

PART 1 - GENERAL1.1 DESCRIPTION

- .1 This specification section includes requirements for dredging, as noted on the drawings. There is no distinction between Class "A" and Class "B" dredging in this contract. Be prepared to remove rock if required to achieve the dredge depths shown on the drawings.
- .2 Supply equipment with sufficient reach capabilities and chose methodology such that dredge depths can be achieved as shown on the drawings.

1.2 DEFINITIONS

- .1 Dredging: excavating, transporting and disposing of underwater materials.
- .2 Class A material: solid rock requiring drilling and blasting to loosen, and boulders or rock fragments of individual volumes 1.5 m³ or more.
- .3 Class B material: loose or shale rock, silt, sand, quick sand, mud, shingle, gravel, clay, sand, gumbo, boulders, hardpan and debris of individual volumes less than 1.5 m³.
- .4 Obstructions: material other than Class A, having individual volumes of 1.5 m³ or more.
- .5 CMPM: cubic metres place measurement.
- .6 Debris: pieces of wood, wire rope, scrap steel, pieces of concrete and other waste materials.
- .7 Estimated quantity:
 - .1 Volume of material calculated to be above grade and within specified side slopes unless otherwise specified.
- .8 Chart Datum: permanently established plane

from which soundings or tide heights are referenced, usually Lowest Normal Tide (LNT).

- .9 Lowest Normal Tide (LNT): plane so low that tide will seldom fall below it.
- .10 Cleared Area: area of dredging accepted as achieving the required grade and verified by a Departmental Representative survey.

1.3 BLASTING OPERATION. .1 If blasting is required to achieve the dredge depths, submit to Departmental Representative and local authorities having jurisdiction for review, written proposal of operations for blasting. Proposal to be submitted, for review, to Department Representative at least two (2) weeks before any blasting is to take place. Departmental review does not relieve the Contractor from any damages that result from the blasting.

- .2 Indicate proposed method of carrying out work, types and quantities of explosives to be used, loading charts and drill hole patterns, type of caps, blasting techniques, blast protection measures for items such as flying rock, vibration, dust and noise control. Include details on protective measures, time of blasting and other pertinent details.

1.4 REGULATORY REQUIREMENTS

- .1 There are strict environmental procedures that must be followed during the Work.
- .2 Comply with municipal, provincial and national codes and regulations relating to project.
- .3 Mark floating equipment with lights in accordance with the provisions of the Canada Shipping Act Collision Regulations and Notices to Mariners.

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- 1.5 PROTECTION .1 Prevent damage to surroundings and injury to persons. Erect fencing, post guards, sound warnings and display signs when blasting to take place.
- 1.6 SCHEDULING .1 Submit to Departmental Representative, within 2 weeks after acceptance of bid, schedule of work including time periods during which each operation involved in Work will be undertaken. At time of submission of schedule, meet with Departmental Representative to review schedule.
- .2 Adhere to schedule and take immediate action to correct any slippage by effectively altering existing operations or mobilizing other equipment. Notify Departmental Representative of corrective action to be taken.
- 1.7 LOCATION .1 Work comprises dredging of areas as indicated on drawings.
- 1.8 INTERFERENCE TO NAVIGATION .1 Be familiar with vessel movements and fishery activities in area affected by dredging operations. Plan and execute Work in manner that will not interfere with fishing operations, marine operations and construction activities at wharf site.
- .2 Departmental Representative will not be responsible for loss of time, equipment, material or any other cost related to interference with moored vessels in harbour or due to other Contractor's operations.
- .3 Keep the Marine Communications and Traffic Services' Centre, Fisheries and Oceans Canada, informed of dredging operations in order that necessary Notices to Mariners will be issued.

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- 1.9 DATUM, WATER GAUGES AND TARGETS .1 Elevations used in this specification and contract drawings are in metres referred to Canadian Hydrographic Services Survey datum.
- .2 Areas to be dredged are to be referenced to vertical bench marks for each location of dredging as indicated.
- 1.10 FLOATING PLANT .1 Dredges or other floating plants to be employed on this Work, to be of Canadian registry, make or manufacture, or, must receive certificate of qualification from Industry Canada, Aerospace, Defence and Marine Branch and this certificate to accompany bid submission.
- .2 Requests for certification in format of form PWGSC-TPSGC 2843 (06/2007) attached to the Bid and Acceptance Form to be directed to Mr. Emile Rochon, Aerospace, Defence and Marine Branch, Industry Canada, CD Howe Building - Room 733C, 235 Queen Street, Ottawa, Ontario, K1A 0H5, and to be received there not less than 14 days prior to bid closing.
- 1.11 SITE INFORMATION .1 Results of most recent soundings are included on the drawings. This data will be used for all calculations for quantity purposes. If the contractor wishes to perform own survey, a written notice must be submitted to the Departmental Representative (at least 7 days notice) so DFO can verify the sounding survey before the commencement of any work.
- .2 Take necessary steps to become fully familiar with potential inclement weather and sea conditions in this area.
- 1.12 SURVEY REQUIREMENTS .1 Provide, at own expense, survey vessel, equipment and crew to set up and maintain control for location of dredge limits and to sound areas immediately after dredging to

verify that grade depth has been attained. Areas are to be sounded to provide sounding printout display of at least 2 x 2 m UTM grid to approval of Departmental Representative.

1.13 SURVEYS AND
ACCEPTANCE OF WORK

- .1 No area will be dredged prior to Departmental Representative and Contractor's mutual acceptance of the existing sounding and topographical survey data included on the drawings.
- .2 A survey will be undertaken by Departmental Representative upon completion of dredging. Survey will confirm if dredging is completed as specified and whether area can be considered cleared area. Survey will be by electronic sweep equipment. Survey plan at 1:250 plotting least of minimum depths obtained in this survey will identify areas requiring reworking to obtain following elevations using least of minimum mode.
- .3 Contractor to re-blast as necessary to remove all material which is found to be above grade using the least of minimum mode elevations as specified herein.
- .4 One additional survey will be undertaken at Departmental Representative's cost, for those areas not meeting acceptance criteria for dredging. All additional surveys required to clear areas will be undertaken by the Departmental Representative at Contractor's cost.

1.14 MEASUREMENT
FOR PAYMENT

- .1 Dredging: Dredging will be measured in cubic metre place measure (CMPM), of material removed and disposed at an approved waste site. Contractor responsible for determining the approved waste site and paying all tipping fees.

- .2 Confirmation of the dredge depths will be determined by a sounding survey performed by the Departmental Representative's Survey Crew by using electronic sounding and DPGS positioning equipment. The Departmental Representative will verify that the Contractor has performed dredging to the specified grade depth. The Departmental Representative will conduct an interim and final survey. The Contractor will formally request at least seven (7) days in advance that the final after-dredging survey be performed upon completion of dredging. The survey will be dependent on the weather. If the survey and inspection shows that all material has not been removed, the Contractor is to re-dredge to obtain grade depth. The Contractor will perform a sounding survey, using a method approved by the Departmental Representative to verify that the specified dredge depth has been obtained. The Departmental Representative will then perform a third survey for final verification of dredge depth. This third sounding survey and any subsequent surveys will be at the cost of the Contractor.
- .3 No payment will be made for Contractor's survey vessel, equipment and crew or diving services.
- .4 Excavated/dredged material to be disposed of at an approved waste site, using water tight boxes.
- .5 There will be no additional payment for delays and/or downtime for vessel traffic, fishery operations, marine operations, during periods when no dredging is permitted. Contractor should contact the Harbour Authority to determine schedules of operations.

- .6 Sweeping and removal of infilling material
will be the Contractor's responsibility.