Parks Canada Parcs Canada

Canada

LACHINE CANAL
LIGHTING NETWORK REHABILITATION

ELECTRICAL SPECIFICATIONS
ISSUED FOR ADDENDUM No. 1

This document should not be used for purposes of construction

SNC-Lavalin Ref. : 645791

SNC-LAVALIN INC.
455, René-Lévesque Blvd. West
Montreal (Quebec) H2Z 1Z3
Fax : (514) 866-0795
Email : snclavalin@snclavalin.com

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Prepared by:

2017-08-22

Miguel Hurtado, Eng.
(Electrical)

SNC·LAVALIN

This addendum becomes part of the tender documents as originally specified. Its content prevails over tender documents issued to date.

All specifications issued with this **ADDENDUM No. I** shall be considered part of the bidding documents. Modifications to sections of the tender documents are listed below and included hereafter.

1. ELECTRICAL

1.1 SECTIONS LIST

On each revised page of a given section, the revisions connected to present addendum are identified by a revision number located at the bottom of the page. The revision number appears inside a triangle to indicate a partial revision, whereas it is located next to the section title if an entire page was added or revised in the scope of the addendum.

The following sections are issued with this Addendum:

Section n^{o}	Number of pages
00 01 10.01	2 pages
01 11 01	12 pages
01 29 00	12 pages
01 35 29.06	9 pages
01 35 43	21 pages
01 56 00	2 pages (new section)
01 73 00	3 pages (new section)

1.2 ELECTRICAL DRAWINGS ISSUED

On each revised drawing, the revisions related to the present addendum are identified in the title box by the revision number indicated after the drawing number. The revision number appears inside a triangle close to the revised area inside a cloud, or close to the drawing title when the drawing has been added or completely revised as part of the addendum.

The following drawings are issued with this Addendum:

DESSIN N°	TITRE	Rév. n^{o}
E01	LEGEND AND TABLE	01
E02	EXTERIOR LIGHTING - SECTION 1 AND 2 - DEMOLITION	01
E03	EXTERIOR LIGHTING - SECTION 3 AND 4 - DEMOLITION	01
E04	EXTERIOR LIGHTING - SECTION 5 AND 6 - DEMOLITION	01

DESSIN N°	TITRE	Rév. n°
E05	EXTERIOR LIGHTING - SECTION 7 AND 8 - DEMOLITION	01
E06	EXTERIOR LIGHTING - SECTION 9 AND 10 - DEMOLITION	01
E07	EXTERIOR LIGHTING - SECTION 11 AND 12 - DEMOLITION	01
E08	EXTERIOR LIGHTING - SECTION 13 AND 14 - DEMOLITION	01
E09	EXTERIOR LIGHTING - SECTION 15 AND 16 - DEMOLITION	01
E10	EXTERIOR LIGHTING - SECTION 17 AND 18 - DEMOLITION	01
E11	EXTERIOR LIGHTING - SECTION 19 AND 20 - DEMOLITION	01
E12	EXTERIOR LIGHTING - SECTION 21 AND 22 - DEMOLITION	01
E13	EXTERIOR LIGHTING - SECTION 23 AND 24 - DEMOLITION	01
E14	EXTERIOR LIGHTING - SECTION 25 - DEMOLITION	01
E15	EXTERIOR LIGHTING - SECTION 1 AND 2 -CONSTRUCTION	01
E16	EXTERIOR LIGHTING - SECTION 3 AND 4 -CONSTRUCTION	01
E17	EXTERIOR LIGHTING - SECTION 5AND 6 -CONSTRUCTION	01
E18	EXTERIOR LIGHTING - SECTION 7 AND 8 - CONSTRUCTION	01
E19	EXTERIOR LIGHTING - SECTION 9 AND 10 - CONSTRUCTION	01
E20	EXTERIOR LIGHTING - SECTION 11 AND 12 - CONSTRUCTION	01
E21	EXTERIOR LIGHTING - SECTION 13 AND 14 - CONSTRUCTION	01
E22	EXTERIOR LIGHTING - SECTION 15 AND 16 - CONSTRUCTION	01
E23	EXTERIOR LIGHTING - SECTION 17 AND 18 - CONSTRUCTION	01
E24	EXTERIOR LIGHTING - SECTION 19 AND 20 - CONSTRUCTION	01
E25	EXTERIOR LIGHTING - SECTION 21 AND 22 - CONSTRUCTION	01
E26	EXTERIOR LIGHTING - SECTION 23 AND 24 - CONSTRUCTION	01
E27	EXTERIOR LIGHTING - SECTION 25 - CONSTRUCTION	01
E28	DETAILS - 1 FROM 3	01
E29	DETAILS - 2 FROM 3	01
E30	DETAILS - 3 FROM 3	01

	SECTION N°	TITRE	Issued for Tender 2017-07-21	Issued for Addendum No. 1 2017-08-21							
1	**00 01 10.01**	**Electrical – List of Sections**	0	**1**							
1	**01 11 01**	**Work Related General Information**	0	**1**							
	01 14 00	Work Restrictions	0								
1	**01 29 00**	**Payment Procedure**	0	**1**							
	01 31 19	Project Meetings	0								
	01 32 16.07	Construction Progress Schedule – Bar Chart (GANTT)	0								
	01 33 00	Submittal Procedures	0								
1	**01 35 29.06**	**Health and Safety Requirements**	0	**1**							
1	**01 35 43**	**Environmental Procedures**	0	**1**							
	01 41 00	Regulatory Requirements	0								
	01 45 00	Quality Control	0								
	01 52 00	Construction Facilities	0								
1	**01 56 00**	**Temporary barriers and enclosures**		**0**							
	01 61 00	Common Product Requirements	0								
1	**01 73 00**	**Execution**		**0**							
	01 74 11	Cleaning	0								
	01 74 21	Construction/Demolition – Waste Management and Disposal	0								

SECTION N°	TITRE	Issued for Tender 2017-07-21	Issued for Addendum No. 1 2017-08-21							
01 77 00	Closeout Procedures	0								
01 78 00	Closeout Submittals	0								
01 91 13	General Commissioning (CX) Requirements	0								
26 05 00	Common Work Results for Electrical	0								
26 05 20	Wire and Box Connectors 0 – 1,000 V	0								
26 05 21	Wires and Cables (0 – 1,000 V)	0								
26 05 31	Splitters, Junction, Pull Boxes and Cabinets	0								
26 05 34	Conduits, Conduit Fastenings and Fittings	0								
26 05 43 01	Installation of Cables in Trenches and in Ducts	0								
26 28 16 02	Moulded Case Circuit Breakers	0								
26 56 19	Roadway Lighting	0								
31 11 00	Clearing and Grubbing	0								
32 01 90 33	Tree and Shrub Preservation	0								
33 65 76	Direct Buried Underground Cable Ducts	0								

1. GENERAL

1.1 Contractor Use of Premises

.1 The following list describes the scope of work, without being limited to such. The Contractor shall perform detailed work to deliver a complete, operational and performing installation. Unless otherwise indicated, work includes the supply, installation, connection of equipment and commissioning.

.1 Disconnect circuit conductors.

.2 Remove and disassemble lamp into its various components.

.3 Store lamp (post, davit, light fixture) at location determined by Parks Canada.

.4 Cut road, excavate, backfill to infrastructure, compact and repair asphalt.

.5 Excavation, removal of concrete base, backfill hole resulting from its removal, compact and ship off-site.

.6 Apply loose soil and turf on all backfilled areas.

.7 Supply and install anchors.

.8 Protect trees, shrubs and fences. Under no circumstances shall excavation works come within two meters of tree fronts.

.9 Ship and dispose of excavation surplus.

.10 Backfill, level and make final adjustments to soil.

.11 Supply and install shafts, conduits, conductors and cables.

.12 Supply, install, connect and start-up street lamps.

.13 Signage required throughout duration of works as required by the Highway Safety Code.

.14 Signage required throughout duration of works as required by the Highway Safety Code.

.15 Electrotechnical testing.

1.2 Demolition

.1 The Contractor shall provide all materials, labour and tools required to execute all demolition works mentioned in these specifications or indicated on the plans.

.2 The Electrical Contractor shall be responsible for all demolition works indicated on the plans mentioned in these specifications or that are necessary for the completion of the works.

.3 No dismantled device, equipment or electrical components must be reused unless otherwise indicated on plans.

.4 All existing devices and equipment that must be removed for the execution of the works must be removed by the Contractor and submitted to the Owner. Any device or piece of equipment that the Owner does not want must be removed from the site by the Contractor at the Contractor's expense and in accordance with environmental standards and municipal, provincial and federal laws and regulations.

.5 Devices and equipment that must be temporarily removed for the execution of works and reinstalled or relocated during the execution of works, as indicated on the plans, shall be the Contractor's responsibility until the completion of works.

.6 Dismantling or demolishing an existing system or piece of equipment involves disconnecting the power supply, removing conductors and cables all the way to the power supply point, removing conduits, supports, straps and attachments, and removing them from the site.

1.3 Temporary power for site tools

.1 Temporary installations and connections to existing services shall be supplied by the Contractor at the Contractor's expense and must comply with all applicable conditions and codes.

.2 The Contractor shall supply, at his expense, all temporary lighting. Temporary lighting must be sufficient to meet the needs of all disciplines involved in the works.

.3 The Contractor is responsible for supplying, installing and connecting all temporary components required, such as power outlets, cables, conduits, protective devices, etc.

.4 The Contractor shall, upon completion of works, dismantle all temporary components used to supply power to tools used on site. Any disconnection of the facility's power network must be witnessed by the Respondent or his delegate.

1.4 Laws, Codes and Regulations

.1 Strictly comply with environmental protection laws, regulations and ordinances during demolition, removal and storage works.

.2 Except in the case of stricter or more restrictive indications, execute demolition works in accordance with the provisions of the laws, standards, regulations and safety codes in effect, particularly the Safety Code for the Construction Industry (R.R.Q., c.S-2.1, r.6), Sub-Section 3.18 – Requirements Prior to Demolition, the National Building Code of Canada with amendments for Quebec (particularly Part 8 – Safety Measures at Construction and Demolition Sites as amended by Chapter 1 of the Construction Code), the National Fire Code of Canada (particularly Section 2.14 – Demolition Sites, Section 2.8 – Emergency Measures, and the articles in Appendix A that apply to these sections).

1.5 Restoration

.1 Prior to presenting a quote, the Contractor shall carefully examine the construction site. During his assessment, the Contractor shall take into account any particularities that could pose a threat to safety or the smooth execution of works.

.2 The Contractor shall examine all aspects in order to assess:

.1 The nature and scope of works to be executed;

.2 Any site access challenges;

.3 Any factors that could make it difficult to execute works;

.4 Devices and equipment required;

.5 Existing underground and overhead utilities.

1.6 Temporary signage plans

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.1 Within a minimum of one (1) week prior to work commencing at the site, the Contractor shall submit to the Parks Canada Representative a series of signage plans for each step of the proposed works, as well as site access passes and site access/traffic management indicators for work teams (including sub-contractors, suppliers and others). These plans, which shall be submitted to the Supervisor for approval, must be signed and sealed by an engineer who is a member of the Quebec Order of Engineers (Ordre des Ingénieurs du Québec). The plans must indicate all signage required and measures that the Contractor will take to control and direct bike traffic. In addition, the plans must be modified as needed for the various proposed work phases.

1.7 Work Sequence

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.1 **Before starting the work, the Contractor shall take photographs of the existing facilities and assign a specialist to perform a video survey of the work site and adjacent lands. This record shall include a view and description of all buildings, structures, trees, fences, condition of the premises and any element conducive to damage claims. No excavation work is permitted until two (2) CD copies of the video recording are provided to the Parks Canada Representative. The Contractor shall retain the original of the registration for his personal use. Costs are included in the total unit price of the tender.**

.2 Construct work in stages to accommodate the parks Canada Representative's use of premises during construction.

.3 Coordinate Progress Schedule and coordinate with the Departmental Representative occupancy during construction.

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.1 **The electrical contractor will be required to submit a timetable for the completion and phasing of the work to the Parks Canada Representative based on the information provided in the Schedule of Works and Projects Access Schedule for Projects 1456 and 1457 attached.**

.4 Construct work in stages to provide for continuous public usage. Do not close off public usage of facilities until use of one stage of work will provide alternate usage.

1

.5 **The electrical contractor must send the work progress calendar according to the occupancy of the premises.**

1.8 Occupancy by the contractor

.1 The work site may be used without restriction until substantial completion of the work as directed by the Parks Canada Representative. The work will be carried out in accordance with instructions issued by the Parks Canada Representative:

.2 Use of the premises is restricted to the areas required for carrying out storage and access

.1 Access for the Parks Canada Representative's personnel.

.2 Use of parking facilities and traffic lanes.

.3 Coordinate the use of the premises as directed by the Parks Canada Representative.

.4 The storage areas required for the performance of the work under this contract will be made available to the contractor as indicated in the plans

.5 Remove or modify the existing structure to avoid damaging the remaining parts

.6 Repair or replace, as directed by the Parks Canada Representative, for the purpose of connecting or harmonizing with the existing structure or an adjacent structure the portions of the existing structure that have been modified during construction work

.7 Once the work has been completed, the existing work must be in a condition equivalent to or greater than the condition it presented before the work began

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1.9 ~~Items Supplied~~ Occupancy of the premises by the ~~-~~ Parks Canada Representative

.1 The Parks Canada Representative will occupy the site throughout the construction period and will continue to operate normally during this period.

.2 Collaborate with the Parks Canada Representative in scheduling work to reduce conflicts and facilitate the use of the site by the Parks Canada Representative

1.10 Partial occupancy of the premises by the Parks Canada Representative:

.1 Execute Certificate of Substantial Performance for each designated portion of work prior to the occupancy by the Parks Canada Representative. Contractor shall allow:

.1 Access for the Parks Canada Representative's personnel.

.2 Use of parking facilities and traffic lanes.

.3 Operation of control and electrical systems.

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1.11 Responsibilities of the ~~Items to be supplied by~~ Parks Canada Representative

~~.1 Arrange for such materials and materials to be delivered to the site in accordance with the work progress schedule.~~

.2 Receive and unload products at site.

.3 Inspect deliveries jointly with the Parks Canada Representative; record shortages, and damaged or defective items.

.4 Provide installation inspections required by public authorities.

.2 Contractor Responsibilities:

.1 Designate submittals and delivery date for each product in Progress Schedule.

.2 Receive and unload products at site.

.3 Inspect deliveries jointly with the Parks Canada Representative; record shortages, and damaged or defective items.

.4 Handle products at site, including unpacking and storage.

.5 Protect products from damage, and from exposure to elements.

.6 Assemble, install, connect, adjust, and finish products.

.7 Provide installation inspections required by public authorities.

.8 Repair or replace items damaged by Contractor or Subcontractor on site under his control.

1.12 Required Documents

.1 Maintain at job site, one (1) copy of each document as follows:

.1 Contract Drawings.

.2 Specifications.

.3 Addenda.

.4 Reviewed Shop Drawings.

.5 List of Outstanding Shop Drawings.

.6 Change Orders.

.7 Other Modifications to Contract.

.8 Field Test Reports.

.9 Copy of Approved Work Schedule.

.10 Health and Safety Plan and other safety related documents.

.11 Other documents as specified.

2. PRODUCTS

.1 Not used.

3. EXECUTION

.1 Not used.

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APPENDIX 1
PROPOSED DEVIATION CARD

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RÉFECTION DU RÉSEAU D'ÉCLAIRAGE DU CANAL DE LACHINE - secteur est sept 2017
Canal Lachine
LASALLE
VERDUN
SUD-OUEST
Parc René-Lévesque
Parc Angrignon
Parc Hardy
Pont H.-Mercier
Îles des Sœurs
Déviation proposée de sept 2017 à mai 2018
Déviation à utiliser par l'entrepreneur
Parcs Canada
Parks Canada

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APPENDIX 2
WORK SCHEDULES AND ACCESS TO SITES

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PROJETS 1456 ET 1457 - RÉUNION DE COORDINATION DU 29 JUIN 2017 + 6 JUILLET 2017
CONFIRMATION DES ÉCHÉANCIERS DES TRAVAUX ET DES ACCÈS AU CHANTIERS

PRO 1457 *		PRO 1456 *	
SÉQUENCE DES TRAVAUX (B4) LAMPADAIRES EN ORDRE DE PRIORITÉ	ACCÈS AU CHANTIER	ACCÈS AU CHANTIER	SÉQUENCE DES TRAVAUX (B4) SECTEURS DE MURS EN ORDRE DE PRIORITÉ
SEPT – OCT. 13 2017 Lampadaires: M1 – M11 *(S33- S35)* L27- 30 *(N14)* L31 – L34 *(N13-14)* (projet prévu pour 2019) H1- H26 *(N39 – N44)* ** *enjeu de coordination*	Chemin du Musée + Rue Vézina + Avenue Lafleur et rue de la berge du canal (nord) + Rue Clément + Rue Philippe Turcot	Rue Philippe Turcot Accès pour la visite de site à coordonner	**SEPT – OCT. 13 2017** Murs : N39 – N44 (13.1 à confirmer par Dominic Pierre) ** *enjeu de coordination* Pas d'autres travaux prévus au cours de cette période.
OCT. 16 – MAI 2018 M9 M25 + N *(S36- S44)*	Chemin du Musée + Rue Vézina + Rue Clément	Route 138 + CP Lasalle (par exception - à coordoner avec le projet 1457, entente de subordination) + Avenue Lafleur et rue de la berge du canal (nord) **	**OCT. 16 – MAI 2018** S33 - S35 N13 – N14
SEPT – MAI 2018 H26 – H35, J 1- J 33, K, L1 – L26 *(N38 – N15)*	Avenue Lafleur et rue de la berge du canal (nord) ** enjeu de coordination + Rue Notre Dame ouest (au niveau de la passerelle Cooke)	1456 à fournir	**MAI 2018 - ?** J + K

* Les zones d'entreposages *(Staging)* pour les projets 1457 et 1456 se situera près du pont CP, accès rue Vézina et St. Patrick. Les espaces doivent être séparés par une clôture avec deux entrées distinctes.

Carole Ann Crossan, APC, Gestionnaire de projets / Service de réalisation des projets /7 juillet 2017

1. GENERAL

1.1 Unit or Lumber Prices

.1 The total amount of the contract is broken down according to a description of work paid on a flat-rate basis (flat-rate prices) and paid work on a unitary basis (unit prices).

.2 Each of the unit or lump sum prices to be broken down shall include all expenditures, work, disbursements, payments, direct or indirect costs, mobilizations, demobilizations and acts, all facts, and all responsibilities, obligations, omissions and errors of The Contractor in connection with the completion of this work. These prices also include the transportation and use of materials, the cost of labor, materials, tools and equipment required for the performance of the contract, and all costs Corporate, administration, insurance, contributions, interest, rents, taxes and other incidental expenses. It must include losses and damages that may result from the nature of the work, fluctuations in prices and wages, business risks, strikes, delays not attributable to the Departmental Representative, transportation restrictions, Accidents and the action of the elements of nature.

1.2 Definitions

.1 Fixed price: where the work is determined in a precise and detailed manner and a price is agreed and accepted by both parties for the whole.

.2 Unit price: where the specifications for the work are determined in a precise and detailed manner and all quantities on the schedule are provided as an estimate.

2. PRICE SCHEDULE LINE ITEM DESCRIPTIONS

.1 Site organization

.1 This section includes the organization of the site and all elements described in this Part. It is paid on a flat-rate basis and includes all the requirements outlined in Division 1 (General Requirements) of this Specification as well as all other work that is not part of other Schedule items but is necessary for the full the work.

.2 It also includes the costs of mobilization and demobilization, the cost of purchasing, depreciating or leasing machinery, tools and equipment, personnel, materials, site facilities and any mobilization As may be required to meet the schedule of work.

.3 Maintenance and operating costs for the maintenance of machinery, equipment and tools included in the worksite facilities during the course of the work and the personnel supporting these facilities are also included.

.4 This price includes, but is not limited to:

.1 Land

.1 Expenses for the acquisition, lease, compensation and use of land other than those which may be made available to the Contractor, either for the construction site or for temporary deposits.

.2 The costs of use and maintenance of the lands made available to the Contractor.

.2 Arrangements of Site Site Areas

.1 Land development required for development of site facilities.

.2 Site drainage.

.3 Site and personnel offices.

.4 Office of Parks Canada Representative.

.5 Premises for storage of equipment.

.6 External Storage for Equipment and Equipment.

.7 Barriers and fencing required throughout the duration of the work, including any movement and all temporary safety devices.

.8 The costs of guarding.

.3 Machinery, Equipment and Tools

.1 All machinery and equipment required to maintain site operations including operation (eg for receiving and managing materials).

.2 Light trucks.

.3 Scaffolding.

.4 Generators and temporary lighting.

.5 tools.

.6 Compressors.

.7 Etc.

.4 Networks

.1 Toilets on site.

.2 Water supply to existing site facilities from existing hydrants.

.3 Fire protection.

.4 Water for compaction of materials and dust suppressant.

.5 Power Supply.

.6 Lighting on site.

.7 Telephone and Internet links for use and use of Parks Canada Representative.

.5 Health and Safety

.1 All equipment and supplies required to ensure health and safety in accordance with Section 01 35 29.06 of the Construction Specification and applicable laws and regulations.

.6 Services

.1 This lump sum price includes the total remuneration including the salaries and bonuses of the contractor's site staff and clerical staff who will provide the services of site organization during the duration of the work, including but not limited to:

.2 Superintendency and project management.

.3 Topographic survey services.

.4 Studies of construction methods.

.5 Quality control.

.6 Health and Safety.

.7 Work planning and subcontractor management.

.8 Supply and Logistics.

.9 Preparation and management of documentation (in accordance with Section 01 33 00 of the construction specifications, including shop drawings, final plans, operating manuals and suppliers).

.10 Commissioning.

.11 Transportation, accommodation and subsistence costs of (indirect) support staff and all workers throughout the duration of the work.

.7 Miscellaneous

.1 Licenses

.2 Supply and installation of 1220 mm x 2440 mm works identification sign, corresponding to a 3.0 m² for each worksite access.

.3 All other related costs for completion of work not included in unit and or lump sum prices.

.4 Provision of timetable of work in two formats: (*.mpp & *.pdf) including all the updates and other information required.

.2 Electrical

.1 Lighting Units

.1 For the price schedule's line item entitled "Lighting Units", the bidder shall list a price per unit that includes the supply and installation of each lamp. The price shall include, without being limited to:

.1 Supplying and installing a street lamp including accessories such as the pole, footing, base cover, lug, etc.

.2 Supplying, installing and wiring connections inside the lamp post, fuse holders, fuses, and splices.

.3 Final adjustments to ensure pole verticality.

.4 Connecting the street lamp to the circuit.

.5 All other related works required to complete the work as specified in the plans and specifications.

.2 Payment of this item will be made based on the progress of the work, as approved by Parks Canada Representative.

.2 Trenches Without Paving

.1 For the price schedule's line item entitled "Trenches Without Paving", the bidder shall list a price per linear metre for the construction of trenches. The price shall include, without being limited to:

.1 Retaining and protecting work areas.

.2 Supporting and protecting public utilities.

.3 Protecting trees, shrubs and fences.

.4 Excavating and drying of trench, disposing of excavated materials and/or waste, encasing and backfilling.

.5 Compacting and installing signalling tape.

.6 Backfilling, final levelling and final adjustments.

.7 Site rehabilitation.

.8 All other related works required to complete the work as specified in the plans and specifications.

.2 Payment of this item will be made based on the progress of the work, as approved by Parks Canada Representative.

.3 Trenches Under Paving

.1 For the price schedule's line item entitled "Trenches Under Paving", the bidder shall list a unit price per linear metre for the construction of trenches. The price shall include, without being limited to:

.1 Cutting the pavement, excavating, backfilling to infrastructure, and compacting (see details on plan) after the installation of ducts, signalling tape, removal of extra/unusable excavated material and all incidental expenses;

.2 All other related works required to complete the work as specified in the plans and specifications.

.2 Payment of this item will be made based on the progress of the work, as approved by Parks Canada Representative.

.4 Concrete Bases

.1 For the price schedule's line item entitled "Concrete Bases", the bidder shall list a unit price for the construction of concrete bases. The price shall include, without being limited to:

.1 Excavating.

.2 Shoring trench, controlling water and supporting nearby structures.

.3 Preparing the bed.

.4 Constructing of the mound around the concrete base, if required.

.5 Supplying and installing the concrete bases, poured on site (including the anchor bolts, encased ducts and reinforcements) or the prefabricated base.

.6 Backfilling and compacting.

.7 Disposing of extra excavated material and/or waste.

.8 Final levelling and adjustments to the concrete base.

.9 All other related works required to complete the work as specified in the plans and specifications.

.2 Payment of this item will be made based on the progress of the work, as approved by Parks Canada Representative.

.5 PVC Ducts

.1 For the price schedule's line item entitled "PVC Ducts", the bidder shall list a unit price per linear metre for suppling and installing PVC ducts, with ducts being measured parallel to the trench, from the centre of one concrete base to the centre of the next. The price shall include, without being limited to:

.1 Supplying and installing rigid PVC ducts with the diameter indicated on the schedule.

.2 Cleaning of the duct, passing a mandrel and stiff bristle brush, and installing a 6 mm nylon cable for pulling conductors or cables.

.3 All other related works required to complete the work as specified in the plans and specifications.

.2 Payment of this item will be made based on the progress of the work, as approved by Parks Canada Representative.

.6 Conductors

.1 For the price schedule's line item entitled "Conductors", the bidder shall list a unit price per linear metre for supplying and installing conductors. The price shall include, without being limited to:

.1 Supplying and installing RWU-90 conductors in ducts, with caliber as indicated on plans.

.2 Measuring to be from one base centre to another.

.3 An additional 3 metres per rise for each cable in a concrete base.

.4 An additional 3.5 metres per rise for the power supply and distribution.

.5 An overall additional 4 metres for each cable passing through a pull block.

.6 An additional 1 metre for each cable passing through a pull box or junction box.

.7 All other related works required to complete the work as specified in the plans and specifications.

.2 Payment of this item will be made based on the progress of the work, as approved by Parks Canada Representative.

.7 Ground-Level Pull Box

.1 For the price schedule's line item entitled "Ground-Level Pull Box", the bidder shall list a unit price for supplying and installing pull boxes. The price shall include, without being limited to:

.1 Excavating.

.2 Supplying and installing the pull box duct.

.3 Backfilling.

.4 All other related works required to complete the work as specified in the plans and specifications.

.2 Payment of this item will be made based on the progress of the work, as approved by Parks Canada Representative.

.8 Modification of Power Supply and Control Panel

.1 For the price schedule's line item entitled "Modification of Power Supply and Control Panel", the bidder shall list a lump-sum price for supplying and installing the equipment indicated on the plans and specifications. The price shall include, without being limited to:

.1 Supplying, installing and connecting all electrical equipment indicated on the plans and specifications.

.2 Installing, modifying and connecting the distribution components, breakers, contactors, terminal blocks, fuse holders, protective covers, astronomical timer, electric eye, selector switches, bushings and labelling stickers.

.3 Modifying the existing electrical distribution, connecting, relocating and pivoting of power supply and control panels.

.4 All other related works required to complete the work as specified in the plans and specifications.

.2 Payment of this item will be made based on the progress of the work, as approved by Parks Canada Representative.

.9 Simple Street Lamp Disassembly

.1 For the price schedule's line item entitled "Simple Street Lamp Disassembly", the bidder shall list a unit price for dismantling simple street lamps. The price shall include, without being limited to:

.1 Disconnecting power conductors.

.2 Removing the street lamp and dismantling it into its various parts (post, davit, light fixture).

.3 Removing conductors inside the post.

.4 Removing the various components (lamp, fuse holder, fuses).

.5 Storing the street lamp (post, davit, light fixture) at the location determined by Parks Canada.

.6 All other related works required to complete the work as specified in the plans and specifications.

.2 Payment of this item will be made based on the progress of the work, as approved by Parks Canada Representative.

.10 Concrete Base Dismantling

.1 For the price schedule's line item entitled "Concrete Base Dismantling", the bidder shall list a unit price for dismantling concrete bases. The price shall include, without being limited to:

.1 Excavating.

.2 Sectioning ducts.

.3 Removing the concrete base and transporting it off site.

.4 Backfilling the hole resulting from its removal and compacting.

.5 All other related works required to complete the work as specified in the plans and specifications.

.2 Payment of this item will be made based on the progress of the work, as approved by Parks Canada Representative.

.11 Electrotechnical Testing

.1 For the price schedule's line item entitled "Electrotechnical Testing", the bidder shall list a lump-sum price. The price shall include, without being limited to:

.1 Ensuring verifications are performed by an independent firm, as required in the specifications, including the necessary equipment.

.2 Issuing a report and performing additional inspections.

.3 All other related works required to complete the work as specified in the plans and specifications.

.2 Payment of this item will be made based on the progress of the work, as approved by Parks Canada Representative.

.12 Anti-Theft Device

.1 For the price schedule's line item entitled "Anti-Theft Device", the bidder shall list a unit price for installing an anti-theft device within lamp posts. The price shall include, without being limited to:

.1 Supplying and installing a steel plate and neoprene protection.

.2 Supplying and installing nuts and bolts.

.3 All other related works required to complete the work as specified in the plans and specifications.

.2 Payment of this item will be made based on the progress of the work, as approved by Parks Canada Representative.

.13 **Lighting Units and concrete bases:**

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.1 **For the price schedule's line item entitled "Lighting Units and concrete bases", the bidder shall list a price per unit that includes the supply and transportation of each lamp and concrete bases. The price shall include, without being limited to:**

.1 **Supplying a street lamp including accessories such as the pole, footing, base cover, lug, etc.**

.2 **Transportation of the concrete bases and the street lamp (post, davit, light fixture) at the location determined by Parks Canada.**

.2 **Payment of this item will be made based on the progress of the work, as approved by Parks Canada Representative.**

3. PRODUCTS

.1 Not Applicable.

4. EXECUTION

.1 Not Applicable.

1. GENERAL

1.1 Section Includes

.1 The Contractor shall manage his operations so that safety and security of the public and of site workers always take precedence over cost and scheduling considerations.

1.2 References

.1 Canada Labour Code - Part II, Canadian Occupational Safety and Health Regulations.

.2 Canadian Standards Association (CSA).

.3 Workplace Hazardous Materials Information System (WHMIS).

.4 Act Respecting Occupational Health and Safety, R.S.Q. Chapter S-2.1.

.5 Construction Safety Code, S-2.1, r.6.

1.3 Submittals

.1 Submit the documents required according to Section 01 33 00 – Submittal Procedures.

.2 Submit to the Parks Canada Representative, the CSST, the *Association paritaire en santé et sécurité du secteur de la construction* (ASP Construction), the site-specific safety program, as outlined in 1.8 at least ten (10) days prior to start of work. The Contractor must review his program during the course of the project if any change occurs in work methods or site conditions. The Parks Canada Representative may, after receiving the program or at any time during the project, ask the Contractor to update or modify the program in order to better reflect the reality of the construction site and activities. The Contractor must make the required changes before work begins.

.3 Submit to the Parks Canada Representative the site inspection sheet, duly completed, at the intervals indicated in 1.13.1.

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.4 **Provide to Parks Canada Representative a traffic control plan.**

.5 Submit to the Parks Canada Representative within 24 hours a copy of any inspection report, correction notice or recommendation issued by federal or provincial inspectors.

.6 Submit to the Parks Canada Representative within 24 hours an investigation report for any accident involving injury and any incident exposing a potential hazard.

.7 Submit to the Parks Canada Representative all safety data sheets for hazardous material to be used at the site at least three (3) days before they are to be used.

.8 Submit to the Parks Canada Representative copies of all training certificates required for application of the safety program, in particular:

.1 General construction site safety and health courses.

.2 Safety officer attestations.

.3 First aid in the workplace and cardiopulmonary resuscitation.

.4 Lockout procedures.

.5 Wearing and fitting of individual protective gear.

.6 Forklift truck.

.7 Positioning platform.

.8 Any other requirement of regulations or the safety program.

.9 Emergency plan: the emergency plan, as defined in 1.8.3, shall be submitted to Parks Canada Representative at the same time as the site-specific safety program.

.10 Notice of site opening: notice of site opening shall be submitted to the *Commission de la santé et de la sécurité du travail* before work begins. A copy of such notice shall be submitted to Parks Canada Representative at the same time and another posted in full view at the site. During demobilization, a notice of site closing shall be submitted to the CSST, with copy to the Parks Canada Representative.

.11 Plans and certificates of compliance: submit to the CSST and Parks Canada Representative a copy signed and sealed by an engineer of all plans and certificates of compliance required pursuant to the Construction Safety Code (S-2.1, r. 6), or by any other legislation or regulation or by any other clause in the specifications or in this contract. Copies of these documents must be on hand at the site at all times.

.12 Certificate of compliance delivered by the CSST: the certificate of compliance is a document delivered by the CSST confirming that the Contractor is in good standing with the CSST, i.e., that he has paid out all the benefits concerning this contract. This document must be delivered to Parks Canada Representative at the end of the work.

1.4 Hazards Assessment

.1 The Contractor must identify all hazards inherent to each task to be carried out at the site.

.2 The Contractor must plan and organize work so as to eliminate hazards at source or promote mutual protection so that reliance on individual protective gear can be kept to a minimum. Where individual protection against falling is required, workers shall use a safety harness that meets standard CAN/CSA-Z-259.10-M90. Safety belts shall not be used as protection against falling.

.3 Equipment, tools and protective gear which cannot be installed, fitted or used without compromising the health or safety of workers or the public shall be deemed inadequate for the work to be executed.

1.5 Meetings

.1 The Contractor's decisional representative must attend any meetings at which site safety and health issues are to be discussed.

.2 Set up a site safety committee and convene meetings in accordance with the Construction Safety Code (S-2.1, r.6).

1.6 Legal and Regulatory Requirements

.1 Comply with all legislation, regulations and standards applicable to the site and its related activities.

.2 Comply with specified standards and regulations to ensure safe operations at a site containing hazardous or toxic materials.

.3 Regardless of the publication date shown in the Construction Safety Code, always use the most recent version.

1.7 Site-Specific Conditions

.1 At the site, the Contactor must take into account the following specific conditions:

.1 The terminal's personnel and users' circulation near the construction area.

1.8 Safety and Health Management

.1 Acknowledge and assume all the tasks and obligations which customarily devolve upon a principal Contractor under the terms of the Act Respecting Occupational Health and Safety (R.S.Q., chapter S-2.1) and the Construction Safety Code (S-2.1, r.6).

.2 Develop a site-specific safety program based on the hazards identified and apply it from the start of project work until close-out is completed. The safety program must encompass all information appearing in 1.7 and must be submitted to all parties concerned, in accordance with the provisions set forth in 1.3. At a minimum, the site-specific safety program must include:

.1 Company safety and health policy.

.2 A description of the work, total costs, schedule and projected workforce curve.

.3 Flow chart of safety and health responsibilities.

.4 The physical and material layout of the site.

.5 First aid and first-line treatment standards.

.6 Identification of site-specific hazards.

.7 Risk assessment for the tasks to be carried out, including preventive measures and the procedures for applying them.

.8 Training requirements.

.9 Procedures in case of accident/injury.

.10 Written commitment from all parties to comply with the prevention program.

.11 A site inspection schedule based on the preventive measures.

.3 The Contractor must draw up an effective emergency plan based on the characteristics and constraints of the site and its surroundings. Submit the emergency plan to all parties concerned, pursuant to the provisions of 1.3. The emergency plan must include:

.1 Identification of persons in charge at the site.

.2 Identification of those with first aid training.

.3 Training required for those responsible for applying the plan.

.4 Any other information needed, in light of the site characteristics.

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.4 **The Contractor is responsible for the installation of protective fencing at all entrances in order to close and secure the site, temporary facilities (including temporary access roads), traffic control (permits, signs, notice Public signs, signpost, and signs along the bike path diversion), as well as the maintenance of these infrastructures.**

1.9 Responsibilities

.1 No matter the size of the construction site or how many workers are present at the workplace, designate a competent person to supervise and take responsibility for health and safety. Take all necessary measures to ensure the health and safety of persons and property at or in the immediate vicinity of the site and likely to be affected by any of the work.

.2 Take all necessary measures to ensure application of and compliance with the safety and health requirements of the Contract Documents, applicable federal and provincial regulations and standards as well as the site-specific safety program, complying without delay with any order or correction notice issued by the *Commission de la santé et de la sécurité du travail*.

.3 Take all necessary measures to keep the site clean and in good order throughout the course of the work

1.10 Communications and Posting

.1 Make all necessary arrangements to ensure effective communication of safety and health information at the site. As workers arrive on site, they must all be informed of their rights and obligations pertaining to the site-specific safety program. The Contractor must insist on their right to refuse to perform work which they feel may threaten their own health, safety or physical integrity or that of other persons at the site. The Contractor must keep and update a written record of all information transmitted with signatures of all workers involved.

.2 The following information and documents must be posted in a location readily accessible to all workers:

.1 Notice of site opening.

.2 Identification of principal Contractor.

.3 Company OSH policy.

.4 Site-specific safety program.

.5 Emergency plan.

.6 Data sheets for all hazardous material used at the site.

.7 Minutes of site committee meetings.

.8 Names of site committee representatives.

.9 Names of those with first aid training.

.10 Action reports and correction notices issued by the CSST.

1.11 Unforeseen Circumstances

.1 Whenever a source of danger not defined in the specifications or identified in the preliminary site inspection arises as a result of or in the course of the work, immediately suspend work, take appropriate temporary measures to protect the workers and the public and notify the Parks Canada Representative, both verbally and in writing. Then the Contractor must modify or update the site-specific safety program in order to resume work under safe conditions.

1.12 Inspection of Site and Correction of Hazardous Situations

.1 Inspect the work site and complete the site inspection sheet at least once a week.

.2 Immediately take all necessary measures to correct any lapses from legislative or regulatory requirements and any hazards identified by a government inspector, by the Parks Canada Representative, by the site safety and health coordinator or during routine inspections.

.3 Submit to the Parks Canada Representative written confirmation of all measures taken to correct lapses and hazardous situations.

.4 Give the safety officer or, where there is no safety officer, the person assigned to safety and health responsibilities, full authority to order interruption and resuming of work as and when deemed necessary or desirable in the interests of safety and health. This person should always act so that the safety and health of the public and site workers and environmental protection take precedence over cost and scheduling considerations.

.5 Without limiting the scope of sections 1.8 and 1.9, the Parks Canada Representative may order cessation of work if, in his view, there is any hazard or threat to the safety or health of site personnel or the public or to the environment.

1.13 Blasting

.1 Blasting and other use of explosives are forbidden unless authorized in writing by the Parks Canada Representative.

.2 Any operation involving explosives must be carried out under the supervision of a qualified shot firer.

.3 The purchase, carriage, storage and use of explosives must comply with all applicable federal and provincial legislation:

.1 Canada: Explosives Act (E-17), Explosives Regulations (C.R.C. CH. 599), Standard for Storage of Blasting Charges and Detonators, Transportation of Dangerous Goods Act and Regulations.

.2 Quebec: Explosives Act (E-22), Explosives Regulations (E-22, r.1), Construction Safety Code (S-2.1, r.6), Transportation of Dangerous Goods Regulations.

.4 The Contractor shall obtain all permits required pursuant to the legislation and regulations referred to above and keep copies on hand at the site.

.5 The Contractor shall facilitate inspection of the site, stored explosives and vehicles used to transport explosives by any government representatives or police officers whose jurisdiction encompasses explosives.

1.14 Powder Actuated Devices

.1 Use of power hammers must be authorized by the Parks Canada Representative.

.2 Any person using a power hammer shall hold a training certificate and meet all requirements of Section 7 of the Construction Safety Code (S-2.1, r. 6).

.3 Any other explosive-actuated devices are not permitted.

1.15 Work at Heights

.1 <u>General</u>

.1 The Contractor must ensure that any person carrying out work that poses a risk of falling more than 2.4 m use fall protection equipment.

.2 Plan and organize work so as to eliminate the danger at source or ensure collective protection, thereby minimizing the use of personal protective equipment. When personal fall protection is required, workers must use a safety harness that complies with CSA standard CAN/CSA Z-259.10 M90. A safety belt must not be used as fall protection.

.3 Every person using an elevating platform must have training regarding this equipment.

.4 Wearing a safety harness is obligatory in any elevating platform with telescopic, articulated or rotary boom.

.5 Delineate a danger zone in any place where equipment for work at heights is used.

1.16 Excavating and Trenching

.1 To follow Canadian Safety Code guidelines on excavation.

1.17 Cleaning Work

.1 The Contractor must ensure that non-compatible chemicals are stored in such a way that they never come into contact with each other.

.2 Ensure workers wear the proper gloves when using cleaning products.

.3 Ensure workers wear the proper gloves when cleaning outdoors if there is a risk of contact with biological contaminants (droppings, birds' nests, etc.).

.4 For outdoor work, advise the Parks Canada Representative of any accumulation of bird or animal droppings so he/she can advise you of the necessary procedures to follow.

1. GENERAL

1.1 References

.1 Definitions

.1 Environmental Pollution and Damage: presence of chemical, physical, biological elements or agents which adversely affect human health and welfare; unfavourably alter ecological balances of importance to human life; affect other species of importance to humans; or degrade environment aesthetically, culturally and/or historically.

.2 Environmental Protection: prevention/control of pollution and habitat or environment disruption during construction.

1.2 Action and Informational Submittals

.1 Product Data

.2 Before commencing construction activities or delivery of materials to site, submit Environmental Protection Plan for review and approval by Parks Canada Representative.

.3 Environmental Protection Plan must include comprehensive overview of known or potential environmental issues to be addressed during construction.

.4 Address topics at level of detail commensurate with environmental issue and required construction tasks.

.5 Include in Environmental Protection Plan:

.1 Names of persons responsible for ensuring adherence to Environmental Protection Plan.

.2 Names and qualifications of persons responsible for training site personnel.

.3 Descriptions of environmental protection personnel training program.

.4 Work area plan showing proposed activity in each portion of area and identifying areas of limited use or non-use.

.1 Plan to include measures for marking limits of use areas and methods for protection of features to be preserved within authorized work areas.

.5 Spill Control Plan to include procedures, instructions and reports to be used in event of unforeseen spill of regulated substance.

.6 Non-Hazardous Solid Waste Disposal Plan identifying methods and locations for solid waste disposal including clearing debris.

.7 Contaminant Prevention Plan identifying potentially hazardous substances to be used on job site; intended actions to prevent introduction of such materials into air, water, or ground; and detailing provisions for compliance with Federal, Provincial and Municipal laws and regulations for storage and handling of these materials.

1.3 Fires

.1 Fires and burning of rubbish on site are not permitted.

.2 Provide supervision, attendance and fire protection measures as directed.

1.4 Site Clearing and Plant Protection

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.1 **The trees of the Lachine Canal are situated on a designated National Historic Site, their conservation and protection are essential.**

.2 **Extreme care must be taken to protect existing trees (including crown, trunk and root system) from damage, compaction and contamination during all stages of work. The roots of a tree can extend from the trunk to approximately 2-3 times the distance of the dripline.**

.3 **No material, construction equipment, or vehicles are to be stored within the critical root zone (drip line) of trees at any time.**

.4 **No movement of vehicles, equipment or pedestrian in the TPZ will be permitted.**

.5 **The use of tree trunks as a backstop, winch support, anchorage, as a temporary power pole, signpost or other similar function is prohibited.**

.6 **Any disturbed vegetation or landscaping will be repaired or replaced without delay to the satisfaction of the PARK CANADA Representative.**

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.7 **Do not cut or damage roots greater than 25 mm (1") diameter. When larger roots are encountered, consult a certified arborist before proceeding. If there are no roots greater than 25 mm diameter, leave at least two (2) of the largest roots per meter of trench. Retain as many roots as possible.**

.8 **Prune roots that must be removed using sharp, clean tools such as secateurs or a landscape handsaw. Make a clean cut and leave as small a wound as possible. All root pruning to be supervised by a certified arborist.**

.9 **If any roots are exposed during construction, they should be immediately reburied with soil or wrapped in peat moss and burlap and kept moist until they can be buried permanently. Avoid exposing roots during hot, dry weather.**

.10 **Directional micro-tunneling and boring may be permitted within the limits of the critical root zone subject to the approval of the PARK CANADA Representative.**

.11 **Open face cuts that are consistent with an approved plan and that require root pruning, require the services of a certified arborist. An exploratory dig, either by hand or using a low water pressure hydro vacuum, or air spade method, must be completed prior to commencing with open face cuts.**

.12 **Prior approval must be obtained from Parks Canada Representative for all tree removals.**

.13 Protect trees and plants on site and adjacent properties as indicated.

.14 Protect trees and shrubs adjacent to construction work, storage areas and trucking lanes, and encase with protective wood framework from grade level to height of 2 m minimum.

.15 Minimize stripping of topsoil and vegetation.

1.5 Pollution Control

.1 Maintain temporary erosion and pollution control features installed under this Contract.

.2 Control emissions from equipment and plant in accordance with local authorities' emission requirements.

.3 Prevent sandblasting and other extraneous materials from contaminating air and waterways beyond application area.

.1 Provide temporary enclosures where directed by Parks Canada Representative.

.4 Cover or wet down dry materials and rubbish to prevent blowing dust and debris. Provide dust control for temporary roads.

1.6 Precautions for temporarily storing contaminated soil:

.1 **Soil removed from trenches shall be used as backfill and a minimum 30 cm of clean soil shall be added as cover.**

.2 **Contaminated soil that is taken from trenches and cannot be reused shall be characterized. Ship all excess soil to a disposal site authorized by MDDELCC for their contamination levels. Save and submit to Parks Canada all documents proving that contaminated soil has been disposed of in a certified site.**

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.3 **Take all necessary precautions when temporarily storing contaminated soil to prevent the contamination of underlying and adjacent soil. At a minimum, this involves:**

.1 **Placing soil on impervious material and covering it with the same type of material. Solidly securing fabric to prevent it from blowing off in the wind.**

.2 **At all times, ensuring that soil does not migrate to other areas, whether it be by air, runoff or passing vehicles.**

.3 **Replacing soils as soon as possible in accordance with the initially observed level of contamination and the initial stratigraphic profile.**

.4 **Never excavating during periods of heavy rain or strong wind.**

.4 **Rehabilitate ground surface and vegetation damaged by works and machinery traffic, restoring the area to its initial condition.**

.5 **Carry a hydrocarbon recovery kit at all times while work is in progress. If an accidental spill occurs, immediately inform Parks Canada authorities and report the incident to Environment Canada's Environmental Emergencies Line at 1-866-283-2333.**

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.6 **Refuel machinery more than thirty (30) metres from the canal and use a spill-containment device to prevent spills from contaminating soil.**

.7 **Ensure that machinery is in good working condition and is not leaking.**

.8 **Ensure that machinery is clean and free from invasive species or weeds upon arrival at the site. Maintain this condition after arrival. Upon completion of works, clean any machinery that has been in contact with exotic invasive species to prevent dispersion in new areas.**

.9 **If ash trees must be removed during the works, the Contractor must comply with the *By-Law to Stop the Spread of the Emerald Ash Borer on the Territory of Montreal.***

1.7 Notification

.1 Parks Canada Representative will notify Contractor in writing of observed noncompliance with Federal, Provincial or Municipal environmental laws or regulations, permits and other elements of Contractor's Environmental Protection plan.

.2 Contractor: after receipt of such notice, inform Parks Canada Representative of proposed corrective action and take such action for approval by Parks Canada Representative.

.1 Take action only after receipt of written approval by Parks Canada Representative.

.3 Parks Canada Representative will issue stop order of work until satisfactory corrective action has been taken.

.4 No time extensions granted or equitable adjustments allowed to Contractor for such suspensions.

2. PRODUCTS

.1 Not used.

3. EXECUTION

3.1 Cleaning

.1 Progress Cleaning: clean in accordance with Section 01 74 11 – Cleaning.

.1 Leave work area clean at end of each day.

.2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 – Cleaning.

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APPENDIX 1
ARCHEOLOGY

ARCHÉOLOGIE

1.1 CONDITIONS PARTICULIÈRES

Le lieu historique national du Canada (*identifier le lieu patrimonial*) a été reconnu par le gouvernement canadien comme l'un des sites ayant la plus haute valeur patrimoniale. Ainsi, sur cette propriété, tous travaux d'excavation du sol reconnu comme pouvant contenir des vestiges archéologiques doivent faire l'objet d'une surveillance d'un archéologue désigné par le gouvernement fédéral.

En raison du potentiel de retrouver des vestiges archéologiques lors des travaux d'excavation nécessaires (*complétez en identifiant la nature du projet*), ces travaux font l'objet de la présente section.

1.2 ACCÈS ET COLLABORATION

a) L'entrepreneur devra coopérer et se conformer à toutes les directives du chargé de projet lors des travaux d'excavation, afin d'éviter toute perte d'information archéologique sur le site, s'il y a lieu.

b) L'entrepreneur devra faciliter l'accès aux travaux et collaborer avec l'archéologue. L'archéologue ou son représentant sera en fonction sur le chantier, selon les besoins liés à la protection et à l'enregistrement des vestiges. Leur rôle sera de guider l'entrepreneur pour éviter toute perte d'information archéologique et de rassembler les informations sur les vestiges.

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c) S'il y a lieu, l'entrepreneur devra permettre à l'équipe d'archéologues de procéder aux examens et aux relevés archéologiques.

1.3 DÉCOUVERTES ARCHÉOLOGIQUES

a) L'entrepreneur devra avertir le représentant de Parcs Canada ou, en son absence, l'archéologue ou son représentant de toute découverte archéologique (vestiges de constructions ou d'aménagements, objets et fragments d'objets) effectuée sur les lieux et attendre ses directives avant de poursuivre les travaux à l'endroit de la découverte.

b) Les vestiges, antiquités et autres éléments présentant quelque intérêt du point de vue historique, archéologique ou scientifique (vestige, objet ou fragment d'objet) trouvés sur le chantier ou dans les zones à excaver ou à démolir demeurent la propriété de la Couronne. L'entrepreneur devra les protéger et obtenir des directives du chargé de projet à cet égard.

1.4 ARRÊT DES TRAVAUX

a) L'entrepreneur doit prévoir dans son contrat, à ses frais, des arrêts de trente (30) minutes par demi-journée d'excavation dans les secteurs nécessitant la présence de l'archéologue (tel que décrit au point 1.1 de la présente section). Ces arrêts, si non utilisés, seront accumulés et pourront être réutilisés, selon les besoins, ultérieurement. Un relevé du temps non utilisé sera tenu par le représentant de Parcs Canada en accord avec l'entrepreneur et l'archéologue.

b) Pour un arrêt de plus de 30 minutes, le représentant de Parcs Canada évaluera les implications de cet arrêt et avisera l'entrepreneur à cet effet. Ce dernier pourra être tenu d'affecter la machinerie à un autre secteur pour permettre la poursuite du travail des archéologues. Si la réaffectation est impossible, l'entrepreneur sera dédommagé à même la banque d'heures ou, si elle est épuisée, selon les ententes prévues lors de la réunion de démarrage (première réunion de chantier).

c) En cas de découvertes fortuites de ressources culturelles effectuées en l'absence d'un archéologue, le responsable du projet et/ou le maître d'œuvre du projet devront impérativement suspendre les travaux dans le secteur immédiat de la découverte et aviser le chargé de projet de l'Agence Parcs Canada.

1.5 EXCAVATIONS MANUELLES À DES FINS ARCHÉOLOGIQUES

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a) Compte-tenu de la possibilité de découvertes archéologiques, l'entrepreneur est avisé que lors des travaux, de l'excavation manuelle pourra être exigée ainsi que tous travaux nécessaires pour assurer la protection des découvertes. L'entrepreneur sera dédommagé selon les ententes prévues.

1.6 PROTECTION DES VESTIGES ET DES OUVRAGES

a) L'entrepreneur devra prendre toutes les précautions raisonnables, lors des excavations et des travaux, afin de protéger les vestiges mis au jour et de permettre leur examen par les archéologues. Parcs Canada, ne tolérera aucune dérogation à cet égard. Si l'entrepreneur détériore par négligence quelque vestige que ce soit, il en sera tenu responsable et le Ministère en jugera les incidences.

b) Dans le cas éventuel où le représentant de Parcs Canada autorise la démolition d'éléments archéologiques sur le site, l'entrepreneur devra prendre les précautions nécessaires afin d'assurer la protection des ouvrages archéologiques adjacents qui ne seront pas à démolir. La démolition des éléments devra être réalisée de façon progressive et de manière contrôlée après que les relevés archéologiques auront été complétés. Si des ouvrages sont endommagés en cours de travaux, en aviser immédiatement le représentant de Parcs Canada.

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APPENDIX 2
MITIGATION MESURES TABLE

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Mitigation measures table – CLAC-(1457-02)

Components or project activities	Environmental components	Description of environmental effects	Impact mitigation measures	Importance of residual effects
1. Construction demobilization Machinery use and movement Transportation of materials and equipment Temporary Storage of materials	Air quality and human health	• Decreased ambient air quality through particulate matter (dust) • CO2 emissions from machinery	1.1 Ensure that the exhaust and emission systems of the construction machinery / equipment are maintained in good condition. 1.2 Avoid unnecessary running of motors when vehicles are stationary. 1.3 Observe the municipal regulations in force (Regulation 90 of the Communauté métropolitaine de Montréal) with respect to dust emissions to air. 1.4 Ensure that fine materials used in construction and residues are confined during transport. 1.5 If necessary, cover the fine materials stored in a cloth, the particles of which may be blown by the wind. 1.6 Avoid handling and transport of easily erodible materials under high wind conditions or when a dust plume is visible. 1.7 Establish appropriate measures to reduce airborne dust emissions (ex wet down dry materials, sweeping, use of tarpaulins, etc.)	Negligible and localized residual impact
Removals and installation of various components	Sound Level	• Increased ambient noise level	1.8 Comply with municipal by-laws concerning noise and work schedules. 1.9 Whenever possible, plan noisy activities in order to minimize the impact on visitors, especially around residential areas and high traffic areas.	None once work is complete
Reinstatement	Water and Soil / Sediment Quality / Aquatic fauna	• Soil compaction and rutting in machinery mobilization and circulation areas • Risk of spillage of hydrocarbon or other hazardous materials in soil / water • Soil erosion, loss of topsoil and subsoil exposure. • Modification of slopes, terrain and landscape.	1.10 Maintain and maintain machinery and equipment on a regular basis for the duration of the work. Repair vehicles immediately or remove faulty equipment from site. 1.11 Use a biodegradable vegetable oil for all machinery that runs along the shoreline within a perimeter of 15m Proof of the application of this mitigation measure may be required. 1.12 The storage of petroleum and hazardous materials, as well as maintenance, refueling and cleaning of machinery must be done a minimum distance of 30 m from a body of water on a site designed for this purpose where there is no risk of contamination of soil, groundwater and surface water. When this is not possible, an impermeable surface must be provided ensuring that all contaminants can be contained in the event of a leak or spill. All such activities are to be supervised and designated storage areas and maintenance areas approved by the representative of Parks Canada. 1.13 Keep hazardous materials locked that are left on the site outside of working hours. 1.14 All refueling must be done on an impervious fuel mat with a berm or in a containment tank. Clean up leaks and spills during refueling and properly dispose of contaminated material. Never dispose of or dispose of fuel in the environment or in a water-body. 1.15 Clean tools and equipment off site. If this must be done on site, assure a minimum distance of 30 meters form all bodies of water.	Negligible and localized residual impact

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Components or project activities	Environmental components	Description of environmental effects	Impact mitigation measures	Importance of residual effects
		Deposit of materials, debris and contaminants in the environment.	1.16 Do not leave any gasoline-powered vehicles, machinery or equipment on a jetty or within 10 m of the water body outside working hours or during extended site closures unless confined to a watertight enclosure. Where soil protection measures are not feasible, soil protection measures must be provided under equipment or machinery throughout the above-mentioned period (ex: containment tank having a volume equivalent to at least 110% of the volume of the fuel tank Equipment or machinery). 1.17 Use retention tanks (110% capacity) or waterproof fuel mats with a berm for stationary equipment and machinery (generators, compressors, etc.) located on the shore and inspect installations during rainy periods to avoid overflowing. 1.18 At all times during the work, have sufficient oil recovery kits on site (containment pads, absorbent rollers, tight containers, etc.) and ensure that workers are trained to intervene quickly in the event of leak or spill. 1.19 Provide for an emergency procedure and a communication protocol in the event of an environmental incident. 1.20 In the event of a spill, immediately report the situation to appropriate personnel and the Environment Canada Emergency Department (1-866-283-2323) for a land source spill. 1.21 In the event of an environmental incident, control the leak, contain spilled material to restrict its extent and prevent it from reaching sensitive areas, recover contaminated equipment and transport it to a site authorized by MDDELCC. 1.22 Implement additional sediment and erosion control measures if the soil is disturbed or exposed. 1.23 Whenever possible, use erosion and sediment control products made from 100% biodegradable materials (ex: jute, sisal, or coconut fiber). Ensure that the support materials are also biodegradable. 1.24 Any temporary pile-up of unconsolidated material located within 30 m of an aquatic environment and left in place for a period of more than 24 h must be protected by a sediment barrier or covered with a geotextile To avoid the transport of sediment into the water body. 1.25 Avoid vehicle movements during periods of heavy rain when soils are saturated with water. 1.26 Ensure that no deleterious substances are submerged or released into the aquatic environment or disposed of at a point that could contaminate the aquatic environment as required by the Fisheries Act and the Birds Convention Act, 1994 migratory.	

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Components or project activities	Environmental components	Description of environmental effects	Impact mitigation measures	Importance of residual effects
			1.27 Stormwater in work areas shall be confined, sampled and treated, if required. Alternatively, they must be pumped to land in an area of buffer vegetation for infiltration, away from the body of water and bare soil, or in a pond to allow the settling of suspended matter. 1.28 Obtain permission from the Parks Canada Representative prior to any environmental release of water. 1.29 Intercept stormwater from outside the construction site and keep these waters off the site by moving them to stabilized facilities or locations. 1.30 Canal water cannot be used to wash equipment or other site operations without prior authorization from the Parks Canada Representative. 1.31 No used snow may be disposed of in a canal in accordance with the Historic Canals Regulations	
	Flora et fauna	• Damage to vegetation and grassed areas • Damage to the root system, branches, and tree bark due to the movement of machinery • Introduction or dispersal of invasive alien species. • Disturbances and changes in wildlife movement. • Destruction or modification of habitat.	1.32 Prioritize the use permanently or already disturbed surfaces (eg paved road, gravel surface, highly compacted disturbed area) for circulation/ movement of vehicles and equipment . 1.33 Limit storage areas to durable or already disturbed surfaces. If this is not feasible, Parks Canada must have approved the proposed storage areas. 1.34 Establish and delimit a protective area around trees and shrubs to be preserved (eg tape, barriers, etc.) so as not to damage them or affect the root system. 1.35 Rehabilitate the land and vegetation damaged by the work so that the site is left as it was prior to the work. 1.36 Rehabilitated surfaces should have a degree of compaction and aeration corresponding to the initial state (before work) to prevent the transport and circulation of soil particles. 1.37 If necessary, the trees and shrubs to be felled will be replaced during the rehabilitation phase at the end of the work. 1.38 Respond to any other requirements of the Government Representative and the Site Manager for vegetation management. 1.39 Ensure machinery is clean and free from invasive species and noxious weeds when it arrives at the site and maintains as such thereafter. At the end of the work, thoroughly clean the machinery that has come into contact with invasive exotic species to avoid dispersal in new areas. 1.40 Choose erosion and sediment control products that reduce the risk of attracting or entangling wildlife and that will not introduce invasive alien species.	Negligible residual and localized impact

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III

Components or project activities	Environmental components	Description of environmental effects	Impact mitigation measures	Importance of residual effects
			1.41 If animals are observed in or near the site, give them the opportunity to leave the area and move away from areas of potential conflict. 1.42 Ensure that on-site workers are made aware of species at risk and that they immediately report any incidental observations to the Government Representative.	
2. Asphalt Demolition and construction	Air quality and human health	• Decreased ambient air quality through particulate matter(dust)and through greenhouse gas emissions.	2.1 Measures 1.3 to 1.7. 2.2 Apply work methods that cause that minimize dust. 2.3 Observe the regulations in place during demolition work. 2.4 Where possible use asphalt produced from recycled asphalt using cold production methods in the effort to reduce greenhouse gas emissions and reduce energy consumption. 2.5 Asphalt works are to be avoided during humid temperatures, under rainy windy conditions when the risk of erosion and sedimentation are elevated.	Negligible and localized residual impact
	Noise level	• Increase in ambient noise level	2.6 Measures 1.8 and 1.9.	None once work is complete
	Water and Soil Qualty/ Aquatic Ressources	• Increase in suspended solids and particulates in the environnement	2.7 Use products that are the least environmentally harmful and conform to environmental regulations. 2.8 Remove any debris accidentally introduced into the aquatic environment as soon as possible (e.g. geotextiles, tarpaulins, sediments barriers etc) 2.9 Clean up construction debris as and when available at the sites authorized by MDDELCC. 2.10 Do not discharge any excavated material, scrap, or debris into the aquatic environment. If this occurs remove immediatly.	Negligible and localized residual impact

IV

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Components or project activities	Environmental components	Description of environmental effects	Impact mitigation measures	Importance of residual effects
3. Excavation et backfill Reinstatement	Water and soil quality/ human health	• Migration of contaminants to soil and water • Soil erosion and sediment transport in the aquatic environment • Modification of slopes land profile and associated landscape	3.1 Measures 1.22 to 1.25, 1.39, 1.40. 3.2 Submit a contaminated soil management plan to Parks Canada for approval prior to excavation. 3.3Manage excavated soil in accordance with applicable federal, provincial and municipal laws and regulations for contaminated soil management. 3.4 Avoid excavation during periods when the soil is saturated, where rainfall is abundant, and there is runoff, strong winds or wet snow. 3.5 Limit the area of the reclaimed and exposed soil areas and stabilize them as soon as possible. If necessary, use ground cover, mulch, straw, sod, granular material, an erosion cover or any other device that can reduce soil erosion in the event of prolonged exposure and intensive use. 3.6 Limit in situ storage time for excavated materials. 3.7 Do not store excavated contaminated materials near water. If the site does not allow on-site storage, plan the excavation taking into account the opening hours of the authorized disposal sites. 3.8 Take the necessary precautions when temporarily storing contaminated soils to avoid contamination of underlying and adjacent soils, minimally: - Segregate the soils according to their level of contamination and according to the observed stratigraphy. - Store floors on an impermeable canvas and cover, or store in any other type of hermetic containment. The canvases must be fixed firmly to prevent them from being lifted by the wind. - At all times, ensure that soils do not migrate to other media, either by air, runoff or vehicle transit. 3.9 Replant soil as quickly as possible, depending on the initial contamination levels and the initial stratigraphic profile. 3.10 If necessary, carry out a characterization of the surplus excavated soils to determine the degree of contamination and adequately manage their disposition.	Negligible localized residual impact

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Components or project activities	Environmental components	Description of environmental effects	Impact mitigation measures	Importance of residual effects
		• Contamination of new embankment by adjacent soils • Modification of slopes, terrain and landscape relief	3.11 Surplus excavated soils that are contaminated will be stored, transported and disposed off-site in accordance with the provisions of the MDDELCC Policy in effect. 3.12 When disposing of off-site soils, keep any document or slip attesting to their disposition in sites authorized by the MDDELCC according to their degree of contamination. 3.13 Where surface soils are to be restored, a geotextile membrane shall be installed between existing contaminated soil and new material. 3.14 When the reclaimed soil exceeds the CCME guidelines for Residential / Park and / or MDDELCC Criterion B criteria, as required by Parks Canada, a minimum of 30 cm of clean soil should be applied. 3.15 Where applicable, any soil imported on the Parks Canada property must be a crop land that complies with the latest standards of the City of Montreal and the Bureau de Normalization du Québec. 3.16 Use clean backfill material free of contaminants and undesirable species. 3.17 Machinery that has come into contact with contaminated soil should be cleaned properly before being used in other areas. 3.18 New material (eg, topsoil, controlled backfill) should be compacted to avoid sagging and minimize erosion. 3.19 Divert runoff from work areas, exposed soils and erodible slopes; Ensure that they flow slowly to the surface. 3.20 Upon completion of the project, ensure good drainage of runoff, which may include restoration or improvement of original drainage conditions.	
	Archeological Resources	• Damage to archaeological remains and resources during excavations	3.21 Comply with all Parks Canada specific requirements for archaeological monitoring. 3.22 In the case where archaeological surveillance is not required for the works and an archaeological vestige (vestige of construction or development, object and fragment of object) is discovered accidentally during excavations. Suspend work in the immediate area of discovery and notify the Government Representative, who will then take the necessary steps to protect and conserve the archaeological remains. 3.23 All points of access to the work site and areas of mobilization will be restricted to existing roads and parking areas and other already disturbed areas. If other areas are to be used protection measures must be put in place (e.g. geo textile grids, wood chips, gravel etc.). During demolition procedures machinery must remain on gravel in order to prevent rutting and compaction, particularly during wet conditions.	Negligible localized residual impact.

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VII

Components or project activities	Environmental components	Description of environmental effects	Impact mitigation measures	Importance of residual effects
			3.24 In the event of the discovery of vestiges, objects and or fragments etc. of archaeological value in a zone not been previously identified as having high archaeological potential ,and in the absence of an archaeologist, works must be immediately suspended in the concerned sector. The Parks Canada Archaeological Team must also be immediately advised in order to initiate appropriate protective measures and assure the integrity and preservation of said discovered vestiges.	
	Terrestrial Vegetation	• Introduction or dispersal of invasive exotic species • Damage to vegetation and grassed areas • Damage to the root system	3.25 In areas where invasive alien species are present, excavated materials from the construction site (eg, topsoil, borrow materials, fill, gravel) will not be available for use in other areas of the Lachine Canal. Materials and plant residues must be properly placed in approved sites. 3.26 Restore disturbed sites as work progresses. Vegetated perturbed soils with native species. 3.27 Submit plant species and seed mixtures to Parks Canada for approval. The restoration elements must ensure that the environment is equivalent or improved compared to the pre-intervention situation. 3.28 If the growing season is too late, stabilize the soil to prevent erosion and wait until the following spring to restore vegetation. 3.29 Monitor disturbed and replanted parcels until the Parks Canada Representative determines that native vegetation is growing there and that the spread of invasive alien species has been avoided. 3.30 If the root system of a tree to be kept is damaged by excavation work, implement the following measures: - Cut the roots with a concrete saw (15 cm) and carry out a gradual stripping where roots are or may be present; - Use a geotextile to cover exposed roots; - Water regularly affected trees during construction; - Restore crown / root balance as a function of the percentage of root system loss by performing compensatory pruning where the same percentage of branches is removed, prioritizing diseased, weak, and / or poorly placed branches; - At the end of the work, the level of the ground must be identical to that which was present before the work.	Negligible localized residual impact

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Components or project activities	Environmental components	Description of environmental effects	Impact mitigation measures	Importance of residual effects
	Aquatic Fauna	•Input of contaminants, materials and debris into aquatic habitats/ • Alteration to natural aquatic components by the use of products.	3.1 As required, implement effective measures to limit sediment and debris from the site to the aquatic environment (ex, sediment barrier, berms, sediment trap, sedimentation basin, temporary slope stabilization, water diversion to Areas of vegetation). The measures must remain effective when the site is temporarily closed and during periods of flood or heavy rain. Pay attention to limiting the movement of particles in the water when removing the installations. 3.2 Conduct regular inspection and maintenance of erosion and sediment control during construction. 3.3 Sediment and erosion control methods must be adapted to the different situations that may be encountered or may be substituted by other methods if they are ineffective.	Negligible and localized residual impact
4. Tree clearing and / or vegetation cleaning	Terrestrial Flora and Fauna	• Vegetation damage • Destruction or modification of wildlife habitat • Damage to nests and / or disturbance of breeding birds • Introduction or dispersal of invasive alien species	4.1 Limit clearing/ grubbing to a minimum to preserve plant cover as much as possible. 4.2 Clearly define the area where the vegetation will be removed and mark the trees to be retained. The plan of trees to be felled must be submitted for prior approval by Parks Canada 4.3 Restore and re-green the site upon completion of the work. 4.4 All tree removals to be done outside of reproductive season of migrating bird species. The regional period established for the St. Lawrence Plain by Environment Canada is approximately from mid-April to mid-August. 4.5 If works must be done during the reproductive season, an inventory of the area should be conducted beforehand. In the event that nests are present, a protective zone must be established until such time as the young have vacated the nest. 4.6 Check for nests or dens in the area prior to clearing vegetation and avoid disturbance to occupied nests or dens. 4.7 Branches and tree trunks shall be cut flush, as close as possible to the ground or stem. 4.8 Trunks and other recovered material shall be transported to a storage site without debris and without damage to standing trees or landscape features outside the limits for clearing or storage. They must not be dragged into the watercourse. 4.9 If vegetation is to be removed early in the season due to sensitive periods for wildlife,perform the soil drying just before construction to ensure soil stability. 4.10 Stumps, roots, encrusted trunks and other non-earthy debris must be removed and shaken to release soil and loose rock before being transported to a designated site. 4.11 Vegetation debris shall be removed as soon as possible from the right-of-way and transported off-site for disposal. Residues of invasive alien species must be disposed of at a landfill site that accepts them, or at an incineration site.	Negligible and localized residual impact

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Components or project activities	Environmental components	Description of environmental effects	Impact mitigation measures	Importance of residual effects
			412 Store vegetation removed in areas already subject to disturbance to minimize disturbance. 4.13 Comply with the City of Montréal's regulations for the control of the Emerald Ash Borer. The recommended slaughter period is from 15 September to 31 December. The processing, displacement and disposal of ash wood must comply with the provisions of Regulation 15-040 in force. 4.14 Do not use pesticides near water (within 3 m of the high-water mark). If pesticides are required elsewhere on the work site, a pesticide treatment plan must be submitted for approval by the Parks Canada process.	
	Public health	• Irritating effects of certain plants on workers	4.15 Verify the presence of irritant species (eg, wild parsnip, poison ivy, ragweed) in the work area prior to carrying out the work and identify the affected areas. Eliminate species in work areas to reduce the risk of contact. 4.16 Ensure workers are aware of the presence of these irritant species and are able to identify them. 4.17 If necessary, wear long clothing and gloves to remove these species. Do not burn poison ivy, as fumes are toxic. 4.18 Revegetate rapidly revealed areas with native species to avoid the establishment of irritant species.	Negligible, localized,residual impact
5. Disposal of off-site waste and waste water.	Air , water, soil and sediment quality, aquatic resources and human health.	• Production of construction debris from demolition • Introduction of contaminants into the environment • Degradation of soil quality.	5.1 Measures 1.22. 2.8, 2.9, 3.11, 3.25 and 4.11 5.2 Assure that waste water generated by construction activities (e.g. water to clean equipment) is confined and recuperated. Before disposing into sewage system or in the environment, waste water must be tested and treated, if required, according to the current environmental regulations. For disposal in the environment, water quality must meet the standards of CCME - protection of aquatic life. criteria for water quality for surface runoff of the MDDELCC (protection de la vie aquatique - effet aigu) reglement 2008-47 of the CMM pour suspended particles, PH levels and C10 -C50 . It is the contractor's responsibility to assure regulatory compliance. 5.3 In the event that a treatment system is required (Filtration basin, filters or other such methods) , the system must effectively prevent contaminants and sediments from migrating to sewage system and water bodies. 5.4 Dispose of residuals materials off site and provide sufficient waste receptacles to manage daily domestic waste on site. 5.5 Implement an on site waste management program for the control and disposal of metal scrap, asphalt and concrete waste. These materials should be contained at the source and recycled as much as possible.	Negligible and localized residual impact

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Components or project activities	Environmental components	Description of environmental effects	Impact mitigation measures	Importance of residual effects
	Air , water, soil and sediment quality, aquatic resources and human health.		5.6 Do not store hazardous materials on site, assure regulatory compliance when disposing off site. 5.7 Regularly maintain portable sanitary facilities and dispose of waste accumulated in an appropriate disposal facility. Portable installations must have sufficient capacity and be managed in such a way as to prevent waste from being discharged into the receiving environment. 5.8 Fires and burning of rubbish or any other material are prohibited on site.	Negligible, localized residual impact

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XI

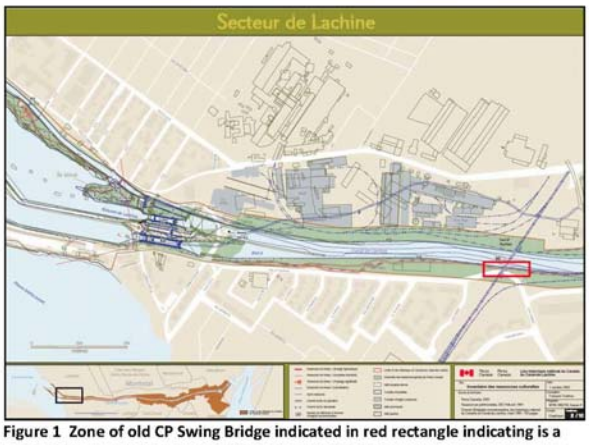

Figure 1 Zone of old CP Swing Bridge indicated in red rectangle indicating is a potential archaeological zone, (Parks Canada 1999)

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Figure 2 Monk Bridge - Potential archéological zone indicated in red rectangle. (Parcs Canada 1999)

Figure 3 Zone of old côte St-Paul bridge indicated in red rectangle is a potential archaeological zone, (Parcs Canada 1999)

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1. GENERAL

1.1 References

.1 Canadian General Standards Board (CGSB)

.1 CGSB 1.59-97, Alkyd Exterior Gloss Enamel.

.2 CAN/CGSB 1.189-00, Exterior Alkyd Primer for Wood.

.2 Canadian Standards Association (CSA International)

.1 CSA-O121-M1978 (R2003), Douglas Fir Plywood.

1.2 Installation and Removal

.1 Provide temporary access facilities and controls in order to execute work expeditiously.

.2 Remove from site all such work after use.

1.3 Guard Rails and Barricades

.1 Provide and install secure, rigid guard rails and barricades where required.

.2 Provide and install as required by governing authorities.

1.4 Weather Enclosures

.1 Provide weather-tight closures to unfinished door and window openings, tops of shafts and other openings in floors and roofs.

.2 Enclosures to withstand wind pressure and snow loading, as designed by a professional hired by the Contractor.

1.5 Dust-Tight Screens

.1 Provide dust-tight screens or insulated partitions to localize dust generating activities, and for protection of workers, finished areas of work and public, as indicated on architectural plans.

.2 Maintain and relocate protection until such work is complete.

1.6 Temporary Access to Site

.1 Provide and maintain access roads, sidewalk crossings, ramps and construction runways as may be required to access work.

1.7 Road Traffic

.1 Provide and maintain competent signal flag operators, traffic signals, barricades and flares, lights, or lanterns as required to perform work and protect public.

1.8 Access Roads for Emergency Response Vehicles

.1 Maintain access to property including overhead clearances for use by emergency response vehicles.

1.9 Protection of Building Finishes

.1 Provide protection for finished and partially finished building finishes and equipment during performance of work.

.2 Provide necessary screens, covers and hoardings.

.3 Confirm with the Departmental Representative the locations and the installation schedule three (3) days prior to installation.

.4 Be responsible for damage incurred due to lack of or improper protection.

1.10 Waste Management and Disposal

.1 Separate waste materials for recycling in accordance with Section 01 74 21 – Construction/Demolition Waste Management and Disposal.

2. PRODUCTS

.1 Not used.

3. EXECUTION

.1 Not used.

1. GENERAL

1.1 Action and Informational Submittals

.1 Submittals: in accordance with Section 01 33 00 – Submittal Procedures.

.2 Submit written request before carrying out cutting or patching work which can affect what follows:

.1 Structural integrity of elements of project.

.2 Integrity of weather-exposed or moisture-resistant elements.

.3 Efficiency, maintenance or safety of operational elements.

.4 Visual qualities of sight-exposed elements.

.3 The request must specify or include what follows:

.1 Identification of project.

.2 Location and description of affected work.

.3 Statement explaining why it is necessary to carry out the cutting or patching requested work.

.4 Description of proposed work, and products to be used.

.5 Alternatives to cutting and patching.

.6 Consequences of cutting and patching work of over those carried out by the Park Canada Representative or another contractor.

.7 Written permission of affected separate contractor.

.8 Date and time work will be executed.

1.2 Materials

.1 Required for original installation.

.2 Change in Materials: Submit request for substitution in accordance with Section 01 33 00 – Submittal Procedures.

1.3 Preparation

.1 Inspect existing conditions, including elements subject to damage or movement during cutting and patching.

.2 After uncovering, inspect conditions affecting performance of work.

.3 Beginning of cutting or patching means acceptance of existing conditions.

.4 Provide supports to assure structural integrity of surroundings; provide devices and methods to protect other portions of project from damage.

.5 Provide protection from elements for areas which are to be exposed by uncovering work; maintain excavations free of water.

1.4 Execution

.1 Execute cutting, fitting and patching to complete work.

.2 Fit several parts together, to integrate with other work.

.3 Uncover work to install ill-timed work.

.4 Remove and replace defective and non-conforming work.

.5 Provide openings in non-structural elements of work for penetrations of mechanical and electrical work.

.6 Execute work by methods to avoid damage to other work, and which will provide proper surfaces to receive patching and finishing.

.7 Cut rigid materials using masonry saw or core drill. Pneumatic or impact tools not allowed on masonry work without prior approval.

.8 Restore work with new products in accordance with requirements of Contract Documents.

.9 Fit work airtight to pipes, sleeves, ducts, conduit and other penetrations through surfaces.

.10 Refinish surfaces to match adjacent finishes. Refinish continuous surfaces to nearest intersection. Refinish assemblies by refinishing entire unit.

1.5 Waste Management and Disposal

.1 Separate waste materials for recycling in accordance with Section 01 74 21 – Construction/Demolition Waste Management and Disposal.

2. PRODUCTS

.1 Not used.

3. EXECUTION

3.1 Work sequence

.1 Not used.