

PART E
SPECIFICATIONS

PART E - SPECIFICATIONS

GENERAL

E1. APPLICABLE SPECIFICATIONS, STANDARD DETAILS AND DRAWINGS

- E1.1 *The City of Winnipeg Standard Construction Specifications* in its entirety, whether or not specifically listed on Form B: Prices, shall apply to the Work.
- E1.1.1 *The City of Winnipeg Standard Construction Specifications* is available in Adobe Acrobat (.pdf) format on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division internet site at <http://www.winnipeg.ca/matmgt>.
- E1.1.2 The version in effect three (3) Business Days before the Submission Deadline shall apply.
- E1.1.3 Further to GC:2.4(d), Specifications included in the Bid Opportunity shall govern over *The City of Winnipeg Standard Construction Specifications*.
- E1.2 The following Drawings are applicable to the Work:

<u>Drawing No.</u>	<u>Drawing</u>
0429020100-C0101	Site Plan

E2. SUPPLY AND INSTALLATION OF A PORTABLE TRUCK SCALE

- E2.1 These specifications are for the supply, delivery and installation of one (1) portable truck scale.
- E2.2 The application is to weigh trucks both loaded and empty when entering and exiting the facility.
- E2.3 This equipment shall be able to operate as much as 24 hours per day, 7 days per week, 12 months per year.
- E2.4 The entire portable Truck Scale system shall be approved Legal-for-Trade (as defined by Measurement Canada), CSA approved and capable of being interfaced to a printer and/or computer. The Owner will arrange to provide trucks suitably loaded in order to calibrate and strain-test the scale. Details for the final inspection shall be provided with order, CSA approved and capable of being interfaced to a printer and/or computer.
- E2.5 Truck Specification
- (a) The trucks and trailers (to be weighed) will have a gross weight not exceeding 100 tonnes (35 tonne dual tandem axle).
 - (b) The truck and trailer maximum wheelbase will not exceed 80 feet.
- E2.6 Scope of Work
- E2.6.1 Provide shop drawings detailing the proposed foundation. The scale shall be placed on spread footings. Provide size, location and properties of spread footings 7 days prior to installation.
- E2.6.2 Supply and delivery of the foundation, scale, components and accessories shall be as per E2.6.1.
- E2.6.3 Provide at no charge, on-site training and review recommended maintenance practices with Contract Administrator or his designate.
- E2.6.4 Relocate and reconnect existing scale house.
- E2.6.5 Supply and install electrical and communication cabling as shown on the Site Plan.

E2.6.6 The Contract Administrator shall be responsible for the following other related work, which will be performed by others.

- (a) Site grading (ramps, boulder placement, levelling of site) as shown on the shop drawing.

E2.7 Final Documentation

E2.7.1 Upon completion of the project, the following documentation shall be provided to the Contract Administrator within seven (7) working days:

- (a) Finalized Engineering Documentation and Drawings.
- (b) Operations and Maintenance Manual, one (1) with a section in English.
- (c) Instrumentation Manuals, one (1) with a section in English.

E2.8 Materials

E2.8.1 Weighbridge/Platform

- (a) The design shall incorporate high-strength all welded steel construction and diamond tread checker steel deck.
- (b) Service access to load cells shall be via service access hatches through the checker steel deck and located directly above the load cells.
- (c) The scale platform shall be 11' wide x 80' long.
- (d) Environmental Considerations:
 - (i) The Scale shall operate in ambient temperatures ranging from -40°C to +40°C.
 - (ii) The platform shall be installed in such a manner to allow access for maintenance and cleaning.
- (e) Painting Specifications
 - (i) All exposed Weighbridge metal shall be power brushed to remove loose mill scale.
 - (ii) The type of paint used shall be one (1) coat of oxide primer and one (1) coat of enamel.

E2.9 Load Cells and Assemblies

E2.9.1 The Portable Truck Scale design shall allow for ease of access and replacement of the Load Cells with a minimum of labour required. In addition all Load Cells and assemblies shall be:

- (a) Single link "Analog" type.
- (b) N.T.E.P. approved, capacity of each load cell 75,000 lbs. with:
 - (i) Side Load Rejection Ratio of 500:1
 - (ii) Safe Side Load of 100% of rated capacity
 - (iii) Safe Overload of 100% of rated capacity
 - (iv) Maximum Overload of 150% of rated capacity
- (c) Non-proprietary, and of industry standard design (easily available from multiple sources).
- (d) Equipped with integral surge voltage protection including a limited lifetime warranty against damage caused by a surge of voltage such as lightning.
- (e) Environmentally sealed to IP67 standard and sprayed with a layer of a polymer coating for additional protection from corrosion.

E2.9.2 Weigh bars are an acceptable alternative to load cells.

- E2.9.3 Mounting Assemblies of the load cells shall be designed to check lateral movement of the scale platform, while controlled longitudinal movement from temperature expansion and contraction, is allowed. The design shall be of a "free-floating Weighbridge" type, designed to limit oscillation and allow the weight to rapidly stabilize (to minimize the time spent to weigh a truck). "UNLINK" or approved equal allowed in accordance with B6.
- E2.10 Wiring and Cables
- E2.10.1 Load cell cable shall be terminated in NEMA 4 weatherproof junction boxes.
- E2.10.2 All load cell wiring shall be run in rigid conduit, 100% shielded and encased in an external steel-mesh jacket for protection against environmental factors, electrical noise and rodents.
- E2.10.3 The scale design shall minimize the number of junction boxes (and cable terminations) to increase reliability and minimize servicing requirements.
- E2.11 Electronic Instrumentation
- E2.11.1 The Digital Weight Indicator supplied will be housed in a scale house and shall be:
- (a) CSA approved.
 - (b) Capable of being interfaced to a printer and/or computer.
- E2.12 Printer
- E2.12.1 A 100 mm visible digital readout shall be supplied and installed as directed by the Contract Administrator.