

FORM A: BID
(See B8)

1. Contract Title SUPPLY AND DELIVERY OF A 40 FT. AERIAL DEVICE VEHICLE

2. Bidder

Name of Bidder

Usual Business Name of Bidder as it appears on Invoice (if different from above)

Street

City

Province

Postal Code

Email Address of Bidder

Facsimile Number

(Mailing address if different)

Street or P.O. Box

City

Province

Postal Code

GST Registration Number (if applicable)

The Bidder is:

(Choose one)

a sole proprietor

a partnership

a corporation

carrying on business under the above name.

3. Contact Person

The Bidder hereby authorizes the following contact person to represent the Bidder for purposes of the Bid.

Contact Person

Title

Telephone Number

Facsimile Number

Email Address

4. Definitions

All capitalized terms used in the Contract shall have the meanings ascribed to them in the General Conditions and D3.

5. Offer The Bidder hereby offers to perform the Work in accordance with the Contract for the price(s), in Canadian funds, set out on Form B: Prices, appended hereto.

6. Commencement of the Work The Bidder agrees that no Work shall commence until he/she is in receipt of a notice of award from the Award Authority authorizing the commencement of the Work.

7. Contract The Bidder agrees that the Bid Opportunity in its entirety shall be deemed to be incorporated in and to form a part of this offer notwithstanding that not all parts thereof are necessarily attached to or accompany this Bid.

8. Addenda The Bidder certifies that the following addenda have been received and agrees that they shall be deemed to form a part of the Contract:

No.	Dated
_____	_____
_____	_____
_____	_____

9. Time This offer shall be open for acceptance, binding and irrevocable for a period of sixty (60) Calendar Days following the Submission Deadline.

10. Indigenous Self-Declaration The City is requesting that Bidders identify if their business is at least 51% owned by one or more Indigenous persons of Canada.

YES, 51% or more Indigenous ownership

NO, it is not

This information is being gathered for statistical purposes only and will not be used for purposes of evaluation.

11. Signatures

The Bidder or the Bidder's authorized official or officials have signed this

_____ day of _____, 20_____.

Signature of Bidder or
Bidder's Authorized Official or Officials

(Print here name and official capacity of individual whose signature appears above)

(Print here name and official capacity of individual whose signature appears above)

FORM B: PRICES
(See B9)

SUPPLY AND DELIVERY OF A 40 FT. AERIAL DEVICE VEHICLE

UNIT PRICES

ITEM NO.	DESCRIPTION	SPEC. REF.	UNIT	QUANTITY	UNIT PRICE
1.	40 ft. Aerial Device	19001	Each	1	
2.	19,500 lbs. GVWR Extended Cab & Chassis	19002	Each	1	

Name of Bidder

FORM N: DETAILED SPECIFICATIONS 19001

40 ft. AERIAL DEVICE VEHICLE

1. INTENT

- 1.1 It is the intent of these specifications to describe a centre-mounted, telescopic aerial device vehicle complete with a hydraulically operated, two boom configuration, a fibreglass service body and other equipment as described herein. The aerial device and equipment shall be installed on an extended cab and chassis to be supplied by the Contractor (see Detailed Specifications 19002 attached).
- 1.2 The aerial device shall be the manufacturer's latest model, as may be modified by these specifications. The aerial device, including all auxiliary equipment, shall be furnished complete and ready for use. All parts not specifically mentioned but which are required for the complete unit shall conform in strength, quality of material and workmanship, to the best standards and engineering practice in the industry.
- 1.3 It will be the responsibility of the Bidder to inform the City of any errors or omissions in these specifications, for under this Contract, the Contractor shall be held responsible to ensure that the manufacturer will be responsible for the design, performance, reliability and satisfactory operational function of the unit.
- 1.4 The ratings specified herein merely state the minimum values acceptable to the City, not implying that those values are sufficient for the design of the particular equipment being bid.

2. OTHER SPECIFICATIONS AND STANDARDS

- 2.1 Canadian Standards Association Standard CAN/CSA-C225-M10 Vehicle Mounted Aerial Devices, ANSI A10.31 (Latest Edition) Digger Derricks – Safety Requirements, Definitions and Specifications, and Canadian Standards Association Standard Z150-1974 – Safety Code for Mobile Cranes, form an integral part of these specifications and shall have precedence in any conflict concerning minimum acceptable standards.
- 2.2 All applicable SAE Standards form an integral part of the chassis specifications and shall have precedence in any conflict concerning minimum acceptable standards.
- 2.3 The completed aerial device shall comply with the Canadian Motor Vehicle Safety Standard (CMVSS) and the Manitoba Highway Traffic Act and all regulations thereunder.
- 2.4 All welding and welding designs of the load supporting elements shall conform to the requirements of the Canadian Standards Association Standard (CSA) W47.1-03 and W59-03.
- 2.5 The completed vehicle shall be complete with a National Safety Mark, NSM.
- 2.5.1 **State NSM Number:** _____

3. QUALIFICATIONS OF MANUFACTURER

- 3.1 The manufacturer of the aerial device shall have a minimum of five (5) years continuous experience manufacturing and installing aerial devices of the type being offered. The manufacturer shall have in effect a complete and documented quality control program ensuring the compliance with all applicable standards.
- 3.2 The manufacturer of the aerial device shall be ISO 9002 Certified.

4. QUALIFICATIONS OF THE BIDDER

- 4.1 The Bidder shall be a manufacturer or authorized distributor/supplier of aerial device equipment.
- 4.2 For the purposes of Warranty repairs, the Bidder shall have an authorized service facility located within 10 km of the boundaries of the City of Winnipeg. The facility, or major portion thereof, shall be dedicated to the installation, service, and maintenance of aerial device vehicles and equipment being offered.
- 4.3 Further to B11.1, Bidders shall include a description of the facility within including, but not limited to, number of qualified staff, years of service experience on aerial and digger derrick equipment, and general service capabilities within forty-eight (48) hours of the request of the Contract Administrator.
- 4.4 The Contractor shall furnish a letter, stamped by a registered professional engineer, indicating that the completed aerial device vehicle complies with CAN/CSA Standard C225-M10.

5. INSTRUCTIONS FOR COMPLETION OF SPECIFICATIONS

- 5.1 All items in these specifications must be answered indicating compliance or non-compliance. **Bidders shall, state “yes” for compliance or state deviation**, or give a reply where requested to do so. Deviations and/or equivalentents shall be clearly stated and fully detailed. Deviations and/or equivalentents will be considered subject to evaluation. In every instance where a brand name or design specification is used, the City will also consider deviations and/or equivalentents.
- 5.2 Each Bidder is required to fill in every blank. **Failure to do so may be used as a basis for rejection of bid.**

6. PERFORMANCE

- 6.1 The aerial device vehicle shall be capable of operating safely and efficiently in any working position and in confined areas while performing traffic signal construction and maintenance functions, during summer and winter conditions normal to the City of Winnipeg.

7. CAB AND CHASSIS

- 7.1 The cab and chassis shall be a new, 2019 or 2020 extended cab and chassis complying with Detailed Specifications 19002 in accordance with the instructions given.

8. AERIAL DEVICE

- 8.1 Type – articulating, telescopic, continuous rotation aerial device, capable of raising one (1) workman 40 ft., bottom of platform height. _____
- 8.1.1 **State** make and model being bid. _____
- 8.2 Overall travel height – 120 in. **State** height. _____
- 8.3 Horizontal reach form centreline of rotation – 27 ft. **State** reach. _____
- 8.4 Rated platform capacity – 350 lbs. based on stability CSA C225-10. **State**. _____
- 8.5 Booms – dielectrically designed and tested to 46 KvAC. A factory test document shall be supplied prior to the delivery of the aerial device stating that the boom has been dielectrically tested to 46 KvAC. _____

- 8.5.1 The completed unit, shall be tested by the Contractor, at their expense. _____
- 8.5.2 Boom materials – steel lower boom with a fiberglass insert, fiberglass upper boom. _____
- 8.6 Lower boom articulation – 0° to 80°, **state**. _____
- 8.7 Upper boom articulation – -14° to 80°, **state**. _____
- 8.8 Rotation – continuous with shear-ball type rotation bearing and spring applied, hydraulically released rotation brake. _____
- 8.9 Boom stow protection system required to prevent excessive down force being applied to the boom rest. _____
- 8.9.1 Boom side-load protection system required. _____
- 8.9.2 Boom overload protection system – required to prevent excessive loading of boom. _____
- 8.10 Boom locks – hydraulically or manually operated provision to lock booms while in the stored position. _____
- 8.10.1 Lower boom rest – auto-latch, self-locking lower boom rest. _____
- 8.11 Boom stow locations – to allow bucket to stow as close to the driver’s side as practicable without interfering with the service body side pack. _____
- 8.12 Slope indicators – two (2) Rieker Inc. model 1017 SPL or equivalent, located in visible locations before accessing the bucket to show side and fore/aft slope angles. _____
- 9. AERIAL DEVICE EQUIPMENT**
- 9.1 Personnel bucket – one (1), end-hung, pin-on, fiberglass platform with one hinged door, accessible from the passenger side. _____
- 9.1.1 Further to 8.5, **state** expected dielectric results with “hinged door” style bucket. _____
- 9.1.2 Nominal bucket dimensions – 24" x 30" x 42". _____
- 9.2 Platform capacity – 350 lbs., **state** capacity c/w applicable label. _____
- 9.3 Platform levelling system – automatic hydraulic type. Cable type bucket levelling systems are not acceptable. _____
- 9.4 Platform dump system – bucket to hydraulically tilt 100°. _____
- 9.5 Bucket cover – required. _____
- 9.6 Bucket label – the bucket shall have a visible label stating “Do Not Drill Holes In Bucket”. _____
- 9.7 Safety lanyard attachments – anchor point(s) required, to meet CSA 225-10. _____

9.8 Bucket support – shock absorbing type, mounted on rear tailshelf. _____

10. STABILIZERS

10.1 The unit shall be designed with proper stability without the use of outriggers. _____

10.2 Stabilizer system – Level Ride Mfg. torsion bar suspension stabilizer system on the rear axle. **State** make and model being bid. _____

10.3 Stability requirements – to meet CSA Standard CAN/CSA-C225–M10. _____

11. HYDRAULIC CONTROLS

11.1 Function controls – two (2) sets required, one master control group and one single lever control located at the bucket end of the boom. _____

11.1.1 Master control group – located at turntable for all boom functions. The controls shall be capable of completely overriding the upper controls. _____

11.1.2 Upper control – single lever control located at the bucket end of the boom. Multi-function control must be proportional and incorporate a “dead-man” function. _____

11.2 Hydraulic bucket rotators – 0°-180° in a horizontal plane, **state** rotation. _____

11.3 Bucket dump system – required from lower controls, bucket tilt (pivot) of 100° for rescue and clean-out purposes. _____

11.4 Automatic engine throttle control activated when platform controls are utilized. _____

11.5 Start/stop system – aerial device must include a start/stop system accessible from the upper and lower controls. _____

11.5.1 Emergency stop buttons – red palm buttons or levers, designed to instantaneously stop all motion from upper and lower controls (engine shutdown not acceptable). _____

11.6 Emergency operating system – 12-Volt auxiliary power pack, must provide hydraulic power to all aerial device functions including elevation and rotation, accessible from both lower and upper controls. _____

11.7 Hydraulic test port – located to be readily accessible without removing panels or covers. _____

11.7.1 Test coupler – Parker/Bruning with metal cover and sized for circuit flow. _____

11.7.2 Test port labelled “Test Port Only”. _____

11.8 All controls must be clearly identified with permanent, engraved type labels. Glued labels will not be accepted. _____

12. HYDRAULICS

12.1 PTO – Constant mesh, Muncie Powerclutch or Chelsea equivalent, readily accessible for servicing. **State** make and model. _____

- 12.1.1 Electric shift with in-cab controls, operable from a normal driving position. _____
- 12.1.2 Park brake must be set for PTO activation. _____
- 12.2 Pump – high pressure piston pump or gear pump to meet aerial device requirements. **State** make and model. _____
- 12.3 Hydraulic oil reservoir – steel construction, baffled as required, complete with breather type filler cap with filter, filler strainer, sight gauge (or dipstick) and drain plug. **State** location and capacity. _____
- 12.3.1 Drain plug valve – ball-type shut-off valve required on drain plug. _____
- 12.4 Suction strainer – 100 micron with magnetic suction separator, in-tank mounted, flow capacity of 2-times pump capacity. _____
- 12.5 Shut-off valve – ball-type, located between reservoir and pump, secured in open position with bracket and bolt. _____
- 12.6 Return line filter – 10 micron, spin-on type, serviceable without oil loss. _____
- 12.7 Relief valve(s) – provided to adequately protect the system and provide hydraulic overload protection to all functions of the aerial device. _____
- 12.8 Hydraulic oil – MV Artic 15, with certified rating of 25 kV. _____
- 12.8.1 Tank label – the hydraulic reservoir shall be labelled “MV Artic 15 Hydraulic Oil Only”. _____
- 12.9 Stainless steel hydraulic tubing – plated type, required where practical except where flexibility is required, properly routed and secured along truck frame. _____
- 12.9.1 Hydraulic tubing shall be guarded as required. _____
- 12.10 Hydraulic hoses – burst rated at 4 times working pressure, protected at all wear and scuff locations. _____
- 12.11 Hydraulic cylinders, aerial device – double acting type, equipped with integral holding valves. _____
- 12.12 Hydraulic gauges – silicone filled, located at lower controls for each system. _____
- 13. FIBREGLASS SERVICE BODY**
- 13.1 Compartment layout, general – one (1) front vertical compartment, one (1) horizontal compartment over wheel well, and one (1) rear vertical compartment each side of body. _____
- 13.1.1 State make and model of service body being bid. _____
- 13.2 For the purpose of this specification:
 - L – Length, along or parallel to chassis frame rails.
 - H – Height or vertical.
 - D – Depth on horizontal plane across chassis.

13.3 General dimensions:

13.3.1 Body height – 42 in. approx. _____

13.3.2 Body length – 108 in. approx. _____

13.4 Compartment layout, **right (curb) side**:

13.4.1 Front vertical compartment (C1) – heated compartment, 37"L x 42"H x 20"D approx. with three (3) height adjustable shelves. A hole shall be cut in the wall between C1 and C2 for heat/air-flow purposes. Coolant heater to be actuated by chassis cab OEM Aux. switch, labeled. _____

13.4.2 Horizontal compartment (C2) – 40"L x 22"H x 20"D approx., bottom hinged with two (2) removable check chains. Chains are to be of suitable length to allow the compartment door to be opened at a 90° angle. Interior of compartment shall contain two (2) full width, small parts trays. Trays shall be approx. 2 in. high with fifteen (15) removable dividers per tray. The upper tray shall be slide-out type. Lower tray shall be fixed, fastened to compartment bottom. _____

13.4.3 Rear vertical compartment (C3) – 31"L x 42"H x 20"D approx. equipped with eight (8) material hooks, four (4) on back wall, two (2) per side on left and right sides of compartment. _____

13.5 Compartment layout **left (street) side**:

13.5.1 Front vertical compartment (S1) – 37"L x 42"H x 20"D approx. with three (3) height adjustable shelves. _____

13.5.2 Horizontal compartment (S2) – 40"L x 22"H x 20"D approx., bottom hinged with two (2) removable check chains. Chains are to be of suitable length to allow the compartment door to be opened at a 90° angle. Interior of compartment shall contain two (2) full width, small parts trays. Trays shall be approx. 2 in. high with fifteen (15) removable dividers per tray. The upper tray shall be slide-out type. Lower tray shall be fixed, fastened to compartment bottom. _____

13.5.3 Rear vertical compartment (S3) – 31"L x 42"H x 20"D approx. with three (3) height adjustable shelves. Upper shelf to be sufficiently reinforced to accommodate a deep cycle battery. _____

Note: No hot stick door/compartment is required.

13.6 Compartment door handles – Tri-Mark or Eberhard stainless steel paddle type, with locks that are keyed alike. _____

13.7 Door hinges and latches – stainless steel with adjustable striker plates. _____

13.8 Door/bin locks – auto locking system, actuated by chassis key FOBS and interior truck OEM lock/unlock switch. _____

13.9 Shelving – fibreglass with a 2 in. front face lip. Dividers shall be fibreglass. All edges shall be finished. Adjustable shelving shall be adjustable in 2-3 in. increments. _____

13.10 Compartment lining – aluminium compartment liner in both rear vertical compartment floors. Bottom of all vertical compartments shall be lined with interlocking matting, Dri-deck or equal. _____

- 13.11 All hooks shall be located approximately 2 in. from the top of the compartment. _____
- 13.12 All compartment door openings shall be sealed using automotive, bulb type, rubber gaskets. _____
- 13.13 Vertical doors shall have rigid type door springs. Horizontal doors, do not require door springs, or check chains. _____
- 13.14 Rubber bumpers – installed on the body below the horizontal compartments, to prevent contact between the compartment door and the body. Two (2) bumpers per door. _____
- 13.15 Wheel well area shall incorporate a fibreglass or rubber fender flare. _____
- 13.16 The inside of the side packs to be lined with 1/8 in. aluminium checker plate, top to bottom, full length. _____
- 13.17 All body seams shall be caulked with an automotive grade elastomeric sealant. _____
- 13.18 Kick plate, front – 1/8 in. aluminium checker plate to protect lower front area of body protruding past chassis cab, each side, 6 in. kick plate height. _____
- 14. MAIN DECK ASSEMBLY**
- 14.1 Deck – 3/16 in. aluminium plate, full width, full length, between fibreglass side packs. _____
- 14.2 Deck width – 54 in. approx. between fiberglass side packs. _____
- 14.3 Deck sides – 1/8 in. aluminium checker plate, designed to provide additional support to the fibreglass side packs. Deck sides to extend up the full height of fibreglass body sides. _____
- 14.4 Tie-down eyes – Buyers Products B901 or equivalent, four (4) total, flush-mounted in deck floor, located near corners of deck floor. The rear mounted tie-down eyes shall be installed slightly ahead of rear of the service body. _____
- 14.5 Front headboard – aluminium construction, 21 in. height approx. Top of headboard shall not protrude higher than the lower portion of the rear truck window. _____
- 14.5.1 Bulkhead – bolted on top of front headboard, aluminium construction, 20"H x 72"W approx., height to match top of cab, tapering towards the top to match cab design, open mesh covering rear window. _____
- 14.6 Tire/deck clearance – 3 in. clearance with full spring deflection. _____
- 15. REAR TAILSHELF**
- 15.1 Rear tailshelf – aluminium construction, 34" x 96" approx. located aft of service body for access to bucket and deck area. _____
- 15.2 Mid-height step – 40"W x 7"D approx., aluminium gripstrut, located between rear bumper surface and deck area, located slightly towards passenger side. _____

15.3 Grab handle – one (1) required, passenger side at rear of tailshelf for ergonomic access to deck area. The handle shall be 1 in. round steel or aluminium material, bolted to the rear tailshelf, bent to approx. 30"H x 19"D.

16. REAR BUMPER

16.1 Rear bumper – heavy duty step bumper, suitable for rear access to deck area, approx. 14 in. depth with grip-strut step surface and tapered ends, full width.

Note: the rear bumper does not require towing provisions.

16.2 Deferral box location – a space shall be provided on the driver's side of the rear bumper to accommodate a City supplied and installed steel Deferral box measuring 40"L x 14"H x 13"D. The box shall have sufficient space (when installed) so as not to interfere with the 3-light cluster, rear facing facing traffic advisor or mid-height step.

16.3 Stirrup cable – rear passenger's side of bumper, for ergonomic access to rear bumper and tailshelf grab handle.

17. ELECTRICAL & LIGHTING

17.1 All vehicle lighting shall conform to C.M.V.S.S. (latest revision) and Manitoba Highway Traffic Act requirements.

17.2 Supplier installed lighting shall be LED Truck-Lite or equivalent (except where otherwise noted) and shall include the following components:

17.2.1 Combination stop/turn/tail lights – P/N 44302R, one (1) per side with P/N 40700 mounting grommets, flush or recess mounted in rear tailshelf.

17.2.2 Turn signal flash rate – 70-90 flashes per minute.

17.2.3 Back-up lights – P/N 44206C, one (1) per side with 40700 mounting grommets.

17.2.4 3-light cluster – three (3) P/N 10250R with P/N 10700 mounting grommets or P/N 33250R.

17.2.5 Clearance lights – P/N 10250R and 10250Y with P/N 10700 mounting grommets or P/N 33250R/Y.

17.2.6 Licence plate lamp – P/N 36140, c/w P/N 36710 license plate bracket, right side mounted.

17.2.7 Lighting harnesses – Truck-Lite 50 Series Harness system, properly routed and secured, protected from damage.

17.2.8 All harnesses shall be internally grounded, no exceptions.

17.3 Junction box – P/N 50400, complete with necessary compression fittings, required for all vehicle lighting harness connections, located inside rear of truck frame, protected from road debris including all harness connections.

17.4 All plug in connectors shall be coated with Truck-Lite NYK Compound prior to assembly.

- 17.5 Mini light bars – two (2), Whelen R2LPPA, mounted on a black powder coated Carr roof rack, one (1) per side of cab. _____
- 17.5.1 Warning lights – ten (10) Whelen RSA03ZCR lights, mounted horizontally, as follows:
 - i) Front – two (2) front facing in truck grille. _____
 - ii) Rear, upper – two (2) rear facing on top/centre of side packs. _____
 - iii) Rear, lower – two (2) rear facing on top outside corners of rear tailshelf. _____
 - iv) Driver’s side – two (2) side facing, front and rear of service body, top corners. _____
 - v) Passenger’s side – two (2) side facing, front and rear of service body, top corners. _____
- 17.5.2 Mini light bars and warning lights shall be wired “hot” (i.e., able to use without the key on), wired through a single, chassis manufacturer’s OEM dash mounted switch, labelled “Beacon” with a permanent type label. _____
- 17.6 Traffic Advisor, rear facing – one (1) SWS 57336, centre mounted in rear tailshelf c/w a full width metal guard on top for protection of accidental damage. _____
- 17.6.1 Traffic Advisor, front facing – one (1) SWS 57336, centre mounted on cab mounted roof rack. _____
- 17.6.2 Controllers – two (2), one for each controller, in-cab mounted in an ergonomic location, wired “hot”. _____
- 17.7 Deck lights – three (3) LED worklights, swivel type with individual on/off switch, wired through one (1) chassis cab OEM dash mounted switch, labelled, wired through the ignition. Mounting locations to be one on each side of the bulkhead at front of body, one mounted passenger’s side at top/rear of side pack. _____
- 17.8 Compartment lights – LED continuous ultra-thin strip lighting in all service body compartments, properly secured to prevent damage, wired through chassis manufacturers OEM dash mounted switch labelled “Bin Lights”. _____
- 17.9 Power take-off engagement switch – truck manufacturer’s OEM dash mounted switch c/w warning light or PTO manufacturer’s dash mounted switch c/w warning light, labelled. _____
- 17.10 Boom stow warning light – red, dash mounted indicator light, normally on when the boom is not in fully stored position. A micro switch is required to trigger the light. _____
- 17.11 PTO hourmeter – dash mounted, energized by engagement of PTO, labelled. _____
- 17.12 All switches and warning lights shall be identified with permanent engraved type labels or chassis/aerial manufacturer’s OEM labels. No labels allowed on upper surface of dash. _____

- 17.13 Inverter – Xantrex 813-3000-UL, mounted in driver’s-side, rear vertical compartment, wired through ignition through dash mounted inverter mfg. remote switch, labeled. Inverter to be complete with suitable solenoid and battery isolator. _____
- 17.13.1 Deep cycle battery – Group 31, 900 CCA approx., mounted on a reinforced top shelf of the compartment. _____
- 17.13.2 All exposed inverter terminals shall be coated with a dielectric grease and completely covered with shrink wrap tubing or rubber fittings. _____
- 17.13.3 Duplex receptacle – one (1) required mounted at front of service body, passenger side, facing forward, mounted as high as practicable so as not to interfere with interior shelf positioning. The receptacle shall be GFI, CSA approved, weatherproof type with hinged covers. _____
- 17.14 Cord reels – two (2) retractable heavy duty cord reels, Lincoln 91029 or equivalent, mounted one per side, rear facing in centre of side packs. _____
- 17.15 All wiring installed by body manufacturer/installer (including accessories, work lights, etc.) shall be colour coded, loomed, properly secured and protected from damage. _____
- 17.16 All electrical connectors shall be crimped & soldered, then sealed with heat shrink tubing. _____
- 17.17 All joining of wires shall be soldered and sealed using heat shrink tubing (crimp-on electrical connectors for joining wires are not acceptable). _____
- 17.18 Any holes required to run wires through body, cab, steel sections, etc. shall be drilled (not punched), grommeted and sealed. _____
- 18. INSTALLATION**
- 18.1 The Contractor shall install the aerial device and fibreglass service body on the chassis specified in Detailed Specifications 19002. _____
- 18.2 Aerial device shall be installed in accordance with CAN/CSA C225-M10 and in accordance with aerial device, manufacturer’s guidelines. _____
- 18.3 Mounting of the fibreglass body and deck shall be in accordance with the chassis manufacturer’s guidelines for body mounting including, but not limited to, guidelines for tire and suspension clearance. _____
- 18.3.1 The fibreglass body shall be mounted to the steel deck using stainless steel carriage bolts and fender washers. Bearing plates shall be used in high stress areas. _____
- 18.3.2 Bidders shall supply within forty eight (48) hours of the request of the Contract Administrator, a diagram and description showing the manufacturer’s recommended body and deck to chassis mount. _____
- 18.4 Welding to truck chassis frame is not permitted. _____
- 18.5 Mounting brackets shall be bolted to chassis frame using Grade-8 fasteners. _____

- 18.6 Any holes required in chassis frame web must be drilled and reamed to fit bolts. _____
- 18.7 All non-continuous body seams (joints) shall be caulked with an automotive grade elastomeric sealant. _____
- 18.8 Departure angle of completed unit – 10° approx. **State** angle. _____
- 18.9 Overall height decal – engraved type, installed in chassis cab. _____
- 18.10 Isolators – all interfaces between aluminium and steel are to be separated by $\frac{1}{16}$ in. thick rubber or neoprene sheet to prevent galvanic corrosion. Bolts used on aluminium or between aluminium and steel shall be bolted through with stainless steel bolts and non-conductive bushings. _____
- 19. MISCELLANEOUS**
- 19.1 Mudflaps – no-name, fabric reinforced, black rubber. Mudflaps installed fore and aft of rear tires c/w zinc plate steel bar anti-sail brackets. _____
- 19.2 Wheel chocks – four (4), high density rubber construction with steel or rope handles. _____
- 19.2.1 Wheel chock holders – four (4) fiberglass or aluminium, fender skirt mounted, two per side. _____
- 19.3 Storage compartment – located above side pack, rear curb side slightly ahead of rear work light, aluminium checker plate construction, Weatherguard Model 654-0-01 or equivalent. _____
- 19.4 Ladder rack – provision for a 10 ft. ladder located on top of the side pack, driver's side, aluminium checker plate enclosure c/w ladder roller and front drain holes. Loading and unloading of the ladder shall be from the rear. A latched securement chain provision is required during transport. _____
- 20. COLOUR AND FINISH**
- 20.1 Aerial device steel boom sections – primed with a suitable primer and painted with a Polyurethane paint or powder coated, applied to components prior to assembly so that all surfaces are coated. _____
- 20.1.1 **State** details of finish on steel boom sections. _____
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- 20.1.2 Insulated (upper) fibreglass boom shall be coated with white, colour impregnated gel-coat. _____
- 20.2 Service body – colour impregnated Gel-coat to match chassis cab colour. _____
- 20.3 Steel components such as bumper, boom rest, etc., shall be sandblasted, properly cleaned, free of oil, dirt, rust etc., primed and finished with the Endura paint process including Endura EP32 Intermix Epoxy Primer and 2-4 mils of Endura EX-2C Topcoat, black or equivalent paint process. _____
- 20.4 Deck surface – properly cleaned and coated with Davis Frost LX-00097 Black Sure Foot Enamel or equivalent. The deck surface coating shall extend approx. 4 in. up the side packs. _____

20.5 Floor, underside – steel and aluminium sections of deck, sub-frame and under body shall be undercoated with an asphalt and rubber based material, Proform or equivalent, applied as per manufacturer’s recommendations.

20.6 Kick plates, shall be aluminium checker plate, unfinished.

21. TECHNICAL DOCUMENTS AND MANUALS

21.1 Bidders shall provide the following, within seventy-two (72) hours of the request of the Contract Administrator:

21.1.1 Two (2) sets of three (3) view drawings showing complete unit including chassis, aerial device and service body.

21.1.2 Estimated front and rear axle weights of the complete unit (chassis, aerial device, body, etc. including full fuel and hydraulic tanks).

21.1.3 Service facility description (see 4.3).

21.1.4 Body and deck mounting plans (see 18.3.2).

21.2 Prior to final inspection the Contractor shall provide the following;

a) Weigh scale ticket of the completed unit including two (2) operators.

b) Certification letter (see 4.4).

c) Dielectric test certificate (see 8.5).

d) Operator’s manuals for aerial device – two (2) sets required with one set delivered to Operator Training prior to delivery of the equipment (see D12.6).

e) Parts and maintenance manuals – two (2) sets required with the following comprising a set:

i) Aerial device lubrication chart.

ii) Maintenance manual.

iii) Unit parts book.

iv) Electric wiring diagram (as built) of the completed unit.

v) Hydraulic circuit diagram (as built) of the completed unit.

NOTE: The manuals supplied with this Contract must be in English and shall be specifically for the unit supplied. General purpose manuals are not acceptable. Contract will not be considered complete until these sets of manuals have been delivered. Manuals must be supplied at the time the unit is delivered. USB format preferred.

21.3 Bidder shall provide information on any manuals that are available in an electronic format.

22. DELIVERY

22.1 The completed unit shall be serviced, ready for operation and delivered F.O.B with the freight prepaid to the City of Winnipeg, Winnipeg Fleet Management Agency, 185 Tecumseh Street, Winnipeg, Manitoba within **forty (40) calendar weeks** from the date of award. The Contractor shall contact the Contract Administrator prior to delivery of the equipment. Equipment shall be delivered within 8:00 am and 3:00 pm on Business Days.

22.2 A pre-delivery inspection shall be performed by the Contractor on all equipment.

23. PERFORMANCE RELIABILITY

23.1 The responsibility for the design of the complete aerial device vehicle, its performance, and reliability shall rest upon the Contractor.

23.2 The term “*repeated failures*” as used herein is defined to mean that the same component, subassembly, or assembly develops repeated defects, breakdowns and/or malfunctions rendering the vehicle inoperative, or requiring repeated shop correction, service, and/or replacement during the Warranty period applicable for said component, subassembly, or assembly. Minor items or ordinary service adjustments are not included, or considered under the scope of “repeated failures”, as well as other factors, such as operational damage due to accidents, misuse or lack of proper maintenance, service and lubrication attention by not following the manufacturer’s preventative maintenance schedules.

23.2.1 Where the vehicle develops “repeated failures” in service, the Contractor shall make any necessary engineering changes, repairs, alterations or modifications in order to guarantee reliability of performance.

24. WARRANTY (Aerial)

24.1 The Warranty on the cab & chassis is listed in Detailed Specifications 19002.

24.2 The Contractor shall provide all detailed published warranty information (including all exclusions) at the time of delivery of the equipment. **State** the following warranties:

a) Booms.

b) Boom articulation links.

c) Hydraulic cylinder structures.

d) Pedestals.

e) Sub-bases.

f) Turntables.

g) Service body.

h) Finish, i.e., paint, gelcoat, powder coat etc.

24.3 Provide details on any extended Warranty coverage available. _____

24.4 All Warranty items brought to the attention of the Contractor by the City shall be addressed within forty eight (48) hours. The City reserves the right to effect Warranty repairs to the vehicle, at full cost to the Contractor, should the Contractor fail to commence repairs within forty-eight (48) hours.

25. FIRST SERVICE PREVENTATIVE MAINTENANCE KIT

25.1 In order to assure minimum downtime of the equipment in future servicing, the Contractor shall provide one (1) complete replacement set of new OEM filters (chassis and aerial) for each unit purchased. The set of required filters shall include air, cabin, fuel, oil, and hydraulic filters required for the first preventative maintenance servicing.

25.2 The Contractor shall provide a list of factory recommended lubricants to be used with the equipment, as well as a complete cross reference guide for all warranty approved lubricants and filters that can be used during preventative maintenance servicing.

FORM N: DETAILED SPECIFICATIONS 19002

19,500 lbs. GVWR EXTENDED CAB AND CHASSIS

1. TYPE

1.1 Shall be a Model Year 2019 or 2020, 19,500 lbs. GVWR, 4wd, Extended Cab & Chassis suitable for use as an aerial device truck without outriggers. The cab & chassis shall be furnished complete and ready for use with all features and equipment as described herein.

1.2 **STATE YEAR, MAKE AND MODEL BEING BID:** _____

2. OTHER SPECIFICATIONS AND STANDARDS

2.1 All applicable SAE standards form an integral part of these specifications and shall have precedence in any conflict concerning minimum acceptable standards.

Society of Automotive Engineers, SAE:
http://en.wikipedia.org/wiki/Society_of_Automotive_Engineers

2.2 The completed unit and all its components shall comply with all C.M.V.S.S. and Manitoba Highway Traffic Act regulations and requirements including, but not limited to, a Manitoba Government Inspection with Safety Sticker on the driver's side window.

3. SERVICE FACILITY

3.1 For the purpose of warranty repairs, the manufacturer shall have an authorized service facility located within 10 km of the boundaries of the City of Winnipeg. The facility, or a portion thereof, shall be dedicated to the service and maintenance of the type equipment being offered. Further to B11, Bidders shall provide a description of the service facility including, but not limited to, number of qualified service staff, years of service experience, and general service capabilities within three (3) Business Days upon request of the Contract Administrator.

4. INSTRUCTIONS FOR COMPLETION OF SPECIFICATIONS

4.1 All items in these specifications must be answered indicating compliance or non-compliance. **Bidders shall state "yes" for compliance or state deviation**, or give reply where requested to do so. Deviations and/or equivalents shall be clearly stated and fully detailed. Deviations and/or equivalents will be considered subject to evaluation. In every instance where a brand name or design specification is used, the City will also consider deviations and/or equivalents.

4.2 Each bidder is required to fill in every blank. **Failure to do so may be used as a basis for rejection of bid.**

5.	SPECIFICATION	BIDDER TO STATE "YES" OR STATE DEVIATION
5.1	GVWR	19,500 lbs., state _____
5.2	GAWR, front	7,000 lbs. approx., state _____
5.3	GAWR, rear	13,500 lbs. approx., state _____
5.4	Cab configuration	Extended cab _____
5.5	Wheelbase	167 in. approx., state _____
5.6	CA	60 in. nominal _____

5.7	Engine	6.0 L class gasoline, state displacement	_____
5.8	Engine cooling	Maximum factory cooling package	_____
5.9	Coolant	Extended Life Coolant, -37°C (-35°F)	_____
5.10	Block heater	Required, submersible coolant type, with cord through grille	_____
5.11	Alternator	240 Amp	_____
5.12	Battery	750 CCA capacity	_____
5.13	Transmission	Automatic with PTO provision	_____
5.14	Transmission cooling	Maximum factory cooling package	_____
5.15	Front axle	4wd	_____
5.16	SPPP	Snow plow prep package required	_____
5.17	Rear axle	Limited slip or locking type	_____
5.18	Rear axle ratio	4.88 approx., state ratio	_____
5.19	Shock absorbers	Standard, front and rear	_____
5.20	Tires	Standard size to match GVWR, maximum traction tires, suitable for aerial device without outriggers, 225/70Rx19.5 approx.	_____
5.21	Front	G-rated, traction tread radials, state make, model and size	_____
5.22	Rear	G-rated, traction tread radials, state make, model and size	_____
5.23	Wheels	Steel rims with wheel nut indicators installed on every second wheel nut, front and rear	_____
5.24	Valve stem extension	Two (2), approx. 7 in. braided stainless steel, required for rear inner tire valve stems	_____
5.25	Mudflaps	Required front mounted, OEM, moulded	_____
5.26	Brakes	Power with ABS	_____
5.27	Steering	Power	_____
5.28	Cab steps	Custom made running boards extending entire length of underside of doors, each side. Constructed of AGS 6061 alum grip strut, 9-1/2" x 2" x .08", c/w 1/8" alum checkerplate as an inside kick plate. Support brackets shall consist of 1 1/2" x 1 1/2" x 1/8" RC alum square tubing with 1/4" alum support plates.	_____
5.28.1	Cab steps, mounting	Cab steps shall be mounted using the existing holes in the body with 3/8-16 nut inserts to secure the mounting brackets to the body.	_____
5.28.2	Isolators	All interfaces between alum and steel shall be separated by 1/16 in. rubber or neoprene sheet and shall be bolted through with stainless steel bolts and non-conductive bushings	_____
5.29	Seats, front	Split bench, cloth or cloth w/vinyl trim	_____

5.29.1	Seats, rear	Bench, cloth or cloth w/vinyl trim	_____
5.29.2	Seat covers	Required, front and rear, heavy duty vinyl material or equivalent, charcoal grey or black, specifically designed for make and model of chassis seats being bid	_____
5.30	Floor covering	Rubber matting throughout with throw-in, winter type rubber floor mats	_____
5.31	Air conditioning	Required	_____
5.32	Tilt steering	Required	_____
5.33	Cruise control	Required	_____
5.34	Door locks	Power	_____
5.35	Ignition keys	Three (3) keys required	_____
5.36	Remote keyless entry	Two (2) required	_____
5.37	Auxiliary switches	Six (6) dash mounted OEM switches	_____
5.38	Windows	Power	_____
5.39	Air bags	Required, front driver's and passenger	_____
5.40	Windshield	Tinted	_____
5.41	Windshield wipers	Intermittent	_____
5.41.1	Wiper blades	Winter blades with heavy duty rubber boot or Reflex style	_____
5.42	Mirror, interior	Rearview, windshield mounted	_____
5.43	Mirrors, exterior	Heated electric power mirrors, dual exterior, black polycarbonate, 5" x 8" approx., manually folding and telescoping, integrated turn signal indicators	_____
5.44	Cab interior lights	Interior dome with door switches	_____
5.45	Flasher circuit	Suitable for installation of LED style body lighting	_____
5.46	Radio	Factory installed AM/FM with aux. IN and USB port	_____
5.47	12-Volt power point	Required	_____
5.48	120-Volt Outlet	Required, front seat area duplex	_____
5.49	Bluetooth® technology	Required for use with cellular phones, "hands-free" capable, voice command activated through vehicle's radio circuit	_____
5.50	Back-up alarm	Required, STAR 99901 or OEM back-up alarm, 97 dB(A) rating, installed at rear of body, located to be protected from damage	_____
5.51	Colour:		
	- Exterior	Bright white	_____
	- Interior	Grey or black	_____
	- Wheels	Grey, argent or white	_____
5.52	Fuel tank	150 L capacity approx., fully fuelled upon delivery	_____
5.53	Bumper, front	Chrome	_____

5.54	License plate bracket	Required, front bumper mounted w/license plate mounting hardware	_____
5.55	Tow hooks	Two (2) front tow hooks attached to frame	_____
5.56	Flare kit	Three triangular reflectors, CVSA approved, Truck-Lite 798 or equal	_____
5.57	Fire extinguisher	5 lbs. short, ABC type, shipped loose	_____
5.58	First aid kit	Required, Manitoba Provincial approved kit, P36, supplied loose	_____
5.59	Operator's manual	Required, one (1) per vehicle	_____
5.60	Chassis warranty	The Contractor shall provide all detailed published warranty information (including all exclusions) at the time of delivery of the equipment. State the following:	_____
5.60.1	Basic vehicle	State	_____
5.60.2	Batteries	State	_____
5.60.3	Drivetrain	State	_____
5.60.4	Cab structure	State	_____
5.60.5	Cab corrosion	State	_____
5.60.6	Frame & crossmembers	State	_____
5.60.7	Cab paint	State	_____
5.60.8	Engine	State	_____
5.60.9	Towing coverage	State	_____
5.60.10	Transmission	State	_____
5.60.11	Axles, front & rear	State	_____
5.60.12	Exhaust system	State	_____
5.61	Manuals	Parts, repair and technical service manuals including preventative maintenance schedules for life of unit, USB or online format preferred	_____
5.62	Delivery point	Vehicles shall be serviced, ready for operation and delivered F.O.B. with the freight prepaid, including invoice and N.I.V.S. to the WFMA 185 Tecumseh Street, Winnipeg MB	_____
5.63	Delivery time	Within 40-calendar weeks from the date of award. Equipment shall be delivered within 8:00 am and 2:00 pm on Business Days	_____
5.64	Delivery contact	The Contractor shall contact the Contract Administrator prior to delivery of the equipment	_____
5.65	PDI	A pre-delivery inspection shall be performed by the Contractor on the equipment. Proof upon inspection including completed check list	_____