

D30. DEWATERING AND DRAINAGE DURING CONSTRUCTION

- D30.1 In addition to C6 the Contractor is solely responsible for planning, implementing, maintaining and monitoring an effective dewatering and drainage system for the Site during performance of the Work.
- D30.2 The Contractor is responsible for the control, diversion, storage and pumping of all water including without limitation rain, snow melt, groundwater, leaking infrastructure and water in pipes throughout all stages of the Work.
- D30.3 Be aware, a portion of the Work involves connecting the new land drainage system to portions of the existing Storm Relief Sewer and Pump Station as shown on the contract drawings.
- D30.4 Contractor shall only discharge to the Storm Relief Sewer. The combined sewer system is ineligible to use for discharge.
- D30.5 Do not pump or drain any water containing excessive suspended materials or harmful substances into waterways, sewers or other drainage systems. Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with governing authority's limitations and requirements.
- D30.6 The Contractor shall be responsible for all damages within or outside the Site directly resultant from Contractor's actions, omissions or neglect which may be caused by or which may result from water backing up, flowing through, overflowing or excessive surcharge of drainage systems.
- D30.7 The Contractor shall organize and bear all costs related to the effective dewatering of excavations and all other pumping and drainage necessary for the proper execution of the Work, including keeping the pipes, structures, shafts, excavations and trenches free of undesirable accumulations of groundwater, seepage, surface water, melt water or rainwater.
- D30.8 Keep all swales and sewers free of silt, sand, debris and gravel and remove such deposits as required.
- D30.9 Accept responsibility for any actionable damage, inconvenience or interference caused by the dewatering and drainage operations to the surrounding properties, yards, businesses, fields, houses, other buildings, roads, streets, approaches, driveways, utilities, services or other improvements which may be affected by a lowering or raising of the water table and bear all costs of repair, replacement, reinstatement or alteration of same.
- D30.10 Notwithstanding the requirements outlined in this specification D28, site dewatering may be required following a rain event. Further to D16, if site dewatering is the only task that can take place on the project site it will be limited to one (1) lost Working Day following a significant rainfall event. For this purpose, a Significant Rainfall Event will represent 15mm or more of precipitation as indicated in the Daily Report from Environment Canada Winnipeg A CS weather station at <http://climate.weather.gc.ca>. This one (1) additional Working Day for dedicated site dewatering may be increased in the event of multiple consecutive days of Significant Rain Events, as determined by the Contract Administrator.
- D30.11 Dewatering and drainage during construction will be considered incidental to the Contract and there will be no measurement and payment item for this portion of the Work.

PART E – SPECIFICATIONS

Add: E1.3

Drawing No. Drawing Name/Title

CT-022 Details (2 of 2)

Revise: E13.1 to read:

~~Roadway cannot be removed until the adjacent structural sidewalk is removed and excavated.~~ Excavation of roadway, where adjacent to retaining walls, shall not commence until the structural sidewalk has been removed and the structural excavation noted in the drawings has been performed and confirmed by the Contract Administrator. This excavation between the sidewalk retaining walls and the CPR subway retaining walls is required in order to prevent destabilizing the smaller wall during the roadway construction.

Revise E17.4 to read:

Measurement and Payment

- (a) Hydro Excavation of earthen material will be measured on an hourly basis and paid for at the Contract Unit Price per hour for "Hydro Excavation". The hours to be paid for will be the total number of ~~hours~~ hours of Hydro Excavation in accordance with this Specification, accepted and measured by the Contract Administrator.

Add:

E35. CONTAMINATED MATERIAL

E35.1 Description

E35.1.1 This Specification shall cover the handling of Contaminated Material as identified on the Drawings.

E35.2 Construction Methods

E35.2.1 The Contractor shall follow all construction methods and procedures as outlined in Appendix 'D'.

E35.3 Measurement and Payment

E35.3.1 Contaminated Material will be measured on a weight basis and paid for at the Contract Unit Price per tonne for "Excavation and Disposal" or "Trenchless Material Disposal". The weight to be paid for will be the total number of tonnes of contaminated material excavated and disposed in accordance with this specification and accepted by the Contract Administrator. The Contractor shall provide tipping weigh bills from the licensed treatment facility to the Contract Administrator.

E36. CONTAMINATED MATERIAL HYDRO EXCAVATION

E36.1 Description

E36.1.1 Further to E17 this Specification shall cover the hydro excavation of contaminated materials where exposing utilities is required as indicated by the Contract Administrator or as identified on the Drawings.

E36.2 Construction Methods

E36.2.1 The Contractor shall follow all construction methods and procedures as outlined in E17 and Appendix 'D'.

E36.2.2 The Contractor shall use a separate Hydro Excavation unit when excavating the contaminated material.

E36.2.3 The contaminated material shall be disposed of at an approved location as per Appendix 'D'.

E36.3 Measurement and Payment

E36.3.1 Hydro Excavation of contaminated material will be measured on an hourly basis and paid for at the Contract Unit Price per hour for "Contaminated Material Hydro Excavation". The hours to be paid for will be the total number of hours of Hydro Excavation of contaminated material in accordance with this Specification that the hydro excavation equipment is on site, accepted and measured by the Contract Administrator. There will be no additional payment for the disposal of the contaminated material.

E37. PRE-CAST CONCRETE RECTANGULAR CATCH BASIN

E37.1 Description

E37.1.1 Notwithstanding and in addition to CW 2130, this specification shall cover the supply and installation of Pre-cast Rectangular Catch Basins as shown on the Drawings.

E37.1.1 Materials

E37.1.2 Notwithstanding CW 2130 Clause 2.7 and City of Winnipeg Standard Detail SD-024, the supplied catch basins shall be 1450 mm x 1150 mm Pre-cast Concrete Rectangular Catch Basin Barrel and 1450 mm x 1150 mm Reducer with 610mm x 450mm opening.

E37.2 Construction Methods

E37.2.1 Notwithstanding E37.4, the construction methods shall be as per Clause 3.8 of CW 2130.

E37.2.2 If required, the sidewalk retaining wall footing may need to be notched in order to install the catch basin tight against the sidewalk retaining wall. Notching shall be completed in accordance with E22.

E37.3 Measurement and Payment

E37.3.1 Pre-cast Rectangular Catch Basin installation including hoods, fittings, frame and cover and other accessories and appurtenances will be measured for payment on a unit basis for each catch basin and paid for at the Contract Unit Price for "Pre-cast Rectangular Catch Basin". Number of units to be paid for will be the total number of pre-cast rectangular catch basins supplied and installed in accordance with this specification, accepted and measured by the Contract Administrator.

E37.3.2 Notching of the sidewalk retaining wall footings (if required) shall be measured and paid in accordance with E22.

E38. CAST IN PLACE CONCRETE CATCH PITS

E38.1 Description

E38.1.1 Notwithstanding and in addition to CW 2130 and CW 2160, this specification shall cover the supply and installation of cast-in-place concrete catch pits as shown on the Drawings.

E38.2 Materials

E38.2.1 General

(a) The Contractor shall be responsible for the supply, safe storage, and handling of all materials as set forth in this Specification and in accordance with CW 2160. All materials shall be handled in a careful and workmanship like manner, to the satisfaction of the Contract Administrator.

E38.3 Construction Methods

E38.3.1 Notwithstanding E38.4, construction methods shall be as per Clause 3. of CW 2160.

E38.3.2 If required, the sidewalk retaining wall footing may need to be notched in order to install the catch pit tight against the sidewalk retaining wall. Notching shall be completed in accordance with E22.

E38.4 Measurement and Payment

E38.4.1 Cast in Place Catch Pit installation including fittings, frame and cover and other accessories and appurtenances will be measured for payment on a unit basis for each catch pit and paid for at the Contract Unit Price for "Cast in Place Catch Pit". Number of units to be paid for will be the total number of cast in place catch pits installed in accordance with this specification, accepted and measured by the Contract Administrator.

E38.4.2 Notching of the sidewalk retaining wall footings (if required) shall be measured and paid in accordance with E22.

E39. DRAINAGE CONNECTING PIPE INSULATION

E39.1.1 Description

E39.1.2 This specification shall cover the supply and installation of Drainage Connecting Pipe Insulation as shown on the drawings.

- E39.1.2 Materials
- E39.1.3 The supplied insulation shall be Rigid extruded polystyrene foam insulation in accordance with CSGB Specification 51-GP20M (Type 4).
- E39.1.4 Construction Methods
- E39.1.5 Insulate Drainage Connecting Pipe in accordance with SD-018 for pipe in an excavation at locations shown on the Drawings and where directed by the Contract Administrator.
- E39.1.6 Measurement and Payment
- E39.1.7 Drainage Connecting Pipe insulation will be measured on a length basis and paid for at the Contract Unit Price for "Drainage Connecting Pipe Insulation". Length to be paid for will be the total length of drainage connecting pipe insulation supplied and installed in accordance with this specification, accepted and measured by the Contract Administrator.

DRAWINGS

Replace: 775-2017 _Drawing_GE-002-R0 with 775-2017 _Addendum_1 Drawing_GE-002-R1

775-2017 _Drawing_CT-001-R0 with 775-2017 _Addendum_1 Drawing_CT-001-R1

775-2017 _Drawing_CT-002-R0 with 775-2017 _Addendum_1 Drawing_CT-002-R1

775-2017 _Drawing_CT-007-R0 with 775-2017 _Addendum_1 Drawing_CT-007-R1

775-2017 _Drawing_CT-020-R0 with 775-2017 _Addendum_1 Drawing_CT-020-R1

775-2017 _Drawing_CT-021-R0 with 775-2017 _Addendum_1 Drawing_CT-021-R1

775-2017 _Drawing_CS-023-R0 with 775-2017 _Addendum_1 Drawing_CS-023-R1

775-2017 _Drawing_CS-024-R0 with 775-2017 _Addendum_1 Drawing_CS-024-R1

775-2017 _Drawing_CU-001-R0 with 775-2017 _Addendum_1 Drawing_CS-001-R1

Add: 775-2017 _Drawing_CT-022-R0

APPENDICES

Add: Appendix "D" Remediation Plan and Manitoba Sustainable Development Approval