

PART E
SPECIFICATIONS

PART E - SPECIFICATIONS

GENERAL

E1. GENERAL

E1.1 These Specifications shall apply to the Work.

E2. GOODS

E2.1 The Contractor shall supply and deliver railway ballast in accordance with the requirements hereinafter specified.

E2.2 The railway ballast shall be composed of hard, strong and durable particles, clean and free from injurious amounts of deleterious substances and conforming to the following requirements of this specification.

E2.2.1 The limits for deleterious substances are as follows:

- (a) soft and friable pieces 5.0%;
- (b) material finer than No. 200 Sieve 2.0%; and
- (c) clay lumps 0.5%.

E2.3 The percentage of wear shall be less than 32%, as determined by the LA Abrasion Test, ASTM Designation C131.

E2.4 The soundness loss shall be less than 13.0%, as determined by the magnesium sulphate soundness test for coarse aggregate, ASTM Designation C88.

E2.5 The ballast shall contain less than 25% by mass of flat pieces. In case of dispute, the test method "Determination of Flakiness Index", British Standard B12, shall be used.

E2.6 The minimum bulk specific gravity shall be 2.60, ASTM Designation C127.

E2.7 The crushed ballast material shall have at least 60% of the particles with two (2) or more fractured faces.

E2.8 The ballast shall conform to the following gradation in accordance with ASTM Designation C136 and C117:

Sieve Opening Size	Permissible Range (% by Weight Passing)
2 inch	100
1½ inch	90 - 100
1 inch	20 - 55
¾ inch	0 - 15
⅝ inch	0 - 5
No. 200	0 - 2

E3. DELIVERY

E3.1 Goods shall be delivered and unloaded, f.o.b. destination, freight prepaid, to the following location:

The City of Winnipeg of Winnipeg
Water and Waste Yard
Ross, Manitoba

E3.2 Goods shall be delivered during a three (3) week period from June 14, 2004 to July 02, 2004.

E3.3 Goods shall be delivered between 8:00 a.m. and 4:00 p.m. on Business Days.

E3.4 The Contractor shall off-load goods as directed at the delivery location.

E4. TESTING AND INSPECTION

E4.1 Upon notification of award the Contractor shall supply, within ten (10) Business Days, a copy of current test results from a certified laboratory indicating conformance of the product to the specifications.

E4.2 The Contract Administrator may have samples of the product tested for conformance to the specifications during production and delivery. The frequency of testing will be at the discretion of the Contract Administrator to ensure conformance with these specifications.

E4.3 Goods that do not meet the requirements of the specifications shall be replaced at no cost to the City of Winnipeg.