Request for

Competitive Sealed Proposal

18-601

Professional Services For:

Pumper Apparatus

NIGP Commodity Code(s):

072-30 Trucks, Fire Protection and Crash Rescue

Submit proposals (sealed) to:
Deputy City Clerk
City of Tulsa
175 E. 2ND St.
Suite 260

CITY OF Tulsa
A New Kind of Energy

2/23/18

Addendum #3

Please note the following changes which have been made for clarification to this Invitation for Sealed Bid. **This addendum must be listed as Addendum #3** of the bid package as verification that you have received and are aware of the information contained herein.

2/23/18

ADDENDUM #3

1. CHANGE: II. A. 1, Date Extension

The proposal must be received by 5:00 p.m. on Wednesday, March 21st, 2018, Central Daylight Time. Proposals must be sealed in an envelope or box clearly labeled "CSP 18-601 Pumper Apparatus". Proposals arriving late will be returned unopened.

2. CHANGES: The following are the changes made to the technical specification table. All changes have been changed in the technical specification in IFB 18-601.

Addendum to technical specifications

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
Page 2	**CHANGE** **1. CHANGE: II. A. 1, Date Extension** The proposal must be received by 5:00 p.m. on Wednesday, ~~March 7th~~, March 2st , 2018, Central Daylight Time. Proposals must be sealed in an envelope or box clearly labeled "CSP 18-601 Pumper Apparatus". Proposals arriving late will be returned unopened.	0	
2.36	**CHANGE** No less than ~~five~~ ten year warranty for the engine.	10	
4.64	The in cab storage cabinet on the passenger's side will be as large as possible and will reach a height near the underside of the roof. The interior of the cabinet will be provided with two adjustable shelves. The in cab storage cabinet on the driver's side will be as large as possible and will reach a height near the underside of the roof. The interior of the cabinet will be provided with two adjustable shelves. An OTE International model **1915B** medical cabinet will be located on the floor inside the storage compartment.	20	
5.22	**CHANGE** The vehicle alternator will be a Delco Remy model 55SI 430 amp alternator. If there is insufficient room for the specified alternator, a smaller Delco Remy alternator may be used	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	providing that documentation clearly demonstrates that the alternator will produce the needed current of all loads without load management while the motor is at idle. The selection of a smaller alternator will include a detailed amp draw report of the proposed apparatus.		
5.45	**CHANGE** Four Streamlight Survivor C4 LED, 12 v, Orange, 90509 fast charge flashlights will be provided and mounted in the following locations: One near the driver One near the officer Two, one each side, of the ~~rear~~ forward facing seats. Specific location will be addressed during the pre-construction meeting.	10	
6.103	**ADD** Images are attached at the end of the addenda.	10	
11.09	**DELETE** ~~The vehicle will be provided with collision avoidance detection while turning or backing. An audible alarm will sound to alert the driver whenever the apparatus is subject to collision.~~	~~10~~	
13.07	**CHANGE** One Bullard NXT thermal image cameras with TI basic plus, electronic thermal throttle, digital zoom, scene catcher, retract strap, wireless desktop charging system and wireless truck mount charger. See annex ~~14.11~~ 14.03 for specifications. No Exception		
13.09	**CHANGE** One Scott Safety RIT-PAK III® with one 5500 psi 75 minute carbon fiber cylinder. ~~See Annex 14.12 for technical specifications~~ No Exceptions.		

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
14.03	**ADD** • The TIC will be third party tested and certified as compliant to the current edition of NFPA 1801 *Standard for Thermal Imagers for the Fire Service*. • The manufacturer of the thermal image camera will be ISO 9001 certified. • The thermal image camera will be manufactured in the United States. • The repair center for the thermal image camera will be in the United States. • The thermal image camera shall be hand held. • The thermal image camera, with a battery and all manufacturer's options and features that may be incorporated at the time of actual use, will not exceed 2.5 pounds. • The thermal image camera will be no greater than 5.5" tall, 4.75" wide or 8.25" long. • The thermal image camera will be approved for use in Class I, Division 2, Group C and D hazardous locations. • The outer case of the thermal image camera will be constructed from a heat-resistant thermoplastic formed into an ergonomic design. • The thermoplastic used in the construction of the outer case will be orange in color. The color pigment will be consistent throughout the thickness of the shell and not a single layer of paint, coating or other covering. • The thermal image camera will incorporate a LED liquid Crystal Display (LSD) monitor screen that has a diagonal measurement of no less than 3.5 inches. • The thermal image camera will be provided with a slightly pliable sun screen that will surround and project outwardly to shroud the viewing screen from unwanted light. • The display produced by the monitor screen that is no less than 76,800 pixels for high quality resolution. • The monitor screen will produce an illumination level of no less than 500 cd/m². • A clear polycarbonate cover must protect the display screen. The screen cover will be field-replaceable and watertight. • The thermal image camera will be provided with a g/1.3 lens fabricated of germanium with no less than a 31°(V) x 40° (H) field of view. • The lens will be protected with a watertight, sealed 2 mm thick germanium cover window. • The thermal image camera will be compliant to IP67, capable of being submerged 3 feet of water for no less than 30 minutes without damage or impaired operation. • The thermal image camera will be capable of being dropped from a height of no less than 6'- 6"onto a hard surface in any orientation without operational damage. • The thermal image camera will be capable of withstanding an environmental temperature of 350°F for no less than 15 minutes without damage or impaired operation. • The imaging array will utilize an uncooled vanadium oxide (VOx) focal plane array of no less than 320x240 pixels.		

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	• The spectral response for the thermal image camera will be 7-17microns. • The update rate of the thermal image camera will be no less than 60Hz. • The Noise Equivalent Temperature Difference (NETD) will be less than 30mK. • The core temperature range of the thermal image camera will be -40 to 175°F. • The dynamic range of the thermal image camera and associated electronics will be approximately 1100°F. • The thermal image camera will not produce a whiteout or undistinguishable image when pointed directly into the flames. • The viewing screen will include a warning indicator to alert the user that the camera is at or approaching a critical temperature that could result in failure of the camera. • The thermal image camera will be provided with tri-color automatic colorization based upon a yellow/orange/red color scheme. The display will show yellow at temperatures of 500°F to 799°F, orange at temperatures of 800°F to 999°F and red at temperatures of 1000°F or greater. • The thermal image camera will provide a manual selection of colors to help the user identify the hottest objects in a scene regardless of the identified heat levels. Manually selected and adjusted, this feature use gradients of blue to prevent confusion with the yellow/orange/red colorization. • The thermal image camera will provide a battery status indicator on the viewing display. • The thermal image camera will provide on the viewing screen, the surface temperature of selected objects. • The thermal image camera will provide the option to simultaneously produce onto the viewing screen of a bar graph and/or numeric temperatures. • The thermal image camera will use one switch to turn the unit on or off. The switch will employ an electronic press-and-hold protection mechanism to prevent unwanted shut-down of the power. • The thermal image camera will have a secondary switch to select its operation in the basic plus mode or access to advanced features. • Operation of the main power switch will default to the thermal image camera's • basic plus mode regardless of the current operational use, state or mode. • The thermal image camera will include a digital zoom feature for an improved view of scene details. The zoom feature will offer 2x and 4x magnification options. • The thermal image camera will include an internally housed Digital Video Recorder (DVR) that enables the recording of thermal imaging video to the internal memory of the thermal imager. • The camera will have the ability to record no less than 5.5 hours of video in 720 x 480 resolution which will be downloaded to a computer via USB connection. • Video recordings will be date and time stamped at the beginning of each recorded event for documentation purposes. • Recorded events will be capable of being downloaded and managed through a standard micro USB connection. • The thermal image camera will be provided with a self-retracting strap. The strap		

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	will be capable of holding the unit to the firefighter's body with the full weight of the camera, with the battery, hanging unsupported by the firefighter solely by the retractable strap. • The thermal image camera will become fully operational within four seconds after activation of the power switch with the battery warm and charged. The camera will be either on or off with no option of a standby switch or mode. • The thermal image camera will be provided with an internal lithium ion rechargeable battery that will provide no less than 7 hours of continuous use. • The thermal image battery will be capable of being charged via USB, inductive desk charger, or inductive truck charger. The wireless, or inductive, chargers eliminate the risk of damaged prongs, dirty contacts or other physical conditions that prevent the battery from being charged or charged correctly. • The charger system(s) will not damage the battery should a fully charged battery continue to be connected or placed into a charging station. • The thermal image camera will be provided with an inductive desktop charging station that is powered through the standard household 120 volt AC receptacle. • The thermal image camera will be provided with a truck mounted charging system that is compliant with NFPA 1901. • The truck charger will be provided with a warranty of no less than one year. • The lithium ion battery will be provided with a warranty of no less than five years. • The thermal image camera and attached options will be provided with a warranty of no less than five years. • The outer shell of the thermal image camera will be provided with a limited lifetime warranty for defects in materials or workmanship. • Warranty repairs will include a guaranteed 48 hour turn around identified as two full business days from date and time of receipt at the authorized warranty repair center to the date and time the unit is processed for shipping. • Non-warranty repairs will include a guaranteed 48 hour turn around identified as two full business days from date and time of receipt at the authorized warranty repair center to the date and time the unit is processed for shipping.		
Page 95	**ADD**	0	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	The Tulsa Fire Department intends to purchase the same Pumper type fire apparat on or about the following time frames: Current date 3 Engine Companies Fall 2018 3 Engine Companies Fall 2019 3 Engine Companies Fall 2020 0 Engine Companies Fall 2021 5 Engine Companies Total of 14 in five years		
Page 95	**ADD** For comparative purposes, please provide pricing in the following formats: • Direct from Dealer/Manufacturer • Through the State of Oklahoma Cooperative Agreement • HGAC • Other cooperative agreement as suggested by the Bidder	0	

19515B Strut Mobile Medical Cabinet
Automatic Heating and Cooling

WWW.OTEINTERNATIONAL.COM
6695 CR 4628
Athens, TX 75752




	Inside Dimensions Top Engine/Rear	Outside Dimensions Top Engine/Rear
Height	13.22"	20.75"/18.24"
Width	22.00"	25.67"
Depth	14.45"	20.36"/22.87"
VDC	11-15 VDC	22-26 VDC
Amps	.5 to 7.5(12)	.5 to 3.7(24)
Airflow Requirements: 65CFM		

Product Overview

- Unit is installable in a variety of configurations
- Functional in mobile, temporary or stationary environments
- Reliable, Robust and Low Maintenance Solid-State technology
- Snap locks for fast and consistent access to contents
- Padlock, Key, Keypad or other methods of locking for security of narcotics
- High tech insulation and thermoelectric proportional controlled methodology
- Manufactured in U.S.A.

Electrical

Unit operates at 12 or 24 VDC, AC power conversion optional. Peak power Consumption is dependent upon model and operating environment but typical power consumption at normal ambient temperatures (100F to 30F) is 50-80% of peak. Unit can be equipped with optional low voltage shutdown. (when voltage is restored the unit automatically restarts)

Temperature Control

Heating and cooling is accomplished using high efficiency thermoelectric technology. The temperature control boards use a proportional control program to maintain minimal temperature variation inside the unit. Internal temperature is preset but custom temperature settings are available. Insulation is state of the art vacuum and / Or PU panels that provide a barrier of maximum efficiency from external temperatures.

Design

Products contain no CFC's nor harmful contaminants requiring only standard tools for installation. Unit is field serviceable with the field service guide. Unit can be configured to operate on 120/220 VAC with optional DC power conversion. OTE engines are designed and manufactured to work day in and day out in the toughest conditions.

** Specification for reference only and are subject to change without notice.*

2/6/18

ADDENDUM #2

Please note the following changes which have been made for clarification to this Invitation for Sealed Bid. **This addendum must be listed as Addendum #2** in the bid package as verification that you have received and are aware of the information contained herein.

QUESTIONS/CLARIFICATION/CHANGES:

CHANGES:

1. CHANGE: II. A. 1, Date Extension

The proposal must be received by 5:00 p.m. on Wednesday, March 7th, 2018, Central Daylight Time. Proposals must be sealed in an envelope or box clearly labeled "CSP 18-601 Pumper Apparatus". Proposals arriving late will be returned unopened.

2. CHANGE: 1.30 Pre-Bid Conference Meeting One:

A Pre-Bid conference will be held for CSP 18-601 Pumper Apparatus on:

Date: February 21th, 2018 Time 10:00
Location: 175 E 2nd Street, 5th Floor Central Conference Room, Tulsa, OK 74103

All Bidders' wishing to participate in the process will attend, send an alternate or participate via conference call.

3. CHANGES: The following are the changes made to the technical specification table. All changes have been changed in the technical specification in IFB 18-601.

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
2.12	**DELETE** ~~The bidder will provide photographic evidence when the chassis is delivered for assembly of the fire body or provide~~	~~10~~	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	~~travel and lodging, or arrange for 1 Tulsa Fire Department representative to the manufacturing facility for no less than two hours per apparatus to inspect and confirm the~~		
2.57	**DELETE** ~~The City of Tulsa will inform the bidder in a timely manner of all significant warranty related issues. Communication will include telephone followed by an email to document the date and time of the notification~~	~~10~~	
3.11	**CHANGE** A hub piloted front straight axle and front suspension will be provided with a load rating sufficient enough to carry the anticipated combined load of the apparatus, water, equipment and personnel will be provided. The bid will describe the manufacturer, design and rating of the front axle. The axle may be manufactured by Dana or Meritor.	10	
3.96	**CHANGE** The transmission will be an Allison EVS 3000~~PR~~ series automatic transmission. The transmission will have two PTO ports, one located on the side and one located on top.	10	
3.102	**CHANGE** In addition to the ~~transmission retarder~~ engine compression brake ~~feature~~, the transmission will be programmed to aggressively downshift, seeking second gear, with the release of the accelerator pedal.	10	
3.105	**CHANGE** The transmission gear selector will be controlled in the cab within easy reach of the driver. The preferred gear selector will be of a lever style.	10	
4.26	**CHANGE** ~~The side windows between the front doors and rear doors are to be fixed and provided with the darkest shade tint, "limo tint," possible.~~ The space between the front and rear cab doors wll be	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	provided with double pan compartment doors that provide access to compartments located inside the cab, provided on both the driver's and officer's side.		
4.42	**CHANGE** Hand rails of no less than 18 inches will be provided in a vertical position on the exterior of the cab near the latch side of the door. The hand rails are to be provided with a slip resistant finish or covering. The handrails will be Hansen anti-slip 4000 Lit with red LEDs facing the fire body. The handrails will illuminate with the headlights and engagement of the parking brake.	10	
4.43	**CHANGE** The front ~~right or officer's~~ doors will be provided with a vertically mounted molded handle that is mounted onto the "A" or corner post to assist entrance into the cab. The rear doors will be provided straps or "D" style handles mounted onto the interior part of the cab on the hinged side of the door to assist entrance into the cab.	10	
4.59	**CHANGE** The seating arrangement in the rear of the cab will consists of ~~one rear facing seat located directly behind the officer and two~~ three forward facing SCBA seats located ~~inboard and positioned near the center width of the can and directly against~~ along the rear wall of the cab.	10	
4.60	**DELETE** ~~The rear facing seat will be Seats Inc. 911 Battalion Series SCBA seat, or equal, with an installed SmartDock SCBA bracket. No exception to the SmartDock bracket or seats that do not have hinged flip away head rests.~~	~~10~~	
4.63	**CHANGE** ~~An in cab~~ Two storage cabinets will be located inside the cab, one located directly behind the driver's seat and the other behind the officer's seat. The cabinets will be provided	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	access through double pan hinged doors located on the exterior of the cab as well as roll-up doors located inside the cab. The exterior double pan doors will be provided with locks. The cabinet will be painted and trimmed in the same materials as used elsewhere within the cab.		
4.64	**CHANGE Text and Points** The in cab storage cabinet on the passenger's side will be as large as possible and will reach a height near the underside of the roof. The interior of the cabinet will be provided with two adjustable shelves. The in cab storage cabinet on the driver's side will be as large as possible and will reach a height near the underside of the roof. The interior of the cabinet will be provided with two adjustable shelves. A manufacturer provided OTE model 19503F medical cabinet will be located on the floor inside the storage compartment.	~~10~~ 20	
4.65	**CHANGE** ~~The in cab storage cabinet will be provided with black web cargo netting to secure items inside the cabinet.~~ Both compartments will be provided with ventilation louvers.	10	
4.66	**CHANGE** ~~The~~ Both in cab storage cabinets will be provided with a 120 volt AC duplex receptacle.	10	
5.20	**CHANGE** ~~A~~The 110-volt duplex receptacle will be provided within the in cab storage compartment will be powered from the vehicle's shoreline. ~~The source of power for the receptacles will be provided by the vehicle's shoreline.~~	10	
5.29	**CHANGE** Underbody lights will be provided under each cab access door. The LED lights will automatically operate upon opening of any cab door, transmission selection of reverse	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	gear, or engagement of the parking brake.		
5.32	**CHANGE** Two, one each side, Whelen model PCPSM1*, 12 volt LED combination spot/flood lights will be semi-recessed mounted into the upper portion of the cab ~~above the~~ ~~fixed window~~ between the front and rear doors. The lights will be provided with chrome flanges. The lights will be switched from inside the cab.	10	
5.34	**CHANGE** Courtesy lights will be placed in the step area, or onto the lower interior side, of each cab door. Amber lights that produce a directional scroll away from the apparatus will be provided above the window of each cab door on the interior side to give warning to approaching traffic. Both the LED courtesy lights and scrolling amber light will ~~be LED and~~ operate automatically when the door is opened.	10	
5.45	**ADD** Four Streamlight Survivor C4 LED, 12 v, Orange, 90509 fast charge flashlights will be provided and mounted in the following locations: One near the driver One near the officer Two, one each side, of the Foward facing seats Specific location will be addressed during the pre-construction meeting.	10	
5.46	**ADD** Four Streamlight Fire Vulcan, 44451, C4 LED, Tail Lights, 12 volt, Orange will be provided and mounted in the following locations: Two located on top of each of the two in-cab storage cabinets.	5	
6.03	**CHANGE of point value** All equipment storage compartments that extend 24 inches	~~10~~	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	or more, measured from the outside face of the frame rail to the furthest portion of the body projecting from the frame, will be provided with a structural sub-frame to support the combined weight of the aluminum fire body and positioned tools and equipment.	50	
6.61	**CHANGE** Located adjacent to the pre-connected hose lines will be a storage space for one long spine board. Covered at the top, each open end will be covered by a ~~blue~~ vinyl cover that is permanently attached at the top and secured with Velcro® on each side and bottom.	10	
6.125	**DELETE** ~~The lower portion of compartment R-2 will be provided with a full sized custom constructed insulated and climate controlled cabinet insert provided by OTE International. The apparatus manufacturer will confirm the size and design of the inserted cabinet that will be approximately 40" wide by 24" deep by 25" high. The inserted cabinet will be designed to allow full removal from the apparatus for maintenance or needed replacement.~~ ~~The cabinet insert will include a secured locking internal compartment to support the safe storage of controlled drugs. The balance of the cabinet insert will be used to store the EMS trauma bag and possibly the defibrillator. The cabinet insert will include an insulated hinged door to manage the internal climate and to prevent the admittance of dirt and water.~~ ~~The interior space within the cabinet insert will be provided with LED lights to illuminate the storage space.~~ ~~Final details concerning specific design and function will be addressed at the pre-construction meeting.~~	~~10~~	

<table>
<tr><th>Line</th><th>Description</th><th>Possible Points</th><th>Awarded Points
To be filled out by Fire Dept.</th></tr>
<tr><td></td><td>~~OTE International may be contacted at 6695 CR 4625, Anthens, TX 75752 or (888) 666-9361 or www.oteinternational.com~~</td><td></td><td></td></tr>
<tr><td>6.126</td><td>CHANGE
R-2 will be provided with <u>one lower and</u> two upper level adjustable shelves.</td><td>10</td><td></td></tr>
<tr><td>6.144</td><td>CHANGE
An electric, o<u>r</u> an~~d~~ electric over hydraulic ladder rack will be provided on the right side of the fire body.</td><td>10</td><td></td></tr>
<tr><td>8.66</td><td>All discharges and respective line gauges will be labeled and color coded to match. Though they will be confirmed at the pre-construction meeting, the following colors are recommended:
<table>
<tr><th>DESCRIPTION</th><th>LABEL</th><th>COLOR</th></tr>
<tr><td>Left 6” intake</td><td>Left MIV Intake</td><td>~~Green~~</td></tr>
<tr><td>Left 2-1/2” intake</td><td>Left Auxiliary Intake</td><td>~~Green~~</td></tr>
<tr><td>Right 6” intake</td><td>Right MIV Intake</td><td>~~Green~~</td></tr>
<tr><td>Right 2-1/2” intake</td><td>Right Auxiliary Intake</td><td>~~Green~~</td></tr>
<tr><td>Tank to Pump</td><td>Tank to Pump</td><td>~~Bright Green~~</td></tr>
<tr><td>1-3/4” Front Jump Line</td><td>Front Jump Line</td><td>~~Maroon~~ <u>Purple</u></td></tr>
<tr><td>Forward Pre-Connected Cross lay</td><td>Cross lay #1, Foam Capable</td><td>~~Red~~ <u>Yellow</u></td></tr>
<tr><td>~~Rear~~ <u>Center</u> Pre-Connected Cross lay</td><td>Cross lay #2, Foam Capable</td><td>White</td></tr>
<tr><td><u>Rear Pre-Connected Cross Lay</u></td><td><u>Cross Lay #3, Foam Capable</u></td><td><u>Beige</u></td></tr>
</table></td><td>10</td><td></td></tr>
</table>

<table>
<tr><th>Line</th><th>Description</th><th>Possible Points</th><th>Awarded Points
To be filled out by Fire Dept.</th></tr>
<tr><td></td><td>
<table>
<tr><td>Rear Pre-Connected Blitz</td><td>Blitz, Foam Capable</td><td>~~Dark Blue~~ Brown</td><td></td></tr>
<tr><td>Left Hose Reel</td><td>Left Reel, Foam Capable</td><td>~~Bright Pink~~ Olive</td><td></td></tr>
<tr><td>Right Hose Reel</td><td>Right Reel, Foam Capable</td><td>Pink</td><td></td></tr>
<tr><td>~~Left~~ Driver Side No.1 2-1/2” Discharge forward</td><td>Discharge #1</td><td>~~Orange~~ Red</td><td></td></tr>
<tr><td>~~Left~~ Driver Side No.3 2-1/2” Discharge rear</td><td>Discharge #2</td><td>~~Yellow~~ Blue</td><td></td></tr>
<tr><td>~~Right~~ Passenger Side No. 2 2-1/2” Discharge forward</td><td>Discharge #3</td><td>~~Brown~~ Orange</td><td></td></tr>
<tr><td>~~Right~~ Passenger Side No.4 2-1/2” Discharge rear</td><td>Discharge #4</td><td>~~Tan~~ Mint Green</td><td></td></tr>
<tr><td>~~Right~~ Passenger Side LDH 4” Discharge</td><td>5” Discharge, Foam Capable</td><td>~~Gray~~ Green</td><td></td></tr>
<tr><td>Deck Gun</td><td>Deck Gun, Foam Capable</td><td>~~Black~~ Burgandy</td><td></td></tr>
<tr><td>Tank Fill</td><td>Tank Fill</td><td>~~Teal~~ Black</td><td></td></tr>
</table>
</td><td></td><td></td></tr>
<tr><td>8.71</td><td>CHANGE
The fire pump will be provided with a Hale® SmartFOAM system, or equal, for the delivery of Class “A” or “B” foam solutions. The system will provide foam for each of the following discharges individually or in unison:
• 1-3/4” pre-connect in the front bumper
• Both pre-connected 1-3/4” cross lays
• 2-1/2” pre-connected cross lay</td><td>10</td><td></td></tr>
</table>

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	• 2-1/2" pre-connected blitz line located in the main hose bed • Both booster reels • Deck Gun • 4" discharge located on the right pump panel finished with a 5" locking Storz		
8.76	**CHANGE** The foam system will include a Hale® EZ-Fill truck-mounted foam concentrate refill system, or equal.	10	
9.05	**CHANGE** The tank is to contain no less than 500 gallons of water and ~~20~~ two 40 gallon~~s~~ tanks, one for ~~of~~ Class A foam concentrate and the other for Class B foam concentrate.	10	
10.13	**CHANGE** Two, one on each side, mounted on top of the fire body compartments near the rear of the apparatus, Whelen model MCFLED2R micro Edge Ultra Freedom LED light heads, red.	10	
10.14	**CHANGE** Two Whelen model 6RBRC, red with clear lens , one on each side, rear facing, mounted onto the rear wall of the fire body compartments, at an elevation equal between the upper and lower warning lights~~, Whelen model 6RBRC, red with clear lens~~.	10	
10.20	**DELETE** ~~The electrically operated air horn switches will power a flasher that will alternate the sounding of the horns.~~	~~10~~	
10.21	**CHANGE** The air horns to be operated by a ~~foot switch~~ momentary button switch located on the dash in front or to the side of ~~at~~ the ~~passenger's floor~~ officer and the center horn button of the steering wheel. ~~The floor switch is to be identified.~~	10	
10.25	**CHANGE**	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	A chrome plated ~~electrically~~ manually operated 12" fire bell, cast in brass, with ~~chrome acorn nut~~ gold eagle and pedestal stand will be provided on the right front bumper. ~~The bell will be operated by two momentary switches, one within reach of the driver and one within reach of the front passenger.~~		
10.28	**ADD** Six, three each side, Whelen M4 warning lights will be mounted above the rear cab doors on or near the drip rail. Each side will consist of fixtures with clear lens and positioned as red, blue, red.	10	
11.14	**CHANGE** A digital clock that is interfaced with multiplex system will be provided and installed on the ceiling mounted switch area directly ahead of the front right passenger or provided in an integrated monitor screen.	10	
11.15	**CHANGE** A digital speedometer will be provided and installed on the ceiling mounted switch area directly ahead of the front right passenger or provided in an integrated monitor screen.	10	
11.25	**CHANGE** ~~The fire apparatus will be provide and install a Motorola APX6500 7/8000 MHZ mid power mobile radio with remote operating head and related cables.~~ The apparatus will be provided with a Motorola APX6500 7/800 HMZ mid power MOBI m25URS9PW1 N Astro Digital, Smartzone operation, P25 Baud Trucking, 05 control head, Multikey, remote mount control head, AES encryption, 5 year SFS Comp, APX control head software, microphone and speaker.	10	
11.32	**ADD** A Havis, DS-DELL-602-2, C-MD-202 mount will be located on the dash directly in front of the Officer's seat.	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
13.01	**CHANGE** Equipment provided with the apparatus will include: • One Duo Safety 24-ft two section extension ladder • One Duo Safety 14-ft roof ladder • One Duo Safety 10-ft attic ladder • One Duo Safety 6-ft pike pole • One Duo Safety 8-ft pike pole • One Duo Safety 10-ft pike pole • One 17-ft Little Giant ~~model 13 super duty 11-ft, type IAA, combination ladder~~	10	
13.18	**CHANGE** Four spare Streamlight Vulcan® 180 Multi-Function Rechargeable Lantern with vehicle mount system and quick release shoulder strap. UPC 080926-44315-0, Item #44315.	5	
13.19	**ADD** Ten spare Four Streamlight Survivor C4 LED, 12 v, Orange, 90509 fast charge flashlights.	5	

QUESTIONS:

Section II

1. Page 2, Item 3: This says that respondents are to register with the buyer. Is there a formal registration process, or are we to just notify the buyer of our intentions?

Response:
Email your intent to bid with your W-9 to James Mozingo @ jmozingo@cityoftulsa.org.

Section III

2. Page 6, Item 1.18: This says that the ability to invoice for the chassis requires a physical inspection of the cab and chassis at the manufacturing facility. Item 2.12 on Page 9 says that the bidder will supply photographic evidence or provide an inspection trip. Which is correct?

Response:

Remove / Strike 2.12

3. Page 6, Item 1.18: Here it says that the ability to invoice is based on an inspection when the pump and body are in the process of being installed. Item 2.13 on Page 10 says that this trip is to occur after the pump, tank, and body have been mounted. Which is correct?

Response:
1.18 is intended to be qualifiers for the bidder to provide multiple invoices throughout the construction process. Non-response or non-performance to 1.18 will result in the acknowledgement of only one invoice after acceptance of the delivered apparatus.

Paragraph 2.12; 2.13; and 2.14 are meetings or inspections that will be required regardless of the bidder's process of invoicing. The criteria established in 2.12; 2.13 and 2.14 are provided to disclose expectations when each of the three meetings or inspections are to be provided.

4. Page 7, Item 1.29: This states that there will be a pre-bid meeting(s) prior to the bid in order to allow changes before the actual bid process. Have these meeting been scheduled? Will the bid due date be extended to allow for any changes to be incorporated into a revised CSP?
Response:
A pre-bid meeting has been established and will be held for CSP 18-601 Pumper Apparatus on:

Date: February 21th, 2018 Time 10:00

Location: 175 E 2nd Street, 5th Floor Central Conference Room, Tulsa, OK 74103

Depending upon the inquiries, requests and interactions at that meeting and additional pre-bid meeting may be added.

5. Page 11, Item 2.24: Here it stated that the warranty period will begin when the trucks are put in service, no longer than 60 days after acceptance. In Item 2.25 it says that apparatus acceptance will represent the beginning of the warranty periods. Which is correct?

Response:
The date that the apparatus is placed into service will be the date that the warranty period begins. This is not to exceed 60 days from date of acceptance.

6. Page 12, Item 2.55: Here it says that the city may make required warranty repairs and then apply to the bidder (apparatus vendor) for reimbursement, including for supplied components that are under their own warranties. Is the bidder expected to reimburse the city for components that fall under the warranties of other companies?

Response:
The successful bidder is providing a two year bumper to bumper warranty. The City expects the bidder to resolve the deficiency in a timely manner and then essentially subrogate the incurred costs.

7. Page 13, Items 2.56 and 2.57: Are these unintentional duplications, or was 2.57 supposed to address another requirement?

Response:
Yes. DELETE 2.57

8. Page 23, Items 3.99 through 3.102 mention a transmission retarder that was not specifically requested. Is a retarder required?

Response:
An engine compression brake is being requested. A transmission retarder is not being requested and any reference to one needs to be dismissed.

9. Page 31, Item 5.14: Here the battery charge display bar graph is located on (or in) the driver's side of the cab. Item 5.16 requires that the bar graph display is to be mounted adjacent to the shoreline, which is on the rear of the truck. Are two bar graphs required?

Response:
There is no current expectation to relocate the battery charger display from the driver's step well area.

10. Page 31, Item 5.18: What amperage does the shoreline need to be?

Response:
The desired amperage is 20 amps 120 Volts AC.

11. Page 37, Item 6.29: If a compartment has adjustable shelves, divider, and/or a swing out tool board (upper and/or lower portion), does it still get a PAC Trac board on the back wall? Please note that, per Page 41, Item 6.85 and Page 47, Item 6.137, compartments L4 and L4 are open to the rear compartment and therefore do not have back walls. This eliminates all back walls except for the rear compartment (Page 43, Item 6.99) and upper R4, which has a swing out PAC Trac tool board. Per Page 47, Item 6.138 and 6.139, is upper R4 (minimum 12" deep) to have both a rear wall mounted and swing out PAC Trac boards?

Response:
Only the lower portions of the rear compartment and rear side facing compartments could have an open or transverse space. The upper part of the rear side facing compartments

are only 12 to 14 inches deep and the exterior of the compartments are the facing of the rear hose beds. Many of the current apparatus have hinged tool boards or shelving in the upper rear compartments.

The open spaces that exist between the left side facing rear compartament, rear facing rear compartment and right side facing compartment ranges from the floor of the compartment upward to a nominal height of 24 inches.

Having so many variances between manufacturers, specific details on how to maximize the space in the lower rear compartments will require discussions at pre-construction.

12. Page 41, Items 6.85 and 6.86: By dead space, do you mean where the back wall of L4 (and R4) would normally be?

Response:
The dead space is that which exists between the door openings and the traditional positioning of walls or bulkheads.

13. Page 44, Item 6.108: What is the RAM you refer to?

Response:
Paragraph 6.108 refers to an Elkhart Brass Rapid Action Monitor (RAM) nozzle.

14. Is it possible to get a drawing (or photos, if these specifications match other TFD pumpers) of the pump house, body, compartments, and hose bed we are required to supply?

Response:
Photos can probably be provided.

15. Page 45, Item 6.120: Are these hose bed covers to be in addition to the aluminum covers?

Response:
The described are intended to be the vertical closures for the hose beds.

16. Page 47, Items 6.138-6.140: See question about Page 37, Item 6.29 above.

Response:
I suspect each manufacture will design and construct the proposed apparatus differently. We have experience with the Luverne and Crimson apparatus which have a transverse space in the lower nominal 24 inches of the compartments. However, other manufacturers have one or more walls that separate the area storage areas. If the manufacturer has a back wall of the rear side facing compartments, the back wall will be provided with PAT Trac.

17. Page 47, Item 6.144: This description is not complete.

Response:
Paragraph 6.144 is intended to give an option for an electric or an electric over hydraulic mechanisms to operate the ladder rack.

18. Page 49, Item 7.10: Is the third brake light supposed to have tail and turn functions as mentioned?

Response:
Yes

19. Page 50, Item 7.21: By on top of the body, do you mean actually on top or on the upper body sides (above the compartment doors)?

Response:
Paragraph 7.21 is the walkway from the rear of the truck body that extends forward to the hose reels and pre-connected cross lays. This walkway is directly over the pre-connected blitz line that is stretched off of the rear of the truck and located between the two large dead loads of 3" hose and 5" hose. As a walkway, it needs to be illuminated and the specifications are calling for hooded lights to illuminate the walkway.

20. Page 50, Item 8.01: Please give as more details about what is expected; laminated paper, poster board, or _?

Response:
The goal is to obtain a full scale poster of the pump panel to assist in training. Expectations are that this would be a reasonably robust poster that would be more than simple paper, but there is likely a need to ascertain the ability to obtain such a poster followed by the options of being a photo image, CAD drawing, material type, backing type, etc. To be conservative for the bid, expectations are for a laminated poster board of either a photo or exact detailed CAD image in color.

21. Page 53, Item 8.42: Here you ask for a 2.5" crosslay, but in the main hose bed. Did you mean in the pump house crosslays, or are you asking for a second preconnect in the main hose bed (in addition to the 3" line)?

Response:
The pre-connected hose lines will consist of a front jump line in the front bumper, two 1-3/4" cross lays over the pump, a 2-1/2" cross lay over the pump and a 2-1/2" discharge that is stowed in the middle of the traditional hose bed that is stretched off of the rear of the truck.

Paragraph 8.42 should ideally be described as the rear blitz line.

22. Page 55, Item 8.66: The third (2.5") crosslay is not mentioned here.

Response:
An addendum will be provided to include the 2-1/2" cross lay.

23. Page 55, Item 8.66: Does the rear preconnected blitz mean the 3" line in the center of the main hose bed?

Response:
Yes

24. Page 57, Item 8.71: Which SmartFOAM version (3.3, 5.0, or 6.5) is required?

Response:
The SmartFOAM 6.5, or equal, is deisred to obtain the desired flow.

25. Page 58, Item 9.05: Here you ask for 20 gallons of foam. Dual 40 gallon foam tanks, however, are requested in Page 59, Item 9.18 and Page 60, Item 9.22. Are dual tanks required?
Mallory 02/04/18

Response:
The desire will be to have two foam tanks, each 40 gallons, one for class A concentrate and one for class B concentrate.

26. Page 62, Item 10.20: Are the horns required to alternate whenever activated, or to alternate only when a separate/specific switch is used?

Response:
Strike paragraph 10.20

27. Page 64, Item 11.08: Which brand/model camera system is preferred?

Response:
With the rapid changes in technology, we would yield to the experience from the manufacturer. In the absence of experience, we would likely place a focus upon Safety Vision.

28. Page 68, Item 12.11: Is 4" or 6" chevron striping required on the front bumper?

Response:
Expectations are that the entire vertical surface of the bumper will be covered with the reflective stripes.

29. Is it possible to get photos of a TFD truck cab with the white pinstripe, gold leaf stripe, and arrow points we are required to match?

Response:
Photos can be provided but there is an implied understanding that the pinstripe, gold leaf stripe and arrow points will only be representative, not necessarily identical in placement, etc. depending upon the make and model of the cab, etc.

30. Page 70, Item 12.29: Does this mean that the city will bring us the graphics layout to be matched, or that the bidder is to provide the proposed layout?

Response:
The intent of 12.29 is to recognize that there are variances between manufacturers as to physical space, relationships of paint to trim and components and the like. The expectation is that there would be a discussion during the pre-construction meeting to discuss the graphics with the employees or sub-contractor as to what graphics are to be provided and applied. Ideally this would be conducted with computer generated images, etc.

31. Page 70, Item 13.01: Do you require a 17' or 11' Little Giant ladder?

Response:
A correction will be made to acquire a 17 ft Little Giant ladder.

32. Page 83: Here vendors are asked to provide pre-determined pricing for five years. On Page 86, Item 13, you give us a choice of increasing the price based on (a) the CPI or (b) a fixed percentage. Which is required for Page 83?

Response:
The annual increase would likely be addressed by City Purchasing. There may be a need or desire to reference CPI with a maximum cap of a fixed percentage should CPI grow sharply.

2/1/2018

Addendum #1

Please note the following changes which have been made for clarification to this Invitation for Sealed Bid.
This addendum must be listed as Addendum #1 in the bid package as verification that you have received
and are aware of the information contained herein.

QUESTIONS/CLARIFICATION/CHANGES:

1. CHANGE: II. A. 1, Date Extension

The proposal must be received by 5:00 p.m. on Wednesday, February 28th, 2018, Central Daylight Time.
Proposals must be sealed in an envelope or box clearly labeled “CSP 18-601 Pumper Apparatus”. Proposals
arriving late will be returned unopened.

2. CHANGE: 1.30 Pre-Bid Conference Meeting One:

A Pre-Bid conference will be held for CSP 18-601 Pumper Apparatus on:
Date: February 15th, 2018 Time 10:00
Location: 175 E 2nd Street, 5th Floor Central Conference Room, Tulsa, OK 74103
All Bidders’ wishing to participate in the process will attend, send an alternate or participate via conference call.

I. STATEMENT OF PURPOSE:

With this Competitive Sealed Proposal (CSP) request, we are searching to secure services for The City of Tulsa Fire Department to purchase three or more Pumper, or Engine, type fire apparatus with affiliated equipment. The Fire Department intends to purchase additional pumpers for the next several years. The quantity will be dependent upon the availability of funding.

We enthusiastically look forward to receiving your proposal.

II. INSTRUCTIONS FOR SUBMITTING A PROPOSAL:

A. General Requirements

1. The proposal **must** be received by **5:00 p.m. on Wednesday, March 21st, 2018, Central Daylight Time.** Proposals must be sealed in an envelope or box clearly labeled "**CSP 18-601 Pumper Apparatus".**
Proposals arriving late will be returned unopened.

2. Proposals must be delivered sealed to:

Deputy City Clerk
City of Tulsa
175 E. 2nd St.
Suite 260
Tulsa, OK 74103

3. All interested Respondents (Sellers) are required to register with the Buyer, James Mozingo, in order to receive updates, addenda or any additional information required. The City is not responsible for any failure to register.

4. Inquiries to the Buyer requesting clarification regarding this CSP request or the content herein must be made via e-mail and must be received prior to the end of the business day on March 14th, 2018**.**

James Mozingo, Buyer
jmozingo@cityoftulsa@cityoftulsa.org

Any questions regarding this CSP request will be handled as promptly and as directly as possible. If a question requires only clarification of CSP request instructions or specifications, it will be handled via e-mail, or verbally. If any question results in material changes or additions to the CSP request, those changes or additions will be forwarded to all registered Respondents as quickly as possible by addendum.

5. Respondents shall designate a contact person, with appropriate contact information, to address any questions concerning a proposal. Respondents shall also state the name and title of individuals who will

make final decisions regarding contractual commitments and have legal authority to execute a contract on the Respondent's behalf.

6. Proposals will be opened on the morning after the due date, at 8:30am, at the:

Standards, Specifications, and Awards Committee Meeting
175 East 2nd Street, 2nd Floor
City Council Chamber

B. General Notifications

1. With this Competitive Sealed Proposal request, the City reserves the right to do the following:

a. To conduct oral or written discussions with Respondents, after proposals are received, concerning technical and Price aspects of the proposals and/or to allow Respondents to revise their proposals, including Price;

b. To evaluate, after proposals are received, the relative abilities of Respondents to perform, including their technical or professional experience and/or expertise;

c. To conduct a comparative evaluation, after proposals are received, of the differing Price, service, quality, contractual factors, technical content and/or technical and performance capability of the proposals;

d. To negotiate mutually agreeable terms in a contract;

2. The City of Tulsa notifies all possible Respondents that no person shall be excluded from participation in, denied any benefits of, or otherwise discriminated against in connection with the award and performance of any contract on the basis of race, religious creed, color, national origin, ancestry, physical disability, sex, age, ethnicity, or on any other basis prohibited by law.

3. All Respondents shall comply with all applicable laws regarding equal employment opportunity and nondiscrimination.

4. All Respondents shall comply with the Americans with Disabilities Act (ADA) and all proposals and any subsequent contract shall include the following statement:

> "Contractor shall take the necessary actions to ensure its operations in performance of this contract and its employment practices are in compliance with the requirements of the Americans with Disabilities Act."

It is understood that the program of the Respondent is not a program or activity of the City of Tulsa. The Respondent agrees that its program or activity will comply with the requirements of the ADA. Any costs of such compliance will be the responsibility of the Respondent. Under no circumstances will the Respondent conduct any activity which it deems to not be in compliance with the ADA.

5. Although it is the City's intent to choose only the most qualified Respondents to interview, the City reserves the right to choose any number of qualified finalists for interview and/or final selection.

6. This Competitive Sealed Proposal request does not commit the City of Tulsa to pay any costs incurred in the submission of a proposal or the costs incurred in making necessary studies and designs for preparation thereof, or contract for service or supplies.

III. SCOPE OF WORK

1.00 GENERAL

1.01 It is the intent of these specifications for the Tulsa Fire Department to purchase three or more Pumper, or Engine, type fire apparatus with affiliated equipment.

1.02 The Fire Department intends to purchase additional pumpers for the next several years. The quantity will be dependent upon the availability of funding.

1.03 Assembly of the major components, and apparatus itself, will be assembled in the United States.

1.04 Parts and assemblies used in the construction of the apparatus should be to imperial measurements. Items known to be metric will be identified by the Bidder.

1.05 Each bid response will be evaluated for compliance to the specifications. The lowest bid meeting specification will be recommended for award.

1.06 The lowest bid meeting specifications will be determined upon a point evaluation process whereby each paragraph is assigned a pre-determined number of points.

1.07 The lowest bid meeting specifications will be determined upon a point evaluation process whereby each paragraph is awarded points for compliance. The bid amount is then divided by the total number of awarded points to determine the cost per point. The cost per point is then multiplied by the total possible points to determine a bid evaluation number. The lowest bid evaluation number will be considered the lowest bid meeting specification.

- Bid Price / Total awarded points = Cost per point
- Cost per point **X** Total possible points = Bid evaluation number

- The lowest bid evaluation number will be considered the lowest bid meeting specification

1.08 The response to the bid needs to be provided separately from the specifications and needs to address each paragraph of the specifications. The response should include as much information and detail as possible.

1.09 Paragraphs, details, items and issues identified in the specifications that are not specifically described in the Bidders response may be considered absent, non-responsive or non-compliant to these specifications and may receive no points for the applicable paragraph. Bidders should not assume that items, issues or responses are implied as being compliant to the specifications.

1.10 The use of terms, phrases or other similar text that claims compliance without supportive text, details, description or supportive information may be considered non-responsive or non-compliant to these specifications and may receive no points for the applicable paragraph.

1.11 Exceptions, deviations, or variances, regardless of the real or perceived variance, will be provided on a separate document with disclosure and description of the exception, deviation or variance.

1.12 The Tulsa Fire Department retains the sole right in determining compliance to the specifications where the bid response includes Bidder provided exceptions, alternative options or is otherwise subjective as compliant to these specifications.

1.13 The bid will include all applicable literature, details, and references to describe and demonstrate compliance to the specifications. The Fire Department will not use or consider information obtained through web based references, searches or links to various web pages. The absence of provided information or the use of links and references from the web will result in the applicable item or issue considered as non-responsive or non-compliant and will not be awarded any credit or points.

1.14 The bid includes fire hose and loose equipment that may be shipped directly to the Tulsa Fire Department prior to delivery of the apparatus.

1.15 The apparatus and all loose items and products will be delivered to Tulsa Fire Department, 1790 Newblock Park Drive, Tulsa, OK 74127. The facility has a fork truck and is able to unload delivery vehicles.

1.16 Upon issuance of a purchase order or contract, the Bidder will provide a performance bond in the amount of 100% of the bid price. The performance bond will remain in effect until acceptance of the delivered apparatus.

1.17 Payment for the apparatus and loose equipment may be provided with receipt of invoices at various stages of the construction of the apparatus or delivery of hose, tools and other loose equipment.

1.18 Invoicing and payment will be done periodically. Invoices will be paid following physical inspection of the constructed items or physical receipt and inspection of requested goods. The final payment, which will be no less than 10% of the total purchase price, will be paid following receipt of the apparatus, equipment and successful completion of the final acceptance inspection conducted in Tulsa, Oklahoma.

Benchmarks for invoicing and payment include:

- Receipt of the specified loose equipment by the Tulsa Fire Department.
- Completion of the cab and chassis to a level that it has the ability to physically maneuver under its own power. Ability to invoice will require physical inspection of the cab and chassis by the Tulsa Fire Department.
- Construction and installation of the fire body onto the chassis. This will be considered part of the mid-construction phase of the project where the fire pump and fire body are in the process of being installed onto the chassis. Ability to invoice will require physical inspection of the fire body by the Tulsa Fire Department.
- Successful completion of the final inspection and acceptance tests held in Tulsa, Oklahoma. Balance remaining to be no less than 10% of the bid.

1.19 For the purpose of efficiency, the Manufacturer is encouraged to provide weekly photographs of the apparatus as it is being constructed.

1.20 Following any final changes or modifications at the manufacturing facility, the completed apparatus will be driven to the Tulsa Fire Department, 1790 Newblock Park Drive, Tulsa, OK 74127 under its own power. The bidder will be responsible for drivers, fuel, permits, repair of any damage or other related expenses incurred in transport during the delivery process.

1.21 With the exception of final programming of the radio and the Utility Rocket, the fire apparatus will be delivered to the Tulsa Fire Department as a complete and finished vehicle. This is to include the installation of mounted equipment brackets that will be specifically detailed and described at the preconstruction meeting.

1.22 The Tulsa Fire Department will recognize the apparatus as being delivered when apparatus has no additional work to be conducted and is offered to the Fire Department as complete, finished, and ready for an acceptance inspection. The vehicle will be presented to the Tulsa Fire Department with:

- All fluid levels will be full and within operating ranges for fuel, motor oil, coolant, power steering, windshield washer fluid, transmission fluid, rear axle, and transfer case for the pump.
- Properly operating air conditioning system.
- Proper front end alignment.
- Properly adjusted and operating suspension system.
- Properly inflated tires.
- Properly operating electrical system including the load management, lighting, and audible-visual warning devices.
- Presentation of applicable literature, manuals, and documents.

1.23 With the delivery of the apparatus, the Tulsa Fire Department will conduct an acceptance inspection of the apparatus as described in NFPA 1911 *Standard for the Inspection, Maintenance, Testing and Retirement of In-Service Automotive Fire Apparatus* and section 4.18 of NFPA 1901 *Standard for Automotive Fire Apparatus*. The acceptance inspection will also serve as a review for compliance to the specifications, actual performance of the apparatus while driving, and operation of the fire pump.

1.24 The Fire Department will not accept the apparatus until all known deficiencies identified during the acceptance inspection have been resolved. This will include the secured mounting of equipment brackets as detailed and described at the pre-construction meeting.

1.25 With receipt of final payment, the Bidder will provide the Manufacturer's Statement of Origin, Oklahoma Tax Commission form 701-6 Application for Oklahoma Certificate of Title for a Vehicle with the appropriate tax stamp, and Oklahoma Tax Commission form 729 Odometer Disclosure Statement.

1.26 The Fire Department will document and inform the Bidder of the date that the apparatus is placed into service.

1.27 The Bidder will identify the expected date of delivery of each of the apparatus but will not exceed 300 calendar days from the date of the issued purchase order or contract to construct.

1.28 Should a performance failure occur, it will be the responsibility of the Bidder to immediately notify the City of Tulsa in writing and submit proof of the circumstances for the delay or inability to deliver the specified apparatus. The Bidder will then negotiate a new delivery schedule that will not exceed 90 days. Failure to negotiate a new delivery date or failure to successfully deliver with the additional period of time will result in the City of Tulsa exercising the performance bond.

1.29 The City of Tulsa will schedule two dates for pre-bid meetings. Each Bidder wishing to participate in the bidding process will be required to have a representative attend one of the two meetings. It is the intent of this meeting to

review the proposed specifications before the bid so as to allow changes before the actual bid process. The date, time and specific meeting location will be scheduled with the Tulsa Fire Department.

1.30 Meeting One:

A Pre-Bid conference will be held for CSP 18-601 Pumper Apparatus on:

Date: February 21st, 2018, Time: 10:00 A.M. CST
Location: 175 E 2nd Street, 5th Floor Central Conference Room, Tulsa, OK 74103

All Bidders' wishing to participate in the process will attend, send an alternate or participate via conference call.

1.31 The specifications herein have been divided into the following sections:

Chapter 1	GENERAL
Chapter 2	ADMINISTRATIVE
Chapter 3	CHASSIS
Chapter 4	CAB
Chapter 5	ELECTRICAL FOR CAB AND CHASSIS
Chapter 6	FIRE BODY
Chapter 7	ELECTRICAL FOR FIRE BODY
Chapter 8	PUMP, PLUMBING
Chapter 9	WATER AND FOAM TANK
Chapter 10	AUDIBLE AND VISUAL WARNING DEVICES
Chapter 11	ELECTRONICS AND COMMUNICATIONS
Chapter 12	PAINT AND FINISH
Chapter 13	LOOSE EQUIPMENT
Chapter 14	ANNEX
Chapter 15	OPTIONS
Chapter 16	ADDENDA

1.32 A table will be provided in the annex that describes the type and quantity of items anticipated to be carried by the apparatus to provide additional information on what is expected to be carried on the apparatus by the Tulsa Fire Department. The table, or NFPA 1901 equipment list, whichever is greater, should be used for determining the applicable loads. The table predicts the complement of equipment that is expected to be carried on the apparatus to be approximately 4,381 pounds.

Line	**Description**	**Possible Points**	**Awarded Points** To be filled out by Fire Dept.
2.00	**ADMINISTRATIVE**	0	
2.01	The bid response will be provided in both written text as well as provided electronically in PDF form on a USB thumb drive.	80	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
2.02	The bid response created by the bidder will be in provided to the City of Tulsa: • In chapters or sections that mirror exactly that of the specifications. Minor deviations within a given chapter or section are acceptable. AND/OR • Provide a cross reference that matches the bid specifications and describes which page of the bidder's response that provides evidence of compliance to the specifications.	80	
2.03	The completed apparatus will be designed and construction in compliance to the current edition of NFPA 1901 Standard for Automotive Fire Apparatus.	10	
2.04	The bidder will disclose any known deficiencies or variances between NFPA 1901 and the specifications herein or the bid response.	10	
2.05	The apparatus will be designed to meet all State of Oklahoma and Federal laws and regulations governing the design and operation of motorized vehicles.	10	
2.06	The Bidder will provide a copy of their license to sell motorized vehicles within the State of Oklahoma.	10	
2.07	The bid will confirm that all components used in the manufacturing and assembly of the apparatus will be new, unused, first line quality and representative of the manufacturer's latest methods and techniques.	10	
2.08	The bid will confirm that the manufacturer will design and construct the apparatus so as to provide access to all parts and components that require periodic inspection, lubrication, adjustment or repair. This may include, but will not be limited to, the creation of removable inspection panels.	10	
2.09	The bidder will disclose in the bid the existence of any special or unique tools that are required to properly inspect, maintain or operate the completed apparatus.	10	
2.10	The awarded Bidder will schedule with the Tulsa Fire Department the following meetings and inspections at the manufacturing facility. The bidder will provide the travel and lodging for each of these meetings for each of the apparatus and/or their major components. Where possible, the meetings and inspections may be combined.	10	
2.11	Preconstruction meeting to review and make any needed changes to the specifications and/or construction documents	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	for the apparatus prior to its actual manufacture or assembly. This one meeting will address all three apparatus and will include three (3) Tulsa Fire Department representatives for no less than two full days to address all three apparatus.		
2.12	Mid-construction inspection of the apparatus when the fire pump, water tank and fire body have been mounted onto the chassis. The inspection is intended to illustrate the interface of all of the related components on the chassis and to allow changes before the truck has been completed with paint, trim and other finishing items. This inspection will include three (3) Tulsa Fire Department representatives for no less than one day per apparatus.	10	
2.13	Final inspection of the apparatus when assembly has been finished and operational testing of the various components and systems are imminent, underway or completed. The apparatus is nearly ready to leave the manufacturing facility. This inspection will include three (3) Tulsa Fire Department representatives for no less than one full day for each apparatus.	10	
2.14	The Bidder will provide photographs of the apparatus throughout the construction process. The photos will be acquired and made available at a frequency no less than weekly.	10	
2.15	The Bidder will provide at the time of delivery, two hard copies and two electronic copies illustrating the structural design of the fire body.	10	
2.16	The Bidder will provide at the time of delivery, two electronic copies of owner/operator/training manual(s).	10	
2.17	The Bidder will provide at the time of the delivery, two hard copies or two electronic copies of listed parts including their description. This should include a cross reference for aftermarket parts.	10	
2.18	The Bidder will provide at the time of delivery, two hard copies, or CD, of repair or service manual describing lubrication charts, engineering drawings and information needed for the maintenance and repair of the apparatus and related systems.	10	
2.19	The Bidder will provide at the time of delivery, two hard copies, or CD, of electrical diagrams illustrating the connectivity and routing of electrical and data systems.	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
2.20	The Bidder, at the time of delivery, will provide no less than three consecutive days operational training to Training Officers and Company personnel with the apparatus in Tulsa, Oklahoma.	10	
2.21	The Bidder will provide an additional two days of technical maintenance training for Emergency Vehicle Technicians with the delivered apparatus in Tulsa, Oklahoma.	10	
2.22	The Bidder will provide a performance bond for each apparatus in the amount of 100 percent of the bid price for each apparatus including provided equipment. The performance bond will remain in effect through the two year bumper to bumper warranty period.	10	
2.23	The Fire Department will inform the Bidder when the apparatus is placed into service. This date, no greater than 60 days from date of acceptance, will represent the date that warranty periods will begin.	10	
2.24	The Bidder will provide the following warranties for the major components of the apparatus. Warranty information will be provided at the time of the pre-bid conference. Warranty documents will be completed at the time of apparatus acceptance which will represent the beginning of the warranty periods.	10	
2.25	Provided warranties will be provided with the recognition that required use, care and maintenance will be provided by the City of Tulsa and will not require care or maintenance from the manufacturer, specific company or entity.	10	
2.26	No less than a two year bumper to bumper warranty for the entire apparatus.	10	
2.27	No less than a five year paint and striping warranty.	10	
2.28	No less than a ten year chassis cab warranty for corrosion and metal cracking.	10	
2.29	No less than a ten year fire body warranty for corrosion and metal cracking.	10	
2.30	No less than three year warranty for the front axle.	10	
2.31	No less than three year warranty for the front suspension.	10	
2.32	No less than two year warranty for the rear axle.	10	
2.33	No less than four year warranty for the rear suspension.	10	
2.34	No less than life of the fire apparatus warranty for the chassis frame, frame liner(S) if applicable, cross-members and fasteners for cracking, warping, and other structural damage.	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
2.35	No less than ten year warranty for the engine.	10	
2.36	No less than five year warranty for the transmission.	10	
2.37	No less than five year warranty for the transmission cooler.	10	
2.38	No less than three year warranty for the alternator.	10	
2.39	No less than a three year warranty for the starter.	10	
2.40	No less than a three year warranty for the ABS, ATC and Stability Control system.	10	
2.41	No less than five year warranty for the Hale fire pump.	10	
2.42	No less than ten year warranty for the stainless steel manifold and plumbing.	10	
2.43	No less than three year warranty for the liquid filled pressure gauges.	10	
2.44	No less than two year warranty for the foam proportioning system.	10	
2.45	No less than two year warranty for the electronic components used by the fire pump and foam proportioning system.	10	
2.46	No less than five year warranty for the electrical multiplex system.	10	
2.47	No less than five year warranty for the Whelen warning lights.	10	
2.48	No less than two year warranty for the headset intercommunication system.	10	
2.49	No less than life of the apparatus warranty for compartment roll-up doors.	10	
2.50	No less than ten year warranty for compartment lighting.	10	
2.51	The Manufacturer of the completed apparatus will provide documentation demonstrating the existence of no less than $15 million dollars of product liability insurance.	10	
2.52	The Tulsa Fire Department expects the Bidder to have access to an adequate stock of replacement parts available to service the apparatus and to make delivery of the parts within two business days from the time of notification.	10	
2.53	Should the apparatus require warranty service outside the City limits of Tulsa, the Bidder will arrange for the transportation, including required permits, insurance, and all affiliated expenses, at no cost to the City.	10	
2.54	The City of Tulsa will provide routine maintenance of the apparatus and will retain appropriate maintenance records. In the event of a minor warranty issue, the City of Tulsa may	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	repair the item and then give notice to the Bidder of the issue and the completed repair in anticipation of reimbursement. Examples may include, but are not limited to, exchange of LED warning light fixtures, pressure gauges, etc.		
2.55	The City of Tulsa will inform the bidder in a timely manner of all significant warranty related issues. Communication will include telephone followed by an email to document the date and time of the notification	10	
2.56	~~The City of Tulsa will inform the bidder in a timely manner of all significant warranty related issues. Communication will include telephone followed by an email to document the date and time of the notification~~	0	Delete
2.57	The Bidder will respond within business 48 hours of notification by the City of Tulsa, on when, where and how a warranty issue will be resolved.	10	
2.58	The City of Tulsa has the right to first refusal for performing warranty repair. The City will also will retain the right to perform, or arrange for, the needed repair if there is no response from the Bidder within 48 hours or if the Bidder's response is not acceptable to the City of Tulsa. At the completion of the repairs, the Bidder will reimburse the City of Tulsa for all costs incurred.	10	
2.59	Warranty work performed by the City of Tulsa will be billed at the same labor rate of unscheduled overtime charged to the Tulsa Fire Department by the City of Tulsa Fire Garage at the time of the needed repair. The rate for unscheduled overtime is 1.5 times the base labor rate. The current labor rate for fiscal year 2016/2017 is $55.00 per hour. Consequently, the unscheduled overtime rate that will be billed for warranty repair will be 1.5 x 55 for a sum of $82.50 per hour. The labor rate for warranty repair will change as the billing rate for normal service billed to the Tulsa Fire Department changes during the warranty period.	10	
2.60	Warranty repairs that are managed by the City of Tulsa will be reimbursed at the actual value plus 5%. Parts that are not provided or acquired through the Bidder will be reimbursed at the actual value plus 25%.	10	
2.61	In addition to the expense of the actual repair, the City of	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	Tulsa will solicit reimbursement for the inability to use the apparatus or systems that render the apparatus out-of-service due to one or more warranty issues.		
2.62	The out of service criteria will be defined by the current edition of NFPA 1911 standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus. Reimbursement will be billed at a rate that will be based upon the FEMA reimbursement rate for the applicable resource divided by 24 hours. For example, in 2015 FEMA code 8684 Fire Truck with 100 ft. ladder had a reimbursement rate of $140.81 per hour. With the established FEMA rate, the City Tulsa rate of reimbursement for out-of-service time will be $140.81divided by 24 hours for a sum of $5.87 per hour of out-of-service time. The out-of-service billing will be charged upon the number of continuous hours that the vehicle is out-of-service including evenings, weekends and holidays. Billing will be rounded to the nearest half hour. The reimbursement billing time will begin 96 hours following the original documented time of notification to the Seller of the warranty issue.	10	
2.63	The apparatus will have a wheelbase no greater than 216 inches	10	
2.64	The apparatus will have an overall height of no greater than 10’-4”	10	
2.65	The apparatus will have an overall length of no greater than 33’-6”.	10	
2.66	Identify the overall length of the proposed apparatus. No Exception	10	
2.67	Identify the overall travel height of the proposed apparatus. No Exception	10	
2.68	Identify the overall length of the proposed apparatus. No exception	10	
2.69	Identify the overall width of the cab measured from exterior wall surface to exterior wall surface.	10	
2.70	Identify the weight without personnel, water, foam, hose or equipment. No Exception	10	
2.71	Identify the overall weight with personnel, water, foam, hose	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	and equipment. No Exception		
2.72	Identify the wheelbase. No Exception	10	
2.73	Identify the maximum cramp angle of the steer axle turned to the left. No Exception	10	
2.74	Identify the maximum cramp angle of the steer axle turned to the right. No Exception	10	
2.75	Identify the curb to curb turn radius left. No Exception	10	
2.76	Identify the curb to curb turn radius right. No Exception	10	
2.77	Identify the wall to wall turn radius left. No Exception	10	
2.78	Identify the wall to wall turn radius right. No Exception	10	
2.79	Identify the front axle and suspension weight rating. No Exception	10	
2.80	Identify the estimated weight on the front axle with personnel, water, foam, hose and equipment. No Exception	10	
2.81	Identify the rear axle and suspension weight rating. No Exception	10	
2.82	Identify the estimated weight on the rear axle with personnel, water, foam, hose and equipment. No Exception	10	
2.83	Identify the actual calculated angle of approach. No Exception	10	
2.84	Identify the actual calculated angle of departure. No Exception	10	
2.85	Include a preliminary drawing of the proposed apparatus. No Exception	10	
2.86	Identify the manufacturer and model of the cab and chassis	10	
2.87	Identify the manufacturer of the fire body	10	
3.00	**CHASSIS**	0	
3.01	The chassis will be a custom to the fire service medium length four door cab with side opening doors mounted onto a truck chassis with a total of five seated positions, four with SCBA storage brackets.	10	
3.02	The cab will be designed to tilt forward for greater access to the engine compartment for periodic inspection and maintenance.	10	
3.03	The cab will be 100 inches wide, ± 2 inches when measured from exterior wall surface to exterior wall surface. This will not include handles, hardware or mirrors.	10	
3.04	The frame will be engineered by the manufacturer and designed to adequately support the total Gross Vehicle Weight Rating (GVWR) in a safe and serviceable manner.	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	Sufficient cross-members and frame liners will be provided to properly support the cab, body and related components without being damaged.		
3.05	The main chassis frame will be one straight continuous length without splices, welded extension or other weldments.	10	
3.06	If the frame is to include a liner, it will be a continuous length, same as the chassis frame, without splices, welded extensions or other weldments.	10	
3.07	Both the frame, frame liner if provided, and cross-members will be treated for corrosion. The Bidder will provide a description of the corrosion protection with the bid.	10	
3.08	The apparatus axles and suspension systems will be designed to safely carry the apparatus with personnel and equipment without exceeding the weight rating for the axle or suspension.	10	
3.09	The apparatus will carry no less than 25% or more than 45% of its total loaded weight on the front axle.	10	
3.10	The apparatus will not have more than 7% side-to-side tire load variation.	10	
3.11	A hub piloted front straight axle and front suspension will be provided with a load rating sufficient enough to carry the anticipated combined load of the apparatus, water, equipment and personnel will be provided. The bid will describe the manufacturer, design and rating of the front axle. The axle may be manufactured by Dana or Meritor..	10	
3.12	The front axle will be provided with Stemco oil seals with viewing window.	10	
3.13	The front axle will be provided with heavy duty telescoping shock absorbers.	10	
3.14	The front axle will be provided with integral heavy-duty power steering.	10	
3.15	The power steering lines will use wire braded lines with crimped fittings.	10	
3.16	The rear axle will be designed to accommodate the total load provided by the apparatus, water, hose, personnel and equipment.	10	
3.17	The rear axle(s) is to be a single reduction differential with a top speed of 68 miles per hour.	10	
3.18	The rear axle(s) will be provided with oil seals.	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
3.19	The rear suspension will be a Hendrickson FIREMAAX®EX heavy-duty air suspension. No exception.	10	
3.20	The rear suspension will be designed, rated and installed to safely manage the anticipated load of the apparatus.	10	
3.21	The entire braking system will meet or exceed FMVSS 121 and the current edition of NFPA 1901.	10	
3.22	The front brakes will be Meritor model EX225 DiscPlus™ air disc brakes, or equal, with no smaller than 17 inch diameter rotors.	10	
3.23	The rear brakes will be S-cam drum brakes with no smaller than 16-1/2" x 7" cast shoes.	10	
3.24	The rear brakes will be provided with automatic slack adjusters.	10	
3.25	The parking brake will consist of a spring brake actuated on the rear axle.	10	
3.26	An air compressor producing no less than 18.7 CFM will be provided.	10	
3.27	The air system will have a storage capacity of no less than 5,800 cubic inches.	10	
3.28	The air tanks will be provided with both manually operated drains and automatic drains.	10	
3.29	The air system will include a WABCO System Saver 1200, or equal, with spin-on coalescing filter cartridge and 100 watt heater.	10	
3.30	The air drier will include a Meritor WABCO heated automatic moisture ejector.	10	
3.31	The driver's dash will include two air pressure gauges, or a dual needle gauge, to identify air pressure in both the front and rear air systems. A red warning light with audible alarm will be provided on the driver's dash to warn of low air pressure.	10	
3.32	A warning light marked with "Parking Brake" will be positioned on the driver's dash to indicate that the engagement/application of the parking brake.	10	
3.33	An air inlet system will allow an external air source to feed into the air brake system through a shoreline or other source. The inlet is to be equipped with a male coupling and located near the driver's door. A check valve must be provided to prevent reverse flow of air. The inlet will	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	discharge into the "wet" tank of the brake system.		
3.34	An air outlet will allow air to be discharged from the apparatus. The outlet will be located near the driver's door and provided with a female coupling. The air outlet will be connected to a non-strategic air tank.	10	
3.35	The couplings used for the air intake and discharge outlet will be compatible with industrial type "D" air fittings.	10	
3.36	Using the chassis air supply, the fire apparatus manufacturer will install a Trident air primer onto the fire pump. Specific details describing the primer are located in Chapter 8 for Pump and Plumbing of the specifications.	10	
3.37	The apparatus shall be provided with Meritor WABCO 4S4M Anti-lock Braking System (ABS). The 4 channel anti-lock braking control will be provided on both the front and rear wheels.	10	
3.38	The apparatus shall be provided with WABCO Automatic Traction Control used for traction in poor road or weather conditions. A mud/snow switch will be provided on the instrument panel whereby activation of the switch will divert power to the non-slipping wheel to let the truck climb out and get on top of deep snow or mud.	10	
3.39	The apparatus shall be provided with WABCO Electronic Stability Control as an integral part of the ABS system. The system will automatically reduce engine RPM and selectively apply brakes to the individual wheel ends of the front and rear axles to reduce the possibility of a side roll event.	10	
3.40	Both the front and rear wheels are to be hub pilot aluminum wheels manufactured by Alcoa©.	10	
3.41	The front rims will be Alcoa© 22.5" x 12.25" polished aluminum disc type wheels with a ten (10) stud, 11.25" bolt circle and load rating no less than 12,800 pounds.	10	
3.42	The front wheels will be provided with stainless steel hub covers with an opening to allow the viewing of the Stemco oil seals.	10	
3.43	The wheels will also be provided with stainless steel lug nut covers.	10	
3.44	The front tires will be 385/65R22.5, or appropriate, to carry the anticipated load placed upon the front axle. In addition to the load rating, the tires will have a speed rating of no less than 68 miles per hour.	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	Similar tires currently used within the Tulsa Fire Department are Goodyear 385/65R22.5 G296 MSA.		
3.45	The rear rims will be Alcoa© 22.5" x 9.00" polished aluminum disc wheels with ten(10) stud 11.25" bolt circle and load rating no less than 10,000 pounds. No Exception to the weight rating.	10	
3.46	The rear tires will be 315/80R22.5 tires. No Exception	10	
3.47	In addition to the load rating, the tires will have a speed rating of no less than 68 miles per hour. Similar tires currently used within the Tulsa Fire Department are Goodyear 315/80R22.5 G751 MSA	10	
3.48	The rear axles will be provided with stainless steel high hats to cover the rear hubs.	10	
3.49	The wheels will also be provided with stainless steel lug nut covers.	10	
3.50	The inner rear wheels will be provided with extended valve stems to improve access, inspection of air pressure and inflation.	10	
3.51	All tires will be balanced before mounting onto the apparatus.	10	
3.52	All wheels will be provided with valve stems with caps that display the individual tire's air pressure as acceptable or unacceptable.	10	
3.53	One spare front wheel with mounted tire and one rear wheel with spare tire, each of the same make, model and design as those mounted onto the chassis, will be provided with each apparatus.	10	
	The apparatus will be provided with an extended front bumper that will project forward of the cab approximately 18 inches to support warning equipment and a pre-connected hose line.	10	
3.54	The space between the frame rails will be provided with a recessed tray that will safely store 150 feet of 1-3/4 inch double jacket fire hose.	10	
3.55	The top of the recessed hose storage tray will be covered with a hinged aluminum tread plate cover that will be provided with a single Eberhard D-ring handle, or equal, to latch and secure the storage area plus two gas struts to hold	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	it open while the hose line is being deployed.		
3.56	The bottom of the recessed hose storage tray will include drain holes and plastic decking to allow water to drain away from the hose and out of the tray.	10	
3.57	The top of the extension will be covered with aluminum tread plate that is specifically reinforced to support the weight and stress produced ab a pedestal mounted Federal Signal Q2B on one side outboard of the frame rails and a manually operated 12" bell on the other.	10	
3.58	The bumper will be provided with a gravel pan constructed of bright aluminum tread plate that is formed and positioned between the front bumper and the front face of the chassis cab. The gravel pan will be supported to prevent unwanted flexing and vibration.	10	
3.59	The front bumper will be constructed of heavy duty formed steel, "C" Channel of no less than 0.25 inch thick and no less than 10 inches in height with top and bottom flanges of no less than 1.5 inches.	10	
3.60	The bumper will be full width of the apparatus and will be finished and painted the job color.	10	
3.61	The bumper will be directly fastened to the frame extensions of the apparatus.	10	
3.62	The top flange of the front bumper will be provided with black textured material with aluminum oxide, or similar material, to produce a chip resistant anti-slip finish.	10	
3.63	Two illuminated sight rods, one each side, will be provided to assist the driver in locating the front corners of the bumper. The sight rods will use an LED lamp for illumination.	10	
3.64	Two chrome plated steel or stainless steel tow hooks will be installed beneath the front bumper and attached to the frame members.	10	
3.65	The apparatus will be provided with a Cummins ISL9 diesel motor that will produce or include: • POWER: 450 Hp @ 2100 rpm • TORQUE: 1250 lb-ft @ 1400 rpm • GOVERNED SPEED: 2200 rpm • DISPLACEMENT: 543 in^3 • FUEL FILTER: Spin-on primary filter with water separator and water-in-fuel sensor. Secondary spin-on style filter. Provided with dual check valves	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	• WATER SEPARATOR: In-Line Racor, or equal, with indicator light and audible alarm • FUEL PUMP: Electric • STARTER: Delco model 39MT™ • COOLANT FILTER: Spin-on style with shut off valves on the supply and return line • AIR CLEANER: Farr or equal, dry-type, dual replaceable element with air restriction indicator. • AIR COMPRESSOR: Tru-Flow 750, 18.7 CFM • LUBE OIL COOLER • LUBE OIL FILTER: Full flow, spin on type. • ELECTRONIC CONTROLS		
3.66	The engine air intake will be provided with an ember separator. The separator will be mounted in a position easily accessible for inspection and maintenance.	10	
3.67	The fuel lines will be braided and provided with shut off valves located at the fuel tank and at each side of the fuel filter, lift pump and water separator to minimize drainage during serving.	10	
3.68	The fuel filter design and capabilities will be compliance with the requirements established by the manufacturer of the motor.	10	
3.69	The fuel tank will contain a minimum of 65 gallons. The tank is to be located between the frame rails with a ground clearance that will not jeopardize the departure angle of the apparatus.	10	
3.70	The fuel tank will be secured into the designated location through the use of rubber covered, or equal, stainless steel straps.	10	
3.71	The apparatus will be designed whereby the fuel tank will be designed and located where it will be protected against water being discharged from the water tank.	10	
3.72	The fuel tank will be provided with a drain, swash partitions and a vent. The fill inlet will be located on the driver's side of the fire body covered with a marked "Diesel Fuel Only" sign.	10	
3.73	The fuel tank will include a drain opening positioned on the side of the tank near the bottom and fitted with a quick style drain plug. Specific description will be provided at the pre-construction meeting.	10	
3.74	A vent of no less than one half inch diameter is to be	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	provided from the top of the fuel tank to just below the fuel fill inlet. The fuel tank will meet or exceed all applicable requirements.		
3.75	The fuel tank fill inlet is to be located behind a compartment door similar to that used by the SCBA spare cylinder compartments.	10	
3.76	Servicing of the fuel pick up tubes and fuel gauge sending units will be accomplished without draining the fuel or dropping the tank from its mounting. If necessary, side access panels capable of being removed without the use of special tools, are provided in compartments adjoining the fuel tank.	10	
3.77	The fuel system, in or near the fuel tank, will be provided with an electric fuel lift pump.	10	
3.78	The exhaust system will include a manually operated regeneration system that may be initiated by a switch in the cab.	10	
3.79	A Diesel Exhaust Fluid (DEF) tank will be as large as possible but of no less than 4.5gallons.	10	
3.80	The DEF tank will include a drain plug located in the low point of the tank for drainage.	10	
3.81	The DEF tank will be located in a convenient location for inspection and filling but will not be located inside a compartment used to store equipment. Ideally, the tank will be positioned where excess filling or spillage will be open to the ground.	10	
3.82	The exhaust piping system will be provided an insulated wrap extending from the turbo and DPF to minimize the transfer of heat from the exhaust to the cab.	10	
3.83	The exhaust piping will be located as to not expose any portion of the apparatus, equipment or operator to excessive heat. Suitable heat shields and/or insulation wraps will be provided where heat may damage various systems including storage compartments.	10	
3.84	The exhaust will terminate ahead of the right rear wheels with a connection to a Plymovent vehicle exhaust system that is directed approximately 10° rearward to direct emissions away from the compartment located directly ahead of the rear wheels. The Plymovent flange will be with the magnetic system.	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
3.85	The radiator will be of sufficient size with the cooling capacity recommended by the engine manufacturer.	10	
3.86	The radiator will be a three section type for intercooler, radiator and transmission cooler.	10	
3.87	The radiator will include a built-in sight glass for visual inspection of coolant levels.	10	
3.88	The fan for the engine and cooling system will use an electrically controlled clutch to allow intermittent operation only when needed.	10	
3.89	The fan will continuously operate while the fire pump is engaged.	10	
3.90	Air to the radiator will enter through a grille located on the front of the cab face.	10	
3.91	High temperature silicone hose will be used for all engine coolant lines.	10	
3.92	The hose clamps will be manufactured of stainless steel and of a design commonly called “constant torque type” to prevent coolant leakage.	10	
3.93	The drive shaft will be a heavy-duty metal tube and equipped with appropriately sized Dana (Spicer) universal joints.	10	
3.94	All drive shafts are to be dynamically balanced before installation.	10	
3.95	A drive shaft safety loop will be provided for the portions of drive shaft that are in excess of 36-inches in length. The safety loop will be positioned where it will keep the shaft from striking the ground should there be a failure of the shaft or joint.	10	
3.96	The transmission will be an Allison EVS 3000 series automatic transmission. The transmission will have two PTO ports, one located on the side and one located on top.	10	
3.97	The transmission will be programmed for five (5) forward speeds and reverse. The driveline will be designed to provide a vehicle top speed of sixty-eight (68) miles per hour as described in NFPA 1901.	10	
3.98	An engine compression brake, Jacobs Brake, will be provided to serve as an auxiliary brake for the apparatus.	10	
3.99	An on/off and selection of high/low performance switch will be provided within reach of the driver for the transmission retarder.	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
3.100	Operational engagement of the retarder will result in the illumination of brake lights.	10	
3.101	Operational engagement of the ABS will disengage the retarder as needed.	10	
3.102	In addition to the engine compression brake, the transmission will be programmed to aggressively downshift, seeking second gear, with the release of the accelerator pedal.	10	
3.103	An external transmission oil cooler will be provided.	10	
3.104	A transmission temperature gauge with red light and audible alarm will be located on the driver's dash.	10	
3.105	The transmission gear selector will be controlled in the cab within easy reach of the driver. The preferred gear selector will be of a lever style.	10	
3.106	The selection of the reverse gear will automatically operate the backup lights, backup alarm and the under fire body ground lights.	10	
4.00	**CAB**	0	
4.01	The cab is to be constructed of aluminum specifically designed and selected for use within the fire service.	10	
4.02	The cab will be designed to safely accommodate five seated firefighters.	10	
4.03	The cab will have four side opening doors to allow access in and out of the cab.	10	
4.04	The cab will have a 10 to 14 inch raised roof to accommodate the personnel seated in the rear of the cab.	10	
4.05	The cab is to be constructed by a combination of cast aluminum, extruded aluminum and formed aluminum to create a strong, durable and aesthetically pleasing cab that exceeds the requirements of NFPA 1901.	10	
4.06	All extrusions that are welded to other extrusions to produce a structural frame will be welded on all sides of the created joint or abutment.	10	
4.07	Gussets used to support and/or align extrusions or other structural element will be welded on both sides along the entire length of each adjoining surface.	10	
4.08	The skin of the cab forming the front, sides, cab doors, roof and rear of the cab is to be 5000 series aluminum.	10	
4.09	Aluminum tread plate used as an overlay may be constructed	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	of 3000 series material.		
4.10	The cab will be provided with insulation between the outer wall skin and the interior wall finish.	10	
4.11	The cab floor will be constructed of aluminum. The floor will be flat without an upward projection into the passenger compartment of the cab.	10	
4.12	The entire underside of the cab floor will be insulated to isolate noise and heat from the motor and drive line from entering the interior space of the cab.	10	
4.13	The exterior rear wall of the cab will be constructed of flat sheet aluminum with an overlay of aluminum tread plate that covers the entire rear surface of the cab.	10	
4.14	The cab is to be capable of being tilted forward to allow access to the engine.	10	
4.15	The cab will be provided with heavy duty hinges and cab locks that are accessible for periodic maintenance or replacement.	10	
4.16	The cab hinges will be of a maintenance free design.	10	
4.17	The mechanism for tilting the cab will consist of an electric over hydraulic pump that will support two hydraulic cylinders used to raise the cab. The cylinders will be provided with check valves positioned on the cylinders to prevent unwanted lowering of the cab.	10	
4.18	The cab is to be provided with a positive latch to secure the cab once it has been fully raised.	10	
4.19	The cab lift controls will be positioned onto an attached cord with a remote switch. The attached cord will be long enough to allow the operator to stand slightly ahead and to the side of the cab to observe the cab in relation to overhead obstructions. The Vendor will describe the attachment, cord, cord length, and switch.	10	
4.20	A manually operated, emergency cab lift pump will be provided in a convenient location to allow the cab to be tilted upward should the normal system fail or otherwise become inoperable.	10	
4.21	The cab is to be locked down by an automatic lock or latch mechanism that actuates after the cab has been lowered.	10	
4.22	The cab will be designed with an access panel to allow inspection of the motor and to facilitate fluid checks and maintenance without the need of tilting the cab.	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
4.23	The windshield is to be tinted safety glass.	10	
4.24	The windshield will have two or more, no less than one each side, two-speed electric windshield wipers. The wipers are to have "return to park" provisions and will meet all current FMVSS requirements. Wipers are to have intermediate, slow and fast wiper speed controls. Wipers are to also include a washer actuated by the wiper control.	10	
4.25	The front doors serving the driver and officer will be electrically operated tinted glass.	10	
4.26	The space between the front and rear cab doors wll be provided with double pan compartment doors that provide access to compartments located inside the cab, provided on both the driver's and officer's side.	10	
4.27	The rear cab doors will have electrically operated windows with the darkest shade tint, "limo tint."	10	
4.28	Two tinted sun visors, one for each windshield, will be provided.	10	
4.29	The front cab doors will be provided with Retrac model 613423 electrically operated, heated, dual vision west coast style mirror with chrome, polished aluminum or stainless steel finish. Both the flat and convex glass will be heated and adjustable with remote control of the driver.	10	
4.30	All four cab access doors are to be provided with exterior door handles on the outside with stainless steel scuff plates located behind and adjacent to the handle to help protect the paint. The preferred door handle will project away from the door forming a vertical or horizontal look that is large enough to allow a person with an extra-large hand to promptly open the cab door while wearing structural firefighting gloves.	10	
4.31	The four cab doors will be provided with electric locks and the Driver's door will be provided with a keypad for door entry.	10	
4.32	Two battery operated remote controls will be provided for locking and unlocking the doors.	10	
4.33	The interior cab door handles will be metal paddle types which are nearly flush with the interior wall of the door.	10	
4.34	All four cab access doors are to be provided with stainless steel interior panels.	10	
4.35	The front two doors will be provided with map pockets.	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
4.36	The bottom interior face of the cab doors will be provided with a reflective chevron style image with reflective red and lime yellow material.	10	
4.37	The lower portion of the cab doors, or a position between the applicable cab access steps, will be provided with LED lights to illuminate the step surfaces.	10	
4.38	The cab doors will be operated with stainless steel piano hinges that use no less than a ¼ inch pin. The hinges will not be welded to the cab or to the door.	10	
4.39	All cab doors will have the ability to open approximately 85 degrees from the cab and will be provided with heavy duty straps or similar devices to keep the door from inadvertently opening beyond the design of approximately 85 degrees.	10	
4.40	The access steps into the cab are to be no less than 8 inches deep or greater than 18 inches in height between steps. The distance between the ground and the first step is to be no greater than 24 inches.	10	
4.41	Externally mounted, assist steps will be provided beneath each of the cab doors to provide a lower step height into the cab.	10	
4.42	Hand rails of no less than 18 inches will be provided in a vertical position on the exterior of the cab near the latch side of the door. The hand rails are to be provided with a slip resistant finish or covering. The handrails will be Hansen anti-slip 4000 Lit with red LEDs facing the fire body. The handrails will illuminate with the headlights and engagement of the parking brake.	10	
4.43	The front doors will be provided with a vertically mounted molded handle that is mounted onto the “A” or corner post to assist entrance into the cab. The rear doors will be provided straps or “D” style handles mounted onto the interior part of the cab on the hinged side of the door to assist entrance into the cab.	10	
4.44	The interior rear cab door handles will be paddle types which are nearly flush with the interior wall of the door.	10	
4.45	Horizontally mounted hand rails will be attached to the interior face of the rear doors and positioned near the bottom of the glass.	10	
4.46	The in cab storage cabinet on the passenger’s side will be as large as possible and will reach a height near the underside	20	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	of the roof. The interior of the cabinet will be provided with two adjustable shelves. The in cab storage cabinet on the driver's side will be as large as possible and will reach a height near the underside of the roof. The interior of the cabinet will be provided with two adjustable shelves. An OTE International model **1915B** medical cabinet will be located on the floor inside the storage compartment.		
4.47	The seats and upholstery will be gray in color.	10	
4.48	The aluminum floor will be covered by an abrasion resistant composite material type mat to provide insulation, sound dampening, and slip resistance. The floor covering will be fully replaceable should it become worn or damaged.	10	
4.49	In addition to the composite material, the engine cover will be insulated and covered with vinyl to provide the greatest heat and sound reduction. The sides of the cover will be tapered at the top to provide the greatest elbow room for the driver and front right passenger.	10	
4.50	The void space between the interior and exterior walls and roof will be insulated.	10	
4.51	The headliner will be constructed of rigid material covered with a sound dampening material that is pleated and secured to the underside of the roof with removable fasteners.	10	
4.52	The seating in the cab will be manufactured by Seats Inc. using Turnout TUFF™ fabric, gray in color.	10	
4.53	All cab seats will be provided with Ready Reach Seatbelts, or equivalent, extended length seatbelts equipped with dual retractor and integrated seat belt sensors.	10	
4.54	All seat belts will be provided with height adjustment to optimize effectiveness and comfort.	10	
4.55	All cab seats will be electronically monitored as described in Section 12 of these specifications.	10	
4.56	The seatbelts will be orange in color.	10	
4.57	The driver's seat will be a Seats, Inc. Series 911 electrically operated air ride driver's seat. The seat will have a high profile back rest, complete ride suspension adjustments, back angle and adjustment forward and backwards.	10	
4.58	The front right or officer's seat will be an air ride Seats Inc. 911Battalion Series Officer's SCBA seat, or equal, with an installed SmartDock SCBA bracket. No exception to the	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	SmartDock bracket or seats that do not have hinged flip away head rests.		
4.59	The seating arrangement in the rear of the cab will consists of three forward facing SCBA seats located along the rear wall of the cab.	10	
4.60	The forward facing seats will be Seats Inc. 911Battalion Series SCBA seat, or equal, with an installed SmartDock SCBA bracket.	10	
4.61	The forward facing seats will be positioned with approximately 8 inches located between each other so as to provide additional space for each seated person.	10	
4.62	Two storage cabinets will be located inside the cab, one located directly behind the driver's seat and the other behind the officer's seat. The cabinets will be provided access through double pan hinged doors located on the exterior of the cab as well as roll-up doors located inside the cab. The exterior double pan doors will be provided with locks. The cabinet will be painted and trimmed in the same materials as used elsewhere within the cab.	10	
4.63	The in cab storage cabinet on the passenger's side will be as large as possible and will reach a height near the underside of the roof. The interior of the cabinet will be provided with two adjustable shelves. The in cab storage cabinet on the driver's side will be as large as possible and will reach a height near the underside of the roof. The interior of the cabinet will be provided with two adjustable shelves. A manufacturer provided OTE model 19503F medical cabinet will be located on the floor inside the storage compartment.	20	
4.64	Both compartments will be provided with ventilation louvers.	10	
4.65	Both in cab storage cabinet will be provided with a 120 volt AC duplex receptacle.	10	
4.66	A frame assembly specifically to safely store and dispense three boxes of medical gloves will be located in the cab within reach of all occupants. The assembly will be constructed of aluminum finished in a manner that matches the balance of the cab interior. Exact positioning of the dispenser bracket will be identified at the final inspection.	10	
4.67	A map box specifically designed and constructed to safely store three 4-inch loose leaf notebooks will be provided. The map box should not include dividers and will be located in the cab at the time of the final inspection.	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
4.68	The steering wheel is to be a multi-position tilt and telescopic type steering column. The design of the steering column will use a manually operated locking lever to allow adjustment of tilt and telescopic position.	10	
4.69	The steering wheel is to be no less than 18 inches in diameter.	10	
4.70	The cab will be provided with the largest conventionally available air conditioning system used by the chassis manufacturer. The system will consist of one or more air compressors and condensing units. It will have the ability to cool the cab from 100 degrees F to 70 degrees F within 30-minutes.	10	
4.71	The air conditioning condenser will be located on the roof and painted the job color.	10	
4.72	The cab will be provided with no less than 75,000 BTU of heat within the cab for the purpose of heating the cab and defrosting windows. The heating system will include the ability to heat the floor areas in both the front and rear portions of the cab.	10	
4.73	The heating system will be designed to provide heat to feet for the front seat area of the cab.	10	
4.74	Two horizontal hand rails will be mounted onto the front face of the cab to assist personnel onto the front bumper while washing the apparatus cab and windshield.	10	
5.00	**CAB & CHASSIS ELECTRICAL**	0	
5.01	The bid will include an amp draw report of the proposed apparatus and electrical system.	10	
5.02	All wiring will be color, number and function coded at intervals of no greater than every four inches in length.	10	
5.03	The cab and chassis will be fully multiplexed. Additional description of the multiplex system will be provided in chapter 12 of the specifications herein. Class 1 is the desired manufacturer of the multiplex system.	10	
5.04	All wire terminations will be coated or sealed with dielectric type grease or sealer to prevent corrosion, including battery posts.	10	
5.05	All wiring methods will be in conformance with applicable Society of Automotive Engineers (SAE) standards. The acquisition of data from various electronic systems will be made through approved connection points. The tapping or	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	splicing of data linkage wires or cables between electronic components such as the engine, transmission, WABCO, Pump, and other similar components is strictly prohibited.		
5.06	Unless otherwise specified, all circuits are to be protected with automatic resetting type circuit breakers. Fusible links are not to be used.	10	
5.07	A compartment will be provided to house the electrical control center of the vehicle. The control center will contain electrical wiring junctions, terminal strips, flashers, and other necessary components. The compartment is to be readily accessible for ease of maintenance.	10	
5.08	The battery system will consist of two banks of three (3) Group 3, high cycle, Excide®, model 31S950X3W, batteries each providing 950 CCA, Cold Cranking Amps, 190 amp reserve capacity, rated at 3800 CCA at 0 degrees Fahrenheit, 760 minutes of reserve capacity and treaded stainless steel studs.	10	
5.09	The batteries will be installed in a protected and well-ventilated location that is outside of the passenger compartment.	10	
5.10	The batteries will be mounted onto a non-corrosive mat.	10	
5.11	The top of the batteries will be protected from physical hazards and metallic items that could produce an electrical short.	10	
5.12	Heavy-duty multi-strand battery cables, or solid copper buss bars, are to be used to provide maximum power to the electrical system. Cables will be color-coded, red for positive and black for negative. Battery terminal connections are to be coated with an anti-corrosive compound.	10	
5.13	Jumper studs will be provided in an easily accessed are, preferably in the step well of the left rear door, front bumper, or beneath the cab near the left rear corner. The suds will be directly wired to the batteries.	10	
5.14	An electronic display bar graph indicating the state of charge for the vehicle batteries will be provided on the left side of the apparatus cab near the driver's door, steps well, or seat.	10	
5.15	A Kussmaul 40 series charger model #445-5262-0, or equal, will be provided.	10	
5.16	The battery charger will be provided with a remote bar graph display located adjacent to the Auto Eject.	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
5.17	All 12-volt chargers, such as flashlights will be powered by the axillary 15 amp output circuit on the charger.	10	
5.18	A Kussmaul Super Auto Eject will be mounted at the rear of the apparatus on the rear face of the street side cabinet.	10	
5.19	A Kussmaul shore power alarm will be located in the cab within view and audible range of the driver to identify when the shore line does not automatically eject from the apparatus.	10	
5.20	The 110-volt duplex receptacle will be provided within the in cab storage compartment will be powered from the vehicle's shoreline.	10	
5.21	A 110-volt duplex receptacle will be provided within compartment R-1, curb side compartment. The specific location will be provided at the time of the pre-construction meeting. The source of power for the receptacles will be provided by the vehicle's shoreline.	10	
5.22	The vehicle alternator will be a Delco Remy model 55SI 430 amp alternator. If there is insufficient room for the specified alternator, a smaller Delco Remy alternator may be used providing that documentation clearly demonstrates that the alternator will produce the needed current of all loads without load management while the motor is at idle. The selection of a smaller alternator will include a detailed amp draw report of the proposed apparatus.	10	
5.23	The multiplexing system will manage the electrical loads in a manner similar to a load manager. The system will provide load sequencing and shedding, monitor both batteries, provide fast idle activation for improved alternator output, over-voltage indication, automatic or manually reset circuits, and a flashing warning light for low voltage and battery discharge.	10	
5.24	Exterior lighting, including marker and clearance lighting, will be provided and will meet or exceed the federal, state and NFPA requirements. All marker and clearance lighting will be LED type.	10	
5.25	The headlights will be LED type. If there are to be four fixtures, the lamps will use a single LED per fixture.	10	
5.26	The headlight system will be equipped with a day time running light feature that automatically turns the headlights on during the daylight hours.	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
5.27	The chassis will be provided with fixtures for headlights and turn/forward facing lower level warning lights on the front face of the cab. The headlights will be positioned in the lower tier of lights and the upper tier of lights will be used for the turn signal and waning lights.	10	
5.28	The front turn signals are to be Whelen model 60A00TAR or equal, LED lamp, amber in color, populated in the shape of an arrow with a black outline located in the outboard position of the light fixture.	10	
5.29	Underbody lights will be provided under each cab access door. The LED lights will automatically operate upon opening of any cab door, transmission selection of reverse gear, or engagement of the parking brake.	10	
5.30	Two, one each side, remote control operated, Go-Light Radioray model 2000, remote control spot lights will be mounted on the roof behind the light bars and mounted on brackets to elevate the lamp above the light bars. The controls for the lights will be within reach of the officer.	10	
5.31	One forward facing brow lights, Whelen model PFS2*, 12 volt LED combination spot/flood lights will be mounted on the front visor of the cab, forward facing and positioned near the center of the cab. The bracket for the light will be painted job color white. The light will be switched from inside the cab.	10	
5.32	Two, one each side, Whelen model PCPSM1*, 12 volt LED combination spot/flood lights will be semi-recessed mounted into the upper portion of the cab between the front and rear doors. The lights will be provided with chrome flanges. The lights will be switched from inside the cab.	10	
5.33	Two, one each side of the cab, located near the upper rear corner of the cab, will include a water tank level gauge. The preferred multi-colored light fixture will be an Innovations Control or Whelen vertically mounted multicolored LED light.	10	
5.34	Courtesy lights will be placed in the step area, or onto the lower interior side, of each cab door. Amber lights that produce a directional scroll away from the apparatus will be provided above the window of each cab door on the interior side to give warning to approaching traffic. Both the LED courtesy lights and scrolling amber light will operate automatically when the door is opened.	10	
5.35	The underside of the cab over the engine will be provided	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	with Whelen strip LED lights positioned where they will automatically illuminate the top and both sides of the engine and transmission when the cab is lifted and the master battery switch is turned on.		
5.36	The driver's instruments and controls are to be conveniently located within view and reach of the driver. The gauges, instruments and switches will be installed onto removable panels for ease of service.	10	
5.37	The following instruments and controls will be placed in front of the front right passenger/ officer in a common electronic screen or separately in a switch panel: • Officer speedometer • Digital clock • Class 1, or equal, seat belt monitor • Two 12-volt power outlets • Kussmaul 09-219 USB dual port, or equal, power supply • Kussmaul temperature monitor, or equal, of compartment R-1 Kussmaul temperature monitor, or equal, of the ambient atmosphere	10	
5.38	The vehicle will be provided with a "door ajar" warning system that produces a visual warning if a cab door, compartment door, ladder rack or other similar system is opened or not otherwise properly stowed when the parking brake is released. The system will use an LED warning light that is within view of both the driver and officer as well as produce a visual identification of the specific location of the compartment, step or item that is not properly stowed.	10	
5.39	The chassis will be provided with dual electric automotive horns. The horns are to be operated the steering wheel center ring.	10	
5.40	Two 6-inch auxiliary fans with individual switches are to be provided at the upper outboard corners of the cab near the windshield beneath the overhead instrument panel.	10	
5.41	An LED gooseneck map light will be provided on the dash ahead and to the left of the front right passenger.	10	
5.42	The apparatus manufacturer will provide a 12-volt power stud and a grounding stud in the electrical compartment for a two-way Fire Department radio. The power provided to the radio will be disengaged when the Master battery switch is turned to the "off" position.	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
5.43	A power stud with uninterrupted 12VDC will be provided to provide memory power for the digital radios.	10	
5.44	A power stud with uninterrupted 12VDC will be provided for the support of the Fire Department computer.	10	
5.45	Four Streamlight Survivor C4 LED, 12 v, Orange, 90509 fast charge flashlights will be provided and mounted in the following locations: One near the driver One near the officer Two, one each side, of the FORWARD facing seats. Specific location will be addressed during the pre-construction meeting.	10	
5.46	Four Streamlight Fire Vulcan, 44451, C4 LED, Tail Lights, 12 volt, Orange will be provided and mounted in the following locations: Two located on top of each of the two in-cab storage cabinets.	5	
6.00	**FIRE BODY**	0	
6.01	The fire body will be constructed of aluminum skin that is supported by a combination of aluminum cast, aluminum extrusions and formed aluminum. Images are attached at the end of the Addendum 3	10	
6.02	The fire body will be attached to the chassis frame in a design and fashion that will allow the body to remain secure but capable of slightly flexing, twisting and bending. The intended design will minimize the risk of creating excessive stress upon the fire body resulting in cracks to the structure and/or fire body skin. The Bidder will describe how the body will be attached to the chassis frame.	10	
6.03	All equipment storage compartments that extend 24 inches or more, measured from the outside face of the frame rail to the furthest portion of the body projecting from the frame, will be provided with a structural sub-frame to support the combined weight of the aluminum fire body and positioned tools and equipment.	50	
6.04	The body will be mounted onto the structural sub-frame support with mounts that allow for some flexibility without compromising a secure fastening to the sub-frame or risk of stress fractures to the fire body. The use of “U” bolts or spring fasteners that attach the fire body to the chassis frame is not an equivalent mounting system.	50	
6.05	The skin of the fire body is to be no less than 5000 series	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	aluminum.		
6.06	Aluminum tread plate used as an overlay may be constructed of 3000 series aluminum.	10	
6.07	An isolation barrier tape, gaskets or similar materials will be provided to separate direct contact between dissimilar metals to prevent electrolysis. The Bidder will describe the material used to separate the fire body from the chassis frame and supports. A paint or similar topical coating for the sole purpose of electrolysis is discouraged.	10	
6.08	All step and walking surfaces will be compliant to the current edition of NFPA 1901.	10	
6.09	All hand rails attached to the fire body will be Hansen International 4000 series, or similar, grab rails with 3 rubber inserts.	10	
6.10	The rear wheel wells will be provided with full and replaceable circular inner fender liners manufactured of aluminum. The design will include a slip joint type concept whereby the liner will slide into a notch for expedient replacement.	10	
6.11	Flexible rubber fender crowns will be installed at the cab wheel openings.	10	
6.12	Heavy-duty mud flaps will be provided behind each of the front wheels.	10	
6.13	The rear wheel wells will be provided with flexible rubber fender crowns that extend outward from the body approximately two or three inches to provide protection to the body.	10	
6.14	The body skin around the rear wheels will be constructed of, or provided with an overlay, of aluminum tread plate.	10	
6.15	Heavy-duty mud flaps will be provided directly behind the rear wheels. The mud flaps will installed in a manner that will not damage the inner wheel well liner if they are torn off when pinched by an obstruction such as a concrete bumper stop and the tire while the apparatus is backing.	10	
6.16	The rub rail used to protect the fire body will be constructed of aluminum solid bar stock of no less than 1 inch thick spaced outward from the fire body approximately 0.5 to 0.75 inches. The bar stock should be no less than 2 inches, or greater than 3.5 inches in vertical height. The ends of the rub rail will be cut at an angle and de-burred to provide a	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	finished appearance. This is highly preferred over traditional "C" channel type rub rail.		
6.17	The rear bumper will be of the same design and materials as that of the rub rails.	10	
6.18	All compartments are to be ventilated and provided with drain holes. Vents are not to be made into the compartment door.	10	
6.19	All vent opening and access panels will be de-burred to prevent sharp edges from causing injury to personnel or equipment.	10	
6.20	Self-tapping screws will not be used in the construction of the fire apparatus or installation of any related brackets. Items will be through the material with nut and bolt or nut insert and bolt.	10	
6.21	All compartments are to have compartment floors that are flat or sweep out type that are free of obstruction at the door opening.	10	
6.22	All screws and bolts that protrude into the compartment will have acorn nuts at the ends to prevent injury to equipment and personnel.	10	
6.23	Each compartment floor is to be designed and constructed to manage a continuous storage load of no less than 500 pounds.	10	
6.24	Unless otherwise specified, all adjustable shelves and trays will be constructed of flat plate aluminum with an upward flange of no less than 1-inch or more than 2-inches turned upward on all four sides. Shelves that do not have four upward flanges or include supplemental stiffeners are unacceptable.	10	
6.25	Each adjustable shelf will be secured into place through the use of adjustable slide tracks located at each corner. The shelf is to be capable of safely supporting a load of 250 pounds without damage to the shelf or the associated tracks.	10	
6.26	All slide out trays will be capable of being extended outside the compartment by 100% of its original stowed position. The assembled slide out tray and slide rails will have a load capacity of no less than 500 pounds while fully extended outside the compartment. The front edge of the tray will be provided with an upward flange of no less than 1-1/2". Each side will have sides that graduate from the top of the front	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	flange to 16 inches to the rear with a back flange serving as a wall at an elevation of approximately 16 inches.		
6.27	Each compartment shelf, tray or compartment floor will be provided with black Turtle Tile, or similar matting, to provide an air space between the stored equipment and the surface of the tray, shelf or floor.	10	
6.28	Swing out tool boards will be Performance Advantage Company (PAC) with Double Face Dual Trac.	10	
6.29	Unless otherwise described, the rear wall of each compartment provided will be provided with PAC Trac.	10	
6.30	Unless otherwise specified, all compartments will be provided with roll-up doors manufactured by Amdor, or equal.	10	
6.31	Unless otherwise specified, all compartment doors are to be painted job color.	10	
6.32	Each roll up door will be provided with a drip pan located below the roll of the door.	10	
6.33	Unless otherwise specified, each compartment will be provided with LED strip lighting will be positioned on both sides of the door opening to illuminate the compartment.	10	
6.34	All fire body compartment doors will be provided with a magnetic switch that will be integrated into the door ajar warning system.	10	
6.35	All roll up fire body compartment doors will be provided with pull straps to facilitate access to close the door.	10	
6.36	Each roll up door will be provided with glove cut outs for easier operation while wearing structural firefighting gloves.	10	
6.37	With the apparatus parked on a flat level surface, the fire body provided no less than 240 lineal inches of lower compartment space for heavy equipment where the compartment is no greater than 28 inches from the ground to the bottom of the compartment and the height of the compartment is no less than 25 inches in height nor less than 24 inches in depth.	10	
6.38	The fire body will provide no less than 289,000 cubic inches of equipment storage excluding compartments specifically designed or intended for SCBA, oxygen cylinder or dunnage space located near the tank risers.	10	
6.39	Unless otherwise specified, the lower compartments will be no less than 24 inches deep.	10	

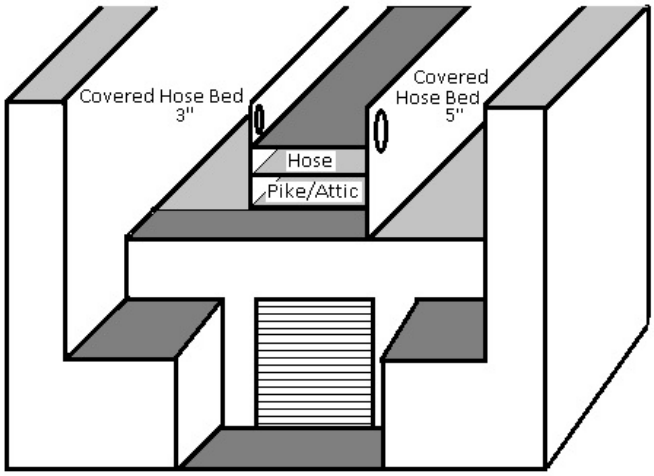
Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
6.40	Unless otherwise specified, the upper compartments will be no less than 12 inches deep.	10	
6.41	For consistency, the compartments will be identified as “L” representing left (driver’s or street side) or “R” right (officer’s or curb side) and numbered beginning with the forward most compartments on the fire body.	10	
6.42	For reference purposes, the compartments described within these specifications will be referenced numerically from the front of the apparatus rearward with #1 located nearest the cab. The alpha character preceding the number identifies the slide of the apparatus as either left or right. The left side represents the driver’s side and the right represents the curb or officer’s side.	10	
6.43	The fire body compartments will be within plus or minus two inches of the specifications. It is implied that the door size will be slightly less in size as compared to the actual compartment.	10	
6.44	The pump house will be totally separate from the cab as well as totally separate as the fire body. No Exception.	10	
6.45	Located between the cab and body, the pump house will be designed and constructed to blend in with both in design, materials, construction technique and general appearance.	10	
6.46	A running board will be provided outward from the pump house to effectively produce a standing surface for access to pre-connected hose lines, booster reel and other similar items.	10	
6.47	The running board will project outward from the pump house no less than 12 inches measured from the face of the pump house to the furthest surface at the same plane as the deck of the running board.	10	
6.48	L-1 and R-1 will be a transverse compartment located immediately behind the cab and the integral forward portion of the pump house. The compartment will be no less than 18 inches, nor more than 24 inches wide.	10	
6.49	Constructed to two different elevations, the lower level will be approximately 24 inches deep with a height of approximately 16 inches.	10	
6.50	The upper level of the transverse compartment will be approximately 24 inches in height measured from the floor, which is located directly over the chassis frame rails, and the	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	top of the compartment.		
6.51	As the integral part of the pump house, the pre-connected hose lines will be located directly above the transverse compartments identified as L-1 and R-1. The bottom of the pre-connected hose line beds will be as low as possible in relationship to the fire pump.	10	
6.52	The deck of the running board will be slip resistant and made of self-draining aluminum material.	10	
6.53	The running board will have the ability to safely support no less than 750 pounds.	10	
6.54	Pre-connected hose lines will be provided directly above the transverse compartment. The pre-connected hose lines will included two 1-3/4" and one 2-1/2".	10	
6.55	The pre-connected hose line beds will be, in relation to the ground, as vertically low as possible to provide improved ergonomic access for expedient deployment. The bid will include a measurement from the ground to the bottom of the hose bed.	10	
6.56	The hose bed divider used to separate the pre-connected hose lines will include an integrated hand hold openings to provide assistance while loading the hose line.	10	
6.57	Each of the 1-3/4" pre-connected hose lines will have the ability to contain no less than 200 feet of 1-3/4" double jacket kink resistant fire hose.	10	
6.58	The pre-connected three inch hose line will have the ability to store no less than 200 feet of 2-1/2" double jacket kink resistant fire hose.	10	
6.59	The pre-connected hose lines will be provided with a hinged aluminum covers constructed of aluminum tread plate. One of the covers will safely cover the 2-1/2" and the other will cover both 1-3/4" hose lines.	10	
6.60	Each open end of the pre-connected hose lines will be provided with a removable black vinyl hose bed cover.	10	
6.61	Located adjacent to the pre-connected hose lines will be a storage space for one long spine board. Covered at the top, each open end will be covered by a vinyl cover that is permanently attached at the top and secured with Velcro® on each side and bottom.	10	
6.62	The space for the long spine board will be no less than 2-3/4" wide x 19" high x 72" long. The compartment location, size	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	and details will be confirmed at the pre-construction meeting.		
6.63	A handrail, positioned horizontally, will be placed directly above the top of the L-1 and R-1 transverse compartment door opening to provide support and assistance while loading hose into the pre-connected hose beds.	10	
6.64	The pump house will be designed to structurally two Hannay booster reels with traditional 200-ft of 1" rubber booster hose above the fire pump. The reels will include roller guides for the applicable side as well as cross over rollers to allow the hose from one side to be used on the other side without direct contact with the spool.	10	
6.65	L-2 will be the compartment directly aft the pump house. The compartment will have two levels.	10	
6.66	The lower portion of L-2 will measure approximately 34"wide x 26" high and 24" deep. Compliance will be within ± 2" in width or height and no less than 24" in depth.	10	
6.67	The upper portion of L-2 will measure approximately 34" wide x 40" high and 12" deep. Compliance will be within ± 2" in width or height and no less than 2" in depth.	10	
6.68	L-2 will be provided with one lower and two upper adjustable shelves.	10	
6.69	The forward face of L-2 that faces the pump house will be provided with an overlay of aluminum tread plate.	10	
6.70	L-2 will be provided with a roll-up compartment shutter type door.	10	
6.71	A Cast Products EB0013, or similar, weatherproof enclosure with latch will be mounted on the front face of L-2 intended to contain David Clark communication equipment.	10	
6.72	Two Zico Quic-chock wheel chocks, model SAC-44 and SQCH-44-H folding chock holder will be provided and mounted beneath the L-2.	10	
6.73	L-3 will be the compartment located above the rear wheels. The compartment will measure approximately 66" wide x 33" high x 12" deep. Compliance will be within ± 2" in width, no less than 26"	10	
6.74	L-3 will be provided with an interior divider that splits the width of the compartment. The forward portion will measure approximately 24 inches.	10	
6.75	The rear portion of L-3 will be provided with an adjustable	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	shelf measuring approximately 42 inches.		
6.76	L-3 will be provided with a roll-up compartment shutter type door.	10	
6.77	The area beneath L-3 and around the rear wheel will be provided with an overlay of aluminum tread plate. It will also be used to provide storage of no less than two spare Scott 4,500 psi 45 minute SCBA cylinders.	10	
6.78	The SCBA cylinder storage will be integral to the fire body or provided structural support at both the front and rear of the storage cabinet, tube or similar system.	10	
6.79	The SCBA cylinder storage will be secured with a Cast Products, or similar locking hinged door.	10	
6.80	In addition to the SCBA cylinder storage, a hinged covered door will be provided for the diesel fuel filling position.	10	
6.81	L-4 will be the compartment located behind the rear wheels. The compartment will have two levels.	10	
6.82	The lower portion of L-4 will measure approximately 48" wide by 26" high x 24" deep. Compliance will be within ± 2" in width or height and no less than 24" in depth.	10	
6.83	The upper portion of L-4 will measure approximately 48" wide by 40" high and 12" deep. Compliance will be within ± 2" in width or height and no less than 12" in depth.	10	
6.84	The lower portion of L-4 will be provided with a slide out tray and one adjustable shelf.	10	
6.85	The lower portion of L-4 will be open, similar to a transverse compartment, to the side of the rear compartment. This otherwise unused space will be used to store horizontally mounted fire extinguishers to extend from the L-4 slide out tray into the space between the L-r and rear compartment.	10	
6.86	The slide out tray will include a manufactured storage system to secure a dry chemical, CO_2 and air pressure water extinguisher in a horizontal position. The system is intended to accommodate multiple diameter extinguishers without replacement or time consuming adjustment of brackets. Designed to be placed into the L-4 tray, the back side of the bracket allows the CO_2 to extend into the dead space between L-4 and the rear compartment. Each extinguisher is placed onto a ribbed rubber mat and then held in place with adjustable Velcro, or similar tension, straps.	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	  Specific details and measurements will be provided at the pre-construction meeting.		
6.87	The upper portion of L-4 will be provided with three adjustable shelves.	10	
6.88	L-4 will be provided with a roll-up compartment shutter type door.	10	
6.89	The space directly behind the rear compartment will be referenced as the tailboard and will be constructed of slip resistant self-draining aluminum material	10	
6.90	The tailboard will extend no less than 18 inches rearward of the rear face of the rear compartment door.	10	
6.91	Serving as a rear bumper, the materials and design used to create a rub rail on the sides of the apparatus will be used across the entire width of the apparatus to create a bumper.	10	
6.92	Located beneath the tailboard, two 2-3/4" steel tow eyes will be mounted to the frame at the rear of the vehicle and attached to each inner frame rail web. If there is only to be one eye to be provided, it will be centered between the frame rails.	10	
6.93	The rear face of L-4 and R-4 will be flat plate aluminum to facilitate the installation of the reflective chevrons.	10	
6.94	The exterior surface facing inward to the tailboard of L-4 and R-4 will be provided with an overlay of aluminum tread plate.	10	
6.95	Large fold up steps will be provided mid height and mid distance on the exterior surface of both L-4 and R-4 that projects into the tailboard. The steps are intended to provide access to the top of the L-4 and R-r compartments.	10	
6.96	The exterior portion of L-4 and R-4 that projects into the tailboard area will be provided with an overlay of aluminum tread plate that is suitable as a walking surface. The top of the compartments are intended to provide safe access to the hose bed.	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
6.97	A vertically positioned hand rail will be provided onto the rear face of the L-4 and R-4 compartments to provide access onto the tailboard.	10	
6.98	A horizontally mounted handrail will be provided beneath the hose bed and above the rear compartment to provide access onto the tailboard.	10	
6.99	The rear compartment will be located beneath the primary hose bed and located between L-4 and R-4. The compartment will measure approximately 40” wide x 40” high and 24” deep. Compliance will be within ± 2” in width or height and no less than 24” in depth.	10	
6.100	The rear compartment will be provided with a roll-out tray and an adjustable shelf.	10	
6.101	The primary hose bed located above the water tank which will be positioned directly over the chassis frame rails. The Hose beds will be accessible from the rear and constructed of aluminum.	10	
6.102	The hose bed will be constructed of aluminum and designed to be self-draining.	10	
6.103	The hose bed will be created of four sections that consist of a storage or dunnage area that protects the foam and water tank risers, left side that will have the ability to store no less than 1,000 feet of 3” hose, a center section that will be used to store a 10 ft. attic ladder, pike poles and no less than 300 feet of 3” hose, and the right side that will have the ability to store no less than 1,000 feet of 5” hose. 	10	
6.104	The extreme front portion of the hose bed nearest the pump	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	house will be permanently affixed with aluminum tread plate.		
6.105	A removable bulk head will be positioned rearward of the water and foam tank risers. The area will be provided with a self-draining floor similar to the hose bed and will be used for storage.	10	
6.106	A removable hose bed divider and storage system will be provided near the center of the hose bed. Measuring approximately 20 inches wide, the lower portion will be used to store a 6-ft; 8-ft and 10-ft pike pole as well as a 10-ft attic ladder. Secured to the hose bed floor and the bulk head near the tank risers, the section storing the pike poles and attic ladder will have access through the bulk head to facilitate the needed length.	10	
6.107	The space directly above the pike poles and attic ladder will be used to store a pre-connected 3” hose line of no less than 200 feet in length.	10	
6.108	The top of the pre-connected 3” hose line and RAM will be covered by a hinged aluminum cover that will be designed to serve as a walkway from the rear of the apparatus to the tank risers.	10	
6.109	Center storage for the pike poles, attic ladder and pre-connected hose line will terminate inside the hose bed no closer than 8 inches to the rear of the hose bed so as to serve as a step and walking surface. It is the intent to provide this same space for the left hose bed intended to store the 1,000 feet of 3” hose.	10	
6.110	Aluminum tread plate suitable as a walking surface will be position on the rear portion of the left hose bed for the 3 inch hose as well as immediately aft the storage system used to store the pike poles and attic ladder.	10	
6.111	The upper rear portion of the center storage will incorporate a vertical sheet of aluminum to serve as the side of the storage system, hose bed divider and support for an aluminum hose bed cover over the left hose bed covering the 3 inch hose.	10	
6.112	The upper rear portion of the center storage will incorporate a vertical sheet of aluminum to serve as the side of the storage system, hose bed divider and support for the aluminum hose bed cover over the right hose bed covering the 5 inch hose.	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
6.113	The right hose bed, intended to be used for 5 inch hose will be no less than 25 inches wide by full length of the hose bed.	10	
6.114	Both the left and right side of the vertical panels used as storage sides and hose bed dividers will be provided with hand hold cut outs.	10	
6.115	Hinged hose bed covers constructed of aluminum tread plate will be provided over both the left and right hose beds.	10	
6.116	The hinged hose bed covers will be provided with one or more heavy duty struts to keep the covers open during hose loading operations.	10	
6.117	The top of the left hose bed cover will be provided with brackets to safely store a 17 ft. Little Giant ladder.	10	
6.118	A hand rail, mounted horizontally onto the top of the left hose bed cover will be provided to assist in access onto the hose bed step and walkway over the pre-connected 3” hose line.	10	
6.119	Lifting handles will be provided onto the hinged hose bed covers to facilitate opening and closing of the covers.	10	
6.120	Each of the hose beds serving the primary 3” hose, the pre-connected 3” and the 5” will be provided with black hose bed covers.	10	
6.121	The space used to store the pike poles and attic ladder will be provided with a hinged aluminum door.	10	
6.122	R-2 will be the compartment directly aft the pump house. The compartment will have two levels.	10	
6.123	The lower portion of R-2 will measure approximately 34”wide x 26” high and 24” deep. Compliance will be within ± 2” in width or height and no less than 24” in depth.	10	
6.124	The upper portion of R-2 will measure approximately 34” wide x 40” high and 12” deep. Compliance will be within ± 2” in width or height and no less than 2” in depth.	10	
6.125	R-2 will be provided with two upper level adjustable shelves	10	
6.126	The forward face of R-2 that faces the pump house will be provided with an overlay of aluminum tread plate.	10	
6.127	R-2 will be provided with a roll-up compartment shutter type door.	10	
6.128	R-3 will be the compartment located above the rear wheels. The compartment will measure approximately 66” wide x 33” high x 12” deep. Compliance will be within ± 2” in width, no less than 26”	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
6.129	R-3 will be provided with a center divider.	10	
6.130	R-3 will be provided with two adjustable shelves, one on each side of the center divider.	10	
6.131	R-3 will be provided with a roll-up shutter type door.	10	
6.132	R-4 will be the compartment located behind the rear wheels. The compartment will have two levels.	10	
6.133	The lower portion of R-4 will measure approximately 48" wide by 26" high x 24" deep. Compliance will be within ± 2" in width or height and no less than 24" in depth.	10	
6.134	The upper portion of R-4 will measure approximately 48" wide by 40" high and 12" deep. Compliance will be within ± 2" in width or height and no less than 12" in depth.	10	
6.135	The lower portion of R-4 will be provided with a slide out tray.	10	
6.136	The lower portion of R-4 will be open, similar to a transverse compartment, to the side of the rear compartment. This otherwise unused space will be used to store horizontally mounted fire extinguishers to extend from the R-4 slide out tray into the space between the R-4and rear compartment.	10	
6.137	The upper portion of R-4 will be provided with one swing out tool board. The swing out tool board will support PAC Dual Track.	10	
6.138	The upper portion of the compartment will be provided with PAC Dual Trac on the back wall of the compartment.	10	
6.139	The lower portion of R-4 will be provided with PAC Dual Trac on the back wall of the compartment.	10	
6.140	R-4 will be provided with a roll-up compartment shutter type door.	10	
6.141	The area beneath R-3 and around the rear wheel will be provided with an overlay of aluminum tread plate. It will also be used to provide storage of no less than four spare Scott 4,500 psi 45 minute SCBA cylinders.	10	
6.142	The SCBA cylinder storage will be integral to the fire body or provided structural support at both the front and rear of the storage cabinet, tube or similar system.	10	
6.143	An electric, or an electric over hydraulic ladder rack will be provided on the right side of the fire body.	10	
6.144	The ladder rack will have the ability to safely secure a 24-ft two section extension ladder and a 14-ft roof ladder. The ladders will be manufactured by Duo Safety.	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
6.145	If the ladder rack is an electric over hydraulic design, it will include a reservoir that is accessible from the ground through an inspection door for both routine inspection and maintenance.	10	
6.146	The ladder rack will be provided with a master on/off switch, an actuation switch, and an operational indicator light and operational instructions. The electric controls will be located in such a manner to allow the operator to see a full view of the area into which the ladders will be lowered.	10	
6.147	Two air operated safety locks will be provided to securely maintain the ladder bracket assembly in the stowed or travel position. The air operated safety locks will be controlled from the ladder rack control panel.	10	
6.148	An interlock will be provided to prevent the operation of the ladder rack unless the apparatus parking brake has been activated.	10	
6.149	The ladder rack will be monitored by the door ajar system.	10	
6.150	The ladders placed onto the ladder rack will be provided with a padded skull saver.	10	
7.00	**ELECTRICAL FOR FIRE BODY**	0	
7.01	All wiring will be color, number and function coded at intervals no greater than every four inches in length.	10	
7.02	The cab and chassis will be fully multiplexed. Additional description of the multiplex system will be provided in chapter 12 of the specifications herein.	10	
7.03	All wire terminations will be coated or sealed with dielectric type grease or sealer to prevent corrosion, including battery posts.	10	
7.04	All wiring methods will be in conformance with applicable Society of Automotive Engineers (SAE) standards. The acquisition of data from various electronic systems will be made through approved connection points. The tapping or splicing of data linkage wires or cables between electronic components such as the engine, transmission, WABCO, Pump, and other similar components is strictly prohibited.	10	
7.05	Unless otherwise specified, all circuits are to be protected with automatic resetting type circuit breakers. Fusible links are not to be used.	10	
7.06	A compartment will be provided to house the electrical control center of the vehicle. The control center will contain	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	electrical wiring junctions, terminal strips, flashers, and other necessary components. The compartment is to be readily accessible for ease of maintenance.		
7.07	Exterior lighting, including marker and clearance lighting, will be provided and will meet or exceed the federal, state and NFPA requirements for the fire body. All marker and clearance lighting will be LED type.	10	
7.08	The rear tail light assembly will be a Whelen M6FCV4 polished cast light fixture for Whelen M6 series lights. The assembly will contain a maximum intensity back up light, maximum intensity brake/tail light, and maximum intensity amber turn signal populated in the shape of an arrow. The fixture will also include a red warning light.	10	
7.09	The red warning light in the rear tail light assembly will flash when the emergency warning lights are switched on and will be wired in a fashion whereby they will stop flashing and will simultaneously remain on when the brake is applied.	10	
7.10	A third brake light will be provided at an elevated location on the center rear of the apparatus. The light will be a Whelen Strip-Lite model PSRASXCR-B/T/T brake, tail, turn fixture.	10	
7.11	An axillary turn signal, model 9186-8580 LED (PR), or equal, will be located at the center of the rear wheels.	10	
7.12	Britax rubber red/amber LED marker lights extending from the rear corners of the apparatus will be provided.	10	
7.13	The rear of the apparatus will be provided with an illuminated license plate bracket. The position of the license plate bracket will be determined at the pre-construction meeting.	10	
7.14	A solid state electronic audible back-up alarm that automatically operates when the transmission is shifted into reverse will be provided at the rear of the apparatus.	10	
7.15	Under body lights, LED type, will be provided beneath the body and aimed towards the walking space next to the apparatus. The lights will automatically operate when the transmission is placed into reverse or the engagement of the parking brake. The lights will be positioned at the following locations: • Two beneath the front bumper facing forward • Two, one each side, facing outward to the side at the gravel shield of the front bumper • One beneath each door	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	• Two, one each side, facing outward to the side of the pump panel ahead of the rear wheels. • Two, one each side, facing outward to the side behind the rear wheels • Two, one each side, facing outward to the side at the rear of the apparatus Two, one each side, facing rear ward at the back of the apparatus		
7.16	The interior of the pump compartment will be provided with LED lights that will be switched at the master switch located on the left pump panel.	10	
7.17	The rear of the fire body, located one each side, will be provided with two Whelen MPBW LED floodlights with stud bill mount provided at the rear of the hose bed.	10	
7.18	Each compartment will be provided with Amdor, or equal, LED lights that produce no less than 30 lumens per LED that have 180 degree illumination.	10	
7.19	LED strip lights will be located at the front of both the 3" and 5" hose beds. The lights will be operated with engagement of the parking brake.	10	
7.20	The walkway over the pre-connected hose line between the 3" and 5" hose beds will be provided with hooded LED lights that will operate with the headlights.	10	
7.21	Two, one on each side, Whelen P**2P LED combination spot/flood lights will be provided on top of the fire body above the rear wheels. The lights to be installed in a 15 degree vertical recessed bracket that is painted job color red. The light on the driver's side will be switched at the driver's side pump panel and the light on the officer's side will be both the driver's and officer's side pump panel.	10	
8.00	**PUMP, PLUMBING, TANKS AND FOAM**	0	
8.01	A full scale wall image of the actual fire pump and related controls will be provided for operational training.	10	
8.02	The fire pump is to be a Hale model QMAX single stage midship fire pump that will be plumbed and rated for 1,500 GPM.	10	
8.03	Though the pump house or pump module will be totally independent upon the cab and fire body but will be designed and constructed of materials to match the design and appearance of that provided by the fire apparatus manufacturer. This includes the running boards, rub rails,	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	structural capability to support slide-out standing platforms and other similar components described in other sections of these specifications.		
8.04	The fire pump will be compliant with the current edition of NFPA 1901 being tested and certified by an independent third party such as Underwriters Laboratory or National Testing.	10	
8.05	The pump is to be provided with the maintenance free, self-adjusting mechanical seal.	10	
8.06	The pump is to be provided with electronically monitored cathodic protection. The anodes will be located in the discharge manifold and in each inlet. The test panel for monitoring the anodes will be located inside the pump house within view and reach of technicians inspecting and servicing the fire pump.	10	
8.07	The pump shift to be air operated with the shift controls to be located within the cab. A manually operated pump shift is not required.	10	
8.08	A Trident Emergency Products AirPrime™ air operated fire pump primer with automatic electric panel switch will be provided.	10	
8.09	The pump will be provided with two Hale Master Intake Valves (MIV)s. One located on each side, the appliances are to be manually operated with a large hand-wheel, measuring approximately 5 inches in diameter, located adjacent to the respective master intake. The controls will be provided with an indicator system to inform the operator of the valve position.	10	
8.10	Access to each of the MIV valves will not require the removal of the entire pump panel. Ideally access will be obtained through an access door or large escutcheon plate used with each of the two valves.	10	
8.11	Each MIV will be provided with a bleeder valve to discharge air while the water is filling the hose and the MIV is in the closed position	10	
8.12	Each MIV will be provided with an Elkhart, or similar, relief valve that will discharge excess intake pressure to the atmosphere. Preset at 125 psi, the relief valves will include a mechanism to adjust the pressure.	10	
8.13	The fire pump to be provided with a thermal relief valve,	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	Hale model TRV, set a minimum of 120º degrees F. The valve to discard the hot water below the left or driver's side pump panel and create both an audible and visual signal at the pump panel.		
8.14	The pump to be provided with two 6-inch intakes, one on each side. The 6-inch intakes to extend outside of the pump panel so that the panel side of the cap or other fittings is accessible and do not contact the face of the pump panel.	10	
8.15	The discharge manifold for the pump will be constructed of stainless steel.	10	
8.16	The manifold and plumbing of all discharges will be fastened with Victaulic, or similar, fittings. Threaded pipe will be avoided.	10	
8.17	High pressure braided hose is preferred to pipe or tubing for discharges that require multiple elbows or extended lengths.	10	
8.18	The pump to be provided with a master drain to drain both the manifold and pump. Though this may require two separate valves, it is preferred to consist of a single valve operated at the left pump panel.	10	
8.19	Unless specifically addressed, all valves to be, or completely interchangeable with Akron 8000 series quarter turn, locking, swing out, ball valves.	10	
8.20	Unless otherwise specified, all drain valves will have lift up style handles that are identified as to their function.	10	
8.21	All valves to operate smoothly with minimal physical effort.	10	
8.22	Caps, plugs and similar devices that require retainers will use a plastic coated stainless steel cable. Traditional ball chain is not acceptable.	10	
8.23	A 3" tank-to-pump line is to include both a ball valve and check located on the suction side of the pump. The ball valve is to be operated from the pump left side panel and use a locking "T" push/pull handle assembly. The handle is to be closest to the pump panel wall when the ball valve is in the open position.	10	
8.24	Two, one each side, 2-1/2" intakes with operating valves will be provided. Each intake to be provided with 2-1/2" NST chrome swivels with brass inlet strainers, chrome plugs and retaining cables. The intakes to be plumbed into the suction side of the pump.	10	
8.25	The 2-1/2" intake valves will be located behind the pump	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	panel. Each 2-1/2" intake will be operated from the respective side of the intake.		
8.26	A manually operated pump to tank, or tank fill line, with 2" plumbing and valve to be provided and operated from the left or driver's side pump panel. The discharge into the water tank will not be in the same, or immediately adjacent, baffled area as used for the tank discharge used as an intake to the fire pump. The specific location and design will be confirmed at the pre-construction meeting.	10	
8.27	A half-inch (1/2") circulating line to be provided with a 1/2" valve from the discharge side of the pump and terminate inside the tank or tank fill tower. The intent of the line is to circulate water through the pump to reduce the potential of overheating the pump.	10	
8.28	Two, one each side, aluminum Hannay booster reels with electric rewind containing 200 feet of 1” traditional rubber booster hose with 800 psi test pressure will be located over the fire pump. No exception to the reel being manufactured by Hannay.	10	
8.29	The reels will include roller assemblies on the outboard position of the reel as well as an inboard crossover roller assembly to facilitate use on the opposite side.	10	
8.30	Each booster reel will include a momentary switch on the pump panel to rewind the hose reel.	10	
8.31	Each of the booster hose reels will be supplied with 1-1/2” 800 psi high pressure or pipe and a 1-1/2” valve.	10	
8.32	Each of the booster lines will be controlled by a valve located on the left pump panel.	10	
8.33	The booster lines will be plumbed into a manifold that will allow foam to be discharged.	10	
8.34	The pre-connect located in the front bumper will be plumbed with 2” plumbing and 2” discharge valve.	10	
8.35	The pre-connect in the front bumper will be plumbed with a combination of pipe with Victaulic fittings and 800 psi high pressure hose.	10	
8.36	The pre-connect located in the front bumper will be plumbed into a manifold that will allow foam to be discharged.	10	
8.37	The low points in the plumbing serving the pre-connect in the front bumper will be provided with one or more Elkhart model 702 automatic ball drip valve(s).	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
8.38	The pre-connect located in the front bumper will be finished with a 1-1/2” NST swivel in the bottom center of the hose tray located in the front bumper.	10	
8.39	Each of the 1-1/2” crosslays will be plumbed with 2" high pressure hose or pipe and provided with a 2" valve. The valves serving the pre-connected cross lays to be operated from the left or driver's side pump panel.	10	
8.40	Each of the cross lays located will be provided with 2" swivels with 1-1/2" NST male fittings.	10	
8.41	The swivel for each cross lay will be positioned as close to the hose bed opening of the respective cross lay as possible so as to improve access while standing on the running board.	10	
8.42	One 2-1/2" cross lay will be provided in the left side of the main hose bed. Provided with no less than 2-1/2” plumbing and valve the discharge will terminate with a 2-1/2" NST male fitting located in the bulkhead between the pump module and the left side main hose bed.	10	
8.43	A 3” discharge will be provided for a deck gun. The discharge will be operated by a 3” valve with an Akron Slo-Cloz feature mounted on the left pump panel.	10	
8.44	The deck gun will be an Akron model 3440 DeckMaster with an Akron model 1577 SaberMaster 1250 electric nozzle.	10	
8.45	The controls for the deck gun and nozzle will be located on the left pump panel.	10	
8.46	A 4-inch discharge will be provided on the right pump panel and controlled at the left pump panel. The discharge will be operated by a full flow 4-inch electrically operated valve.	10	
8.47	The 4-inch discharge will be finished with a 4” NST male fitting. The discharge will be described as a 5” discharge.	10	
8.48	Four, two each side, 2-1/2"discharges to be provided with valves. The discharges to be 2-1/2" NST and provided with 30 degree elbows with 2-1/2" NST fittings equipped with caps and retaining cables.	10	
8.49	The 2-1/2” caps will include a thread design that will relieve stored pressure before the cab is fully removed.	10	
8.50	All discharges, except the pump to tank (tank fill) line, to be provided with individual drains or bleeder valves. Flexible hoses to be attached to the valves and extended to a position below the running board.	10	
8.51	All 2-1/2” discharge valves will be, or fully interchangeable with, Akron Tork Lock, if used with a horizontally operated	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	handle.		
8.52	All ball valves of 1-1/2" or larger to be, or fully interchangeable with, Akron swing out ball valves.	10	
8.53	Ball valve type drains with lift style handles with identification plates will be provided for each discharge.	10	
8.54	Both the left and right side pump panels will be constructed of stainless steel with a brushed finish.	10	
8.55	Both the left and right pump panels will be designed be fully removed during extensive work upon the pump, valves, plumbing, etc. Each of the panels will be secured by fasteners that do not require tools to acquire access or remove.	10	
8.56	The left pump panel will include a hinged panel near the top that will give access to the back side of gauges, plumbing and other related components.	10	
8.57	The left lower pump panel will be fully removable after the fittings, caps and plugs are removed. The panel need not be hinged.	10	
8.58	If gauges or instruments are attached to the upper hinged pump panel, the associated tubing, hoses, and wiring will be long enough to allow the panel to be fully opened.	10	
8.59	The left pump panel will be provided with LED lights that are illuminated with the engagement of the fire pump. The lights will be shielded to direct the lights onto the pump panel and to minimize glare that could impede the view of personnel and traffic.	10	
8.60	The right pump panel will be split where by the upper portion may be quickly opened for access to the pump, valves, controls, etc.	10	
8.61	The right lower pump panel will be fully removable after the fittings, caps and plugs are removed. The panel need not be hinged.	10	
8.62	The right pump panel will be illuminated by LED lights.	10	
8.63	All fire pump pressure gauges will have a white face with black markings and black needle. The gauges will be liquid filled with a material to prevent freezing and will be temperature compensating.	10	
8.64	Gauges and instruments that are not directly related to the fire pump and are separate of the pressure governor will use a black face with white markings and needle if applicable.	10	

<table>
<tr><th>Line</th><th>Description</th><th>Possible Points</th><th>Awarded Points
To be filled out by Fire Dept.</th></tr>
<tr><td>8.65</td><td>Gauges on the left pump panel will include the following:
4-1/2" liquid filled Compound vacuum pressure gauge
4-1/2" liquid filled Master Pressure gauge
2-1/2" gauges for each discharge having an operating valve of 2" or larger.</td><td>10</td><td></td></tr>
<tr><td>8.66</td><td>All discharges and respective line gauges will be labeled and color coded to match. Though they will be confirmed at the pre-construction meeting, the following colors are recommended:
<table>
<tr><th>DESCRIPTION</th><th>LABEL</th><th>COLOR</th></tr>
<tr><td>Left 6” intake</td><td>Left MIV Intake</td><td><s>Green</s></td></tr>
<tr><td>Left 2-1/2” intake</td><td>Left Auxiliary Intake</td><td><s>Green</s></td></tr>
<tr><td>Right 6” intake</td><td>Right MIV Intake</td><td><s>Green</s></td></tr>
<tr><td>Right 2-1/2” intake</td><td>Right Auxiliary Intake</td><td><s>Green</s></td></tr>
<tr><td>Tank to Pump</td><td>Tank to Pump</td><td><s>Bright Green</s></td></tr>
<tr><td>1-3/4” Front Jump Line</td><td>Front Jump Line</td><td>Purple</td></tr>
<tr><td>Forward Pre-Connected Cross lay</td><td>Cross lay #1, Foam Capable</td><td>Yellow</td></tr>
<tr><td>Center Pre-Connected Cross lay</td><td>Cross lay #2, Foam Capable</td><td>White</td></tr>
<tr><td>Rear Pre-Connected Cross Lay</td><td>Cross Lay #3, Foam Capable</td><td>Beige</td></tr>
<tr><td>Rear Pre-Connected Blitz</td><td>Blitz, Foam Capable</td><td>Brown</td></tr>
<tr><td>Left Hose Reel</td><td>Left Reel, Foam Capable</td><td>Olive</td></tr>
<tr><td>Right Hose Reel</td><td>Right Reel, Foam Capable</td><td>Pink</td></tr>
<tr><td>Driver Side No. 1, 2-1/2” Discharge forward</td><td>Discharge #1</td><td>Red</td></tr>
<tr><td>Driver Side No. 3, 2-1/2” Discharge rear</td><td>Discharge #2</td><td>Blue</td></tr>
<tr><td>Passenger Side No. 2, 2-1/2” Discharge forward</td><td>Discharge #3</td><td>Orange</td></tr>
<tr><td>Passenger Side No. 4, 2-1/2” Discharge rear</td><td>Discharge #4</td><td>Mint Green</td></tr>
<tr><td>Passenger Side LDH 4” Discharge</td><td>5” Discharge, Foam Capable</td><td>Green</td></tr>
<tr><td>Deck Gun</td><td>Deck Gun, Foam Capable</td><td>Burgandy</td></tr>
<tr><td>Tank Fill</td><td>Tank Fill</td><td>Black</td></tr>
</table></td><td>10</td><td></td></tr>
<tr><td>8.67</td><td>A Class 1 ITL-40 water tank level indicator will be provided on the left pump panel.</td><td>10</td><td></td></tr>
<tr><td>8.68</td><td>The pump tank level system will be prepared for the installation of axillary tank level indicators that are to be located on each side of the cab aft the rear doors.</td><td>10</td><td></td></tr>
<tr><td>8.69</td><td>A Fire Research Pump Boss 400, or equal, pressure governor system will be provided on the left pump panel to allow the operator to operate the pump and monitor apparatus functions. The system will:</td><td>10</td><td></td></tr>
</table>

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	• Be visible in direct sunlight • Display intake and discharge pressure • Identify target pressure • Identify engine RPM • Confirm presence of safety interlocks • Display system voltage • Display engine coolant temperature • Display engine oil pressure • Display transmission temperature Display engine fuel consumption		
8.70	Additional left pump panel displays and controls will include: • Thermal relief valve indicator light with test button • Test gauge outlets for both suction and discharge sides of the fire pump • A cut out for a momentary button switch intended to operate the chassis air horn • Pump panel light switch	10	
8.71	The fire pump will be provided with a Hale® SmartFOAM system or equal for the delivery of Class "A" or "B" foam solutions. The system will provide foam for each of the following discharges individually or in unison: • 1-3/4" pre-connect in the front bumper • Both pre-connected 1-3/4" cross lays • 2-1/2" pre-connected cross lay • 2-1/2" pre-connected blitz line located in the main hose bed • Both booster reels • Deck Gun • 4" discharge located on the right pump panel finished with a 5" locking Storz	10	
8.72	The foam system will have the ability to deliver the foam concentrate at a range between 0.1 to 6.5 gpm to enable the greatest range of need from a very small flow up to a combined total flow exceeding 1,000 gpm at 0.3% solution at a pressure up to 200 psi.	10	
8.73	The foam system will utilize a rotary gear type foam pump.	10	
8.74	The foam system will include a pump panel control module that includes: • An ultra-bright LED digital readout • Injection percentage from 0.1% to 10.0%	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	• Low concentrate warning • Water flow rate • Total water used • Percent of foam concentrate • Total concentrate used • Protection from operation in the absence of concentrate through the combined use of a low concentrate warning light and automatic disengagement after 60 seconds of dry operation • Provide description of system errors or faults in English terms instead of coded messages • Will produce plain English error messages in inform the pump operator of system issues without the cross referencing of alpha/numeric codes Continued production of foam concentrate during system errors		
8.75	The foam fill system will include(s) • High-capacity rotary gear foam concentrate pump • Continuous duty 12 volt motor • Electronic microprocessor control • Flush valve • Indicator lights • Pump panel plate with instructions • 1” concentrate pick-up wand • Check valves • 6’ of one inch suction hose with wand • Includes a field serviceable foam concentrate strainer • Ability to flush the system with clear water Brass or 3000 series stainless steel plumbing that has contact with foam concentrate or solution		
8.76	The foam system will include a Hale® EZ-Fill truck-mounted foam concentrate refill system, or equal.	10	
8.77	The foam system and refill system will be managed at the left pump panel.	10	
9.00	**WATER AND FOAM TANK**	0	
9.01	The water tank will be constructed of UV stabilized 1/2" thick Polyprene®.	10	
9.02	The water tank, with integral foam cell, will be manufactured by Pro Poly or UPF. The Bidder will identify which manufacturer is going to be used.	10	
9.03	The water tank will be designed and provided with removable lifting eyes to facilitate installation and removal	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	should repair be required of the tank or fire apparatus.		
9.04	The water tank will include a lifetime of the apparatus warranty.	10	
9.05	The tank is to contain no less than 500 gallons of water and two 40 gallons tanks, one for Class A foam concentrate and the other for Class B foam concentrate.	10	
9.06	Has the ability to receive intake flows up to 1,000 gpm at 100 psi without damage or cause to void the tank warranty.	10	
9.07	The water tank and foam tank will be compliant with the current edition of NFPA 1901 and will be inspected and certified.	10	
9.08	The water tank will be as short in height as possible. This will reduce the center of gravity of the vehicle and reduce the height of the hose bed.	10	
9.09	The water tank to be located inside the fire body. The design and placement of the tank will be determined by the manufacturer.	10	
9.10	A tank vent/fill tower will be provided and to have an outside measurement of approximately 11-inches by 11-inches. The tower will located as far forward and at the center width of the hose bed as possible.	10	
9.11	The riser and top lid of the water tank riser to be blue in color and labeled as water.	10	
9.12	A 4-inch diameter overflow will be provided and designed to dump behind the rear wheels. The overflow discharge will be positioned where it will not place water onto the top of the fuel tank.	10	
9.13	The tank will be mounted to isolate the tank from road shock and vibration. Tank cushions are to be permanently mounted to the body frame. The tank is to be completely removable.	10	
9.14	The tank will be provided with a 1-1/2" tank fill, 1/2" tank circulating, and 4" tank-to-pump line. The opening for the tank-to-pump line will be provided with an anti-swirl plate. All lines to have flex connections or hoses to protect the tank from any adverse stress or vibration.	10	
9.15	To minimize the risk of aeration that could produce cavitation of the pump, the discharges for the tank fill and tank circulating lines shall not share the same baffled area as the tank-to-pump line and should be located as far away	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	from the tank sump as possible. The specific location and design will be confirmed at the pre-construction meeting.		
9.16	The tank will be provided with necessary baffles and design to prevent bulging or flexing while storing or filling with water.	10	
9.17	The water level meter will enter the tank from the top and will be located immediately ahead of the fill reservoir to allow easy access and maintenance of the sending unit.	10	
9.18	A 40-gallon foam tank to be provided and located internal to the water tank. The tank will be used for Class “A” foam concentrate.	10	
9.19	The foam tank is to have an independent riser approximately 12" x 12" and provided with a hinged air tight lid provided with a latch to prevent accidental opening of the lid.	10	
9.20	The foam tank riser and lid will be green in color and be labeled as “Class A Foam.”	10	
9.21	A vacuum relief will be provided on the foam tank riser or lid to allow air to enter the tank while the concentrate is being used or drained.	10	
9.22	A 40-gallon foam tank to be provided and located internal to the water tank. The tank will be used for Class “B” foam concentrate.	10	
9.23	The foam tank is to have an independent riser approximately 12" x 12" and provided with a hinged air tight lid provided with a latch to prevent accidental opening of the lid.	10	
9.24	The foam tank riser and lid will be red in color and be labeled as “Class B Foam.”	10	
9.25	A vacuum relief will be provided on the foam tank riser or lid to allow air to enter the tank while the concentrate is being used or drained.	10	
9.26	Each tank will be provided with a removable screen to prevent the entrance of debris during the inspection and filling of the tanks.	10	
9.27	The foam tank will be provided with a discharge point that will be fitted with a brass or stainless steel ball valve to stop the flow of concentrate should a leak develop in the associated plumbing.	10	
9.28	The foam tank is to be capable of being drained. The drain is to be provided with identified and flexible hoses extended to a position below the running boards. The terminal end of	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	each foam drain will be provided with a 1-inch stainless steel male cam and groove coupling. The fitting will also be provided with a female couple dust cap. The dust cap will be attached to the apparatus with a retaining cable.		
10.00	**AUDIBLE AND VISUAL WARNING DEVICES**	0	
10.01	All warning lights will be connected to a master warning light switch. Engagement of the switch will signal the multi-plexing system to sequence the operation of the warning lights so as to minimize any electrical spikes to the warning systems or electrical system.	10	
10.02	An alternating headlight flasher will be provided. The headlight flasher will be capable of being individually turned off through the use of the multiplexing system and will automatically turn off. The flasher will automatically disengage when the high beams are being used as well as upon engagement of the parking brake	10	
10.03	Two Whelen 6RBRC red flashing LED warning lights with clear curved lens located inboard of the forward facing turn signals.	10	
10.04	A Roto Ray, model 4000W rotating warning light will be provided on the front of the cab near the upper center portion of the front grill. The light will be provided with a PAR46 red LED, PAR46 white LED and a PAR 46blue LED light. The light will be provided with a switch that is energized with the Master Warning lights and release of the parking brake.	10	
10.05	All lower level light heads mounted to the body will be provided with black mounting flanges.	10	
10.06	Two, one each side, Whelen model M6RC, red with clear lens, will be mounted onto the side of the gravel shield.	10	
10.07	Two, one each side, Whelen model M6RC, red with clear lens, will be mounted onto the side of the cab aft the rear doors at an elevation near the same as the top of the wheels.	10	
10.08	Two, one each side, Whelen model M6RC, red with clear lens, will be mounted onto the side of the body near the rear wheels.	10	
10.09	Two, one each side, Whelen model MCRC, red with clear lens, will be mounted into the assembly used for the tail, brake, turn, backup and warning light assembly. The lights will flash when the emergency lights are being operated but will simultaneously stay illuminated when the brakes are	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	applied.		
10.10	A Whelen 92" NFPA Edge® Freedom® IV F4N Low Current DYAD™ series linear Super-LED® light bar, or equal, will be mounted onto the roof of the cab. The light bar will be symmetrical in design beginning in the center and moving outward will include: • GTT 795H Opticom Emitter • Long Super LED, red • Long Super LED, blue • Long Super LED, red • Long Super LED, red • Long Super LED, blue • Long Super LED, red • Long Super LED, red • Single color corner LED, red • Short Super LED, red Single color corner LED, red	10	
10.11	The Opticom emitter will be independently switched within the Master Warning Control. The light will automatically disengage upon setting of the parking brake.	10	
10.12	The light bar will be permanently mounted to the roof.	10	
10.13	Two, one on each side, mounted on top of the fire body compartments near the rear of the apparatus, Whelen model MCFLED2R micro Edge Ultra Freedom LED light heads, red.	10	
10.14	Two Whelen model 6RBRC, red with clear lens , one on each side, rear facing, mounted onto the rear wall of the fire body compartments, at an elevation equal between the upper and lower warning lights.	10	
10.15	The rear facing 6RBRC light fixture will use a black flange and will be outlined by no less than a 3 inch circumference of a black vinyl or painted flange.	10	
10.16	A Whelen model 295HFSC9, 200 watt, dual tone electronic siren with noise canceling microphone will be provided. Foot operated switches will be provided for the driver and front passenger floor to change the tone of the electronic siren. All foot switches to be identified with durable labels.	10	
10.17	The siren is to be provided with an interlock that stops the siren sound when the apparatus parking brake is engaged.	10	
10.18	Two, one each side, Whelen KDE,SA314A 100-watt cast aluminum speakers are to be mounted forward facing through the front bumper. The speakers will be positioned	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	one to each side of the outboard frame extensions.		
10.19	Two, one each side, Grover Studdertone 24-inch chrome air horns will be recessed into the front bumper. The air horns are to be forward facing and will not have any obstruction to the front open end of the horn.	10	
10.20	The air horns to be operated by a momentary button switch located on the dash in front or to the side of the officer and the center horn button of the steering wheel.	10	
10.21	A switch is to be located on the dash for the selection of the twin electric horns or the air horns for the steering wheel center horn button.	10	
10.22	A Federal Signal model Q2B electro-mechanical siren will be provided. The siren will be mounted on top of the bumper on the left side. The Q2B siren will be operated by a foot switch located at the driver's floor and momentary push button located on the dash in front of the front right seat. A brake will be provided within reach of the front passenger. The switches and brake will be identified and the siren will only operate when the master warning light switch is placed in the on position.	10	
10.23	The portion of the bumper that will support the model Q2B siren will be reinforced to support the weight and torque produced by the siren. This will include structural support beneath the finished deck of the front bumper.	10	
10.24	A chrome plated manually operated 12" fire bell, cast in brass, with gold eagle and pedestal stand will be provided on the right front bumper.	10	
10.25	The portion of the bumper that will support the bell will be reinforced to support the weight and torque produced by the siren. This will include structural support beneath the finished deck of the front bumper.	10	
10.26	One Whelen TAL65 LED traffic warning device (directional arrow) will be mounted on the rear face of the fire body directly above the rear ground ladder storage compartment door. The controls for the traffic warning device will be located in the cab within reach of the driver and will produce a visual signal that is being produced by the light at the rear of the truck. A protective cover will be provided above the light to reduce the risk of the fixture from being damaged.	10	
10.27	Six, three each side, Whelen M4 warning lights will be mounted above the rear cab doors on or near the drip rail.	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	Each side will consist of fixtures with clear lens and positioned as red, blue, red.		
11.00	**ELECTRONICS AND COMMUNICATIONS**	0	
11.01	The chassis, fire body, and fire pump will use the same electrical multiplex system that will be interconnected with one another.	10	
11.02	The multiplex system will have the ability to identify and diagnose faults related to the chassis, driveline, fire body, pump and visual warning systems.	10	
11.03	The multiplex system will automatically monitor the electrical system and will sequence added loads to prevent unwanted variances in voltage and amperage.	10	
11.04	The multiplex system will automatically monitor the electrical system and will shed preselected loads should the system become overly taxed.	10	
11.05	The multiplex system will include the ability to record preselected performance features of the vehicle for analysis, diagnosis of issues or event investigation.	10	
11.06	The multiplex system will monitor and control the climate control for the vehicle chassis and cab.	10	
11.07	The driver will have in view and within arm's reach a monitor screen with control station.	10	
11.08	The vehicle will include an integrated camera system that will provide multiple images independently of one another or collectively to produce a general 360 degree image. The system will automatically display an image with sound produced from a rear facing camera with the transmission is placed into reverse. The system will also automatically produce an image in the appropriate direction with engagement of the turn signal. The image and controls for the camera system will be within view and control of the driver.	10	
11.09	The multiplex system will monitor, record and in the absence of seatbelt usage, produce an audible and visual warning. A seat belt monitor display will be provided and installed on the ceiling mounted switch area directly ahead of the front right passenger.	10	
11.10	The absence of seatbelt usage will also produce an audible and visual alarm on the driver's display and control station.	10	
11.11	The multiplex system will monitor the position of cab doors	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	and compartment doors. Any item that is not properly stowed or secured will produce an audible and alarm when the parking brake is released.		
11.12	In addition to the audible and visual alarm, the multiplex system will identify the specific item on a graphic display.	10	
11.13	A digital clock that is interfaced with multiplex system will be provided and installed on the ceiling mounted switch area directly ahead of the front right passenger or provided in an integrated monitor screen.	10	
11.14	A digital speedometer will be provided and installed on the ceiling mounted switch area directly ahead of the front right passenger or provided in an integrated monitor screen.	10	
11.15	The multiplex system will include a modem to allow the apparatus to be connected to a network for remote diagnosis of the driveline, pump and electrical system(s).	10	
11.16	The system will include an information center that will be located in an inconspicuous location on the cab dash.	10	
11.17	The system will be provided with a data transfer dongle and interface and USB to CAN & Serial to CAN interface module.	10	
11.18	The pump controls and monitoring system will be interfaced into the vehicle's multiplex system.	10	
11.19	The electrical system will have a dedicated power source for the radio. The selected source will automatically deactivate with the battery switch turned off.	10	
11.20	The electrical system will have a dedicated power source for the computer. The selected source will remain energized with the battery switch turned off. The power will be provided from connection to the clean power terminals on the chassis batteries.	10	
11.21	The dash will include a three position 12-volt cigar type power supply for assorted temporary 12 volt systems such as phone chargers, etc.	10	
11.22	All radio, communication, data recording and similar electrical systems will be installed by the manufacturer of the apparatus and included in the electrical performance test.	10	
11.23	Questions concerning the radio need to be directed to Officer Gerry Tarver (918) 596-9894.	10	
11.24	The apparatus will be provided with a Motorola APX6500 7/800 HMZ mid power MOBI m25URS9PW1 N Astro Digital, Smartzone operation, P25 Baud Trucking, 05 control head,	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	Multikey, remote mount control head, AES encryption, 5 year SFS Comp, APX control head software, microphone and speaker.		
11.25	The Bidder will install two multi-function antennas at the manufacturing factory, one mounted on each side of the roof. The antennas will support the radio, GPS, Rocket, computers, etc. The radio antennas will be by ROK Brothers Inc. item number SH-TUL-006 Tulsa Sharkee Kit with 25 ft. cables. http://www.rokbrothers.com/antennas.php NO EXCEPTION. Note: Each of the two antennas will have five cables that should be installed and run to the front center position of the cab dash.	10	
11.26	The antennas will be provided with coaxial cable that will terminate near the center of the dash for connection to the radio and computer equipment.	10	
11.27	The apparatus will be provided with a Utility Rocket vehicle router. The unit will be safely secured within the cab and connected to the appropriate Sharkee antenna. The device will use a cellular service from Verizon. The power will be provided for the Rocket will be from the clean power terminals on the chassis batteries.. http://www.utility.com/ NO EXCEPTION	10	
11.28	The apparatus will be provided with an automated drive recorder type camera that will monitor and record both the audible and the visual images inside the cab as well as directly outside the front windshield. The camera will be a Safety Vision Safe Drive MiniDVR™. The camera will be positioned near the upper center portion of the windshield where it will have a clear view of the front two passengers without obstructing vision for either.	10	
11.29	The apparatus will be provided with a David Clark brand communication system will be provided. The system will include an interface with the fire department radio and voice communication between all five seated positions and the left or street side pump panel. The Front right passenger and the pump panel will have the ability to hear and transmit on both the radio and intercom system. The system will include the following items:	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	• Radio interface, 40107G-01 • Two interface connectors, 09227P-81 • Appropriate cable, 9271P-13 • Bulk head, 18352G-16 • Belt PTT, C-3019 • Interface cable, 9271P-13 • Module U-3811 PTT (mounted on the ceiling on the left side and within arm's reach of right front seat.) • Module U-3800 (mounted on the ceiling above and behind driver seat.) • Power cable C-3820 • (Four) Module U-3802 • (One) Module U3801 located in a special compartment at the left rear corner of the apparatus. • Cable C-38-25 (number needed to connect each module • (Five) Headsets H3342		
11.30	A Knox Box KeySecure® 3B USB, part 2651 will be provided and installed within the cab located in a position which is accessible to the front right passenger. NO EXCEPTION	10	
11.31	A Havis, DS-DELL-602-2, C-MD-202 mount will be located on the dash directly in front of the Officer's seat.	10	
12.00	**PAINT AND FINISH**	0	
12.01	Body assemblies that cannot be finished painted after assembly are to be finish painted before assembly.	10	
12.02	An isolation tape or gasket will be used to prevent damage to finished surfaces before re-assembly and reinstallation of lights, handrails, door hardware and any miscellaneous items.	10	
12.03	The apparatus cab will be painted with the upper portion painted white and the lower portion painted red. The entire exterior of the fire body will be painted red.	10	
12.04	The chassis frame, frame liner and cross-members will be treated against corrosion and then painted the same color as the cab and fire body.	10	
12.05	The interior surfaces of the compartments will be painted with a gray truck bed material, Zolatone, or similar material, paint code ZOL 20-72.	10	
12.06	The interior of the cab will be painted with a gray truck bed material, Zolatone or similar finish.	10	
12.07	All hydraulic hoses, air hoses, wires and wiring loom will be	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	masked before painting.		
12.08	The Air conditioning condenser housing will be painted the same job color as the cab.	10	
12.09	The apparatus manufacturer will apply reflective white-white-white stripes with black outlines on all exposed edges of each stripe onto the cab and body. The reflective material used in this application will be 3M Scotchlite 680CR. Positioned with the lower white stripe positioned immediately above the deck of the extended front bumper, the stripes will begin at the radiator grill and extend across the front and sides of the cab and continue the same elevation to the fire body. The stripe will extend across the lower portion of the compartment ahead of the rear wheels and then extend upward in elevation back towards the cab. The stripe will then extend across the entire length of all compartments with the lower stripe slightly above the bottom of the compartment doors located over the rear wheels. In most cases the reflective stripe is 1" white, 1" space, 6" white, 1" space, and 1" white.	10	
12.10	The rear face of the apparatus will be provided with a reflective chevron of red and lime-yellow. The chevron will be designed and installed in compliance with the Federal Highway Administration's Manual on Uniform Traffic Control Devices (MUTCD). The reflective stripes will be six-inches in width and will be positioned on the rear face of the apparatus at an angle of 45-degrees sloping to the lowest and outermost corner of the apparatus.	10	
12.11	The front bumper will be provided with a reflective chevron of red and lime-yellow.	10	
12.12	The reflective material used to create the front and rear chevrons will be manufactured by 3M. The lime-yellow material will be used as the background and will consist of 3M diamond grade DG3 Fluorescent lime-green sheet 4083. The red material used to create the diagonal stripes will be 3M Scotchlite Electronic Cutable Film – 1172-Red.	10	
12.13	The flange surface of shelves and trays that face the exterior of the compartment will be provided with lime yellow reflective material.	10	
12.14	Gold leaf striping and arrow points with an adjacently located white pinstripe will be provided near the bottom of the cab, across the front door, around the front wheels, and around	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	the rear door, and bottom of the cab aft the rear door.		
12.15	Gold leaf stripe, with an adjacently located white pinstripe, will be provided below the windshield on each front corner of the cab. Specific details will be determined at the pre-construction meeting. An example of striping on the front left corner of the cab. The horizontal portion will extend across the front of the cab and the vertical portion will be located slightly ahead of the front door hinges. 	10	
12.16	All gold leaf will be encapsulated between two layers of clear vinyl. The vinyl lettering and Maltese cross should not be covered with clear coat.	10	
12.17	The gold leaf will be Extra-Large Signgold vinyl, or equal, with 3M clear removable graphic film with Comply Performance.	10	
12.18	All non-reflective vinyl will be 3M removable graphic film with Comply Performance.	10	
12.19	All reflective vinyl will be 3M Scotchlite removable graphic film with Comply Performance.	10	
12.20	All lettering and numerical digits will be clearface bold with black outline and shadow. Images of text shown below are representation of size and position to the art and are not representative of the desired font.	10	
12.21	Gold leaf with black background forming the words "TULSA FIRE DEPT." will be located on both front doors of the cab. The lettering is to be elliptically arched with "Tulsa" above "Fire Dept." The word “Tulsa” will be approximately 3-1/2-inches in height and the words “Fire Dept.” will be approximately 3-inches in height.		
12.22	An 11-1/2 inch Maltese cross will be provided in the center of the lettering on the front doors. The maltese cross will be of gold leaf with black art work. A sample of the art will be provided at a later date.	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
			
12.23	Four inch gold leaf lettering with black background forming the words “Ladder" over eight inch tall numerical digits such as "30.” The lettering will be located on both rear doors of the cab. The numerical digit is to be verified with the Fire Department before installation. 	10	
12.24	Reflective white numbers, approximately 8” in height with black background will be located on both front corners of the cab.	10	
12.25	Reflective red numbers, no less than 8” but sized to fit, with black background will be located on the rear of the apparatus.	10	
12.26	A reflective US flag with an appearance of waving with an integrated eagle head will be installed on the upper portion of the cab located between the front and rear doors. The flag on the right side of the apparatus will be reverse image. The image will be similar in appearance as this image. 	10	
12.27	The fire apparatus manufacturer will provide and install all NFPA 1901 required signage.	10	
12.28	The fire apparatus manufacturer will provide and install the labels onto the valves and related components of the fire pump. The specific details and related colors are described in Chapter 8 of the specifications.	10	
12.29	All graphics will be developed and prepared for review during the pre-construction meeting.	10	
13.00	**EQUIPMENT**	0	
13.01	Equipment provided with the apparatus will include: • One Duo Safety 24-ft two section extension ladder • One Duo Safety 14-ft roof ladder	10	

Line	Description	Possible Points	Awarded Points To be filled out by Fire Dept.
	• One Duo Safety 10-ft attic ladder • One Duo Safety 6-ft pike pole • One Duo Safety 8-ft pike pole • One Duo Safety 10-ft pike pole • One 17-ft Little Giant		
13.02	For each purchase order of one or more apparatus, the bidder will provide the following software in the form of CD/DVD/electronic file or internet access with appropriate password(s): The Tulsa Fire Department expects to receive one of each current edition or version: Latest Version of Cummins Diagnostic Software Inline 7 Data Link Connector Latest version of ADOC Allison Diagnostic Software Latest Version of ABS/Suspension/Stability Control Software (Example Meritor) Latest Version of Body Control Software (Command Zone, VMUX exct.)	10	
13.03	Three Akron style 2443 triple wrench set containing the mounting bracket, two style 10 spanners and one style 15 hydrant wrench	10	
13.04	Three 55-gallon drums of Phos-Chek WD 881 class “A” foam concentrate. No Exception.	10	
13.05	One 55-gallon drum of Chemguard 3% x 3% AR-AFFF concentrate. No Exception.	10	
13.06	Ten soft kit of 8-PowerFlare battery powered LED flares, amber LED with yellow case and yellow storage bag.	10	
13.07	One Bullard NXT thermal image cameras with TI basic plus, electronic thermal throttle, digital zoom, scene catcher, retract strap, wireless desktop charging system and wireless truck mount charger. See annex 14.03 for specifications. No Exception	10	
13.08	Two Ziamatic double premix holders, QM-PMH-D	10	
13.09	One Scott Safety RIT-PAK III® with one 5500 psi 75 minute carbon fiber cylinder. No Exceptions.	10	
13.10	Two Zico nozzle cup mount NCM-B-TFT	5	
13.11	Two PAC flexmount P/N 1002 for securing the booster lines	5	
13.12	Sixteen PAC hooklok P/N 1001	5	
13.13	Sixteen PAC handlelok P/N 1004	5	
13.14	Six PAC extended adjustamount kit P/N K5008	5	
13.15	Six PAC adjustamount P/N K5006	5	

<table>
<tr><th>Line</th><th>Description</th><th>Possible Points</th><th>Awarded Points
To be filled out by Fire Dept.</th></tr>
<tr><td>13.16</td><td>Three PAC Ironslok P/N K5003</td><td>5</td><td></td></tr>
<tr><td>13.17</td><td>Twelve PAC Toolok P/N 1003</td><td>5</td><td></td></tr>
<tr><td>13.18</td><td>Four Streamlight Vulcan® 180 Multi-Function Rechargeable Lantern with vehicle mount system and quick release shoulder strap. UPC 080926-44315-0, Item #44315.</td><td>5</td><td></td></tr>
<tr><td>13.19</td><td>Ten spare Four Streamlight Survivor C4 LED, 12 v, Orange, 90509 fast charge flashlights.</td><td>5</td><td></td></tr>
<tr><td>14.00</td><td>ANNEX</td><td>0</td><td></td></tr>
<tr><td>14.01</td><td>The following items are information concerning expectations of the Tulsa Fire Department as well as specifications for specific items.</td><td>0</td><td></td></tr>
<tr><td>14.02</td><td colspan="2">
<table>
<tr><th>Location</th><th>Description</th><th>Qnty</th><th>Unit Weight</th><th>Line Weight</th></tr>
<tr><td>Front Bumper</td><td>100 ft. of 1-3/4” double jacket</td><td>2</td><td>18</td><td>36</td></tr>
<tr><td>Front Bumper</td><td>1-1/2” fog nozzle</td><td>1</td><td>4</td><td>4</td></tr>
<tr><td>Cab</td><td>Scott SCBA</td><td>4</td><td>24.75</td><td>99</td></tr>
<tr><td>Cab</td><td>TIC</td><td>1</td><td>4</td><td>4</td></tr>
<tr><td>Cab</td><td>Streamlight Fire Vulcan lantern</td><td>5</td><td>1</td><td>5</td></tr>
<tr><td>Cab</td><td>Map book</td><td>3</td><td>6</td><td>18</td></tr>
<tr><td>Cab</td><td>Binoculars</td><td>1</td><td>1.5</td><td>1.5</td></tr>
<tr><td>Cab</td><td>Storm kit</td><td>1</td><td>10</td><td>10</td></tr>
<tr><td>Cab</td><td>EMS Gloves</td><td>3</td><td>2.5</td><td>7.5</td></tr>
<tr><td>Cab</td><td>Box N95 respirators</td><td>2</td><td>1</td><td>2</td></tr>
<tr><td>Cab</td><td>Safety Vest</td><td>5</td><td>0.5</td><td>2.5</td></tr>
<tr><td>Cab</td><td>Portable Radio</td><td>4</td><td>1.5</td><td>6</td></tr>
<tr><td>L-1</td><td>Wheel chocks beneath cabinet</td><td>2</td><td>21</td><td>42</td></tr>
<tr><td>L-1</td><td>25ft of five inch with hydrant catcher</td><td>1</td><td>27.5</td><td>27.5</td></tr>
<tr><td>L-1</td><td>50ft of five inch with hydrant catcher</td><td>1</td><td>52.5</td><td>52.5</td></tr>
<tr><td>L-1</td><td>2-1/2” Playpipe</td><td>1</td><td>5.5</td><td>5.5</td></tr>
<tr><td>L-1</td><td>Double female, 2-1/2”</td><td>2</td><td>1.25</td><td>2.5</td></tr>
<tr><td>L-1</td><td>Double male, 2-1/2”</td><td>2</td><td>0.63</td><td>1.26</td></tr>
<tr><td>L-1</td><td>2-1/2 X 1-1/2 Reducer</td><td>2</td><td>0.5</td><td>1</td></tr>
<tr><td>L-1</td><td>Rubber Mallet</td><td>1</td><td>2.5</td><td>2.5</td></tr>
<tr><td>L-1</td><td>4” to 5” Storz adapter (white)</td><td>1</td><td>2.5</td><td>2.5</td></tr>
<tr><td>L-1</td><td>4-1/2 LH female to 5” storz (orange)</td><td>1</td><td>2.5</td><td>2.5</td></tr>
<tr><td>L-1</td><td>2-1/2” female to 5” storz adapter</td><td>1</td><td>2.5</td><td>2.5</td></tr>
<tr><td>L-1</td><td>2-1/2” male to 5” storz adapter</td><td>1</td><td>2.5</td><td>2.5</td></tr>
</table>
</td><td></td><td></td></tr>
</table>

Line	Description					Possible Points	Awarded Points To be filled out by Fire Dept.
	L-1	Two Clappered 2-1/2” NST female to 5” storz Siamese	1	17	17		
	L-1	5” NST female long handle to 5” storz (rear waterway)	1	4	4		
	L-1	Rope hose tool	3	1	3		
	L-1	Elkhart RAM (top of compartment	1	17	17		
	L-1	Solid stream tip with straightener for RAM	1	2	2		
	L-1	2-1/2” female to two 1-1/2” male gated wye	1	3	3		
	L-1	Two spanner & hydrant wrench with bracket front face of L1	1	7.5	7.5		
	L-1	Storz spanner wrench set outside face of L1	1	4	4		
	L-1	Vest Tanks with trombone pump	3	3	9		
	L-2	5-gallon drinking water	1	40	40		
	L-2	SCBA bracket with Scott SCBA	1	27.75	27.75		
	L-2	Hose bundle of 2” x 50’ with high rise nozzle	2	23	46		
	L-2	High rise bag with water thief, 6ft of 3 inch and 50ft of 2inch with two spanners	1	47	47		
	L-2	Piercing nozzle	1	11	11		
	L-2	PFD bag of 3PFDs, 2Throw bags	1	15	15		
	L-3	15lb CO2 extinguisher	1	37.75	37.75		
	L-3	2-1/2 gallon APW	1	24.5	24.5		
	L-3	20lb Dry chemical extinguisher	1	38	38		
	L-3	Adjustable plastic step chocks	2	15	30		
	Dunnage area near tank risers	2x4 plastic cribbing	8	1.5	12		
	Dunnage area near tank risers	4x4 plastic cribbing	16	3	48		
	Dunnage area near tank risers	Plastic wedges	8	1.5	12		
	R-4	Amkus Power Plant	1	90	90		
	R-4	20” Amkus push/pull ram	1	22.5	22.5		
	R-1	30” Amkus push/pull ram	1	27	27		
	R-4	Chain for rescue tool	1	40	40		
	R-4	Amkus Ram attachment kit	1	7.5	7.5		
	R-4	Pail of oil dry	1	40	40		
	R-4	Roll of oil dry collection bags	1	15	15		
	L-4	5" manifold	1	50	50		
	L-4	Traffic Cones	5	10.5	52.5		

Line	Description					Possible Points	Awarded Points To be filled out by Fire Dept.
	L-4	Battery operated flares kit of no less than 5	1	3.5	3.5		
	L-4	Tool box with tools	1	25	25		
	L-4	Tool box with fasteners	1	25	25		
	Rear	Two spanner & hydrant wrench with bracket rear face	1	7.5	7.5		
	Rear	Storz spanner set on rear wall	1	4	4		
	Rear	Salvage covers	2	28	56		
	Rear	Floor runners	2	22	44		
	Hose bed & Ladder	5” hose with hydrant catcher	10	100	1000		
	Hose bed & Ladder	3” hose	20	40	800		
	Hose bed & Ladder	2-1/2" preconnect, 200 ft.	4	34	136		
	Hose bed & Ladder	24ft two section	1	77	77		
	Hose bed & Ladder	14ft roof	2	39	78		
	Hose bed & Ladder	10ft attic	1	41	41		
	Hose bed & Ladder	6ft pike	2	6	12		
	Hose bed & Ladder	8ft pike	2	7	14		
	Hose bed & Ladder	10ft pike	2	8	16		
	Pump house	4” x 5”storz elbow	1	8.5	8.5		
	Pump house	2-1/2” elbow	4	4.5	18		
	Pump house	1-3/4” double jacket, 50ft coupled	8	18	144		
	Pump house	2-1/2” double jacket, 50ft coupled	4	34	136		
	Pump house	1-1/2” nozzle	2	4	8		
	Pump house	2-1/2” nozzle	1	6.25	6.25		
	Pump house	Backboards	2	17.5	35		
	Pump house	Push brooms	2	4.5	9		
	Pump house	Pry bars	2	12.5	25		
	Pump house	New York Roof Hook	1	12.5	12.5		
	Left hose bed cover	Little Giant 17ft	1	28	28		
	R-1	EMS T-Pack (requirement for first aid kit)	1	40	40		
	R-1	Defibrillator	1	21	21		
	R-1	Disposable tarps	2	2	4		

Line	Description					Possible Points	Awarded Points To be filled out by Fire Dept.
	R-1	Mega Mover	1	2	2		
	R-1	Hilti Reciprocating saw	1	11	11		
	R-1	Hilti Cordless hammer drill	1	7	7		
	R-1	Hilti Cordless grinder	1	7	7		
	R-1	Two spanner & hydrant wrench with bracket front face of R1	1	7.5	7.5		
	R-1	Storz spanner wrench set outside face of R1	1	4	4		
	R-2	Round point shovel	1	4	4		
	R-2	Square point shovel	1	4	4		
	R-2	Scoop shovel	1	4.5	4.5		
	Dunnage area near tank risers	Vehicle stabilizer kit	2	94	188		
	R-2	150ft general use life safety rope	1	14	14		
	R-2	Scott RIT kit		33	33		
	R-3	Bracket with 4 cycle fuel	1	7.5	7.5		
	R-3	Pry axe	1	3	3		
	R-3	Glass Master	1	1.5	1.5		
	R-3	42” bolt cutters	1	14.5	14.5		
	R-3	18” bolt cutters	1	4.5	4.5		
	R-3	A/C voltage detector	1	2.5	2.5		
	R-3	6lb Pick head axe	1	8.5	8.5		
	R-3	6lb Flat head axe	1	8	8		
	R-3	8lb sledge hammer	1	11.5	11.5		
	R-3	3ft D handle pike	1	3.5	3.5		
	Rear Wheels	SCBA cylinder storage	5	10	50		
	Rear Wheels	Oxygen cylinder storage	1	5	5		
				TOTAL	4,380.51		

Line	Description
14.03	• The TIC will be third party tested and certified as compliant to the current edition of NFPA 1801 *Standard for Thermal Imagers for the Fire Service*. • The manufacturer of the thermal image camera will be ISO 9001 certified. • The thermal image camera will be manufactured in the United States. • The repair center for the thermal image camera will be in the United States. • The thermal image camera shall be hand held. • The thermal image camera, with a battery and all manufacturer's options and features that may be incorporated at the time of actual use, will not exceed 2.5 pounds. • The thermal image camera will be no greater than 5.5" tall, 4.75" wide or 8.25" long. • The thermal image camera will be approved for use in Class I, Division 2, Group C and D hazardous locations. • The outer case of the thermal image camera will be constructed from a heat-resistant thermoplastic formed into an ergonomic design. • The thermoplastic used in the construction of the outer case will be orange in color. The color pigment will be consistent throughout the thickness of the shell and not a single layer of paint, coating or other covering. • The thermal image camera will incorporate a LED liquid Crystal Display (LSD) monitor screen that has a diagonal measurement of no less than 3.5 inches. • The thermal image camera will be provided with a slightly pliable sun screen that will surround and project outwardly to shroud the viewing screen from unwanted light. • The display produced by the monitor screen that is no less than 76,800 pixels for high quality resolution. • The monitor screen will produce an illumination level of no less than 500 cd/m². • A clear polycarbonate cover must protect the display screen. The screen cover will be field-replaceable and watertight. • The thermal image camera will be provided with a g/1.3 lens fabricated of germanium with no less than a 31°(V) x 40° (H) field of view. • The lens will be protected with a watertight, sealed 2 mm thick germanium cover window. • The thermal image camera will be compliant to IP67, capable of being submerged 3 feet of water for no less than 30 minutes without damage or impaired operation. • The thermal image camera will be capable of being dropped from a height of no less than 6'- 6"onto a hard surface in any orientation without operational damage. • The thermal image camera will be capable of withstanding an environmental temperature of 350°F for no less than 15 minutes without damage or impaired operation. • The imaging array will utilize an uncooled vanadium oxide (VOx) focal plane array of no less than 320x240 pixels. • The spectral response for the thermal image camera will be 7-17microns. • The update rate of the thermal image camera will be no less than 60Hz. • The Noise Equivalent Temperature Difference (NETD) will be less than 30mK. • The core temperature range of the thermal image camera will be -40 to 175°F.

	• The dynamic range of the thermal image camera and associated electronics will be approximately 1100°F. • The thermal image camera will not produce a whiteout or undistinguishable image when pointed directly into the flames. • The viewing screen will include a warning indicator to alert the user that the camera is at or approaching a critical temperature that could result in failure of the camera. • The thermal image camera will be provided with tri-color automatic colorization based upon a yellow/orange/red color scheme. The display will show yellow at temperatures of 500°F to 799°F, orange at temperatures of 800°F to 999°F and red at temperatures of 1000°F or greater. • The thermal image camera will provide a manual selection of colors to help the user identify the hottest objects in a scene regardless of the identified heat levels. Manually selected and adjusted, this feature use gradients of blue to prevent confusion with the yellow/orange/red colorization. • The thermal image camera will provide a battery status indicator on the viewing display. • The thermal image camera will provide on the viewing screen, the surface temperature of selected objects. • The thermal image camera will provide the option to simultaneously produce onto the viewing screen of a bar graph and/or numeric temperatures. • The thermal image camera will use one switch to turn the unit on or off. The switch will employ an electronic press-and-hold protection mechanism to prevent unwanted shut-down of the power. • The thermal image camera will have a secondary switch to select its operation in the basic plus mode or access to advanced features. • Operation of the main power switch will default to the thermal image camera's • basic plus mode regardless of the current operational use, state or mode. • The thermal image camera will include a digital zoom feature for an improved view of scene details. The zoom feature will offer 2x and 4x magnification options. • The thermal image camera will include an internally housed Digital Video Recorder (DVR) that enables the recording of thermal imaging video to the internal memory of the thermal imager. • The camera will have the ability to record no less than 5.5 hours of video in 720 x 480 resolution which will be downloaded to a computer via USB connection. • Video recordings will be date and time stamped at the beginning of each recorded event for documentation purposes. • Recorded events will be capable of being downloaded and managed through a standard micro USB connection. • The thermal image camera will be provided with a self-retracting strap. The strap will be capable of holding the unit to the firefighter's body with the full weight of the camera, with the battery, hanging unsupported by the firefighter solely by the retractable strap. • The thermal image camera will become fully operational within four seconds after activation of the power switch with the battery warm and charged. The camera will be either on or off with no option of a standby switch or mode. • The thermal image camera will be provided with an internal lithium ion

	rechargeable battery that will provide no less than 7 hours of continuous use. • The thermal image battery will be capable of being charged via USB, inductive desk charger, or inductive truck charger. The wireless, or inductive, chargers eliminate the risk of damaged prongs, dirty contacts or other physical conditions that prevent the battery from being charged or charged correctly. • The charger system(s) will not damage the battery should a fully charged battery continue to be connected or placed into a charging station. • The thermal image camera will be provided with an inductive desktop charging station that is powered through the standard household 120 volt AC receptacle. • The thermal image camera will be provided with a truck mounted charging system that is compliant with NFPA 1901. • The truck charger will be provided with a warranty of no less than one year. • The lithium ion battery will be provided with a warranty of no less than five years. • The thermal image camera and attached options will be provided with a warranty of no less than five years. • The outer shell of the thermal image camera will be provided with a limited lifetime warranty for defects in materials or workmanship. • Warranty repairs will include a guaranteed 48 hour turn around identified as two full business days from date and time of receipt at the authorized warranty repair center to the date and time the unit is processed for shipping. • Non-warranty repairs will include a guaranteed 48 hour turn around identified as two full business days from date and time of receipt at the authorized warranty repair center to the date and time the unit is processed for shipping.


3-66393

INTERNATIONAL

WWW.OTEINTERNATIONAL.COM
6695 CR 4628
Athens, TX 75752

19515B Strut Mobile Medical Cabinet
Automatic Heating and Cooling




	Inside Dimensions Top Engine/Rear	Outside Dimensions Top Engine/Rear
Height	13.22"	20.75"/18.24"
Width	22.00"	25.67"
Depth	14.45"	20.36"/22.87"
VDC	11-15 VDC	22-26 VDC
Amps	.5 to 7.5(12)	.5 to 3.7(24)
Airflow Requirements: 65CFM		

Product Overview

- Unit is installable in a variety of configurations
- Functional in mobile, temporary or stationary environments
- Reliable, Robust and Low Maintenance Solid-State technology
- Snap locks for fast and consistent access to contents
- Padlock, Key, Keypad or other methods of locking for security of narcotics
- High tech insulation and thermoelectric proportional controlled methodology
- Manufactured in U.S.A.

Electrical
Unit operates at 12 or 24 VDC, AC power conversion optional. Peak power Consumption is dependent upon model and operating environment but typical power consumption at normal ambient temperatures (100F to 30F) is 50-80% of peak. Unit can be equipped with optional low voltage shutdown. (when voltage is restored the unit automatically restarts)

Temperature Control
Heating and cooling is accomplished using high efficiency thermoelectric technology. The temperature control boards use a proportional control program to maintain minimal temperature variation inside the unit. Internal temperature is preset but custom temperature settings are available. Insulation is state of the art vacuum and / Or PU panels that provide a barrier of maximum efficiency from external temperatures.

Design
Products contain no CFC's nor harmful contaminants requiring only standard tools for installation. Unit is field serviceable with the field service guide. Unit can be configured to operate on 120/220 VAC with optional DC power conversion. OTE engines are designed and manufactured to work day in and day out in the toughest conditions.

** Specification for reference only and are subject to change without notice.*

15.00	**ADDENDA**	0	
16.00	**ADDENDA**	0	
	TOTAL POINTS	7,075	

IV. TIME FRAME FOR REVIEW:

_____

V. DELIVERABLES:

The products, reports, and plans to be delivered to the City will include:

1) _____

2) _____

VI. RESPONDENT AND PROPOSAL REQUIREMENTS

To be considered, interested Respondents should submit or address the following:

A. One (1) unbound original and _____ bound copies of the proposal plus one electronic (1) copy on CD, DVD, or flash drive.

B. A description of the Respondent's qualifications and experience and that of key personnel assigned to this project (and that of each firm proposed as part of the Respondent's team). It is noted that equipment, material and staff shall be provided by the Respondent.

C. A description of previous projects that Respondent's firm has conducted for organizations of similar size and complexity. Provide contact names and telephone numbers of references from these organizations.

D. Provide a project schedule, identifying beginning and ending dates of work, as well as project target dates.

E. At the discretion of the City, one or more Respondents may be invited to be interviewed for purposes of clarification or discussion of the proposal.

F. Any expenses incurred by the Respondent(s) in appearing for an interview or in any way providing additional information as part of the response to this Competitive Sealed Proposal request are solely the responsibility of the Respondent. The City of Tulsa is not liable for any costs incurred by Respondents in the preparation of proposals or any work performed by the

Respondent prior to the approval of an executed contract by the City of Tulsa. The City assumes no responsibility or liability for any costs you may incur in responding to this CSP request, including attending meetings or contract negotiations.

VII. EVALUATION OF PROPOSALS:

A panel consisting of not less than Three City of Tulsa employees will evaluate proposals. Selection shall be determined to be in the best interest of the City as evaluated by the City of Tulsa. The approval of the selected Respondent will be subject to the final determination of the City and will be contingent on the successful completion of a contract between the City and the successful Respondent.

VIII. AWARD OF PROPOSALS:

The City evaluates proposals based on the general criteria identified in Tulsa Revised Ordinance (TRO) Title 6, Chapter 4, and listed below:

1. The ability, capacity and skill of the Respondent to perform the contract or provide the service required,

2. Whether the Respondent can perform the contract or provide the service promptly or within the time specified, without delay or interference,

3. The character, integrity, reputation, judgment, experience and efficiency of the Respondent,

4. The quality of performance by Respondent of previous contracts or services,

5. The previous and existing compliance by the Respondent with laws and ordinances relating to the contract or service,

6. The sufficiency of the financial resources and ability of the Respondent to perform the contract or provide the service,

7. The quality, availability and adaptability of the Services offered by Respondent to the particular use required,

8. The ability of the Respondent to provide future maintenance, support and service related to Respondent's offer,

9. Where an earlier delivery date would be of great benefit to the Using Department, the date and terms of delivery may be considered in the Proposal award,

10. The degree to which the Proposal submitted is complete, clear, and addresses the requirements in the CSP request specifications,

11. If a point system has been utilized in the CSP request specifications, the number of points earned by the Respondent.

12. The total cost of ownership, including the costs of supplies, materials, maintenance, and support necessary to perform the item's intended function.

13. If an evaluation committee performs the evaluation, the recommendation of such committee.

IX. MISCELLANEOUS

A. Your response to this CSP request will be considered part of the contract, if one is awarded to you.

B. All data included in this CSP request, as well as any attachments, are proprietary to the City of Tulsa.

C. The use of the City of Tulsa's name in any way as a potential customer is strictly prohibited except as authorized in writing by the City of Tulsa.

D. Your proposal must clearly indicate the name of the responding organization, including the Respondent's e-mail address and web site information, if applicable, as well as the name, address, telephone number and e-mail address of the organization's primary contact for this proposal. Your proposal must include the name, address, telephone number and e-mail address of the Respondent and/or team of Respondents assigned to the City account.

E. The City is bound to comply with Oklahoma's Open Records Act, and information submitted with your proposal, with few exceptions, is a matter of public record. For specifics on the Oklahoma Open Records Act, see the link below:

https://libraries.ok.gov/law-legislative-reference/library-laws/statutes-open-records/

The City shall not be under any obligation to return any materials submitted in response to this CSP request.

F. The City expects to enter into a written Agreement with the chosen Respondent that will incorporate this CSP request and your proposal. In addition to any terms and conditions included in this CSP request, the City may include in the Agreement other terms and conditions as deemed necessary.

INTEREST AFFIDAVIT

STATE OF _____)

COUNTY OF_____)

I, _____, of lawful age, being first duly sworn, state that I am the agent authorized by Seller to submit the attached Proposal. Affiant further states that no officer or employee of the City of Tulsa either directly or indirectly owns a five percent (5%) interest or more in the Respondent's business or such a percentage that constitutes a controlling interest. Affiant further states that the following officers, including any Trustee, and/or employee of the City of Tulsa own an interest in the Respondent's business which is less than a controlling interest, either direct or indirect.

_____
_____
_____
_____

By: _____
Signature

Title: _____

Subscribed and sworn to before me this _____day of _____, 20____.

_____

Notary Public

My Commission Expires: _____

Notary Commission Number: _____

County & State Where Notarized: _____

The Affidavit must be signed by an authorized agent and notarized

NON-COLLUSION AFFIDAVIT

(Required by Oklahoma law, 74 O.S. §85.22-85.25)

STATE OF _____)

COUNTY OF_____)

I, _____, of lawful age, being first duly sworn, state that:

(Seller's Authorized Agent)

1. I am the authorized agent of Seller herein for the purposes of certifying facts pertaining to the existence of collusion between and among Respondents and municipal officials or employees, as well as facts pertaining to the giving or offering of things of value to government personnel in return for special consideration in the letting of any contract pursuant to the Proposal to which this statement is attached.

2. I am fully aware of the facts and circumstances surrounding the making of Seller's Proposal to which this statement is attached, and I have been personally and directly involved in the proceedings leading to the submission of such Proposal; and

3. Neither the Seller nor anyone subject to the Seller's direction or control has been a party:
   a. to any collusion among Respondents in restraint of freedom of competition by agreement to Propose at a fixed price or to refrain from responding,
   b. to any collusion with any municipal official or employee as to quantity, quality, or price in the prospective contract, or as to any other terms of such prospective contract, nor
   c. in any discussions between Respondents and any municipal official concerning exchange of money or other thing of value for special consideration in the letting of a contract.

By: _____

_____
Signature

Title: _____

_____

Subscribed and sworn to before me this _____day of _____, 20____.

_____

Notary Public
My Commission Expires: _____

Notary Commission Number: _____
County & State Where Notarized: _____

The Affidavit must be signed by an authorized agent and notarized

AFFIDAVIT OF CLAIMANT

STATE OF _____)

COUNTY OF_____)

The undersigned person, of lawful age, being first duly sworn on oath, says that all invoices to be submitted pursuant to this agreement with the City of Tulsa will be true and correct. Affiant further states that the work, services or material furnished will be completed or supplied in accordance with the plans, specifications, orders, requests and/or contract furnished or executed by the affiant. Affiant further states that (s)he has made no payment directly or indirectly to any elected official, officer, or employee of the City of Tulsa, or of any public trust where the City of Tulsa is a beneficiary, of money or any other thing of value to obtain payment of the invoice or procure the contract or purchase order pursuant to which an invoice is submitted**.** Affiant further certifies that (s)he has complied with all applicable laws regarding equal employment opportunity.

Company: _____

_____

Remit to
Address: _____

City, State
Zip: _____

Phone: _____

Name (print): _____

Signature: _____

Title: _____

Subscribed and sworn to before me this _____ day of _____, 20___.

_____
Notary Public

My commission expires: _____
My commission number: _____
County and State where notarized: _____

The Affidavit must be signed by an authorized agent and notarized

RESPONDENT INFORMATION SHEET

Respondent's Legal Name: _____
(Must be Respondent's company name exactly as reflected on its organizational documents, filed with the state in which Respondent is organized; not simply a DBA.)

State of Organization: _____

Respondent's Type of Legal Entity: (check one)

( ) Sole Proprietorship
( ) Partnership
( ) Corporation
( ) Limited Partnership
( ) Limited Liability Company
( ) Limited Liability Partnership
( ) Other: _____

Address: _____
Street City State Zip

Website Address: _____ **Email Address:** _____

Sales Contact:

Name: _____

Street: _____

City: _____

State: _____

Phone: _____

Fax: _____

Email: _____

Legal or Alternate Sales Contact:

Name: _____

Street: _____

City: _____

State: _____

Phone: _____

Fax: _____

Email: _____

Price Sheet Summary

The Tulsa Fire Department intends to purchase the same Pumper type fire apparat on or about the following time frames:

Current date 3 Engine Companies

Fall 2018 3 Engine Companies
Fall 2019 3 Engine Companies
Fall 2020 0 Engine Companies
Fall 2021 5 Engine Companies

Total of 14 in five years

Please present a Fee Schedule for each year's services:

For comparative purposes, please provide pricing in the following formats for 5 year totals:

Direct from Dealer/Manufacturer	$_____
Through the State of Oklahoma Cooperative Agreement	$_____
Houston Galveston Area Council (HGAC)	$_____
Other cooperative agreement as suggested by the Bidder	$_____

Company Name: _____ Date: _____

Signature: _____

Name Printed: _____

Title: _____

It is anticipated that the City of Tulsa will enter into a contract with the selected Respondent for an initial term ending one (1) year from the date of its execution by the City's Mayor, with four (4) one-year renewals available at the option of the City. Contracts entered into by the City of Tulsa generally include, but are not limited to, the following terms:

1. **Renewals.** Contractor understands and acknowledges that any future contracts or renewals are neither automatic nor implied by this Agreement. The continuing purchase by City of the Services set forth in this Agreement is subject to City's needs and to City's annual appropriation of sufficient funds in City's fiscal year (July 1st to June 30th) in which such Services are purchased. In the event City does not appropriate or budget sufficient funds to perform this Agreement, this Agreement shall be null and void without further action by City.

2. **No Indemnification or Arbitration by City.** Contractor understands and acknowledges that City is a municipal corporation that is funded by its taxpayers to operate for the benefit of its citizens. Accordingly, and pursuant to Oklahoma law, City shall not indemnify nor hold Contractor harmless for loss, damage, expense or liability arising from or related to this Agreement, including any attorneys' fees and costs. In addition, Contractor shall not limit its liability to City for actual loss or direct damages for any claim based on a breach of this Agreement and the documents incorporated herein. City reserves the right to pursue all legal and equitable remedies to which it may be entitled. City will not agree to binding arbitration of any disputes.

3. **Intellectual Property Indemnification by Contractor.** Contractor agrees to indemnify, defend, and save harmless City and its officers, employees and agents from all suits and actions of every nature brought against them due to the use of patented, trademarked or copyright-protected appliances, products, materials or processes provided by Contractor hereunder. Contractor shall pay all royalties and charges incident to such patents, trademarks or copyrights.

4. **General Liability.** Contractor shall hold City harmless from any loss, damage or claims arising from or related to the performance of the Agreement herein. Contractor must exercise all reasonable and customary precaution to prevent any harm or loss to all persons and property related to this Agreement.

5. **Liens.** Pursuant to City's Charter (Art. XII, §5), no lien of any kind shall exist against any property of City. Contractor agrees to indemnify and hold the City harmless from all claims, demands, causes of action or suits of whatever nature arising out of the services, labor, and material furnished by Contractor or Contractor's subcontractors under the scope of this Agreement.

6. **No Confidentiality.** Contractor understands and acknowledges that City is subject to the Oklahoma Open Records Act (51 O.S. §24A.1 *et seq.*) and therefore cannot assure the confidentiality of contract terms or other information provided by Contractor pursuant to this Agreement that would be inconsistent with City's compliance with its statutory requirements there under.

7. **Compliance with Laws.** Contractor shall be responsible for complying with all applicable federal, state and local laws. Contractor is responsible for any costs of such compliance. Contractor shall take the necessary actions to ensure its operations in performance of this contract and its employment practices are in compliance with the requirements of the Americans with Disabilities Act. Contractor certifies that it and all of its subcontractors to be used in the performance of this agreement are in compliance with 25 O.S. Sec. 1313 and

participate in the Status Verification System. The Status Verification System is defined in 25 O.S. Sec. 1313 and includes, but is not limited to, the free Employee Verification Program (E-Verify) available at www.dhs.gov/E-Verify.

8. **Right to Audit.** The parties agree that books, records, documents, accounting procedures, practices, price lists or any other items related to the Services provided hereunder are subject to inspection, examination, and copying by City or its designees. Contractor shall retain all records related to this Agreement for the duration of the contract term and a period of three years following completion and/or termination of the contract. If an audit, litigation or other action involving such records begins before the end of the three year period, the records shall be maintained for three years from the date that all issues arising out of the action are resolved or until the end of the three year retention period, whichever is later.

9. **Governing Law and Venue.** This Agreement is executed in and shall be governed by and construed in accordance with the laws of the State of Oklahoma without regard to its choice of law principles, which shall be the forum for any lawsuits arising under this Agreement or incident thereto. The parties stipulate that venue is proper in a court of competent jurisdiction in Tulsa County, Oklahoma and each party waives any objection to such venue.

10. **No Waiver.** A waiver of any breach of any provision of this Agreement shall not constitute or operate as a waiver of any other provision, nor shall any failure to enforce any provision hereof operate as a waiver of the enforcement of such provision or any other provision.

11. **Entire Agreement/No Assignment.** This Agreement and any documents incorporated herein constitute the entire agreement of the parties and supersede any and all prior agreements, oral or otherwise, relating to the subject matter of this Agreement. This Agreement may only be modified or amended in writing and must be signed by both parties. Notwithstanding anything to the contrary herein, the City does not agree to the terms of any future agreements, revisions or modifications that may be required under this Agreement unless such terms, revisions or modifications have been reduced to writing and signed by both parties. Contractor may not assign this Agreement or use subcontractors to provide the Goods and/or Services without City's prior written consent. Contractor shall not be entitled to any claim for extras of any kind or nature.

12. **Equal Employment Opportunity**. Contractor shall comply with all applicable laws regarding equal employment opportunity and nondiscrimination.

13. **Annual Price Adjustment.** The prices bid for any Goods and/or Services shall not increase during the initial term of the contract. However, if you anticipate that you will not be able to maintain firm prices for any renewal period, a change in price **will be considered** if the following conditions are met:

    a) You must limit any increase to **one** of the following(<u>indicate your **choice***</u>):

        1. the change in the Consumer Price Index from BLS Table 1(web link below) from the prior year, as measured by the change in the CPI-U between the most recent month available and that same month in the prior year _____ (place an "X" here if this is your choice)

        2. a fixed percentage you specify _____%

    b) You must notify City, in writing, no later than 90 days before the initial contract period ends, or any renewal period ends, of your intent to exercise the price choice in your bid. **Failure to so notify City will result in City denying any price increases.** In no event can the proposed price change exceed that possible under the choice in your bid. Your notice can be sent by certified mail, fax or email.

Notes: ***** - Any price increase you choose will be considered in the evaluation of your bid. If you choose the CPI-U, the annual increase used for evaluation will be assumed to equal the change in the CPI-U for the prior year, as described above.

CPI Web Link: http://www.bls.gov/news.release/cpi.t01.htm

The undersigned agrees to the inclusion of the above provisions, among others, in any contract with the City of Tulsa.

Company Name: _____ Date: _____

Signature: _____

Name Printed: _____

Title: _____