

**GOVERNMENT OF NEWFOUNDLAND AND LABRADOR
MUNICIPAL WATER, SEWER, AND ROADS SPECIFICATIONS
LIST OF REVISIONS, March 2022**

Section Number	Section	Revision
General	Throughout	Each part and specification section has been updated to unify formatting, update references of Engineer or Consultant to Owner where applicable, correct typos, remove gendered language, and update urls and department names. Additional changes will be listed in this document.
Title Page		Title updated to Municipal Water, Sewer and Roads Master Construction Specifications
Master Table of Contents		<p>Added:</p> <ul style="list-style-type: none"> - New section 01000 Project Specific Specification - Previously missing 02577 Pavement Crack Cleaning & Filling <p>Renamed:</p> <ul style="list-style-type: none"> - 02233 to Selected Granular Base & Sub-Base Materials - 02832 to Wildlife Wire Fences <p>Deleted references to Highway Division website and previously removed specification sections 02502, 02503, and 02504.</p>
Introduction		2022 Committee members updated
User's Guide		<p>Added references to the MERX Pricing Sheets and updated the list of Project Documents.</p> <p>Replaced 'Latest' with '(Consultant to Insert Applicable Date)' in the statement "These Project Documents Have Been Prepared For Use With And Require Being Read In Conjunction With ...".</p> <p>Revisions to the Supplementary Specifications now referred to as the Project Specific Specification.</p>
Schedule of Quantities and Prices		<p>Changes to match corresponding language in individual specification sections. See attached Schedule of Quantities and Prices with Track Changes. Where these changes were made to the spec section, they will be noted below.</p> <p>Deletion of references to the Tender/Bid Form.</p>

MERX Price Table		Changed to match changes to SoQaP. Updated to correct issue with MERX system.
Standard Forms Table of Contents	Table of Contents	Added. Previously listed in Master ToC but was missing.
Standard Drawings	Table of Contents	Added. Previously listed in Master ToC but was missing.
01000	Project Specific Specification	New template section to match requirements and language changes to User's Guide.
01003	Reference Documents	Added: References throughout the Master Construction Specifications to other codes, specifications, standards, guides, legislation, etc. are to the latest version at time of bid solicitation.
01005	General Instructions	Replace 19.1 with: With the exception Parts 14 and 15, no separate or direct payment will be made for work as outlined in this specification. Parts 14 and 15, if required, will be included as pay items in the Schedule of Quantities and Prices either under this specification or 01020 as indicated. Costs of all other work specified in this section is deemed to be included in the lump sum and unit prices quoted in the Schedule of Quantities and Prices.
01010	Mobilization & Demobilization	Replace 2.2 with: The unit price for this item, in the Labrador portion of the Province, shall not be greater than 10% of the initial contract price including this item but not including HST. For projects north of Cartwright the unit price for this item shall not be greater than 15% of the initial contract price including this item but not including HST.
01015	Materials & Equipment Delivered to Site	Change 2.2 to: Pipes, fittings and pre-cast maintenance holes not incorporated in the work, up to quantities specified in the Schedule of Quantities and Prices, shall be purchased by the Owner at the invoiced price from the supplier plus 10%, or return costs shall be paid by the Owner at the rate of 15% of the contract unit price plus transportation at cost (ie Force Account without mark-ups) to the Contractor's closest storage facility. Items that cannot be returned to the supplier MUST be noted before tender closing to the Owner's Representative (with the approximate cost) and the Owner's Representative will issue an amendment instructing

		on how payment is to be made for unused (full) lengths.”
01320	Standby Compensation	In 4.1. after ‘complete with change order’ add: signed by the Regional Engineer
01370	Schedule of Values	Rename Part 2: Form of Submittal Replace 4.2 with: Submit applications for payment on a monthly basis in accordance with Article A-4 of the Agreement, General Conditions of Unit Price Contract, Section GC20 - Application for Payment and Section GC 21 - Certificates and Payments. These monthly progress applications shall consist of one (1) type written copy of the Contract Payment Certificate, Detail Sheets for Unit Price Contract (if applicable), Materials on Site forms, Testing and Re-instatement Allowance form, Reinstatement Certificate, Force Account Forms, and any other such forms as will be required by the Owner. Proposed change orders that have not been signed by the Regional Engineer shall not be included for payment until they are approved. These monthly certificates shall be signed by the Contractor prior to submission for payment.
01400	Quality Control and Testing Laboratory Services	Replace Part 1.1 with: The Owner’s authorised representative will approve and the Owner shall pay for services of testing laboratory outside of this contract except for the following: - 1.1.1 through to 1.1.5 to remain the same.
01545	Safety Requirements	Delete 1.3.2. Renumber 1.3.3 as 1.3.2.
01560	Environmental Requirements	In 1.3 replace ‘Contractor’ with ‘Owner’s Representative’. Add 3.4: The Contractor shall obtain and pay for burning permits from Authority Having Jurisdiction. In 11.7 replace ‘DFO’ with ‘Authorities Having Jurisdiction’ Replace 11.17 with: A copy of all permits shall be kept on the Work Site for the duration of the Contract, and shall be made available upon request of an inspector designated to act on behalf of the Department or an employee of an Authority Having Jurisdiction.

		<p>In 13.2 replace references to 'Department of Service NL' with 'Authority Having Jurisdiction'</p> <p>Delete 13.9 through to the end of Part 13 inclusive.</p>
01580	Project Signs & Sign Supports	<p>Change first paragraph to: This specification outlines the requirements for the installation of a project sign in location on or near the site of the work. The location of the sign is to be determined by the Owner and is to be installed in the first week that the Contractor's personnel mobilizes to site prior to any other work being performed. A photo is to be submitted to the Department immediately."</p> <p>Change 1.1.3 to: Project sign is to be supplied by the Contractor and to be 1.22 m x 2.44 m (or otherwise approved by the Regional Engineer). It is to be made of Dibond or 13 mm plywood only."</p> <p>Delete 2.2</p>
01582	Sign and Signpost Installations	<p>Delete 2.6.1 and 2.6.2. Renumber 2.6.3 as 2.6.1.</p> <p>Replace 3.7.3 with: On Types A and Types B signposts, the top and bottom lag bolts must be placed 100 mm from the top and bottom edges of the sign board. Refer to appropriate Sign and Signpost Installation drawings as listed in the Standard Drawings Table of Contents.</p> <p>5.1 with: Payment at the contract price for sign and signpost installation of a particular type shall be compensation in full for all labour, handling, materials and equipment used, assembly and installation, painting, excavating and backfilling of a hole for the footing including compaction of the backfill, installing the sign board and the disposal of all surplus material in accordance with this specification, including the ongoing maintenance of signs.</p>
01600	Material and Equipment	<p>Remove Part 1 in front of References and renumber all subsequent parts. i.e. Part 2 Manufacturers' Instructions is now Part 1.</p> <p>Delete last sentence from renumbered Part 1.2.</p>
01610	Force Account Payment	<p>In 1.3 replace 'Board and Lodging' with 'Accommodations at a licenced establishment'</p>

01700	Contract Close-Out	Add 1.2.7 Commissioning Manuals
01720	Project Record Documents	Add to 2.3 the items 'MI Project Number' and 'Owner' Delete 2.7 Add to 3.1 the items 'MI project number; and 'Owner' In Part 5 replace 'AutoCAD 2012 or higher format' with 'AutoCAD 2012 or earlier format'
Division 2	Table of Contents	Add sections 02547, 02577, and 02832.
02104	Landscaping, Seeding, Sodding & Tree Preservation	Replace 1.5.4 with: Shrub and tree preservation will be measured by the each and as detailed on the contract documents.
02111	Clearing & Grubbing	Delete 1.2.1.6 Replace 1.2.2 with: Clearing and grubbing isolated trees, to a depth of 150 mm, will be measured by the each and as detailed on the contract documents.
02202	Rock Removal	Add 1.2.3: Rock removal shall be measured and paid in accordance with the applicable rock excavation sections of 02215, 02223, or 02224. Replace 3.2 with: No separate or direct payment will be made for work as outlined in this specification. Costs of all work specified is deemed to be included in the lump sum and unit prices quoted in the Schedule of Quantities and Prices.
02224	Roadway Excavation, Embankment & Compaction	Rename 1.1.1 as: Mass Rock Excavation Rename 1.1.2 as: Mass Common Excavation
02233	Selected Granular Base Course	Renamed section: Selected Granular Base & Sub-Base Materials. Replace references to section name throughout. Add to References: Government of Newfoundland and Labrador, Department of Transportation and Infrastructure (TI), Highway Design and Construction Division Specifications

		<p>Replace last sentence of 1.1.2 with: 'Owner shall indicate in the tender documents if tickets are required.'</p> <p>Updated 2.1.5.1 and 2.1.6.1 Class A and Class B specifications to match Highways specifications book.</p>
02271	Armour Stone Protection	<p>Delete from 2.1.3: weight, or of a</p> <p>In 3.1.3 replace 'clam a' with clam bucket as'</p>
02272	Gabions	In 2.4.1 replace 'authority' with 'Owner'
02282	Supply & Installation of Guide Rails	<p>Delete last sentence from first paragraph.</p> <p>Reorganize 1.1.3 and 1.1.4 requirements into list form.</p> <p>Move header reference to Sloped and Buried Guide Rail End from 1.1.5 to 1.1.4.</p> <p>Delete from 2.1.2: on a drawing or supplementary general condition</p>
02283	Salvage & Reinstallation of Guide Rail	Replace 1.1.1 with: Measurement for payment for the Salvage and Reinstallation of Guide Rail, whether installed on New or Salvaged Posts, shall be the length of the reinstalled guide rail placed within the limits designated by the Owner, measured in metres, rounded to one decimal place, measured end to end along the face of the railing and terminal sections.
02434	Pipe Culverts	<p>In 1.1.1 replace 'type' with 'thickness'</p> <p>In 1.1.2 replace 'for road culverts' with 'for road and driveway culverts'</p> <p>Delete 1.1.3 and renumber subsequent items.</p>
02481	Channel Excavation, Cleaning & Deepening	Rename 'Part 3 - Excavation' as 'Part 3 Execution'
02528	Concrete Walks, Curbs & Gutters	Add 'Concrete' to the end of name '3.1 Grade Preparation'
02547	Asphalt Tack Coat	Add new section replacing a previously removed section of the same name
02252	Hot Mix Asphaltic	Add 2.3: Asphaltic Concrete Base and Surface Course as well as Adjustments will be paid by the tonne.

	Concrete Pavement	Add 2.4: Asphaltic Concrete Walkways and Ditches will be paid for by the linear meter for the various thicknesses and widths outlined in the Schedule of Quantities and Prices.
02574	Reshaping & Patching Asphalt Pavement	In 1.1.9 replace last sentence with: All other asphalt work (as determined by the Owner) will be paid by the tonne in accordance with Section 02552.
02577	Pavement Crack Cleaning & Filling	Add new section replacing a previously removed section of the same name
02580	Pavement Markings	Add to References: Government of Newfoundland and Labrador, Department of Transportation and Infrastructure (TI), Highway Design and Construction Division Specifications In 3.2.8.3 replace 'removing the paint off the private property' with 'removing the paint off the private or public property' In 3.2.9.2 replace 'the Owner's Central Laboratory' with 'a laboratory'
02601	Maintenance Holes, Catch Basins & Ditch Inlets	Add new 1.1.2.1: 2 m or less. Shift numbering of subsequent items to accommodate. Add 1.1.2.9: Greater than 6 m but not more than 6.5 m Reorganize 1.1.3, 1.1.4, 1.1.5, and 1.1.6 to match SoQaP
02650	Sewage Pumping Station	In 1.1.1 and 1.1.2 replace 'Supplementary Conditions' with 'Project Specific Specification' In 2.6.2.2.2 correct an error in displaying the fraction $\frac{1}{2}$.
02702	Sewer Mains	Renumber 1.2.5 through 1.2.12 to align with SoQaP. <u>2021 becomes in 2022</u> .5 .6 .6 .7 .7 .9 .8 .10 .9 .11 .10 .12 .11 .5

		<p>.12 .8</p> <p>Then deleted from 1.2.8 the sentence ‘Measurement for a CCTV inspection of watermain shall be measured in metres on the ground surface along the centreline of the watermain from the valve pit entry point to the valve pit exit point or termination of the cement mortar lining.’</p> <p>Delete 1.2.12 ‘Connecting to existing sewer stubs will be measured by each such connection.’</p> <p>Add new 1.2.11: Locating and connecting to existing sewer mains will be measured by each such connection. Renumbered previous 1.2.11 as 1.2.12.</p> <p>Add: 1.3 Scheduling of Work</p> <p>.1 Schedule Work to minimize interruptions to existing services.</p> <p>.2 Maintain existing sewage flows during construction.</p> <p>.3 Submit schedule of expected interruptions to the Owner for approval and adhere to approved schedule.</p> <p>In 3.7.2 replace “Prior to TV inspection” with “Prior to video or photo CCTV inspection”</p> <p>In 3.8.2 replace first paragraph with: Media storage and report presentation shall be cloud based unless prior approval is granted by the Department. All software will be NASSCO import/export certified (refer to www.nassco.org for a full list of compatible software).</p> <p>In 3.8.2 replace second paragraph with: Digital storage device (if approved) will be a minimum USB 2.0 or higher compatibility shall be placed inside envelopes with labels displaying the following information:</p> <ul style="list-style-type: none">- List of items 3.8.2.1 through 3.8.2.6 remains unchanged <p>Replace 3.8.3 with: .3 Inspection Report</p> <p>.1 The report shall include a standard cover sheet showing the following:</p> <ul style="list-style-type: none">- .1 Location- .2 Performed By
--	--	---

		<ul style="list-style-type: none">- .3 Date- .4 Contractor <p>.2 The report shall include a completed Index Page with the headers: Street Name From M.H. No. To M.H, No. Page No.</p> <p>.3 Whether inspected at the same time or not, the complete report will be presented together, from upstream to downstream maintenance hole.</p> <p>.4 For video inspection results and findings the heading will state:</p> <ul style="list-style-type: none">- .1 the street name- .2 the maintenance hole numbers applicable to this section- .3 the reference drawing number- .4 prevailing weather on the day of the inspection- .5 statement of soil condition in area of inspection, eg., dry, wet, saturated, frozen- .6 the date of the inspection <p>.5 The key plan will consist of a small drawing (not to scale) showing the appropriate location of the two maintenance holes in relation to any nearby reference points such as houses (with corresponding civic numbers), telephone poles (with corresponding pole numbers), etc. This drawing will denote:</p> <ul style="list-style-type: none">- .1 the maintenance hole numbers- .2 the horizontal distance between the maintenance holes- .3 the direction of sewer flow <p>.6 The report shall include photographs of:</p> <ul style="list-style-type: none">- .1 pipe joints that display gaps, spread, or offset;- .2 signs of infiltration; protruding service lines; crushed, broken or cracked pipe;- .3 variance of the grade of the pipe section; and- .4 gravel or debris or other blockages which may impede flow. <p>.7 All photographs will labelled and have a corresponding labelled description for the photograph.</p> <p>.8 All photographs will be numbered in order. This number will appear beside them and will be the same number referred to in the description.</p> <p>.9 The last page of the report will consist of an area sewer plan to scale, showing the street inspected for the report and applicable maintenance numbers.</p>
--	--	--

		<p>.10 Typical Key Plan Templates for Inspection Report DEPARTMENT PROJECT NO.: MUNICIPALITY: STREET NAME: FROM MH# TO MH# REFERENCE DRAWING: LINE SECTION LENGTH: DATE: PIPE SIZE: WEATHER CONDITION: PIPE MATERIAL: PIPE SECTION LENGTH: PIPE MATERIAL TYPE:</p> <table border="1" data-bbox="711 632 1458 890"> <thead> <tr> <th data-bbox="711 632 859 852">SKETCH</th> <th data-bbox="859 632 1008 852">LINE LENGTH (M)</th> <th data-bbox="1008 632 1157 852">PHOTO #</th> <th data-bbox="1157 632 1307 852">TAPE REFERENCE (HOURS, MINUTES)</th> <th data-bbox="1307 632 1458 852">OBSERVATIONS</th> </tr> </thead> <tbody> <tr> <td data-bbox="711 852 859 890"></td> <td data-bbox="859 852 1008 890"></td> <td data-bbox="1008 852 1157 890"></td> <td data-bbox="1157 852 1307 890"></td> <td data-bbox="1307 852 1458 890"></td> </tr> </tbody> </table> <p>Replace 3.8.4 with: Digital photograph files shall meet or exceed a resolution of at least 800 x 600 pixels.</p> <p>Delete from 3.8.6 the sentence: Cooling and heating units shall be independent from the main vehicle engine and in good working order.</p> <p>Delete 3.8.21.3</p>	SKETCH	LINE LENGTH (M)	PHOTO #	TAPE REFERENCE (HOURS, MINUTES)	OBSERVATIONS					
SKETCH	LINE LENGTH (M)	PHOTO #	TAPE REFERENCE (HOURS, MINUTES)	OBSERVATIONS								
02704	Sanitary Sewer Outfall Pipe	<p>Add to References under CSA Group:</p> <ul style="list-style-type: none"> - Z275.4 Competency Standard for Diving, Hyperbaric Chamber, and Remotely Operated Vehicle Operations - Z275.2 Occupational Safety Code for Diving Operations <p>Delete 1.1.5</p> <p>Add 1.7.6: Underwater Video and/or Photo Inspection will be measured by lump sum.</p> <p>Add new 3.5: 3.5 UNDERWATER VIDEO AND/OR PHOTO INSPECTION</p> <p>.1 Safety The underwater diving and preparation operations are to meet all the safety codes for diving practices both for the Federal and Provincial governing bodies,</p>										

		<p>including “The Occupational Health & Safety Regulations, 2012 , NL” and the Occupational Safety Code for Diving Operations CAN/CSA - Z275.4 & CAN/CSA - Z275.2.</p> <p>All divers and attendants are to be certified by the applicable regulatory body. Diving Contractors are responsible to ensure that all divers, employees and equipment are certified and capable of performing the work described herein.</p> <p>Prior to any diving inspection, the diving Contractor shall provide a safe work operating procedure & execution plan that shall be suitable to the Owner and applicable safety regulations.</p> <p>The safe work & execution plan shall include, but not be limited to:</p> <ul style="list-style-type: none">- 1. working around bodies of water;- 2. boating safety and operator shall hold a valid license;- 3. all worker(s) travel from shoreline to dive location;- 4. diver and boat positioning/communication plan while underwater;- 5. worker rescue & emergency response plan, including a plan to address the primary transport/rescue boat having mechanical issues during underwater operations;- 6. notification to the closest hyperbaric chamber facility to make the facility aware of the dive in the event of an emergency;- 7. dive tables;- 8. harbour/river traffic management plan;- 9. a dive schedule explaining the scope of the work;- 10. confirmation/certificates that all divers and attendants are certified by the applicable regulatory body;- 11. all equipment is calibrated, certified and capable of performing the work described herein;- 12. a water sample confirming the presence and quantity of, if any, fecal chloroforms if deemed necessary. <p>Contractor shall also have their job hazard analysis (JHA) for the site and specific task(s). The JHA shall be suitable to the Owner, work crew, and conform to all applicable safety regulations prior to commencing work.</p>
--	--	--

.2 Inspection

In general the diving Contractor shall provide the following:

- 1. A colour video monitor and a clear two-way radio communication system that will enable the Owner to communicate with the divers during the inspection operation.
- 2. A narrated colour video inspection of the above mentioned work. Marine growth shall be removed from the sample area and other areas where problems are suspected, prior to the video being taped at the Owner's discretion. The narration will clearly describe the location that the diver is inspecting. In particular, at locations where ice damage, scour, deterioration, corrosion, cracks, or any other distress exists in piling, pier caps, connections, concrete decking, or any other component of the structure, the location will be carefully and accurately recorded as the video is taken.
- 3. Colour still photographs are required for all areas showing any signs of distress in the structure, such as ice damage, corrosion, cracks, pile uplift/deterioration, and scour or undermining of the foundations. Photographs shall be numbered and corresponding to the number of the defect on the "Defect Map" in section 4.
- 4. A defect map showing all problem areas shall be provided showing the size, extent and location of the distress.
- 5. One electronic and one paper copy of a detailed report pertaining to the inspection will be submitted no later than two (2) weeks after completion of the work to the Owner. Included with the report will be one electronic and one USB drive copy of the narrated color video and photos of the inspection. This report will contain plans with detailed measurements, tables, color still photographs, a detailed discussion of the condition of the structure and its' components, and any other information deemed necessary by the Owner to produce a clear and concise report which thoroughly describes the condition of the structure.

.3 Diving Report

		<p>The report format to be as follows:</p> <ul style="list-style-type: none"> - Cover sheet - Index - Preliminary data (location of inspection, climate and water conditions) - Abstract - Personnel - Method of inspection - Findings - Summary - Photographs with location plans - Drawings/Attachments <p>The Contractor shall submit a draft report for review by the Owner. Once the draft report is accepted by the Owner with no further changes, the report can be finalized and submitted as a final report.</p> <p>Renumber previous 3.5 as 3.6</p>
02713	Water Mains	<p>Replace 1.4.11 with: Concrete for bedding, thrust blocks, encasement of pipes, supports and cut-off walls will be measured in accordance with Section 03300.</p> <p>Add 1.4.12: Joint restraints, combination air release – vacuum relief valves, valve box extensions, and adjustments to existing valve boxes to grade will be measured by the each.</p> <p>To 2.1.4 add header: Polyethylene pressure pipe</p> <p>In 2.5.1 replace “Provincial Fire Marshall approved” with “FM approved”</p> <p>In 2.5.2 replace “St. John’s standards” with “local standards”</p> <p>Replace 3.7.10 with: Test chambers for infiltration and exfiltration in accordance with Section 02601.</p>
02726	Factory Pre-insulated Piping Systems	<p>Replace 1.1.5 with: Concrete for bedding, encasement of pipes, supports and thrust blocks will be measured in accordance with Section 03300.</p> <p>Replace 1.1.6 with: Granular bedding and surround material will be measured in cubic metres in accordance with Section 02223.</p>

		<p>Replace 3.4.1 with: Place bedding and surround material as indicated on contract drawings and in accordance with Section 02223.</p> <p>Replace 3.5.1 with: Install pipe in accordance with Section 02713, Section 02702, Section 02704, or Section 02724.</p>
02729	Water Wells	<p>Add new 1.2.3 and renumber subsequent items: Supply and install of drive shoes will be measured by the number of each size installed.</p> <p>In 2.2.3 replace “12 inch” with “300 mm” and “5 ft” with “1.5 m”</p> <p>In 3.8.2 replace “150 feet/second” with “46 m/s”</p> <p>In 3.8.4 correct an error in displaying the fractions $\frac{1}{4}$, $\frac{1}{2}$, and $\frac{3}{4}$.</p>
02831	Chain Link Fences & Gates	Add new 1.2 and renumber subsequent items: Supply and install of barb wire and brackets will be measured in metres.
02832	Wildlife Wire Fence	<p>Rename section as: Wildlife Wire Fence</p> <p>Add new section replacing a previously removed section named Farm Wire Fences</p>
03300	Cast-in-place Concrete	Replace 3.8.1 with: Inspection and testing of concrete and concrete materials will be carried out by a Testing Laboratory in accordance with CSA A23.1-14/A23.2-14 and the Owner’s authorized representative will approve and the Owner shall pay for services of testing laboratory outside of this contract.
03306	Underwater Concreting	<p>Add 1.2.3: Underwater Video and/or Photo Inspection will be measured by lump sum</p> <p>Add 3.7 and renumber previous 3.7 as 3.8: 3.7 UNDERWATER VIDEO AND/OR PHOTO INSPECTION .1 Underwater video and/or photo inspection as per Section 02704</p>
Dwg 04060	Concrete Headwall for Sewer or Culvert Pipe	Change note 1 to: Class of Concrete Class: 25 MPa
Dwg 04100	Concrete Sidewalk	Removed reference to Dwg 04150

Dwg 04130	Concrete Sidewalk Adjacent to Curb and Cutter	Removed reference to Dwg 04150
Dwg 04560	Hydrant Connection	Change note 2 to: Concrete shall be 25 MPa
Dwg 04600	Watermain Thrust Blocks B	Change note 1 to: Concrete for Thrust Blocks to be 25 MPa
Dwg 04650	Typical Cross Section - Municipal Road	New Drawing. Asphalt thickness – 60mm: Class A – 100 mm; Class B (if required) – 150 mm
Forms	General	All forms were updated for consistency, formatting, Department and Division name, minor updates to match other documents, and for ease of making fillable pdfs.
Form 7	Testing and Reinstatement Allowance	Added references to the specification sections in the table for Testing Allowance
Form 15	Contract Payment	Added MI Project Number, Contractor Invoice #, and *contractor's invoice must be attached to headers. Altered cells for Change Order values and added a place for Revised Subtotal (Not Including HST). Added locations for: Date of Substantial, question on Holdback release. Reorganized calculation table to include location for Reinstatement Allowance and Deficiencies (x2) value.

Track Changes
Not for Contract Use

Schedule of Quantities and Prices

[THIS PAGE INTENTIONALLY LEFT BLANK]

Track Changes
Not for Contract Use

The quantities set out in this schedule are estimated quantities only and are not to be taken as final quantities by the Contractor. The unit prices bid shall include all labour, plant, materials, overhead, duties, and profit and all other obligations and liabilities under the contract. Do not include taxes in unit or lump sum prices, taxes due are to be added on the last page of this schedule as indicated on the bottom. Totals shall be determined by multiplying the quantity by the tendered unit price.

<u>SECTION</u>	<u>DESCRIPTION</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT PRICE</u>	<u>TOTAL</u>
----------------	--------------------	-------------	-----------------	-------------------	--------------

DIVISION #1

01005 Maintain Existing Piped Services

1. Maintain Existing Water System <u>(Part 14.2)</u>	L.S.	Unit	_____	_____	_____
2. Maintain Existing Sewer System <u>(Part 15.1)</u>	L.S.	Unit	_____	_____	_____

01010 Mobilization & Demobilization

(not greater than 5% if on the Island, or 10% if in Labrador, or 15% north of Cartwright, of Sub-Total item a Before HST "sub-total" on last page)

	L.S.	Unit	_____	_____	_____
--	------	------	-------	-------	-------

01020 Cash Allowance (to be entered by Consultant)

1. Pole Relocation/Shoring/Bracing		Allowance	_____	_____	_____
2. Contribution in Aid (Hydro/Utilities)		Allowance	_____	_____	_____
3. Supply of Water (Section 01005 <u>Parts 14.1 & 14.3</u>)		Allowance	_____	_____	_____
4. Supply of Sewer Service (Section 01005 <u>Part.15.2</u>)		Allowance	_____	_____	_____
5. Overhaul		Allowance	_____	_____	_____
6. Other (Specify)		Allowance	_____	_____	_____
7. Overhaul		m ³ km	_____	_____	_____
8. Fuel Adjustment		Allowance	_____	_____	_____
9. Liquid Asphalt (SGC #71)		Allowance	_____	_____	_____
10. Petroleum Products Cost (SGC #93)		Allowance	_____	_____	_____
10-11. Excavation for Geotechnical as Directed by Owner Allowance		Allowance	_____	_____	_____

01500 Temporary Facilities

1. Consultant Site Office	L.S.	Unit	_____	_____	_____
---------------------------	------	------	-------	-------	-------

01560 Environmental Requirements

1. Silt Fence	m	_____	_____	_____	_____
---------------	---	-------	-------	-------	-------

01570 Traffic Regulations

1. Flag persons Wages	Hour	_____	_____	_____	_____
2. Traffic Control	L.S.	Unit	_____	_____	_____

SECTION DESCRIPTION UNIT QUANTITY UNIT PRICE TOTAL

01580 Projects Signs & Signposts & Installation

1. Project Sign (drawing 04010) L.S. Unit _____

01582 Sign and Signpost Installations

1. Type A - X (specify sign) Each _____
 Type B - X (specify sign) Each _____
 Type C - L/W (specify sign) Each _____
 Type D - L/W (specify sign) Each _____
 2. Other Signs Each _____

01710 Reinstatement and Cleaning

1. Fencing m _____
 2. Ditching m _____
 3. Remove, Relocate and/or Reinstall Culverts m _____
 4. Other Structures (specify) Specify _____
 5. Manual Seeding m² _____
 6. Temporary Cover for Seed Protection m² _____
 7. Hydraulic Seeding & Mulching m² _____
 8. Terraseeding m² _____
 9. Supply & Placing Topsoil m² _____
 10. Supply & Placing Agricultural Limestone m² _____
 11. Supply & Application of Fertilizer m² _____
 12. Supply & Placement of Sods m² _____

SECTION DESCRIPTION UNIT QUANTITY UNIT PRICE TOTAL

DIVISION #2

02070 Sitework, Demolition & Removal of Structures

1. Removal of Concrete Base m² _____
 2. Removal of Concrete Pavement m² _____
 3. Removal of Asphalt Covered Concrete Pavement m² _____
 4. ~~Removal of Concrete Sidewalk~~ m² _____
 4.5. Removal of Curb & Gutter m _____
 5.6. Removal of Catch Basins, Maintenance Holes & Ditch Inlets Each _____
 6.7. Removal of Fences m _____
 7.8. Removal of Guide Rails m _____
 8.9. Removal of Sanitary Sewers m _____

SECTION	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
9-10.	Removal of Water Lines	m	_____	_____	_____
10-11.	Removal of Culverts	m	_____	_____	_____
11-12.	Removal of Storm Sewers	m	_____	_____	_____
12-13.	Removal of Bridges	Each	_____	_____	_____
13-14.	Removal of Mass Concrete	m ³	_____	_____	_____
14-15.	Removal of Asbestos Cement Pipe	m	_____	_____	_____
15-16.	Removal of Other Items	Specify_____	_____	_____	_____
<u>02104</u>	<u>Landscaping, Seeding, Sodding & Tree Preservation</u>				
1.	Manual Seeding	m ²	_____	_____	_____
2.	Temporary Cover for Seed Protection	m ²	_____	_____	_____
3.	Hydraulic Seeding & Mulching	m ²	_____	_____	_____
4.	Terraseeding	m ²	_____	_____	_____
5.	Supply & Placing Topsoil	m ²	_____	_____	_____
6.	Supply & Placing Agricultural Limestone	m ²	_____	_____	_____
7.	Supply & Application of Fertilizer	m ²	_____	_____	_____
8.	Supply & Placement of Sods	m ²	_____	_____	_____
9.	Shrub & Tree Preservation	Each	_____	_____	_____
<u>02111</u>	<u>Clearing & Grubbing</u>				
1.	Clearing	ha	_____	_____	_____
2.	Grubbing	ha	_____	_____	_____
3.	Clearing and Grubbing	ha	_____	_____	_____
4.	Close Cut Clearing	ha	_____	_____	_____
5.	Underbrush Clearing and Grubbing	ha	_____	_____	_____
6.	Isolated Trees Clearing and Grubbing	Each	_____	_____	_____
<u>02215</u>	<u>Site Work & Site Grading</u>				
1.	Mass Rock Excavation	m ³	_____	_____	_____
2.	Mass Common Excavation	m ³	_____	_____	_____
3.	Imported Mass Common Backfill	m ³	_____	_____	_____
4.	Supply, Placing & Spreading Topsoil	m ²	_____	_____	_____
<u>02223</u>	<u>Excavation, Trenching & Backfilling</u>				
1.	Main Trench Excavation				
1.	Rock	m ³	_____	_____	_____
2.	Common	m ³	_____	_____	_____
2.	Service Trench Excavation				
1.	Rock	m ³	_____	_____	_____
2.	Common	m ³	_____	_____	_____
<u>3.</u>	Imported Common Backfill	m ³	_____	_____	_____

SECTION	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
3.4.	Sheeting & Bracing Left in Place	m ²	_____	_____	_____
4.5.	Granular Pipe Bedding				
1.	Type 1	m ³	_____	_____	_____
2.	Type 2	m ³	_____	_____	_____
3.	Type 3	m ³	_____	_____	_____
3.1	Type 3 Imported	m ³	_____	_____	_____
5-6.	Rock Under-Bedding	m ³	_____	_____	_____
6-7.	Trucking, Handling, Stockpiling, Filling, and Conditioning, and Reuse of Wet Common Material	m ³	_____	_____	_____
7-8.	Supply & Placement of Marking Tape				
1.	Plastic Tape	m	_____	_____	_____
2.	Metallic Tape	m	_____	_____	_____
02224	Roadway Excavation, Embankment & Compaction				
1.	Mass Excavation & Backfill				
1.	Rock	m ³	_____	_____	_____
2.	Common	m ³	_____	_____	_____
2.	Imported Backfill				
1.	Rock	m ³	_____	_____	_____
2.	Common	m ³	_____	_____	_____
3.	Placing & Spreading Topsoil	m ²	_____	_____	_____
02231	Scarifying & Reshaping				
1.	Scarifying & Reshaping incl. Compaction	m ²	_____	_____	_____
02232	Reshaping Only (up to 100 mm)				
1.	Reshaping up to 100 mm incl. Compaction	m ²	_____	_____	_____
02233	Selected Granular Base & Sub Base Materials				
1.	Class "A" Granular Base	m ³	_____	_____	_____
2.	Class "B" Granular Sub-Base	m ³	_____	_____	_____
02250	Calcium Chloride				
1.	Calcium Chloride	tonne	_____	_____	_____
02270	Rip-Rap Protection				
1.	Rip-Rap Hand Laid Dry Wall	m ³	_____	_____	_____
2.	Rip-Rap Hand Laid with Sod	m ³	_____	_____	_____
3.	Rip-Rap Grouted	m ³	_____	_____	_____
4.	Rip-Rap Random	m ³	_____	_____	_____

SECTION	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
<u>02271</u>	<u>Armour Stone Protection</u>				
1.	Supply & Placement of Armour Stone (size X)	t or m ³	_____	_____	_____
2.	Supply & Placement of Armour Stone (size Y)	m ³	_____	_____	_____
4-3.	Supply & Placement of Armour Stone (size Z)	m ³	_____	_____	_____
<u>02272</u>	<u>Gabions</u>				
1.	Supply & Placement of Gabions incl. Fill by Hand (wire type)	m ³	_____	_____	_____
<u>02282</u>	<u>Supply & Installation of Guide Rail</u>				
1.	Standard Type Guide Rail	m	_____	_____	_____
2.	Guide Rail with Additional Posts	m	_____	_____	_____
3.	Type "A" Guide Rail	m	_____	_____	_____
4.	Type "B" Guide Rail	m	_____	_____	_____
5.	Sloped & Buried Guide Rail Section	Each	_____	_____	_____
<u>02283</u>	<u>Salvage & Reinstallation of Guide Rail</u>				
1.	Salvage & Reinstallation of Guide Rail				
1.	On New Posts	m	_____	_____	_____
2.	On Salvaged Posts	m	_____	_____	_____
<u>02284</u>	<u>Handrail</u>	m	_____	_____	_____
<u>02410</u>	<u>Sub-Drains</u>				
1.	Supply & Placement of Bedding Gravel	m ³	_____	_____	_____
2.	Supply & Placement of Granular Filter Material	m ³	_____	_____	_____
3.	Supply & Placement of Sub-Drains (size)	m	_____	_____	_____
<u>02434</u>	<u>Pipe Culverts</u>				
1.	Supply & Placement of Pipe Culvert (size) (thickness) (type)	m	_____	_____	_____
2.	Supply & Placement of Cut-off Collars	Each	_____	_____	_____
3.	Supply & Placement Prefab. End Sections	Each	_____	_____	_____
4.	Supply & Placement of Debris Racks	Each	_____	_____	_____
5.	Supply & Placement of Concrete Head Walls	m ³	_____	_____	_____
<u>02481</u>	<u>Channel Excavation, Cleaning & Deepening</u>				
1.	Channel Excavation				
1.	Rock	m ³	_____	_____	_____
2.	Common	m ³	_____	_____	_____
2.	Cleaning & Deepening of Existing Channels	m	_____	_____	_____

SECTION	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
<u>02496</u>	<u>Timber Crib work</u>				
1.	Timber Cribwork	m ³	_____	_____	_____
<u>02528</u>	<u>Concrete Walk, Curb & Gutters</u>				
1.	Supply & Place Granular Base Material	m ³	_____	_____	_____
2.	Concrete Walks (width) (thickness)	m	_____	_____	_____
3.	Combined Curb & Sidewalk (width) (thickness)	m	_____	_____	_____
4.	Driveway Ramps				
1.	With Curb, (width) (thickness)	m	_____	_____	_____
2.	Without Curb, (width) (thickness)	m	_____	_____	_____
5.	Curb & Gutter	m	_____	_____	_____
6.	Curb	m	_____	_____	_____
<u>02547</u>	<u>Asphalt Tack Coat</u>				
1.	Supply & Placement of Asphalt Tack Coat	m ²	_____	_____	_____
<u>02552</u>	<u>Hot Mix Asphalt Concrete Paving</u>				
1.	Asphaltic Concrete				
1.	Base Course	tonnes	_____	_____	_____
2.	Surface Course	tonnes	_____	_____	_____
3.	Asphaltic Concrete Adjustment	tonnes	_____	_____	_____
2.	Asphaltic Concrete Walkways				
1.	(thickness) (width)	m ²	_____	_____	_____
3.	Asphaltic Concrete Ditch				
1.	(thickness) (width)	m	_____	_____	_____
<u>02574</u>	<u>Reshaping & Patching Asphalt Pavement</u>				
1.	Removal of Asphalt Pavement	m ²	_____	_____	_____
2.	Patching of Asphalt Pavement	m ²	_____	_____	_____
3.	Removal and Replacement of Asphalt Pavement (For Road Projects only)	m ²	_____	_____	_____
4.	Temporary Patching of Asphalt Pavement	m ²	_____	_____	_____
5.	Cutting of Asphalt Pavement	m	_____	_____	_____
<u>02575</u>	<u>Cold Planing</u>	m ²	_____	_____	_____
<u>02576</u>	<u>Pulverizing</u>	m ²	_____	_____	_____
<u>02577</u>	<u>Pavement Crack Cleaning & Filling</u>	m	_____	_____	_____

SECTION DESCRIPTION UNIT QUANTITY UNIT PRICE TOTAL

02580 Pavement Marking

1. Pavement Marking L.S. Unit _____

02601 ~~Manholes~~ Maintenance holes, Catch basins, Ditch Inlets & Valve Chambers

1. Supply & Placement of Pre-Cast Maintenance Holes Diameter:

1. 2 m or less	Each	_____	_____	_____
2. \geq 2 m to 2.5 m	Each	_____	_____	_____
3. \geq 2.5 m to 3 m	Each	_____	_____	_____
4. \geq 3 m to 3.5 m	Each	_____	_____	_____
5. \geq 3.5 m to 4.0 m	Each	_____	_____	_____
6. \geq 4.0 m to 4.5 m	Each	_____	_____	_____
7. \geq 4.5 m to 5.0 m	Each	_____	_____	_____
8. \geq 5.0 m to 5.5 m (etc.) with Safety Landing	Each	_____	_____	_____
9. \geq 6.0 m to 6.5 m with Safety Landing (etc.)	Each	_____	_____	_____

2. Supply & Placement of Maintenance Hole Inflow Protectors Each _____

3. Outfall Structures Each _____

4. Drop Maintenance Holes Each _____

5. Special Maintenance Holes Each _____

6. Catch Basins Each _____

7. Cast-in-Place Maintenance Holes Each _____

8. Adjustment of Maintenance Hole/Catch Basin Tops Each _____

9. ~~Adjustment of Maintenance Hole Covers~~ Each _____

10. Sealing Existing Maintenance Hole/Catch Basin Tops Each _____

11. ~~Safety Landings for Deep Manholes~~ Each _____

02650 Sewage Pumping Stations

1. (~~Pumping Station identifier~~), (~~Station size~~), (Pumps),
 - (Size in kW.) see contract documents & Impeller L.S. Each Unit _____

4.2. Supply and Commission Portable Diesel Generator L.S. Each Unit _____

02702 Pipe Sewer Construction

1. Supply & Placement of Sanitary Sewer

1. Main Line				
(size) (type) (thickness) (insulation)	m	_____	_____	_____
2. Service Line				
1. (size) (type) (thickness)(insulation)	m	_____	_____	_____
2. long radius bends	Each	_____	_____	_____

2. Supply & Placement of Storm Sewer

SECTION	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
	(size) (type) (thickness)	m			
3.	Supply & Install Tees c/w Bends	Each			
4.	Supply & Installation of End Caps	Each			
5.	Supply & Installation of Plugs	Each			
6.	CCTV Camera Inspection Services	m			
7.	Break Into & Connect to Existing -Maintenance Holes	Each			
7-8.	Locate and Connect to Existing Sewer Mains	Each			
8-9.	Locate and Connect to Existing Sewer Stubs	Each			
02704	Sanitary Sewer Outfall Pipe				
1.	Outfall Sewer pipe (Ssize) (type) (thickness)	m			
2.	Concrete for Bedding and Encasement Pipes	m ³			
3.	Other bedding (specify)	m ³			
4.	Tees, Caps, Plugs, Other Fittings Concrete Head Blocks, Cradles, Supports (Specify)	Each			
5.	Underwater Video and/or Photo Inspection	L.S. Each	Unit		
02710	Foundation & Under Slab Drainage				
1.	Supply & Installation Foundation & Under Slab Drainage	L.S. Unit			
02713	Water Mains				
1.	Supply & Installation of Water Main (type) (class) (size) (insulation)	m			
2.	Supply & Installation of Service Connections Pipe to ROW (type) (class) (size) (insulation)	m			
3.	Supply & Install of Fire Hydrants (depth) (insulation)	Each			
4.	Supply & Installation of Fitting (size) (insulation)				
1.	Wyes	Each			
2.	Crosses	Each			
3.	Reducers	Each			
4.	End Caps/Plugs	Each			
5.	Bends	Each			
6.	Tees	Each			
7.	Corporation Stops	Each			
8.	Saddles	Each			
9.	Curb Stops & Boxes	Each			
10.	Sleeve-type couplings	Each			
5.	Supply & Install Sounding point/marker				

SECTION	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
6.	Supply & Install of Hydrant Extensions (length) (insulation) Each	Each			
7.	Colour Coded Painting of Hydrants	Each			
8.	Supply & Install Valves Including Valve Boxes (size) (insulation)	Each			
9.	Supply & Install of Valve Chambers	Each			
10.	Supply & Placement of Concrete Thrust Blocks m ³				
11.	Supply & Placement of Joint Restraints (size)	Each			
12.	Supply & Install Combination Air Release -Vacuum Relief Valves (size)	Each			
13.	Supply & Install Valve Box Extensions	Each			
14.	Adjust Existing Valve Boxes to Grade	Each			
15.	Swabbing of Water Lines (size)	m			
16.	Locating & Connecting to Existing System	Each			
02724	Sewage Force Mains				
1.	Supply & Installation of Sewage Force Mains (size) (class) (type)(insulation)	m			
2.	Supply & Installation Combination Air Release -Vacuum Relief Valve & Chamber	Each			
3.	Supply & Installation of Fittings Bends (size) (insulation)	Each			
4.	Force Main Connection to Maintenance Holes	Each			
4.5.	Break into & connect to existing maintenance Hole	Each			
5.6.	Swabbing of Force main (size)	m			
02729	Water Wells				
1.	Drilling Unconsolidated Formation	m			
2.	Drilling in Consolidated Formation	m			
3.	Supply & Installation of Casing (type) (size)	m			
4.	Supply & Install Drive Shoe	Each			
5.	Supply & Installation of Well Screen (size)	L.S. Unit			
6.	Supply & Placement of Gravel Packing	kg.			
7.	Supply & Placement of Grouting (40 kg bags)	Each			
8.	Well Development	Hour			
9.	Disinfection of Well	L.S. Unit			
10.	Test Pumping of Well	Hour			
11.	Water Quality Testing	L.S. Unit			
12.	Supply & Installation of Well Seals (size)	Each			

SECTION DESCRIPTION UNIT QUANTITY UNIT PRICE TOTAL

02831 Chain Link Fences & Gates

1. Supply & Erection of Chain Link Fence, Including Brace Panels & Gate Openings Requirements

m

~~4.2.~~ Supply & Install Barb Wire & Brackets

m

~~2.3.~~ Supply & Erection of Chain Link Gates (size)

Each

02832 Wildlife Farm-Wire Fences

1. Supply & Erection of Wire Fences

m

2. Supply & Erection of Wire Gates

Each

02897 Filter Fabrics (Geotextile)

1. Supply & Install Filter Fabric

m²

SECTION DESCRIPTION UNIT QUANTITY UNIT PRICE TOTAL

DIVISION #3

03300 Cast-In-Place Concrete

1. Cast-In-Place Concrete

m³

2. Concrete Bedding

m³

3. Concrete Pipe Encasement

m³

4. Concrete Supports

m³

5. Concrete Thrust Blocks

m³

6. Concrete Cut Off Walls

m³

03306 Underwater Concreting

1. Underwater Concrete

m³

2. Underwater Video and/or Photo Inspection

L.S. Each

Unit

a. Sub Total

H.S.T. 15% of Sub-Total

b. Grand Total

(Carry Forward to Page 1 of Tender Form)