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**CITY OF PITTSBURG, KANSAS**  
**COMMISSION AGENDA**  
**Tuesday, July 11, 2023**  
**5:30 PM**

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**CALL TO ORDER BY THE MAYOR:**

- a. Flag Salute Led by the Mayor
- b. Public Input

**CONSENT AGENDA (ROLL CALL VOTE):**

- a. Approval of the June 27, 2023, City Commission Meeting minutes.
- b. Approval of the Appropriation Ordinance for the period ending July 11, 2023, subject to the release of HUD expenditures when funds are received.

**HEARING:**

- a. MIZE NUISANCE ABATEMENT - In accordance with Pittsburg City Code Section 50-38, Bryan Mize has requested a hearing before the Governing Body regarding a land nuisance on his property, located at 209 East 15<sup>th</sup> Street. **Following the Hearing, take that action deemed appropriate.**

**CONSIDER THE FOLLOWING:**

- a. FIRE APPARATUS PURCHASE - Consider staff recommendation to waive the City's formal bid process to allow the purchase of a Pierce Fire Apparatus from sole source supplier Conrad Fire Equipment, of Olathe, Kansas, with funding from the Public Safety Sales Tax in the amount of \$945,192.83. **Approve or disapprove the recommendation and, if approved, authorize the Mayor to sign the necessary documents on behalf of the City.**
- b. FIRE APPARATUS PURCHASE FINANCING - Staff will provide a verbal recommendation regarding financing for the purchase of a Pierce Fire Apparatus in the amount of \$945,192.83. **Approve or disapprove staff recommendation and, if approved, authorize the Mayor to sign the necessary lease/purchase documents on behalf of the City.**

**CITY OF PITTSBURG, KANSAS**  
**COMMISSION AGENDA**  
**Tuesday, July 11, 2023**  
**5:30 PM**

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- c. ORDINANCE NO. G-1349 - Consider approval of Ordinance No. G-1349, creating Article VII, Sections 62-166 through 62-171, in Chapter 62 of the Pittsburg City Code for the purpose of creating a Neighborhood Advisory Council, and determining the membership, duties and functions of said Neighborhood Advisory Council, also referred to as the NAC. **Approve or disapprove of Ordinance No. G-1349 and, if approved, authorize the Mayor to sign the Ordinance on behalf of the City.**

**NON-AGENDA REPORTS & REQUESTS:**

**THE MAYOR'S MOMENT:**

**ADJOURNMENT**

OFFICIAL MINUTES  
OF THE MEETING OF THE  
GOVERNING BODY OF THE  
CITY OF PITTSBURG, KANSAS  
June 27, 2023

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A Regular Session of the Board of Commissioners was held at 5:30 p.m. on Tuesday, June 27, 2023, in the City Commission Room, located in the Law Enforcement Center, 201 North Pine, with Mayor Ron Seglie presiding and the following members present: Cheryl Brooks, Stu Hite, Dawn McNay and Chuck Munsell.

Mayor Seglie led the flag salute.

INVOCATION - Pastor Jim French, on behalf of the Countryside Christian Church, provided an invocation.

PUBLIC INPUT – Jerry Lomshek, 304 South Chicopee Road, Chicopee, Kansas, encouraged the Governing Body to support the enhancement of the current center alignment of the 69 Bypass, as opposed to the proposed western alignment.

APPROVAL OF MINUTES – On motion of McNay, seconded by Hite, the Governing Body approved the June 13, 2023, City Commission Meeting minutes as presented. Motion carried.

APPROPRIATION ORDINANCE – On motion of McNay, seconded by Hite, the Governing Body approved the Appropriation Ordinance for the period ending June 27, 2023, subject to the release of HUD expenditures when funds are received. Motion carried with the following roll call vote: Yea: Brooks, Hite, McNay, Munsell and Seglie.

AGREEMENT - SPRINT SPECTRUM REALTY COMPANY, LLC – On motion of McNay, seconded by Munsell, the Governing Body tabled consideration of the Third Amendment to the Antenna Collocation Lease Agreement between the City of Pittsburg and Sprint Spectrum Realty Company, LLC, for space on the tower at 420 East 22<sup>nd</sup> Street. Motion carried.

AIRPORT AVGAS REFUELER PURCHASE – On motion of McNay, seconded by Brooks, the Governing Body approved staff request to waive the City's formal bid process and purchase a refueler for use at the Atkinson Municipal Airport from Garsite Aviation Refueling Equipment, of Kansas City, Kansas, in the amount of \$178,000, and authorized the Mayor to sign the necessary documents on behalf of the City. Motion carried.

ORDINANCE NO. G-1349 – On motion of Hite, seconded by McNay, the Governing Body tabled consideration of Ordinance No. G-1349, creating Article VII, Sections 62-166 through 62-171, in Chapter 62 of the Pittsburg City Code for the purpose of creating a Neighborhood Advisory Council, and determining the membership, duties and functions of said Neighborhood Advisory Council. Motion carried.

THE MAYOR'S MOMENT – Mayor Seglie acknowledged those who are working to clean up Pittsburg and encouraged everyone to join in the effort.



OFFICIAL MINUTES  
OF THE MEETING OF THE  
GOVERNING BODY OF THE  
CITY OF PITTSBURG, KANSAS  
June 27, 2023

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ADJOURNMENT: On motion of McNay, seconded by Hite, the Governing Body adjourned the meeting at 5:49 p.m. Motion carried.

\_\_\_\_\_  
Ron Seglie, M.D., Mayor

ATTEST:

\_\_\_\_\_  
Tammy Nagel, City Clerk

VENDOR SET: 99 City of Pittsburg, KS  
 BANK: \* ALL BANKS  
 DATE RANGE: 6/21/2023 THRU 7/04/2023

VENDOR I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
C-CHECK	VOID CHECK	V	6/22/2023			193782		
C-CHECK	VOID CHECK	V	6/22/2023			193783		
C-CHECK	VOID CHECK	V	6/22/2023			193784		
C-CHECK	VOID CHECK	V	6/22/2023			193785		
C-CHECK	VOID CHECK	V	6/29/2023			193819		
C-CHECK	VOID CHECK	V	6/29/2023			193820		

## \* \* T O T A L S \* \*

NO	INVOICE AMOUNT	DISCOUNTS	CHECK AMOUNT
REGULAR CHECKS:	0	0.00	0.00
HAND CHECKS:	0	0.00	0.00
DRAFTS:	0	0.00	0.00
EFT:	0	0.00	0.00
NON CHECKS:	0	0.00	0.00

VOID CHECKS:	6 VOID DEBITS	0.00		
	VOID CREDITS	0.00	0.00	0.00

TOTAL ERRORS: 0

NO	INVOICE AMOUNT	DISCOUNTS	CHECK AMOUNT
VENDOR SET: 99 BANK: * TOTALS:	6	0.00	0.00
BANK: * TOTALS:	6	0.00	0.00

VENDOR I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
0224	KDOR							
I-202306234570	MAY 2023 SALES TAX UTILITY	D	6/27/2023	7,731.41		000000		
I-MAY 2023	MAY 2023 SALES TAX	D	6/27/2023	3,212.61		000000		10,944.02
0321	KP&F							
I-1707647	06-23-2023 PAYROLL	D	6/23/2023	48,783.87		000000		48,783.87
0728	ICMA							
I-06-23-2023 PAY	06-23-2023 PAYROLL	D	6/23/2023	1,366.57		000000		1,366.57
1050	KPERS							
I-1707643	06-23-2023 PAYROLL	D	6/23/2023	1,888.47		000000		
I-1707645	06-23-2023 PAYROLL	D	6/23/2023	45,348.46		000000		
I-1707648	06-23-2023 PAYROLL	D	6/23/2023	122.71		000000		47,359.64
3079	COMMERCE BANK							
I-129-13601-23	P-CARDS DUE 07-03-2023	D	6/26/2023	91,130.25		000000		91,130.25
6415	GREAT WEST TANDEM KPERS 457							
I-1101341367	06-23-2023 PAYROLL	D	6/23/2023	4,372.00		000000		
I-1101341982	06-23-2023 PAYROLL	D	6/23/2023	329.00		000000		4,701.00
7290	DELTA DENTAL OF KANSAS INC							
I-202306264572	CLAIMS PAID 6-16 TO 6-22-23	D	6/23/2023	1,660.80		000000		1,660.80
7290	DELTA DENTAL OF KANSAS INC							
I-202306304613	CLAIMS PAID 6-23 TO 6-29-23	D	6/30/2023	2,900.60		000000		2,900.60
8526	HEALTH PLANS, INC							
I-06-23-2023 PAY	06-23-2023 PAYROLL	D	6/23/2023	4,331.93		000000		
I-202306264576	CLAIMS PAID 6-14 TO 6-20-23	D	6/23/2023	85,160.92		000000		89,492.85
8526	HEALTH PLANS, INC							
I-202306304612	CLAIMS PAID 6-21 TO 6-29-23	D	6/30/2023	37,429.69		000000		37,429.69
8241	CLARENCE L. GARMAN							
I-36320	B.CARDS: MALACHI COOK	E	6/23/2023	50.00		019067		50.00
8275	ADCOMP SYSYEMS INC							
I-23541	JULY 2023 FEES	E	6/23/2023	80.00		019068		80.00
8467	WASTE CORPORATION OF KANSAS, L							
I-BL0000006709	SW SEPTIC	E	6/23/2023	512.19		019069		512.19

VENDOR SET: 99 City of Pittsburg, KS

BANK: 80144 BMO HARRIS BANK

DATE RANGE: 6/21/2023 THRU 7/04/2023

VENDOR I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
8560	SOUTHERN UNIFORM AND TACTICAL,							
I-152012-1	MISC UNIFORM SUPPLIES	E	6/23/2023	125.98		019070		
I-152249-1	MISC UNIFORM SUPPLIES	E	6/23/2023	288.96		019070		414.94
8699	SCHILTZ LAWN AND GARDEN LLC							
I-202306224561	HOLSTAR	E	6/23/2023	199.99		019071		199.99
8724	ASSURED PARTNERS CAPITAL, INC							
I-63775	PROP & LIAB INS JULY 2023	E	6/23/2023	3,750.00		019072		
I-65157	KIDDIELAND GEN LIAB	E	6/23/2023	5,000.00		019072		8,750.00
8762	TG TECHNICAL SERVICES LLC							
I-01560	3-4 GAS MONITOR SERVICE/FILTER	E	6/23/2023	279.36		019073		279.36
0046	ETTINGERS OFFICE SUPPLY							
I-554932-0	PD:DESK	E	6/23/2023	2,380.80		019074		
I-555461-0	PD: MISC OFFICE SUPPLIES	E	6/23/2023	129.36		019074		
I-555573-0	MISC OFFICE SUPPLIES	E	6/23/2023	111.98		019074		2,622.14
0054	JOPLIN SUPPLY COMPANY							
I-S4777867.001	HYDRANT EXTENSION	E	6/23/2023	3,012.78		019075		
I-S4780190.001	SADDLE GASKET/STRAP	E	6/23/2023	927.15		019075		
I-S4780196.001	SADDLE GASKET	E	6/23/2023	823.60		019075		4,763.53
0068	BROOKS PLUMBING LLC							
I-131501	4 OAKS RESTROOM	E	6/23/2023	2,237.51		019076		2,237.51
0087	FORMS ONE, LLC							
I-059482	WOOD DESK NAME SIGNS	E	6/23/2023	344.28		019077		344.28
0101	BUG-A-WAY INC							
I-123792	1506 N WALNUT	E	6/23/2023	55.00		019078		
I-123795	303 MEMORIAL DR	E	6/23/2023	55.00		019078		
I-123796	1301 N WALNUT	E	6/23/2023	50.00		019078		160.00
0105	PITTSBURG AUTOMOTIVE							
I-986263	FILTERS	E	6/23/2023	16.00		019079		
I-986597	AW32-5 GAL	E	6/23/2023	43.99		019079		
I-986768	BENCH SEAT COVER	E	6/23/2023	69.99		019079		
I-986898	ADAPTERS	E	6/23/2023	17.70		019079		
I-986970	FILTERS	E	6/23/2023	47.24		019079		
I-987099	FILTERS	E	6/23/2023	307.84		019079		
I-987105	FILTERS	E	6/23/2023	23.55		019079		
I-987735	SILICONE	E	6/23/2023	25.99		019079		
I-988204	BELTS	E	6/23/2023	516.00		019079		
I-988294	ADAPTER & CHUCK	E	6/23/2023	16.90		019079		
I-988327	SUPER HC IND V-BELT	E	6/23/2023	412.98		019079		
I-988356	HOSE FITTINGS	E	6/23/2023	54.47		019079		1,552.65

VENDOR SET: 99 City of Pittsburg, KS

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DATE RANGE: 6/21/2023 THRU 7/04/2023

VENDOR I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
0133	JIM RADELL CONSTRUCTION COMPAN							
I-839	SEWER TAP REPAIR-1111 E 8TH	E	6/23/2023	1,982.00		019080		
I-840	VERIFY WATER MAIN-FRANKLIN RD	E	6/23/2023	2,850.00		019080		4,832.00
0142	HECKERT CONSTRUCTION CO INC							
I-7680	ASPHALT	E	6/23/2023	9,676.05		019081		
I-7683	ASPHALT	E	6/23/2023	442.83		019081		10,118.88
0364	CRAWFORD COUNTY SHERIFF'S DEPA							
I-202306224557	APRIL 2023 PRISONERS HELD	E	6/23/2023	4,250.00		019082		4,250.00
0534	TYLER TECHNOLOGIES INC							
I-130-137364	2023 NEW WORLD MAINT	E	6/23/2023	117,084.79		019083		117,084.79
0577	KANSAS GAS SERVICE							
I-202306154548	WWTP: MONTHLY SVC	E	6/23/2023	446.11		019084		
I-202306154549	MEM AUD: MONTHLY SVC	E	6/23/2023	125.74		019084		
I-202306154550	ASPHALT PLANT: MONTHLY SVC	E	6/23/2023	79.69		019084		
I-202306224559	MONTHLY SERVICE	E	6/23/2023	3,546.92		019084		
I-202306224560	AIRPORT MONTHLY SERVICE	E	6/23/2023	42.04		019084		4,240.50
0627	BOETTCHER SUPPLY INC							
I-1225984-1	FILTERS & MISC	E	6/23/2023	243.44		019085		243.44
0631	TRI-STATE BUILDING & SUPPLY CO							
I-22751	PAIROT HEAD LIQ-DUMPSTER PAD	E	6/23/2023	791.16		019086		791.16
0659	PAYNES INC							
I-122208	MISC PARTS MACHINED	E	6/23/2023	317.73		019087		317.73
0753	COUNTY OF CRAWFORD							
I-2023-0307	PD: EVALUATION	E	6/23/2023	150.00		019088		
I-202306214556	2023 LIQUOR TAX DISTRIBUTION	E	6/23/2023	12,500.00		019088		12,650.00
1075	COASTAL ENERGY CORP							
I-201932	MC30	E	6/23/2023	513.75		019089		
I-201933	SS-1H	E	6/23/2023	3,136.80		019089		3,650.55
1109	QA BALANCE SERVICES INC							
I-14645	YEARLY SERVICE	E	6/23/2023	1,645.00		019090		1,645.00
1478	KANSASLAND TIRE #1828							
I-29661	410/350-5 TR87 Q10	E	6/23/2023	24.24		019091		24.24

VENDOR I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
1767	I-202306224562	KIM VOGEL MILAGE REIMBURSEMENT	E 6/23/2023	176.25		019092		176.25
1792	I-006359	B&L WATERWORKS SUPPLY, LLC CLAMP-GASKET-BOLT KIT	E 6/23/2023	3,072.25		019093		3,072.25
2186	I-1044474 I-1044475	PRODUCERS COOPERATIVE ASSOCIAT PARKS MAINT. GAS & OIL PARKS MAINT. GAS & OIL	E 6/23/2023 E 6/23/2023	2,106.00 1,546.29		019094 019094		3,652.29
2767	I-BSW471232	BRENNTAG SOUTHWEST, INC LIQUID CHLORINE	E 6/23/2023	3,992.00		019095		3,992.00
2960	I-2360184192 I-2360185134 I-2360185154 I-2360185560 I-236018562	PACE ANALYTICAL SERVICES LLC LAB FEES 2023 LAB FEES 2023 LAB FEES 2023 LAB FEES 2023 LAB FEES 2023	E 6/23/2023 E 6/23/2023 E 6/23/2023 E 6/23/2023 E 6/23/2023	250.00 250.00 250.00 662.30 539.00		019096 019096 019096 019096 019096		1,951.30
2994	I-46750-1	COMMERCIAL AQUATIC SERVICE INC POOL CHEMICALS 2023	E 6/23/2023	456.35		019097		456.35
5014	I-42414	MID-AMERICA SANITATION INC. 303 MEMROIAL DR	E 6/23/2023	850.66		019098		850.66
5640	I-INV0106888	WELLPATH LLC INMATE HEALTH SERVICES	E 6/23/2023	90.00		019099		90.00
5855	I-8004122497	STERICYCLE, INC. MENGHINI LAW OFFICE SHRED	E 6/23/2023	118.60		019100		118.60
5931	I-06-16-23	VOGEL HEATING & COOLING INC CITYHALL ROOFTOP UNIT FREON	E 6/23/2023	243.00		019101		243.00
6772	I-38581	INDUSTRIAL CRATING INC KIDDIE CARPET	E 6/23/2023	2,300.00		019102		2,300.00
7151	I-202306224558	QUADIENT FINANCE USA INC CITY HALL POSTAGE	E 6/23/2023	1,000.00		019103		1,000.00
7284	I-INV-0004123192	TRANSYSTEMS CORPORATION EAST QUINCY STREET PROJ	E 6/23/2023	29,479.55		019104		29,479.55

VENDOR I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
7418	NEWEDGE SERVICES, LLC							
I-2988	CITYWORKS TRAINING	E	6/23/2023	3,120.00		019105		3,120.00
7739	COMMUNITIES IN SCHOOLS OF MID							
I-202306214554	2023 LIQUOR TAX DISTRIBUTION	E	6/23/2023	2,500.00		019106		2,500.00
8206	LINDE INC							
I-36529002	LIQUID CARBON DIOXIDE	E	6/23/2023	3,904.00		019107		3,904.00
8309	MISSISSIPPI LIME COMPANY							
I-1675402	QUICKLIME CALCIUM OXIDE	E	6/23/2023	8,774.29		019108		8,774.29
8605	WOODRIVER ENERGY LLC							
I-340837	MAY 2023 SERVICE	E	6/23/2023	819.73		019109		819.73
8680	POINT FORWARD INC.							
I-1000	3RD PAYMENT	E	6/23/2023	50,000.00		019110		50,000.00
7959	ALL ABOARD FOUNDATION							
I-471	JUNE 2023 LEASE	E	6/27/2023	2,598.56		019111		
I-472	JULY 2023 LEASE	E	6/27/2023	2,598.56		019111		5,197.12
6595	AMAZON.COM, INC							
I-202306264573	VARIOUS ELECTRONICS	E	6/27/2023	17,226.28		019112		17,226.28
8211	UMB BANK N.A.							
I-202306294588	TDD JUNE 2023	E	6/30/2023	16,190.36		019113		16,190.36
8236	NORTHGATE ASSOCIATES LLC							
I-202306294590	JUNE 2023 CID	E	6/29/2023	7,875.43		019114		7,875.43
8737	EK ENTERPRISE							
I-177	PIZZA FOR PARKS CONCESSIONS	E	6/30/2023	440.00		019115		440.00
0038	LEAGUE OF KANSAS MUNICIPALITIE							
I-6723	FROMAN: BUILDING VITAL COMMUNI	E	6/30/2023	75.00		019116		75.00
0046	ETTINGERS OFFICE SUPPLY							
I-555550-0	MISC OFFICE SUPPLIES	E	6/30/2023	49.42		019117		
I-555570-0	ETTINGERS OFFICE SUPPLY	E	6/30/2023	22.97		019117		72.39
0055	JOHN'S SPORT CENTER, INC.							
I-19976	BOOTS: ZACH SHARP	E	6/30/2023	141.30		019118		
I-19977	BOOTS: BEN JAMES	E	6/30/2023	150.00		019118		291.30

VENDOR SET: 99 City of Pittsburgh, KS

BANK: 80144 BMO HARRIS BANK

DATE RANGE: 6/21/2023 THRU 7/04/2023

VENDOR I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
0105	PITTSBURG AUTOMOTIVE							
I-987310	IDLE AIR CONTROL VALVE	E	6/30/2023	50.80		019119		
I-987311	HYDRAGRUCULTURAL FLUID	E	6/30/2023	42.99		019119		
I-987406	AIR FILTER	E	6/30/2023	100.01		019119		
I-987564	CAP SCREW	E	6/30/2023	1.96		019119		
I-987855	DIAPHRAGM T-30	E	6/30/2023	7.64		019119		
I-987956	FUEL FILTER	E	6/30/2023	9.34		019119		
I-988029	FORD CLIP	E	6/30/2023	4.88		019119		
I-988167	AIR FILTER	E	6/30/2023	48.00		019119		
I-988423	BATTERY	E	6/30/2023	136.62		019119		
I-988603	SWITCH	E	6/30/2023	17.58		019119		
I-988754	PITTSBURG AUTOMOTIVE	E	6/30/2023	3.50		019119		
I-988766	DODGE CHARGER VALVE	E	6/30/2023	14.50		019119		
I-988824	NAF 2.5 DEF	E	6/30/2023	25.98		019119		
I-989301	LUCAS HUB OIL	E	6/30/2023	13.69		019119		477.49
0142	HECKERT CONSTRUCTION CO INC							
I-7690	ASPHALT	E	6/30/2023	11,496.70		019120		
I-7692	ASPHALT	E	6/30/2023	10,894.52		019120		
I-7693	ASPHALT	E	6/30/2023	12,262.24		019120		
I-7694	ASPHALT	E	6/30/2023	10,912.89		019120		
I-7695	ASPHALT	E	6/30/2023	20,299.83		019120		
I-7696	ASPHALT	E	6/30/2023	18,784.64		019120		
I-7697	ASPHALT	E	6/30/2023	17,314.48		019120		
I-7698	ASPHALT	E	6/30/2023	11,192.73		019120		
I-7699	ASPHALT	E	6/30/2023	2,943.13		019120		
I-7705	ASPHALT	E	6/30/2023	1,471.10		019120		117,572.26
0317	KUNSHEK CHAT & COAL CO, INC.							
I-17365	3/4 CLEAN ROCK	E	6/30/2023	1,615.20		019121		1,615.20
0409	WISEMAN'S DISCOUNT TIRE INC							
I-366556	STARFIRE SOLARUS	E	6/30/2023	113.95		019122		
I-366562	AIR LOCK TURF	E	6/30/2023	180.90		019122		294.85
0438	PAUL KEYS							
I-202306294596	PERMIT REFUND	E	6/30/2023	30.00		019123		30.00
0525	3M							
I-9414238875	ELECTRO CUT FILM	E	6/30/2023	648.23		019124		648.23
0659	PAYNES INC							
I-122243	BACK HOE BOOM	E	6/30/2023	190.00		019125		
I-122347	PAYNES INC	E	6/30/2023	570.00		019125		
I-36743	AIR FILTER	E	6/30/2023	51.58		019125		811.58



VENDOR SET: 99 City of Pittsburg, KS

BANK: 80144 BMO HARRIS BANK

DATE RANGE: 6/21/2023 THRU 7/04/2023

VENDOR I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
0746	CDL ELECTRIC COMPANY INC							
I-W88216	PD: ELECTRICAL REPAIRS	E	6/30/2023	4,178.28		019126		
I-W88749	POSTER	E	6/30/2023	22.50		019126		4,200.78
1478	KANSASLAND TIRE #1828							
I-30200	TIRE REPAIR	E	6/30/2023	21.00		019127		21.00
1629	PITTSBURG BEAUTIFUL							
I-202306274579	CFSEK PASS THROUGH	E	6/30/2023	36,153.00		019128		
I-202306274580	CFSEK PASS THROUGH	E	6/30/2023	6,291.00		019128		42,444.00
2137	VAN-WALL EQUIPMENT, INC							
I-5886404	DEFLECTOR	E	6/30/2023	130.36		019129		130.36
2186	PRODUCERS COOPERATIVE ASSOCIAT							
I-1044552	AIRPORT: FUEL	E	6/30/2023	646.00		019130		
I-1044553	AIRPORT: FUEL	E	6/30/2023	389.51		019130		1,035.51
2994	COMMERCIAL AQUATIC SERVICE INC							
I-46353-1	BASKET/ PUMP STRAINERS	E	6/30/2023	1,994.80		019131		
I-46696-1	ELECTROLYTE FOR CTE SENSOR	E	6/30/2023	90.94		019131		
I-46843-1	ACUATOR, ADA LIFT	E	6/30/2023	1,432.10		019131		
I-46894-2	POOL CHEMICALS 2023	E	6/30/2023	1,572.74		019131		
I-46894-2 AP	POOL CHEMICALS	E	6/30/2023	4,911.82		019131		10,002.40
4085	GILMORE & BELL							
I-8051449	TIF TERMINATION	E	6/30/2023	750.00		019132		750.00
5014	MID-AMERICA SANITATION INC.							
I-42487	PORTABLE TOILETS	E	6/30/2023	80.00		019133		80.00
5720	J & M DISPLAYS INC							
I-58579	2023 JULY 4TH FIREWORKS	E	6/30/2023	27,500.00		019134		27,500.00
5855	STERICYCLE, INC.							
I-8004137562	LEC: SHREDDING	E	6/30/2023	544.39		019135		544.39
6360	THE RENTAL STORE							
I-160016-1	DIAMOND BLADE	E	6/30/2023	740.31		019136		740.31
7038	SIGNET COFFEE ROASTERS							
I-1355	CITY HALL COFFEE	E	6/30/2023	55.00		019137		55.00

VENDOR I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
7151	I-202306274585	QUADIENT FINANCE USA INC PD POSTAGE	E 6/30/2023	300.00		019138		300.00
7427	I-461020	OLSSON INC USACE INDIVIDUAL PERMIT	E 6/30/2023	736.00		019139		736.00
8046	I-PS237081	CONVERGEONE, INC. PROFESSIONAL SERVICES	E 6/30/2023	225.00		019140		225.00
8147	I-8279592	CHEM-AQUA, INC. WATER TREATMENT PROGRAM	E 6/30/2023	439.86		019141		439.86
8246	I-5294	BETHANY ANN BROOKS LAND BANK MOWING	E 6/30/2023	646.00		019142		646.00
8535	I-6/16/2023	HEALTH PLANS, INC JUL 2023	E 6/30/2023	40,301.22		019143		40,301.22
8649	I-9109 I-9110	UPLINK, LLC EXTRA BATTERIES AND BANK CHARG NEW PORTABLE RADIOS/ BATTERY	E 6/30/2023 E 6/30/2023	1,175.74 4,058.00		019144 019144		5,233.74
8721	I-11456	WALDEN CHEMICAL INC REPLACE 8" TEE / 8" BUTTERFLY	E 6/30/2023	2,200.00		019145		2,200.00
0335	I-23.265	CUSTOM AWARDS, LLC EMPLOYER OF THE YEAR	E 6/29/2023	450.00		019146		450.00
0135	I-29735	PITTSBURG AREA CHAMBER OF COMM LEADERSHIP CRAWFORD COUNTY	E 7/03/2023	400.00		019147		400.00
0866	I-018847144	AVFUEL CORPORATION JET FUEL 7410.00	E 7/03/2023	22,019.63		019148		22,019.63
8080	I-202306304611	SUNNYVALE INVESTMENT PROPERTIE RAPID RE-HOUSING	E 7/03/2023	387.04		019149		387.04
8246	I-5300	BETHANY ANN BROOKS LAND BANK MOWING	E 7/03/2023	292.00		019150		292.00
8765	I-202306224563	ALLISON LATHIM UMPIRE	R 6/22/2023	90.00		193775		90.00

VENDOR I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
0516	AMERICAN CONCRETE CO INC							
I-90483106	CONCRETE	R	6/22/2023	1,093.00		193776		
I-90489985	CONCRETE	R	6/22/2023	431.00		193776		
I-90492462	CONCRETE	R	6/22/2023	599.75		193776		
I-90492874	CONCRETE	R	6/22/2023	1,326.50		193776		
I-90492875	CONCRETE	R	6/22/2023	850.75		193776		
I-90492897	CONCRETE	R	6/22/2023	219.50		193776		
I-90493489	CONCRETE	R	6/22/2023	969.50		193776		
I-90493493	CONCRETE	R	6/22/2023	693.88		193776		
I-90493892	CONCRETE	R	6/22/2023	788.00		193776		6,971.88
8658	AMINO BROTHERS CO., INC							
I-PAY APP # 9	QUINCY STREET CONSTRUCTIO	R	6/22/2023	282,487.37		193777		282,487.37
5480	BITNER MOTORS							
I-06-06-23	THROTTLE CABLE	R	6/22/2023	38.74		193778		
I-06-07-23	2 DAMPNERS	R	6/22/2023	124.62		193778		
I-06-09-23	BELT	R	6/22/2023	79.84		193778		243.20
8764	BLEEDING EDGE ENSYS LLC							
I-INVOICE-146	HANDHELD SHIELDS & FREIGHT	R	6/22/2023	1,363.13		193779		1,363.13
5966	BERRY COMPANIES, INC.							
I-73011269	COUPLERS/HYDRAULIC OIL	R	6/22/2023	270.77		193780		270.77
5759	COMMUNITY HEALTH CENTER OF SEK							
I-202306214555	2023 LIQUOR TAX DISTRIBUTION	R	6/22/2023	12,500.00		193781		
I-887	EE TESTING	R	6/22/2023	1,200.00		193781		13,700.00
0339	GENERAL MACHINERY							
I-INV31547	WD-40	R	6/22/2023	7.95	0.16CR	193786		
I-SO28571	WD-40	R	6/22/2023	7.95	0.16CR	193786		15.58
8378	GFL ENVIRONMENTAL SERVICES USA							
I-LQ01780894	PART WASHER/EERF	R	6/22/2023	221.91		193787		221.91
8479	GODFREY'S INDOOR SHOOTING AND							
I-S129504	PD:PANTS	R	6/22/2023	4,461.75		193788		4,461.75
8623	INDIANA GROTHEER							
I-202306224569	TENNIS INSTRUCTOR	R	6/22/2023	200.00		193789		200.00
7680	IMA, INC.							
I-237621	2ND QUARTER 2023	R	6/22/2023	9,375.00		193790		9,375.00

VENDOR I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
8766	I-202306224565	JOSH ALLEN UMPIRE	R	6/22/2023	75.00	193791		75.00
7792	I-2301090100611	KANREN, INC JAN TO MARCH 2023	R	6/22/2023	4,987.68	193792		
	I-2304050100611	APRIL-JUNE 2023	R	6/22/2023	4,987.68	193792		9,975.36
8767	I-202306224564	KARMA FIELDS UMPIRE	R	6/22/2023	90.00	193793		90.00
8763	I-27336	LEARNING TREE INSTITUTE AT GRE PLANNING FACILITATION PYMT 1	R	6/22/2023	500.00	193794		500.00
8208	I-202306224566	MICHAEL JOHNSON UMPIRE	R	6/22/2023	75.00	193795		75.00
8729	I-202306224567	NATHAN HUGHES UMPIRE	R	6/22/2023	150.00	193796		150.00
7480	I-202306224568	RODGER PETRAIT UMPIRE	R	6/22/2023	125.00	193797		125.00
4059	I-68341	PSU - PRINTING & DESIGN SERVI SAGE PROMO-TIRE GAUGES	R	6/22/2023	1,085.10	193798		1,085.10
5296	I-8467	RFB CONSTRUCTION INC CONCRETE PANEL-DRIVEWAY-CURB	R	6/22/2023	4,918.18	193799		4,918.18
6372	I-36384	SATTERLEE MECHANICAL CONTRACTI HVAC SERVICE	R	6/22/2023	300.00	193800		300.00
8375	I-23293	TRASH HOG LLC 1920 S OLIVE	R	6/22/2023	400.00	193801		400.00
6377	I-05262023F	SOUTHEAST KANSAS RECYCLING CEN MAY 2023 PICK UP	R	6/22/2023	30.00	193802		30.00
6260	I-313562267	TRANE PD: DRIVE VFD 10HP 460V INSTAL	R	6/22/2023	3,073.09	193803		
	I-313576850	MAINTENANCE PD&FD	R	6/22/2023	857.00	193803		3,930.09
8683	I-PAY APP # 2	TRI-STAR UTILITIES, INC. SANITARY SEWER LINING PRO	R	6/22/2023	562,694.40	193804		562,694.40

VENDOR I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
8761	I-183401	US TACTICAL SYSTEMS INC NARCAN POUCH	R 6/22/2023	917.52		193805		917.52
5371	I-202306214553	PITTSBURG FAMILY YMCA EVENT SETTLEMENT	R 6/22/2023	5,569.48		193806		5,569.48
5561	I-202306274583	AT&T MOBILITY DOWNTOWN SECURITY	R 6/29/2023	148.20		193807		148.20
7856	I-0001034	BARDAVON HEALTH INNOVATIONS, L KMIT WORKSTEPS POET	R 6/29/2023	525.00		193808		525.00
5480	I-06-09-2023 I-06-19-2023	BITNER MOTORS BELT GAS TANK	R 6/29/2023 R 6/29/2023	79.84 392.33		193809 193809		472.17
8278	I-06-28-23	GERSON BOCANEGRA 1 HR OF INTERPRETER SVC	R 6/29/2023	25.00		193810		25.00
7279	I-5802	CLAYTON HOLDINGS, LLC STREET PAVER PMT #4	R 6/29/2023	37,701.86		193811		37,701.86
4263	I-202306274584	COX COMMUNICATIONS KANSAS LLC FD #1 MONTHLY SERVICE	R 6/29/2023	52.48		193812		52.48
4263	I-202306294591	COX COMMUNICATIONS KANSAS LLC PD MONTHLY SERVICE	R 6/29/2023	99.70		193813		99.70
4263	I-202306294594	COX COMMUNICATIONS KANSAS LLC 719 W 20TH: MONTHLY SVC	R 6/29/2023	46.20		193814		46.20
0375	I-241116	WICHITA WATER CONDITIONING HOUSING: WATER	R 6/29/2023	8.75		193815		8.75
8758	I-202306294592	DUSTIN TREIBER FARMERS MARKET ENTERTAINMENT	R 6/29/2023	200.00		193816		200.00
8430	I-2864627-000	EQUIPMENTSHARE.COM, INC CASE	R 6/29/2023	306.00		193817		306.00
1108	I-202306294589	EVERGY KANSAS CENTRAL INC MONTHLY SERVICE	R 6/29/2023	84,300.71		193818		84,300.71

VENDOR SET: 99 City of Pittsburg, KS

BANK: 80144 BMO HARRIS BANK

DATE RANGE: 6/21/2023 THRU 7/04/2023

VENDOR I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
0118	FED EX							
I-8-170-26909	SHIPPING CHARGES	R	6/29/2023	8.17		193821		8.17
1	HORTON, DICK							
I-202306294587	HORTON, DICK:	R	6/29/2023	15.00		193822		15.00
1	JASON CECIL							
I-202306274581	EXPENSE REIMBURSE	R	6/29/2023	32.82		193823		32.82
8482	JT CONSTRUCTION COMPANY							
I-COP6152023	DRIVEWAY 610 OAKCREST	R	6/29/2023	1,250.00		193824		1,250.00
8768	MARK MCATEE							
I-202306284586	SERVICE ON LADDER 4	R	6/29/2023	412.50		193825		412.50
7697	MARTIN MEDINA							
I-935223	RADIO TOWER	R	6/29/2023	300.00		193826		300.00
8505	PITTSBURG PUBLISHING COMPANY,							
I-2411	PUBLIC NOTICE: 908 N SMELTER	R	6/29/2023	333.60		193827		
I-2412	PUBLIC NOTICE: 523 E 8TH	R	6/29/2023	333.60		193827		
I-2413	PUBLIC NOTICE: 528 E 8TH/JONES	R	6/29/2023	333.60		193827		1,000.80
8507	PITTSBURG PUBLISHING COMPANY,							
I-2322	SKYSCRAPER DIGITAL AD	R	6/29/2023	275.00		193828		275.00
1	MUSKET GROUP LLC							
I-202306294595	MUSKET GROUP LLC:	R	6/29/2023	175.35		193829		175.35
1	RICK STEPHENS							
I-202306274582	RESTITUTION	R	6/29/2023	50.00		193830		50.00
8118	FRANK E ROBISON							
I-280291	6 FIRE HELMET SHIELDS	R	6/29/2023	300.00		193831		300.00
1	WEAVER, VALERIE							
I-202306294593	WEAVER, VALERIE:	R	6/29/2023	190.00		193832		190.00
8770	BEAU PASTEUR							
I-202306304602	UMPIRE	R	6/30/2023	90.00		193833		90.00
1616	CITY OF PITTSBURG							
I-202306304607	ESG BACK WATER BILL	R	6/30/2023	155.67		193834		155.67

VENDOR I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
1616 I-202306304608	CITY OF PITTSBURG ESG BACK BILL	R	6/30/2023	140.24		193835		140.24
1616 I-202306304609	CITY OF PITTSBURG ESG BACK BILL	R	6/30/2023	209.67		193836		209.67
1616 I-202306304610	CITY OF PITTSBURG ESG WATER DEPOSIT	R	6/30/2023	100.00		193837		100.00
8774 I-202306304601	COOPER SIMMONS UMPIRE	R	6/30/2023	150.00		193838		150.00
8773 I-202306304603	JOHN POTUSEK UMPIRE	R	6/30/2023	150.00		193839		150.00
8766 I-202306304597	JOSH ALLEN UMPIRE	R	6/30/2023	75.00		193840		75.00
8769 I-0515	KANSAS DEPARTMENT OF COMMERCE TEAM KANSAS	R	6/30/2023	15,000.00		193841		15,000.00
8767 I-202306304605	KARMA FIELDS UMPIRE	R	6/30/2023	120.00		193842		120.00
8417 I-202306304604	FRED LUNDIEN UMPIRE	R	6/30/2023	75.00		193843		75.00
8208 I-202306304598	MICHAEL JOHNSON UMPIRE	R	6/30/2023	75.00		193844		75.00
8729 I-202306304599	NATHAN HUGHES UMPIRE	R	6/30/2023	150.00		193845		150.00
8771 I-202306304600	SAM MYERS UMPIRE	R	6/30/2023	120.00		193846		120.00
8618 I-202306304606	COREY REAGIN 4TH OF JULY ENTERTAINMENT	R	6/30/2023	2,300.00		193847		2,300.00

VENDOR SET: 99 City of Pittsburg, KS  
 BANK: 80144 BMO HARRIS BANK  
 DATE RANGE: 6/21/2023 THRU 7/04/2023

VENDOR I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
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## \* \* T O T A L S \* \*

NO

INVOICE AMOUNT

DISCOUNTS

CHECK AMOUNT

REGULAR CHECKS:

67

1,057,042.33

0.32CR

1,057,042.01

HAND CHECKS:

0

0.00

0.00

0.00

DRAFTS:

10

335,769.29

0.00

335,769.29

EFT:

84

628,266.88

0.00

628,266.88

NON CHECKS:

0

0.00

0.00

0.00

VOID CHECKS:

0 VOID DEBITS

0.00

VOID CREDITS

0.00

0.00

0.00

TOTAL ERRORS: 0

NO

INVOICE AMOUNT

DISCOUNTS

CHECK AMOUNT

VENDOR SET: 99 BANK: 80144TOTALS:

161

2,021,078.50

0.32CR

2,021,078.18

BANK: 80144 TOTALS:

161

2,021,078.50

0.32CR

2,021,078.18



VENDOR SET: 99 City of Pittsburg, KS  
 BANK: EHV BMO HARRIS BANK-EHV  
 DATE RANGE: 6/21/2023 THRU 7/04/2023

VENDOR I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
4636	EVERGY KANSAS CENTRAL INC. (HA							
I-07/2023-100637E	HOUSING ASSISTANCE PAYMENT	R	7/03/2023	269.00		193854		269.00

\* \* T O T A L S \* \*

NO

INVOICE AMOUNT

DISCOUNTS

CHECK AMOUNT

REGULAR CHECKS: 1 269.00 0.00 269.00

HAND CHECKS: 0 0.00 0.00 0.00

DRAFTS: 0 0.00 0.00 0.00

EFT: 0 0.00 0.00 0.00

NON CHECKS: 0 0.00 0.00 0.00

VOID CHECKS: 0 VOID DEBITS 0.00

VOID CREDITS 0.00 0.00 0.00

TOTAL ERRORS: 0

NO

INVOICE AMOUNT

DISCOUNTS

CHECK AMOUNT

VENDOR SET: 99 BANK: EHV TOTALS: 1 269.00 0.00 269.00

BANK: EHV TOTALS: 1 269.00 0.00 269.00

VENDOR I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
4636	EVERGY KANSAS CENTRAL INC. (HA							
I-07/2023-100637	HOUSING ASSISTANCE PAYMENT	R	7/03/2023	3,011.36		193848		3,011.36
7616	STEVE KUPLEN							
I-07/2023-100660	HOUSING ASSISTANCE PAYMENT	R	7/03/2023	40.00		193849		40.00
8177	MISSISSIPPI REGIONAL HOUSING A							
I-07/2023-100955	HOUSING ASSISTANCE PAYMENT	R	7/03/2023	594.38		193850		594.38
8427	RENT-MOORE LLC							
I-07/2023-100185	HOUSING ASSISTANCE PAYMENT	R	7/03/2023	946.00		193851		946.00
6451	NAZAR SAMAN							
I-07/2023-100249	HOUSING ASSISTANCE PAYMENT	R	7/03/2023	1,122.00		193852		1,122.00
0472	LARRY SPRESSER							
I-07/2023-100251	HOUSING ASSISTANCE PAYMENT	R	7/03/2023	430.00		193853		430.00

* * T O T A L S * *	NO	INVOICE AMOUNT	DISCOUNTS	CHECK AMOUNT
REGULAR CHECKS:	6	6,143.74	0.00	6,143.74
HAND CHECKS:	0	0.00	0.00	0.00
DRAFTS:	0	0.00	0.00	0.00
EFT:	0	0.00	0.00	0.00
NON CHECKS:	0	0.00	0.00	0.00
VOID CHECKS:	0			
	VOID DEBITS	0.00		
	VOID CREDITS	0.00	0.00	

TOTAL ERRORS: 0

	NO	INVOICE AMOUNT	DISCOUNTS	CHECK AMOUNT
VENDOR SET: 99 BANK: HAP TOTALS:	6	6,143.74	0.00	6,143.74
BANK: HAP TOTALS:	6	6,143.74	0.00	6,143.74
REPORT TOTALS:	168	2,027,491.24	0.32CR	2,027,490.92

## SELECTION CRITERIA

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VENDOR SET: 99-  
VENDOR: ALL  
BANK CODES: All  
FUNDS: All  
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## CHECK SELECTION

CHECK RANGE: 000000 THRU 999999  
DATE RANGE: 6/21/2023 THRU 7/04/2023  
CHECK AMOUNT RANGE: 0.00 THRU 999,999,999.99  
INCLUDE ALL VOIDS: YES  
-----

## PRINT OPTIONS

SEQUENCE: CHECK NUMBER

PRINT TRANSACTIONS: YES  
PRINT G/L: NO  
UNPOSTED ONLY: NO  
EXCLUDE UNPOSTED: NO  
MANUAL ONLY: NO  
STUB COMMENTS: NO  
REPORT FOOTER: NO  
CHECK STATUS: NO  
PRINT STATUS: \* - All  
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Passed and approved this 11<sup>th</sup> day of July, 2023.

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Ron Seglie, M.D., Mayor

ATTEST:

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Tammy Nagel, City Clerk



**COMMUNITY DEVELOPMENT**

**AND HOUSING**

201 West 4<sup>th</sup> Street ·

Pittsburg KS 66762

(620) 230-5550

[www.pittks.org](http://www.pittks.org)

**INTEROFFICE MEMORANDUM**

To: Daron Hall, Tammy Nagel  
From: Kim Froman Community Development & Housing Director  
  
Date: July 6, 2023  
Subject: Bryan Mize requesting a hearing on nuisance at 209 East 15<sup>th</sup> Street

Bryan Mize received a nuisance letter for his property located at 209 East 15<sup>th</sup> Street Pittsburg, KS. He is requesting a hearing in front of the City Commission to show cause why the nuisance should not be abated.

Please place the attached information on the agenda for consideration at the July 11, 2023 Commission Meeting.

Kim Froman  
Director of Community Development and Housing

JUN 23 2023

Pittsburg City Clerk

I am requesting a hearing in front of the City Council regarding a recent letter I received from ~~the~~ Codes office. ~~to~~ request more time to clean up my property at 909 E 15th. I am disabled and have been for 9 years I have physical limitations.

Plus I'm trying to fix up my house but not allowed to have construction materials



and possible harassment  
+ discrimination

And finally to give  
me sometimes to seek  
legal advice &/or legal  
counsel;

Thank you

Tracy Kelly



DEPARTMENT OF PUBLIC WORKS

201 W. 4th Street Pittsburg KS  
66762

(620) 231-4170

www.pittks.org

BRYAN MIZE  
209 E 15TH  
Pittsburg, KS 66762

Reference No: CE2023-0257

6/23/2023

Dear BRYAN MIZE

An inspection of the property located at 209 E 15TH, KS, 66762 on 04/14/2023 by a designee of the Director of Public Works revealed the existence of a land nuisance located thereon in violation of City Code, Section 50-35. Land nuisance, as provided in the City Code, is the presence upon the surface of the land or structure of any of the following:

**Garbage, trash, cans, rubbish, tires, cardboard containers, stones, filth, discarded appliances, furniture, building/construction material needs removed.**

We request your cooperation in this matter and urge you to promptly remove the land nuisance from the above address. Failure to abate or terminate this nuisance within ten (10) days from the mailing or serving of this notice will result in the City abating the nuisance unless you file a written request with the City Clerk for a hearing before the City Commission within 10 (ten) days of the mailing or service of this notice to show cause why the nuisance should not be abated. The cost of the abatement by the City, including the administrative fee, will be charged to the owner, occupant or agent in charge of the property.

The City Commission, in its meeting of January 26, 2010, approved the following schedule of fees associated with abating a nuisance for properties in violation of the Nuisance Ordinance adopted by the City of Pittsburg. The City will bill a one (1) hour minimum charge for all removal. If the removal time exceeds one (1) hour, then the charge will increase by one-quarter (1/4) hour increments thereafter. The administrative fee is assessed once to every piece of property on each occurrence.

Removal cost per hour	\$200.00
Administrative Fee	\$100.00
Total Minimum Charge	\$300.00

1 (+ 1/4 HR. INCREMENTS OVER 1 HOUR)

Failure to comply with this notice will result in the City abating the nuisance. You will be given a thirty (30) day opportunity to pay the cost of the abatement. If not paid, the cost will be added to the property taxes as a special assessment. In addition to the City's abating the nuisance, the City Code Section 50-36 also provides that violations may be prosecuted in Municipal Court. If convicted, a fine of at least Fifty Dollars (\$50.00) and no more than One Thousand Dollars (\$1,000.00) may be assessed, or imprisonment for a period of time not to exceed ten (10) days, or both fine and imprisonment.

Contact by e-mail [kaci.preston@pittks.org](mailto:kaci.preston@pittks.org) or call Kaci Preston at 620-230-5539 during regular business hours.

Sincerely,

Kaci Preston  
Codes Enforcement Inspector  
City of Pittsburg































Sec. 50-38. - Order to abate nuisance or to show cause.

Whenever the Director of Planning and Community Services or designee shall have reason to believe that any nuisance exists in the City, he may cause to be issued and cause to be served upon the owner, occupant or person in charge of the lot or land on which the alleged nuisance exists (the premises), a written notice to terminate the nuisance. The notice may be sent either by certified mail, postage prepaid, return receipt requested, or may be served personally upon the owner, occupant or person in charge of the premises. The notice shall state:

- (1) The basis for and the type of nuisance; and
- (2) That the owner, occupant or person in charge shall have:
  - a. Ten days from the date the notice is mailed or served to abate and terminate the nuisance; or
  - b. File a written request with the City Clerk prior to the expiration of the ten-day period for a hearing before the Governing Body.

If the owner, occupant or person in charge of the premises cannot be ascertained or served either by certified mail or personally, then a copy of the notice shall be posted on the premises and published once in the official City newspaper. The failure of the owner, occupant or person in charge of the premises to receive a copy of the notice by either certified mail or personal service shall not prevent the City from abating and terminating the nuisance and assessing the costs thereof against such premises.

(Code 1975, § 12-107; Ord. No. G-1192, § 1, 10-22-2013)

Sec. 50-39. - Hearing and order.

If, prior to the time of the hearing before the Governing Body, the owner, occupant or person in charge has abated and terminated the nuisance, or appears and makes a showing to the satisfaction of the Governing Body that no such nuisance exists, the Governing Body shall rescind the notice to abate and terminate the nuisance. If at such hearing, the Governing Body shall determine that the alleged nuisance does in fact exist or if the owner, occupant or person so served shall not appear, then the Governing Body may, by resolution or motion, direct the City Clerk to issue a written order to abate and terminate such nuisance and the premises on which it is located, naming the owner, occupant or person in charge of such premises, if known. Such written order shall be served, posted or published in the same manner as is provided in Section 50-38 for serving, posting or publishing the notice.

(Code 1975, § 12-108)





**Taylor Cerne**  
**Fire Chief**

Pittsburg Fire Department, Station 1  
911 West 4<sup>th</sup> Street Pittsburg, Kansas 66762

(620) 231-1870

**TO:** Daron Hall, City Manager  
**FROM:** Taylor Cerne, Fire Chief  
**DATE:** July 6, 2023  
**RE:** Approval of Purchase of Pierce Fire Engine. Agenda Item-July 11, 2023

With the Passing of the Public Safety Sales Tax renewal earlier this year, I am requesting approval for the purchase of a Pierce Enforcer Pumper and associated equipment. This apparatus will replace a 23-year old Quint. I have been working with a committee of Firefighters to explore our options to ensure the safety of our community with quality response vehicles.

Due to the current climate of nearly all manufacturing in the country, build time for a custom apparatus is now at 3 years, minimum, from order to delivery. In speaking with a representative from Pierce we found a stock built 2023 pumper ready for delivery that will meet our needs. This apparatus has the attributes that we are looking for in a pumper. We therefor request to waive the formal bid process.

The overall cost of this apparatus and included equipment is \$945,192.83. It is my recommendation to purchase this apparatus and associated equipment through a financed lease/purchase. We have started the bid process with local financing agencies to finance the lease/purchase agreement as well as received one from Pierce Manufacturing.

Would you please place this item on the agenda for the City Commission meeting scheduled for July 11, 2023? Action necessary will be the approval or disapproval of this request pending legal council's approval. I have included the apparatus specifications sheet regarding this pumper for your review. If you have any questions, please do not hesitate to contact me.



June 21, 2023

To whom it may concern:

Conrad Fire Equipment is under contract with Pierce Manufacturing through May of 2025 to continue as the exclusive provider of Pierce Manufactured fire apparatus, parts, and warranty service in Kansas, Oklahoma, and western Missouri. All maintenance, warranty, and repair services are provided directly through our location in Olathe, Kansas or through our mobile service within the states that Conrad Fire serves.

All aspect of the Pierce Warranty, including the complete powertrain, is serviced locally through Conrad Fire's service center. Pierce parts and equipment are available for pick-up at Conrad Fire's facility or through direct shipping to the customer.

Conrad Fire appreciates the business of the local fire service and will continue delivering our best to the fire departments within the metropolitan area. Please contact me directly for any further information.

Sincerely,

PERFORM. LIKE NO OTHER.<sup>SM</sup>

A handwritten signature in blue ink that reads 'Sal Monteleone'.

Sal Monteleone  
President  
Conrad Fire Equip.



Expiration Date:

Estimated Build Time

Apparatus Purchase Price	
Trade-in Value	
Price After Trade-in	
Pre-Payment Discount	N/A
Extrication Rescue Tools*	
Loose Equipment*	
Options	
Due Upon Delivery	

## Notes

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# Option List

6/15/2023

<b>Customer:</b>	Pittsburg, Kansas	<b>Bid Number:</b>	1167
<b>Representative:</b>	Brown, Roger	<b>Job Number:</b>	
<b>Organization:</b>	Conrad Fire Equipment	<b>Number of Units:</b>	1
<b>Requirements Manager:</b>		<b>Bid Date:</b>	06/16/2023
<b>Description:</b>	Pumper, HDRP, 1500 GPM, 750 gallon, 189" (FT) 39432	<b>Stock Number:</b>	39432
<b>Body:</b>	Pumper, Heavy Duty Rescue, Aluminum, 3G	<b>Price Level:</b>	44 (Current: 45)
<b>Chassis:</b>	Enforcer Chassis, HDRP	<b>Lane:</b>	

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	0670275		Unit to be Similar in some Aspects, Excluding Pump Panel	1
			Fill in Blank - For Engineering Purposes Only, Similar to Job 39296	
7	0610784		Comply NFPA 1901 Changes Effective Jan 1, 2016, With Exceptions	1
8	0533347		Pumper/Pumper with Aerial Device Fire Apparatus	1
9	0588611		Vehicle Certification, Pumper	1
10	0661778		Agency, Apparatus Certification, Pumper/Tanker, U.L.	1
11	0891947		Certification, Vehicle Inspection Program, NFPA 1901	1
12	0000000	STF	Service information, Conrad Fire	1
12	0000000	STF	Training, Conrad Fire	1
13	0620362		Consortium, HGAC	1
14	0537375		Unit of Measure, US Gallons	1
15	0030006		Bid Bond Not Requested	1
16	0540326		Performance Bond, Not Requested	1
17	0000007		Approval Drawing	1
18	0002928		Electrical Diagrams	1
19	0624557		Enforcer Chassis, HDRP	1
20	0000110		Wheelbase	1
			Wheelbase - 217.00	
21	0000070		GVW Rating	1
			GVW rating - 46,500	
22	0729280		Frame Rails, 13.38 x 3.50 x .375, Enforcer	1
23	0889469		Frame Liner, "C/Inv L" 12.50" x 3.00" x .25", AXT/Vel/Imp/Enf, 56" QVal	1
24	0630705		Axle, Front, Oshkosh TAK-4, Non Drive, 19,500 lb, Enforcer	1
25	0030264		Suspension, Front TAK-4, 19,500 lb, Qtm/AXT/Imp/Vel/Enf/SFR	1
26	0087572		Shock Absorbers, KONI, TAK-4, Qtm/AXT/Imp/Vel/DCF/Enf	1
27	0000322		Oil Seals, Front Axle	1
28	0582936		Tires, Front, Goodyear, G289 WHA, 315/80R22.50, 20 ply	1
29	0019575		Wheels, Front, Alcoa, 22.50" x 9.00", Aluminum, Hub Pilot	1
30	0640711		Axle, Rear, Dana S26-190, 27,000 lb Saber/Enforcer	1
31	0544253		Top Speed of Vehicle, 68 MPH /109 KPH	1
32	0565380		Suspen, Rear, Single Slipper Spring, 27,000 lb, Saber/Enforcer	1
33	0000485		Oil Seals, Rear Axle	1
34	0587216		Tires, Rear, Goodyear, G622 RSD, 12R22.50, 16 ply, Single	1
35	0019625		Wheels, Rear, Alcoa, 22.50" x 8.25", Aluminum, Hub Pilot, Single	1
36	0568081		Tire Balancing, Counteract Beads	1
37	0620570		Tire Pressure Monitoring, RealWheels, AirSecure, Valve Cap, Single Axle	1
			Qty, Tire Pressure Ind - 6	
38	0003245		Axle Hub Covers w/center hole, S/S, Front Axle	1
39	0001960		Axle Hub Covers, Rear, S/S, High Hat (Pair)	1
40	0057936		Covers, Lug Nut, Chrome	1
41	0002045		Mud Flap, Front and Rear, Pierce Logo	1
42	0544802		Chocks, Wheel, SAC-44-E, Folding	1
			Qty, Pair - 01	
43	0544806		Mounting Brackets, Chocks, SAC-44-E, Folding, Horizontal	1
			Qty, Pair - 01	
			Location, Wheel Chocks - Left Side Rear Tire, Forward and Rearward	

Line	Option	Type	Option Description	Qty
44	0010670		ABS Wabco Brake System, Single rear axle	1
45	0030185		Brakes, Knorr/Bendix 17", Disc, Front, TAK-4	1
46	0627930		Brakes, Bendix, Cam, Rear, 16.50 x 8.63"	1
47	0735527		Air Compressor, Brake, Wabco 26.8 CI, Paccar	1
48	0644232		Brake Reservoirs, 4,272 Cubic Inch Minimum Capacity, Saber FR/Enforcer	1
49	0568012		Air Dryer, Wabco System Saver 1200, Heater, 2010	1
50	0000790		Brake Lines, Nylon	1
51	0000854		Air Inlet, w/Disconnect Coupling	1
			Location, Air Coupling(s) - a) DS Step Well, Forward	
			Qty, Air Coupling (s) - 1	
52	0743490		Engine, Paccar MX13, 510HP, 1850 lb-ftW/OBD, EPA 2021, Enforcer	1
53	0001244		High Idle w/Electronic Engine, Custom	1
54	0735687		Engine Brake, Fully Integrated, Paccar MX13 Engine	1
			Switch, Engine Brake - MX13	
55	0644227		Clutch, Fan, Air Actuated, Saber FR/Enforcer	1
56	0640477		Air Intake, Metal Screen, Saber FR/Enforcer	1
57	0794743		Exhaust System, 5", X12/X15, MX13, Engine, Horizontal, Right Side	1
58	0788765		Radiator, Saber FR/Enforcer	1
59	0001090		Cooling Hoses, Rubber	1
60	0001125		Fuel Tank, 65 Gallon, Left Side Fill	1
61	0001129		Lines, Fuel	1
62	0734655		DEF Tank, 7.3 Gallon, LS Fill, Under Cab, Paccar, Fill Dr, ENF	1
			Door, Material & Finish, DEF Tank - Painted	
			Latch, Door, Access - SouthCo M1 medium compression	
63	0552793		Not Required, Fuel Priming Pump	1
64	0552712		Not Required, Shutoff Valve, Fuel Line	1
65	0699437		Cooler, Chassis Fuel, Not Req'd.	1
66	0690880		No Selection Required From This Category	1
67	0887546		Trans, Allison 6th Gen, 4000 EVS P, w/Prognostics, Imp/Vel/SFR/Enf	1
68	0625331		Transmission, Shifter, 6-Spd, Push Button, 4000 EVS	1
69	0684459		Transmission Oil Cooler, Modine, External	1
70	0001375		Driveline, Spicer 1810	1
71	0734211		Steering, Sheppard M110 w/Tilt, TAK-4, Paccar Pump, w/Cooler, Paccar	1
72	0605355		Steering Wheel, 4 Spoke with Controls, Enforcer, Mux	1
73	0559647		Pierce Logo on Horn Button	1
74	0606441		Bumper, 19" Extended, Steel Painted, Saber FR/Enforcer	1
75	0640197		Tray, Hose, Center, 19" Bumper, Outside Air Horns	1
			Grating, Bumper extension - Grating, Rubber	
			Capacity, Bumper Tray - 20) 125' of 1.75"	
76	0630813		Cover, Aluminum Treadplate, One (1) D-Ring Latch, Hose Tray	1
			Stay arm, Tray Cover - b) Pneumatic Stay Arm	
77	0614646		No Lift & Tow Package, Imp/Vel, AXT, SFR/Enf	1
78	0002270		Tow Hooks, Chrome	1
79	0698960		Coating, Top Flange, Front Bumper, Outside Exterior, UL-LX Coating, Black	1
80	0648332		Cab, Enforcer, 7010	1
81	0747442		Engine Tunnel, X12, MX13, Enforcer	1
82	0633594		Rear Wall, Interior, Adjustable Seating	1
83	0632103		Rear Wall, Exterior, Cab, Saber FR/Enforcer	1
			Material, Exterior Rear Wall - Aluminum Treadplate	
84	0644201		Cab Lift, Elec/Hyd, Saber FR/Enforcer	1
85	0695930		Grille, Bright Finished, Front of Cab, Enforcer	1
86	0002224		Scuffplates, S/S At Cab Door Jambs, 4-Door Cab	1
			Material Trim/Scuffplate - c) S/S, Polished	
87	0647932		Not Required, Trim, S/S Band, Across Cab Face, AXT/Saber/Enforcer	1
88	0087357		Molding, Chrome on Side of Cab	1
89	0772130		Mirrors, Retractable, West Coast Style, Htd/Rmt, w/Htd/Rmt Convex, Marker Light	1
90	0648170		Door, Half-Height, Saber FR/Enforcer 4-Door Cab, Raised Roof	1
			Key Model, Cab Doors - 751	
			Cab, Exterior Door Handle, Finish - 4-Door, Chrome/Black	
91	0655543		Door Panel, Brushed Stainless Steel, Saber/Enforcer 4-Door Cab	1
92	0630636		Controls, Electric Roll-Up Windows, 4dr, 4 Driver Controls, Saber FR/Enforcer	1

Line	Option	Type	Option Description	Qty
93	0638310		Steps, 4-Door Cab, Saber FR/Enforcer	1
			Step Well Material - Aluminum Treadplate	
94	0770194		Handrail, Exterior, Knurled, Alum, 4-Door Cab	1
95	0892638		Lights, Cab & Crw Cab Acs Stps, P25, LED w/Bezel, 6lts	1
			Color, Trim - Chrome Housing	
96	0583698		Fenders, S/S on cab, Extra Wide, Saber/Enf	1
97	0637984		Window, Side of C/C, Fixed, Saber FR/Enforcer	1
98	0012090		Not Required, Windows, Front/Side of raised roof	1
99	0779033		Not Required, Windows Rear of Crew Cab, Saber FR/Enforcer	1
100	0722796		Dash, Poly, Saber FR/Enforcer	1
101	0607217		Mounting Provisions, 3/16" Alum, Full Engine Tunnel, Saber FR/Enforcer	1
			Mounting Provision Spacing - 1.00"	
			Material Finish, Cab Interior - Painted	
102	0750824		Cab Interior, Vinyl Headliner, Saber FR/Enforcer, CARE	1
			Color, Cab Interior Vinyl/Fabric - Endure Vinyl - Silver/Gray	
			Engine Tunnel Cover - Dark Silver Gray Endure Vinyl	
			Cab Interior Rear Wall Material - Painted Aluminum	
103	0753903		Cab Interior, Paint Color, Saber FR/Enforcer	1
			Color, Cab Interior Paint - i) fire smoke gray	
104	0052100		Floor, Rubber Padded, Cab & Crew Cab, Saber/Enforcer	1
105	0722696		HVAC, Enforcer, CARE	1
			HVAC System, Filter Access - Tool Free Panel	
			Auxiliary Cab Heater - Both	
			HVAC System, Control Loc. - Panel Position #12	
			Plenum Cover Material - Metal, Painted	
106	0639675		Sun Visor, Smoked Lexan, AXT, Imp/Vel, Saber FR/Enforcer	1
			Sun Visor Retention - Thumb Latch	
107	0634328		Grab Handles, Driver and Officer Door Posts, Saber FR/Enforcer	1
108	0583938		Lights, Engine Compt, Custom, Auto Sw, WIn 3SC0CDCR, 3" LED, Trim	1
			Qty, - 01	
109	0631830		Fluid Check Access, Saber FR/Enforcer, Arrow XT	1
			Latch, Door, Storage - Lift and Turn Latch, Flush	
110	0583042		Side Roll and Frontal Impact Protection	1
111	0622617		Seating Capacity, 6 Seats	1
112	0636955		Seat, Driver, Pierce PSV, Air Ride, High Back, Safety, Saber FR/Enforcer	1
113	0636942		Seat, Officer, Pierce PSV, Fixed, SCBA, Safety, Saber FR/Enforcer	1
114	0620420		Radio Compartment, Below Non-Air Ride Seat, Saber FR/Enforcer	1
			Latch, Door, Storage - Lift and Turn Latch, Flush	
115	0635973		Seat, Rear Facing C/C, DS Outboard, Pierce PSV, SCBA, Safety, Saber FR/Enforcer	1
116	0102783		Not Required, Seat, Rr Facing C/C, Center	1
117	0635969		Seat, Rear Facing C/C, PS Outboard, Pierce PSV, SCBA, Safety, Saber FR/Enforcer	1
118	0632944		Seat, Forward Facing C/C, DS Outboard, Flip Up Cushion, Safety, Saber FR/Enforcer	1
119	0783479		Cabinet, Forward Facing, Center, 38.50 W x 50 H x 28 D, Roll, SFR/Enf	1
			Material Finish, Shelf - Painted - Cab Interior	
			Shelf/Tray, Cabinet - (2) Shelves, Adjustable, 0.75" Up-Turned Lip	
			Door, Cab Interior Cabinet - Rollup, Amdor, Anodized, Locking #751	
			Light, Tall Cabinet - Pierce, Interior, Left Side and Pierce, Interior, Right Side	
			Louvers, Cabinet - 0-No Louvers	
120	0632876		Seat, Forward Facing C/C, PS Outboard, Flip Up Cushion, Safety, Saber FR/Enf	1
121	0766467		Upholstery, Seats In Cab, All Vinyl, Seats Inc, CARE	6
			Color, Cab Interior Vinyl/Fabric - Endure Vinyl - Silver/Gray	
			Qty, - 06	
122	0543991		Bracket, Air Bottle, Hands-Free II, Cab Seats	3
			Qty, - 03	
123	0603866		Seat Belt, Dual Retractor, ReadyReach, Saber FR/Enforcer	1
			Seat Belt Color - Red	
124	0602464		Helmet Storage, Provided by Fire Department, NFPA 2016	1
125	0647647		Lights, Dome, FRP Dual LED 4 Lts	1
			Color, Dome Lt - Red & White	
			Color, Dome Lt Bzl - Black	

Line	Option	Type	Option Description	Qty
125			Control, Dome Lt White - Door Switches and Lens Switch	
			Control, Dome Lt Color - Lens Switch	
126	0896451		Enhanced Software for Cab and Crew Cab Dome Lts	1
127	0602637		Portable Hand Light, Provided by Fire Dept, Pumper NFPA 2016 Classification	1
128	0622803		Cab Instruments, Black Gauges, Black Bezels, Enforcer MUX	1
			Emergency Switching - Individual Switches	
129	0509511		Air Restriction Indicator, Imp/Vel, AXT, Dash CF, Enf MUX	1
130	0543751		Light, Do Not Move Apparatus	1
			Alarm, Do Not Move Truck - Pulsing Alarm	
131	0509042		Messages, Open Dr/DNMT, Color Dsply,	1
132	0622798		Switching, Cab Instrument Lower Console & Overhead, Rocker MUX, Enforcer	1
133	0802940		Wiper Control, 2-Speed with Intermittent, Saber FR/Enforcer	1
			Location, Wiper Control - Transmission Shifter	
134	0548007		Wiring, Spare, 15 A 12V DC 3rd	1
			Qty, - 01	
			12vdc power from - Battery direct	
			Wire termination - 10-Place Bus Bar w/Cover	
			Location - behind officer seat.	
135	0548004		Wiring, Spare, 15 A 12V DC 1st	1
			Qty, - 01	
			12vdc power from - Battery direct	
			Wire termination - 15 amp power point plug	
			Location, Spare Wiring - panel position #14	
136	0797189		Wiring, Spare, 4.8 A 12V DC, USB Termination Blue Sea 1045 1st	1
			Qty, - 01	
			12vdc power from - Battery direct	
			Location - panel position #14	
137	0548006		Wiring, Spare, 15 A 12V DC 2nd	1
			Qty, - 01	
			12vdc power from - Battery direct	
			Wire termination - 10-Place Bus Bar w/Cover	
			Location - upper rear wall of EMS cabinet, centered.	
138	0615386		Vehicle Information Center, 7" Color Display, Touchscreen, MUX	1
			System Of Measurement - US Customary	
139	0734857		Collision Mitigation, HAAS Alert (R2V), HA5	1
			Subscription, HAAS R2V - R2V - 5 Year Data Plan Subscription	
140	0606247		Vehicle Data Recorder w/CZ Display Seat Belt Monitor	1
141	0696439		Antenna Mount, Custom Chassis, Cable Routed to Instrument Panel Area	2
			Qty, - 02	
			Location, Antenna Mount - Left And Right Side	
142	0890416		Pierce Command Zone, Advanced Electronics & Control System, Enforcer, WiFi CZT	1
			Color, Antenna - Black Antenna	
			Module Housings - See Through Housings with LED Cuircuit Indicators	
143	0896456		Prognostics, Electrical System	1
144	0892649		ClearSky Telematics for Remote Fleet and On-scene Management	1
			Subscription, Telematics - 3 Year Subscription	
145	0624253		Electrical System, Enforcer MUX	1
146	0079166		Batteries, (4) Stryten/Exide Grp 31, 950 CCA ea, Threaded Stud	1
147	0008621		Battery System, Single Start, All Custom Chassis	1
148	0002698		Battery Compartment, Saber/Enforcer	1
149	0531315		Charger, Sngl Sys, IOTA, DSL-75, 75 Amp, Kussmaul 091-94-12 Ind, Qtm/Enf/SFR	1
150	0012782		Location, Charger, Front Left Side Body Compartment	1
			Location, Battery Chrgr/Cmpr - High On Left Wall	
151	0537512		Location, Bat Chrg Ind, Display Through Window Behind Driver Seat	1
152	0016857		Shoreline, 20A 120V, Kussmaul Auto Eject, 091-55-20-120, Super	1
			Qty, - 01	
			Color, Kussmaul Cover - b) red	
			Shoreline Connection - Battery Charger	
153	0026800		Shoreline Location	1
			Location, Shoreline(s) - DS Cab Side	
154	0647728		Alternator, 430 amp, Delco Remy 55SI	1

Line	Option	Type	Option Description	Qty
155	0092582		Load Manager/Sequencer, MUX	1
			Enable/Disable Hi-Idle - e)High Idle enable	
156	0783157		Headlights, Rect LED, JW Spkr Evo 2, Heat, AXT/DCF/Enf/Imp/Sab/Vel	1
			Color, Headlight Bez - Chrome Bezel	
157	0802935		Light, Directional, Wln M62T* LED, Cmn Bzl, Above Headlights, Sab/Enf	1
			Color, Lens, LED's - Clear	
			Color, Q Bezel and Trim - Polished Chrome	
			Flash Pattern, Directional Lts - Sequence (80 FPM) to Solid	
158	0620054		Light, Directional/Marker, Intermediate, Weldon 9186-8580-29 LED 2lts	1
159	0647800		Lights, Clearance/Marker/ID, Front, Truck-Lite 35375Y LED 5 Lts, Saber FR/Enf	1
			Light Guard - With Guard	
160	0647899		Lights, Directional/Marker, Cab Front Side, Weldon 9186-8580-29 LED, Sab/Enf	1
161	0090155		Lights, Clearance/Marker/ID, Rear, Truck-Lite 35200R LED 7Lts	1
162	0517025		Lights, Tail, Wrap-around, Stop/Tail, Turn & Backup LED, Tri-Cluster	1
163	0085910		Lights, Backup Included in Signal Cluster	1
164	0889577		Bracket, License Plate & Light, P25 LED, Stainless Brkt	1
			Color, Trim - Chrome Housing	
165	0589905		Alarm, Back-up Warning, PRECO 1040	1
166	0769420		Lights, Perimeter Cab, Amdor AY-LB-12HW020 LED 4Dr	1
167	0769572		Lights, Perimeter Pump House, Amdor AY-LB-12HW020 LED 2lts	1
168	0770056		Lights, Perimeter Body, Amdor AY-LB-12HW020 LED 2lts, Rear Step	1
			Control, Perimeter Lts - Parking Brake Applied	
169	0896454		Enhanced Software for Perimeter Lts	1
170	0556360		Lights, Step, P25 LED 4lts, Pump Pnl Sw	1
171	0792512		Light, Roof Mt, HiViz, FT-B-X-72-*-, Cnt Feature, Mux	1
			Control, Scene Lts - Cab Sw Panel DS	
			Color, Lt Housing HiViz - Black	
			Scene Light Optics - Flood/Spot	
172	0768061		Lights, Wln, PCPSM2* Pioneer, 12 VDC, 1st	1
			Location - mount behind cab door, above crew cab window	
			Qty, - 01	
			Color, Wln Lt Housing - Chrome Cover	
			Control, Scene Lts - Cab Sw Panel DS and Pump Panel Sw LS	
173	0768059		Lights, Wln, PCPSM2* Pioneer, 12 VDC, 2nd	1
			Location - mount behind officers door, above crew cab window	
			Qty, - 01	
			Color, Wln Lt Housing - Chrome Cover	
			Control, Scene Lts - Cab Sw Panel DS and Pump Panel Sw LS	
174	0766906		Lights, Wln, PCPSM1*, Pioneer, 12 VDC, 1st	2
			Location - rear of truck, one each side, mid-height of rear body bulkhead	
			Qty, - 02	
			Color, Wln Lt Housing - Chrome Cover	
			Control, Scene Lts - Cab Sw Panel DS and Body Switch, DS Rear	
			Bulkhead	
175	0763608		Lights, Wln, PCPSM2*, Pioneer, 12 VDC, 2nd	2
			Location - two lights passenger side , in upper body corners inboard of the M9 Whelen warning lights.	
			Qty, - 02	
			Color, Wln Lt Housing - Chrome Cover	
			Control, Scene Lts - PS Scene Lts	
176	0763610		Lights, Wln, PCPSM2*, Pioneer, 12 VDC, 1st	2
			Location - two lights driver side, in upper body corners inboard of the M9 Whelen warning lights.	
			Qty, - 02	
			Color, Wln Lt Housing - Chrome Cover	
			Control, Scene Lts - DS Scene Lts	
177	0532358		Not Required, Deck Lights, Other Hose Bed & Rear Lighting	1
178	0645877		Lights, Hose Bed, Sides, Dual LED Light Strips	1
			Control, Hose Bed Lts - Cup Switch At Rear	
179	0645677		Lights, Not Required, Rear Work, Alt. 12 Volt Lights At Rear Body	1
180	0709438		Lights, Walk Surf, FRP Flood, LED	1
181	0746178		Pumper, Heavy Duty Rescue, Aluminum, 3G	1
182	0554271		Body Skirt Height, 20"	1
183	0744398		Tank, Water, 750 Gallon, Poly, LHB 67, HDRP	1



Line	Option	Type	Option Description	Qty
184	0003405		Overflow, 4.00" Water Tank, Poly	1
185	0028104		Foam Cell Required	1
186	0887842		Sleeve, Through Tank, Stock Unit	1
			Qty, Sleeve - 1	
			Water Tank Sleeve - Plumbing/Hydraulic Diameter - 1.50" Aeroquip Hose	
187	0633066		Sleeve, Through Tank	1
			Qty, Sleeve - 1	
			Water Tank Sleeve - Plumbing/Hydraulic Diameter - 3" Plumbing	
188	0553725		Restraint, Water Tank, Heavy Duty, Special Type Tank, 4x4, or Export	1
189	0003429		Not Required, Direct Tank Fill	1
190	0003424		Not Required, Dump Valve	1
191	0048710		Not Required, Jet Assist	1
192	0030007		Not Required, Dump Valve Chute	1
193	0514778		Not Required, Switch, Tank Dump Master	1
194	0597043		Body Height, PUC/HDRP	1
			Body Height - 92.00"	
195	0744395		Hose Bed, Aluminum, Heavy Duty Rescue Pumper, Low Hose Bed	1
196	0723340		Unpainted/Brush Finished, Hose Bed, 3G PUC/HDRP	1
197	0003481		Hose Bed Capacity, Special	1
			Capacity, Hosebed - 600' of 2.50" hose and 1000' of 5.00" hose	
198	0077704		Divider, Hose Bed, Unpainted, HDR Pumper	1
			Qty, Hosebed Dividers - 1	
199	0589278		Hose Restraint, Hose Bed, Velcro Strap on Top, 2" Heavy Nylon Web at Rear	1
			Type of fastener - seat belt buckle	
			Nylon Web Color - Black	
			Type of fastener, Rear - seat belt buckle - bottom of hosebed	
200	0058070		Hose Bed Divider Connected to Upper Rear Handrail	1
201	0013512		Running Boards, 12.75" Deep	1
202	0685334		Tailboard, 12" Deep, Full Width, PUC/HDRP	1
203	0690023		Wall, Rear, Smooth Aluminum	1
204	0003531		Tow Bar, Under Tailboard	1
205	0024110		Tray, Hose, Running Board, 20' of 5.00" Soft Suction Hose	1
			Location, Hose Tray, Running Board - b) LH Side	
			Qty, Tray, Hose - 1	
206	0745896		Construction, Compt, Alum, Heavy Duty Rescue Pumper	1
207	0745624		LS 189" Rollup, (1) 62" Fwd, (1) 52" Rr, Full Height & Depth Front & Rear, HDRP	1
208	0745656		RS 189" Rollup, (1) 62" Fwd, (1) 52" Rr, Full Height & Depth Front & Rear, HDRP	1
209	0594005		Doors, Rollup, Amdor, Side Compartments	6
			Qty, Door Accessory - 06	
			Color, Roll-up Door - AMDOR Painted to Match Lower Body	
			Latch, Roll-up Door - Non-Locking Liftbar	
210	0744271		Compt, Rear, Rollup, 29.50" FF, w/Tailboard, PUC/HDRP	1
211	0593958		Door, Amdor, Rollup, Rear Compartment, PUC	1
			Color, Roll-up Door - AMDOR Satin Aluminum	
			Latch, Roll-up Door - Non-Locking Liftbar	
212	0616670		Lights, Compt, Pierce LED, Dual Light Strips, Each Side of Door, Pumper/Tanker	7
			Qty, - 07	
			Location, Compartment Lights - All Body Compts	
213	0515681		189" Hatch, (2) Lift-up, 28" Wide, Both Sides, PUC/HDRP	1
			Size, Hatch Compt, Height - 22.00"	
			Trim, Body/Hatch Compt Seam, Horizontal, Pair - Molding	
			Trim, Body/Hatch Compt Seam, Vertical, Pair, PUC - Painted Extrusion	
			Matting, Floor, Hatch Compt - Dri-Deck - Black	
214	0733406		Handrails, Hatch Step Area, (1) Curved & (1) Straight	1
215	0688124		Lights, Hatch Compt, LED Strip Light, 189", Both Sides	1
216	0687145		Shelf Tracks, Recessed, PUC/3rd Generation	1
217	0600350		Shelves, Adj, 500 lb Capacity, Full Width/Depth, Predefined Locations	5
			Qty, Shelf - 05	
			Material Finish, Shelf - Painted - Spatter Gray	
			Location, Shelves/Trays, Predefined - RS3-Centered Left of Partition, RS1-Lower Third, RS3-Lower Third Left of Partition (2nd), LS1-Centered and LS3-Upper Third Left of Partition	

Line	Option	Type	Option Description	Qty
218	0709692		Tray, 215 lb, Tilt/Slide-Out, 30 Deg, Adj, Predefined Locations Qty, Tray (slide-out) - 01 Location, Shelves/Trays, Predefined - RS1-Upper Third Material Finish, Tray - Painted - Spatter Gray	1
219	0647091		Tray, Floor Mounted, Slide-Out, 500lb, 2.00" Sides Qty, - 02 Location, Tray Slide-Out, Floor Mounted - RS1 and LS1 Material Finish, Tray - Painted - Spatter Gray	2
220	0725631		Cabinet, Drawer Assembly, CTECH, Five Drawers, Up To 24" Wide Qty, - 01 Location - front of partition of LS-3 Size, Drawer Height 1 (Top) - 4.00" Size, Drawer Height 2 - 4.75" Size, Drawer Height 3 - 4.75" Size, Drawer Height 4 - 4.75" Size, Drawer Height 5 - 8.75"	1
221	0709346		Toolboard, Slide-out, Alum, .188", Peg Board, Predefined Locations Qty, - 03 Mounting, Toolboard - Adjustable side-side Hole Diameter, Pegboard/Toolboard - .281" diameter Finish, Pegboard/Toolboard - Painted - Spatter Gray Location, Partition/Toolboard, Predefined - LS3- 38.00" From Forward Door Frame, LS3- 44.00" From Forward Door Frame and RS3- 16.00" From Forward Door Frame	3
222	0544614		Toolboard, Swing-out, Alum, .188", Peg Board, 3G Qty - 2 Location, Pivot - Front Mounting, Toolboard - Adjustable Frt-back Hole Diameter, Pegboard/Toolboard - .281" diameter Finish, Pegboard/Toolboard - Painted - Spatter Gray Location, Toolboard - LS2 - Full Height/Width and RS2 - Full Height/Width	2
223	0726428		Partition, Horizontal, In Compt Qty, Partition - 01 Location - RS3	1
224	0539811		Box, Poly Tool Location - on adjustable shelf in RS1 Qty, Comp. Accessory - 04 Color - 1) black Length - 20.00" Width - 12.00" Depth - 10.00"	4
225	0762913		Divider, Vertical Location - one in compartment LS-3 to the right side of the CTech tool box, one in RS3 centered in compartment. Qty, - 02 Material Finish, Partition - Painted - Spatter Gray	2
226	0755526		Pegboard, Back Wall Mounted, 3/16" Alum, Special Qty, Comp. Accessory - 02 Configuration - back wall of compartment LS-2 and RS-2 Hole Diameter, Pegboard/Toolboard - .281" diameter Finish, Pegboard/Toolboard - Painted - Spatter Gray Location, Compartment, Predefined - LS2 and RS2	2
227	0063064		Rub Rail, Aluminum Extruded, Side of Body, 3rd Gen Body	1
228	0515441		Fender Crowns, Rear, S/S, W/Removable Fender Liner, Pumper, 3G Material Finish, Fender Liner - Brushed Stainless	1
229	0602222		Hose, Hard Suction, 6.0", 10.0', Clear Corrugated, Kocheck Qty, Hard Suction Hose - 2	2
230	0611033		Compt, HSH, (1), In Upper Body, PUC/HDRP Qty, - 02 Location, Hose Trough/Compartment - I) one each side Door, Material & Finish, Storage - Smooth Aluminum Latch, Door, Storage - Southco C2 Chrome Raised Hinge Location - Outboard Trough, Material - Stainless Steel	2

Line	Option	Type	Option Description	Qty
231	0626229		Handrails, Side Pump Panels, Per Print	1
232	0664688		Handrails, Rear, PUC/HDRP	1
233	0610196		Handrail, Rear, Above Hose Bed, New York Style/Low Hose Bed	1
			Handrail Finish - Black Rubber Covered	
			Reinforcement, Hose Bed Divider - Not Required, Reinforcement	
234	0648325		Compt, Air Bottle, Double, Tri Door, Fender Panel	1
			Qty, Air Bottle Comp - 1	
			Door Finish, Fender Compt - Painted	
			Location, Fender Compt - Double - LS Rear - Fuel Combo	
			Latch, Air Bottle Compt - Southco C2 Chrome Raised	
			Insert, Air Bottle Compt - Rubber Matting	
235	0657522		Compt, Air Bottle, Triple, Fender Panel	3
			Qty, Air Bottle Comp - 3	
			Door Finish, Fender Compt - Painted	
			Location, Fender Compt - Triple - LS Fwd, Triple - RS Fwd and Triple - RS Rear	
			Latch, Air Bottle Compt - Southco C2 Chrome Raised	
			Insert, Air Bottle Compt - Rubber Matting	
236	0004225		Ladder, 24' Duo-Safety 900A 2-Section	1
237	0004230		Ladder, 14' Duo-Safety 775A Roof	1
238	0736924		Ladder Storage, Thru-Tunnel, Horizontal, Banked/Spaced, Enclosed, HDRP	1
			Door, Material & Finish, Ladder Storage - smooth aluminum	
			Latch, Door Ladder Storage - Southco C2 Chrome Raised, Pair	
			Door Type - lift up with 2 stay arms	
239	0733387		Ladder, 10' Duo-Safety Folding 585A	1
240	0732966		Trough, Folding Ladder, Hard Suction Hose Compt	1
			Location, Left Side, Right Side - Left Side	
241	0812235		Ladder, Little Giant, Revolution 2.0 - Model 17, 13117 **	1
			Location - RS3	
242	0802285		Little Giant/Werner/Wall Ladder Storage, Horizontal In Compt	1
			Ladder, Make/Model - Little Giant Revolution Model 17	
			Location Within Compartment - on floor	
			Location, Compartment, Predefined - RS3	
			Configuration, BB/Stokes/LG - Horizontal	
243	0548193		Pike Pole, 8' Nupla, Fiberglass, I Beam, SPD-8	1
			Qty, Pike Poles - 1	
			Location - ladder storage compartment	
244	0548182		Pike Pole, 6' Nupla, Fiberglass, I Beam, SPD-6	1
			Qty, Pike Poles - 1	
245	0004361		Tubes, Alum, Pike Pole Storage	2
			Qty, Pike Pole Tubes - 02	
			Location, Pike Pole Tube - HSH Compt - RS	
246	0785102		Steps, Folding, Front of Body, Cargo Bed Access, w/LED, Trident	1
			Coating, Step - black	
			Location, Steps - Full Height Left and Right Side w/LED Light	
247	0515521		Ladder, Top Access, Alum, LH Rear, PUC/HDRP	1
			Do Not Move Truck Indicator - DNMT indicator	
248	0723704		Pump House, Side Control, 34", With Speedlay Module	1
249	0723562		Raised Pump House Structure, Side Control, With Speedlay Module	1
250	0797005		Pump, Waterous, CXC20, 1500 GPM, Single Stage, Midship Split Shaft	1
251	0004482		Seal, Mechanical, Waterous	1
252	0559769		Trans, Pump, Waterous C20 Series	1
253	0635600		Pumping Mode, Stationary Only	1
254	0605126		Pump Shift, Air Mnl Override, Split Shaft, Interlocked, Waterous	1
255	0003148		Transmission Lock-up, EVS	1
256	0004547		Auxiliary Cooling System	1
257	0014486		Not Required, Transfer Valve, Single Stage Pump	1
258	0746501		Valve, Relief Intake, Elkhart	1
			Qty - 1	
			Pressure Setting - 125 psig	
			Intake Relief Valve Control - Behind Right Side Pump Panel	
259	0794959		Controller, Pressure, Pierce, Pump Boss, PBA300	1
260	0072153		Primer, Trident, Air Prime, Air Operated	1

Line	Option	Type	Option Description	Qty
261	0780364		Manuals, Pump, (2) Total, Electronic Copies	1
262	0602512		Plumbing, Stainless Steel and Hose, Single Stage Pump, Control Zone	1
263	0795135		Plumbing, Stainless Steel, w/Foam System	1
264	0004645		Inlets, 6.00" - 1250 GPM or Larger Pump	1
265	0004646		Cap, Main Pump Inlet, Long Handle, NST, VLH	1
266	0084610		Valves, Akron 8000 series- All	1
267	0016158		Valve, Inlet(s) Recessed, Side Cntrl, "Control Zone"	1
			Qty, Inlets - 1	
268	0004700		Control, Inlet, at Valve	1
269	0004660		Inlet (1), Left Side, 2.50"	1
270	0029147		Not Required, Inlet, Right Side	1
271	0092569		No Rear Inlet (Large Dia) Requested	1
272	0064116		No Rear Inlet Actuation Required	1
273	0092696		Not Required, Cap, Rear Inlet	1
274	0009648		No Rear Intake Relief Valve Required on Rear Inlet	1
275	0586174		Provision, Front Inlet	1
276	0092568		No Rear Auxiliary Inlet Requested	1
277	0723049		Valve, .75" Bleeder, Aux. Side Inlet, "T" Swing Handle	1
278	0029043		Tank to Pump, (1) 3.00" Valve, 3.00" Plumbing	1
279	0004905		Outlet, Tank Fill, 1.50"	1
280	0062133		Control, Outlets, Manual, Pierce HW if applicable	1
281	0723616		Outlet (1), Left Side, 2.50"	1
282	0005091		Elbow, Left Side Outlets, 45 Degree, 2.50" FNST x 2.50" MNST, VLH	1
283	0092570		Not Required, Outlets, Left Side Additional	1
284	0035094		Not Required, Elbow, Left Side Outlets, Additional	1
285	0723614		Outlet (1), Right Side, 2.50"	1
286	0025091		Elbow, Right Side Outlets, 45 Degree, 2.50" FNST x 2.50" MNST, VLH	1
287	0092571		Not Required, Outlets, Right Side Additional	1
288	0089584		Not Required, Elbow, Right Side Outlets, Additional	1
289	0723556		Outlet, 4" w/4" Right, Small Handwheel	1
			Valve, Brand - Akron	
290	0005097		Elbow, Large Dia Outlet, 30 Deg, 4.00" FNST x 5.00" Storz	1
			Qty, - 01	
291	0649939		Outlet, Front, 1.50" w/2" Plumbing	1
			Fitting, Outlet - 1.50" NST with 90 degree swivel	
			Drain, Front Outlet - Automatic	
			Location, Front, Single - in center bumper tray	
292	0723552		Outlet, Rear, 2.50"	1
			Qty, Discharges - 01	
			Location, Outlet - b) left side	
293	0045091		Elbow, Rear Outlets, 45 Degree, 2.50" FNST x 2.50" MNST, VLH	1
294	0092574		Not Required, Outlet, Rear, Additional	1
295	0085695		Not Required, Elbow, Rear Outlets, Large, Additional	1
296	0092573		Not Required, Outlet, Hose Bed/Running Board Tray	1
297	0752097		Caps/Plugs for 1.00" to 3.00" Discharges/Inlets, Chain	1
298	0723042		Valve, 0.75" Bleeder, Discharges, "T" Swing Handle	1
299	0005065		Outlet, 3.00" Deluge Riser	1
300	0770359		No Monitor Requested, Customer/Dealer Furnished and Installed	1
			Fill in Blank - no monitor required or requested	
301	0029304		No Nozzle Req'd	1
302	0005070		Deluge Mount, NPT	1
303	0723972		11.00" Speedlay Module	1
			Scuffplate, Speedlay, Speedlay Module - Brushed Stainless Steel	
304	0723257		Compartments, Below Speedlays, RS, LS Used for Foam System	1
			Door, Material & Finish, Storage - Aluminum Treadplate	
			Latch, Door, Storage - Southco C2 Chrome Raised	
305	0723450		Hose Restr, Spdly, 2"Nylon Web, (1) Seat Belt Buckle, Tether Release	1
			Color, Strap - Orange	
306	0723971		Speedlays, (1) 1.5", W/Poly Trays, Std. Cap.	1
			Location, Outlet Swivel, Speedlay - Top of Speedlay Hose Bed	
307	0723970		Speedlays, (1) 1.5", W/Poly Trays, Std. Cap.	1
			Location, Outlet Swivel, Speedlay - Top of Speedlay Hose Bed	

Line	Option	Type	Option Description	Qty
308	0723729		Not Required, Selected in New Speedlay Categories	1
309	0090442		Crosslays Sngl Sheet Unpainted, (1) 2.50" Std Cap	1
310	0660087		Hose Restraint, Crosslays, 2" Nylon Web, Seat Belt Buckle, W/Tether, Sides	1
			Qty, - 1	
311	0723728		Not Required, Selected in New Speedlay Categories	1
312	0723727		Not Required, Selected in New Speedlay Restraint Category	1
313	0615255		Cover, Crosslay, 3/16" Alum Treadplate, Front Hinge	1
			Stay arm, Tray Cover - f) Rubber Latch	
314	0624939		Foam Sys, Husky 3, Single Agent, Multi Select Feature	1
			Discharge, Foam Locations - Front Bumper Center, Rear Outlet Left	
			Side, Crosslay Front, Speedlay Lower and Speedlay Upper	
315	0012126		Not Required, CAF Compressor	1
316	0592527		Refill, Foam Tank, Integral, Husky 3	1
317	0031896		Demonstration, Foam System, Dealer Provided	1
318	0005446		Foam Cell, 20 Gallon, Not Reduce Water	1
			Type of Foam - Class "A"	
319	0697589		Drain, 1.00", Foam Tank #1, Husky 3 Foam System, Quarter Turn	1
320	0091079		Not Required, Foam Tank #2	1
321	0091112		Not Required, Foam Tank #2 Drain	1
322	0738072		Approval Dwg, Pump Panel(s), Not Required	1
323	0032479		Pump Panel Configuration, Control Zone	1
324	0629252		Material, Pump Panels, Side Control Black Vinyl	1
			Material Finish, Pump Panel, Side Control - Black Vinyl	
			Material, Pump Panel, Side Control - Aluminum	
325	0722365		Panel, Pump Access, Front, Top and Both Sides, With Speedlay Module	1
			Latch, Pump Panel Access, Side Mount - Flush Trigger, Chrome	
326	0583824		Light, Pump Compt, WIn 3SC0CDCR LED White	1
			Qty, - 01	
327	0586382		Gauges, Engine, Included With Pressure Controller	1
328	0005601		Throttle, Engine, Incl'd w/Press Controller	1
329	0739224		Indicator Light @ Pump Panel, Throttle Ready, Incl w/Pressure Gov/Throttle, Green	1
330	0549333		Indicators, Engine, Included with Pressure Controller	1
331	0745568		Indicator Light, Pump Panel, Ok To Pump, Green	1
332	0511078		Gauges, 4.00" Master, Class 1, 30"-0-600psi	1
333	0511100		Gauge, 2.00" Pressure, Class 1, 30"-0-400psi	1
334	0757359		Gauge, Water Level, Class 1, Remote Module Driver	1
			Activation, Water Level G - pg) pump in gear	
335	0746513		Water Level Gauge, WIn 50*02Z*R LED w/Flange, Gr-BI-Amb-Rd, Features	2
			Location - behind crew cab doors, each side of truck, high as possible.	
			Qty, - 02	
			Activation, Water Level G - pg) pump in gear	
			Color, Lens, LED's - Match	
			Color, Trim - Chrome Trim	
336	0062992		Gauge, Foam Level, (1) Tank, Class 1, GAAAR 5lt	1
337	0682503		Light Shield/Step 8", LED, P25 LED Stp Lt	1
338	0682498		Light Shield/Step 8", PS LED, P25 LED Stp Lt	1
339	0606694		Air Horns, (2) Hadley, 6" Round, eTone, In Bumper	1
340	0606834		Location, Air Horns, Bumper, Each Side, Outside Frame, Inboard (Pos #2 & #6)	1
341	0757092		Control, Air Horn, Multi Select	1
342	0757076		Control, Air Horn, Lanyard, RS	1
			Lanyard - Vinyl Covered .12" cable	
343	0757084		Control, Air Horn, Horn Ring	1
344	0533071		Siren, WIn 295SLSC1, 100 or 200 Watt, w/Plug-in/Detachable Microphone Cord	1
345	0015283		Location, Elect Siren	1
			Location - Panel A	
346	0076156		Control, Elec Siren, Head Only	1
347	0601306		Speaker, (1) WIn, SA315P, w/Pierce Polished Stainless Steel Grille, 100 watt	1
			Connection, Speaker - siren head	
348	0601565		Location, Speaker, Frt Bumper, Recessed, Center (Pos 4)	1
349	0895310		Siren, Federal Q2B	1
			Finish, Q2B Siren - Chrome	

Line	Option	Type	Option Description	Qty
350	0006095		Siren, Mechanical, Mounted Above Deckplate	1
			Location, Siren, Mech - a) Left	
351	0748305		Control, Mech Siren, Multi Select	1
352	0748281		Control Mech Siren, Ft Sw RS	1
353	0748282		Control Mech Siren, Ft Sw LS	1
354	0736165		Sw, Siren Brake, Momentary, RS Overhead Sw Pnl	1
355	0736164		Sw, Siren Brake, Momentary, LS Overhead Sw Pnl	1
356	0734625		Control, Warning Lt Intensity, WIn, Photocell, Prk Brk	1
357	0740422	SP	Lightbar, WIn, Freedom IV-Q, 72", RRWRRR____RRRWRR, Lw Int	1
			Filter, Whl Freedom Ltbrs - No Filters	
358	0016380		No Additional Lights Req'd, Side Zone Upper	1
359	0745392		Lights, Front Zone, WIn M6** LED, in Common Bzl, Lw Int	1
			Color, Lens, LED's - c)clear	
			Color, Lt DS Front - Red	
			Color, Lt PS Front - Red	
360	0558676		Daytime Running Lights, Headlights, Qtm, Vel/Imp, Enf/AXT-MUX, DCF (Low Beam)	1
361	0653937		Flasher, Headlight Alternating	1
			Headlt flash deactivation - a)w/high beam	
362	0740512		Lights, Side Zone Lower, WIn M6**, M6**, M6**, 6lts, Lw Int	1
			Location, Lights Front Side - b)each side bumper	
			Color, Lens, LED's - Clear	
			Location, Lights Mid Side - Over Front Wheels	
			Location, Lights Rear Side - Over Rear Wheels	
			Color, Trim - Chrome Trim	
			Color, Lt Side Front, DS - Red	
			Color, Lt Side Front, PS - Red	
			Color, Lt Side Mid DS - Red	
			Color, Lt Side Mid PS - Red	
			Color, Lt Side Rear PS - Red	
			Color, Lt Side Rear DS - Red	
363	0889433		Lights, Side, WIn M9** LED, Lw Int 1st	2
			Location, Lights - front body upper corner, one each side of truck.	
			Qty, - 02	
			Color, Lights, Warning - Red Flashing	
			Color, Lens, LED's - Clear	
			Color, Trim - Chrome Trim	
364	0746427		Lights, Side, WIn M6* LED, Lw Int	2
			Location, Lights - behind crew cab door, each side of truck.	
			Qty, - 02	
			Color, Lights, Warning - gla) red	
			Color, Lens, LED's - Clear	
			Color, Trim - Chrome Trim	
365	0721511	SP	Lights, Rear Zn Lwr, WIn M9* LED, Lw Int	1
			Color, Lens, LED's - Clear	
			Color, Lt DS Rear - r) DS Rear Lt Red	
			Color, Lt PS Rear - r) PS Rear Lt Red	
			Color, Trim - Chrome Trim	
366	0728930	SP	Lights, Rear, WIn M9** LED, Lw Int	2
			Color, Light - ae) red	
			Location, Rear Lights - Rear compt bulkheads	
			Qty, - 02	
			Control, Light - a) rear upper warning	
			Color, Lens, LED's - Clear	
			Color, Trim - Chrome Trim	
367	0888061		Lights, Rear/Side Up Zone, WIn M9** M9** M9** M9** 4lts, Lw Int.	1
			Color, Lens, LED's - Clear	
			Color, Lt, Side Rear Upper DS - Red	
			Color, Lt, Side Rear Upper PS - Red	
			Color, Lt, Rear Upper DS - Red	
			Color, Lt, Rear Upper PS - Red	
			Color, Trim - Chrome Trim	
368	0006551		Not Required, Lights, Rear Upper Zone Blocking	1
369	0590000		No Hose Bed Warn Light Brackets Req'd, Lights Mtd on Hatch/Body Compts, PUC	1

Line	Option	Type	Option Description	Qty
370	0781579		Receptacle, 15/20A 120V 3-Pr 3-Wr, NEMA 5-20R SB Dup, 1st, Interior Cab Qty, - 01 Location 1 - upper rear wall of EMS Cabinet, centered next to 10 place 12v buss bar. AC Power Source - Shoreline Cover, Receptacle - Interior SS Wall Plate(s)	1
371	0519934		Not Required, Brand, Hydraulic Tool System	1
372	0649753		Not Required, PTO Driven Hydraulic Tool System	1
373	0007150		Bag of Nuts and Bolts Qty, Bag Nuts and Bolts - 1	1
374	0602516		NFPA Required Loose Equipment, Pumper, NFPA 2016, Provided by Fire Department	1
375	0610099		Soft Suction Hose, Provided by Fire Department, Pumper ULC Classification	1
376	0602390		Strainer, Provided by Fire Department, Pumper NFPA 2016 Classification	1
377	0602538		Extinguisher, Dry Chemical, Pumper NFPA 2016 Class, Provided by Fire Department	1
378	0602360		Extinguisher, 2.5 Gal. Pressurized Water, Pumper NFPA 2016, Provided by Fire Dept	1
379	0602679		Axe, Flathead, Pumper NFPA 2016 Classification, Provided by Fire Department	1
380	0602667		Axe, Pickhead, Pumper NFPA 2016 Classification, Provided by Fire Department	1
381	0741569		Paint Process / Environmental Requirements, Appleton	1
382	0709566		Paint, Two-Tone Color, Enforcer Paint Color, Upper Area, Predefined - #101 Black Shield, Cab - Standard Shield Paint Color, Lower Area, Predefined - #90 Red Paint Break, Cab - Standard Two-Tone Cab Break	1
383	0709845		Paint, Single Color, Body Paint, Body - Match Lower Cab	1
384	0646901		Paint Chassis Frame Assy, With Liner, E-Coat, Standard Paint Color, Frame Assembly, Predefined - Gloss Black	1
385	0693797		No Paint Required, Aluminum Front Wheels	1
386	0693792		No Paint Required, Aluminum Rear Wheels	1
387	0733739		Paint, Axle Hubs Paint, Axle Hub - Lower Job Color	1
388	0007230		Compartment, Painted, Spatter Gray	1
389	0544129		Reflective Band, 1"-6"-1" Color, Reflect Band - A - i) gold Color, Reflect Band - B - p) black Color, Reflect Band - C - ze) gold	1
390	0007356		Reflective across Cab Face	1
391	0536954		Stripe, Chevron, Rear, Diamond Grade, Pumper Color, Rear Chevron DG - fluorescent yellow green	1
392	0073811		Folded "Z" Ribbon in Reflective Stripe, Pair Location - front body compartment, each side of truck Qty, - 1	1
393	0017359		Stripe, Black Outline, Vinyl on Reflective Band Qty, - 02	2
394	0593225		Stripe, Reflective, Cab Doors Interior, Diamond Grade Color, Reflect Band - A - p) fluorescent yellow green diamond grade	1
395	0027286		Not Required, Lettering Specs	1
396	0007472		[Lettering not Requested]	1
397	0583553		Undercoating, Cab & Body, Stock/Demo Style, Pumper, Ziebart	1
398	0772003		Manual, Fire Apparatus Parts, USB Flash Drive, Custom Qty, - 01	1
399	0772037		Manual, Chassis Service, USB Flash Drive, Custom Qty, - 01	1
400	0773381		Manual, Chassis Operation, (1) USB Flash Drive, Custom	1
401	0030008		Warranty, Basic, 1 Year, Apparatus, WA0008	1
402	0735523		Warranty, Engine, Paccar MX13, 5 Year	1
403	0684953		Warranty, Steering Gear, Sheppard M110, 3 Year WA0201	1
404	0596017		Warranty, Frame, 50 Year, Custom Chassis, WA0013	1
405	0595698		Warranty, Axle, 3 Year, TAK-4, WA0050	1
406	0610485		Warranty, Axle, Eaton/Dana, 5 Year/100,000 Mile, Parts and Labor	1

Line	Option	Type	Option Description	Qty
407	0652758		Warranty, ABS Brake System, 3 Year, Meritor Wabco, WA0232	1
408	0019914		Warranty, Structure, 10 Year, Custom Cab, WA0012	1
409	0744240		Warranty, Paint, 10 Year, Cab, Pro-Rate, WA0055	1
410	0524627		Warranty, Electronics, 5 Year, MUX, WA0014	1
411	0647720		Warranty, Pierce LED Strip Lights, WA0203	1
412	0046369		Warranty, 5-year EVS Transmission, Standard Custom, WA0187	1
413	0685945		Warranty, Transmission Cooler, WA0216	1
414	0688798		Warranty, Water Tank, Lifetime, UPF, Poly Tank, WA0195	1
415	0596025		Warranty, Structure, 10 Year, Body, WA0009	1
416	0693126		Warranty, AMDOR, Roll-up Door, 10 Year/5 Year Painted, WA0185	1
417	0734463		Warranty, Pump, Waterous, 7 Year Parts, WA0382	1
418	0648675		Warranty, 10 Year S/S Pumbing, WA0035	1
419	0657990		Warranty, Foam System, Husky 3, WA0231	1
420	0595820		Warranty, Paint, 10 Year, Body, Pro-Rate, WA0057	1
421	0593921		Not Required, Warranty, No Lettering	1
422	0683627		Certification, Vehicle Stability, CD0156	1
423	0735686		Certification, Engine Installation, Enf, Paccar MX13, 2021	1
424	0686786		Certification, Power Steering, CD0098	1
425	0631980		Certification, Cab Integrity, Saber FR/Enforcer, CD0130	1
426	0631973		Certification, Cab Door Durability, Saber FR/Enforcer, CD0137	1
427	0631978		Certification, Windshield Wiper Durability, Saber FR/Enforcer, CD0132	1
428	0631974		Certification, Electric Window Durability, Saber FR/Enforcer, CD0133	1
429	0631977		Certification, Seat Belt Anchors and Mounting, Saber FR/Enforcer, CD0134	1
430	0735949		Certification, Cab HVAC System Performance, SFR/Enf, CD0165/CD0167/CD0174/CD0175	1
431	0545073		Amp Draw Report, NFPA Current Edition	1
432	0002758		Amp Draw, NFPA/ULC Radio Allowance	1
433	0799247		Appleton/Florida Stock Unit	1
434	0000048		PUMPER/TANKER, 3rd Gen	1
435	0000012		PIERCE CHASSIS	1
436	0735525		PACCAR MX13 ENGINE	1
437	0046396		EVS 4000 Series TRANSMISSION	1
438	0020011		WATEROUS PUMP	1
439	0020009		POLY TANK	1
440	0028048		FOAM SYSTEM	1
441	0020006		SIDE CONTROL	1
442	0020007		AKRON VALVES	1
443	0020015		ABS SYSTEM	1
444	0658751		PUMPER BASE	1



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### **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.

### **SPECIAL INSTRUCTIONS**

The apparatus being proposed will be designed and built to match the For Engineering Purposes Only, Similar to Job 39296. However, some variation may be necessary due to changes in our manufacturing processes or our product offering. Revisions in NFPA guidelines and/or other regulations may also affect our ability to match the previous unit.

### **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.

All horizontal surfaces designated as a standing or walking surface that are greater than 48.00" above the ground must be defined by a 1.00" wide line along its outside perimeter. Perimeter markings and designated access paths to destination points will be identified on the customer approval print and are shown as approximate. Actual location(s) will be determined based on materials used and actual conditions at final build. Access paths may pass through hose storage areas and opening or removal of covers or restraints may be required. Access paths may require the operation of devices and equipment such as the aerial device or ladder rack.

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".

### **PUMP TEST**

Underwriters Laboratory (UL) will test, approve, and certify the pump. The test results and the pump manufacturer's certification of hydrostatic test; the engine manufacturer's certified brake horsepower curve; and the pump manufacturer's record of pump construction details will be forwarded to the Fire Department.

### **GENERATOR TEST**

If the unit has a generator, Underwriters Laboratory (UL) will test, approve, and certify the generator. 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 have the sample certified that the air quality meets the requirements of NFPA 1989, *Standard on Breathing Air Quality for Fire and Emergency Services Respiratory Protection*.

### **VEHICLE INSPECTION PROGRAM CERTIFICATION**

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

### **SERVICE**

The bidder has service centers within the State of bidding and also has mobile service to the department location. These services will be covering the states of Nebraska, Kansas, and Oklahoma. You will be provided with phone numbers, contact persons and an emergency 24/7 number from the dealership. You can also contact your sales person in emergencies.

You will also be provided with a 24/7 phone number to customer service from the factory level as well.

### **TRAINING**

Training from a factory certified trainer will be provided on each unit for a maximum of 24 hours (three 8 hour shifts). There will also be a factory trainer on aerial devices. This training can take place on the consecutive days you choose. For volunteer departments, this training can be provided on weekend schedules.

### **BID BOND NOT REQUESTED**

A bid bond will not be included. If requested, the following will apply:

All bidders will provide a bid bond as security for the bid in the form of a 5% bid bond to accompany their bid. 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 217.00.



### **GVW RATING**

The gross vehicle weight rating will be 46,500.

### **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 have a 13.38" tall web over the front and mid sections of the chassis, with a continuous smooth taper to 10.75" over the rear axle. Each rail will have a section modulus of 25.992 cubic inches and a resisting bending moment (rbm) of 3,119,040 in-lb over the critical regions of the frame assembly, with a section modulus of 18.96 cubic inches with an rbm of 2,275,200 in-lb over the rear axle. The frame rails will be constructed of 120,000 psi yield strength heat-treated 0.38" thick steel with 3.50" wide flanges.

### **FRAME REINFORCEMENT**

In addition, a mainframe internal liner will be provided. The liner will be an internal "C" design that steps to an internal "L" design over the rear axle. It will be heat-treated steel measuring 12.50" x 3.00" x 0.25" through the front portion of the liner, stepping to 9.38" x 3.00" x 0.25" through the rear portion of the liner. Each liner will have a section modulus of 13.58 cubic inches, yield strength of 110,000 psi, and rbm of 1,494,042 in-lb. Total rbm at wheelbase center will be 4,391,869 in-lb.

The frame liner will be mounted inside of the chassis frame rail and extend the full length of the frame.

### **FRONT NON DRIVE AXLE**

The Oshkosh TAK-4® front axle will be of the independent suspension design with a ground rating of 19,500 lb.

Upper and lower control arms will be used on each side of the axle. Upper control arm castings will be made of 100,000-psi yield strength 8630 steel and the lower control arm casting will be made of 55,000-psi yield ductile iron.

The center cross members and side plates will be constructed out of 80,000-psi yield strength steel.

Each control arm will be mounted to the center section using elastomer bushings. These rubber bushings will rotate on low friction plain bearings and be lubricated for life. Each bushing will also have a flange end to absorb longitudinal impact loads, reducing noise and vibrations.

There will be nine (9) grease fittings supplied, one (1) on each control arm pivot and one (1) on the steering gear extension.

The upper control arm will be shorter than the lower arm so that wheel end geometry provides positive camber when deflected below rated load and negative camber above rated load.

Camber at load will be zero degrees for optimum tire life.

The ball joint bearing will be of low friction design and be maintenance free.

Toe links that are adjustable for alignment of the wheel to the center of the chassis will be provided.

The wheel ends must have little to no bump steer when the chassis encounters a hole or obstacle.

The steering linkage will provide proper steering angles for the inside and outside wheel, based on the vehicle wheelbase.

The axle will have a turning angle of up to 45 degrees.

### **FRONT SUSPENSION**

Front Oshkosh TAK-4™ independent suspension will be provided with a minimum ground rating of 19,500 lb.

The independent suspension system will be designed to provide maximum ride comfort. The design will allow the vehicle to travel at highway speeds over improved road surfaces and at moderate speeds over rough terrain with minimal transfer of road shock and vibration to the vehicle's crew compartment.

Each wheel will have torsion bar type spring. In addition, each front wheel end will also have energy absorbing jounce bumpers to prevent bottoming of the suspension.

The suspension design will be such that there is at least 10.00" of total wheel travel and a minimum of 3.75" before suspension bottoms.

The torsion bar anchor lock system allows for simple lean adjustments, without the use of shims. One can adjust for a lean within 15 minutes per side. Anchor adjustment design is such that it allows for ride height adjustment on each side.

The independent suspension was put through a durability test that simulated 140,000 miles of inner city driving.

### **FRONT SHOCK ABSORBERS**

KONI heavy-duty telescoping shock absorbers will be provided on the front suspension.

### **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 G289 WHA tread, rated for 20,400 lb maximum axle load and 68 mph maximum speed.

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

### **REAR AXLE**

The rear axle will be a Dana, Model S26-190, with a capacity of 27,000 lb.

### **TOP SPEED OF VEHICLE**

A rear axle ratio will be furnished to allow the vehicle to reach a top speed of 68 mph / 109 kph.

### **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 27,000 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 Alcoa 22.50" x 8.25" polished aluminum disc 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.

### **FRONT HUB COVERS**

Stainless steel hub covers will be provided on the front axle. An oil level viewing window will be provided.

### **REAR HUB COVERS**

A pair of stainless steel high hat hub covers will be provided on rear axle hubs.

### **CHROME LUG NUT COVERS**

Chrome lug nut covers will be supplied on front and rear wheels.

### **MUD FLAPS**

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

### **WHEEL CHOCKS**

There will be one (1) pair of folding Ziamatic, Model SAC-44-E, aluminum alloy, Quick-Choc wheel blocks, with easy-grip handle provided.

### **Wheel Chock Brackets**

There will be one (1) pair of Zico, Model SQCH-44-H, horizontal mounting wheel chock brackets provided for the Ziamatic, Model SAC-44-E, folding wheel chocks. The brackets will be made of aluminum and consist of a quick release spring loaded rod to hold the wheel chocks in place. The brackets will be mounted one (1) forward and one (1) rearward of the left side rear tire.

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

The vehicle will be equipped with a Meritor WABCO 4S4M, anti-lock braking system. The ABS will provide a 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.

### **BRAKES**

The service brake system will be full air type.

The front brakes will be Knorr/Bendix disc type with a 17.00" ventilated rotor for improved stopping distance.

The brake system will be certified, third party inspected, for improved stopping distance.

The rear brakes will be Bendix™ 16.50" x 8.63" cam operated with automatic slack adjusters.

### **AIR COMPRESSOR, BRAKE SYSTEM**

The air compressor will be a Wabco single piston compressor with a 26.8 CI displacement.

### **BRAKE SYSTEM**

The brake system will include:

- Brake treadle valve
- 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)

- 1/4 turn drain valves on each air tank

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 WABCO System Saver 1200 with 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 3D series 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 forward 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 fitting will also be provided with the loose equipment.

### **ENGINE**

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

Make:	Paccar
Model:	MX13
Power:	510 hp at 1600rpm
Torque:	1850 lb-ft at 1000rpm
Governed Speed:	1900 rpm
Emissions Certification:	EPA 2021
Fuel:	Diesel
Cylinders:	Six (6)
Displacement:	12.9L
Starter:	DP60
Fuel Filters:	Dual cartridge style with check valve, water separator, and water in fuel sensor

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 compression release brake option is a fully integrated MX engine braking system. It utilizes the turbocharger and backpressure valve, but adds in a hydraulically operated compression brake to increase overall retarding power.

To maximize the effectiveness of the compression brake the MX engine brake system works in conjunction with the turbocharger and back pressure valve.

The driver will be able to turn the engine brake system on/off and have a high, medium and low setting

### **CLUTCH FAN**

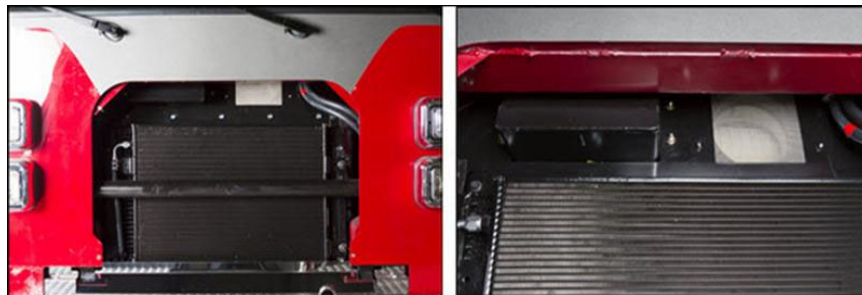
A fan clutch will be provided. The fan clutch will be automatic when the pump transmission is in "Road" position, and constantly engaged when in "Pump" position.

### **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 include a Single Module™ aftertreatment device to meet current EPA standards. The exhaust system will be stainless steel from the turbo to the inlet of the aftertreatment device, and will be 5.00" in diameter. An insulation wrap will be provided on all exhaust pipes between the turbo and aftertreatment device to minimize the heat loss to the aftertreatment device. The exhaust will terminate horizontally ahead of the right 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 tank will be made of heavy duty glass-reinforced nylon and the return tank will be made of aluminum. Both tanks 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 65 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 0.75" 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 0.50" 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 7.3 gallon diesel exhaust fluid (DEF) tank will be provided and mounted under the cab on the driver's side.

A fill inlet will be provided on the driver's side of the cab. The door will be vertically hinged and secured by a SouthCo M1 medium stainless steel compression latch and be painted.

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 6th generation, Model EVS 4000P, 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 left side and top of converter housing (positions 8 o'clock and 1 o'clock).

A transmission temperature gauge with an amber light and buzzer will be installed on the cab instrument panel.

### **TRANSMISSION SHIFTER**

A six (6)-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	3.51 to 1.00
2nd	1.91 to 1.00
3rd	1.43 to 1.00
4th	1.00 to 1.00
5th	0.75 to 1.00
6th	0.64 to 1.00
R	4.80 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® 1810 universal joints.

The shafts will be dynamically balanced before installation.

A splined slip joint will be provided in each driveshaft where the driveline design requires it. The slip joint will be coated with Glidecoat® or equivalent.

### **STEERING**

Dual Sheppard, Model M110, steering gears, with integral heavy-duty power steering, will be provided. For reduced system temperatures, the power steering will incorporate an air to oil cooler and Paccar 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 four (4)-spoke design.

There will be a switch pod provided on each side of the steering wheel between the spokes. The switch pods will be an integral part of the steering wheel. Each switch pod will contain four (4) switches. The following switches will be provided:

- Air horn
- Emergency lighting
- Area lighting
- Front dome light
- Rear dome light
- Q2B siren activate
- Q2B siren brake
- Wiper mist
- Full floating horn pad

### **BUMPER**

A one (1)-piece bumper manufactured from 0.25" formed steel with a 0.38" bend radius will be provided. The bumper will be a minimum of 10.00" high with a 1.50" top and bottom flange, and will extend 19.00" from the face of the cab. The bumper will be 95.28" wide with 45 degree corners and side plates. The bumper will be metal finished and painted job color.

To provide adequate support strength, the bumper will be mounted directly to the front of the C channel frame. The frame will be a bolted modular extension frame constructed of 50,000 psi tensile steel.

### **Gravel Pan**

A gravel pan, constructed of bright aluminum treadplate, will be furnished between the bumper and the cab face. The pan will be properly supported from the underside to prevent flexing and vibration.

### **CENTER HOSE TRAY**

A hose tray, constructed of aluminum, will be placed in the center of the bumper extension.

The tray will have a capacity of 125' of 1.75" double jacket cotton-polyester hose.

Black rubber grating will be provided at the bottom of the tray. Drain holes are also provided.

### **Center Hose Tray Cover**

A bright aluminum treadplate cover will be provided over the center hose tray.

The cover will be attached with a stainless steel hinge.

One (1) D-ring latch will secure the cover in the closed position and a pneumatic stay arm will hold the cover in the open position.

### **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.

### **FRONT BUMPER UL-LX COATING**

Protective black UL-LX® coating will be provided on the outside exterior of the top front bumper flange. It will not be sprayed on the underside of the flange.

The lining will be properly installed by an authorized UL-LX dealer.

### **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 forward cab section will have an overall height (from the cab roof to the ground) of approximately 99.00". The crew cab section will have a 10.00" raised roof, with an overall cab height of approximately 109.00". 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 64.50" in the center and outboard positions.

The crew cab floor will measure 46.00" 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 61.50" to the rear wall. The big block engine tunnel will measure 51.50" 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.



**[Washer Reservoir Location]**

### **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 overlaid with bright aluminum treadplate except for areas that are not typically visible when the cab is lowered.

### **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.

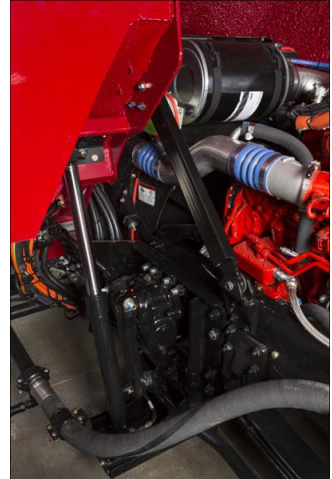


The hydraulic cylinders will be equipped with a velocity fuse that protects the cab from accidentally descending when the control is located in the tilt position.

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.

#### **DOOR JAMB SCUFFPLATES**

All cab door jambs will be furnished with a 1.00" polished stainless steel scuffplate, mounted on the striker side of the jamb.

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

Chrome molding will be provided on both sides of cab.

#### **MIRRORS**

A Retractable, 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.

An amber marker light will be provided on each mirror head.

#### **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 73.25" 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 finish of the door handle will be chrome/black. 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.



[Exterior Door Handle]

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 keys will be Model 751. 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.



[Interior Door Handle]

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 grab handle will be provided on the inside of each cab door for ease of entry.

A red webbed grab handle will be installed on the crew cab door stop strap. The grab handles will be securely mounted.

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.

### **ELECTRIC OPERATED CAB DOOR WINDOWS**

All four (4) cab doors will be equipped with electric operated windows with one (1) flush mounted automotive style switch on each door. The driver's door will have four (4) switches, one (1) to control each door window.

Each switch will allow intermittent or auto down operation for ease of use. Auto down operation will be actuated by holding the window down switch for approximately 1 second.



### **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.

The vertical surfaces of the step well will be aluminum treadplate.

### **CAB EXTERIOR HANDRAILS**

A 1.25" diameter slip-resistant, knurled aluminum handrail will be provided adjacent to each cab and crew cab door opening to assist during cab ingress and egress.



### **STEP LIGHTS**

There will be six (6) white LED step lights with chrome housing installed for cab and crew cab access steps.

- One (1) light for the left access steps.
- Two (2) lights for the left side crew cab access steps.
- Two (2) lights for the right side crew cab access steps.
- One (1) light for the right side access step.

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

### **FENDER CROWNS**

Stainless steel fender crowns will be installed at the cab wheel openings.

### **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 DASH**

The driver side dash, switch panel located to the right of the driver, and center console will be an easily removable high impact resistant polymer cover.

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



The officer side dash will be a flat top design with an upper beveled edge to provide easy maintenance and will be constructed out of aluminum and painted to match the cab interior.

#### **MOUNTING PLATE ON ENGINE TUNNEL**

Equipment installation provisions will be installed on the engine tunnel.

A 0.188" smooth aluminum plate will be bolted to the top surface of the engine tunnel. The plate will follow the contour of the engine tunnel and will run the entire length of the engine tunnel. The plate will be spaced off the engine tunnel 1.00" to allow for wire routing below the plate.

The mounting surface will be painted to match the cab interior.

#### **CAB INTERIOR**

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

The engine tunnel will be padded and covered, on the top and sides, with dark silver gray 36 ounce leather grain vinyl resistant to oil, grease, and mildew.

For durability and ease of maintenance, the cab interior side walls will be painted aluminum. The rear wall will be painted aluminum.

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 an aluminum sheet and securely fastened to interior cab ceiling.

The forward portion of the 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 36 oz dark silver gray vinyl.

#### **CAB INTERIOR PAINT**

The cab interior metal surfaces, excluding the rear heater panels, will be painted fire smoke gray, vinyl texture paint.

The rear heater panels will be painted black, vinyl textured 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.

### **DEFROST/AIR CONDITIONING SYSTEM**

A ceiling mounted combination heater, defroster and air conditioning system will be installed in the cab above the engine tunnel area.

#### **Cab Defroster**

A 54,000 BTU heater-defroster unit with 690 SCFM of air flow will be provided inside the cab. The heater-defrost will be installed in the forward portion of the cab ceiling. Air outlets will be strategically located in the cab header extrusion per the following:

- One (1) adjustable will be directed towards the left side cab window
- One (1) adjustable will be directed towards the right side cab window
- Six (6) fixed outlets will be directed at the windshield

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 Auxiliary Heater**

There will be one (1) 31,000 BTU auxiliary heater with 560 SCFM of air flow provided in each outboard rear facing seat risers with a dual scroll blower. An aluminum plenum incorporated into the cab structure used to transfer heat to the forward positions.

#### **Air Conditioning**

A condenser will be a 59,644 BTU output that meets and exceeds the performance specification will be mounted on the radiator.

The air conditioning system will be capable of cooling the average cab temperature from 100 degrees Fahrenheit to 75 degrees Fahrenheit at 50 percent relative humidity within 30 minutes. The cooling performance test will be run only after the cab has been heat soaked at 100 degrees Fahrenheit for a minimum of 4 hours.

The evaporator unit will be installed in the rear portion of the cab ceiling over the engine tunnel. The evaporator will include one (1) high performance heating core, one (1) high performance cooling core with (1) plenum directed to the front and one (1) plenum directed to the rear of the cab. The rear plenum will be covered with a metal cover painted to match the cab interior.

The evaporator unit will have a 52,000 BTU at 690 SCFM rating that meets and exceeds the performance specifications.

Adjustable air outlets will be strategically located on the forward plenum cover per the following:

- Four (4) will be directed towards the seating position on the left side of the cab
- Four (4) will be directed towards the seating position on the right side of the cab

Adjustable air outlets will be strategically located on the rear plenum cover per the following:

- Minimum of five (5) will be directed towards crew cab area

A high efficiency particulate air (HEPA) filter will be included for the system. Access to the filter cover will be hinged with two (2) thumb latches.

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

### **Climate Control**

An automotive style controller will be provided to control the heat and air conditioning system within the cab. The controller will have three (3) functional knobs for fan speed, temperature, and air flow distribution (front to rear) control.



The system will control the temperature of the cab and crew cab automatically by pushing the center of the fan speed control knob. Rotate the center temperature control knob to set the cab and crew cab temperature.

The AC system will be manually activated by pushing the center of the temperature control knob. Pushing the center of the air flow distribution knob will engage the AC for max defrost, setting the fan speeds to 100 percent and directing all air flow to the overhead forward position.

The system controller will be located within panel position #12.

### **Gravity Drain Tubes**

Two (2) condensate drain tubes will be provided for the air conditioning evaporator. The drip pan will have two (2) drain tubes plumbed separately to allow for the condensate to exit the drip pan. No pumps will be provided.

### **SUN VISORS**

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

There will be a black plastic thumb latch 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 LIGHTS**

There will be one (1) Whelen, Model 3SC0CDCR, 12 volt DC, 3.00" white LED light(s) with Whelen, Model 3FLANGE, chrome flange kit(s) installed under the cab to be used as engine compartment illumination.

These light(s) will be activated automatically when the cab is raised.

### **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 lift and turn latch will be provided on the access door.



### **CAB SAFETY SYSTEM**

The cab will be provided with a safety system designed to protect occupants in the event of a side roll or frontal impact, and will include the following:

- A supplemental restraint system (SRS) sensor will be installed on a structural cab member behind the instrument panel. The SRS sensor will perform real time diagnostics of all critical subsystems and will record sensory inputs immediately before and during a side roll or frontal impact event.
- A slave SRS sensor will be installed in the cab to provide capacity for eight (8) crew cab seating positions.
- A fault-indicating light will be provided on the vehicle's instrument panel allowing the driver to monitor the operational status of the SRS system.
- A driver side front air bag will be mounted in the steering wheel and will be designed to protect the head and upper torso of the occupant, when used in combination with the 3-point seat belt.

- A passenger side knee bolster air bag will be mounted in the modesty panel below the dash panel and will be designed to protect the legs of the occupant, when used in combination with the 3-point seat belt.
- Air curtains will be provided in the outboard bolster of outboard seat backs to provide a cushion between occupant and the cab wall.
- Suspension seats will be provided with devices to retract them to the lowest travel position during a side roll or frontal impact event.
- Seat belts will be provided with pre-tensioners to remove slack from the seat belt during a side roll or frontal impact event.

### **Frontal Impact Protection**

The SRS system will provide protection during a frontal or oblique impact event. The system will activate when the vehicle decelerates at a predetermined G force known to cause injury to the occupants. The cab and chassis will have been subjected, via third party test facility, to a crash impact during frontal and oblique impact testing. Testing included all major chassis and cab components such as mounting straps for fuel and air tanks, suspension mounts, front suspension components, rear suspensions components, frame rail cross members, engine and transmission and their mounts, pump house and mounts, frame extensions and body mounts. The testing provided configuration specific information used to optimize the timing for firing the safety restraint system. The sensor will activate the pyrotechnic devices when the correct crash algorithm, wave form, is detected.

The SRS system will deploy the following components in the event of a frontal or oblique impact event:

- Driver side front air bag
- Passenger side knee bolster air bag
- Air curtains mounted in the outboard bolster of outboard seat backs
- Suspension seats will be retracted to the lowest travel position
- Seat belts will be pre-tensioned to firmly hold the occupant in place

### **Side Roll Protection**

The SRS system will provide protection during a fast or slow 90 degree roll to the side, in which the vehicle comes to rest on its side. The system will analyze the vehicle's angle and rate of roll to determine the optimal activation of the advanced occupant restraints.

The SRS system will deploy the following components in the event of a side roll:

- Air curtains mounted in the outboard bolster of outboard seat backs
- Suspension seats will be retracted to the lowest travel position
- Seat belts will be pre-tensioned to firmly hold the occupant in place

### **SEATING CAPACITY**

The seating capacity of the vehicle (including tiller cab and belted seat positions in the rescue body) will be six (6).

### **DRIVER SEAT**

A seat will be provided in the cab for the driver. The seat design will be a cam action type, with air suspension. For increased convenience, the seat will include a manual control to adjust the horizontal position (6.00" travel). The manual horizontal control will be a towel-bar style located below the forward part of the seat cushion. To provide flexibility for multiple driver configurations, the seat will have an adjustable reclining back. The seat back will be a high back style with side bolster pads for maximum support. For optimal comfort, the seat will be provided with 17.00" deep foam cushions designed with EVC (elastomeric vibration control).

The seat will include the following features incorporated into the side roll protection system:

- Side air curtain will be mounted integral to the outboard bolster of the seat back. The air curtain will be covered by a decorative panel when in the stowed position.
- A suspension seat safety system will be included. When activated in the event of a side roll, this system will pretension the seat belt and retract the seat to its lowest travel position.

The seat will be furnished with a 3-point, shoulder type seat belt.

### **OFFICER SEAT**

A seat will be provided in the cab for the passenger. The seat will be a fixed type, with no suspension. For optimal comfort, the seat will be provided with 17.00" deep foam cushions designed with EVC (elastomeric vibration control).

The seat back will be an SCBA back style with 5 degree fixed recline angle. The SCBA cavity will be adjustable from front to rear in 1.00" increments, to accommodate different sized SCBA cylinders. Moving the SCBA cavity will be accomplished by unbolting, relocating, and re-bolting it in the desired location.

The seat will include the following features incorporated into the side roll protection system:

- Side air curtain will be mounted integral to the outboard bolster of the seat back. The air curtain will be covered by a decorative panel when in the stowed position.
- A seat safety system will be included. When activated, this system will pretension the seat belt.

The seat will be furnished with a 3-point, shoulder type seat belt.

### **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 one (1) flush lift and turn latch will be provided for access.

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

### **REAR FACING DRIVER SIDE OUTBOARD SEAT**

There will be one (1) rear facing seat provided at the driver side outboard position in the crew cab. For optimal comfort, the seat will be provided with 15.00" deep foam cushions designed with EVC (elastomeric vibration control).

The seat back will be an SCBA back style with 5 degree fixed recline angle. The SCBA cavity will be adjustable from front to rear in 1.00" increments, to accommodate different sized SCBA cylinders. Moving the SCBA cavity will be accomplished by unbolting, relocating, and re-bolting it in the desired location.

The seat will include the following features incorporated into the side roll protection system:

- Side air curtain will be mounted integral to the outboard bolster of the seat back. The air curtain will be covered by a decorative panel when in the stowed position.
- A seat safety system will be included. When activated, this system will pretension the seat belt.

The seat will be furnished with a 3-point, shoulder type seat belt.

### **REAR FACING PASSENGER SIDE OUTBOARD SEAT**

There will be one (1) rear facing seat provided at the passenger side outboard position in the crew cab. For optimal comfort, the seat will be provided with 15.00" deep foam cushions designed with EVC (elastomeric vibration control).

The seat back will be an SCBA back style with 5 degree fixed recline angle. The SCBA cavity will be adjustable from front to rear in 1.00" increments, to accommodate different sized SCBA cylinders. Moving the SCBA cavity will be accomplished by unbolting, relocating, and re-bolting it in the desired location.

The seat will include the following features incorporated into the side roll protection system:

- Side air curtain will be mounted integral to the outboard bolster of the seat back. The air curtain will be covered by a decorative panel when in the stowed position.
- A seat safety system will be included. When activated, this system will pretension the seat belt.

The seat will be furnished with a 3-point, shoulder type seat belt.

### **FORWARD FACING DRIVER SIDE OUTBOARD SEAT**

There will be one (1) forward facing flip-up seat provided at the driver side outboard position in the crew cab. The seat back will have a plywood 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.

The seat will include the following features incorporated into the side roll protection system:

- A seat safety system will be included. When activated, this system will pretension the seat belt around the occupant to firmly hold them in place in the event of a side roll.

The seat will be furnished with a 3-point, shoulder type seat belt.

### **FORWARD FACING CENTER CABINET**

A forward facing cabinet will be provided in the crew cab at the center position.

The cabinet will be 38.50" wide x 50.00" high x 28.00" deep with one (1) Amdor rollup door with anodized finish, locking with #751 key. The frame to frame opening of the cabinet will be 36.00" wide x 44.75" high. The minimum clear door opening will be 33.25" wide x 38.87" high.

CLEAR DOOR OPENINGS (F-F = Frame to Frame)					
AMDOR		GORTITE		ROM	
HORIZONTAL	VERTICAL	HORIZONTAL	VERTICAL	HORIZONTAL	VERTICAL
Subtract 2.00" from F-F	Subtract 5.88" from F-F	Subtract 2.75" from F-F	Subtract 4.75" from F-F	Subtract 2.56" from F-F	Subtract 4.50" from F-F

The cabinet will include two (2) infinitely adjustable shelves with a 0.75" up-turned lip painted to match the cab interior.

The cabinet will include no louvers.

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

### **Cabinet Light**

There will be one (1) white LED strip light installed on the left side of the interior cabinet door opening and one (1) white LED strip light installed on the right side of the interior cabinet door opening. The lighting will be controlled by an automatic door switch.

### **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 a plywood 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.

The seat will include the following features incorporated into the side roll protection system:

- A seat safety system will be included. When activated, this system will pretension the seat belt around the occupant to firmly hold them in place in the event of a side roll.

The seat will be furnished with a 3-point, shoulder type seat belt.

### **SEAT UPHOLSTERY**

All seat upholstery will be leather grain 36 oz dark silver gray vinyl resistant to oil, grease and mildew. The cab will have six (6) seating positions.

### **AIR BOTTLE HOLDERS**

All SCBA type seats in the cab will have a "Hands-Free" auto clamp style bracket in its backrest. For efficiency and convenience, the bracket will include an automatic spring clamp that allows the occupant



to store the SCBA bottle by simply pushing it into the seat back. For protection of all occupants in the cab, in the event of an accident, the inertial components within the clamp will constrain the SCBA bottle in the seat and will exceed the NFPA standard of 9G.

There will be a quantity of three (3) SCBA brackets.

### **SEAT BELTS**

All cab and tiller cab (if applicable) seating positions will have red seat belts. 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 3-point shoulder type seat belts will include height adjustment. This adjustment will optimize the belts effectiveness and comfort for the seated firefighter. The 3-point shoulder type seat belts will be furnished with dual automatic retractors that will provide ease of operation in the normal seating position.

The 3-point shoulder type 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.

Any flip up seats will include a 3-point shoulder type belts only.

To ensure safe operation, the seats 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.

### **ENHANCED SOFTWARE FOR CAB AND CREW CAB DOME LIGHTS**

The cab and crew cab dome lights will remain on for 10 seconds for improved visibility after the doors are closed.

The dome lights will dim after 10 seconds or immediately if the vehicle's transmission is put into gear.

### **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 include gauges, an LCD display, 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 caution indicator on the information center with intermittent alarm
    - Amber caution light on gauge assembly
  - High volts (15.5 VDC)
    - Amber caution indicator on the information center with intermittent alarm
    - Amber caution light on gauge assembly
  - Very low volts (11.3 VDC)
    - Red warning indicator on the information center with a steady alarm
    - Amber caution light on gauge assembly
  - Very high volts (16.0 VDC)
    - Red warning indicator on the information center with a steady alarm
    - Amber caution light on gauge assembly
- Engine Tachometer (RPM)
- Speedometer MPH (Major Scale), KM/H (Minor Scale)
- Fuel level gauge (Empty - Full in fractions):
  - Low fuel (1/8 full)
    - Amber caution indicator on the information center with intermittent alarm
    - Amber caution light on gauge assembly
  - Very low fuel (1/32 full)
    - Red caution indicator on the information center with steady alarm
    - Amber caution light on gauge assembly
- Engine Oil pressure Gauge (PSI):

- Low oil pressure to activate engine warning lights and alarms
  - Red caution indicator on the information center with steady alarm
  - Amber caution light on gauge assembly
- Front Air Pressure Gauges (PSI):
  - Low air pressure to activate warning lights and alarm
    - Red warning indicator on the information center with a steady alarm
    - Amber caution light on gauge assembly
- Rear Air Pressure Gauges (PSI):
  - Low air pressure to activate warning lights and alarm
    - Red warning indicator on the information center with a steady alarm
    - Amber caution light on gauge assembly
- Transmission Oil Temperature Gauge (Fahrenheit):
  - High transmission oil temperature activates warning lights and alarm
    - Amber caution indicator on the information center with intermittent alarm
    - Amber caution light on gauge assembly
- Engine Coolant Temperature Gauge (Fahrenheit):
  - High engine temperature activates an engine warning light and alarms
    - Amber caution indicator on the information center with intermittent alarm
    - Amber caution light on gauge assembly
- Diesel Exhaust Fluid Level Gauge (Empty - Full in fractions):
  - Low fluid (1/8 full)
    - Amber indicator light in gauge dial

All gauges will perform prove out at initial power-up to ensure proper performance.

### **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)
- Aux brake overheat (Auxiliary brake overheat)
- Air rest (air restriction)
- Caution (triangle symbol)
- Water in fuel
- DPF (engine diesel particulate filter regeneration)
- Trailer ABS (where applicable)
- Wait to start (where applicable)
- HET (engine high exhaust temperature) (where applicable)
- ABS (antilock brake system)

- MIL (engine emissions system malfunction indicator lamp) (where applicable)
- Side roll fault (where applicable)
- Front air bag fault (where applicable)

The following red telltale lamps will be present:

- Warning (stop sign symbol)
- Seat belt
- Parking brake
- Stop engine
- Rack down

The following green telltale lamps will be provided:

- Left turn
- Right turn
- Battery on

The following blue telltale lamp will be provided:

- High beam

### **Alarms**

Audible steady tone warning alarm: A steady audible tone alarm will be provided whenever a warning message is present.

Audible pulsing tone caution alarm: A pulsing audible tone alarm (chime/chirp) will be provided whenever a caution message is present without a warning message being present.

Alarm silence: Any active audible alarm will be able to be silenced by holding the ignition switch at the top position for three (3) to five (5) seconds. For improved safety, silenced audible alarms will intermittently chirp every 30 seconds until the alarm condition no longer exists. The intermittent chirp will act as a reminder to the operator that a caution or warning condition still exists. Any new warning or caution condition will enable the steady or pulsing tones respectively.

### **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 at initial power-up to ensure proper performance.

### **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, defroster, and air conditioning control panel.

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

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

Parking brake control: An air actuated push/pull park brake control valve will be provided.

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

High idle engagement switch: A momentary 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.

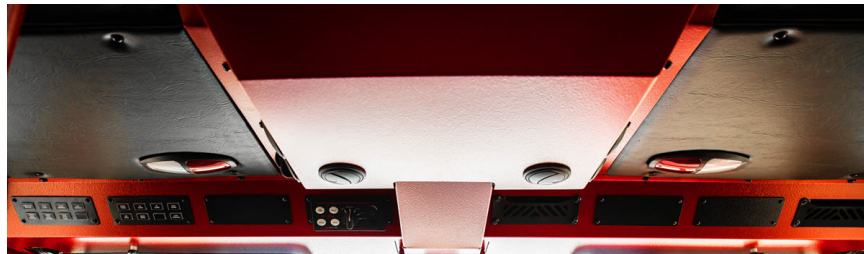
"OK To Engage High Idle" indicator lamp: A green indicator light will be provided next to the high idle activation switch to indicate that the interlocks have been met to allow high idle engagement.

Emergency switching will be controlled by multiple individual warning light switches for various groups or areas of emergency warning lights. An Emergency Master switch provided on the instrument panel that enables or disables all individual warning light switches is included.

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 accessible while standing on the ground and 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 ABS systems to provide blink codes should a problem exist.

The diagnostic panel will include the following:

- Engine diagnostic port
- Transmission diagnostic port
- ABS diagnostic port
- Roll sensor diagnostic port
- Command Zone USB diagnostic port

- ABS diagnostic switch (blink codes flashed on ABS telltale indicator)
- Diesel particulate filter regeneration switch (where applicable)
- Diesel particulate filter regeneration inhibit switch (where applicable)

### **Cab LCD Display**

A digital four (4)-row by 20-character dot matrix display will be integral to the gauge panel. The display will be capable of showing simple graphical images as well as text. The display will be split into three (3) sections. Each section will have a dedicated function. The upper left section will display the outside ambient temperature.

The upper right section will display the following, along with other configuration specific information:

- Odometer
- Trip mileage
- PTO hours
- Fuel consumption
- Engine hours

The bottom section will display INFO, CAUTION, and WARNING messages. Text messages will automatically activate to describe the cause of an audible caution or warning alarm. The LCD will be capable of displaying multiple text messages should more than one caution or warning condition exist.

### **AIR RESTRICTION INDICATOR**

A high air restriction warning indicator light LCD message with amber warning indicator and audible alarm will be provided.

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

A flashing red indicator light, located in the driving compartment, will be illuminated automatically per the current NFPA requirements. The light will be labeled "Do Not Move Apparatus If Light Is On."

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

### **DO NOT MOVE TRUCK MESSAGES**

Messages will be displayed on the Command Zone™, color display located within sight of the driver whenever the Do Not Move Truck light is active. The messages will designate the item or items not in the stowed for vehicle travel position (parking brake disengaged).

The following messages will be displayed (where applicable):

- Do Not Move Truck
- DS Cab Door Open (Driver Side Cab Door Open)
- PS Cab Door Open (Passenger's Side Cab Door Open)
- DS Crew Cab Door Open (Driver Side Crew Cab Door Open)
- PS Crew Cab Door Open (Passenger's Side Crew Cab Door Open)
- DS Body Door Open (Driver Side Body Door Open)
- PS Body Door Open (Passenger's Side Body Door Open)

- Rear Body Door Open
- DS Ladder Rack Down (Driver Side Ladder Rack Down)
- PS Ladder Rack Down (Passenger Side Ladder Rack Down)
- Deck Gun Not Stowed
- Lt Tower Not Stowed (Light Tower Not Stowed)
- Fold Tank Not Stowed (Fold-A-Tank Not Stowed)
- Aerial Not Stowed (Aerial Device Not Stowed)
- Stabilizer Not Stowed
- Steps Not Stowed
- Handrail Not Stowed

Any other device that is opened, extended, or deployed that creates a hazard or is likely to cause major damage to the apparatus if the apparatus is moved will be displayed as a caution message after the parking brake is disengaged.

### **SWITCH PANELS**

The built-in switch panels will be located in the lower console or overhead console of the cab.

The switches will be rocker-type and include an integral indicator light. For quick, visual indication the switch will be illuminated whenever the switch is active. A 2-ply, scratch resistant laser engraved Gravoply label indicating the use of each switch will be placed below the switches. The label will allow light to pass through the letters for improved visibility in low light conditions. Switches and light source are integral to the switch panel assembly.

### **WIPER CONTROL**

Wiper control will consist of a two (2)-speed windshield wiper control with intermittent feature and windshield washer controls. The control will be located to the rear or left side of the transmission shifter.

### **SPARE CIRCUIT**

There will be one (1) dual USB fast charge socket mounts installed on the apparatus.

The above wires will have the following features:

- The positive wire will be connected directly to the battery power.
- The negative wire will be connected to ground.
- Wires will be protected to 4.8 amps at 12 volts DC.
- The USB socket mount will be panel position #14.
- Termination will be a Blue Sea Systems part number 1045 dual USB charger socket.
- Wires will be sized to 125% of the protection.

This circuit(s) may be load managed when the parking brake is applied.

### **SPARE CIRCUIT**

There will be one (1) pair of wires, including a positive and a negative, installed on the apparatus.



The above wires will have the following features:

- The positive wire will be connected directly to the battery power.
- The negative wire will be connected to ground.
- Wires will be protected to 15 amps at 12 volts DC.
- Power and ground will terminate upper rear wall of EMS cabinet, centered..
- Termination will be with a 10-place bus bar with screws and removable cover.
- Wires will be sized to 125 percent of the protection.

This circuit(s) may be load managed when the parking brake is set.

#### **SPARE CIRCUIT**

There will be one (1) pair of wires, including a positive and a negative, installed on the apparatus.

The above wires will have the following features:

- The positive wire will be connected directly to the battery power.
- The negative wire will be connected to ground.
- Wires will be protected to 15 amps at 12 volts DC.
- Power and ground will terminate behind officer seat..
- Termination will be with a 10-place bus bar with screws and removable cover.
- Wires will be sized to 125 percent of the protection.

This circuit(s) may be load managed when the parking brake is set.

#### **SPARE CIRCUIT**

There will be one (1) pair of wires, including a positive and a negative, installed on the apparatus.

The above wires will have the following features:

- The positive wire will be connected directly to the battery power
- The negative wire will be connected to ground
- Wires will be protected to 15 amps at 12 volts DC
- Power and ground will terminate panel position #14
- Termination will be with 15 amp, power point plug with rubber cover
- Wires will be sized to 125 percent of the protection

The circuit(s) may be load managed when the parking brake is set.

#### **INFORMATION CENTER**

An information center employing a 7.00" diagonal touch screen color LCD display will be encased in an ABS plastic housing.

The information center will have the following specifications:

- Operate in temperatures from -40 to 185 degrees Fahrenheit
- An Optical Gel will be placed between the LCD and protective lens

- Five weather resistant user interface switches
- Grey with black accents
- Sunlight Readable
- Linux operating system
- Minimum of 1000nits rated display
- Display can be changed to an available foreign language
- A LCD display integral to the cab gauge panel will be included as outlined in the cab instrumentation area.
- Programmed to read US Customary

### **General Screen Design**

Where possible, background colors will be used to provide "At a Glance" vehicle information. If information provided on a screen is within acceptable limits, a green background will be used.

If a caution or warning situation arises the following will occur:

- An amber background/text color will indicate a caution condition
- A red background/text color will indicate a warning condition
- The information center will utilize an "Alert Center" to display text messages for audible alarm tones. The text messages will be written to identify the item(s) causing the audible alarm to sound. If more than one (1) text message occurs, the messages will cycle every second until the problem(s) have been resolved. The background color for the "Alert Center" will change to indicate the severity of the "warning" message. If a warning and a caution condition occur simultaneously, the red background color will be shown for all alert center messages.
- A label for each button will exist. The label will indicate the function for each active button for each screen. Buttons that are not utilized on specific screens will have a button label with no text or symbol.

### **Home/Transit Screen**

This screen will display the following:

- Vehicle Mitigation (if equipped)
- Water Level (if the water level system includes compatible communications to the information center)
- Foam Level (if the foam level system includes compatible communications to the information center)
- Seat Belt Monitoring Screen
- Tire Pressure Monitoring (if equipped)
- Digital Speedometer
- Active Alarms

### **On Scene Screen**

This screen will display the following and will be auto activated with pump engaged (if equipped):

- Battery Voltage

- Fuel
- Oil Pressure
- Coolant Temperature
- RPM
- Water Level (if equipped)
- Foam Level (if equipped)
- Foam Concentration (if equipped)
- Water Flow Rate (if equipped)
- Water Used (if equipped)
- Active Alarms

### **Virtual Buttons**

There will be four (4) virtual switch panel screens that match the overhead and lower lighting and HVAC switch panels.

### **Page Screen**

The page screen will display the following and allow the user to progress into other screens for further functionality:

- Diagnostics
  - Faults
    - Listed by order of occurrence
    - Allows to sort by system
  - Interlock
    - Throttle Interlocks
    - Pump Interlocks (if equipped)
    - Aerial Interlocks (if equipped)
    - PTO Interlocks (if equipped)
  - Load Manager
    - A list of items to be load managed will be provided. The list will provide a description of the load.
    - The lower the priority numbers the earlier the device will be shed should a low voltage condition occur.
    - The screen will indicate if a load has been shed (disabled) or not shed.
    - "At a glance" color features are utilized on this screen.
  - Systems
    - Command Zone
      - Module type and ID number
      - Module Version
      - Input or output number
      - Circuit number connected to that input or output
      - Status of the input or output
      - Power and Constant Current module diagnostic information
    - Foam (if equipped)

- Pressure Controller (if equipped)
    - Generator Frequency (if equipped)
  - Live Data
    - General Truck Data
- Maintenance
  - Engine oil and filter
  - Transmission oil and filter
  - Pump oil (if equipped)
  - Foam (if equipped)
  - Aerial (if equipped)
- Setup
  - Clock Setup
  - Date & Time
    - 12 or 24 hour format
    - Set time and date
  - Backlight
    - Daytime
    - Night time
    - Sensitivity
  - Unit Selection
  - Home Screen
  - Virtual Button Setup
  - On Scene Screen Setup
  - Configure Video Mode
    - Set Video Contrast
    - Set Video Color
    - Set Video Tint
- Do Not Move
  - The screen will indicate the approximate location and type of item that is open or is not stowed for travel. The actual status of the following devices will be indicated
    - Driver Side Cab Door
    - Passenger's Side Cab Door
    - Driver Side Crew Cab Door
    - Passenger's Side Crew Cab Door
    - Driver Side Body Doors
    - Passenger's Side Body Doors
    - Rear Body Door(s)
    - Ladder Rack (if applicable)
    - Deck Gun (if applicable)
    - Light Tower (if applicable)
    - Hatch Door (if applicable)
    - Stabilizers (if applicable)
    - Steps (if applicable)
- Notifications

- View Active Alarms
  - Shows a list of all active alarms including date and time of the occurrence is shown with each alarm
  - Silence Alarms - All alarms are silenced
- Timer Screen
- HVAC (if equipped)
- Tire Information (if equipped)
- Ascendant Set Up Confirmation (if equipped)

Button functions and button labels may change with each screen.

### **COLLISION MITIGATION**

There will be a HAAS Alert®, Model HA5 Responder-to-Vehicle (R2V) collision avoidance system provided on the apparatus. The HA5 cellular transponder module will be installed behind the cab windshield, as high and near to the center as practical, to allow clear visibility to the sky. The module dimensions are 5.40" long x 2.70" wide x 1.30" high, and operating temperature range is -40 degree C to 85 degree C.

The transponder will be connected to the vehicle's emergency master circuit and battery direct power and ground.

While responding with emergency lights on, the HA5 transponder sends alert messages via cellular network to motorists in the vicinity of the responding truck that are equipped with the WAZE app.

While on scene with emergency lights on, the HA5 transponder sends road hazard alerts to motorists in the vicinity of the truck that are equipped with the WAZE app.

The HA5 Responder-to-Vehicle (R2V) collision avoidance system will include the transponder and a 5 year cellular plan subscription.

Activation of the HAAS Alert system requires a representative of the customer to accept the End User License Agreement (EULA) via an on-line portal.

### **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 on the Command Zone™ color display. 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 seat belt monitoring screen will become active on the Command Zone color display when:

- The home screen is active:
  - and there is any occupant seated but not buckled or any belt buckled with an occupant.
  - and there are no other Do Not Move Apparatus conditions present. As soon as all Do Not Move Apparatus conditions are cleared, the SBMS will be activated.

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.

### **RADIO ANTENNA MOUNT**

There will be two (2) standard 1.125", 18 thread antenna-mounting base(s) installed one (1) on the left side and one (1) on the right side on the cab roof with high efficiency, low loss, coaxial cable(s) routed to the instrument panel area. A weatherproof cap will be installed on the mount.



### **ELECTRICAL POWER CONTROL SYSTEM**

The primary power distribution will be located forward of the officer's seating position and be easily accessible while standing on the ground for simplified maintenance and troubleshooting. Additional electrical distribution centers will be provided throughout the vehicle to house the vehicle's electrical power, circuit protection, and control components. The electrical distribution centers will be located strategically throughout the vehicle to minimize wire length. For ease of maintenance, all electrical distribution centers will be easily accessible. All distribution centers containing fuses, circuit breakers and/or relays will be easily accessible.

Distribution centers located throughout the vehicle will contain battery powered studs for supplying customer installed equipment thus providing a lower cost of ownership.

Circuit protection devices, which conform to SAE standards, will be utilized to protect electrical circuits. All circuit protection devices will be rated per NFPA requirements to prevent wire and component damage when subjected to extreme current overload. General protection circuit breakers will be Type-I automatic reset (continuously resetting). When required, automotive type fuses will be utilized to protect electronic equipment. Control relays and solenoid will have a direct current rating of 125 percent of the maximum current for which the circuit is protected per NFPA.

### **Solid-State Control System**

A solid-state electronics based control system will be utilized to achieve advanced operation and control of the vehicle components. A fully computerized vehicle network will consist of electronic modules, electronic control modules to include a see through housing, a power indicator, a status indicator and circuit indicators located near their point of use to reduce harness lengths and improve reliability. The control system will comply with SAE J1939-11 recommended practices.

The control system will operate as a master-slave system whereas the main control module instructs all other system components. The system will contain patented Mission Critical software that maintains critical vehicle operations in the unlikely event of a main controller error. The system will utilize a Real Time Operating System (RTOS) fully compliant with OSEK/VDX™ specifications providing a lower cost of ownership.

For increased reliability and simplified use the control system modules will include the following attributes:

- Green LED indicator light for module power
- Red LED indicator light for network communication stability status
- Control system self test at activation and continually throughout vehicle operation
- No moving parts due to transistor logic
- Software logic control for NFPA mandated safety interlocks and indicators
- Integrated electrical system load management without additional components
- Integrated electrical load sequencing system without additional components
- Customized control software to the vehicle's configuration
- Factory and field programmable to accommodate changes to the vehicle's operating parameters

To assure long life and operation in a broad range of environmental conditions, the solid-state control system modules will meet the following specifications:

- Module circuit board will meet SAE J771 specifications
- Operating temperature from -40C to +70C
- Storage temperature from -40C to +70C
- Vibration to 50g

IP67 rated enclosure (Totally protected against dust and also protected against the effect of temporary immersion between 15 centimeters and one (1) meter)

Operating voltage from eight (8) volts to 32 volts DC

The main controller will activate status indicators and audible alarms designed to provide warning of problems before they become critical.

#### **Circuit Protection and Control Diagram**

Copies of all job-specific, computer network input and output (I/O) connections will be provided with each chassis. The sheets will indicate the function of each module connection point, circuit protection information (where applicable), wire numbers, wire colors and load management information.

#### **On-Board Electrical System Diagnostics**

The on-board information center will include the following diagnostic information:

- Text description of active warning or caution alarms
- Simplified warning indicators
- Amber caution indication with intermittent alarm
- Red warning indication with steady tone alarm

Advanced diagnostic feature will be provided in this control system. From the Command Zone display or connected wireless device, these features allow the user to monitor the real-time status of every input or output on the vehicle. It also allows users logged in as an administrator to force on inputs or outputs to assist the troubleshooting process.

#### **TCU Module with WiFi**

An in cab module will provide WiFi wireless interface and data logging capability. The WiFi interface will comply with IEEE 802.11 b/g/n capabilities while communicating at 2.4 Gigahertz. The module will communicate through a black WiFi antenna allowing a line of site communication range of up to 300 feet with a roof mounted antenna.

The module will transmit a password protected web page to a WiFi enabled device (i.e. most smart phones, tablets or laptops) allowing two levels of user interaction. The firefighter level will allow vehicle monitoring of the vehicle and firefighting systems on the apparatus. The technician level will allow diagnostic access to inputs and outputs installed on the Command Zone™, control and information system.

The TCU capability will record faults from the engine, transmission, ABS and Command Zone™, control and information systems as they occur. No other data will be recorded at the time the fault occurs. The data TCU will provide up to 2 Gigabytes of data storage.

The TCU will provide a means to download the TCU information and update software in the device.

#### **Indicator Light and Alarm Prove-Out System**

A system will be provided which automatically tests basic indicator lights and alarms located on the cab instrument panel.



### **Voltage Monitor System**

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

The alarm will activate if the system falls below 11.8 volts DC for more than two (2) minutes.

### **Dedicated Radio Equipment Connection Points**

There will be three (3) studs provided in the primary power distribution center located in front of the officer for two-way radio equipment. The studs will consist of the following:

- 12-volt 40-amp battery switched power
- 12-volt 60-amp ignition switched power
- 12-volt 60-amp direct battery power

There will also be a 12-volt 100-amp ground stud located in or adjacent to the power distribution center.

### **EMI/RFI Protection**

To prevent erroneous signals from crosstalk contamination and interference, the electrical system will meet, at a minimum, SAE J551/2, thus reducing undesired electromagnetic and radio frequency emissions. An advanced electrical system will be used to ensure radiated and conducted electromagnetic interference (EMI) or radio frequency interference (RFI) emissions are suppressed at their source.

The apparatus will have the ability to operate in the electromagnetic environment typically found in fire ground operations to ensure clean operations. The electrical system will meet, without exceptions, electromagnetic susceptibility conforming to SAE J1113/25 Region 1, Class C EMR for 10KHz-1GHz to 100 Volts/Meter. The vehicle OEM, upon request, will provide EMC testing reports from testing conducted on an entire apparatus and will certify that the vehicle meets SAE J551/2 and SAE J1113/25 Region 1, Class C EMR for 10KHz-1GHz to 100 Volts/Meter requirements. Component and partial (incomplete) vehicle testing is not adequate as overall vehicle design can impact test results and thus is not acceptable by itself.

EMI/RFI susceptibility will be controlled by applying appropriate circuit designs and shielding. 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 SYSTEM PROGNOSTICS**

There will be a software based vehicle tool provided to predict remaining life of the vehicles critical fluid and events.

The system will send automatic indications to the Command Zone™ information center and/or wireless enabled devices to proactively alert of upcoming service intervals.

Prognostics will include the following:

- Engine oil and filter
- Transmission oil and filter

### **TELEMATICS SYSTEM**

There will be a cellular based vehicle telematics system consisting of a Telematic Control Unit (TCU) with external cellular WiFi and GPS antenna, and access to a web-based user interface portal provided.

The TCU will be fully integrated into the electrical system. It will monitor the vehicle through the CAN data bus and transmit data through a secure 4G LTE cellular connection, and be provided with a 3 year subscription..

After accepting the end user license agreement, the vehicle administrator will have access to vehicle location information and vehicle data via a secure web-based interface portal.

The web-based interface will allow users to access vehicle data and configure monitoring tools, providing a global view of the location of each connected asset and a summary of fleet data, which include:

- User defined interval notifications
- User defined fault alerts
- Remote access to Command Zone diagnostics
- Vehicle analytics and activity monitoring
- Vehicle system status

### **ELECTRICAL**

All 12-volt electrical equipment installed by the apparatus manufacturer 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 require 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 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 Stryten/Exide®, Model 31S950X5W, 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 be stored in well ventilated compartments located under the cab and bolted directly to the chassis frame. The battery boxes will have reinforced sides. The battery compartments will be constructed of 0.188" steel plate and be designed to accommodate a maximum of three (3) group 31 batteries in each compartment. The battery hold-downs will be of a non-corrosive material. All bolts and nuts will be stainless steel.

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 CHARGER**

There will be an IOTA™, Model DSL 75, battery charger with IQ4, controller provided.

The battery charger will be wired to the AC shoreline inlet through an AC receptacle adjacent to this battery charger.

There will be a Kussmaul™, Model #091-94-12, remote indicator included.

The battery charger will be located in the left body compartment mounted on the left wall as high as possible.

The battery charger indicator will be displayed through the window behind the driver seat. The display will be mounted on a bracket so that it is visible from outside the apparatus in the lower corner of the window.

### **AUTO EJECT FOR SHORELINE**

There will be one (1) Kussmaul™, Model 091-55-20-120, 20 amp 120 volt AC shoreline inlet(s) provided to operate the dedicated 120 volt AC circuits on the apparatus.

The shoreline inlet(s) will include red weatherproof flip up cover(s).

There will be a release solenoid wired to the vehicle's starter to eject the AC connector when the engine is starting.

The shoreline(s) will be connected to the battery charger.

There will be a mating connector body supplied with the loose equipment.

There will be a label installed near the inlet(s) that state the following:

- Line Voltage
- Current Rating (amps)
- Phase

- Frequency

The shoreline receptacle will be located on the driver side of cab, above wheel.

### **ALTERNATOR**

A Delco Remy®, Model 55SI, alternator will be provided. It will have a rated output current of 430 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 MANAGER**

An electronic load management (ELM) system will be provided that monitors the vehicles 12-volt electrical system, automatically reducing the electrical load in the event of a low voltage condition, and automatically restoring the shed electrical loads when a low voltage condition expires. This ensures the integrity of the electrical system.

For improved reliability and ease of use, the load manager system will be an integral part of the vehicle's solid state control system requiring no additional components to perform load management tasks. Load management systems which require additional components will not be allowed.

The system will include the following features:

- System voltage monitoring.
- A shed load will remain inactive for a minimum of five minutes to prevent the load from cycling on and off.
- Sixteen available electronic load shedding levels.
- Priority levels can be set for individual outputs.
- High Idle to activate before any electric loads are shed and deactivate with the service brake.
  - If enabled:
    - "Load Man Hi-Idle On" will display on the information center.
    - Hi-Idle will not activate until 30 seconds after engine start up.
- Individual switch "on" indicator to flash when the particular load has been shed.
- The information center indicates system voltage.

The information center, where applicable, includes a "Load Manager" screen indicating the following:

- Load managed items list, with priority levels and item condition.
- Individual load managed item condition:
  - ON = not shed
  - SHED = shed

### **SEQUENCER**

A sequencer will be provided that automatically activates and deactivates vehicle loads in a preset sequence thereby protecting the alternator from power surges. This sequencer operation will allow a

gradual increase or decrease in alternator output, rather than loading or dumping the entire 12 volt load to prolong the life of the alternator.

For improved reliability and ease of use, the load sequencing system will be an integral part of the vehicle's solid state control system requiring no additional components to perform load sequencing tasks. Load sequencing systems which require additional components will not be allowed.

Emergency light sequencing will operate in conjunction with the emergency master light switch. When the emergency master switch is activated, the emergency lights will be activated one by one at half-second intervals. Sequenced emergency light switch indicators will flash while waiting for activation.

When the emergency master switch is deactivated, the sequencer will deactivate the warning light loads in the reverse order.

Sequencing of the following items will also occur, in conjunction with the ignition switch, at half-second intervals:

- Cab Heater and Air Conditioning
- Crew Cab Heater (if applicable)
- Crew Cab Air Conditioning (if applicable)
- Exhaust Fans (if applicable)
- Third Evaporator (if applicable)

### **HEADLIGHTS**

There will be four (4) JW Speaker®, Model 8800, 4" x 6" rectangular LED lights with heated lens mounted in the front quad style, chrome housing on each side of the cab grille:

- the outside light on each side will contain a part number 055\*\*\*1 low beam module
- the inside light on each side will contain a part number 055\*\*\*1 high beam module
- the headlights to include chrome bezels

The low beam lights will be activated when the headlight switch is on.

The high beam and low beam lights will be activated when the headlight switch and the high beam switch is activated.

### **FRONT DIRECTIONALS**

The front directional's will be Whelen®, Model M62T, 4.31" high x 6.75" wide x 1.37" deep directional lights with amber LEDs. The lens color(s) to be clear. The directional's will be housed in the same common bezel as the front warning light and will be located above the headlights. The housing to be polished and the trim shall be chrome.

The flash pattern of the directional lights will be Sequence (80 FPM) to Solid.

### **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) Truck-Lite, Model 35375Y, 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.

The lights will be mounted with an aluminum guard.

### **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 three (3) Truck-Lite®, Model 35200R, LED lights 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) Truck-Lite, Model 35200R, 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) Truck-Lite, Model 35200R, LED lights installed on the side of the apparatus 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**

There will be two (2) wrap around tri-cluster LED modules provided on the face of the rear body compartments.

Each tri-cluster will include the following:

- One (1) LED stop/tail light
- One (1) LED directional light
- One (1) LED backup light

### **LICENSE PLATE BRACKET**

One (1) license plate bracket constructed of stainless steel will be provided at the rear of the apparatus.

One (1) white LED light with chrome housing will be provided to illuminate the license plate. A 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, Model AY-LB-12HW020, 350 lumens each, 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.

### **PUMP HOUSE PERIMETER LIGHTS**

There will be two (2) Amdor, Model AY-LB-12HW020, 350 lumens each, 20.00" LED weatherproof strip lights with brackets provided under the pump panel running boards, one (1) each side.

If the combination of options in the vehicle does not permit clearance for a 20.00" light, a 12.00" version of the Amdor light will be installed.

The lights will be controlled by the same means as the body perimeter lights.



### **BODY PERIMETER SCENE LIGHTS**

There will be two (2) Amdor, Model AY-LB-12HW020, 350 lumens, 20.00" long, white LED's, 12 volt DC 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.

### **ENHANCED SOFTWARE FOR PERIMETER LIGHTS**

All perimeter lights will be deactivated when the parking brake is released unless alternate control is selected.

The cab and crew cab perimeter lights will remain on for ten (10) seconds for improved visibility after the doors closed.

### **STEP LIGHTS**

Four (4) white LED step lights will be provided. One (1) step light will be provided on each side, on the front compartment face and two (2) step lights at the rear to illuminate the tailboard.

In order to ensure exceptional illumination, each light will provide a minimum of 25 foot-candles (fc) covering an entire 15.00" x 15.00" square placed 10.00" below the light and a minimum of 1.5 fc covering an entire 30.00" x 30.00" square at the same 10.00" distance below the light.

These step lights will be actuated with the pump panel light switch.

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

### **12 VOLT LIGHTING**

There will be a HiViz Model FT-B-X-72-\*-\*, 2.56" high x 72.00" long x 3.31" deep 21,251.57 effective lumens 12 volt DC LED light provided on the front cab roof as far forward as practical. The light will include white scene LEDs. The white LEDs will be configured with a combination of flood and spot optics.

The painted parts of the light housing and brackets to be black.

The scene LEDs will be activated by a switch at the driver's side switch panel.

The white LEDs may be load managed when the parking brake is applied.

### **12 VOLT DC SCENE LIGHTS**

There will be one (1) Whelen® Model PCPSM2\*, 16,000 lumens 12 volt DC powered light(s) with white LEDs installed on the cab located, mount behind officers door, above crew cab window.

The surface mount housing(s) will be provided with a chrome cover.

The light(s) will be activated by a switch at the driver's side switch panel and by a switch at the left side pump panel.

The light(s) may be load managed when the parking brake is applied.

### **12 VOLT DC SCENE LIGHTS**

There will be one (1) Whelen® Model PCPSM2\*, 16,000 lumens 12 volt DC powered light(s) with white LEDs installed on the cab located, mount behind cab door, above crew cab window.

The surface mount housing(s) will be provided with a chrome cover.

The light(s) will be activated by a switch at the driver's side switch panel and by a switch at the left side pump panel.

The light(s) may be load managed when the parking brake is applied.

### **12 VOLT LIGHTING**

There will be two (2) Whelen® Model PCPSM1\*, 10,444 lumens 12 volt DC surface mount light(s) installed on the body of the apparatus located, rear of truck, one each side, mid-height of rear body bulkhead.

The light(s) will include black housing(s) with a chrome cover.

The light(s) will be controlled by a switch at the driver's side switch panel and by a switch in a recessed cup located at the driver's side rear bulkhead.

The light(s) may be load managed when the parking brake is applied.

### **12 VOLT LIGHTING**

There will be two (2) Whelen® Model PCPSM2\*, 16,000 lumens 12 volt DC surface mount light(s) installed on the body of the apparatus located, two lights passenger side , in upper body corners inboard of the M9 Whelen warning lights..

The light(s) will include housing(s) with a chrome cover.

The light(s) will be controlled by the same control that has been selected for the passenger's side scene light(s).

The light(s) may be load managed when the parking brake is applied.

### **12 VOLT LIGHTING**

There will be two (2) Whelen® Model PCPSM2\*, 16,000 lumens 12 volt DC surface mount light(s) installed on the body of the apparatus located, two lights driver side, in upper body corners inboard of the M9 Whelen warning lights..

The light(s) will include housing(s) with a chrome cover.

The light(s) will be controlled by the same control that has been selected for the driver's side scene light(s).

The light(s) may be load managed when the parking brake is applied.

### **HOSE BED LIGHTS**

There will be white 12 volt DC LED light strips with stainless steel protective cover, provided to light the hose bed area. Hose Bed lights will meet the photometric levels listed in NFPA 1901 for Hose Bed lighting requirements.

- Light strip(s) will be installed along the upper edge of the left side of the hose bed.
- Light strip(s) will be installed along the upper edge of the right side of the hose bed.

The lights will be activated by a cup switch at the rear of the apparatus no more than 72.00" from the ground.

### **WALKING SURFACE LIGHT**

There will be Model FRP, 4" round black 12 volt DC LED floodlight(s) with bolt mount provided to illuminate the entire designated walking surface on top of the body.

The light(s) will be activated when the body step lights are on.

### **WATER TANK**

Booster tank will have a water capacity of 750 gallons.

Tank will be constructed of polypropylene plastic by United Plastic Fabricating, Incorporated.

The tank will be designed to achieve a low hose bed. Tank design will be a stepped design with the forward section of the tank higher than the section of the tank that is below the hose bed.

Tank joints and seams will be nitrogen welded inside and out.

Tank will be baffled in accordance with NFPA Bulletin 1901 requirements.

Baffles will have vent openings at both the top and bottom to permit movement of air and water between compartments.

Longitudinal partitions will be constructed of .38" polypropylene plastic and will extend from the bottom of the tank through the top cover to allow for positive welding.

Transverse partitions will extend from 4.00" off the bottom of the tank to the underside of the top cover.

All partitions will interlock and will be welded to the tank bottom and sides.

Tank top will be constructed of .50" polypropylene. It will be recessed .38" and will be welded to the tank sides and the longitudinal partitions.

Tank top will be sufficiently supported to keep it rigid during fast filling conditions.

Construction will include 2.00" polypropylene dowels spaced no more than 30.00" apart and welded to the transverse partitions. Two (2) of the dowels will be drilled and tapped (.50" diameter, 13.00" deep) to accommodate lifting eyes.

A sump that will be sized dependent on the tank to pump plumbing will be provided at the bottom of the water tank.

Sump will include a drain plug and the tank outlet.

Tank will be installed in a fabricated cradle assembly constructed of structural steel.

Sufficient crossmembers will be provided to properly support bottom of tank. Crossmembers will be constructed of steel flat bar or rectangular tubing.

Tank will "float" in cradle to avoid torsional stress caused by chassis frame flexing. Rubber cushions, .50" thick x 3.00" wide, will be placed on all horizontal surfaces that the tank rests on.

Stops or other provision will be provided to prevent an empty tank from bouncing excessively while moving vehicle.

Mounting system will be approved by the tank manufacturer.

Fill tower will be constructed of .50" polypropylene and will be a minimum of 8.00" wide x 14.00" long.

Fill tower will be furnished with a .25" thick polypropylene screen and a hinged cover.

An overflow pipe, constructed of 4.00" schedule 40 polypropylene, will be installed approximately halfway down the fill tower and extend through the water tank and exit to the rear of the rear axle.

#### **SLEEVE, PLUMBING, THROUGH TANK**

One (1) sleeve will be provided in the water tank for a 1.50" Aeroquip hose for booster reel to the rear.

#### **SLEEVE, PLUMBING, THROUGH TANK**

One (1) sleeve will be provided in the water tank for a 3.00" pipe to the rear.

#### **WATER TANK RESTRAINT**

A heavy-duty water tank restraint will be provided.

#### **BODY HEIGHT**

The height of the body will be 92.00" from the bottom of the body to the top of the body.

#### **HOSE BED**

The hose bed will be fabricated of .125"-5052 aluminum with a nominal 38,000 psi tensile strength.

The interior of the hose bed will be unpainted.

Flooring of the hose bed will be removable aluminum grating with the top surface corrugated to aid in hose aeration. The grating slats will be a minimum of 0.50" x 4.50" with spacing between slats for hose ventilation.

A cross divider will be provided at the front of the hose bed before the tank transitions from the lower section to the upper section. The divider will run from the top of the side sheet down below the hose bed grating.

The hose bed will be as low as possible.

The hose bed walls will be unpainted and with a brushed finish.

Hose bed will accommodate 600' of 2.50" hose and 1000' of 5.00" hose.

#### **HOSE BED DIVIDER**

One (1) hosebed divider will be furnished for separating hose.

Each divider will be constructed of a .125" brushed aluminum sheet fitted and fastened into a slotted, 1.50" diameter radiused extrusion along the top, bottom, and rear edge.

Divider will be fully adjustable by sliding in tracks, located at the front and rear of the hose bed.

Divider will be held in place by tightening bolts, at each end.

Acorn nuts will be installed on all bolts in the hose bed which have exposed threads.

#### **HOSE BED HOSE RESTRAINT**

The hose in the hose bed will be restrained by a pair of black nylon Velcro® straps at the top of the hose bed. An additional pair of black nylon Velcro® straps may be provided if needed. At the rear of the hose bed, 2.00" black nylon webbing with a 1.50" x 4.00" box pattern will attach at the top rear outside corners with seat belt buckle fasteners. The webbing will have straps connected with seat belt buckle fasteners located at the rear body sheet below the hose bed.

The hose bed divider(s) will be connected to the upper rear handrail.

#### **RUNNING BOARDS**

Running boards will be fabricated of .125" bright aluminum treadplate.

Each running board will be supported by a welded 2.00" square tubing and channel assembly, which will be bolted to the pump compartment substructure.

Running boards will be 12.75" deep and spaced .50" away from the pump panel.

A splash guard will be provided above the running board treadplate.

### **TAILBOARD**

The tailboard will be constructed of .125" bright aluminum treadplate and spaced .50" from the body, as well as supported by a structural steel assembly.

The tailboard area will be 12.00" deep and full width of the body.

The exterior side will be flanged down and in for increased rigidity of tailboard structure.

### **SMOOTH ALUMINUM REAR WALL**

The rear wall will be smooth aluminum.

### **TOW BAR**

A tow bar will be installed under the tailboard at center of truck.

Tow bar will be fabricated of 1.00" CRS bar rolled into a 3.00" radius.

Tow bar assembly will be constructed of .38" structural angle. When force is applied to the bar, it will be transmitted to the frame rail.

Tow bar 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.

Tow bar design will have been fully tested and evaluated using strain gauge testing and finite element analysis techniques.

### **HOSE TRAY**

One (1) hose tray will be recessed in the left hand side running board.

Capacity of the tray will be 20.00' of 5.00" soft suction hose.

Rubber matting will be installed on the floor of the tray to provide proper ventilation. Drain holes will be provided.

### **COMPARTMENTATION**

The apparatus body will be built of aluminum construction using a minimum of 0.125" thick, 5052-H32 aluminum.

The body panel assembly will be constructed in a fixture and consist of formed sheet metal for the front and rear bulkheads, door frames, floors, ceilings, and back walls. These parts will be welded together to ensure greatest longevity with no visible welds in compartment interior.

Welded construction will consist of 1.00" x 0.38" engineered plug weld holes that control the size, location, and the amount of weld required. The bodies will be assembled and welded from engineered prints that call out the size, location, and type of weld required.

In structural areas the sheet metal components will have flanges for welding. Gussets and support posts will be provided for additional strength where needed.



The fender panel will be an integral part of the complete welded body assembly. All light and compartment holes are pre punched prior to construction to provide accuracy and rounded corners to prevent stress risers in the material.

Circular fender liners will be provided. For prevention of paint chips and ease of suspension maintenance the fender liners will be formed from brush finished 304L stainless steel, be unpainted, and removable for suspension maintenance.

Side compartment flooring will be of the sweep out design with the floor minimum of 1.00" higher than the compartment door lip.

Drip protection will be provided above the doors by means of aluminum extrusion, or formed bright aluminum treadplate.

The top of the compartment will be sheet metal and covered with bright aluminum treadplate rolled over the edges on the front, and rear. These covers will have the corners welded.

The aluminum treadplate covers will not make up the ceiling of the compartment.

All screws and bolts, which are not Grade 8, will be stainless steel and where they protrude into a compartment will have acorn nuts on the ends to prevent injury.

#### **UNDERBODY SUPPORT SYSTEM**

Due to the severe loading requirements of this pumper a method of body and compartment support suitable for the intended load will be provided.

The backbone of the body support system will begin with the chassis frame rails which is the strongest component of the chassis and is designed for sustaining maximum loads. The support system will include lateral frame rail extensions that are formed from 0.375" 80k high strength steel and bolted to the chassis frame rails with 0.625" diameter Grade 8 bolts.

The vertical and horizontal members of the frame rail extensions are to be reinforced with welded gussets and extend to the outside edge of the body. The lateral frame extensions will be electro-coated for superior corrosion resistance.

The floating substructure will be separated from the lateral frame extensions with neoprene elastomer isolators. These isolators will reduce the natural flex stress of the chassis from being transmitted to the body, and absorb road shock and vibration.

The isolators will have a broad load range, proven viability in vehicular applications, be of a fail safe design and allow for all necessary movement in three (3) transitional and rotational modes.

The neoprene isolators will be installed in a modified V three (3)-point mounting pattern to reduce the natural flex of the chassis being transmitted to the body.

A design with body compartments simply hanging/sitting on the chassis in an unsupported (cantilever) fashion will not be acceptable.

### **AGGRESSIVE WALKING SURFACE**

All exterior surfaces designated as stepping, standing, and walking areas will comply with the required average slip resistance of the current NFPA standards. Documentation of the material meeting the standard will be provided at time of delivery.

### **LOUVERS**

All body compartments will have a minimum of one (1) set of automotive style, dust resistant louvers pressed into a wall. The louvers will incorporate a one (1)-way rubber valve that provides airflow out of the compartment and prevents water and dirt from gaining access to the compartment. Compartments over the wheel will not have louvers.

### **TESTING OF BODY DESIGN**

Body structural analysis will be fully tested. Proven engineering and test techniques such as finite element analysis and strain gauging have been performed with special attention given to fatigue life and structural integrity of the body and substructure.

The body will be tested while loaded to its greatest in-service weight.

The criteria used during the testing procedure will include:

- Raising opposite corners of the vehicle tires 9.00" to simulate the twisting a truck may experience when driving over a curb.
- Making a 90 degree turn, while driving at 20 mph to simulate aggressive driving conditions.
- Driving the vehicle on at 35 mph on a washboard road.
- Driving the vehicle at 55 mph on a smooth road.
- Accelerating the vehicle fully, until reaching the approximate speed of 45 mph on rough pavement.

Evidence of the actual testing techniques will be made available upon request.

FEA will have been performed on all substructure components.

### **LEFT SIDE COMPARTMENTATION**

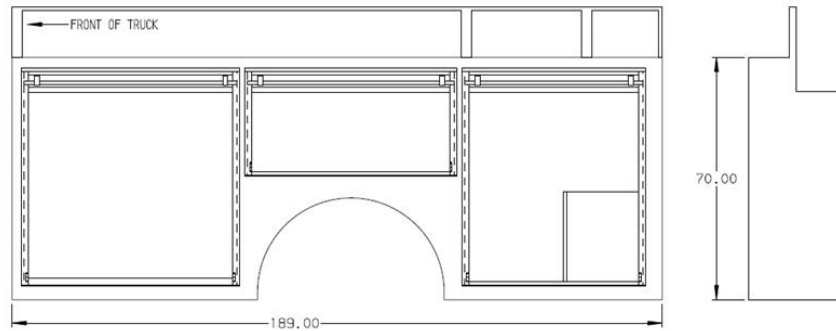
The left side compartmentation will consist of three rollup door compartments.

A full height, rollup door compartment ahead of the rear wheels will be provided. The interior dimensions of this compartment will be 61.75" wide x 53.63" high x 26.00" deep. The clear door opening will be a minimum of 59.25" wide x 53.63" high.

A rollup door compartment over the rear wheels will be provided. The interior dimensions of this compartment will be 60.00" wide x 22.88" high x 26.00" deep. The clear door opening will be a minimum of 57.25" wide x 22.88" high.

A full height, rollup door compartment behind the rear wheels will be provided. The interior dimensions of this compartment will be 51.75" wide x 54.63" high x 26.00" deep. The clear door opening will be a minimum of 49.25" wide x 54.63" high.





The roll up door spool will be installed in a recess above the compartment ceiling. All compartments will include a drip pan below the roll of the door. The drip pan will be installed level with the compartment ceiling.

The interior height of the compartments will be measured from the compartment floor to the ceiling. The depth of the compartments will be measured from the back wall to the inside of the door frame.

Closing of the doors will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one hand.

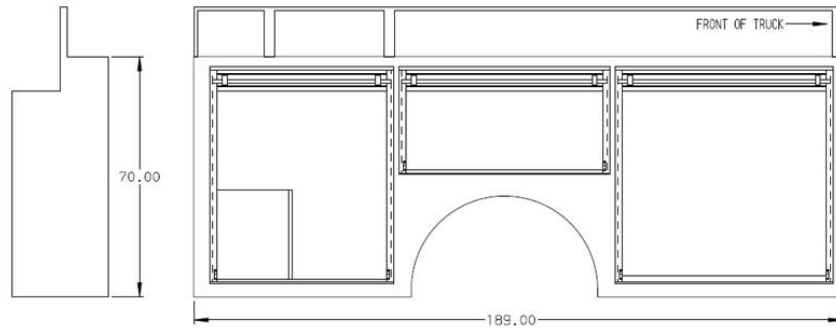
#### **RIGHT SIDE COMPARTMENTATION**

The right side compartmentation will consist of three rollup door compartments.

A full height, rollup door compartment ahead of the rear wheels will be provided. The interior dimensions of this compartment will be 61.75" wide x 53.63" high x 26.00" deep. The clear door opening will be a minimum of 59.25" wide x 53.63" high.

A rollup door compartment over the rear wheels will be provided. The interior dimensions of this compartment will be 60.00" wide x 22.88" high x 26.00" deep. The clear door opening will be a minimum of 57.25" wide x 22.88" high.

A full height, rollup door compartment behind the rear wheels will be provided. The interior dimensions of this compartment will be 51.75" wide x 54.63" high x 26.00" deep. The clear door opening will be a minimum of 49.25" wide x 54.63" high.



The roll up door spool will be installed in a recess above the compartment ceiling. All compartments will include a drip pan below the roll of the door. The drip pan will be installed level with the compartment ceiling.

The interior height of the compartments will be measured from the compartment floor to the ceiling. The depth of the compartments will be measured from the back wall to the inside of the door frame.

Closing of the doors will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one hand.

#### **SIDE COMPARTMENT ROLLUP DOOR(S)**

There will be six (6) compartment doors installed on the side compartments, double faced, aluminum construction, painted one (1) color to match the lower portion of the body and manufactured by AMDOR™ brand rollup doors.

Door(s) will be constructed using 1.00" extruded double wall aluminum slats which will feature a flat smooth interior surface to provide maximum protection against equipment hang-up. The slats will be connected with a structural driven ball and socket hinge designed to provide maximum curtain diaphragm strength. Mounting and adjusting the curtain will be done with a clip system that connects the curtain to the balancer drum allowing for easy tension adjustment without tools. The slats will be mounted in reusable slat shoes with positive snap-lock securement.

Each slat will incorporate weather tight recessed dual durometer seals. One (1) fin will be designed to locate the seal within the extrusion. The second will serve as a wiping seal which will also allow for compression to prevent water ingress.

The doors will be mounted in a one (1)-piece aluminum side frame with recessed side seals to minimize seal damage during equipment deployment. All seals including side frames, top gutters and bottom panel are to be manufactured utilizing non-marring materials.

Bottom panel flange of rollup door will be equipped with two (2) cut-outs to allow for easier access with gloved hands.

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 with striker latches installed at the base of the side frames. Side frame mounted door

strickers will include support beneath the stainless steel lift bar to prevent door curtain bounce, improve bottom seal life expectancy and to avoid false door ajar signals.

All injection molded rollup door wear components will be constructed of Type 6 nylon.

Each rollup door will have a 3.00 inch diameter balancer/tensioner drum to assist in lifting the door.

The header for the rollup door assembly will not exceed 4.00".

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

### **REAR COMPARTMENTATION**

A roll-up door compartment above the rear tailboard will be provided.

The interior dimensions of this compartment will be 37.00" wide x 32.50" high x 25.88" deep in the lower 23.00" of the compartment and 15.00" deep in the remaining upper portion. The clear door opening will be a minimum of 33.88" wide x 22.63" high.

A removable access panel will be furnished on the back wall of the compartment.

The rear compartment will be open into the rear side compartments. The transverse opening will be a minimum of 22.00" wide x 23.50" high.

A drip pan will be installed below the roll of the door. A guard will be installed behind the roll of the door. The interior height of the compartment will be measured from the floor to the ceiling. The depth of the compartment will be measured from the back wall to the inside of the door frame.

Closing of the door will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one hand.

### **ROLL-UP REAR COMPARTMENT DOOR**

The rear compartment will have a roll-up door.

The door will be double faced, aluminum construction, satin aluminum and manufactured by AMDOR™ brand roll-up doors.

The door will be constructed using 1.00" extruded double wall aluminum slats which will feature a flat smooth interior surface to provide maximum protection against equipment hang-up. The slats will be connected with a structural driven ball and socket hinge designed to provide maximum curtain diaphragm strength. Mounting and adjusting the curtain will be done with a clip system that connects the curtain to the balancer drum allowing for easy tension adjustment without tools. The slats will be mounted in reusable slat shoes with positive snap-lock securement.

Each slat will incorporate weather tight recessed dual durometer seals. One (1) fin will be designed to locate the seal within the extrusion. The second will serve as a wiping seal which will also allow for compression to prevent water ingress.

The door will be mounted in a one (1)-piece aluminum side frame with recessed side seals to minimize seal damage during equipment deployment. All seals including side frames, top gutters and bottom panel are to be manufactured utilizing non-marring materials.

Bottom panel flange of roll-up door will be equipped with two (2) cut-outs to allow for easier access with gloved hands.

A stainless steel lift bar to be provided for opening the door and located at the bottom of each door with latches on the outer extrusion of the door frame. A ledge to be supplied over lift bar for additional area to aid in closing the door. The lift bar will be located at the bottom of door with striker latches installed at the base of the side frames. Side frame mounted door strikers will include support beneath the stainless steel lift bar to prevent door curtain bounce, improve bottom seal life expectancy and to avoid false door ajar signals.

All injection molded roll-up door wear components will be constructed of Type 6 nylon.

The door will have a 3.00 inch diameter balancer/tensioner drum to assist in lifting the door.

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.

#### **COMPARTMENT LIGHTING**

There will be seven (7) compartment(s) with two (2) white 12 volt DC LED compartment light strips. The dual light strips will be centered vertically along each side of the door framing. There will be two (2) light strips per compartment. The dual light strips will be in all body compartment(s).

Any remaining compartments without light strips 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.

#### **HATCH COMPARTMENTS**

Hatch compartments with two (2) lift-up, top opening hatch doors will be provided above the left and right side body compartments. Each hatch compartment will extend the full length of the side body compartmentation x 28.00" wide x 22.00" maximum depth. The compartments will extend the full length of the side body compartmentation except for a 20.00" recessed step area at the rear of the compartment on the access ladder side.

Sides of the compartments will be constructed of the same material as the body and painted job color on the outside panels. A chrome and black vinyl molding will be provided to cover the seam between the top of the body panel and the bottom of the hatch compartment. The vertical outboard seam at the center of the compartment will have a 1.00" wide painted aluminum extrusion.

Top of the compartments will be constructed of bright aluminum treadplate.

Two (2) lift-up, bright aluminum treadplate doors will be provided on the top of each hatch compartment. Each door will have a lever handle with a slam style latch to hold the doors in the closed position.

These double pan doors will have lipped edges with a rubber seal for weather resistance.

Doors will be hinged on the outboard side and will be held open with pneumatic stay arms.

The compartments will have a 3/4" drain that extends to below the body. Black Dri-Deck matting shall be provided to help prevent stored equipment in pooled water.

Handrails will be provided at the step area to the rear of the hatch compartment. One (1) curved handrail will be mounted on the outboard side of the step area at the rear and curve over the top. One (1) straight handrail will be mounted vertically along the inboard side of the step area.

#### **HATCH COMPARTMENT LIGHTING**

There will be LED strip lights mounted full length on the interior, hinged side of each compartment.

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

#### **MOUNTING TRACKS**

There will be recessed tracks installed vertically to support the adjustable shelf(s).

Tracks will not protrude into any compartment in order to provide the greatest compartment space and widest shelves possible.

The tracks will be provided in each compartment except for the one that contains the pump operator's panel.

#### **ADJUSTABLE SHELVES**

There will be five (5) shelves with a capacity of 500 lb provided.

The shelf construction will consist of .188" aluminum painted spatter gray with 2.00" sides.

Each shelf will be infinitely adjustable by means of a threaded fastener, which slides in a track.

The shelves will be held in place by .12" thick stamped plated brackets and bolts.

The location(s) will be in RS3 centered between the floor and the ceiling to the left of the partition, in RS1 in the lower third, in RS3 in the lower third to the left of the partition, in LS1 centered between the floor and ceiling and in LS3 in the upper third to the left of the partition.

#### **SLIDE-OUT/TILT-DOWN TRAY**

There will be one (1) slide-out tray provided.

The bottom of each tray will be constructed of 0.188" thick aluminum painted spatter gray while special aluminum extrusions will be utilized for the tray sides, ends, and tracks. The corners will be welded to form a rigid unit.

A spring loaded lock will be provided on each side at the front of the tray. Releasing the locks will allow the tray to slide out approximately two-thirds (2/3) of its length from the stowed position and tip 30 degrees down from horizontal. The tray will be equipped with ball bearing rollers for smooth operation.

Rubber padded stops will be provided for the tray in the extended position.

The capacity rating of the tray will be a minimum of 215 lb in the extended position.

The vertical position of the tray within the compartment will be adjustable.

The location(s) will be in RS1 in the upper third.

#### **SLIDE-OUT FLOOR MOUNTED TRAY**

There will be two (2) floor mounted slide-out tray(s) provided.

Each tray will have 2.00" high sides and a minimum capacity rating of 500 lb in the extended position.

Each tray will be constructed of aluminum painted spatter gray

There will be two undermount-roller bearing type slides rated at 250lb each provided. The pair of slides will have a safety factor rating of 2.

To ensure years of dependable service, the slides will be coated with a finish that is tested to withstand a minimum of 1,000 hours of salt spray per ASTM B117.

To ensure years of easy operation, the slides will require no more than a 50lb force for push-in or pull-out movement when fully loaded after having been subjected to a 40 hour vibration (shaker) test under full load. The vibration drive file will have been generated from accelerometer data collected from a heavy truck chassis driven over rough gravel roads in an unloaded condition. Proof of compliance will be provided upon request.

Automatic locks will be provided for both the "in" and "out" positions. The trip mechanism for the locks will be located at the front of the tray for ease of use with a gloved hand.

The location(s) will be RS1 and LS1.

#### **DRAWER ASSEMBLY**

A slideout drawer assembly will be installed front of partition of LS-3.

The clear dimension of the top drawer will be 4.00" with a face plate that is 5.00" high x 21.00" deep. The clear dimension of the second drawer will be 4.75" with a face plate that is 5.00" high x 21.00" deep. The clear dimension of the third drawer will be 4.75" with a face plate that is 5.00" high x 21.00" deep. The clear dimension of the fourth drawer will be 4.75" with a face plate that is 5.00" high x 21.00" deep. The clear dimension of the bottom drawer will be 8.75" with a face plate that is 9.00" high x 21.00" deep.

The drawers will have a capacity of 250 pounds.

The drawers will be mounted in a cabinet housing constructed of light gray powder coated aluminum with anodized aluminum frames. The housing will be 24.00" deep, and completely enclose the drawer.

A full-length aluminum extruded rail will be provided at the top edge of each drawer. This rail will act as the latching mechanism as well as the handle for each drawer.

There will be a total of one (1) provided.

### **SWING OUT TOOLBOARD**

A swing out aluminum toolboard will be provided.

It will be a minimum of .188" thick with .281" diameter holes in a pegboard pattern with 1.00" centers between holes.

A 1.00" x 1.00" aluminum tube frame will be welded to the edge of the pegboard.

The board will be mounted on a pivoting device at the front of the compartment on the top and bottom to allow easy movement in and out of the compartment. The maximum tool load will be 400 lb.

The board will have positive lock in the stowed and extended position.

The board will have a D-ring handle to secure it in the stowed position.

The board will be mounted on adjustable tracks from front to back within the compartment.

There will be Two (2) toolboard(s) provided. The toolboard(s) will be spatter gray painted and installed in LS2 full height and width and RS2 full height and width.

### **SLIDE-OUT TOOLBOARD**

There will be three (3) slide-out toolboard(s) provided.

The toolboard will be a minimum of 0.188" thick with .281" diameter holes in a pegboard pattern with 1.00" centers between holes.

A 1.00" x 1.00" aluminum tube frame will be welded to the edge of the pegboard. A handhold cutout will be provided on the outboard edge of the toolboard.

The board will be mounted on an under-mount roller bearing type slide rated at 250 lb with a factor of safety of 2.

To ensure years of dependable service the slides will be coated with a finish that is tested to withstand a minimum of 1,000 hours of salt spray per ASTM B117.

To ensure years of easy operation, the slides will require no more than a 50 pound force for push-in or pull-out movement when fully loaded after having been subjected to a 40 hour vibration (shaker) test under full load. The vibration drive file will have been generated from accelerometer data collected from a heavy truck chassis driven over rough gravel roads in an unloaded condition. Proof of compliance will be provided upon request.

The slide will be mounted on adjustable tracks side to side within the compartment.

The board will have positive lock in the stowed and extended position.

The toolboard(s) will be spatter gray painted and installed in LS3, 38.00" from the forward door frame, in LS3, 44.00" from the forward door frame and in RS3, 16.00" from the forward door frame.

#### **HORIZONTAL PARTITION**

One (1) partition, horizontally mounted and bolted or welded in place, will be installed RS3.

#### **TOOL BOX**

A tool box will be furnished.

The outside size will be 20.00" long x 12.00" wide x 10.00" deep.

The tool box will be black in color.

Construction will be of .50" polypropylene plastic with joints and seams nitrogen welded. A cut out carrying handle will be provided on each end.

There will be four (4) provided. It will be located on adjustable shelf in RS1.

#### **VERTICAL DIVIDER**

A .12" thick aluminum vertical compartment divider will be provided one in compartment LS-3 to the right side of the CTech tool box, one in RS3 centered in compartment.. The divider will be secured in place with #10 self tapping screws.

A total of two (2) will be provided.

#### **PEGBOARD**

There will be 3/16" thick aluminum pegboard spatter gray painted installed on the back wall of two (2) compartments. It will be mounted using two (2) horizontal tracks. Retainers will be used to mount the pegboard to the tracks. The holes will be .281" diameter , punched 1.00" on center. The pegboard will be located in the LS2 and RS2 and mounted back wall of compartment LS-2 and RS-2.

#### **RUB RAIL**

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

Trim will be 3.12" high with 1.50" 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.

Rub rails will be attached with bolts and spaced from the body with isolators that will help to absorb any moderate impact without damaging the body.

#### **BODY FENDER CROWNS**

Polished stainless steel fender crowns will be provided around the rear wheel openings.



A fender liner constructed of unpainted brushed stainless will be provided to avoid paint chipping. The liners will be removable to aid in the maintenance of rear suspension components.

A dielectric barrier will be provided between the fender crown fasteners (screws) and the fender sheet metal to prevent corrosion.

The fender crowns will be held in place with stainless steel screws that thread directly into a composite nut and not directly into the parent body sheet metal to eliminate dissimilar metals contact and greatly reduce the chance for corrosion.

### **HARD SUCTION HOSE**

Two (2) lengths of 6.00" Kochek Fire Grade clear corrugated hard suction hose, reinforced with a black spiral helix, 10' in length, will be provided. The hose will be equipped with a long handle female coupling on one (1) end and a rocker lug male coupling on the other end. Couplings will be black anodized hard coated aluminum.

### **HARD SUCTION HOSE STORAGE**

A total of two (2) fully enclosed hard suction hose compartment(s) will be provided one (1) on the left side and one (1) on the right side in the upper area of the body compartments and capable of storing one (1) hard suction hose each.

The trough will be constructed of stainless steel.

One (1) smooth aluminum door with a Southco C2 chrome raised trigger lever latch hinged along the outboard edge, will be provided at the rear of each compartment.

### **HANDRAILS**

The handrails will be 1.25" diameter knurled aluminum to provide a positive gripping surface.

Chrome plated end stanchions will support the handrail. Plastic gaskets will be used between end stanchions and any painted surfaces.

Drain holes will be provided in the bottom of all vertically mounted handrails.

Handrails will be provided to meet NFPA 1901 section 15.8 requirements. The handrails will be installed as noted on the sales drawing.

- Two (2) vertical handrails will be located at the rear, one on each side of the rear compartment .

One (1) horizontal black rubber-covered handrail will be provided above the hose bed at the rear of the apparatus. The hose bed dividers do not require additional reinforcement.

### **AIR BOTTLE STORAGE (TRIPLE)**

A quantity of three (3) air bottle compartments designed to hold (3) air bottles up to 7.25" in diameter x 26.00" deep will be provided on the left side forward of the rear wheels, on the right side forward of the rear wheels and on the right side rearward of the rear wheels. A painted stainless steel door with a

Southco raised trigger C2 chrome lever latch will be provided to contain the air bottle. A dielectric barrier will be provided between the door hinge, hinge fasteners and the body sheet metal.

Inside the compartment, black rubber matting will be provided.

#### **AIR BOTTLE COMPARTMENT STRAP**

A strap will be provided in the air bottle compartment(s) to help contain the air bottles when the vehicle is parked on an incline. The strap will wrap around the neck and attach to the wall of the compartment.

#### **AIR BOTTLE STORAGE (DOUBLE)**

A quantity of one (1) air bottle compartment, 15.25" wide x 7.75" tall x 26.00" deep, will be provided on the left side rearward of the rear wheels. The triangular door shall cover the double air bottle opening and the fuel tank access.. A painted stainless steel door with a Southco raised trigger C2 chrome lever latch will be provided to contain the air bottle. A dielectric barrier will be provided between the door hinge, hinge fasteners and the body sheet metal.

Inside the compartment, black rubber matting will be provided.

#### **AIR BOTTLE COMPARTMENT STRAP**

A strap will be provided in the air bottle compartment to help contain the air bottle when the vehicle is parked on an incline. The strap will wrap around the neck and attach to the wall of the compartment.

#### **EXTENSION LADDER**

There will be a 24' two-section aluminum Duo-Safety Series 900-A extension ladder provided.

#### **ROOF LADDER**

There will be a 14' aluminum Duo-Safety Series 775-A roof ladder provided.

#### **LADDER STORAGE**

The ladders will be stored in a tunnel through the water tank and accessed at the rear.

Ladder will be stored horizontally stacked and banked. The tunnel will include poly blocks to space the ladders apart.

The ladders may extend into the pump compartment just to the rear of the water pump. Any portion of the ladders that extend into the pump house will be enclosed. An enclosure will also be provided around the rear access area to the ladders.

Ladders will be secured from moving forward during travel.

Rear of ladder storage area will have a(n) smooth aluminum lift up door with two (2) stay arms with a pair of Southco raised trigger C2 chrome latches for access to the ladders.

#### **FOLDING LADDER**

One (1) 10.00' aluminum, Series 585-A, Duo-Safety folding ladder will be installed.

#### **FOLDING LADDER STORAGE**

One (1) folding ladder will be stored on the left side hard suction hose compartment in a stainless steel U-shaped trough. The ladder and trough will be located in the hard suction hose compartment.

**ADDITIONAL FOLDING LADDER**

One (1) Revolution 2.0 Model 13117 Little Giant folding ladder will be provided. The stored dimensions will be 55.50" high x 23.75" wide x 9.25" deep. The weight will be 32 lbs.

The ladder will be located RS3.

**LADDER STORAGE**

Storage will be provided in RS3 compartment for a Little Giant ladder. The ladder will be stored horizontally in the compartment on floor. There will be two (2) trough style brackets provided with dura surf slides and a Velcro® strap to aid in restraint and removal of the ladder. The ladder will be a Little Giant Revolution Model 17 - 12017.

**PIKE POLE, 8'**

One (1) pike pole, 8' long Nupla with a fiberglass I-beam handle, will be provided ladder storage compartment.

**PIKE POLE, 6'**

One (1) pike pole, 6' long Nupla with a fiberglass I-beam handle, will be provided.

**PIKE POLE STORAGE**

Aluminum tubing will be used for the storage of two (2) pike poles and will be located in the right side hard suction hose compartment. If the head of a pike pole can come in contact with a painted surface, a stainless steel scuffplate will be provided.

**FOLDING STEPS FRONT OF BODY**

Folding steps will be provided full height on the left side and right side body compartments to provide access to the cargo bed. Steps will be spaced evenly on the sales drawing. Actual quantity may vary due to pump panel interferences but will meet the NFPA required maximum stepping height.

The Trident steps will be bright finished, non-skid with a black tread coating on the stepping surface.

The step will incorporate an LED light to illuminate the stepping surface.

The steps can be used as a hand hold with two openings wide enough for a gloved hand.

### **LADDER, TOP ACCESS**

A wide easy climbing access ladder, constructed of aluminum rungs and extruded aluminum rails, will be provided on the left side at the rear of the apparatus. The inside climbing area of the ladder will be 13.75" wide.

The lower section of the ladder will be retractable into the upper section to eliminate interference with the rear FMVSS lights. When lowered the bottom rung will be lower than the body, approximately 16.00" to 20.00" from the ground to allow a lower first step height.



The ladder will be slanted when in use for easy access, and fold against the body for storage to reduce the overall length. Corrosion resistant, stainless steel spring-loaded locks will hold the ladder in place.

There will be a "do not move truck" indicator activated in the cab if the ladder is not in the stowed position when the parking brake is disengaged.

### **PUMP COMPARTMENT**

The pump compartment will be 34.00" wide.

The pump compartment will be an independent structure from the rear body and compartments so that each may flex independently of the other. Allowing the compartment, pump, plumbing and gauge panels to be removable from the chassis in a single assembly.

It will be a fabricated assembly of steel tubing, angles and channels which supports both the fire pump and the side running boards.

The pump compartment will be constructed of the same material as the rear body and compartments.

The pump compartment will be mounted to a steel substructure used to mount the pump which is mounted to the chassis frame rails with rubber biscuits.

### **PUMP MOUNTING**

The pump will be mounted to a steel substructure which will be mounted to the chassis frame rail using rubber isolators in a four point pattern. The mounting will allow chassis frame rails to flex independently without damage to the fire pump.

The side running board substructure will be fabricated from steel and mounted to the pump mount substructure.

### **CONTROL ZONE PUMP CONTROLS**

All pump controls and gauges will be located at the left side of the apparatus and properly marked.

Controls will be a Control Zone layout that is ergonomically organized for user-friendly operation.

Polished stainless steel trim collars will be installed around all inlets and outlets.

### **PUMP**

Fire pump will be a Waterous CXC20, 1500 gpm, single (1) stage centrifugal type. The pump will be an end suction, pedestal mount, single inlet type.

Pump will be the class "A" type.

Pump will deliver the percentage of rated discharge at pressures indicated below:

- 100 percent of rated capacity at 150 psi net pump pressure.
- 70 percent of rated capacity at 200 psi net pump pressure.
- 50 percent of rated capacity at 250 psi net pump pressure.

Pump body will be close-grained gray iron, bronze fitted.

Impeller shaft will be stainless steel, accurately ground to size. It will be supported by oil or grease lubricated, anti-friction ball bearings for rigid precise support.

Bearings will be protected from water and sediment by suitable stuffing boxes, slinger rings, and oil seals. No special or sleeve type bearings will be used.

Pump will be equipped with a self-adjusting, maintenance-free, mechanical shaft seal.

The mechanical seal will consist of a flat, highly polished, spring fed carbon ring that rotates with the impeller shaft. The carbon ring will press against a highly polished stainless steel stationary ring that is sealed within the pump body.

In addition, a throttling ring will be pressed into the steel chamber cover, providing a very small clearance around the rotating shaft in the event of a mechanical seal failure. The pump performance will not deteriorate, nor will the pump lose prime, while drafting if the seal fails during pump operation.

Wear rings will be bronze and easily replaceable to restore original pump efficiency and eliminate the need to replace the entire pump casing due to wear.

### **PUMP TRANSMISSION**

The pump transmission will be made of a three (3) piece, aluminum, horizontally split casing. Power transfer to pump will be through a high strength Morse HY-VO silent drive chain. By the use of a chain rather than gears, 50% of the sprocket will be accepting or transmitting torque, compared to two (2) or three (3) teeth doing all the work.

Drive shafts will be 2.35" diameter hardened and ground alloy steel and supported by ball bearings. The case will be designed to eliminate the need for water cooling.

### **PUMPING MODE**

An interlock system will be provided to ensure that the pump drive system components are properly engaged so that the apparatus can be safely operated. The interlock system will be designed to allow stationary pumping only.



### **AIR PUMP SHIFT**

Pump shift engagement will be made by a two (2) position sliding collar, actuated pneumatically (by air pressure), with a three (3) position air control switch located in the cab. A manual back-up shift control will also be located on the left side pump panel.

Two (2) indicator lights will be provided adjacent to the pump shift inside the cab. One (1) green light will indicate the pump shift has been completed and be labeled "pump engaged". The second green light will indicate when the pump has been engaged, and that the chassis transmission is in pump gear. This indicator light will be labeled "OK to pump".

The pump shift will be interlocked to prevent the pump from being shifted out of gear when the chassis transmission is in gear to meet NFPA requirements.

The pump shift control in the cab will be illuminated to meet NFPA requirements.

### **TRANSMISSION LOCK-UP**

The direct gear transmission lock-up for the fire pump operation will engage automatically when the pump shift control in the cab is activated.

### **AUXILIARY COOLING SYSTEM**

A supplementary heat exchange cooling system will be provided to allow the use of water from the discharge side of the pump for cooling the engine water. The heat exchanger will be a separate unit. It will be installed in the pump or engine compartment with the control located on the pump operator's control panel. The exchanger will be plumbed to the master drain valve.

### **INTAKE RELIEF VALVE - PUMP**

There will be One (1) Elkhart Style 40 relief valve(s) installed on the suction side of the pump preset at 125 psig.

The relief valve(s) will have a working range of 75 psi to 250 psi.

The outlet will terminate below the frame rails with a 2.50" National Standard hose thread adapter and will have a "do not cap" warning tag.

The relief valve pressure control will be located behind the right side pump panel with a stainless steel access door .

### **PRESSURE CONTROLLER**

A Pierce Pump Boss Model PBA300 pressure governor will be provided.

A pressure transducer will be installed in the water discharge manifold on the pump.

The display panel will be located at the pump operator's panel.

### **PRIMING PUMP**

The priming pump will be a Trident Emergency Products compressed air powered, high efficiency, multistage venturi based AirPrime System, conforming to standards outlined in the current edition of NFPA 1901.

All wetted metallic parts of the priming system are to be of brass and stainless steel construction.

One (1) priming control will open the priming valve and start the pump primer.

### **PUMP MANUALS**

There will be a total of two (2) pump manuals provided by the pump manufacturer and furnished with the apparatus. The manuals will be provided by the pump manufacturer in the form of two (2) electronic copies. Each manual will cover pump operation, maintenance, and parts.

### **PLUMBING, STAINLESS STEEL AND HOSE**

All inlet and outlet lines will be plumbed with either stainless steel pipe, flexible polypropylene tubing or synthetic rubber hose reinforced with hi-tensile polyester braid. All hose's will be equipped with brass or stainless steel couplings. All stainless steel hard plumbing will be a minimum of a schedule 10 wall thickness.

Where vibration or chassis flexing may damage or loosen piping or where a coupling is required for servicing, the piping will be equipped with victaulic or rubber couplings.

Plumbing manifold bodies will be ductile cast iron or stainless steel.

All piping lines are to be drained through a master drain valve or will be equipped with individual drain valves. All drain lines will be extended with a hose to drain below the chassis frame.

All water carrying gauge lines will be of flexible polypropylene tubing.

All piping, hose and fittings will have a minimum of a 500 PSI hydrodynamic pressure rating.

### **FOAM SYSTEM PLUMBING**

All piping that is in contact with the foam concentrate or foam/water solution will be stainless steel. The fittings will be stainless steel or brass. Cast iron pump manifolds will be allowed.

### **MAIN PUMP INLETS**

A 6.00" pump manifold inlet will be provided on each side of the vehicle. The suction inlets will include removable die cast zinc screens that are designed to provide cathodic protection for the pump, thus reducing corrosion in the pump.

### **MAIN PUMP INLET CAP**

The main pump inlets will have National Standard Threads with a long handle chrome cap.

The cap will be the Pierce VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected.



### **VALVES**

All ball valves will be Akron® Brass. The Akron valves will be the 8000 series heavy-duty style with a stainless steel ball and a simple two-seat design. No lubrication or regular maintenance is required on the valve.

Valves will have a **ten (10) year** warranty.

The location of the valve for the one (1) inlet will be recessed behind the pump panel.

### **INLET CONTROL**

The side auxiliary inlet(s) will incorporate a quarter-turn ball valve with the control located at the inlet valve. The valve operating mechanism will indicate the position of the valve.

### **LEFT SIDE INLET**

There will be one (1) auxiliary inlet with a 2.50" valve at the left side pump panel, terminating with a 2.50" (F) National Standard hose thread adapter.

The auxiliary inlet will be provided with a strainer, chrome swivel and plug.

### **FRONT INLET PROVISION**

Provisions for a front inlet will be provided on the right side pump suction manifold. Flange will be capped off for possible addition of front inlet at a later date.

### **INLET BLEEDER VALVE**

A 0.75" bleeder valve will be provided for each side gated inlet.

The valves will be located behind the panel with a "T" swing style handle control extended to the outside of the panel.

The handles will be chrome plated and provide a visual indication of valve position. The swing handle will provide an ergonomic position for operating the valve without twisting the wrist and provides excellent leverage.

The water discharged by the bleeders will be routed below the chassis frame rails.

### **TANK TO PUMP**

The booster tank will be connected to the intake side of the pump with stainless steel piping and a quarter turn 3.00" full flow line valve with the control remotely located at the operator's panel. Tank to pump line will run straight (no elbows) from the pump into the front face of the water tank and angle down into the tank sump. A rubber coupling will be included in this line to prevent damage from vibration or chassis flexing.

A check valve will be provided in the tank to pump supply line to prevent the possibility of "back filling" the water tank.

### **TANK REFILL**

A 1.50" combination tank refill and pump re-circulation line will be provided, using a quarter-turn full flow ball valve controlled from the pump operator's panel.

### **DISCHARGE OUTLET CONTROLS**

The discharge outlets will incorporate a quarter-turn ball valve with the control located at the pump operator's panel. The valve operating mechanism will indicate the position of the valve.

If a handwheel control valve is used, the control will be a minimum of a 3.9" diameter stainless steel handwheel with a dial position indicator built in to the center of the handwheel.

Any 3.00 inch or larger discharge valve will be a slow-operating valve in accordance with NFPA 16.7.5.3.

#### **LEFT SIDE DISCHARGE OUTLETS**

There will be one (1) outlet with a 2.50" valve on the left side of the apparatus, terminating with a 2.50" (M) National Standard hose thread adapter.

#### **LEFT SIDE OUTLET ELBOWS**

The 2.50" discharge outlets located on the left side pump panel will be furnished with a 2.50" (F) National Standard hose thread x 2.50" (M) National Standard hose thread, chrome plated, 45 degree elbow.

The elbow will be Pierce VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected.

#### **RIGHT SIDE DISCHARGE OUTLETS**

There will be one (1) outlet with a 2.50" valve on the right side of the apparatus, terminating with a 2.50" (M) National Standard hose thread adapter.

#### **RIGHT SIDE OUTLET ELBOWS**

The 2.50" discharge outlets located on the right side pump panel will be furnished with a 2.50" (F) National Standard hose thread x 2.50" (M) National Standard hose thread, chrome plated, 45 degree elbow.

The elbow will be Pierce VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected.

#### **LARGE DIAMETER DISCHARGE OUTLET**

There will be a 4.00" discharge outlet with a 4.00" Akron valve installed on the right side of the apparatus, terminating with a 4.00" (M) National Standard hose thread adapter. This discharge outlet will be actuated with a small handwheel control at the pump operator's control panel.

An indicator will be provided to show when the valve is in the closed position.

#### **LARGE DIAMETER OUTLET ELBOWS**

The 4.00" outlet(s) will be furnished with one (1) 4.00" (F) National Standard hose thread x 5.00" Storz elbow adapter with Storz cap.

#### **FRONT DISCHARGE OUTLET**

There will be one (1) 1.50" discharge outlet piped to the front of the apparatus and located in the center bumper tray.

Plumbing will consist of 2.00" piping and flexible hose with a 2.00" ball valve with control at the pump operator's panel. A fabricated weldment made of stainless steel pipe will be used in the plumbing where appropriate. The piping will terminate with a 1.50" NST with 90 degree stainless steel swivel.

There will be automatic drains provided at all low points of the piping.

### **REAR DISCHARGE OUTLET**

There will be One (1) discharge outlet piped to the rear of the hose bed, left side, installed so proper clearance is provided for spanner wrenches or adapters. Plumbing will consist of 2.50" piping along with a 2.50" full flow ball valve with the control from the pump operator's panel.

### **REAR OUTLET ELBOWS**

The 2.50" discharge outlets located at the rear of the apparatus will be furnished with a 2.50" (F) National Standard hose thread x 2.50" (M) National Standard hose thread, chrome plated, 45 degree elbow.

The elbow will be Pierce VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected.

### **DISCHARGE CAPS/ INLET PLUGS**

Chrome plated, rocker lug, caps with chain will be furnished for all discharge outlets 1.00" thru 3.00" in size, besides the pre-connected hose outlets.

Chrome plated, rocker lug, plugs with chain will be furnished for all auxiliary inlets 1.00" thru 3.00" in size.

The caps and plugs will incorporate a thread design to automatically relieve stored pressure in the line when disconnected.

### **OUTLET BLEEDER VALVE**

A 0.75" bleeder valve will be provided for each outlet 1.50" or larger. Automatic drain valves are acceptable with some outlets if deemed appropriate with the application.

The valves will be located behind the panel with a T swing style handle control extended to the outside of the side pump panel.

The handles will be chrome plated and provide a visual indication of valve position.

The T swing handle will provide an ergonomic position for operating the valve without twisting the wrist and provides excellent leverage.

Bleeders will be located at the bottom of the pump panel. They will be properly labeled identifying the discharge they are plumbed in to.

The water discharged by the bleeders will be routed below the chassis frame rails.

### **DELUGE RISER**

A 3.00" deluge riser will be installed above the pump in such a manner that a monitor can be mounted and used effectively. Piping will be rigidly braced and installed securely so no movement develops when the line is charged. The riser will be gated and controlled at the pump operator's panel.

Any 3.00 inch or larger discharge valve will be a slow-operating valve in accordance with NFPA 16.7.5.3.

### **MONITOR**

A customer/dealer supplied and installed make and model no monitor required or requested monitor will be properly installed on the deluge riser.

The deluge riser will have male National Pipe Threads for mounting the monitor.

### **SPEEDLAY MODULE**

The speedlay module will be standard width to match the pumphouse.

The speedlays module will be 11.00" wide and mounted to the front of the pumphouse.

The speedlays will be capable of carrying up to a maximum of 200' of double stacked 1.75" hose.

The outside vertical surfaces on the left and right side of the speedlay module will have a brushed stainless steel scuffplate.

### **COMPARTMENT BELOW SPEEDLAYS**

A compartment will be located on the each side of the speedlay module, below the speedlays.

The left side compartment will be used to house foam system components.

The left side compartment will have a panel secured to the speedlay module to match the material of the pump panel.

The right side compartment will have a aluminum treadplate door with Southco C2 chrome raised trigger lever latch provided to secure the door in the closed position.

The interior dimensions of the right side compartment will be approximately 10.00" high x 10.00" deep.

The width of the compartment will 2.00" less than the speedlay module.

### **SPEEDLAY HOSE RESTRAINT**

A 2.00" black nylon webbing design restraint will be provided across the ends of speedlay(s) to secure the hose during travel. The webbing assembly is to be attached at the bottom of the speedlay(s) with footman loops as a permanent attachment and is attached at the top center with one (1) seat belt buckle. The female end is permanently attached above the speedlay(s) and the male end attached to the webbing.

A stiffener will be sewn into the top of the restraint to keep it rigid.

A 1.00" orange release strap will be provided in order to help facilitate release from the ground.

### **SPEEDLAY(S). LOWER**

There will be one (1) lower speedlay provided.

### **1.50" Speedlay**

There will be one (1) 1.50" speedlay plumbed with 2.00" welded or formed schedule 10 304L stainless steel pipe.



There will be a 1.50" National Standard hose thread 90-degree swivel provided in each hose bed, so that the hose may be removed from either side of apparatus. The swivel will be positioned at the top of speedlay hose bed as far outboard as possible for ease of changing hose.

Each speedlay will be gated with a 2.00" quarter turn ball valve with the controls located at the pump operator's panel.

Each hose bed will be capable of carrying 200' of 1.75" double jacket hose, double stacked.

### **Speedlay Hose Trays**

A removable tray will be provided for each crosslay hose bed. The crosslay tray will be constructed of black poly to provide a lightweight sturdy tray. Two (2) hand holes will be in the floor and additional hand holes will be provided in the sides for easy removal and installation from the compartment. The floor of the trays will be perforated to allow for drainage and hose drying.

Trays will be held in place by a mechanical spring-loaded stainless-steel latch that automatically deploys upon loading the trays to hold the trays in place during transit.

### **SPEEDLAY(S), UPPER**

There will be one (1) upper speedlay provided.

#### **1.50" Speedlay**

There will be one (1) 1.50" speedlay plumbed with 2.00" welded or formed schedule 10 304L stainless steel pipe.

There will be a 1.50" National Standard hose thread 90-degree swivel provided in each hose bed, so that the hose may be removed from either side of apparatus. The swivel will be positioned at the top of speedlay hose bed as far outboard as possible for ease of changing hose.

Each speedlay will be gated with a 2.00" quarter turn ball valve with the controls located at the pump operator's panel.

Each hose bed will be capable of carrying 200' of 1.75" double jacket hose, double stacked.

### **Speedlay Hose Trays**

A removable tray will be provided for each crosslay hose bed. The crosslay tray will be constructed of black poly to provide a lightweight sturdy tray. Two (2) hand holes will be in the floor and additional hand holes will be provided in the sides for easy removal and installation from the compartment. The floor of the trays will be perforated to allow for drainage and hose drying.

Trays will be held in place by a mechanical spring-loaded stainless-steel latch that automatically deploys upon loading the trays to hold the trays in place during transit.

### **2.50" CROSSLAY HOSE BED**

One (1) crosslay with 2.50" outlets will be provided. This bed to be capable of carrying 200' of 2.50" double jacketed hose and will be plumbed with 2.50" i.d. pipe and gated with a 2.50" quarter turn ball valve.

Outlet to be equipped with a 2.50" National Standard hose thread 90 degree swivel located in the hose bed so that hose may be removed from either side of apparatus.

The crosslay control will be at the pump operator's panel.

When used in conjunction with other crosslay/speedlay/deadlay configurations, a center crosslay divider, when needed, will be fabricated of .25" aluminum and will provide adjustment from side to side. The divider will be unpainted with a brushed finish. The remainder of the crosslay bed will be painted job color.

Stainless steel vertical scuffplates will be provided at hose bed ends (each side of vehicle). Bottom of hose bed ends (each side) will also be equipped with a stainless steel scuffplate.

Crosslay bed flooring will consist of removable perforated brushed aluminum.

### **CROSSLAY HOSE RESTRAINT**

A 2.00" black nylon webbing design restraint will be provided at each of the ends of one (1) crosslay(s) to secure the hose during travel. The webbing assembly is to be attached at the bottom of the crosslays, with footman loops and a permanent attachment, and is to attach at the top outside corners with seat belt buckles. The female end of the seat buckle will be permanently attached at the top corner of the opening. A nylon strap will be attached to the seat belt buckle for releasing the buckle on the webbing.

### **CROSSLAY COVER**

A hinged .19" aluminum treadplate cover will be installed over the crosslay hose beds. It will include a latch at each end of the cover to hold it securely in place, a chrome grab handle at each end for opening and closing the cover and a foam rubber gasket where the cover comes into contact to a painted surface.

The cover will be provided with rubber latch hold open device.

The hinge will be to the front of the hose beds.

### **HUSKY 3 FOAM PROPORTIONER**

A Pierce Husky® 3 foam proportioning system will be provided. The Husky 3 is an on demand, automatic proportioning, single point, direct injection system suitable for all types of Class A and B foam concentrates, including the high viscosity (6000 cps), alcohol resistant Class B foams. Operation will be based on direct measurement of water flow, and remain consistent within the specified flows and pressures. The system will automatically proportion foam solution at rates from .1 percent to 3 percent regardless of variations in water pressure and flow, up to the maximum rated capacity of the foam concentrate pump.

The design of the system will allow operation from draft, hydrant, or relay operation.

### **System Capacity**

The system will have the ability to deliver the following minimum foam solution flow rates at accuracies that meet or exceed NFPA requirements at a pump rating of 150 psi.

100 gpm @ 3 percent

300 gpm @ 1 percent

600 gpm @ 0.5 percent

Class A foam setting in .1 percent increments from .1 percent to 1 percent. Typical settings of 1 percent, .5 percent and .3 percent (maximum capacity will be limited to the plumbing and water pump capacity).

### **Control System**

The system will be equipped with a digital electronic control display located on the pump operators panel. Push button controls will be integrated into the panel to turn the system on/off, control the foam percentage, and to set the operation modes.

The percent of injection will have a preset. This preset can be changed at the fire department as desired. The percent of injection will be able to be easily changed at the scene to adjust to changing demands.

Three (3) .50 tall LEDs will display the foam percentage in numeric characters. Three (3) indicator LEDs will also be included, one (1) green, one (1) red, and one (1) yellow. The LEDs will indicate various system operation or error states.

The indications will be:

- Solid Green - System On
- Solid Red - Valve Position Error
- Solid Yellow - Priming System
- Flashing Green - Injecting Foam
- Flashing Red - Low Tank Level
- Flashing Yellow - Refilling Tank

The control display will house a microprocessor, which receives input from the systems water flow meter while also monitoring the position of the foam concentrate pump. The microprocessor will compare the values of the water flow versus the position/rate of the foam pump, to ensure the proportion rate is accurate. One (1) check valve will be installed in the plumbing to prevent foam from contaminating the water pump.

### **Hydraulic Drive System**

The foam concentrate pump will be powered by an electric over hydraulic drive system. The hydraulic system and motor will be integrated into one (1) unit.

### **Foam Concentrate Pump**

The foam concentrate pump will be of positive displacement, self-priming; linear actuated design, driven by the hydraulic system. The pump will be constructed of brass body; chrome plated stainless steel shaft, with a stainless steel piston. In order to increase longevity of the pump, no aluminum will be present in its construction.

A relief system will be provided which is designed to protect the drive system components and prevent over pressuring the foam concentrate pump

The foam concentrate pump will have minimum capacity for 3 gpm with all types of foam concentrates with a viscosity at or below 6000 cps including protein, fluoroprotein, AFFF, FFFP, or AR-AFFF. The system will deliver only the amount of foam concentrate flow required, without recirculating foam back to the storage tank. Recirculating foam concentrate back to the storage tank can cause agitation and premature foaming of the concentrate, which can result in system failure. The foam concentrate pump will be self-priming and have the ability to draw foam concentrate from external supplies such as drums or pails.

#### **External Foam Concentrate Connection**

An external foam pick-up will be provided to enable use of a foam agent that is not stored on the vehicle. The external foam pick-up will be designed to allow continued operation after the on-board foam tank is empty, or the use of foam different than the foam in the foam tank.

#### **Panel Mounted External Pick-Up Connection / Valve**

A bronze three (3)-way valve will be provided. The unit will be mounted to the pump panel. The valve unit will function as the foam system tank to pump valve and external suction valve. The external foam pick-up will be one (1) 0.75" male connection GHT (garden hose thread) with a cap.

#### **Pick-Up Hose**

A 0.75" flexible hose with an end for insertion into foam containers will be provided. The hose will be supplied with a 0.75" female swivel GHT (garden hose thread) swivel connector. The hose will be shipped loose.

#### **Discharges**

The foam system will be plumbed to the center of front bumper, left rear outlet, front crosslay, lower speedlay and upper speedlay.

#### **System Electrical Load**

The maximum current draw of the electric motor and system will be no more than 55 amperes at 12 VDC.

#### **SINGLE FOAM TANK REFILL**

The foam system's proportioning pump will be used to fill the foam tank. This will allow use of the auxiliary foam pick-up to pump the foam from pails or a drum on the ground into the foam tank. A foam shut-off switch will be installed in the fill dome of the tank to shut the system down when the tank is full. The fill operation will be controlled by a mode in the foam system controller. While the proportioner pump is filling the tank, the controller will display a flashing yellow LED to indicate that the tank is filling. When the tank is full, as determined by the float switch in the tank dome, the pump will stop and the controller will shut the yellow LED off. If it attempted to use tank fill and the refill valve and suction valve are in the wrong position(s), then a red LED will illuminate to indicate the improper valve position(s). When the valves are positioned properly, then filling will commence.

### **FOAM TANK**

The foam tank will be an integral portion of the polypropylene water tank. The cell will have a capacity of 20 gallons of foam with the intended use of Class A foam. The foam cell will not reduce the capacity of the water tank. The foam cell will have a screen in the fill dome and a breather in the lid.

### **FOAM TANK DRAIN**

The foam tank drain will be a 1.00" quarter turn drain valve located inside the pump/plumbing compartment.

### **PUMP PANEL CONFIGURATION**

The pump panel configuration will be arranged and installed in an organized manner that will provide user-friendly operation.

### **PUMP AND GAUGE PANEL**

The pump and gauge panels will be constructed of aluminum with a black vinyl finish. A polished aluminum trim molding will be provided around each panel.

### **LEFT SIDE PANEL**

The left side pump panel will be split into (4) pieces. An upper, mid-section, lower and drain bank panels.

The upper pump panel will have vertically hinged access above the valve controls. The hinge will be located towards the front of the pump panel. The upper panel will be made as large as possible.

The left side mid-section (valve control area) pump panel will be secured using screws and rivet nut type of fasteners.

The left side lower (main intake area) pump panel will be secured using screws and rivet nut type of fasteners.

The drain bank portion of the left panel will be secured using screws and rivet nut type of fasteners.

### **RIGHT SIDE PANEL**

The right side pump panel will be split into (4) pieces. An upper, mid-section, lower and drain bank panels.

The right side upper, mid section and lower (main intake area) section will be removable.

The drain bank portion of the right panel will be secured using screws and rivet nut type of fasteners.

### **FRONT OF PUMPHOUSE ACCESS**

On the front of the pump house structure, provisions will be provided for access to the pump and plumbing. An opening of 36.00" wide by 30.00" high will be provided.

An aluminum treadplate kneeling pad, 20.00" long by 9.25" wide will be provided at the front of the pumphouse.

No permanently mounted panels will be secured/installed on the front of the pump house area.

### **TOP OF PUMPHOUSE ACCESS**

On the top of the pump house structure/cargo floor area, provisions will be provided for access to the pump and plumbing. The pumphouse cargo floor will be split into Three (3) sections and fastened with removable S/S hardware and rivet nut type of fasteners.

### **PANEL LATCHES**

The upper left side hinged, right side upper, right side mid section and right side lower section of panels will be fastened with chrome flush trigger latch .

### **PUMP COMPARTMENT LIGHT**

There will be one (1) Whelen®, Model 3SC0CDCR, 3.00" white 12 volt DC LED light(s) with Whelen, Model 3FLANGEC, flange(s) installed in the pump compartment.

Engine monitoring graduated LED indicators will be incorporated with the pressure controller.

Also provided at the pump panel will be the following:

- Master Pump Drain Control

### **THROTTLE READY GREEN INDICATOR LIGHT**

There will be a green indicator light integrated with the pressure governor and/or engine throttle installed on the pump operators panel that is activated when the pump is in throttle ready mode.

### **OK TO PUMP INDICATOR LIGHT**

There will be a green indicator light installed on the pump operators panel that is activated when the pump is in Ok To Pump mode.

### **VACUUM AND PRESSURE GAUGES**

The pump vacuum and pressure gauges will be liquid filled and manufactured by Class 1 Incorporated ©.

The gauges will be a minimum of 4.00" in diameter and will have white faces with black lettering, with a pressure range of 30.00"-0-600#.

Gauge construction will include a Zytel nylon case with adhesive mounting gasket and threaded retaining nut.

The pump pressure and vacuum gauges will be installed adjacent to each other at the pump operator's control panel.

Test port connections will be provided at the pump operator's panel. One will be connected to the intake side of the pump, and the other to the discharge manifold of the pump. They will have 0.25 in. standard pipe thread connections and non-corrosive polished stainless steel or brass plugs. They will be marked with a label.

This gauge will include a 10 year warranty against leakage, pointer defect, and defective bourdon tube.



### **PRESSURE GAUGES**

The individual "line" pressure gauges for the discharges will be Class 1© interlube filled.

They will be a minimum of 2.00" in diameter and have white faces with black lettering.

Gauge construction will include a Zytel nylon case with adhesive mounting gasket and threaded retaining nut.

Gauges will have a pressure range of 30"-0-400#.

The individual pressure gauge will be installed as close to the outlet control as practical.

This gauge will include a 10 year warranty against leakage, pointer defect, and defective bourdon tube.

### **WATER LEVEL GAUGE**

There will be an electronic water level gauge provided on the operator's panel that registers water level by means of five (5) colored LED lights. The lights will be durable, ultra-bright five (5) LED design viewable through 180 degrees. The water level indicators will be as follows:

- 100 percent = Green
- 75 percent = Yellow
- 50 percent = Yellow
- 25 percent = Yellow
- Refill = Red

The light will flash when the level drops below the given level indicator to provide an eighth of a tank indication. To further alert the pump operator, the lights will flash sequentially when the water tank is empty.

The level measurement will be based on the sensing of head pressure of the fluid in the tank.

The display will be constructed of a solid plastic material with a chrome plated die cast bezel to reduce vibrations that can cause broken wires and loose electronic components. The encapsulated design will provide complete protection from water and environmental elements. An industrial pressure transducer will be mounted to the outside of the tank. The field calibratable display measures head pressure to accurately show the tank level.

There will be a Hale part number 106877, 4-light driver module included with this installation to power additional water level gauges.

The system(s) will be energized when pump is in gear.

### **WATER LEVEL GAUGE - ADDITIONAL**

A water level gauge system will be provided behind crew cab doors, each side of truck, high as possible. . Each system will be provided with four (4) Whelen® Model 50\*02Z\*R Linear LED lights with chrome trim. The total quantity of water level gauge systems to be provided will be two (2).

The lights will be mounted and indicate the following:

- The top green light - water level full.
- Next blue light - water level 3/4 full.
- Next amber light - water level 1/2 full
- Bottom red light - water level 1/4 full when on solid and will flash when empty.
- The lens color(s) to be the same as the LEDs.

The flash rate will be determined by the main water tank sensor.

The above system will function similar to the standard five (5) light at the pump panel. The system will activate pump is in gear.

### **FOAM LEVEL GAUGE**

An electronic foam level gauge will be provided on the operator's panel that registers foam level by means of five (5) colored LED lights. The lights will be durable, ultra-bright five (5) LED design viewable through 180 degrees. The foam level indicators will be as follows:

- 100 percent = Green
- 75 percent = Yellow
- 50 percent = Yellow
- 25 percent = Yellow
- Refill = Red

The light will flash when the level drops below the given level indicator to provide an eighth of a tank indication. To further alert the pump operator, the lights will flash sequentially when the foam tank is empty.

The level measurement will be based on the sensing of head pressure of the fluid in the tank.

The display will be constructed of a solid plastic material with a chrome plated die cast bezel to reduce vibrations that can cause broken wires and loose electronic components. The encapsulated design will provide complete protection from foam and environmental elements. An industrial pressure transducer will be mounted to the outside of the tank. The display will be able to be calibrated in the field and will measure head pressure to accurately show the tank level.

### **STEP/LIGHT SHIELD**

There will be an aluminum treadplate stepping surface no less than 8.00" deep and properly reinforced to support a man's weight, installed over the pump operators panel.

- There will be 12 volt DC white LED lights installed under the step to illuminate the controls, switches, essential instructions, gauges, and instruments necessary for the operation of the apparatus. These lights will be activated by the pump panel light switch. Additional lights will be included every 18.00" depending on the size of the pump house.
- One (1) pump panel light will come on when the pump is in ok to pump mode.

There will be a light activated above the pump panel light switch when the parking brake is applied. This is to afford the operator some illumination when first approaching the control panel.

There will be one (1) white LED, step light provided above this step. In order to ensure exceptional illumination, each step light will provide a minimum of 25 foot-candles (fc) covering an entire 15.00" x 15.00" square placed 10.00" below the light and a minimum of 1.5 fc covering an entire 30.00" x 30.00" square at the same 10.00" distance below the light. The step light will be activated by the pump panel light switch.

#### **ADDITIONAL STEP/LIGHT SHIELD**

There will be an additional aluminum treadplate stepping surface no less than 8.00" deep and properly reinforced to support a man's weight, installed over the passenger's side pump panel.

- There will be 12 volt DC white LED lights installed under the step to illuminate the controls, switches, essential instructions, gauges, and instruments necessary for the operation of the apparatus. These lights will be activated by the pump panel light switch. Additional lights will be included every 18.00" depending on the size of the pump house.

There will be one (1) white LED, step light provided above the step. In order to ensure exceptional illumination, each step light will provide a minimum of 25 foot-candles (fc) covering an entire 15.00" x 15.00" square placed 10.00" below the light and a minimum of 1.5 fc covering an entire 30.00" x 30.00" square at the same 10.00" distance below the light. The step light will be activated by the pump panel light switch.

#### **AIR HORN SYSTEM**

Two (2) Hadley®, eTone, chrome air horns will be recessed in the front bumper. The air horn system will be piped to the air brake system wet tank utilizing 0.38" tubing. A pressure protection valve will be installed to prevent the loss of air in the brake system.

#### **Air Horn Location**

The air horns will be located on each side of the bumper, just outside of the frame rails.

#### **Air Horn Control**

The air horn(s) will be activated by the following:

- Right side lanyard. The lanyard to be vinyl covered 0.12" cable.
- Steering wheel horn ring with electric/air horn selector switch

#### **ELECTRONIC SIREN**

A Whelen, Model: 295SLSC1, electronic siren with a plug-in, detachable noise canceling microphone will be provided.

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

#### **ELECTRIC SIREN, LOCATION.**

Siren head will be mounted Panel A.

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

### **SPEAKER**

There will be one (1) Whelen®, Model SA315P, black nylon composite, 100-watt, speaker with through bumper mounting brackets and polished stainless steel grille provided. The speaker will be connected to the siren amplifier.

The speaker(s) will be recessed in the center of the front bumper.

### **AUXILIARY MECHANICAL SIREN**

There will be a Federal Signal Model Q2B mechanical siren furnished and installed in the front of the apparatus.

The Q2B will be chrome finish.

The siren will have a 2-gauge cable connected to a power solenoid that is connected by a 2-gauge cable ran battery direct to the primary chassis batteries and will be labeled Q2B+ at the battery. The power solenoid will only be enabled when the emergency master switch is on.

The siren will have a 2-gauge ground wire connected to the chassis battery stud. The cable will be labeled Q2B- at the battery.

The mechanical siren will be mounted on the bumper deck plate. It will be mounted on the left side. A reinforcement plate will be furnished to support the siren.

### **MECHANICAL SIREN CONTROL**

The mechanical siren will be activated by the following:

- Right side foot switch.
- Left side foot switch.

A momentary switch will be included in the right side overhead switch panel to activate the siren brake.

A momentary switch will be included in the left side overhead switch panel to activate the siren brake.

### **SWITCH FOR WARNING LIGHTS INTENSITY**

When parking brake is set, and a Whelen®, Model LCPHOTO photocell installed on the interior forward cab dash as near to the windshield as practical, is activated due to diminished ambient light, the designated Whelen® warning lights on the cab and the warning lights on the body will transition to a low power intensity.

In order for the activation of low power mode of the warning lights, the dash mounted Whelen® photocell must sense diminished ambient light (approx. 50 LUX), the battery switch, the ignition switch, the emergency master switch, must be on, and the parking brake set.

The low power intensity mode will be reset when any of the above conditions are not met.

### **FRONT ZONE UPPER WARNING LIGHTS**

There will be one (1) 72.00" Whelen Freedom IV LED lightbar mounted on the cab roof.

The lightbar will include the following:

- One (1) red flashing LED module in the driver's side end position.
- One (1) red flashing LED module in the driver's side front corner position.
- One (1) white flashing LED module in the driver's side first front position.
- One (1) red flashing LED module in the driver's side second front position.
- One (1) red flashing LED module in the driver's side third front position.
- One (1) red flashing LED module in the driver's side fourth front position.
- Open in the driver's side fifth front position.
- Open in the driver's side sixth front position.
- Open in the passenger's side sixth front position.
- Open in the passenger's side fifth front position.
- One (1) red flashing LED module in the passenger's side fourth front position.
- One (1) red flashing LED module in the passenger's side third front position.
- One (1) red flashing LED module in the passenger's side second front position.
- One (1) white flashing LED module in the passenger's side first front position.
- One (1) red flashing LED module in the passenger's side front corner position.
- One (1) red flashing LED module in the passenger's side end position.

There will be clear lenses included on the lightbar.

The light bar will have the low intensity mode wires connected to the controlling circuit.

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

The white LEDs will be disabled when the parking brake is applied.

The six (6) red flashing LED modules in the front positions may be load managed when the parking brake is applied.

### **FRONT ZONE LOWER LIGHTS**

There will be two (2) Whelen, Model M6\*\*, flashing LED lights installed on the cab face above the headlights, in a common bezel with the directional lights.

- The driver's side front warning light to include red LEDs
- The passenger's side front warning light to include red LEDs
- The color of the lenses will be clear

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

Each light will have the low intensity mode wire connected to the controlling circuit.

### **DAYTIME RUNNING LIGHTS (HEADLIGHTS)**

The low-beam headlights used as daytime running lights will be activated with the following measures:

- Ignition switch is turned on
- Parking brake is released

These lights will be deactivated with any one of the following measures:

- Headlight switch is turned on
- High-beam flash is turned on
- Parking brake is set

### **HEADLIGHT FLASHER**

The high beam headlights will flash alternately between the left and right side.

There will be a switch installed in the cab on the switch panel to control the high beam flash. This switch will be live when the battery switch and the emergency master switches are on.

The flashing will automatically cancel when the hi-beam headlight switch is activated or when the parking brake is set.

### **SIDE ZONE LOWER LIGHTING LOW INTENSITY**

There will be six (6) Whelen®, Model M6\*\*, 4.31" high x 6.75" long x 1.37" deep flashing LED warning lights with chrome trim installed per the following:

- Two (2) lights located, one (1) each side on the bumper extension. The driver's side, side front light to include red warning LEDs and the passenger's side, side front light to include red warning LEDs.
- Two (2) lights located, one (1) each side above the front wheels. The driver's side, side middle light to include red warning LEDs and the passenger's side, side middle light to include red warning LEDs.
- Two (2) lights located, one (1) each side above rear wheels. The driver's side, side rear light to include red warning LEDs and the passenger's side, side rear light to include red warning LEDs.
- The warning light lens color(s) to be clear.

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

Each light will have the low intensity mode wire connected to the controlling circuit.

Any flashing white lights will be disabled when the parking brake is set.

### **SIDE WARNING LIGHTS**

There will be two (2) Whelen®, Model M6\* LED flashing warning light(s) with chrome trim provided behind crew cab door, each side of truck..

The color of the lights will be red.

The lens color(s) to be clear.

These lights will be activated with the Side Zone Lower warning lights.

The light(s) will have the low intensity mode wire connected to the controlling circuit.



### **SIDE WARNING LIGHTS LOW INTENSITY**

There will be two (2) Whelen®, Model M9\*\*, 6.50" high x 10.37" wide x 1.37" deep flashing LED warning light(s) with chrome trim provided front body upper corner, one each side of truck..

The light(s) to include red flashing LEDs and the warning light lens color(s) to be clear.

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

White LEDs will be deactivated when the parking brake is applied.

Amber, blue, green and red LEDs may be load managed when the parking brake is applied.

The light(s) will have the low intensity mode wire connected to the controlling circuit.

### **REAR ZONE LOWER LIGHTING**

There will be two (2) Whelen®, Model M9\* LED flashing warning lights with chrome trim located at the rear of the apparatus.

- The driver's side rear light to be red
- The passenger's side rear light to be red

The lens color(s) to be clear.

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

The light(s) will have the low intensity mode wire connected to the controlling circuit.

### **REAR BODY WARNING LIGHTS**

There will be two (2) Whelen®, Model M9\*\*, LED flashing warning light(s) with chrome trim provided each side high on rear compartment bulkheads.

The color of these light(s) will be red.

The lens color(s) to be clear.

These light(s) will be controlled with the rear upper warning switch.

The low intensity circuit will be connected to the low intensity control.

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

There will be four (4), Whelen®, Model M9\*\*C, 6.50" high x 10.37" wide x 1.37" deep flashing LED warning lights with chrome trim provided at the rear of the apparatus per the following:

- The side upper rear light on the left side to include red flashing LEDs.
- The rear upper light on the left side to include red flashing LEDs.
- The rear upper light on the right side to include red flashing LEDs.
- The side upper rear light on the right side to include red flashing LEDs.
- The warning light lens color(s) to be clear

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

Each light will have the low intensity mode wire connected to the controlling circuit.

### **120 VOLT RECEPTACLE**

There will be one (1), 15/20 amp 120 volt AC three (3) wire straight blade duplex receptacle(s) with interior stainless steel wall plate(s), installed upper rear wall of EMS Cabinet, centered next to 10 place 12v buss bar.. The NEMA configuration for the receptacle(s) will be 5-20R.

The receptacle(s) will be powered from the shoreline inlet.

There will be a label installed near the receptacle(s) that state the following:

- Line Voltage
- Current Rating (amps)
- Phase
- Frequency

### **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 5.9.3 and 5.9.4 will be provided by the fire department.

- 800 ft (60 m) of 2.50" (65 mm) or larger fire hose.
- 400 ft (120 m) of 1.50" (38 mm), 1.75" (45 mm), or 2.00" (52 mm) fire hose.
- One (1) handline nozzle, 200 gpm (750 L/min) minimum.
- Two (2) handline nozzles, 95 gpm (360 L/min) minimum.
- One (1) smoothbore or combination nozzle with 2.50" shutoff that flows a minimum of 250 gpm.
- One (1) SCBA complying with NFPA 1981 for each assigned seating position, but not fewer than four (4), 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.
- Four (4) combination spanner wrenches.
- Two (2) hydrant wrenches.
- One (1) double female 2.50" (65 mm) adapter with National Hose threads.
- One (1) double male 2.50" (65 mm) adapter with National Hose threads.
- One (1) rubber mallet, for use on suction hose connections.
- Two (2) salvage covers each a minimum size of 12 ft x 14 ft (3.7 m x 4.3 m).

- 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 (2) at the shoulders, two (2) at the sides, and one (1) at the front.
- Five (5) fluorescent orange traffic cones not less than 28.00" (711 mm) in height, each equipped with a 6.00" (152 mm) retro-reflective white band no more than 4.00" (152 mm) from the top of the cone, and an additional 4.00" (102 mm) retro-reflective white band 2.00" (51 mm) below the 6.00" (152 mm) band.
- Five (5) illuminated warning devices such as highway flares, unless the five (5) fluorescent orange traffic cones have illuminating capabilities.
- One (1) automatic external defibrillator (AED).
- Four (4) ladder belts meeting the requirements of NFPA 1983, *Standard on Fire Service Life Safety Rope and System Components* (if equipped with an aerial device).
- If the supply hose carried does not use sexless couplings, an additional double female adapter and double male adapter, sized to fit the supply hose carried, will be carried mounted in brackets fastened to the apparatus.
- If none of the pump intakes are valved, a hose appliance that is equipped with one or more gated intakes with female swivel connection(s) compatible with the supply hose used on one side and a swivel connection with pump intake threads on the other side will be carried. Any intake connection larger than 3.00" (75 mm) will include a pressure relief device that meets the requirements of 16.6.6.
- If the apparatus does not have a 2.50" National Hose (NH) intake, an adapter from 2.50" NH female to a pump intake will be carried, mounted in a bracket fastened to the apparatus if not already mounted directly to the intake.
- If the supply hose carried has other than 2.50" National Hose (NH) threads, adapters will be carried to allow feeding the supply hose from a 2.50" NH thread male discharge and to allow the hose to connect to a 2.50" NH female intake, mounted in brackets fastened to the apparatus if not already mounted directly to the discharge or intake.

#### **SOFT SUCTION HOSE PROVIDED BY FIRE DEPARTMENT**

CAN/ULC-S515, current edition, section 4.8.2 requires a minimum of 4.6 m (15 ft) of supply hose or 6.1 m (20 ft) of suction hose.

Hose is not on the apparatus as manufactured. The fire department will provide suction or supply hose.

#### **STRAINER PROVIDED BY FIRE DEPARTMENT**

NFPA 1901, 2016 edition, section 5.8.2.1.1 requires a suction strainer when suction hose is provided.

The strainer is not on the apparatus as manufactured. The fire department will provide the suction strainer.

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

NFPA 1901, 2016 edition, section 5.9.4 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 5.9.4 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.

### **FLATHEAD AXE PROVIDED BY FIRE DEPARTMENT**

NFPA 1901, 2016 edition, Section 5.9.4 requires one (1) flathead axe mounted in a bracket fastened to the apparatus.

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

### **PICKHEAD AXE PROVIDED BY FIRE DEPARTMENT**

NFPA 1901, 2016 edition, Section 5.9.4 requires one (1) pickhead axe mounted in a bracket fastened to the apparatus.

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

### **PAINT PROCESS**

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.
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 manufacturer.

After the cab and body are painted, the color will be verified to make sure that it matches the color standard. Electronic color measuring equipment will be used to compare the color sample to the color standard entered into the computer. Color specifications will be used to determine the color match. A Delta E reading will be 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 painted 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.

The paint finish quality levels for critical areas of the apparatus (cab front and sides, body sides and doors, and boom lettering panels) are to meet or exceed Cadillac/General Motors GMW15777 global paint requirements. Orange peel levels are to meet or exceed the #6 A.C.T. standard in critical areas. The manufacture's written paint standards will be available upon request.

### **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 percent 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 percent. Water wash systems will be 99.97 percent 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 recycled 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.

**TWO-TONE CAB PAINT**

The cab will be painted two-tone with the upper section painted #101 black and the lower section painted #90 red. There will be a standard two-tone cab paint break provided.

There will be a standard cab shield provided.

**BODY PAINT**

The body will be painted to match the lower section of the cab.

**PAINT CHASSIS FRAME ASSEMBLY**

The chassis frame assembly will be finished with primer and gloss black paint 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 are:

- Frame rails
- Frame liners
- 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
- Steel 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
- Two (2) frame liners

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

**AXLE HUB PAINT**

All axle hubs will be painted to match lower job color.

FILM TECHNICAL PROPERTIES		
PROPERTY	TEST METHOD	PERFORMANCE
Color	~	Black
Film Thickness	~	0.5 - 1.5 Mils
Gloss - 60 Degree	ASTM D523	65 - 85
Pencil Hardness	ASTM D3363	2H Minimum
Direct Impact	ASTM D2794	100 in. - lbs. Minimum
Reverse Impact	ASTM D2794	60 in. - lbs. Minimum
Crosshatch Adhesion	ASTM D3359	4B - 5B
Humidity	ASTM D1735	1000 Hours Minimum
Water Immersion	ASTM D870	250 Hours Minimum
Gravelometer	GM9508P	6 Minimum
Throwpower	GM9535P	12 - 15 in.
Cold rolled steel lab panels, Zinc Phosphate pretreatment, 0.6 mils average film thickness, cured 20 minutes @ 350°F.		
PROPERTY	SUBSTRATE PRETREATMENT	SALT SPRAY* 1000 HOURS
Corrosion Resistance	CRS / Zinc Phos / Non-Chrome	1 - 2 mm
*Salt Spray - ASTM B117, cold rolled steel lab panels cured 20 minutes @ 350°F. (Average Total Scribe Creep)		



### **COMPARTMENT INTERIOR PAINT**

The interior of all compartments will be painted with a gray spatter finish for ease of cleaning and to make it easier to touch up scratches and nicks.

### **REFLECTIVE STRIPES**

Three (3) reflective stripes will be provided across the front of the vehicle and along the sides of the body. The reflective band will consist of a 1.00" gold stripe at the top with a 1.00" gap then a 6.00" black stripe with a 1.00" gap and a 1.00" gold stripe on the bottom.

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. The rear surface, excluding the rear compartment door, will be covered.

The colors will be red and fluorescent yellow green 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.

### **FOLDED RIBBON IN REFLECTIVE STRIPE**

There will be one (1) folded type ribbon/s added to the reflective stripe front body compartment, each side of truck.

### **REFLECTIVE STRIPE OUTLINE**

A black outline will be applied on the top and the bottom of the reflective band. There will be two (2) set of outline stripes required.

### **CAB DOOR REFLECTIVE STRIPE**

A 6.00" x 16.00" fluorescent yellow green diamond grade 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.

### **UNDERCOATING, CAB & BODY**

The apparatus will be properly treated by an authorized Ziebart dealer.

The underside of the apparatus will be undercoated with an asphalt petroleum based material, dark in color.

The undercoating material utilized on the apparatus will be formulated to resist corrosion and deaden unwanted sound or road noise.

Coating texture will appear firm, flexible, and resistant to abrasion. Minimum dry film thickness will be in the range of 8.00 to 12.00 mils.

The material will be applied to the following areas:

- Body and cab wheel well fender liners, on the back side only.
- Underside of body and cab sheet metal, and structural components.
- Underside and vertical sides of all sheet metal compartmentation, including support angles.
- Structural support members under running boards, rear platforms, battery boxes, walkways, etc.
- Inside surfaces of the pump heat enclosure. (when installed)
- Suspension mounts.
- Transmission cooler fittings.
- Engine mounts.
- Bottom and outside of frameroils behind the forward edge of the water pump.

Exclusions will be:

- Engine
- Transmission
- Drive lines
- PTO's
- Schroeder valves and tank drains
- Intake valves
- Air Horns, sirens and back-up alarms
- Frameroils forward of the forward edge of the water pump.

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

There will be one (1) custom parts manual(s) in USB flash drive format for the complete fire apparatus provided.

The manual(s) 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

Each manual 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 Pierce 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**

There will be one (1) chassis service manuals on USB flash drives containing parts and service information on major components provided with the completed unit.

The manual 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 MANUAL**

The chassis operation manual will be provided on one (1) USB flash drive.

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

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

### **ENGINE WARRANTY**

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

**STEERING GEAR WARRANTY**

A Sheppard **three (3) 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 THREE (3) YEAR MATERIAL AND WORKMANSHIP WARRANTY**

The Pierce TAK-4 suspension limited warranty certificate, WA0050, is included with this proposal.

**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.

**FIVE (5) YEAR MATERIAL AND WORKMANSHIP**

The Pierce Command Zone electronics limited warranty certificate, WA0014, 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.

**WATER TANK WARRANTY**

A UPF poly water tank limited warranty certificate, WA0195, is included with this proposal.

**TEN (10) YEAR STRUCTURAL INTEGRITY**

The Pierce apparatus body limited warranty certificate, WA0009, is included with this proposal.

**ROLL UP DOOR MATERIAL AND WORKMANSHIP WARRANTY**

An AMDOR roll-up door limited warranty will be provided. The roll-up door will be warranted against manufacturing defects for a period of **ten (10) years**. A **five (5) year** limited warranty will be provided on painted roll up doors.

The limited warranty certificate, WA0185, is included with this proposal.

**PUMP WARRANTY**

The Waterous pump will be provided with a Seven (7) year material and workmanship limited warranty.

A copy of the warranty certificate will be submitted with the bid package (no exception).

**TEN (10) YEAR PUMP PLUMBING WARRANTY**

The Pierce apparatus plumbing limited warranty certificate, WA0035, is included with this proposal.

**FOAM SYSTEM WARRANTY**

The Husky 3 foam system limited warranty certificate, WA0231, 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 delivery.

**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.

#### **ELECTRIC WINDOW DURABILITY CERTIFICATION**

Cab window roll-up systems can cause maintenance problems if not designed for long service life. The window regulator design will complete 30,000 complete up-down cycles and still function normally when finished. The bidder will certify that sample doors and windows similar to those provided on the apparatus have been tested and have met these criteria without malfunction or significant component wear.

#### **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.

### **PERFORMANCE CERTIFICATIONS**

#### **Cab Air Conditioning**

Good cab air conditioning temperature and air flow performance keeps occupants comfortable, reduces humidity, and provides a climate for recuperation while at the scene. The cab air conditioning system will cool the cab from a heat-soaked condition at 100 degrees Fahrenheit to an average of 78 degrees Fahrenheit in 30 minutes. The bidder will certify that a substantially similar cab has been tested and has met these criteria.

#### **Cab Defroster**

Visibility during inclement weather is essential to safe apparatus performance. The defroster system will clear the required windshield zones in accordance with SAE J381 Windshield Defrosting Systems Test Procedure And Performance Requirements - Trucks, Buses, And Multipurpose Vehicles. The bidder will certify that the defrost system design has been tested in a cold chamber and passes the SAE J381 criteria.

#### **Cab Auxiliary Heater**

Good cab heat performance and regulation provides a more effective working environment for personnel, whether in-transit, or at a scene. An auxiliary cab heater will warm the cab 77 degrees Fahrenheit from a cold-soak, within 30 minutes when tested using the coolant supply methods found in SAE J381. The bidder will certify, at time of delivery, that a substantially similar cab has been tested and has met these 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).

## INTEROFFICE MEMORANDUM

To: Daron Hall, Tammy Nagel  
From: Kim Froman Community Development & Housing Director  
  
Date: July 3, 2023  
Subject: Creation of Ordinance NO. G-1349 Neighborhood Advisory Council

In conjunction with the City-wide clean-up efforts, the creation of the Neighborhood Advisory Council will help support these efforts and will also bring a voice from the citizens that live within these defined neighborhoods to City Staff and the Governing Body. The members of the Neighborhood Advisory Council, also referred to as the NAC, will be citizens with vested interest in their surrounding area who want to make improvements, create relationships with neighbors and support the needs of the defined neighborhood area. Members will be appointed by the Governing Body in the same manner as other City boards and those interested can apply by contacting the City Clerk.

Attached is a proposed neighborhood map that will help define neighborhood boundaries. This is for example only and is still a work in progress.

The creation of the NAC will not only help to support the City-wide clean-up efforts, but will also serve as a networking tool to connect neighbors throughout the City of Pittsburg, Kansas. There has been proven success in other cities that have adopted similar councils and we hope to see the same success with the Pittsburg Neighborhood Advisory Council.

Please place the attached Ordinance NO. G-1349 on the agenda for consideration at the July 11, 2023 Commission Meeting.

Contact me with any questions and thank you.

Kim Froman

Director of Community Development and Housing

(Summary published in The Morning Sun on July 14, 2023)

**ORDINANCE NO. G-1349**

**AN ORDINANCE** creating Article VII, Sections 62-166 through 62-171, in Chapter 62 of the Pittsburg City Code for the purpose of creating a Neighborhood Advisory Council, and determining the membership, duties and functions of said Neighborhood Advisory Council, also referred to as the NAC.

**WHEREAS**, the Governing Body is aware of the importance of vibrant and healthy neighborhoods to the quality of life in Pittsburg, Kansas;

**WHEREAS**, the Governing Body recognizes that citizens that live in neighborhoods have a better understanding of the particular area where they reside;

**WHEREAS**, the establishment of neighborhood boundaries within the city limits of the City of Pittsburg, Kansas is an initial step to creating the Neighborhood Advisory Council;

**WHEREAS**, the Governing Body recognizes that the creation of the Neighborhood Advisory Council will help support the city-wide clean up efforts and create a council of citizens that can access both public and private resources; and

**WHEREAS**, the Governing Body finds that a council comprised of neighborhood members providing leadership, support and information on neighborhood affairs and issues is a benefit to the neighborhoods of the City of Pittsburg, City Staff, Community Development and the Governing Body.

**BE IT ORDAINED BY THE GOVERNING BODY OF THE CITY OF PITTSBURG, KANSAS:**

Section 1. Article VII in Chapter 62 of the Pittsburg City Code is hereby created as follows:

**ARTICLE VII. NEIGHBORHOOD ADVISORY COUNCIL**

**Sec. 62-166. Creation; Membership, Terms.**

It is hereby declared to be in the best interests of the City to create a Neighborhood Advisory Council (NAC) to be composed of twelve (12) members representing all four (4) quadrants within the city limits of Pittsburg, Kansas. Equal membership from each of the four (4) quadrants is preferred, but not mandatory. The members of the NAC will be citizens with vested interest in their surrounding area who want to make improvements, create relationships with neighbors and support the needs of the defined neighborhood area. Members will be appointed by the Governing Body. Each member will be a real property owner or tenant who has been a citizen of the City of Pittsburg for more than one (1) year. Each member will serve a two (2) year term and will be eligible for reappointment for three (3) consecutive terms.

**Sec. 62-167. Election of Officers.**

The members of the NAC shall annually appoint one (1) member as Chairperson and another member as Vice-Chairperson, each of whom shall serve for one (1) year or until successors are appointed.

**Sec. 62-168. Ex-Officio Member; Secretary.**

The City Manager or his or her designee shall be an ex-officio member of the NAC and shall act as Secretary and keep notes, but shall not be entitled to vote on any matter considered by the NAC.

**Sec. 62-169. Filling of Vacancies; Removal; Quorum.**

Upon the expiration of the term of any member, the Governing Body shall either reappoint that member, or some other qualified individual to a two (2) year term of membership; provided, however, that no member shall serve more than three (3) consecutive terms. Any member may be removed by the Governing Body for failing to attend meetings of the NAC or for no longer meeting the criteria for membership. Should any member of the NAC resign, pass away, or be removed by the Governing Body, the Governing Body shall appoint some other qualified individual to serve the former member's unexpired term. Seven (7) members of the NAC shall constitute a quorum. An affirmative vote of the majority of a quorum shall be required for any action taken by the NAC.

**Sec. 62-170. Member Duties.**

The NAC shall act as a deliberative and review body representing the interests of the neighborhoods in Pittsburg, Kansas. The NAC shall serve as a primary vehicle for communication between the neighborhoods and the City of Pittsburg, Kansas. The mission of the NAC is to be the voice of all neighborhood members on public policy development to support healthy, safe and vibrant neighborhoods in the City of Pittsburg, Kansas. The NAC members may review and make recommendations on proposed City policies, programs and decision-making regarding the concerns and perceived impacts of decisions and policies upon neighborhoods.

The following are the primary responsibilities of the NAC:

- a) Education. Support current policy and provide consistent opportunity for education and resident involvement while also recruiting and retaining dedicated community members to help serve.
- b) Communication. Establish a network to connect residents and neighborhoods to address concerns and ideas and regularly communicate with elected officials and City staff.
- c) Coordination. Create opportunities to gather and build networking amongst neighbors and other neighborhoods throughout the City of Pittsburg, Kansas.
- d) Initiation. Research policy within the City of Pittsburg, Kansas and other communities to implement ideas that will create change and growth within the neighborhoods and recommend policy change when necessary.

**Sec. 62-171. Operational Processes; Meeting Frequency; Annual Report**

The NAC may adopt, define and amend its operational processes, in writing, and shall submit to the City Clerk. The NAC shall meet at least quarterly at a time and place as fixed by the chairperson. Special meetings may be called by the chairperson or, in his or her absence, the vice-chairperson. The City Manager or his or her designee may call a meeting if exigent circumstances require timely action by the council. The chairperson, without a formal meeting of the NAC and upon consulting with the other members, may provide a formal response of “No comment” if a response from the council is requested.

The NAC shall prepare an annual report in March of each year. The NAC Chairperson will present the annual report to the City Commission to review the accomplishments and goals of the NAC. Following such a review, if the Governing Body finds it is in the best interest of the City of Pittsburg, Kansas, the NAC may be dissolved by ordinance.

Section 2. This Ordinance shall take effect upon its passage and publication in the official city newspaper.

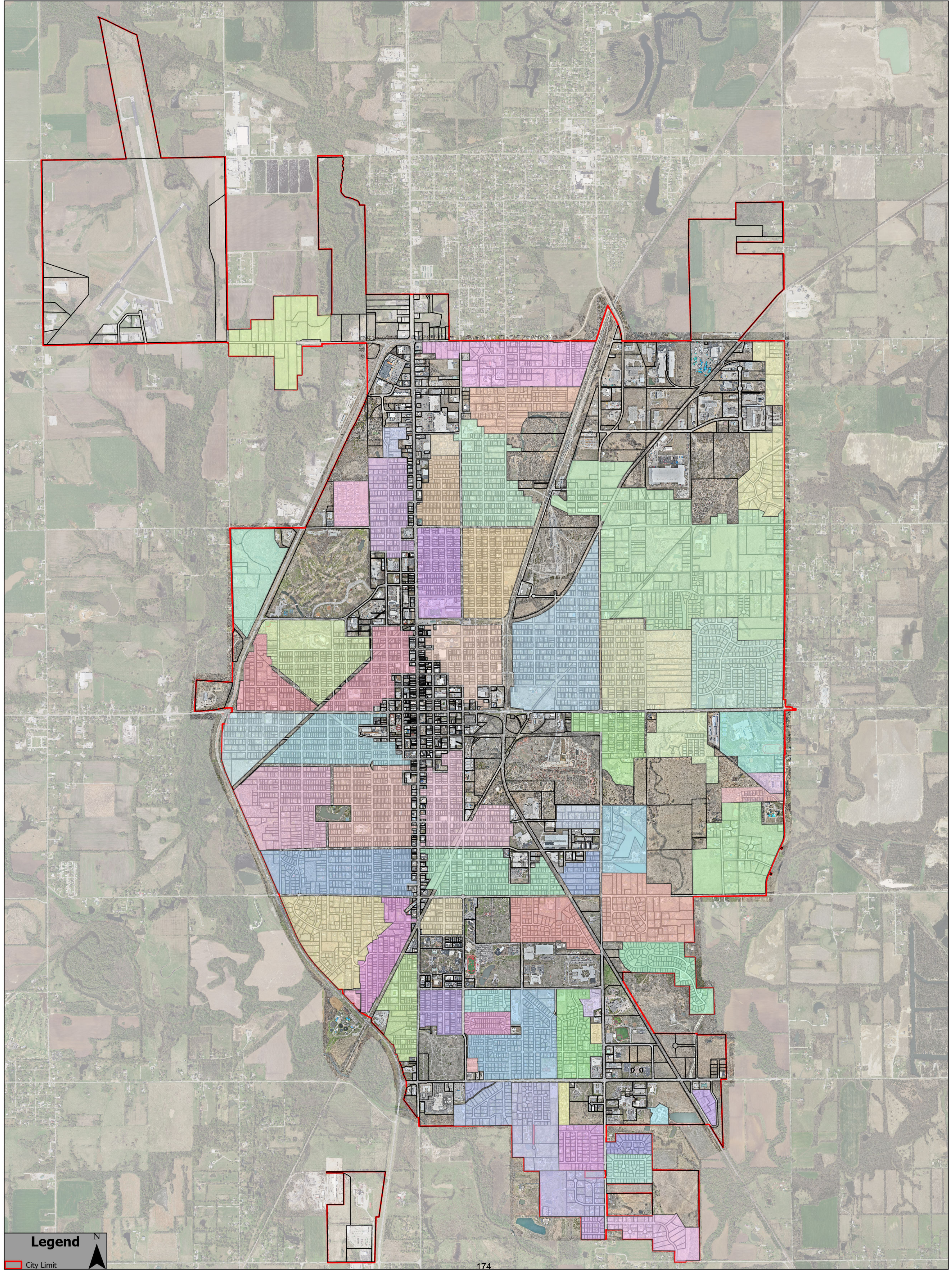
PASSED and APPROVED this \_\_\_\_ day of July, 2023.

\_\_\_\_\_  
Mayor, Ron Seglie, MD


ATTEST:

\_\_\_\_\_  
City Clerk





**Legend**

 City Limit

