

# PROPOSAL FOR FURNISHING FIRE APPARATUS

September 12, 2016

Pinellas County Administration  
315 Court Street  
Clearwater, Florida 33756

The undersigned is prepared to manufacture for you, upon an order being placed by you, for final acceptance by Pierce Manufacturing, Inc., at its home office in Appleton, Wisconsin, the apparatus and equipment herein named and for the following prices:

One (1) Pierce Enforcer Encore Rescue Florida Sheriffs Assn. Spec. #14 with options as specified in the attached documents.	\$ 304,984.00
Priced in accordance with Florida Sheriffs Contract #FSA16-VEF12.0	
Options Selected per "Proposal Option List #638"	128,887.00
Option list discount per FSA contract	(8,377.00)
Additional dealer and manufacturer discount	(10,851.00)
Additional discount for 100% prepayment due at time of order	(23,782.00)
(Total less prepayment would be \$414,643)	
Total \$	390,861.00

Said apparatus and equipment are to be built and shipped in accordance with the specifications hereto attached, delays due to strikes, war, or intentional conflict, failures to obtain chassis, materials, or other causes beyond our control not preventing, within about 14 months after receipt of this order and the acceptance thereof at our office at Appleton, Wisconsin, and to be delivered to you at Clearwater, Florida.

The specifications herein contained shall form a part of the final contract, and are subject to changes desired by the purchaser, provided such alterations are interlined prior to the acceptance by the company of the order to purchase, and provided such alterations do not materially affect the cost of the construction of the apparatus.

The proposal for fire apparatus conforms with all Federal Department of Transportation (DOT) rules and regulations in effect at the time of bid, and with all National Fire Protection Association (NFPA) Guidelines for Automotive Fire Apparatus as published at the time of bid, except as modified by customer specifications. Any increased costs incurred by first party because of future changes in or additions to said DOT or NFPA standards will be passed along to the customers as an addition to the price set forth above.

Unless accepted within 45 days from date, the right is reserved to withdraw this proposition.

Pierce Manufacturing, Inc.

By:   
AUTHORIZED SALES REPRESENTATIVE  
Dustin Bouwer



PERFORM. LIKE NO OTHER.



# Proposal Option List

3/9/2016

**Customer:** Florida Sheriffs Association **Bid Number:** 566  
**Representative** Abraham, Stacey **Job Number:**  
**Organization:** Ten-8 Fire Equipment, Inc **Number of Units:** 1  
**Requirements Manager:** **Bid Date:** 03-23-2016  
**Description:** Spec # 14 Med. Duty Rescue Aluminum ( Enforcer\_ **Stock Number:**  
**Body:** ENCORE, Rescue, Aluminum **Price Level:** 35 (Current: 35)  
**Chassis:** Enforcer Chassis

Line	Option	Type	Option Description	Qty
1	0010012		No Boiler Plates requested	1
2	0661794		Single Source Compliance	1
3	0584456		Manufacture Location: Appleton, Wisconsin	1
4	0584452		RFP Location: Appleton, Wisconsin	1
5	0588609		Vehicle Destination, US	1
6	0610784		Comply NFPA 1901 Changes Effective Jan 1, 2016, With Exceptions	1
7	0533352		Special Services (Rescue) Fire Apparatus	1
8	0588614		Vehicle Certification, Rescue	1
9	0681285		Agency, Apparatus Certification, Rescue, U.L.	1
10	0535579		Not Required, Unit of Measure, (no pump, no tank)	1
11	0529326		Bid Bond, 10%, Pierce Built Chassis	1

12	0540326	Performance Bond, Not Requested	1
13	0000007	Approval Drawing	1
14	0002928	Electrical Diagrams	1
15	0649754	Enforcer Chassis	1
16	0000110	Wheelbase	1
		Wheelbase - 146.13 "	
17	0000070	GVW Rating	1
		GVW rating - 42,000 lbs.	
18	0649713	Frame Rails, 10.25" x 3.50" x .375", Saber FR/Enf	1
19	0020018	Frame Liner Not Req'd	1
20	0635815	Axle, Front, Dana, D-2000F, 18,000 lb Saber FR/Enforcer	1
21	0637879	Suspension, Front, Standens, Taper Leaf, 18,000 lb, Saber FR/Enforcer	1
22	0000321	Shock Absorbers on Front Axle, Saber/Enforcer	1
23	0000322	Oil Seals, Front Axle	1
24	0011637	Tires, Front, Goodyear, G291, 315/80R22.50, 20 ply	1
25	0001655	Wheels, Front, 22.50" x 9.00", Steel, Hub Pilot, 315/80R Tire	1
26	0690933	Axle, Rear, Dana S23-170, 24,000 lb, Saber/Enforcer	1
27	0544252	Top Speed of Vehicle, 67 MPH	1
28	0565379	Suspen, Rear, Single Slipper Spring, 24,000 lb, Saber/Enforcer	1
29	0000485	Oil Seals, Rear Axle	1
30	0587216	Tires, Rear, Goodyear, G622 RSD, 12R22.50, 16 ply, Single	1
31	0693627	Wheels, Rear, 22.50" x 8.25", Steel, Hub Pilot, Single	1

32	0568081	Tire Balancing, Counteract Beads	1
33	0620570	Tire Pressure Monitoring, RealWheels, AirSecure, Valve Cap, Single Axle	1
		Qty, Tire Pressure Ind - 6	
34	0002045	Mud Flaps, w/logo front & rear	1
35	0602473	Chocks, Wheel, Special Services, Provided by Fire Department, NFPA 2016	1
36	0544690	Mounting Brackets, Chocks, Provided by Fire Department	1
37	0010671	ABS/ATC Wabco Brake System, Single Rear Axle	1
38	0690932	Brakes, Bendix, ADB22X, 17" Disc, Front	1
39	0581433	Brakes, Bendix, Cam, Rear, 16.50 x 7.00"	1
40	0020784	Air Compressor, Brake, Cummins/Wabco 18.7 CFM	1
41	0644232	Brake Reservoirs, 4,272 Cubic Inch Minimum Capacity, Saber FR/Enforcer	1
42	0644228	Air Dryer, Wabco System Saver 1200 IWT, Saber FR/Enforcer	1
43	0000790	Brake Lines, Nylon	1
44	0000854	Air Inlet, w/Disconnect Coupling	1
		Location, Air Coupling(s) - a) DS Step Well	
		Qty, Air Coupling (s) - 1	
45	0610827	Engine, Cummins ISL9, 350 hp, 1000 lb-ft, W/OBD, EPA 2016, Saber FR/Enforcer	1
46	0001244	High Idle w/Electronic Engine, Custom	1
47	0683055	Engine Brake, Cummins Turbo Brake (VGT), Brake Activated	1
48	0644227	Clutch, Fan, Air Actuated, Saber FR/Enforcer	1
49	0640477	Air Intake, Metal Screen, Saber FR/Enforcer	1

50	0597542	Exhaust System, 4", 2010 ISL9/ISC 8.3 Engine, Horizontal, Officer Side	1
51	0648346	Radiator, Saber FR/Enforcer	1
52	0001090	Cooling Hoses, Rubber	1
53	0021126	Fuel Tank, 50 Gallon, Left Side Fill	1
54	0001129	Lines, Fuel	1
55	0595087	DEF Tank, 4.5 Gallon, DS Fill, Forward of Rear Axle	1
Door, Material & Finish, DEF Tank - Polished Stainless			
56	0552793	Not Required, Fuel Priming Pump	1
57	0552712	Not Required, Shutoff Valve, Fuel Line	1
58	0699437	Cooler, Chassis Fuel, Not Req'd.	1
59	0642572	Trans, Allison 5th Gen, 3000 EVS P, w/Prognostics, Imp/Vel/DCF/SFR/Enf	1
60	0625329	Transmission, Shifter, 5-Spd, Push Button, 3000 EVS	1
61	0684459	Transmission Oil Cooler, Modine, External	1
62	0001370	Driveline, Spicer 1710	1
63	0635294	Steering, Single Gear, w/tilt, Pump w/ Cooler, Saber FR/Enforcer	1
64	0509229	Steering Wheel, 2 Spoke	1
65	0559647	Pierce Logo on Horn Button	1
66	0634291	Bumper, Non-Extended, Alum-Clad, Saber FR/Enforcer	1
67	0002270	Tow Hooks, Chrome	1
68	0625652	Cab, Enforcer, 6000	1
69	0647919	Engine Tunnel, ISL, Saber FR/Enforcer	1
70	0633594	Rear Wall, Interior, Adjustable Seating	1

71	0632103	Rear Wall, Exterior, Cab, Saber FR/Enforcer	1
		Material, Exterior Rear Wall - Painted	
72	0644201	Cab Lift, Elec/Hyd, Saber FR/Enforcer	1
73	0695930	Grille, Bright Finished, Front of Cab, Dash CF/Enforcer	1
74	0647932	Not Required, Trim, S/S Band, Across Cab Face, AXT/Dash CF/Saber/Enforcer	1
75	0087357	Molding, Chrome on Side of Cab	1
76	0521669	Mirrors, Retractable, West Coast Style, Htd/Rmt, w/Htd/Rmt Convex	1
77	0648171	Door, Half-Height, Saber FR/Enforcer 4-Door Cab, Level Roof	1
78	0655543	Door Panel, Brushed Stainless Steel, Saber/Enforcer 4-Door Cab	1
79	0528958	Not Required, Controls, Electric Window, AXT, Quantum, Saber, Enforcer, Dash CF	1
80	0638310	Steps, 4-Door Cab, Saber FR/Enforcer	1
		Step Well Material - Painted	
81	0634786	Lights, Cab and Crew Cab Access Steps, P25, LED w/Bezel, 1 Light Per Step 6lts	1
82	0032142	No Fender Crowns, Saber/Enf	1
83	0637984	Window, Side of C/C, Fixed, Saber FR/Enforcer	1
84	0637322	Cab Interior, Vinyl Headliner, Saber FR/Enforcer	1
		Color, Cab Interior Vinyl/Fabric - a) Silver/Gray	
		Engine Tunnel Cover - Painted	
85	0012430	Cab Interior, paint color	1
		Color, Cab Interior Paint - i) fire smoke gray	
86	0052100	Floor, Rubber Padded, Cab & Crew Cab, Saber/Enforcer	1
87	0631994	Heater/Defroster, w/Combination Unit on Engine Tunnel, Saber	1

	FR/Enforcer	
88 0632619	Air Conditioning/Heater, Engine Tunnel, Saber FR/Enforcer	1
89 0639675	Sun Visor, Smoked Lexan, AXT, Dash CF, Imp/Vel, Saber FR/Enforcer	1
	Sun Visor Retention - No Retention	
90 0634328	Grab Handles, Driver and Officer Door Posts, Saber FR/Enforcer	1
91 0002526	Light, Engine Compt, All Custom Chassis	1
92 0631830	Fluid Check Access, Saber FR/Enforcer, Arrow XT	1
93 0583039	Not Required, Side Roll and Frontal Impact Protection	1
94 0622620	Seating Capacity, 3 Seats	1
95 0636959	Seat, Driver, 911, Knee Action, Air Ride, High Back, Saber FR/Enforcer	1
96 0636949	Seat, Officer, 911, Fixed, High Back, Saber FR/Enforcer	1
97 0620420	Radio Compartment, Below Non-Air Ride Seat, Saber FR/Enforcer	1
98 0102788	Not Required, Seat, Rear Facing C/C, DS Outboard	1
99 0102783	Not Required, Seat, Rr Facing C/C, Center	1
100 0102790	Not Required, Seat, Rr Facing C/C, PS Outboard	1
101 0108189	Not Required, Seat, Forward Facing C/C, DS Outboard	1
102 0103319	Not Required, Seat, Forward Facing C/C, Center	1
103 0632877	Seat, Forward Facing C/C, PS Outboard, Flip Up Cushion, Saber FR/Enforcer	1
104 0566653	Upholstery, Seats In Cab, Turnout Tuff	1
	Color, Cab Interior Vinyl/Fabric - c) Black	
105 0511471	No SCBA Brackets Required In Cab Seats, Imp/Vel, AXT 2010, Qtm 2010, Dash CF	1
106 0636545	Seat Belt, Single Retractor, Saber FR/Enforcer	1

Seat Belt Color - Red		
107 0602464	Helmet Storage, Provided by Fire Department, NFPA 2016	1
108 0647647	Lights, Dome, FRP Dual LED 4 Lts	1
	Color, Dome Lt - Red & White	
	Color, Dome Lt Bzl - Black	
	Control, Dome Lt White - Door Switches and Lens Switch	
	Control, Dome Lt Color - Lens Switch	
109 0602637	Portable Hand Light, Provided by Fire Dept, Pumper NFPA 2016 Classification	1
110 0644187	Cab Instruments, Black Gauges, Black Bezels, Saber FR/Enforcer	1
	Emergency Switching - E-Master Only	
111 0002544	Air Restriction Indicator - Pierce Chassis	1
112 0543848	Light, Do Not Move Apparatus, Whelen 5SR00FRR LED	1
	Alarm, Do Not Move Truck - Steady Alarm	
113 0637359	Not Required, Door Open Indicator w/Do Not Move Truck Light, Enf/Saber FR	1
114 0632738	Switching, Cab Instrument Lower Console & Overhead, Rocker, Enforcer	1
115 0644179	Wiper Control, 2-Speed with Intermittent, Saber FR/Enforcer	1
116 0610240	Vehicle Data Recorder w/Seat Belt Monitor	1
117 0624241	Electrical Power/Signal Protection & Control, Enforcer	1
118 0624256	Electrical System, Enforcer Hard Wired	1
119 0079166	Batteries, (4) Exide Grp 31, 950 CCA each, Threaded Stud	1
120 0008621	Battery System, Single Start, All Custom Chassis	1



121	0002698	Battery Compartment, Saber/Enforcer	1
122	0036234	Receptacle, Battery Charging, Cab Step Area, Driver's Side	1
123	0012778	No Pick Required, Battery Charger Location	1
124	0530960	Not Required, Remote Battery Charger Indicator	1
125	0690974	Alternator, 275 amp, Delco Remy 40SI	1
126	0644176	Load Manager, Integrated In Electrical System, Saber FR/Enforcer	1
127	0648596	Headlights, Rectangular Halogen, AXT/Dash CF/Saber/Enforcer	1
128	0648426	Light, Directional, Whelen 60A00TAR LED Arrow, Common Bzl, Above Headlts,Sab/Enf	1
129	0620054	Light, Directional/Marker, Intermediate, Weldon 9186-8580-29 LED 2lts	1
130	0647802	Lights, Clearance/Marker/ID, Front, P25 LED 5 Lts, Saber FR/Enforcer	1
131	0647899	Lights, Directional/Marker, Cab Front Side, Weldon 9186-8580-29 LED, Sab/Enf	1
132	0627282	Lights, Clearance/Marker/ID, Rear, FRP LED Bar & P25 LED 4Lts	1
133	0564683	Lights, Tail, Whelen M6BTT* Red LED Stop/Tail & M6T* Amber LED Dir Arw For Hsg	1
		Color, Lens - Colored	
134	0561471	Lights, Backup, Whelen M6BUW, LED, For Tail Lt Housing	1
135	0664481	Bracket, License Plate & Light, P25 LED	1
136	0589905	Alarm, Back-up Warning, PRECO 1040	1
137	0666455	Lights, Perimeter Cab, Amdor AY-9500-020 LED 4Dr	1
138	0616293	Not Required, Lights Perimeter Pump House, No Pump	1
139	0645995	Lights, Perimeter Body, Amdor AY-9500-020 LED 2lts, Rear Step	1
		Control, Perimeter Lts - Parking Brake Applied	
140	0556339	Lights, Step, P25 LED, Encore Rescue, Perm Lts	1

141	0004961	Not Required, Work Lights, Alt. Rear Lights, HDR/Encore, No Hose Bed	1
142	0645639	Lights, Rear Scene, Whelen, PELCC LED, 45 Deg Flange  Location, lights - each side rear of body up high  Control, Rear Scene Lts - Cab Switch Panel DS and Park Brake	1
143	0559733	Buzzer, Two-way, Cab to Body, NOT REQUIRED	1
144	0023456	ENCORE, Rescue, Aluminum	1
145	0045953	16' Length, Alum, 42.74.62	1
146	0692731	Doors, Gortite, Roll-up, Side Compartments  Qty, Door Accessory - 06  Color,Gortite,Roll-upDoor - Satin finish  Latch, Gortite, Roll-up - Non-locking Liftbar	6
147	0041838	16' Length, Roll Doors, Alum, 42.74.62  Paint, Color - per customer preference	1
148	0036024	Left Forward Compt, 42", Alum	1
149	0036039	Left Over Wheel Compt, 74", Alum	1
150	0036041	Left Rear Compt, 62", Alum	1
151	0036043	Right Forward Compt, 42", Alum	1
152	0036055	Right Over Wheel Compt, 74", Alum	1
153	0036057	Right Rear Compt, 62", Alum	1
154	0503436	Not Req'd, Telephone Network, Command Interior	1
155	0503432	Audio/Video Network Not Provided	1
156	0043253	(A)Compt, Rear, Full Size Rear Access, Roll Up Door	1

157 0043178	Divider, Compt, Vertical Transverse	1
	Location - forward compartment to divide the compartment into two equal transverse areas	
	Qty, - 1	
158 0045068	Bumper, Rear Non-Walk-In 13.00" D x 90.00" W	1
159 0053336	Not Required, Water Tank	1
160 0023410	Not Required, Overflow	1
161 0028107	Not Required, Foam Cell Modification	1
162 0553729	Not Required, Restraint, Water Tank, Heavy Duty	1
163 0690023	Wall, Rear, Smooth Aluminum	1
164 0023535	Tow Hooks, ENCORE	1
165 0689545	Lights, Compt, Pierce LED, Single Light Strip, NFPA 2009 Minimum	7
	Location - all compartments	
	Qty, - 07	
166 0004016	Rub Rail, Aluminum Extruded, Side of Body	1
167 0039041	Not Required, Fender Crowns, Rear	1
168 0519848	Not Required, Hose, Hard Suction, No Pump	1
169 0044229	No Extension Ladder Req'd	1
170 0074231	No Roof Ladder Req'd	1
171 0074248	Not Required, Folding Ladder	1
172 0540739	Not Required, Rack, Equipment Storage, Rear Compt	1
173 0014381	Not Required, Rear Step (No rear door)	1
174 0045867	Not Required, Pump	1

175	0012216	No Packing Req'd	1
176	0012690	Transmission, Pump - Not Req'd	1
177	0669703	Pumping Mode, Not Required	1
178	0024484	Not Required, Pump Shift	1
179	0046295	Transmission Lock-up, Not Req'd, NO PUMP	1
180	0046296	Not Required, Auxiliary Cooling System, NO PUMP	1
181	0046283	Not Required, Transfer Valve, NO PUMP	1
182	0024513	Not Required, Intake Relief Valve	1
183	0046403	No Relief Valve Req'd, No Pump	1
184	0012336	No Pump Primer Req'd	1
185	0012816	Manuals, Pump Not Req'd	1
186	0090789	Not Required, Plumbing, No Pump	1
187	0046371	Not Required, No Plumbing or Foam System	1
188	0014625	No Main Inlet Required	1
189	0089389	No Valves, (No Pump)	1
190	0055600	Not Required, Auxiliary Inlet, Left Side	1
191	0029147	Not Required, Inlet, Right Side	1
192	0074685	Not Required, Inlet Installation	1
193	0064700	Not Required, Inlet Control	1
194	0681723	No Bleeder Valve, No Pump	1
195	0681730	Not Required, Tank to Pump, No Pump	1
196	0074900	Not Required, Tank Fill	1
197	0551181	Not Required, Outlet, Left Side, Rescue	1

198	0092570	Not Required, Outlets, Left Side Additional	1
199	0021143	Not Required, Outlet, Right Side	1
200	0092571	Not Required, Outlets, Right Side Additional	1
201	0545326	Not Required, Outlet, Large Diameter, No Pump	1
202	0092572	Not Required, Outlet, Front	1
203	0551179	Not Required, Discharge Caps	1
204	0089391	Valve, Bleeder - None Req'd, (No Pump)	1
205	0055095	Not Required, Elbow, Left Side Outlets, 2.50"	1
206	0021134	Not Required, Elbow, Right Side Outlets	1
207	0089394	Not Required, Outlet Control, No Pump	1
208	0519936	Not Required, 1.50" Crosslays, Rescue	1
209	0029260	Not Required, Speedlays	1
210	0500535	Not Required, Hose Restraint, Crosslay/Speedlay	1
211	0046372	Not Required, Foam System, Pump, or Plumbing	1
212	0012126	Not Required, CAF Compressor	1
213	0552517	Not Required, Refill, Foam Tank	1
214	0042573	Not Required, Foam System Demonstration	1
215	0045465	Not Required, Foam Tanks	1
216	0091110	Not Required, Foam Tank Drain	1
217	0091079	Not Required, Foam Tank #2	1
218	0091112	Not Required, Foam Tank Drain	1
219	0518339	Not Required, Pump House, Rescue	1
220	0000261	Not Required, Pump Panel Layout	1

221	0030701	Not Required, Material, Pump Panels, No Panel	1
222	0046495	Not Required, Pump Access, No Pump	1
223	0092531	Not Required, Pump House Structure	1
224	0002624	Not Required, No Chassis Engine Gauges @ Pump Panel	1
225	0046400	Throttle, Engine Not Req'd, No Pump / Skid Pump	1
226	0046378	Not Required, Gauges, Vac/Pressure, No Pump	1
227	0046375	Not Required, Gauges, No Pump	1
228	0035650	Not Required, Water Level Gauge	1
229	0006774	Not Required, Foam Level Gauge	1
230	0046280	Not Required, Light Shield, No Pump	1
231	0508022	Air Horns, (2) Hadley, 6" Round, Below Bumper	1
232	0606835	Location, Air Horns, Bumper, Each Side, Outside Frame, Outboard (Pos #1 & #7)	1
233	0036062	Control, Air Horn, Horn Ring, PS Lanyard	1
234	0525667	Siren, Whelen 295SLSA1, 100 or 200 Watt	1
235	0510206	Location, Elect Siren, Recessed Overhead In Console	1
		Location, Elec Siren - Overhead, DS Inside Sw Pnl	
236	0076156	Control, Elec Siren, Head Only	1
237	0199862	Speaker, Whelen SA31I01H	1
		Qty, Speakers - 1	
		Connection, Speaker - siren head	
238	0548348	Location, Below the Front Bumper	1
		Location 7 - center	

239 0679781	Lightbar, Whelen, Justice, 56" LED, 4-R, 4-RC LED, Clear Lens	1
240 0076796	Lights, Front Zone, Whelen 60*02F*R LED, In Common Bezel  Color,WhIn Sup600 LED - a) rd/rd	1
241 0524874	Lights, Side Zone Lower, Whelen LIN3 Super LED, 2pr  Location, lights rear - over rear wheels  Location, Lights Frt Side - g)each side of cab  Color, Lt, Rear Fender - r)red	1
242 0530165	Lights, Rear Zone Lower, Whelen LIN3 Super LED	1
243 0541116	Lights, Rear/Side Up Zone, Whelen M6* LED, Colored Lens 4lts  Color, Lt, Side Rer Up DS - Side Rear Upper Red  Color, Lt, Side Rer Up PS - Side Rear Upper Red  Color, Lt, Rer Up DS - r) DS Rear Upper Red  Color, Lt, Rer Up PS - r) PS Upper Rear Red	1
244 0006551	Not Required, Lights, Rear Upper Zone Blocking	1
245 0519934	Not Required, Brand, Hydraulic Tool System	1
246 0649753	Not Required, PTO Driven Hydraulic Tool System	1
247 0007150	Bag of Nuts and Bolts  Qty, Bag Nuts and Bolts - 1	1
248 0602524	NFPA Required Loose Equipment, Special Services, NFPA 2016,Provided by Fire Dept	1
249 0519879	Not Required, Soft Suction, 1906 Truck, Portable Pump Application	1
250 0602533	Extinguisher, Dry Chemical, Special Services, NFPA 2016, Provided by Fire Dept	1
251 0602351	Extinguisher, 2.5 Gal. Press Water, Special Service, NFPA 2016,Prov	1

	by Fire Dept	
252 0559573	Paint, Single Color, Custom	1
	Paint Color, Predefined - to be determined by customer	
253 0646897	Paint Chassis Frame Assy, E-Coat, Standard	1
	Paint Color, Frame Assembly, Predefined - Black	
254 0693798	Paint, Front Wheels	1
	Paint, Wheels - to match cab and body paint	
255 0693793	Paint, Rear Wheels, Single Axle	1
	Paint, Wheels - to match cab and body paint	
256 0087992	Compartment, Unpainted, Natural Finish, ENCORE	1
257 0544111	Reflective Band, 10"	1
	Color, Reflect Band - A - a) white	
258 0007356	Reflective across Cab Face	1
259 0536955	Stripe, Chevron, Rear, Diamond Grade, Rescue	1
	Color, Rear Chevron DG - fluorescent yellow	
260 0065687	Stripe, Reflective, Cab Doors Interior	1
	Color, Reflective - a) white	
261 0027286	Not Required, Lettering Specs	1
262 0007472	[Lettering not Requested]	1
263 0529225	Manuals, Two (2) CD, Fire Apparatus Parts, Custom Chassis	1
264 0543577	Manuals, One (1) Chassis Service & (1) CD, Custom	1
265 0531638	Manual, Two (2) CD, Chassis Operation, Custom	1



266 0030008	Warranty, Basic, 1 Year, Apparatus, WA0008	1
267 0595239	(No Pick Required)	1
268 0696698	Warranty, Engine, Cummins, 5 Year, WA0181	1
269 0684952	Warranty, Steering Gear, TRW Ross TAS, 1 Year WA0202	1
270 0596017	Warranty, Frame, 50 Year, Custom Chassis, WA0013	1
271 0610471	Warranty, Axle, Eaton/Dana, 5 Year/100,000 Mile, Parts and Labor	1
272 0610485	Warranty, Axle, Eaton/Dana, 5 Year/100,000 Mile, Parts and Labor	1
273 0652758	Warranty, ABS Brake System, 3 Year, Meritor Wabco, WA0232	1
274 0019914	Warranty, Structure, 10 Year, Custom Cab, WA0012	1
275 0595813	Warranty, Paint, 10 Year, Cab, Pro-Rate, WA0055	1
276 0647720	Warranty, Pierce LED Strip Lights, WA0203	1
277 0046369	Warranty, 5-year EVS Transmission, Standard Custom, WA0187	1
278 0685945	Warranty, Transmission Cooler, WA0216	1
279 0033401	Not Required, Tank Warranty	1
280 0596022	Warranty, Structure, 10 Year, Encore Rescue, WA0016	1
281 0693127	Warranty, Gortite, Roll-up Door, 6 Year, WA0190	1
282 0012599	Warranty, Pump, Not Required	1
283 0046370	Not Required, Warranty, No Plumbing	1
284 0641372	Warranty, Foam System, Not Available	1
285 0595820	Warranty, Paint, 10 Year, Body, Pro-Rate, WA0057	1
286 0593921	Not Required, Warranty, No Lettering	1
287 0683627	Certification, Vehicle Stability, CD0089	1
288 0610736	Certification, Engine Installation, Saber FR/Enf, ISL9, 2016, CD0128/CD0136	1

289 0686786	Certification, Power Steering, CD0098	1
290 0631980	Certification, Cab Integrity, Saber FR/Enforcer, CD0130	1
291 0631973	Certification, Cab Door Durability, Saber FR/Enforcer, CD0137	1
292 0631978	Certification, Windshield Wiper Durability, Saber FR/Enforcer, CD0132	1
293 0556828	Certification, Electric Window, Not Available	1
294 0631977	Certification, Seat Belt Anchors and Mounting, Saber FR/Enforcer, CD0134	1
295 0674479	Certification, Not Available, Cab Air Conditioning Performance	1
296 0545073	Amp Draw Report, NFPA Current Edition	1
297 0002758	Amp Draw, NFPA/ULC Radio Allowance	1
298 0000030	ENCORE	1
299 0000012	PIERCE CHASSIS	1
300 0004713	ENGINE, OTHER	1
301 0046395	EVS 3000 Series TRANSMISSION	1
302 0020037	NO PUMP	1
303 0020013	NO WATER TANK	1
304 0028047	NO FOAM SYSTEM	1
305 0046282	Not Required, Control Panel, No Pump	1
306 0020007	AKRON VALVES	1
307 0020015	ABS SYSTEM	1
308 0658751	Manufacturing Attribute	1

## **FSA SPEC# 14 MEDIUM DUTY RESCUE ENFORCER BID 566**

### **SINGLE SOURCE MANUFACTURER**

Pierce Manufacturing, Inc. provides an integrated approach to the design and manufacture of our products that delivers superior apparatus and a dedicated support team. From our facilities, the chassis, cab weldment, cab, pumphouse (including the sheet metal enclosure, valve controls, piping and operators panel) and body will be entirely designed, tested, and hand assembled to the customer's exact specifications. The electrical system either hardwired or multiplexed, will be both designed and integrated by Pierce Manufacturing. The warranties relative to these major components (excluding component warranties such as engine, transmission, axles, pump, etc.) will be provided by Pierce as a single source manufacturer. Pierce's single source solution adds value by providing a fully engineered product that offers durability, reliability, maintainability, performance, and a high level of quality.

Your apparatus will be manufactured in Appleton, Wisconsin.

### **NFPA 2016 STANDARDS**

This unit will comply with the NFPA standards effective January 1, 2016, except for fire department directed exceptions. These exceptions will be set forth in the Statement of Exceptions.

Certification of slip resistance of all stepping, standing and walking surfaces will be supplied with delivery of the apparatus.

A plate that is highly visible to the driver while seated will be provided. This plate will show the overall height, length, and gross vehicle weight rating.

The manufacturer will have programs in place for training, proficiency testing and performance for any staff involved with certifications.

An official of the company will designate, in writing, who is qualified to witness and certify test results.

### **NFPA COMPLIANCY**

Apparatus proposed by the bidder will meet the applicable requirements of the National Fire Protection Association (NFPA) as stated in current edition at time of contract execution. Fire department's specifications that differ from NFPA specifications will be indicated in the proposal as "non-NFPA".

### **VEHICLE INSPECTION PROGRAM CERTIFICATION**

To assure the vehicle is built to current NFPA standards, the apparatus, in its entirety, will be third-party, audit-certified through Underwriters Laboratory (UL) that it is built and complies to all applicable standards in the current edition of NFPA 1901. The certification will include: all design, production,

operational, and performance testing of not only the apparatus, but those components that are installed on the apparatus.

A placard will be affixed in the driver's side area stating the third party agency, the date, the standard and the certificate number of the whole vehicle audit.

### **GENERATOR TEST**

If the unit has a generator, the generator will be tested, approved, and certified by Underwriters Laboratories at the manufacturer's expense. The test results will be provided to the Fire Department at the time of delivery.

### **BREATHING AIR TEST**

If the unit has breathing air, Pierce Manufacturing will draw an air sample from the air system and certify that the air quality meets the requirements of NFPA 1989, *Standard on Breathing Air Quality for Fire and Emergency Services Respiratory Protection*.

### **BID BOND**

A bid bond as security for the bid in the form of a 10% bid bond will be provided with the proposal. This bid bond will be issued by a Surety Company who is listed on the U.S. Treasury Departments list of acceptable sureties as published in Department Circular 570. The bid bond will be issued by an authorized representative of the Surety Company and will be accompanied by a certified power of attorney dated on or before the date of bid. The bid bond will include language which assures that the bidder/principal will give a bond or bonds, as may be specified in the bidding or contract documents, with good and sufficient surety for the faithful performance of the contract, including the Basic One (1) Year Limited Warranty, and for the prompt payment of labor and material furnished in the prosecution of the contract.

Notwithstanding any document or assertion to the contrary, any surety bond related to the sale of a vehicle will apply only to the Basic One (1) Year Limited Warranty for such vehicle. Any surety bond related to the sale of a vehicle will not apply to any other warranties that are included within this bid (OEM or otherwise) or to the warranties (if any) of any third party of any part, component, attachment or accessory that is incorporated into or attached to the vehicle. In the event of any contradiction or inconsistency between this provision and any other document or assertion, this provision will prevail.

### **PERFORMANCE BOND NOT REQUESTED**

A performance bond will not be included. If requested at a later date, one will be provided to you for an additional cost and the following will apply:

The successful bidder will furnish a Performance and Payment bond (Bond) equal to 100 percent of the total contract amount within 30 days of the notice of award. Such Bond will be in a form acceptable to the Owner and issued by a surety company included within the Department of Treasury's Listing of Approved Sureties (Department Circular 570) with a minimum A.M. Best Financial Strength Rating of

A and Size Category of XV. In the event of a bond issued by a surety of a lesser Size Category, a minimum Financial Strength rating of A+ is required.

Bidder and Bidder's surety agree that the Bond issued hereunder, whether expressly stated or not, also includes the surety's guarantee of the vehicle manufacturer's Bumper to Bumper warranty period included within this proposal. Owner agrees that the penal amount of this bond will be simultaneously amended to 25 percent of the total contract amount upon satisfactory acceptance and delivery of the vehicle(s) included herein. Notwithstanding anything contained within this contract to the contrary, the surety's liability for any warranties of any type will not exceed three (3) years from the date of such satisfactory acceptance and delivery, or the actual Bumper to Bumper warranty period, whichever is shorter.

### **APPROVAL DRAWING**

A drawing of the proposed apparatus will be prepared and provided to the purchaser for approval before construction begins. The Pierce sales representative will also be provided with a copy of the same drawing. The finalized and approved drawing will become part of the contract documents. This drawing will indicate the chassis make and model, location of the lights, siren, horns, compartments, major components, etc.

A "revised" approval drawing of the apparatus will be prepared and submitted by Pierce to the purchaser showing any changes made to the approval drawing.

### **ELECTRICAL WIRING DIAGRAMS**

Two (2) electrical wiring diagrams, prepared for the model of chassis and body, will be provided.

### **ENFORCER CHASSIS**

The Pierce Enforcer™ is the custom chassis developed exclusively for the fire service. Chassis provided will be a new, tilt-type custom fire apparatus. The chassis will be manufactured in the apparatus body builder's facility eliminating any split responsibility. The chassis will be designed and manufactured for heavy-duty service, with adequate strength, capacity for the intended load to be sustained, and the type of service required. The chassis will be the manufacturer's first line tilt cab.

### **WHEELBASE**

The wheelbase of the vehicle will be 146.13 ".

### **GVW RATING**

The gross vehicle weight rating will be 42,000 lbs..

### **FRAME**

The chassis frame will be built with two (2) steel channels bolted to five (5) cross members or more, depending on other options of the apparatus. The side rails will be heat-treated steel measuring 10.25" x 3.50" x .375".

Each rail will have a section modulus of 16.00 cubic inches, yield strength of 120,000 psi, and a resisting bending moment (rbm) of 1,921,069 inch-pounds.

### **FRONT AXLE**

The front axle will be a reverse "I" beam type with inclined king pins. It will be a Dana axle, Model D-2000F, with a rated capacity of 18,000 lb.

### **FRONT SUSPENSION**

The front springs will be a Standens, three (3)-leaf, taper leaf design, 54.00" long x 4.00" wide, with a ground rating of 18,000 lb.

The two (2) top leaves will wrap the forward spring hanger pin. The top leaf will also wrap the rear spring hanger pin. Both the front and rear eyes will be Berlin style wraps that will place the eyes in the horizontal plane within the main leaf. This will reduce bending stress from acceleration and braking.

A steel encased rubber bushing will be used in the spring eye. The steel encased rubber bushing will be maintenance free and require no lubrication.

### **SHOCK ABSORBERS**

To provide a smoother ride, the front axle will be furnished with heavy-duty telescoping shock absorbers.

### **FRONT OIL SEALS**

Oil seals with viewing window will be provided on the front axle.

### **FRONT TIRES**

Front tires will be Goodyear® 315/80R22.50 radials, 20 ply G291 tread, rated for 18,180 lb maximum axle load and 68 mph maximum speed.

The tires will be mounted on 22.50" x 9.00" steel disc type wheels with a ten (10) stud, 11.25" bolt circle.

### **REAR AXLE**

The rear axle will be a Dana, Model S23-170, with a capacity of 24,000 lb.

### **TOP SPEED OF VEHICLE**

A rear axle ratio will be furnished to allow the vehicle to reach a top speed of 67 MPH.

### **REAR SUSPENSION**

The rear suspension will be Standens, semi-elliptical, 3.00" wide x 53.00" long, 12-leaf pack with a ground rating of 24,000 lb. The spring hangers will be castings.

The two (2) top leaves will wrap the forward spring hanger pin, and the rear of the spring will be a slipper style end that will ride in a rear slipper hanger. To reduce bending stress due to acceleration and braking, the front eye will be a berlin eye that will place the front spring pin in the horizontal plane within the main leaf.

A steel encased rubber bushing will be used in the spring eye. The steel encased rubber bushing will be maintenance free and require no lubrication.

### **REAR OIL SEALS**

Oil seals will be provided on the rear axle(s).

### **REAR TIRES**

Rear tires will be four (4) Goodyear® 12R22.50 radials, 16 ply all season G622 RSD tread, rated for 27,120 lb maximum axle load and 75 mph maximum speed.

The tires will be mounted on 22.50" x 8.25" steel disc type wheels with a ten (10)-stud, 11.25" bolt circle.

### **TIRE BALANCE**

All tires will be balanced with Counteract balancing beads. The beads will be inserted into the tire and eliminate the need for wheel weights.

### **TIRE PRESSURE MANAGEMENT**

There will be a RealWheels LED AirSecure™ tire alert pressure management system provided, that will monitor each tire's pressure. A sensor will be provided on the valve stem of each tire for a total of six (6) tires.

The sensor will calibrate to the tire pressure when installed on the valve stem for pressures between 10 and 200 psi. The sensor will activate an integral battery operated LED when the pressure of that tire drops 5 to 8 psi.

Removing the cap from the sensor will indicate the functionality of the sensor and battery. If the sensor and battery are in working condition, the LED will immediately start to flash.

### **MUD FLAPS**

Mud flaps with a Pierce logo will be installed behind the front and rear wheels.

### **WHEEL CHOCKS PROVIDED BY FIRE DEPARTMENT**

NFPA 901, 2016 edition, section 10.9.3 requires two (2) or more wheel chocks mounted in readily accessible locations, that together will hold the apparatus, when loaded to its GVWR or GCWR, on a hard surface with a 20 percent grade with the transmission in neutral and the parking brake released.

The wheel chocks are not on the apparatus as manufactured. The fire department will provide and install these wheel chocks.

### **WHEEL CHOCK BRACKETS, PROVIDED BY FIRE DEPARTMENT**

The wheel chock brackets are not on the apparatus as manufactured. The fire department will provide and install the wheel chock brackets.

### **ANTI-LOCK BRAKE SYSTEM**

The vehicle will be equipped with a Wabco 4S4M, anti-lock braking system. The ABS will provide a four (4) channel anti-lock braking control on both the front and rear wheels. A digitally controlled system that utilizes microprocessor technology will control the anti-lock braking system. Each wheel will be monitored by the system. When any particular wheel begins to lockup, a signal will be sent to the control unit. This control unit then will reduce the braking of that wheel for a fraction of a second and then reapply the brake. This anti-lock brake system will eliminate the lockup of any wheel thus helping to prevent the apparatus from skidding out of control.

### **AUTOMATIC TRACTION CONTROL**

An anti-slip feature will be included with the ABS. The Automatic Traction Control will be used for traction in poor road and weather conditions. The Automatic Traction Control will act as an electronic differential lock that will not allow a driving wheel to spin, thereby supplying traction at all times. The ABS electronic control unit (ECU) will work with the engine ECU, sharing information concerning wheel slip. Engine ECU will use information to control engine speed, allowing only as much throttle application as required for the available traction, regardless of how much the driver is asking for. A "mud/snow" switch will be provided on the instrument panel. Activation of the switch will allow additional tire slip to let the truck climb out and get on top of deep snow or mud.

### **BRAKES**

The service brake system will be full air type by Bendix®.

Front brakes will be Model ADB22X™, disc type with automatic pad wear adjustment and 17.00" rotors for improved stopping distance.

The rear brakes will be Bendix®, Model ES1657D, 16.50" x 7.00" cam operated with automatic slack adjusters.

### **BRAKE SYSTEM AIR COMPRESSOR**

The air compressor will be a Cummins/WABCO with 18.7 cubic feet per minute output.

### **BRAKE SYSTEM**

The brake system will include:

- Bendix® brake treadle valve with vinyl covered foot surface
- Heated automatic moisture ejector on air dryer
- Total air system minimum capacity of 4,272 cubic inches
- Two (2) air pressure gauges with a red warning light and an audible alarm, that activates when air pressure falls below 60 psi



- Spring set parking brake system
- Parking brake operated by a push-pull style control valve
- A parking "brake on" indicator light on instrument panel
- Park brake relay/inversion and anti-compounding valve, in conjunction with a double check valve system, with an automatic spring brake application at 40 psi
- A pressure protection valve to prevent all air operated accessories from drawing air from the air system when the system pressure drops below 80 psi (550 kPa)

The air tank will be primed and painted to meet a minimum 750 hour salt spray test.

To reduce the effects of corrosion, the air tank will be mounted with stainless steel brackets.

**BRAKE SYSTEM AIR DRYER**

The air dryer will be a WABCO System Saver 1200 IWT, with internal wet tank, spin-on coalescing filter cartridge and 100 watt heater.

**BRAKE LINES**

Color-coded nylon brake lines will be provided. The lines will be wrapped in a heat protective loom in the chassis areas that are subject to excessive heat.

**AIR INLET**

One (1) air inlet with male coupling will be provided. It will allow station air to be supplied to the apparatus brake system through a shoreline hose. The inlet will be located in the driver side lower step well of cab. A check valve will be provided to prevent reverse flow of air. The inlet will discharge into the "wet" tank of the brake system. A mating female coupling will also be provided with the loose equipment.

**ENGINE**

The chassis will be powered by an electronically controlled engine as described below:

Make:	Cummins
Model:	ISL9
Power:	350 hp at 2000 rpm
Torque:	1000 lb-ft at 1400 rpm
Governed Speed:	2200 rpm
Emissions Level:	EPA 2016
Fuel:	Diesel
Cylinders:	Six (6)
Displacement:	543 cubic inches (8.9L)
Starter:	Delco Remy 39MT™
Fuel Filters:	Spin-on style primary filter with water separator and water-in-fuel sensor. Secondary

spin-on style filter.
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The engine will include On-board diagnostics (OBD), which provides self diagnostic and reporting. The system will give the owner or repair technician access to state of health information for various vehicle sub systems. The system will monitor vehicle systems, engine and after treatment. The system will illuminate a malfunction indicator light on the dash console if a problem is detected.

### **HIGH IDLE**

A high idle switch will be provided, inside the cab, on the instrument panel, that will automatically maintain a preset engine rpm. A switch will be installed, at the cab instrument panel, for activation/deactivation.

The high idle will be operational only when the parking brake is on and the truck transmission is in neutral. A green indicator light will be provided, adjacent to the switch. The light will illuminate when the above conditions are met. The light will be labeled "OK to Engage High Idle."

### **ENGINE BRAKE**

The variable geometry turbo (VGT) provided on the Cummins ISC8.3 or ISL9 engine will be programmed to function as an engine brake. The brake will be controlled by a switch on the instrument panel located within easy reach of the driver. The brake will activate when the switch is on and service brakes are activated.

The engine brake will be installed in such a manner that when the engine brake is slowing the vehicle, the brake lights are activated.

The ABS system will automatically disengage the auxiliary braking device, when required.

### **CLUTCH FAN**

A fan clutch will be provided. The fan clutch will be automatic when the pump transmission is in "Road" position, and constantly engaged when in "Pump" position.

### **ENGINE AIR INTAKE**

The engine air intake will be located above the engine cooling package. It will draw fresh air from the front of the apparatus through the radiator grille.

A stainless steel metal screen will be installed at the inlet of the air intake system that will meet NFPA 1901 requirements.

The air cleaner and stainless steel screen will be easily accessible by tilting the cab.

### **EXHAUST SYSTEM**

The exhaust system will be stainless steel from the turbo to the inlet of the selective catalytic reduction (SCR) device, and will be 4.00" in diameter. The exhaust system will include a diesel particulate filter (DPF) and an SCR device to meet current EPA standards. An insulation wrap will be provided on all

exhaust pipes between the turbo and DPF to minimize the transfer of heat to the cab. The exhaust will terminate horizontally ahead of the passenger side rear wheels. A tailpipe diffuser will be provided to reduce the temperature of the exhaust as it exits. Heat deflector shields will be provided to isolate chassis and body components from the heat of the tailpipe diffuser.

### **RADIATOR**

The radiator and the complete cooling system will meet or exceed NFPA and engine manufacturer cooling system standards.

For maximum corrosion resistance and cooling performance, the entire radiator core will be constructed using long life aluminum alloy. The radiator core will consist of aluminum fins, having a serpentine design, brazed to aluminum tubes.

The radiator core will have a minimum front area of 1060 square inches.

Supply and return tanks will be made of heavy duty glass-reinforced nylon that will be crimped onto the core assembly using header tabs and a compression gasket to complete the radiator core assembly. There will be a full steel frame around the inserts to enhance cooling system durability and reliability.

The radiator will be compatible with commercial antifreeze solutions.

The radiator assembly will be isolated from the chassis frame rails with rubber isolators to prevent the development of leaks caused by twisting or straining when the apparatus operates over uneven terrain.

The radiator will include a de-aeration/expansion tank. For visual coolant level inspection, the radiator will have a built-in sight glass. The radiator will be equipped with a 15 psi pressure relief cap.

A drain port will be located at the lowest point of the cooling system and/or the bottom of the radiator to permit complete flushing of the coolant from the system.

Shields or baffles will be provided to prevent recirculation of hot air to the inlet side of the radiator.

### **COOLANT LINES**

Gates, or Goodyear, rubber hose will be used for all engine coolant lines installed by Pierce Manufacturing.

Hose clamps will be stainless steel constant torque type to prevent coolant leakage. They will expand and contract according to coolant system temperature thereby keeping a constant clamping pressure on the hose.

### **FUEL TANK**

A 50 gallon fuel tank will be provided and mounted at the rear of the chassis. The tank will be constructed of 12-gauge, hot rolled steel. It will be equipped with swash partitions and a vent. To eliminate the effects of corrosion, the fuel tank will be mounted with stainless steel straps.

A .75" drain plug will be located in a low point of the tank for drainage.

A fill inlet will be located on the left hand side of the body and is covered with a hinged, spring loaded, stainless steel door that is marked "Ultra Low Sulfur - Diesel Fuel Only".

A .50" diameter vent will be installed from tank top to just below fuel fill inlet.

The fuel tank will meet all FHWA 393.67 requirements including a fill capacity of 95 percent of tank volume.

All fuel lines will be provided as recommended by the engine manufacturer.

### **DIESEL EXHAUST FLUID TANK**

A 4.5 gallon diesel exhaust fluid (DEF) tank will be provided and mounted in the driver's side body forward of the rear axle.

A 0.50" drain plug will be provided in a low point of the tank for drainage.

A fill inlet will be located on the driver's side of the body and be covered with a hinged, spring loaded, polished stainless steel door that is marked "Diesel Exhaust Fluid Only".

The tank will meet the engine manufacturers requirement for 10 percent expansion space in the event of tank freezing.

The tank will include an integrated heater unit that utilizes engine coolant to thaw the DEF in the event of freezing.

### **TRANSMISSION**

An Allison 5th generation, Model EVS 3000P, electronic torque converting automatic transmission will be provided.

The transmission will be equipped with prognostics to monitor oil life, filter life, and transmission health. A wrench icon on the shift selector's digital display will indicate when service is due.

Two (2) PTO openings will be located on both sides of converter housing (positions 4 o'clock and 8 o'clock) as viewed from the rear.

A transmission temperature gauge with red light and audible alarm will be installed on the cab dash.

### **TRANSMISSION SHIFTER**

A five (5)-speed push button shift module will be mounted to right of driver on console. Shift position indicator will be indirectly lit for after dark operation.

The transmission ratio will be:

1st	3.49 to 1.00
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2nd	1.86 to 1.00
3rd	1.41 to 1.00
4th	1.00 to 1.00
5th	0.75 to 1.00
R	5.03 to 1.00

### **TRANSMISSION COOLER**

A Modine plate and fin transmission oil cooler will be provided using engine coolant to control the transmission oil temperature.

### **DRIVELINE**

Drivelines will be a heavy-duty metal tube and be equipped with Spicer® 1710 universal joints.

The shafts will be dynamically balanced before installation.

A splined slip joint will be provided in each driveshaft, slip joint will be coated with Glidecoat® or equivalent.

### **STEERING**

Steering gear will be provided with integral heavy-duty power steering. For reduced system temperatures, the power steering will incorporate an air to oil cooler and Vickers® V20NF hydraulic pump with integral pressure and flow control. All power steering lines will have wire braded lines with crimped fittings.

A tilt and telescopic steering column will be provided to improve fit for a broader range of driver configurations.

### **STEERING WHEEL**

The steering wheel will be 18.00" in diameter, have tilting and telescoping capabilities, and a 2-spoke design.

### **BUMPER**

A one (1) piece, full-width, polished stainless steel clad aluminum bumper will be attached to the front of the chassis frame.

A 9.00" formed steel channel will be mounted directly behind the bumper for additional strength.

### **GRAVEL PAN**

A gravel pan, constructed of bright aluminum treadplate, will be furnished between the bumper and cab face.

### **TOW HOOKS**

Two (2) chromed steel tow hooks will be installed under the bumper and attached to the front frame members. The tow hooks will be designed and positioned to allow up to a 6,000 lb straight horizontal

pull in line with the centerline of the vehicle. The tow hooks will not be used for lifting of the apparatus.

### CAB

The Enforcer cab will be designed specifically for the fire service and manufactured by the chassis builder.

The cab will be built by the apparatus manufacturer in a facility located on the manufacturer's premises.

For reasons of structural integrity and enhanced occupant protection, the cab will be a heavy duty design, constructed to the following minimal standards.

The cab will have 12 main vertical structural members located in the A-pillar (front cab corner posts), B-pillar (side center posts), C-pillar (rear corner posts), and rear wall areas. The A-pillar will be constructed of solid A356-T5 aluminum castings. The B-pillar and C-pillar will be constructed from 0.13" wall extrusions. The rear wall will be constructed of two (2) 2.00" x 2.00" outer aluminum extrusions and two (2) 2.00" x 1.00" inner aluminum extrusions. All main vertical structural members will run from the floor to 4.625" x 3.864" x 0.090" thick roof extrusions to provide a cage-like structure with the A-pillar and roof extrusions being welded into a 0.25" thick corner casting at each of the front corners of the roof assembly.

The front of the cab will be constructed of a 0.13" firewall plate, covered with a 0.090" front skin (for a total thickness of 0.22"), and reinforced with a full width x 0.50" thick cross-cab support located just below the windshield and fully welded to the engine tunnel. The cross-cab support will run the full width of the cab and weld to each A-pillar, the 0.13" firewall plate, and the front skin.

The cab floors will be constructed of 0.125" thick aluminum plate and reinforced at the firewall with an additional 0.25" thick cross-floor support providing a total thickness of 0.375" of structural material at the front floor area. The front floor area will also be supported with two (2) triangular 0.30" wall extrusions that also provides the mounting point for the cab lift. This tubing will run from the floor wireway of the cab to the engine tunnel side plates, creating the structure to support the forces created when lifting the cab.

The cab will be 96.00" wide (outside door skin to outside door skin) to maintain maximum maneuverability.

The cab will have an overall height (from the cab roof to the ground) of approximately 99.00". The overall height listed will be calculated based on a truck configuration with the lowest suspension weight rating, the smallest diameter tires for the suspension, no water weight, no loose equipment weight, and no personnel weight. Larger tires, wheels, and suspension will increase the overall height listed.

The floor to ceiling height inside the crew cab will be 54.50" in the center and outboard positions.

The crew cab floor will measure 36.00" from the rear wall to the back side of the rear facing seat risers.

The medium block engine tunnel, at the rearward highest point (knee level), will measure 51.50" to the rear wall. The big block engine tunnel will measure 41.50" to the rear wall.

The crew cab will be a totally enclosed design with the interior area completely open to improve visibility and verbal communication between the occupants.

The cab will be a full tilt cab style.

A 3-point cab mount system with rubber isolators will improve ride quality by isolating chassis vibrations from the cab.

### **CAB ROOF DRIP RAIL**

For enhanced protection from inclement weather, a drip rail will be furnished on the sides of the cab. The drip rail will be painted to match the cab roof, and bonded to the sides of the cab. The drip rail will extend the full length of the cab roof.

### **INTERIOR CAB INSULATION**

The cab will include 1.00" insulation in the ceiling, 1.50" insulation in the side walls, and 2.00" insulation in the rear wall to maximize acoustic absorption and thermal insulation.

### **FENDER LINERS**

Full circular inner fender liners in the wheel wells will be provided.

### **PANORAMIC WINDSHIELD**

A one (1)-piece safety glass windshield will be provided with over 2,775 square inches of clear viewing area. The windshield will be full width and will provide the occupants with a panoramic view. The windshield will consist of three (3) layers: outer light, middle safety laminate, and inner light. The outer light layer will provide superior chip resistance. The middle safety laminate layer will prevent the windshield glass pieces from detaching in the event of breakage. The inner light will provide yet another chip resistant layer. The cab windshield will be bonded to the aluminum windshield frame using a urethane adhesive. A custom frit pattern will be applied on the outside perimeter of the windshield for a finished automotive appearance.

### **WINDSHIELD WIPERS**

Three (3) electric windshield wipers with washer will be provided that meet FMVSS and SAE requirements.

The washer reservoir will be able to be filled without raising the cab.

### **ENGINE TUNNEL**

Engine hood side walls will be constructed of 0.375" aluminum. The top will be constructed of 0.125" aluminum and will be tapered at the top to allow for more driver and passenger elbow room.

The engine hood will be insulated for protection from heat and sound. The noise insulation keeps the dBA level within the limits stated in the current NFPA 1901 standards.

The engine tunnel will be no higher than 17.00" off the crew cab floor.

#### **INTERIOR CREW CAB REAR WALL ADJUSTABLE SEATING (PATENT PENDING)**

The interior rear wall of the crew cab will have mounting holes every 2.75" to allow for adjustability of the forward facing crew cab seating along the rear wall. Seats will be adjustable with use of simple hand tools allowing departments flexibility of their seating arrangement should their department needs change.

#### **CAB REAR WALL EXTERIOR COVERING**

The exterior surface of the rear wall of the cab will be painted job color .

#### **CAB LIFT**

A hydraulic cab lift system will be provided consisting of an electric powered hydraulic pump, dual lift cylinders, and necessary hoses and valves.

Lift controls will be located on the right side pump panel or front area of the body in a convenient location.

The cab will be capable of tilting 43 degrees to accommodate engine maintenance and removal.

The cab will be locked down by a 2-point normally closed spring loaded hook type latch that fully engages after the cab has been lowered. The system will be hydraulically actuated to release the normally closed locks when the cab lift control is in the raised position and cab lift system is under pressure. When the cab is completely lowered and system pressure has been relieved, the spring loaded latch mechanisms will return to the normally closed and locked position.

For increased safety, a redundant mechanical stay arm will be provided that must be manually put in place on the left side between the chassis and cab frame when the cab is in the raised position. This device will be manually stowed to its original position before the cab can be lowered.

#### **Cab Lift Interlock**

The cab lift system will be interlocked to the parking brake. The cab tilt mechanism will be active only when the parking brake is set and the ignition switch is in the on position. If the parking brake is released, the cab tilt mechanism will be disabled.

#### **GRILLE**

A bright finished aluminum mesh grille screen, inserted behind a bright finished grille surround, will be provided on the front center of the cab.

#### **SIDE OF CAB MOLDING**

Chrome molding will be provided on both sides of cab.



## **MIRRORS**

A Retraco, Model 613423, dual vision, motorized, west coast style mirror, with chrome finish, will be mounted on each side of the front cab door with spring loaded retractable arms. The flat glass and convex glass will be heated and adjustable with remote control within reach of the driver.

## **DOORS**

To enhance entry and egress to the cab, the forward cab door openings will be a minimum of 37.50" wide x 63.37" high. The crew cab doors will be located on the sides of the cab and will be constructed in the same manner as the forward cab doors. The crew cab door openings will be a minimum of 34.30" wide x 63.37" high.

The forward cab and crew cab doors will be constructed of extruded aluminum with a nominal material thickness of 0.093". The exterior door skins will be constructed from 0.090" aluminum.

A customized, vertical, pull-down type door handle will be provided on the exterior of each cab door. The exterior handle will be designed specifically for the fire service to prevent accidental activation, and will provide 4.00" wide x 2.00" deep hand clearance for ease of use with heavy gloved hands.

Each door will also be provided with an interior flush, open style paddle handle that will be readily operable from fore and aft positions, and be designed to prevent accidental activation. The interior handles will provide 4.00" wide x 1.25" deep hand clearance for ease of use with heavy gloved hands.

The cab doors will be provided with both interior (rotary knob) and exterior (keyed) locks exceeding FMVSS standards. The locks will be capable of activating when the doors are open or closed. The doors will remain locked if locks are activated when the doors are opened, then closed.

A full length, heavy duty, stainless steel, piano-type hinge with a 0.38" pin and 11 gauge leaf will be provided on all cab doors. There will be double automotive-type rubber seals around the perimeter of the door framing and door edges to ensure a weather-tight fit.

A chrome handle will be provided on the inside of each front cab door for ease of entry.

The bottom cab step at each cab door location will be located below the cab doors and will be exposed to the exterior of the cab.

## **DOOR PANELS**

The inner cab door panels will be constructed out of brushed stainless steel.

## **MANUAL CAB DOOR WINDOWS**

All cab entry doors will contain a conventional roll down window.

## **CAB STEPS**

The forward cab and crew cab access steps will be a full size two (2) step design to provide largest possible stepping surfaces for safe ingress and egress. The bottom steps will be designed with a grip pattern punched into bright aluminum treadplate material to provide support, slip resistance, and

drainage. The bottom steps will be a bolt-in design to minimize repair costs should they need to be replaced. The forward cab steps will be a minimum 25.00" wide, and the crew cab steps will be 21.65" wide with a 10.00" minimum depth. The inside cab steps will not exceed 16.50" in height. A slip-resistant handrail will be provided adjacent to each cab door opening to assist during cab ingress and egress.

The vertical surfaces of the step well will be painted.

### **STEP LIGHTS**

There shall be six (6) white LED step lights installed for cab and crew cab access steps.

- One (1) light for the driver's access steps.
- Two (2) lights for the driver's side crew cab access steps.
- Two (2) lights for the passenger's side crew cab access steps.
- One (1) light for the passenger's side access step.

In order to ensure exceptional illumination, each light shall provide a minimum of 25 foot-candles (fc) covering an entire 15" x 15" square placed ten (10) inches below the light and a minimum of 1.5 fc covering an entire 30" x 30" square at the same ten (10) inch distance below the light.

The lights shall be activated when the battery switch is on and the adjacent door is opened.

### **CREW CAB WINDOWS**

One (1) fixed window with tinted glass will be provided on each side of the cab, to the rear of the front cab door. The windows will be sized to enhance light penetration into the cab interior. The windows will measure 18.70" wide x 23.75" high.

### **CAB INTERIOR**

The cab interior will be constructed of primarily metal (painted aluminum) to withstand the severe duty cycles of the fire service.

The officer side dash will be a flat faced design to provide easy maintenance and will be constructed out of painted aluminum.

The instrument cluster will be surrounded with a high impact ABS plastic contoured to the same shape of the instrument cluster.

The engine tunnel will be painted aluminum to match the cab interior.

The headliner will be installed in both forward and rear cab sections. Headliner material will be vinyl. A sound barrier will be part of its composition. Material will be installed on aluminum sheet and securely fastened to interior cab ceiling.

Forward portion of cab headliner will permit easy access for service of electrical wiring or other maintenance needs.

All wiring will be placed in metal raceways.

### **CAB INTERIOR UPHOLSTERY**

The cab interior upholstery will be dark silver gray.

### **CAB INTERIOR PAINT**

A rich looking interior will be provided by painting all the metal surfaces inside the cab fire smoke gray, vinyl texture paint.

### **CAB FLOOR**

The cab and crew cab floor areas will be covered with Polydamp™ acoustical floor mat consisting of a black pyramid rubber facing and closed cell foam decoupler.

The top surface of the material has a series of raised pyramid shapes evenly spaced, which offer a superior grip surface. Additionally, the material has a 0.25" thick closed cell foam (no water absorption) which offers a sound dampening material for reducing sound levels.

### **CAB DEFROSTER**

To provide maximum defrost and heating performance, a 43,500 BTU heater-defroster unit with 350 CFM of air flow will be provided inside the cab. The defroster unit will be strategically located under the center forward portion of the vacuum formed instrument panel. For easy access, a removable vacuum formed cover will be installed over the defroster unit. The defroster will include an integral aluminum frame air filter, high performance dual scroll blowers, and ducts designed to provide maximum defrosting capabilities for the 1-piece windshield. The defroster ventilation will be built into the design of the cab dash instrument panel and will be easily removable for maintenance. The defroster will be capable of clearing 98 percent of the windshield and side glass when tested under conditions where the cab has been cold soaked at 0 degrees Fahrenheit for 10 hours, and a 2 ounce per square inch layer of frost/ice has been able to build up on the exterior windshield. The defroster system will meet or exceed SAE J382 requirements.

### **CAB/CREW CAB HEATER**

Two (2) auxiliary heaters with 276 CFM (each unit) of air flow will be provided inside the crew cab, one (1) in each outboard rear facing seat riser. The heaters will include high performance dual scroll blowers (one (1) for each unit). Outlets for the heaters will be located below each rear facing seat riser and below the fronts of the driver and passenger seats, for efficient airflow. An extruded aluminum plenum will be incorporated in the cab structure that will transfer heat to the forward cab seating positions. These heaters will work in conjunction with the heater/air conditioner combination unit.

The heater/defroster and crew cab heaters and combination unit will be controlled by a single integral electronic control panel. The heater control panel will allow the driver to control heat flow to the front and rear simultaneously. The control panel will include variable adjustment for temperature and fan control, and be conveniently located on the dash in clear view of the driver. The heat controls will control both the temperature and fan speed of the crew cab heaters and combination unit together. When

the control panel is switched to the AC mode the crew cab floor heater fans will not operate. The control panel will include highly visible, progressive LED indicators for both fan speed and temperature.

### **HEATER/AIR CONDITIONING**

A combination heater/air conditioning unit will be furnished inside the cab and crew cab, mounted on the engine tunnel.

A radiator mounted condenser will be installed.

The air conditioner refrigerant will be R-134A and will be installed by a certified technician.

The heater/air conditioner will be controlled by a single electronic control panel. For ease of operation, the control panel will include variable adjustment for temperature and fan control and be conveniently located on the dash in clear view of the driver.

### **SUN VISORS**

Two (2) smoked Lexan™ sun visors provided. The sun visors will be located above the windshield with one (1) mounted on each side of the cab.

There will be no retention bracket provided to help secure each sun visor in the stowed position.

### **GRAB HANDLES**

A black rubber covered grab handle will be mounted on the door post of the driver and officer's side cab door to assist in entering the cab. The grab handles will be securely mounted to the post area between the door and windshield.

### **ENGINE COMPARTMENT LIGHT**

An engine compartment light will be installed under the engine hood, of which the switch is an integral part. Light will have a .125" diameter hole in its lens to prevent moisture retention.

### **ACCESS TO ENGINE DIPSTICKS**

For access to the engine oil and transmission fluid dipsticks, there will be a door on the engine tunnel, inside the crew cab. The door will be on the rear wall of the engine tunnel, on the vertical surface.

The engine oil dipstick will allow for checking only. The transmission dipstick will allow for both checking and filling.

The door will have a rubber seal for thermal and acoustic insulation. One (1) flush latch will be provided on the access door.

### **SEATING CAPACITY**

The seating capacity in the cab will be three (3).

### **DRIVER SEAT**

A Seats Incorporated, 911, knee action air ride, high-back style seat will be provided in the cab for the driver.

### **OFFICER SEAT**

A Seats Incorporated, 911, fixed high back style seat will be provided in the cab for the officer.

### **RADIO COMPARTMENT**

A radio compartment will be provided under the officer's seat.

The inside compartment dimensions will be 16.00" wide x 7.50" high x 15.00" deep, with the back of the compartment angled up to match the cab structure.

A drop-down door with a chrome plated lift and turn latch will be provided for access.

The compartment will be constructed of smooth aluminum and painted to match the cab interior.

### **FORWARD FACING PASSENGER SIDE OUTBOARD SEAT**

There will be one (1) forward facing flip-up seat provided at the passenger side outboard position in the crew cab. The seat back will have an aluminum backing, covered with foam padded upholstery. The seat bottom will be constructed of a piece of plywood covered with foam rubber and upholstery. The bottom cushion will have its bottom covered with brushed stainless steel, for a pleasant appearance when the seat bottom is in the up position.

### **SEAT UPHOLSTERY**

All seat upholstery will be black Turnout Tuff material.

### **SEAT BELTS**

All seating positions will be furnished with 3-point shoulder type red seat belt. The seat belt will be furnished with a single automatic retractor. To provide quick, easy use for occupants wearing bunker gear, the female buckle and seat belt webbing length will meet or exceed the current edition of NFPA 1901 and CAN/ULC - S515 standards.

The belts will also include the ReadyReach D-loop assembly to the shoulder belt system. The ReadyReach feature adds an extender arm to the D-loop location placing the D-loop in a closer, easier to reach location.

To ensure safe operation, the seat will be equipped with seat belt sensors in the seat cushion and belt receptacle that will activate an alarm indicating a seat is occupied but not buckled.

### **HELMET STORAGE PROVIDED BY FIRE DEPARTMENT**

NFPA 1901, 2016 edition, section 14.1.7.4.1 requires a location for helmet storage be provided.

There is no helmet storage on the apparatus as manufactured. The fire department will provide a location for storage of helmets.

### **CAB DOME LIGHTS**

There will be four (4) dual LED dome lights with black bezels provided. Two (2) lights will be mounted above the inside shoulder of the driver and officer and two (2) lights will be installed and located, one (1) on each side of the crew cab.

The color of the LED's will be red and white.

The white LED's will be controlled by the door switches and the lens switch.

The color LED's will be controlled by the lens switch.

In order to ensure exceptional illumination, each white LED dome light will provide a minimum of 10.1 foot-candles (fc) covering an entire 20.00" x 20.00" square seating position when mounted 40.00" above the seat.

### **PORTABLE HAND LIGHTS, PROVIDED BY FIRE DEPARTMENT**

NFPA 1901, 2016 edition, section 5.9.4 requires two portable hand lights mounted in brackets fastened to the apparatus.

The hand lights are not on the apparatus as manufactured. The fire department will provide and mount these hand lights.

### **CAB INSTRUMENTATION**

The cab instrument panel will be a molded ABS panel and include gauges, telltale indicator lamps, control switches, alarms, and a diagnostic panel. The function of the instrument panel controls and switches will be identified by a label adjacent to each item. Actuation of the headlight switch will illuminate the labels in low light conditions. Telltale indicator lamps will not be illuminated unless necessary. The cab instruments and controls will be conveniently located within the forward cab section, forward of the driver. The gauge assembly and switch panels are designed to be removable for ease of service and low cost of ownership.

### **GAUGES**

The gauge panel will include the following ten (10) black faced gauges with black bezels to monitor vehicle performance:

- Voltmeter gauge (volts):
  - Low volts (11.8 VDC)
    - Amber telltale light on indicator light display with steady tone alarm
  - High volts (15.5 VDC)
    - Amber telltale light on indicator light display with steady tone alarm
- Engine Tachometer (RPM)

- Speedometer MPH (Major Scale), KM/H (Minor Scale)
- Fuel level gauge (Empty - Full in fractions):
  - Low fuel (1/8 full)
    - Amber indicator light in gauge dial with steady tone alarm
- Engine Oil pressure Gauge (PSI):
  - Low oil pressure to activate engine warning lights and alarms
    - Red indicator light in gauge dial with steady tone alarm
- Front Air Pressure Gauges (PSI):
  - Low air pressure to activate warning lights and alarm
    - Red indicator light in gauge dial with steady tone alarm
- Rear Air Pressure Gauges (PSI):
  - Low air pressure to activate warning lights and alarm
    - Red indicator light in gauge dial with steady tone alarm
- Transmission Oil Temperature Gauge (Fahrenheit):
  - High transmission oil temperature activates warning lights and alarm
    - Amber indicator light in gauge dial with steady tone alarm
- Engine Coolant Temperature Gauge (Fahrenheit):
  - High engine temperature activates an engine warning light and alarms
    - Red indicator light in gauge dial with steady tone alarm
- Diesel Exhaust Fluid Level Gauge (Empty - Full in fractions):
  - Low fluid (1/8 full)
    - Amber indicator light in gauge dial

### **INDICATOR LAMPS**

To promote safety, the following telltale indicator lamps will be located on the instrument panel in clear view of the driver. The indicator lamps will be "dead-front" design that is only visible when active. The colored indicator lights will have descriptive text or symbols.

The following amber telltale lamps will be present:

- Low coolant
- Trac cntl (traction control) (where applicable)
- Check engine
- Check trans (check transmission)
- Air rest (air restriction)
- DPF (engine diesel particulate filter regeneration)
- HET (engine high exhaust temperature) (where applicable)
- ABS (antilock brake system)
- MIL (engine emissions system malfunction indicator lamp) (where applicable)
- Regen inhibit (engine emissions regeneration inhibit) (where applicable)
- Side roll fault (where applicable)

- Front air bag fault (where applicable)
- Aux brake overheat (auxiliary brake overheat) (where applicable)
- The following red telltale lamps will be present:
  - Ladder rack down
  - Parking brake
  - Stop engine
- The following green telltale lamps will be present:
  - Left turn
  - Right turn
  - Battery on
  - Ignition
- Aux brake (auxiliary brake engaged) (where applicable)
- The following blue telltale lamps will be present:
  - High beam

### **ALARMS**

Audible steady tone warning alarm: A steady audible tone alarm will be provided whenever a warning condition is active.

### **INDICATOR LAMP AND ALARM PROVE-OUT**

A system will be provided which automatically tests telltale indicator lights and alarms located on the cab instrument panel. Telltale indicators and alarms will perform prove-out for 3 to 5 seconds when the ignition switch is moved to the on position with the battery switch on.

### **CONTROL SWITCHES**

For ease of use, the following controls will be provided immediately adjacent to the cab instrument panel within easy reach of the driver. All switches will have backlit labels for low light applications.

Headlight/Parking light switch: A three (3)-position maintained rocker switch will be provided. The first switch position will deactivate all parking and headlights. The second switch position will activate the parking lights. The third switch will activate the headlights.

Panel back lighting intensity control switch: A three (3)-position momentary rocker switch will be provided. Pressing the top half of the switch, "Panel Up" increases the panel back lighting intensity and pressing the bottom half of the switch, "Panel Down" decreases the panel back lighting intensity. Pressing the half or bottom half of the switch several times will allow back lighting intensity to be gradually varied from minimum to maximum intensity level for ease of use.

Ignition switch: A three (3)-position maintained/momentary rocker switch will be provided. The first switch position will turn off and deactivate vehicle ignition. The second switch position will activate vehicle ignition and will perform prove-out on the telltale indicators and alarms for 3 to 5 seconds after the switch is turned on. A green indicator lamp is activated with vehicle ignition. The third momentary



position will temporarily silence all active cab alarms. An alarm "chirp" may continue as long as alarm condition exists. Switching ignition to off position will terminate the alarm silence feature and reset function of cab alarm system.

Engine start switch: A two (2)-position momentary rocker switch will be provided. The first switch position is the default switch position. The second switch position will activate the vehicle's engine. The switch actuator is designed to prevent accidental activation.

Hazard switch will be provided on the instrument panel or on the steering column.

Heater and defroster controls.

Turn signal arm: A self-canceling turn signal with high beam headlight controls.

Windshield wiper control will have high, low, and intermittent modes.

Parking brake control: An air actuated push/pull park brake control.

Chassis horn control: Activation of the chassis horn control will be provided through the center of the steering wheel.

High idle engagement switch: A maintained rocker switch with integral indicator lamp will be provided. The switch will activate and deactivate the high idle function. The "OK To Engage High Idle" indicator lamp must be active for the high idle function to engage. A green indicator lamp integral to the high idle engagement switch will indicate when the high idle function is engaged.

"OK To Engage High Idle" indicator lamp: A green indicator light will be provided next to the high idle activation switch to indicate that the interlocks have been met to allow high idle engagement.

Emergency switching will be controlled by a single Emergency Master switch which controls all emergency warning lights including lightbars, cab warning lights, body warning lights and high beam flash..

An additional "Emergency Master" button will be provided on the lower left hand corner of the gauge panel to allow convenient control of the "Emergency Master" system from inside the driver's door when standing on the ground.

### **CUSTOM SWITCH PANELS**

The design of cab instrumentation will allow for emergency lighting and other switches to be placed within easy reach of the operator thus improving safety. There will be positions for up to four (4) switch panels in the lower instrument console and up to six (6) switch panels in the overhead visor console. All switches have backlit labels for low light conditions.

## **DIAGNOSTIC PANEL**

A diagnostic panel will be provided and accessible while standing on the ground. The panel will be located inside the driver's side door left of the steering column. The diagnostic panel will allow diagnostic tools such as computers to connect to various vehicle systems for improved troubleshooting providing a lower cost of ownership. Diagnostic switches will allow engine and ABS systems to provide blink codes should a problem exist.

The diagnostic panel will include the following:

- ENGINE/TRANSMISSION/ABS J1939 Diagnostic Port
- ABS Diagnostic Switch and Indicator - The switch and amber indicator will allow access to diagnostic mode and display of standard ABS system fault blink codes that may be generated by the ABS system
- ENG DIAG (Engine Diagnostic Indicator) - A red indicator will be provided that will illuminate in a "STOP ENGINE" condition. (A switch with will allow access to diagnostic mode and display of standard engine diagnostic blink codes.) (where applicable)
- DPF REGEN (Diesel Particulate Filter Regeneration Switch) (where applicable) will be provided to request regeneration of the engine emission system. An amber indicator will be provided on top of the switch that will illuminate in a "CHECK ENGINE" condition
- REGEN INHIBIT (Diesel Particulate Filter Regeneration Inhibit Switch) (where applicable) will be provided that will request that regeneration be temporarily prevented. A green indicator will be provided on top of the Regen Inhibit switch that will illuminate when the Regen Inhibit feature is active. Regen Inhibit will be disabled upon cycling of the ignition switch to the off state.

## **AIR RESTRICTION INDICATOR**

A high air restriction warning indicator light (electronic) will be provided.

## **"DO NOT MOVE APPARATUS" INDICATOR**

There will be a Whelen, Model 5SR00FRR, flashing red LED indicator light located in the driving compartment. The light will be illuminated automatically per the current NFPA requirements and labeled "Do Not Move Apparatus If Light Is On".

The same circuit that activates the Do Not Move Apparatus indicator will activate a steady tone alarm when the parking brake is released.

## **SWITCH PANELS**

The built-in switch panels will be located in the lower console or overhead console of the cab. Switches will be rocker type with an indicator light, of which is an integral part of the switch.

## **WIPER CONTROL**

Wiper control will consist of a two (2)-speed windshield wiper control with intermittent feature and windshield washer controls.

## **VEHICLE DATA RECORDER**

There will be a vehicle data recorder (VDR) capable of reading and storing vehicle information provided.

The information stored on the VDR can be downloaded through a USB port mounted in a convenient location determined by cab model. A USB cable can be used to connect the VDR to a laptop to retrieve required information. The program to download the information from the VDR will be available to download on-line.

The vehicle data recorder will be capable of recording the following data via hardwired and/or CAN inputs:

- Vehicle Speed - MPH
- Acceleration - MPH/sec
- Deceleration - MPH/sec
- Engine Speed - RPM
- Engine Throttle Position - % of Full Throttle
- ABS Event - On/Off
- Seat Occupied Status - Yes/No by Position
- Seat Belt Buckled Status - Yes/No by Position
- Master Optical Warning Device Switch - On/Off
- Time - 24 Hour Time
- Date - Year/Month/Day

## **Seat Belt Monitoring System**

A seat belt monitoring system (SBMS) will be provided. The SBMS will be capable of monitoring up to 10 seating positions indicating the status of each seat position per the following:

- Seat Occupied & Buckled = Green LED indicator illuminated
- Seat Occupied & Unbuckled = Red LED indicator with audible alarm
- No Occupant & Buckled = Red LED indicator with audible alarm
- No Occupant & Unbuckled = No indicator and no alarm

The SBMS will include an audible alarm that will warn that an unbuckled occupant condition exists and the parking brake is released, or the transmission is not in park.

## **ELECTRICAL POWER CONTROL SYSTEM**

A compartment will be provided in or under the cab to house the vehicle's electrical power and signal circuit protection and control components. The power and signal protection and control compartment will contain circuit protection devices and power control devices. Power and signal protection and control components will be protected against corrosion, excessive heat, excessive vibration, physical damage and water spray.

Serviceable components will be readily accessible.

Circuit protection devices, which conform to SAE standard, will be utilized to protect each circuit. All circuit protection devices will be sized to prevent wire and component damage when subjected to extreme current overload. General protection circuit breakers will be Type-I automatic reset (continuously resetting) and conform to SAE J553 or J258. When required, automotive type fuses conforming to SAE J554, J1284, J1888 or J2077 will be utilized to protect electronic equipment.

Power control relays and solenoids will have a direct current (dc) rating of 125 percent of the maximum current for which the circuit is protected.

Visual status indicators will be supplied to identify control safety interlocks and vehicle status. In addition to visual status indicators, audible alarms designed to provide early warning of problems before they become critical will be used.

### **VOLTAGE MONITOR SYSTEM**

A voltage monitor system will be provided to indicate the status of each battery system connected to the vehicle's electrical load. The monitor system will provide visual and audio warning when the system voltage is above or below optimum levels.

### **POWER AND GROUND STUDS**

Spare circuits will be provided in the primary distribution center for two-way radio equipment.

The spare circuits will consist of the following:

- One (1) 12-volt DC, 30 amp battery direct spare
- One (1) 12-volt DC ground and un-fused switched battery stud located in or adjacent to the power distribution center

### **EMI/RFI PROTECTION**

The electrical system proposed will include means to control undesired electromagnetic and radio frequency emissions. State of the art electrical system design and components will be used to ensure radiated and conducted EMI (electromagnetic interference) and RFI (radio frequency interference) emissions are suppressed at their source.

The apparatus proposed will have the ability to operate in the electromagnetic environment typically found in fire ground operations. The contractor will be able to demonstrate the EMI and RFI testing has been done on similar apparatus and certifies that the vehicle proposed meets SAE J551 requirements.

EMI/RFI susceptibility will be controlled by applying immune circuit designs, shielding, twisted pair wiring and filtering. The electrical system will be designed for full compatibility with low level control signals and high powered two-way radio communication systems. Harness and cable routing will be given careful attention to minimize the potential for conducting and radiated EMI-RFI susceptibility.

## **ELECTRICAL**

All 12-volt electrical equipment installed by Pierce Manufacturing will conform to modern automotive practices. All wiring will be high temperature crosslink type. Wiring will be run, in loom or conduit, where exposed and have grommets where wire passes through sheet metal. Automatic reset circuit breakers will be provided which conform to SAE Standards. Wiring will be color, function and number coded. Function and number codes will be continuously imprinted on all wiring harness conductors at 2.00" intervals. Exterior exposed wire connectors will be positive locking, and environmentally sealed to withstand elements such as temperature extremes, moisture and automotive fluids.

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

1. All holes made in the roof will be caulked with silicon. Large fender washers, liberally caulked, will be used when fastening equipment to the underside of the cab roof.
2. Any electrical component that is installed in an exposed area will be mounted in a manner that will not allow moisture to accumulate in it. Exposed area will be defined as any location outside of the cab or body.
3. Electrical components designed to be removed for maintenance will not be fastened with nuts and bolts. Metal screws will be used in mounting these devices. Also, a coil of wire will be provided behind the appliance to allow them to be pulled away from mounting area for inspection and service work.
4. Corrosion preventative compound will be applied to all terminal plugs located outside of the cab or body. All non-waterproof connections will have this compound in the plug to prevent corrosion and for easy separation (of the plug).
5. All lights that have their sockets in a weather exposed area will have corrosion preventative compound added to the socket terminal area.
6. All electrical terminals in exposed areas will have silicon (1890) applied completely over the metal portion of the terminal.

All lights and reflectors, required to comply with Federal Motor Vehicle Safety Standard #108, will be furnished. Rear identification lights will be recessed mounted for protection.

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

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

The results of the tests will be recorded and provided to the purchaser at time of delivery.

## **BATTERY SYSTEM**

There will be four (4) 12 volt Exide®, Model 31S950X3W, batteries that include the following features will be provided:

- 950 CCA, cold cranking amps
- 190 amp reserve capacity
- High cycle
- Group 31
- Rating of 3800 CCA at 0 degrees Fahrenheit
- 760 minutes of reserve capacity
- Threaded stainless steel studs

Each battery case will be a black polypropylene material with a vertically ribbed container for increased vibration resistance. The cover will be manifold vented with a central venting location to allow a 45 degree tilt capacity.

The inside of each battery will consist of a "maintenance free" grid construction with poly wrapped separators and a flooded epoxy bottom anchoring for maximum vibration resistance.

### **BATTERY SYSTEM**

There will be a single starting system with an ignition switch and starter button provided and located on the cab instrument panel.

### **MASTER BATTERY SWITCH**

There will be a master battery switch provided within the cab within easy reach of the driver to activate the battery system.

An indicator light will be provided on the instrument panel to notify the driver of the status of the battery system.

### **BATTERY COMPARTMENTS**

Batteries will be placed on non-corrosive mats and stored in well ventilated compartments located under the cab.

Heavy-duty, 2/0 gauge, color coded battery cables will be provided. Battery terminal connections will be coated with anti-corrosion compound.

Battery solenoid terminal connections will be encapsulated with semi-permanent rubberized compound.

### **JUMPER STUDS**

One (1) set of battery jumper studs with plastic color-coded covers will be included on the battery compartments.

### **BATTERY CHARGING RECEPTACLE**

The battery charging receptacle location will be near the driver's side cab step area.

## **ALTERNATOR**

A Delco Remy®, model 40SI, alternator will be provided. It will have a rated output current of 275 amps, as measured by SAE method J56. The alternator will feature an integral regulator and rectifier system that has been tested and qualified to an ambient temperature of 257 degrees Fahrenheit (125 degrees Celsius). The alternator will be connected to the power and ground distribution system with heavy-duty cables sized to carry the full rated alternator output.

## **ELECTRONIC LOAD MANAGEMENT**

An electronic load management (ELM) system that monitors the vehicles 12-volt electrical system, and automatically reduces the electrical load in the event of a low voltage condition and by doing so, ensures the integrity of the electrical system.

The ELM will monitor the vehicle's voltage while at the scene (parking brake applied). It will sequentially shut down individual electrical loads when the system voltage drops below a preset value. Two (2) separate electrical loads will be controlled by the load manager. The ELM will sequentially re-energize electrical loads as the system voltage recovers.

## **HEADLIGHTS**

There will be four (4) rectangular halogen lights mounted in the front quad style, chrome housings on each side of the cab grille:

- The outside light on each side will contain a halogen low and high beam module.
- The inside light on each side will contain a halogen high beam module only.

## **DIRECTIONAL LIGHTS**

There will be two (2) Whelen, Model 60A00TAR, amber LED populated arrow directional lights provided on the front of the cab, above the headlights. Each light will be housed in the same quad common bezel as the front warning light.

## **INTERMEDIATE LIGHT**

There will be two (2) Weldon, Model 9186-8580-29, amber LED turn signal marker lights furnished, one (1) each side, in the rear fender panel. The light will double as a turn signal and marker light.

## **CAB CLEARANCE/MARKER/ID LIGHTS**

There will be five (5) amber LED lights provided to indicate the presence and overall width of the vehicle in the following locations:

- Three (3) amber LED identification lights will be installed in the center of the cab above the windshield.
- Two (2) amber LED clearance lights will be installed, one (1) on each outboard side of the cab above the windshield.

### **FRONT CAB SIDE DIRECTIONAL/MARKER LIGHTS**

There will be two (2) Weldon, Model 9186-8580-29, amber LED lights installed front of the cab door, one (1) on each side of the cab.

The lights will activate as marker lights with the headlight switch and directional lights with the corresponding directional circuit.

### **REAR CLEARANCE/MARKER/ID LIGHTING**

There will be a three (3) LED light bar used as identification lights located at the rear of the apparatus per the following:

- As close as practical to the vertical centerline
- Centers spaced not less than 6.00" or more than 12.00" apart
- Red in color
- All at the same height

There will be two (2) LED lights installed at the rear of the apparatus used as clearance lights located at the rear of the apparatus per the following:

- To indicate the overall width of the vehicle
- One (1) each side of the vertical centerline
- As near the top as practical
- Red in color
- To be visible from the rear
- All at the same height

There will be two (2) LED lights installed on the side of the apparatus used as marker lights as close to the rear as practical per the following:

- To indicate the overall length of the vehicle
- One (1) each side of the vertical centerline
- As near the top as practical
- Red in color
- To be visible from the side
- All at the same height

There will be two (2) red reflectors located on the rear of the truck facing to the rear. One (1) each side, as far to the outside as practical, at a minimum of 15.00", but no more than 60.00", above the ground.

There will be two (2) red reflectors located on the side of the truck facing to the side. One (1) each side, as far to the rear as practical, at a minimum of 15.00", but no more than 60.00", above the ground.

Per FMVSS 108 and CMVSS 108 requirements.



## **REAR FMVSS LIGHTING**

The rear stop/tail and directional LED lighting will consist of the following:

- Two (2) Whelen®, Model M6BTT, red LED stop/tail lights
- Two (2) Whelen, Model M6T, amber LED arrow turn lights

The lights shall be provided with color lenses.

The lights will be mounted in a polished combination housing.

There will be two (2) Whelen Model M6BUW, LED backup lights provided in the tail light housing.

## **LICENSE PLATE BRACKET**

There will be one (1) license plate bracket mounted on the rear of the body.

A white LED light will illuminate the license plate. A polished stainless steel light shield will be provided over the light that will direct illumination downward, preventing white light to the rear.

## **BACK-UP ALARM**

A PRECO, Model 1040, solid-state electronic audible back-up alarm that actuates when the truck is shifted into reverse will be provided. The device will sound at 60 pulses per minute and automatically adjust its volume to maintain a minimum ten (10) dBA above surrounding environmental noise levels.

## **CAB PERIMETER SCENE LIGHTS**

There will be four (4) Amdor LumaBar H2O, Model AY-9500-020, 20.00" white LED strip lights provided, one (1) for each cab door.

These lights will be activated automatically when the battery switch is on and the exit doors are opened or by the same means as the body perimeter scene lights.

## **BODY PERIMETER SCENE LIGHTS**

There will be two (2) Amdor LumaBar H2O™, Model AY-9500-020, 20.00" 12 volt DC LED strip lights provided at the rear step area of the body, one (1) each side shining to the rear.

The perimeter scene lights will be activated when the parking brake is applied.

## **STEP LIGHTS**

Two (2) white LED, step lights will be provided. The step lights will be provided at the rear body, one (1) each side of the rear compartment.

In order to ensure exceptional illumination, each light will provide a minimum of 25 foot-candles (fc) covering an entire 15" x 15" square placed ten (10) inches below the light and a minimum of 1.5 fc covering an entire 30" x 30" square at the same ten (10) inch distance below the light.

The step lights will be activated by the same control as the perimeter lights.

All other steps on the apparatus will be illuminated per the current edition of NFPA 1901.

### **REAR SCENE LIGHTS**

There will be two (2) Whelen, Model PELCC, white 12 volt DC LED scene lights with 45 degree chrome housing installed at the rear of the apparatus, each side rear of body up high.

The lights will be controlled by a switch at the driver's side switch panel and when the parking brake is applied.

### **RESCUE BODY CONSTRUCTION**

The rescue body will consist of individual compartment modules, that are welded together to form the body. Welders that are certified to the standards of AWS will perform all welding on the modules and body assembly.

#### **Module Fabrication**

Compartment modules will be built in a fixture that will ensure correct tolerances. The design of the module will allow all welding to be performed in areas that are not visible after the body is assembled. All compartments will be supported on the top, sides and bottom. All modules will be designed to provide maximum storage space. Each module will have side walls that are not common with any other compartment. The compartment floors will be a sweep out design, with the floor higher than the compartment door frame.

#### **Body Assembly**

The modules will be coupled in a fixture, and welded together to form the body. The body will be built as a separate component prior to being mounted onto the substructure.

All primary, load bearing structures will be welded. All secondary, non load bearing body panels will be fastened to the primary structure with the use of an elastic adhesive.

#### **Body Panel Installation**

Body panels that are non load bearing will be bonded with an elastic adhesive. The use of an adhesive will reduce the possibility of corrosion, provide sound deadening and increase the torsional strength of the assembly over conventional methods of fastening. All surfaces that require bonding will be sanded or painted. A cleaner will be applied to all mating surfaces. An industrial adhesive will be applied and the panels will be installed on to the body framework. Documented installation procedures, approved by the adhesive manufacturer, will be followed to ensure a good bond.

### **RESCUE BODY CONSTRUCTION AND SUPPORT STRUCTURE**

The rescue body will be of all aluminum construction. The body will use .12" (3 mm) and .18" (5 mm) 5052 aluminum alloy with a tensile strength of 38,000 psi and yield strength of 31,000 psi. The structural support framing used will be 1.00" (25 mm) x 2.00" (51 mm), .12" (3 mm) wall thickness aluminum alloy tubing and 2.00" (51 mm) square, .12" (3 mm) wall thickness 6061 aluminum alloy

tubing. The body will be properly welded into a unitized construction. Proper reinforcing and supports will be utilized throughout all construction to ensure strength and rigidity.

#### Side Compartment Support

The substructure for the body will not be integral with the body but be a separate assembly.

An underslung steel angle grid will support the bottom of each lower compartment floor. The underslung support will be constructed of a minimum .50" (13 mm) x 2.50" (64 mm) x 2.50" (64 mm) steel angle vertical support. The horizontal members will be a minimum .38" (10 mm) x 2.00" (51 mm) x 3.00" (76 mm) and .38" (10 mm) x 2.50" (64 mm) x 3.50" (89 mm) steel angle. The compartment floors will be bolted to the underslung substructure. The support will transfer major stress to the chassis frame and not through the body.

The complete substructure will be washed, primed and finish painted before being bolted to the chassis frame. The substructure will be bolted to the chassis frame rails with grade eight (8) bolts.

A .75" x 3.00" rubber pad will be fastened to the substructure in all areas that contact the body. The rubber will serve as an isolator between the substructure and body. The rubber will also allow body flex without damage.

The body will be secured to the sub structure in a minimum of six (6) locations with .38" (10 mm) diameter bolts.

#### Rear Side Compartment Support

The chassis frame rails will be cut short behind the rear axle. An underslung steel compartment support will be assembled and bolted to the rear frame rails. The compartment support will be constructed as follows:

The lower frame member, on each side, will be a minimum of 3.00" (76 mm) x 6.00" (152 mm) x .38" (10 mm) steel tube. The length of the tube will be determined by the width of the rear compartment. The remainder of the compartment support assembly will consist of structural steel channel, tubing, and angles welded to the lower frame members.

The complete substructure will be washed, primed and finish painted before being attached to the chassis frame.

A .75" x 3.00" rubber pad will be fastened to the substructure in all areas that contact the body. The rubber will serve as an isolator between the substructure and body. The rubber will also allow body flex without damage.

The body will be secured to the sub structure in a minimum of four (4) locations with .38" (10 mm) diameter bolts.

### Compartment Loading

The 42.00" (1067 mm) compartment module, ahead of the rear wheels, will be capable of holding 1,000 pounds (454 kg) on each side of the truck (2,000 pounds 908 kg total). The 74.00" (1,880 mm) compartment module, over the rear wheels, will be capable of holding 1,000 pounds (454 kg) on each side of the truck (2,000 pounds 908 kg total). The 62.00" (1575 mm) compartment module, behind the rear wheels, will be capable of holding 1,400 pounds (454 kg) on each side of the truck (2,800 pounds 1,271 kg total). Strain gauge test documentation of the compartment loading capacities will be provided upon request.

### Roof Construction

The roof will be .12" (3 mm) 3003 bright aluminum alloy treadplate. The roof will be supported with 1.00" (25 mm) x 2.00" (51 mm) aluminum alloy tubing, .12" (3 mm) wall thickness and 2.00" (51 mm) square, .12" (3 mm) wall thickness 6061 aluminum alloy tubing welded in place approximately 16.00" (406 mm) on center. The roof perimeter will be covered with a 2.00" treadplate trim panel to provide a protective edge.

### Body Size

The overall length of the body will be 188.00" (4,775 mm). The height of the body will be 92.00" (2,337 mm). The total storage space available in the body will be 631 cubic feet (17.9 cubic meters).

### **ROLL-UP DOOR, SIDE COMPARTMENTS**

There will be six (6) compartment doors installed on the side compartments, double faced, aluminum construction, an anodized satin finish and manufactured by A&A Manufacturing (Gortite).

Lath sections will be an interlocking rib design and will be individually replaceable without complete disassembly of door.

Between each slat at the pivoting joint will be a PVC inner seal to prevent metal to metal contact and prevent dirt or moisture from entering the compartments. Seals will allow door to operate in extreme temperatures ranging from plus 180 to minus 40 degrees Fahrenheit. Side, top and bottom seals will be provided to resist ingress of dirt and weather and be made of Santoprene.

All hinges, barrel clips and end pieces will be nylon 66. All nylon components will withstand temperatures from plus 300 to minus 40 degrees Fahrenheit.

A polished stainless steel lift bar to be provided for each roll-up door. The lift bar will be located at the bottom of door and have latches on the outer extrusion of the doors frame. A ledge will be supplied over lift bar for additional area to aid in closing the door.

Door(s) will be constructed from an aluminum box section. The exterior surface of each slat will be flat. The interior surfaces will be concave to provide strength and prevent loose equipment from jamming the door from inside.

To conserve space in the compartment(s), the spring roller assembly will not exceed 3.00" in diameter.

The header for the roll-up door assembly will not exceed 4.00".

A heavy-duty magnetic switch will be used for control of open compartment door warning lights.

### **LEFT FORWARD COMPARTMENT**

Located behind the cab will be the first compartment. The compartment dimensions will be 42.00" wide x 85.75" high x 26.00" deep at the floor level. The area over the frame rails will be 42.00" wide x 63.75" high and will extend through to the right side of the body. The compartment clear door opening will be 39.50" wide x 69.00" high.

### **MOUNTING TRACKS**

Installed in all of the compartments on the vehicle will be mounting tracks for accessories such as trays and shelves.

### **LEFT OVER WHEEL COMPARTMENT**

Located above the rear wheels will be a compartment. The compartment dimensions will be 74.00" (1,880 mm) wide x 53.00" (1,346 mm) high. The depth will extend through to the right side of the body. The compartment clear door opening will be 71.50" (1,816 mm) wide x 36.25" (921 mm) high.

The compartment will have support structure to provide 1,500 lb (680 kg) per side for a total compartment load rating of 3,000 lb (1,361 kg).

### **Wheel Well Area**

The rear fender will be an integral part of the body and compartment modules. The inside of the fender will be fitted with a full circular inner fender liner constructed of aluminum.

### **LEFT REAR COMPARTMENT**

Located behind the rear wheels will be a compartment. The compartment dimensions will be 62.00" wide x 85.75" high. The depth will extend through to the right side of the body. The compartment clear door opening will be 59.50" wide x 69.00" high.

### **RIGHT FORWARD COMPARTMENT**

Located behind the cab will be the first compartment. The compartment dimensions will be 42.00" wide x 85.75" high x 26.00" deep at the floor level. The area over the frame rails will be 42.00" wide x 63.75" high and will extend through to the left side of the body. The compartment clear door opening will be 39.50" wide x 69.00" high.

### **RIGHT OVER WHEEL COMPARTMENT**

Located above the rear wheels will be a compartment. The compartment dimensions will be 74.00" (1,880 mm) wide x 53.00" (1,346 mm) high. The depth will extend through to the left side of the body. The compartment clear door opening will be 71.50" (1,816 mm) wide x 36.25" (921 mm) high.

### **Wheel Well Area**

The rear fender will be an integral part of the body and compartment modules. The inside of the fender will be fitted with a full circular inner fender liner constructed of aluminum.

### **RIGHT REAR COMPARTMENT**

Located behind the rear wheels will be a compartment. The compartment dimensions will be 62.00" wide x 85.75" high. The depth will extend through to the right side of the body. The compartment clear door opening will be 59.50" wide x 69.00" high.

### **REAR COMPARTMENT**

A rear compartment will be provided. The rear compartment door will be a roll-up style door that is the same brand and has the same finish as the side body doors. The compartment dimensions will be 40.00" wide x 85.75" high. The depth of this compartment will be determined by the width of the rear side compartments. The compartment door frame opening will be 40.00" wide x 79.00" high. The compartment clear door opening will be 37.50" wide x 74.00" high.

A 27.00" long, 1.25" diameter handrail will be provided on each side of the rear compartment.

The handrails will be an anodized aluminum extrusion with a ribbed design to provide a positive gripping surface.

Chrome plated end stanchions will support the handrails. A drain hole will be provided in the bottom stanchion. Plastic gaskets will be used between end stanchions and the painted surface.

The addition of this rear compartment will change the depths of the rear side compartments. Instead of being fully transverse, the compartment on each side of the body behind the rear wheels will be 26.00" deep.

### **VERTICAL COMPARTMENT DIVIDER, TRANSVERSE**

A vertical compartment divider will be provided. The divider will be constructed of .12" aluminum sheet with .62" flanges formed on the ends for mounting.

A total of one (1) will be installed forward compartment to divide the compartment into two equal transverse areas .

### **REAR BUMPER**

A rear bumper will be provided that is an integral part of the rear body substructure.

The bumper will be approximately 13.00" deep x 90.00" wide.

The bumper will have an aluminum treadplate deck mounted to the frame providing a stepping surface.

A kickplate will be provided above the bumper extending up on the rear bulkheads approximately 3.00"

### **SMOOTH ALUMINUM REAR WALL**

The rear wall will be smooth aluminum.

### **TOW HOOKS**

Two (2) painted steel tow hooks will be installed under the tailboard of the truck.

When force is applied to the tow hooks, it will be transmitted to the frame rail.

The tow hook assembly will be designed and positioned to allow up to a 30 degree upward angled pull of 17,000 lb, or a 20,000 lb straight horizontal pull in line with the centerline of the vehicle.

The tow hook design will have been fully tested and evaluated using strain gauge testing techniques.

### **COMPARTMENT LIGHTING**

There will be seven (7) compartment(s) with a single Pierce LED compartment light strip. Each light strip will be centered vertically along the door framing. There will be one (1) light per compartment. The single light strip will be in compartment(s): all compartments.

Any remaining compartment without a light strip will have a 6.00" diameter Truck-Lite, Model: 79384 light. Each light will have a number 1076 one filament, two wire bulb.

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

### **RUB RAIL**

Bottom edge of the side compartments will be trimmed with a bright aluminum extruded rub rail.

Trim will be 2.12" high with 1.38" flanges turned outward for rigidity.

The rub rails will not be an integral part of the body construction, which allows replacement in the event of damage.

An interlock system will be provided to ensure that the PTO pump drive system components are properly engaged so that the apparatus can be safely operated. Interlock system will be designed to allow the truck to be in motion while pumping.

### **AIR HORN SYSTEM**

Two (2) Hadley round air horns with 6.00" bell will be provided below the bumper. The horn system will be piped to the air brake system wet tank utilizing 0.38" tubing. A pressure protection valve will be installed in-line to prevent the loss of air in the air brake system.

### **Air Horn Location**

The air horns will be located on each side of the bumper, towards the outside.

### **AIR HORN CONTROL**

The air horns will be actuated by a lanyard rope pull control within reach of the officer and by the horn button in the steering wheel. The driver will have the option to control the air horns or the chassis horns from the horn button by means of a selector switch located on the instrument panel.

### **ELECTRONIC SIREN**

A Whelen®, Model 295SLSA1, electronic siren with noise canceling microphone will be provided.

This siren to be active when the battery switch is on and that emergency master switch is on.

Electronic siren head will be recessed in the driver side inside switch panel.

The electronic siren will be controlled on the siren head only. No horn button or foot switches will be provided.

### **SIREN SPEAKER**

There will be one (1) speaker Whelen®, Model SA31I01H, speakers provided. The speakers will be black with a rectangular face shape. The speakers will be connected to connected to the siren amplifier.

The speaker(s) will be mounted below the front bumper on the center.

### **CAB ROOF LIGHTBAR**

There will be one (1) 56.00" Whelen Justice, LED lightbar mounted on the cab roof.

This lightbar will include the following:

- Four (4) red flashing forward facing LED modules.
- Two (2) red flashing front corner LED modules.
- Two (2) red flashing rear corner LED modules.

The color of the lenses will be clear.

There will be a switch located in the cab on the switch panel to control the lightbar.

### **FRONT ZONE LOWER LIGHTS**

There will be one (1) pair of Whelen, Model 60\*02F\*R, flashing LED lights installed on the cab face above the headlights, in a common bezel with the directional lights.

The color of these lights will be red Super LED/red lens.

There will be a switch located in the cab on the switch panel to control the lights..

### **SIDE ZONE LOWER LIGHTING**

Four (4) Whelen model RS\*02ZCR, flashing LIN3 Super LED warning lights will be located in the following positions:



Two (2) lights, one (1) each side of the cab between the cab and crew cab doors above the front wheel.

The color of these lights will be red.

Two (2) lights, over rear wheels.

The color of these lights will be red each rear fender.

The above four (4) lights will be required to meet or exceed the lower level optical warning and optical power requirements of NFPA.

There will be a switch located in the cab on the switch panel to control the lights.

These lights will be installed in a plastic, chrome-plated flange.

### **REAR ZONE LOWER LIGHTING**

Two (2) Whelen, Model RS\*02ZCR, flashing LIN3 Super LED lights will be located at the rear of the apparatus.

The color of the lights will be red.

A switch located in the cab on the switch panel will control these lights.

These lights will be installed in a plastic, chrome-plated flange

### **WARNING LIGHTS (REAR AND SIDE UPPER ZONES)**

Four (4) Whelen, model M6\* LED flashing warning lights will be provided at the rear of the apparatus with Whelen, 6EFLANGE chrome flanges.

The side rear upper light(s) on the driver's side to be red.

The rear upper light(s) on the driver's side to be red.

The rear upper light(s) on the passenger's side to be red.

The side rear upper light(s) on the passenger's side to be red.

These lights will include a lens that is the same color as the LED's.

There will be a switch located in the cab on the switch panel to control the lights.

### **LOOSE EQUIPMENT**

The following equipment will be furnished with the completed unit:

- One (1) bag of chrome, stainless steel, or cadmium plated screws, nuts, bolts and washers, as used in the construction of the unit.

### **NFPA REQUIRED LOOSE EQUIPMENT PROVIDED BY FIRE DEPARTMENT**

The following loose equipment as outlined in NFPA 1901, 2016 edition, section 10.9.3 will be provided by the fire department.

- One (1) SCBA complying with NFPA 1981 for each assigned seating position, but not fewer than two (2), mounted in brackets fastened to the apparatus or stored in containers supplied by the SCBA manufacturer.
- One (1) spare SCBA cylinder for each SCBA carried, each mounted in a bracket fastened to the apparatus or stored in a specially designed storage space(s).
- One (1) first aid kit.
- One (1) traffic vest for each seating position, each vest to comply with ANSI/ISEA 207, *Standard for High Visibility Public Safety Vests*, and have a five-point breakaway feature that includes two at the shoulders, two at the sides, and one at the front.
- Five (5) fluorescent orange traffic cones not less than 28" (711 mm) in height, each equipped with a 6" (152 mm) retro-reflective white band no more than 4" (152 mm) from the top of the cone, and an additional 4" (102 mm) retro-reflective white band 2" (51 mm) below the 6" (152 mm) band.
- Five (5) illuminated warning devices such as highway flares, unless the five fluorescent orange traffic cones have illuminating capabilities.
- One automatic external defibrillator (AED).

### **DRY CHEMICAL EXTINGUISHER PROVIDED BY FIRE DEPARTMENT**

NFPA 1901, 2016 edition, section 10.9.3 requires one (1) approved dry chemical portable fire extinguisher with a minimum 80-B:C rating mounted in a bracket fastened to the apparatus.

The extinguisher is not on the apparatus as manufactured. The fire department will provide and mount the extinguisher.

### **WATER EXTINGUISHER PROVIDED BY FIRE DEPARTMENT**

NFPA 1901, 2016 edition, section 10.9.3 requires one (1) 2.5 gallon or larger water extinguisher mounted in a bracket fastened to the apparatus.

The extinguisher is not on the apparatus as manufactured. The fire department will provide and mount the extinguisher.

### **PAINT - BODY PAINTED TO MATCH CAB**

The exterior custom cab and body painting procedure will consist of a seven (7) step finishing process as follows:

1. Manual Surface Preparation - All exposed metal surfaces on the custom cab and body will be thoroughly cleaned and prepared for painting. Imperfections on the exterior surfaces will be removed and sanded to a smooth finish. Exterior seams will be sealed before painting. Exterior surfaces that will not be painted include; chrome plating, polished stainless steel, anodized aluminum and bright aluminum treadplate.
2. Chemical Cleaning and Pretreatment - All surfaces will be chemically cleaned to remove dirt, oil, grease, and metal oxides to ensure the subsequent coatings bond well. The aluminum surfaces will be properly cleaned and treated using a high pressure, high temperature 4 step Acid Etch process. The steel and stainless surfaces will be properly cleaned and treated using a high temperature 3 step process specifically designed for steel or stainless. The chemical treatment converts the metal surface to a passive condition to help prevent corrosion. A final pure water rinse will be applied to all metal surfaces.
3. Surfacer Primer - The Surfacer Primer will be applied to a chemically treated metal surface to provide a strong corrosion protective basecoat. A minimum thickness of 2 mils of Surfacer Primer is applied to surfaces that require a Critical aesthetic finish. The Surfacer Primer is a two-component high solids urethane that has excellent sanding properties and an extra smooth finish when sanded.
4. Finish Sanding - The Surfacer Primer will be sanded with a fine grit abrasive to achieve an ultra-smooth finish. This sanding process is critical to produce the smooth mirror like finish in the topcoat.
5. Sealer Primer - The Sealer Primer is applied prior to the Basecoat in all areas that have not been previously primed with the Surfacer Primer. The Sealer Primer is a two-component high solids urethane that goes on smooth and provides excellent gloss hold out when topcoated.
6. Basecoat Paint - Two coats of a high performance, two component high solids polyurethane basecoat will be applied. The Basecoat will be applied to a thickness that will achieve the proper color match. The Basecoat will be used in conjunction with a urethane clear coat to provide protection from the environment.
7. Clear Coat - Two (2) coats of Clear Coat will be applied over the Basecoat color. The Clear Coat is a two-component high solids urethane that provides superior gloss and durability to the exterior surfaces. Lap style and roll-up doors will be Clear Coated to match the body. Paint warranty for the roll-up doors will be provided by the roll-up door manufacture.

Each batch of basecoat color is checked for a proper match before painting of the cab and the body. After the cab and body are painted, the color is verified again to make sure that it matches the color standard. Electronic color measuring equipment is used to compare the color sample to the color standard entered into the computer. Color specifications are used to determine the color match. A Delta E reading is used to determine a good color match within each family color.

All removable items such as brackets, compartment doors, door hinges, and trim will be removed and separately if required, to ensure paint behind all mounted items. Body assemblies that cannot be finish painted after assembly will be finish painted before assembly.

Pierce Manufacturing paint finish quality levels for critical areas of the apparatus (cab front and sides, body sides and doors, and boom lettering panels) meet or exceed the Cadillac/General Motors GMW15777 global paint requirements. Orange peel levels meet or exceed the #6 A.C.T. standard in critical areas. These requirements are met in order for the exterior paint finish to be considered acceptable. The Pierce Manufacturing written paint standards will be available upon request.

The cab and the body will be painted to be determined by customer.

### **PAINT - ENVIRONMENTAL IMPACT**

Contractor will meet or exceed all current State regulations concerning paint operations. Pollution control will include measures to protect the atmosphere, water and soil. Controls will include the following conditions:

- Topcoats and primers will be chrome and lead free.
- Metal treatment chemicals will be chrome free. The wastewater generated in the metal treatment process will be treated on-site to remove any other heavy metals.
- Particulate emission collection from sanding operations will have a 99.99% efficiency factor.
- Particulate emissions from painting operations will be collected by a dry filter or water wash process. If the dry filter is used, it will have an efficiency rating of 98.00%. Water wash systems will be 99.97% efficient
- Water from water wash booths will be reused. Solids will be removed on a continual basis to keep the water clean.
- Paint wastes are disposed of in an environmentally safe manner.
- Empty metal paint containers will be to recover the metal.
- Solvents used in clean-up operations will be recycled on-site or sent off-site for distillation and returned for reuse.

Additionally, the finished apparatus will not be manufactured with or contain products that have ozone depleting substances. Contractor will, upon demand, present evidence that the manufacturing facility meets the above conditions and that it is in compliance with his State EPA rules and regulations.

### **PAINT CHASSIS FRAME ASSEMBLY**

The chassis frame assembly will be painted black before the installation of the cab and body, and before installation of the engine and transmission assembly, air brake lines, electrical wire harnesses, etc.

Components that are included with the chassis frame assembly that will be painted not e-coated are:

- Frame rails
- Cross members
- Axles
- Suspensions
- Steering gear

- Battery boxes
- Bumper extension weldment
- Frame extensions
- Body mounting angles
- Rear Body support substructure (front and rear)
- Pump house substructure
- Air tanks
- Fuel tank
- Castings
- Individual piece parts used in chassis and body assembly

Components treated with epoxy E-coat protection prior to paint:

- Two (2) C-channel frame rails

The E-coat process will meet the technical properties shown.

#### **PAINT, FRONT WHEELS**

All wheel surfaces, inside and outside, will be provided with to match cab and body paint.

#### **PAINT, REAR WHEELS**

All wheel surfaces, inside and outside, will be provided with to match cab and body paint.

#### **COMPARTMENT INTERIOR FINISH**

The interior of the compartments will be the natural aluminum finish. There will not be any paint or other type of finish applied to the compartments.

#### **REFLECTIVE BAND**

A 10.00" white reflective band will be provided across the front of the vehicle and along the sides of the body.

The reflective band provided on the cab face will be at the headlight level.

#### **REAR CHEVRON STRIPING**

There will be alternating chevron striping located on the rear-facing vertical surface of the apparatus. Covered surfaces will include the exterior rear wall. Rear compartment doors, entry doors, or walkway areas will not be covered.

The colors will be red and fluorescent yellow diamond grade.

Each stripe will be 6.00" in width.

This will meet the requirements of the current edition of NFPA 1901, which states that 50% of the rear surface will be covered with chevron striping.

### **CAB DOOR REFLECTIVE STRIPE**

A 6.00" x 16.00" white reflective stripe will be provided across the interior of each cab door. The stripe will be located approximately 1.00" up from the bottom, on the door panel.

This stripe will meet the NFPA 1901 requirement.

### **FIRE APPARATUS PARTS CD MANUAL**

There will be two (2) custom parts manuals for the complete fire apparatus provided in CD format with the completed unit.

The manuals will contain the following:

- Job number
- Part numbers with full descriptions
- Table of contents
- Parts section sorted in functional groups reflecting a major system, component, or assembly
- Parts section sorted in alphabetical order
- Instructions on how to locate parts

The manuals will be specifically written for the chassis and body model being purchased. It will not be a generic manual for a multitude of different chassis and bodies.

### **SERVICE PARTS INTERNET SITE**

The service parts information included in these manuals are also available on the factory website. The website offers additional functions and features not contained in this manual, such as digital photographs and line drawings of select items. The website also features electronic search tools to assist in locating parts quickly.

### **CHASSIS SERVICE MANUALS**

One (1) chassis service manuals containing parts and service information on major components will be provided with the completed unit.

One (1) compact disk (CD) will also be provided that will include all of the information from the above manual.

The manuals will contain the following sections:

- Job number
- Table of contents
- Troubleshooting
- Front Axle/Suspension

- Brakes
- Engine
- Tires
- Wheels
- Cab
- Electrical, DC
- Air Systems
- Plumbing
- Appendix

The manual will be specifically written for the chassis model being purchased. It will not be a generic manual for a multitude of different chassis and bodies.

**CHASSIS OPERATION CD MANUALS**

There will be two (2) CD format chassis operation manuals provided.

**ONE (1) YEAR MATERIAL AND WORKMANSHIP**

A Pierce basic apparatus limited warranty certificate, WA0008, is included with this proposal.

**ENGINE WARRANTY**

A Cummins **five (5) year** limited engine warranty will be provided. A limited warranty certificate, WA0181, is included with this proposal.

**STEERING GEAR WARRANTY**

A TRW **one (1) year** limited steering gear warranty will be provided. A copy of the warranty certificate will be submitted with the bid package.

**FIFTY (50) YEAR STRUCTURAL INTEGRITY**

The Pierce custom chassis frame limited warranty certificate, WA0013, is included with this proposal.

**FRONT AXLE WARRANTY**

A Eaton **five (5)-year/100,000 mile** parts and labor warranty will be provided.

**REAR AXLE WARRANTY**

A Eaton **five (5)-year/100,000 mile** parts and labor warranty will be provided.

**ABS BRAKE SYSTEM THREE (3) YEAR MATERIAL AND WORKMANSHIP WARRANTY**

A Meritor Wabco™ABS brake system limited warranty certificate, WA0232, is included with this proposal.

### **TEN (10) YEAR STRUCTURAL INTEGRITY**

The Pierce custom cab limited warranty certificate, WA0012, is included with this proposal.

### **TEN (10) YEAR PRO-RATED PAINT AND CORROSION**

A Pierce cab limited pro-rated paint warranty certificate, WA0055, is included with this proposal.

### **COMPARTMENT LIGHT WARRANTY**

The Pierce 12 volt DC LED strip lights limited warranty certificate, WA0203, is included with this proposal.

### **TRANSMISSION WARRANTY**

The transmission will have a **five (5) year/unlimited mileage** warranty covering 100 percent parts and labor. The warranty will be provided by Allison Transmission.

Note: The transmission cooler is not covered under any extended warranty you may be getting on your Allison Transmission. Please review your Allison Transmission warranty for coverage limitations.

### **TRANSMISSION COOLER WARRANTY**

The transmission cooler will carry a five (5) year parts and labor warranty (exclusive to the transmission cooler). In addition, a collateral damage warranty will also be in effect for the first three (3) years of the warranty coverage and will not exceed \$10,000 per occurrence. A copy of the warranty certificate will be submitted with the bid package.

### **TEN (10) YEAR STRUCTURAL INTEGRITY**

The Pierce Encore rescue apparatus body limited warranty certificate, WA0016, is included with this proposal.

### **ROLL UP DOOR MATERIAL AND WORKMANSHIP WARRANTY**

A Gortite roll-up door limited warranty will be provided. The mechanical components of the roll-up door will be warranted against defects in material and workmanship for the lifetime of the vehicle. A **six (6) year** limited warranty will be provided on painted and satin roll up doors.

The limited warranty certificate, WA0190, is included with this proposal.

### **TEN (10) YEAR PRO-RATED PAINT AND CORROSION**

A Pierce body limited pro-rated paint warranty certificate, WA0057, is included with this proposal.

### **VEHICLE STABILITY CERTIFICATION**

The fire apparatus manufacturer will provide a certification stating the apparatus complies with NFPA 1901, current edition, section 4.13, Vehicle Stability. The certification will be provided at the time of bid.



### **ENGINE INSTALLATION CERTIFICATION**

The fire apparatus manufacturer will provide a certification, along with a letter from the engine manufacturer stating they approve of the engine installation in the bidder's chassis. The certification will be provided at the time of bid.

### **POWER STEERING CERTIFICATION**

The fire apparatus manufacturer will provide a certification stating the power steering system as installed meets the requirements of the component supplier. The certification will be provided at the time of bid.

### **CAB INTEGRITY CERTIFICATION**

The fire apparatus manufacturer will provide a cab crash test certification with this proposal. The certification will state that a specimen representing the substantial structural configuration of the cab has been tested and certified by an independent third party test facility. Testing events will be documented with photographs, real-time and high-speed video, vehicle accelerometers, cart accelerometers, and a laser speed trap. The fire apparatus manufacturer will provide a state licensed professional engineer to witness and certify all testing events. Testing will meet or exceed the requirements below:

- European Occupant Protection Standard ECE Regulation No.29.
- SAE J2422 Cab Roof Strength Evaluation - Quasi-Static Loading Heavy Trucks.
- SAE J2420 COE Frontal Strength Evaluation - Dynamic Loading Heavy Trucks.
- Roof Crush

The cab will be subjected to a roof crush force of 22,500 lb. This value meets the ECE 29 criteria, and is equivalent to the front axle rating up to a maximum of ten (10) metric tons.

#### **- Side Impact**

The same cab will be subjected to dynamic preload where a 13,275-lb moving barrier is slammed into the side of the cab at 5.50 mph, striking with an impact of 13,000 ft-lb of force. This test is part of the SAE J2422 test procedure and more closely represents the forces a cab will see in a rollover incident.

#### **- Frontal Impact**

The same cab will withstand a frontal impact of 32,600 ft-lb of force using a moving barrier in accordance with SAE J2420.

#### **- Additional Frontal Impact**

The same cab will withstand a frontal impact of 65,200 ft-lb of force using a moving barrier. (Twice the force required by SAE J2420)

The same cab will withstand all tests without any measurable intrusion into the survival space of the occupant area.

### **CAB DOOR DURABILITY CERTIFICATION**

Robust cab doors help protect occupants. Cab doors will survive a 200,000 cycle door slam test where the slamming force exceeds 20 G's of deceleration. The bidder will certify that the sample doors similar to those provided on the apparatus have been tested and have met these criteria without structural damage, latch malfunction, or significant component wear.

### **WINDSHIELD WIPER DURABILITY CERTIFICATION**

Visibility during inclement weather is essential to safe apparatus performance. Windshield wipers will survive a 3 million cycle durability test in accordance with section 6.2 of SAE J198 *Windshield Wiper Systems - Trucks, Buses and Multipurpose Vehicles*. The bidder will certify that the wiper system design has been tested and that the wiper system has met these criteria.

### **SEAT BELT ANCHOR STRENGTH**

Seat belt attachment strength is regulated by Federal Motor Vehicle Safety Standards and should be validated through testing. Each seat belt anchor design will withstand 3000 lb of pull on both the lap and shoulder belt in accordance with FMVSS 571.210 Seat Belt Assembly Anchorages. The bidder will certify that each anchor design was pull tested to the required force and met the appropriate criteria.

### **SEAT MOUNTING STRENGTH**

Seat attachment strength is regulated by Federal Motor Vehicle Safety Standards and should be validated through testing. Each seat mounting design will be tested to withstand 20 G's of force in accordance with FMVSS 571.207 Seating Systems. The bidder will certify, at time of delivery, that each seat mount and cab structure design was pull tested to the required force and met the appropriate criteria.

### **AMP DRAW REPORT**

The bidder will provide, at the time of bid and delivery, an itemized print out of the expected amp draw of the entire vehicle's electrical system.

The manufacturer of the apparatus will provide the following:

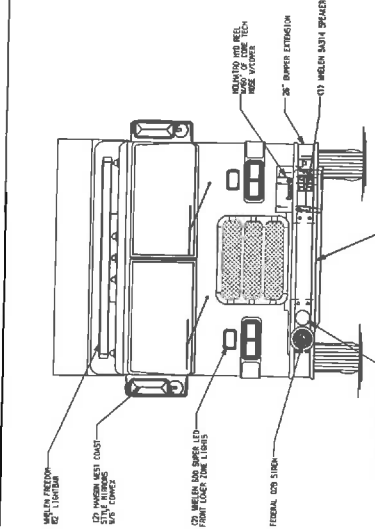
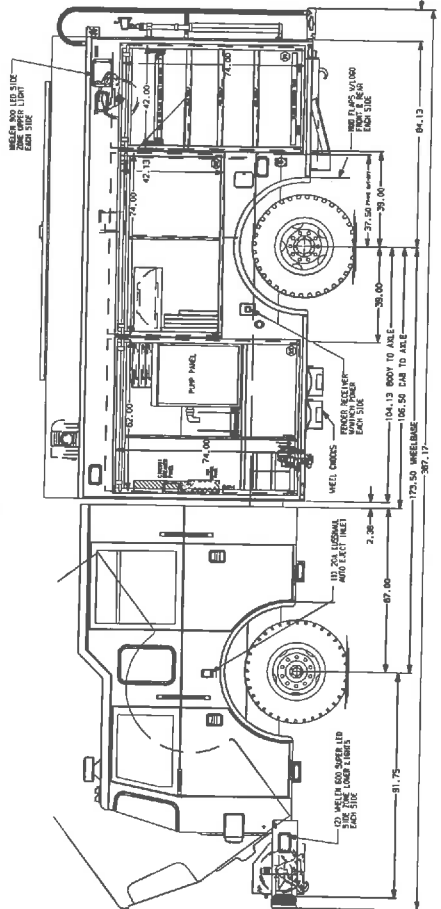
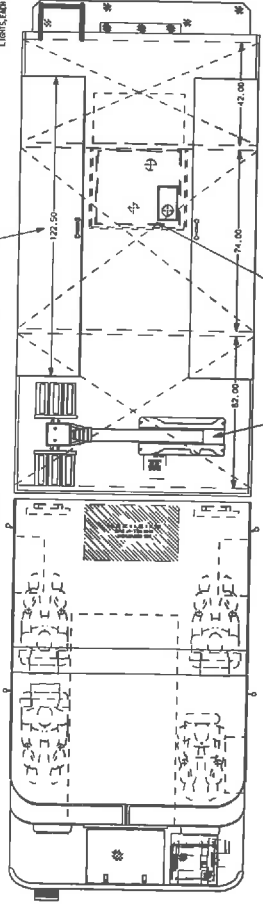
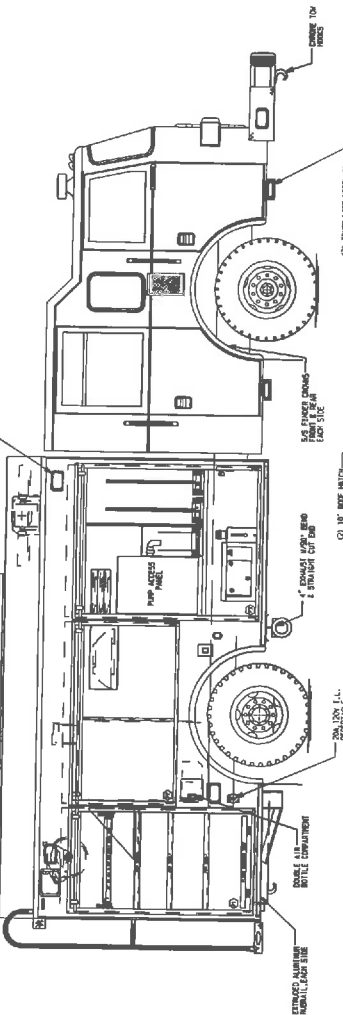
- Documentation of the electrical system performance tests.
- A written load analysis, which will include the following:
  - The nameplate rating of the alternator.
  - The alternator rating under the conditions specified per:
    - Applicable NFPA 1901 or 1906 (Current Edition).
  - The minimum continuous load of each component that is specified per:
    - Applicable NFPA 1901 or 1906 (Current Edition).
  - Additional loads that, when added to the minimum continuous load, determine the total connected load.

- Each individual intermittent load.

All of the above listed items will be provided by the bidder per the applicable NFPA 1901 or 1906 (Current Edition).

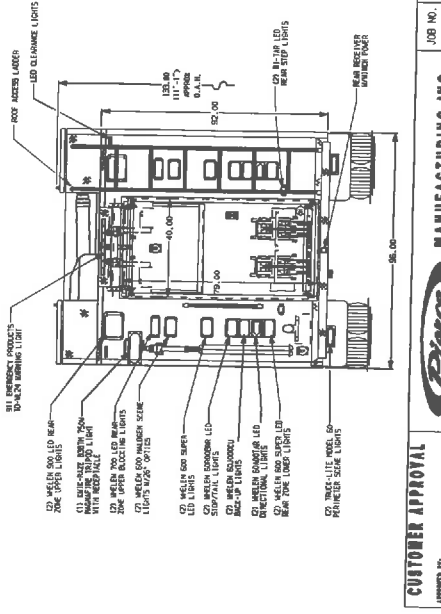
- PASSENGER'S SIDE COMPARTMENTS CONTAIN THE FOLLOWING:**
- (1) 20" WIDE SEAT
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100% WOOD PANELING



**REAR COMPARTMENT CONTAINS THE FOLLOWING:**

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**NOTE:**  
 1. ALL DIMENSIONS SHOWN ARE APPROXIMATE.  
 2. DIMENSIONS SHOWN ARE APPROXIMATE AND ARE SUBJECT TO MINOR DEVIATIONS AS MAY OCCUR OR BE NECESSARY IN CONSTRUCTION.  
 3. DIMENSIONS NOT SHOWN.

**VIEW FILE CREATED 25-OCT-2007 08:08:24**

<b>CUSTOMER APPROVAL</b>		<b>JOB NO.</b> 19989	<b>SCALE</b> 1:24	<b>DATE</b>
<b>APPROVED BY:</b>	<b>DATE:</b>	<b>TITLE</b> ENGINE RESCUE VEHICLE	<b>DESIGNED BY</b> DHE	<b>DATE</b> 09JUL07
<b>CHASSIS DATA</b>	<b>PIERCE</b>	<b>FOR</b> FORTONA FIRE PROTECTION DISTRICT	<b>DATE</b> 12JUL07	<b>SHEET NO.</b> 1 OF 1
<b>REV</b>	<b>DATE</b>	<b>BY</b>	<b>CHK</b>	<b>APP</b>
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**Pierce MANUFACTURING INC.**





# Proposal Option List

9/12/2016

**Customer:**

**Representative**

Bouwer, Dustin

**Organization:**

Ten-8 Fire Equipment, Inc

**Requirements Manager:**

**Description:**

Pinellas County Enforcer Encore

**Body:**

ENCORE, Rescue, Aluminum

**Chassis:**

Enforcer Chassis

**Bid Number:** 638

**Job Number:**

**Number of Units:**

**Bid Date:**

**Stock Number:**

**Price Level:** 35 (Current: 35)

Line	Option	Type	Option Description	Qty
1	0581842		Boiler Plates, ENCORE Rescue	1
2	0661794		Single Source Compliance	1
3	0584456		Manufacture Location: Appleton, Wisconsin	1
4	0584452		RFP Location: Appleton, Wisconsin	1
5	0588609		Vehicle Destination, US	1
6	0610784		Comply NFPA 1901 Changes Effective Jan 1, 2016, With Exceptions	1
7	0533352		Special Services (Rescue) Fire Apparatus	1
8	0588614		Vehicle Certification, Rescue	1
9	0681285		Agency, Apparatus Certification, Rescue, U.L.	1
10	0620357		Consortium, Florida Sheriff's	1
11	0535579		Not Required, Unit of Measure, (no pump, no tank)	1
12	0030006		Bid Bond Not Requested	1
13	0050066		Performance Bond, 100% Req'd (Statement by Rep)	1
14	0000007		Approval Drawing	1
15	0002928		Electrical Diagrams	1
16	0649754		Enforcer Chassis	1
17	0000110		Wheelbase	1
			Wheelbase - 190.13	
18	0000070		GVW Rating	1
			GVW rating - 43,500	
19	0649713		Frame Rails, 10.25" x 3.50" x .375", Saber FR/Enf	1
20	0020018		Frame Liner Not Req'd	1
21	0648169		Axle, Front, Dana, D-2000F, 16,000 lb Saber FR/Enforcer	1
22	0637880		Suspension, Front, Standens, Taper Leaf, 16,000 lb, Saber FR/Enforcer	1
23	0000321		Shock Absorbers on Front Axle, Saber/Enforcer	1
24	0000322		Oil Seals, Front Axle	1
25	0001635		Tires, Front, Goodyear, G291, 315/80R22.50, 18 ply	1
26	0019575		Wheels, Front, Alcoa, 22.50" x 9.00", Aluminum, Hub Pilot	1
27	0690933		Axle, Rear, Dana S23-170, 24,000 lb, Saber/Enforcer	1
28	0544253		Top Speed of Vehicle, 68 MPH	1
29	0565379		Suspen, Rear, Single Slipper Spring, 24,000 lb, Saber/Enforcer	1
30	0000485		Oil Seals, Rear Axle	1
31	0587216		Tires, Rear, Goodyear, G622 RSD, 12R22.50, 16 ply, Single	1
32	0019632		Wheels, Rear, Alcoa, 22.50" x 8.25", Aluminum-Steel, Hub Pilot, Single	1
33	0568081		Tire Balancing, Counteract Beads	1
34	0620570		Tire Pressure Monitoring, RealWheels, AirSecure, Valve Cap, Single Axle	1
			Qty, Tire Pressure Ind - 6	
35	0003245		Axle Hub Covers w/center hole, S/S, Front Axle	1
36	0001960		Axle Hub Covers, Rear, S/S, High Hat (Pair)	1
37	0057936		Covers, Lug Nut, Chrome	1
38	0002045		Mud Flaps, w/logo front & rear	1
39	0544802		Chocks, Wheel, SAC-44-E, Folding	1
			Qty, Pair - 01	
40	0544806		Mounting Brackets, Chocks, SAC-44-E, Folding, Horizontal	1
			Qty, Pair - 01	
			Location, Wheel Chocks - Left Side Rear Compt	
41	0010670		ABS Wabco Brake System, Single rear axle	1
42	0690932		Brakes, Bendix, ADB22X, 17" Disc, Front	1
43	0580500		Brakes, Bendix, Disc, Rear, Model ADB-22X, Single	1
44	0020784		Air Compressor, Brake, Cummins/Wabco 18.7 CFM	1

Line	Option	Type	Option Description	Qty
45	0644232		Brake Reservoirs, 4,272 Cubic Inch Minimum Capacity, Saber FR/Enforcer	1
46	0644228		Air Dryer, Wabco System Saver 1200 IWT, Heated, Saber FR/Enforcer	1
47	0000790		Brake Lines, Nylon	1
48	0000854		Air Inlet, w/Disconnect Coupling	1
			Location, Air Coupling(s) - a) DS Step Well	
			Qty, Air Coupling (s) - 1	
49	0795475		Engine, Cummins L9, 370 hp, 1250 lb-ft, W/OBD, EPA 2017, Saber FR/Enforcer	1
50	0001244		High Idle w/Electronic Engine, Custom	1
51	0683056		Engine Brake, Cummins Turbo Brake (VGT), Accelerator Activated	1
52	0644227		Clutch, Fan, Air Actuated, Saber FR/Enforcer	1
53	0640477		Air Intake, Metal Screen, Saber FR/Enforcer	1
54	0794761		Exhaust System, 4", 2017 L9 Engine, Horizontal, Right Side	1
55	0648346		Radiator, Saber FR/Enforcer	1
56	0001090		Cooling Hoses, Rubber	1
57	0021126		Fuel Tank, 50 Gallon, Left Side Fill	1
58	0001129		Lines, Fuel	1
59	0595087		DEF Tank, 4.5 Gallon, DS Fill, Forward of Rear Axle	1
			Door, Material & Finish, DEF Tank - Polished Stainless	
60	0552793		Not Required, Fuel Priming Pump	1
61	0552712		Not Required, Shutoff Valve, Fuel Line	1
62	0699437		Cooler, Chassis Fuel, Not Req'd.	1
63	0642572		Trans, Allison 5th Gen, 3000 EVS P, w/Prognostics, Imp/Vel/DCF/SFR/Enf	1
64	0625329		Transmission, Shifter, 5-Spd, Push Button, 3000 EVS	1
65	0684459		Transmission Oil Cooler, Modine, External	1
66	0090176		Mode, Downshift, Aggressive downshift to 3rd, w/engine brake, 5 speed	1
67	0001370		Driveline, Spicer 1710	1
68	0635294		Steering, Single Gear, TRW TAS_85, w/tilt, Pump w/ Cooler, Saber FR/Enforcer	1
69	0605356		Steering Wheel, 4 Spoke without Controls, Saber FR/Enforcer	1
70	0690274		Logo/Emblem, on Dash	1
			Text, Row (1) One - T	
			Text, Row (2) Two - B	
			Text, Row (3) Three - D	
71	0606557		Bumper, 13" Extended, Saber FR/Enforcer	1
72	0630210		No Selection Required, Cover Selected in Bumper Accessories	1
73	0002270		Tow Hooks, Chrome	1
74	0649716		Cab, Enforcer, 6010	1
75	0647919		Engine Tunnel, ISL, Saber FR/Enforcer	1
76	0633594		Rear Wall, Interior, Adjustable Seating	1
77	0632103		Rear Wall, Exterior, Cab, Saber FR/Enforcer	1
			Material, Exterior Rear Wall - Painted	
78	0644201		Cab Lift, Elec/Hyd, Saber FR/Enforcer	1
79	0695930		Grille, Bright Finished, Front of Cab, Dash CF/Enforcer	1
80	0647932		Not Required, Trim, S/S Band, Across Cab Face, AXT/Dash CF/Saber/Enforcer	1
81	0087357		Molding, Chrome on Side of Cab	1
82	0521669		Mirrors, Retractable, West Coast Style, Htd/Rmt, w/Htd/Rmt Convex	1
83	0648171		Door, Half-Height, Saber FR/Enforcer 4-Door Cab, Level Roof	1
84	0655543		Door Panel, Brushed Stainless Steel, Saber/Enforcer 4-Door Cab	1
85	0528958		Not Required, Controls, Electric Window, AXT, Quantum, Saber, Enforcer, Dash CF	1
86	0638310		Steps, 4-Door Cab, Saber FR/Enforcer	1
			Step Well Material - Painted	
87	0634786		Lights, Cab and Crew Cab Access Steps, P25, LED w/Bezel, 1 Light Per Step 6lts	1
88	0002141		Fenders, s/s on cab - Saber/Enforcer	1
89	0042105		No Windows, Side of Crew Cab	1
90	0012090		Not Required, Windows, Front/Side of raised roof	1
91	0637322		Cab Interior, Vinyl Headliner, Saber FR/Enforcer	1
			Color, Cab Interior Vinyl/Fabric - a) Silver/Gray	
			Engine Tunnel Cover - Painted	
92	0012430		Cab Interior, paint color	1
			Color, Cab Interior Paint - i) fire smoke gray	
93	0052100		Floor, Rubber Padded, Cab & Crew Cab, Saber/Enforcer	1
94	0632620		Defroster, Saber FR/Enforcer	1

Line	Option	Type	Option Description	Qty
95	0632619		Air Conditioning/Heater, Engine Tunnel, Saber FR/Enforcer	1
96	0639675		Sun Visor, Smoked Lexan, AXT, Dash CF, Imp/Vel, Saber FR/Enforcer Sun Visor Retention - No Retention	1
97	0634328		Grab Handles, Driver and Officer Door Posts, Saber FR/Enforcer	1
98	0583938		Lights, Engine Compt, Custom, Automatic Sw, Whelen 3SC0CDCR, 3" LED, Trim Qty, - 01	1
99	0631830		Fluid Check Access, Saber FR/Enforcer, Arrow XT	1
100	0583039		Not Required, Side Roll and Frontal Impact Protection	1
101	0622619		Seating Capacity, 4 Seats	1
102	0636959		Seat, Driver, 911, Knee Action, Air Ride, High Back, Saber FR/Enforcer	1
103	0636948		Seat, Officer, 911, Fixed, SCBA, Saber FR/Enforcer	1
104	0620420		Radio Compartment, Below Non-Air Ride Seat, Saber FR/Enforcer	1
105	0102788		Not Required, Seat, Rear Facing C/C, DS Outboard	1
106	0102783		Not Required, Seat, Rr Facing C/C, Center	1
107	0102790		Not Required, Seat, Rear Facing C/C, PS Outboard	1
108	0108189		Not Required, Seat, Forward Facing C/C, DS Outboard	1
109	0618398		Seat, Forward Facing C/C, Center, (2) Seats Inc 911, SCBA, 11" Spacing, SFR/Enf	1
110	0108190		Not Required, Seat, Forward Facing C/C, PS Outboard	1
111	0566653		Upholstery, Seats In Cab, Turnout Tuff Color, Cab Interior Vinyl/Fabric - c) Black	1
112	0065740		Bracket, Air Bottle Zico, ULLH, Load & Lock, 1901-04, In Cab Seats Qty, - 03	3
113	0636545		Seat Belt, Single Retractor, Saber FR/Enforcer Seat Belt Color - Red	1
114	0602464		Helmet Storage, Provided by Fire Department, NFPA 2016	1
115	0647647		Lights, Dome, FRP Dual LED 4 Lts Color, Dome Lt - Red & White Color, Dome Lt Bzl - Black Control, Dome Lt White - Door Switches and Lens Switch Control, Dome Lt Color - Lens Switch	1
116	0602618		Portable Hand Lt, Provided by Fire Dept, Special Services, NFPA 2016 Classification	1
117	0644187		Cab Instruments, Black Gauges, Black Bezels, Saber FR/Enforcer Emergency Switching - E-Master Only	1
118	0002544		Air Restriction Indicator - Pierce Chassis	1
119	0543751		Light, Do Not Move Apparatus Alarm, Do Not Move Truck - Pulsing Alarm	1
120	0637359		Not Required, Door Open Indicator w/Do Not Move Truck Light, Enf/Saber FR	1
121	0632738		Switching, Cab Instrument Lower Console & Overhead, Rocker, Enforcer	1
122	0644179		Wiper Control, 2-Speed with Intermittent, Saber FR/Enforcer	1
123	0548009		Wiring, Spare, 20 A 12V DC 1st Qty, - 02 12vdc power from - Battery direct Wire termination - Butt Splice Location, Spare Wiring - TBD	2
124	0548004		Wiring, Spare, 15 A 12V DC 1st Qty, - 02 12vdc power from - Battery direct Wire termination - Butt Splice Location, Spare Wiring - Officer Dash	2
125	0610240		Vehicle Data Recorder w/Seat Belt Monitor	1
126	0696439		Antenna Mount, Custom Chassis, Cable Routed to Instrument Panel Area Qty, - 01 Location, Antenna Mount - Right Side	1
127	0624241		Electrical Power/Signal Protection & Control, Enforcer	1
128	0624256		Electrical System, Enforcer Hard Wired	1
129	0079166		Batteries, (4) Exide Grp 31, 950 CCA ea, Threaded Stud	1
130	0008621		Battery System, Single Start, All Custom Chassis	1
131	0002698		Battery Compartment, Saber/Enforcer	1
132	0562594		Charger, Sngl Sys, Newmar, PUC12-35, 35A	1
133	0012782		Location, Charger, Front Left Side Body Compartment Location, Battery Chrgr/Cmpr - High On Left Wall	1
134	0530949		Location, Battery Charger Indicator, Driver's Seat Riser	1



Line	Option	Type	Option Description	Qty
135	0016857		Shoreline, 20A 120V, Kussmaul Auto Eject, 091-55-20-120, Super Qty, - 01 Color, Kussmaul Cover - b) red Shoreline Connection - Battery Charger	1
136	0026800		Shoreline Location Location, Shoreline(s) - DS Cab Side	1
137	0647729		Alternator, 320 amp, Delco Remy 40SI	1
138	0645619		Charger Socket, Blue Sea 1016 Dual USB Type A Location - Driver dash area and Officer dash Qty, - 02 12vdc power from - Battery direct	2
139	0644176		Load Manager, Integrated In Electrical System, Saber FR/Enforcer	1
140	0648596		Headlights, Rectangular Halogen, AXT/Dash CF/Saber/Enforcer	1
141	0648426		Light, Directional, Whelen 60A00TAR LED Arrow, Common Bzl, Above Headlts, Sab/Enf	1
142	0620054		Light, Directional/Marker, Intermediate, Weldon 9186-8580-29 LED 2lts	1
143	0647802		Lights, Clearance/Marker/ID, Front, P25 LED 5 Lts, Saber FR/Enforcer	1
144	0647899		Lights, Directional/Marker, Cab Front Side, Weldon 9186-8580-29 LED, Sab/Enf	1
145	0627282		Lights, Clearance/Marker/ID, Rear, FRP LED Bar & P25 LED 4Lts	1
146	0564683		Lights, Tail, Whelen M6BTT* Red LED Stop/Tail & M6T* Amber LED Dir Arw For Hsg Color, Lens - Colored	1
147	0561471		Lights, Backup, Whelen M6BUW, LED, For Tail Lt Housing	1
148	0664481		Bracket, License Plate & Light, P25 LED	1
149	0556842		Bezels, Whelen, (2) M6 Chrome Pierce, For mtg (4) Whelen M6 lights	1
150	0589905		Alarm, Back-up Warning, PRECO 1040	1
151	0666455		Lights, Perimeter Cab, Amdor AY-9500-020 LED 4Dr	1
152	0616293		Not Required, Lights Perimeter Pump House, No Pump	1
153	0645995		Lights, Perimeter Body, Amdor AY-9500-020 LED 2lts, Rear Step Control, Perimeter Lts - Parking Brake Applied	1
154	0556339		Lights, Step, P25 LED, Encore Rescue, Perm Lts	1
155	0584961		Light, Whelen, 12V PFP2B Pioneer LED Floodlt, Recessed 15 Deg Blk 1st Location, Lights - DS body center Qty, - 01 Switch, Lt Control 1 DC,1 - a) DS Switch Panel Switch, Lt Control 2 DC,2 - c) DS Rear of Apparatus Switch, Lt Control 3 DC,3 - d) No Control Switch, Lt Control 4 DC,4 - d) No Control	1
156	0584960		Light, Whelen, 12V PFP2B Pioneer LED Floodlt, Recessed 15 Deg Blk 2nd Location, Lights - PS body center Qty, - 01 Switch, Lt Control 1 DC,1 - a) DS Switch Panel Switch, Lt Control 2 DC,2 - i) PS Rear of Apparatus Switch, Lt Control 3 DC,3 - d) No Control Switch, Lt Control 4 DC,4 - d) No Control	1
157	0004961		Not Required, Work Lights, Alt. Rear Lights, HDR/Encore, No Hose Bed	1
158	0645678		Lights, Not Required, Rear Work, Alt. 120/240 Volt Lights At Rear Body	1
159	0709438		Light, Walking Surface, FRP Flood, LED	1
160	0559733		Buzzer, Two-way, Cab to Body, NOT REQUIRED	1
161	0023456		ENCORE, Rescue, Aluminum	1
162	0035959		18' Length, Alum, 42.42.74.42	1
163	0594021		Doors, AMDOR, Roll-up, Side Compartments Qty, Door Accessory - 08 Color, Roll-up Door - aaa) AMDOR satin aluminum Latch, Roll-up Door - Locking, 1250, Match Compartments	8
164	0041961		18' Length, Roll Doors, Alum	1
165	0036031		Left Forward Compt, 42" & 42", Alum	1
166	0036039		Left Over Wheel Compt, 74", Alum	1
167	0036040		Left Rear Compt, 42", Alum	1
168	0036047		Right Forward Compt, 42" & 42", Alum	1
169	0036055		Right Over Wheel Compt, 74", Alum	1
170	0036056		Right Rear Compt, 42", Alum	1
171	0503436		Not Req'd, Telephone Network, Command Interior	1

Line	Option	Type	Option Description	Qty
172	0503432		Audio/Video Network Not Provided	1
173	0043269		(A)Compt, Rear Access, Roll Up Door Only	1
174	0054944		Awning, Side of Body, Zip Dee Brand	1
			Location - DS	
			Qty, - 1	
			Color - 4) white	
175	0043189		Box, Tool, Poly, Standard	6
			Location - TBD	
			Qty, - 06	
176	0043232		Compt, Roof, 4' Long, 18" Deep	2
			Location - Behind 9' compartments, one DS, one PS	
			Qty, - 02	
177	0043234		Compt, Roof, 9' Long, 18" Deep	2
			Location - Behind Light tower, one DS, one PS	
			Qty, - 02	
178	0081912		Fairing, Painted, Front and Both Sides	1
179	0091904		Hitch, Receiver, Rear/Sides, Through Body, Encore	1
			Connection, Trailer - Trailer Electric Brakes	
180	0043243		Ladder, Roof Access, (Alum)	1
			Location - TBD	
181	0043151		Shelf, Adj., 40" W x 22" L, (42" W. Compt.)	6
			Location - TBD	
			Qty, - 06	
182	0043153		Shelf, Adj., 40" W x 62" L, (42" W. Compt.)	4
			Location - TBD	
			Qty, - 04	
183	0043159		Shelf, Adj., 72" W x 62" L, (74" W. Compt.)	2
			Location - TBD	
			Qty, - 02	
184	0043199		Strap, Pull for Doors	9
			Qty, - 09	
185	0529793		Toolboard, Alum Adj., 63" H x 62" Dp, Side Rear Compt., w/ Tray	1
			Location - TBD	
			Qty, - 1	
186	0043207		Tray, Slide-Out, Adj. Ht., 500 lb, 33" W x 22" L (42" W. Compt.)	8
			Location - TBD	
			Qty, - 08	
187	0043166		Tray, Slide-Out/Tilt, Adj. Ht., 33" W x 22" L, (42" W. Compt.)	2
			Location - TBD	
			Qty, - 02	
188	0043167		Tray, Slide-Out/Tilt, Adj. Ht., 33" W x 42" L, (42" W. Compt.)	2
			Location - TBD	
			Qty, - 02	
189	0045068		Bumper, Rear Non-Walk-In 13.00" D x 90.00" W	1
190	0793822		Not Required, Water Tank, Rescue	1
191	0023410		Not Required, Overflow	1
192	0028107		Not Required, Foam Cell Modification	1
193	0553729		Not Required, Restraint, Water Tank, Heavy Duty	1
194	0690023		Wall, Rear, Smooth Aluminum	1
195	0023535		Tow Hooks, ENCORE	1
196	0689549		Lights, Compt, Pierce LED, Dual Light Strips, Each Side of Door	9
			Location - ALL COMPARTMENTS	
			Qty, - 09	
197	0645987		Tray, Floor Mounted, Slide-Out, 500lb, 31.00" W x 38.00" D, Rear Compt, Encore	1
			Qty, - 01	
			location - TBD	
198	0646072		Tray, Floor Mounted, Slide-Out, 500lb, 2.00" Sides, 22.00" Deep, Encore	3
			Qty, - 03	
			location - TBD	
199	0646064		Tray, Floor Mounted, Slide-Out, 500lb, 62.00" Deep, Encore	2
			Qty, - 02	
			location - TBD	
200	0004016		Rub Rail, Aluminum Extruded, Side of Body	1

Line	Option	Type	Option Description	Qty
201	0004024		Fender Crowns, Rear, S/S	1
202	0519849		Not Required, Hose, Hard Suction	1
203	0044229		No Extension Ladder Req'd	1
204	0074231		No Roof Ladder Req'd	1
205	0074248		Not Required, Folding Ladder	1
206	0540739		Not Required, Rack, Equipment Storage, Rear Compt	1
207	0014381		Not Required, Rear Step (No rear door)	1
208	0796159		Not Required, Pump, Rescue	1
209	0012216		No Seal/Packing Required	1
210	0012690		Not Required, Trans, Pump	1
211	0669703		Not Required, Pumping Mode	1
212	0024484		Not Required, Pump Shift	1
213	0046295		Transmission Lock-up, Not Req'd, NO PUMP	1
214	0046296		Not Required, Auxiliary Cooling System, NO PUMP	1
215	0046283		Not Required, Transfer Valve, NO PUMP	1
216	0024513		Not Required, Intake Relief Valve	1
217	0046403		No Relief Valve Req'd, No Pump	1
218	0012336		No Pump Primer Req'd	1
219	0012816		Not Required, Pump Manuals	1
220	0090789		Not Required, Plumbing, No Pump	1
221	0046371		Not Required, No Plumbing or Foam System	1
222	0796254		No Main Inlet Required, Rescue No Pump	1
223	0089389		No Valves, (No Pump)	1
224	0055600		Not Required, Auxiliary Inlet, Left Side	1
225	0029147		Not Required, Inlet, Right Side	1
226	0074685		Not Required, Inlet Installation	1
227	0064700		Not Required, Inlet Control	1
228	0681723		No Bleeder Valve, No Pump	1
229	0681730		Not Required, Tank to Pump, No Pump	1
230	0074900		Not Required, Tank Fill	1
231	0551181		Not Required, Outlet, Left Side, Rescue	1
232	0092570		Not Required, Outlets, Left Side Additional	1
233	0021143		Not Required, Outlet, Right Side	1
234	0092571		Not Required, Outlets, Right Side Additional	1
235	0545326		Not Required, Outlet, Large Diameter, No Pump	1
236	0092572		Not Required, Outlet, Front	1
237	0551179		Not Required, Discharge Caps	1
238	0089391		Valve, Bleeder - None Req'd, (No Pump)	1
239	0055095		Not Required, Elbow, Left Side Outlets, 2.50"	1
240	0021134		Not Required, Elbow, Right Side Outlets	1
241	0089394		Not Required, Outlet Control, No Pump	1
242	0519936		Not Required, 1.50" Crosslays, Rescue	1
243	0029260		Not Required, Speedlays	1
244	0500535		Not Required, Hose Restraint, Crosslay/Speedlay	1
245	0046372		Not Required, Foam System, Pump, or Plumbing	1
246	0012126		Not Required, CAF Compressor	1
247	0552517		Not Required, Refill, Foam Tank	1
248	0042573		Not Required, Foam System Demonstration	1
249	0045465		Not Required, Foam Tanks	1
250	0091110		Not Required, Foam Tank Drain	1
251	0091079		Not Required, Foam Tank #2	1
252	0091112		Not Required, Foam Tank Drain	1
253	0518339		Not Required, Pump House, Rescue	1
254	0000261		Not Required, Pump Panel Layout	1
255	0030701		Not Required, Material, Pump Panels, No Panel	1
256	0046495		Not Required, Pump Access, No Pump	1
257	0092531		Not Required, Pump House Structure	1
258	0522609		Not Required, No Chassis Engine Gauges @ Pump Panel	1
259	0046400		Throttle, Engine Not Req'd, No Pump / Skid Pump	1
260	0046378		Not Required, Gauges, Vac/Pressure, No Pump	1

Line	Option	Type	Option Description	Qty
261	0046375		Not Required, Gauges, No Pump	1
262	0035650		Not Required, Water Level Gauge	1
263	0006774		Not Required, Foam Level Gauge	1
264	0046280		Not Required, Light Shield, No Pump	1
265	0508022		Air Horns, (2) Hadley, 6" Round, Below Bumper	1
266	0606835		Location, Air Horns, Bumper, Each Side, Outside Frame, Outboard (Pos #1 & #7)	1
267	0016065		Control, Air Horn, Horn Ring, PS Chrome Push Button	1
268	0525667		Siren, Whelen 295SLSA1, 100 or 200 Watt	1
269	0510206		Location, Elect Siren, Recessed Overhead In Console	1
			Location, Elec Siren - Overhead, DS Inside Sw Pnl	
270	0076156		Control, Elec Siren, Head Only	1
271	0581959		Speaker, Whelen SA315P w/Pierce Polished Stainless Steel Grille, 100 watt	1
			Qty, Speakers - 1	
			Connection, Speaker - siren head	
272	0548352		Location, Recessed in the Front Bumper, Driver Side	1
273	0607820		Lightbar, Whelen, Freedom IV-V, 81", R_R_R_R__R_R_R_R	1
			Filter, Whl Freedom Ltbrs - No Filters	
274	0617868		Light, GTT, 794*M LED Multimode Opticom Emitter on Cab Roof, 2100 Controller Rev	1
			Location - ROOF, best location	
			Opticom Priority - b) High	
			Opticom Activation - Cab Switch & E-Master	
			Momentary Opticom Activation - no activation	
275	0016380		No Additional Lights Req'd, Side Zone Upper	1
276	0540384		Lights, Front Zone, Whelen M6*C LED, Clear Lens, in Common Bzl	1
			Color, Lt DS Front - Red	
			Color, Lt PS Front - Red	
277	0653937		Flasher, Headlight Alternating	1
			Headlt flash deactivation - a)w/high beam	
278	0540692		Lights, Side Zone Lower, Whelen M6*C LED, Clear Lens, 3pr, Ovr 25	1
			Location, Lights Front Side - b)each side bumper	
			Color, Lt Side Front - Red	
			Color, Lt Side Middle - Red	
			Color, Lt Side Rear - Red	
			Location, Lights Mid Side - Rearward of Crew Cab Doors	
			Location, Lights Rear Side - Between Tandem	
279	0564655		Lights, Rear Zone Lower, Whelen M6*C LED, Clear Lens, For Tail Lt Housing	1
			Color, Lt DS Rear - r) DS Rear Lt Red	
			Color, Lt PS Rear - r) PS Rear Lt Red	
280	0541155		Lights, Rear/Side Up Zone, Whelen M9*C LED, Clear Lens 4lts	1
			Color, Lt, Side Rear Upper DS - Side Rear Upper Red	
			Color, Lt, Side Rear Upper PS - Side Rear Upper Red	
			Color, Lt, Rear Upper DS - r) DS Rear Upper Red	
			Color, Lt, Rear Upper PS - r) PS Upper Rear Red	
281	0006551		Not Required, Lights, Rear Upper Zone Blocking	1
282	0796154		Light, Traffic Directing, Whelen TAL65, 36.01" Long LED, Rescue	1
			Activation, Traffic Dir L - Control Head Only	
283	0529858		Location, Traf Dir Lt, Recessed Within Trdplt Step	1
284	0530282		Location, Traf Dir Lt Controller, Overhead Switch Panel DS Right End	1
285	0006646		Electrical System, 120/240VAC, General Design	1
286	0050838		Generator, Onan 15kW, Single Phase, PTO Drive (15,000W Cont. Rating)	1
287	0016645		Location, PTO Generator, Between the Frame Rails	1
288	0016752		Starting Sw, Truck Engine Powered Gen, Cab Sw Pnl	1
289	0016757		Not Required, Remote Start, Generator	1
290	0016740		Not Required, Fuel System	1
291	0016767		Not Required, Oil Drain Extension, Generator	1
292	0016771		Not Required, Routing Exhaust, Generator	1
293	0036738		Circuit Breaker Panel, Included With PTO Generator	1
			Location, Circuit Breaker Panel - D4, Forward Wall High	
294	0092381		Guard, Splash Guard for PTO Generator Between the Frame Rails, Stainless Steel	1
295	0689685		Light, FRC, 120V, SPA600-K20-603 LED Floodlt, Tripod 1st	2
			Location, 120/240 Volt Lt - PS & DS rear	

Line	Option	Type	Option Description	Qty
295			Qty, 120/240 Volt Light - 2	
			Type of Electrical Plug - d) 20 amp 120 volt twist-lock	
296	0645272		Light Twr, W-B Chf NS2.3-600 WHL, 4-PFP2 120AC Lts Cld 7.5'	1
			Color, Tower, Wlb - White Paint	
297	0639593		Location, Light Tower, Rescue Body Roof, Forward	1
298	0617750		Controller, Light Tower, W-B, Wired Handheld, E-STOP Chf, Chf Pr, Pow Pr	1
299	0664791		Location, Light Tower Controller, Driver's Side Front Body Compartment	1
300	0607099		Reel, Elect Cable, Hannay, 1600, (3) Wire (HDR/Rescue)	1
			Qty, Cord Reels - 1	
			Reel Guide - a) Nylatron guide	
			Location - TBD	
			Finish, Reel - Painted Gray	
301	0006828		Cord, Electric, 10/3 Yellow, 3 Wire	1
			Lengths of Elect Cord - 1	
			Feet of Yellow Cord - c)150	
			Connection, Cord - Hubbell 20A 120V Twst Lock	
302	0644017		Receptacle, 20A 120V 3-Pr 3-Wr TL, L5-20R, Wtrprf Gen	2
			Location, Receptacles - Rear Fender Panels	
			Qty, - 02	
303	0519934		Not Required, Brand, Hydraulic Tool System	1
304	0649753		Not Required, PTO Driven Hydraulic Tool System	1
305	0649750		Not Required, Hydraulic Reels	1
306	0007150		Bag of Nuts and Bolts	1
			Qty, Bag Nuts and Bolts - 1	
307	0602524		NFPA Required Loose Equipment, Special Services, NFPA 2016, Provided by Fire Dept	1
308	0796255		Not Required, Soft Suction, Rescue No Pump	1
309	0602533		Extinguisher, Dry Chemical, Special Services, NFPA 2016, Provided by Fire Dept	1
310	0602351		Extinguisher, 2.5 Gal. Press Water, Special Service, NFPA 2016, Prov by Fire Dept	1
311	0559573		Paint, Single Color, Custom	1
			Paint Color, Predefined - #10 white	
312	0646897		Paint Chassis Frame Assy, E-Coat, Standard	1
			Paint Color, Frame Assembly, Predefined - Black	
313	0693797		No Paint Required, Aluminum Front Wheels	1
314	0687653		Paint, Rear Wheels, Single Axle, Alum-Stl	1
			Paint, Wheels - Black #101	
315	0087992		Compartment, Unpainted, Natural Finish, ENCORE	1
316	0544111		Reflective Band, 10"	1
			Color, Reflect Band - A - b) red	
317	0007356		Reflective across Cab Face	1
318	0536955		Stripe, Chevron, Rear, Diamond Grade, Rescue	1
			Color, Rear Chevron DG - fluorescent yellow green	
319	0027341		Jog, In Reflective Stripe, Single or Multiple	1
			Qty, - 1	
320	0065687		Stripe, Reflective, Cab Doors Interior	1
			Color, Reflective - a) white	
321	0027372		Lettering Specifications, (GOLD STAR Process)	1
322	0686428		Lettering, Gold Leaf, 3.00", (41-60)	1
			Outline, Lettering - Outline and Shade	
323	0529225		Manuals, Two (2) CD, Fire Apparatus Parts, Custom Chassis	1
324	0531636		Manual, Two (2) CD, Chassis Service, Custom	1
325	0531638		Manual, Two (2) CD, Chassis Operation, Custom	1
326	0030008		Warranty, Basic, 1 Year, Apparatus, WA0008	1
327	0595239		(No Pick Required)	1
328	0696698		Warranty, Engine, Cummins, 5 Year, WA0181	1
329	0684952		Warranty, Steering Gear, TRW Ross TAS, 1 Year WA0202	1
330	0596017		Warranty, Frame, 50 Year, Custom Chassis, WA0013	1
331	0610471		Warranty, Axle, Eaton/Dana, 5 Year/100,000 Mile, Parts and Labor	1
332	0610485		Warranty, Axle, Eaton/Dana, 5 Year/100,000 Mile, Parts and Labor	1
333	0652758		Warranty, ABS Brake System, 3 Year, Meritor Wabco, WA0232	1
334	0019914		Warranty, Structure, 10 Year, Custom Cab, WA0012	1
335	0595813		Warranty, Paint, 10 Year, Cab, Pro-Rate, WA0055	1

Line	Option	Type	Option Description	Qty
336	0647720		Warranty, Pierce LED Strip Lights, WA0203	1
337	0046369		Warranty, 5-year EVS Transmission, Standard Custom, WA0187	1
338	0685945		Warranty, Transmission Cooler, WA0216	1
339	0033401		Not Required, Tank Warranty	1
340	0596022		Warranty, Structure, 10 Year, Encore Rescue, WA0016	1
341	0693127		Warranty, Gortite, Roll-up Door, 6 Year, WA0190	1
342	0012599		Warranty, Pump, Not Required	1
343	0046370		Not Required, Warranty, No Plumbing	1
344	0641372		Warranty, Foam System, Not Available	1
345	0642011		Warranty, Onan Generator, 5 Year, Hydraulic, Protec	1
346	0595820		Warranty, Paint, 10 Year, Body, Pro-Rate, WA0057	1
347	0595421		Warranty, Goldstar, 3 Year, Apparatus, WA0018	1
348	0683627		Certification, Vehicle Stability, CD0089	1
349	0608289		Certification, Engine Installation, Saber FR/Enf, Cummins L9, 2017	1
350	0686786		Certification, Power Steering, CD0098	1
351	0631980		Certification, Cab Integrity, Saber FR/Enforcer, CD0130	1
352	0631973		Certification, Cab Door Durability, Saber FR/Enforcer, CD0137	1
353	0631978		Certification, Windshield Wiper Durability, Saber FR/Enforcer, CD0132	1
354	0556828		Certification, Electric Window, Not Available	1
355	0631977		Certification, Seat Belt Anchors and Mounting, Saber FR/Enforcer, CD0134	1
356	0631975		Certification, Cab Defroster, Saber FR/Enforcer	1
357	0674479		Certification, Not Available, Cab Air Conditioning Performance	1
358	0545073		Amp Draw Report, NFPA Current Edition	1
359	0002758		Amp Draw, NFPA/ULC Radio Allowance	1
360	0799248		Appleton/Florida BTO	1
361	0000030		ENCORE	1
362	0000012		PIERCE CHASSIS	1
363	0004713		ENGINE, OTHER	1
364	0046395		EVS 3000 Series TRANSMISSION	1
365	0020037		NO PUMP	1
366	0020013		NO WATER TANK	1
367	0028047		NO FOAM SYSTEM	1
368	0046282		Not Required, Control Panel, No Pump	1
369	0020007		AKRON VALVES	1
370	0020015		ABS SYSTEM	1
371	0658751		Manufacturing Attribute	1