1.1 DESCRIPTION OF WORK

.1 The Work under this Contract involves the supply of all labour, materials and equipment required to construct a SSP wall and rubblemound breakwater immediately outboard and along the alignment of the existing structures of varying construction as described in the Contract Drawings and in this Specification.

.2 The Work includes but is not limited to:
.1 Site work including mobilization, demobilization, excavation, demolition, hauling and disposal offsite and onsite (fill material into cell).
.2 Work also includes any required survey to set location of new work as indicated on the drawings.
.3 Excavation below LNT as required.
.4 The Supply and Installation of steel sheet piles , concrete deadmen, tie-rods, rock fill, structural fill, Class "A" gravel, armour stone, geotextile filter fabric, cast-in-place concrete deck, rough carpentry components, all miscellaneous metals and ladders.

.3 Site of Work is at: Naufrage,DFO-SCH facility, Kings County, PE.

1.2 FAMILIARIZATION WITH SITE

.1 Before submitting a bid, it is recommended that bidders visit the site to review and verify the form, nature and extent of the work, materials needed, the means of access and the temporary facilities required to perform the Work.

.2 Obtain prior permission from the Departmental Representative and Harbor Authority before carrying out such site inspection.

.3 In advance of site visit, the Contractor is

to review hazards as indicated in Section 01 35 29 and submit a Site Specific Safety Plan (SSSP) for the purpose of viewing the site.

1.3 CODES AND STANDARDS

.1 Perform work in accordance with any code of provincial or local application, including all amendments up to bid closing date, provided that in any case of conflict or discrepancy, the more stringent requirement shall apply.

.2 Materials and workmanship must meet or exceed requirements of specified standards, codes and referenced documents.

1.4 INTERPRETATION OF DOCUMENTS

.1 The Division 01 sections take precedence over the technical specification sections in other Divisions of the Specification Manual.

1.5 TERM ENGINEER

.1 Unless specifically stated otherwise, the term Engineer where used in the Specifications and on the Drawings shall mean the Departmental Representative as defined in the General Conditions of the Contract.

1.6 SETTING OUT WORK

.1 Assume full responsibility for and execute complete layout of work to locations, lines and elevations indicated.

.2 Provide devices needed to lay out and construct work.

.3 Supply such devices as straight edges and templates required to facilitate Departmental Representative's inspection of work.

.4 Supply stakes and other survey markers required for laying out work.

1.7 MEASUREMENT FOR PAYMENT

.1 Notify Departmental Representative sufficiently in advance of operations to permit required measurements for payment.

.2 Items included under "Measurement for payment". All lump sum and all unit price items shall include all materials, labour, equipment and all other items necessary to complete the work.

Item 1: Mobilization and Demobilization:
Mobilization and demobilization shall constitute a lump sum for measurement purposes.

Item 2: Siteworks, Demolitions and Removals:
Siteworks, demolition (including selective demolition) and removals of miscellaneous items shall constitute a lump sum for measurement purposes. Any required rework and knitting of existing armour stone into new work shall be covered in this pay item.

Item 3: Extracting Existing SSP
Extracting Existign SSP shall constitute a lump sum for measurement purposes. Item shall include all costs to extract and dispose of existing SSP as detailed on the contract drawings.

Item 4: Creosoted Timber Disposal:
Creosoted Timber Disposal shall constitute a lump sum for measurement purposes. This quantity includes all costs required to remove, transport and pay tippage fees for creosoted timber.

Item 5: Excavation and Disposal (within existing Structure #304):
Excavation and Disposal (within existing Structure #304)of existing soils shall

constitute a price per cubic meter based on truck measure for measurement purposes.

Item 6: Toe Excavation:

Toe excavation shall constitute a price per cubic meter based on truck measure for measurement purposes. This quantity includes the volume of till bounded by the lines defining the bottom and sloped sides of the toe. A pre-sounding survey will establish soundings prior to construction for purposes of verifying quantities to be removed.

Item 7: Cast-in-Place Concrete:

Cast in Place (CIP) Concrete shall include all cast in place concrete elements (including steel reinforcing) and shall constitute a price per cubic meter for measurement purposes, based on dimensions shown on drawings. Item to include supply and installation.

Item 8: Pre-Cast Concrete:

Pre-Cast Concrete shall include all pre-cast concrete elements (including steel reinforcing) and shall constitute a price per cubic meter for measurement purposes, based on dimensions shown on drawings. Item to include supply and installation.

Item 9: Structural Steel:

Structural Steel shall include all miscellaneous metals (besides steel sheet piles, ladder assemblies and tie-rods) and shall constitute a price per tonne for measurement purposes. Item to include supply and installation.

Item 10: Tie-Rods:

Tie-Rods shall include only the tie rod, standard nuts and washers and shall constitute a price per unit (assembly including standard nuts and washers on either end) for measurement purposes. Item to include supply and installation.

Item 11: Rough Carpentry (Curbing):
Rough Carpentry shall constitute a price per cubic meter in-place for measurement purposes. Item to include supply and installation.

Item 12: Rock Fill:
Rock fill shall constitute a price per metric tonne for measurement purposes. Item to include supply and installation.

Item 13: Structural Fill:
Structural fill shall constitute a price per metric tonne for measurement purposes. Item to include supply and installation.

Item 14: Class "A" Gravel:
Class "A" Gravel shall constitute a price per metric tonne for measurement purposes. Item to include supply and installation.

Item 15: Armour Stone (4-6 tonne)
Armour stone shall constitute a price per metric tonne for measurement purposes. Item to include supply and installation.

Item 16: Filter Stone (800-1000kg)
Filter stone (800-1000kg) shall constitute a price per metric tonne for measurement purposes. Item to include supply and installation.

Item 17: Filter Stone (400-600kg)
Filter stone (400-600kg) shall constitute a price per metric tonne for measurement purposes. Item to include supply and installation.

Item 18: Geotextile:
Geotextiles shall constitute a price per square meter for measurement purposes. Item to include supply and installation.

Item 19: Steel Sheet Piles (Install):
Steel Sheet Piles (Install) shall

constitute a price per square meter for measurement purposes.

Item 20: Steel Sheet Piles (Supply):
Steel Sheet Piles (Supply) shall constitute a price per square meter for measurement purposes.

Item 21: Ladders:
Ladders shall constitute a price per unit for measurement purposes. Item to include supply and installation.

Item 22: Silt Fence
Silt fence shall constitute a lump sum for measurement purposes. Item to include supply and installation.

Item 23: Survey Control
Layout and survey control, including rubble mound mock-up and the cross sections during placement, shall constitute a lump sum for measurement purposes.

1.8 PERMITS

.1 Obtain and pay for building permit, certificates, licenses and other permits as required by municipal, provincial and federal authorities.

.2 Provide appropriate notifications of project to municipal and provincial inspection authorities.

.3 Obtain compliance certificates as prescribed by legislative and regulatory provisions of municipal, provincial and federal authorities as applicable to the performance of work.

.4 Submit to Departmental Representative, copy of application forms and approval documents received from above referenced authorities.

1.9 ACCOMMODATE HARBOUR OPERATIONS

.1 Execute work with least possible interference or disturbance to Harbour operations and normal use of premises. Arrange with Departmental Representative to facilitate execution of work.

.2 Provide barriers and warning signs in locations where work is adjacent to areas which will be operative during such work.

.3 Provide and maintain temporary bouys to delineate the new work or temporary structures.

.1 0.4m yellow spar bouys complete with a flashing yellow light having a nominal range of 2 nm and a flash of FI 0.5 seconds, Eclipse 3.5 seconds and retro reflective tape are to be placed and maintained at the outward, seaward limit of the work (and silt curtain).

.4 All bouys and equipment used in the construction must be visible at all times and must be marked in accordance with the collision regulations of the Canada Shipping Act.

.5 Advise Departmental Representative 4 days in advance of the installation of any temporary structure so that a notice to shipping can be submitted.

1.10 CUTTING, FITTING AND PATCHING

.1 Ensure that cutting and patching required by all trades is included in total bid price submitted for the work.

.2 Execute cutting, including excavation, fitting and patching required to make work fit properly.

.3 Where new work connects with existing and where existing work is altered, cut, patch and make good to match existing work.

.4 Do not cut, bore, or sleeve load-bearing members, except where specifically approved by Departmental Representative.

.5 Make cuts with clean, true, smooth edges. Make patches inconspicuous in final assembly.

1.11 EXISTING SERVICES

.1 Where work involves breaking into or connecting to existing services, carry out work at times directed by governing authorities, with minimum disturbance to operations.

.2 Before commencing work, establish location and extent of service lines in area of work and notify Departmental Representative of findings.

.3 Submit schedule to and obtain approval from Departmental Representative for any shut-down or closure of active service or facility. This includes disconnection of electrical power and water supply. Adhere to approved schedule and provide notice to affected parties.

.4 Provide temporary services when directed by Departmental Representative to maintain critical systems.

.5 Where unknown services are encountered, immediately advise Departmental Representative and confirm findings in writing.

.6 Protect, relocate or maintain existing active services as required. When inactive services are encountered, cap off in manner approved by authorities having jurisdiction over service. Record locations of maintained, re-routed and abandoned service lines.

END OF SECTION