

200 WM CROSSING

RAIL CROSSING NOTES:
 RAILWAY MILEAGE AND SUBDIVISION: MAIN LINE - RIVERS SUBDIVISION - MILE 3.92
 NAME OF PIPELINE OWNER: CITY OF WINNIPEG, WATER AND WASTE DEPARTMENT

CONTENTS TO BE HANDLED: POTABLE WATER
 MAXIMUM OPERATING PRESSURE: 450 kPa
 MAXIMUM SURGE AND TEST PRESSURE: 1000 kPa
 MAXIMUM OPERATING TEMPERATURE: 20° C
 MINIMUM OPERATING TEMPERATURE: 4° C

PIPING MATERIALS: CARRIER: 200 mm, CASING: 350 mm
 NOMINAL DIAMETER: 230 mm, OUTSIDE DIAMETER: 356 mm
 MATERIAL: PVC, STEEL PIPE
 SPECIFICATION AND GRADE: AWWA C900 DR18, MIN. YIELD STRENGTH 241 MPa

WALL THICKNESS: 12.8 mm, 9.5 mm MIN.
 TYPE OF JOINT: GASKETED BELL & SPIGOT, WELDED
 COATING: N/A, LIQUID EPOXY AWWA C210
 LOCATION OF SHUT-OFF VALVES: A) 81.0 N OF NL OF R.O.W., B) 51.0 S OF SL OF R.O.W.

METHOD OF INSTALLATION: TRENCHLESS - CASING PIPE TO BE JACKED W/ NO SOIL REMOVAL AHEAD OF PIPE

VENTS: N/A, NUMBER: N/A, HEIGHT ABOVE GROUND: N/A

SEALS: SEE NOTE IN DETAIL

BURY: BASE OF RAIL TO TOP OF CARRIER: 5.1 m, NOT BENEATH TRACKS: 4.13 m

EXTENT OF TOTAL CASING MEASURED PERPENDICULAR TO CENTRELINE OF TRACK: 56.0 m (OVERALL LENGTH)

CENTRELINE OF TRACK TO FACING OF JACKING/RECEIVING PITS: 15.0 m

ANGLE OF PIPE / TRACK CROSSING: 77°

DIRECTION OF FLOW: BI-DIRECTIONAL

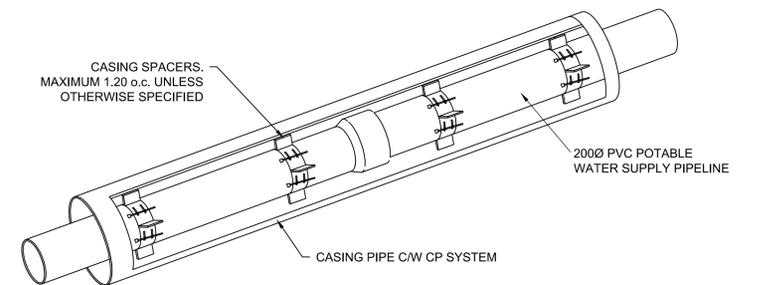
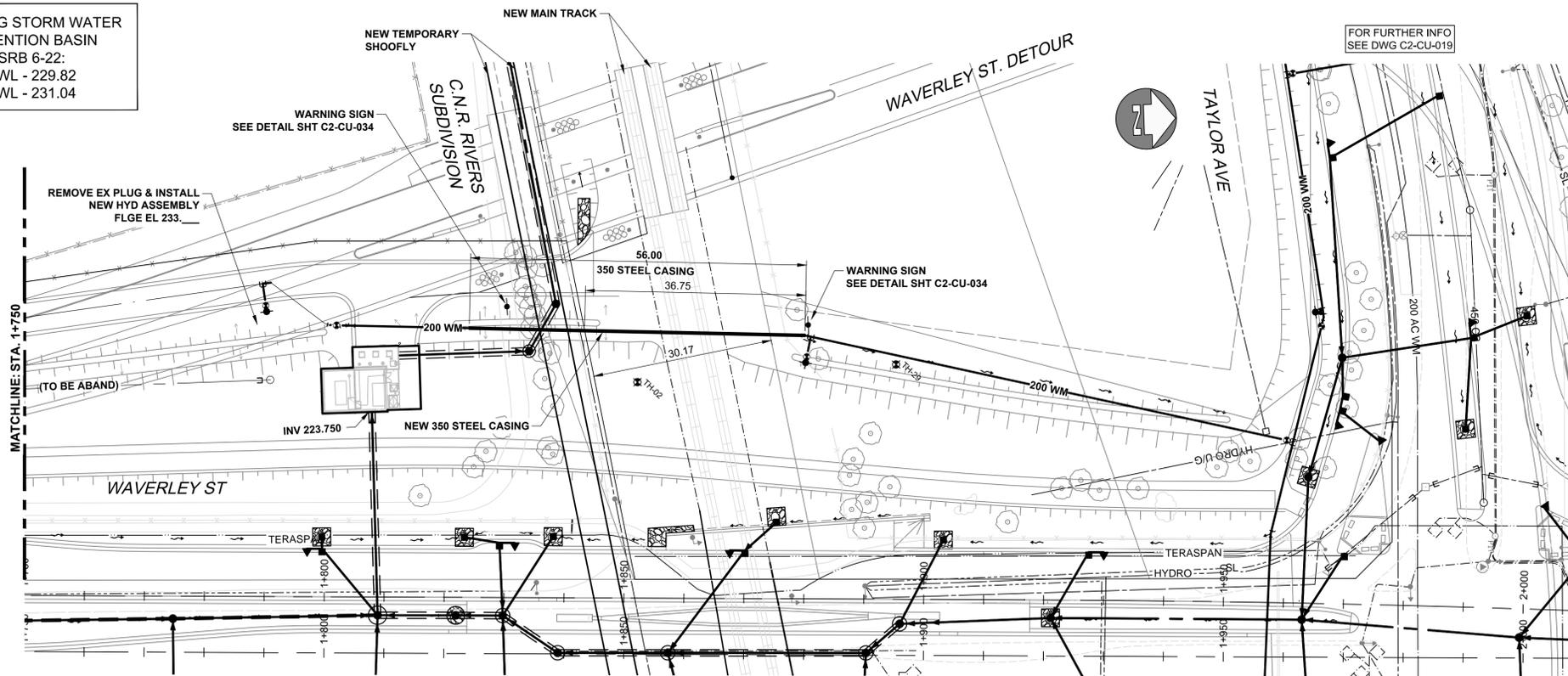
TYPE, SIZE AND SPACING OF INSULATORS OR SUPPORTS: PSI RANGER II MIDI SPACERS WITH 38mm RUNNER HEIGHT 1.2m O.C.

CATHODIC PROTECTION: GEOTECHNICAL BOREHOLES: 6 - 11.5 kg ZINC ANODES
 SOIL TYPE: SEE PROFILE
 BASE OF RAIL TO GROUND WATER: CLAY, N/A

NOTE: INSTALLATION AND MAINTENANCE TO BE IN ACCORDANCE WITH TC E10

CHAINAGE ALONG CL OF WAVERLEY ST

EXISTING STORM WATER RETENTION BASIN
 SRB 6-22:
 NWL - 229.82
 HWL - 231.04



BOTH ENDS OF THE CASING PIPE SHALL BE SEALED AGAINST THE CARRIER PIPE TO PREVENT WATER & SOIL TRANSFER INTO THE ANNULUS. END SEALS SHALL BE WRAP-AROUND STYLE COMPLETE WITH S.S. BANDS FOR BOTH THE CASING & THE CARRIER PIPE CONNECTIONS & BE MANUFACTURED FROM 3.175mm THICK EDPM 60 RUBBER. 3 PRE-PACKAGED ZINC ANODES WELDED TO EACH END OF THE CASING PIPE.

DETAIL
 SCALE: NTS
 CASING DETAIL

WARNING

- IF POWER EQUIPMENT OR EXPLOSIVES ARE TO BE USED FOR EXCAVATION ON THIS PROJECT THE CONTRACTOR MUST:
1. NOTIFY THE GAS COMPANY OF THE PROPOSED LOCATION OF EXCAVATION.
 2. TAKE PRECAUTION TO AVOID DAMAGE TO GAS COMPANY INSTALLATIONS SEE PROVINCIAL REGULATION 210/72 FOR DETAILS.
 3. OBTAIN EXCAVATION PERMITS PRIOR TO CONSTRUCTION.

NOTE: REFER TO LDS STRUCTURE & LOCATION SCHEDULE ON DRAWING C2-CU-035 FOR FURTHER WATER MAIN, HYDRANT, VALVE & FITTINGS INFORMATION

PA:60321148;900-Work\9100-DD CAD;200-SHEETS\Municipal\63353-C2-CU-Waverley-002.dwg

150 WM	WATER MAIN	150 WM	PIPE ABANDONMENTS	150 WM	WATER MAIN	150 WM
⊕	HYDRANT	⊕	SURVEY BAR	⊕	HYDRANT	⊕
⊖	VALVE	⊖	CURB STOP	⊖	VALVE	⊖
300 LDS	LAND DRAINAGE SEWER	300 LDS	REDUCER	300 LDS	LAND DRAINAGE SEWER	300 LDS
250 WWS	WASTE WATER SEWER	250 WWS	COUPLING	250 WWS	WASTE WATER SEWER	250 WWS
SSP	SEWER SERVICE PIPE	SSP	ANODE	SSP	PAVEMENT CROWN	SSP
---	DRAINAGE CONNECTION PIPE	---	HYDRO	---	N/W PROPERTY LINE	---
○	MANHOLE	○	MTS	○	S/E PROPERTY LINE	○
□	CATCH BASIN	□	GAS	□	N/W GUTTER	□
△	CURB INLET	△	TESTHOLE	△	S/E GUTTER	△
▭	CULVERT	▭	LAMP STANDARD	▭		▭
---	EXISTING	---	LEGEND - PLAN	---	LEGEND - PROFILE	---
---	NEW	---	LEGEND - PLAN	---	LEGEND - PROFILE	---

UNDERGROUND STRUCTURES

SUPV. U/G STRUCTURES DATE

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. ELEV.			
0	ISSUED FOR TENDER	17/01/02	KLC
NO.	REVISIONS	DATE	BY

AECOM

DESIGNED BY	MPG	CHECKED BY	
DRAWN BY	KLC	APPROVED BY	
HOR. SCALE	1:500	RELEASED FOR CONSTRUCTION	
VERTICAL	1:100		

ENGINEER'S SEAL

PROVINCE OF MANITOBA

M.P.A. GAUDREAU
 Member
 32167

REGISTERED PROFESSIONAL ENGINEER

CONSULTANT PROJECT NUMBER: 60321148

THE CITY OF WINNIPEG
 PUBLIC WORKS DEPARTMENT

WAVERLEY STREET UNDERPASS AT CN MILE 3.89 RIVERS SUB
 CONTRACT 2: UNDERPASS STRUCTURE, RAILWORKS,
 ROADWORKS, LAND DRAINAGE SEWER, PUMPING STATION
 AND LANDSCAPING WORKS

CITY DRAWING NUMBER: U239-2016-C2-CU-025
 SHEET 25 OF 41

WAVERLEY STREET - PLAN/PROFILE
 WM
 PUMPING STATION ACCESS ROAD

CONSULTANT DRAWING NUMBER: C2-CU-025

BID OPPORTUNITY NO. 473-2016