECHANICAL ITEMS, ELECTRICAL ITEMS, OR PAINT FINISHES. A COPY OF THE WARRANTY DOCUMENT SHALL BE PROVIDED WITH THE BID.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**10 YEAR STAINLESS STEEL PLUMBING WARRANTY**

THE APPARATUS MANUFACTURER SHALL PROVIDE A FULL 10-YEAR STAINLESS STEEL PLUMBING COMPONENTS WARRANTY. THIS WARRANTY SHALL COVER DEFECTS IN MATERIALS OR WORKMANSHIP OF APPARATUS MANUFACTURER DESIGNED FOAM/WATER PLUMBING SYSTEM STAINLESS STEEL COMPONENTS FOR 10 YEARS. A COPY OF THE WARRANTY DOCUMENT SHALL BE PROVIDED WITH THE BID.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**10 YEAR PAINT AND CORROSION WARRANTY**

THE APPARATUS MANUFACTURER SHALL PROVIDE A 10-YEAR LIMITED PAINT AND CORROSION PERFORATION WARRANTY. THIS WARRANTY SHALL COVER PAINT PEELING, CRACKING, BLISTERING, AND CORROSION PROVIDED THE VEHICLE IS USED IN A NORMAL AND REASONABLE MANNER.

THE PAINT SHALL BE PRORATED FOR 10 YEARS AS FOLLOWS:

TOPCOAT & APPEARANCE:  
GLOSS, COLOR RETENTION, CRACKING

0 TO 72 MONTHS	100%
73 TO 120 MONTHS	50%

COATING SYSTEM, ADHESION & CORROSION:  
INCLUDES DISSIMILAR METAL CORROSION, FLAKING,  
BLISTERING, BUBBLING

0 TO 36 MONTHS	100%
37 TO 84 MONTHS	50%
85 TO 120 MONTHS	25%

CORROSION PERFORATION SHALL BE COVERED 100% FOR 10 YEARS. CORROSION PERFORATION IS DEFINED AS COMPLETE PENETRATION THROUGH THE EXTERIOR METAL OF THE APPARATUS.

THE WARRANTY PERIOD SHALL BEGIN UPON DELIVERY OF THE APPARATUS TO THE KNOXVILLE FIRE DEPARTMENT. A COPY OF THE WARRANTY DOCUMENT SHALL BE PROVIDED WITH THE BID.

UV PAINT FADE SHALL BE COVERED IN A SEPARATE WARRANTY SUPPLIED BY AKZO NOBEL (SIKKENS) AND SHALL BE FOR A MINIMUM OF 10 YEARS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**SUPPORT, DELIVERY, MANUALS, AND INSPECTIONS**

**APPROVAL DRAWINGS**

A GENERAL ARRANGEMENT DRAWING DEPICTING THE VEHICLES APPEARANCE SHALL BE PROVIDED TO THE CITY FOR INSPECTION. THE DRAWING SHALL CONSIST OF LEFT SIDE, RIGHT SIDE, FRONT, AND REAR ELEVATION VIEWS.

VEHICLES REQUIRING PUMP CONTROLS SHALL INCLUDE A GENERAL ARRANGEMENT VIEW OF THE PUMP OPERATOR`S POSITION, SCALED THE SAME AS THE ELEVATION VIEWS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

**ELECTRONIC MANUALS**

TWO (2) COPIES OF ALL OPERATOR, SERVICE, AND PARTS MANUALS MUST BE SUPPLIED AT THE TIME OF DELIVERY IN ELECTRONIC FORMAT (CD-ROMS). THE ELECTRONIC MANUALS SHALL INCLUDE THE FOLLOWING INFORMATION:

- OPERATING INSTRUCTIONS, DESCRIPTIONS, SPECIFICATIONS, AND RATINGS OF THE CAB, CHASSIS, BODY, AERIAL (IF APPLICABLE), INSTALLED COMPONENTS, AND AUXILIARY SYSTEMS.
- WARNINGS AND CAUTIONS PERTAINING TO THE OPERATION AND MAINTENANCE OF THE FIRE APPARATUS AND FIRE FIGHTING SYSTEMS.
- CHARTS, TABLES, CHECKLISTS, AND ILLUSTRATIONS RELATING TO LUBRICATION, CLEANING, TROUBLESHOOTING, DIAGNOSTICS, AND INSPECTIONS.
- INSTRUCTIONS REGARDING THE FREQUENCY AND PROCEDURE FOR RECOMMENDED MAINTENANCE.
- MAINTENANCE INSTRUCTIONS FOR THE REPAIR AND REPLACEMENT OF INSTALLED COMPONENTS.
- PARTS LISTING WITH DESCRIPTIONS AND ILLUSTRATIONS FOR IDENTIFICATION.
- WARRANTY DESCRIPTIONS AND COVERAGE.

THE CD-ROM SHALL INCORPORATE A NAVIGATION PAGE WITH ELECTRONIC LINKS TO THE OPERATOR`S MANUAL, SERVICE MANUAL, PARTS MANUAL, AND WARRANTY INFORMATION, AS WELL AS INSTRUCTIONS ON HOW TO USE THE MANUAL. EACH COPY SHALL INCLUDE A TABLE OF CONTENTS WITH LINKS TO THE SPECIFIED DOCUMENTS OR ILLUSTRATIONS.

THE CD MUST BE FORMATTED IN SUCH A MANNER AS TO ALLOW NOT ONLY THE PRINTING OF THE ENTIRE MANUAL, BUT TO ALSO THE CUTTING, PASTING, OR COPYING OF INDIVIDUAL DOCUMENTS TO OTHER ELECTRONIC MEDIA, SUCH AS ELECTRONIC MAIL, MEMOS, AND THE LIKE.

A FIND FEATURE SHALL BE INCLUDED TO ALLOW FOR SEARCHES BY TEXT OR BY PART NUMBER.

THESE ELECTRONIC MANUALS SHALL BE ACCESSIBLE FROM ANY COMPUTER OPERATING SYSTEM CAPABLE OF SUPPORTING PORTABLE DOCUMENT FORMAT (PDF). PERMANENT COPIES OF ALL PERTINENT DATA SHALL BE KEPT FILE AT BOTH THE LOCAL DEALERSHIP AND AT THE MANUFACTURER`S LOCATION.

NOTE: ENGINE OVERHAUL, ENGINE PARTS, TRANSMISSION OVERHAUL, AND TRANSMISSION PARTS MANUALS ARE NOT INCLUDED.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **BUILD SHEET**

WINNING BIDDER SHALL PROVIDE ONE (1) "BUILD SHEET" PER VEHICLE WHICH LISTS ALL PARTS USED IN ASSEMBLING EACH VEHICLE. BUILD SHEET MUST BE PROVIDED AT DELIVERY.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **FIRE APPARATUS SAFETY GUIDE**

FIRE APPARATUS SAFETY GUIDE PUBLISHED BY FAMA, LATEST EDITION. THIS SAFETY MANUAL IS INTENDED TO POINT OUT SOME OF THE BASIC SAFETY SITUATIONS THAT MAY BE ENCOUNTERED DURING THE NORMAL OPERATION AND MAINTENANCE OF A FIRE APPARATUS AND TO SUGGEST POSSIBLE WAYS OF DEALING WITH THESE SITUATIONS. THIS MANUAL IS NOT A SUBSTITUTE FOR THE FIRE APPARATUS OPERATOR AND MAINTENANCE MANUALS OR COMMERCIAL CHASSIS MANUFACTURER`S OPERATOR AND MAINTENANCE MANUALS.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

#### **EQUIPMENT MOUNTING AND EQUIPMENT**

##### **EQUIPMENT MOUNTING**

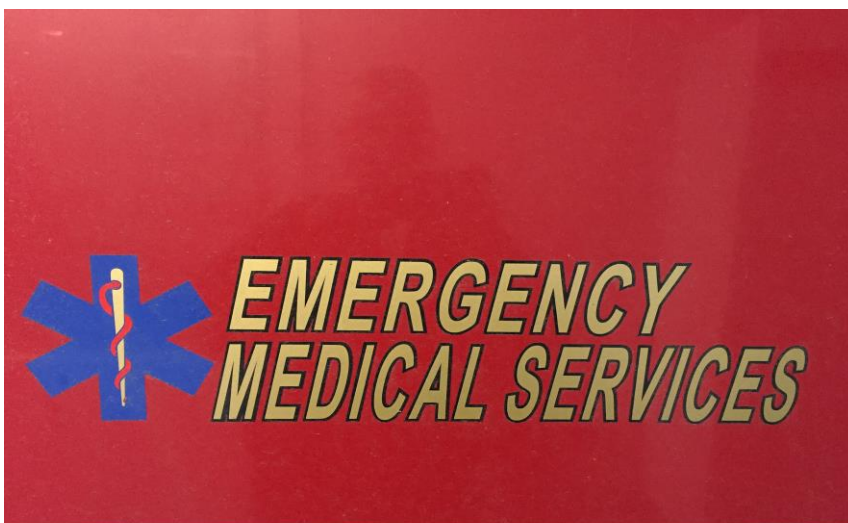
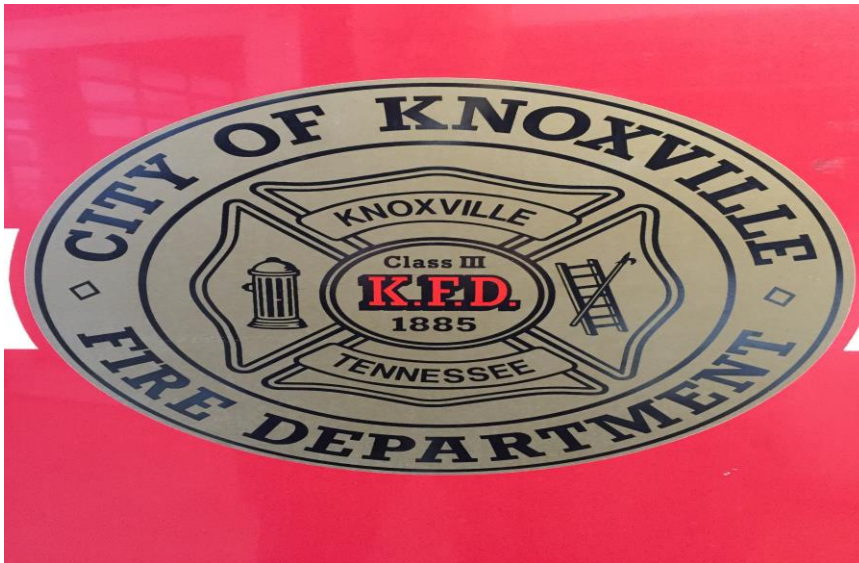
ALL TOOLS SHALL BE MOUNTED WITH (PAC) TOOL MOUNTS. THE PLACEMENT OF TOOLS SHALL BE DETERMINED AT FINAL INSPECTION BY THE FIRE DEPARTMENT STAFF. THE FOLLOWING EQUIPMENT SHALL BE MOUNTED TO THE APPARATUS BY THE MANUFACTURER. THE (PAC) TOOL MOUNTS SHALL BE USED IN MOUNTING THE EQUIPMENT. THE EQUIPMENT SHALL BE SHIPPED TO THE MANUFACTURER PRIOR TO THE FINAL INSPECTION.

**BIDDER FULLY COMPLIES WITHOUT EXCEPTION OR DEVIATIONS    YES\_\_\_\_\_ NO\_\_\_\_\_**

### EQUIPMENT LIST

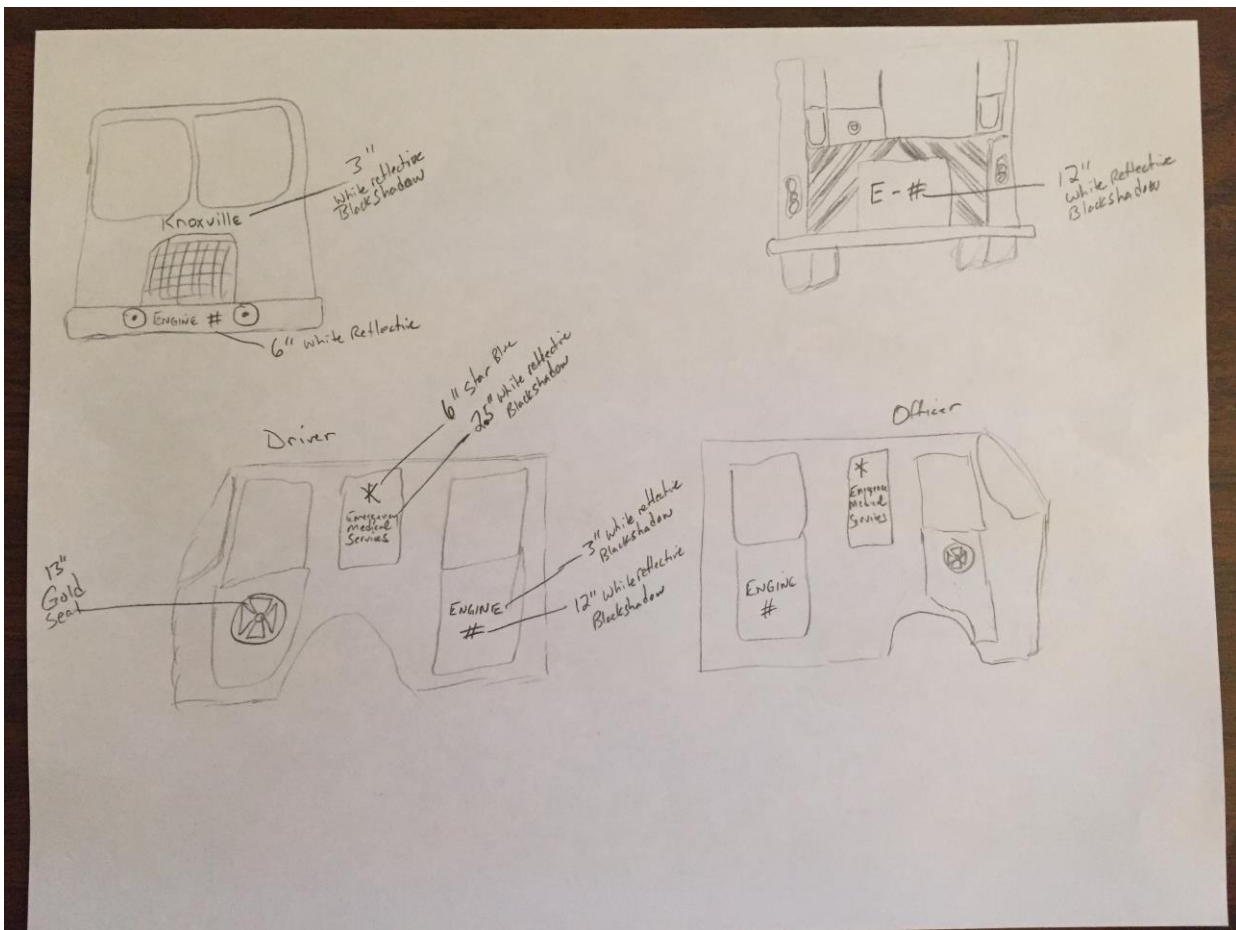
HOSE CLAMP (1)  
HYDRANT HOSE GATE (1)  
GATED WYE (1)  
PICK HEAD AXE (1)  
FLAT HEAD AXE (1)  
PIKE POLES (2)  
SLEDGE HAMMER (1)  
BOLT CUTTERS (1)  
WATER COOLER (1)  
HALIGAN TOOL (2)  
CO2 EXTINGUISHER (1)  
DRY CHEMICAL (80 B:C) (1)  
2 ½" PLAYPIPE WITH 1", 1.125", AND 1.25" TIP  
2 ½" COMBINATION NOZZLE  
HOSE FITTINGS 2 ½" (10) 5" (8)

### EXAMPLE OF DECALS





## PLACEMENT TEMPLATE



## GENERAL INFORMATION

1. SEALED BIDS WILL BE RECEIVED BY THE PURCHASING AGENT OF THE CITY OF KNOXVILLE IN ROOM 667-674, CITY/COUNTY BUILDING, 400 MAIN AVENUE, KNOXVILLE, TENNESSEE UNTIL **THURSDAY, DECEMBER 1, 2016, AT 11:00:00 A.M.**, AT WHICH TIME THEY WILL BE PUBLICLY OPENED AND READ ALOUD AND THE CONTRACT AWARDED AS SOON AS PRACTICABLE. NO BID WILL BE RECEIVED OR ACCEPTED AFTER THE ABOVE-SPECIFIED TIME FOR THE OPENING OF BIDS. BIDS THAT ARRIVE LATE DUE TO THE FAULT OF U. S. POSTAL SERVICE, UNITED PARCEL SERVICE, DHL, FEDEX, ANY DELIVERY/COURIER SERVICE, OR ANY

OTHER CARRIER OF ANY SORT ARE STILL CONSIDERED LATE AND SHALL NOT BE ACCEPTED BY THE CITY. SUCH BIDS SHALL REMAIN UNOPENED AND WILL BE RETURNED TO THE SUBMITTING ENTITY UPON REQUEST.

2. THE CITY OF KNOXVILLE RESERVES THE RIGHT TO WAIVE ANY INFORMALITIES OR TO REJECT ANY OR ALL BIDS, TO EVALUATE BIDS, AND TO ACCEPT ANY BID WHICH, IN ITS OPINION, MAY BE FOR THE BEST INTEREST OF THE CITY.
3. PRIOR TO SUBMITTING THEIR BIDS, BIDDERS ARE TO BE REGISTERED WITH THE PURCHASING DIVISION BY SETTING UP A VENDOR SELF-SERVICE ACCOUNT. INSTRUCTIONS FOR REGISTERING ON-LINE ARE AVAILABLE AT [WWW.KNOXVILLETN.GOV/PURCHASING](http://WWW.KNOXVILLETN.GOV/PURCHASING). BID SUBMISSIONS FROM UN-REGISTERED BIDDERS MAY BE REJECTED.
4. INCLUDED IN THE INVITATION TO BID IS AN AFFIDAVIT IN PROOF THAT THE UNDERSIGNED HAS NOT ENTERED INTO ANY COLLUSION WITH ANY PERSON IN RESPECT TO THIS BID OR ANY OTHER BID. THE FULLY EXECUTED AND NOTARIZED AFFIDAVIT MUST BE SUBMITTED WITH THE SEALED BID.
5. **NO CONTACT POLICY: AFTER THE POSTING OF THIS SOLICITATION TO THE PURCHASING DIVISION'S WEBSITE, ANY CONTACT INITIATED BY ANY PROPOSER WITH ANY CITY OF KNOXVILLE REPRESENTATIVE CONCERNING THIS PROPOSAL IS STRICTLY PROHIBITED, UNLESS SUCH CONTACT IS MADE WITH THE PURCHASING DIVISION REPRESENTATIVE LISTED HEREIN OR WITH SAID REPRESENTATIVE'S AUTHORIZATION. ANY UNAUTHORIZED CONTACT MAY CAUSE THE DISQUALIFICATION OF THE PROPOSER FROM THIS PROCUREMENT TRANSACTION.**
6. INCLEMENT WEATHER: DURING PERIODS OF INCLEMENT WEATHER, THE PURCHASING DIVISION WILL ENACT THE FOLLOWING PROCEDURES WITH REGARD TO SOLICITATIONS AND WEATHER DELAYS:
  - IF CITY OFFICES ARE CLOSED DUE TO INCLEMENT WEATHER ON THE DATE THAT BIDS/PROPOSALS/QUALIFICATIONS/LETTERS OF INTEREST ARE DUE INTO THE PURCHASING OFFICE, ALL SOLICITATIONS DUE THAT SAME DAY WILL BE MOVED TO THE NEXT OPERATIONAL BUSINESS DAY.
  - THE CITY OF KNOXVILLE SHALL NOT BE LIABLE FOR ANY COMMERCIAL CARRIER'S DECISION REGARDING DELIVERIES DURING INCLEMENT WEATHER.
7. **IMPORTANT: BID SUBMISSIONS SHALL INCLUDE SIX (6) HARD COPIES (ONE ORIGINAL AND FIVE DUPLICATES—MARK THE ORIGINAL AS SUCH) AND ONE ELECTRONIC COPY OF THE BID (.PDF FORMAT ON CD ONLY—MARK THE STORAGE DEVICE WITH THE COMPANY NAME); THE ELECTRONIC VERSION SHALL BE AN EXACT DUPLICATE OF THE ORIGINAL, AND THE ELECTRONIC VERSION WILL BE THE OFFICIAL DOCUMENT EXHIBITED IN THE CONTRACT. ELECTRONIC SUBMISSIONS MUST BE INCLUDED WITH THE SEALED SUBMISSIONS; DO NOT EMAIL YOUR SUBMISSION.**
8. REQUIRED NUMBER OF COPIES OF THE BID MUST BE SUBMITTED IN A SEALED SHIPPING CARTON, ADDRESSED TO THE PURCHASING AGENT; CITY OF KNOXVILLE; CITY/COUNTY BUILDING; 400 MAIN STREET, ROOM 667-674; KNOXVILLE, TENNESSEE, 37902. **THE SEALED SHIPPING CARTON CONTAINING THE REQUIRED NUMBER OF BID COPIES MUST BE PLAINLY MARKED ON THE OUTSIDE AS: "PUMPER TRUCKS."**
9. ALL BIDS MUST BE MADE ON THE BID FORM SUPPLIED WITH THE CONTRACT DOCUMENTS, AND NO INTERLINEATIONS, EXCISIONS, OR SPECIAL CONDITIONS SHALL BE MADE OR INCLUDED IN THE BID EVALUATION SHEET BY THE BIDDER. **ANY BID ON WHICH THERE IS AN ALTERATION OF OR DEPARTURE FROM THE BID FORM MAY BE CONSIDERED IRREGULAR AND MAY BE REJECTED.** ALL BIDS MUST BE SIGNED IN FULL BY THE BIDDER OR BIDDERS IN THEIR BUSINESS NAME OR STYLE WHEN SUBMITTED AND MUST SHOW HIS OR THEIR COMPLETE ADDRESS.
10. NO BIDDER MAY WITHDRAW HIS BID FOR A PERIOD OF 60 DAYS AFTER THE ACTUAL DATE OF THE OPENING THEREOF.
11. ALL BIDDERS MUST BE LICENSED TO CONDUCT BUSINESS IN THE STATE OF TENNESSEE. BIDDER'S NAME, ADDRESS, LICENSE NUMBER, DATE OF EXPIRATION OF LICENSE, AND THAT PART OF THE LICENSE CLASSIFICATION APPLYING TO THE BID MUST BE PLACED ON THE SEALED ENVELOPE CONTAINING THE BID.
12. PAYMENT FOR COMPLETED SERVICES DELIVERED TO AND ACCEPTED BY THE CITY SHALL BE AT THE CONTRACT PRICE.
13. ALL BIDS MUST BE SIGNED WITH THE FIRM NAME AND BY A RESPONSIBLE OFFICER OR EMPLOYEE. OBLIGATIONS ASSUMED BY SUCH SIGNATURE MUST BE FULFILLED.

14. BIDDERS SHALL VERIFY BIDS BEFORE SUBMISSION, AS BIDS CANNOT BE WITHDRAWN OR CORRECTED AFTER BEING OPENED.
15. THE CITY'S PERFORMANCE AND OBLIGATION TO PAY UNDER THIS CONTRACT IS SUBJECT TO FUNDING CONTINGENT UPON AN ANNUAL APPROPRIATION.
16. IF FEDERAL EXCISE TAX APPLIES, SHOW AMOUNT OF SAME AND DEDUCT. BEAR IN MIND THAT THE CITY IS EXEMPT FROM TENNESSEE SALES TAX.
17. PRICES ARE CONSIDERED FOB DESTINATION UNLESS OTHERWISE STATED IN THE INVITATION TO BID.
18. ALL BIDS IN EXCESS OF \$100,000 MUST BE ACCOMPANIED BY A CASHIER'S CHECK OR A CERTIFIED CHECK OR BY A SURETY BOND IN AN AMOUNT EQUAL TO FIVE (5) PERCENT OF THE TOTAL ANNUAL AMOUNT AS A GUARANTEE THAT IF THE BID IS ACCEPTED THE REQUIRED CONTRACT WILL BE EXECUTED AND PAYMENT AND PERFORMANCE BONDS (IF REQUIRED) FURNISHED. ATTORNEYS-IN-FACT WHO SIGN BID BONDS MUST FILE WITH EACH BOND A CERTIFIED AND EFFECTIVE DATED COPY OF THEIR POWER OF ATTORNEY. SAID BOND OR CHECK WILL BE RETURNED TO THE UNSUCCESSFUL BIDDER AS SOON AS THE CONTRACT HAS BEEN AWARDED AND TO THE SUCCESSFUL BIDDER AS SOON AS HE HAS EXECUTED THE CONTRACT AND FURNISHED ANY OTHER REQUIRED BONDS AND THE CONTRACT HAS BEEN EXECUTED BY THE CITY OF KNOXVILLE.
19. BY EXECUTION AND DELIVERY OF A BID SUBMISSION, THE BIDDER AGREES THAT ANY ADDITIONAL TERMS AND CONDITIONS, WHETHER SUBMITTED TO THE CITY PURPOSELY OR INADVERTENTLY, SHALL HAVE NO FORCE OR EFFECT.
20. BIDDERS MUST PROVIDE A FULLY EXECUTED AND NOTARIZED DRUG-FREE WORKPLACE AFFIDAVIT WITH THEIR BID SUBMISSION.
21. REGARDING THE EQUAL BUSINESS OPPORTUNITY PROGRAM CONTRACTING, THE APPROPRIATE FORM 1 OR FORM 2 **MUST** BE SUBMITTED WITH THE BID. SUCCESSFUL BIDDERS WHO INCLUDE FORM I WITH THEIR BID, STATING THEIR INTENT TO USE MOB OR WOB SUBCONTRACTORS FOR ANY PART OF THE CONTRACT, WILL BE REQUIRED TO SUBMIT FORM III, STATEMENT OF PAYMENTS TO MOB/WOB SUBCONTRACTOR(S) & SUPPLIER(S). CONTRACTORS WILL USE FORM III TO REPORT THE AMOUNT(S) THEY HAVE PAID TO MOB AND/OR WOB SUBCONTRACTORS ON JUNE 30TH AND DECEMBER 31ST OF EACH YEAR DURING THE LIFE OF THE CONTRACT AND WITH THE FINAL PAYMENT. FAILURE TO SUBMIT THIS REPORTING DATA MAY RESULT IN A DELAY OF PAYMENTS. FINAL PAYMENT WILL NOT BE RELEASED BY THE CITY UNTIL FORM III IS SUBMITTED.
22. BIDDERS MUST COMPLY WITH THE PRESIDENT'S EXECUTIVE ORDERS NO.11246 AND 11375 WHICH PROHIBIT DISCRIMINATION IN EMPLOYMENT REGARDING RACE, COLOR, RELIGION, SEX OR NATIONAL ORIGIN. BIDDERS MUST NOT MAINTAIN OR PROVIDE FOR THEIR EMPLOYEES ANY FACILITIES THAT ARE SEGREGATED ON THE BASIS OF RACE, COLOR, RELIGION OR NATIONAL ORIGIN. BIDDERS MUST ALSO COMPLY WITH TITLE VI OF THE CIVIL RIGHTS ACT OF 1964, COPELAND ANTI-KICK BACK ACT, THE CONTRACT WORK HOURS AND SAFETY STANDARD ACT, SECTION 402 OF THE VIETNAM VETERANS ADJUSTMENT ACT OF 1974 AND SECTION 503 OF THE REHABILITATION ACT OF 1973, ALL OF WHICH ARE HEREIN INCORPORATED BY REFERENCE.
23. ALL BIDDERS MUST COMPLY WITH TITLE VI OF THE CIVIL RIGHTS ACT OF 1964, AS CODIFIED IN 42 U.S.C. 2000D. THE SUCCESSFUL BIDDER MUST FOLLOW TITLE VI GUIDELINES IN ALL AREAS INCLUDING HIRING PRACTICES, OPEN FACILITIES, INSURANCE, AND WAGES. THE CITY OF KNOXVILLE RESERVES THE RIGHT TO REVIEW ALL COMPLIANCE RECORDS BY A CONTRACT COMPLIANCE OFFICER DESIGNATED BY THE CITY.
24. NO INTERPRETATION OF THE MEANING OF THE PLANS, SPECIFICATIONS, OR OTHER PRE-BID DOCUMENTS WILL BE MADE TO ANY BIDDER ORALLY. EACH REQUEST FOR SUCH INTERPRETATION SHOULD BE IN WRITING ADDRESSED TO JANICE MCCLELLAND, ASSISTANT PURCHASING AGENT FOR THE CITY OF KNOXVILLE, 400 MAIN STREET, ROOM 667, KNOXVILLE, TN 37902, OR EMAILED TO HER AT JMCLELLAND@KNOXVILLETN.GOV. **TO BE GIVEN CONSIDERATION, SUCH REQUESTS/QUESTIONS MUST BE RECEIVED BY CLOSE OF BUSINESS ON November 23, 2016.** ANY AND ALL SUCH INTERPRETATIONS AND ANY SUPPLEMENTAL INSTRUCTIONS WILL BE IN THE FORM OF WRITTEN ADDENDA TO THE SPECIFICATIONS WHICH, IF ISSUED, WILL BE POSTED TO THE CITY'S WEBSITE AT WWW.KNOXVILLETN.GOV/PURCHASING. SUBMITTING ORGANIZATIONS ARE STRONGLY ENCOURAGED TO VIEW THIS WEBSITE OFTEN TO SEE IF ADDENDA ARE POSTED. FAILURE OF ANY BIDDER TO RECEIVE SUCH ADDENDUM OR INTERPRETATION SHALL NOT RELIEVE SUCH BIDDER FROM ANY OBLIGATION UNDER HIS BID AS SUBMITTED. ALL ADDENDA SO ISSUED SHALL BECOME PART OF THE CONTRACT DOCUMENTS.

25. ATTENTION OF ALL BIDDERS IS DIRECTED TO THE SET OFF PROVISION CONTAINED IN ARTICLE II, SECTION 24-33, ENTITLED, "DEBTS OWED BY PERSONS RECEIVING PAYMENTS OTHER THAN SALARY", AND SECTION 2-1049 ENTITLED "RECEIPT OF BENEFITS FROM CITY CONTRACTS BY COUNCIL MEMBERS, EMPLOYEES, AND OFFICERS OF THE CITY" OF THE CODE OF THE CITY OF KNOXVILLE.
26. WHERE APPLICABLE, THE SUCCESSFUL BIDDER WILL BE REQUIRED TO PAY PREVAILING WAGES TO THOSE WHOM THEY EMPLOY (TO INCLUDE ANY SUB CONTRACTORS). INFORMATION REGARDING THE PREVAILING WAGE RATES MAY BE OBTAINED ON THE FOLLOWING STATE OF TENNESSEE WEBSITE: [WWW.STATE.TN.US/LABOR](http://WWW.STATE.TN.US/LABOR).
27. THE CITY MAY TERMINATE THIS AGREEMENT AT ANY TIME, WITH OR WITHOUT CAUSE, BY WRITTEN NOTICE OF TERMINATION TO THE CONTRACTOR. IF THE CITY TERMINATES THIS AGREEMENT, AND SUCH TERMINATION IS NOT A RESULT OF A DEFAULT BY THE CONTRACTOR, THE CONTRACTOR SHALL BE ENTITLED TO RECEIVE AS ITS SOLE AND EXCLUSIVE REMEDY THE FOLLOWING AMOUNTS FROM THE CITY, AND THE CITY SHALL HAVE NO FURTHER OR OTHER OBLIGATIONS TO THE CONTRACTOR: (A). THE AMOUNT DUE TO THE CONTRACTOR FOR WORK EXECUTED THROUGH THE DATE OF TERMINATION, NOT INCLUDING ANY FUTURE FEES, PROFITS, OR OTHER COMPENSATION OR PAYMENTS WHICH THE CONTRACTOR WOULD HAVE BEEN ENTITLED TO RECEIVE IF THE PROJECT HAD NOT BEEN TERMINATED; AND (B) THE DIRECT OUT-OF-POCKET COSTS INCURRED BY THE CONTRACTOR FOR DEMOBILIZATION OF THE PROJECT FOLLOWING RECEIPT OF THE NOTICE OF TERMINATION, NOT TO EXCEED THE AMOUNT REASONABLY AND ACTUALLY REQUIRED TO DEMOBILIZE THE PROJECT.
28. THE CITY MAY, BY WRITTEN NOTICE OF DEFAULT TO THE CONTRACTOR, TERMINATE THE WHOLE OR ANY PART OF THIS CONTRACT IF THE CONTRACTOR FAILS TO MAKE DELIVERY OF THE SUPPLIES OR TO PERFORM THE SERVICES WHEREIN THE TIME SPECIFIED HEREIN OR ANY EXTENSION THEREOF; OR IF THE CONTRACTOR FAILS TO PERFORM ANY OF THE OTHER PROVISIONS OF THE CONTRACT, OR SO FAILS TO MAKE PROGRESS AS TO ENDANGER PERFORMANCE OF THIS CONTRACT IN ACCORDANCE WITH ITS TERMS, AND IN EITHER OF THESE TWO CIRCUMSTANCES DOES NOT CURE SUCH FAILURE WITHIN A PERIOD OF 10 DAYS (OR SUCH LONGER PERIOD AS THE PURCHASING AGENT MAY AUTHORIZE IN WRITING) AFTER RECEIPT OF NOTICE FROM THE PURCHASING AGENT SPECIFYING SUCH FAILURE.
29. IF THE CONTRACT IS TERMINATED IN WHOLE OR IN PART FOR DEFAULT, THE CITY MAY PROCURE, UPON SUCH TERMS AND IN SUCH MANNER AS THE PURCHASING AGENT MAY DEEM APPROPRIATE, SUPPLIES OF SERVICES SIMILAR TO THOSE SO TERMINATED.
30. IF, AFTER NOTICE OF TERMINATION OF THIS CONTRACT UNDER THE PROVISIONS OF THIS CLAUSE, IT IS DETERMINED FOR ANY REASON THAT THE CONTRACTOR WAS NOT IN DEFAULT UNDER THE PROVISIONS OF THIS CLAUSE, OR THAT THE DEFAULT WAS EXCUSABLE UNDER THE PROVISIONS OF THIS CLAUSE, THE RIGHTS AND OBLIGATIONS OF THE PARTIES SHALL BE THE SAME AS IF THE NOTICE OF TERMINATION HAD BEEN ISSUED PURSUANT TO TERMINATION FOR CONVENIENCE OF THE CITY.
31. THE RIGHTS AND REMEDIES OF THE CITY PROVIDED IN THIS CLAUSE SHALL NOT BE EXCLUSIVE AND ARE IN ADDITION TO ANY OTHER RIGHTS AND REMEDIES PROVIDED BY LAW OR UNDER THIS CONTRACT.
32. BEFORE A CONTRACT WILL BE SIGNED BY THE CITY, THE SUBMITTING ENTITY, IF SELECTED, **MUST** PROVIDE THE CITY PURCHASING DIVISION WITH A COPY OF ITS VALID BUSINESS LICENSE **OR** WITH AN AFFIDAVIT EXPLAINING WHY IT IS EXEMPT FROM THE BUSINESS LICENSURE REQUIREMENTS OF THE CITY OR COUNTY IN WHICH IT IS HEADQUARTERED. IF A CONTRACT IS SIGNED, THE CONTRACTOR'S BUSINESS LICENSE SHALL BE KEPT CURRENT THROUGHOUT THE DURATION OF THE CONTRACT, AND THE CONTRACTOR SHALL INFORM THE CITY OF CHANGES IN ITS BUSINESS NAME OR LOCATION. ANY CONTRACT RESULTING FROM THIS INVITATION TO BID SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE SUBSTANTIVE LAWS OF THE STATE OF TENNESSEE AND ITS CONFLICT OF LAWS PROVISIONS. VENUE FOR ANY ACTION ARISING BETWEEN THE CITY AND THE VENDOR FROM THE AGREEMENT SHALL LIE IN KNOX COUNTY, TENNESSEE.
33. WHEN APPLICABLE AND PRIOR TO THE COMMENCEMENT OF THE CONTRACT, CONTRACTOR MUST, AT ITS SOLE EXPENSE, OBTAIN AND MAINTAIN IN FULL FORCE AND EFFECT FOR THE DURATION OF THE AGREEMENT AND ANY EXTENSION HEREOF AT LEAST THE FOLLOWING TYPES AND AMOUNTS OF INSURANCE FOR CLAIMS WHICH MAY ARISE FROM OR IN CONNECTION WITH THIS AGREEMENT. CONTRACTOR SHALL FURNISH THE CITY OF KNOXVILLE WITH PROPERLY EXECUTED CERTIFICATES OF INSURANCE WHICH SHALL CLEARLY EVIDENCE ALL INSURANCE REQUIRED BY THE CITY. ALL INSURANCE MUST BE UNDERWRITTEN BY INSURERS WITH AN A.M. BEST RATING OF A-VIII OR BETTER. SUCH INSURANCE SHALL BE AT A MINIMUM THE FOLLOWING:

EMPLOYERS' LIABILITY



THE SUCCESSFUL BIDDER SHALL, DURING THE PERFORMANCE OF THE CONTRACT, KEEP IN FORCE AT LEAST THE APPLICABLE STATUTORY LIMITS FOR WORKERS COMPENSATION INSURANCE AND AT LEAST THE FOLLOWING MINIMUM LIMITS OF EMPLOYERS LIABILITY INSURANCE:  
EACH ACCIDENT: \$500,000

COMMERCIAL GENERAL LIABILITY INSURANCE

PRODUCTS/COMPLETED OPERATIONS AGGREGATE \$2,000,000  
PERSONAL AND ADVERTISING INJURY \$2,000,000  
EACH OCCURRENCE \$2,000,000

COVERAGE SHALL BE WRITTEN ON A COMMERCIAL GENERAL LIABILITY FORM. THE POLICY SHALL BE WRITTEN ON AN OCCURRENCE FORM AND SHALL INCLUDE CONTRACTUAL LIABILITY COVERAGE SUBJECT TO THE TERMS AND CONDITIONS OF THE POLICY.

SUCH INSURANCE SHALL:

(A.) CONTAIN OR BE ENDORSED TO CONTAIN A PROVISION THAT INCLUDES THE CITY, ITS OFFICIALS, OFFICERS, EMPLOYEES, AND VOLUNTEERS AS ADDITIONAL INSURED WITH RESPECT TO LIABILITY ARISING OUT OF WORK OR OPERATIONS PERFORMED BY OR ON BEHALF OF THE CONTRACTOR INCLUDING MATERIALS, PARTS, OR EQUIPMENT FURNISHED IN CONNECTION WITH SUCH WORK OR OPERATIONS. THE COVERAGE SHALL CONTAIN NO SPECIAL LIMITATIONS ON THE SCOPE OF ITS PROTECTION AFFORDED TO THE ABOVE-LISTED INSURED. PROOF OF ADDITIONAL INSURED STATUS UP TO AND INCLUDING COPIES OF ENDORSEMENTS AND/OR POLICY WORDING WILL BE REQUIRED.

(B.) FOR ANY CLAIMS RELATED TO THIS PROJECT, CONTRACTOR'S INSURANCE COVERAGE SHALL BE PRIMARY INSURANCE AS RESPECTS THE CITY, ITS OFFICERS, OFFICIALS, OFFICERS, EMPLOYEES, AND VOLUNTEERS. ANY INSURANCE OR SELF-INSURANCE PROGRAMS COVERING THE CITY, ITS OFFICIALS, OFFICERS, EMPLOYEES, AND VOLUNTEERS SHALL BE EXCESS OF CONTRACTOR'S INSURANCE AND SHALL NOT CONTRIBUTE WITH IT.

(C.) AT THE SOLE DISCRETION OF THE CITY, DEDICATED LIMITS OF LIABILITY FOR THIS SPECIFIC PROJECT MAY BE REQUIRED.

- A. **AUTOMOBILE LIABILITY INSURANCE;** INCLUDING VEHICLES OWNED, HIRED, AND NON-OWNED, WITH A COMBINED SINGLE LIMIT OF NOT LESS THAN \$1,000,000 EACH ACCIDENT. SUCH INSURANCE SHALL INCLUDE COVERAGE FOR LOADING AND UNLOADING HAZARDS. INSURANCE SHALL CONTAIN OR BE ENDORSED TO CONTAIN A PROVISION THAT INCLUDES THE CITY, ITS OFFICIALS, OFFICERS, EMPLOYEES, AND VOLUNTEERS AS ADDITIONAL INSURED WITH RESPECT TO LIABILITY ARISING OUT OF AUTOMOBILES OWNED, LEASED, HIRED, OR BORROWED BY OR ON BEHALF OF CONTRACTOR.
- B. **WORKERS' COMPENSATION INSURANCE.** CONTRACTOR SHALL MAINTAIN WORKERS' COMPENSATION INSURANCE WITH STATUTORY LIMITS AS REQUIRED BY THE STATE OF TENNESSEE OR OTHER APPLICABLE LAWS AND EMPLOYERS' LIABILITY INSURANCE WITH LIMITS OF NOT LESS THAN \$500,000. CONTRACTOR SHALL REQUIRE EACH OF ITS SUBCONTRACTORS TO PROVIDE WORKERS' COMPENSATION FOR ALL OF THE LATTER'S EMPLOYEES TO BE ENGAGED IN SUCH WORK UNLESS SUCH EMPLOYEES ARE COVERED BY CONTRACTOR'S WORKERS' COMPENSATION INSURANCE COVERAGE. SUCH INSURANCE SHALL INCLUDE A WAIVER OF SUBROGATION IN FAVOR OF THE CITY. PROOF OF WAIVER OF SUBROGATION UP TO AND INCLUDING COPIES OF ENDORSEMENTS AND/OR POLICY WORDING WILL BE REQUIRED.

- C. **UMBRELLA/EXCESS LIABILITY INSURANCE.** THE SUCCESSFUL BIDDER SHALL, DURING THE PERFORMANCE OF THE CONTRACT AND FOR THREE (3) YEARS FOLLOWING ACCEPTANCE OF THE PROODUCT, KEEP IN FORCE AT LEAST THE FOLLOWING MINIMUM LIMITS OF UMBRELLA LIABILITY INSURANCE:

AGGREGATE: \$25,000,000  
EACH OCCURRENCE: \$25,000,000

THE UMBRELLA POLICY SHALL BE WRITTEN ON AN OCCURRENCE BASIS AND AT A MINIMUM PROVIDE EXCESS TO THE BIDDER'S GENERAL LIABILITY, AUTOMOBILE LIABILITY, AND EMPLOYER'S LIABILITY POLICIES. OWNER SHALL BE INCLUDED AS AN ADDITIONAL INSURED ON THE GENERAL LIABILITY POLICY AS THEIR INTEREST MAY APPEAR.

- D. **OTHER INSURANCE REQUIREMENTS.** CONTRACTOR SHALL:

- PRIOR TO COMMENCEMENT OF SERVICES, FURNISH THE CITY WITH ORIGINAL CERTIFICATES AND AMENDATORY ENDORSEMENTS EFFECTING COVERAGE REQUIRED BY THIS SECTION AND PROVIDE THAT SUCH INSURANCE SHALL NOT BE CANCELLED, ALLOWED TO EXPIRE, OR BE MATERIALLY REDUCED IN COVERAGE EXCEPT ON 30 DAYS' PRIOR WRITTEN NOTICE TO THE CITY ATTORNEY OF KNOXVILLE; P.O. BOX 1631; KNOXVILLE, TENNESSEE 37901. PROOF OF POLICY PROVISIONS REGARDING NOTICE OF CANCELLATION WILL BE REQUIRED.
  - UPON THE CITY'S REQUEST, PROVIDE CERTIFIED COPIES OF ENDORSEMENTS AND POLICIES IF REQUESTED BY THE CITY IN LIEU OF OR IN ADDITION TO CERTIFICATES OF INSURANCE. COPIES OF POLICIES WILL ONLY BE REQUESTED WHEN CONTRACTS ARE DEEMED TO BE EXTREMELY OR UNIQUELY HAZARDOUS, INCLUDE A DOLLAR AMOUNT THAT IS SIGNIFICANT TO THE OVERALL BUDGET OF THE CITY OR A CITY DEPARTMENT, OR THE COVERAGE(S) MAY NOT FOLLOW STANDARD INSURANCE FORMS. A POLICY WILL ONLY BE REQUESTED AFTER THE CITY'S RISK MANAGER HAS REVIEWED THE CONTRACT AND PROOF OF COVERAGE HAS BEEN PROVIDED. SHOULD THE CERTIFICATE OF INSURANCE REFER TO SPECIFIC COVERAGE WORDING OR ENDORSEMENTS(S), PROOF OF SUCH POLICY WORDING OR ENDORSEMENT(S) WILL BE REQUIRED.
  - REPLACE CERTIFICATES, POLICIES, AND ENDORSEMENTS FOR ANY SUCH INSURANCE EXPIRING PRIOR TO COMPLETION OF SERVICES.
  - MAINTAIN SUCH INSURANCE FROM THE TIME SERVICES COMMENCE UNTIL SERVICES ARE COMPLETED. FAILURE TO MAINTAIN OR RENEW COVERAGE OR TO PROVIDE EVIDENCE OF RENEWAL MAY BE TREATED BY THE CITY AS A MATERIAL BREACH OF CONTRACT.
  - IF CONTRACTOR CANNOT PROCURE INSURANCE THROUGH AN INSURER HAVING AN A.M. BEST RATING OF A-VIII, CONTRACTOR MAY, IN THE ALTERNATIVE, PLACE SUCH INSURANCE WITH INSURER LICENSED TO DO BUSINESS IN TENNESSEE AND HAVING A.M. BEST COMPANY RATINGS OF NO LESS THAN A. MODIFICATION OF THIS STANDARD MAY BE CONSIDERED UPON APPEAL TO THE CITY LAW DIRECTOR.
  - REQUIRE ALL SUBCONTRACTORS TO MAINTAIN DURING THE TERM OF THE AGREEMENT COMMERCIAL GENERAL LIABILITY INSURANCE, BUSINESS AUTOMOBILE LIABILITY INSURANCE, AND WORKERS' COMPENSATION/EMPLOYER'S LIABILITY INSURANCE (UNLESS SUBCONTRACTOR'S EMPLOYEES ARE COVERED BY CONTRACTOR'S INSURANCE) IN THE SAME MANNER AS SPECIFIED FOR CONTRACTOR. CONTRACTOR SHALL FURNISH SUBCONTRACTORS' CERTIFICATES OF INSURANCE TO THE CITY WITHOUT EXPENSE IMMEDIATELY UPON REQUEST.
  - ANY DEDUCTIBLES AND/OR SELF-INSURED RETENTIONS GREATER THAN \$50,000 MUST BE DISCLOSED TO AND APPROVED BY THE CITY OF KNOXVILLE PRIOR TO THE COMMENCEMENT OF SERVICES. USE OF LARGE DEDUCTIBLES AND/OR SELF-INSURED RETENTIONS MAY REQUIRE PROOF OF FINANCIAL ABILITY AS DETERMINED BY THE CITY.
  - THE INSURER SHALL AGREE TO WAIVE ALL RIGHTS OF SUBROGATION AGAINST THE CITY, ITS OFFICERS, OFFICIALS, AND EMPLOYEES FOR LOSSES ARISING FROM WORK PERFORMED BY CONTRACTOR FOR THE CITY. PROOF OF WAIVER OF SUBROGATION UP TO AND INCLUDING COPIES OF ENDORSEMENTS AND/OR POLICY WORDING WILL BE REQUIRED.
  - ALL GENERAL LIABILITY POLICIES MUST BE WRITTEN ON AN OCCURRENCE BASIS, UNLESS THE RISK MANAGER DETERMINES THAT A CLAIMS MADE BASIS IS REASONABLE IN THE SPECIFIC CIRCUMSTANCE. USE OF POLICIES WRITTEN ON A CLAIMS MADE BASIS MUST BE APPROVED BY THE CITY. RISK MANAGER AND RETROACTIVE DATES AND/OR CONTINUATION DATES MUST BE PROVIDED TO THE CITY PRIOR TO COMMENCEMENT OF ANY WORK PERFORMED. PROFESSIONAL LIABILITY AND ENVIRONMENTAL LIABILITY (POLLUTION COVERAGE) ARE MOST COMMONLY WRITTEN ON A CLAIMS MADE BASIS AND ARE GENERALLY ACCEPTABLE IN THAT FORM.
34. THE SUCCESSFUL PROPOSER WILL BE REQUIRED TO SIGN A CONTRACT WHICH CONTAINS THE FOLLOWING INDEMNIFICATION CLAUSE. THIS INDEMNIFICATION CLAUSE WILL NOT BE ALTERED IN ANY WAY. FAILURE TO AGREE WITH THIS INDEMNIFICATION CLAUSE IN THE CONTRACT MAY RESULT IN THE CITY MOVING TO THE NEXT RESPONSIBLE RESPONSIVE PROPOSER.

CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD HARMLESS THE CITY, ITS OFFICERS, EMPLOYEES AND AGENTS FROM ANY AND ALL LIABILITIES WHICH MAY ACCRUE AGAINST THE CITY, ITS OFFICERS, EMPLOYEES AND AGENTS OR ANY THIRD PARTY FOR ANY AND ALL LAWSUITS, CLAIMS, DEMANDS, LOSSES OR DAMAGES ALLEGED TO HAVE ARISEN FROM AN ACT OR OMISSION OF CONTRACTOR IN PERFORMANCE OF THIS AGREEMENT OR FROM CONTRACTOR'S FAILURE TO PERFORM THIS AGREEMENT

USING ORDINARY CARE AND SKILL, EXCEPT WHERE SUCH INJURY, DAMAGE, OR LOSS WAS CAUSED BY THE SOLE NEGLIGENCE OF THE CITY, ITS AGENTS OR EMPLOYEES.

CONTRACTOR SHALL SAVE, INDEMNIFY AND HOLD THE CITY HARMLESS FROM THE COST OF THE DEFENSE OF ANY CLAIM, DEMAND, SUIT OR CAUSE OF ACTION MADE OR BROUGHT AGAINST THE CITY ALLEGING LIABILITY REFERENCED ABOVE, INCLUDING, BUT NOT LIMITED TO, COSTS, FEES, ATTORNEY FEES, AND OTHER EXPENSES OF ANY KIND WHATSOEVER ARISING IN CONNECTION WITH THE DEFENSE OF THE CITY; AND CONTRACTOR SHALL ASSUME AND TAKE OVER THE DEFENSE OF THE CITY IN ANY SUCH CLAIM, DEMAND, SUIT, OR CAUSE OF ACTION UPON WRITTEN NOTICE AND DEMAND FOR SAME BY THE CITY. CONTRACTOR WILL HAVE THE RIGHT TO DEFEND THE CITY WITH COUNSEL OF ITS CHOICE THAT IS SATISFACTORY TO THE CITY, AND THE CITY WILL PROVIDE REASONABLE COOPERATION IN THE DEFENSE AS CONTRACTOR MAY REQUEST. CONTRACTOR WILL NOT CONSENT TO THE ENTRY OF ANY JUDGMENT OR ENTER INTO ANY SETTLEMENT WITH RESPECT TO AN INDEMNIFIED CLAIM WITHOUT THE PRIOR WRITTEN CONSENT OF THE CITY, SUCH CONSENT NOT TO BE UNREASONABLY WITHHELD OR DELAYED. THE CITY SHALL HAVE THE RIGHT TO PARTICIPATE IN THE DEFENSE AGAINST THE INDEMNIFIED CLAIMS WITH COUNSEL OF ITS CHOICE AT ITS OWN EXPENSE.

CONTRACTOR SHALL SAVE, INDEMNIFY AND HOLD CITY HARMLESS AND PAY JUDGMENTS THAT SHALL BE RENDERED IN ANY SUCH ACTIONS, SUITS, CLAIMS OR DEMANDS AGAINST CITY ALLEGING LIABILITY REFERENCED ABOVE.

THE INDEMNIFICATION AND HOLD HARMLESS PROVISIONS OF THIS AGREEMENT SHALL SURVIVE TERMINATION OF THE AGREEMENT.

#### **SUBMISSION REQUIREMENTS**

**IMPORTANT: BID SUBMISSIONS SHALL INCLUDE SIX (6) HARD COPIES (ONE ORIGINAL AND FIVE DUPLICATES—MARK THE ORIGINAL AS SUCH) AND ONE ELECTRONIC COPY OF THE BID (.PDF FORMAT ON CD ONLY—MARK THE STORAGE DEVICE WITH THE COMPANY NAME); THE ELECTRONIC VERSION SHALL BE AN EXACT DUPLICATE OF THE ORIGINAL, AND THE ELECTRONIC VERSION WILL BE THE OFFICIAL DOCUMENT EXHIBITED IN THE CONTRACT. ELECTRONIC SUBMISSIONS MUST BE INCLUDED WITH THE SEALED SUBMISSIONS; DO NOT EMAIL YOUR SUBMISSION.**

REQUIRED NUMBER OF COPIES OF THE BID MUST BE SUBMITTED IN A SEALED SHIPPING CARTON, ADDRESSED TO THE PURCHASING AGENT; CITY OF KNOXVILLE; CITY/COUNTY BUILDING; 400 MAIN STREET, ROOM 667-674; KNOXVILLE, TENNESSEE, 37902. **THE SEALED SHIPPING CARTON CONTAINING THE REQUIRED NUMBER OF BID COPIES MUST BE PLAINLY MARKED ON THE OUTSIDE AS: "PUMPER TRUCKS."**

IN ADDITION TO ALL DOCUMENTATION REQUIRED IN THE PRECEDING SPECIFICATIONS, BIDDERS MUST INCLUDE FULLY EXECUTED SUBMISSION FORMS AS SUPPLIED HEREINAFTER:

1. BID FORM
2. NON-COLLUSION AFFIDAVIT
3. IRAN DIVESTMENT ACT CERTIFICATION OF NON-INCLUSION
4. EITHER FORM I **OR** FORM II FROM THE EQUAL BUSINESS OPPORTUNITY PACKET

CITY OF KNOXVILLE

BID FORM

TO: Purchasing Agent  
City of Knoxville  
Suite 667-674  
City/County Building  
400 Main Street  
Knoxville, TN 37902

Having carefully examined the specifications entitled "Pumper Trucks" to open on December 1, 2016, at 11:00:00 a.m., and the other Contract Documents and addenda, and having familiarized ourselves with the existing conditions of the job, we hereby propose to furnish the supervision, labor, materials, equipment, and services to do the work as stated for the following sum:

PER UNIT BID: \$ \_\_\_\_\_

Firm Name: \_\_\_\_\_

Official Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_  
By (Signature)

\_\_\_\_\_  
(Name Typed)

\_\_\_\_\_  
Title

Date \_\_\_\_\_

## NON-COLLUSION AFFIDAVIT OF PRIME BIDDER

State of \_\_\_\_\_

County of \_\_\_\_\_

, being first duly sworn, deposes and says that:

- (1) He is owner, partner, officer, representative, or agent of \_\_\_\_\_, the Bidder that has submitted the attached Bid;
- (2) He is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstances respecting such Bid;
- (3) Such Bid is genuine and is not a collusive or sham Bid;
- (4) Neither the said Bid nor any of its officers, partners, owners, agents, representatives, employees, or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly, with any other Bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain from proposing in connection with such Contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm, or person to fix the price or prices in the attached Bid or of any other Bidder, firm, or person to fix any overhead, profit, or cost element of the bid price or the bid price of any other Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the City of Knoxville or any person interested in the proposed Contract; and

The price or prices quoted in that attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affidavit.

Signed: \_\_\_\_\_

Title: \_\_\_\_\_

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 2\_\_\_\_.

My commission expires: \_\_\_\_\_

## IRAN DIVESTMENT ACT of 2014

### Certification of Noninclusion

**NOTICE:** Pursuant to the Iran Divestment Act of 2014, Tenn. Code Ann. § 12-12-106 requires the State of Tennessee Chief Procurement Officer to publish, using creditable information freely available to the public, a list of persons it determines engage in investment activities in Iran, as described in § 12-12-105. Inclusion on this list makes a person ineligible to contract with the state of Tennessee; if a person ceases its engagement in investment activities in Iran, it may be removed from the list. The State of Tennessee currently uses the State of South Carolina's list, available here:

[https://www.tn.gov/assets/entities/generalservices/cpo/attachments/List\\_of\\_persons\\_pursuant\\_to Tenn. Code Ann. 12-12-106, Iran Divestment Act-July.pdf](https://www.tn.gov/assets/entities/generalservices/cpo/attachments/List_of_persons_pursuant_to_Tenn._Code_Ann._12-12-106,_Iran_Divestment_Act-July.pdf)

By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of its knowledge and belief that each bidder is not on the list created pursuant to T.C.A. § 12-12-106.

Vendor Name (Printed)	Address
By (Authorized Signature)	Date Executed
Printed Name and Title of Person Signing	

### NOTARY PUBLIC:

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 2\_\_\_\_\_.

My commission expires:\_\_\_\_\_

# **EQUAL BUSINESS OPPORTUNITY PROGRAM**

## **Contracting Component**

### **EQUAL BUSINESS OPPORTUNITY PROGRAM "GOOD FAITH EFFORT PLAN"**

The City of Knoxville strongly encourages contractors to employ minority owned businesses and women owned businesses as subcontractors whenever feasible. This is viewed favorably by the City of Knoxville. In fact, the City's goal for minority and women owned business participation is 10 percent of the contract amount.

Prime contractors will consider all competitive sub-bids and quotations received from minority owned businesses (MOB) and women owned businesses (WOB). When a subcontract is not awarded to the MOB/WOB submitting the lowest bid, the prime contractor must document the reason(s) the award was not made in writing. If the Contractor terminates an agreement and/or subcontract with a MOB/WOB, then the contractor is required to strongly consider selection of another MOB or WOB as a replacement.

### **GOOD FAITH EFFORTS**

1. Soliciting through all reasonable and available means.
  - a. Advertising
  - b. Written notices to all certified MOB's and WOB's who have the capability to perform the work or provide the service.
  - c. Solicitation of interest must be within sufficient time to allow MOB's and WOB's to respond to the solicitation.
  - d. Faxes, direct mailings, and telephone requests.
2. Providing interested MOB's and WOB's with adequate information about plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.
3. Negotiating in good faith with interested MOB's and WOB's.
  - a. It is the **bidder's/proposer's** responsibility to make opportunities available to MOB's and WOB's subcontractors and suppliers and to select opportunities consistent with the available MOB/WOB business subcontractors and suppliers. Evidence of such negotiations includes the names, addresses, and telephone numbers of MOB's and WOB's considered.
    - (1) A description of the specifications for the work selection for subcontracting

- (2) Evidence why agreements could not be reached for MOB's and WOB's to perform the work.
4. Effectively using the services of available minority, women contractor groups, local minority and women business assistance offices, small business groups, and other organizations on a case-by-case basis to provide assistance in the recruitment and placement of minority/women business.

## **SECTION II**

### **MOB/WOB SUBMITTAL TIME FRAME**

The Contractor will submit the following forms with the **bid/proposal**:

**1. "Statement of Intent for MOB/WOB Utilization" (Form I Attached)**

This form will be submitted by the bidder/proposer if he/she plans to subcontract any portion(s) of the work with a MOB and/or a WOB. This form illustrates the areas the Contractor has identified as potential MOB and/or WOB subcontract opportunities and the **dollar value** associated with these opportunities. The purpose of "Form I" is to measure the Contractor's **"Good Faith Efforts."** It does not commit the prime to subcontracting these areas only to MOB and WOB firms or release the prime from negotiating with MOB/WOB firms for subcontract opportunities.

OR

**2. "Statement of Intent of Performing Work Without Subcontracting" (Form II Attached)**

This form will be submitted if the **bidder/proposer** does not plan to subcontract any portion(s) of the work and if there are not any sufficient material purchases in which MOB/WOB firms can be utilized. The **bidder/proposer** must certify that this has been a typical practice on projects of similar scope and dollar value. By submittal of Form II, the Contractor certifies that:

- (1) He/she does not typically subcontract on projects of similar scope and dollar value.
- (2) He/she will not enter into any subcontract for duration of the project, and if he/she does decide to subcontract any portion of the work, he/she will: notify the City immediately of the decision to subcontract and adhere to the provision of **"Good Faith Efforts"** in filling that subcontract opportunity.

**The Purchasing Division may request the apparent low bidder/proposer to provide additional information to clarify the bidder's/proposer's responsiveness and intent in this regard.**

These documents will be received by the Purchasing Division upon submission of a proposal/bid. Additionally, prime contractors who submit Form I stating their intent to use MOB or WOB subcontractors for any part of the contract are required to report the amount(s) they have paid to these subcontractors on June 30<sup>th</sup> and December 31st of each year. Failure to submit this reporting data may result in a delay of payments. At the time of the final request for payment, the prime shall submit a



Statement of Final Payments to MOB and WOB Subcontractors and Suppliers (Form III attached).  
Final payment will not be released by the City until Form III is submitted.

## SECTION II

### DEFINITIONS

Minority: A person who is a citizen or lawful admitted permanent resident of the United States and who is a member of one (1) of the following groups:

- a. Black American, which includes persons having origins in any of the Black racial groups of Africa;
- b. A Hispanic American, which includes persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish culture or origin, regardless of race;
- c. Native American, which includes persons who are American Indians or Alaska Native;
- d. An Asian-Indian American, which includes persons whose origins are from Indian, Pakistan or Bangladesh.
- e. An Asian Pacific Islander, which includes persons whose origins are from Japan, China, Taiwan, Korea, Vietnam, Laos, Cambodia, the Philippines, Samoa, Guam, the U. S. Trust Territories of the Pacific and Northern Marinas.

Minority Owned Business (MOB), Women Owned Business (WOB): A business which is at least (51%) owned and controlled by minority group members or European American female(s). A MOB/WOB is bonafide only if the minority group interests are real and continuing and not created solely to meet the MOB/WOB requirement. In addition, the MOB/WOB must perform satisfactory work or services to provide supplies under the contract and not act as a mere conduit. In short, the contractual relationship must be bonafide. Certification of minority owned businesses and women owned businesses is provided by City Community Relations Office.

Owned and Controlled: A business which is (1) a sole proprietorship legitimately owned by an individual who is a minority or European American female; (2) a partnership or joint venture controlled by minorities or European American females, and in which at least (51%) of the beneficial ownership interests legitimately are held by minorities or European American females; or (3) a corporation or other entity controlled by minorities or European American females, and in which at least 51% of the voting interests and 51% of the beneficial ownership interests are legitimately held by minorities or European American females. In addition, these persons must control the management and operation of the business on a day-to-day basis.

Subcontractor: Any named person, firm, partnership, or corporation which supplies any work, labor, services, supplies, equipment, materials, or any combination of the foregoing contract with the contractor on a public contract.

# FORM I

## STATEMENT OF INTENT OF MOB/WOB UTILIZATION (TO BE SUBMITTED WITH THE BID/PROPOSAL)

We, \_\_\_\_\_, do certify that on the

\_\_\_\_\_ (Project Name)

(\_\_\_\_\_) (Dollar Amount of Bid)

MOB/WOB's will be employed as subcontractor(s), vendor(s), supplier(s), or professional service(s). The estimated **dollar value** of the amount that we plan to pay the MOB or WOB subcontractor(s), vendor(s), supplier(s), or professional service(s) is \$\_\_\_\_\_.

MOB/WOB Utilization			
Description of Work	MOB Amount	WOB Amount	Name of MOB/WOB

The undersigned understands that they are to report the annual amount disbursed to these MOB(s) /WOB(s) on June 30<sup>th</sup> of each year. Moreover, the undersigned understands that he/she is required to report the total amount disbursed to MOB(s)/WOB(s) for this project at the completion of the project and that payments may be withheld until these reporting requirements are met.

DATE: \_\_\_\_\_ COMPANY NAME: \_\_\_\_\_

SUBMITTED BY: \_\_\_\_\_  
(Authorized Representative)

TITLE: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

CITY/STATE/ZIP CODE: \_\_\_\_\_

TELEPHONE NO: \_\_\_\_\_

## FORM II

### STATEMENT OF INTENT TO PERFORM WORK WITHOUT SUBCONTRACTING (TO BE SUBMITTED WITH BID/PROPOSAL)

We, \_\_\_\_\_, hereby certify that it is our  
(Bidder/Proposer)

intent to perform 100 % of the work required for the \_\_\_\_\_  
\_\_\_\_\_ contract.  
(Name of Project)

In making this certification, the **Bidder/Proposer** states that:

1. It is a normal business practice of the bidder/proposer to perform all elements of this type contract with its own work forces without the use of subcontracts.

AND

2. If it is necessary to subcontract some portion of the work at a later date, the **bidder/proposer** will comply with all requirements of the "**Good Faith Efforts**" in providing equal opportunity to MOB/WOB Firms to subcontract the work.

The undersigned hereby certifies that he/she has read the terms and agrees to the terms of this statement.

Signature and title of authorized official of the company and the date must be properly executed on this document and a list of previous projects of similar scope and dollar value as stated in Section II attached or the bid may be deemed non-responsive.

DATE: \_\_\_\_\_ COMPANY NAME: \_\_\_\_\_

SUBMITTED BY: \_\_\_\_\_  
(Authorized Representative)

TITLE: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

CITY/STATE/ZIP CODE: \_\_\_\_\_

TELEPHONE NO: \_\_\_\_\_

# FORM III

**STATEMENT OF PAYMENTS TO MOB/WOB SUBCONTRACTOR(S) & SUPPLIER(S)  
(TO BE SUBMITTED ON JUNE 30 AND DECEMBER 31 OF EACH YEAR FOR THE  
LIFE OF THE CONTRACT AND TO BE WITH FINAL PAYMENT REQUEST)**

Project:\_\_\_\_\_ Contract#:\_\_\_\_\_

Contractor's  
Name:\_\_\_\_\_

Cert. #	MOB	WOB	Name of Firm / Address & Phone#	Total Amount Paid	Contact Person

I hereby certify that this statement is true and that above payments have been made.

Contractor:\_\_\_\_\_

Address:\_\_\_\_\_

By:\_\_\_\_\_

Contractor's Signature

Title

Subscribed and sworn to before me this\_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_

Notary

Public:\_\_\_\_\_

My Commission Expires:\_\_\_\_\_