

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 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:

Drawing Title	Drawing No.	File Name	Size
Sunnyside Boulevard - from Assiniboine Avenue to Sta. 2+00	41283-C-001	30-2004_41283C1-R0.pdf	
Sunnyside Boulevard - from Assiniboine Avenue to Sta. 2+00 to 3+40	41283-C-002	30-2004_41283C2-R0.pdf	
Sunnyside Boulevard - from Sta. 3+40 to Emo Avenue	41283-C-003	30-2004_41283C3-R0.pdf	
Banting Drive - from Assiniboine Avenue to Portage Avenue	41283-SK-01	30-2004_41283SK1-R0.pdf	
Barker Boulevard - Sinnott St. to #234 Barker Boulevard	41283-SK-02	30-2004_41283SK2-R0.pdf	
Stewart Street - Portage Avenue to Livinia Avenue	41283-SK-03	30-2004_41283SK3-R0.pdf	
Voyageur Avenue - Bella Vista Crescent to Crestview Park Drive	41283-SK-04	30-2004_41283SK4-R0.pdf	
Emo Avenue - Harris Boulevard to Woodhaven Boulevard	41283-SK-05	30-2004_41283sk5-R0.pdf	

E2. OFFICE FACILITIES

- E2.1 The Contractor shall supply office facilities meeting the following requirements:
- The field office shall be for the exclusive use of the Contract Administrator.
 - The building shall be conveniently located near the site of the Work.
 - The building shall have a minimum floor area of 15 square metres, a height of 2.4m with a window and a door entrance with a suitable lock.
 - The building shall be furnished with one desk, table 3 m x 1.2 m, and a minimum of 8 chairs.
 - A portable toilet shall be located near the field office building. The toilet shall have a locking door and be for the exclusive use of the Contract Administrator and other personnel from the City.

- (f) The field office building and the portable toilet shall be cleaned on a weekly basis immediately prior to each site meeting. The Contract Administrator may request additional cleaning when he deems it necessary.
- E2.2 The Contractor shall be responsible for all installation and removal costs, all operating costs, and the general maintenance of the office facilities.
- E2.3 The office facilities will be provided from the date of the commencement of the Work to the date of Substantial Performance.
- E2.4 On a one time basis, where directed by the Contract Administrator, the Contractor shall relocate the office facilities to a location more convenient for the remaining Work.

E3. PROTECTION OF EXISTING TREES

- E3.1 The Contractor shall take the following precautionary steps to prevent damage from construction activities to existing boulevard trees within the limits of the construction area:
 - a) The Contractor shall not stockpile materials and soil or park vehicles and equipment on boulevards within 2 metres of trees.
 - b) Trees identified to be at risk by the Contract Administrator are to be strapped with 25 x 100 x 2400mm wood planks, or suitably protected as approved by the Contract Administrator.
 - c) Excavation shall be performed in a manner that minimizes damage to the existing root systems. Where possible, excavation shall be carried out such that the edge of the excavation shall be a minimum of 1.5 times the diameter (measured in inches), with the outcome read in feet, from the closest edge of the trunk. Where roots must be cut to facilitate excavation, they shall be pruned neatly at the face of excavation.
 - d) Operation of equipment within the dripline of the trees shall be kept to the minimum required to perform the work required. Equipment shall not be parked, repaired, refuelled; construction materials shall not be stored, and earth materials shall not be stockpiled within the driplines of trees. The dripline of a tree shall be considered to be the ground surface directly beneath the tips of its outermost branches. The Contractor shall ensure that the operations do not cause flooding or sediment deposition on areas where trees are located.
 - e) Work on-site shall be carried out in such a manner so as to minimize damage to existing tree branches. Where damage to branches does occur, they shall be neatly pruned.
- E3.2 All damage to existing trees caused by the Contractor's activities shall be repaired to the requirements and satisfaction of the Contract Administrator and the City Forester or his designate.
- E3.3 No separate measurement or payment will be made for the protection of trees.
- E3.4 Elm trees cannot be trimmed between April 1 and July 31, inclusive.

E4. TRAFFIC CONTROL

- E4.1 Further to clauses 3.6 and 3.7 of CW 1130-R1:
 - (a) Where directed, the Contractor shall construct and maintain temporary asphalt ramps to alleviate vertical pavement obstructions such as manholes and planing drop-offs to the

satisfaction of the Contract Administrator. No measurement for payment will be made for this work.

- (b) In accordance with the Manual of Temporary Traffic Control, the Contractor ("Agency" in the manual) shall make arrangements with the Traffic Services Section of the City of Winnipeg to place all temporary regulatory signs. The Contractor shall bear all costs associated with the placement of temporary traffic control devices by the Traffic Services Section of the City of Winnipeg in connection with the works undertaken by the Contractor.

E5. TRAFFIC MANAGEMENT

E5.1 Further to clause 3.7 of CW 1130:

E5.1.1 The Contractor shall schedule construction activities to meet the following:

- (a) Sunnyside Boulevard and Emo Avenue – will be closed to all Traffic. The Contractor shall sign the street "Road Closed" in accordance with the Manual of Temporary Traffic Control.
- (b) Banting Drive – School bus access to Lincoln School will be maintained at all times. Coordinating the access to the Fire and Paramedic service will be a condition of the work. All costs associated with these conditions shall be considered incidental to the associated works and no separate measurements will be made.
- (c) Voyageur Avenue – Construction activities shall not commence until after June 28, 2004 when the majority of the activities at Voyageur School have been completed for the school season. Local access and/or school bus traffic shall be maintained as determined by the Contract Administrator.
- (d) Barker Boulevard and Stewart Street – Local access shall be maintained as determined by the Contract Administrator. Barker and Stewart shall be closed to traffic during asphalt paving operations with the approval of the Contract Administrator.

E5.1.2 Should the Contractor be unable to maintain an existing access to a residence or business, he shall review the planned disruption with the business or residence and the Contract Administrator, and take reasonable measures to minimize the impact. The Contractor shall provide a minimum of 24 hours notification to the affected residence or business and the Contract Administrator, prior to disruption of access.

E5.1.3 Pedestrian and ambulance/emergency vehicle access must be maintained at all times.

E6. WATER USED BY CONTRACTOR

E6.1 Further to clause 3.7 of CW 1120-R1, the Contractor shall pay for all costs associated with obtaining water in accordance with the Waterworks By-law. Sewer charges will not be assessed for water obtained from a hydrant.

E7. INFRASTRUCTURE SIGNS

E7.1 The Contractor shall obtain infrastructure signs from the Traffic Services Sign Shop at 421 Osborne Street. The Contractor shall mount each sign securely to a rigid backing material approved by the Contract Administrator. The Contractor shall fasten each sign to a suitable support and erect and maintain one sign at each street as directed by the Contract Administrator. When the Contract Administrator considers the Work on the street complete, the Contractor shall remove and dispose of the signs and supports. No measurement for payment will be made for the performing all operations herein described and all other items incidental to the work described.

E8. INSTALLATION AND ADJUSTMENT OF CURB INLETS

E8.1 This Specification shall amend CW 3210-R5.

E8.2 Add the following to the first paragraph of section 3 "Description":

"and the installation of curb inlet boxes."

E8.3 Replace the reference to "shall conform with Specification CW 2410" in clauses 5.3, 5.5, and 5.7.1 with "***shall conform with those products listed as Approved Products for Underground Use in the City of Winnipeg found on the City of Winnipeg, Materials Management web site at: <http://www.city.winnipeg.mb.ca/matmgt/info.stm>.***"

E8.4 Replace "SD-107" with "AP-007", "SD 104" with "AP-004", "SD-106" with "AP-005", "SD-100" with "AP-001", and "SD-109" with "AP-011", as they appear in clauses 5.3, 5.5, 5.6 and 5.7.1. In Clause 5.6 delete "and SD-111".

E8.5 Replace the second paragraph of clause 9.9.1 with the following:

"For curb inlets with inlet box, the adjustment shall be considered to include the supply and placing of reinforcing steel and concrete as required to cast the existing frame into the existing inlet box, in accordance with the Drawings and the requirements of Specification CW 3310. Where required, new inlet box covers shall be supplied in accordance with AP-015 and paid for separately. For curb inlets with catchbasin, the adjustment of the existing catchbasin shall be done in accordance with Section 9.2 of this Specification."

E8.6 Add the following to section 9 "Construction Methods":

"9.13 Installation of Curb Inlets with Inlet Boxes

Installation of curb inlets with inlet boxes to grade shall include the supply of all materials, and the installation of the complete curb inlet structure in accordance with the Drawings, Standard Details SD-221 or SD-222, and this Specification, to the satisfaction of the Contract Administrator, excepting the installation of the curb inlet box connection pipe.

The installation shall be considered to include the excavation for the inlet box, the construction of the inlet box complete with the curb inlet frame, the inlet box cover, and the backfilling around the inlet box. The excavation shall not extend more than 300 mm beyond the limits of the inlet box. Backfilling and compaction shall be done in accordance with Specification CW 2030.

Curb Inlet Box Connection Pipe

Installation of connection pipe and connection to a catchbasin shall be done in accordance with clause 3.11 of Specification CW 2130-R6."

E8.7 Add the following to section 12 "Method of Measurement":

"12.15 Curb Inlets with Inlet Boxes

Curb inlets will be measured on a unit basis. The number to be paid for shall be the total number of curb inlets with inlet boxes supplied and installed in accordance with this Specification and accepted by the Contract Administrator.

12.16 Curb Inlet Box Connection Pipe

Construction of connection pipe between the curb inlet box and the catchbasin will be measured on a linear measure basis. The length to be paid for shall be the total number of

metres constructed in accordance with this Specification and accepted by the Contract Administrator, measured horizontally, at grade, above the centre line of the pipe, and measured from the centre of the inlet box to the centre of the catchbasin, as computed by measurements made by the Contract Administrator.

Fittings for curb inlet box connection pipe will be included in the pay item for "Curb Inlet Box Connection Pipe.

Tying into a catchbasins from the curb inlet box will be included in the pay item for "Curb Inlet Box Connection Pipe."

12.17 Supply of Curb Inlet Frames

Supply of curb inlet frames will be measured on a unit basis. The number to be paid for shall be the total number of curb inlet frames supplied in accordance with this Specification and accepted by the Contract Administrator.

12.18 Supply of Curb Inlet Box Covers

Supply of curb inlet box covers will be measured on a unit basis. The number to be paid for shall be the total number of curb inlet box covers supplied in accordance with this Specification and accepted by the Contract Administrator. "

E8.8 Replace item ii) in clause 13.8 with the following:

"ii) Adjustment of Curb Inlet and Inlet Box"

E8.9 Add the following to section 13 "Basis of Payment":

"13.15 Curb Inlets with Inlet Boxes

Curb inlets with inlet boxes will be paid for at the Contract Unit Price for "Curb Inlets with Inlet Boxes", measured as specified herein, which price shall be payment in full for performing all operations herein described and all other items incidental to the work included in this Specification.

13.16 Curb Inlet Box Connection Pipe

Construction of connections from inlet boxes will be paid for at the Contract Unit Price per metre for "Curb Inlet Box Connection Pipe", measured as specified herein, which price shall be payment in full for performing all operations herein described and all other items incidental to the work included in this Specification.

13.17 Supply of Curb Inlet Frames

Supply of curb inlet frames will be paid for at the Contract Unit Price for "Supply of Curb Inlet Frames", measured as specified herein, which price shall be payment in full for performing all operations herein described and all other items incidental to the work included in this Specification.

13.18 Supply of Curb Inlet Box Covers

Supply of inlet box covers will be paid for at the Contract Unit Price for "Supply of Inlet Box Covers", measured as specified herein, which price shall be payment in full for performing all operations herein described and all other items incidental to the work included in this Specification."

E9. RECONSTRUCTION OF PAVING STONE APPROACHES

E9.1 GENERAL

The General Conditions and Standard Provisions of the latest edition of the City of Winnipeg Standard Construction Specification shall apply to and be part of this Specification.

E9.2 DESCRIPTION

This Specification shall cover the removal and storage of existing approach paving stones, the removal and disposal of concrete and the replacement of the approach structure equal or better than the existing condition. The work to be done shall include the furnishing of all superintendence, overhead, labour, material, equipment, tools, supplies and all other things necessary for an incidental to the satisfactory performance and completion of all work as hereinafter specified.

E9.3 MATERIALS

E9.3.1 Granular Materials

- (a) Supply granular materials in accordance with Section 2 of CW 3110-R6.

E9.3.2 Concrete Materials

- (a) Supply concrete materials in accordance with Section 5 and 6 of CW 3310-R7.

E9.3.3 Reinforcing Steel

- (a) Supply reinforcing steel in accordance with Clauses 5.4.4 and 5.4.5 of CW 3310-R7.

E9.4 CONSTRUCTION METHODS

E9.4.1 Paving Stone Approach Renewal

- (a) Remove, clean and store paving stones until reinstallation.
- (b) Ensure the removal methods do not chip, damage or undercut paving stones to remain. The Drawings in Part F are applicable to the Work.
- (c) Excavate, compact sub-grade, place granular materials in accordance with CW 3310 to a maximum of 300 mm beyond the pavers being removed.
- (d) Install reinforcing steel and concrete in accordance with CW 3310 and detail SD-238A.
- (e) Reinstall pavers to match the finished grade of adjacent pavers and asphalt pavement in accordance with CW 335.

E9.5 MEASUREMENT AND PAVEMENT

E9.5.1 Reconstruction of Approaches

- (a) Reconstruction of Approaches will be measured on an area basis and paid for at the Contract Unit Price per square metre for the "Items of Work" listed here below. The area to be paid for will be the total number of square metres of existing approaches removed and installed in accordance with this specification, accepted and measured by the Contract Administrator.

Items of Work:

Reconstruction of Approaches

- (i) Paving Stone (SD-238A)

- (b) All costs for the pavement removals, paving stone removal and storage, excavation, sub-grade compaction, placement of base course, and sub-base materials, pavement installation and edging curb to the specified limits will be included in the pavement for the "Items of Work" listed for Reconstruction of Approaches.
- (c) Supply and placement of granular materials in excess of the depths specified in the applicable details will be measured and payment made in accordance with CW 3110 and the Contract Unit Price stated in this Contract.