



GOVERNMENT OF  
NEWFOUNDLAND AND LABRADOR

**Department of Works, Services and Transportation**

## **PHASE III**

# **TRANS LABRADOR HIGHWAY**

**HAPPY VALLEY-GOOSE BAY TO CARTWRIGHT JUNCTION**

**ENVIRONMENTAL ASSESSMENT REGISTRATION DOCUMENT**

1 April 2002

**PROPONENT:**

(I) Name of Corporate Body

Department of Works, Services and Transportation  
Government of Newfoundland & Labrador

(ii) Address

6<sup>th</sup> Floor, Confederation Building (West Block)  
St. John's, NF  
A1B 4J6

(iii) Chief Executive Officer

Barbara Knight  
Deputy Minister  
729-3676

(iv) Principal Contacts for the Purpose of Environmental Assessment

Terrence McCarthy  
Senior Coordinator, Trans Labrador Highway  
729-3640

Roger Pottle  
Senior Environmental Planner  
Policy and Planning Division  
729-5379

Dan Michielsen  
Environmental Planner  
Policy and Planning Division  
729-5540

## **THE UNDERTAKING:**

(I) Name of the Undertaking

Trans Labrador Highway Phase III between Happy Valley-Goose Bay and Cartwright Junction ,  
Labrador.

(ii) Nature of the Undertaking

The construction of the Trans Labrador Highway between Happy Valley-Goose Bay and Cartwright Junction (87 km south of Cartwright), Labrador. The road would be constructed to a two lane gravel surface highway for an approximate distance of 250 km.

(iii) Purpose / Rationale / Need for the Undertaking

The purpose of Phase III of the TLH (Happy Valley-Goose Bay To Cartwright Junction) is to finish a complete and reliable cost effective all-season ground transportation link between Labrador West, Happy Valley-Goose Bay, The South Eastern Coast , and the Labrador Straits. Establishment of this vital link will provide improved and more economical services to the residents of these areas.

Construction of Phase I of the TLH was completed between Happy Valley-Goose Bay and Labrador West in June of 2000. This was the final section that saw all of the 530 km of highway between Happy Valley-Goose Bay and Labrador City upgraded.

In 1999, Phase II of the TLH (Red Bay To Cartwright) was released from Environmental Assessment (EA) process. During the EA process a comprehensive Environmental Impact Statement (EIS) including

component studies was completed by Jacques Whitford Environmental Ltd. This study focussed on Avifauna, Moose, American Marten, Freshwater Fish and Fish Habitat, Historic Resources, Land and Resource Use, Services and Infrastructure, Employment and Business, and Tourism. Construction of Phase II began shortly after it's release from the EA process and is currently 85% complete and scheduled to be 100% complete by December 2002.

The general economic benefits of a highway between Happy Valley-Goose Bay and Cartwright Junction are:

- new highway construction jobs (seasonal employment for 2,800 people);
- new road transportation system;
- improved transportation of goods;
- improved and expanded tourism opportunities.

The general social benefits of a highway between Happy Valley-Goose Bay and Cartwright Junction are:

- greater and more economical means for residents travelling within Labrador as well as between Labrador and Newfoundland;
- greater access to health, education, and recreational facilities in Labrador and Newfoundland;
- reduces the sense of isolation within the South Coast, Straits, and Happy Valley-Goose Bay Regions of Labrador and between Labrador and Newfoundland, and
- reduced personal and business travel costs.

### Description of the Undertaking

#### (I) Geographic Location

Based on comments received after the January, 1993, release of the Fiander-Good report entitled "Trans Labrador Highway Social and Economic Project Feasibility Analysis", alternate routings further south of

the Mealy Mountains were developed to alleviate some concerns. After careful balancing of environmental considerations, including consideration for the proposed Mealy Mountain Park and the efforts to minimize potential impacts on the Eagle River watershed, with engineering and economic factors, alternate routings were developed. Although these routings differ entirely from the Fiander-Good Route, the social economic impacts remain consistent. The proposed routings have been determined to be both more environmentally sustainable as well as more economically feasible than the original more northern Fiander-Good Route.

The proposed project preferred routing begins east of Muskrat Falls and crosses the Churchill River at Black Rocks approximately 9km west of the Hamilton Intersection in Happy Valley-Goose Bay. The route then continues south east for approximately 75 km before turning and traveling slightly north east for an additional 175km to join Phase II at Cartwright Junction, 87km south of Cartwright.

Two additional routing alternatives have also been identified on the attached map. These include:

! Alternative B - This alternative begins with a bridge and causeway structure spanning the Churchill River at English Point and travels south west for approximately 50km before joining the preferred route. This alternative adds 26km to the preferred route.

! Alternative C - This alternative begins approximately 67km from the start of the preferred route. It then proceeds south of Crooke Lake, heads east before turning north and rejoins the preferred route. This alternative is approximately 144km in length adding a total of 18km to the preferred route.

(ii) Physical Features.

The highway between Happy Valley-Goose Bay and Cartwright Junction will be constructed to a Rural Local Undivided 80 km / hr. (RLU 80) design standard and hold a posted speed limit of 70km/hr. This is a similar standard of the highway between Happy Valley-Goose Bay and Labrador West as well as the

recently constructed highway between Red Bay and Cartwright. Typical cross section drawings are attached. A 9.5 m wide top will be provided and the surface will be gravel. The right-of-way width of an RLU 80 is 40 m. Normally the clearing width is 30 m; however, this will be reduced wherever possible especially around watercourses. The grubbing width will be 20 m rather than the standard 30 m.

The road will cross a number of major watercourses or their tributaries. A preliminary examination of available mapping indicates most of the crossings could be made using steel culvert pipes which are 2,000 mm in diameter or larger, arch pipes, multi plate arch pipes or multi plate arch pipes which have no bottom. Bridge structures will be necessary at some major river crossings such as the Churchill River, Traverspine River, Kenamu River, Paradise River, and a tributary of the Eagle River. Grubbing activities around watercourses will be prohibited until such time as the crossing structures are installed. The buffer width at each water crossing will be determined when the road grade is established.

All water crossing sites will be examined in greater detail as soon as field survey information is obtained; however, for environmental protection purposes all crossings will be deemed to have significant fish habitat. Detailed design work and existing environmental conditions will determine the type of structures which will be required and what modifications have to be incorporated into the structure to allow for the necessary fish passage. Based on an examination of 1:50,000 topographic map sections, many culverts are required for small watershed areas and to accommodate storm drainage and snow melt.

All bridge structures and other stream crossing structures will be designed to withstand a minimum of 1:100 year flood events. Special attention will be given to erosion and scour protection at inlet and outlet control areas.

The Department of Works, Services and Transportation will consult with the Water Resources Division of the Department of Environment and Labour to ensure that the best available data is utilized to design stream crossing structures and storm drainage structures. The Water Resources Division's Environmental Guidelines for work around watercourses will be used during the design and

construction phases. These guidelines include:

<b>Chapter</b>	<b>Title</b>
3	Watercourse Crossings
4	Bridges
5	Culverts
6	Fording
7	Diversions, New Channels, and Major Alterations
9	Pipe Crossings
13	General Construction Practices

Stream crossing structures will be designed and constructed in consultation with Fisheries and Oceans Canada (DFO). An **Assessment of Fish Habitat** along upstream and downstream areas adjacent to significant stream crossings will be carried out. Stream crossing structures will be designed and constructed at locations which have minimal impact on fish and fish habitat and in accordance with:

- DFO's Guidelines for Protection of Freshwater Fish Habitat in Newfoundland and Labrador (1998);
- DFO Fact Sheets for environmental protection measures; and
- fish passage guidelines and other applicable guidelines.

### Construction

Road construction will be performed by contract forces. The construction will be carried out in phases over a six year period with the initial phase scheduled for 2003. Subsequent phases will be undertaken in the following five years and the final construction taking place in 2008. The various phases will involve:

#### Road

- (a) field surveys;

- (b) right-of-way clearing;
- (c) grubbing;
- (d) subgrade construction;
- (e) stream crossing structures; and
- (f) clean-up and rehabilitation.

The potential sources of pollution during construction would be limited to the possible siltation of various watercourses during grubbing operations, stream crossing work and subgrade construction. In addition, the potential exists for hydrocarbon spillage from temporary fuel storage facilities. Contractors will be advised of the environmental requirements for stream crossings and for hydrocarbon spill reporting and the necessity of strict compliance.

An **environmental Protection Plan (EPP)** will be prepared for the project and it will form part of the tender documents. The EPP will be a field usable document which will outline the environmental protection measures to be implemented during construction phase. The EPP will clearly outline the location of any environmentally sensitive areas which are known and specify any restrictions on the timing of construction due to wildlife/fisheries/water resources/historic resources/native concerns, etc. Rehabilitation measures for areas such as borrow sites and quarries will be clearly outlined.

Prior to any construction, representatives of the contractor's employees including any subcontractors will be required to attend an **environmental awareness session**. The session will focus on the environmental protection measures which will be detailed in the EPP and the contract documents.

The Department of Works, Services and Transportation will consult with community councils in the Happy-Valley Goose Bay area and along the Southeast Coast of Labrador as well as with the Innu Nation and the Labrador Metis Association to brief them on the project and to obtain their input. The Department of Works, Services and Transportation will conduct a series of **“Open House” Public Information Sessions** during planning and design phases of the project.



The Department of Works, Services and Transportation will hire an archaeologist before any construction activities take place. A **Stage 1 Historic Resources Overview Assessment** will be undertaken for the proposed route. The Department of Works, Services and Transportation will work closely with the Cultural Heritage Division of the Department of Tourism, Culture and Recreation and the Innu Nation to ensure that known sites containing historic resources are protected and that potential sites along the route are investigated, recorded and where necessary mitigative measures put in place.

The Wildlife Division of the Department of Forest Resources and Agrifoods and the Innu Nation have been consulted on a **Caribou Study** which has been initiated. This study will focus on the Mealy Mountain Caribou Herd (MMCH). Aerial surveys will be conducted to determine densities and distribution of caribou over the historic range of MMCH. Subsequent to the density distribution survey, areas with animal observations will be revisited, and animals captured and fitted with Very High Frequency (VHF) radio transmitters. These transmitters will allow relocation of animals from aircraft through time to determine animal movement rates, home range estimates, herd distribution and seasonal movements, as well as providing important demographic data including mortality and recruitment rates. These parameters will allow assessment of impacts associated with various stages of road construction and use.

The Department of Works, Services and Transportation will undertake a **raptor survey** along the proposed highway route and will consult with the Wildlife Division and the Innu Nation on the details of the survey.

The Canadian Wildlife Service and the Innu Nation have been consulted on the presence of migratory birds along the proposed route. The Department of Works, Services and Transportation will carry out a **survey of waterfowl** along the proposed route and will consult with the Canadian Wildlife Service and the Innu Nation on the work details.

The potential for adverse environmental impacts during construction will be minimized as all construction activities will be undertaken in accordance with the environmental requirements of the Department of

Works, Services and Transportation Specification Book for transportation projects. An EPP will be prepared for each construction phase of the project and the contractors' employees will be required to attend an environmental awareness session prior to any construction activities. Where necessary, additional environmental protection conditions will be incorporated into the contract documents.

(iv) Operation

The road is a permanent operation. Periodic summer maintenance will be necessary and will include such activities as grading, ditch cleaning and repairs to guide rails and road signs. Winter maintenance will consist of snow clearing and the application of sand for ice control.

(v) Occupations

The various types of occupations anticipated for this project include:

- (a) Civil Engineers;
- (b) Structural Engineers;
- (c) Engineering Technicians;
- (d) Road Surveyors;
- (e) Heavy Equipment Operators;
- (f) Drillers and Blasters;
- (g) Electricians;
- (h) Carpenters;
- (I) Heavy Equipment Mechanics;
- (j) Labourers;
- (k) Truck Drivers;
- (l) Concrete Finishers;
- (m) Concrete Technicians;
- (o) Steel Erectors.

(vi) Project-related Documents

- Trans Labrador Highway - Social and Economic Project Feasibility Analysis, (January 1993). Prepared for the Department of Works, Services and Transportation by Fiander-Good Associates Ltd.
- Trans Labrador Highway (Red Bay To Cartwright) Environmental Impact Statement and Addendum, September 1998. Prepared for the Department of Works, Services and Transportation by Jacques Whitford Environment Ltd.
- Additional Trans Labrador Highway (Red Bay To Cartwright) Environmental Impact Statement Documents, 1998 and 1999, prepared by Jacques Whitford Environment Ltd. including.
  - S Migratory Bird/Birds of Prey Component Study and Addendum, 1998, 1999;
  - S Historic Resources Component Study, Overview Assessment, and Stage 1 and 2 Assessments;
  - S Wildlife Component Study, 1998
- Environmental Protection Plans prepared for each project segment of the Trans Labrador Highway (Red Bay To Cartwright) by Department of Works, Services and Transportation, 1999-2001. (Eighteen in Total)

## **APPROVAL OF THE UNDERTAKING**

The following is a list of the permits, licences, approvals which may be necessary for this project:

### **MAJOR REGULATORY APPROVALS BY TYPE AND AGENCY**

<b>Type of Permit</b>	<b>Agency</b>
1. Stream crossing approvals	Dept. of Fisheries & Oceans, Goose Bay
2. Wood cutting permits	Dept. of Forest Resources and Agrifoods, Goose Bay
3. Burning permits	Dept. of Forest Resources and Agrifoods, Goose Bay
4. Fuel storage & handling	Government Service Centre, Goose Bay
5. Solid waste disposal	Government Service Centre, Goose Bay
6. Water supply/sewage disposal for construction camps	Government Service Centre, Goose Bay
7. Borrow/quarry site approvals	Dept. of Mines and Energy, St. John's
8. Navigable Waters Approvals	Dept. of Fisheries & Oceans, St. John's

## **SCHEDULE**

The Department of Works, Services and Transportation would like to complete the requirements of the Environmental Assessment Act and seek approval for the project by 2003 01 31. A tender call could take place in the Spring of 2003 with subgrade construction starting shortly after.

## **FUNDING**

The Provincial Government will fund the full cost of the project.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Barbara Knight  
Deputy Minister