

# **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 two (2) 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>
LD-3086	Arlington Street – Notre Dame Ave. to 49m S. of McDermot Ave.
LD-3087	Arlington Street – 17m N. of Winnipeg Ave. to 25m S. of Bannatyne Ave.
LD-3088	Arlington Street – 55m N. of McDermot Ave. to 22m S. of William Ave.
LD-3089	Arlington Street – 80m N. of Bannatyne Ave. to 21m S. of Elgin Ave.
LD-3090	Arlington Street – 63m N. of William Ave. to 12m S. of Ross Ave.
LD-3091	McDermot Street – Arlington St. to 142m W. of Tecumseh St.
LD-3092	William Avenue – 150m E. of Lark St. to Arlington St.
LD-3093	Lark Street – 15m N. of Bannatyne Ave. to William Ave.
LD-3094	Pacific Avenue – Xante St. to 130m W. of Arlington St.
LD-3095	Pacific Avenue – 75m E. of Xante St. to 25m W. of Arlington St.
LD-3096	Alexander Avenue – Xante St. to 50m W. of Trinity St.
LD-3097	Alexander Avenue – 75m E. of Xante St. to 24m W. of Arlington St.
LD-3098	Trinity Street – Alexander Ave. to 18m S. of Logan Ave.
LD-3099	Tecumseh Street – Notre Dame Ave. to Winnipeg Ave.
LD-3100	Winnipeg Avenue – 122m W. of Arlington St. to Tecumseh St.
LD-3101	Dorothy Street – Alexander Ave. to 62m S. of Logan Ave.
LD-3102	Details
LD-3103	Details

#### E2. SOILS INVESTIGATION REPORT

- E2.1 Further to GC:3.1, Test Hole logs compiled during the design process are provided. The Test Hole logs are provided to supplement the Contractors evaluation of the Site conditions within the Work area. The information is considered accurate at the locations indicated and at the time of the investigation. However, considerable variations in the soil conditions may exist between test holes and fluctuations in groundwater levels can be expected seasonally.

### GENERAL REQUIREMENTS

#### E3. OFFICE FACILITIES

- E3.1 The Contractor shall supply office facilities meeting the following requirements:
- (a) The field office shall be conveniently located near the Site of the Work;

- (b) The building shall have a minimum floor area of 20 square metres, with window area of 3 square metres and a door entrance with suitable lock satisfactory to the Contract Administrator.
- (c) The building shall be suitable for all-weather use. It shall be capable of maintaining a temperature range between 16°C and 25°C;
- (d) The building shall be supplied with adequate lighting and 120 Volt power supply;
- (e) The building shall be supplied with a local telephone line;
- (f) The building shall be furnished with one desk, one meeting table, one drafting table, one filing cabinet and six chairs, all satisfactory to the Contract Administrator;
- (g) A separate toilet with door lock shall be supplied for the Contract Administrator;
- (h) The field office shall be cleaned weekly immediately prior to the Job Site Meetings to the satisfaction of the Contract Administrator;
- (i) The provision of the field office with the aforementioned furnishings and equipment shall also include maintenance and removal of the field office, operating costs and any service installation costs.

#### **E4. EXCAVATION AND BACKFILL**

##### **E4.1 Disposal of Unsuitable or Surplus Excavated Material**

- (a) If the Contractor has not arranged for an approved disposal site, the City shall provide an optional disposal site for all surplus clean clay from the construction site. The material is not to include any refuse, concrete, metals, wood, organics, construction waste or any other deleterious materials. Any surplus soil material not meeting these requirements shall not be considered clean clay and shall not be permitted.
- (b) The disposal location provided by the City will be at the Summit Road Landfill Site. The Contract Administrator will make arrangements with Colin Potter (986-4463) at the landfill site for the disposal of the surplus soil material.
- (c) There will be no tipping fees charged at the landfill sites to the Contractor for the disposal of surplus soil material meeting the requirements of clean clay as specified.
- (d) Surplus material not meeting the requirements of clean clay may be disposed of at the Brady Road Landfill Site although tipping fees will be charged.
- (e) There shall be no measurement of surplus soil material disposed of at any disposal site. No additional payment will be made for disposal of surplus soil materials. It shall be considered incidental to the cost of the Work.

##### **E4.2 Foundation, Bedding and Backfill**

- (a) Type 3 foundations shall be used in all shafts.
- (b) Type 3 bedding and initial backfill shall be used in place of sand in all shafts.
- (c) Shafts located within paved areas of Arlington Street shall be backfilled with Class 1 backfill as per SD-002.

#### **E5. TEMPORARY CONCRETE SURFACE RESTORATIONS**

- E5.1 If the weather will not permit final road pavement restorations to be completed in a timely manner after the underground work, temporary surface restorations for shafts or excavations within the pavement shall be made by installing Temporary Concrete Surface Restorations until such a time as final restorations are complete.

- E5.2 Concrete Surface Restorations shall conform to CW 2130 with the following exception:
- (a) No tie bars, dowels or reinforcing steel shall be required.
- E5.3 All shafts and excavations shall be flooded and jetted prior to installing temporary surface restorations.
- E5.4 If the weather will permit, road pavement restorations shall be final restorations and shall commence immediately after underground construction.
- E5.5 Construction of temporary concrete pavement shall be measured on a square metre basis. The amount paid for shall be the total number of square metres of specified thickness acceptably placed. Payment shall be compensation in full for preparation of the base, supplying forms, insulating blankets, as well as supply and placement of Portland cement concrete pavement complete. Payment shall also include removal and disposal of the temporary pavement when permanent restorations commence.
- E5.6 Temporary surface restorations must be completed and maintained to the satisfaction of the Contract Administrator. All additional materials required for temporary surface restorations shall be considered pay items.
- (a) Any temporary concrete, cement stabilized fill, limestone and/or cold mix placed during winter construction shall be completely removed and the remaining backfill shall be flooded, tamped and topped up prior to performing permanent pavement or boulevard restorations.

## **E6. GRAVITY SEWERS**

### **E6.1 Measurement and Payment**

- (a) 1200 storm relief sewer (SRS) to existing 1250 SRS on Arlington Street at Bannatyne Avenue: The unit payment for the connection shall include 2.1m of 1200 monolithic pipe.
- (b) MH.2 (overflow manhole): Measurement and payment will be on a unit basis performing all operations necessary to complete the works as specified including any items incidental to the works. The unit to be paid for shall consist of the frame, cover, rungs, risers, reducers, adjusting rings, base, benching and installation of the 400 C900 CL 150 DR18 PVC pipe through the manhole complete with overflow. The 400 C900 CL 150 DR18 PVC pipe will be considered a renewal with limits from the adjacent existing combined sewer manhole (CS MH.9233) to the proposed 400x375 reducer connection point.
- (c) MH.5 (overflow manhole): Measurement and payment will be on a unit basis performing all operations necessary to complete the works as specified including any items incidental to the works. The unit to be paid for shall consist of the frame, cover, rungs, risers, reducers, adjusting rings, base, benching, 400 C900 CL 150 DR18 PVC pipe with overflow, connection to the existing 300 combined sewer (#1928) including a 400x300 reducer, as well as the connection to adjacent existing combined sewer manhole (CS MH.#1929).
- (d) MH.9, MH.10 and MH.24 (weir overflow manholes): Measurement and payment will be on a unit basis performing all operations necessary to complete the works as specified including any items incidental to the works. The unit to be paid shall consist of the frames, covers, rungs, risers, reducers, adjusting rings, base, overflow pipe, weir walls/benching and connection to existing sewers.
- (e) MH.18 (drop manhole): Measurement and payment will be on a unit basis performing all operations necessary to complete the works as specified including any items incidental to the works. The unit to be paid for shall consist of the frame, cover, rungs, risers, reducers, adjusting rings, base, benching and an internal concrete wall including a 300x500 opening.
- (f) MH.26 (900x600 brick combined sewer manhole): Measurement and payment will be on a unit basis performing all operations necessary to complete the works as specified including

any items incidental to the works. The unit to be paid for shall consist of the frame, cover, rungs, risers, reducers, adjusting rings, base, benching, 900x600 pipe and the connections to the existing 900x600 brick combined sewers (#1284 and #1285).

#### **E7. EXISTING ABANDONED GAS MAINS**

E7.1 Should it become necessary for an existing abandoned gas main to be removed to facilitate construction of the sewer, it shall be the responsibility of the Contractor to notify the Gas Company prior to removing the main. After obtaining an acknowledgement from the Gas Company that the main is abandoned, the necessary length may be removed and the open ends of the abandoned gas main plugged and sealed in accordance with CW2130. No separate payment shall be made for this work. It shall be incidental to the price bid for installation of the sewers.

#### **E8. PROTECTION OF EXISTING TREES**

- E8.1 The Contractor shall take the following precautionary steps to avoid damage from his construction activities to existing boulevard trees within and adjacent to the limits of construction:
- (a) The Contractor shall not stockpile materials and soil or park vehicles and equipment on boulevards within 2 metres of any tree.
  - (b) Mature tree trunks shall be strapped with 25 x 150 x 2400 (1" x 6" x 8") wood planks. Smaller trees shall be similarly protected using appropriately sized wood planks.
    - (i) Excavations shall be carried out in such a manner so as to minimize damage to existing root systems. Roots over 50mm in diameter which must be cut to facilitate an excavation shall be neatly pruned with a saw prior to excavation and coated with an appropriate wound dressing to prevent infection.
    - (ii) Work on Site shall be carried out in such a manner so as to minimize damage to existing tree branches. Where damage to tree branches does occur, the Contractor shall neatly prune the damaged branch.
  - (c) American elm trees are not to be pruned between April 1<sup>st</sup> and August 1<sup>st</sup> and Siberian elm trees between April 1<sup>st</sup> and July 1<sup>st</sup> of any year under provisions of The Dutch Elm Disease Act.
- E8.2 All damages to existing trees caused by the Contractor's construction activities shall be repaired to the requirements and satisfaction of the City of Winnipeg, Parks and Recreation Department, Forestry Branch.
- E8.3 No separate measurement or payment will be made for protection of trees. It shall be considered incidental to the Contract Work.