

**FORM A: BID**  
(See B7)

1. Contract Title SUPPLY & DELIVERY OF TRUCK MOUNTED DRILL RIG EQUIPMENT

2. Bidder

\_\_\_\_\_  
Name of Bidder

\_\_\_\_\_  
Street

\_\_\_\_\_  
City

\_\_\_\_\_  
Province

\_\_\_\_\_  
Postal Code

\_\_\_\_\_  
Facsimile Number

(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

\_\_\_\_\_  
E-mail 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 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. 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 B8)

**SUPPLY & DELIVERY OF TRUCK MOUNTED DRILL RIG EQUIPMENT**

**UNIT PRICES**

ITEM NO.	DESCRIPTION	SPEC. REF.	UNIT	APPROX. QUANTITY	UNIT PRICE	AMOUNT
1	Supply & Delivery of Truck Mounted Drill Rig Equipment	10029	Each	1	\$ _____	\$ _____
2	Supply & Delivery of Complete Parts, Repair and Service Manuals	10029	Set	2	\$ _____	\$ _____
TOTAL BID PRICE (GST and MRST extra) (in figures) \$ _____ (in words) _____ _____						

\_\_\_\_\_  
 Name of Bidder

## FORM N: DETAILED SPECIFICATIONS 10029

### SUPPLY AND DELIVERY OF TRUCK MOUNTED DRILL RIG EQUIPMENT

*(Water & Waste)*

#### **1.0** SCOPE

- 1.1 These specifications describe the supply and delivery of truck-mounted drilling equipment consisting of a combination hydraulic rock drill, a swing-out hydraulic auger system and a hydraulic feed system. The equipment shall be installed by the City of Winnipeg on a City owned cab & chassis vehicle (see 12.0 Installation for chassis description). The completed vehicle shall be used to drill test holes on City streets for water main leak detection.
- 1.2 The drill rig equipment shall be furnished complete and ready for use and installation by the City. All parts not specifically mentioned, but which are required to complete and place the unit into successful operation, shall be furnished as though specifically mentioned in these specifications. The drill rig equipment and all parts thereof, shall conform in strength and quality of material and workmanship to the best standards and engineering practice of the industry.
- 1.3 It will be the responsibility of the Bidder to inform the City of any deficiencies in these specifications, for under this Contract the Contractor shall be held responsible for the design, performance, reliability and satisfactory operational function of the unit (installation items excluded).
- 1.4 The ratings specified herein merely state the minimum values acceptable to the City. There is no intent of implying that these values are sufficient for the design of the units being bid.

#### **2.0** 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 All welding shall conform to the CSA/CWB Standards W47.1-03 and W59-03.

#### **3.0** INSTRUCTIONS FOR COMPLETION OF SPECIFICATIONS

- 3.1 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 will be considered subject to evaluation.
- 3.2 Each bidder is required to fill in every blank. **Failure to do so may be used as a basis for rejection of bid.**

#### **4.0** PERFORMANCE

- 4.1 Rock drill and auger – shall be capable of consistent top performance of drilling a 2 in. diameter hole, 120 holes per day, through 6 in. of concrete plus 8 ft. of clay, sand, soil, roots, etc. (frequently wet) during the summer and winter environments which are normal to the City of Winnipeg.
- 4.2 Feed system – shall be capable of consistent top performance of securely mounting the rock drill, transporting the mast and rock drill in a near horizontal position and manoeuvring the rock drill into a vertical
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position for drilling. The mast shall have a minimum of 18 in. of travel (longitudinally) while in the vertical position. The feed system shall be capable of consistent top performance during the summer and winter environments which are normal to the City of Winnipeg.

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Note: Hours of operation will be approximately 5 hrs/day, 7-days a week, 364-days a year for 9-years with the exception of regular scheduled maintenance of the truck and drill equipment. Temperatures in Winnipeg range between -40°C (-40°F) to +40°C (104°F).

## 5.0 POWER UNIT

5.1 Type – diesel engine, 40 hp approx., TIER III or Tier IV compliant, SCR (Selective Catalytic Reduction not acceptable). **State** make and model being bid.

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5.1.1 The engine shall be warranted to use bio-diesel at a B10 blend level (10% bio-diesel to 90% ultra low sulphur diesel, ASTM D6751 to ensure fuel quality).

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5.2 Cylinders / displacement – **state** number of cylinders and displacement.

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5.3 Rated power – **state** rated horsepower at corresponding rpm.

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5.4 Torque – **state** max. torque @ rated rpm.

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5.5 Engine shutdown – required in the event of high temperature, and low engine oil pressure or engine underspeed.

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5.6 Block heater – 110 Volt.

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5.7 Ignition – push button with separate on/off toggle switch or keyed ignition c/w three (3) sets of keys.

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5.8 Fuel tank – 50 L approx. **State** capacity.

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5.9 Gauges – shock mounted, illuminated, housed in a fully enclosed, hinged, lockable enclosure accessible from ground level at the passenger's side of the vehicle, including the following gauges:

i) Engine oil pressure.

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ii) Temperature.

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iii) Hourmeter – non-resettable type.

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## 6.0 ROCK DRILL

6.1 Type – hydraulically driven, direct drive rotation, Stanley SK58 sinker drill or equal. **State** make and model of rock drill being bid.

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6.2 Weight – **state**.

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6.3 Dimensions – 40" L x 12" H approx., **state**.

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6.4 Rotation – adjustable from 0-300 rpm.

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6.5 Flow – approx. 7-9 GPM @ 1500-2000 psi. \_\_\_\_\_

6.6 Hose whips – required. \_\_\_\_\_

6.7 Hole size – 2 in. \_\_\_\_\_

6.7.1 Rod size – **state** recommended size and configuration. \_\_\_\_\_

6.8 Blows per minute – 2500 approx., **state**. \_\_\_\_\_

6.9 Torque – up to 900 lb-ft. \_\_\_\_\_

6.10 Drill steel – two (2) 24" x 1" hex drill steel. \_\_\_\_\_

6.11 Rock bits – two (2) 2 in. diameter rock bits. \_\_\_\_\_

6.12 Mining bits – two (2) 2 in. diameter. \_\_\_\_\_

**7.0 AIR COMPRESSOR**

7.1 **State** make and model of air compressor being bid. \_\_\_\_\_

7.2 Type – hydraulically operated. \_\_\_\_\_

7.3 Capacity – 35 cfm approx. **State** cfm @ corresponding psig. \_\_\_\_\_

7.4 Receiver tank – 9 gallon approx. \_\_\_\_\_

7.5 Shut-off controls – required. \_\_\_\_\_

7.6 Cooling fan – required with electric clutch. \_\_\_\_\_

**8.0 TOPHEAD ROTARY DRIVE**

8.1 Type – single hydraulic motor drive with double chain sprocket coupling. \_\_\_\_\_

8.2 Speed range – 0-190 rpm. \_\_\_\_\_

8.3 Torque – 960 lb-ft. \_\_\_\_\_

8.4 Unit shall be equipped with a hinged, quick-latch, off-hole feature. \_\_\_\_\_

8.5 Auger drillhead pull-up and pull-down – 7600 lbs., adjustable. \_\_\_\_\_

**9.0 DRILL TEAM SPECIFICATIONS**

9.1 Auger (main) mast – long stroke, welded structural steel, rectangular formed section, single piece mast. \_\_\_\_\_

9.1.1 Main auger mast shall provide 135 in. of net stroke, hydraulically driven. \_\_\_\_\_

9.1.2 Main auger drive – #60 double roller chains. \_\_\_\_\_

9.2 Hydraulic foot – required with 8 in. of stroke. \_\_\_\_\_

- 9.3 Drilling guide – required. \_\_\_\_\_
- 9.4 Mast travel rest – required. \_\_\_\_\_
- 9.5 Auxiliary mast – similar welded type construction as main mast, hinged with release pin to allow mast to swing-off hole. \_\_\_\_\_
- 9.5.1 Feed – hydraulic cylinder feed, 18 in. stroke. \_\_\_\_\_
- 9.5.2 Shall include mounting bracket saddle with pin for holding auger during transit. \_\_\_\_\_
- 9.6 Universal auger adapter – required from 1 1/8 in. hex spindle to 1 3/16 in. hex box connection. \_\_\_\_\_
- 9.7 Lateral slide base – all welded structural steel base, twin cylinders providing total travel of 18 in., i.e., 9 in. either side of centre. \_\_\_\_\_
- 9.8 In/out slide base – hydraulically operated providing 16 in. of travel, operable separately or in conjunction with side-to-side slide base. \_\_\_\_\_
- 9.9 Auger drill stem – four (4) 1 3/4" x 5' auger sections with a 2 in. OD carbide tipped finger bit and eight (8) U-clip pins. \_\_\_\_\_
- 9.10 Additional auger – one (1) 3' x 1 3/4" auger. \_\_\_\_\_
- 9.10.1 Auger U-clip pins – eight (8) required. \_\_\_\_\_
- 10.0 HYDRAULIC SYSTEM**
- 10.1 Hydraulic system – three (3) 10 gpm gear pump sections providing hydraulic oil to power all functions. Separate circuits shall allow for independent operation of the percussive tool, air compressor and feed circuits. \_\_\_\_\_
- 10.2 Output from two pump sections shall be combined to provide 20 gpm to power the auger/rotary drillhead. \_\_\_\_\_
- 10.3 Pressure gauges – required on all circuits. \_\_\_\_\_
- 10.4 Relief valves – required on all circuits. \_\_\_\_\_
- 10.5 Hydraulic reservoir – approx. 120 L with breather cap and strainer, baffled as required. \_\_\_\_\_
- 10.5.1 Level gauge – glass sight type, mounted in readily visible location. \_\_\_\_\_
- 10.5.2 Return line filter – spin-on type, serviceable without oil loss. \_\_\_\_\_
- 10.5.3 Drain plug – 1/2 in. diameter. \_\_\_\_\_
- 10.6 Hydraulic hoses – wire braid reinforced, rated for system operating pressure with 4 to 1 safety factor for burst pressure. \_\_\_\_\_
- 10.7 Hose fittings – hydraulic full flow, crimp-on (non-reusable) type. \_\_\_\_\_

10.8 Hydraulic oil cooler – required. \_\_\_\_\_

10.9 Flow control valve – feed rate control for infinite down-feed adjustment control to provide precise control when drilling in hard materials. \_\_\_\_\_

**11.0 WELDING**

11.1 All welds shall be continuous welds. \_\_\_\_\_

11.2 All welding performed shall conform to CSA Standard W47.1-03 and W59-03. \_\_\_\_\_

Note: All welds are subject to inspection by a City of Winnipeg Qualified Inspector.

**12.0 INSTALLATION**

12.1 The drill team package shall be installed by the City of Winnipeg on the following cab & chassis vehicle:

**2008 International 4300**

- 29,000 lbs. GVWR
- 108 in. CA
- 10,000 lbs. front axle
- 19,000 lbs. rear axle
- Rear air ride suspension
- Outside frame rails clear
- DT466 (7.3L)
- Allison 2500 RDS Series transmission
- Vertical exhaust
- Hydraulic brake system
- 13 ft. steel flat deck

12.2 The successful bidder shall provide installation assistance with all pertinent details regarding the installation of the drill rig package, including (but not limited to) hole pattern for base, and mounting locations. \_\_\_\_\_

**13.0 MISCELLANEOUS**

13.1 Grease fittings – required on all, pivot points and linkages as required. \_\_\_\_\_

**14.0 FINISH**

14.1 The entire unit shall be properly primed and prepared, then painted the manufacturer's standard colour with two (2) coats of polyurethane enamel, Dupont Imron, Endura paint process or equivalent. \_\_\_\_\_

**15.0 MANUALS**

15.1 The following manuals shall be supplied with the unit when delivered. Manuals shall be in English and shall cover the complete equipment. \_\_\_\_\_

15.2 Operator's manual – one (1) per machine. \_\_\_\_\_

15.3 Parts, repair and technical service manuals including preventative maintenance schedules for life of the unit – CDs preferred, quantity



as per Form B: Prices.

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## **16.0 TRAINING**

16.1 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.

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16.2 Mechanical training – the Contractor shall be required to provide **one (1) Business Day** 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 shall be sufficient in duration and shall provide adequate familiarization and orientation of the equipment, to the satisfaction of the Contract Administrator.

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16.3 Training materials and applicable manuals or on-line training information shall be provided by the Contractor to the Operator Training Branch of Public Works at the earliest possible opportunity, no later than 4-weeks prior to delivery of the equipment and related attachments. The training materials shall be sent preferably in electronic format and hard copy. Training videos shall be supplied on either CD or DVD format.

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16.3.1 Training materials shall be sent to:

Public Works Human Resources Division  
Operator Training Branch  
102-1155 Pacific Ave.  
Wpg. MB R3E 3P1

E-mail: [blaxdal@winnipeg.ca](mailto:blaxdal@winnipeg.ca)

## **17.0 DELIVERY**

17.1 Delivery – the unit shall be delivered F.O.B. destination freight prepaid to the Winnipeg Fleet Management Agency, Facility 7, 215 Tecumseh Street, Winnipeg, Manitoba within **sixteen (16) calendar weeks** from the date of official notification of award of Contract. 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.

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

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## **18.0 PERFORMANCE RELIABILITY**

18.1 The responsibility for the design of the complete drill rig, its performance and reliability shall rest upon the Contractor.

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18.2 The term "*repeat failures*" as used herein is defined to mean that the same component, assembly, or sub-assembly develops repeated defects, breakdowns and/or malfunctions rendering the unit

inoperative, or requiring repeated shop correction, service and/or replacement during the warranty period applicable for said component, assembly, or sub-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.

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- 18.3 Where the unit develops "repeated failures" in service, the Contractor shall make any necessary engineering changes, repairs, alterations or modifications in order to guarantee reliability of performance.
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**19.0 WARRANTY**

- 19.1 For the purpose of warranty repairs, 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 and maintenance of the 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 on drill rig equipment, and general service capabilities. A description of the service facility shall be provided within 3-Calendar Days upon request of the Contract Administrator.
- 19.2 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 Facilities. Any work performed by the City of Winnipeg Repair Facilities 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 2010: \$75.00/hr regular time, \$102.50/hr overtime and callout).
- 19.3 The Contractor shall warrant **all equipment** and all parts thereof, against any defects of workmanship, construction and materials, and agrees to repair or replace without cost to the City any article that has become defective and not proven to have been caused by negligence on the part of the user within **two (2) years** from the date the equipment is put into service by the City of Winnipeg.
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