



MODIFICATION DE SOUMISSION No.1 AMENDMENT TO TENDER

Dossier No – File No

5P300-15-5029/A

Projet - Project

Major Rehabilitation of Road 132 in Forillon National Park
Phase II

Date limite au plus tard -
Closing Date on or before
Wednesday, May 6, 2015 à 2:00
PM (EDT)

Date d'émission – Date of issue
April 27, 2015

OBJET DE LA PRÉSENTE MODIFICATION – THE PURPOSE OF THIS AMENDMENT IS TO GIVE EFFECT TO THE FOLLOWING

Please find attached changes made to the specifications and the schedule (see attached)

TOUTES LES AUTRES CONDITIONS INCLUSES DANS LES INSTRUCTIONS DE TRAVAIL DEMEURENT LES MÊMES / ALL OTHER CONDITIONS INCLUDED IN THE WORK INSTRUCTIONS REMAIN THE SAME.

Par la présente nous reconnaissons avoir reçu la version modifiée des instructions et nous attestons avoir modifié notre soumission en conséquence.

We hereby acknowledge receipt of the amendment instructions and confirm that provisions therefore have been made in our tender.

Pour être prise en considération, toute soumission devra être accompagnée d'un exemplaire signé de la présente modification. Si votre soumission a déjà été envoyée, veuillez signer et envoyer cette modification par télécopieur/courriel avec toutes révisions faites à votre prix de soumission, à nos bureaux avant la date limite. Télécopieur: 418-648-5392

Signed copy of this amendment must accompany each tender in order that the tender be considered. If your submission has already been sent, please sign and send this amendment by fax / email with any revisions made to your bid price, at our office before the deadline. Fax: 418-648-5392.

Signé - Signed	Titre - Title	Date
Société - Company		

PARKS CANADA

Major rehabilitation of Route 132 in Forillon National Park- Phase II

Amendment 1



Prepared by David Thibault, eng.

RECORD OF REVISION AND EMISSION		
Revision no	Date	Description of change and / or the issuance
00	2015-04-10	Issued for tender
01	2015-04-23	Issued for amendment 1

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This addendum is an integral part of the contract documents. All information included in this addendum supersedes the information previously issued.

PART 1 - INVITATION TO TENDER

1.1 SUPPLEMENTARY CONDITIONS (SC)

- .1 SC04 : Asphalt cement price adjustment
 - .1 Sub-article 2. b), last paragraph is replaced by the following one :
 - .1 **The price index shall be the Asphalt Cement Price Index published monthly by the Ministère des transports du Québec (MTQ) in the Contract Bulletin displayed on the MTQ Web site <http://www.bitumequebec.ca/resultats-bitume/annee-en-cours>. This price index shall be used to calculate the adjustment per ton of all grades of asphalt cement accepted into the Work.**

PART 2 - SCHEDULE OF SUBMISSION

- .2 The article 3.5.3 is added and the article 5.6.2 is modified. The costs pre-established in the bid document must be included in the amount of the submission. Two (2) pages of schedule of submission joined to the present amendment replace and cancel those presented to the page 21 and 26 of the invitation to tender.

PART 3 - TECHNICAL SPECIFICATIONS

1.2 SECTION VR00000 (LIST OF THE SECTIONS)

- .1 A note is added concerning certain sections of the technical specifications. The aimed sections are identified by an asterisk (*) and the note is indicated in the bottom of the board. Furthermore, the number of page of the section 32 11 00 was modified (French version only). Pages i and ii joined to the present amendment replace and cancel the pages of the previous version.

1.3 SECTION 01 29 00 – PAYMENT PROCEDURES

- .1 This complete section (pages 1 to 23) is issued (only in the english version) and joined to the present amendment.
- .2 Article 1.4.12 – Bridge

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- .1 The sub-article 1.4.12.14 is replaced by the following one :
- .1 This post is provisional and paid only if weather conditions require it. On the other hand, if the heating of constituents is required due to a delay caused by the entrepreneur or at the request of the latter, the cost of these works is at the expense of the entrepreneur**
- .2 The heating of components is measured and paid per cubic meter (m³) of concrete heated and the quantities shall be calculated on the basis of the theoretical dimensions of new concrete indicated on the plans and specifications. The set rate for heating of components shall be 13.20\$/ m³. This rate is fixed and any excess cost must be included in the unit price of concrete. Any expenses regarding heating of concrete components due to the necessity of correcting defective works shall be at the cost of the Contractor.
- .2 The sub-article 1.4.12.18.1 is replaced by the following one :
- .1 Steel structures are paid in a lump sum amount with the exception of bearing supports, deck joints, retaining devices in steel. The amount includes the **deck drains**, the furnishing of materials, fabrication, welds and welding controls, loading, transport, erection, installation as well as any incidental expense**
- .3 The sub-article 1.4.12.24 – Deck drains, is deleted.
- .4 The sub-article 1.4.12.28 is replaced by the following one :
- .1 This post is provisional and paid only if weather conditions require it. On the other hand, if the temporary asphalt is required due to a delay caused by the entrepreneur or at the request of the latter, the cost of these works is at the expense of the entrepreneur.**
- .2 Temporary Asphalt pavement shall be measured and paid by the metric ton. It shall include all labor, materials and equipment for, without being limited to, furnishing and transport of all materials required for fabrication, fabrication of asphalt, loading, transport, spreading, compaction, the use of bonding agents to seal the joints, **the saw cuts**, execution and removal of temporary connections if required and all other incidental expenses. Transport from the mixing plant to the work site is included in the unit price.

Additionally, the removal of temporary asphalt by scarification is included in the unit price per ton of the asphalt.

- .5 The sub-article 1.4.12.30 - Saw cut, is deleted.

1.4 SECTION 01 52 00 – CONSTRUCTION FACILITIES

- .1 Article 1.8 Trailer offices electricity

- .1 The sub-article 1.8.1 is replaced by the following one :

- .1 The electrical supply is planned into the electric panel **Aquarium no 2** located in the electric room of the building 'Centre d'interprétation' and it is at a distance of ± 175 meters of the diurnal area. The entrepreneur has to plan in his cost the installation and the removal of a temporary aerial electricity network between the offices of the construction site and the point of power supply, by including the temporary posts and insure a safe vertical clearance with the ground, the addition of circuit breakers into the existing electrical panel of the centre d'interprétation, the drilling and the restoration of the walls of the electric room for the passage of electric cables and all other works required to allow to feed the offices(trailer) of the construction site. The contractor must provide and install all required material for the connection. The energy expenses will be charge to the entrepreneur by basing itself on the average consumption of the last two years applicable to the period of use of the temporary electricity networks. The location of the centre d'interprétation and a picture of the electrical **panel #2** are shown in the following articles.

- .2 The sub-article 1.8.3 is replaced by the following one :

- .1 Photo – Electrical panel **Aquarium n°2**

Centre d'Interpretation Salle Aquarium 2.jpg



1.5 SECTION 31 00 00 – GENERAL (CIVIL)

.1 Article 1.3– Pavement price

.1 The sub-article 1.3.1 is replaced by the following one:

.1 The specifications concerning pavement price adjustment from CCDG(latest edition), will apply. The reference price for the

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calculation of the nominal price of pavement(excluding transportation) shall be :

.1 PG 64-34 : **900,00** \$/ton of pavement.

1.6 SECTION 32 11 00 – ROADWORKS

.1 Pages 17 to 39 are added (applicable to the french version only) and presented in appendix to the french version amendment.

.2 Article 3.12 - **Existing barrier** is added:

.1 The sub-article **3.12.1** is added:

.1 The existing barrier of the Road of the north Sector will have to be defused and repositioned, according to the directives of the supervisor. The entrepreneur will also have to remove and arrange existing concrete bases according to the requirements of the estimate, outside the limits of the national park. The barrier will have to be fixed to two concrete bases of type 4 of the MTQ standards.

The details of the barrier are shown in the plan in appendix in the present amendment.

.2 The sub-article **3.12.2** is added :

.1 The existing barrier of the boulevard Cap-des-Rosiers must be defused and delivered to the operation center of the Forillon national park. Concrete bases must be removed and arranged according to the requirements, outside the limits of the national park.

END OF SECTION



Parcs
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Item	Description of works	Quantity	Unit	Unit price	Amount
3.3.4	Maintenance of Northern Sector Road (provisional quantities for maintenance of the existing road)	500	m2	\$	\$
3.4	Landscaping features				
3.4.1	100-mm-thick topsoil and ground cover	1 200	m2	\$	\$
3.4.2	Hydroseeding type:			\$	\$
	- H-1	800	m2	\$	\$
	- H-3	400	m2	\$	\$
3.4.3	Renaturation of existing abandoned pavement	2 500	m2	\$	\$
3.5	Safety elements				
3.5.1	DN-II-4-001 precast curb	30	lin. m.	\$	\$
3.5.2	Curb bullnose				
	DN-II-5-001 0.5 m radius	1	unit	\$	\$
	1.5 m radius	1	unit	\$	\$
3.5.3	Barrier to re-locate	1	global	\$	\$
3.6	Signage				
3.6.1	Small road signs including poles				
	Signs	7	unit	\$	\$
	Panels	2	unit	\$	\$
3.7	Drainage elements				
3.7.1	Culvert				
	- 750 mm Ø RCP CL IV	25	lin. m.	\$	\$
3.7.2	Concrete sloped end section				
	- 750 mm Ø	2	unit	\$	\$

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Item	Description of works	Quantity	Unit	Unit price	Amount
5.3	Bridge bearings				
5.3.1	Laminated bearing	10	unit	\$	\$
5.4	Deck				
5.4.1	Steel structure (steel reinforcement)	1	global	\$	\$
5.4.2	Type 210D guardrail with parapet for bike path (including guardrails over return walls)	91	m	\$	\$
5.4.3	Concrete slab (on girders)	75	m3	\$	\$
5.4.4	Galvanized reinforcement slab (on girders)	16866	kg	\$	\$
5.4.5	Concrete (curb) including curb and approaches	19	m3	\$	\$
5.4.6	Galvanized steel reinforcement (curb), including reinforcement of curb at approaches	1915	kg	\$	\$
5.4.7	Elastomer gasket deck joint	13	m	\$	\$
5.5	Waterproof membrane and paving				
5.5.1	Cleaning of slab surfaces	333	m2	\$	\$
5.5.2	Temporary asphalt	64	t	\$	\$
5.5.3	Cleaning of slab existing surfaces	333	m2	\$	\$
5.5.4	Waterproof membrane	333	m2	\$	\$
5.5.5	Permanent asphalt	64	t	\$	\$
5.6	Other elements				
5.6.1	Motorized access equipment for inspection	1	global	\$	\$
5.6.2	Heating of components (concrete slab on girders and curb)	87	m3	13,20 \$	1 148.40 \$

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SECTION A: TECHNICAL SPECIFICATIONS

Section No.	Description	Number of Pages	Rev.
01 11 00	Summary of Work	6	00
01 29 00	Payment Procedures	23	00
01 31 19	Project Meetings	3	00
01 32 18	Schedule Work Bar Chart (GANTT)	5	00
01 33 00	Submittal Procedures	5	00
01 35 00.06	Special procedures for traffic control	13	00
01 35 29	Health and Safety Requirements	4	00
01 35 43	Environmental Procedures	24	00
01 45 00	Quality Control	3	00
01 52 00	Construction Facilities	5	00
01 61 00	Common Product Requirements	5	00
01 70 12	Safety Requirements	5	00
01 71 00	Examination and Preparation	2	00
01 74 11	Cleaning	2	00
01 78 00	Closeout Submittals	4	00
02 81 01	Hazardous Materials	5	00
*03 10 00	Concrete Forming and Accessories	6	00
*03 20 00	Concrete Reinforcing	7	00
*03 30 00	Cast-In-Place Concrete	10	00
*03 30 51	Concrete for Bridge Decks	7	00
*05 12 33	Structural Steel for Bridges	13	00
*05 50 00	Metal Fabrications	10	00
*07 13 52	Modified Bitumen Waterproofing Membranes	8	00
31 00 00	Civil Generalities	6	00
31 11 00	Clearing and Grubbing	5	00
*31 23 11	Excavation and Backfilling	24	00

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Section No.	Description	Number of Pages	Rev.
31 23 13	Civil Environmental Management of Excavation Surpluses	5	00
*31 23 16 26	Rock Removal	4	00
31 32 19 01	Geotextiles	4	00
31 37 00	Rip Rap	2	00
*32 11 00	Roadworks	42	00
32 91 21	Civil Topsoil and Earthwork	6	00
32 92 19.16	Hydraulic Seeding	7	00
*33 31 00	Culverts	11	00



*** When a reference to a specific article of the Cahier des charges et devis généraux (CCDG) of the ministère des Transports du Québec (MTQ) is made in the section, the requirements of this reference have then priority in case of contradiction or of difference.**

SECTION B: NORMALISED DRAWINGS (DN)

SECTION C: GEOTECHNICAL STUDY REPORTS:

Reconnaissance des sols organiques – Tronçon 2, Parc Forillon (LVM, 8 juillet 2014, 39 pages)

Étude géotechnique – Pont ruisseau Cap-des-Rosiers (Inspecsol, 4 février 2015, 25 pages)

Étude pédologique (Inspecsol, 4 mars 2015, 53 pages)

SECTION D: DRAWINGS

END OF SECTION

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Part 1 General

1.1 REFERENCES

- .1 Contract between the Owner/Applicable Public Authority and the Contractor.

1.2 ORDER OF PREVALENCE

- .1 In the case of contradictions or divergence in the methods of payment (measurement) between this section of the specification (01 29 00) and the *Cahier des charges et devis généraux* (CCDG latest Addition), the methods of payment (measurement) of this section of the specification (01 29 00) shall take govern and prevail.

1.3 MEASUREMENT

- .1 Method of measurement:
 - .1 The supply of materials, labour, tools, equipment, protection, transportation, customs, administrative costs, profits, financing, etc. necessary to perform the work of this contract are included in each of the items described below, unless otherwise indicated.
 - .2 For payment, only the materials actually incorporated into the work and accepted by the Ministerial Representative will be taken into account.

1.4 ITEMS LISTED ON THE BID FORMS

- .1 Construction site Organization:

This item in the Bid form is a global price to offset all costs incurred for the facilities required for performance of the Work and for any costs not covered in other payment items in the Bid Form in accordance with the specifications. The price includes, but is not limited to:

 - .1 Coordination with City of Gaspé, MTQ and other stakeholders, including all permits required for performance of Work.
 - .2 Maintenance of site and site accesses.
 - .3 Anything required in the following sections that is not directly attributed to or associated with a payment item in the Bid Form:

- .4 Section 01 31 19 – Project Meeting
 - .5 Section 01 35 29 – Health and Safety
 - .6 Section 01 52 00 – Construction Facilities
 - .7 Section 01 74 11 – Cleaning
 - .8 Section 01 74 21 – Construction/demolition Waste Management and Disposal
 - .9 Surveying, staking and survey not attributed to any other payment item in the Bid Form.
 - .10 Site security (if applicable).
 - .11 Rental costs for land or space to store materials.
 - .12 Protection of existing public utilities for the duration of the Work and environmental control.
 - .13 20% of the total bid price for this item shall be paid with the first progress payment once the Work has begun.
 - .14 Other progress payments under this item shall be paid at each payment request at a percentage that is consistent with the overall progress of the Work corresponding to the request.
 - .15 With regards to the preparation of the site where the site trailers shall be located, the costs shall include preparation of the site, backfilling, leveling, installation of transportable platforms, and preparation of a parking area for use by the Contractor, Ministerial representative and at least 3 visitors. Additionally, the costs shall include all incidental expenses as well as the costs of restoring the site to its previous state at the end of the works.
- .2 Site Office:
- .1 This item is a global price and include items described in Section 01 52 00- Site Installation of this specification such as Site trailers, access roads, platforms, barges, sanitary facilities, site fencing, electricity, water, lighting of the site, furniture, telephone (including internet, pagers, fax machines, etc.), heating/ ventilation of site offices, scaffolding, Site signage, insurance, mobilisation and demobilisation, liquid dust control, all to the conformity of the requirements in the specifications and the directives of the Ministerial Representative.

.3 Environmental Protection Measures

- .1 Environmental protection measures are paid globally in a lump sum payment. The price shall include all material, labor, and methods undertaken by the Contractor in order to respect the laws, norms and requirements for environmental matters. The price shall include the implementation of measures, the dismantlement of such measures, transport, disposal in an approved offsite location of waste materials, restoration of the area to its previous state and all repetitions or additions of such measures in accordance with the directives of the Ministerial Representative.

.4 Traffic Maintenance

- .1 Traffic Maintenance is paid globally and in a lump sum payment. The price shall include, without being limited to, all material, labor, equipment, flagmen, furnishing of signage and lane closure plans, barriers, site access signage, temporary traffic lights, adjustments to traffic light timing, temporary signage, shock/impact reducers, guards for the site, maintenance and adjustments during the duration of the works and incidental expenses to maintain installations that conform to the contractual documents and Tome V (MTQ).

.5 Earth Works:

- .1 Removal and disposal of the existing culvert.
 - .1 The removal and the disposal measure of the existing culvert are paid to global price and includes, without to it limiting itself, the sawing, the excavation, the removal of culverts, backfilling when required, the load, the transport and the off-site disposal.
- .2 Removal of Existing Road Pavement
 - .1 The removal of pavement is paid per square meter (m²) and includes, without limitation, sawing, pulverisation (if required), loading, transportation, and off-site disposal. Payable quantities are situated

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within the limits of the backfill and excavation of the new road.

- .3 Removal and Disposal of Existing Flexible Guardrails
 - .1 The removal and disposal of existing flexible guardrails is paid in a lump sum amount. The price includes, without limitation, dismantlement, manipulation, transport and the loading/unloading of guardrails to be recovered. Additionally, it includes transport, disposal of waste off-site of waste and unused elements, fill and compaction of cavities left upon removal of posts.
- .4 Removal, Disposal, and Replacement of Existing Road Signs
 - .1 Removal, disposal, and replacement of existing road signs are paid in a global pricing. The price includes, without limitation, the survey of existing signs in the work area, removing and replacing signs, removal and disposal off-site media at an authorized site, loading, and transportation of the material.
- .5 1st Class excavation and 1st class for structural signalling.
 - .1 This is a provisional item. 1st Class excavation is measured and paid per cubic meter (m³) of excavated material. The amount includes, but is not limited to, the following: boring, blasting, security measures, mechanical fragmentation of the materials to excavate to the appropriate sizing for re-use, all other works not included in 2nd Class excavation works/backfilling of different elements to be constructed/ transitions under the infrastructure level, loading, transport, labor, scaling, use of a seismograph, the protection of all elements/ public places/buildings/adjacent structures and incidental expenses. No bid form item has been designated for the placement of backfill material. When materials originating from 1st class excavations are used as backfill material, the Contractor should include such expenses in the unit price of 1st class excavations. The excavation/removal of easily fragmented rock, that which does not require the use of pneumatic hammers and blasting for removal, shall not be considered as 1st Class excavations. The excavation of <Boulders>, larger than 1 m³, shall be paid

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according to this item. No compensation shall be paid to the contractor should the executed quantities differ by greater than 15% than the foreseen quantities in the slip.

- .6 2nd Class excavation
 - .1 2nd Class excavation is measured and paid per cubic meter (m³) of excavated material and includes, but is not limited to, the excavation of granular materials that are not 1st Class: The unloading, the transport of the wood, the cutting of stumps, grubbing, stripping and setting aside of vegetative cover, removal and disposal of waste materials according to the requirements and terms of the contractual documents.
 - .2 This item includes the loading, transport and disposal off-site of waste materials.
 - .3 This item also includes the profiling of backfill material up to the infrastructure line, the profiling of the cut depths as indicated on the plans, compaction of cut depths, cleaning and reshaping of road ditches including the removal of all debris causing problems to the natural flow of water and all incidental expenses for the complete execution of works conforming to the requirements set out in Section 32 11 00 Civil Roadworks.
 - .4 No bid form item has been designated for the placement of backfill material. When materials originating from 2nd class excavations are used as backfill material, the Contractor should include such expenses in the unit price of 2nd class excavations.
 - .5 The removal of boulders and the backfill of such with MG-20 stone backfill is also included in the price of 2nd class excavations and shall include, without being limited to, works required for the removal of such boulders, backfill, compaction of stone backfill, loading, transport and disposal off site at a location approved by the Ministerial Representative.
- .7 Perforated Drains and Geotextile Membrane
 - .1 Perforated drains are payable by linear meter and include the transport, loading, compaction and all other incidental expenses.

- .2 The price shall include the installation of a geotextile membrane of Type V, with 300mm laps at each band of membrane, in order to completely cover the stone drainage material.
- .8 Drain Exits
 - .1 Drain exits shall be measured and paid per unit. The price shall include the supply and installation of concrete pipe, the MG-20 stone surrounding layer, the grill, excavations, profiling and other works all as indicated on DN-II-3-009.
- .9 Geotextile Membrane Type III
 - .1 Geotextile membrane is measured and paid per square meter (m²) without including additional amounts for laps. The price includes furnishing, storage, manipulation, transport, installation, assembly of spreads, anchor bolts (if required), labor, cleaning, leveling and all other incidental expense.
- .10 Exploration Pits
 - .1 Exploration pits shall be measured and paid per unit. They shall include, without being limited to, excavation, in the presence and at a location determined by the Ministerial Representative, of a pit that will permit the determination of the depth of the organic cover laid in 2014, backfilling of the pit once the information is obtained. The Contractor must consider that such surveys shall be conducted at the moment chosen by the Ministerial Representative and not according to the presence of machinery in proximity to the locations chosen.
- .6 Road Works
 - .1 Insulation
 - .1 Insulation shall be measured and paid per square meter (m²) and according to the thicknesses specified on the plans. It shall include, without being limited to, labor, materials, installation of rigid insulation, preparation of granular substrate prior to installation, preparation of transitions and all other works set out in the plans and specifications. The preparation of the approaches shall be included in

the price per square meter of full-depth insulation specified on the plans.

.2 Crushed MG-112 Stone Subgrade:

- .1 Crushed MG-112 Stone Subgrade is measured and paid per cubic meter (m³). It shall include all labor, materials and equipment for, without being limited to, the furnishing of information, tests and grading necessary for the approval of the materials, approval of the material source, purchase of materials, transport to the work site, weighing of materials, placement, compaction and all other incidental expenses required for the conformity of the works to the plans and specifications. The quantities shall be determined by the averaging of the volumes based on the theoretical dimensions indicated on the typical sections indicated on the plans. The installation must include the profiling and compaction of the material to the specified compaction and profiles indicated on the plans and specifications.
- .2 The price shall also include the preparation of the granular surface platform in order to receive the foundation materials as well as other incidental expenses.

.3 Crushed MG-20 Stone Upper Foundation:

- .1 Crushed MG-20 Stone Upper Foundation is measured and paid per cubic meter (m³). It shall include all labor, materials and equipment for, without being limited to, the furnishing of information, tests and grading necessary for the approval of the materials, approval of the material source, purchase of materials, transport to the work site, weighing of materials, placement, compaction, saw cuts and all other incidental expenses required for the conformity of the works to the plans and specifications. The quantities shall be determined by the averaging of the volumes based on the theoretical dimensions indicated on the typical sections indicated on the plans. The installation must include the profiling and compaction of the

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- material to the specified compaction and profiles indicated on the plans and specifications.
- .2 The price shall also include the preparation of the granular surface platform in order to receive the foundation materials, paving material as well as other incidental expenses.
- .4 Crushed MG-20b Stone Shoulder:
 - .1 Crushed stone MG-20b, for the shoulders, shall be measured and paid in metric tons (T) of material put in place. It shall include all labor, materials and equipment for, without being limited to, the furnishing of information, tests and grading necessary for the approval of the materials, approval of the material source, purchase of materials, transport to the work site, weighing of materials, placement, compaction and all other incidental expenses required for the conformity of the works to the plans and specifications.
 - .2 The price shall also include the placement of MG 56 in lieu of MG-20b at the locations indicated on the plans.
 - .5 TTOG Electrical Sleeves
 - .1 TTOG electrical sleeves are measured and paid per linear meter. The price shall include all labor, materials and equipment for, without being limited to, TTOG pipes with a polymer coating, plugs, excavation, furnishing and labor of all materials from the bedding material to the infrastructure line, temporary shoring, transition material as well as other works.
 - .6 Maintenance of Existing Northern Sector Road
 - .1 The maintenance of the Existing Northern Sector Road, between the existing Route 132 and the new infrastructure works, shall be measured and paid per square meter (m²) of 50mm asphalt layer. Provisional quantities are indicated on the bid form in order to anticipate occasional repairs to the existing pavement. The price shall include all labor,

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materials and equipment for, without being limited to, the asphalt concrete, bonding agent, compaction, mobilisation, de-mobilisation, signage during the works as well as all other incidental expenses. The contractor shall consider that only small surfaces will be repaired during the various different mobilisations for this kind of work.

.7 Pavement

.1 Pavement (Asphalt Concrete)

.1 Pavement is measured and paid per metric ton (T) of the mix indicated on the bid form. It shall include all labor, materials and equipment for, without being limited to, formulation of the mix design for initial approval of the asphalt concrete, preparation prior to paving, adjustment of the accessories to final levels if required, placement of a bonding agent, purchase of material, loading, the joint heater, the waiting time, totality of transport, drivers (if required), spreading, compaction and all other works required for the conformity of the works to the plans and specifications.

.2 Material Transfer Vehicle (MTV)

.1 The MTV is paid per metric ton of asphalt concrete placed. The unit price shall include the furnishing of the MTV and the required additional hoppers/gantries, all labor, allowances, transport to the site, fuel, lubricants, daily maintenance and incidental expenses. The price must also include the use of a rig that will enable the MTV to cross a bridge.

.8 Landscaping

.1 Topsoil and Finishing Grading

.1 Topsoil shall be measured and paid per square meter (m²) and shall include all labor, materials and equipment for, without being limited to, excavation and arrangement of an authorised site for stockpiling all manners of materials, preparation of surface to

receive topsoil, disposal of debris, furnishing of material analysis for approval, furnishing, transport and laying of topsoil and all other works required for the conformity of the works to the plans and specifications.

.2 Hydro-seeding

.1 Hydro-seeding, according to the type indicated on the bid form, shall be measured and paid per square meter (m²) of effective seeding along the slopes of the terrain. Hydro-seeding shall include the preparation of surfaces, the mix of seeds, fertiliser, mulch, adhesive agent and straw/wood fiber mat, maintenance during the warranty period and all other incidental expenses.

.3 Re-Naturalisation of existing roads

.1 Re- Naturalisation of existing roads shall be measured and paid per square meter (m²). It shall include all labor, materials and equipment for, without being limited to, cutting, removal, pulverisation (if required), loading, transport, disposal of materials off-site, backfilling of ditches, removal and disposal of existing culverts, placement of topsoil and Hydro-seeding. Payable quantities shall be located along the exterior of the limits of the backfill/excavation of the new road.

.9 Security Elements

.1 Semi-Rigid Guardrails

.1 The Semi-Rigid Guardrails shall be measured and paid per linear meter according to the types and typical drawings specified on the bid form. It shall include all labor, materials and equipment for, without being limited to, the installation and furnishing of guardrails, posts and necessary hardware. All works shall be as indicated in article 18.5.4 of the CCDG 2015

.2 End-Pieces

.1 End-Pieces shall be payable by unit and shall include the furnishing, transport, installation and all other incidental expenses.

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- .3 Rigid Transition Guardrails
 - .1 Rigid Transition Guardrails shall be payable by unit according to the types and typical drawings specified on the bid form. It shall include all labor, materials and equipment for, without being limited to, installation and furnishing of guardrails, posts, necessary hardware and bridge connections. All works shall be as indicated in article 18.5.4 of the CCDG 2015
- .4 Transition Guardrails or prefabricated Guardrails
 - .1 Transition Guardrails or prefabricated Guardrails shall be payable by linear meter. It shall include all labor, materials and equipment for, without being limited to, excavation and disposal of all manner of materials in place at an authorised site, furnishing and supply of formwork, preparation of granular foundation in MG-20, pouring of concrete, treatment and curing of concrete, insulation (if required), backfill and all other works required for the conformity of the works to the plans and specifications.
- .5 Curb Bullnose
 - .1 Curb Bullnoses shall be payable by unit. It shall include all labor, materials and equipment for, without being limited to, excavation and disposal of all manner of materials in place at an authorised site, furnishing and supply of formwork, preparation of granular foundation in MG-20, pouring of concrete, treatment and curing of concrete, insulation (if required), backfill and all other works required for the conformity of the works to the plans and specifications.
- .10 Signalling
 - .1 Small road signs
 - .1 Small road signs shall be payable by the unit. It shall include all labor, materials and equipment for, without being limited to, furnishing of panels and posts, loading, transport, installation, anchors,

- necessary hardware and all other incidental expenses.
- .2 Signal arrow(lighted) on trailer fixed
 - .1 .1 The signal arrows are paid according to one of the two conditions of payment planned in the slip. The entrepreneur has to give a price for every option to the slip of submission. The owner reserves the right to choose the option of his choice.
 - .2 Option 1: Purchasing
 - .1 The signal arrows on fixed trailer are paid by the unit. The price includes the purchase, the transport, the installation, the maintenance during 1 year, the removal according to the instructions of the owner, and it includes any incidental expense
 - .3 Option 2: Renting
 - .1 The signal arrows on fixed trailer are paid by the week. The price includes the rent of the equipment, transport, installation, maintenance, use and removal, and it includes any incidental spending.
 - .3 Signage Structures
 - .1 Signage Structures shall be payable by the unit. It shall include all labor, materials and equipment for, without being limited to, excavation and backfill of sites as indicated on the plans including loading and transport of the required materials outside the work site, signage for the temporary works, concrete bases, reinforcing steel, steel post supports, hardware, loading and transport of panels and connections furnished by the client, adjustment of connections to the posts as well as well other incidental expenses.
 - .4 Pavement Marking:
 - .1 Pavement markings will be measured and paid in linear meters (m) or in a lump sum as indicated on the bid form. It shall include all labor, materials and

equipment for, without being limited to, scattering of reflective glass beads and the pre-marking measured in linear meters for continuous lines. Marking of dashed lines, hatches, stop lines, arrows shall be paid in a lump sum amount.

.11 Drainage Elements

.1 Culverts

.1 Culverts will be measured and paid by linear meter (m). It shall include all labor, materials and equipment for, without being limited to, Reinforced concrete pipe (RCP) corresponding to pipe diameter and class of pipe identified on the bid form. It shall include excavations, supply and installation of all materials from the bottom of the trench to the infrastructure, temporary retaining works, cross slope, supply and installation of cut-off walls, supply of all materials for a complete installation according to the standard drawing III-4-002 and any incidental expenses necessary to complete the Work according to the specifications of the Section 33 31 00 – Culverts.

.2 Sloped Concrete End Sections

.1 Sloped concrete end sections for circular culverts will be measured by the unit, corresponding to the culvert diameter to which it is connected. Unit price shall include excavation, transportation, and disposal of waste material, bedding, supply and installation of all materials, cut off walls, waterproof joints and any incidental expenses necessary to complete the Work according to the specifications of the Section 33 31 00 – Culverts.

.3 Drainage Ditches

.1 Excavation and profiling of drainage ditches are payable per linear meter of ditch. Ditches adjacent to the existing road are not payable under this item. It shall include all labor, materials and equipment for, without being limited to, transport, loading, disposal of waste excavated material and all other incidental expenses.

.4 Rock ballast / Rip Rap

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- .1 Rock Ballast and Slope stabilisation ballast, as identified by type on the bid form, are measured and paid per square meter (m²). Rock caliber can be expressed in corresponding grade and thickness. It shall include loading, transportation, placing, all labour, equipment, stone washing, excavation, disposal of waste material, type V geotextile membrane, installation, and any incidental expenses necessary to complete the Work according to the specifications of Section 33 31 00 – Culverts.
- .5 Stone Box culverts
 - .1 Stone Box culverts are measured and paid in linear meters. It shall include loading, transportation, placing, all labour, equipment, stones, stone washing, excavation, disposal of waste material, geotextile membrane type V, installation, asphalt concrete, asphalt borders and any incidental expenses necessary to complete the Work in conformity with the details.
- .12 Bridge
 - .1 1st Class Excavated Material
 - .1 1st Class Excavated Material for the monumental works is measured and paid per cubic meter (m³) of excavated material. The amount includes, but is not limited to, the following: mechanical fragmentation of the materials to be excavated, loading, transport, disposal of the materials offsite if authorized, transport and disposal of the materials into a site approved by the Ministerial Representative. The contractor can use blasting equipment with the written approbation from the Ministerial Representative. Contractor must take into account that additional costs for use of blasting equipment are not paid. In the case where the rock is not cut to the stipulated dimensions, the cost of supplementary executed works required shall be borne by the Contractor.

- .2 The placement of backfill inside the theoretical volume established in the preceding article must be included in the price of excavated material.
- .2 2nd Class Excavation and Backfill
 - .1 2nd Class Excavation and backfill of the monumental works is paid in a lump sum amount for 2nd class excavated material, with the exception of excavated material that cannot be re-used for the works in this present section. No excavation will be paid outside the envelope of the theoretical volume established at the bid form item <Excavation and Backfill>. Excavation and Backfill outside this volume envelope must be included in the price of works requiring this excavation. The amount includes, but is not limited to: the preparation and drying of excavated areas, transport, loading and disposal of the materials and the backfill of excavated areas to the level of the adjacent areas prior to excavation, labor and all incidental expenses. The backfill and placement of fill inside the volume envelope established in the item <excavation and backfill> must be included in the price of excavations. Fill outside the volume envelope must be included in the prices of the works requiring this fill.
- .3 Cofferdams
 - .1 Cofferdams shall be measured and paid by unit, since a cofferdam is a unit of foundation. The price shall include the furnishing of material, labor, the inspection of such dam with the aid of a video camera, removal of cofferdams and all incidental expenses.
- .4 Rip Rap
 - .1 Rip Rap is measured and paid per square meter (m²) according to the caliber used 200-300 or 300-500. . It shall include loading, transportation, placing, all labour, equipment, stone washing, excavation, preparation of the covered surface including the base of the cladding where required, disposal of waste material, type V geotextile membrane, installation, and any incidental expenses necessary.

- .5 Perforated drains 200mm and geotextile, PVC (type 1) or PVC COEX (type 1) or PE (type 2), 180 kpa min
 - .1 The perforated drain is measured and paid in linear meter of installed drain. The measurement shall be done in a continuous manner according to their central axis and this to the ends of the drains. The price includes the furnishing of materials, couplers, installation of geotextile, penetration of the foundation, excavation, bedding, backfill of the trench as well as labor and incidental expenses.
- .6 Granular Bedding
 - .1 Bedding in granular material is measured and paid per cubic meter (m³) based on the theoretical dimensions of the excavations. It shall include the furnishing of material, labor and all other incidental expenses.
- .7 Concrete Bedding
 - .1 Bedding in concrete is measured and paid per cubic meter (m³) based on the theoretical dimensions of the excavations. It shall include the furnishing of material, labor and all other incidental expenses.
- .8 Concrete- Foundation Footings
 - .1 Foundation footings concrete is measured and paid per cubic meter (m³) based on the theoretical dimensions. It shall include the furnishing of detailed mix data sheets, furnishing of materials, formwork, formwork connections, chamfers, cure of concrete, correction, cleaning of surfaces and concrete finishing, where required, removal of formwork, all labor and any incidental expense.
- .9 Concrete- Foundation supports
 - .1 Foundation Support concrete is measured and paid per cubic meter (m³) based on the theoretical dimensions. It shall include the furnishing of detailed mix data sheets, furnishing of materials, cure of concrete, all labor and any incidental expense.
- .10 Concrete- Abutments
 - .1 Abutment concrete is measured and paid per cubic meter (m³) based on the theoretical dimensions. It shall include the furnishing of detailed mix data

sheets, furnishing of materials, formwork, formwork connections, chamfers, cure of concrete, construction joints, control joints, correction, cleaning of surfaces and concrete finishing, where required, performance of tests on field cured samples, removal of formwork, furnishing of barbitans, furnishing of self-adhesive membrane of the joints in order to waterproof cracks in the concrete that shall be backfilled, furnishing and installation of pre-fabricated drainage systems, all labor and any incidental expense. Additionally, it covers the realisation of suitability testing as well as testing to the characterisation of the concrete. Any repeat due to a non-conforming suitability test shall be at the expense of the Contractor.

.11 Concrete- Approach Slab

.1 Approach slab concrete is measured and paid per cubic meter (m³) based on the theoretical dimensions. It shall include the furnishing of detailed mix data sheets, furnishing of materials, formwork, formwork connections, chamfers, cure of concrete, correction, cleaning of surfaces and concrete finishing, where required, removal of formwork, furnishing of geotextiles, drains, perforated plates, asphalt board of the approach slab, all labor and any incidental expense.

.12 Concrete deck Slab(on beam)

.1 Bridge Deck Slab concrete is measured and paid per cubic meter (m³) based on the theoretical dimensions but excluding the interior volume of the hollowed pieces. However, in the case of a slab supported by beams, the quantity of concrete of the slab shall be augmented by the quantity of concrete required to construct the gussets. It shall include the furnishing of detailed mix data sheets, furnishing of materials, formwork, formwork connections, chamfers, cure of concrete, eaves, construction joints, control joints, correction, cleaning of surfaces and concrete finishing, where required, performance of tests on field cured samples, removal of formwork, compressible liners, geotextiles, furnishing of self-adhesive membrane of the joints of a slab on

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abutments, all labor and any incidental expense. Additionally, it covers the realisation of suitability testing as well as testing to the characterisation of the concrete. Any repeat due to a non-conforming suitability test shall be at the expense of the Contractor.

.13 Concrete- Curbs

- .1 Curb concrete is measured and paid per cubic meter (m^3) based on the theoretical dimensions. It shall include the furnishing of detailed mix data sheets, furnishing of materials, formwork, formwork connections, chamfers, cure of concrete, construction joints, correction, cleaning of surfaces and concrete finishing, where required, performance of tests on field cured samples, removal of formwork, all labor and any incidental expense. Additionally, it covers the realisation of suitability testing as well as testing to the characterisation of the concrete. Any repeat due to a non-conforming suitability test shall be at the expense of the Contractor.

.14 Concrete- Heating of Components



- .1 **This post is provisional and paid only if weather conditions require it. On the other hand, if the heating of constituents is required due to a delay caused by the entrepreneur or at the request of the latter, the cost of these works is at the expense of the entrepreneur**
- .2 The heating of components is measured and paid per cubic meter (m^3) of concrete heated and the quantities shall be calculated on the basis of the theoretical dimensions of new concrete indicated on the plans and specifications. The set rate for heating of components shall be 13.20\$/ m^3 . This rate is fixed and any excess cost must be included in the unit price of concrete. Any expenses regarding heating of concrete components due to the necessity of correcting defective works shall be at the cost of the Contractor.

.15 Concrete- Type 1 Cold Weather protection

- .1 This item is provisional and paid only if weather conditions require it. On the other hand, if cold

- weather protection is required due to a delay caused by the entrepreneur or a request from him, the cost of these works is at the expense of the entrepreneur.
- .2 Type 1 Cold weather protection is measured and paid per square meter (m²) of non-formed new concrete covered by insulation. The set rate for Type 1 Cold Weather Protection shall be 8.85\$/ m² of insulation (per layer). This rate is fixed and any excess cost must be included in the unit price of concrete. Any expenses regarding Cold weather protection due to the necessity of correcting defective works shall be at the cost of the Contractor.
- .16 Concrete- Type 3 Cold Weather protection
- .1 This item is provisional and paid only if weather conditions require it. On the other hand, if cold weather protection is required due to a delay caused by the entrepreneur or a request from him, the cost of these works is at the expense of the entrepreneur.
- .2 Type 3 Cold weather protection is measured and paid per square meter (m²) of new concrete in contact with formwork or a beam, excluding insulation which shall be paid per square meter of slab covered by insulation. The set rate for Type 3 Cold Weather Protection shall be 64.75\$/ m², that shall be added to 8.85\$/ m² for the insulation (per layer) installed over the concrete. This rate is fixed and any excess cost must be included in the unit price of concrete. Any expenses regarding Cold weather protection due to the necessity of correcting defective works shall be at the cost of the Contractor.
- .3
- .17 Reinforcing Steel
- .1 Reinforcing Steel is paid per kilogram (kg), in accordance with the quantities installed within the formwork. The linear mass is determined by the designation of the reinforcements bars described in the standard CSA G30.18 *Carbon Steel Bars for*

Concrete Reinforcement, latest edition. The amount includes the furnishing of materials, galvanisation, bar ties, labor and installation as well as any incidental expense. Note that only support bars indicated on the plans shall be paid at the unit rate of reinforcement bars. Other support bars must be included in the price of works for which they are intended. Supplementary reinforcing steel added to link a new slab supported by beams shall be paid according to the unit rate of reinforcing steel.

.18 Steel Structures

- .1 Steel structures are paid in a lump sum amount with the exception of bearing supports, deck joints, retaining devices in steel. The amount includes **deck drains**, the furnishing of materials, fabrication, welds and welding controls, loading, transport, erection, installation as well as any incidental expense.



.19 Galvanisation

- .1 Galvanisation is not included in any item on the bid form. All costs and expenses incurred by the Contractor for the realisation of these works are included in the unit prices of the works, in which galvanisation of steel is stipulated.


.20 Metallization

- .1 Factory metallization is not included in any item on the bid form. All costs and expenses incurred by the Contractor for the realisation of these works, including furnishing of materials and labor, transport and installation, are included in the unit prices of the works, in which metallization of steel is stipulated.

.21 Painting of Metallized Steel Surfaces

- .1 Painting of Metallized Steel Surfaces is not included in any item on the bid form. All costs and expenses incurred by the Contractor for the realisation of these works, including the painting in the field of bolted assemblies, furnishing of materials and labor, transport and installation, are included in the unit prices of the works, in which the application of paint is stipulated.

.22 Bearing Supports (Bridge)

- .1 Bridge Bearings are measured and paid by unit quantities. It shall include the furnishing and installation of bearings and the anchors, field welding and control of such field welding and any incidental expense. In the case of elastomeric bearings beneath the steel beams, the price shall also include the furnishing and installation of the steel top plate.
- .23 Deck joints
 - .1 Deck Joints are measured and paid per linear meter according to the horizontal projection of such joints and excluding the vertical returns at the curbs. It shall include the furnishing and installation of the deck joints, field welding and control of such field welding and any incidental expense.
- ~~.24 Deck drains~~
-  ~~.1 Deck Drains are measured and paid by unit quantities. It shall include the furnishing, installation and any incidental expense.~~
- .25 Type 210D Guardrails
 - .1 Type 210D Guardrails are measured and paid per linear meter according to the length of the top rail. It shall include the furnishing and installation of the materials including the anchors, field welding, control of such field welding and any incidental expense. Should the connection of the road guardrail to the bridge guardrail are specifically described in a line item on the bid form, they shall be paid by the unit quantity. The price shall include the furnishing of materials, labor and all incidental expenses.
- .26 Cleaning of Slab Surfaces
 - .1 The cleaning of slab surfaces is measured and paid per square meter. It shall include the furnishing of materials, labor and all incidental expenses.
- .27 Waterproof membrane
 - .1 Waterproof membrane is measured and paid per square meter according to the realised covered surface and excluding the laps and eaves. It shall

include the furnishing of materials, labor and all incidental expenses.

.28 Asphalt Pavement- Temporary



.1 This post is provisional and paid only if weather conditions require it. On the other hand, if the temporary asphalt is required due to a delay caused by the entrepreneur or at the request of the latter, the cost of these works is at the expense of the entrepreneur.

.2 Temporary Asphalt pavement shall be measured and paid by the metric ton. It shall include all labor, materials and equipment for, without being limited to, furnishing and transport of all materials required for fabrication, fabrication of asphalt, loading, transport, spreading, compaction, the use of bonding agents to seal the joints, **the saw cuts**, execution and removal of temporary connections if required and all other incidental expenses. Transport from the mixing plant to the work site is included in the unit price. Additionally, the removal of temporary asphalt by scarification is included in the unit price per ton of the asphalt.

.29 Asphalt Pavement- Permanent

Permanent Asphalt pavement shall be measured and paid by the metric ton. It shall include all labor, materials and equipment for, without being limited to, furnishing and transport of all materials required for fabrication, fabrication of asphalt, loading, transport, spreading, compaction, the use of bonding agents to seal the joints, execution and removal of temporary connections if required and all other incidental expenses. Transport from the mixing plant to the work site is included in the unit price. Additionally, all costs incurred by the Contractor for the application of bonding agents at a residual rate of 0.20 l/m² on the waterproof membrane are included in the unit price of the asphalt, including the costs of furnishing the bonding agent.

~~.30 Saw Cuts~~

~~.1 Saw cuts (applicable on the bridge only) are measured and paid per linear meter. It shall include~~



~~the furnishing of materials, labor and all incidental expenses.~~

- .31 Motorised Access Equipment for end of works Inspections
 - .1 The motorised access equipment of type MBI-125, or an equivalent approved by the Ministerial Representative, shall be paid in a lump sum amount set at 5 500\$. This price is fixed and all expense in excess of such price shall be included in the site organisation line item. It includes the access equipment, operator, signage and all other incidental expenses.

Part 2 Products

2.1 NOT USED

- .1 Not used.

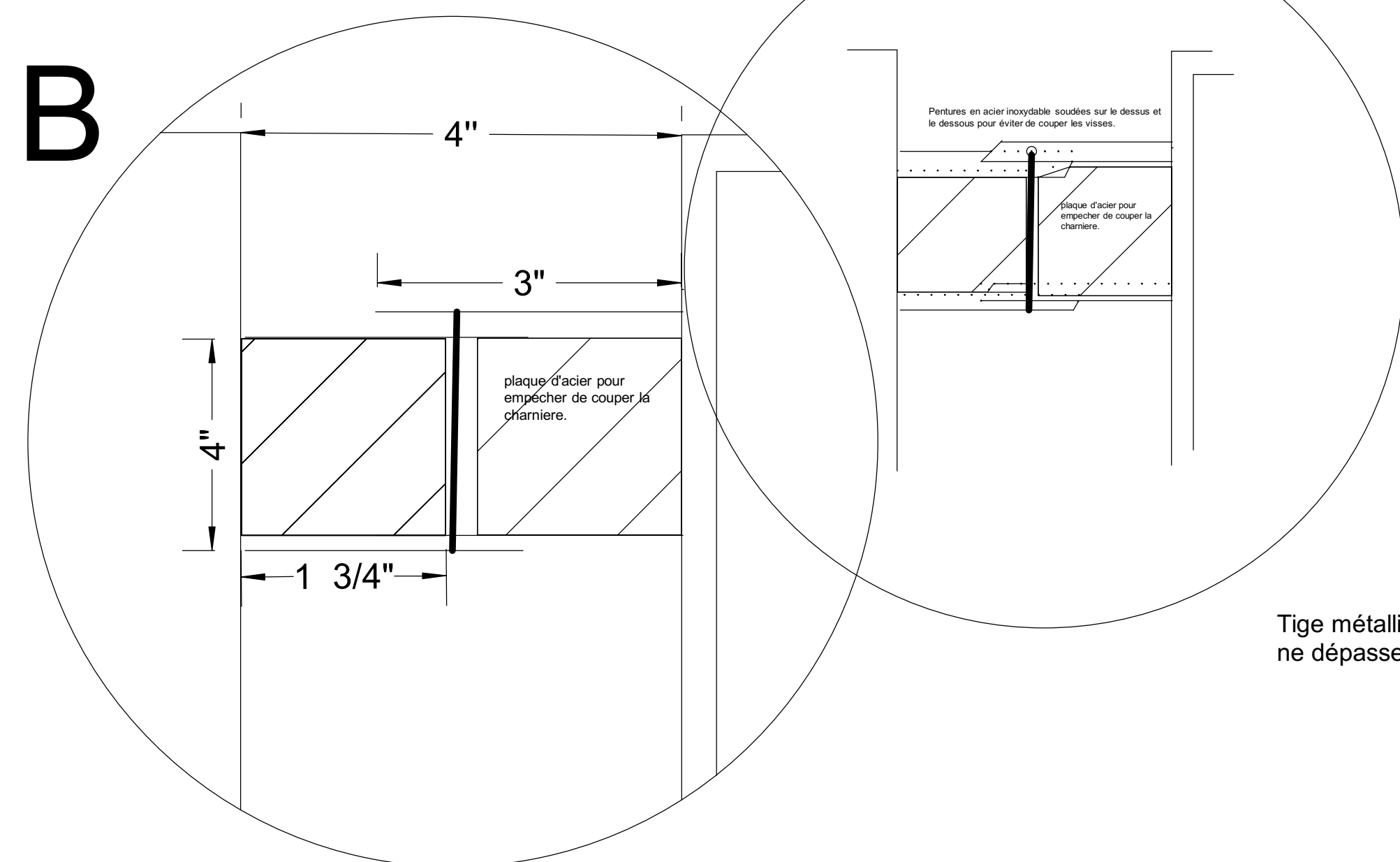
Part 3 Execution

3.1 NOT USED

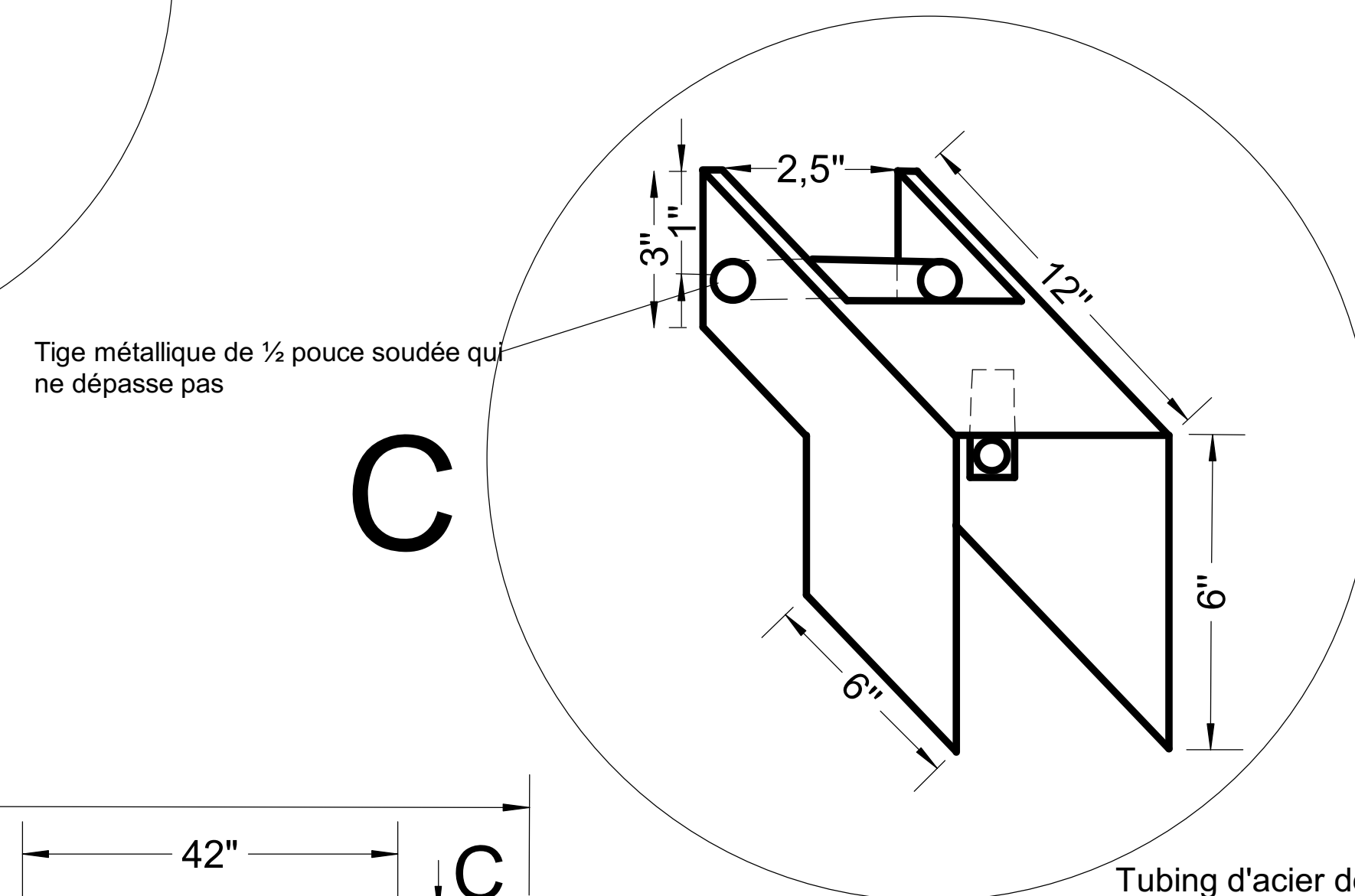
- .1 Not used.

END OF SECTION

B

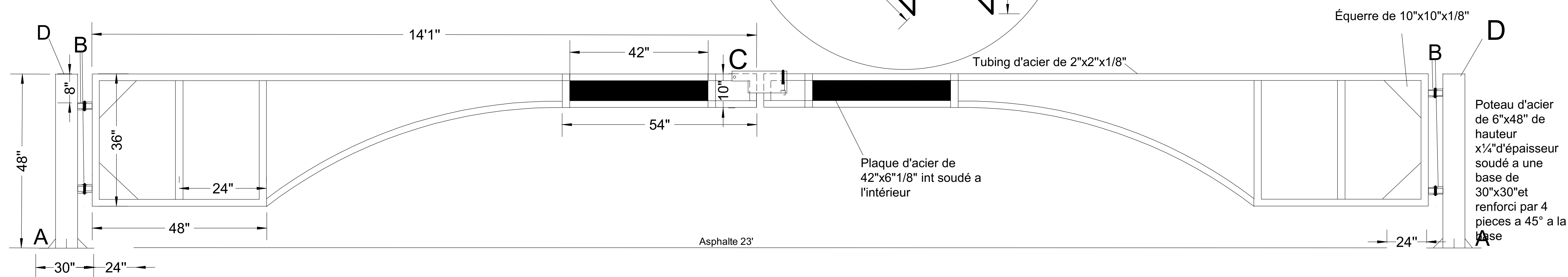


C

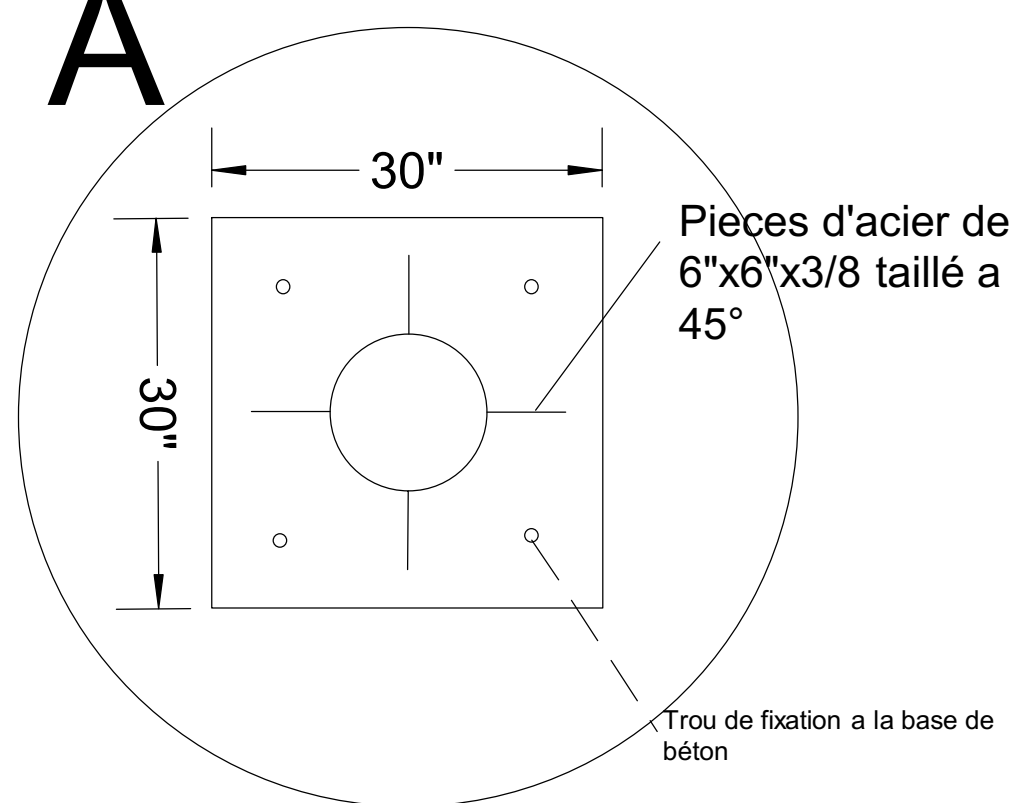


D

Couvercle soudé sur tout le contour pour éviter l'infiltration d'eau



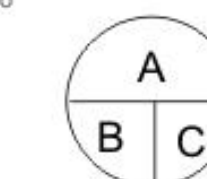
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Préliminaire 5 Janvier 2011

Modification Date

a. no detail a. detail no
b. localisation b. localisation
c. feuilleno c. sheet no



conception desing

concu par desinged by

Simion Caouette

dessiné par draw by

Simon Caouette

verifié par checked by

Jean-Yves Chouinard

chargé de projet project manager by

Jean-Yves Chouinard

Validé par Validated by

Chargé de projet project manager

Jean-Yves Chouinard

directeur du projet project director

Jean-Yves Chouinard

projet project

Parc national du Canada Forillon

Barrière d'entrée

titre du dessin drawing title

Route du havre
Pont Whalen

Date feuille

05/01/2011

échelle scale

1"= 1'

ref. consultant sheet

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