

PART A

BID SUBMISSION

FORM A: BID
(See B7)

1. Project Title SUPPLY & DELIVERY AN UNDERBRIDGE INSPECTION DEVICE VEHICLE

2. Bidder

Name of Bidder

Street

City

Province

Postal Code

(Mailing address if different)

Street or P.O. Box

City

Province

Postal Code

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

4. Definitions

All capitalized terms used in the Contract shall have the meanings ascribed to them in the General Conditions and D3.1 unless the context otherwise requires.

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 is in receipt of a Purchase Order authorizing the commencement of the Work.

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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 Submission.

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. Signatures

In witness whereof 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 B8)

SUPPLY & DELIVERY AN UNDERBRIDGE INSPECTION DEVICE VEHICLE

ITEM NO.	DESCRIPTION	SPEC. REF.	UNIT	APPROX. QUANTITY	UNIT PRICE	AMOUNT
1	60 ft. Bridge Inspection Unit	06007	Each	1	\$ _____	\$ _____
1a	Operator's Manual for Item 1	05055	Each	2	\$ _____	\$ _____
1b	Parts, Repair and Technical Service Manuals for Item 1	05055	Set	2	\$ _____	\$ _____
1c	Parts, Repair and Service Manuals – Auxiliary engine for Item 1	05055	Set	2	\$ _____	\$ _____
2	82,000 lbs. GVWR Cab & Chassis Vehicle	06008	Each	1	\$ _____	\$ _____
2a	Operator's Manual for Item 2	06008	Each	2	\$ _____	\$ _____
2b	Parts, Repair and Technical Service Manuals for Item 2	06008	Set	2	\$ _____	\$ _____
TOTAL BID PRICE (GST and PST extra) (in figures) \$ _____ (in words) _____ _____						

 Name of Bidder

FORM N: DETAILED SPECIFICATIONS 06007

60' UNDERBRIDGE INSPECTION DEVICE

1. INTENT

- 1.1 It is the intent of these specifications to describe a 60' Bridge Inspection Unit and other equipment as described herein, installed on a cab and chassis to be supplied by the Contractor.
- 1.2 The under bridge inspection device shall be the manufacturer's latest model, as may be modified by these specifications. The 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 ANSI A92.8 (Latest Edition) Bridge Inspection Unit – Safety Requirements, Definitions and Specifications, 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 under bridge inspection device shall comply with the Canadian Motor Vehicle Safety Act (CMVSS) and the Manitoba Highway Traffic Act and all regulations thereunder. It is understood that the completed unit's weights will not meet legal limits and will have to be permitted by the City.
- 2.4 All welding and welding designs of the load supporting elements shall conform to the requirements of the Canadian Standards Association Standard W47.1-03 and W59-03 or US standards AWS D1.1 and D1.2.

3. QUALIFICATIONS OF THE MANUFACTURER

- 3.1 The manufacturer of the under bridge inspection device shall have a minimum of five (5) years continuous experience manufacturing and installing 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.

4. QUALIFICATIONS OF THE BIDDER

- 4.1 The Bidder shall be a manufacturer or authorized distributor/supplier of under bridge inspection equipment.
- 4.2 The Contractor 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,

maintenance and warranty of the bridge inspection unit being offered. Further to B9.1, Bidders shall provide a description of the service facility including, but not limited to, number of qualified service staff, years of service experience on bridge inspection units, and general service capabilities. A description of the service facility shall be provided within 3-Calendar Days upon request of the Contract Administrator.

4.3 If a suitable warranty facility is not available within 10 km of the boundaries of the City of Winnipeg, the Bidder may propose that warranty work be performed by the City of Winnipeg Repair Facility. Any Work performed by the City of Winnipeg Repair Facility shall be charged to the Contractor at the Facility's shop rate in effect at the time the work is performed (for example, shop rate for 2006: \$73.50/hour regular time, \$103.50/hr overtime and callout.

4.4 The Contractor shall furnish a letter, stamped by a registered professional engineer, indicating that the completed under bridge inspection device vehicle complies with ANSI A92.8 Standards.

4.5 All welding and welding design of the load supporting elements shall conform to the requirements of the ANSI A92.8 Standards.

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 shall be clearly stated and fully detailed. Alternatives shall be considered subject to evaluation.

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 under bridge inspection device vehicle shall be capable of operating safely and efficiently without the use of outriggers in any working position and in confined areas while performing bridge inspections 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, 2006 cab and chassis complying with Detailed Specifications 06008 in accordance with the instructions given.

8. UNDERBRIDGE INSPECTION UNIT (GENERAL)

8.1 Type – 60 ft. Under Bridge Inspection Device, with 4 articulating booms, two (2) rotating turrets and an aluminium work platform. _____

8.1.1 State make and model being offered. _____

8.2 Overall travel height not to exceed 162 in. maximum at any point.
State height. _____

8.3 Booms – four (4) articulating booms, one (1) hydraulically extendable section. _____

8.4 State reach of each boom stage: _____

a) Sidewalk clearance – 12 ft. 6 in. minimum. _____

- b) Vertical clearance, boom no. 1 to boom no. 3 – 24 ft. minimum. _____
- 8.5 Horizontal reach from centreline of rotation – 60 ft. minimum; 55 ft. when boom no. 2 is in a vertical position. State reach. _____
- 8.6 Boom elevation shall have a range of -35° to +30° from horizontal. _____
- 8.7 Rotation No. 1 – 270 degrees, ability to operate over either side of the truck. _____
- 8.8 Rotation No. 2 – 180 degrees minimum. _____
- 8.9 Tilt alarm system to indicate excessive slope condition. _____
- 9. UNDERBRIDGE INSPECTION DEVICE EQUIPMENT**
- 9.1 Personnel platform – one (1) only, end-hung, continuous aluminium skin construction (i.e., expanded mesh not acceptable) with non-skid floor. _____
- 9.1.1 Nominal, platform dimensions – 40" L x 60" W x 42" H. _____
- 9.1.2 Platform capacity – minimum 600 lbs.. _____
- 9.1.3 Platform levelling system – automatic hydraulic. _____
- 9.2 Safety lanyard attachments – three (3) required, state size and type. _____
- 10. COUNTERWEIGHT, SPRING LOCKOUTS AND SUBFRAME**
- 10.1 Outrigger shall not be provided. The unit shall be capable of performing safely in all working positions without the use of outriggers from either left of right side of the truck. _____
- 10.2 Counterweights shall stay within the confines of the truck body when stowed and in operation. _____
- 10.3 Spring lockouts shall be provided on all springs, four (4) required. _____
- 10.4 Sub-frame – plated type, full length, fastened to top of chassis frame. _____
- 10.4.1 Method of attaching sub-frame to be detailed in manufacturer's mounting plans and specifications to be supplied within forty eight (48) hours of the request of the Contract Administrator. _____
- 10.5 Stability requirements – to meet ANSI A92.2. _____
- 11. HYDRAULIC CONTROLS**
- 11.1 Controls – full metering with separate levers for each function. Control levers shall be protected to prevent accidental actuation of any boom or turret functions. _____
- 11.1.1 Controls shall permit the multiple simultaneous boom movements, and shall be fully featherable and meterable. _____

- 11.2 Two speed engine throttle control to be provide for use when platform controls are utilized. _____
- 11.3 Emergency stop button – red palm button, designed to shut down both engines, chassis and auxiliary. _____
- 11.4 Master control group – located at the pedestal with controls for all boom and rotation functions. _____
- 11.4.1 Controls shall be mounted in the platform, protected from the elements with a cover. _____
- 11.4.2 Lower controls shall be capable of overriding the platform controls. _____
- 11.4.3 Master control group shall include the following:
 - a) Pressure gauge. _____
 - b) Spring lockout controls. _____
 - c) Override handle. _____
 - d) Emergency stop button. _____
 - e) Lower/upper control selector switch. _____
 - f) Hourmeter for underbridge crane when in use. _____
- 11.5 Throttle control – switch controlled. _____
- 11.6 Interlock override switch – switch with flip-up protective cover located with the master control group. _____
- 11.7 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. State. _____
- 12.1.1 Electric shift with in-cab controls, operable from a normal driving position. _____
- 12.2 Pump – to meet under bridge inspection 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. _____
- 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 – 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 – Unavis equivalent, MIL spec 5606A. _____
- 12.8.1 Hydraulic tubing shall be guarded as required. _____
- 12.9 Hydraulic hoses – burst rated at 4 times working pressure, protected at all wear and scuff locations. _____
- 12.10 Hydraulic cylinders – double acting type, equipped with integral holding valves. _____
- 12.11 Emergency override – shall allow hydraulic control of boom functions in the event of engine failure. _____
- 13. BODY COMPARTMENTS**
- 13.1 Compartment layout, general – two (2) underdeck compartments. _____
- 13.1.1 State make and model of compartments 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:
- 13.4 Compartment layout, right (curb) side:
 - 13.4.1 Horizontal compartment – 24”L x 24”H X 24”D approx. _____
- 13.5 Compartment layout left (street) side:
 - 13.5.1 Horizontal compartment – 24”L x 24”H x 24”D approx. _____
- 13.6 Compartment door handles – stainless steel paddle type, with locks that are keyed alike. _____
- 13.7 Door hinges and latches – stainless steel with adjustable striker plates. _____
- 13.8 All compartment door openings shall be sealed using automotive, bulb type, rubber gaskets. _____
- 13.9 Vertical doors shall have rigid type door springs. Horizontal doors shall be equipped with check chains. _____
- 13.10 Drip moulding – installed along the full length of the body above the door openings. _____
- 13.11 All body seams shall be caulked with an automotive grade elastomeric sealant. _____

14. MAIN DECK ASSEMBLY

- 14.1 Deck – ¼ in. steel checker-plate, full width, full length. _____
- 14.2 Deck sides – 4"x 1½" x ⅛" rectangular steel tubing. _____
- 14.3 Tire/deck clearance – bumper pad clearance plus 3 in. minimum. _____

15. ACCESSORIES

- 15.1 Auxiliary engine – 20 hp auxiliary diesel engine installed under deck in steel compartment, engine fuel run from chassis fuel tank, auxiliary engine c/w a non-resetable hourmeter. _____
- 15.1.1 Generator – 5 kW generator installed, direct mounted to auxiliary engine. _____
- 15.1.2 Outlets – one (1) 120 V duplex and one (1) 240 V outlet provided in platform. _____
- 15.2 Intercom system – 12V provided in the cab, at the pedestal and in the platform. _____
- 15.3 Floodlights – two (2) 12V removable floodlights provided in the platform. _____
- 15.4 High pressure wash line – ¾ in. OD provided in platform, routed to rear of truck c/w quick coupler connectors on both ends. _____

16. REAR BUMPER

- 16.1 Rear bumper – heavy duty bumper, full width with fold down step. _____

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 (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 kick plate. _____
 - 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. _____
 - 17.2.5 Clearance lights – P/N 10250R and 10250Y with P/N 10700 mounting grommets. _____
 - 17.2.6 Licence plate lamp – P/N 15040, complete with license plate bracket. _____
 - 17.2.7 Lighting harnesses – Truck-Lite 50 Series Harness system, properly routed and secured, protected from damage. The lighting harness shall not be spliced into the main truck harness. _____

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- 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, readily accessible, protected from elements. _____
- 17.4 All plug in connectors shall be coated with Truck-Lite NYK Compound prior to assembly. _____
- 17.5 Back-up alarm – STAR 62-097, 97 dB(A) rating, installed at rear of body, located to be protected from damage. _____
- 17.6 Mini Light Bars – two (2), Grote 77163, top-mounted for 360° visibility. _____
- 17.6.1 Branch guard – heavy duty branch guard constructed by 3/16 in. roundbar or equivalent. _____
- 17.6.2 Oval LED warning lights – ten (10) Grote 77363 lights, three (3) per side, two (2) front and two (2) rear. Exact locations to be determined at time of installation. _____
- 17.6.3 Mini light bars and oval LED warning lights shall be wired through the ignition, wired through a single OEM dash mounted fused switch, labelled with a permanent type, engraved style label. _____
- 17.7 Power take-off engaged warning light – O.E.M. warning light. _____
- 17.8 Boom stow warning light – 1 in. minimum diameter red lens mounted on the instrument panel, normally on when the boom is not in fully stored position. A micro switch is required to trigger the light. _____
- 17.9 All warning lights (except PTO) shall be Cole Hersee #PI-86-RC double contact, wired so that switch is on the ground side of the lamp. _____
Note: Pre-wired systems such as Wired Rite are preferred in lieu of dash mounted warning lights specified in 17.7, 17.8 and 17.9.
- 17.10 All wiring for locally installed accessories, lights and back-up alarm shall be colour coded, loomed and properly secured and protected from damage. _____
- 17.11 All power for accessories shall be taken from the power distribution box only. _____
- 17.12 All electrical connectors shall be crimped & soldered, then sealed with heat shrink tubing. _____
- 17.13 All joining wires shall be soldered and sealed using heat shrink tubing (crimp-on electrical connectors for joining wires are not acceptable). _____
- 17.14 Any holes required to run wires through shall be drilled (not punched), grommeted and sealed as necessary. _____
- 17.15 Compartment lights shall be continuous “rope” style lighting properly secured to prevent damage, wired through a single master switch in the cab. _____
- 17.16 Hourmeter – dash mounted, non-resetable, energized by engagement of PTO. _____

17.17 All switches and warning lights shall be identified with permanent engraved type labels. No labels allowed on upper surface of dash. _____

17.18 Duplex receptacles – one (1) required below deck and one (1) in the platform. The receptacles shall be GFI, CSA approved, weatherproof type, with hinged covers. _____

17.19 The complete 110V electrical system installation shall be certified by the Manitoba Department of Labour and the necessary approval sticker shall be supplied. _____

18. INSTALLATION

18.1 The Contractor shall install the under bridge inspection device on the chassis specified in attached tandem-tandem cab & chassis Detailed Specifications. _____

18.2 Bridge Inspection Unit shall be installed in accordance with ANSI A92.8 and in accordance with the bridge crane manufacturer's guidelines. _____

18.3 Mounting of the 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 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 – 12° minimum. State angle. _____

18.9 Overall height decal – engraved type, installed in chassis cab. _____

19. MISCELLANEOUS

19.1 Mudflaps – no name, fabric reinforced, black rubber with anti-sail brackets installed fore and aft of and rear tires. Mudflaps required aft of front tires. _____

19.2 Grab handles – supplied as required to provide safe access on and off deck. _____

19.3 Grease fittings – readily accessible, with remote fittings as required. _____

20. COLOUR

20.1 Under bridge inspection device steel boom sections – sandblasted and painted using primer and paint process, applied to components prior to assembly so that all surfaces are coated. _____

20.2 Bumper, boom rest, shall be sandblasted, primed, then painted black using polyurethane enamel, no substitutes. _____

20.3 Deck surface, painted with grey, Safetex, Ferrox non-skid coating. _____

20.4 All metal surfaces to be painted shall be free of oil, dirt, rust etc.. Chemical pre-treatment such as multistage cleaners are acceptable. _____

21. TECHNICAL DOCUMENTS AND MANUALS

21.1 Bidders shall include the following, within forty-eight hours of the request of the Contract Administrator:

21.1.1 Two (2) sets of three (3) view drawings showing complete unit including chassis, under bridge inspection device, compartments, etc.. _____

21.1.2 Estimated front and rear axle weights of the complete unit (chassis, device, compartments, etc. fully fuelled, full hydraulic tanks). _____

21.1.3 Service facility description (see clause 4.2). _____

21.1.4 Subframe mounting plans (see clause 10.4.1). _____

21.1.5 Body and deck mounting plans. _____

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

a) Scale weight ticket of the completed unit. _____

b) Certification letter (see clause 4.4). _____

c) Operator's manuals for under bridge inspection – quantity as per Form B: Prices. _____

d) Parts, repair and technical maintenance manuals – CD format preferred, quantity as per Form B: Prices, with the following comprising a set:

i) Under Bridge inspection 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. _____

vi) Parts, repair and service manual for auxiliary engine. _____

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.

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

22. PERFORMANCE RELIABILITY

22.1 The Contractor shall assure the City of Winnipeg that the manufacturer shall be responsible for the design of the complete under bridge inspection device vehicle, its performance, and reliability. _____

22.2 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 schedule. _____

22.2.1 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. _____

23. WARRANTY (Under Bridge Device)

23.1 The Warranty on the under bridge device (including all components, auxiliary engine, etc.) shall include the following:

a) 100% replacement parts (including paint) and labour for the complete unit for a period of **two (2) years**. _____

b) Provide details on any extended Warranty coverage available. _____

23.1.1 A new **two (2) year** Warranty period shall be provided for any component, subassembly or assembly that is repaired or replaced under the terms of the “repeated failures” clause (clause 22 Performance Reliability) The new Warranty period shall be effective from the date of acceptance of the repaired or replaced article. _____

23.2 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. _____

24. MANUFACTURER’S LITERATURE

24.1 Bidder shall include manufacturer’s literature within forty-eight (48) hours of the request of the Contract Administrator on all equipment being offered. _____

25. TRAINING

- 25.1 Operator training – the Contractor shall be required to provide two (2) Business Days of training, in Winnipeg by qualified staff, for City of Winnipeg operating personnel. All costs associated with the training, shall be at the Contractor's expense. The training sessions shall be sufficient in duration and shall provide adequate familiarization and orientation of the equipment, to the satisfaction of the Contract Administrator. All particulars surrounding the specified time required to perform the training shall be provided to the Contract Administrator by the Contractor, four (4) weeks prior to the delivery of the completed equipment. The training shall be coordinated through the Contract Administrator.
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- 25.1 Mechanical training – the Contractor shall be required to provide three (3) Business Days of training, in Winnipeg by qualified staff, for City of Winnipeg maintenance personnel. All costs associated with the training, shall be at the Contractor's expense. The training session/s shall be sufficient in duration and shall provide adequate familiarization and orientation of the equipment, to the satisfaction of the Contract Administrator. All particulars surrounding the specified time required to perform the training shall be provided to the Contract Administrator by the Contractor, four (4) weeks prior to the delivery of the completed equipment. The training shall be coordinated through the Contract Administrator.
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DETAILED SPECIFICATIONS 06008

82,000 LBS. GVWR CONVENTIONAL CAB & CHASSIS

(Under Bridge Inspection Device Chassis)

1.0 TYPE

1.1 Shall be a minimum 82,000 lbs. GVWR conventional, tandem-tandem cab & chassis suitable for use as an under bridge inspection device truck. The vehicle shall be furnished complete and ready for use with all features and equipment as described herein.

1.2 **STATE MAKE AND MODEL BEING BID: 2006** _____

2.0 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.

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.

3.0 SERVICE FACILITY

3.1 For the purpose of warranty repairs, the cab & chassis supplier 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 B9.1, 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.

4.0 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 shall be clearly stated and fully detailed. Alternatives will be considered subject to evaluation.

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.**

ITEM	SPECIFICATION	BIDDER TO STATE "YES" OR STATE DEVIATION
5.0	GVWR	
5.1	Total	82,000 lbs. _____
5.2	Front	36,000 lbs. minimum _____
5.3	Rear	46,000 lbs. minimum _____
6.0	Dimensions	
6.1	Cab to Axle	215 in. effective approx., state. _____

DETAILED SPECIFICATIONS 06008 (continued)

6.2	Wheelbase	As required for Underbridge unit, state	_____
6.3	Turning radius	State	_____
7.0	Engine		
7.1	Type	Diesel, inline 6-cylinder, Cat C11	_____
7.2	Horsepower	335 HP gross minimum	_____
7.3	Torque	1250 lb-ft minimum	_____
7.4	Engine shut down	Low oil pressure / high water temperature	_____
7.5	Air cleaner	Dry type	_____
7.6	Air intake restriction ind.	Dash mounted indicator	_____
7.7	Oil drain plug	Magnetic type	_____
7.8	Oil filter	Full flow, spin-on type	_____
7.9	Fuel filter	Spin-on type	_____
7.10	Fuel/water separator	Heated, drainable, mounted under hood, located to be protected from road spray	_____
7.11	Fuel line primer pump	Required	_____
7.12	Block heater	Immersion type, 1000 Watt minimum with covered recessed male plug, located under driver's side door	_____
7.13	Coolant	CAT Extended Life coolant, antifreeze to -35°C	_____
7.14	Coolant filter	Required	_____
7.15	Coolant hoses	Silicone type or Gates Blue Stripe	_____
7.16	Fan Drive	Thermostatically controlled, automatic type	_____
7.17	Air compressor	Water cooled, pressure lubricated, minimum 13 cfm	_____
8.0	Electrical system		
8.1	Electrical connectors	Plug-in, sealed type	_____
8.2	Alternator	Delco Remy 35-SI, 130 Amp	_____
8.3	Starter	Delco Remy 41-MT/OCP 450 Series with thermal protection	_____
8.4	Circuit breakers	Auto-reset, readily accessible	_____
8.5	Batteries	Three (3), 12-volt, group 31, 2250 CCA combined capacity minimum	_____
8.6	Battery Box	Under cab or frame mounted c/w enclosure	_____
8.7	Battery disconnect	In-cab mounted outboard of driver's seat	_____
8.8	Battery boost terminal	Remote battery boost terminal(s), protected from road spray, covered, state location	_____
8.9	Cab marker lights	LED	_____

DETAILED SPECIFICATIONS 06008 (continued)

8.10	2-way radio circuit	Independent 20 Amp circuit, ignition powered, wired under dash loose, labelled	_____
8.11	Accessory switches	Three (3) required, dash mtd. for "PTO", "Beacon" and additional switch labelled "Aux". All switches complete and wired for body installation, labeled and backlit	_____
9.0 Exhaust system			
9.1	Configuration	Stationary extreme outboard single right hand, horizontal muffler under cab, passenger side, chrome vertical discharge on passenger side, underframe routing, vertical portion cab mounted. Discharge tip shall have a backlash type end	_____
9.2	Overall exhaust height	Approx. 18 in. higher than cab roof line	_____
9.3	Heat shield	Required over exhaust next to cab door	_____
10.0 Transmission			
10.1	Model	Allison 4500 RDS with 5-speed programming	_____
10.2	Shift selector	Digital push-button type, dash mounted	_____
10.3	Cooling capacity	Water to oil transmission cooler, as per manufacturer's recommendation for severe duty cycle	_____
10.4	Oil level dipstick	Bayonet type with high and low level markings	_____
10.5	Trans. drain plug	Magnetic type	_____
11.0 Front axle			
11.1	Type	Tandem axle, 36,000 lbs. capacity minimum, state make, model and capacity	_____
11.2	Axle spacing	73 in. max., state	_____
12.0 Rear axle			
12.1	Type	Meritor, 46,000 lbs. capacity minimum	_____
12.2	Ratio	For 110 km/hr top speed, state ratio	_____
12.3	Inter-axle lock	Required w/dash mtd. switch	_____
12.4	Differential lock	Required for both drive axles w/dash mtd. switch	_____
13.0 Hub seals			
13.1	Type	Oil lubricated front and rear	_____
14.0 Front suspension			
14.1	Type	Multi-leaf spring suspension, 36,000 lbs. capacity minimum	_____
15.0 Rear suspension			
15.1	Type	46,000 lbs. capacity, Hendrickson RT-460, 51-54 in. axle spacing	_____

DETAILED SPECIFICATIONS 06008 (continued)

16.0 Rims, wheels, hubs

16.1	Front	22.5 x 12.25 steel disk, hub piloted	_____
16.2	Rear	22.5 x 8.25 steel disk, hub piloted	_____
16.3	Hubs	Steel or iron hubs, front and rear	_____

17.0 Tires, front

17.1	Make & Model	Goodyear 286, state tires	_____
17.2	Size	385/65R 22.5, 18-ply	_____

18.0 Tires, rear

18.1	Make & Model	Goodyear 164 RTD, state	_____
18.2	Size	11R 22.5, 14-ply minimum	_____

19.0 Frame

19.1	Type	110,000 psi, 3,500,000 in-lb RBM minimum,	_____
19.2	Application	Suitable for under bridge crane installation	_____
19.3	Chassis fasteners	Grade-8 threaded hex headed frame fasteners	_____
19.4	Afterframe	As required for under bridge crane, 80 in. approx.	_____

20.0 Steering

20.1	Type	Power	_____
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21.0 Brakes

21.1	Type	Air, ABS, S-cam drum brakes, front & rear	_____
21.2	Slack adjusters	Meritor (clearance sensing), automatic type	_____
21.3	Parking brake	Spring set, four (4) chamber system	_____
21.4	Dust shields	Required, front and rear	_____
21.5	Moisture ejector	Bendix DV-2, heated, required in all air tanks	_____
21.6	Drain valves	Manual, chain or cable operated, required on each air tank	_____
21.7	Air drier	Wabco System Saver 1200, heated	_____

22.0 Fuel tank

22.1	Type	Aluminium, 225 L minimum capacity, fully fuelled upon delivery	_____
22.2	Tank straps	Steel straps with minimum 1/16 in. rubber or neoprene isolators to prevent galvanic corrosion	_____
22.3	Fuel separator	Heated, drainable	_____

23.0 Cab

23.1	Type	Conventional w/corrosion inhibitor	_____
23.2	Construction	Aluminium or galvanized steel construction	_____

DETAILED SPECIFICATIONS 06008 (continued)

23.3	Cab mounts	Air suspension	_____
23.4	Cab interior / trim	Extreme climate insulation including cloth or vinyl headliner on roof, door panels and rear interior of cab	_____
23.5	Cab silencer package	Required for minimal decibel level	_____
23.6	Hood/Firewall/Engine	Insulated hood liner, engine cover and firewall	_____
23.7	Floor covering	Rubber mat with under-padding	_____
23.8	Floor mats	Two (2), rubber	_____
23.9	Driver's seat	High back, air suspension w/foldable armrests, heavy-duty cloth upholstery, Cordura or equal, state material	_____
23.10	Passenger seat	High back, air suspension w/foldable armrests, heavy-duty cloth upholstery, Cordura or equal, state material	_____
23.11	Sun visors	Dual flip-up type	_____
23.12	Steering wheel	Tilt and telescopic type	_____
23.13	12-Volt power outlet	Required with independent circuit	_____
23.14	Radio	Factory installed AM/FM	_____
23.15	Starter switch	Key operated c/w three (3) sets of keys	_____
23.16	Interior light	Dome light with driver and passenger door switches	_____
23.17	Heater / Defroster	High output, capable of keeping all windows clear at an outside temperature of -35°F (-37°C)	_____
23.18	Air conditioning	Required	_____
23.19	Brake & accel. pedals	Hanging type brake and accelerator pedals	_____
23.20	Horn	Dual electric	_____
23.21	Exterior mirrors	Dual polycarbonate unpainted aerodynamic mirrors with integral convex mirrors, min. 16" x 7", heated, 4-way motorized adjustment, suitable for 102 in. equipment width	_____
23.22	Downview mirror	Required over passenger door, 5" x 4" approx.	_____
23.23	Windows & windshield	Tinted	_____
23.24	Windshield wipers	Electric, intermittent	_____
23.25	Windshield washers	Electric, required with spray nozzles on wiper blades	_____
23.26	Grab handles	Dual exterior	_____
23.27	Entrance steps	Dual each side, open grate / grip type	_____
23.28	Winter front	Heavy-duty vinyl w/twist lock or snap type fasteners	_____

DETAILED SPECIFICATIONS 06008 (continued)

24.0 Instrumentation

24.1	Oil pressure	Gauge	_____
24.2	Coolant temperature	Gauge	_____
24.3	Transmission oil temp.	Gauge	_____
24.4	LOP/HWT	Warning light and buzzer	_____
24.5	Voltmeter	Gauge	_____
24.6	Air reservoir pressure	Gauge with LAP warning light and buzzer	_____
24.7	Engine hourmeter	Required, non-resetable type	_____

25.0 Tow hooks

25.1	Location	Front mounted	_____
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26.0 Front bumper

26.1	Type	Steel, full width	_____
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27.0 Colour

27.1	Exterior	White	_____
27.2	Interior	Blue or grey	_____
27.3	Frame & suspension	Primed and finished with black Imron 5000 paint	_____
27.4	Wheels	Powder coated white	_____

28.0 Accessories

28.1	Flare kit	Three (3) triangular reflectors, CVSA approved	_____
28.2	Fire extinguisher	10 lb. ABC type, required in cab with mounting bracket	_____

29.0 Warranty

29.1	Basic vehicle	One (1) year or 161 000 km	_____
29.2	Batteries	One (1) year or 161 000 km	_____
29.3	Drivetrain	Two (2) years or 161 000 km	_____
29.4	Cab structure/corrosion	Three (3) years or 242 000 km	_____
29.5	Frame & crossmembers	Five (5) years or 483 000 km	_____
29.6	Cab paint	One (1) year or 100 000 km	_____
29.7	Engine	Three (3) years or 242 000 km	_____
29.8	Transmission	Two (2) years, unlimited km	_____
29.9	Axles, front & rear	Three (3) years or 240 000 km	_____

30.0 Manuals

30.1	Operator's	Required, quantity as per Form B: Prices	_____
30.2	Parts, repair, service	Required for complete cab & chassis being bid including front tandem axle, CDs preferred, quantity as per Form B: Prices	_____

FORM O: QUESTIONNAIRE

1.0 **STATE** the delivery time of the complete order from the date of official notification of award: (See D5.1)

2.0 **LIST** any significant features that will be supplied standard on the unit being offered, but were not specifically mentioned in the Detailed Specifications:

3.0 **LIST** three current users of the offered model including names and telephone numbers:

4.0 **STATE** the location of the cab & chassis service facility:

4.1 **STATE** the location of the bridge crane service facility:

4.2 **STATE** hours of operation, hours of emergency service and number of service trucks at bridge crane service facility:

5.0 Does the equipment being offered meet or exceed the minimum requirements of the Detailed Specifications?

6.0 **LIST** any deviations that might be considered less than equal to the Detailed Specifications:
