

WMR Purchasing Group

BID OPPORTUNITY

Bid Number 0001-2018

SUPPLY AND DELIVERY OF:

- **TWO (2) FIRE PUMPER APPARATUSES**
- **ONE (1) PUMPER TANKER APPARATUS**

Submission Deadline

June 1st, 2018

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A BID SUBMISSION

A1 FORM A: BID

A1.1 See FORM A: BID provided separately.

A2 FORM B: PRICES

A2.1 See FORM B: PRICES provided separately.

B BIDDING PROCEDURES

B1 CONTRACT TITLE

B1.1 SUPPLY AND DELIVERY OF TWO FIRE PUMPER APPARATUSES AND ONE PUMPER TANKER APPARATUS

B2 SUBMISSION DEADLINE

B2.1 The Submission Deadline is 9:00 AM Central Time, June 1st, 2018.

B2.2 Bids determined by the Contract Administrator to have been received later than the Submission Deadline will not be accepted and will be returned unopened upon request.

B2.3 The Contract Administrator may extend the Submission Deadline by issuing an Addendum according to [B6](#) Addenda.

B3 DEFINITIONS

B3.1 When used in this Bid Opportunity:

- (a) **“Contract”** means the agreement made with successful bidder to supply the Work.
- (b) **“Contractor”** means the bidder/manufacturer identified in Form A who is awarded the bid.
- (c) **“representative sample”** means the sample submitted will be exactly what will be provided for the duration of the Contract and must meet specifications;
- (d) **“WMR”** means Winnipeg Metropolitan Region;
- (e) **“WMR Purchasing Group”** means a group comprised of delegated representatives of the Winnipeg Metropolitan Region (formerly the Partnership of the Manitoba Capital Region) to facilitate the tendering of specified goods;
- (f) **“WMR Purchasing Group Member”** means a municipality that may purchase goods services through the WMR Purchasing Group and includes municipalities holding membership with the Winnipeg Metropolitan Region or another municipality approved by the WMR Purchasing Group. WMR municipalities include:
 - City of Winnipeg
 - City of Selkirk;
 - RM of Cartier;
 - RM of East St. Paul;

- RM of Headingley;
- RM of Macdonald;
- RM of Ritchot;
- RM of Rockwood;
- RM of Rosser;
- RM of Springfield;
- RM of St. Clements;
- RM of St. Andrews;
- RM of St. Francois Xavier;
- RM of Tache;
- RM of West St. Paul;
- Town of Niverville;
- Town of Stonewall;
- Village of Dunnottar.

B4 ENQUIRIES

- B4.1 All enquiries shall be directed to the Contract Administrator identified in [C4.1](#).
- B4.2 If the Bidder finds errors, discrepancies or omissions in the Bid Opportunity, or is unsure of the meaning or intent of any provision therein, the Bidder shall notify the Contract Administrator of the error, discrepancy or omission at least five (5) Business Days prior to the Submission Deadline.
- B4.3 If the Bidder is unsure of the meaning or intent of any provision therein, the Bidder should request clarification from the Contract Administrator as to the meaning or intent prior to the Submission Deadline.
- B4.4 Responses to enquiries which, in the sole judgment of the Contract Administrator, require a correction to or a clarification of the Bid Opportunity will be provided by the Contract Administrator to all Bidders by issuing an Addendum as per [B6.2](#).
- B4.5 Responses to enquiries which, in the sole judgment of the Contract Administrator, do not require a correction to or a clarification of the Bid Opportunity will be provided by the Contract Administrator only to the Bidder who made the enquiry.
- B4.6 The Bidder shall not be entitled to rely on any response or interpretation received pursuant to [B4](#), unless that response or interpretation is provided by the Contract Administrator in writing.

B5 CONFIDENTIALITY

- B5.1 Information provided to a Bidder by the WMR Purchasing Group or acquired by a Bidder by way of further enquiries or through investigation is confidential. Such information shall not be used or disclosed in any way without the prior written authorization of the Contract Administrator. The use and disclosure of the confidential information shall not apply to information which:
- (a) was known to the Bidder before receipt hereof; or
 - (b) becomes publicly known other than through the Bidder; or

(c) is disclosed pursuant to the requirements of a governmental authority or judicial order.

B5.2 The Bidder shall not make any statement of fact or opinion regarding any aspect of the Bid Opportunity to the media or any member of the public without the prior written authorization of the Contract Administrator.

B6 ADDENDA

B6.1 The Contract Administrator may, at any time prior to the Submission deadline, issue addenda correcting errors, discrepancies or omissions in the Bid Opportunity, or clarifying the meaning or intent of any provision therein.

B6.2 The Contract Administrator will issue each Addendum at least two (2) Business Days prior to the Submission Deadline, or provide at least two (2) Business Days by extending the Submission Deadline.

B6.3 Addenda will be available by searching on MERX (<https://www.merx.com>) as well as on the WMR website at <http://winnipegmetroregion.ca/index.php/bids-rfps-top>.

B6.4 The Bidder is responsible for ensuring that he/she has received all addenda and is advised to check MERX as well as the WMR website at <http://winnipegmetroregion.ca/index.php/bids-rfps-top> for addenda regularly and shortly before the Submission Deadline, as may be amended by Addendum.

B6.5 The Bidder shall acknowledge receipt of each Addendum in Paragraph A1.7 of Form A: Bid. Failure to acknowledge receipt of an Addendum may render a Bid non-responsive.

B7 SUBSTITUTES

B7.1 The 'Work' is based on the materials, equipment, methods and products specified in the Bid Opportunity.

B7.2 Substitutes shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.

B7.3 Requests for approval of a substitute will not be considered unless received in writing by the Contract Administrator at least seven (7) Business Days prior to the Submission Deadline.

B7.4 The Bidder shall ensure that any and all requests for approval of a substitute:

- (a) provide sufficient information and details to enable the Contract Administrator to determine the acceptability of the material, equipment, method or product as either an approved equal or alternative;
- (b) identify any and all changes required in the applicable Work, and all changes to any other Work, which would become necessary to accommodate the substitute;
- (c) identify any anticipated cost or time savings that may be associated with the substitute;
- (d) certify that, in the case of a request for approval as an approved equal, the substitute will fully perform the functions called for by the general design, be of equal or superior substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the Contract;
- (e) certify that, in the case of a request for approval as an approved alternative, the substitute will adequately perform the functions called for by the general design, be similar in substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the Contract.

B7.5 The Contract Administrator, after assessing the request for approval of a substitute, may in their sole discretion grant approval for the use of a substitute as an "approved equal" or as an "approved alternative", or may refuse to grant approval of the substitute.

- B7.6 The Contract Administrator will provide a response in writing, at least two (2) Business Days prior to the Submission Deadline, to the Bidder who requested approval of the substitute.
- B7.6.1 The Contract Administrator will issue an Addendum, disclosing the approved materials, equipment, methods and products to all potential Bidders. The Bidder requesting and obtaining the approval of a substitute shall be responsible for disseminating information regarding the approval to any person or persons she/he wishes to inform.
- B7.7 If the Contract Administrator approves a substitute as an “approved equal”, any Bidder may use the approved equal in place of the specified item.
- B7.8 If the Contract Administrator approves a substitute as an “approved alternative”, any Bidder bidding the approved alternative may base their Total Bid Price upon the specified item but may also indicate an alternative price based upon the approved alternative. Such alternatives will be evaluated in accordance with [B16](#).
- B7.9 No later claim by the Contractor for an addition to the price(s) because of any other changes in the Work necessitated by the use of an approved equal or an approved alternative will be considered.

B8 BID SUBMISSION

- B8.1 The Bid shall consist of the following components:
- (a) Form A: Bid;
 - (b) Form B: Prices;
 - (c) Either or both of:
 - i. Completed and filled [E](#) - Pumper Apparatus Detailed Specifications;
 - ii. Completed and filled [F](#) - Pumper Tanker Apparatus Detailed Specifications;
 - iii. Additional required information.
- B8.2 Further to [B8.1](#), the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with [B7](#).
- B8.3 All components of the Bid shall be fully completed or provided, and submitted by the Bidder no later than the Submission Deadline, with all required entries made clearly and completely, to constitute a responsive Bid.
- B8.4 The Bid Submission may be submitted by mail, courier or personal delivery.
- B8.5 If the Bid Submission is submitted by mail, courier or personal delivery, it shall be enclosed and include five (5) copies of the Bid Submission sealed in an envelope clearly marked with the Bid Opportunity number and the Bidder’s name and address, and shall be submitted to the Contract Administrator:
- C/O Barry Feller
WMR Purchasing Group
1-1749 Portage Avenue
Winnipeg, Manitoba, Canada
R3J 0E6**
- B8.5.1 Samples or other components of the Bid Submission which cannot reasonably be enclosed in the envelope may be packaged separately, but shall be clearly marked with the Bid Opportunity number, the Bidder’s name and address, and an indication that the contents are part of the Bidder’s Bid Submission.
- B8.6 Bidders are advised not to include any information/literature except as requested in accordance with [B8.1](#).
- B8.7 Bidders are advised that inclusion of terms and conditions inconsistent with the Bid Opportunity document, including the General Conditions, will be evaluated in accordance with [B16.1\(a\)](#).
- B8.8 Bids submitted by internet electronic mail (e-mail) will not be accepted.

B9 BID

- B9.1 The Bidder shall complete Form A: Bid, making all required entries.
- B9.2 Paragraph A1.2 of Form A: Bid shall be completed in accordance with the following requirements:
- (a) if the Bidder is a sole proprietor carrying on business in their own name, their name shall be inserted;
 - (b) if the Bidder is a partnership, the full name of the partnership shall be inserted;
 - (c) if the Bidder is a corporation, the full name of the corporation shall be inserted;
 - (d) if the Bidder is carrying on business under a name other than their own, the business name and the name of every partner or corporation who is the owner of such business name shall be inserted.
- B9.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B9.2.
- B9.3 In Paragraph A1.3 of Form A: Bid, the Bidder shall identify a contact person who is authorized to represent the Bidder for purposes of the Bid.
- B9.4 Paragraph A1.11 of Form A: Bid shall be signed in accordance with the following requirements:
- (a) if the Bidder is a sole proprietor carrying on business in their own name, it shall be signed by the Bidder;
 - (b) if the Bidder is a partnership, it shall be signed by the partner or partners who have authority to sign for the partnership;
 - (c) if the Bidder is a corporation, it shall be signed by its duly authorized officer or officers and the corporate seal, if the corporation has one, should be affixed;
 - (d) if the Bidder is carrying on business under a name other than their own, it shall be signed by the registered owner of the business name, or by the registered owner's authorized officials if the owner is a partnership or a corporation.
- B9.4.1 The name and official capacity of all individuals signing Form A: Bid should be printed below such signatures.
- B9.5 If a Bid is submitted jointly by two or more persons, the word "Bidder" shall mean each and all such persons, and the undertakings, covenants and obligations of such joint Bidders in the Bid and the Contract, when awarded, shall be both joint and several.

B10 PRICES

- B10.1 The Bidder shall state a price in Canadian funds for each item of the Work identified on Form B: Prices.
- B10.1.1 Prices on Form B: Prices shall include:
- (a) duty;
 - (b) freight and cartage;
 - (c) Provincial and Federal taxes [except the Goods and Services Tax (GST) and Manitoba Retail Sales Tax (MRST, also known as Provincial Sales Tax or PST)], which shall be extra where applicable] and all charges governmental or otherwise paid;
 - (d) profit and all compensation which shall be due to the Contractor for the Work and all risks and contingencies connected therewith.
- B10.2 The total amount of GST and MRST as well as the Total Bid Price after GST and MRST, shall be indicated in the appropriate fields on Form B: Prices.
- B10.3 Prices on Form B: Prices shall include Environmental Handling Charges (EHC) or fees, where applicable.

B10.4 The quantities for which payment will be made to the Contractor are to be determined by the Work actually performed and completed by the Contractor, to be measured as specified in the applicable Specifications.

B11 DISCLOSURE

B11.1 Various Persons provided information or services with respect to this Work. In the WMR Purchasing Group's opinion, this relationship or association does not create a conflict of interest because of this full disclosure.

B12 QUALIFICATION

B12.1 The Bidder shall:

- (a) undertake to be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba, or if the Bidder does not carry on business in Manitoba, in the jurisdiction where the Bidder does carry on business; and
- (b) be financially capable of carrying out the terms of the Contract; and
- (c) have all the necessary experience, capital, organization, and equipment to perform the Work in strict accordance with the terms and provisions of the Contract; and
- (d) be a vendor having a place of business in Canada where the bidder conducts activities on a permanent basis and that is clearly identified by name and is accessible during normal working hours.

B12.2 The Bidder and any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:

- (a) be responsible and not be suspended, debarred or in default of any obligations to the WMR Purchasing Group.

Work proposed to be subcontracted to them shall:

- (a) have successfully carried out work similar in nature, scope and value to the Work; and
- (b) be fully capable of performing the Work required to be in strict accordance with the terms and provisions of the Contract; and
- (c) have a written workplace safety and health program, if required, pursuant to The Workplace Safety and Health Act (Manitoba);

B12.3 The Bidder shall submit, within three (3) Business Days of a request by the Contract Administrator, proof satisfactory to the Contract Administrator of the qualifications of the Bidder and of any proposed Subcontractor.

B12.4 The Bidder shall provide, on the request of the Contract Administrator, full access to any of the Bidder's equipment and facilities to confirm, to the Contract Administrator's satisfaction, that the Bidder's equipment and facilities are adequate to perform the Work.

B13 OPENING OF BIDS AND RELEASE OF INFORMATION

B13.1 Bids will not be opened publicly.

B13.2 After award of Contract, information may be available from the Contract Administrator by request.

B13.3 The Bidder is advised that any information contained in any Bid may be released if required by WMR Purchasing Group policy or procedures, by The Freedom of Information and Protection of Privacy Act (Manitoba), by other authorities having jurisdiction, or by law.

B14 IRREVOCABLE BID

- B14.1 The Bid(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph [A1.8](#) of Form A: Bid.
- B14.2 The acceptance by the WMR Purchasing Group of any Bid shall not release the Bids of the next two highest-scoring responsive Bidders as evaluated per [B16](#) and these Bidders shall be bound by their Bids on such Work for the Bid Validity Duration specified in Paragraph [A1.8](#) of Form A: Bid.

B15 WITHDRAWAL OF BIDS

- B15.1 A Bidder may withdraw their Bid without penalty by giving written notice to the Contract Administrator at any time prior to the Submission Deadline.
- B15.1.1 The time and date of receipt of any notice withdrawing a Bid shall be the time and date of receipt as determined by the Contract Administrator.
- B15.1.2 The WMR Purchasing Group will assume that any one of the contact persons named in Paragraph [A1.3](#) of Form A: Bid or the Bidder's authorized representatives named in Paragraph [A1.11](#) of Form A: Bid, and only such person, has authority to give notice of withdrawal.
- B15.1.3 If a Bidder gives notice of withdrawal prior to the Submission Deadline, the Contract Administrator will:
- (a) retain the Bid until after the Submission Deadline has elapsed;
 - (b) open the Bid to identify the contact person named in Paragraph [A1.3](#) of Form A: Bid and the Bidder's authorized representatives named in Paragraph [A1.11](#) of Form A: Bid; and
 - (c) if the notice has been given by any one of the persons specified in [B15.1.3\(b\)](#), declare the Bid withdrawn.
- B15.2 A Bidder who withdraws their Bid after the Submission Deadline but before their Bid has been released or has lapsed as provided for in [B14.2](#) shall be liable for such damages as are imposed upon the Bidder by law and subject to such sanctions as the Contract Administrator considers appropriate in the circumstances. The WMR Purchasing Group, in such event, shall be entitled to all rights and remedies available to it at law.

B16 EVALUATION OF BIDS

- B16.1 Award of the Contract shall be based on the following bid evaluation criteria:
- (a) Compliance with requested specifications;
 - (b) Qualifications and requirements of the Bidder, Manufacturer and any Subcontractors pursuant to [B12](#) and [D4](#);
 - (c) Substitutions that meet or exceed specifications;
 - (d) Configuration and design of apparatus;
 - (e) Delivery schedule;
 - (f) Total Bid Price;
 - (g) Service in accordance with [C13](#);
 - (h) Warranty time lines and coverage on:
 - i. Material and workmanship;
 - ii. Chassis structural integrity;
 - iii. Cab structural integrity;

- iv. Body structural integrity;
- v. Paint and corrosion;
- vi. Parts and labour;
- vii. Plumbing.

- B16.2 Further to [B16.1 \(a\)](#), the WMR Purchasing Group may reject a Bid as being non-responsive if the Bid Submission is incomplete, obscure or conditional, or contains additions, deletions, alterations or other irregularities. The WMR Purchasing Group may reject all or any part of any Bid, or waive technical requirements or minor informalities or irregularities if the interests of the WMR Purchasing Group so require.
- B16.3 Further to [B16.1 \(b\)](#), the WMR Purchasing Group shall reject any Bid submitted by a Bidder who does not demonstrate, in their Bid or in other information required to be submitted, that he/she is responsible and qualified.

B17 AWARD OF CONTRACT

- B17.1 The WMR Purchasing Group will give notice of the award of the Contract or will give notice that no award will be made.
- B17.2 The WMR Purchasing Group will have no obligation to award a Contract to a Bidder, even though one or all of the Bidders are determined to be responsible and qualified, and the Bids are determined to be responsive.
- B17.2.1 Without limiting the generality of [C3.2.1](#), the WMR Purchasing Group will have no obligation to award a Contract where:
- (a) the prices are materially in excess of the prices received for similar work in the past;
 - (b) only one Bid is received; or
 - (c) in the judgment of the WMR Purchasing Group, the interests of the WMR Purchasing Group would best be served by not awarding a Contract.
- B17.3 Where an award of Contract is made by the WMR Purchasing Group, the award shall be made to the responsible and qualified Bidder submitting the highest-scoring responsive Bid as per [B16](#).
- B17.3.1 Following the award of contract, a Bidder may be provided with information related to the evaluation of their Bid upon written request to the Contract Administrator.

C GENERAL CONDITIONS

C1 GENERAL CONDITIONS

- C1.1 The General Conditions are applicable to the Work of the Contract.

C2 UNFAIR LABOUR PRACTICES

- C2.1 The Contractor declares that in bidding for the work and in entering into this contract, the Contractor and their subcontractors conduct their respective business in accordance with established international codes as they relate to child and forced labour embodied in United Nations (UN) and International Labour Organization (ILO) conventions as ratified by Canada.
- C2.2 The Contractor shall forfeit all claims under the Contract as well as refund to the Member any monies paid to them, beyond their actual proven expenses for work done, if this declaration is shown to be false.

C3 SCOPE OF WORK

- C3.1 The Work to be done under the Contract shall consist of the SUPPLY AND DELIVERY OF TWO FIRE PUMPER APPARATUSES AND ONE PUMPER TANKER APPARATUS
- C3.1.1 **Two** pumper apparatuses shall conform to the PUMPER APPARATUS DETAILED SPECIFICATIONS (E) and **one** pumper tanker shall conform to the PUMPER TANKER APPARATUS DETAILED SPECIFICATIONS (F), in addition to any other applicable Specifications. One pumper apparatus shall be delivered jointly to the Town of Stonewall and the Rural Municipality of Rockwood, one pumper apparatus shall be delivered to the Rural Municipality of East St. Paul, and one pumper tanker shall be delivered to the Rural Municipality of Macdonald.
- C3.1.2 Form B: Prices are for the duration of the Bid Validity Duration in Paragraph A1.8 of Form A: Bid.
- C3.1.3 WMR Purchasing Group may negotiate a price extension option with the Contractor prior to the expiry date of the Bid Validity Duration in Paragraph A1.8 of Form A: Bid. The WMR Purchasing Group shall incur no liability to the Contractor as a result of such negotiations.
- C3.2 The Work shall be done on an "as required" basis during the term of the Contract as determined by Members.
- C3.2.1 WMR Purchasing Group and its Members shall have no obligation under the Contract to purchase any quantity of any item.
- C3.3 Notwithstanding C3.1, in the event that operational changes result in substantial changes to the requirements for Work, the WMR Purchasing Group reserves the right to alter the type of work performed under this Contract, or to terminate the Contract, within the Bid Validity Duration in Paragraph A1.8 with written notice by the Contract Administrator. In such an event, no claim may be made to the WMR Purchasing Group or its Members for damages on the ground of loss of anticipated profit on Work.

C4 CONTRACT ADMINISTRATOR

- C4.1 The Contract Administrator is:
- Barry Feller
(204) 736-4433
ward3@rmofmacdonald.com

C5 OWNERSHIP OF INFORMATION, CONFIDENTIALITY AND NON DISCLOSURE

- C5.1 The Contract, all deliverables produced or developed, and information provided to or acquired by the Contractor are the property of the WMR Purchasing Group and shall not be appropriated for the Contractors own use, or for the use of any third party.
- C5.2 The Contractor shall not make any public announcements or press releases regarding the Contract, without the prior written authorization of the Contract Administrator.
- C5.3 The following shall be confidential and shall not be disclosed by the Contractor to the media or any member of the public without the prior written authorization of the Contract Administrator;
- (a) information provided to the Contractor by the WMR Purchasing Group or acquired by the Contractor during the course of the Work;
 - (b) the Contract, all deliverables produced or developed; and
 - (c) any statement of fact or opinion regarding any aspect of the Contract.
- C5.4 A Contractor who violates any provision of C5 or B5.1 may be determined to be in breach of Contract.

C6 NOTICES

- C6.1 Bids Submissions must be submitted to the address in [B8.5](#).
- C6.2 All notices of appeal to the Contract Administrator shall be made in writing and submitted to the address in [B8.5](#).

C7 AUTHORITY TO CARRY ON BUSINESS

- C7.1 The Contractor shall be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba, or if the Contractor does not carry on business in Manitoba, in the jurisdiction where the Contractor does carry on business, throughout the term of the Contract, and shall provide the Contract Administrator with evidence thereof upon request.

C8 COMMENCEMENT OF WORK

- C8.1 The Contractor shall not commence any Work until the following conditions are met:
- (a) he/she is in receipt of a notice of award from the WMR Purchasing Group authorizing the commencement of the Work;
 - (b) the Contract Administrator has confirmed receipt and approval of evidence of authority to carry on business specified in [C7](#);
 - (c) the Contractor has attended a meeting with the Contract Administrator, or the Contract Administrator has waived the requirement for a meeting;
 - (d) the Contractor has a signed agreement with a WMR Purchasing Group Member to commence the Work.

C9 ORDERS

- C9.1 Orders shall be placed with the Contractor by the WMR Purchasing Group Member.
- C9.2 There shall be no minimum order placed as per [C3.2.1](#).

C10 DELIVERY

- C10.1 Goods shall be delivered to a WMR Purchasing Group Member f.o.b. destination, freight prepaid and allowed, or pending agreement between Contractor and Member.
- C10.2 The Bidder shall specify in their Bid Submission the number of working and/or calendar days after a purchase order is placed by a WMR Purchasing Group Member that a completed apparatus shall be delivered by the Contractor.
- C10.3 A WMR Purchasing Group reserves the right to impose a penalty for late deliveries beyond the agreed delivery schedule.
- C10.4 Goods shall be delivered between 7:30 a.m. and 3:30 p.m. on Business Days, unless an alternative delivery time and schedule are agreed upon between Contractor and WMR Purchasing Group Member.
- C10.5 Apparatus, equipment, and all attached components shall be delivered in new condition.
- C10.6 An authorized company representative shall perform operational, care and maintenance training to the Member Fire Department upon delivery.

C11 INVOICES

- C11.1 The Contractor shall submit an invoice for each order delivered to the WMR Purchasing Group Member placing the order.
- C11.2 Invoices must clearly indicate, as a minimum:
- (a) the purchase order number;
 - (b) date of delivery;
 - (c) delivery address;
 - (d) type and quantity of goods delivered;
 - (e) the amount payable with GST, MRST, and any applicable environmental handling charges/fees identified and shown as separate amounts; and
 - (f) the Contractor's GST registration number.
- C11.3 The WMR Purchasing Group will bear no responsibility for delays in approval of invoices which are improperly submitted, nor for the payment of invoices between a WMR Purchasing Group Member and the Contractor.

C12 PAYMENTS

- C12.1 Payment shall be in Canadian funds net thirty (30) Calendar Days after receipt and approval of the Contractor's invoice.
- C12.2 A WMR Purchasing Group Member may at their option pay the Contractor by direct deposit to the Contractor's banking institution.

C13 WARRANTY AND SERVICE

- C13.1 The manufacturers of the chassis, pump body, cab, and other components shall warranty their respective components. These warranties shall be fully described in the proposal. Each proposal shall include a list of authorized contractors and location of repair and/or service facilities for all warranty work on all major components of the proposed pumper fire apparatus.
- C13.2 All warranty, parts and service requirements must be available within the area of a 100 kilometre radius from the City of Winnipeg, with factory authorized work and future servicing being performed locally under license and approval of the manufacturer. Each bidder's proposal shall include a full description of their service facilities and repair capabilities.
- C13.3 There shall be at least two (2) operation and maintenance manuals included with each apparatus.
- C13.4 The Bidder must be able to provide or be able to sub-contract all required service work including general parts, engine, transmission and pump on behalf of the manufacturer in a timely fashion and with minimum loss of apparatus availability to a WMR Purchasing Group Member. To provide this requirement, servicing is preferred to be performed within a 100 kilometre radius from the centre of the City of Winnipeg, or by mobile service unit. Such servicing is to be available on a 24 hour per day, 7 days a week basis. The bidder must provide the name of the servicing agency and its contact information with their Bid Submission.

D GENERAL SPECIFICATIONS

D1 WORK

D1.1 Both the General and Detailed Specifications pertaining to each respective apparatus shall apply to the Work.

D2 INTENT

D2.1 The following general specifications apply to each pumper and pumper tanker apparatus described by their respective Detailed Specifications.

D2.2 Each apparatus shall be furnished complete and ready for use. Any parts not specifically mentioned but which are required to complete and place the apparatus in successful operation shall be furnished as though specifically mentioned in these specifications.

D2.3 The apparatus, assemblies, component parts, etc., shall be designed and constructed with consideration to the nature and distribution of the load to be sustained and to the general character of the service to which the apparatus is to be subjected.

D2.4 The design and materials must not be less than the current recognized industry standards.

D3 STANDARDS

D3.1 Each apparatus shall meet the specifications of the most recent editions of the NFPA 1901 Standard and ULC S515 Standard at time of apparatus build unless otherwise specified in the specifications. In the event of a conflict between the requirements of NFPA, ULC or the specifications contained herein, this document shall prevail, followed by the more restrictive of NFPA or ULC. In addition, the complete apparatus shall be inspected, tested, and labeled to ULC S515 prior to delivery. The ULC test must be by ULC and not a third party.

D3.2 All substitution are to be equal to or better than the specifications provided.

D3.3 The apparatus shall comply with the Canada Motor Vehicle Safety Act and the Manitoba Highway Traffic Act.

D3.4 Each bid must be accompanied by a set of detailed manufacturer's specifications consisting of a detailed description of the apparatus and equipment proposed. These specifications shall include size, location, type, and model of all component parts being furnished. Detailed information shall be provided on the materials used to construct all facets of the apparatus body.

D3.5 Bidders shall supply with their bid detailed drawings depicting the vehicle's appearance from the left side, right side, front, and elevation views. This drawing shall be representative of the apparatus being bid. The drawing must include but not be limited to all principle dimensions (height/width/length). The supplier shall supply electronic drawings (i.e. dwg, dxf, iges, stp, etc.) with bid if available. Pictures or brochures are also encouraged that represent the quality of construction being proposed.

D3.6 All diagrams for each apparatus, including mechanical and electrical diagrams, shall be provided "as built" and a complete listing of OEM part numbers shall be provided.

D4 QUALIFICATIONS AND REQUIREMENTS OF MANUFACTURER AND BIDDER

D4.1 The manufacturer of the apparatus shall have a minimum of five (5) years continuous experience manufacturing apparatus of the type being offered.

D4.2 The manufacturer of the apparatus shall have successfully demonstrated the operation of the type of apparatus being offered in cold weather (-40 degrees celsius) conditions

- D4.3 The Bidder shall provide the name of three references, either municipalities or fire districts and include a contact name and phone number for each reference.
- D4.4 The successful bidder must be certified and in good standing with the Workers Compensation Board and proof of that certification must accompany the bid submission.
- D4.5 The manufacturer must comply with the following certification requirements and copies of that certification must accompany the bid submission:
- (a) The manufacturer shall have in effect a certified and documented (ISO 9001 preferred) quality control program ensuring compliance with all applicable standards.
 - (b) All welding must be performed by certified welders and copies of certifications must accompany the bid submission.
 - (c) The manufacturer must be certified by the Fire Apparatus Manufacturers Association.
 - (d) The manufacturer must have a certified engineer on staff with a related degree.
 - (e) The manufacturer must supply a certificate of product liability insurance in the amount of \$5,000,000 (five million dollars).
 - (f) The manufacturer must be authorized to affix the Transport Canada National Safety Mark and have the vehicle production certification to comply with the regulations under the Motor Vehicle Safety Act.
 - (g) The manufacturer must be able to supply parts for an apparatus within 48 hours.
- D4.6 The Bidder shall be able to demonstrate financial stability as well as the ability to manufacture and provide long term warranty and service of the apparatus by producing an audited financial statement upon request by a WMR Purchasing Group Contract Administrator.
- D4.7 The Bidder shall furnish evidence of the ability to construct the apparatus specified, and shall state the location of the factory where the chassis and apparatus will be built.
- D4.8 The successful bidder shall be solely responsible for the design, construction and material used in the construction of the vehicle.
- D4.9 After notification of the intent to award this contract, WMR Purchasing Group representatives may request an inspection of the manufacturer's facility. The bidder shall make arrangement for this inspection and shall include delegated representatives of the WMR Purchasing Group and a representative of the manufacturer. This inspection shall be at the expense of the bidder, including air travel (for distances over 500 km), meals, and lodging expenses. The cooperative scheduling of this inspection trip is to be by mutual agreement of both the WMR Purchasing Group and the bidder.
- D4.10 A final inspection of the finished product shall be provided prior to delivery of the apparatus by visual display either on site or through visual displays sent electronically.

D5 GENERAL DESIGN REQUIREMENTS

- D5.1 All pressure gauges shall be marked in both metric and imperial measurements.
- D5.2 Welding should not be employed in the assembly of an apparatus in a manner that shall prevent the removal of major components for service and/or repair. Areas of concern in this matter shall be clearly identified.

D6 INSTRUCTIONS FOR COMPLETION OF DESCRIBED SPECIFICATIONS

- D6.1 Each Bid Submission shall include a filled copy of the Specifications. All items in these Specifications must be answered indicating compliance, non-compliance, or ability to provide equivalent substitutions. Bidders shall state

"yes" for compliance, "no" for non-compliance, or "sub" if an equivalent substitution is offered. All substitutions are pursuant to [B7](#). All substitutions must be indicated. If a substitution is indicated, the specification must be referenced and a detailed description of the alternative provided in the Bid Submission.

- D6.2 Where bidder's specifications and/or construction differ in any way from the bid specification, a full and complete description in the Bid Submission shall be included. Drawings shall also be included to show alternative construction methods.
- D6.3 Each bidder is required to fill in every blank, answer each question and provide required information. Failure to do so may result in a rejection of the bid.
- D6.4 Where descriptions are included, weights and measures must be stated in both metric and imperial measure.

E PUMPER APPARATUS DETAILED SPECIFICATIONS

E1 INTENT

E1.1 Then intent of this detailed specification is to describe a fire department Pumper Apparatus.

E2 APPARATUS DETAILS

E2.1	Apparatus shall be a multi-purpose response vehicle.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
E2.2	Apparatus shall be designed on a custom chassis built specifically for fire and emergency applications.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
E2.3	Apparatus shall be in compliance with NFPA 1901 and/or ULC S515 Standards. Exception for deviation of ULC standard shall only be allowed by written approval from the Contract Administrator or delegate.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
E2.4	Apparatus Manufacturer shall operate and be qualified under an ISO 9001 Quality Management System or equivalent.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
E2.5	Apparatus when fully loaded shall not have less than 25% and no more than 50% of total apparatus weight on the front axle.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
E2.6	Apparatus when fully loaded shall not have less than 50% and no more than 75% of total apparatus weight on rear axle.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
E2.7	Apparatus electrical system shall be multiplexed.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
E2.8	Certification of slip resistance of all stepping, standing, and walking surfaces must be supplied.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
E2.9	The apparatus in its entirety shall be third party, independent, audit certified through Underwriters Laboratory (UL) that it is built and complies with all applicable standards in the current edition of ULC S515.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
E2.10	Apparatus pump shall be tested and certified by Underwriters Laboratory.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
E2.11	Required ULC certifications shall be in metric form.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
E2.12	An approval drawing of the proposed apparatus shall be provided prior to commencement of the apparatus construction.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:

E2.13	Apparatus shall have certification that it complies with NFPA 1901 and/or ULC S515 Vehicle Stability requirements.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
E3 CAB		
E3.1	Chassis shall be a full tilt-type custom fire apparatus.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
E3.2	Construction of vertical structural members shall consist of solid aluminum castings, aluminum extrusions, and aluminum formed plating.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
E3.3	Rear cab seating area shall have a raised height minimum of 10in. and a maximum of 16in.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
E3.4	The crew cab shall be a totally enclosed design.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
E3.5	The crew cab interior should be a completely open design.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
E3.6	Crew cab length from back side of rear facing seat risers to the rear wall should measure a minimum of 45in.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
E3.7	Cab shall be isolated from chassis with a quality rubber isolator system.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
E3.8	Engine tunnel shall consist of a tapered design to allow for driver and passenger elbow room.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
E3.9	The engine hood shall be insulated for protection from heat and sound.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
E3.10	Cab shall be a Custom Medium size and provide seating for 6 occupants, two (2) in front and four (4) in back of cab.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
E3.11	Cab width should not exceed 96in. measured from outside door panel to outside door panel.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
E3.12	Rear seating shall be arranged with two (2) outboard rear facing seats generally behind front driver's seat area and generally behind officer's front seat. Two (2) remaining seats shall be located forward facing and centered against rear cab wall area.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
E3.13	The apparatus shall have no overall height restrictions; however, preference shall be given to apparatus that does not exceed 11 feet.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:

E3.14 The unit has no overall length restrictions; however, **preference shall be given to apparatus that does not exceed 35 feet.** Complies: yes no sub
Comments:

Cab Lift System

E3.15 An electric-over-hydraulic cab lift system shall be provided for access to the engine. Complies: yes no sub
Comments:

E3.16 A redundant safety latch/stay arm shall be provided to lock the cab while in a tilt position. Complies: yes no sub
Comments:

Cab Grille

E3.17 A bright finished aluminum mesh grille screen, inserted behind a bright finished grille surround, shall be provided on the front center of the cab. Complies: yes no sub
Comments:

E3.18 A Canadian flag design shall be painted on the cab grille. Complies: yes no sub
Comments:

Cab Interior

E3.19 All cab floors shall be covered with an aggressive slip-resistant surface in accordance with current NFPA and/or ULC standards. Complies: yes no sub
Comments:

E3.20 The interior of the cab shall be insulated to ensure the sound (dbA) level for the cab interior is within the limits stated in the current edition of NFPA 1901 and/or ULC S515. Complies: yes no sub
Comments:

Occupant Protection

E3.21 Occupant protection system shall be provided, frontal and side roll. The supplier will detail all occupant protection systems in response to this Bid. Complies: yes no sub
Comments:

Cab Instruments/Controls/Gauges

E3.22 Cab controls shall be located on the cab instrument panel in the dashboard drivers' side and on the driver's right side tunnel area where they are clearly visible and easily reachable. The following gauges and/or controls should be provided but not limited to:

- Ignition switch.
- Ignition switch.
- Starter switch/engine stop switch.
- Heater and defroster controls with illumination
- Marker light/headlight control switch with dimmer switch
- Self-canceling turn signal control with indicators
- Windshield wiper switch with intermittent control and washer control
- Master warning light switch
- Transmission oil temperature gauge
- Pump shift control with indicator lights
- Parking brake controls.
- Automatic transmission shift console
- Cab ajar warning light on the message center enunciator
- Air pressure gauges
- Speedometer
- Tachometer
- Fuel gauge
- Voltmeter
- Diesel exhaust fluid level indicator Metric Dominant Gauge Cluster

Complies: yes no sub
Comments:

E3.23 The Speedometer/Odometer in this panel shall be Metric dominant.

Complies: yes no sub
Comments:

E3.24 Controls and switches shall be easily identified to their function.

Complies: yes no sub
Comments:

Fast Idle System

E3.25 A fast idle system shall be provided and controlled by a cab-mounted switch. The system shall increase engine idle speed to a preset RPM for increased alternator output.

Complies: yes no sub
Comments:

Electrical System

E3.26 The cab and chassis system shall have a centrally located electrical distribution area. All electrical components shall be located such that standard operations shall not interfere with or disrupt vehicle operation.

Complies: yes no sub
Comments:

Cab Crashworthiness Requirement

E3.27 The apparatus cab shall meet and/or exceed relevant NFPA 1901 and/or ULC load and impact tests.

Complies: yes no sub
Comments:

E3.28 Vendor must provide minimum withstanding impact force figures.

Complies: yes no sub
Comments:

Cab Door Locks

- E3.29 Each cab door shall have a manual operated door lock actuated from the interior of each respective door. Complies: yes no sub
Comments:
-

Cab Door Area Lighting

- E3.30 There shall be lights provided to illuminate the cab step well areas. Complies: yes no sub
Comments:
-

Cab Door Windows

- E3.31 The cab door windows should be manually operated to raise and lower. Complies: yes no sub
Comments:
-

Cab Doors

- E3.32 Cab steps shall be located inside the cab doors. Complies: yes no sub
Comments:
- E3.33 Cab doors shall be provided with reflective striping across the interior of each door. Complies: yes no sub
Comments:
-

Cab Steps Size

- E3.34 Forward cab and crew access steps shall be a full two (2) step design that provides the largest possible stepping surface. Complies: yes no sub
Comments:
-

Cab Step Lighting

- E3.35 Cab steps shall be provided with optimum lighting activated when battery is on and the cab door/doors are open. Complies: yes no sub
Comments:
-

Cab Interior Electrical

- E3.36 All wiring shall be placed in metal raceways. Complies: yes no sub
Comments:
-

Cab Mirrors

- E3.37 Two (2) remote controlled, dual vision, front cab door mounted, heated mirrors shall be provided. Complies: yes no sub
Comments:
-

E4 FRAME RAILS

E4.1 The chassis frame shall be built with two (2) steel channels connected to at least five (5) cross members, or equivalent meeting or exceeding relevant standards.

Complies: yes no sub
Comments:

E4.2 The frame rails and frame extension shall be isolated from the aluminum body.

Complies: yes no sub
Comments:

E5 BUMPERS

Front Bumper

E5.1 The vehicle shall be equipped with a one-piece 10in. polished stainless steel bumper. It shall be mounted directly to a modular frame extension designed for maximum strength.

Complies: yes no sub
Comments:

Front Bumper Extension

E5.2 The bumper shall be extended a minimum of 18in. to a maximum 20in. from the face of the cab as required.

Complies: yes no sub
Comments:

E6 BUMPER TRAY

Front Bumper Tray - Center

E6.1 A hose tray constructed of aluminum shall be recessed into the front bumper extension. The tray shall be located in the center of the bumper and have a capacity to carry a minimum of 150 feet of 44mm hose.

Complies: yes no sub
Comments:

E6.2 Front bumper tray shall be provided with a diamond plate lid with D-Ring latch and shock located over the centre mounted tray.

Complies: yes no sub
Comments:

E7 AXLES

Front Axle

E7.1 The vehicle front axle shall be designed with a minimum rated capacity of 18,000 lb.

Complies: yes no sub
Comments:

Rear Axle

- E7.2 The vehicle rear axle shall be designed with a minimum rated capacity of 27,000 lb. Complies: yes no sub
Comments:

E8 SUSPENSIONS

Front Suspension

- E8.1 The front suspension shall encompass a minimum three (3) leaf, taper leaf design with a minimum ground rating of 18,000 lb. Complies: yes no sub
Comments:
-
- E8.2 The front axle shall be furnished with heavy-duty telescoping shocks. Complies: yes no sub
Comments:
-
- E8.3 Front tires shall be Michelin 20 ply all-position XZY3 tread. Complies: yes no sub
Comments:
-
- E8.4 Front wheels shall be polished aluminum disc wheels with a ten (10) stud bolt circle. Complies: yes no sub
Comments:

Rear Suspension

- E8.5 The rear suspension shall be a minimum 12 leaf pack with a minimum ground rating of 27,000 lb. Complies: yes no sub
Comments:
-
- E8.6 Rear tires shall be Michelin 16 ply XDS LRH directional mud and snow tread, rated for 27,120 lb maximum axle load. Complies: yes no sub
Comments:
-
- E8.7 Rear wheels shall be polished aluminum disc wheels with a ten (10) stud bolt circle. Complies: yes no sub
Comments:

Tire Balance

- E8.8 All tires shall be balanced. Complies: yes no sub
Comments:

Tire Pressure Management

- E8.9 There shall be a tie alert pressure management system provided that monitors all six tires pressure. Complies: yes no sub
Comments:

Valve Stem Extensions

- E8.10 Each inside rear wheel on the rear axle should have valve extensions. Complies: yes no sub
Comments:
-

Wheel Chocks

E8.11 One (1) pair wheel chocks shall be provided. Complies: yes no sub
Comments:

Mud Flaps

E8.12 Mud flaps shall be installed behind the front and rear wheels. Complies: yes no sub
Comments:

E9 DIFFERENTIAL LOCK

E9.1 Apparatus shall be provided with a manually actuated rear wheel differential locking system. Complies: yes no sub
Comments:

E9.2 Differential actuator shall be on driver panel area within constant reach of the driver. Complies: yes no sub
Comments:

E10 BRAKE SYSTEMS

Front Brakes

E10.1 The front axle shall be equipped with disc type brakes with automatic pad wear adjustment. Complies: yes no sub
Comments:

Rear Brakes

E10.2 The rear axle shall be equipped with cam brakes with brake drums. Complies: yes no sub
Comments:

E10.3 The rear axle brakes shall be furnished with automatic slack adjusters. Complies: yes no sub
Comments:

Brake System

E10.4 The apparatus shall be equipped with a brake system air compressor. Complies: yes no sub
Comments:

E10.5 The braking system shall include an anti-lock braking system (ABS). Complies: yes no sub
Comments:

E10.6 The braking system shall include a brake system air dryer with internal wet tank, spin-on filter cartridge and heater. Complies: yes no sub
Comments:

E10.7 The brake lines shall be wrapped in a heat protective loom in the chassis areas subjected to excessive heat. Complies: yes no sub
Comments:

Dust Brake Shields

E10.8 The rear axles shall have dust shields provided for the CAM brakes. Complies: yes no sub
Comments:

E11 AIR SYSTEM OPTIONS

Air Dryer

E11.1 The chassis air system shall be equipped with an air dryer to remove moisture from the air in order to help prevent the air lines from freezing in cold weather and prolong the life of the braking system components. Complies: yes no sub
Comments:

Air Inlet

E11.2 One (1) air inlet with a 3D male coupling shall be provided. The inlet shall allow a shoreline air hose to be connected to the vehicle, discharging air directly into the wet tank of the air brake system. It shall be located driver step well of the cab. Complies: yes no sub
Comments:

E11.3 A check valve shall be provided to prevent reverse air flow. Complies: yes no sub
Comments:

Heated Moisture Ejectors

E11.4 All air reservoirs shall be equipped with an automatic reservoir drain valve which shall automatically eject moisture and contaminants from the reservoirs. The moisture ejectors shall be heated. Complies: yes no sub
Comments:

Air Horn

E11.5 Two (2) air horns shall be provided, connected to the chassis air system. The horns shall be mounted through the front bumper. Complies: yes no sub
Comments:

E11.6 The driver shall be able to operator the OEM traffic horn or air horn from the steering wheel horn button. Complies: yes no sub
Comments:

E11.7 A push-button switch shall be installed on the officer's side engine to operate the air horn. Complies: yes no sub
Comments:

Air Horn Switch Pump Panel

E11.8 A heavy duty weatherproof push-button switch should be installed at the pump operator's panel to operate the air horns.
Complies: yes no sub
Comments:

E11.9 The switch shall be labeled "Evacuation Alert".
Complies: yes no sub
Comments:

E12 ENGINES & TRANSMISSIONS

Engine

E12.1 The vehicle shall utilize a Cummins ISL Diesel engine providing a minimum of 400 horsepower.
Complies: yes no sub
Comments:

Transmission

E12.2 The vehicle shall utilize an Allison 5th generation EVS3000P, electronic, 6-speed automatic transmission.
Complies: yes no sub
Comments:

E12.3 A push button shift module shall be located right side of the steering column, within easy reach of the driver. The shift position indicator shall be indirectly lit for after-dark operation.
Complies: yes no sub
Comments:

E13 SECONDARY BRAKING

Engine Brake

E13.1 A variable geometry turbo (VGT) secondary braking system shall be provided.
Complies: yes no sub
Comments:

E13.2 The brake shall be controlled by a switch on the instrument panel within easy reach of the driver.
Complies: yes no sub
Comments:

E13.3 The brake shall activate the brake lights when actively slowing the vehicle.
Complies: yes no sub
Comments:

E13.4 The ABS system shall automatically disengage the secondary braking system when required.
Complies: yes no sub
Comments:

Exhaust Heat Shield

E13.5 A heat shield and insulation wrap shall be provided where necessary on the exhaust system to protect chassis and body components from the exhaust system heat.
Complies: yes no sub
Comments:

E14 ENGINE COOLING

Coolant Lines

Complies: yes no sub

Comments:

- E14.1 Goodyear or Gates rubber hose shall be used for all engine coolant lines with stainless steel constant torques hose clamps. All radiator hoses should be routed, loomed, and secured so as to provide maximum protection from chafing, crushing, or contact with other moving parts.
-

Coolant Recovery

Complies: yes no sub

Comments:

- E14.2 There shall be a coolant overflow recovery system provided.

E15 ALTERNATOR

Complies: yes no sub

Comments:

- E15.1 Apparatus shall be equipped with a 320 amp. or larger alternator equipped with heavy duty cables sized to carry the full rated alternator output.

E16 BATTERIES

Battery System

Complies: yes no sub

Comments:

- E16.1 There shall have a minimum of four (4) 12 volt heavy duty maintenance free batteries.
-

Complies: yes no sub

Comments:

- E16.2 One (1) positive and one (1) negative jumper stud shall be provided with plastic covers and that is easily accessible.
-

Complies: yes no sub

Comments:

- E16.3 Batteries shall have a warranty of twelve (12) months that shall commence upon the date of delivery of the apparatus.

E17 ELECTRONIC LOAD MANAGEMENT SYSTEM

Complies: yes no sub

Comments:

- E17.1 An electronic load management system should be provided to monitor the 12 volt electrical system.
-

Complies: yes no sub

Comments:

- E17.2 Load management system shall automatically activate.

E18 CHASSIS

Engine Block Heater

E18.1 A 120 volt coolant heater shall be installed in the engine block rated at 1000 watts.

Complies: yes no sub
Comments:

Engine Clutch Fan

E18.2 The engine shall be equipped with an automatic clutch fan.

Complies: yes no sub
Comments:

E18.3 The clutch fan shall be constantly engaged when in "Pump" position.

Complies: yes no sub
Comments:

Rear Tow Bar

E18.4 A tow bar shall be provided under the tail board at the centre of the truck.

Complies: yes no sub
Comments:

Front Tow Hooks

E18.5 Two (2) heavy duty stainless steel front tow hooks shall be securely attached to the front chassis frame members to allow towing (not lifting) of the apparatus without damage. They shall be mounted in the downward position.

Complies: yes no sub
Comments:

DEF Tank

E18.6 A 5 gallon diesel exhaust fluid (DEF) tank shall be provided.

Complies: yes no sub
Comments:

E18.7 The DEF tank should include a heater to prevent the DEF from becoming too cool to operate correctly per EPA requirements.

Complies: yes no sub
Comments:

E19 HVAC

Air Conditioning

E19.1 A high performance, customized air conditioning system shall be furnished inside the cab and crew cab area.

Complies: yes no sub
Comments:

Heat, Supplemental

E19.2 Two auxiliary heaters shall be supplied in the rear area of the cab to heat the rear cab lower section, located in each outboard rear facing seat.

Complies: yes no sub
Comments:

Cab Defrosting

E19.3 A heater-defroster system that provides a CFM airflow for maximum defrost and heating performance shall be installed.

Complies: yes no sub
Comments:

E19.4 The defroster system shall SAE J382 requirements.

Complies: yes no sub
Comments:

E20 SEATS

Cab Seats

E20.1 All cab seats shall be Bostrom brand.

Complies: yes no sub
Comments:

Seat, Driver

E20.2 One (1) H. O. Bostrom 400 Series Sierra Air- 100RX4 suspension seats with high back styling shall be supplied for the driver position.

Complies: yes no sub
Comments:

Seat, Officer

E20.3 One (1) H. O. Bostrom 400 Series fixed seat with high back SCBA storage for the officer's position shall be supplied.

Complies: yes no sub
Comments:

Seats, Rear Facing

E20.4 Two (2) Bostrom 400 Series tanker 450 SCBA high back SCBA storage seats shall be provided in the rear facing position over the officer side and driver side wheel well.

Complies: yes no sub
Comments:

Seats, Rear Wall Side by Side Centre Forward Facing

E20.5 Two (2) fold down seat with Bostrom Res-Q-Back seat back with SCBA storage. Location on the rear wall to be driver's side inboard, officer's side inboard.

Complies: yes no sub
Comments:

Seat Cover Material

E20.6 All seats shall have durable fabric seat cover material.

Complies: yes no sub
Comments:

Seat Fabric Color

E20.7 All seats shall be gray or black in color. Complies: yes no sub
Comments:

Seat Belts

E20.8 All seat positions shall have a bright retractable 3-point lap and shoulder harness, providing additional safety and security for personnel. Seat belts shall be designed so the male end can be easily grasped and the female end easily located while sitting in a normal position. Complies: yes no sub
Comments:

SCBA Bracket Docking in Cab

E20.9 There shall be strap free SCBA docking involving no more than a single motion release and hands free insertion of cab seating SCBA's. Complies: yes no sub
Comments:

Location: All seats with exception of driver seat.

E21 CAB STORAGE CABINETS

E21.1 Storage compartments compatible with design configuration shall be provided in the rear Cab area. Complies: yes no sub
Comments:

E21.2 The storage compartments shall include a hinged or roll up door to secure contents. Complies: yes no sub
Comments:

Cab Interior Color

E21.3 Cab instrument panel, overhead console, trim panels, headliner, and door panels shall be gray. Complies: yes no sub
Comments:

Cab Insulation Package - Cold Climate

E21.4 In order to ensure maximum cooling/heating capacity in our environment, additional insulation be provided inside the cab including, but not limited to, the front wall, rear wall, side walls, ceiling, below the front and rear facing seat risers and inside each cab door. Complies: yes no sub
Comments:

Cab Dome Lights

E21.5 LED dome light assemblies shall be provided for interior cab lighting. Complies: yes no sub
Comments:

E22 Q2B SIREN

		Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub
E22.1	A Q2B electro/mechanical siren shall be provided on the officer bumper location.	Comments:

		Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub
E22.2	A heavy duty push-button switch shall be installed on the officer's side dash to operate the Q2B siren.	Comments:

		Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub
E22.3	A heavy duty push-button switch shall be installed on the officer's side dash to operate the Q2B siren brake.	Comments:

12 Volt (or 24 Volt) Outlet

		Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub
E22.4	A plug-in type receptacle for hand held spotlights, cell phones, chargers, etc. shall be installed officer side dash. The receptacle shall be wired battery hot.	Comments:

E23 ELECTRICAL FRONT RIGHT SEAT DASH AREA

		Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub
E23.1	Two (2) USB ports and pre-wiring to accept a computer tablet.	Comments:

E24 STEREO

		Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub
E24.1	AM/FM Stereo complete with USB and Bluetooth connection. System to be wired with front and rear speakers.	Comments:

E25 COMMUNICATION RADIO

		Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub
E25.1	Supply wiring harnesses and mounting plates for two (2) SRFD supplied communication radios.	Comments:

		Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub
E25.2	Exterior weatherproof speaker mounted on operators panel complete with all-weather control switch.	Comments:

E26 ANTENNA BASE

E26.1 There shall be a two (2) standard weather proof antenna bases mounted on the cab roof on the right and left sides on the cab roof wire with high efficiency, low loss coaxial cables routed to the instrument panel area.

Complies: yes no sub
Comments:

Halogen Cab Headlights

E26.2 Halogen cab headlights shall be provided in the low and high beam position of the head lamp assembly.

Complies: yes no sub
Comments:

Battery Charger

E26.3 A battery charger with remote mounted LED display shall be installed.

Complies: yes no sub
Comments:

E26.4 A fully automatic charging system shall be installed on the apparatus. The battery charging system shall be connected directly to the shoreline to ensure the batteries remain fully charged while the vehicle is in the fire station or firehouse.

Complies: yes no sub
Comments:

E26.5 The system shall include a remote charging status indicator panel. Auto-Eject Battery Charger Receptacle.

Complies: yes no sub
Comments:

E26.6 The battery charger receptacle shall be a 20 amp Auto-Eject with a cover. The Auto-Eject receptacle shall be completely sealed and have an automatic power line disconnect.

Complies: yes no sub
Comments:

E26.7 The receptacle shall be located outside driver's door area.

Complies: yes no sub
Comments:

E27 DIESEL PARTICULATE REGENERATION SYSTEM (DPFS)

E27.1 A DPFS shall be provided to meet emissions control requirements.

Complies: yes no sub
Comments:

DPF Regeneration Override

E27.2 A momentary override switch shall be provided for the Diesel Particulate Filter (DPF) regeneration. The switch shall inhibit the regeneration process until the switch is reset or the engine is shut down and restarted. The switch shall be located within reach of the driver.

Complies: yes no sub
Comments:

E28 BODY DESIGN/ASSEMBLY

Complies: yes no sub
Comments:

E28.1 The body structure shall undergo proven test techniques such as finite element analysis and strain gauging to determine fatigue life and structural integrity of the body and substructure.

Complies: yes no sub
Comments:

E28.2 The body shall be tested while loaded to its greatest in service weight.

Officer and Driver Body Side Assemblies

Complies: yes no sub
Comments:

E28.3 The body side assemblies shall be constructed entirely of aluminum extrusions, interlocking aluminum plates, and formed plates. The aluminum modular design shall provide a high strength-to-weight ratio for increased equipment carrying capacity.

Officer and Driver Side Compartments

Complies: yes no sub
Comments:

E28.4 The side compartments shall be modular in design and shall not be a part of the body support structure.

Transverse Storage Compartment

Complies: yes no sub
Comments:

E28.5 Area above speed lays shall be provided with a long storage compartment accessible from driver and passenger sides with hinged doors.

Complies: yes no sub
Comments:

E28.6 Transverse storage compartment shall be designed for storage of a backboard, and equipment.

Complies: yes no sub
Comments:

E28.7 Running boards shall be supplied on each side of the body to allow access to the transverse storage cabinet.

Hose Bed Storage Compartments

Complies: yes no sub
Comments:

E28.8 Compartments shall be provided above the passenger and driver side body compartments extending the full length of the side body compartmentation as possible without interfering with ladder and hose bed access.

Complies: yes no sub
Comments:

E28.9 Compartments shall be provided with aluminum split treadplate door design on the top of each compartment.

Complies: yes no sub
Comments:

E28.10 Compartment doors shall be able to be opened and closed by a single person.

E28.11 Two (2) steel hard suction hose troughs shall be provided in the Hose Bed Storage Compartment on the passenger side with access from a rear access door.

Complies: yes no sub
Comments:

E28.12 A floor shall be provided above the hard suction hose inside the hatch compartment to allow storage of additional equipment in the compartment.

Complies: yes no sub
Comments:

Tailboard Step

E28.13 A tailboard step shall be provided at the rear of the body. The tailboard shall be in accordance with NFPA and/or ULC in both step height and stepping surface. The maximum rear step height to the tailboard should not exceed 24in.

Complies: yes no sub
Comments:

E28.14 The tailboard step shall be bolted on to the body from the underside assuring a clear surface.

Complies: yes no sub
Comments:

E28.15 Tailboard step shall be 12in. to 16in. in depth.

Complies: yes no sub
Comments:

Rear Access Handrails

E28.16 Handrails shall be provided at the rear of the body to assist ground personnel accessing the tailboard step and hose bed area.

Complies: yes no sub
Comments:

E29 DOORS

Roll Up Compartment Doors

E29.1 R-O-M Corporation roll up doors with anodized satin finish shall be provided on all exterior body compartment doors located around and behind apparatus water tank, not transverse storage compartment.

Complies: yes no sub
Comments:

E29.2 The doors shall be counterbalanced for ease in operation. A full width latch bar shall be operable with one hand, even with heavy gloves. Securing method shall be a positive latch device.

Complies: yes no sub
Comments:

E29.3 A switch integral to the door shall be supplied for door ajar indication and compartment light activation.

Complies: yes no sub
Comments:

E30 SHELVES

Adjustable Tracks for Shelves

Complies: yes no sub
Comments:

E30.1 Tracks shall be provided in compartments for use with adjustable shelves and/or trays in deep non-transverse compartments and compatible with design features. The tracks shall be vertically mounted and attached to the side and/or rear walls of the compartments.

Complies: yes no sub
Comments:

E30.2 Tracks shall be provided in compartments for use with shallow depth adjustable shelves and compatible with design features. The tracks shall be vertically mounted and attached to the side and/or rear walls of the compartments.

E31 TRAYS / TOOL BOARD

Tool board

Complies: yes no sub
Comments:

E31.1 A Pac Trac tool mounting board shall be provided in specified centre compartment upon purchase approval.

Complies: yes no sub
Comments:

E31.2 Tool board should be capable of swinging out in a vertical motion.

Roll-Out Tray

Complies: yes no sub
Comments:

E31.3 There shall be three (3) floor mounted roll-out tray provided in compartments specified upon purchase approval. The tray shall have a total capacity minimum of 250 lbs.

Crosslay (Speedlays) Hose Beds

Complies: yes no sub
Comments:

E31.4 Two (2) crosslays (speedlays) capable of carrying 200 feet of 44mm (1.75in.) hose shall be provided at front of body immediately rear of cab.

Complies: yes no sub
Comments:

E31.5 Crosslays (speedlays) shall be low mounted and equipped with a 90 degree swivel for removal of hose from either side of apparatus.

Crosslay (Speedlay) Cover - Sides

Complies: yes no sub
Comments:

E31.6 A pair of covers shall be installed over the side openings of the apparatus crosslays.

Removable Poly Crosslay (Speedlay) Trays [Qty: 2]

Complies: yes no sub
Comments:

E31.7 The crosslay (speedlay) areas shall include storage trays. The trays shall have vertical slots on each end to facilitate in grabbing the tray during loading and unloading.

E31.8 The trays shall also have horizontal slots on the upper sides to facilitate in carrying the tray. Complies: yes no sub
Comments:

E32 PUMP MODULE OPTIONS

Pump Compartment Heaters

E32.1 Heaters shall be installed in the pump compartment areas. The heaters shall be controlled at the pump operator's panel. Complies: yes no sub
Comments:

Heat Pan

E32.2 The pump compartment shall have a heat pan installed under the pump area. The heat pan shall be easily removable for fair weather operations. Complies: yes no sub
Comments:

E33 WATER TANK

E33.1 Water tank shall hold a total capacity of approximately 800 imperial gallons of water. Complies: yes no sub
Comments:

E33.2 The booster tank shall be constructed of polypropylene material. Complies: yes no sub
Comments:

E33.3 The tank shall have a combination vent and manual fill tower with a hinged lid. Complies: yes no sub
Comments:

E33.4 The booster tank shall have two (2) tank plumbing openings. One (1) for a tank-to-pump suction line with an anti-swirl plate, and one (1) for a tank fill line. All tank fill couplings shall be backed with flow deflectors to break up the stream of water entering the tank, and be capable of withstanding sustained fill rates per the tank fill inlet size. Complies: yes no sub
Comments:

E33.5 All partitions shall be equipped with vent and air holes to permit movement of air and water between compartments. The partitions shall be designed to provide maximum water flow. All swash partitions interlock with one another and are completely fused to each other as well as to the walls of the tank. Complies: yes no sub
Comments:

E33.6 Inside the fill tower there shall be a combination vent/overflow pipe. Complies: yes no sub
Comments:

Complies: yes no sub
Comments:

E33.7 The booster tank shall undergo extensive testing prior to installation in the truck. All water tanks shall be tested and certified as to capacity on a calibrated and certified tilting scale.

Complies: yes no sub
Comments:

E33.8 The tank shall have a limited Lifetime warranty that provides warranty service for the life of the fire apparatus in which the tank is installed.

Inlet Anodes

Complies: yes no sub
Comments:

E33.9 Zinc anodes shall be provided in the water pump inlets to protect the pump from corrosion.

Complies: yes no sub
Comments:

E33.10 They shall be installed in a location that is easily accessible.

E34 TANK PLUMBING

Tank Refill

Complies: yes no sub
Comments:

E34.1 One (1) 2in. pump-to-tank fill and re-circulation line having a manually operated full flow valve shall be provided. The valve control shall be located at the pump operator's panel.

Tank to Pump Valve

Complies: yes no sub
Comments:

E34.2 One (1) valve shall be installed between the pump suction and the booster tank. The valve control shall be located at the pump panel right side.

Complies: yes no sub
Comments:

E34.3 A check valve shall be provided in the tank to pump supply line to prevent the possibility of "back filling" the water tank.

E35 FOAM TANK

Complies: yes no sub
Comments:

E35.1 A 20 imperial gallon foam cell for Class A foam shall be supplied. The foam cell shall be integral to the water tank.

Complies: yes no sub
Comments:

E35.2 The foam tank shall have a manual fill tower. The fill tower shall be located in the forward area of the tank. The tower shall have a removable polypropylene screen.

Complies: yes no sub
Comments:

E35.3 The tank shall have a limited Lifetime warranty that provides warranty service for the life of the fire apparatus in which the tank is installed.

E36 LADDER / STORAGE / RACKS

Ladders

- E36.1 The length of ladders capable of being stored shall be the following:
30' ladder, 14' roof ladder and 10' attic ladder w/shoes.
- Complies: yes no sub
Comments:
-

Ladder Storage Tunnel/Contents

- E36.2 Ladders shall be stored inside body tunnels with access at rear.
- Complies: yes no sub
Comments:
- E36.3 Ladder storage tunnel should be capable of holding (1) 30ft ladder,
(1) 14ft roof ladder, (1) 10ft attic ladder, and (2) pike poles.
- Complies: yes no sub
Comments:
- E36.4 Ladder storage tunnels shall have a horizontal hinged access doors
provided.
- Complies: yes no sub
Comments:
-

E37 HANDRAILS / STEPS

- E37.1 All steps and handrails shall meet NFPA and ULC standards.
- Complies: yes no sub
Comments:
-

E38 BODY

Body Mainframe

- E38.1 The body mainframe shall be constructed of aluminum. The
framework shall be aluminum alloy extrusions.
- Complies: yes no sub
Comments:
- E38.2 The frame sill extrusions shall be shaped to contour with the chassis
frame rails and shall be protected from contact with the chassis
frame rails to prevent wear and galvanic corrosion caused when
dissimilar metals come in contact.
- Complies: yes no sub
Comments:
-

Hose Bed

- E38.3 The area above the booster tank shall have a hose storage area
provided. The hose bed shall have a removable grating and
corrugated top surface that shall prevent the accumulation of water
and allow for ventilation of wet hose.
- Complies: yes no sub
Comments:
- E38.4 Hose bed shall accommodate 1500 feet of 2.50in. (65mm) and 400
feet of 1.5in. (38mm) hose.
- Complies: yes no sub
Comments:
-

E38.5 The hose bed shall include an open area for the fill tower(s).
Complies: yes no sub
Comments:

Hose Bed Divider [Qty: 2]

E38.6 There shall be two (2) hose bed dividers provided for the full fore-aft length of the hose bed.
Complies: yes no sub
Comments:

E38.7 The dividers shall be adjustable from side to side in the hose bed to accommodate varying hose loads.
Complies: yes no sub
Comments:

Hose Bed Cover and Walkway

E38.8 A two (2) section hose bed hinged cover constructed of aluminum treadplate shall be provided.
Complies: yes no sub
Comments:

E38.9 A walkway shall be provided in the centre of the hose bed.
Complies: yes no sub
Comments:

E38.10 The hose bed cover shall be reinforced so it can support the weight of a fire fighter walking on it.
Complies: yes no sub
Comments:

Hose Bed End Flap

E38.11 Hose bed end flaps shall be provided constructed of heavy vinyl with tie down straps.
Complies: yes no sub
Comments:

Storage Pan

E38.12 A storage pan shall be provided in the forward area of the hose bed to accommodate a master stream nozzle.
Complies: yes no sub
Comments:

Body Rub Rails

E38.13 The body shall have bright aluminum extruded rub rails mounted along the sides and at the rear.
Complies: yes no sub
Comments:

E39 SCBA BOTTLE STORAGE

E39.1 SCBA bottle storage shall be provided in front and / or behind the rear wheel in the fender area on both the left and right side of the apparatus. There shall be storage for a minimum of 5 SCBA bottles.
No exceptions.
Complies: yes no sub
Comments:

E39.2 SCBA bottle storage shall be for 4500 psi tanks.
Complies: yes no sub
Comments:

E40 FIRE PUMP

E40.1	The pump shall be a single stage fire pump, capable of a 1250 IMP. GPM rating.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
E40.2	Power to drive the pump shall be provided by the same engine used to propel the apparatus. The pump shall be midship mounted and designed to operate through an integral transmission, including a means for power selectivity to the driving axle or to the pump.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
E40.3	A discharge manifold shall include a discharge check valve assembly to allow priming of the pump from draft with discharges open and caps off.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
Pump Heating/Cooling		
E40.4	Pump shall incorporate a heater/cooling jacket integral to the pump housing.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
Pump Mounting		
E40.5	Rubber isolators shall be used to isolate pump on frame rails.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
E40.6	Pump mounting shall allow chassis frame rails to flex independently without damage to pump.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
Suction Inlets		
Two (2) 6in. diameter master intake suction ports with 6in. NST male threads and removable screens shall be provided, one (1) each side. The ports shall be mounted one (1) on each side of the mid-ship pump and shall extend through the side pump panels.		Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
E40.7	An inlet electronic flow valve shall be provided on the driver and passenger side 6in. inlets.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
E40.8	An adjustable pressure relief valve and a bleeder valve shall be provided on the inlet butterfly valves.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
E40.9	An intake relief valve shall be provided on the driver side 6in. suction port and preset to 125 PSI.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
E40.10	A pressure governor shall be provided and will be capable of automatically maintaining a desired preset discharge pressure in the water pump.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
E40.11	A pump cavitation protection feature shall be provided.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:

E40.12 All inlet and outlet lines shall be plumbed with either stainless steel pipe, flexible polypropylene tubing, or reinforced synthetic rubber hose with hi-tensile polyester braid.

Complies: yes no sub
Comments:

E40.13 Stainless steel hard plumbing shall be a minimum of a schedule 10 wall thickness.

Complies: yes no sub
Comments:

Tank to Pump Check Valve

E40.14 The fire pump suction inlet shall be provided with a tank to pump check valve. The check valve shall is designed to automatically open when drafting from an on-board water tank, and close if the pump suction receives water pressure from an outside source.

Complies: yes no sub
Comments:

Master Drain

E40.15 A master drain valve shall be installed and operated from the pump operator's panel.

Complies: yes no sub
Comments:

Rear Inlet

E40.16 5in. piping shall be provided to the rear of the apparatus and connect to a 5in. gated valve with a 4in. NSH threaded inlet with screen and cap.

Complies: yes no sub
Comments:

E40.17 A manual or electric valve actuator shall be placed in the pump operator panel.

Complies: yes no sub
Comments:

Additional Primer

E40.18 An additional primer valve may be provided and installed on the 5 in. rear intake, before the master intake valve also controlled at the pump operator's panel.

Complies: yes no sub
Comments:

E40.19 One (1) priming control shall open the priming valve in conjunction with the priming valve that comes with the pump and start the priming motor. The priming valve shall be electronically interlocked to the "Park Brake" circuit to allow priming of the pump before the pump is placed in gear.

Complies: yes no sub
Comments:

E40.20 If plumbed to front or rear intakes the connection shall be at the highest point of the piping.

Complies: yes no sub
Comments:

E41 INTAKES

Left Side Intake

E41.1 One (1) 2 1/2in. suction inlet valve shall be provided on the left side of the apparatus at the pump panel. Complies: yes no sub
Comments:

E41.2 A bleeder valve assembly shall be installed. Complies: yes no sub
Comments:

Right Side Intake

E41.3 One (1) 2 1/2in. suction inlet valve shall be provided on the right side of the apparatus. Complies: yes no sub
Comments:

E41.4 A bleeder valve assembly shall be installed. Complies: yes no sub
Comments:

E42 DISCHARGES AND PRECONNECTS

Front Jump Line 1.5 Discharge

E42.1 One (1) 1-1/2in. pre-connect outlet with a manually operated valve shall be supplied to the extended front bumper. The pre-connect shall consist of a mechanical swivel hose connection to permit the use of the hose from either side of the apparatus. Complies: yes no sub
Comments:

E42.2 The discharge shall be supplied with automatic drain valve assemblies' at all low points of piping. Complies: yes no sub
Comments:

E42.3 The valve control shall be located at the pump operator panel. Complies: yes no sub
Comments:

Rear 2.5 Hose Bed Discharge

E42.4 One (1) 2-1/2in. pre-connect outlet with a manual or electronic operated valve shall be supplied to the lower area of the apparatus hose bed. Pre-connect location to be determined at the design stage. Complies: yes no sub
Comments:

E42.5 The valve control shall be located at the pump operator panel. Complies: yes no sub
Comments:

3in. Deluge Riser

E42.6 A 3in. deluge riser shall be installed and capped above the pump so a monitor can be mounted and used effectively. Complies: yes no sub
Comments:

E42.7 A control shall be provided to operate the waterway monitor. Complies: yes no sub
Comments:

E42.8 The valve control shall be located at the pump operator's panel. Complies: yes no sub
Comments:

Left Side 2.5in. Discharges

E42.9 Two (2) 2-1/2in. discharge outlet with a manual operated valve shall be provided at the left hand side. Complies: yes no sub
Comments:

Right Side 4in. Discharge

E42.10 One (1) 4in. storz discharge outlet with a 4in. electrically operated valve shall be provided at the right side. Complies: yes no sub
Comments:

E43 DISCHARGE OPTIONS

E43.1 Apparatus shall be provided with all appropriate outlet and inlet elbows, adapters, swivels, caps etc. to be operational sound. Complies: yes no sub
Comments:

Thread Type Western Canada Fire Underwriters Association

E43.2 Thread type provided shall be NPSH threads on all 1.5in. discharges and all 2.5in. inlets and discharges to be (Western Canada Fire Underwriters Association) threads as an integral part of the valve. Complies: yes no sub
Comments:

Thread Type NPSH

E43.3 Thread type provided shall be NPSH threads on all 1.5in. discharges. Complies: yes no sub
Comments:

E44 FOAM SYSTEMS

E44.1 There shall be a fully automatic electronic direct injection foam proportioning system furnished and installed on the apparatus for the specified discharge(s). The system shall be capable of Class A foam concentrates. The proportioning operation shall be based on an accurate direct measurement of water flow with no restriction. Complies: yes no sub
Comments:

E44.2 A foam tank level gauge shall be located at the pump operator's panel to provide a high-visibility display of the foam tank level. Complies: yes no sub
Comments:

-
- E44.3 The system shall be equipped with a digital electronic control display. It shall be installed on the pump operator's panel and enable the pump operator to perform the following control and operation functions:
- Activate the foam system.
 - Change foam concentrate proportioning rates from .1% to 3% in .1% increments.
 - Show current flow, show total volume of water pump, and show total amount of foam concentrate used.
 - Flash a "low concentrate" warning when the foam concentrate tank run low of concentrate.
- Complies: yes no sub
Comments:

E45 FOAM SYSTEM OPTIONS

Foam System Plumbing

- E45.1 The specified foam system shall be plumbed to 1.5in. first speedlay, 1.5in. second speedlay, and center bumper front jump line.
- Complies: yes no sub
Comments:

E46 WINTERIZATION

Gasket Disc/Intake Pump Panel

- E46.1 All intakes and discharges shall have gasket material provided on the pump module to hold in the heat of the module plumbing.
- Complies: yes no sub
Comments:

E47 ELECTRICAL SYSTEMS

Multiplex Electrical System

Electrical System

- E47.1 The apparatus shall incorporate a multiplex 12 volt electrical system. The system shall have the capability of delivering multiple signals via a CAN bus. The electrical system installed by the apparatus manufacturer shall conform to current SAE standards, the latest FMVSS standards, and the requirements of the applicable NFPA 1901 and/or ULC S515 standards.
- Complies: yes no sub
Comments:
-

E47.2 The electrical system shall be pre-wired for optional computer modem accessibility to allow service personnel to easily plug in a modem to allow remote diagnostics.

Complies: yes no sub
Comments:

E47.3 The electrical circuits shall be provided with low voltage over-current protective devices. Such devices shall be accessible and located in required terminal connection locations or weather-resistant enclosures. The over-current protection shall be suitable for electrical equipment and shall be automatic reset type and meet SAE standards. All electrical equipment, switches, relays, terminals, and connectors shall have a direct current rating of 125 percent of maximum current for which the circuit is protected. The system shall have electro-magnetic interference suppression provided as required in applicable SAE standards.

Complies: yes no sub
Comments:

E47.4 Any electrical junction or terminal boxes shall be weather-resistant and located away from water spray conditions.

Complies: yes no sub
Comments:

Wiring

E47.5 All harnessing, wiring and connectors shall be manufactured to standards/guidelines applicable.

- NFPA 1901-Standard for Automotive Fire Apparatus
- SAE J1127 and J1127
- IPC/WHMA-A-620 – Requirements and Acceptance for Cable and Wire Harness Assemblies. (Class 3 – High Performance Electronic Products)

Complies: yes no sub
Comments:

Wiring Protection

E47.6 The overall covering of the conductors shall be loom or braid.

Complies: yes no sub
Comments:

E47.7 Wiring loom shall be flame retardant black nylon.

Complies: yes no sub
Comments:

Required Testing of Electrical System

E47.8 The apparatus shall be electrical tested upon completion of the vehicle and prior to delivery. The electrical testing, certifications, and test results shall be submitted with delivery documentation.

Complies: yes no sub
Comments:

Required Documentation

- E47.9 The following documentation shall be provided on delivery of the apparatus:
(a) Documentation of the electrical system performance tests required.
(b) A written load analysis.
- Complies: yes no sub
Comments:
-

Vehicle Data Recorder

- E47.10 A vehicle data recorder system shall be provided. The following data shall be monitored but not limited to:
- Vehicle speed KPH
 - Acceleration (from speedometer).
 - Deceleration (from speedometer).
 - Engine speed RPM
 - Engine throttle position % of full throttle
 - ABS Event On/Off
 - Seat occupied status Occupied Yes/No by position
 - Seat belt status Buckled Yes/No by position
 - Master Optical Warning Device Switch On/Off
- Complies: yes no sub
Comments:
-

Occupant Detection System

- E47.11 There shall be a visual and audible warning system installed in the cab that indicates the occupant buckle status of all cab seating positions that are designed to be occupied during vehicle movement.
- Complies: yes no sub
Comments:
- E47.12 The audible warning shall activate when the vehicle's park brake is released and a seat position is not in a valid state. A valid state is defined as a seat that is unoccupied and the seat belt is unbuckled, or one that has the seat belt buckled after the seat has been occupied.
- Complies: yes no sub
Comments:
- E47.13 The system shall include a seat sensor and safety belt latch switch for each cab seating position, audible alarm and braided wiring harness.
- Complies: yes no sub
Comments:
-

E48 ELECTRONICS / WIRING SYSTEM

- E48.1 A diagnostics panel shall be provided and will allow diagnostic tools to connect to vehicle systems for improved troubleshooting.
- Complies: yes no sub
Comments:
-

E49 LIGHT BAR

-
- E49.1 A minimum 60in. LED roof mount light bar model shall be provided. Complies: yes no sub
Comments:
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- E49.2 Driver and Officer side light bar ends shall be equipped with alley lights that activate through multiplex electrical display system or separate toggle switch. Complies: yes no sub
Comments:
-
- E49.3 The light bar shall be installed centered on the front cab roof. Complies: yes no sub
Comments:

E50 TRAFFIC DIRECTIONAL REAR LIGHT BAR

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- E50.1 One (1) directional traffic warning amber LED light bar shall be provided on rear of apparatus. Complies: yes no sub
Comments:

E51 SIRENS

Electronic Siren

-
- E51.1 An electronic siren with attached noise-canceling microphone shall be installed. The unit shall be capable of driving a single high power speaker up to 200 watts to achieve a sound output level that meets Class "A" requirements. Complies: yes no sub
Comments:

Siren Speaker

-
- E51.2 The siren speaker shall be recessed in the centre front bumper and meet NFPA and/or ULC standards for sound output. Complies: yes no sub
Comments:

Mechanical Siren

-
- E51.3 A chrome plated and pedestal mounted Federal Q2B-P coaster siren shall be installed on top of the front bumper extension. An electric siren brake switch shall be located in the cab accessible to the officer. Complies: yes no sub
Comments:
-
- E51.4 The siren shall be mounted on the passenger side front bumper. Complies: yes no sub
Comments:

DOT Lighting

-
- E51.5 All exterior truck body directional, intermediate, clearance, marker, ID, and cab lighting shall meet DOT, ULC and/or NFPS requirements. Complies: yes no sub
Comments:

License Plate Brackets

E51.6 There shall be bracket fabricated from aluminum diamond plate, secured to rear of the body and front of the bumper to accommodate license plates. Rear license plate shall also be illuminated to meet DOT requirements.

Complies: yes no sub
Comments:

Interior Cab Cabinet Lighting

E51.7 Interior cabinets located on rear cab wall on sides of forward facing seats shall be provided with lighting that is controlled by a compartment door switch.

Complies: yes no sub
Comments:

Ground/Perimeter Lights

E51.8 The apparatus shall be equipped with a sufficient quantity of lights to properly illuminate the ground areas around the apparatus in accordance with current NFPA and/or ULC requirements.

Complies: yes no sub
Comments:

Cab Ground / Auxiliary Step Lights

E51.9 The cab shall be equipped with a sufficient quantity of lights to properly illuminate the auxiliary steps and the ground areas below them in accordance with current NFPA and/or ULC requirements.

Complies: yes no sub
Comments:

E51.10 The lights shall also be activated automatically when the exit doors are opened.

Complies: yes no sub
Comments:

Exterior Compartment Lights

E51.11 Compartment lights shall be mounted in each body compartment to provide optimal LED lighting in all areas of compartments.

Complies: yes no sub
Comments:

E51.12 Compartment lights shall be wired to a master on/off rocker switch on the cab switch panel.

Complies: yes no sub
Comments:

E51.13 The wiring connection for the compartment lights shall be made with a weather-resistant plug in style connector. A single water and corrosion-resistant switch with sealed contacts shall control each compartment light. The switch shall allow the light to illuminate if the compartment door is open.

Complies: yes no sub
Comments:

Hose Bed Walkway Lighting

E51.14 Lighting shall be installed to illuminate entire walking area of hose bed.

Complies: yes no sub
Comments:

Hose Bed Lighting

E51.15 Lighting shall be provided to illuminate hose bed area that meets photometric levels listed in NFPA and/or ULC lighting requirements.

Complies: yes no sub
Comments:

Rear Scene Lights

E51.16 Fire Research model SPA900-Q70 surface mount lights shall be installed. Wiring shall extend from a weatherproof strain relief at the rear of the light and provide 7000 lumens of lighting.

Complies: yes no sub
Comments:

E51.17 Lights shall be located (1) each side rear compartment face, up high, and activate by a switch at the driver's side switch panel.

Complies: yes no sub
Comments:

Pump Compartment Lighting

E51.18 Lighting shall be provided in the pump compartment area conforming to NFPA and/or ULC compliance. The pump panel and ground working area shall be provided with lighting to illuminate entire work area.

Complies: yes no sub
Comments:

Engine Compartment Light

E51.19 There shall be lighting provided to illuminate the engine compartment area in compliance with NFPA and/or ULC standards.

Complies: yes no sub
Comments:

Back-Up Alarm

E51.20 An electronic back-up alarm shall be supplied. The alarm shall be wired into the chassis back-up lights to signal when the vehicle is in reverse gear.

Complies: yes no sub
Comments:

Alternating Headlights

E51.21 The chassis high beam headlights shall alternately flash and shall be controlled by a switch inside the cab.

Complies: yes no sub
Comments:

Lower and Upper Front/Rear/Sides Warning Lights

E51.22 All lower and upper warning lights on cab and body shall meet the specifications of NFPA and/or ULC requirements.

Complies: yes no sub
Comments:

Scene Lights Side Body Rear

Complies: yes no sub
Comments:

E51.23 Two (2) Fire Research Spectra LED scene light model SPA260-Q15 surface mount lights with switch in cab, shall be installed providing 15,000 lumens of light. Wiring shall extend from a weatherproof strain relief at the rear of the lamp head.

Location: Rearward upper body panel officer side (inboard of upper warning lights if design required), Rearward upper body panel driver side (inboard of upper warning lights if design).

Scene Lights Side Body Front

Complies: yes no sub
Comments:

E51.24 Two (2) Fire Research Evolution, Model FCA530-V20, 12 volt DC LED lights with switch in cab, provided on push up, side mount poles.

Location: Front body bulkhead on left and right sides.

12V LED Flood Light

Complies: yes no sub
Comments:

E51.25 Two (2) Fire Research Spectra model SPA800-Q15 contour roof mount brow lights with switch in cab. Wiring shall extend from a weather proof strain relief at the rear of the lamp head and provide 15,000 lumens of light.

E52 HAND TOOLS

Pike Pole Fiberglass

6' Pike Pole

Complies: yes no sub
Comments:

E52.1 One (1) 6' hollow fiberglass pike pole with painted steel pike shall be supplied.

8' Pike Pole

Complies: yes no sub
Comments:

E52.2 One (1) 8' hollow fiberglass pike pole with painted steel pike shall be supplied.

E52.3 5ft New York Roof Hook c/w Chisel End

Complies: yes no sub
Comments:

Axes

Complies: yes no sub
Comments:

E52.4 One (1) 2.7 kg. (6 lb.) pick head axe shall be supplied.

Complies: yes no sub
Comments:

E52.5 One (1) 2.7 kg. (6lb) flat head axe shall be supplied.

Nozzle

E52.6 One (1) 2.5in. (65mm) smoothbore nozzle with shutoff that flows a minimum of 250 gpm. Complies: yes no sub
Comments:

First Aid Kit

E52.7 One (1) first aid kit. Complies: yes no sub
Comments:

Traffic Warning Devices

E52.8 Five (5) highway traffic flares. Complies: yes no sub
Comments:

Adapters

E52.9 One (1) double male 4in. NSH threaded adapter. Complies: yes no sub
Comments:

E52.10 One (1) double female 4in. NSH threaded adapter. Complies: yes no sub
Comments:

E53 LADDERS

Folding Attic Ladder

E53.1 One (1) 10' aluminum folding ladder shall be provided. Complies: yes no sub
Comments:

Roof Ladder

E53.2 A 14' aluminum roof ladder shall be provided. Folding steel roof hooks shall be attached to one end of the ladder with steel spikes on the other. Complies: yes no sub
Comments:

Extension Ladder

E53.3 One (1) 30' aluminum extension ladder shall be provided. The ladder shall meet or exceed the requirements of the current edition of NFPA 1931. Complies: yes no sub
Comments:

DOT Required Drive Away Kit

E53.4 Three (3) triangular warning reflectors with carrying case shall be supplied to satisfy the DOT requirement. Complies: yes no sub
Comments:

Generator

E53.5 Supply one Honda EU2200i portable generator. Complies: yes no sub
Comments:

E54 EXTERIOR PAINT

Paint Cab

- Complies: yes no sub
Comments:
- E54.1 The apparatus cab shall be painted to industry standards. The paint process shall meet or exceed current regulations concerning paint operations.
-
- Complies: yes no sub
Comments:
- E54.2 The color scheme shall be two tone, red on body and white over red on cab. Final color shall be determined during design review.
-
- Complies: yes no sub
Comments:
- E54.3 The aluminum cab exterior should have no mounted components prior to painting to assure full coverage of metal treatments and to the exterior surfaces.
-

Paint Body

- Complies: yes no sub
Comments:
- E54.4 Body paint to match Cab.
-
- Complies: yes no sub
Comments:
- E54.5 The apparatus body shall be painted in a process that meets or exceeds current regulations concerning paint operations and corrosion inhibiting treatments.
-
- Complies: yes no sub
Comments:
- E54.6 The aluminum body exterior should have no mounted components prior to painting to assure full coverage of metal treatments and paint to the exterior surfaces of the body.
-

Rear Body Chevron Striping

- Complies: yes no sub
Comments:
- E54.7 Chevron striping shall be provided on the rear of the apparatus in compliance with NFPA and/or ULC standards.
-

Decals

- Complies: yes no sub
Comments:
- E54.8 There shall be two (2) Fire Department door decals installed on the cab doors, and two (2) unit decals supplied on unit. Design and location to be approved by SRFD.
-

E55 WARRANTY

Frame Warranty

Complies: yes no sub
Comments:

E55.1 The apparatus manufacturer shall provide a frame structural warranty. This warranty shall cover all apparatus manufacturer designed frame, frame members, and cross-members against defects in materials or workmanship. A copy of the warranty document shall be provided with the proposal.

Structural Warranty

Complies: yes no sub
Comments:

E55.2 The apparatus manufacturer shall provide a comprehensive structural warranty. This warranty shall cover all structural components of the cab and/or body manufactured by the apparatus manufacturer against defects in materials or workmanship. A copy of the warranty document shall be provided with the proposal.

Stainless Steel Plumbing Warranty

Complies: yes no sub
Comments:

E55.3 The apparatus manufacturer shall provide a stainless steel plumbing components warranty. This warranty shall cover defects in materials or workmanship of apparatus manufacturer designed foam/water plumbing system stainless steel components. A copy of the warranty document shall be provided with the proposal.

Paint and Corrosion Warranty

Complies: yes no sub
Comments:

E55.4 The apparatus manufacturer shall provide a paint and corrosion perforation warranty.

Complies: yes no sub
Comments:

E55.5 The warranty period shall begin upon delivery of the apparatus to the original user-purchaser. A copy of the warranty document shall be provided with the proposal.

Warranty - One Year Standard

Complies: yes no sub
Comments:

E55.6 The apparatus manufacturer shall provide a full 1 year standard warranty. All components manufactured by the apparatus manufacturer shall be covered against defects in materials or workmanship for a 1 year period. All components covered by separate suppliers such as engines, transmissions, tires, and batteries shall maintain the warranty as provided by the component supplier. A copy of the warranty document shall be provided with the proposal.

Frame Rail Warranty

Complies: yes no sub
Comments:

E55.7 The chassis manufacturer shall provide a warranty on the chassis frame rails. This warranty shall cover the chassis frame rails, including frame rail liners (if equipped). A copy of the warranty document shall be provided with the proposal.

-
- E55.8 The chassis manufacturer shall provide a warranty on any galvanized chassis frame components if applicable. This warranty shall cover the front frame extensions, chassis cross members (from engine rearward), battery tray brackets and rear underbody support (if applicable). A copy of the warranty document shall be provided with the proposal.
- Complies: yes no sub
Comments:

E56 SUPPORT / MANUALS

Approval Drawings

- E56.1 A general arrangement drawing depicting the vehicles appearance shall be provided. The drawing shall consist of left side, right side, front, and rear elevation views.
- Complies: yes no sub
Comments:
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- E56.2 Pump controls shall include a general arrangement view of the pump operator's position, scaled the same as the elevation views.
- Complies: yes no sub
Comments:
-

Manuals

- E56.3 A copy of all operator, service, and parts manuals MUST be supplied at the time of delivery. The manuals shall include the following information:
- Operating Instructions, descriptions, specifications, and ratings of the cab, chassis, body, aerial (if applicable), installed components, and auxiliary systems.
 - Warnings and cautions pertaining to the operation and maintenance of the fire apparatus and fire fighting systems.
 - Charts, tables, checklists, and illustrations relating to lubrication, cleaning, troubleshooting, diagnostics, and inspections.
 - Instructions regarding the frequency and procedure for recommended maintenance.
 - Maintenance instructions for the repair and replacement of installed components.
 - Parts listing with descriptions and illustrations for identification.
 - Warranty descriptions and coverage.
- Complies: yes no sub
Comments:
-

Schedule

- E56.4 The supplier shall supply the lead time to manufacture and deliver the fire apparatus from purchase order acceptance.

F PUMPER TANKER APPARATUS DETAILED SPECIFICATIONS

F1 INTENT

F1.1 It is the intent of these detailed specifications to describe a fire department Pumper Tanker Apparatus.

F2 CAB AND CHASSIS REQUIREMENTS

F2.1	A regular cab shall be provided.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F2.2	The cab shall be equipped with a heating and cold weather package, including enhanced cab insulation and heaters for the rear crew compartment.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F2.3	Each cab doorway shall incorporate supplemental steps to assist in cab ingress and egress.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F2.4	All seats shall be air cushion with lumbar support and constructed with ballistic nylon fabric with a bonded PVC coating that protects the seat from UV rays and fluid contamination.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F2.5	Seat Belts – Red – NFPA Compliant	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F2.6	Cab access contoured grab handles, LH/RH	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F2.7	Helmet holders for all cab occupants shall be installed in an approved position.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F2.8	The front dashboard console shall be designed and configured to support the installation of equipment such as radios, flashlights, and thermal camera.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F2.9	The dashboard, center console, cab interior and door sides shall be finished with a rugged. Scratch-resistant material.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F2.10	The cab floor shall have a durable, easy-clean, skid-resistant, and non-wicking finish.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F2.11	Auxiliary defrosting fans with separate controls shall be installed near the top corners of the windshield.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F2.12	2 air circulating fans directed at each side or windshield, min 6" diameter.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:

F2.13	Climate control system that provides heating, windshield de-frosting, and air conditioning functions that can maintain a comfortable temperature within the cab.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F2.14	Rear-view mirrors shall be mounted on both front doors. Both a flat mirror and a convex mirror shall be installed on both front corners of the body. All mirrors shall be heated and the flat mirrors shall be electrically adjustable.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F2.15	The exterior paint and decaling scheme shall be black upper & red lower and shall be first approved by the Member.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F2.16	Vehicle Data recorder (VDR) to meet latest edition of NFPA 1901; information to be retrievable by laptop.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F2.17	VDR to include: Video (front, sides, rear), Vehicle Speed, Acceleration, Deceleration, Engine Speed, Engine Throttle Positions, ABS event, Seat occupied Status, Seat Belt Status, Master Optical Warning Device Switch Position, and Date/Time.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F2.18	The exhaust shall be discharged on the right (passenger) side of the vehicle, away from the vehicle and not towards the tires or ground. All exhaust system materials shall be non-corroding. Tubing shall be stainless steel.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F2.19	A Ward NO SMOKE or equivalent Diesel Exhaust Filter shall be installed on the chassis exhaust system. The system is an apparatus mounted, direct source capture system that works automatically and meets or exceeds OSHA, NIOSH and NFPA standards for firehouse air quality.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F2.20	Four OEM style direct frame mounted tow hooks shall be provided – two on the front of the apparatus and two on the rear of the apparatus.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F2.21	A flat regular bumper shall be provided on the front of the chassis and shall provide ample room for a 1.5" hose outlet. The bumper shall be frame mounted and braced to provide high strength and reduce oscillation due to engine or road vibration. The bumper shall be covered with aluminum checker plate.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F2.22	A structural steel bumper shall be provided on the rear of the apparatus. The bumper shall be covered with aluminum checker-plate.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F2.23	A backup camera shall be activated whenever the apparatus transmission is placed into reverse gear.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:

F2.24	A backup collision sensing system shall be activated whenever the apparatus transmission is placed into reverse gear.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F2.25	The apparatus shall be equipped with anti-lock brakes and electronic/dynamic stability control.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F2.26	The engine requirement shall be Minimum 400HP. State bid Horsepower.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F2.27	The engine shall be equipped with a Jacobs engine compression brake.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F2.28	The engine shall have a thermostatically-controlled, air-operated clutch fan. A switch shall be provided in the cab for manual activation and auto activation of the clutch.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F2.29	The transmission shall at a minimum be an Allison 3000 EVS or equivalent and shall be configured to shift to neutral when the parking brake is applied and have built in torque converter. The gear ratio shall allow for a maximum speed of 120km/h.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F2.30	The alternator shall be a minimum of 320 amps.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F2.31	The apparatus shall be equipped with rear air suspension.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F2.32	The front brakes shall be configured with park on air.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F2.33	The apparatus shall be equipped with rear drum brakes with Q Plus brake shoes.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F2.34	The air brake tank drains shall be equipped with labelled pull cords on the left side of the apparatus.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F2.35	All fluid level checks and fluid fill ports shall be easily accessible without the need to raise the cab.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F2.36	The front axle shall be rated at minimum 16,000lbs.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F2.37	The rear axle shall be a tandem axle rated at minimum 46,000lbs.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F2.38	Front Tires shall have side sipes and shall be Bridgestone M854 or equivalent.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F2.39	Rear tires shall be Bridgestone M799 or equivalent.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:

F2.40	Mud flaps must be appropriate size and placed according to tire size.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F2.41	4.5" rubber wheel fender extensions	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F2.42	Quiet Cab package – using sound deadening materials	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F2.43	There shall be an aluminum console installed in the cab between the driver and passenger seat. The console shall feature a hinge-up top lid to allow for easy access to interior electrical. The switch panel, siren and mobile radios shall be flush mounted into the lid. The console shall be finished with a speckle coat scratch resistant paint finish.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F2.44	There shall be Chromed ABS Axle Trim installed on the front axle. The trim shall be single-piece and cover the axle and wheel lugs to provide a please appearance.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F2.45	There shall be Chromed ABS Axle Trim installed on the back tandem axles. The trim shall be single-piece and cover the axle and wheel lugs to provide a pleasing appearance.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F2.46	There shall be a "Rear View Safety" Backup Camera installed on the dash of the cab. The system shall be supplied by minimum with the following features: <ul style="list-style-type: none"> • Color CCD Weather Proof Heated Camera with Infrared Illuminators • 7" LCD Color Monitor with Mount/Stand 	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F2.47	Alcoa Polished Aluminum Rims – Size determined by chassis manufacturer	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F2.48	The following labels shall be applied to the apparatus: <ul style="list-style-type: none"> * NSM - National Safety Mark * Apparatus Fluids Plate * Warning - Apparatus Seating Capacity * Warning - Occupants Must be Seated and Belted * Warning - Do Not Wear Helmets While Riding * Warning - Only Trained Operators to Operate Apparatus * Warning - Hot Exhaust * Warning - Step Fall Hazard * Warning - Do Not Ride on Step when Apparatus in Motion 	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:

F3 ELECTRICAL AND LIGHTING REQUIREMENTS

F3.1	AM/FM/USB/Bluetooth Radio	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
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F3.2	LED lighting emergency/interior/exterior per NFPA standards.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F3.3	Batteries: 4 - 2800 CCA dual purpose	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F3.4	Minimum 320 AMP Alternator - Brushless with Battery Voltage Sense	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F3.5	Block Heater – 120V 1000W with plug under door	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F3.6	Starter:12-volt electrical system - centralized power distribution incorporating plug-in style relays. Circuit protection for serviceability, 12-volt light system w/circuit protection circuits number & color coded.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F3.7	Start Aid: 12V heat for fuel filter	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F3.8	Remote PTO control	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F3.9	PTO Air Control – On dash with indicator light	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F3.10	Two Spare Switches – Wired to power	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F3.11	Dash Mounted air filter restriction gauge	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F3.12	Canadian Instrument Package – Km/h replaces MPH – Includes speedometer, tachometer, fuel gauge, engine coolant temp, engine oil pressure, voltmeter, primary & secondary air tank levels, DEF level, engine hour meter, and outside air temperature at minimum	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F3.13	Electric Door Locks and Windows	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F3.14	NFPA Compliance Kit – Sweat occupancy sensors, seat belt switches, VDR & Seat Sensor Harness	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F3.15	Headlamps: Halogen Projector Low Beam, Halogen Complex Reflector High Beam	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F3.16	Marker Lights: Five, rectangular, LED	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F3.17	Turn Signal Lights: Mounted on fender, LED	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F3.18	LED Stop, Turn, Tail: Flange Mounted with Two LED backup lights and with an LED license plate.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F3.19	Daytime Running Lamps	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:

F3.20	Marker Lights Interrupter Switch	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F3.21	Two (2) midframe reflectors	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F3.22	Electrical Junction Box to be installed under the cab or where manufacturer suggests.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F3.23	Circuit Breakers: Number of Fuses to be by Manufacturer Spec.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F3.24	The following components shall be supplied with the battery charger & Air Pump: <ul style="list-style-type: none"> • Pump Plus 1200 or equivalent Battery Charger; • 20 AMP Auto eject with yellow cover; • LED Bar graph; • 12V Air Pump 	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F3.25	One (1) 120V duplex receptacle shall be installed at the cab floor beside the console, wired from the shoreline	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F3.26	A 120V AC duplex receptacle shall be installed high in compartment L1 and shall be wired to the shore line auto-eject circuit	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F3.27	There shall be a Green LED Master-Battery-On lamp installed at the skirt below the driver cab door. The lamp shall illuminate when the mastery battery switch is on.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F3.28	There shall be a Tire Pressure Monitor Kit installed on the apparatus. The kit shall include one (1) for each tire.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F3.29	There shall be two (2) mobile radio antenna cables installed on the chassis cab roof. The cables shall be routed to the cab console for hook-up to the mobile radios. A "remote" speaker shall be installed at the pump panel. *Mobile Radios and "remote" speaker to be supplied by the Municipality* Builder to Install Radios.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F3.30	There shall be a multi-plexed electrical power distribution system installed. The display shall be installed at the upper front surface of the console cover.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F3.31	A water tank level display indicator shall be installed	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:

F3.32	<p>There shall be two (2) LED Remote Water Tank Level Lights installed. The lights shall be driven by the master water tank level display located at the pump operators panel. The lights shall be installed, one (1) on the left-side & one (1) on the right-side of the pumphouse.</p>	<p>Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:</p>
F3.33	<p>A foam tank level display indicator shall be installed</p>	<p>Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:</p>
F3.34	<p>There shall be one (1) Master Vacuum and one (1) Master Pressure gauge assembly installed at the pump operator's panel. The gauges shall be stainless steel, 4" diameter. The vacuum gauge shall have a scale of -30 to 400 psi (0-2750 Kpa). The pressure gauge shall have a scale of 0-400 psi (0-2750 Kpa). Two (2) pump test ports shall be included. The gauges and the test ports shall be part of a chromed bezel for a pleasing appearance.</p>	<p>Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:</p>
F3.35	<p>A Light Bar equivalent to a Whelen Edge® Ultra Freedom IV™ Linear Super-LED® LC Series 60" lightbar model # F4N0VLED shall be installed on the roof of the chassis cab.</p>	<p>Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:</p>
F3.36	<p>Two (2) additional RED LED Warning Lights shall be installed facing-forward on the lightbar, for a total of four (4) RED and two (2) CLEAR.</p>	<p>Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:</p>
F3.37	<p>Two (2) Clear LED alley lights shall be included, one (1) at each end of the lightbar.</p> <ul style="list-style-type: none"> • The alley lights shall be switched with a dedicated switch at the switch panel. 	<p>Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:</p>
F3.38	<p>A Light Bar Scene Light equivalent to a Whelen Pioneer Plus™ Model # PCP2 shall be provided, installed on the center of the cab lightbar, facing forward.</p> <ul style="list-style-type: none"> • The scene lights shall be switched with a dedicated switch at the switch panel. 	<p>Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:</p>
F3.39	<p>Two Warning / Scene Lights equivalent to (2) Whelen M9 Series Model # M9V2R Warning/Scene lights shall be installed, at the body rear upper, one (1) on each side.</p> <ul style="list-style-type: none"> • The scene lights shall be switched with a dedicated switch. • The warning lights shall be switched with a dedicated switch. 	<p>Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:</p>

F3.40	<p>Four (4) Warning / Scene Lights equivalent to Whelen M9 Series Model # M9V2R Warning/Scene lights shall be installed, at the body sides upper panels, two (2) on each side, one (1) at front & one (1) at back.</p> <ul style="list-style-type: none"> The scene lights shall be switched with a dedicated switch. The warning lights shall be switched with a dedicated switch. 	<p>Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:</p>
F3.41	<p>Two (2) Whelen M6 Series Model # M6R Red Warning Lights (with Red Lens) or equivalent shall be installed, one (1) each side of the chassis grille. Chromed bezels are included.</p>	<p>Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:</p>
F3.42	<p>Two (2) Whelen M6 Series Model # M6R Red Warning Lights (with Red Lens) or equivalent shall be installed, at the chassis fenders, one (1) on each side. Chromed bezels are included.</p>	<p>Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:</p>
F3.43	<p>There shall be four (4) Whelen M6 Red LED flashers or equivalent installed at the body fenders, two (2) per side ahead & behind the rear axles. The flashers shall be installed in chromed bezels. The flashers shall be wired into the lower level emergency light circuit. Weather proof electrical connectors shall be used to connect the flashers to the apparatus harness.</p>	<p>Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:</p>
F3.44	<p>Two (2) Whelen M6 Series Model # M6R Red Warning Lights (with Red Lens) shall be installed, at the body rear lower panels, one (1) on each side. Chromed bezels are included. *All lower level warning lights shall be switched by the same circuit.*</p>	<p>Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:</p>
F3.45	<p>There shall be a Whelen (46" x 2.875") TAL85W Amber 8-LED Traffic Advisor or equivalent installed at the back of the body up high. A control panel shall be included, installed at the cab console, flush mounted into the console cover.</p>	<p>Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:</p>
F3.46	<p>The chassis manufacturer shall install a wig-wag headlamp system. The system shall operate only with park brake released and low beams, not high beams. Upon arriving on-scene, the wig-wags shall turn-off when the park brake is engaged. The Wig-Wags shall be supplied by the chassis manufacturer.</p>	<p>Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:</p>
F3.47	<p>There shall be a Whelen 295SLSC1 Siren System or equivalent installed, flush mounted into the cab center console. A mic shall be included for the operator to speak through a public address system. A "hands-free" feature shall be included which when selected, allows the driver to start the siren by tapping the vehicle horn, tap again to change siren tone, and tap twice to silence.</p>	<p>Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:</p>
F3.48	<p>There shall be one (1) Whelen SP123BMC 100-watt Siren Speaker or equivalent installed at the front bumper. A Chrome bezel shall be included.</p>	<p>Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:</p>

F3.49	<p>There shall be a set of Whelen LED M6 Brake/ Tail/ Turn/ Back-up Lamps or equivalent installed in a polished 4-place vertical bezel at the back of the apparatus. The top lamp on each side, shall be an amber arrow for turn function, the second position a red brake lamp, the third position a clear back-up lamp and the lower position a red flasher.</p> <p>Five (5), 2" round Red LED clearance lamps shall be installed on the back bumper, one (1) on each corner and three (3) on center of the bumper.</p> <p>Four (4) Red LED clearance lamps shall be installed at the back-top of the body sides, two (2) facing sideways and two (2) facing backwards. One (1), Red LED 3-lamp ID bar shall be installed at the top center of the body.</p> <p>There shall be two (2) Amber LED turn signal/clearance lamps installed, one (1) on each side at the body fenders.</p>	<p>Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:</p>
<hr/>		
F3.50	<p>There shall be a stainless-steel bracket installed at the back of the body to carry a license plate. The top of the bracket shall have a formed lip to protect an LED lamp, installed to illuminate the license plate.</p>	<p>Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:</p>
<hr/>		
F3.51	<p>There shall be a Back-up Alarm installed at the back of the apparatus frame area.</p>	<p>Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:</p>
<hr/>		
F3.52	<p>A Light Tower shall be installed. These towers shall be extremely stable. The tower shall be able to be positioned by remote control.</p> <p>Features:</p> <ul style="list-style-type: none">• continuous 360° rotation;• 2 pivot points for endless positions;• full deployment in under 15 seconds;• all weather - not affected by ice buildup, high winds, blowing dust;• ability to overhang side of vehicle;• one-touch auto-park;• all electric - no air or hydraulics required;• umbilical remote control with 15' cord;• maintenance free;• five year warranty;• NFPA 1901 compliant;• tested to 90 mph winds;• backlighting option to light both sides of scene. <p>A green strobe shall be mounted on the top of the light tower. The tower shall be installed at the front of the body.</p>	<p>Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:</p>
<hr/>		
F3.53	<p>The pump panels shall be illuminated by an led strip light provided with the roll-up doors.</p>	<p>Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:</p>
<hr/>		
F3.54	<p>There shall be four (4) LED step lights installed, two (2) each side at the chassis cab entry steps. These lights shall turn-on automatically when a cab door is opened and are also switched by a cab dash switch.</p>	<p>Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:</p>

F3.55	There shall be two (2) LED step lights installed at the top of body rear, one (1) each side, and one (1) LED strip light below the mid rear body step. This strip light will illuminate the top of bumper.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F3.56	There shall be two (2) LED ground lights installed, one (1) each side beneath the front bumper to illuminate the ground. These lights shall turn-on automatically when a cab door is opened and are also switched by a cab dash switch.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F3.57	There shall be two (2) LED ground lights installed, one (1) each side beneath each cab entry step to illuminate the ground. These lights shall turn-on automatically when a cab door is opened and are also switched by a cab dash switch.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F3.58	There shall be two (2) LED ground lights installed, one (1) each side beneath each pump house step to illuminate the ground. These lights shall turn-on automatically when a cab door is opened and are also switched by a cab dash switch.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F3.59	There shall be two (2) LED ground lights installed, one (1) each side beneath the front of body to illuminate the ground. These lights shall turn-on automatically when a cab door is opened and are also switched by a cab dash switch.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F3.60	There shall be two (2) LED ground lights installed, one (1) each side beneath the back of body to illuminate the ground. These lights shall turn-on automatically when a cab door is opened and are also switched by a cab dash switch.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F3.61	There shall be two (2) LED ground lights installed, one (1) each side beneath the back bumper to illuminate the ground. These lights shall turn-on automatically when a cab door is opened and are also switched by a cab dash switch.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F3.62	There shall be two (2) LED interior lights installed, one (1) each side at the engine compartment to illuminate the engine compartment. These lights shall be switched by the ground light switch.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F3.63	There shall be one (1) minimum 60" long strip of LED strip lighting installed, at the pump house compartment ceiling to illuminate the pump house. The strip light shall be switched at the pump panel.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F3.64	All body compartments shall be illuminated by LED strip lighting inserted into the back of the vertical rollup door tracks. One (1) full height strip shall be included on each side. The lighting shall turn-on by a magnetic door switch whenever the door is in the open position.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F3.65	The apparatus shall be wired for three (3) headsets. One on the pump panel and two in the cab.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:

F4 FUEL TANK & FILL PORT

- F4.1 The fuel tank shall have a capacity of approximately 300 liters and be located under the cab on the Driver's side. Complies: yes no sub
Comments:
-
- F4.2 DEF tank – as advised by manufacturer. Complies: yes no sub
Comments:

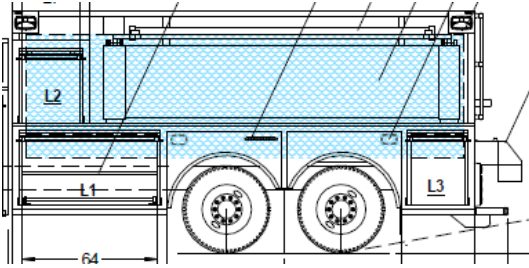
F5 BODY REQUIREMENTS

- F5.1 An aluminum hose bed cover extending the full length and width of the apparatus body shall be provided to cover the hose bed and coffin compartments. The cover shall a four (4) piece and shall be substantial enough to support being walked on. The top surface of the cover shall be designed to be non-slip. Complies: yes no sub
Comments:
-
- F5.2 The coffin compartments shall have a secondary cover that protects contents from weather elements when the hose bed cover is in the open position. Complies: yes no sub
Comments:
-
- F5.3 SCBA bottle storage compartments shall be provided around the rear wheel wells. The body design shall maximize SCBA bottle storage capacity around the rear wheel wells. The SCBA bottle compartments shall have a tight closing gasket sealed door. (4500 psi 45-minute carbon fiber bottles). Complies: yes no sub
Comments:
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- F5.4 A compartment will be provided that holds and dispensed absorbent (approx. 2 bags) at the driver side rear of the apparatus body. Complies: yes no sub
Comments:
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- F5.5 Running Boards: There shall be two (2) custom embossed aluminum boards installed on the chassis, one (1) to be placed below each the driver's and officer's door. Complies: yes no sub
Comments:
-

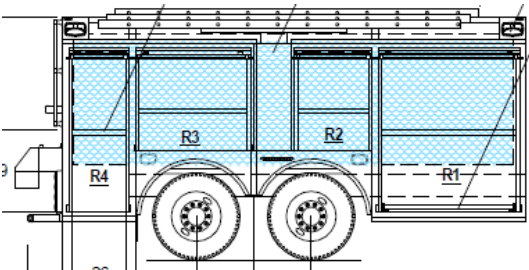
-
- F5.6 An aluminum body shall be supplied. The body shall fully enclose the poly water tank.
- Complies: yes no sub
Comments:

Extruded design preferred.

The body design will be as per the following drawings:



Officer-Side



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- F5.7 There shall be a bumper installed at the back of the body. Heavy-duty steel plates shall be custom cut and formed to provide a rigid frame for the tailboard to attach to. The bumper support frame assembly shall be fully independent of the body frame, and shall be fastened to the chassis frame rails with grade 8 bolts. The tailboard shall be formed from embossed aluminum polished checker plate to promote slip-resistance. A heavy aluminum channel shall be welded to the underside for additional support.
- Complies: yes no sub
Comments:

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- F5.8 There shall be polished stainless-steel fender skirts installed at the body wheel wells. Stainless steel hardware shall be used to fasten the fenders. Nylon shoulder washers are installed on each bolt, corrosion control paste is applied to each bolt hole prior to hardware insertion to fasten the skirt.
- Complies: yes no sub
Comments:

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- F5.9 There shall be stainless steel fenderettes installed on the body wheel well skirts, fastened to the skirts with stainless steel hardware
- Complies: yes no sub
Comments:

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- F5.10 There shall be wheel well liners installed in each body wheel well.
- Complies: yes no sub
Comments:

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- F5.11 There shall be heavy-duty mud flaps installed at the rear wheels, attached to the body with stainless steel hardware. The mud flaps shall be 14" high x 24" wide.
- Complies: yes no sub
Comments:
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- F5.12 There shall be anodized aluminum rub rails installed on the sides of the body, ahead of and behind the rear wheels. Nylon shoulder washers are installed on each bolt, corrosion control paste is applied to each bolt hole prior to hardware insertion on the lower body.
- Complies: yes no sub
Comments:
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- F5.13 There shall be a collapsible stairway installed at the back left-side of the body to access the upper-body. The assembly in its deployed state, shall extend past the back bumper to provide an ergonomic angled stairway. The bottom portion shall hinge-up and neatly fold above the brake/tail/turn lights, collapsing into a vertical compact unit. The threads shall incorporate an aggressive thread pattern to offer secure slip-free footing. Handrails shall be attached to both upper stairway stringers for additional support. Additional Handrails shall be included at the top of hose bed.
- Complies: yes no sub
Comments:
-
- F5.14 There shall be one (1) Slide-Master Roll-Out Tray installed, one (1) in body compartment L1, Left-Front-Of-Wheel. The slides shall be by SlideMaster with a 600lb capacity, and include a lock-in and lock-out device. An aluminum tray with 2" up-turned flanges and rubber interlocking floor tile shall be included.
- Complies: yes no sub
Comments:
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- F5.15 There shall be one (1) Slide-Master Roll-Out Tray installed, in body compartment R1, Right-Front-Of-Wheel. The slides shall be by SlideMaster with a 600lb capacity, and include a lock-in and lock-out device. An aluminum tray with 2" up-turned flanges and rubber interlocking floor tile shall be included.
- Complies: yes no sub
Comments:
-
- F5.16 There shall be a two (2) SCBA brackets installed in a body compartment. The brackets shall be two spring clips and one nylon strap per cylinder. * the brackets shall be installed on body compartment R2 or R3*
- Complies: yes no sub
Comments:
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- F5.17 There shall be rubber floor tile installed on the floor of the upper body hose bed. The floor tile shall be interlocking to prevent shifting, and shall allow air circulation for drying.
- Complies: yes no sub
Comments:
-
- F5.18 There shall be two (2) hose bed dividers installed in the upper hose bed. The dividers shall be produced from 3/16" aluminum sheet, and formed for rigidity. The top of the dividers shall have a flange, providing a flat surface for support for the hose bed cover.
- Complies: yes no sub
Comments:
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F5.19 There shall be four (4) Aluminum Checker Plate Hose Bed covers installed, two (2) on each side of the hose bed. Two (2) per side are used to reduce cover size as one full-length is quite large. The checker plate shall be NFPA compliant skid-resistant embossed material. The covers shall be hinged full-length with stainless steel piano hinge. Gas springs shall be included to support the covers in the open position.

Complies: yes no sub
Comments:

Black Vinyl flaps shall be attached to the back of each hose bed cover to prevent deployment of hose. Bungee Cord is attached to the bottom of each tarp for securement purposes.

F5.20 Compartment doors shall be roll-up doors complete with the following features:

- 1" aluminum double wall slats with continuous ball & socket hinge joint designed to prevent water ingress and weather tight recessed dual durometer seals;
- Double wall reinforced bottom panel with stainless steel lift bar latching system;
- Bottom panel flange with cut-outs for ease of access with gloved hands;
- Reusable slat shoes with positive snap-lock securement;
- Smooth interior door curtain to prevent equipment hang-ups;
- One-piece aluminum door track side frame;
- Top gutter with non-marring seal;
- Non-marring recessed side seals with UV stabilizers to prevent warping;
- Dual leg bottom seal;
- Door ajar switch system (magnetic) shall be provided by door manufacturer;
- Door striker will provide support beneath the lift bar to prevent door curtain bounce and potential false door ajar indications.

Complies: yes no sub
Comments:

F5.21 There shall be a Hydraulic Ladder Storage Rack installed on the body, at the officer-side wheel well, justified forward. This ladder storage system carries the ladders over-top of the right-side body in a ladder-horizontal position.

The storage system shall be operated electrically, from the officer-side pump panel. An Up/Down toggle switch shall be installed. A self-contained hydraulic pump & cylinder shall actuate the system from, vertical for storage to horizontal for accessing the ladder. A mechanical safety latch shall be included to latch system in the stored position.

Two (2) amber LED flashing lights shall be included, one at the front and one at the back of the ladder storage cradle. These lights shall automatically turn-on when the rack moves from its stored position. A "Do Not Move" lamp shall illuminate whenever the system is not in its stored position.

Complies: yes no sub
Comments:

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- F5.22 There shall be a Hydraulic Portable Tank Storage Rack installed on the Driver-Side of the body, above the wheels. The storage system shall be operated electrically, from the Driver-Side pump panel. An Up/Down toggle switch shall be installed. A self-contained hydraulic pump & cylinder shall actuate the system. A mechanical (manual) safety latch shall be included to latch system in the stored position. Two (2) amber LED flashing lights shall be included, one at the front and one at the back of the system. These lights shall automatically turn-on when the rack moves from its stored position. A "Do Not Move" lamp shall illuminate whenever the system is not in its stored position.
- Complies: yes no sub
Comments:
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- F5.23 There shall be a painted aluminum cover installed on the storage rack to hide the porta tank and provide a pleasing appearance.
- Complies: yes no sub
Comments:
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- F5.24 There shall be a rubberized undercoating applied to the underside of the body. This coating will protect against body corrosion.
- Complies: yes no sub
Comments:
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- F5.25 The body compartments shall be coated with a Silver-Grey speckle-coat paint finish. Prior to the coating the compartment interior seams shall be caulked to prevent leakage.
- Complies: yes no sub
Comments:
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- F5.26 Only the highest quality Urethane paint will be used, to provide a high luster and long-lasting paint finish. The structure to be painted will have all hardware removed to ensure that paint protects all areas.
- Complies: yes no sub
Comments:
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- F5.27 There shall be a Red & Yellow-Green 6" reflective chevron striping installed on the back of the body. The design shall be such that from the centerline on the body, the striping shall be applied outwards & downwards at a 45-degree angle. The colors shall be applied alternately.
- Complies: yes no sub
Comments:
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- F5.28 There shall be "Black" Reflective Striping installed on the front & sides of the apparatus per NFPA 1901. The side design shall feature a 6" stripe running mid-body and a second 1" stripe applied beside the 6" stripe, spaced 1/2" apart. A "Z" pattern shall be applied at the body front door. The 1" stripe shall be applied above the 6" stripe at the chassis cab and transition through the "Z" pattern to the bottom of the 6" stripe applied to the body. A proof shall be sent to the Municipality for approval before installation.
- Complies: yes no sub
Comments:
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- F5.29 There shall be Fire Department Door Decals installed on the chassis cab doors. The design shall be provided or approved by the Member.
- Complies: yes no sub
Comments:

F6 PUMPER REQUIREMENTS

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- F6.1 All piping and fittings shall be made of stainless steel.
- Complies: yes no sub
Comments:
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F6.2	A pump overhead light shall be provided on the pump panel.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F6.3	<p>There shall be a side-control pumphouse installed immediately behind the chassis cab. The structure shall be fabricated from 1/4" wall aluminum extruded profiles. All welding by CWB certified aluminum welders. (or equivalent)</p> <p>Stainless steel panels shall be attached to both sides of the pumphouse. The lower intake/ discharge panels shall be bolted in place. Stainless trim rings with a rubber backing shall be installed at each of the adapters to seal off for heat retention. The upper panels shall be hinged on both sides to allow fast and easy access for pump service. All side panels shall be polished stainless steel. The under-side of the pump house (vertically front & rear) shall be completely closed off with aluminum panels as effectively as possible. Dual heat retaining pans shall be installed meeting on center and shall be easily removable with the simple pull-and-turn of a spring-loaded catch.</p> <p>Two (2) cross-lay hose beds shall be fabricated on top of the pumphouse. The floor of the hose beds shall be slotted to allow for water drainage and air recirculation. An aluminum checker plate cover shall be attached, hinged at the back with stainless steel piano hinge. Black vinyl tarps shall be attached to the cross lay cover on both sides. A bungee cord sewn into the bottom shall restrain the tarp.</p> <p>Three (1) stainless steel rollers (two (2) vertical on each side and one (1) horizontal) shall be installed to guide the hose to and from the cross lays.</p>	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub List CWB Qualification: Comments:
F6.4	Aluminum Roll-Up doors shall be installed on each side of the pump house to enclose the pump panels. The doors shall include LED strip lighting full-height on the inside of each door track.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F6.5	<p>There shall be two (2) 35,000 btu heaters installed in the pump house, one (1) on each side at frame level. Coolant shall be routed through 5/8" thermal hose from the engine for the source of heat. Quarter-turn brass ball valves shall be installed at the engine. The activation switch shall be at the cab dash within convenient reach of the operator.</p>	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F6.6	There shall be a minimum (1250 US GPM) Single Stage PTO Fire Pump installed.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F6.7	There shall be a "Hot-Shift" Power-Take-Off installed on the chassis transmission. This PTO shall power the fire pump and can be used for both stationary and pump-and-roll applications. The PTO shall be pressure lubricated with synthetic oil from the chassis Allison automatic transmission.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:

F6.8	<p>There shall be a Slip-Shaft installed. One end shall be connected to the PTO. The other end shall include a slip-yoke, attached to the fire pump. The drive-shaft assembly shall be machine balanced prior to installation.</p>	<p>Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:</p>
F6.9	<p>The fire pump frame shall be manufactured from 3/8" mild steel plate. Angles shall be bolted to both chassis frame rails with grade 8 bolts. These angles shall have flanges formed for the pump frame channels to bolt onto. Four (4) Rubber Vibration Isolation Mounts shall be installed between the pump frame and chassis frames to assist in reducing drive line & pump vibration. All frame components shall be painted with a rust prevention coating.</p>	<p>Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:</p>
F6.10	<p>There shall be a mechanical spring-loaded pump seal installed on the fire pump. The seal shall be maintenance free.</p>	<p>Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:</p>
F6.11	<p>There shall be a pump overheat protection system installed. The system shall include a thermal valve at the pump discharge manifold that opens automatically when the water temperature reaches 140 degrees F and dumps to atmosphere. An LED lamp shall be installed at the pump operators' panel that flashes once the water temperature reaches 180 degrees F. A push-button switch shall be included to test the lamp function.</p>	<p>Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:</p>
F6.12	<p>There shall be a pump-engage switch installed at the chassis dash to engage the Fire Pump Power-Take-Off.</p>	<p>Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:</p>
F6.13	<p>There shall be a 12volt electric pump primer installed, attached to the pump module, inside the pump-house. The primer shall be an environment friendly oil-less version and not require lubrication oil.</p>	<p>Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:</p>
F6.14	<p>There shall be a 6" male NH intake installed on the left-side of the fire pump. The Intake shall include a zinc anode screen and a 6" NH long-handle chromed cap.</p>	<p>Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:</p>
F6.15	<p>There shall be a 6" male NH intake installed on the right-side of the fire pump. The Intake shall include a zinc anode screen and a 6" NH long-handle chromed cap.</p>	<p>Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:</p>
F6.16	<p>There shall be a 2.5" auxiliary intake installed at the left-side pump panel behind of the Main Intake. A brass ball valve with stainless steel ball and remote valve actuator shall be included. The valve actuator shall be a direct mount lever located beside the valve. The intake shall include a 2.5" female swivel adapter and chromed plug, chained to the pump panel. A strainer shall be included. A 3/4" 1/4-turn bleeder/drain valve shall be installed on the intake. The intake and drain valve shall be labeled with a color-coded label. The threads shall be WCT.</p>	<p>Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:</p>

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- F6.17 There shall be a 2.5" auxiliary intake installed at the **right-side pump panel behind of the Main Intake**. A brass ball valve with stainless steel ball and remote valve actuator shall be included. The valve actuator shall be a direct mount lever located beside the valve. The intake shall include a 2.5" female swivel adapter and chromed plug, chained to the pump panel. A strainer shall be included. A 3/4" lift-style bleeder/drain valve shall be installed on the intake. The intake and drain valve shall be labeled with a color-coded label. The threads shall be WCT.
- Complies: yes no sub
Comments:
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- F6.18 There shall be a 2.5" Discharge located on the **left-side of the pump-house towards the front**. A brass 2.5" ball valve with stainless steel ball and remote valve actuator shall be included. The valve actuator shall be a positive locking lever at the pump operator panel. The discharge shall include a 30-degree droop and chromed cap, chained to the pump panel. There shall be a 2.5" stainless steel dual-scale PSI/Kpa discharge pressure gauge installed for this discharge. A 3/4" - lift-style bleeder/drain valve shall be installed for the discharge at the base of the pump panel. The valve lever and drain valve shall be labeled with a color-coded label. The threads shall be WCT.
- Complies: yes no sub
Comments:
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- F6.19 There shall be a 2.5" Discharge located on the **left-side of the pump-house towards the rear**. A brass 2.5" ball valve with stainless steel ball and remote valve actuator shall be included. The valve actuator shall be a positive locking lever at the pump operator panel. The discharge shall include a 30-degree droop and chromed cap, chained to the pump panel. There shall be a 2.5" stainless steel dual-scale PSI/Kpa discharge pressure gauge installed for this discharge. A 3/4" - lift-style bleeder/drain valve shall be installed for the discharge at the base of the pump panel. The valve lever and drain valve shall be labeled with a color-coded label. The threads shall be WCT.
- Complies: yes no sub
Comments:
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- F6.20 There shall be a 2.5" Discharge located on the **right-side of the pump-house towards the front**. A brass 2.5" ball valve with stainless steel ball and remote valve actuator shall be included. The valve actuator shall be a positive locking lever at the pump operator panel. The discharge shall include a 30-degree droop and chromed cap, chained to the pump panel. There shall be a 2.5" stainless steel dual-scale PSI/Kpa discharge pressure gauge installed for this discharge. A 3/4" - 1/4-turn bleeder/drain valve shall be installed for the discharge at the base of the pump panel. The valve lever and drain valve shall be labeled with a color-coded label. The threads shall be WCT.
- Complies: yes no sub
Comments:
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F6.21 There shall be a 4.0" discharge located on the **right-side of the pump-house towards the rear**. A brass 3.0" ball valve with stainless steel ball and remote slow-close valve actuator shall be included. The valve actuator shall be a positive locking lever at the pump operator panel. The discharge shall include a 30-degree droop and storz cap, chained to the pump panel. There shall be a 2.5" stainless steel dual-scale PSI/Kpa discharge pressure gauge installed for this discharge.
A 3/4" - lift style bleeder/drain valve shall be installed for the discharge at the base of the pump panel. The valve lever and drain valve shall be labeled with a color-coded label. The threads shall be storz.

Complies: yes no sub
Comments:

F6.22 There shall be a 3.0" deluge discharge **plumbed to the top of the pumphouse**. A brass 3.0" ball valve with stainless steel ball and remote slow-close valve actuator shall be included. The valve actuator shall be a positive locking lever at the pump operator panel. A 2.5" stainless steel dual-scale PSI/Kpa discharge pressure gauge installed for this discharge. A 3/4" - lift style bleeder/drain valve shall be installed for the discharge at the base of the pump panel. The valve lever and drain valve shall be labeled with a color-coded label.

Complies: yes no sub
Comments:

F6.23 A Task Force Tips Crossfire model # XFC-73 portable lightweight monitor package or equivalent consisting of the following:

- (XFT-NJ) CrossFire Monitor Top c/w M WCT Outlet Threads or equivalent;
- (XG18VL-XL) Manual 18" Extenda-Gun 3" Victaulic or equivalent;
- (XGB-23) 3" Bracket Set Plate/Saddle or equivalent;
- (M-RS1000-NJ) Master Stream Selectable Flow Nozzle or equivalent c/w 2.5" F Sw WCT Inlet - 250, 350, 500, 750 and 1000 gpm @ 100 psi.

Complies: yes no sub
Comments:

F6.24 A pressure governor and monitoring display kit shall be installed. The kit shall include a control module, intake pressure sensor, discharge pressure sensor, and cables.

Complies: yes no sub
Comments:

F7 EQUIPMENT

F7.1 Fire extinguishers

- 1 - Dry
- 1 - Carbon Dioxide
- 1 - AB EXJ 20lb

Complies: yes no sub
Comments:

F7.2 There shall be a Series 1225-A 35' Duo-Safety Aluminum Extension Ladder supplied.

Complies: yes no sub
Comments:

F7.3	There shall be a Series 775-A 14' Duo-Safety Aluminum Roof Ladder supplied.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F7.4	There shall be a Series 585-A, 10' Duo-Safety Folding Aluminum Ladder supplied. The ladder shall be fastened to the Zico Ladder Rack with rubber PAC tool mounts.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F7.5	There shall be two (2) x 10' lengths of lightweight suction hose supplied with the apparatus. A Folding long-handle female coupling is included. Alum trays shall be attached to the top of the porta-tank rack to carry the hose. Two (2) spring type hose holders are included to restrain the hose.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F7.6	A Task-Force-Tips 6" F NH High Volume Low-Level Strainer with Jet Siphon shall be supplied. A floating device shall be included.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F7.7	An Akron Brass Style 7982 Revolution Intake Valve shall be provided. The Intake Valve shall be constructed of lightweight, corrosion-resistant, hard-anodized aluminum and stainless steel. To protect against corrosion, the casting shall be coated with a powder coat finish and all components on the wet side of the valve shall be constructed from stainless steel. The valve shall have an adjustable (50-250 psi) relief valve, 3/4" air bleeder that discharges at the same location as the pressure relief valve, 30° down angle inlet with adjustable rotational positions, a stainless ball sector, durable non-stick seat, and a minimum 4 1/2" diameter waterway. A position indicator shall be included to indicate position of ball. A 12.5" diameter handwheel shall be included to operate valve open and close functions. The valve shall not exceed 7 psi friction loss at 2000 gpm and 14.875" depth. The intake shall be 4" storz and the outlet 6" M NH swivel / long handle. Product must carry a 10 year warranty against corrosion and manufacturer defects.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F7.8	There shall be two (2) 6lb Fibre Glass Handled Pick Axes supplied with the apparatus. Both axes shall be mounted with rubber PAC tool mounts and a checker plate pocket for the axe head. The axes shall be installed, one (1) each side at the back of the body.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F7.9	Two (2) Aluminum Wheel Chocks shall be supplied for use with tires up to 44" in diameter. The chocks shall easily fold-up and features high-tensile strength aluminum construction, a large rear-opening hand grip, and a double row of rugged teeth that grip virtually any hard surface. NFPA and SAEJ348 compliant and third-party tested.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
F7.10	There shall be two (2) storage brackets installed, at the front under-side of the body, right-side	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:

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- F7.11 There shall be two (2) sets of (2) spanner & (1) hydrant wrench sets supplied and installed onto the apparatus, one (1) set on each side at the pump panels. Complies: yes no sub
Comments:
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- F7.12 There shall be two (2) Aluminum Storz Wrench Sets installed, one (1) at the officer-side pump panel and one (1) at the back-of-body for use with the storz adapters. Complies: yes no sub
Comments:
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- F7.13 Eight (8) lengths of 100-foot-long 4" supply hose with locking storz couplers. Complies: yes no sub
Comments:

F8 VEHICLE WEIGHT AND DIMENSIONS

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- F8.1 When the vehicle is loaded to its maximum in-service weight, the Gross Vehicle Weight Rating (GVWR) and front to rear weight distribution of the vehicle shall be within the limits specified by the chassis manufacturer, NFPA standards and Department of Transportation regulations. Complies: yes no sub
Comments:
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- F8.2 The front gross axle weight rating (GAWR) of the chassis shall not be less than 22,000 pounds. Complies: yes no sub
Comments:
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- F8.3 The rear gross axle weight rating (GAWR) of the chassis shall not be less than 46,000 pounds. Complies: yes no sub
Comments:
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- F8.4 Overall height of the finished vehicle shall not exceed 11ft (132 inches); measured with tires properly inflated and the apparatus unloaded. Complies: yes no sub
Comments:
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- F8.5 The following dimensions shall apply to the completed apparatus. Max Length is 33 feet. Min. Length is 31 feet. Any critical dimensions that apply shall be noted here. Complies: yes no sub
Comments:

F9 WATER TANK SPECIFICATIONS

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- F9.1 There shall be a 3.5" stainless steel tank-to-pump line installed. A brass 3.0" ball valve with stainless steel ball and remote valve actuator shall be included. The valve actuator shall be a positive locking lever at the pump operator panel. The lever shall be labeled with a color-coded label. Complies: yes no sub
Comments:
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F9.2	There shall be a 2.0" tank fill line installed. A brass 2.0" ball valve with stainless steel ball and remote valve actuator shall be included. The valve actuator shall be a positive locking lever at the pump operator panel. The lever shall be labeled with a color-coded label. High-Pressure flexible hose shall be used to route the line from valve to tank. Stainless steel fittings are crimped to the end of hose.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
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F9.3	There shall be one (1) 4" Stainless Steel Fireman's Friend Direct-Tank-Fill Valve installed at the back of the water tank on the right-side. The valve shall include a spring-loaded plunger that opens automatically when pressure is applied, and closes automatically when pressure falls below 8psi. A 1/4-turn bleeder valve is included with a 30-degree x 4" Storz droop adapter and cap.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
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F9.4	There shall be a 2.5" pre-connect discharge located on the right-front of the hose-bed. A brass 2.5" ball valve with stainless steel ball and remote valve actuator shall be included. The valve actuator shall be a positive locking lever at the pump operator panel. There shall be a 2.5" stainless steel dual-scale PSI/Kpa discharge pressure gauge installed for this discharge. A 3/4" - lift style bleeder/drain valve shall be installed for the discharge at the base of the pump panel. The discharge and drain valve shall be labeled with a Green color-coded label. The threads shall be WCT.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
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F9.5	A 25 Imperial Gallon Poly Foam Tank shall be installed. The tank shall be integrated into the upper front of the water tank.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
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F9.6	There shall be a 2.5" Foam Proportioner Installed	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
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F9.7	There shall be a 2.5" stainless steel foam manifold installed. A brass check valve shall be included to prevent foam solution to back flow to the clean water manifold. A 3/8" brass drain valve shall be installed at the lower pump panel to drain the foam manifold. The drain valve shall be labeled Foam Manifold Drain.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:
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F9.8	There shall be a Foam cross lay hose bed installed on top of the pumphouse, as cross lay #1. A brass 2.0" ball valve with stainless steel ball and remote valve actuator shall be included. The valve actuator shall be a positive locking lever at the pump operator panel. The discharge shall be plumbed with high-pressure flexible hose with crimped stainless-steel fittings. A brass 1.5" male NPSH swivel elbow shall be included. There shall be a 2.5" stainless steel dual-scale PSI/Kpa discharge pressure gauge installed for this discharge. A 3/4" - lift-style bleeder/drain valve shall be installed for the discharge at the base of the pump panel. The valve lever and drain valve shall be labeled with a color-coded label. This Cross lay shall be foam capable.	Complies: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> sub Comments:

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- F9.9 There shall be a foam cross lay hose bed installed on top of the pumphouse, as cross lay #2. A brass 2.0" ball valve with stainless steel ball and remote valve actuator shall be included. The valve actuator shall be a positive locking lever at the pump operator panel. The discharge shall be plumbed with high-pressure flexible hose with crimped stainless-steel fittings. A brass 1.5" male NPSH swivel elbow shall be included. There shall be a 2.5" stainless steel dual-scale PSI/Kpa discharge pressure gauge installed for this discharge. A 3/4" - lift-style bleeder/drain valve shall be installed for the discharge at the base of the pump panel. The valve lever and drain valve shall be labeled with a color-coded label. This Cross lay shall be foam capable.
- Complies: yes no sub
Comments:
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- F9.10 There shall be a 1.5" foam discharge plumbed to the front bumper. A brass 2.0" ball valve with stainless steel ball and remote valve actuator shall be included. The valve actuator shall be a positive locking lever at the pump operator panel. The discharge shall be plumbed with 2.0" high-pressure flexible hose with crimped stainless-steel fittings. A 1.5" NPSH male adapter and chromed cap shall be included. There shall be a 2.5" stainless steel dual-scale PSI/Kpa discharge pressure gauge installed for this discharge. A 3/4" - lift-style bleeder/drain valve shall be installed for the discharge at the base of the pump panel. The valve lever and drain valve shall be labeled with a color-coded label. This discharge shall be foam capable.
- Complies: yes no sub
Comments:
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- F9.11 There shall be a Master Pump Drain Valve installed at the base of the driver-side pump panel.
- Complies: yes no sub
Comments:
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- F9.12 A 2500 Imperial Gallon Poly Water Tank shall be installed. The tank shall be NFPA compliant and shall come with a life time warranty.
- Complies: yes no sub
Comments:
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- F9.13 There shall be a Stainless-Steel Dump Valve installed at the back of the water tank. The assembly shall include a 10" dump valve, a 10" - 180-degree swivel elbow and a 36" telescopic chute.
- Complies: yes no sub
Comments:
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- F9.14 A drain port shall be installed in the bottom of the tank sump. The port shall be sealed with a pipe plug.
- Complies: yes no sub
Comments:
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- F9.15 There shall be one (1) 3000 US-Gal Portable Water Tank supplied. An aluminum collapsible support frame and 22oz red vinyl is included.
- Complies: yes no sub
Comments:

F10 OPTIONS

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- F10.1 A supplementary restraint system in the apparatus cab (air bags) per manufacturers specification.
- Complies: yes no sub
Comments:
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F10.2 Auto eject air hose and electrical cord. Complies: yes no sub
Comments:

F11 DELIVERY & WARRANTY

F11.1 The apparatus shall be subjected to a final inspection and 3rd party pump tested to ULC-S515-13. A non-affiliated organization shall perform the test with calibrated testing equipment. A label shall be engraved and attached to the pump operators panel, to indicate that the apparatus met the required performance criteria Complies: yes no sub
Comments:

F11.2 The apparatus shall be subject to a Manitoba provincial truck safety inspection prior to delivery. Complies: yes no sub
Comments:

F11.3 There shall be at least two (2) operation & maintenance manuals included with the apparatus. Complies: yes no sub
Comments:

F11.4 A Warranty policy shall apply to the apparatus and shall be an included attachment with the bid submission. Complies: yes no sub
Comments:

F11.5 The completed apparatus shall be subject to a final inspection. It shall then be delivered to the customer's facility under its own power. An authorized company representative shall deliver the apparatus and perform operational training to the Fire Department upon arrival. Complies: yes no sub
Comments: