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**SOLICITATION AMENDMENT
MODIFICATION DE L'INVITATION**

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'invitation demeurent les mêmes.

Comments - Commentaires

**Vendor/Firm Name and Address
Raison sociale et adresse du
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Issuing Office - Bureau de distribution
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Québec
Québec
G1J 0C7

Title - Sujet Dragage du chenal Cap-des-Rosiers	
Solicitation No. - N° de l'invitation EE519-180791/A	Amendment No. - N° modif. 002
Client Reference No. - N° de référence du client EE519-180791	Date 2017-10-11
GETS Reference No. - N° de référence de SEAG PW-\$QCM-008-17224	
File No. - N° de dossier QCM-7-40104 (008)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2017-10-17	
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Rochette, Jean	Buyer Id - Id de l'acheteur qcm008
Telephone No. - N° de téléphone (418) 649-2834 ()	FAX No. - N° de FAX (418) 648-2209
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: Havre Cap-des-Rosiers Cap-des-Rosiers, QC	

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée	Delivery Offered - Livraison proposée
Vendor/Firm Name and Address Raison sociale et adresse du fournisseur/de l'entrepreneur	
Telephone No. - N° de téléphone Facsimile No. - N° de télécopieur	
Name and title of person authorized to sign on behalf of Vendor/Firm (type or print) Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)	
Signature	Date

AMENDEMENT 002

Title: **CAP-DES-ROSIERS CHANNEL DREDGING**

Included in the present amendment:

1. Question and answer 1
2. Addendum no 2

QUESTION AND ANSWER:

Question 1: Could you post this part of the specification. 35 20 24 1.2.3.1 article suggests 3 dredging with a disposal site area. How will be the dredging of soils in immersion paid?

Answer 1: There are no sediments at sea immersion in this project. See the new 35 20 24 specification section.

ADDENDUM no 2

1 Section 35 20 24 of the specifications:

DELETE Section 35 20 24
INSERT Section 35 20 24 hereinafter.

ALL OTHER TERMS AND CONDITIONS REMAIN UNCHANGED.

Part 1 General

1.1 RELATED SECTIONS

- .1 Section 01 11 01 – General Work Information
- .2 Section 01 35 29.06 – Health and Safety
- .3 Section 01 35 43 – Environmental Protection
- .4 Section 01 74 21 – Construction/Demolition Waste Management and Disposal

1.2 LOCATION

- .1 The work will be carried out in CAP-DES-ROSIERS harbour (specifically, in the Forillon National Park) in Gaspésie.
- .2 Under this section, the work includes the dredging of the areas indicated on drawings RM17039C.
- .3 The dredging work are divided into two (2) distinct areas.
 - .1 For areas 1 and 2, the Contractor must dispose of the sediment in accordance with its level of contamination, as per the MDDELCC's Interim Management Grid for Excavated Contaminated Soils.
 - .2 The area 1 of dredging shall be done from the wide towards the interior of the harbour. Work must be done before area 2.

1.3 MEASUREMENT FOR PAYMENT

- .1 Only material excavated above the required dredging level and within the side slopes indicated or specified will be measured.
- .2 The quantities indicated in the price schedule are anticipated approximate quantities and must not be increased without the written authorization of the Departmental Representative. No payment will be made for work related to additional quantities unless the Contractor has received written authorization from the Departmental Representative.
- .3 The materials, labour, tools, equipment, protective devices, transportation, administrative charges, profits, financing, etc., required to carry out the work set out herein are included in each of the items described below, unless otherwise indicated.
- .4 The method for measuring the categories of labour, tools and materials constituting the work will be as follows:
 - .1 Contractor mobilization/demobilization
 - .1 The lump-sum amount will represent the costs incurred by the Contractor in relation to the set-up and commissioning of the equipment at the dredging site and the dismantling and demobilization of the equipment once the work is completed.

- .2 The Contractor must ensure that it has the equipment and material needed to moor floating materials. Dismantling of the mooring system.
- .3 Also included are any items that cannot be assigned directly to another measurement item.
 - .1 This item includes all of the elements in division 01- *General Requirements*.
- .2 Waterproof basin
 - .1 This item will be measured as a lump sum and includes, but is not limited to:
 - .1 Initial stripping of site.
 - .2 Construction of access routes to the waterproof basin. Construction of access routes to the un-proof basin. The entire surface area affected by loading and unloading work, as well as the transport route, must be protected by a geotextile and a 150-mm layer of MG20.
 - .3 Excavation and backfill to the waterproof.
 - .4 Placement of geomembranes, geotextiles and various sediment capture devices.
 - .5 This basin must be used to stack the dredged materials located in the “A-B” range (Zone 2).
 - .6 The contractor will have to dispose of the liquids according to their degree of contamination, in accordance with the MDDELCC Interim Contaminated Soil Management Grid.
- .3 Un-proof basin
 - .1 This item will be measured as a lump sum and includes, but is not limited to:
 - .1 Initial stripping of site.
 - .2 Construction of access routes to the un-proof basin. The entire surface area affected by loading and unloading work, as well as the transport route, must be protected by a geotextile and a 150-mm layer of MG20.
 - .3 Excavation and backfill.
 - .4 Placement of geotextiles and various sediment capture devices.
 - .5 This basin must be use for the stacking of dredged material located.
- .4 Dredging
 - .1 The Contractor must submit a unit price per cubic metre place measurement (CMPM), to be applied to the dredged volumes representing different levels of contamination, as indicated in the plan and below:
 - .1 “marine sediment” and smaller than A” (Zone 1)
 - .2 “A-B” range (Zone 2)

- .2 Should the work take longer than thirty (30) days, a progress payment based on the estimate of the Departmental Representative may be accepted.
 - .3 The dredging sector is defined by the lateral boundaries and depth levels indicated on the plans and includes lateral slopes with a ratio of 3 horizontal to 1 vertical for Zone 2 of the west side of the channel.
 - .4 The dredged material will be measured in CMPM. Volumes will be established on the basis of the bathymetric surveys carried out before and after the complete dredging of the areas demarcated on the plans.
 - .5 Before the start of the work, the Department reserves the right to modify the horizontal and/or vertical boundaries at any time.
 - .6 Sweeping and levelling of the dredged areas are included in the unit price for the dredging, as well as all equipment, tools and labour, etc., required to carry out the work.
 - .7 All operations associated with the setting up the dredging equipment will be deemed to be related to the work and will not be measured separately for payment.
 - .8 Prior to acceptance of the work, backfilling and sedimentation may occur in areas where the work has not been completed, or where dredging was previously carried out. The Contractor must remove this material and complete the dredging work in all of the areas shown on the plan, to the depth specified, in order to obtain the Certificate of Completion. The removal of backfilling or sedimentation material during the dredging work will not be measured separately for payment purposes.
 - .9 In its unit price, the Contractor must include all costs associated with dredged material removed below the dredging level and outside the dredging boundaries.
- .5 Transportation and disposal of materials in zones 1 and 2
- .1 The Contractor must submit a unit price per CMPM, to be applied to the volume determined in one of the items in the Unit Price Table, which includes, but is not limited to, the loading, transport and disposal at a site pre-approved by the Departmental Representative of the dredged material, stacked and dewatered in the basins, representing different levels of contamination, in open water, as indicated on the plan and identified below.
 - .1 Sediment marine and “smaller than A” (Zone 1): dispose of sediment according to its level of contamination.
 - .2 “A-B” range (Zone 2): dispose of sediment according to its level of contamination.
 - .2 The material will be disposed of in accordance with the requirements set out herein and in other contract documents.
 - .3 All operations associated with the removal of dredged material and its final disposal at a site authorized by the proper authorities will be deemed to be related to the work and will not be measured separately for payment.
- .6 Cleaning and restoration
- .1 This item will be measured as a lump sum and includes, but is not limited to:

- .1 Dismantling of un-proof basins, the traffic route and the areas affected by the work and disposal of construction material used for these basins according to their level of respective contamination.
- .2 Clean-up of the work area along the harbour and the road.
- .3 Waste and debris must be disposed of off-site.

1.4 DEFINITIONS

- .1 “Average of Instantaneous” plan: hydrographic survey plan in which average sounding in appropriate groupings of matrix blocks is plotted.
- .2 Square profile trench: dredging channel with lateral and vertical slopes, dug to allow for the lateral excavation slopes to collapse and become a natural equilibrium slope.
- .3 Class A materials: solid rock requiring drilling and blasting in order to be loosened, as well as boulders or rock fragments of at least $[1.5] \text{ m}^3$ in volume.
- .4 Class B materials: loose or shale rock, silt, sand, quicksand, mud, shingle, gravel, clay, gumbo, boulders, hardpan and debris of individual volumes of less than $[1.5] \text{ m}^3$.
- .5 Chart datum: permanently established plane from which surroundings or tide heights are referenced, usually lowest normal tide (LNT).
- .6 Cleared area: area of dredging accepted as complying with plans and specifications.
- .7 Coordinates
 - .1 UTM Projection: Universal Transverse Mercator Projection
 - .2 MTM Projection: Modified Transverse Mercator Projection
 - .3 UTM or MTM coordinates: plane rectangular coordinates used in grid system in which grid network is applied to UTM or MTM project. The coordinates are the horizontal reference parameters.
- .8 Debris: pieces of wood, wire ropes, scrap metal, pieces of concrete and other waste material
- .9 Dredging: excavating, transporting and disposing of underwater materials.
- .10 Estimated quantity:
 - .1 Area in square metres of material calculated horizontally to exist above grade and within dredge limits, unless otherwise specified.
- .11 Grade: plane above which material is to be dredged.
- .12 Installation of hydraulic dredging plant: equipment that uses the movement of water to excavate and transport underwater materials such as a cutter suction dredger, suction dredger or trailing suction hopper dredger.
- .13 Instantaneous mode: mode of operation of hydrographic survey equipment where sounding observed only at predetermined distance intervals is retained in memory.

- .14 Least of Minimum plan: hydrographic survey plan in which the lowest depth measured by sounding in each grouping of matrix blocks is plotted.
- .15 Lowest normal tide (LNT): plane so low that tide will seldom fall below it.
- .16 Matrix block: each dredge area is represented as a certain number of blocks of 1.2 m by 10 m. Depending on the location of the soundings, each block can contain 0 to 4 soundings.
- .17 Measurements
 - .1 CMPM: cubic metres place measurement at dredging site.
 - .2 CMSM: cubic metres scow measurement.
 - .3 SQM: area in square metres projected on horizontal plane.
- .18 Installation of mechanical dredging: equipment that includes a clamshell, dragline, dipper or backhoe dredge with hopper barges.
- .19 Mechanical sweeping: clearing dredged areas to the desired depth using a mechanical device suspended from a barge.
- .20 Minimum mode: mode of operation of hydrographic survey equipment where only the minimum depths measured by sounding over the length between position coordinates is retained in memory. Soundings taken in this mode may be shallower than actual bottom elevations, given variations in water depth as a result of wave action.
- .21 Obstruction: material other than Class A, of individual volumes of 1.5 m³ or greater.
- .22 Side slope: inclined surface or plane from subgrade at side limit of dredging area to intersect original ground line outside of side limit and to be expressed as ratio of horizontal to vertical.
- .23 Sub-grade: plane parallel to grade, 300 mm below it.
- .24 Universal Transverse Mercator (UTM) Projection or Modified Transverse Mercator (MTM) Projection: plane rectangular coordinates used in grid system in which grid network is applied to UTM or MTM projection. The coordinates are the horizontal reference parameters.
- .25 Dredging: excavating, transporting and disposing of underwater materials.
- .26 Evacuation: transportation and disposal of excavated material to an authorized land dump site.
- .27 Obstruction: material other than class A, of individual volumes of 1.5 m³ or more.
- .28 CMPC: Dredging work measured in cubic metres at the dredging site. Horizontal projection in cubic metres, or the area expressed in square metres in horizontal projection.
- .29 Class A materials: solid rock requiring drilling and blasting in order to be loosened, and boulders or rock fragments of individual volumes of [1.5] m³ or greater.

- .30 Class B materials: loose or shale rock, silt, sand, quicksand, mud, shingle, gravel, clay, gumbo, boulders, hardpan and debris of individual volumes of less than $[1.5] \text{ m}^3$.
- .31 Debris: pieces of wood, wire rope, scrap metal, pieces of concrete and other waste materials.
- .32 Dredging level: horizontal plane above which all material must be dredged.
- .33 Estimated quantity
 - .1 Areas in square metres of material calculated horizontally to exist above grade and within dredge limits, unless otherwise specified.
- .34 CPM: surface area of materials measured on site, in cubic metres.
- .35 Side slope: inclined surface or plane from subgrade at side limit of dredging area to intersect original ground line outside of side limit and to be expressed as a ratio of horizontal to vertical
- .36 Chart datum: permanently established plane from which surroundings or tide heights are referenced, usually Lowest Normal Tide.
- .37 Coordinate system.
 - .1 MTM: Modified Transverse Mercator Projection Mercator.
 - .2 MTM coordinates: plane rectangular coordinates used in grid system in which grid network is applied to UTM or MTM projection. The coordinates are the horizontal reference parameters.
- .38 Lowest normal tide (LNT): plane so low that tide will seldom fall below it.
- .39 Cleared area: area of dredging accepted as complying with plans and specifications.

1.5 ADMINISTRATIVE REQUIREMENTS

- .1 Navigation coordination
 - .1 Perform work in accordance with Collision Regulations, Do not obstruct navigation during progress of Work.
 - .2 Observe vessel movements and fishery activities in area affected by dredging operations, including movement of vessels at adjacent wharves.
 - .3 Plan and execute work in a manner that will not interfere with fishing operations, marina operations, construction activities at wharf sites or access to wharves by land or water.
 - .4 The Departmental Representative will not be responsible for loss of time, material or equipment or any other cost related to interference with moored vessels in harbour or because of other Contractor operations.
 - .5 Keep the Canadian Coast Guard (CCG)/Fisheries and Oceans (DFO) Operations Centre watch keepers and District Manager informed of dredging operations so that the necessary Notices to Mariners can be issued.
 - .6 When required, make arrangements with the CCG to move and replace buoys to allow the work to be carried out. Advise nearest Coast Guard Base of any requirement to relocate channel markers / buoys within the dredging area.

- .7 Organize activities so as to minimize interference with fishers in Cap-des-Rosiers harbour.

1.6 REGULATORY REQUIREMENTS

- .1 Comply with municipal, provincial and national codes and regulations relating to the project. The Contractor must also ensure that its employees and subcontractors similarly comply.
- .2 Mark floating equipment with lights in accordance with Collision Regulations, Notice to Mariners and Rules of the Road for the Great Lakes.
 - .1 Maintain VHF marine radio (Channel 16) on board floating equipment.

1.7 SCHEDULING

- .1 Submit the work schedule to the Departmental Representative for approval prior to the start of the work or within two (2) weeks following contract award, to include the time frames for each operation involved in the Work through to completion of the work.
- .2 In addition to the scheduling required in the previous item, the Contractor must, three (3) weeks in advance, submit to the Departmental Representative the date of its arrival at the location. The Departmental Representative must, during this period, proceed with a bathymetry survey before dredging and inform the Contractor of the results.
- .3 The Contractor must comply with the mandated schedule and make immediate arrangements to rectify any discrepancies, by modifying the dredging under way or by transporting and relocating other equipment. The Departmental Representative must be informed of the rectification measures used.
- .4 The Work must be completed in accordance with the dates set out in the Contract Documents.

1.8 INTERFERENCE WITH NAVIGATION

- .1 Be familiar with vessel movements and fishery activities in the area affected by the dredging operations.
- .2 Plan and execute the Work in a manner that will not interfere with fishing operations or marina operations, or access to wharves by land or water.
- .3 The Department is not responsible for any loss of time, material or equipment, or for any other cost related to interference with moored vessels in the work area or by other Contractor operations.
- .4 The Contractor must notify the Departmental Representative, forty-eight (48) hours in advance if possible, of any special relocation of its dredging equipment (for refuelling or repair purposes, etc.).
- .5 The Contractor must continually and accurately report all dredging relocations, to Marine Communications and Traffic Services, Fisheries and Oceans Canada.
- .6 If the Contractor causes an obstruction to navigation, the Contractor must:

- .1 Advise the Marine Communications and Traffic Services (MCTS), DFO, and the Departmental Representative;
- .2 Comply with paragraph 3.1.13 herein;
- .3 Proceed with the immediate removal of this equipment at its own cost. If the Contractor does not fulfill this obligation, the Departmental Representative will remove the obstacle and all costs incurred will be charged to the Contractor.

1.9 CHART DATUM, DEPTHS AND TIDE MARKS

- .1 The depths and the dredging levels used in these Specifications and Contract Drawings are indicated in metres with reference to the datum.
- .2 The depths will be reduced to chart datum using DGPS-RTK technology. The Contractor will be responsible for obtaining, through its own methods and at its own costs, all relevant data concerning the water level values to use for the work.

1.10 FLOATING PLANT

- .1 The Contractor must supply and maintain all dredging equipment in order to dredge, load, transport and dispose of all materials mentioned in these Specifications, taking into account the settling of materials and excess dredged materials, as applicable.
- .2 All equipment used to execute the dredging contract must at all times be satisfactory to the Departmental Representative.
- .3 The Contractor must, under this Contract, use barges so constructed as to prevent dredged material from spilling when the barge is being loaded or towed.

1.11 SITE INSPECTION

- .1 Before submitting its bid, it is the responsibility of the Contractor to visit the work site and obtain all of the information necessary regarding the nature and scope of the work, as well as all of the conditions that could influence the execution of said work.
- .2 By submitting its tender, the Contractor acknowledges that it is aware of the following: the nature and location of the project, general and local conditions, particularly weather or climactic conditions, the degree of agitation of the water surface, the tide levels, and physical conditions associated with the location of the project, the nature of the underwater soil and riverbed, the nature of the materials to be dredged, and all other circumstances that could affect the conditions of execution of the contract and on the value of the work.

1.12 SITE INFORMATION

- .1 Take the steps necessary to become fully familiar with potential inclement weather and sea conditions in this area.
- .2 Given different hydrodynamic phenomena and climate events, the Contractor can expect to encounter sediment transport while doing the work, and possibly sediment deposit in the dredging area.
- .3 Both wharves in the harbour are closed to transshipment and docking activities. The Contractor must use the fishers' wharf.

1.13 SURVEYS AND ACCEPTANCE OF WORK

- .1 Bathymetric surveys were carried out in June 2017 by the Department before the beginning of dredging to confirm the location of materials to be dredged as accurately as possible and to determine the quantity.
- .2 The pre-dredging sounding is the one provided with the tender documents. Before starting work, the Contractor must confirm in writing to the Departmental Representatives that it did the usual checks and accepts the results of this survey. No claim for additional amounts will be accepted during the term of the contract (that is, after the pre-dredging soundings are accepted).
- .3 During the post-dredging soundings, a qualified representative of the Contractor will be present, along with the Department's survey team, so that the soundings are officially accepted by both parties.
- .4 The Departmental Representative will provide the Contractor, in ASCII digital format, the basic data required for the work (pre- and post-dredging bathymetric surveys); these digital files will be sent to the Contractor by email.
- .5 The Contractor will submit an official request, at least five (5) days in advance, for post-dredging soundings to be done when the work is finished. The temperature will determine whether or not the bathymetric survey can be carried out.
- .6 In all cases, the bathymetric surveys will be carried out in daylight. Accordingly, the Department's vessel will dock at sundown.
- .7 The execution of bathymetric surveys depends on weather conditions.
- .8 The Departmental Representative will not conduct any pre- or post-dredging surveys if there is ice present. There will be no additional payment for delays caused by such conditions or situations.
- .9 Bathymetric survey equipment
 - .1 Positioning system
 - .1 Global positioning system (GPS) used for real-time kinematic (RTK) surveying;
 - .2 Equipment: Trimble 5700 or equivalent.
 - .2 Survey system
 - .1 System with two (2) or more transducers or multibeam system;
 - .2 Vertical accuracy: ± 0.1 metre;
 - .3 Frequency: 200 or 400 kHz.
- .10 Processing of bathymetric data
 - .1 The bathymetric data will be processed in order to create a 3D surface using the CUBE (Combined Uncertainty and Bathymetry Estimator) algorithm.
 - .2 The Departmental Representative will use the parameters it deems suitable to process the data using the CUBE algorithm.
 - .3 The 3D surface will be created using a grid with a resolution of 50 cm x 50 cm.

- .4 This grid will be used to create a digital file containing the depths obtained from the processed data.
- .11 Calculation of volumes
 - .1 Using a digital ground model generated using all of the instantaneous depths.
- .12 Acceptance of dredging work
 - .1 At the end of the work, the Departmental Representative will carry out, if necessary, two (2) bathymetric surveys, specifically, an audit sampling and a final post-dredging sounding. All additional soundings, and waiting time, will be invoiced to the Contractor on an hourly basis as follows:
 - .1 Hourly rate of \$300.00/hour.
 - .2 Any period exceeding twenty-four (24) hours between the end of the audit sampling and the start of the final post-dredging sounding will be considered waiting time.
 - .3 Waiting time will be calculated by the Departmental Representative on the site on the basis of an eight (8) hour day, that is, from 8:00 a.m. to 4:00 p.m. If the Contractor requires soundings outside of this period, they will be invoiced to the Contractor as waiting time.
 - .2 If, following the verification sounding or subsequent soundings, the results indicate that some depths do not meet the requirements of these Specifications, the Contractor will be required to return to the site to complete the work to the satisfaction of the Departmental Representative.
 - .3 Before the work can be accepted, a general clean-up of the areas affected by the work must be done, and the site must be left in a condition satisfactory to the Departmental Representative.

1.14 SYSTEM OF UNITS

- .1 Data relating to bathymetric surveys, water levels, distances, areas and volumes, vertical benchmarks (according to reference level Z.D.C), etc., used in these Specifications and during the execution of the work will be in the International System of Units (SI).

Partie 2 Products

2.1 DREDGING EQUIPMENT

- .1 Determine the equipment required for dredging the material specified and to remove it to the locations specified.
- .2 The Work must be carried out with a grab clamshell dredge and/or a hydraulic shovel and/or a trailing suction hopper dredge.
- .3 The dredge must have the necessary dimensions, characteristics and draught to perform the work.
- .4 Equipment for disposal at sea of dredged sediment: see item 3.3.9 of this section.

- .5 The equipment to be used for unloading at the wharf and temporary storage must have the necessary dimensions and characteristics to perform the work.

Part 3 Execution

3.1 SEQUENCE OF WORK

- .1 Before beginning the Work, the Contractor must have received written approval of its schedules from the Departmental Representative.
- .2 Develop the basin in accordance with the requirements in Section 01 35 43 – Environmental Protection, item 1.11, before commencing the dredging.
- .3 The Contractor must obtain the written approval of the Departmental Representative before using the basin to stack sediments.
- .4 Next, dredge the sediment-filled areas in “smaller than A” Zone 1 and dispose of the sediment in the un-proof basin. Ensure that stacking allows for dewatering.
- .5 Last, dredge the sediment-filled zones located in “A-B” and dispose of the sediment in the un-proof basin. Ensure that stacking allows for dewatering.
- .6 Dredge the material to the dredge level indicated on the drawing.
- .6 During the work, cover the entire area above the dredge level, according to the various zones identified, as shown on the plan.
- .7 The Contractor must comply with the dredging plan and the dredge level required:
 - (a) Zone 1 dredge level (-2.00).
 - (b) Zone 1A dredge level (-1.50).
 - (c) Zone 1 dredge level (-1.50).Any additional dredging beyond the dredging plan and/or under the dredge level required will be the full responsibility of the Contractor and performed at its own expense.
- .8 The Contractor must dredge using a computerized system capable of accurately displaying on a monitor the position of the dredge and relevant bathymetric data (locations and thicknesses of material to be dredged) and the dredging template.
- .9 The coordinates of control points to determine the horizontal limits of the sectors to be dredged will be provided in the construction plan.
- .10 The Contractor must be responsible for providing on its own the spatial positioning of the dredge.
- .11 The Departmental Representative, at his or her discretion, may check the accuracy of any positioning system(s) used by the Contractor.
- .12 The Contractor will be solely responsible for all primary, intermediate or secondary points (X,Y), (X,Y,Z) and (Lat, Long) used by it, whether determined by it or provided by the Departmental Representative or any other party.

- .13 During the performance of the Contract, the dredge and the equipment must be kept in good repair and maintained in proper working order at all times.
- .14 Demobilization: The Contractor may demobilize its equipment only after receiving the written authorization of the Departmental Representative. Said authorization will be provided to the Contractor after final acceptance of the work.
- .15 Buoys necessary for the contract: The Contractor will supply, place in position, moor and maintain at its own expense all buoys/markers required to properly execute the work. In the event that any of these buoys/markers sink or go adrift by chance or by accident, they shall be re-floated and/or recovered by the Contractor at its own expense, to the satisfaction of the Departmental Representative. The Contractor must assume responsibility for all accidents of any kind due to the buoys/markers being improperly placed, or insufficiently visible during the day, improperly lighted during the night, or for any other reason.
- .16 Navigation buoys: The Contractor must not at any time remove or relocate the main navigation buoys. Relocation of said buoys, where warranted, will be done by the Department of Fisheries and Oceans. Requests for such service must be made to the Departmental Representative at least five (5) business days in advance. The Departmental Representative reserves the right to determine whether such requests by the Contractor are warranted.
- .17 Keep all signals and lights required to be installed on all dredging equipment required for the work in accordance with the Collision Regulations and the Navigation Safety Regulations on the St-Lawrence River. All equipment required for the work must be properly identified and/or visible at all times.
- .18 All equipment used must be seaworthy and in good condition.
- .19 While the work is being carried out, if in the opinion of the Departmental Representative, the equipment provided is not suitable and sufficient to perform the work, or if the Contractor is behind schedule, the Contractor must, within 15 days following receipt of a written notice from the Departmental Representative, provide other equipment as previously approved by the Departmental Representative.
- .20 Install and maintain tide gauges or water level indicators in order to be able to determine the appropriate depth of the dredging work. Place the tide gauges or water level indicators such that they are clearly visible.
- .21 Remove any stockpile of material that might occur during by the work at no additional cost to the Crown.
- .22 Notify the Departmental representative immediately upon finding any object, including blocks of stone measuring 3.0 m³ or more and solid rock, that could be considered debris or an obstruction. Move around the object after clearly indicating the object's using buoys made prior to the start of work. Provide the Departmental Representative with its MTM coordinates, then carry on with the work.
- .23 Take the precautions needed to protect existing structures located in the vicinity of the work. Any damage to such structures must be repaired at the Contractor's expense.
- .24 Parks Canada property must be kept clean throughout the work.

- .25 Refer to the typical cross-sections shown on plan RM17039C. Take the necessary precautions to protect existing structures. In the event of damage to these structures, the Contractor is responsible for the cost of their repair or replacement.

3.2 BASIN FIT-UP

- .1 The Contractor must strip the site to fit up the various basins required for the disposal of dredged material. This must be done within the zone prescribed on plan RM17039C.
- .2 Dig trenches around the un-proof basin and provide for sediment capture by means of a geotextile barrier, bale of straw, or any other method deemed acceptable by the Departmental Representative. Ensure that water from the trenches flows towards the Gulf of St. Lawrence and that the system for capturing sediment works properly. Provide for cleaning of the capture system to ensure it continues to work properly, and dispose of the sediment in accordance with applicable regulations.
- .3 Dredged material must be piled separately and clearly identified so that they can be dewatered. The piles must be covered by an impermeable geomembrane to protect the dredged material during conditions unfavourable to dewatering. The piles must be covered during evenings and weekends, and during rainy days. The covers must be removed during sunny days to allow the materials to dewater.
- .4 The dredged material can be removed from the storage site and shipped off-site only once their water content is low enough that mud won't leak out of the truck boxes. The written approval of the Departmental Representative is required before loading operations can begin.
- .5 The Contractor must demolish the various basins once the dredged material has been removed from the site. At this point, the impermeable membranes, sediment capture system, and all materials used for the construction of the basins must be considered as follows:
 - .1 Waterproof for Zone 2: "A-B" range
 - .2 Un-proof basin for Zone 1: "smaller than A" range and marine sediment.

3.3 DREDGING

- .1 Be responsible for accuracy of Work relative to established bench marks. Provide, install and maintain electronic position fixing and distance measuring equipment, laser transits and such other equipment as normally required for accurate dredging control.
- .2 Install and maintain a water level gauge or tide boards.
- .3 Remove materials above the specified grade depths, within the limits indicated. Material removed from below subgrade depth or outside the specified area or side slope is not part of the Work.
- .4 Remove shoaling that occurs as result of Work at no expense to the Departmental Representative.
- .5 Remove material cast-over on surrounding area and dispose of it in the same way as dredged material. Do not cast over material unless so authorized in writing by the Departmental Representative.

- .6 Infilling must be removed from dredge areas before the area can be accepted by the Departmental Representative.
- .7 Notify the Departmental Representative immediately upon discovering any object that could be considered debris or an obstruction. Move around the object after clearly marking the object, then carry on with the work
- .8 Tolerances
 - .1 Do not dredge at less than 0.1 m of the required depth.

3.4 EVACUATION OF DREDGED MATERIAL

Land disposal site

- .1 The Contractor is responsible for the removal off site of dredged material. The Contractor must have the disposal sites and transport methods approved by the Departmental Representative. The Contractor must maintain access roads and keep them free of debris.
- .2 Truck boxes, when used, must be leak-proof to prevent material from leaking during transportation to the transfer area. Clean up spills in accordance with instructions and take the necessary measures to prevent recurrence.
- .3 Keep all pavement, and the transfer area, clean for the duration of the Contract. Repair, at no extra cost to the Department, any damaged caused by the Contractor's activities. Return surfaces to their original state upon completion of the work.

3.5 DREDGING NEAR EXISTING STRUCTURES

- .1 In the event of damage to these structures, the Contractor is responsible for the cost of their repair or replacement.

3.6 RE-DREDGING

- .1 Re-dredge, to the satisfaction of the Departmental Representative, any zones in which the work does not meet requirements, and verify the depths obtained by means of sweeping or additional sounding.

3.7 CO-OPERATION AND ASSISTANCE TO DEPARTMENTAL REPRESENTATIVE

- .1 Co-operate with the Departmental Representative on inspection of work and provide any assistance requested.

3.8 ACCIDENTAL SPILLS BY MACHINERY

- .1 Filling, storing and maintenance of the excavator must take place in a watertight location designated for this purpose, at least 30 metres from the water. Have a complete oil spill response kit on site at all times. Have a contingency plan. Before beginning the work, ensure that the machinery to be used is in good working order and is not leaking oil or other fluid that could pose a risk to the environment. During the work, look out for signs of potential contamination (olfactory, visual). If signs of contamination are identified, stop work and investigate further before continuing the work.

END OF SECTION