STATE OF TEXAS §
§
COUNTY OF FORT BEND §

AGREEMENT FOR PURCHASE OF A HAZMAT COMMAND VEHICLE

RFP 19-043

THIS AGREEMENT is made and entered into by and between Fort Bend County, (hereinafter "County"), a body corporate and politic under the laws of the State of Texas, and Siddons-Martin Emergency Group, LLC, (hereinafter "Vendor") (hereinafter "Contractor"), a company authorized to conduct business in the State of Texas.

W I T N E S S E T H

WHEREAS, County desires to purchase a Hazmat Command Vehicle from Contractor pursuant to RFP 19-043; and

WHEREAS, County has received funding assistance from the Department of Homeland Security, Grant No. 2971004 for these Services; and

WHEREAS, Contractor represents that it is qualified and desires to perform such services.

NOW, THEREFORE, in consideration of the mutual covenants and conditions set forth below, the parties agree as follows:

AGREEMENT

Section 1. Scope of Services

Contractor shall render Services to County as defined in the Scope of Services (attached hereto as Exhibit A, which includes the Proposal Letter for Hazmat Command, dated April 24, 2019, the Proposal prepared by Cory Frankum for Vendor dated April 24, 2019; the updated specifications drawing, and the updated Proposal Option List).

Section 2. Personnel and Equipment

2.1 Contractor represents that it presently has, or is able to obtain, adequate qualified personnel in its employment for the timely performance of the Scope of Services required under this Agreement and that Contractor shall furnish and maintain, at its own expense, adequate and sufficient personnel, in the opinion of County, to perform the Scope of Services when and as required and without delays.

2.2 All employees of Contractor shall have such knowledge and experience as will enable them to perform the duties assigned to them. Any employee of Contractor who, in the

opinion of County, is incompetent or by his conduct becomes detrimental to the project shall, upon request of County, immediately be removed from association with the project.

2.3 Contractor shall provide all equipment, tools, materials, and other items necessary to perform the services as described herein.

Section 3. Compensation and Payment

3.1 Contractor's fees shall be calculated at the rates set forth in the attached Exhibit A. The Maximum Compensation for the performance of Services within the Scope of Services described in Exhibit A is eight hundred ninety-nine thousand eight hundred seventy-one dollars and no/100 ($899,871.00). In no case shall the amount paid by County under this Agreement exceed the Maximum Compensation without an approved change order.

3.2 All performance of the Scope of Services by Contractor including any changes in the Scope of Services and revision of work satisfactorily performed will be performed only when approved in advance and authorized by County.

3.3 County will pay Contractor based on the following procedures: Upon completion of the tasks identified in the Scope of Services, Contractor shall submit to County two (2) original copies of invoices showing the amounts due for services performed in a form acceptable to County. County shall review such invoices and approve them within 14 calendar days with such modifications as are consistent with this Agreement and forward same to the Auditor for processing. County shall pay each such approved invoice within fourteen (14) calendar days. County reserves the right to withhold payment pending verification of satisfactory work performed.

Section 4. Limit of Appropriation

4.1 Contractor clearly understands and agrees, such understanding and agreement being of the absolute essence of this Agreement, that County shall have available the total maximum sum of eight hundred ninety-nine thousand eight hundred seventy-one dollars and no/100 ($899,871.00), specifically allocated to fully discharge any and all liabilities County may incur.

4.2 Contractor does further understand and agree, said understanding and agreement also being of the absolute essence of this Agreement, that the total maximum compensation that Contractor may become entitled to and the total maximum sum that County may become liable to pay to Contractor shall not under any conditions, circumstances, or interpretations thereof exceed eight hundred ninety-nine thousand eight hundred seventy-one dollars and no/100 ($899,871.00).

4.3 It is specifically understood and agreed that in the event no funds or insufficient funds are appropriated by Fort Bend County under this Agreement, Fort Bend County shall notify all necessary parties that this Agreement shall thereafter terminate and be null and void on the last day of the fiscal period for which appropriations were made without penalty, liability or expense to Fort Bend County.

Section 5. Time of Performance

The time for performance of the Scope of Services by Contractor shall begin with receipt of the Notice to Proceed from County and end no later than June 30, 2020. Contractor shall complete the tasks described in the Scope of Services within this time or within such additional time as may be extended by the County.

Section 6. Modifications and Waivers

6.1 The parties may not amend or waive this Agreement, except by a written agreement executed by both parties.

6.2 No failure or delay in exercising any right or remedy or requiring the satisfaction of any condition under this Agreement, and no course of dealing between the parties, operates as a waiver or estoppel of any right, remedy, or condition.

6.3 The rights and remedies of the parties set forth in this Agreement are not exclusive of, but are cumulative to, any rights or remedies now or subsequently existing at law, in equity, or by statute.

Section 7. Termination

7.1 Termination for Convenience

7.1.1 County may terminate this Agreement at any time upon thirty (30) days written notice.

7.2 Termination for Default

7.2.1 County may terminate the whole or any part of this Agreement for cause in the following circumstances:

7.2.1.1 If Contractor fails to perform services within the time specified in the Scope of Services or any extension thereof granted by the County in writing;

7.2.1.2 If Contractor materially breaches any of the covenants or terms and conditions set forth in this Agreement or fails to perform any of the other provisions of this Agreement or so fails to make progress as to endanger performance of this Agreement in accordance with its terms, and in any of these circumstances does not cure such breach or failure to County's reasonable satisfaction within a period of ten (10) calendar days after receipt of notice from County specifying such breach or failure.

7.2.2 If, after termination, it is determined for any reason whatsoever that Contractor was not in default, or that the default was excusable, the rights and obligations of the parties shall be the same as if the termination had been issued for the convenience of the County in accordance with Section 7.1 above.

7.3 Upon termination of this Agreement, County shall compensate Contractor for cancellation fees as outlined in the Proposal Letter for Hazmat Command, dated April 24, 2019, attached here as Exhibit A). Contractor's final invoice for said services will be presented to and paid by County in the same manner set forth in Section 3 above.

7.4 If County terminates this Agreement as provided in this Section, no fees of any type, other than fees due and payable at the Termination Date, shall thereafter be paid to Contractor.

7.5 Notwithstanding language to the contrary found in the Contractor's Proposal attached to this Agreement as Exhibit A, Contractor shall furnish a Performance and Payment bond (Bond) equal to one hundred percent (100%) of the total contract amount upon full execution of this Agreement. Such Bond will be in a form acceptable to the County 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.

7.6 Contractor'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. County 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.

Section 8. Ownership and Reuse of Documents

All documents, data, reports, research, graphic presentation materials, etc., developed by Contractor as a part of its work under this Agreement, shall become the property of County upon completion of this Agreement, or in the event of termination or cancellation thereof, at the time of payment under Section 3 for work performed. Contractor shall promptly furnish all such data and material to County on request.

Section 9. Inspection of Books and Records

Contractor will permit County, or any duly authorized agent of County, to inspect and examine the books and records of Contractor for the purpose of verifying the amount of work performed under the Scope of Services. County's right to inspect survives the termination of this Agreement for a period of four years.

Section 10. Insurance

10.1 Prior to commencement of the Services, Contractor shall furnish County with properly executed certificates of insurance which shall evidence all insurance required and provide that such insurance shall not be canceled, except on thirty (30) days' prior written notice

to County. Contractor shall provide certified copies of insurance endorsements and/or policies if requested by County. Contractor shall maintain such insurance coverage from the time Services commence until Services are completed and provide replacement certificates, policies and/or endorsements for any such insurance expiring prior to completion of Services. Contractor shall obtain such insurance written on an Occurrence form from such companies having Bests rating of A/VII or better, licensed or approved to transact business in the State of Texas, and shall obtain such insurance of the types listed at the minimum limits as described in Exhibit A.

10.2 County and the members of Commissioners Court shall be named as additional insured to all required coverage except for Workers' Compensation. All Liability policies including Workers' Compensation written on behalf of Contractor shall contain a waiver of subrogation in favor of County and members of Commissioners Court.

10.3 If required coverage is written on a claims-made basis, Contractor warrants that any retroactive date applicable to coverage under the policy precedes the effective date of the contract; and that continuous coverage will be maintained or an extended discovery period will be exercised for a period of 2 years beginning from the time that work under the Agreement is completed.

Section 11. Indemnity

CONTRACTOR SHALL INDEMNIFY AND DEFEND COUNTY AGAINST ALL LOSSES, LIABILITIES, CLAIMS, CAUSES OF ACTION, AND OTHER EXPENSES, INCLUDING REASONABLE ATTORNEYS FEES, ARISING FROM ACTIVITIES OF CONTRACTOR, ITS AGENTS, SERVANTS OR EMPLOYEES, PERFORMED UNDER THIS AGREEMENT THAT RESULT FROM THE NEGLIGENT ACT, ERROR, OR OMISSION OF CONTRACTOR OR ANY OF CONTRACTOR'S AGENTS, SERVANTS OR EMPLOYEES.

Section 12. Confidential and Proprietary Information

12.1 Contractor acknowledges that it and its employees or agents may, in the course of performing their responsibilities under this Agreement, be exposed to or acquire information that is confidential to County. Any and all information of any form obtained by Contractor or its employees or agents from County in the performance of this Agreement shall be deemed to be confidential information of County ("Confidential Information"). Any reports or other documents or items (including software) that result from the use of the Confidential Information by Contractor shall be treated with respect to confidentiality in the same manner as the Confidential Information. Confidential Information shall be deemed not to include information that (a) is or becomes (other than by disclosure by Contractor) publicly known or is contained in a publicly available document; (b) is rightfully in Contractor's possession without the obligation of nondisclosure prior to the time of its disclosure under this Agreement; or (c) is independently developed by employees or agents of Contractor who can be shown to have had no access to the Confidential Information.

12.2 Contractor agrees to hold Confidential Information in strict confidence, using at least the same degree of care that Contractor uses in maintaining the confidentiality of its

own confidential information, and not to copy, reproduce, sell, assign, license, market, transfer or otherwise dispose of, give, or disclose Confidential Information to third parties or use Confidential Information for any purposes whatsoever other than the provision of Services to County hereunder, and to advise each of its employees and agents of their obligations to keep Confidential Information confidential. Contractor shall use its best efforts to assist County in identifying and preventing any unauthorized use or disclosure of any Confidential Information. Without limitation of the foregoing, Contractor shall advise County immediately in the event Contractor learns or has reason to believe that any person who has had access to Confidential Information has violated or intends to violate the terms of this Agreement and Contractor will at its expense cooperate with County in seeking injunctive or other equitable relief in the name of County or Contractor against any such person. Contractor agrees that, except as directed by County, Contractor will not at any time during or after the term of this Agreement disclose, directly or indirectly, any Confidential Information to any person, and that upon termination of this Agreement or at County's request, Contractor will promptly turn over to County all documents, papers, and other matter in Contractor's possession which embody Confidential Information.

12.3 Contractor acknowledges that a breach of this Section, including disclosure of any Confidential Information, or disclosure of other information that, at law or in equity, ought to remain confidential, will give rise to irreparable injury to County that is inadequately compensable in damages. Accordingly, County may seek and obtain injunctive relief against the breach or threatened breach of the foregoing undertakings, in addition to any other legal remedies that may be available. Contractor acknowledges and agrees that the covenants contained herein are necessary for the protection of the legitimate business interest of County and are reasonable in scope and content.

12.4 Contractor in providing all services hereunder agrees to abide by the provisions of any applicable Federal or State Data Privacy Act.

12.5 Contractor expressly acknowledges that County is subject to the Texas Public Information Act, TEX. GOV'T CODE ANN. §§ 552.001 *et seq.*, as amended, and notwithstanding any provision in the Agreement to the contrary, County will make any information related to the Agreement, or otherwise, available to third parties in accordance with the Texas Public Information Act. Any proprietary or confidential information marked as such provided to County by Contractor shall not be disclosed to any third party, except as directed by the Texas Attorney General in response to a request for such under the Texas Public Information Act, which provides for notice to the owner of such marked information and the opportunity for the owner of such information to notify the Attorney General of the reasons why such information should not be disclosed. The terms and conditions of the Agreement are not proprietary or confidential information.

Section 13. Independent Contractor

13.1 In the performance of work or services hereunder, Contractor shall be deemed an independent contractor, and any of its agents, employees, officers, or volunteers performing work required hereunder shall be deemed solely as employees of contractor or, where permitted, of its subcontractors.

13.2 Contractor and its agents, employees, officers, or volunteers shall not, by performing work pursuant to this Agreement, be deemed to be employees, agents, or servants of County and shall not be entitled to any of the privileges or benefits of County employment.

Section 14. Notices

14.1 Each party giving any notice or making any request, demand, or other communication (each, a "Notice") pursuant to this Agreement shall do so in writing and shall use one of the following methods of delivery, each of which, for purposes of this Agreement, is a writing: personal delivery, registered or certified mail (in each case, return receipt requested and postage prepaid), or nationally recognized overnight courier (with all fees prepaid).

14.2 Each party giving a Notice shall address the Notice to the receiving party at the address listed below or to another address designated by a party in a Notice pursuant to this Section:

County:	Doug Barnes, Deputy Chief Fort Bend County Fire Marshal's Office 1520 Eugene Heimann Circle #114, Richmond, TX
With a copy to:	Fort Bend County Attn: County Judge 401 Jackson Street Richmond, Texas 77469
Contractor:	Siddons-Martin Emergency Group ATTN: Cory Frankum 1362 E. Richey Rd. Houston, Texas 77073

14.3 A Notice is effective only if the party giving or making the Notice has complied with subsections 14.1 and 14.2 and if the addressee has received the Notice. A Notice is deemed received as follows:

14.3.1 If the Notice is delivered in person, or sent by registered or certified mail or a nationally recognized overnight courier, upon receipt as indicated by the date on the signed receipt.

14.3.2 If the addressee rejects or otherwise refuses to accept the Notice, or if the Notice cannot be delivered because of a change in address for which no Notice was given, then upon the rejection, refusal, or inability to deliver.

Section 15. Compliance with Laws

Contractor shall comply with all federal, state, and local laws, statutes, ordinances, rules and regulations, and the orders and decrees of any courts or administrative bodies or tribunals in any matter affecting the performance of this Agreement, including, without limitation, Worker's Compensation laws, minimum and maximum salary and wage statutes and regulations, licensing

laws and regulations. When required by County, Contractor shall furnish County with certification of compliance with said laws, statutes, ordinances, rules, regulations, orders, and decrees above specified.

Section 16. Performance Warranty

16.1 Contractor warrants to County that Contractor has the skill and knowledge ordinarily possessed by well-informed members of its trade or profession practicing in the greater Houston metropolitan area and Contractor will apply that skill and knowledge with care and diligence to ensure that the Services provided hereunder will be performed and delivered in accordance with the highest professional standards.

16.2 Contractor warrants to County that the Services will be free from material errors and will materially conform to all requirements and specifications contained in the attached Exhibit A.

Section 17. Assignment and Delegation

17.1 Neither party may assign any of its rights under this Agreement, except with the prior written consent of the other party. That party shall not unreasonably withhold its consent. All assignments of rights are prohibited under this subsection, whether they are voluntarily or involuntarily, by merger, consolidation, dissolution, operation of law, or any other manner.

17.2 Neither party may delegate any performance under this Agreement.

17.3 Any purported assignment of rights or delegation of performance in violation of this Section is void.

Section 18. Applicable Law

The laws of the State of Texas govern all disputes arising out of or relating to this Agreement. The parties hereto acknowledge that venue is proper in Fort Bend County, Texas, for all legal actions or proceedings arising out of or relating to this Agreement and waive the right to sue or be sued elsewhere. Nothing in the Agreement shall be construed to waive the County's sovereign immunity.

Section 19. Successors and Assigns

County and Contractor bind themselves and their successors, executors, administrators and assigns to the other party of this Agreement and to the successors, executors, administrators and assigns of the other party, in respect to all covenants of this Agreement.

Section 20. Third Party Beneficiaries

This Agreement does not confer any enforceable rights or remedies upon any person other than the parties.

Section 21. Severability

If any provision of this Agreement is determined to be invalid, illegal, or unenforceable, the remaining provisions remain in full force, if the essential terms and conditions of this Agreement for each party remain valid, binding, and enforceable.

Section 22. Publicity

Contact with citizens of Fort Bend County, media outlets, or governmental agencies shall be the sole responsibility of County. Under no circumstances whatsoever, shall Contractor release any material or information developed or received in the performance of the Services hereunder without the express written permission of County, except where required to do so by law.

Section 23. Captions

The section captions used in this Agreement are for convenience of reference only and do not affect the interpretation or construction of this Agreement.

Section 24. Conflict

If there is a conflict between this Agreement and any attached item, the provisions of this Agreement shall prevail.

Section 25. Certain State Law Requirements for Contracts:

The contents of this Section are required by Texas Law and are included by County regardless of content.

25.1 Agreement to Not Boycott Israel Chapter 2270 Texas Government Code: By signature below, Contractor verifies Contractor does not boycott Israel and will not boycott Israel during the term of this Agreement.

25.2 Texas Government Code Section 2251.152 Acknowledgment: By signature below, Contractor represents pursuant to Section 2252.152 of the Texas Government Code, that Contractor is not listed on the website of the Comptroller of the State of Texas concerning the listing of companies that are identified under Section 806.051, Section 807.051 or Section 2253.153

Section 26. Federal Clauses

The Vendor understands and agrees that because federal assistance is being used and because those funds are being passed through a state agency to purchase the item(s) listed in Exhibit A, the Vendor must abide by the following federal and state requirements:

26.1 ADA Access. The Contractor agrees to comply with all applicable provisions of section 504 of the Rehabilitation Act of 1973, as amended, with 29 U.S.C. § 794, which prohibits

discrimination on the basis of disability; with the Americans with Disabilities Act of 1990 (ADA), as amended, 42 U.S.C. §§ 12101 et seq., which requires that accessible facilities and services be made available to individuals with disabilities; and with the Architectural Barriers Act of 1968, as amended, 42 U.S.C. §§ 4151 et seq., which requires that buildings and public accommodations be accessible to individuals with disabilities, and any subsequent amendments to these laws; (4) U.S. DOJ regulations, "Nondiscrimination on the Basis of Disability in State and Local Government Services," 28 C.F.R. Part 35; (5) U.S. DOJ regulations, "Nondiscrimination on the Basis of Disability by Public Accommodations and in Commercial Facilities," 28 C.F.R. Part 36; (6) U.S. General Services Administration (U.S. GSA) regulations, "Accommodations for the Physically Handicapped," 41 C.F.R. Subpart 101-19; (7) U.S. EEOC, "Regulations to Implement the Equal Employment Provisions of the Americans with Disabilities Act," 29 C.F.R. Part 1630;

26.2 Child Support. Per Texas Family Code 231.006, a child support obligor or business entity remains ineligible to receive payments from state funds under a contract to provide property, materials, or services; or a state funded loan until: (1) All arrearages have been paid; (2) the obligor is in compliance with a written repayment agreement or court order as to any existing delinquency; or (3) the court of continuing jurisdiction over the child support order has granted the obligor an exemption from ineligibility as part of a court-supervised effort to improve earnings and child support payments.

Before payment can be released Contractor will supply County with the name and social security number of the individual or sole proprietor and each partner, shareholder, or owner with an ownership interest of at least 25 percent of the business entity.

Under Section 231.006, Family Code, the Contractor certifies that the individual or business entity named in this contract, bid, or application is not ineligible to receive the specified grant, loan, or payment and acknowledges that this contract may be terminated and payment may be withheld if this certification is inaccurate.

26.3 Civil Rights/Nondiscrimination Requirements. Nondiscrimination Contractor will comply, with the nondiscrimination requirements which may include the Civil Rights Act of 1964 (42 USC § 2000d); the Civil Rights Act of 1968 (42 USC § 3601 et seq.); the Rehabilitation Act of 1973 (29 USC § 794); the Americans With Disabilities Act (ADA) of 1990 (42 USC § 12131-34); the Education Amendments of 1972 (USC §§ 1681, 1683, 1685-86); Title IX of the Education Amendments of 1972 (Equal Employment in Education Act) (20 USC § 1681 et seq.); the Age Discrimination Act of 1975 (42 USC §§ 6101-07); Titles I, II and III of the Americans with Disabilities Act; the Drug Abuse and Treatment Act of 1972 (PL 92-255); the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment, and Rehabilitation Act of 1970 (PL 91-616); Sections 523 and 527 of the Public Health Service Act of 1912 (42 USC §§ 290dd-3 and 290ee-3); and 28 CFR 38 (Equal Treatment for Faith-Based Organizations); see Ex. Order 13279 (equal protection of the laws for faith-based and community organizations) and Ex. Order 13559 (fundamental principles and policymaking criteria for partnerships with faith-based and neighborhood organizations).

More specifically, Contractor will comply with:

26.3.1 *Civil Rights Act of 1964*
Contractor must comply with the requirements of Title VI of the Civil Rights Act of 1964 (42 U.S.C. Section 2000d et seq.), which provides that no person in the United States will, on the g r o u n d s of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance. DHS implementing regulations for the Act are found at 6 C.F.R. Part 21 and 44 C.F.R. Part 7.

26.3.2 *Limited English Proficiency*
Contractor must comply with the Title VI of the Civil Rights Act of 1964 (42 U.S.C. Section 2000d et seq.) prohibition against discrimination on the basis of national origin, which requires that recipients of federal financial assistance take reasonable steps to provide meaningful access to persons with limited English proficiency (LEP) to their programs and services. For additional assistance and information regarding language access obligations, please refer to the DHS Recipient Guidance
https:// www.dhs.gov/guidance-published-help-department-supported-organizations-provide- meaningful- access-people-limited and additional resources on http://www.lep.gov.

26.3.3 *Civil Rights Act of 1968*
Contractor must comply with Title VIII of the Civil Rights Act of 1968, which prohibits recipients from discriminating in the sale, rental, financing, and advertising of dwellings, or in the provision of services in connection therewith, on the basis of race, color, national origin, religion, disability, familial status, and sex (See 42 U.S.C. Section 3601 et seq.), as implemented by the Department of Housing and Urban Development at 24 C.F.R. Part 100. The prohibition on disability discrimination includes the requirement that new multifamily housing with four or more dwelling units- i.e., the public and common use areas and individual apartment units (all units in buildings with elevators and ground-floor units in buildings without elevators)-be designed and constructed with certain accessible features. (See 24 C.F.R. Section 100.201.)

26.3.4 *Rehabilitation Act of 1973*
Contractor must comply with the requirements of Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. Section 794), as amended, which provides that no otherwise qualified handicapped individuals in the United States will, solely by reason of the handicap, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance.

26.3.5 *Education Amendments of 1972*
Contractor must comply with the requirements of Title IX of the Education Amendments of 1972 (20 U.S.C. Section 1681 et seq.), which provide that no person in the United States will, on the basis of sex, be excluded from participation in, be denied

the benefits of, or be subjected to discrimination under any educational program or activity receiving federal financial assistance. DHS implementing regulations are codified at 6 C.F.R. Part 17 and 44 C.F.R. Part 19.

26.3.6 *Americans with Disabilities Act of 1990*
Contractor must comply with the requirements of Titles I, II, and III of the Americans with Disabilities Act, which prohibits recipients from discriminating on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities. (42 U.S.C. Sections 12101- 12213).

26.3.7 *Age Discrimination Act of 1975*
Contractor must comply with the requirements of the Age Discrimination Act of 1975 (Title 42 U.S. Code, Section 6101 et seq.), which prohibits discrimination on the basis of age in any program or activity receiving federal financial assistance.

26.3.8 *Nondiscrimination in Matters Pertaining to Faith-Based Organizations*
It is DHS policy to ensure the equal treatment of faith-based organizations in social service programs administered or supported by DHS or its component agencies, enabling those organizations to participate in providing important social services to beneficiaries. Contractor must comply with the equal treatment policies and requirements contained in 6 C.F.R. Part 19 and other applicable statutes, regulations, and guidance governing the participations of faith-based organizations in individual DHS programs.

26.4 Clean Air. The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. §§ 7401 et seq . The Contractor agrees to report each violation to the County and understands and agrees that the County will, in turn, report each violation as required to assure notification to Office of the Governor and U.S. Department of Homeland Security and the appropriate EPA Regional Office. The Contractor agrees it will not use any violating facilities. It will report the use of facilities placed on or likely to be placed on the U.S. EPA "List of Violating Facilities". It will report violations of use of prohibited facilities to the Office of the Governor and U.S. Department of Homeland Security.

The Contractor also agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with Federal assistance provided by the Office of the Governor and U.S. Department of Homeland Security.

26.5 Clean Water. The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq. The Contractor agrees to report each violation to the County and understands and agrees that the County will, in turn, report each violation as required to assure notification to the Office of the Governor and U.S. Department of Homeland Security and the appropriate EPA Regional Office. The Contractor agrees it will not use any violating facilities. It will report the

use of facilities placed on or likely to be placed on the U.S. EPA "List of Violating Facilities". It will report violations of use of prohibited facilities to the Office of the Governor and U.S. Department of Homeland Security.

The Contractor also agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with Federal assistance provided by the Office of the Governor and U.S. Department of Homeland Security.

26.6 Cooperation with Monitoring, Audits and Records Requirements. The Contractor agrees to cooperate with the Office of the Governor and any relevant federal agency generally, including on any compliance review or complaint investigation conducted by the Federal sponsoring agency or the Office of the Governor and on all grant monitoring requests, including requests related to desk reviews, enhanced programmatic desk reviews, and/or site visits.

The Contractor shall maintain adequate records that enable the Office of the Governor and any relevant federal agency to complete monitoring tasks, including verifying all reporting measures, requests for reimbursements, and expenditure of match funds related to this Grant Agreement. The Contractor shall maintain such records as are deemed necessary by the Office of the Governor, the State Auditor's Office, other auditors of the State of Texas, the federal government or such other persons or entities designated or authorized by the Office of the Governor to ensure proper accounting for all costs and performances related to this Grant Agreement.

The Office of the Governor may request documented proof of payment. Acceptable proof of payment includes, but is not necessarily limited to, a receipt or other documentation of a paid invoice, a general ledger detailing the specific revenue and expenditures, a monthly bank statement evidencing payment of the specific expenditure, bank reconciliation detail, copies of processed checks, or a printed copy of an electronic payment confirmation evidencing payment of the specific expenditure to which the reimbursement relates.

The Contractor authorizes DHS, the Office of the Governor, the Texas State Auditor's Office, the Comptroller General of the United States, and any relevant federal agency, and their representatives, the right to audit, examine, and copy all paper and electronic records, books, documents, accounting procedures, practices, and any other requested records, in any form; relevant to this Agreement and will make them readily available upon request. The Contractor will similarly permit access to facilities, personnel, and other individuals and information as may be necessary.

If requested, the Contractor shall submit to the Office of the Governor a copy of its most recent independent financial audit, any audited financial statements, related management letters and management responses of Contractor, and financial audit documents or portions thereof that are directly related to the Contractor's performance of its obligations under this Agreement.

The Office of the Governor may make unannounced monitoring visits at any time but will, whenever practical as determined at the sole discretion of the Office of the Governor, provide the Contractor with up to five (5) business days advance notice of any such examination

or audit. Any audit of records shall be conducted at the Contractor's principal place of business and/or the location(s) of the Contractor's operations during the Contractor's normal business hours. The Contractor shall provide to the Office of the Governor or its designees, on the Contractor's premises, private space, office furnishings (including lockable cabinets), telephone services and Internet connectivity, utilities, and office-related equipment and duplicating services as the Office of the Governor or its designees may reasonably require performing the audits described in this section.

In addition to the information contained in the required reports, other information may be required as requested by the Office of the Governor, including the Office of the Governor asking for more information regarding project performance or funds expenditures. In the event the Office of the Governor requires additional information regarding the information or data submitted, the Contractor will promptly provide the additional information. The Contractor also agrees to assist the Office of the Governor in responding to questions and assisting in providing information responsive to any audit, legislative request, or other inquiry regarding the grant award. Upon the request of the Office of the Governor, the Contractor must submit to the Office of the Governor any additional documentation or explanation the Office of the Governor may desire to support or document the requested payment or report submitted under this Agreement.

If after a written request by the Office of the Governor or a relevant federal agency, the Contractor fails to provide required reports, information, documentation, or other information within reasonable deadlines set by the Office of the Governor or the relevant federal agency, as required by this Agreement, or fails to fulfil any requirement in this section, then the Office of the Governor may consider this act a possible default under this Agreement, and the Contractor may be subject to sanctions including but not limited to, withholdings and/or other restrictions on the access to funds; referral to relevant agencies for audit review; designation of the Contractor as a high-risk Contractor; or termination of awards.

26.7 Debt to State. The State shall not be responsible for any debts associated with this Agreement.

26.8 DHS Specific Acknowledgements and Assurances. All Contractors, successors, transferees, and assignees must acknowledge and agree to comply with applicable provisions governing DHS access to records, accounts, documents, information, facilities, and staff.

26.8.1 Contractor must cooperate with any compliance reviews or compliance investigations conducted by DHS.

26.8.2 Contractor must give DHS access to, and the right to examine and copy, records, accounts, and other documents and sources of information related to the federal financial assistance award and permit access to facilities, personnel, and other individuals and information as may be necessary, as required by DHS regulations and other applicable laws or program guidance.

26.8.3 Contractor must submit timely, complete, and accurate reports to the appropriate DHS officials and maintain appropriate backup documentation to support the reports.

26.8.4 Contractor must comply with all other special reporting, data collection, and evaluation requirements, as prescribed by law or detailed in program guidance.

26.8.5 If, during the past three years, Contractor has been accused of discrimination on the grounds of race, color, national origin (including limited English proficiency (LEP)), sex, age, disability, religion, or familial status, recipients must provide a list of all such proceedings, pending or completed, including outcome and copies of settlement agreements to the DHS FAO and the DHS Office of Civil Rights and Civil Liberties (CRCL) by e-mail at crcl@hq.dhs.gov or by mail at U.S. Department of Homeland Security Office for Civil Rights and Civil Liberties Building 410, Mail Stop #0190 Washington, D.C. 20528.

26.8.6 In the event courts or administrative agencies make a finding of discrimination on grounds of race, color, national origin (including LEP), sex, age, disability, religion, or familial status against the Contractor or Contractor settles a case or matter alleging such discrimination, Contractor is obligated to share this information with the County. The County is required to then forward a copy of the complaint and findings to the DHS FAO and the CRCL office by e-mail or mail at the addresses listed above.

The United States has the right to seek judicial enforcement of these obligations.

26.9 Disputes and Resolutions. The parties shall attempt in good faith to resolve promptly any dispute arising out of or relating to the Agreement by negotiation between the parties. Disputes arising in the performance of this Agreement that are not resolved by agreement of the parties shall be decided in writing by the authorized representative of the County. This decision shall be final and conclusive unless within ten [10] days from the date of receipt of its copy, the Contractor mails or otherwise furnishes a written appeal to the County. In connection with any such appeal, the Contractor shall be afforded an opportunity to be heard and to offer evidence in support of its position. The decision of the County shall be binding upon the Contractor and the Contractor shall abide be the decision.

26.10 Energy Policy and Conservation Act. The Contractor must comply with the requirements of The Energy Policy and Conservation Act (42 U.S.C. Section 6201) which contain policies relating to energy efficiency that are defined in the state energy conservation plan issued in compliance with this Act.

26.11 Examination of Records. The Contractor agrees to provide County, the Office of the Governor and U.S. Department of Homeland Security, the Comptroller General of the United States or any of their authorized representatives access to any books, documents, papers and records of the Contractor which are directly pertinent to the Agreement for the purposes of making audits, examinations, excerpts and transcriptions. The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.

The Contractor agrees to comply and will require all subcontractors of any tier to comply with the record retention requirements in accordance with 2 C.F.R. 200.333. The Contractor agrees to retain, and will require its subcontractors of all tiers to retain, complete and readily accessible records related in whole or in part to the contract, including, but not limited to, all books, records, accounts, statistics, leases, subcontracts, arrangements other third party

arrangements of any type, reports, and supporting materials related to those records required under the Agreement for a period of not less than three years after the date of termination or expiration of the Agreement, except in the event of litigation or settlement of claims arising from the performance of the Agreement, in which case Contractor agrees to maintain same until County, the Office of the Governor and U.S. Department of Homeland Security, the Comptroller General, or any of their duly authorized representatives, have disposed of all such litigation, appeals, claims or exceptions related thereto.

26.12 Government-wide Debarment and Suspension. The Contractor shall comply and facilitate compliance with the U.S. Office of Management and Budget (U.S. OMB) "Guidelines to Agencies on Government wide Debarment and Suspension (No procurement)," 2 C.F.R. part 180. A contract award in any tier must not be made to parties listed on the government wide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 C.F.R. § 180 that implement Executive Orders Nos. 12549 (3 C F R part 1986 Comp., p. 189) and 12689 (3 C.F.R. part 1989 Comp., p. 235), "Debarment and Suspension." SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order No. 12549. These provisions apply to each contract at any tier of $25,000 or more, and to each contract at any tier for a federally required audit (irrespective of the contract amount).

This certification is a material representation of fact relied upon by the County. If it is later determined that the Contractor did not comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, in addition to remedies available to (name of state agency serving as recipient and name of sub recipient), the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.

Contractor agrees to comply with the requirements of 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

26.13 Byrd Anti-Lobbying Amendment. Contractors who apply or bid for an award of $100,000 or more shall file the certification required by 49 C.F.R. Part 20, "New Restrictions on Lobbying." Contractor and certifies that it and all its subcontractors at every tier will not and have not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant, award, including any extension, continuation, renewal, amendment, or modification covered by 31 U.S.C. 1352. Each tier shall also disclose the name of any registrant under the Lobbying Disclosure Act of 1995 who has made lobbying contacts on its behalf with non-Federal funds with respect to that Federal contract, grant or award covered by 31 U.S.C. 1352.

26.14 Program Fraud, False Claims Act and Program Fraud Civil Remedies.Contractor must comply with the requirements of The False Claims Act (31 U.S.C.

Section 3729-3733) which prohibits the submission of false or fraudulent claims for payment to the federal government. (See also 31 U.S.C. Section 3801-3812 which details the administrative remedies for false claims and statements made and 38 USC § 3801-3812 which details the administrative remedies for false claims and statements made.)

The Contractor acknowledges that the provisions of the Program Fraud Civil Remedies Act of 1986, as amended, 31 U.S.C. § 3801 et seq. and U.S. DOT regulations, "Program Fraud Civil Remedies," 49 C.F.R. Part 31, apply to its actions pertaining to this Project. Upon execution of the underlying contract, the Contractor certifies or affirms the truthfulness and accuracy of any statement it has made, it makes, it may make, or causes to be made, pertaining to Agreement or the DHS assisted project for which the Agreement work is being performed. In addition to other penalties that may be applicable, the Contractor further acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification, the Federal Government reserves the right to impose the penalties of the Program Fraud Civil Remedies Act of 1986 on the Contractor to the extent the Federal Government deems appropriate.

The Contractor also acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification to the Federal Government under a contract connected with a project that is financed in whole or in part with Federal assistance originally awarded by DHS, the Government reserves the right to impose the penalties of 18 U.S.C. § 1001 and 49 U.S.C. § 5307(n)(1) on the Contractor, to the extent the Federal Government deems appropriate.

The Contractor agrees to include the above three clauses in each subcontract financed in whole or in part with Federal assistance provided by DHS. It is further agreed that the clauses shall not be modified, except to identify the subcontractor who will be subject to the provisions.

26.15 Reporting of Fraud, Waste, and Abuse. Contractor understands that in the event County becomes aware of any allegation or a finding of fraud, waste, or misuse of funds received from the Office of the Governor that is made against the Contractor, the County is required to immediately notify OOG of said allegation or finding and to continue to inform OOG of the status of any such on-going investigations. The County must also promptly refer to OOG any credible evidence that a principal, employee, agent, contractor, subcontractor, or other person has -- (1) submitted a claim for award funds that violates the False Claims Act; or (2) committed a criminal or civil violation of laws pertaining to fraud, conflict of interest, bribery, gratuity, or similar misconduct involving award funds. County must also immediately notify OOG in writing of any misappropriation of funds, fraud, theft, embezzlement, forgery, or any other serious irregularities indicating noncompliance with grant requirements. County must notify the local prosecutor's office of any possible criminal violations.

26.16 Political Activities. Contractors are prohibited from using federal funds directly or indirectly for political purposes, including polling, lobbying or advocating for legislative programs or changes; campaigning for, endorsing, contributing to, or otherwise supporting political candidates or parties; and voter registration or get-out-the-vote campaigns. Generally, organizations or entities which receive federal funds by way of grants, contracts, or cooperative

agreements do not lose their rights as organizations to use their own, private, non-federal resources for "political" activities because of or as a consequence of receiving such federal funds. These recipient organizations must thus use private or other non-federal money, receipts, contributions, or dues for their political activities, and may not charge off to or be reimbursed from federal contracts or grants for the costs of such activities.

26.17 Retention of Records.

The Contractor agrees to maintain fiscal records and supporting documentation for all expenditures related to this Agreement pursuant to 2 CFR 200.333, UGMS, and state law. Contractor must retain, and will require its subcontractors of all tiers to retain, these records and any supporting documentation for a minimum period of not less than three (3) years after the date of termination or expiration of the Agreement or any litigation, dispute, or audit arising from the performance of the Agreement. Records related to real property and equipment acquired with grant funds shall be retained for three (3) years after final disposition. The Office of the Governor's Criminal Justice Division (CJD) reserves the right to direct a grantee to retain documents for a longer period of time or transfer certain records to CJD custody when it is determined the records possess longer term retention value.

26.18 Prompt Payment. The Contractor is required to pay its subcontractors performing work related to the Underlying Agreement for satisfactory performance of that work no later than thirty (30) days after the Contractor's receipt of payment for that work from County. In addition, the Contractor is required to return any retainage payments to those subcontractors within thirty (30) days after the subcontractor's work is satisfactorily completed.

26.19 Terrorist Financing. Contractor must comply with E.O. 13224 and U.S. law that prohibit transactions with, and the provisions of resources and support to, individuals and organizations associated with terrorism.

26.20 Text Messaging While Driving. Contractor is encouraged to adopt and enforce policies that ban text messaging while driving as described in E.O. 13513, including conducting initiatives described in Section 3(a) of the Order when on official government business or when performing any work for or on behalf of the federal government.

26.21 Trafficking Victims Protection Act. Contractor will comply with the requirements of Section 106(g) of the Trafficking Victims Protection Act (TVPA) of 2000, as amended (22 U.S.C. 7104) which prohibits grant award recipients or a sub-recipient from awarding funds to a private entity or individual who has (1) engaged in severe forms of trafficking in persons during the period of time that the award is in effect; (2) procured a commercial sex act during the period of time that the award is in effect or (3) used forced labor in the performance of the award or sub awards under the award. Contractor shall must inform County immediately upon receipt of any information from any source alleging a violation of a prohibition of TVP. Violation of this clause, may result in termination of this Agreement.

26.22 USA Patriot Act of 2001. Contractor must comply with requirements of the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act (USA PATRIOT Act), which amends 18 U.S.C. Sections 175-175c.

26.23 Use of DHS Seal, Logo and Flags. Contractor must obtain permission from their DHS FAO, prior to using the DHS seal(s), logos, crests or reproductions of flags or likenesses of DHS agency officials, including use of the United States Coast Guard seal, logo, crests or reproductions of flags or likenesses of Coast Guard officials.

26.24 No Obligation by Federal Government. The Federal Government is not a party to this Agreement and is not subject to any obligations or liabilities to the County, Contractor, or any other party pertaining to any matter resulting from the contract.

26.25 Notice of Funding Opportunity. All of the instructions, guidance, limitations, and other conditions set forth in the federal Notice of Funding Opportunity (NOFO) for this program are incorporated here by reference in the award terms and conditions.

26.26 Contracting with Small, Minority Firms, Women's Business Enterprises and Labor Surplus Area Firms. Contractor will take all necessary, affirmative steps to assure that qualified small and minority businesses, women's business enterprises, and labor area surplus firms are used when possible by:

26.26.1 Placing small and minority businesses and women's business enterprises on solicitation lists;
26.26.2 Assuring that it solicits small and minority businesses and women's business enterprises whenever they are potential sources;
26.26.3 Dividing total requirements, *when economically feasible*, into smaller tasks or quantities to permit maximum participation by small and minority businesses and women's business enterprises;
26.26.4 Establishing delivery schedules, *where the requirement permits*, which encourage participation by small and minority businesses and women's business enterprises;
26.26.5 Utilizing the assistance, as appropriate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce
26.26.6 Contractor must require subcontractors to take the five affirmative steps described in a-e above.

Section 27. <u>Entire Agreement</u>

This instrument contains the entire Agreement between the parties hereto relating to the rights herein granted and the obligation herein assumed. Any oral representations or modifications concerning this instrument shall be of no force or effect excepting a subsequent modification in writing signed by all the parties hereto.

{Execution Page Follows}

IN TESTIMONY OF WHICH, THIS AGREEMENT shall be effective upon execution of all parties.

FORT BEND COUNTY	**SIDDONS-MARTIN EMERGENCY GROUP**
_____	_____
KP George, County Judge	Authorized Agent- Signature
_____	_____
Date	Authorized Agent- Printed Name
ATTEST:	_____
	Title
_____	_____
Laura Richard, County Clerk	Date

Reviewed by:

_____
Doug Barnes, Deputy Chief
Fort Bend County, Fire Marshal's Office

EXHIBIT A: Proposal Letter for Hazmat Command, dated April 24, 2019
Proposal prepared by Cory Frankum for Vendor dated April 24, 2019
Updated Specifications Drawing
Updated Proposal Option List

AUDITOR'S CERTIFICATE

I hereby certify that funds are available in the amount of **$_____** to accomplish and pay the obligation of Fort Bend County under this contract.

_____
Robert E. Sturdivant, County Auditor

hna i:\AGREEMENTS\2019 Agreements\Purchasing\RFP 19-043 Haz Mat Vehicle\Agreement for Haz Mat Vehicle (05.07.19).docx

EXHIBIT A

Siddons Martin Emergency Group, LLC
3500 Shelby Lane
Denton, Texas 76207
GDN P115891
TXDOT MVD No. A115890
EIN 27-4333590

April 24, 2019

FORT BEND COUNTY OFFICE OF EMERGENCY MANAGEMENT
307 FORT ST.
RICHMOND, TX 77469

Proposal for Hazmat Command

Siddons-Martin Emergency Group, LLC is pleased to provide the following proposal to **FORT BEND COUNTY OFFICE OF EMERGENCY MANAGEMENT** . Unit will comply with all specifications attached and made a part of this proposal. Total price includes delivery to **FORT BEND COUNTY OFFICE OF EMERGENCY MANAGEMENT** and training on operation and use of the apparatus.

Description	Amount
1) Pierce-Custom Velocity Rescue, Non-Walk-In **Unit price - $846,483.00**	

Price guaranteed for 30 days. Delivery within 12.5-13.5 months of order date. A warranty term of 12 months is included.

Vehicle Price	$846,483.00
Chassis Prepay Discount	($12,171.00)
Full Prepay Discount	($27,317.00)
Loose Equipment	$90,876.00
Sub Total	$897,871.00
Contract Amount	$2,000.00
Final Sales Price	**$899,871.00**

Additional. Vehicle price includes (2) factory inspection trips for (3) people.

Taxes. Tax is not included in this proposal. In the event that the purchasing organization is not exempt from sales tax or any other applicable taxes and/or the proposed apparatus does not qualify for exempt status, it is the duty of the purchasing organization to pay any and all taxes due. Balance of sale price is due upon acceptance of the apparatus at the factory.

Late Fee. A late fee of .033% of the sale price will be charged per day for overdue payments beginning ten (10) days after the payment is due for the first 30 days. The late fee increases to .044% per day until the payment is received. In the event a prepayment is received after the due date, the discount will be reduced by the same percentages above increasing the cost of the apparatus.

Cancellation. In the event this proposal is accepted, and a purchase order is issued then cancelled or terminated by Customer before completion, Siddons-Martin Emergency Group may charge a cancellation fee. The following charge schedule based on costs incurred may be applied:

(A) 10% of the Purchase Price after order is accepted and entered by Manufacturer;
(B) 20% of the Purchase Price after completion of the approval drawings;

(C) 30% of the Purchase Price upon any material requisition by Manufacturer.

The cancellation fee will increase accordingly as costs are incurred as the order progresses through engineering and into manufacturing. Siddons-Martin Emergency Group endeavors to mitigate any such costs through the sale of such product to another purchaser; however, the customer shall remain liable for the difference between the purchase price and, if applicable, the sale price obtained by Siddons-Martin Emergency Group upon sale of the product to another purchaser, plus any costs incurred by Siddons-Martin Emergency Group to conduct such sale.

Acceptance. In an effort to ensure the above stated terms and conditions are understood and adhered to, Siddons-Martin Emergency Group, LLC requires an authorized individual from the purchasing organization sign and date this proposal and include it with any purchase order. Upon signing of this proposal, the terms and conditions stated herein will be considered binding and accepted by the Customer. The terms and acceptance of this proposal will be governed by the laws of the state of TX. No additional terms or conditions will be binding upon Siddons-Martin Emergency Group, LLC unless agreed to in writing and signed by a duly authorized officer of Siddons-Martin Emergency Group, LLC

Sincerely,

Cory Frankum

Cory Frankum
Siddons-Martin Emergency Group, LLC

I,_____, the authorized representative of **FORT BEND COUNTY OFFICE OF EMERGENCY MANAGEMENT** , agree to all of the terms of this proposal and the specifications attached hereto and this proposal will be binding upon **FORT BEND COUNTY OFFICE OF EMERGENCY MANAGEMENT**.

_____

Signature & Date

Proposal for **Ft. Bend County OEM**

Prepared by **Cory Frankum**

Siddons-Martin Emergency Group

04/24/2019

CONTENTS

Siddons-Martin Emergency Group is pleased to submit a proposal to Ft. Bend County for a **Pierce® Heavy Duty Rescue** per your request for quotation. The following paragraphs will describe in detail the apparatus, construction methods, and equipment proposed. This proposal will indicate size, type, model and make of components parts and equipment, providing proof of compliance with each and every item (except where noted) in the departments advertised specifications.

PIERCE MANUFACTURING was founded in 1913. Since then we have been building bodies with one philosophy, "BUILD THE FINEST". Our skilled craftsmen take pride in their work, which is reflected, in the final product. We have been building fire apparatus since the early "forties" giving Pierce Manufacturing over 75 years of experience in the fire apparatus market. Pierce Manufacturing has built and put into service more than 62,500 apparatus, including more than 33,900 on Pierce custom chassis designed and built specifically for fire and emergency applications. Our Appleton, Wisconsin facility has over 870,000 total square feet of floor space situated on approximately 105 acres of land. Our Bradenton, Florida facility has 300,000 square feet of floor space situated on approximately 38 acres of land.

Our beliefs in high ethical standards are carried through in all of our commitments and to everyone with whom we do business. Honesty, Integrity, Accountability and Citizenship are global tenets by which we all live and work. Consequently, we neither engage in, nor have we ever been convicted of price fixing, bid rigging, or collusion in any domestic or international fire apparatus market.

Pierce has only one brand of fire apparatus "Pierce", ensuring you are receiving top of the line product that meets your specification.

In accordance with the current edition of NFPA 1901 standards, this proposal will specify whether the fire department, manufacturer, or apparatus dealership will provide required loose equipment.

Images and illustrative material in this proposal are as accurate as known at the time of publication, but are subject to change without notice. Images and illustrative material is for reference only, and may include optional equipment and accessories and may not include all standard equipment.

GENERAL DESIGN AND CONSTRUCTION

To control quality, ensure compatibility, and provide a single source for service and warranty, the custom cab, chassis, pump module and body will be entirely designed, assembled/welded and painted in Pierce owned manufacturing facilities. This includes, but not limited to the cab weldment, the pumphouse module assembly, the chassis assembly, the body and the electrical system.

QUALITY AND WORKMANSHIP

Pierce has set the pace for quality and workmanship in the fire apparatus field. Our tradition of building the highest quality units with craftsmen second to none has been the rule right from the beginning and we demonstrate that ongoing commitment by: Ensuring all steel welding follows American Welding Society D1.1-2004 recommendations for structural steel welding. All aluminum welding follows American Welding society and ANSI D1.2-2003 requirements for structural welding of aluminum. All sheet metal welding follows American welding Society B2.1-2000 requirements for structural welding of sheet metal. Our flux core arc welding uses alloy rods, type 7000 and is performed to American Welding Society standards A5.20-E70T1. Furthermore, all employees classified as welders are tested

and certified to meet the American welding Society codes upon hire and every three (3) years thereafter. Pierce also employs and American Welding Society certified welding inspector in plant during working hours to monitor weld quality.

Pierce Manufacturing operates a Quality Management System under the requirements of ISO 9001. These standards sponsored by the International Organization for Standardization (ISO) specify the quality systems that are established by the manufacturer for design, manufacture, installation and service. A copy of the certificate of compliance is included with this proposal.

In addition to the Quality Management system, we also employ a Quality Achievement Supplier program to insure the vendors and suppliers that we utilize meet the high standards we demand. That is just part of our overall "Quality at the Source" program at Pierce.

To demonstrate the quality of our products and services, a list of at least fifteen (15) fire departments/municipalities that have purchased vehicles for a second time is provided.

DELIVERY

The apparatus will be delivered under its own power to insure proper break-in of all components while the apparatus is still under warranty. A qualified delivery representative shall deliver the apparatus and remain for a sufficient length of time to instruct personnel in proper operation, care and maintenance of the equipment delivered.

MANUAL AND SERVICE INFORMATION

At time of delivery, complete operation and maintenance manuals covering the apparatus will be provided. A permanent plate will be mounted in the driver's compartment specifying the quantity and type of fluids required including engine oil, engine coolant, transmission, pump transmission lubrication, pump primer and drive axle.

SAFETY VIDEO

At the time of delivery Pierce will also provide one (1) 39-minute, professionally produced apparatus safety video, in DVD format. This video will address key safety considerations for personnel to follow when they are driving, operating, and maintaining the apparatus, including the following: vehicle pre-trip inspection, chassis operation, pump operation, aerial operation, and safety during maintenance.

PERFORMANCE TESTS

A road test will be conducted with the apparatus fully loaded and a continuous run of no less than ten (10) miles. During that time the apparatus will show no loss of power nor will it overheat. The transmission drive shaft or shafts and the axles will run quietly and be free of abnormal vibration or noise. The apparatus when fully loaded will not have less than 25 percent nor more than 50 percent on the front axle, and not less than 50 percent nor more than 75 percent on the rear axle. The apparatus will meet NFPA 1901 acceleration and braking requirements.

SERVICE AND WARRANTY SUPPORT

Pierce dealership support will be provided by Siddons-Martin Emergency Group by operating in conjunction with a Pierce authorized service center. The service center will have factory-trained mechanics on staff versed in Pierce fire apparatus. The service facility will be located within ten (10) miles of the fire department.

In addition to the dealership, Pierce has service facilities located in both, Weyauwega, Wisconsin and Bradenton, Florida. Pierce also maintains a dedicated parts facility of over 100,000 square feet in Appleton, Wisconsin. The parts facility stocks in excess of $5,000,000 in parts dedicated to service and replacement parts. The parts facility employs a staff dedicated solely for the distribution and shipment of service and replacement parts.

Service parts for the apparatus being proposed can be found via Pierceparts.com which, is an interactive online tool that delivers information regarding your specific apparatus as well as the opportunity to register for training classes.

As a Pierce customer you have the ability to view the complete bill of materials for your specific apparatus, including assembly drawings, piece part drawings, and beneficial parts notations. You will also have the ability to search the complete Pierce item master through a parts search function which offers all Pierce SKU's and descriptions offered on all Pierce apparatus. Published component catalogs, which include proprietary systems along with an extensive operators manual library is available for easy reference.

Pierce Manufacturing maintains a dedicated service and warranty staff of over 35 personnel, dedicated to customer support, which also maintains a 24 hour 7 day a week toll free hot line, four (4) on staff EVTs, and offers hands-on repair and maintenance training classes multiple times a year.

LIABILITY

The successful bidder will defend any and all suits and assume all liability for the use of any patented process including any device or article forming a part of the apparatus or any appliance furnished under the contract.

INSURANCE PROVIDED BY BIDDER

COMMERCIAL GENERAL LIABILITY INSURANCE

The successful bidder will, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of commercial general liability insurance:

Each Occurrence$1,000,000

Products/Completed Operations Aggregate$1,000,000

Personal and Advertising Injury$1,000,000

General Aggregate$2,000,000

Coverage will be written on a Commercial General Liability form. The policy will be written on an occurrence form and will include Contractual Liability coverage for bodily injury and property damage subject to the terms and conditions of the policy. The policy will include Owner as an additional insured when required by written contract.

COMMERCIAL AUTOMOBILE LIABILITY INSURANCE

The successful bidder will, during the performance of the contract, keep in force at least the following minimum limits of commercial automobile liability insurance and coverage will be written on a Commercial Automobile liability form:

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

UMBRELLA/EXCESS LIABILITY INSURANCE

The successful bidder will, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of umbrella liability insurance:

Aggregate:$3,000,000

Each Occurrence:$3,000,000

The umbrella policy will be written on an occurrence basis and at a minimum provide excess to the bidder's General Liability and Automobile Liability policies.

The required limits can be provided by one (1) or more policies provided all other insurance requirements are met.

Coverage will be provided by a carrier(s) rated A- or better by A.M. Best.

All policies will provide a 30-day notice of cancellation to the named insured. The Certificate of Insurance will provide the following cancellation clause: Should any of the above described polices be cancelled before the expiration date thereof, notice will be delivered in accordance with the policy provisions.

Bidder agrees to furnish owner with a current Certificate of Insurance with the coverages listed above along with the bid. The certificate will show the purchaser as certificate holder.

INSURANCE PROVIDED BY MANUFACTURER

PRODUCT LIABILITY INSURANCE

The manufacturer will, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of Product Liability insurance:

Each Occurrence$1,000,000

Products/Completed Operations Aggregate$1,000,000

Coverage will be written on a Commercial General Liability form. The policy will be written on an occurrence form. The manufacturer's policy will include the owner as additional insured when required by written contract between the Owner and a Pierce authorized dealer.

UMBRELLA/EXCESS LIABILITY INSURANCE

The manufacturer will, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of umbrella liability insurance:

Each Occurrence:$25,000,000

Aggregate:$25,000,000

The umbrella policy will be written on an occurrence basis and provide excess to the manufacturer's General Liability/Products policies.

The required limits can be provided by one (1) or more policies provided all other insurance requirements are met.

Coverage will be provided by a carrier(s) rated A- or better by A.M. Best.

All policies will provide a 30-day notice of cancellation to the named insured. The Certificate of Insurance will provide the following cancellation clause: Should any of the above described polices be cancelled before the expiration date thereof, notice will be delivered in accordance with the policy provisions.

Manufacturer agrees to furnish owner with a current Certificate of Insurance with the coverages listed above along with the bid. The certificate will show the purchaser as the certificate holder.

SINGLE SOURCE MANUFACTURER

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

Your apparatus will be manufactured in Appleton, Wisconsin.

NFPA 2016 STANDARDS

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

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

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".

VEHICLE INSPECTION PROGRAM CERTIFICATION

To assure the vehicle is built to current NFPA standards, the apparatus, in its entirety, will be third-party, audit-certified through Underwriters Laboratory (UL) that it is built and complies to all applicable standards in the current edition of NFPA 1901. The certification will include: all design, production, operational, and performance testing of not only the apparatus, but those components that are installed on the apparatus.

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

GENERATOR TEST

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

BREATHING AIR TEST

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

BID BOND

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

Year Limited Warranty, and for the prompt payment of labor and material furnished in the prosecution of the contract.

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

PERFORMANCE BOND NOT REQUESTED

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

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

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

APPROVAL DRAWING

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

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

ELECTRICAL WIRING DIAGRAMS

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

VELOCITY CHASSIS

The Pierce Velocity® 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 and 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.

MAXIMUM OVERALL HEIGHT
The maximum overall height of the apparatus will be 13'.

MAXIMUM OVERALL LENGTH
The maximum overall length of the apparatus will be 39'.

WHEELBASE
The wheelbase of the vehicle will be 208.00.

GVW RATING
The gross vehicle weight rating will be 46,800.

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 full-length mainframe internal "C" liner will be provided. The liner will be an internal "C" design that steps to a smaller internal "C" design over the rear axle. It will be heat-treated steel measuring 12.50" x 3.00" x 0.25" through the front "C" portion of the liner, stepping to 9.38" x 3.00" x 0.25" through the rear "C" 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 857,462 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 24,000 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 0 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 third party certified turning angle of 40 degrees. Front discharge, front suction, or aluminum wheels will not infringe on this cramp angle.

FRONT SUSPENSION

Front Oshkosh TAK-4™ independent suspension will be provided with a minimum ground rating of 24,000 lb.

The independent suspension system has been 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 a 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 radials 445/65R22.50, 20 ply all-position G296 MSA tread, rated for 24,600 lb maximum axle load and 68 mph maximum speed.

The tires will be mounted on Alcoa 22.50" x 13.00" polished aluminum disc type wheels with a ten (10)stud, 11.25" bolt circle.

REAR AXLE
The rear axle will be a Meritor™, Model RS-26-185, 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.

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 below the left side rear compartment.

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 Meritor™ 16.50" x 7.00" cam operated with automatic slack adjusters. Dust shields will be provided.

AIR COMPRESSOR, BRAKE SYSTEM

The air compressor will be a Bendix®, Model BA-921, with 15.80 cubic feet per minute output at 1,250 rpm.

BRAKE SYSTEM

The brake system will include:

- Bendix® dual brake treadle valve
- Heated automatic moisture ejector on air dryer
- Total air system capacity of 4,362 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 valve 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/OUTLET

One (1) air inlet/outlet will be installed with the female coupling located in the driver side lower step well of cab. This system will tie into the "wet" tank of the brake system and include a check valve in the inlet line and an 85 psi pressure protection valve in the outlet line. The air outlet will be controlled by a needle valve.

A mating male fitting will be provided with the loose equipment.

The air inlet will allow a shoreline air hose to be connected to the vehicle. This will allow station air to be supplied to the brake system of the vehicle to insure constant air pressure.

ADDITIONAL AIR TANK

An additional air tank with 1,454 cubic inch displacement will be provided to increase the capacity of the air system. This tank will be dedicated for air horn use.

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.

The output flow of the engine air compressor varies with engine rpm. Full compressor output is only achieved at governed engine speed. Engine speed may be limited by generators, pumps and other PTO driven options.

AUTOMATIC MOISTURE EJECTOR(S)

One (1) automatic moisture ejector, Bendix®, Model DV-2, will be installed in the brake system.

Each moisture ejector will be equipped with a 12-volt heater, controlled by thermostat and ignition switch.

The moisture ejector(s) will be provided on the additional tank reservoirs(s).

ENGINE

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

Make:	Detroit™
Model:	DD13®
Power:	505 hp at 1625 rpm
Torque:	1750 lb-ft at 1075 rpm
Governed Speed:	Full Load - 1900 rpm Road/2080 rpm Parked PTO
Emissions Certification:	EPA 2016 (GHG17)
Fuel:	Diesel
Cylinders:	Six (6)
Displacement:	781 cubic inches (12.8L)
Starter:	Delco Remy 39MT™
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

A Jacobs® engine brake is to be installed with the controls located on the instrument panel within easy reach of the driver.

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

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

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

CLUTCH FAN

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

ENGINE AIR INTAKE

An air intake with an ember separator (to prevent road dirt, burning embers, and recirculating hot air from entering the engine) will be mounted at the front of the apparatus, on the passenger side of the engine. The ember separator will be mounted in the air intake with flame retardant, roto-molded polyethylene housing. It will be easily accessible by the hinged access panel at the front of the vehicle.

EXHAUST SYSTEM

The exhaust system will include a diesel particulate filter (DPF) and a selective catalytic reduction (SCR) device to meet current EPA standards. The exhaust system will be stainless steel from the turbo to the inlet of the SCR device and will be 5.00" in diameter. An insulation wrap will be provided on all exhaust pipes between the turbo and SCR to minimize the transfer of heat to the cab. 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 core will be made of aluminum fins, having a serpentine design, brazed to aluminum tubes. The tubes will be brazed to aluminum headers. The radiator core will have a minimum frontal area of 1434 square inches. Supply tank made of glass-reinforced nylon and a return tank of cast aluminum alloy shall be crimped on to the core assembly using header tabs and a compression gasket to complete the radiator core assembly. The radiator will be compatible with commercial antifreeze solutions.

There will be a full steel frame around the entire radiator core assembly. The radiator core assembly will be isolated within the steel frame by rubber inserts to enhance cooling system durability and reliability. The radiator will be mounted in such a manner as to prevent the development of leaks caused by twisting or straining when the apparatus operates over uneven ground. The radiator assembly will be isolated from the chassis frame rails with rubber isolators.

The radiator assembly will include an integral deaeration tank permanently mounted to the top of the radiator framework, with a readily accessible remote-mounted overflow 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.

A heavy-duty fan will draw in fresh, cool air through the radiator. 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 the chassis manufacturer.

Hose clamps will be stainless steel "constant torque type" to prevent coolant leakage. They will react to temperature changes in the cooling system and expand or contract accordingly while maintaining 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 4.5 gallon diesel exhaust fluid (DEF) tank will be provided and mounted in the driver's side body forward of the rear axle.

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

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

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

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

AUXILIARY FUEL PUMP

An auxiliary electric fuel pump will be added to the fuel line for priming the engine. A switch located on the cab instrument panel will be provided to operate the pump.

FUEL COOLER

An air to fuel cooler will be installed in the engine fuel return line.

TRANSMISSION

An Allison 5th 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 red 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.

DOWNSHIFT MODE (W/ENGINE BRAKE)
The transmission will be provided with an aggressive downshift mode.

This will provide earlier transmission downshifts to 2nd gear from 6th gear, resulting in improved engine braking performance.

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 an Eaton, Model VN20, 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 4-spoke design.

LOGO AND CUSTOMER DESIGNATION ON DASH
The dash panel will have an emblem containing the Pierce logo and customer name. The emblem will have three (3) rows of text for the customer's department name. There will be a maximum of eight (8) characters in the first row, 11 characters in the second row and 11 characters in the third row.

The first row of text will be: Ft. Bend

The second row of text will be: County

The third row of text will be: Haz Mat

BUMPER
A one (1) piece, ten (10) gauge, 304-2B type polished stainless steel bumper, a minimum of 10.00" high, will be attached to a bolted modular extension frame.

The bumper will be extended 19.00" from front face of cab.

The bumper extension frame will be fabricated using .38" gussets welded to 2.00" x 5.00" steel tubing running front to back with .50" front and rear plates mounted to the chassis frame. Fabricated "U" shaped channel supports the weight of the bumper and provides the main strength in frontal crash. .25" steel is formed into "C" shaped backing plates for mounting of the bumper and providing protection to the cab.

The bumper extension's cross section is considered expendable, and a crush zone. The bumper is not intended for pushing other vehicles or objects.

Tow hooks/eyes located under the bumper extension are for straight pull only.

GRAVEL PAN

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

LIFT AND TOW MOUNTS

Mounted to the frame extension will be lift and tow mounts. The lift and tow mounts will be designed and positioned to adapt to certain tow truck lift systems.

The lift and tow mounts with eyes will be painted the same color as the frame.

TOW HOOKS

No tow hooks are to be provided. This truck will be equipped with a lift and tow package with integral tow eyes.

BUMPER TRAY

A full width bumper tray, constructed of smooth aluminum, will be located in the under slung bumper extension.

The tray will be a bolted modular design, 8.25" deep.The tray will have capacity for TBD .

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

TRAY COVER

A bright aluminum treadplate cover will be provided over the full width tray. The cover will be raised approximately 8.50" above the gravel pan.

The cover will be full width.

The cover will be attached with a stainless steel hinge.

The cover will be secured with D-ring latch on each side in the closed position and pneumatic stay arm on each side will hold the cover in the open position.

STRIP LIGHT UNDER BUMPER COVER

There will be one (1) Amdor Model AY-9220-31, 30.63" 12 volt DC LED strip light(s) provided on the inside of the front bumper cover.

The light(s) will be activated when the battery switch is on and the bumper tray cover is open.

CAB

The Velocity cab will be designed specifically for the fire service and will be manufactured by Pierce Manufacturing.

To provide quality at the source and single source customer support, 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 of 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 0.25" heavy wall extrusions joined by a solid A356-T6 aluminum joint casting. The B-pillar and C-pillar will also be constructed from 0.25" heavy wall extrusions. The rear wall will be constructed of two (2) 4.00" x 2.00" outer aluminum extrusions and two (2) 3.00" x 2.00" inner aluminum extrusions. All main vertical structural members will run from the floor to 7.50" x 3.50" x 0.125" thick roof extrusions to provide a cage-like structure with the A-pillar and roof extrusions being welded into a 0.75" thick corner casting at each of the front corners of the roof assembly.

The front of the cab will be constructed of a 0.25" thick firewall, covered with a 0.125" front skin (for a total thickness of 0.38"), and reinforced with 24.50" wide x 10.00" deep x 0.50" thick supports on each side of the engine tunnel. The cross-cab support will be welded to the A-pillar, 0.25" firewall, and engine tunnel, on the left and right sides.

The cab floors will be constructed of 0.1875" thick aluminum plate and reinforced at the firewall with an additional 0.25" thick cross-floor support providing a total thickness of 0.44" of structural material at the front floor area. The front floor area will also be supported with three (3) 0.50" plates bolted together that also provides the mounting point for the cab lift. This tubing will run from the front of the cab to the 0.1875" thick engine tunnel, creating the structure to support the forces created when lifting the cab.

The cab will be a full-tilt style. A 3-point cab mount system with rubber isolators will improve ride quality by isolating chassis vibrations from the cab.

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 crew cab will be provided with a door on the passenger side only.

The forward cab section will have an overall height (from the cab roof to the ground) of approximately 102.00". The crew cab section will have a 20.00" raised roof, with an overall cab height of approximately 122.00". The raised portion will start at the most forward point of the B-pillar and continue rearward to the back of the cab. The overall height listed will be calculated based on a truck configuration with the lowest suspension weight ratings, 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 cab will have an interior width of not less than 93.50". The driver and passenger seating positions will have a minimum 24.00" clear width at knee level.

To reduce injuries to occupants in the seated positions, proper head clearance will be provided. The floor-to-ceiling height inside the forward cab of will be no less than 60.25". The floor-to-ceiling height

inside the crew cab will be no less than 72.95" in the center position and 78.75" in the outboard positions.

The crew cab will measure a minimum of 71.50" from the rear wall to the backside of the engine tunnel (knee level) for optimal occupant legroom.

INTERIOR CAB INSULATION

The cab walls, ceiling and engine tunnel will be insulated in all strategic locations to maximize acoustic absorption and thermal insulation. The cab will be insulated with 2.00" insulation in the rear wall, 3.00" insulation in the side walls, and 1.50" insulation in the ceiling.

FENDER LINERS

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

PANORAMIC WINDSHIELD

A one (1)-piece, safety glass windshield with more than 2,802 square inches of clear viewing area will be provided. The windshield will be full width and will provide the occupants with a panoramic view. The windshield will consist of three (3) layers: the outer light, the middle safety laminate, and the inner light. The 0.114" thick 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 a washer, in conformance with FMVSS and SAE requirements, will be provided. The wiper blades will be 21.65" long and together will clear a minimum of 1,783 square inches of the windshield for maximum visibility in inclement weather.

The windshield washer fluid reservoir will be located at the front of the vehicle and be accessible through the access hood for simple maintenance.

FAST SERVICE ACCESS FRONT TILT HOOD

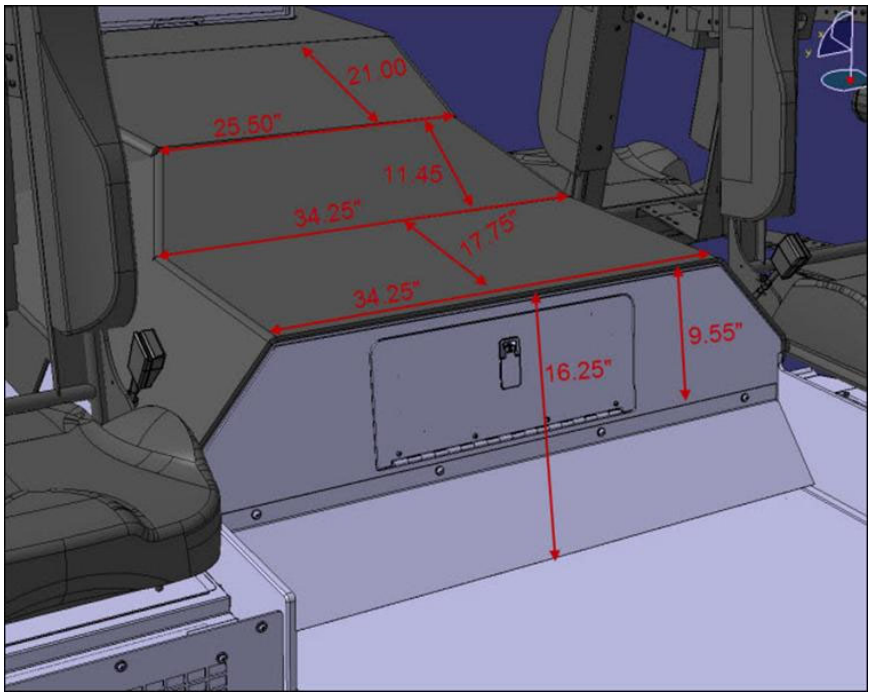
A full-width access hood will be provided for convenient access to engine coolant, steering fluid, wiper fluid, cab lift controls, headlight power modules, and ember separator. The hood will also provide complete access to the windshield wiper motor and components. The hood will be contoured to provide a sleek, automotive appearance. The hood will be constructed of two (2) fiberglass panels bonded together and will include reinforcing ribs for structural integrity. The hood will include air cylinders to hold the hood in open and closed positions, and a heavy duty latch system that will meet FMVSS 113 (Hood Latch System). The spring-loaded hood latch will be located at the center of the hood with a double-action release lever located behind the Pierce logo. The two (2)-step release requires the lever first be pulled to the driver side until the hood releases from the first latch (primary latch) then to the passenger side to fully release the hood (secondary latch).

ENGINE TUNNEL

To provide structural strength, the engine tunnel sidewalls will be constructed of 0.50" aluminum plate that is welded to both the 0.25" firewall and 0.38" heavy wall extrusion under the crew cab floor. To maximize occupant space, the top edges will be tapered.

The back of the engine tunnel will be no higher than 16.25" off the crew cab floor.

The engine tunnel will be insulated on both sides for thermal and acoustic absorption. The underside of the tunnel will be covered with 1.00" thick polyether foam that is reinforced with an aluminized face. Thermal rating for this insulation will be -40 degrees Fahrenheit to 300 degrees Fahrenheit. The insulation will keep noise (dBA) levels at or lower than the specifications in the current edition of the NFPA 1901 standards.



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, fluid reservoir, dual lift cylinders, remote cab lift controls and all necessary hoses and valves. The hydraulic pump will have a backup manual override, for use in the event of an electrical failure.

The cab lift controls will be located at the driver side front of the cab, easily accessible under the full width front access hood. The controls will include a permanently mounted raise/lower switch. For enhanced visibility during cab tilt operations, a remote control tether with on/off switch will be supplied on a coiled cord that will extend from 2.00' (coiled) to 6.00' (extended).

The cab will be capable of tilting 42 degrees and 80 degrees with crane assist to accommodate engine maintenance and removal. The cab pivots will be located 46.00" apart to provide stability while tilting the cab.

The rear of the cab will be locked down by a two (2)-point, automatic, hydraulic, double hook mechanism that fully engages after the cab has been lowered (self-locking). The dual 2.25" diameter hydraulic cylinders will be equipped with a velocity fuse that protects the cab from accidentally descending when the cab is in the tilt position.

For increased safety, a redundant mechanical stay arm will be provided that must be manually put in place on the driver side between the chassis and cab frame when 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 safety 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 formed bright finished grille surround, will be provided on the front center of the cab, and will serve as an air intake to the radiator.

DOOR JAMB SCUFFPLATES

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

FRONT CAB TRIM

A band of 22 gauge polished stainless steel trim will be installed across the front of the cab, from door hinge to door hinge. The trim band will be centered on the head lights and applied with two (2)-sided tape. A 0.625" self adhesive trim strip will be applied around the perimeter of the trim band.

There will be polished stainless steel corner covers provided over the painted cab corner where the cab turn signals are located.

SIDE OF CAB MOLDING

Chrome molding will be provided on both sides of cab.

MIRRORS

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

DOORS

The forward cab and crew cab doors will be the half-height style door. To enhance entry and egress to the cab, the forward cab doors will be a minimum of 43.59" wide x 64.71" high. The crew cab door will measure a minimum of 37.87" wide x 73.75" high.

The forward cab and crew cab doors will be constructed of extruded aluminum with a nominal material thickness of 0.125". The exterior door skins will be constructed from 0.090" aluminum.

The forward cab door windows will include a 7.50" high x 10.00" wide drop area at the front to enhance visibility.

A customized, vertical, pull-down type door handle will be provided on the exterior of each cab door. The exterior handle will be designed specifically for the fire service to prevent accidental activation and will provide 4.00" wide x 2.00" deep hand clearance for ease of use with heavy gloved hands. Each door will also be provided with an interior flush, open style paddle handle that will be readily operable from fore and aft positions, and be designed to prevent accidental activation. The interior handles will provide 4.00" wide x 1.25" deep hand clearance for ease of use with heavy gloved hands.

The cab doors will be provided with both interior (rotary knob) and exterior (keyed) locks exceeding FMVSS standards. The 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.

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 and crew cab door.

The cab steps 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. The cab door panels will be removable.

RECESSED POCKET WITH ELASTIC COVER

To provide organized storage (clutter control) in the cab for miscellaneous equipment, the cab interior will be provided with recessed storage pockets. The pockets will be 5.63" wide x 2.00" high x 4.00" deep. The pockets will be provided with a perforated elastic material cover to secure the equipment in the pocket. The pockets will be installed in all available mounting locations of the overhead console.

ELECTRIC WINDOW CONTROLS

Each cab entry door will be equipped with an electrically operated tempered glass window. A window control panel will be located on the door panel within easy reach of the respective occupant. 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. The driver control panel will contain a control switch for each cab door's window. All other door control panels will contain a single switch to operate the window within that door.

The window switches will be connected directly to the battery power. This allows the windows to be raised and lowered when the battery switch is in the off position.

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 31.00" wide, and the crew cab step will be 24.25" wide with an 8.00" minimum depth. The inside cab steps will not exceed 18.00" in height and be limited to two (2) steps.

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

For reduced overall maintenance costs compared to incandescent lighting, there will be four (4) white LED step lights provided. The lights will be installed at each cab and crew cab door, one (1) per step. The lights will be located in the driver side front doorstep, driver side crew cab doorstep, passenger side front doorstep and passenger side crew cab doorstep.

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.

The lights will be activated when 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 20.00" wide x 20.50" high.

One (1) fixed window with tinted glass will be provided on each side of the cab, to the rear of the crew cab door.

WINDOWS INTERIOR TRIM

For improved aesthetics, the cab side windows will include a vacuum formed ABS interior trim panel.

UPPER REAR WINDOW ON SIDE OF CREW CAB

One (1) window will be provided above the crew cab door, along the side of the raised roof section of the cab, on the passenger's side of the cab. The profile of the glass will match the painted metal side sheet opening, creating a uniform threshold appearance. The window will be bonded to the vehicle using urethane adhesive. The visibility thru the window will measure 35.25" wide x 7.12" high. The window will be tinted a privacy, dark gray automotive tint.

WINDOWS, REAR
The rear wall of the crew cab will have two (2) windows, each being 11.25" wide x 18.00" high.

WINDOW INTERIOR TRIM
For improved aesthetics, the cab rear wall windows will include a vacuum formed ABS interior trim panel.

Window Tint
The window behind the right side front cab door will be tinted privacy dark gray.

Window Tint
The window behind the right side crew cab door will be tinted privacy dark gray.

Window Tint
The rollup window in the right side crew cab door will be tinted privacy dark gray.

Window Tint
The window behind the left side front cab door will be tinted privacy dark gray.

Window Tint
The upper window in the right side crew cab door will be tinted privacy dark gray.

MOUNTING PLATE ON ENGINE TUNNEL
Equipment installation provisions will be installed on the engine tunnel.

A .188" smooth aluminum plate will be bolted to the top surface of the engine tunnel. The plate will be located to the left of the officer and on the rear of the tunnel. It 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 .50" to allow for wire routing below the plate. There will be a 1.50" lip around the entire edge of the plate.

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

EQUIPMENT MOUNTING SHELF
There will be four (4) shelves for permanent mounting of equipment provided.

Each shelf will have a 1.00" lip around the edge. The size of the shelves will be triangular in shape extending 1' from corner to shelf outward edge.

Each shelf will be fabricated from aluminum and will be painted to match the cab interior.

The shelves will be located LS rear corner of cab.

Not intended for storage of loose equipment. Items stored on tray will be permanently attached to meet NFPA requirements.

LAPTOP COMPUTER DOCKING STATION
A lockable computer docking station with dual RF pass through, 90W power supply, and tilt / swivel / slide / swing motion device for a Panasonic Toughbook CF-19 computer, MK4/MK5/MK6, will be

provided on a flat, horizontal surface located officer dash . A 12Vdc power point will be provided near the mount.

The following Havis components will be provided:

- One (1) DS-PAN-212-2 CF-19 Docking station
- One (1) C-MD-105 Swing arm w/ motion device & tilt/swivel
- One (1) C-HDM-135 Fixed adapter plate tall

DRY ERASE BOARD

A dry erase marking board will be installed rear wall of cab, entire surface. The board will be as wide and as tall as possible, have a bronzed steel frame and provide a magnetic surface for attaching papers.

OVERHEAD CABINET

An overhead C-Tech cabinet will be provided.

The cabinet will have a horizontally hinged lift up doors. Below each door section will be a recessed light on the underside of the cabinet. All aluminum cabinets will have dry erase writing surfaces, with the over-head-cabinets having a pneumatic door stay to hold the doors in the open position. There will be radius edging on all exposed corners.

Under cabinet lighting will be provided when the under cabinet radius edging is used. The lighting will consist of one puck light per door opening. The light will be controlled by a switch mounted on an adjacent wall unless otherwise specified. When more than one cabinet is mounted in the same location the cabinet lights will be controlled from a common switch.

The overall dimensions of the cabinet will be 24.00" wide x 16.00" high x 14.00" deep. The frame size will be 20.00" wide x 14.00" high x 14.00" deep. The clear door opening will be 17.00" wide x 11.00" high.

There will be a total of two (2) provided above L shaped desk.

CABINET, COMMAND CENTER

A two (2) drawer C-Tech file cabinet will be provided under the desk top work surface. The drawers will be large enough to hold a hanging file. Each drawer will be 13.28" wide x 12.00" high x 15.00" deep.

The overall dimensions will be 20.75" wide x 28.00" high x 18.00" deep.

A total of one (1) will be provided under cab desk.

COMMAND CHAIR

Installed in the command cab will be two (2) command chairs manufactured by USSC. The command chair(s) will be located crew cab, to be used for L shape desk.

Arm rests will be provided along with an adjustable back.

The back will be a high back style with zero to 45 degree recline angle. For optimal comfort, the command chair will be provided with 15.00" deep cushion. To ensure safe operation, the command chair will be equipped with a sensor in the seat cushion and belt receptacle that will activate an alarm indicating the chair is occupied but not buckled.

The seat upholstery will be made of black Cordura, sewn with red stitching.

Lap style seat belts will be provided.

The seat will be mounted on a swivel base and will have forward and rearward adjustments. A 3.00" spacer with adjustment holes will be provided at the base for more flexibility with forward and rear-ward adjustment.

COMMAND DESK

An "L" shaped desk top work surface will be provided in the rear of the cab.

The desk top will be constructed of .75" plywood with a white plastic laminate that completely covers all of the plywood.

The desk top will be as wide as possible in the forward section as it extends from the passenger side rear facing seat to the driver side wall, and will be 24.00" deep. The side section of the desk along the driver side wall, will be as long as possible as it extends from the driver seat to the back of the cab, and will be 18.00" deep.

The inside corners will have a smooth radius where the side connects to the front.

CAB INTERIOR

With safety as the primary objective, the wrap-around style cab instrument panel will be designed with unobstructed visibility to instrumentation. The dash layout will provide the driver with a quick reference to gauges that allows more time to focus on the road.

The center console will be a high impact ABS polymer and will be easily removable for access to the defroster. The center console will include louvers strategically located for optimal air flow and defrost capability to the windshield.

The passenger side dashboard will be constructed of painted aluminum for durability and low maintenance. For enhanced versatility, the passenger side dash will include a flat working surface.

To provide optional (service friendly) control panels, switches and storage modules, a painted aluminum overhead console will also be provided.

To complete the cab front interior design, painted aluminum modesty panels will be provided under the dash on both sides of the cab. The driver side modesty panel will provide mounting for the battery switch and diagnostic connectors, while the passenger side modesty panel provides a glove box, and ground access to the main electrical distribution panel via quick quarter turn fasteners.

To provide a deluxe automotive interior, the engine tunnel, side walls and rear wall will be covered by a leather grain vinyl that is resistant to oil, grease, and mildew.

The headliner will be installed in both forward and rear cab sections. The headliner panel will be a composition of an aluminum panel covered with a sound barrier and upholstery.

The cab structure will include designated raceways for electrical harness routing from the front of the cab to the rear upper portion of the cab. Raceways will be extruded in the forward door frame, floor, walls and overhead in the area where the walls meet the ceiling. The raceways located in the floor will be covered by aluminum extrusion, while the vertical and overhead raceways will be covered by painted aluminum covers. The raceways will improve harness integrity by providing a continuous harness path that eliminates wire chafing and abrasion associated with exposed wiring or routing through drilled metal holes. Harnesses will be laid in place.

CAB INTERIOR UPHOLSTERY

The cab interior upholstery will be dark silver gray. All cab interior materials will meet FMVSS 302 (flammability of interior materials).

CAB INTERIOR PAINT

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

CAB FLOOR

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

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

CAB DEFROSTER

To provide maximum defrost and heating performance, a 54,961 BTU heater-defroster unit with 558 SCFM of air flow will be provided inside the cab. The defroster unit will be strategically located under the center forward portion of the instrument panel. For easy access, a removable metal cover will be installed over the defroster unit. The defroster will include an integral aluminum frame air filter, high performance dual scroll blowers, and ducts designed to provide maximum defrosting capabilities for the 1-piece windshield. The defroster ventilation will be built into the design of the cab dash instrument panel and will be easily removable for maintenance. The defroster will be capable of clearing 98 percent of the windshield and side glass when tested under conditions where the cab has been cold soaked at 0 degrees Fahrenheit for 10 hours, and a 2 ounce per square inch layer of frost/ice has been able to build up on the exterior windshield. The defroster system will meet or exceed SAE J382 requirements.

CAB/CREW CAB HEATER

Two (2) 36,702 BTU auxiliary heaters with 276 SCFM (each unit) of air flow will be provided inside the crew cab, one (1) in each outboard rear facing seat riser. The heaters will include high performance dual scroll blowers, one (1) for each unit. Outlets for the heaters will be located below each rear facing seat riser and below the fronts of the driver and passenger seats, for efficient airflow. An extruded

aluminum plenum will be incorporated in the cab structure that will transfer heat to the forward cab seating positions.

The heater/defroster and crew cab heaters will be controlled by an integral electronic control panel. The heater control panel will allow the driver to control heat flow to the front and rear independently. The control panel will include variable adjustment for temperature and fan control, and be conveniently located on the dash in clear view of the driver. The control panel will include highly visible, progressive LED indicators for both fan speed and temperature.

AIR CONDITIONING

Due to the large space inside the cab, a high-performance, customized air conditioning system will be furnished. A 19.10 cubic inch compressor will be installed on the engine.

The air conditioning system will be capable of cooling the average cab temperature from 100 degrees Fahrenheit to 64 degrees Fahrenheit in the forward section of the cab, and 69 degrees Fahrenheit in the rear section of the cab, 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.

A roof-mounted condenser with a 63,000 BTU output that meets and exceeds the performance specification will be installed on the cab roof. The condenser cover and mounting legs to be painted white as provided by the A/C manufacturer.

The evaporator unit will be installed in the rear portion of the cab ceiling over the engine tunnel. The evaporator will include two (2) high performance cores and plenums with multiple outlets, one (1) plenum directed to the front and one (1) plenum directed to the rear of the cab.

The evaporator unit will have a 49,000 BTU (4.08 tons) rating that meets and exceeds the performance specifications.

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

- Four (4) will be directed towards the drivers location
- Four (4) will be directed towards the officers location
- Eight (8) will be directed towards crew cab area

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

The air conditioner will be controlled by dual zone integral electronic control panels for the heater, defroster and air conditioner. The cab control panel will be located in the center console. For ease of operation, the control panels will include variable adjustment for temperature and fan control.

INTERIOR CAB INSULATION

The cab walls, ceiling and engine tunnel will be insulated in all strategic locations to maximize acoustic absorption and thermal insulation. The cab will be insulated with 2.00" insulation in the rear wall, 3.00" insulation in the side walls, and 1.50" insulation in the ceiling. Headliners will be constructed from a

0.20" high density polyethylene corrugated material. Each headliner will be wrapped with a 0.25" thick foil faced poly damp low emissivity foam insulation barrier for acoustic and thermal control.

Designed for maximum sound absorption and thermal insulation, the rear cab wall will be insulated with a 1.50" thick open cell acoustical foam. The thermal protection of the foam will provide and R-value of 4 per 1.00" thickness.

HEATING AND AIR CONDITIONING

There will be one (1) white, Coleman®-Mach® 8, Roughneck™, 120 volt, low profile air conditioning unit installed on the crew cab roof. The air conditioner will have cooling capacity of 15,000 BTU and heating capacity of 6000 BTU.

A wall mounted digital thermostat capable of controlling the rooftop air conditioner with electric heat element, wired battery direct will control the air conditioning unit.

This unit will be powered from the onboard generator to shoreline power transfer switch.

INTERIOR CAB INSULATION

The walls and roof will be insulated to aid in cooling.

WINDOW DEFROST FANS

Two (2) window defrost fans will be mounted on the ceiling of the cab, located crew cab rear outer corner.

SUN VISORS

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

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

GRAB HANDLE

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

A long rubber grab handle will be mounted on the dash board in front of the officer.

ENGINE COMPARTMENT LIGHTS

There will be one (1) Whelen, Model 3SC0CDCR, 12 volt DC, 3.00" white LED light(s) with Whelen, Model 3FLANGEC, 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 door will be 17.75" wide x 12.75" high and be flush with the wall of the engine tunnel.

The engine oil dipstick will allow for checking only. The transmission dipstick will allow for both checking and filling. An additional port will be provided for filling the engine oil.

The door will have a rubber seal for thermal and acoustic insulation. One (1) flush 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 in the cab will be four (4).

DRIVER SEAT

A Pierce PS6® 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 electric controls to adjust the rake (15 degrees), height (1.75" travel) and horizontal (7.00" travel) position. Electric controls will be located below the forward part of the seat cushion. To provide flexibility for multiple driver configurations, the seat will have a reclining back, adjustable from 20 degrees back to 45 degrees forward. Providing for maximum comfort, the seat back will be a high back style with manual lumbar adjustment lever, for lower back support, and will include minimum 7.50" deep side bolster pads for maximum support. The lumbar adjustment lever will be easily located at the lower outboard position of the seat cushion. For optimal comfort, the seat will be provided with 17.00" deep dual density 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. The seat belt will be furnished with dual automatic retractors that will provide ease of operation in the normal seating position.

OFFICER SEAT

A Pierce PS6® seat will be provided in the cab for the passenger. The seat 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. For optimal comfort, the seat will be provided with 17.00" deep dual density foam cushions designed with EVC (elastomeric vibration control). To ensure safe

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

The seat back will be an SCBA back style with 7.5 degree fixed recline angle, and will include minimum 4.50" wide x 7.50" deep side bolster pads for maximum support. 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 suspension seat safety system will be included. When activated, this system will pretension the seat belt and then retract the seat to its lowest travel position.

The seat will be furnished with a 3-point, shoulder type seat belt. The seat belt will be furnished with dual automatic retractors that will provide ease of operation in the normal seating position.

SEAT UPHOLSTERY

All seat upholstery will be black Turnout Tuff material.

SEAT EMBROIDERY

The seats in the cab and crew cab will be provided with custom embroidery. The Fire Department will determine what the embroidery will be by providing pictures at the time of order.

The embroidery will be provided on four (4) seats.

SEAT BELTS

All seating positions in the cab, crew cab and tiller cab (if applicable) 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 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.

SHOULDER HARNESS HEIGHT ADJUSTMENT

All seating positions furnished with 3-point shoulder type seat belts will include a height adjustment. This adjustment will optimize the belts effectiveness and comfort for the seated firefighter.

A total of two (2) seating positions will have the adjustable shoulder harness.

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 six (6) dual LED dome lights with black bezels provided. Two (2) lights will be mounted above the inside shoulder of the driver and officer and four (4) lights will be installed and located, two (2) 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.

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.

ADDITIONAL DOME LIGHT

There will be two (2) ROM DuroLumen, Model R03695, LED light(s) provided in the cab and/or crew cab, located under cabinets in crew.

The lights will be controlled by a three position rocker switch located to the rear of the passenger's side crew cab door after the battery switch is turned on.

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

MAP LIGHT

There will be one (1) ROM, Model C-MAP-T-LED map light(s) with 12.00" gooseneck provided in the cab and located back area of cab.

There will be a 3-position switch provided on the light(s) to allow the LED to be red/off/white.

The light switch(es) will be connected directly to the battery switched power.

HAND HELD LIGHT

There will be four (4) 12v Streamlight, model #44001, Vulcan lights mounted Cab, exact location TBD.

The Vulcan will be yellow in color.

CAB INSTRUMENTATION

The cab instrument panel will consist of gauges, an LCD display, telltale indicator lights, alarms, control switches, and a diagnostic panel. The function of 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 directly forward of the driver. Gauge and switch panels will be designed to be removable for ease of service and low cost of ownership.

GAUGES

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

- Voltmeter gauge (Volts)

Low volts (11.8 VDC)

Amber indicator on gauge assembly with alarm

High volts (15 VDC)

Amber indicator on gauge assembly with alarm

Very low volts (11.3 VDC)

Amber indicator on gauge assembly with alarm

Very high volts (16 VDC)

Amber indicator on gauge assembly with alarm

- Tachometer (RPM)

- Speedometer (Primary (outside) MPH, Secondary (inside) Km/H)

- Fuel level gauge (Empty - Full in fractions)

Low fuel (1/8 full)

Amber indicator on gauge assembly with alarm

Very low fuel (1/32) fuel

Amber indicator on gauge assembly with alarm

- Engine oil pressure gauge (PSI)

Low oil pressure to activate engine warning lights and alarms

Red indicator on gauge assembly with alarm

- Front air pressure gauge (PSI)

Low air pressure to activate warning lights and alarm

Red indicator on gauge assembly with alarm

- Rear air pressure gauge (PSI)

Low air pressure to activate warning lights and alarm

Red indicator on gauge assembly with alarm

- Transmission oil temperature gauge (Fahrenheit)

High transmission oil temperature activates warning lights and alarm

Amber indicator on gauge assembly with alarm

- Engine coolant temperature gauge (Fahrenheit)

High engine temperature activates an engine warning light and alarm

Red indicator on gauge assembly with alarm

- Diesel Exhaust Fluid Level Gauge (Empty - Full in fractions)

Low fluid (1/8 full)

Amber indicator on gauge assembly with alarm

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

INDICATOR LAMPS

To promote safety, the following telltale indicator lamps will be integral to the gauge assembly and are located above and below the center gauges. 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)
- SRS (supplemental restraint system) fault (where applicable)
- DEF (low diesel exhaust fluid level)

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

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.

Emergency master switch: A molded plastic push button switch with integral indicator lamp will be provided. Pressing the switch will activate emergency response lights and siren control. A green lamp on the switch provides indication that the emergency master mode is active. Pressing the switch again disables the emergency master mode.

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

Panel backlighting intensity control switch: A three (3)-position momentary rocker switch will be provided. The first switch position decreases the panel backlighting intensity to a minimum level as the switch is held. The second switch position is the default position that does not affect the backlighting intensity. The third switch position increases the panel backlighting intensity to a maximum level as the switch is held.

The following standard controls will be integral to the gauge assembly and are located below the right hand gauges. All switches have backlit labels for low light applications.

High idle engagement switch: A two (2)-position momentary rocker switch with integral indicator lamp will be provided. The first switch position is the default switch position. The second switch position will activate and deactivate the high idle function when pressed and released. 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.

The following standard controls will be provided adjacent to the cab gauge assembly within easy reach of the driver. All switches will have backlit labels for low light applications.

Ignition switch: A three (3)-position maintained/momentary rocker switch will be provided. The first switch position will deactivate vehicle ignition. The second switch position will activate vehicle ignition. The third momentary position will disable the Command Zone audible alarm if held for three (3) to five (5) seconds. A green indicator lamp will be activated with vehicle ignition.

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.

4-way hazard switch: A two (2)-position maintained rocker switch will be provided. The first switch position will deactivate the 4-way hazard switch function. The second switch position will activate the 4-way hazard function. The switch actuator will be red and includes the international 4-way hazard symbol.

Heater, defroster, and optional air conditioning control panel: A control panel with membrane switches will be provided to control heater/defroster temperature and heater, defroster, and air conditioning fan speeds. A green LED status bar will indicate the relative temperature and fan speed settings.

Turn signal arm: A self-canceling turn signal with high beam headlight and windshield wiper/washer controls will be provided. The 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.

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 overhead console on the driver's side, up to four (4) switch panels in the engine tunnel console facing the driver, up to four (4) switch panels in the overhead console on the officer's side and up to two (2) switch panels in the engine tunnel console facing the officer. All switches will have backlit labels for low light applications.

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
- SRS diagnostic port (where applicable)
- 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, 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 shall be provided.

- Officer Speedometer, A Class I digital display speedometer will be provided on the officer side overhead position.

"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 emergency light switch panel will have a master switch for ease of use plus individual switches for selective control. Each switch panel will contain eight (8) membrane-type switches each rated for one million (1,000,000) cycles. Panels containing less than eight (8) switch assignments will include non-functioning black appliqués. Documentation will be provided by the manufacturer indicating the rated cycle life of the switches. The switch panel(s) will be located in the overhead position above the windshield on the driver side overhead to allow for easy access.

Additional switch panel(s) will be located in the overhead position(s) above the windshield or in designated locations on the lower instrument panel layout.

The switches will be membrane-type and also act as an integral indicator light. For quick, visual indication the entire surface of the switch will be illuminated white whenever back lighting is activated and illuminated green whenever the switch is active. An active illuminated switch will flash when interlock requirements are not met or device is actively being load managed. For ease of use, a two (2)-ply, scratch resistant laser engraved Gravoply label indicating the use of each switch will be placed in the center of the switch. The label will allow light to pass through the letters for ease of use in low light conditions.

WIPER CONTROL

For simple operation and easy reach, the windshield wiper control will be an integral part of the directional light lever located on the steering column. The wiper control will include high and low wiper speed settings, a one (1)-speed intermittent wiper control and windshield washer switch. The control will have a "return to park" provision, which allows the wipers to return to the stored position when the wipers are not in use.

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 officer side dash area
- Termination will be with heat shrinkable butt splicing
- Wires will be sized to 125 percent of the protection

The 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 cab dash.

Termination will be with 15 amp, power point plug with rubber cover.

Wires will be sized to 125% of the protection.

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

SPARE CIRCUIT
There will be two (2) 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 50 amps at 12 volts DC.
- Power and ground will terminate LS cab at the bottom of the 4 shelves, (1) mounted centered above rear engine tunnel under the desk.
- Termination will be to a Blue Sea System, Model 5025, 6 circuit with negative bus bar. The terminal block will include a cover with circuit labels.

Wires will be sized to 125% of the protection.

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

SPARE CIRCUIT
There will be two (2) 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 2.0 amps at 12 volts DC.
- Power and ground will terminate cab dash, crew cab deck top.
- Termination will be a Blue Sea Systems part number 1016 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.

STEREO RADIO

A Jensen, heavy duty AM/FM/CD/Weatherband stereo radio, with front auxiliary input will be installed within reach of the driver . There will be 5.25" speakers installed one (1) pair of 5.25" speakers in the cab and one (1) pair of 5.25" speakers in the crew cab. The antenna will be a roof-mounted rubber antenna located in an open space, on the cab roof .

The following features will be included:

- CD Player with Electronic Skip Protection (ESP)
- Full 7-Channel NOAA Weatherband Tuner with SAME technology
- Built-in Clock
- Audio CD, CD-R, R/W, MP3 CD compatible
- Radio Broadcast Data System Text Display
- Front panel USB input
- Front and Rear Auxiliary Audio Input
- Receives audio (A2DP/AVRCP) from Bluetooth enabled device
- Supports Bluetooth HFP to receive phone calls from BT-enabled phones
- Low battery alert (<10.8Vdc)
- Heavy Duty design with Conformal Coated Circuit Boards for maximum durability under all conditions

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 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 indicate
        - 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.

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 and in the center overhead of the cab instrument panel. 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.

INTERCOM SYSTEM

A four (4) position David Clark, Model U3800, intercom system with single radio interface capability at the driver and officer positions will be provided. Two (2) crew cab positions, located at two (2) inboard rear facing seats, will have radio listen / intercom only.

The following components will be supplied with this system:

- One (1) U3815 Radio Interface Module (Officer)
- One (1) U3811 Radio Interface Modules (Driver)
- One (1) U3800 Intercom Unit (2 Crew)
- One (1) C3820 Power Cable.
- All necessary cables and connectors

RADIO / INTERCOM INTERFACE INCLUDED

All radio interfaced stations will have universal radio interfaces installed. The interface wiring will be routed within the cab to behind driver seat .

UNDER THE HELMET HEADSET

There will be four (4) under the helmet, headset(s) provided inboard of each .

Each David Clark, Model H3442, headset will feature:

- 5' Coiled cord
- Noise cancelling electric microphone
- Flexible microphone boom rotates 200 degrees for left or right dress
- Microphone on/off button
- Comfort Gel Earseals
- 23 dB noise reduction

CHARGER, SINGLE PORTABLE RADIO

There will be one (1) Motorlola, Model WPLN4208C, portable two-way radio charger(s) with radio retaining strap installed RS4 (Command Compartment). Each charger will be hard wired in the vehicle 12 volt battery direct.

RADIO SPEAKER

There will be one (1) Motorola, Model #HSN4040, water resistant radio speaker with volume control provided and mounted RS4 (Command Compartment). Cables will terminate from radio head to RS4.

LAND MOBILE 2-WAY RADIO

There will be one (1) Motorola, Model M25URS9PW1N, APX6500 700/800 MHz dual band mid power mobile radio(s) provided location TBD .

The following will be provided for each:

- G806 ADD: Astro digital CAI operation
- G48 ENH: Conventional operation APX6500
- G442 ADD: O5 Control Head
- G444 ADD: APX Control head software
- G67 ADD: Remote mount mid power
- G174 ADD: Ant 3DB Low profile 762-870
- W22 ADD: Palm Microphone
- G831 ADD: Speaker 15w Water Resistant

- G400 ENH: 1 year SFS LITE
- W665 ADD: Base station APEXWWM
- G610 ADD: Remote mount cable 30'

RADIO ANTENNA MOUNT

There will be one (1) standard 1.125", 18 thread antenna-mounting base(s) installed 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.

VEHICLE CAMERA SYSTEM

There will be a color vehicle camera system provided with the following:

- One (1) camera located at the rear of the apparatus, pointing rearward, displayed automatically with the vehicle in reverse.
- One (1) camera located on the right side of the apparatus, pointing rearward, displayed automatically with the right side turn signal.
- One (1) camera located on the left side of the apparatus, pointing rearward, displayed automatically with the left side turn signal.

The camera images will be displayed on the driver's vehicle information center display. Audio from the microphone on the rear camera will be not provided.

The following components will be included:

- One (1) SV-CW134639CAI Camera
- Two (2) CS134404CI Side cameras
- One (1) Amplified speaker (if applicable)
- All necessary cables

RECESS REAR CAMERA

A rear camera recess will be provided in the center at the rear .

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 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 re programmable to accommodate changes to the vehicle's operating parameters
- Complete operating and troubleshooting manuals
- USB connection to the main control module for advanced troubleshooting

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 16 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 ADVANCED/VISUAL 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

All control system modules, with the exception of the main control module, will contain on-board visual diagnostic LEDs that assist in troubleshooting. The LEDs will be enclosed within the sealed, transparent module housing near the face of the module. One LED for each input or output will be provided and will illuminate whenever the respective input or output is active. Color-coded labels within the modules will encompass the LEDs for ease of identification. The LED indicator lights will provide point of use information for reduced troubleshooting time without the need for an additional computer.

TECH 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 provide an external antenna connection 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 data logging 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 logger will provide up to 2 Gigabytes of data storage.

A USB connection will be provided on the Tech Module. It will provide a means to download data logger information and update software in the device.

PROGNOSTICS

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

The system will send automatic indications to the Command Zone, color display and/or wireless enabled device to proactively alert of upcoming service intervals.

Prognostics will include:

- Engine oil and filter
- Transmission oil and filter
- Pump oil (if equipped)
- Foam oil (if equipped)
- Aerial oil and filter (if equipped)

ADVANCED DIAGNOSTICS

An advanced, Windows-based, diagnostic software program will be provided for this control system. The software will provide troubleshooting tools to service technicians equipped with a Windows-based computer or wireless enabled device.

The service and maintenance software will be easy to understand and use and have the ability to view system input/output (I/O) information.

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.

ENHANCED SOFTWARE

The solid-state control system will include the following software enhancements:

All perimeter lights and scene lights (where applicable) will be deactivated when the parking brake is released.

Cab and crew cab dome lights will remain on for ten (10) seconds for improved visibility after the doors close. The dome lights will dim after ten (10) seconds or immediately if the vehicle is put into gear.

Cab and crew cab perimeter lights will remain on for ten (10) seconds for improved visibility after the doors close. The dome lights will dim after ten (10) seconds or immediately if the vehicle is put into gear.

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.

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

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 (1890) applied completely over the metal portion of the terminal.

All lights and reflectors, required to comply with Federal Motor Vehicle Safety Standard #108, will be furnished. Rear identification lights will be recessed mounted for protection. Lights and wiring mounted in the rear bulkheads will be protected from damage by installing a false bulkhead inside the rear compartments.

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

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

BATTERY SYSTEM

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

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

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

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

BATTERY SYSTEM

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

MASTER BATTERY SWITCH

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

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

BATTERY COMPARTMENTS

The batteries will be stored in well-ventilated compartments that are located under the cab and bolted directly to the chassis frame. The battery compartments will be constructed of 3/16" steel plate and be designed to accommodate a maximum of three (3) group 31 batteries in each compartment. The compartments will include formed fit heavy-duty roto-molded polyethylene battery tray inserts with drains on each side of the frame rails. The batteries will be mounted inside of the roto-molded trays.

JUMPER STUDS

One (1) set of battery jumper studs with plastic color-coded covers will be installed on the battery box on the driver's side. This will allow enough room for easy jumper cable access.

BATTERY CHARGER/ AIR COMPRESSOR

There will be a Kussmaul™ Pump Plus 1200, Model # 52-21-1100, single output battery charger/air compressor system will be provided. A display bar graph indicating the state of charge will be included.

The automatic charger will maintain one (1) set of batteries with a maximum output current of 40 amps.

The 12-volt air compressor will be installed to maintain the air system pressure when the vehicle is not in use.

There will be an auto pump timer installed between the pressure switch and the pump that will allow the pump to run for one hour than shut down for one hour.

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

Battery charger/compressor will be located in the front left body compartment.

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 Ratting (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 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 headlight 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.

DIRECTIONAL LIGHTS

There will be two (2) Whelen 600® series, LED combination directional/marker lights provided. The lights will be located on the outside cab corners, next to the headlights.

The color of the lenses will be the same color as the LED's.

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 seven (7) 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.
- Two (2) amber LED marker lights will be installed, one (1) on each side above the cab doors.

REAR CLEARANCE/MARKER/ID LIGHTING

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

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

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

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

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

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

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

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

Per FMVSS 108 and CMVSS 108 requirements.

REAR FMVSS LIGHTING

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

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

The lights shall be provided with color lenses.

Each light will be installed separately at the rear with Whelen, Model M6FC, chrome flanges.

Two (2) Whelen Model M6BUW, LED backup lights, will be provided with a flange.

LICENSE PLATE BRACKET

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

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

BACK-UP ALARM

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

CAB PERIMETER SCENE LIGHTS

There will be three (3) Amdor®, Model AY-LB-12HW020, 350 lumen, 20.00" long, white LED strip lights provided, one (1) for each cab door.

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

BODY PERIMETER SCENE LIGHTS

There will be two (2) Amdor, Model AY-LB-12HW012, 190 lumens each, 12.00" 12 volt DC LED strip lights provided at the rear step area of the body, one (1) each side shining to the rear.

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

STEP LIGHTS

Step lights will be provided on the body. 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.

The step lights will be controlled by a switch installed at the rear of the unit in an easily accessible area.

The following step lights will be provided:

Rear Stairway Lights

There will be a total of two (2) 12 volt DC, LED strips light provided to illuminate the stairway. One (1) light strip will be mounted at an angle on the side walls above the stairs on each side of the stairway.

Other Step Lights

Step lights will be provided both at the rear of the body and in the recessed walkway on the roof of the body. All of these step lights will be white LED lights.

There will be one (1) step light provided on each side of the tailboard at the rear of the body.

There will be one (1) chrome plated hooded step light provided every 4' in the recessed walkway.

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

SCENE LIGHTS

There will be two (2), Super Bright LEDS, Model ORBH14-36WS-FL, 14.00" 12 volt DC LED lights with flood optics mounted under the front bumper, under front bumper.

The light(s) will be activated when the battery switch is on, the parking brake is applied and a switch in the cab is on.

These lights may be load managed when the parking brake is applied.

REAR WORK AREA LIGHTS

There will be two (2) Whelen®, part number 01-066C520-10, 3.00" x 7.00" white LED scene lights installed at the rear of the vehicle, under the tailboard, facing the rear. The lights will have 12 white LEDs and have no internal optics. The lights will be mounted on brackets below the truck so as to not interfere with the angle of departure.

The lights will be controlled by a switch at the driver's side switch panel.

12 VOLT LIGHTING

There will be one (1) Whelen® Model P*H2*, 17,750 lumens 12 volt DC light(s) with a combination of flood and spot optics provided on the front visor, centered.

The painted parts of this light assembly to be white.

The light(s) will be controlled by a switch at the driver's side switch panel and by a switch at the passenger's side switch panel.

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

12 VOLT DC SCENE LIGHTS

There will be one (1) Whelen® Model P*H2*, 17,750 lumens 12 volt DC powered lights with white LEDs and a combination of flood and spot optics installed on the apparatus located, side of cab, high, between cab and crew cab doors.

The light(s) to be installed in a 0 degree vertical recessed bracket.

The painted parts of this light assembly to be red number 106.

The lights will be activated by a switch at the driver's side switch panel, by a switch at the passenger's side switch panel and when the cab or crew cab doors on the driver's side are open.

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 P*H2*, 17,750 lumens 12 volt DC powered lights with white LEDs and a combination of flood and spot optics installed on the apparatus located, RS cab, high, between cab and crew cab door.

The light(s) to be installed in a 0 degree vertical recessed bracket.

The painted parts of this light assembly to be red number 106.

The lights will be activated by a switch at the driver's side switch panel, by a switch at the passenger's side switch panel and when the cab or crew cab doors on the passenger's side are open.

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

FRONT WHITE WARNING LIGHT CONTROL

There will be switch(es) installed in the cab on the switch panel that will allow the operator to activate/deactivate all the front white warning lights whenever the emergency master switch is activated and the parking brake is released. The headlight flash option is included in this white warning light control if applicable. Each time the emergency master switch is activated, and the parking brake is released, the white warning light control switch and the white warning lights will default to on.

HEAVY DUTY RESCUE BODY CONSTRUCTION

The body will be built as a separate module prior to being mounted onto the substructure. The rescue body will be constructed of 5052 aluminum.The structural support framing and the gussets used will be of 2.00" (51 mm) square 0.125" (3 mm) wall 6061 aluminum alloy tubing. All exterior body corners will be 3.00" (76 mm) radius aluminum, corrosion resistant alloy 6061 extrusions. Spacing of the 2.00" (51 mm) vertical supports will not exceed 14.00" (356 mm) on center. The roof and corner extrusions will be reinforced with interconnecting gusset supports at all stress points. The body will be properly welded into a unitized construction. Proper reinforcing and supports will be utilized throughout the entire construction process to ensure strength and rigidity.

The body will be supported by 2.00" (51 mm) x 2.00" (51 mm) x 0.25" (6 mm) wall aluminum tubing. The cross sill tubes will be spaced approximately 15.00" (381 mm) on center and interconnected to the body from front to rear.

A 1.00" (25 mm) x 3.00" (76 mm) aluminum bar will be used as a stringer and will be welded to the cross sills. The stringer will be used to mount the body to the chassis frame rails.

ROOF CONSTRUCTION

The roof will be integral with the body construction. The roof will be constructed of 0.125" (3 mm) bright aluminum treadplate and supported by 2.00" (51 mm) square 0.125" (3 mm) wall tubing welded in place approximately 12.00" (305 mm) on center. The roof will be further reinforced with 2.00" (51 mm) square gussets welded approximately every 48.00" (1219 mm). The roof perimeters will be constructed

of a 3.00" (76 mm) radius extrusion with an integral drip molding. The roof extrusion will also have an inset allowing the roof panel to be recessed into the extrusion giving further support and sealing effect at the outside edge.

The roof panel will be welded to the roof extrusions and supports. All roof seams will be continuously welded.

BODY AND COMPARTMENT SUPPORT

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

The bottom of each lower compartment floor will be supported by an under slung steel angle grid that will be bolted to the chassis frame rails with grade 8 bolts in order to transfer major stress to the chassis frame and not through the body. The under slung support will be constructed of 0.50" (13 mm) x 2.50" (64 mm) x 2.50" (64 mm) steel angle vertical supports. Horizontal members will be 0.38" (10 mm) x 2.00" (51 mm) x 3.00" (76 mm) and 0.38" (10 mm) x 2.50" (64 mm) x 3.50" (89 mm) steel angle.

The complete substructure will be washed, primed and finish painted before being bolted to the chassis frame. A rubber coating will be applied over the painted under slung support structure for an additional corrosion barrier.

A 3.00" (76 mm) x 0.75" (19 mm) rubber liner will be placed on top of the chassis frame rails. The liner will be used to prevent metal to metal contact where the body stringer rests on the chassis frame rails.

The compartment floors will be bolted to the under slung substructure and the body will be secured to the chassis frame by a minimum of four (4) tie-down assemblies. Each tie-down assembly will consist of two (2) 2.00" (51 mm) x 6.25" (159 mm) x 0.75" (19 mm) steel plates and two (2) 14.00" (356 mm) long, 0.50" (13 mm) diameter steel rods. The tie-downs will be easily accessible so that the body may be removed.

BODY LENGTH

The length of the body will be 284.00" (7,214 mm).

BODY WIDTH

The width of the body will be 100.00" (2,540 mm).

Compartment Depth

Standard Depth

All standard depth body compartments will measure 30.00" (762 mm) deep from the outside of the body to the rear compartment wall. The usable depth inside each side body compartment will be 28.00" (711 mm) deep.

Transverse

All transverse side body compartments will have a usable depth of 28.00" (711 mm) at the floor level. These compartments will extend over the frame rails through to the other side of the body.

BODY HEIGHT

The height of the body will be 98.00" (2,489 mm) without any roof mounted options.

ROOF CONFIGURATION

The roof of the body will be configured with side hatch compartments, a recessed walkway, and a recessed area for mounting equipment. The recessed area will be located at the front of the body. The side hatch compartments and the recessed walkway will be located rearward of the recessed area.

The side hatch compartments will run the length of the body on both sides from the rear up to the recessed area. The side hatch compartments will be provided in the following configuration:

- There will be two (2) hatch compartments of equal size on each side of the roof.

The recessed walkway will be centered between the hatch compartments, running the length of the body up to the recessed area.

Recessed Area

The recessed area will be constructed of 0.125" (3 mm) aluminum treadplate and will have two (2) 1.00" (25 mm) diameter drain holes. The drains will be routed to drain below the body.

The recessed area will be sized appropriately in order to allow proper mounting space and clearance for all roof mounted equipment where the designated mounting location is the recess on the roof of the body. The maximum allowable depth of the recessed area will be equal to the depth of the recessed walkway. The recess will be configured so that whenever possible, items mounted in the recess will stow below the roof line of the body. If a piece of equipment is taller than the maximum depth of the recess, that item may protrude above the roof line.

Hatch Compartments

All compartment doors will be designed to hinge on the outboard side and will be held open with gas cylinder struts.

The outside walls of the compartments will be a double wall design to prevent equipment from denting the outside painted surface.

A 1.00" (25 mm) diameter drain will be provided on the floor of each compartment. The drains will be routed to drain below the body.

Size of Hatch Compartments

The clear width of the side hatch compartments differs depending on the width of the body. The clear width of each side hatch compartment will be as follows:

Clear Width of Side Hatch Compartments According to Width of Body	
Body Width	**Clear Width of Hatch Compartments**
96.00" (2,438 mm)	26.50" (673 mm)
100.00" (2,540 mm)	28.50" (724 mm)

All hatch compartments on the roof of the body will have the same clear depth inside the compartment unless listed otherwise. The inside depth can differ depending on the height of the body. The clear depth inside each hatch compartment will be as follows:

Inside Depth of All Hatch Compartments According to Body Height	
Body Height	**Inside Depth of Hatch Compartments**
90.00" (2,286 mm)	16.50" (419 mm)
98.00" (2,489 mm)	24.50" (622 mm)
100.00" (2,540 mm)	26.50" (673 mm)
103.25" (2,623 mm)	29.50" (749 mm)
106.25" (2,699 mm)	32.50" (826 mm)
Body Height Not Listed Here	Consult factory for depth of hatch compartments

Recessed Walkway

The recessed walkway will not be less than 30.00" (762 mm) wide. The depth of the walkway will be equal to the depth of the hatch compartments. The walkway will be constructed of aluminum treadplate and reinforced with 0.125" (3 mm) thick, 2.00" (51 mm) square aluminum tubing on 12.00" (305 mm) centers.

The treadplate in the walkway will be formed up 90 degrees at least 2.00" (51 mm) on each side to form a double 0.125" (3 mm) vertical wall for a water tight seal.

There will be two (2) 1.00" (25 mm) diameter drain holes provided in the walkway. The drains will be routed to drain below the body.

ROLLUP DOOR, SIDE COMPARTMENTS

There will be eight (8) 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 Gortite®.

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

Between each slat at the pivoting joint will be a PVC inner seal to prevent metal to metal contact and prevent dirt or moisture from entering the compartments. Seals will allow door to operate in extreme temperatures ranging from 180 to -40 degrees Fahrenheit (82 to -40 degrees Celsius). Side, top and bottom seals will be provided to resist ingress of dirt and weather and will be made of Santoprene.

All hinges, barrel clips and end pieces will be nylon 66. All nylon components will withstand temperatures from 300 to -40 degrees Fahrenheit (149 to -40 degrees Celsius).

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

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

To conserve space in the compartment(s), the spring roller assembly will not exceed 3.00" (76 mm) in diameter.

The header for the rollup door assembly will not exceed 4.00" (102 mm).

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

EXTERIOR COMPARTMENTS

The exterior compartment layout, dimensions and requirements will be minimum specifications. The doors will be able to withstand years of rugged service and wear. For this reason, the compartment door design, metal thickness and attachments will be strictly adhered to. The compartment will be constructed of .125" (3 mm)-corrosion resistant aluminum alloy, including all interior panels, floor and sides. The assemblies will be held inside fixtures while being welded.

Compartment flooring will be of the sweep out design with the floor higher than the compartment door frame. All compartments will be supported on top, rear and bottom. The rear wall of each exterior compartment will be welded to the cross sills. Drip protection will be provided over all door openings with an integral roof extrusion or aluminum extrusion.

WHEEL WELLS

The rear fenders will be an integral part of the body sides and compartments. The inside of the fender will be fitted with a full circular inner fender liner. All screws and bolts, which protrude into a compartment, will have acorn nuts attached.

LEFT FORWARD COMPARTMENTS

First Compartment

The first compartment will be located directly behind the cab. The compartment will be provided with a full-height roll-up door. The compartment dimensions will be 50.50" (1,283 mm) wide x 66.88" (1,699 mm) high. The compartment will be transverse, extending through to the other side of the body. The area over the frame rails will be 50.50" (1,283 mm) wide x 49.25" (1,251 mm) high. The compartment door frame opening will be 48.00" (1,219 mm) wide x 64.00" (1,626 mm) high. The compartment clear door opening will be 45.50" (1,156 mm) wide x 58.00" (1,473 mm) high.

Second Compartment

The second compartment will be located behind the first compartment. The compartment will be provided with a full-height roll-up door. The compartment dimensions will be 50.88" (1,292 mm) wide x 66.88" (1,699 mm) high. The compartment will be transverse, extending through to the other side of the body. The area over the frame rails will be 50.88" (1,292 mm) wide x 49.25" (1,251 mm) high. The compartment door frame opening will be 48.00" (1,219 mm) wide x 64.00" (1,626 mm) high. The compartment clear door opening will be 45.50" (1,156 mm) wide x 58.00" (1,473 mm) high.

Third Compartment

The third compartment will be located behind the second compartment and directly ahead of the rear wheels. The compartment will be provided with a full-height roll-up door. The compartment dimensions will be 50.88" (1,292 mm) wide x 66.88" (1,699 mm) high. The compartment will be transverse, extending through to the other side of the body. The area over the frame rails will be 50.88" (1,292 mm)

wide x 49.25" (1,251 mm) high. The compartment door frame opening will be 48.00" (1,219 mm) wide x 64.00" (1,626 mm) high. The compartment clear door opening will be 45.50" (1,156 mm) wide x 58.00" (1,473 mm) high.

Compartment Loading
Each compartment will be capable of holding 1,100 lb (499 kg). The area over the frame rails in each compartment will be capable of holding an additional 1,000 lb (454 kg).

LEFT OVER WHEEL COMPARTMENT
A compartment will be provided above the rear wheels. The compartment will be provided with a full height roll-up door.

The compartment dimensions will be 62.50" (1,588 mm) wide x 39.13" (994 mm) high. The compartment door frame opening will be 57.00" (1,448 mm) wide x 36.25" (921 mm) high. The compartment clear door opening will be 54.50" (1,384 mm) wide x 31.25" (794 mm) high.

Compartment Loading
The compartment will be capable of holding 1,200 lb (545 kg).

LEFT REAR SIDE COMPARTMENT
The left rear side compartment will be located directly behind the rear wheels. The compartment will be provided with a full-height roll-up door. The compartment dimensions will be 62.50" (1,588 mm) wide x 66.88" (1,699 mm) high. The compartment door frame opening will be 60.00" (1,524 mm) wide x 64.00" (1,626 mm) high. The compartment clear door opening will be 57.50" (1,461 mm) wide x 58.00" (1,473 mm) high.

Compartment Loading
The compartment will be capable of holding 1,400 lb (635 kg).

RIGHT FORWARD COMPARTMENTS

First Compartment
The first compartment will be located directly behind the cab. The compartment will be provided with a full-height roll-up door. The compartment dimensions will be 50.50" (1,283 mm) wide x 66.88" (1,699 mm) high. The compartment will be transverse, extending through to the other side of the body. The area over the frame rails will be 50.50" (1,283 mm) wide x 49.25" (1,251 mm) high. The compartment door frame opening will be 48.00" (1,219 mm) wide x 64.00" (1,626 mm) high. The compartment clear door opening will be 45.50" (1,156 mm) wide x 58.00" (1,473 mm) high.

Second Compartment
The second compartment will be located behind the first compartment. The compartment will be provided with a full-height roll-up door. The compartment dimensions will be 50.88" (1,292 mm) wide x 66.88" (1,699 mm) high. The compartment will be transverse, extending through to the other side of the body. The area over the frame rails will be 50.88" (1,292 mm) wide x 49.25" (1,251 mm) high. The compartment door frame opening will be 48.00" (1,219 mm) wide x 64.00" (1,626 mm) high. The compartment clear door opening will be 45.50" (1,156 mm) wide x 58.00" (1,473 mm) high.

Third Compartment
The third compartment will be located behind the second compartment and directly ahead of the rear wheels. The compartment will be provided with a full-height roll-up door. The compartment dimensions will be 50.88" (1,292 mm) wide x 66.88" (1,699 mm) high. The compartment will be transverse, extending through to the other side of the body. The area over the frame rails will be 50.88" (1,292 mm) wide x 49.25" (1,251 mm) high. The compartment door frame opening will be 48.00" (1,219 mm) wide x 64.00" (1,626 mm) high. The compartment clear door opening will be 45.50" (1,156 mm) wide x 58.00" (1,473 mm) high.

Compartment Loading
Each compartment will be capable of holding 1,100 lb (499 kg). The area over the frame rails in each compartment will be capable of holding an additional 1,000 lb (454 kg).

RIGHT OVER WHEEL COMPARTMENT
A compartment will be provided above the rear wheels. The compartment will be provided with a full height roll-up door.

The compartment dimensions will be 62.50" (1,588 mm) wide x 39.13" (994 mm) high. The compartment door frame opening will be 57.00" (1,448 mm) wide x 36.25" (921 mm) high. The compartment clear door opening will be 54.50" (1,384 mm) wide x 31.25" (794 mm) high.

Compartment Loading
The compartment will be capable of holding 1,200 lb (545 kg).

RIGHT REAR SIDE COMPARTMENT
The right rear side compartment will be located directly behind the rear wheels. The compartment will be provided with a full-height roll-up door. The compartment dimensions will be 62.50" (1,588 mm) wide x 66.88" (1,699 mm) high. The compartment door frame opening will be 60.00" (1,524 mm) wide x 64.00" (1,626 mm) high. The compartment clear door opening will be 57.50" (1,461 mm) wide x 58.00" (1,473 mm) high.

Compartment Loading
The compartment will be capable of holding 1,400 lb (635 kg).

REAR COMPARTMENT

Roll-Up Door
A roll-up door will be installed on the rear compartment. The door will be a Gortite® brand roll-up door manufactured by Dynatect™ Manufacturing. The finish will be painted one (1) color to match the lower portion of the body.

The door will be double faced aluminum construction. The lath sections will be an interlocking rib design and will be individually replaceable without complete disassembly of the door.

Between each slat at the pivoting joint will be a PVC inner seal to prevent metal to metal contact and to prevent dirt or moisture from entering the compartment. Seals will allow door to operate in extreme

temperatures ranging from 180 to -40 degrees Fahrenheit (82 to -40 degrees Celsius). The side, top and bottom seals will be made of Santoprene and will be provided to resist ingress of dirt and weather.

All hinges, barrel clips and end pieces will be nylon 66. All nylon components will withstand temperatures from 300 to -40 degrees Fahrenheit (149 to -40 degrees Celsius).

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

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

To conserve space in the compartment, the spring roller assembly will not exceed 3.00" (76 mm) in diameter.

The header for the roll-up door assembly will not exceed 4.00" (102 mm).

A heavy-duty magnetic switch will be used for control of the interior compartment lights and the "open compartment door" warning light in the cab.

Compartment Door Size

Dimensions of Roll-Up Door (96.00" or 100.00" Wide Body)		
	Door Frame Opening	**Clear Door Opening**
With Recessed Walkway on Roof of Body	Width: 40.00" (1,016 mm) Height: 64.00" (1,626 mm)	Width: 37.25" (946 mm) Height: 57.25" (1,454 mm)
Without Recessed Walkway on Roof of Body	Width: 40.00" (1,016 mm) Height: 79.75" (2,026 mm)	Width: 37.25" (946 mm) Height: 73.00" (1,854 mm)

Interior Dimensions

Interior Width of Rear Compartment	
Body Width	**Interior Width of Compartment**
96.00" (2,438 mm) or 100.00" (2,540 mm)	40.00" (1,016 mm)

The frame rails will extend part of the way into the rear compartment at the floor level creating two (2) different values for the height and depth of the compartment. Both the height and depth of the compartment will be different when measured behind the frame rails as compared to when measured above the frame rails.

Interior Height of Rear Compartment		
	Full Height (Behind Frame Rails)	**Height Above Frame Rails**

Any Body with Recessed Walkway on Roof of Body	67.00" (1,702 mm)	49.37" (1,254 mm)
90.00" (2,286 mm) High Body without Recessed Walkway	82.75" (2,102 mm)	65.12" (1,654 mm)
98.00" (2,489 mm) High Body without Recessed Walkway	90.75" (2,305 mm)	73.12" (1,857 mm)
Non-Standard Body Height without Recessed Walkway	Dimension not available	Dimension not available

Depth of Rear Compartment

The rear compartment will be 26.00" (660 mm) deep at the floor level behind the frame rails.

The depth of the rear compartment above the frame rails can vary according to the configuration of the body. This dimension is dependent upon both the width and depth of the following compartments:

- Left Rear Side Compartment
- Right Rear Side Compartment
- Left Over the Wheel Compartment
- Right Over the Wheel Compartment

Depth of Rear Compartment Over the Frame				
	48.00" Rear Side Compts	**60.00" Rear Side Compts**	**Rear Side Compts: Width Not Listed Here**	**Rear Side Compts: Transverse (Any Width)**
Standard Over Wheel Compts	114.50" (2,908 mm)	126.50" (3,213 mm)	Width of Side Rear Compartments + 68.50" (1,740 mm)	No compartment
Transverse Over Wheel Compts	51.88" (1,318 mm)	63.88" (1,623 mm)	Width of Side Rear Compartments + 5.88" (149 mm)	No compartment
Over Wheel Compts: Non-Standard Dimension	Dimension available upon request	Dimension available upon request	Dimension available upon request	No compartment

Compartment Loading

The compartment will be capable of holding 1,000 lb (454 kg). The area over the frame rails will be capable of holding an additional 2,000 lb (908 kg).

COUNTERTOP COMMAND DESK WITH STORAGE

A command desk with storage area will be provided and mounted on top of the countertop. The desk will measure approximately 30.00" wide, and will span the full depth of the countertop. The desk will be 6.00" high at the rear and will slant forward toward the front of the desk. A hinged top will provide

access to the storage area in the desk. The stainless steel hinge will be located at the rear of the desk top so it can be opened from the front of the desk. An extruded aluminum lip will be fastened to the lower edge of the desk top to prevent items from sliding off.

The desk will be constructed from a composite material and provided with a finish that matches or compliments the interior surfaces in the area adjacent to the desk.

There will be a total of one (1) desk(s) provided. The desk(s) will be located RS4 (Command Compartment).

CAMERA CONNECTION

The video out of a single surveillance camera (not supplied with this option) will be connected directly to the video in of a single TV video monitor (not supplied with this option).

PTZ CAMERA CONTROLLER

There will be a quantity of one (1) WTI model DTC-720 Pan, Tilt and Zoom camera controller(s) provided crew cab desk.

VIDEO SURVEILLANCE CAMERA

There will be one (1) WTI Viper, Model VS720-H.264-HD30-AC-SE high definition, network and analog Pan, Tilt, Zoom (PTZ) color video camera mounted on the pneumatic mast located top of mast.

The camera will include the following features:

- Continuous 360 degree Pan and Tilt
- 30x Optical, 12x digital zoom
- 2 Megapixel CMOS high definition 720p/1080i
- 16:9 Widescreen format
- Analog NTSC compatible video
- Ethernet streaming video and control
- Locking camera brake when camera is powered down

WEATHER SYSTEM

Two (2) weather station pole mounts will be provided for the storage of the weather station pole. These mounts will be located cab roof

WEATHER SYSTEM

A compact, durable, all-in-one sensor module with no moving parts will be provided. The Orion 510 Transmitter is housed in a self-aspirating radiation shield with

- Temperature Sensor
- Relative Humidity Sensor
- Digital Barometer

- Ultrasonic Wind Direction/Speed Sensor
- Impact Rain Sensor

A single cable attaches through an external connector mounted on the vehicle. Inside, the Orion Interface Module provides power to the sensor transmitter and communication ports for both computer and Weather Display Console.

An eight (8) foot telescoping sensor mast made of rugged anodized aluminum, with heavy-duty, powdered-coated steel mounting brackets will be provided. A built-in North Orientation Offset feature quickly and efficiently orients wind direction readings. A permanent "snap-on" mounting adapter allows you to quickly remove and reinstall the sensor head without losing North orientation.

Orion Data Manager software and a comprehensive user manual will be included.

Monitoring Options

WeatherMaster 2000 professional monitoring and database software which automatically interfaces with CAMEO/ALOHA software for HazMat applications such as plume modeling will be provided.

a rack mounted display will be provided at cab roof.

A weather microserver running Linux operating system provides FTP output, as well as a browser user interface for network applications. It includes two (2) serial communication ports and datalogging capability. will be provided.

TABLETOP MULTI CONNECT BOX

There will be three (3) flush mounted tabletop muti connect box(s) with flip down cover provided at (2) on crew cab table top, (1) on desk top in P3 compt..

Each box will contain one (1) 120 volt, 15 amp duplex receptacle and jacks as specified in computer, telephone, and audio / video options.

PNEUMATIC MAST WITH COILED CONDUIT

There will be a quantity of one (1) pneumatic telescoping mast system(s) with Nycoil preformed coiled conduit(s) to house payload wiring to the vehicle body located rear of body DS .

The mast(s) will be of a free standing design and use high strength, heat treated, aluminum alloy tubes and collars. Each mast section will have two (2) full length external keys with matching machined keyways. Each mast section and collar will use low friction synthetic bearings for smooth operation and long life. All exterior aluminum surfaces will be anodized and sealed. Fasteners and fittings will be plated steel or stainless steel for corrosion resistance. A condensate drain will be placed at the bottom of the mast(s).

The mast(s) will be a Will-Burt TMD 5-20 with the following features:

- Nested Length: Five (5) feet, four (4) inches

- Extended Length: 20 feet

- Pay Load Capacity: 70 pounds

- Number of Sections: Six (6)

A mast control box will be provided near each mast and will include the following:

- One (1) 0-160 psi air gauge, regulator, and 0-60 psi regulated air gauge.

- Electric solenoids to control the regulated air to the mast.

A corded pendant controller with raise / lower switch will be located near the mast to allow safe operation of the mast while maintaining view of the payload.

A tower raised indicator will be provided in the mast control box and connected to the vehicle "Do Not Move Truck" / "Tower Raised" indicator system in the cab.

RETRACTABLE ALUMINUM STAIRWAY FOR ROOF ACCESS

A retractable aluminum stairway will be provided to access the recessed walkway on the roof of the body. The stairway will stow inside the recessed walkway and will deploy off the rear of the body to create a safe and secure means of access from the ground to the recessed walkway.

Before deploying the stairway the user must make sure that the apparatus is parked on a flat, stable surface in order to make sure the stairway has secure footing when the stairway is fully deployed.Once the user is assured of stable ground, the user may begin deploying the stairway.

When deployed, the stairway will activate the "Do Not Move Truck" light when the parking brake is released. When stowed, the stairway will be held in place with a positive mechanical lock to prevent it from deploying during transit.

The stairway will be approximately 144.00" long x 24.00" wide. Each step in the stairway will be 8.00" deep.

The side rails of the stairway will be constructed of aluminum extrusions. Each step in the stairway will be constructed of an aggressive non-slip aluminum step surface.

The stairway will be provided with fold down aluminum handrails that will deploy with the stairway to ensure a safe and easy climb and fold down for ease of storage. There will be supports provided at the top of the stairway to minimize handrail movement while the ladder is in use.

The stairway will utilize hard plastic wheels with roller bearings that slide in aluminum tracks located on each side of the recessed walkway.

A 12.00" long x 2.00" wide nylon pull strap provided at the rear to aid in deploying the ladder.

ELECTRIC AWNING

An electrically opening and closing awning with 120 volt electric motor will be supplied. The awning will be stored in a metal enclosure on the side of the body with end fairings for blending into the side of the body when not in use. The awning enclosure will be painted [Color, Paint] .

A switch will be provided for easy push button convenience inside an adjacent forward compartment. A manual crank will be provided in the event of a power failure. A sensor will be provided to retract the awning automatically in high wind conditions.

The awning will span the full length of the body or a maximum of 22' 11.00". The awning will extend out 8' from the body. When fully extended, the awning will be self supported without the use of poles extending to the ground.

The awning will activate the Do Not Move Truck indicator circuit to alert the cab occupant(s) that the awning is not in the stowed position when the parking brake is released.

The awning will be white.

A total of two (2) will be supplied.

The awning will be installed DS and PS.

OIL DRY HOPPER

A portion of the roof hatch compartment will be sectioned off to provide a storage bin for oil absorbent material. The storage bin will have a minimum volume of 9,750 cubic inches, which is sufficient capacity for storage of up to 250 lb of clay-based oil absorbent material.

A PVC chute constructed of 4.00" PVC pipe will be provided below the storage bin for dispensing the absorbent material. A stainless steel slide closure will be provided on the PVC chute to control the flow of the material. The PVC chute will be routed through the compartment directly below the storage bin and through the floor of the compartment, terminating below the body. This allows the absorbent material to dispense below the body.

A total quantity of one (1) hopper(s) will be provided RS rear corner .

PEGBOARD

An aluminum pegboard will be provided on the rear wall of a compartment.

The pegboard will be .188" thick with .20" diameter holes punched 1.00" on center in a pegboard pattern.

The board will be spaced 1.00" from the wall to provide room for fasteners.

A total of one (1) will be provided .

STORAGE RACK FOR SPARE SCBA BOTTLES

A storage rack will be provided RS1 to hold nine (9) spare SCBA bottles. The rack will be built to hold the bottles 3x3.

The rack will be constructed of 0.12" aluminum. The inside of the rack will be left unpainted and the outside of the rack will be painted the same color as the compartment it is installed in. Each storage slot will angle to the rear of the rack in order to minimize the chances of the bottle falling out. A rubber bumper will be provided on the rear wall of each slot to absorb the shock of the bottle being placed into

position. Scuff tape material will be applied to the inside of the each slot to reduce scratching on the bottle.

The inside dimension of each bottle slot will be 7.50" x 7.50".

COFFEE MAKER

There will be one (1) Hamilton Beach Brewstation, 12 cup coffee maker provided and securely mounted inside an exterior body compartment located RS4 (Command Compartment). The beverage maker will feature one (1) hand dispensing with insulated tank/no carafe.

RETAINER STRAP

A 2.00" retainer strap will be provided for equipment. One (1) end of the strap will be permanently mounted. The opposite end of the strap will be provided with a hook and loop release.

A total of four (4) will be provided RS1 for each SCBA bottle in storage rack.

REAR BUMPER

A bumper will be provided at the rear of the body. The rear bumper will be constructed as an integral part of the rear body substructure with an aluminum treadplate deck mounted to the frame to provide a stepping surface. A 3.00" high kick plate constructed of aluminum treadplate will be provided on the bulkhead surfaces above the bumper.

The bumper will be approximately 13.00" deep and as wide as possible.

REAR WALL, BODY MATERIAL

The rear wall will be smooth and the same material as the body.

TOW EYES

Two (2) rear painted tow eyes will be located at the rear of the apparatus and will be mounted directly to the chassis frame rails. The inner and outer edges of the tow eyes will have a radius.

COMPARTMENT LIGHTING

There will be nine (9) compartments with Pierce LED compartment light strips. The strips will be centered vertically along each side of the door framing.

Any remaining compartments will include 6.00" diameter Truck-Lite, Model: 79384 light in each enclosed compartment. Each light will have a number 1076 one filament, two wire bulb.

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

HATCH COMPARTMENT LIGHTING

There will be an LED strip light mounted on the hinged side of the interior in each hatch compartment.

Each light will be wired to an automatic door switch and to the "open door" indicator inside the cab.

STANDARD DEPTH ADJUSTABLE SHELF

An adjustable shelf will be provided. The shelf will be constructed of 0.188" thick aluminum with 2.00" high sides.

The shelf will be as deep as possible for a standard depth compartment, and as wide as possible for the specified mounting location.

The shelf will be secured within the compartment by means of adjustable threaded fasteners. These fasteners will slide in an extruded aluminum track to provide height adjustment.

The shelf will have a load capacity of 500 lb.

A total of three (3) shelves will be provided (1) LS3, (1) RS1, (1) RS3 above tool box trays, (1) RS4 (Command Compartment).

HALF DEPTH ADJUSTABLE SHELF

An adjustable shelf will be provided for use in a transverse side body compartment. The shelf will be constructed of 0.188" thick aluminum with 2.00" high sides.

The shelf will be half depth of the transverse compartment and as wide as possible for the specified mounting location.

The shelf will be secured within the compartment by means of adjustable threaded fasteners. These fasteners will slide in an extruded aluminum track to provide height adjustment.

The shelf will have a load capacity of 500 lb.

A total of one (1) shelf will be provided RS3.

STANDARD DEPTH SLIDE-OUT ADJUSTABLE HEIGHT TRAY

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

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

Each tray will be as deep as possible for a standard depth compartment and as wide as possible for the specified mounting location.

Each tray will be mounted on a pair of side mounted slides. The slide mechanisms will have ball bearings for ease of operation and years of dependable service. The slides will be mounted to shelf tracks to allow the tray to be adjustable up and down within the designated mounting location.

An automatic lock will be provided for both the in and out tray positions. The lock trip mechanism will be located at the front of the tray and will be easily operated with a gloved hand.

The tray(s) will be located (1) LS3,.

TRANSVERSE TWO (2) WAY SLIDE-OUT UTILITY TRAY

There will be one (1) slide-out tray provided for use in the transverse side body compartment(s).

Each tray will be a utility style tray that is rated for up to 500 lb in the extended position. The bottom of each tray will be constructed of 0.19" thick aluminum while special aluminum extrusions will be utilized for the tray sides, ends and tracks. The corners will be welded.

Each tray will have 3.00" high sides, will span the full depth of the transverse compartment and will be as wide as possible for the designated mounting location.

Each tray will be supported with a minimum of six (6) ball bearing rollers. Each tray will slide out two thirds (2/3) of its length to either side of the apparatus.

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 each tray for ease of use with a gloved hand.

The vertical location of each tray within the compartment will be adjustable.

The tray(s) will be located LS4.

HALF DEPTH SLIDE-OUT/TILT-DOWN TRAY

There will be five (5) slide-out trays provided for use in the transverse side body compartment(s).

Each tray will be a slide-out/tilt down tray that is rated for up to 200 lb in the extended position. The bottom of each tray will constructed of 0.188" thick aluminum while special aluminum extrusions will be utilized for the tray sides, ends, and tracks. The corners will be welded to form a rigid unit.

The tray will have 3.00" high sides, will be half depth of the transverse compartment and will be as wide as possible for the specified mounting location.

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. Each 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 vertical position of each tray within the compartment will be adjustable.

The tray(s) will be located (2) LS2 (2) LS5 (2) LS5.

SLIDE-OUT FLOOR MOUNTED TRAY

There will be five (5) floor mounted slide-out tray(s) with 2.00" sides provided LS3, LS4, LS5, RS1, RS5. Each tray will be rated for up to 500lb in the extended position. The tray(s) will be constructed of .19" aluminum with welded corners. The finish will be painted to match compartment interior.

Slides will be equipped with ball bearings for ease of operation and years of dependable service. The slides will be located on the sides of the tray so that the tray can be located as close to the compartment floor as possible.

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.

STANDARD DEPTH SLIDE-OUT TOOLBOARD

A slide-out aluminum toolboard will be provided. The toolboard will be constructed of 0.19" thick aluminum that is painted spatter gray to match compartment interior. The toolboard will be provided

with 0.20" 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 toolboard will be as deep as possible for a standard depth compartment, and as tall as possible for the specified mounting location.

The toolboard will be mounted on an under mount, roller bearing type slide that is rated for 250 lb with a factor of safety of two (2).

To ensure years of dependable service the slide 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 slide will require no more than a 50 lb 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 to a shelf type track to allow side adjustment of the tool board.

A positive lock will be provided to allow the toolboard to be locked in both the stowed and extended positions.

A total of Two (2) standard depth slide-out toolboard(s) will be provided. The toolboard(s) will be located LS1.

TOOL BOX

A tool box will be furnished.

The outside size will be 12.00" long x 12.00" wide x 12.00" 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 RS1.

DRAWER ASSEMBLY

A slideout drawer assembly will be installed PS3.

The clear dimensions starting at the top of the cabinet with the first drawer will be 6.25" with a face plate that is 7.00" high x 21.00" deep. The clear dimensions of the second drawer will be 6.75" with a face plate that is 7.00" high x 21.00" deep. The clear dimensions of the third drawer will be 6.75" with a face plate that is 7.00" high x 21.00" deep. The clear dimensions of the fourth drawer will be 6.75" with a face plate that is 7.00" high x 21.00" deep. Each drawer will be the same width and not exceed 48.00".

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.

SLIDE-OUT WORK SURFACE

There will be a total of one (1) slide-out work surface(s) provided. A tray will be provided that will incorporate a hinged, dry erase work surface that covers the entire top of the tray. The tray lip at its front will be taller than the surface of the dry erase board to help retain markers at the base of the board.

Each tray will be as deep and as wide as possible for the specified mounting location.

Each tray will be mounted on top of a pair of surface/floor mount slides.

An automatic lock will be provided for stowed position. The lock trip mechanism will be located at the front of the tray and will be easily operated with a gloved hand.

The slide-out work surface(s) will be located RS4 command compartment.

MATTING, COMPARTMENT SHELVING

Turtle Tile compartment matting will be provided in 12 shelves. The locations are, all compartment shelves .

The color of the Turtle Tile will be black.

MATTING, COMPARTMENT FLOOR

Turtle Tile compartment matting will be provided in nine (9) compartments on the compartment floor. The locations are, all compartment floor.

The Turtle Tile will be black and the leading edge of the matting will include the beveled edge. The beveled edge will be black .

MATTING, FLOOR OF HATCH COMPARTMENT

There shall be Turtle Tile compartment matting provided on the floor of the designated hatch compartment(s).

The color of Turtle Tile matting shall be black.

The Turtle Tile matting shall be provided on the floor of a total of four (4) hatch compartment(s) located each hatch compartment.

HATCH COMPARTMENT PARTITION

Four (4) partitions will be provided (1) each hactch compartment. Each partition will be the full vertical height of the hatch compartment and adjustable from front to back.

SHELVING TRACKS

There will be seven (7) sets of tracks for future installation of adjustable shelf(s). These tracks will be installed vertically on the walls of the compartment(s).

The compartment(s) with the shelving tracks will be TBD.

RUB RAIL

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

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

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

BODY FENDER CROWNS

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

A rubber welting will be installed between the body and the crown to seal the seam and restrict moisture from entering.

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

HARD SUCTION HOSE

Hard suction hose will not be required.

DOUBLE WIDE AIR BOTTLE STORAGE IN FENDER PANEL

A double wide air bottle storage compartment will be provided in the corner of the body fender panel. The double wide compartment will have two (2) separate areas for air bottle storage, an upper and a lower storage area. Each storage area will have sufficient capacity for storage of one (1) air bottle.

[Double Wide Storage Compartment]

The upper storage area will have a 7.75" diameter clear opening and will be 26.00" deep.

The lower storage area will have a 7.75" diameter clear opening. The depth of the lower storage area will be 24.00" deep with a 96.00" wide body and increases to 26.00" deep with a 100.00" body.

A black rubber matting will be provided inside each compartment.

A full width door will be provided to cover the openings of both storage areas. The full width door will be a single vertically hinged door that is constructed of stainless steel with a polished finish. The door will have a chrome plated flush lift & turn latch. A dielectric barrier will be provided between the door hinge, hinge fasteners and the body sheet metal.

[Double Wide Door]

There will be a total of three (3) double wide storage compartment(s) provided. The

compartment(s) will be located 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.

SWING DOWN STEP

A swing down style rear access step will be installed onto the rear tailboard. The step will swing up and stow above the tailboard in the "up" position and swing down for use as a stepping surface in the "down" position.

[Swing Down Step]

A chrome plated lift handle will be provided on the underside of the step to aid in raising and lowering the step.

The step will be provided with gas assist cylinders to secure the step in the up and down positions.

The step will be fabricated from polished aluminum treadplate with a Morton Cass insert to provide a non-skid stepping surface.

	Size of Step
Non-Walk-In Body	38.50" wide x 8.00" deep
Walk-In Body	31.50" wide x 8.00" deep

When the step is in the "down" position, a text message will be displayed on the Vehicle Information Center multiplex display screen that reads "Rear Step Not Stowed".

When deployed, the step will meet the NFPA requirement for minimum stepping height from the ground.

AIR HORN SYSTEM

Two (2) Grover 2040 rectangular air horns will be provided. The horns will be mounted low through the lower bumper flange. The horn system will be piped to the air brake system wet tank utilizing 0.38" tubing. A pressure protection valve will be installed in-line to prevent the loss of air in the air brake system.

Air Horn Location

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

AIR HORN CONTROL

The air horns will be actuated by a chrome push button located on the officer's side of the engine tunnel and by the horn button in the steering wheel. The driver will have the option to control the air horns or the chassis horns from the horn button by means of a selector switch located on the instrument panel.

ADDITIONAL AIR HORN CONTROL

An air horn control switch button will be provided RS4 (command compartment).

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

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

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

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
A Federal Q2B® siren will be furnished. A siren brake button will be installed on the switch panel.

The control solenoid will be powered up after the emergency master switch is activated.

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.

The mechanical siren will be actuated by a foot switch on the officer's side and by the horn button in the steering wheel. The driver will have the option to control the siren or the chassis horns from the horn button by means of a selector switch located on the instrument panel.

SIREN PROGRAMMING
The electronic siren will be programmed to include the warble and whoop tones.

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.

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.

CAB FACE WARNING LIGHTS

There will be four (4) Whelen®, Model M6*C, LED flashing warning lights installed on the cab face, above the headlights, mounted in a common bezel.

- The driver's side front outside warning light to be red
- The driver's side front inside warning light to be red
- The passenger's side front inside warning light to be red
- The passenger's side front outside warning light to be red

All four (4) lights will include a clear lens.

There will be a switch located in the cab, on the switch panel, to control the four (4) lights.

The inside lights may be load managed if colored or disabled if white, when the 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

There will be six (6) Whelen®, Model M6*C, LED flashing warning lights with Model 6EFLANGE, chrome flanges located in the following positions:

- Two (2) lights, one (1) each side on the bumper extension
    - The side front lights to be red
- Two (2) lights, one (1) each side of cab rearward of crew cab doors
    - The side middle lights to be red
- Two (2) lights, one (1) each side above rear wheels

- The side rear lights to be red

All six (6) lights will include a clear lens.

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

SIDE WARNING LIGHTS

There will be four (4) Whelen, Model WIONSMC* LED light(s) provided and located (1) as far forward in the front rub rail and One (1) as far rearward in the rear rub rail (on each side of truck)..

The color of each light will be red LED with a clear lens.

Each light will be provided with a chrome plated ABS flange.

The light(s) will be activated with the side warning switch.

REAR ZONE LOWER LIGHTING

There will be two (2) Whelen®, Model M6*C, LED flashing warning lights with Model M6FC, chrome flanges 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

Both lights will include a lens that is clear.

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

REAR OF HOSE BED WARNING LIGHTS

There will be two (2) Whelen Rota-Beam, Model R316*F, 4.00" high x 7.19" wide beacons with clear domes provided.

The rear zone upper lights to be red in color.

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

REFRIGERATOR

There will be one (1) Norcold, Model DE-0788B, AC/DC 3.1 cubic foot refrigerator installed in the apparatus RS4.

There will be a 15 amp, 120 volt AC straight blade receptacle, powered from the shoreline, installed near this refrigerator to supply the AC power.

There will be a 10 amp 12 volt DC Deutsch plug and connector, powered with ignition, installed near this refrigerator to supply the DC power.

ELECTRICAL SYSTEM GENERAL DESIGN FOR ALTERNATING CURRENT

The following guidelines will apply to the 120/240 VAC system installation:

General

Any fixed line voltage power source producing alternating current (ac) line voltage will produce electric power at 60 cycles plus or minus 3 cycles.

Except where superseded by the requirements of NFPA 1901, all components, equipment and installation procedures will conform to NFPA 70, National Electrical Code (herein referred to as the NEC).

Line voltage electrical system equipment and materials included on the apparatus will be listed and installed in accordance with the manufacturer's instructions. All products will be used only in the manner for which they have been listed.

Grounding

Grounding will be in accordance with Section 250-6 "Portable and Vehicle Mounted Generators" of the NEC. Ungrounded systems will not be used. Only stranded or braided copper conductors will be used for grounding and bonding.

An equipment grounding means will be provided in accordance with Section 250-91 (Grounding Conductor Material) of the NEC.

The grounded current carrying conductor (neutral) will be insulated from the equipment grounding conductors and from the equipment enclosures and other grounded parts. The neutral conductor will be colored white or gray in accordance with Section 200-6 (Means of Identifying Grounding Conductors) of the NEC.

In addition to the bonding required for the low voltage return current, each body and driving or crew compartment enclosure will be bonded to the vehicle frame by a copper conductor. This conductor will have a minimum amperage rating of 115 percent of the nameplate current rating of the power source specification label as defined in Section 310-15 (amp capacities) of the NEC. A single conductor properly sized to meet the low voltage and line voltage requirements will be permitted to be used.

All power source system mechanical and electrical components will be sized to support the continuous duty nameplate rating of the power source.

Operation

Instructions that provide the operator with the essential power source operating instructions, including the power-up and power-down sequence, will be permanently attached to the apparatus at any point where such operations can take place.

Provisions will be made for quickly and easily placing the power source into operation. The control will be marked to indicate when it is correctly positioned for power source operation. Any control device used in the drive train will be equipped with a means to prevent the unintentional movement of the control device from its set position.

A power source specification label will be permanently attached to the apparatus near the operator's control station. The label will provide the operator with the following information:

- Rated voltage(s) and type (ac or dc)

- Phase
- Rated frequency
- Rated amperage
- Continuous rated watts
- Power source engine speed

Direct drive (PTO) and portable generator installations will comply with Article 445 (Generators) of the NEC.

Overcurrent protection

The conductors used in the power supply assembly between the output terminals of the power source and the main over current protection device will not exceed 144.00" (3658 mm) in length.

For fixed power supplies, all conductors in the power supply assembly will be type THHW, THW, or use stranded conductors enclosed in nonmetallic liquid tight flexible conduit rated for a minimum of 194 degree Fahrenheit (90 degrees Celsius).

For portable power supplies, conductors located between the power source and the line side of the main overcurrent protection device will be type SO or type SEO with suffix WA flexible cord rated for 600-volts at 194 degrees Fahrenheit (90 degrees Celsius).

Wiring Methods

Fixed wiring systems will be limited to the following:

- Metallic or nonmetallic liquid tight flexible conduit rated at not less than 194 degrees Fahrenheit (90 degrees Celsius)
- or
- Type SO or Type SEO cord with a WA suffix, rated at 600 volts at not less than 194 degrees Fahrenheit (90 degrees Celsius)

Electrical cord or conduit will not be attached to chassis suspension components, water or fuel lines, air or air brake lines, fire pump piping, hydraulic lines, exhaust system components, or low voltage wiring. In addition the wiring will be run as follows.

- Separated by a minimum of 12.00" (305 mm), or properly shielded, from exhaust piping
- Separated from fuel lines by a minimum of 6.00" (152 mm) distance

Electrical cord or conduit will be supported within 6.00" (152 mm) of any junction box and at a minimum of every 24.00" (610 mm) of continuous run. Supports will be made of nonmetallic materials or corrosion protected metal. All supports will be of a design that does not cut or abrade the conduit or cable and will be mechanically fastened to the vehicle.

Wiring Identification

All line voltage conductors located in the main panel board will be individually and permanently identified. The identification will reference the wiring schematic or indicate the final termination point. When prewiring for future power sources or devices, the unterminated ends will be labeled showing function and wire size.

Wet Locations
All wet location receptacle outlets and inlet devices, including those on hardwired remote power distribution boxes, will be of the grounding type provided with a wet location cover and installed in accordance with Section 210-7 "Receptacles and Cord Connections" of the NEC.

All receptacles located in a wet location will be not less than 24.00" (610 mm) from the ground. Receptacles on off-road vehicles will be a minimum of 30.00" (762 mm) from the ground.

The face of any wet location receptacle will be installed in a plane from vertical to not more than 45 degrees off vertical. No receptacle will be installed in a face up position.

Dry Locations
All receptacles located in a dry location will be of the grounding type. Receptacles will be not less than 30.00" (762 mm) above the interior floor height.

All receptacles will be marked with the type of line voltage (120-volts or 240-volts) and the current rating in amps. If the receptacles are direct current, or other than single phase, they will be so marked.

Listing
All receptacles and electrical inlet devices will be listed to UL 498, Standard for Safety Attachment Plugs and Receptacles, or other appropriate performance standards. Receptacles used for direct current voltages will be rated for the appropriate service.

Electrical System Testing
The wiring and associated equipment will be tested by the apparatus manufacturer or the installer of the line voltage system.

The wiring and permanently connected devices and equipment will be subjected to a dielectric voltage withstand test of 900-volts for one (1) minute. The test will be conducted between live parts and the neutral conductor, and between live parts and the vehicle frame with any switches in the circuit(s) closed. This test will be conducted after all body work has been completed.

Electrical polarity verification will be made of all permanently wired equipment and receptacles to determine that connections have been properly made.

Operational Test per Current NFPA 1901 Standard
The apparatus manufacturer will perform the following operation test and ensure that the power source and any devices that are attached to the line voltage electrical system are properly connected and in working order. The test will be witnessed and the results certified by an independent third-party certification organization.

The prime mover will be started from a cold start condition and the line voltage electrical system loaded to 100 percent of the nameplate rating.

The power source will be operated at 100 percent of its nameplate voltage for a minimum of two (2) hours unless the system meets category certification as defined in the current NFPA 1901 standard.

Where the line voltage power is derived from the vehicle's low voltage system, the minimum continuous electrical load as defined in the current NFPA 1901 standard will be applied to the low voltage electrical system during the operational test.

ONAN 25KW SINGLE PHASE GENERATOR

The apparatus will be equipped with a complete electrical power system. The wiring and generator installation will conform to the present National Electrical Code Standards of the National Fire Protection Association. The installation will be designed for continuous operation without overheating and undue stress on components.

The generator will be a single phase, four (4)-wire, Onan 25kW driven by a transmission "power takeoff" attached to the side of the transmission.

Generator performance will meet the American National Standards Institute (ANSI) C84.1-1982 voltage requirement as utilized from the receptacle.

Generator will have a built in automatic voltage control.

Generator will have a NEMA MG21 rating.

- Continuous Duty Rating: 25,000 watts

- Phase: Single

- Nominal Cycles: 60 hertz

- Nominal Amp Rating: 104 at 240-volts

- Engine Speed at Engagement: Idle

- Engine Speed Engaged: 1100/1400 rpm range

- Generator RPM: 1800 rpm

- Weight: 398 lbs.

The output of the generator will be controlled by an electronic governor. The governor will be programmed so the generator's output is at 60 hertz.

The main chassis transmission PTO will power the generator. A stainless steel splash guard will be installed to reduce the amount of road spray on this frame-mounted generator.

The generator will be operable in the stationary mode with a shift control located inside the cab with an indicator light to note engagement. For safety, the automatic high idle will be activated through interlocks only after the chassis parking brake control is in the park position, the generator PTO transmission has made a complete shift and the truck transmission is in neutral.

An electric/hydraulic valve will supply hydraulic fluid to the clutch engagement unit provided on the chassis PTO drive.

To properly monitor the generator performance and load demands during operation, the generator will be equipped with a full instrument and control package. This panel will be mounted adjacent to the load center. The following instruments will be installed in the panel:

- One (1) Voltmeter

- Two (2) Ammeters

- One (1) Frequency Meter

- One (1) Hour Meter

- One (1) "Power On" Green Indicator Light

- One (1) PTO Engagement Indicator Light

- Two (2) Fuse Holders: With two (2) amp fuses for gauge protection

The meter and indicators will be installed near eye level in the compartment. Instruments will be flush mounted in an appropriate sized weatherproof electrical enclosure. All instruments used will be accurate within +/- two (2) percent.

The system will be installed by highly qualified electrical technicians to assure the required level of safety and protection to the fire apparatus operators. The wiring, electrical fixtures and components will be to the highest industry quality standards available on the domestic market. The equipment will be the type designed for mobile installations subject to vibration, moisture and severe continuous usage.

All electrical wiring from the load center will be fine stranded copper S.O. type with a 600 volt jacket. The wire will be sized to the load and circuit breaker rating. The wire size will be ten (10)-gauge on 30 amp circuits, 12-gauge on 20 amp circuits and 14-gauge on 15 amp circuits. The S.O. cable will be run in corner areas and extruded aluminum pathways built into the body for easy access. Any S.O. cord not run in an enclosed raceway or cable tray will have an additional abrasion resistant covering.

The main load center will have circuit breakers rated to load demand.

Individual breakers will be provided for all receptacles to isolate a tripped breaker from affecting any other on-line equipment.

GENERATOR LOCATION
The generator will be mounted under the body between the frame rails.

GENERATOR START
There will be a switch provided on the cab instrument panel to engage the generator.

GENERATOR REMOTE START
There will be a generator remote start/stop switch with indicator light located TBD.

CIRCUIT BREAKER PANEL
The circuit breaker panel will be located high on the right wall of compartment RS4.

VERTICAL LIGHT TOWER

There will be one (1) Will-Burt, Model VRT 5.4-17-1380 SPC, vertical light tower provided.

This tower will extend 17.00 feet.

There will six (6) Fire Research Spectra, 230 watt, 120 volt AC LED light fixtures included.

The painted parts of the light tower and the light heads to be white.

This tower the AC detector.

This tower will be connected to the Do Not Move Truck Indicator in the cab.

LIGHT TOWER LOCATION

The light tower will be installed in the cargo area.

LIGHT TOWER CONTROLLER

There will be one (1) wired handheld controller included.

LOCATION FOR THE LIGHT TOWER CONTROLLER

The light tower controller will be installed in the driver's side front body compartment.

ELECTRIC CORD REEL

Furnished with the 120 volt AC electrical system will be a Hannay, Series 1600, cord reel. The reel will be provided with a 12-volt electric rewind switch, that is guarded to prevent accidental operation and labeled for its intended use. The switch will be protected with a fuse and installed at a height not to exceed 72.00" above the operators standing position.

The exterior finish of the reel(s) will be painted #269 gray from the reel manufacturer.

A captive roller assembly to be provided to aid in the payout and loading of the reel. A ball stop will be provided to prevent the cord from being wound on the reel.

A label will be provided in a readily visible location adjacent to the reel. The label will indicate current rating, current type, phase, voltage and total cable length.

A total of one (1) cord reel will be provided one (1) in compartment D4 high and to the left.

The cord reel will be configured with three (3) conductors.

CORD

Provided for electric distribution will be one (1) length installed on the reel of 200 feet of Carol Super Vu-Tron II yellow 12/3 electrical cord. A Hubbell 5-20, 20 amp, 120 volt, straight blade connector body will be installed on the end of the cord.

PORTABLE JUNCTION BOX

There will be a total of two (2) electrical junction box(es), listed for use in wet locations and provided with light to indicate power on. Each box will be designed to

keep the exterior electrical components above 2.00" of standing water, protected from corrosion, and capable of being carried with a gloved hand.

There will be a cable strain relief and a 1.00' pigtail with wire mesh grip, NEMA L5-20, 20 amp, 120 volt twist lock plug provided for each box. Each box will be yellow powder coated .

Each Circle D, PF51G Series, box will be provided with the following receptacles:

- Two (2) 120 vac, 20 amp twist lock receptacles
- Two (2) 120 vac, 20 amp single straight blade receptacles

120 VOLT RECEPTACLE

There will be four (4), 20 amp 120 volt AC three (3) wire straight blade duplex GFCI receptacle(s) with waterproof flip up cover(s) installed TBD. The NEMA configuration for the receptacles will be 5-20R.

The receptacle(s) will be powered from the on board generator.

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

- Line Voltage
- Current Ratting (amps)
- Phase
- Frequency
- Power Source

COMPUTER

There will be one (1) Panasonic, Model CF-33, Manufacturers part number CF-33AFHAZVM, Toughbook laptop computer(s) provided with loose equipment. A three (3) year parts and labor warranty-preferred will be provided with the laptop and an addition 2 year warranty extension with no fault will be included. The laptop will include i5-7300U 2.60Ghz Processor, Win 10 Pro, 256GB SSD, 8GB Mem,
WiFi, Bluetooth, Dual-Pass, Camera, Premium Keyboard.

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.

One (1) set of reflective emergency triangles will be provided.

NFPA REQUIRED LOOSE EQUIPMENT PROVIDED BY FIRE DEPARTMENT

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

- One (1) SCBA complying with NFPA 1981 for each assigned seating position, but not fewer than two (2), mounted in brackets fastened to the apparatus or stored in containers supplied by the SCBA manufacturer.

- One (1) spare SCBA cylinder for each SCBA carried, each mounted in a bracket fastened to the apparatus or stored in a specially designed storage space(s).

- One (1) first aid kit.

- One (1) traffic vest for each seating position, each vest to comply with ANSI/ISEA 207, *Standard for High Visibility Public Safety Vests*, and have a five-point breakaway feature that includes two at the shoulders, two at the sides, and one at the front.

- Five (5) fluorescent orange traffic cones not less than 28" (711 mm) in height, each equipped with a 6". (152 mm) retro-reflective white band no more than 4" (152 mm) from the top of the cone, and an additional 4" (102 mm) retro-reflective white band 2" (51 mm) below the 6" (152 mm) band.

- Five (5) illuminated warning devices such as highway flares, unless the five fluorescent orange traffic cones have illuminating capabilities.

- One automatic external defibrillator (AED).

- One (1) extinguisher, 2.50# "ABC" D.O.T. extinguisher will be located crew cab .

DRY CHEMICAL EXTINGUISHER PROVIDED BY FIRE DEPARTMENT

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

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

WATER EXTINGUISHER PROVIDED BY FIRE DEPARTMENT

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

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

PAINT - BODY PAINTED TO MATCH CAB

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

1. Manual Surface Preparation - All exposed metal surfaces on the custom body will be thoroughly cleaned and prepared for painting. Surfaces that will not be painted include all chrome plated, polished stainless steel, anodized aluminum and bright aluminum treadplate. Each imperfection on the exterior metal surface will be removed or filled and then sanded smooth for a smooth appearance. All seams will be sealed before painting.

2. Chemical Cleaning and Treatment - The aluminum surfaces will be properly cleaned using a 4-phase, high pressure and high temperature acid etching system. All steel surfaces will be properly treated using a 3-phase, high temperature, cleaning/phosphatizing system. Surfaces are chemically cleaned to remove all dirt, oil, grease and metal oxides to ensure the subsequent coatings bond well.

An ultra pure water final rinse of 25 parts per million solids or less, will be applied to final rinse all metal surfaces at the conclusion of the metal treatment process. This final rinse ensures all chemical residues are removed and that no minerals, (salts), from the water dry onto the metal surface and remain under the primers and topcoats. These salts can lead to blistering and under film corrosion.

3. Primer/Surfacer Coats - A minimum of two (2) mil dry, (.002), of two component urethane primer/surfacer will be hand applied to the chemically treated metal surfaces to provide a strong corrosion protective base coat and to smooth out the surface. The primer is a high solids and low VOC paint.

4. Hand Sanding to Ultra Fine FinishThe primer/surfacer coat is lightly sanded with mild abrasive paper to an ultra smooth finish. This hand finish process is critical to produce the smooth mirror like finish in the topcoat.

5. Sealer Primer Coat A two- (2) component sealer primer coat is applied over the sanded primer to again build toward the final smooth finish. This layer of primer sealer also gives additional corrosion protection.

6. Topcoat Paint Two (2) coats of an automotive grade, two component acrylic urethane paint are applied to provide the lasting beauty and durability. The acrylic urethane topcoat contains a clear coat resin chemistry that creates the high gloss and depth of image. This type of topcoat provides the best resistance against acid rain and other more common chemicals.

7. Clearcoat - Two (2) coats of an automotive grade two (2) component urethane will be applied. Lap style doors will be clear coated to match the body. Roll-up doors will not be clear coated and the standard roll-up door warranty will apply.

A cyclic corrosion test, (General Motors test GM-9540), of 40 cycles will be required before making changes to the exterior coating process. Exterior coating systems, (excluding the undercarriage components), must achieve a 1/16 or less maximum creep from the scribe for aluminum and an 1/8 or less maximum creep from the scribe for galvanneal after 40 cycles in the General Motors GM-9540 test.

Each batch of color topcoat, together with the finish painted vehicle, is tested for precise color match. Visual color match will be checked following ASTM D-1729, (American Standard Testing Methods), procedures using CIE, (International Commission on Illumination), D75 Northern Daylight light source. Instrumental color match will follow ASMT D-2244 procedures with a maximum delta E of 1.0 for whites, 1.4 for yellows, blues, greens and 1.5 for reds.

All removable items such as brackets, compartment doors, door hinges, trim, etc. will be removed and painted separately to insure paint behind all mounted items. Body assemblies that can not be finish painted after assembly will be finish painted before assembly.

The cab and body will be two-tone, with the upper section and a high shield design painted #551 silver gray mettalic. The lower section of the cab and body painted #103 lime green.

PAINT - ENVIRONMENTAL IMPACT

Contractor will meet or exceed all current State (his) 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 must have a 99.99% efficiency factor.

- Particulate emissions from painting operations will be collected by a dry filter or water wash process. If the dry filter means is used, it must have an efficiency rating of 98.00%. Water wash systems will be 99.97% efficient.

- Water from water wash booths will be reused. Solids will be removed mechanically on a continual basis to keep the water clean.

- Paint wastes are disposed of in an environmentally safe manner. They are used as fuel in kilns used in the cement manufacturing process - thereby extracting energy from a waste material.

- Empty metal paint containers will be cleaned, crushed and recycled to recover the metal.

- Solvents used in clean-up operations will be collected, recycled on-site, or sent off-site for distillation and returned for reuse. Residue from the distillation operation will be used as fuel in off-site cement kilns.

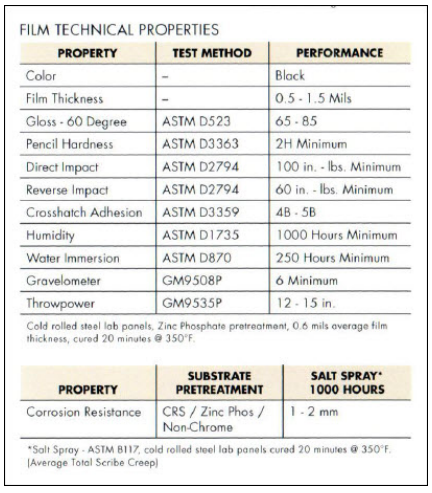
Additionally, the finished apparatus will not be manufactured with or contain products that have ozone depleting substances. Contractor will, upon demand, present evidence that his manufacturing facility meets the above conditions and that it is in compliance with his State EPA rules and regulations.

PAINT CHASSIS FRAME ASSEMBLY

The chassis frame assembly will be finished with a single system black top coat 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



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)

- 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.

The front bumper will be painted to match the upper portion of the cab.

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 BAND

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

The reflective band provided on the cab face will be below the headlights on the fiberglass.

REAR CHEVRON STRIPING

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

The colors will be red and fluorescent yellow 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.

CAB DOOR REFLECTIVE STRIPE

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

This stripe will meet the NFPA 1901 requirement.

LETTERING
One hundred forty-one (141) to one hundred sixty (160) reflective lettering, 4.00" high, with outline will be provided.

LETTERING
Sixty-one (61) to eighty (80) reflective lettering, 4.00" high, with outline will be provided.

LETTERING
One hundred one (101) to one hundred twenty (120) reflective lettering, 4.00" high, with outline will be provided.

LETTERING
One hundred twenty-one (121) to one hundred forty (140) reflective lettering, 3.00" high, with outline will be provided.

LETTERING
Eighty-one (81) to one hundred (100) reflective lettering, 4.00" high, with outline will be provided.

CAB GRILLE DESIGN
A Texas flag design will be painted on the cab grille.

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
- EngineTires
- 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.

THREE (3) YEAR MATERIAL AND WORKMANSHIP
The Pierce custom chassis limited warranty certificate, WA0284, is included with this proposal.

ENGINE WARRANTY
A Detroit Diesel **five (5) year** limited engine warranty will be provided. A limited warranty certificate, WA0180, is included with this proposal.

STEERING GEAR WARRANTY
A Sheppard **three (3) year** limited steering gear warranty shall be provided. A copy of the warranty certificate shall be submitted with the bid package.

FIFTY (50) YEAR STRUCTURAL INTEGRITY
The Pierce custom chassis frame and crossmembers limited warranty certificate, WA0038, 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 TWO (2) YEAR MATERIAL AND WORKMANSHIP WARRANTY
A Meritor axle limited warranty certificate, WA0046, is included with this proposal.

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.

CAMERA SYSTEM WARRANTY
A Pierce fifty four (54) month warranty will be provided for the camera system**.**

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.

FIFTEEN (15) YEAR STRUCTURAL INTEGRITY
The Pierce heavy duty rescue apparatus body limited warranty certificate, WA0010, is included with this proposal.

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

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

FIVE (5) YEAR GENERATOR WARRANTY

There will be a 5 year limited warranty provided for Onan hydraulic and Protec generators.

TEN (10) YEAR PRO-RATED PAINT AND CORROSION

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

ONE (1) YEAR MATERIAL AND WORKMANSHIP

The Pierce graphics fading and deterioration limited warranty limited warranty certificate, WA0168, is included with this proposal.

VEHICLE STABILITY CERTIFICATION

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

ENGINE INSTALLATION CERTIFICATION

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

POWER STEERING CERTIFICATION

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

CAB INTEGRITY CERTIFICATION

The fire apparatus manufacturer will provide a cab integrity certification with this proposal. The certification will state that 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 22,050 lb. This value meets the ECE 29 criteria and is equivalent to the front axle rating up to a maximum of 10 metric tons.

Additional Roof Crush

The same cab will be subjected to a roof crush force of 100,000 lbs. This value exceeds the ECE 29 criteria by nearly 4.5 times.

Side Impact
The same cab will be subjected to dynamic preload where a 13,275 lb moving barrier slams into the side of the cab at 5.5 mph at a force of 13,000 ft-lbs. 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-lbs 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-lbs 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 that each seat mount and cab structure design was pull tested to the required force and met the appropriate criteria.

CAB DEFROSTER CERTIFICATION

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 HEATER CERTIFICATION

Good cab heat performance and regulation provides a more effective working environment for personnel, whether in-transit, or at a scene. The cab heaters will warm the cab 75 F from a cold-soak, within 30 minutes when tested using the coolant supply methods found in SAE J381. The bidder will certify that a substantially similar cab has been tested and has met these criteria.

CAB AIR CONDITIONING PERFORMANCE CERTIFICATION

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 67 degrees Fahrenheit in 30 minutes. The bidder will certify that a substantially similar air conditioning system has been tested and has met these criteria. The certification will be available at the time of delivery.

AMP DRAW REPORT

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

The manufacturer of the apparatus will provide the following:

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

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

PASSENGER'S SIDE COMPARTMENTS CONTAIN THE FOLLOWING:

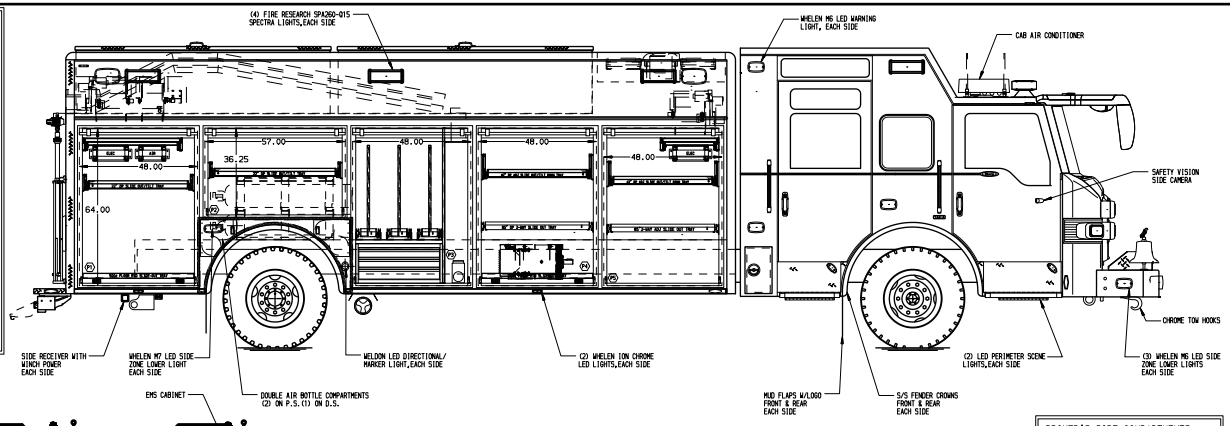
COMPARTMENT P1 CONTAINS:
- (1) 23"DP FLOOR MOUNTED TRAY
- (1) 22"DP ADJ SLIDE OUT/TILT TRAY
- (1) ELECTRIC CORD REEL WITH 250' OF 10/3 YELLOW CORD
- (1) LOW PRESSURE AIR REEL WITH 150' OF HOSE
-
-

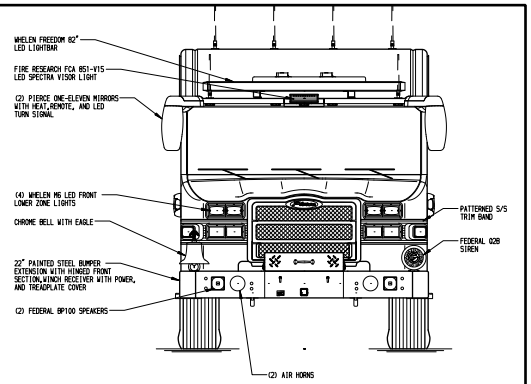
COMPARTMENT P2 CONTAINS:
- (1) 22"DP ADJ SLIDE OUT/TILT TRAY
-
-
-

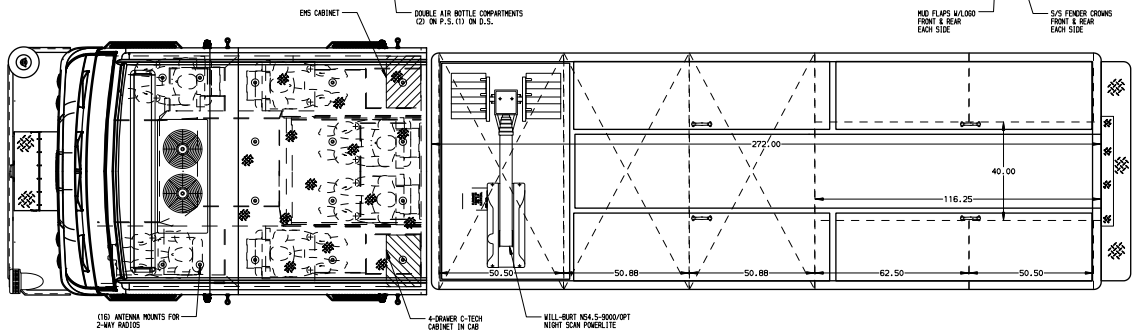
COMPARTMENT P3 CONTAINS:
- (3) 42"DP ADJ SLIDE OUT TOOLBOARDS
- (1) HORIZONTAL FLOOR EXTENSION
- (1) OIL DRY HOPPER
- (1) 3-DRAWER C-TECH CABINET
-
-

COMPARTMENT P4 CONTAINS:
- (1) 85"2-WAY ADJ SLIDE OUT TRAY
- (1) 42"DP ADJ SLIDE OUT/TILT TRAY
- (1) 23"DP FLOOR MOUNTED TRAY
-
-
-

COMPARTMENT P5 CONTAINS:
- (1) 85"2-WAY ADJ SLIDE OUT TRAY
- (1) ELECTRIC CORD REEL WITH 250' OF 10/3 YELLOW CORD
- (1) 42"DP ADJ SLIDE OUT/TILT TRAY
-







DRIVER'S SIDE COMPARTMENTS CONTAIN THE FOLLOWING:

COMPARTMENT D1 CONTAINS:
- (1) 22"DP ADJ SHELF WITH DIVIDER
- (1) 23"DP FLOOR MOUNTED TRAY
- (1) "L"SHAPED COMPARTMENT DIVIDER
- (1) CIRCUIT BREAKER PANEL
- (1) GENERATOR METER PANEL
- (1) ELECTRIC CORD REEL WITH 250' OF 10/3 YELLOW CORD
- (1) 30A,240V T.L. RECEPTACLE
-

COMPARTMENT D2 CONTAINS:
- (1) 22"DP ADJ SLIDE OUT/TILT TRAY
-
-

COMPARTMENT D3 CONTAINS:
- (1) 22"DP ADJ SHELF
- (1) 42"DP ADJ SLIDE OUT/TILT TRAY
- (1) NIGHT SCAN CONTROLLER
- (1) "SPACESAVER"2-BOTTLE FILL ENCLOSURE
- (1) CASCADE SYSTEM CONTROL PANEL
- (1) RACK FOR 6 SCBA BOTTLES
- (1) 20A,120V DUPLEX RECEPTACLE
-

COMPARTMENT D4 CONTAINS:
- (1) 85"2-WAY ADJ SLIDE OUT TRAY
- (1) 42"DP ADJ SLIDE OUT/TILT TRAY
- (1) 23"DP FLOOR MOUNTED TRAY
-

COMPARTMENT D5 CONTAINS:
- (1) 85"2-WAY ADJ SLIDE OUT TRAY
- (1) ELECTRIC CORD REEL WITH 250' OF 10/3 YELLOW CORD
- (1) 42"DP ADJ SLIDE OUT/TILT TRAY
- (1) KUSSMAUL BRAKE SYSTEM AIR COMPRESSOR

REAR COMPARTMENT CONTAINS THE FOLLOWING:

COMPARTMENT R1 CONTAINS:
- (1) 42"DP ADJ SLIDE OUT TRAY
- (1) 23"DP FLOOR MOUNTED TRAY
- (1) RACK FOR THE FOLLOWING:
  - (1) 10' FOLDING LADDER
  - (6) PIKE POLES
  - (1) 17' LITTLE GIANT LADDER
- (1) STORAGE RACK FOR 6-6000 LN AIR STORAGE BOTTLES
- (2) HYDRAULIC HOSE REELS WITH 100' OF HOSE EACH REEL
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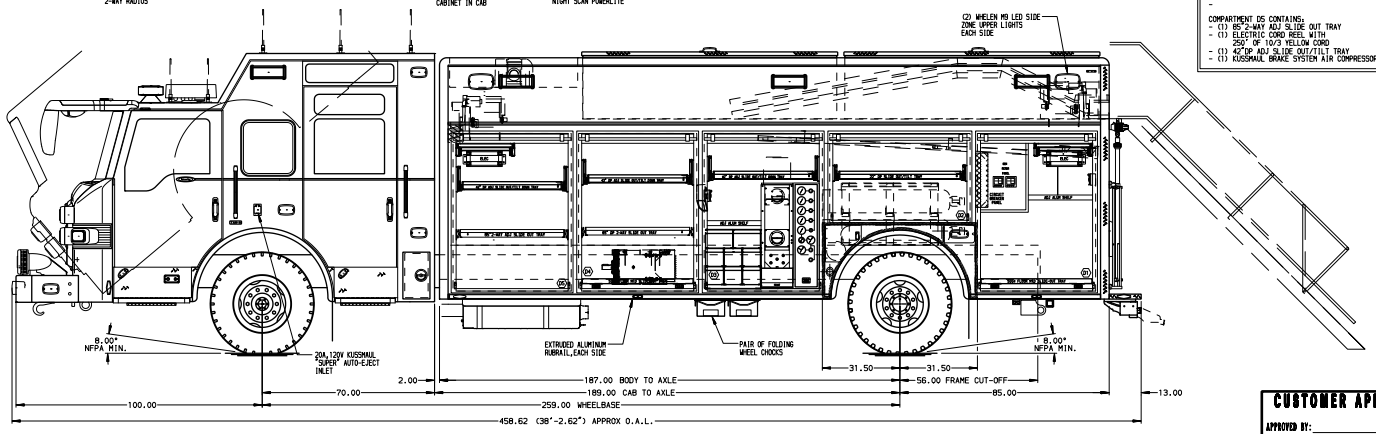

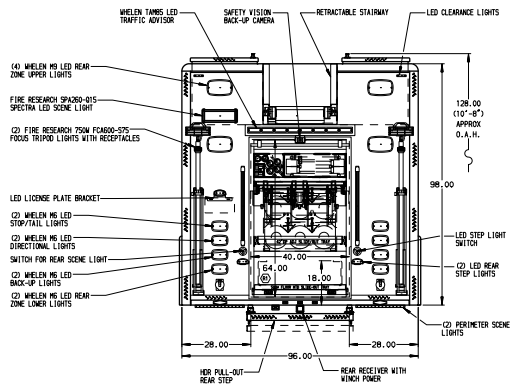

NOTE
DIMENSIONS SHOWN ARE APPROXIMATE AND ARE SUBJECT TO MINOR DEVIATIONS AS MAY OCCUR OR BE NECESSARY IN CONSTRUCTION. MINOR DETAILS NOT SHOWN.

NOTES:
1. AIR INLET/OUTLET WITH DISCONNECT FITTING LOCATED IN DRIVER SIDE LOWER STEP WELL OF CAB
2. WARN 9,000# PORTABLE WINCH
3. NEWMAR BATTERY CHARGER LOCATED BEHIND THE DRIVER'S SEAT
4. ALUMINUM TREADPLATE ON CREW CAB ROOF
5. FLOOR IN CAB AND CREW CAB TO BE PADDED RUBBER
6. ALUMINUM TREADPLATE ON REAR BODY CORNERS
7. KUSSMAUL BATTERY SAVERS LOCATED IN RADIO/EMS COMPARTMENT
8. PIERCE DUAL LED COMPARTMENT LIGHTS IN THE BODY
9. TURTLE TILE MATTING ON COMPARTMENT SHELVES AND TRAYS
10. ONAN 30KW SINGLE PHASE PTO DRIVEN GENERATOR LOCATED BETWEEN THE FRAME RAILS
11. (3) 20A,120V DUPLEX RECEPTACLES LOCATED IN CAB
12. BATTERY CHARGE INDICATOR LOCATED ON DRIVER'S SEAT BRACKET

FRONTAL IMPACT & SIDE ROLL PROTECTION

REV	DATE	BY	CH
1	15OCT13	DHE	MPE
2	06SEP13	DHE	CDK
3	15JUL13	DHE	MPE

CHASSIS DATA
MAKE: PIERCE
MODEL: VFR7020

CUSTOMER APPROVAL
APPROVED BY:
DATE:

PIERCE MANUFACTURING INC.

TITLE: HEAVY DUTY RESCUE NON-WALKIN
FOR: KLEIN FIRE DEPARTMENT SPRING, TEXAS
DWG NO. 26933AD

JOB NO.	26933
SCALE	1:24
DATE	
DRAWN BY	DHE 27JUN13
CHECKED BY	MPE 27JUN13
SHEET SIZE	D
SHEET NO.	1 OF 1

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Proposal Option List

4/24/2019

Customer:	FT. Bend County OEM	**Bid Number:**	887
Representative	Frankum, Cory	**Job Number:**	
Organization:	Siddons-Martin Emergency Group	**Number of Units:**	1
Requirements Manager:		**Bid Date:**	05-06-2019
Description:	Ft Bend County Velocity Hazmat	**Stock Number:**	
Body:	HDR, Non-Walk-In, Aluminum	**Price Level:**	38 (Current: 38)
Chassis:	Velocity Chassis (Big Block), 2010		

Line	Option	Type	Option Description	Qty
1	0766614		Boiler Plates, Heavy Duty Rescue Fire Department/Customer - Ft. Bend County Operating/In conjunction W-Service Center - In Conjunction Miles - 10 Miles Number of Fire Dept/Municipalities - 15 Bidder/Sales Organization - Siddons-Martin Emergency Group Delivery - Delivery representative Dealership/Sales Organization, Service - Siddons-Martin Emergency Group	1
2	0661794		Single Source Compliance	1
3	0584456		Manufacture Location, Appleton, Wisconsin	1
4	0584452		RFP Location: Appleton, Wisconsin	1
5	0588609		Vehicle Destination, US	1
6	0610784		Comply NFPA 1901 Changes Effective Jan 1, 2016, With Exceptions	1
7	0533352		Special Services (Rescue) Fire Apparatus	1
8	0588614		Vehicle Certification, Rescue	1
9	0681285		Agency, Apparatus Certification, Rescue, U.L.	1
10	0535579		Not Required, Unit of Measure, (no pump, no tank)	1
11	0529326		Bid Bond, 10%, Pierce Built Chassis	1
12	0540326		Performance Bond, Not Requested	1
13	0000007		Approval Drawing	1
14	0002928		Electrical Diagrams	1
15	0564202		Velocity Chassis (Big Block), 2010	1
16	0021007		Maximum Overall Height Size - 13'	1
17	0021010		Maximum Overall Length Size - 39'	1
18	0000110		Wheelbase Wheelbase - 208.00	1
19	0000070		GVW Rating GVW rating - 46,800	1
20	0000203		Frame Rails, 13.38 x 3.50 x .375, Qtm/AXT/Imp/Vel/DCF	1
21	0756525		Frame Liner, Internal "C" 12.50" x 3.00" x .25", XT/Vel/Imp, Full Length, 56"Qv	1
22	0508846		Axle, Front, Oshkosh TAK-4, Non Drive, 24,000 lb, Velocity	1
23	0090914		Suspension, Front TAK-4, 24,000 lb, DLX/Qtm/AXT/Vel/Enf	1
24	0087572		Shock Absorbers, KONI, TAK-4, Qtm/AXT/Imp/Vel/DCF/Enf	1
25	0000322		Oil Seals, Front Axle	1
26	0582746		Tires, Front, Goodyear, G296 MSA, 445/65R22.50, 20 ply	1
27	0019618		Wheels, Front, Alcoa, 22.50" x 13.00", Aluminum, Hub Pilot	1
28	0530466		Axle, Rear, Meritor RS26-185, 27,000 lb, Imp/Vel/Dash CF	1
29	0544253		Top Speed of Vehicle, 68 MPH	1
30	0122075		Suspen, Rear, Standens, Spring, 27,000 lb, Imp/Vel/Dash CF	1
31	0000485		Oil Seals, Rear Axle	1
32	0587216		Tires, Rear, Goodyear, G622 RSD, 12R22.50, 16 ply, Single	1
33	0019625		Wheels, Rear, Alcoa, 22.50" x 8.25", Aluminum, Hub Pilot, Single	1
34	0568081		Tire Balancing, Counteract Beads	1
35	0620570		Tire Pressure Monitoring, RealWheels, AirSecure, Valve Cap, Single Axle Qty, Tire Pressure Ind - 6	1
36	0003245		Axle Hub Covers w/center hole, S/S, Front Axle	1
37	0001960		Axle Hub Covers, Rear, S/S, High Hat (Pair)	1
38	0057936		Covers, Lug Nut, Chrome	1

Line	Option	Type	Option Description	Qty
39	0002045		Mud Flaps, w/logo front & rear	1
40	0544802		Chocks, Wheel, SAC-44-E, Folding	1
			Qty, Pair - 01	
41	0544806		Mounting Brackets, Chocks, SAC-44-E, Folding, Horizontal	1
			Qty, Pair - 01	
			Location, Wheel Chocks - Left Side Rear Compt	
42	0010670		ABS Wabco Brake System, Single rear axle	1
43	0030185		Brakes, Knorr/Bendix 17", Disc, Front, TAK-4	1
44	0000730		Brakes, Meritor, Cam, Rear, 16.50 x 7.00"	1
45	0058463		Air Compressor, Brake, Bendix 15.8 CFM	1
46	0000785		Brake Reservoirs, Three	1
47	0568012		Air Dryer, Wabco System Saver 1200, Heater, 2010	1
48	0000790		Brake Lines, Nylon	1
49	0000858		Inlet/Outlet, Air, w/Disconnect Fitting	1
			Location, Air Coupling(s) - a) DS Step Well	
			Qty, Air Coupling (s) - 1	
50	0014130		Air Tank, Additional for Extra Air Horn Capacity	1
51	0000820		Moisture Ejector, Automatic, w/Heat	1
			Qty, Auto. Moisture Eject - 1	
			Location, Moisture Ejector - Additional Tank	
52	0610849		Engine, DDC DD13, 505 hp, 1750 lb-ft, W/OBD, EPA 2016, Velocity	1
53	0001244		High Idle w/Electronic Engine, Custom	1
54	0590300		Engine Brake, Jacobs Compression Brake, DD13	1
			Switch, Engine Brake - f) DD13	
55	0552334		Clutch, Fan, Air Actuated, Horton Drive Master	1
56	0123135		Air Intake, w/Ember separator, Imp/Vel	1
57	0565965		Exhaust System, 5", 2010 DD13, ISX engine, Horizontal, Right Side	1
58	0787999		Radiator, Impel/Velocity	1
59	0511425		Cooling Hoses, Rubber	1
60	0001125		Fuel Tank, 65 Gallon, Left Side Fill	1
61	0001129		Lines, Fuel	1
62	0595087		DEF Tank, 4.5 Gallon, DS Fill, Forward of Rear Axle	1
			Door, Material & Finish, DEF Tank - Polished Stainless	
63	0697231		Fuel Pump for Repriming, Hardwired Switch Location MUX Truck	1
64	0552712		Not Required, Shutoff Valve, Fuel Line	1
65	0553019		Cooler, Engine Fuel, Imp/Vel, AXT/Qtm/Sab/DCF/SFR/Enf	1
66	0690880		No Selection Required From This Category	1
67	0642582		Trans, Allison 5th Gen, 4000 EVS P, w/Prognostics, Imp/Vel/DCF/SFR/Enf	1
68	0625331		Transmission, Shifter, 6-Spd, Push Button, 4000 EVS	1
69	0684459		Transmission Oil Cooler, Modine, External	1
70	0535530		Mode, Downshift, Aggressive downshift to 2nd, w/engine brake, 6 speed	1
71	0001375		Driveline, Spicer 1810	1
72	0669988		Steering, Sheppard M110 w/Tilt, TAK-4, Eaton Pump, w/Cooler	1
73	0001544		Not Required, Steering Assist Cylinder on Front Axle	1
74	0509230		Steering Wheel, 4 Spoke without Controls	1
75	0690274		Logo/Emblem, on Dash	1
			Text, Row (1) One - Ft. Bend	
			Text, Row (2) Two - County	
			Text, Row (3) Three - Haz Mat	
76	0618714		Bumper, 19" Extended, Under Slung, Recessed Crosslays/Trays, Imp/Vel	1
77	0510226		Lift & Tow Package, Imp/Vel, AXT, Dash CF	1
78	0522573		Tow Hooks Not Required, Due to Lift and Tow Package	1
79	0648377		Tray, Full Width, 19" Bumper, Under Slung Design, 10" H Bumper, Imp/Vel	1
			Capacity, Hose Tray - TBD	
			Grating, Bumper extension - Grating, Rubber	
80	0629413		Cover, 8.5" Raised Alum Treadplate, Full Width Tray,Under Slung Bumper	1
			Type of fastener - D ring latch on each side	
			Stay arm, Tray Cover - c)Pneumatic Stay Arm, Dual	
81	0659634		Light, Amdor, AY-9220-31, 30.63" LED Strip Light, Front Bumper Cover	1
			Qty, - 01	
82	0647226		Cab, Velocity FR, 8420 Raised Roof, 3-Door	1
83	0668309		Engine Tunnel, ISL and DD13, Impel/Velocity FR	1

Line	Option	Type	Option Description	Qty
84	0677478		Rear Wall, Exterior, Cab, Aluminum Treadplate	1
85	0122466		Cab Lift, Elec/Hyd, w/Manual Override, Imp/Vel	1
86	0123176		Grille, Bright Finished, Front of Cab, Impel/Velocity	1
87	0622966		Scuffplates, S/S At Cab Door Jambs, 3-Door Cab	1
			Material Trim/Scuffplate - c) S/S, Polished	
88	0527032		Trim, S/S Band, Across Cab Face, Rect Lights, Velocity	1
			Material Trim/Scuffplate - c) S/S, Polished	
			Turnsignal Covers - Polished S/S Covers	
89	0087357		Molding, Chrome on Side of Cab	1
90	0521669		Mirrors, Retrac, West Coast Style, Htd/Rmt, w/Htd/Rmt Convex	1
91	0647206		Door, Half-Height, Impel/Velocity FR 3-Door Cab, Raised Roof	1
			Key Model, Cab Doors - 751	
92	0655512		Door Panel, Brushed Stainless Steel, Impel/Velocity 3-Door Cab	1
93	0667905		Storage Pockets w/ Elastic Cover, Recessed, Impel/Velocity FR	1
94	0667902		Controls, Electric Windows, All Cab Doors, Impel/Velocity FR	1
95	0560695		Steps, 3-Door Full Tilt Cab, Imp/Vel	1
96	0770195		Handrail, Exterior, Knurled, Alum, 3-Door Cab	1
97	0509649		Lights, Cab and Crew Cab Access Steps, P25, LED w/Bezel, 1Lt Per Step	1
98	0002140		Fenders, S/S on Cab	1
99	0199245		Window, Side of C/C, Fixed, 84"/104" Vel/Imp	1
100	0552934		Trim, Cab Side Windows, 84" Velocity	1
101	0012090		Not Required, Windows, Front/Side of raised roof	1
102	0542079		Window, Rear Side of CC, Upper, Fixed, 20" Raised Roof, 3-Door Cab	1
103	0509287		Windows, Rear CC, (2) 11.25" x 18", Velocity	1
104	0553196		Trim, Cab Rear Windows, Velocity	1
105	0786286		Window Tint, Upper Crew Cab Door, Right Side, Privacy Dark Gray	1
106	0786299		Window Tint, Behind Cab Door, Left Side, Privacy Dark Gray	1
107	0786279		Window Tint, Crew Cab Door, Right Side, Privacy Dark Gray	1
108	0786281		Window Tint, Behind Crew Cab Door, Right Side, Privacy Dark Gray	1
109	0786284		Window Tint, Behind Cab Door, Right Side, Privacy Dark Gray	1
110	0635215		Mounting Provisions, 3/16" Alum, Full Engine Tunnel, Lip, Vel/Imp	1
			Mounting Provision Spacing - .50"	
			Material Finish, Cab Interior - Painted	
			Lip - 1.50"	
111	0606282		Shelf, Equipment Mounting, Aluminum, Lip, Size	4
			Location - LS rear corner of cab	
			Qty, - 04	
			Size - triangular in shape extending 1' from corner to shelf outward edge	
			Material Finish, Cab Interior - Painted	
			Lip - 1.00"	
112	0616249	SP	Computer Docking, Havis DS-PAN-212-2, Toughbook 19, Dual RF, Tilt/Swivel/Slide	1
			Location - officer dash	
113	0511188	SP	Board, Dry Erase	1
			Location - rear wall of cab, entire surface	
			Qty, - 1	
114	0758034	SP	Cabinet, Overhead, C-Tech, 24 W x 16 H x 14 D, Lift Door	2
			Location - above L shaped desk	
			Qty, - 02	
115	0622603		Cabinet, Under Desk, File, C-Tech, 20.75 W x 28 H x 18 D, (2) Drawer	1
			Location - under cab desk	
			Qty, - 1	
116	0759863		Chair, Command, USSC, Valor, High Back	2
			Location - crew cab, to be used for L shape desk	
			Qty, Command Chair - 2	
			Color, Seat Upholstery - u) Black/Red Stitching	
117	0774113	SP	Desk, L-shaped, Full Length, Wide as possible w/PS RF Postion, 3 Dr Enf	1
118	0667945		Cab Interior, Vinyl, Velocity FR, CARE	1
			Color, Cab Interior Vinyl/Fabric - a) Silver/Gray	
119	0667943		Cab Interior, Paint Color, Impel/Velocity FR	1
			Color, Cab Interior Paint - i) fire smoke gray	
120	0509532		Floor, Rubber Padded Cab & Crew Cab, Imp/Vel, Dash CF	1
121	0667936		Heater/defroster, Dual Zone Control, Impel/Velocity FR	1

Line	Option	Type	Option Description	Qty
122	0603347		Air Conditioning, Dual Zone Control, Impel/Velocity FR	1
			Paint Color, A/C Condenser - Painted by OEM	
123	0787895		Air Conditioning, Coleman-Mach 8, Roughneck, 120V, 15K, 6K Heat, Cab Roof,White	1
			Thermostat - Coleman A/C with heat, Batt Dir	
			AC Power Source - Gen to Shoreline Transfer Switch	
124	0032085		Fans, Window Defrost, Two (2), Location Feature	1
			Location - crew cab rear outer corner	
125	0639675		Sun Visor, Smoked Lexan, AXT, Dash CF, Imp/Vel, Saber FR/Enforcer	1
			Sun Visor Retention - No Retention	
126	0543257		Grab Handles, Driver Door Post & Passenger Dash Panel, Imp/Vel	1
127	0583938		Lights, Engine Compt, Custom, Auto Sw, Wln 3SC0CDCR, 3" LED, Trim	1
			Qty, - 01	
128	0122516		Fluid Check Access, Imp/Vel	1
129	0583042		Side Roll and Frontal Impact Protection	1
130	0622619		Seating Capacity, 4 Seats	1
131	0697005		Seat, Driver, Pierce PS6, Premium, Air Ride, High Back, Safety	1
132	0696994		Seat, Officer, Pierce PS6, Premium, Air Ride, SCBA, Safety	1
133	0002517		Not Required, Radio Compartment	1
134	0102788		Not Required, Seat, Rear Facing C/C, DS Outboard	1
135	0102783		Not Required, Seat, Rr Facing C/C, Center	1
136	0102790		Not Required, Seat, Rear Facing C/C, PS Outboard	1
137	0108189		Not Required, Seat, Forward Facing C/C, DS Outboard	1
138	0103319		Not Required, Seat, Forward Facing C/C, Center	1
139	0108190		Not Required, Seat, Forward Facing C/C, PS Outboard	1
140	0566653		Upholstery, Seats In Cab, Turnout Tuff	1
			Color, Cab Interior Vinyl/Fabric - c) Black	
141	0511471		No SCBA Brackets Required In Cab Seats, Imp/Vel, AXT 2010, Qtm 2010, Dash CF	1
142	0690610		Embroidery, Seats, Cab and Crew Cab	1
			Qty, Seats Embroidery - 4 Seats	
143	0603867		Seat Belt, ReadyReach	1
			Seat Belt Color - Red	
144	0604872		Seat Belt Height Adjustment, 2 Seats, Imp/Vel, Dash CF	1
145	0602464		Helmet Storage, Provided by Fire Department, NFPA 2016	1
146	0647644		Lights, Dome, FRP Dual LED 6 Lts	1
			Color, Dome Lt - Red & White	
			Color, Dome Lt Bzl - Black	
			Control, Dome Lt White - Door Switches	
			Control, Dome Lt Color - Lens Switch	
147	0709161	SP	Lights, Dome, ROM, Durolumen R03695 V4 LED, White/Red, PS Crew Switch	2
			Location - under cabinets in crew	
			Qty, - 02	
148	0631776		Not Required, Overhead Map Lights	1
149	0649915		Light, Map, ROM, C-MAP-T-LED, Gooseneck	1
			Location - back area of cab	
			Qty, - 01	
			12vdc power from - Battery switched	
150	0544486		Handlts, (4) Streamlight, Vulcan 44001 Yellow, 12v Charger Base, Shoulder Strp	1
			Location, Lights - Cab, exact location TBD	
151	0568369		Cab Instruments, Ivory Gauges, Chrome Bezels, Impel/Velocity 2010, Dash CF	1
152	0509511		Air Restriction Indicator, Imp/Vel, AXT, Dash CF, Enf MUX	1
153	0032602		Speedometer, Class 1 w/LED, Officer Overhead	1
154	0543751		Light, Do Not Move Apparatus	1
			Alarm, Do Not Move Truck - Pulsing Alarm	
155	0509042		Messages, Open Door/Do Not Move Truck, MUX w/Color Display	1
156	0611681		Switching, Cab, Membrane, Impel/Velocity/Quantum, Dash CF, AXT WiFi MUX	1
			Location, Emerg Sw Pnls - Driver's Side Overhead	
157	0555915		Wiper Control, 2-Speed with Intermittent, MUX, Impel/Velocity	1
158	0548004		Wiring, Spare, 15 A 12V DC 1st	1
			Qty, - 01	
			12vdc power from - Battery direct	
			Wire termination - Butt Splice	

Line	Option	Type	Option Description	Qty
158			Location, Spare Wiring - Officer Dash	
159	0548006		Wiring, Spare, 15 A 12V DC 2nd	1
			Qty, - 01 12vdc power from - Battery direct Wire termination - 15 amp power point plug Location - cab dash	
160	0610968		Wiring, Spare, 2.0 A 12V DC, USB Termination Blue Sea 1016 1st	2
			Qty, - 02 12vdc power from - Battery direct Location - cab dash, crew cab deck top	
161	0579886		Wiring, Spare, 50 A 12V DC, 6 Circuit Fuse Block, Blue Sea 5025 1st	2
			Qty, - 02 12vdc power from - Battery direct Location - LS cab at the bottom of the 4 shelves, (1) mounted centered above rear engine tunnel under the desk	
162	0643196		Radio, AM/FM/CD/WB, Jensen, Front Aux In / USB / Bluetooth	1
			Speakers, AM/FM Radio - Two (2) pairs of speakers, Cab/Crew Antenna, AM/FM Radio - c) Roof-mounted rubber antenna Location, AM/FM Radio - a) within reach of the driver	
163	0615386		Vehicle Information Center, 7" Color Display, Touchscreen, MUX	1
			System Of Measurement - US Customary	
164	0606249		Vehicle Data Recorder w/CZ and Overhead Display Seat Belt Monitor	1
165	0697844		Intercom, David Clark, 4-Pos, 2-Radio, D,O,2C (Inboard Crew)	1
			Location, Intercom, C Cab - 2) 2 inboard rear facing seats	
166	0637058		David Clark Universal Radio Interfaces Included with Single/Dual System	1
			Location, Radio Interface - behind driver seat	
167	0597914		Headset, David Clark, H3442 Under Helmet, Flex Mic	4
			Qty, - 04 Location - inboard of each	
168	0677662		Charger, Motorola WPLN4208C, 12V Single Portable Radio	1
			Location - RS4 (Command Compartment) Qty, - 01	
169	0604142	SP	Radio, Mobile, Motorola, APX6500, 700/800	1
			Location - location TBD Qty, - 1	
170	0768222	SP	Speaker, Motorola, Model #HSN4040, Volume Control	1
			Location - RS4 (Command Compartment) Location 2 - from radio head to RS4	
171	0696439		Antenna Mount, Custom Chassis, Cable Routed to Instrument Panel Area	1
			Qty, - 01 Location, Antenna Mount - Right Side	
172	0653519		Camera, Pierce, Driver Mux, R, RS, LS Cameras	1
			Camera System Audio - Not Provided	
173	0523921		Recess, Rear Vision Camera	1
			Location, Camera, Recessed - Center Rear	
174	0615100		Pierce Command Zone, Advanced Electronics & Control System, Diag LEDs, Vel, WiFi	1
175	0624254		Electrical System, Velocity	1
176	0079166		Batteries, (4) Exide Grp 31, 950 CCA ea, Threaded Stud	1
177	0008621		Battery System, Single Start, All Custom Chassis	1
178	0123174		Battery Compartment, Imp/Vel	1
179	0531338		Charger, Sngl Sys, Kussmaul, Pump Plus 1200, 52-21-1100	1
180	0012781		Location, Charger/Compr, Front left body compt	1
181	0537512		Location, Bat Chrg Ind, Display Through Window Behind Driver Seat	1
182	0016857		Shoreline, 20A 120V, Kussmaul Auto Eject, 091-55-20-120, Super	1
			Qty, - 01 Color, Kussmaul Cover - b) red Shoreline Connection - Battery Charger	
183	0026800		Shoreline Location	1
			Location, Shoreline(s) - DS Cab Side	
184	0647728		Alternator, 430 amp, Delco Remy 55SI	1
185	0092582		Load Manager/Sequencer, MUX	1
			Enable/Disable Hi-Idle - e)High Idle enable	

Line	Option	Type	Option Description	Qty
186	0783153		Headlights, Rect LED, JW Spkr Evo 2, AXT/DCF/Enf/Imp/Sab/Vel	1
			Color, Headlight Bez - Chrome Bezel	
187	0648425		Light, Directional, Wln 600 Cmb, Cab Crn, Imp/Vel/AXT/Qtm/DCF	1
			Color, Lens, LED's - m)match LED's	
188	0620054		Light, Directional/Marker, Intermediate, Weldon 9186-8580-29 LED 2lts	1
189	0648074		Lights, Clearance/Marker/ID, Front, P25 LED 7 Lts	1
190	0627282		Lights, Clearance/Marker/ID, Rear, FRP LED Bar & P25 LED 4Lts	1
191	0551870		Lights, Tail, Wln M6BTT* Red LED Stop/Tail & M6T* Amber LED Dir w/Flange	1
			Color, Lens - Colored	
192	0551758		Lights, Backup, Wln M6BUW, LED, Flange Feature	1
			Flange Kit - w)with flange	
193	0664481		Bracket, License Plate & Light, P25 LED	1
194	0589905		Alarm, Back-up Warning, PRECO 1040	1
195	0761913		Lights, Perimeter Cab, Amdor AY-LB-12HW020 LED 3Dr	1
196	0616293		Not Required, Lights Perimeter Pump House, No Pump	1
197	0769560		Lights, Perimeter Body, Amdor AY-LB-12HW012 LED 2lts, Rear Step	1
			Control, Perimeter Lts - Parking Brake Applied	
198	0768256		Lights, Step, P25 at Rear & Walkway, LED Light Strips in Stairway, Rr Sw	1
199	0777394	SP	Lights, Front Scene, SBL Series, 12V 14" LED, Mounted Under Bumper	2
			Location, Lights - under front bumper	
			Qty, - 02	
200	0635487		Lights, Rear Scene, Wln, 700 LED, Below Tailboard	1
			Control, Rear Scene Lts - Cab Switch Panel DS	
201	0776357		Light, Visor, Wln, 12V P*H2* Pioneer, Cnt Feature, 1st	1
			Qty, - 01	
			Location, driver's/passenger's/center - Centered	
			Color, Wln Lt Housing - White Paint	
			Control, Scene Lts - Cab Sw Panel DS and Cab Sw Panel PS	
			Scene Light Optics - Flood/Spot	
202	0774309		Lights, Wln, P*H2* Pioneer, 12 VDC, 1st	1
			Location - side of cab, high, between cab and crew cab doors	
			Qty, - 01	
			Color, Wln Lt Housing - Red #106 Paint	
			Control, Scene Lts - Cab Sw Panel DS, Cab Sw Panel PS and Cab and Crew Cab Dr Sw, DS	
			Scene Light Optics - combination	
			Mount, Wln II - Semi-recessed 0 deg P**2	
203	0774308		Lights, Wln, P*H2* Pioneer, 12 VDC, 2nd	1
			Location - RS cab, high, between cab and crew cab door	
			Qty, - 01	
			Color, Wln Lt Housing - Red #106 Paint	
			Control, Scene Lts - Cab Sw Panel DS, Cab Sw Panel PS and Cab and Crew Cab Dr Sw, PS	
			Scene Light Optics - combination	
			Mount, Wln II - Semi-recessed 0 deg P**2	
204	0004961		Not Required, Work Lights, Alt. Rear Lights, HDR/Encore, No Hose Bed	1
205	0795742		Not Required, Walking Surface, Alt. Walking Surface Lights, HDR	1
206	0753285		Switch, White Warning Lights, Front	1
			Function Reset - On	
207	0019030		HDR, Non-Walk-In, Aluminum	1
208	0020818		23.5' Body Length, 48.48.48.57.60, NWI	1
209	0656685		100" Body Width, NWI	1
210	0018374		98" Body Height, NWI	1
211	0617576		NWI, Hatch, Recessed Walkway & Recessed Area	1
			Configuration of Hatch Compartments - 1.) Two Each Side	
212	0692726		Doors, Gortite, Roll-up, Side Compartments	8
			Qty, Door Accessory - 08	
			Color, Roll-up Door, Gortite - Painted to Match Lower Body	
			Latch, Roll-up Door, Gortite - Non-Locking Liftbar	
213	0041773		23.5' Body Roll Doors, 48.48.48.57.60, NWI	1
214	0010603		Left Forward Compt, 48" & 48" & 48", Roll, NWI	1
215	0018724		Left Over Wheel Compt, 57", Roll, NWI	1
216	0018752		Left Rear Compt, 60" Roll, NWI	1

Line	Option	Type	Option Description	Qty
217	0013163		Right Forward Compt, 48" & 48" & 48", Roll, NWI	1
218	0018816		Right Over Wheel Compt, 57" Roll, NWI	1
219	0018844		Right Rear Compartment, 60" Roll, NWI	1
220	0788379		Rear Compt, Roll Door, Gortite, Single Axle	1
			Color, Roll-up Door, Gortite - Painted to Match Lower Body	
			Latch, Roll-up Door, Gortite - Non-Locking Liftbar	
221	0044777		Desk, Countertop, With Storage	1
			Location - RS4 (Command Compartment)	
			Qty, - 01	
222	0690173		Audio/Video Connection, Single Camera to Single Monitor	1
223	0578961		Controller, WTI, Desk Top Controller, for PTZ Camera	1
			Qty, - 01	
			Location 1 - crew cab desk	
224	0778097	SP	Camera, WTI Viper H264 Network, HD Color PTZ	1
			Location 1 - top of mast	
225	0530038		Receptacles, Tabletop Power and Network Jacks	3
			Location - (2) on crew cab table top, (1) on desk top in P3 compt.	
			Qty, - 03	
226	0530610		Weather System, Columbia Orion	1
			Location - cab roof	
			Software - WeatherMaster	
			Display - Weather Station, Rack mounted	
			Microserver - Orion LX	
227	0791212	SP	Weather System, Columbia Orion, Mast Storage	1
			Location - cab roof	
228	0591018		Mast, Will-Burt, 5-20 w/ Nycoil	1
			Location - rear of body DS	
			Qty, - 01	
229	0021401		Stairway, Retractable, Recessed Walkway, Aluminum	1
230	0751512		Awning, Electric, Girard, G-2000, Painted Cover	2
			Location - DS and PS	
			Qty, - 02	
			Color - 4) white	
231	0053763		Hopper, Oil Dry Absorbent, Roof Hatch, Thru Floor	1
			Location - RS rear corner	
			Qty, - 01	
232	0054403		Pegboard, Alum, .188"	1
			Location - driver side compartment behind the rear wheels	
			Qty, - 1	
233	0004201		Rack, SCBA Bottles, 7.50" x 7.50"	9
			Location - RS1	
			Qty, - 09	
			Configuration - 3x3	
234	0754229	SP	Coffee Maker, Hamilton Beach 12-cup Brewstation	1
			Location - RS4 (Command Compartment)	
			Qty, - 1	
			Configuration - mounted on shelf in compartment	
235	0592642		Strap, Retainer for Equipment, Hook & Loop, 2.00"	4
			Location - RS1 for each SCBA bottle in storage rack	
			Qty, - 04	
236	0794489		Bumper, Rear, Non-Walk-In 13.00" D	1
237	0793822		Not Required, Water Tank, Rescue	1
238	0023410		Not Required, Overflow	1
239	0028107		Not Required, Foam Cell Modification	1
240	0553729		Not Required, Restraint, Water Tank, Heavy Duty	1
241	0013534		Not Required, Running Boards	1
242	0690026		Wall, Rear, Body Material	1
243	0003540		Tow Eyes (2) (Tanker/Rescue)	1
244	0689547		Lights, Compt, Pierce LED, Dual Light Strips, Each Side of Door, HDR	9
			Qty, - 09	
245	0606068		Lights, Hatch Compt, Pierce LED Strip Lights, HDR	1
246	0652247		Shelf, Adjustable, 500 lb Capacity, Standard Depth, HDR	3
			Qty, Shelf - 03	

Line	Option	Type	Option Description	Qty
246			Location, Shelf - (1) LS3, (1) RS1, (1) RS3 above tool box trays, (1) RS4 (Command Compartment)	
247	0652244		Shelf, Adjustable, 500 lb Capacity, 1/2 Trans, HDR	1
			Qty, Shelf - 01 Location, Shelf - RS3	
248	0652281		Tray, 500 lb Slide-Out, 2" Sides - Adj. Height, Standard Depth Compt, HDR	1
			Location - (1) LS3, Qty, Tray (slide-out) - 01	
249	0652264		Tray, 500 lb, Slide-out, 2-Way, Utility, Adj Height, 3" Sides, Full Trans, HDR	1
			Location - LS4 Qty, Tray (slide-out) - 01	
250	0652262		Tray, 200 lb, Tilt/Slide-out, 30 Deg, Adj, 1/2 Trans, HDR	5
			Location - (2) LS2 (2) LS5 (2) LS5 Qty, Tray (slide-out) - 05	
251	0645991		Tray, Floor Mounted, Slide-Out, w/ Side Slides,Std Depth, 500lb, 2.00" Sides,HDR	5
			Qty, - 05 location - LS3, LS4, LS5, RS1, RS5 Material - paint to match compt interior	
252	0648489		Toolboard, Slide-out, Alum, .188", Peg Board, Standard Depth, HDR	2
			Finish - Painted, Compt Interior, Spatter Gray location - LS1 Qty - 2	
253	0558503		Drawer Assembly, CTECH, Four Drawers, Up To 48" Wide	1
			Location - PS3 Qty, - 01 Size, Drawer Height 1 (Top) - 6.25" Size, Drawer Height 2 - 6.75" Size, Drawer Height 3 - 6.75" Size, Drawer Height 4 - 6.75"	
254	0539811		Box, Poly Tool	4
			Location - RS1 Qty, Comp. Accessory - 04 Color - 1) black Length - 12.00" Width - 12.00" Depth - 12.00"	
255	0789261	SP	Slide Out Work Surface, Dry Erase Board, Surface Mount	1
			Location - RS4 command compartment Qty, - 1	
256	0544203		Matting, Turtle Tile, Hatch Compt Floor, Each	4
			Location - each hatch compartment Qty, - 04 Color - 1) black	
257	0659383		Matting, Turtle Tile w/Ramp, Compt Floors	9
			Location - all compartment floor Qty, Comp. Accessory - 09 Color - 1) black Color, Tile Edge - black	
258	0028026		Matting, Turtle Tile, Compt Shelving only	12
			Location - all compartment shelves Qty, Shelf - 12 Color - 1) black	
259	0589388		Partition, Vertical (Transverse), Adjustable, Hatch Compt	4
			Location - (1) each hactch compartment Qty, Partition - 04	
260	0027092		Tracks only, for Shelving	7
			Location - TBD Qty, Shelf Track - 07	
261	0004016		Rub Rail, Aluminum Extruded, Side of Body	1
262	0004024		Fender Crowns, Rear, S/S	1
263	0519849		Not Required, Hose, Hard Suction	1
264	0795798		Compt, Air Bottle, Corner of Fender Panel, Dbl Wide, Full Width Door, HDR	3
			Qty, - 03 Door Finish, Fender Compt - Polished	

Line	Option	Type	Option Description	Qty
264			Location, Fender Compt - Double - LS Fwd, Double - RS Fwd and Double - RS Rear	
			Latch, Air Bottle Compt - Flush Lift & Turn	
			Insert, Air Bottle Compt - Rubber Matting	
265	0044229		No Extension Ladder Req'd	1
266	0074231		No Roof Ladder Req'd	1
267	0074248		Not Required, Folding Ladder	1
268	0540739		Not Required, Rack, Equipment Storage, Rear Compt	1
269	0621559		Step, Rear, Swing Down, Gas Assist Cylinders w/Morton Cass Insert, HDR, MUX	1
270	0796159		Not Required, Pump, Rescue	1
271	0012216		No Seal/Packing Required	1
272	0012690		Not Required, Trans, Pump	1
273	0669703		Not Required, Pumping Mode	1
274	0024484		Not Required, Pump Shift	1
275	0046295		Transmission Lock-up, Not Req'd, NO PUMP	1
276	0046296		Not Required, Auxiliary Cooling System, NO PUMP	1
277	0046283		Not Required, Transfer Valve, NO PUMP	1
278	0024513		Not Required, Intake Relief Valve	1
279	0046403		No Relief Valve Req'd, No Pump	1
280	0012336		No Pump Primer Req'd	1
281	0012816		Not Required, Pump Manuals	1
282	0090789		Not Required, Plumbing, No Pump	1
283	0046371		Not Required, No Plumbing or Foam System	1
284	0796254		No Main Inlet Required, Rescue No Pump	1
285	0584002		Not Required, Cap, Main Pump Inlet, No Side Inlet Caps Required, No Pump	1
286	0089389		No Valves, (No Pump)	1
287	0055600		Not Required, Auxiliary Inlet, Left Side	1
288	0029147		Not Required, Inlet, Right Side	1
289	0074685		Not Required, Inlet Installation	1
290	0064700		Not Required, Inlet Control	1
291	0681723		No Bleeder Valve, No Pump	1
292	0681730		Not Required, Tank to Pump, No Pump	1
293	0074900		Not Required, Tank Fill	1
294	0551181		Not Required, Outlet, Left Side, Rescue	1
295	0092570		Not Required, Outlets, Left Side Additional	1
296	0021143		Not Required, Outlet, Right Side	1
297	0092571		Not Required, Outlets, Right Side Additional	1
298	0545326		Not Required, Outlet, Large Diameter, No Pump	1
299	0092572		Not Required, Outlet, Front	1
300	0092575		Not Required, Outlet, Rear	1
301	0092574		Not Required, Outlet, Rear, Additional	1
302	0551179		Not Required, Discharge Caps	1
303	0089391		Valve, Bleeder - None Req'd, (No Pump)	1
304	0055095		Not Required, Elbow, Left Side Outlets, 2.50"	1
305	0021134		Not Required, Elbow, Right Side Outlets	1
306	0089584		Not Required, Elbow, Right Side Outlets, Additional	1
307	0045099		Not Required, Elbow, Rear Outlets	1
308	0007308		Not Required, Elbow, Large Diameter Outlet	1
309	0089394		Not Required, Outlet Control, No Pump	1
310	0029106		Not Required, Deluge Outlet	1
311	0029302		No Monitor Requested	1
312	0029304		No Nozzle Req'd	1
313	0029107		No Deluge Mount	1
314	0519936		Not Required, 1.50" Crosslays, Rescue	1
315	0029260		Not Required, Speedlays	1
316	0500535		Not Required, Hose Restraint, Crosslay/Speedlay	1
317	0046372		Not Required, Foam System, Pump, or Plumbing	1
318	0012126		Not Required, CAF Compressor	1
319	0552517		Not Required, Refill, Foam Tank	1
320	0042573		Not Required, Foam System Demonstration	1
321	0045465		Not Required, Foam Tanks	1

Line	Option	Type	Option Description	Qty
322	0091110		Not Required, Foam Tank Drain	1
323	0091079		Not Required, Foam Tank #2	1
324	0091112		Not Required, Foam Tank #2 Drain	1
325	0518339		Not Required, Pump House, Rescue	1
326	0000261		Not Required, Pump Panel Layout	1
327	0030701		Not Required, Material, Pump Panels, No Panel	1
328	0046495		Not Required, Pump Access, No Pump	1
329	0092531		Not Required, Pump House Structure	1
330	0002624		Not Required, No Chassis Engine Gauges @ Pump Panel	1
331	0046400		Throttle, Engine Not Req'd, No Pump / Skid Pump	1
332	0046378		Not Required, Gauges, Vac/Pressure, No Pump	1
333	0046375		Not Required, Gauges, No Pump	1
334	0035650		Not Required, Water Level Gauge	1
335	0006774		Not Required, Foam Level Gauge	1
336	0046280		Not Required, Light Shield, No Pump	1
337	0793576		Air Horns, (2) Grover, Stutter Tone, 2040 Rect, Through Underslung Bumper Flange	1
338	0606835		Location, Air Horns, Bumper, Each Side, Outside Frame, Outboard (Pos #1 & #7)	1
339	0016065		Control, Air Horn, Horn Ring, PS Chrome Push Button	1
340	0783817	SP	Switch, Air Horns, Push Button, Location	1
			Location - RS4 (command compartment)	
341	0525667		Siren, Wln 295SLSA1, 100 or 200 Watt	1
342	0510206		Location, Elect Siren, Recessed Overhead In Console	1
			Location, Elec Siren - Overhead, DS Center Sw Pnl	
343	0076156		Control, Elec Siren, Head Only	1
344	0601306		Speaker, (1) Wln, SA315P, w/Pierce Polished Stainless Steel Grille, 100 watt	1
			Connection, Speaker - siren head	
345	0601565		Location, Speaker, Frt Bumper, Recessed, Center (Pos 4)	1
346	0016080		Siren, Federal Q2B	1
347	0006095		Siren, Mechanical, Mounted Above Deckplate	1
			Location, Siren, Mech - a) Left	
348	0026160		Control, Mech Siren, Horn Ring, PS Foot Sw	1
349	0657536		Programming, Wln Electronic Siren, Warble & Whoop Tones	1
350	0606775		Lightbar, Wln, Freedom IV-Q, 72", RRWRRR____RRRWRR	1
			Filter, Whl Freedom Ltbrs - No Filters	
351	0540460		Light, Front Zone, Wln M6*C LED, Clear Lens, 4lts Q Bezel	1
			Color, Lt DS Frnt Outside - DS Front Outside Red	
			Color, Lt PS Frnt Outside - PS Front Outside Red	
			Color, Lt DS Front Inside - r) DS Front Inside Red	
			Color, Lt PS Front Inside - r) PS Front Inside Red	
352	0653937		Flasher, Headlight Alternating	1
			Headlt flash deactivation - a)w/high beam	
353	0795711		Lights, Side Zone Lower, Wln M6*C LED, Clear Lens, 3pr, Ovr 25, Rescue	1
			Location, Lights Front Side - b)each side bumper	
			Color, Lt Side Front - Red	
			Color, Lt Side Middle - Red	
			Color, Lt Side Rear - Red	
			Location, Lights Mid Side - Rearward of Crew Cab Doors	
			Location, Lights Rear Side - Over Rear Wheels	
354	0670079		Lights, Side, Wln WIONSMC* LED, Chrome Flange, 1st	4
			Location, Lights - (1) as far forward in the front rub rail and One (1) as far rearward in the rear rub rail (on each side of truck).	
			Qty, - 04	
			Color, Lights, Warning - gla) red	
			Control, Light - b) side warning	
355	0540783		Lights, Rear Zone Lower, Wln M6*C LED, Clear Lens	1
			Color, Lt DS Rear - r) DS Rear Lt Red	
			Color, Lt PS Rear - r) PS Rear Lt Red	
356	0641361		Light, Rear Zone Upper, Wln Rota-Beam R316*F LED Beacon, Clear Lens	1
			Color, Lts, Rear Zone Upper - r)red	
357	0006551		Not Required, Lights, Rear Upper Zone Blocking	1

Line	Option	Type	Option Description	Qty
358	0766959		Refrigerator, Norcold DE-0788B, 3.1 cf AC/DC	1
			Qty, - 01 Location - RS4	
359	0006646		Electrical System, 120/240VAC, General Design	1
360	0066658		Generator, Onan 25kW, Single Phase, PTO Drive (25,000W Cont. Rating)	1
361	0016645		Location, PTO Generator, Between the Frame Rails	1
362	0016752		Starting Sw, Truck Engine Powered Gen, Cab Sw Pnl	1
363	0651902		Remote Start, Hydraulic Generator, 1 Location	1
			Location 1 - TBD	
364	0016740		Not Required, Fuel System	1
365	0016767		Not Required, Oil Drain Extension, Generator	1
366	0016771		Not Required, Routing Exhaust, Generator	1
367	0036738		Circuit Breaker Panel, Included With PTO Generator	1
			Location, Circuit Breaker Panel - RS4, Right Wall High	
368	0642861		Light Twr, W-B Vrt 5.4-17-1380 SPC, 6-K20 120VAC Lts Cld 17'	1
			Detector, AC Lt Tower - Shall include the AC detector Color, Tower, Wlb - White Paint	
369	0664471		Location, Light Tower, Cargo Area	1
370	0617738		Controller, Light Tower, W-B, Wired Handheld, E-STOP Pow, Pow X, Vrt	1
371	0664791		Location, Light Tower Controller, Driver's Side Front Body Compartment	1
372	0006825		Reel, Elect Cable, Hannay, 1600, (3) Wire	1
			Qty, Cord Reels - 1 Reel Guide - b) Captive roller Finish, Reel - Painted Gray Location, Electric Cord Reel - D4, High & Left, 1 Reel	
373	0006827		Cord, Electric, 12/3 Yellow, 3 Wire	1
			Lengths of Elect Cord - 1 Feet of Yellow Cord - e)200 Connection, Cord - Hubbell 20A 120V Str Blade	
374	0619267		Box, Junc, Circle-D, 3Wire, 2-15/20A 120V SB, 2-20A 120V TL	2
			Qty, - 02 Connection, Electric Plug / Inlet (Male) - Pigtail, 20A, 120V, TL Color, Electrical Junction Box, Circle D - High Visability Yellow	
375	0036622		Receptacle, 20A 120V 3-Pr 3-Wr SB Dup, GFCI, Wtrprf	4
			Location, Receptacles - TBD Qty, - 04 AC Power Source - Generator	
376	0519934		Not Required, Brand, Hydraulic Tool System	1
377	0649753		Not Required, PTO Driven Hydraulic Tool System	1
378	0649750		Not Required, Hydraulic Reels	1
379	0772479	SP	Computer, Laptop, Panasonic CF33 Toughbook (Honolulu FD)	1
			Qty, - 01	
380	0007150		Bag of Nuts and Bolts	1
			Qty, Bag Nuts and Bolts - 1	
381	0047021		Reflective Emergency Triangles, Set of Three	1
			Qty, - 1	
382	0602524		NFPA Required Loose Equipment, Special Services, NFPA 2016,Provided by Fire Dept	1
383	0796255		Not Required, Soft Suction, Rescue No Pump	1
384	0008811	SP	Extinguisher, 2.5 "ABC" D.O.T. w/Mtg Brkt, Installed	1
			Location - crew cab Qty, Extinguishers - 1	
385	0602533		Extinguisher, Dry Chemical, Special Services, NFPA 2016, Provided by Fire Dept	1
386	0602351		Extinguisher, 2.5 Gal. Press Water, Special Service, NFPA 2016,Prov by Fire Dept	1
387	0617600	SP	Paint, Two Tone, Cab and Body, w/High Shield, Metallic Upper, Custom Cab,Vel/Imp	1
			Paint, Color - #103 lime green Paint Color, Upper Area - #551 silver gray mettalic	
388	0646901		Paint Chassis Frame Assy, With Liner, E-Coat, Standard	1
			Paint Color, Frame Assembly, Predefined - Standard Black	
389	0693797		No Paint Required, Aluminum Front Wheels	1
390	0693792		No Paint Required, Aluminum Rear Wheels	1
391	0763223	SP	Paint, Front Bumper, Match the Upper Cab Color	1

Line	Option	Type	Option Description	Qty
392	0007230		Compartment, Painted, Spatter Gray	1
393	0544111		Reflective Band, 10"	1
			Color, Reflect Band - A - a) white	
394	0510041		Reflective across Cab Face, Imp/Vel	1
395	0536955		Stripe, Chevron, Rear, Diamond Grade, Rescue	1
			Color, Rear Chevron DG - fluorescent yellow green	
396	0065687		Stripe, Reflective, Cab Doors Interior	1
			Color, Reflective - a) white	
397	0033179		Lettering Specifications, Reflective	1
398	0686145		Lettering, Reflective, 4.00", (141-160)	1
			Outline, Lettering - Outline	
399	0686022		Lettering, Reflective, 4.00", (101-120)	1
			Outline, Lettering - Outline	
400	0686024		Lettering, Reflective, 4.00", (81-100)	1
			Outline, Lettering - Outline	
401	0686020		Lettering, Reflective, 3.00", (121-140)	1
			Outline, Lettering - Outline	
402	0686025		Lettering, Reflective, 4.00", (61-80)	1
			Outline, Lettering - Outline	
403	0769755		Emblem, Texas Flag Painted on Cab Grille, All Custom Chassis	1
404	0772003		Manual, Fire Apparatus Parts, USB Flash Drive, Custom	1
			Qty, - 01	
405	0772037		Manual, Chassis Service, USB Flash Drive, Custom	1
			Qty, - 01	
406	0773381		Manual, Chassis Operation, (1) USB Flash Drive, Custom	1
407	0030008		Warranty, Basic, 1 Year, Apparatus, WA0008	1
408	0611136		Warranty, Chassis, 3 Year, Velocity/Impel, WA0284	1
409	0696696		Warranty, Engine, Detroit DD13, 5 Year, WA0180	1
410	0684953		Warranty, Steering Gear, Sheppard M110, 3 Year WA0201	1
411	0595767		Warranty, Frame, 50 Year, Velocity/Impel, Dash CF, WA0038	1
412	0595698		Warranty, Axle, 3 Year, TAK-4, WA0050	1
413	0777368		Warranty, Axle, 2 Year, Meritor, General Service, WA0328	1
414	0652758		Warranty, ABS Brake System, 3 Year, Meritor Wabco, WA0232	1
415	0019914		Warranty, Structure, 10 Year, Custom Cab, WA0012	1
416	0595813		Warranty, Paint, 10 Year, Cab, Pro-Rate, WA0055	1
417	0524627		Warranty, Electronics, 5 Year, MUX, WA0014	1
418	0695416		Warranty, Pierce Camera System, WA0188	1
419	0647720		Warranty, Pierce LED Strip Lights, WA0203	1
420	0046369		Warranty, 5-year EVS Transmission, Standard Custom, WA0187	1
421	0685945		Warranty, Transmission Cooler, WA0216	1
422	0033401		Not Required, Tank Warranty	1
423	0596024		Warranty, Structure, 15 Year, HDR, WA0010	1
424	0693127		Warranty, Gortite, Roll-up Door, 6 Year, WA0190	1
425	0012599		Warranty, Pump, Not Required	1
426	0046370		Not Required, Warranty, No Plumbing	1
427	0641372		Warranty, Foam System, Not Available	1
428	0642011		Warranty, Onan Generator, 5 Year, Hydraulic, Protec	1
429	0595820		Warranty, Paint, 10 Year, Body, Pro-Rate, WA0057	1
430	0595412		Warranty, Graphics Lamination, 1 Year, Apparatus, WA0168	1
431	0683627		Certification, Vehicle Stability, CD0156	1
432	0610837		Certification, Engine Installation, Velocity, Detroit DD13, 2016, CD0148	1
433	0686786		Certification, Power Steering, CD0098	1
434	0667417		Certification, Cab Integrity, Velocity FR, CD0009	1
435	0548950		Certification, Cab Door Durability, Velocity/Impel, CD0001	1
436	0548967		Certification, Windshield Wiper Durability, Impel/Velocity, CD0005	1
437	0667411		Certification, Electric Window Durability, Velocity/Impel FR, CD0004	1
438	0549273		Certification, Seat Belt Anchors and Mounting, Imp/Vel/Vel SLT, CD0018	1
439	0667416		Certification, Cab Heater and Defroster, Velocity/Impel FR, CD0015	1
440	0667415		Certification, Cab Air Conditioning Performance, Velocity/Impel FR, CD0016	1
441	0545073		Amp Draw Report, NFPA Current Edition	1
442	0002758		Amp Draw, NFPA/ULC Radio Allowance	1

Line	Option	Type	Option Description	Qty
443	0799248		Appleton/Florida BTO	1
444	0000031		HDR BODY	1
445	0000012		PIERCE CHASSIS	1
446	0562778		DD13 ENGINE	1
447	0046396		EVS 4000 Series TRANSMISSION	1
448	0020037		NO PUMP	1
449	0020013		NO WATER TANK	1
450	0028047		NO FOAM SYSTEM	1
451	0046282		Not Required, Control Panel, No Pump	1
452	0020007		AKRON VALVES	1
453	0020015		ABS SYSTEM	1
454	0658751		PUMPER BASE	1