Fisheries and Oceans Canada

FP802-160167

SPECIFICATIONS

New SAR Boat storage & repair facility,
Gimli Marina,
Centre Street, Gimli, MB R0C 1B1

Department of Fisheries and Oceans

1.0 Introduction

.1 Basic Requirements

.1 The Canadian Coast Guard (the Owner) requires a Boat Storage and Maintenance Workshop at the Gimli Search & Rescue location for the personnel who crew, maintain and repair it. The Work required by the Owner will consist of all design, procurement and construction operations required for completion of a Boat Storage and Maintenance Shop. Supply and Install new structure and foundation for this new structure. Manitoba sealed engineering drawings are to be provided by the Contractor.

.2 The boat to be accommodated is the CCGS 'Vakta' which is a 16.3m Search and Rescue (SAR) vessel, weighing 34,400 kg. This boat will be stored in the Storage & Maintenance Shed during the winter months. The SP-40 Boat hauler unit weighed in at 24,500lbs. The foundation must be designed to take this full load of boat and trailer and building.

.3 A workshop is required for storage and general maintenance operations of the SAR boat within the building. A concept drawing of the building is provided. Windows should be added at height not less than 10-12 feet above grade to allow for nature light and energy savings.

.2 Site Location

.1 The proposed boathouse/Maintenance shop is to be constructed on lot 28 , one of the two adjacent sites near to Gimli Harbour, off Centre Street (See Site Plan in Appendix 1) in Gimli, Manitoba.

.2 The Site for the accommodation building is approximately 43m x 19m and that for the Boathouse and Workshop is 45m x 27m. Both sites are level.

.3 There is currently one small single-storey office trailer on this lot which functions the Search and Rescue Building.

2.0 Buildings - Detailed requirements

.1 The Contractor shall grub up all foundations, asphalt, curbs and other below-ground structures and backfill the voids with compacted granular material in preparation for the formation of new foundations for the new foundation for the Boathouse.

.2 Boat Storage and Maintenance workshop

.1 The principal function of the storage shed is to shelter the CCGS 'Vakta' during the winter months, when it is brought out of the water.

.2 The Storage shed shall be approximately 10 metres wide by 29 metres long, with an overhead rolling door of 6m wide by 7.6m high. The door shall be lockable & chain-operated.

.3 The floor shall be capable of supporting the vessel, weighing up to 34,400 kg, and the SP-40 Boat hauler unit weighed in at 24,500lbs. the foundation work is included in this tender.

.4 The minimum headroom at the ridge of the storage shed shall be 10.8m. The structure of the building shall be a 'Portal Frame' type, to maximise usable volume. No roof trusses will be permitted below the principal rafter level.

.5 The Storage Shed will be constructed as 'Semi-Heated Space' as defined in ASHRAE 90.1. The Contractor shall provide insulation to the walls, doors and roof in accordance with The Manitoba Energy Code for Buildings (M.E.C.B.).

.6 The envelope of the building shall be formed from metal external cladding and metal internal lining panels, with insulation between. The cladding and panels may be assembled on-site from discrete components or they may be factory-finished metal panels with integrated insulation. In the area where the boathouse is windows must be installed to allow nature light in the building.

.3 Maintenance Shop and Boat Storage

.1 The Shop & Storage Building shall be approximately 15 metres by 16.5 metres long and attached to the Storage Boathouse. As per detailed concept drawing.

.2 The Shop & Storage Building is intended to accommodate a workshop and general repair and maintenance of the SAR vessel. A workshop shall be partitioned off within the building.

.3 The Boat storage & maintenance/workshop building shall be provided with two overhead rolling doors: one from the Storage of the Boat and the other in the maintenance shop.

.4 The Overhead doors shall be minimum 2440mm wide by 2440mm high, lockable, with chain operation.

.5 The Shop & Garage Building shall be constructed as `Heated Space` as defined in ASHRAE 90.1. The Contractor shall provide insulation to the walls, doors and roof in accordance with The Manitoba Energy Code for Buildings (M.E.C.B.).

.6 The Shop & Storage Garage shall have a minimum interior height of 3050mm. Roof trusses are permitted above this height.

.4 V.H.F. Antenna Tower

.1 The existing V.H.F. antenna tower shall remain in place and operational during the Work.

.5 Materials and Finishes - Exterior

.1 All external materials and finishes shall be designed with a minimum replacement lifecycle of 25 years and a refinishing / external maintenance cycle of a minimum 10 years.

.2 Exterior detailing shall be designed and installed with full consideration given to: Snow loading, Ice Dam minimization, Ultraviolet degradation, security and casual damage (vandalism). Materials should be heavy-duty and easily cleaned.

.3 All of the buildings will be externally clad with Polyester Powder Coated (PPC) profiled steel sheet in `Dove Grey` or approved alternate colour.

.4 Flashings, copings and trim shall be brake-formed PPC metal in white colour.

.5 All external pass doors shall be insulated hollow metal with metal frames, painted white.

.6 All vertical overhead doors shall be insulated hollow metal panel type, with galvanized guides and fittings, colour white.
.7 All external overhead doors shall be fully draught-stripped.
.8 All windows shall be double glazed lockable non opening to allow daylight in accordance with the Building Code.
.9 Foundation walls shall be brush-finished concrete
.10 All roof assemblies shall be covered with PPC interlocking profiled metal sheeting, colour `slate grey` or approved alternate.

.10 Materials and Finishes - Interior

.1 All internal materials and finishes shall be designed with a minimum replacement lifecycle of 20 years and a refinishing / maintenance cycle of a minimum 5 years.
.2 All concrete floors will be machine-float finish with Acrylic surface hardener treatment.
.3 The interior wall faces of the Storage and Workshop buildings shall be 16mm plywood, to a height of 3m, painted white.

.11 Servicing

.1 The buildings shall be provided with Electrical and Mechanical services to maintain the internal environment and supply the necessary requirements for Tools, Equipment, Health and Life Safety.
.2 Mechanical systems shall be designed to provide stable, controllable internal environment in accordance with ASHRAE 90.1.
.3 Heating equipment shall be powered by Natural Gas.
.4 Heating within the Boathouse, Garage & Workshop buildings to be ceiling-mounted High Efficiency fan-assisted Gas heaters.
.5 The Garage / Workshop Building shall have a floor drain / catch basin with oil interceptor, draining into the Municipal sewerage system.
.6 The Boathouse shall have a central trench drain with oil interceptor, draining into the Municipal sewerage system. The Boathouse floor shall be laid to fall minimum 1 in 100 to this trench drain.
.7 The Boat Storage area shall be provided with a single 100A (220v? 1-Phase?) power supply for the SAR vessel. Additional 15A 110v and 220v receptacles shall be provided for portable equipment and additional heating.
.8 The Maintenance Shop & Boathouse shall be provided with a 400A (220v? 1-Phase?) power supply for fixed equipment to be installed by the Owner. Additional 15A 110v and 220v receptacles shall be provided for portable equipment and additional heating.
.9 The Shop & Garage building shall be provided with a localized extraction fan system for welding and grinding operations.
.10 Emergency and Exit lighting shall be provided in all buildings in accordance with local Codes.

.11 The Boathouse/workshop shall be provided with temperature and humidity sensors. The sensors shall be auto-dialling type, able to automatically call the regional Coastguard supervisor with a warning message if the temperature falls below, or the humidity rises above, pre-set values.

3.0 External Connections

.1 Water & Sanitary Drainage

.1 For the foundation, a roughed in sewer, water and electrical conduits will be ran for future use.

.1 If suitable water and sewerage connections already exist on the site, the Contractor shall make all alterations necessary to rough the existing systems, to the satisfaction of the Rural Municipality of Gimli .

.2 Electrical Power

.1 The Contractor shall engage the services of a licensed Electrical Engineer to assess the existing Electrical Power connection to the Boathouse/maintenance shop on site and calculate the power requirement of the proposed new buildings.
.2 If it is determined that the existing power connection is insufficient, the contractor shall be responsible for applying to Manitoba Hydro for a larger connection.
.3 The Contractor shall be responsible for coordinating Hydro meter and disconnect locations.

.3 Natural Gas

.1 The Contractor shall be responsible for applying for a new natural gas connection for the proposed buildings.
.2 The Contractor will be responsible for all costs associated with altering the existing natural gas connection adjacent to the site and making the connection between Manitoba Hydro`s network and the proposed new building.

4.0 Statutory Requirements

.1 Development & Building Permits

.4 The Contractor shall engage a Registered Manitoba Land Surveyor to define the boundaries of the site, both electronically and by physically marking the boundaries on the ground.
.5 The Contractor shall apply for any and all Development Permits or Municipal Authorizations required by the Eastern Interlake Planning District, prior to applying for a Building Permit.
.6 The Contractor shall apply for a Building Permit as required by the Rural Municipality of Gimli.

.2 Retention of Professional Consultants

.1 The Contractor shall retain the services of an Architect, registered in the Province of Manitoba, to supervise and oversee the production of all Architectural Drawings, review construction on site and apply for the Certificate of Occupancy.

.2 The Contractor or relevant subcontractor(s) shall retain the services of a Professional Engineer or Engineers, registered in the Province of Manitoba, to design and certify foundations, superstructure, Mechanical and Electrical Systems.

.3 Codes & Bylaws

.1 The Contractor shall ensure that all works comply with relevant Federal, provincial and Municipal Codes, Regulations and Bylaws, including (but not limited to):

a. The National Building Code of Canada
b. The Manitoba Building Code
c. The Manitoba Energy Code for Buildings
d. ASHRAE 90.1
e. The Manitoba Fire Code
f. Manitoba Hydro Electricity and Gas Installation requirements.

.2 The Boathouse and Workshop buildings shall be designed as Occupancy Group F3 - Low-Hazard Industrial.

.4 Operation & Maintenance Manuals

.1 The Contractor shall provide Operation and Maintenance (O&M) manuals for the building, materials, finishes and components installed during the Work to include (but not limited to):

a. As-Built Drawings, including Drawing List
b. Equipment Manufacturer's Operation and Maintenance Instructions
c. Materials Safety Data Sheets
d. Electrical Systems Design Criteria, Controls Schematics & Operating Instructions
e. Mechanical Systems Design Criteria, Controls Schematics & Operating Instructions
f. Copies of all Inspection and Certification reports.

.2 Two bound paper copies and two CD-ROM copies of the O&M Manuals shall be presented to the Owner not more than 14 days following the completion of the Work.

End of Owner's Requirements.