

**WATER CARRIER PIPE INFO FOR C.P.R. CROSSING**

DIAMETER - 200mm  
 MATERIAL - PVC  
 WALL THICKNESS = 13mm  
 PIPE CLASS - AWWA C900 DR 18  
 SURGE PRESSURE = 300 PSI (2.0MPa)  
 OPERATING PRESSURE = 60 PSI (0.4 MPa)  
 TEST PRESSURE = 150 PSI (1.0MPa)  
 INSTALLATION METHOD - AUGER OR BORING

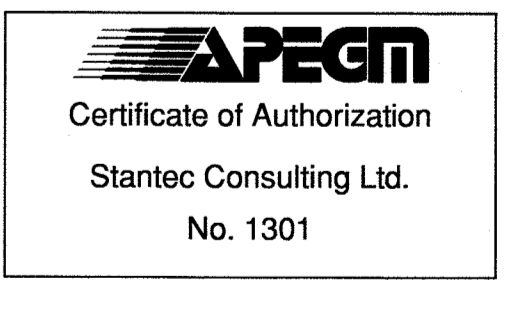
**CASING PIPE INFO**

OUTSIDE DIAMETER - 406mm  
 MATERIAL - BLACK STEEL ASTM 53  
 WALL THICKNESS - 5.59mm  
 YIELD STRENGTH - 241 MPa

- NOTES:**
- RAILWAY CROSSING TO BE CONSTRUCTED AND MAINTAINED, IN ACCORDANCE WITH CANADIAN TRANSPORT AGENCY GENERAL ORDER E-10.
  - CASING PIPE SHALL BE INSTALLED BY PIPE JACKING OR RAMMING METHODS. SOIL NOT TO BE REMOVED UNTIL ENCASEMENT PIPE IS IN ITS FINAL LOCATION OR A MINIMUM OF TWO PIPE DIAMETERS SOIL PLUG BEHIND THE LEADING END OF THE CASING PIPE WILL BE INSTALLED DURING INSTALLATION.
  - WATERMAIN TO BE INSTALLED WITHIN THE CP RAIL ROW BY AUGER OR BORING METHODS
  - EMERGENCY VALVE LOCATION, 72.1m WEST & 71.2m EAST OF CROSSING.
  - EXISTING 200 CI WATERMAIN IS TO BE FILLED WITH CEMENT STABILIZED FLOWABLE FILL WITHIN C.P.R. RIGHT OF WAY.
  - CONTRACTOR TO SUBMIT A SHOP DRAWING OF THE SHORING THAT IS CAPABLE OF SUPPORTING THE EXCAVATION WALL CLOSEST TO THE CP RAIL RIGHT OF WAY UNDER AASHTO HS20 LOADING. SHOP DRAWINGS ARE TO BE SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
  - INSTALL WARNING SIGNS AT EACH EDGE OF RAILWAY RIGHT-OF-WAY.
  - CASING PIPE TO BE CATHODICALLY PROTECTED WITH 10.9kg SACRIFICIAL ZINC ANODES ON BOTH ENDS.

**OWNER CONTACT INFORMATION**

CITY OF WINNIPEG  
 WATER AND WASTE DEPARTMENT  
 KAS ZUREK, P. ENG.  
 DESIGN AND CONSTRUCTION ENGINEER  
 110 - 1199 PACIFIC AVENUE  
 WINNIPEG, MB  
 R3E 3S8  
 TEL:(204) 986-2025  
 FAX:(204) 986-5345



**THE CITY OF WINNIPEG**  
 WATER AND WASTE DEPARTMENT  
 ENGINEERING DIVISION

2017 WATERMAIN RENEWALS  
 CONTRACT 10  
 ELLICE AVENUE  
 ERIN STREET TO  
 120 EWL ERIN STREET

SHEET 3 OF 17  
 CITY DRAWING NUMBER  
 D-14659

**NOTE: ALL VALVES TO BE INSTALLED COUNTERCLOCKWISE TO CLOSE**

**METRIC**  
 WHOLE NUMBERS INDICATE MILLIMETRES  
 DECIMALIZED NUMBERS INDICATE METRES

**WARNING**

IF POWER EQUIPMENT OR EXPLOSIVES ARE TO BE USED FOR EXCAVATION ON THIS PROJECT THE CONTRACTOR MUST:

- NOTIFY THE GAS COMPANY OF THE PROPOSED LOCATION OF EXCAVATION.
- TAKE PRECAUTION TO AVOID DAMAGE TO GAS COMPANY INSTALLATIONS.

SEE PROVINCIAL REGULATION 210/72 FOR DETAILS

**LOCATION APPROVED UNDERGROUND STRUCTURES**

SUPV. U/G STRUCTURES COMMITTEE DATE

NOTE:  
 LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE, BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

B.M. 37-33 N.W. Cor. St. Matthews Ave. & Dominion St., Tbt. in ELEV. 233.716m S. Syndal stone foundation of Minto Armoury, 0.7m

NO.	REVISIONS	DATE	BY
02	ISSUED FOR TENDER	2017.04.28	RS
01	ISSUED FOR REVIEW	2017.04.18	RS

**Stantec**

DESIGNED BY: RS  
 CHECKED BY: WB  
 DRAWN BY: KR  
 APPROVED BY: RS

SCALE:  
 HORIZONTAL 1:250  
 VERTICAL 1:50

RELEASED FOR CONSTRUCTION  
 DATE: 2017 03 22

DATE: 2017 04 27

ENGINEER'S SEAL  
 PROVINCE OF MANITOBA  
 APRIL 28/17  
 R.M. SHERLOCK  
 MEMBER 24045  
 REGISTERED PROFESSIONAL ENGINEER

CONSULTANT DRAWING NUMBER  
 C-201