

Highway 104 at Antigonish
Community Liaison Committee Meeting
May 19, 2010

Attendees:

Trudy Spooner
Ken Donnelly
Brian Segal
Dwayne Cross
Heather Mayhew
John Bain
Roger Garby
Ian McCallum
Robbie Fraser
Rick Giffin
John MacDonald
Ken Proctor
Al McRae

Regrets:

Hugh MacDonald
Mary McCarron
Len Robertson
Anne-Marie MacKenzie
Gerry Grant
Alicia Grant
Sylvie Colomb
Bill MacFarlane

1 Introductions

Ken Donnelly provided a brief introduction to the meeting and indicated that the main purpose of the meeting was to discuss phase II of the Highway 104 project. Al McRae from NSTIR introduced the consultants from CBCL Consulting who designed phase II of the highway; John MacDonald, Rick Giffin and Robbie Fraser.

2 Overview of Phase II

John MacDonald and Al McRae provided a brief summary of progress on phase II to date. This included:

- A meeting was held with The Paq'tnkek, and no negative feedback was given on the planned design, although many alternatives were presented;
- The design is approximately 95% finished, with hopes it will be fully completed by the end of May;
- The alignment was decided as part of the Environmental Assessment (EA) and no major changes have been made;
- Phase II extends from Beech Hill Road to Taylor Road;
- Silver Birches falls within the area of phase II. It was suggested that there might have been a historically and archeologically significant native settlement in the area. Testing was conducted with the help of a government staff archaeologist and a First Nations archaeologist. No significant findings were made, though if some are discovered further investigation will occur;
- Terms were developed to mitigate any damage to the A. Fraser House (an 19th century farm house). NSTIR was to document and salvage representative samples of the building materials, however, the home unfortunately burnt down. NSTIR is still negotiating to purchase the land on which the farm house was located and will attempt to salvage anything possible; and
- A box-style culvert has been chosen for the Beaver Dam (culvert 8+150) site, which will allow for the passage of small animals and reptiles.

3 Discussion on the Phase II Alignment

Rick Giffin presented information regarding the plan for the phase II alignment.

3.1 Dunn's Loop

Two options were explored; one with the new highway crossing over top of the old highway, and one with new highway going underneath the old highway. It was determined that having the new highway go underneath the older one is better both economically and in terms of sound attenuation (meeting the criteria laid out in the EA). To accomplish this, the older highway will be slightly raised to make room for the new roadway. A detour will be constructed to shift traffic away from the area while the highway is being built. Most of the detour will be removed after highway construction is complete, except for a small portion which will allow for access to Dunn's Loop. Also, a small dirt road will be built in the direction of the river (though not all the way to the shore) to provide access to local land owners. This will be a gated roadway, with keys being distributed only to the land owners in need of the road.

3.2 South Side Harbour Road

The South Side Harbour Road will be realigned to be parallel to the new highway, with roundabouts at the ramp terminals. An additional roundabout will be constructed to connect the South Side Harbour Road with Highway 316.

3.3 Taylor Road

A structure will be built over the new highway to connect to Taylor Road. The old highway will then become Taylor Road.

3.4 Phase II – Digital Images

3D digital images facing east and west were created to display the topography of the land and how the highway will be placed. These images were built using LIDAR (flown in 2008) and 3D modelling techniques. The data will be made available to NSTIR, who may then distribute it to the public.

4 Major Structures in Phase II

Robbie Fraser gave a presentation detailing the 5 major structures to be constructed in phase II.

4.1 Culvert 8+150 at Beaver Dam

This is a 12m span. The bedrock conditions made this difficult to design. Gypsum, a permeable rock, is in the area so the designers were very cautious. They designed a closed box structure, which prevents water from migrating into the rock below and acts like “a big mat”. There is a small premium to make this a closed box structure but it provides the safety needed. A baffle will also be built in the culvert to hold back water ever during drier periods, creating a safe area for fish. In addition there will be some small trails built to allow for the passage of small animals.

4.2 Dunn’s Loop Underpass

This is a curved structure, which is not at 90 degrees to the highway, like most underpasses. The span is larger than a typical underpass by nearly double, making it 146m. Due to its size, a pre-fabricated concrete girder could not be used so a custom one will need to be made.

4.3 South River Bridge

There will be two bridges spanning the South River, one headed east and the other west. This is a 320m span, the design of which has not changed since the last presentation (approximately a year and a half ago). CBCL designed the bridge to reduce the number of pillars that would be needed, thereby reducing the environmental impact of the bridge. Foundations will be built at either side of the river and the span will go across the river with no additional pillars. The interior span is 192m. There was a challenge with this area because of the presence of gypsum so to strengthen the bridge the piles will be driven 3m into the ground and reinforced with concrete.

4.4 South Side Harbour Road

The South Side Harbour Road structure is more typical than the others in this project. It is a jointless, hammer head bridge. The total span is 70m with a supporting pillar in the middle.

4.5 Taylor Road

This structure will largely be the same as the South Side Harbour Road, only it will have a horizontal curve. There will also be a supporting pillar in the middle.

5 Phase II Discussion

After the presentations had been delivered, Al McRae offered further explanation of the work done for the phase II alignment. He stated:

- NSTIR investigated for Karst Topography all along the alignment. No large deposits were found, but several pockets were located, therefore highway ditches that are dug will be recompacted to be impermeable;
- Geotextile will be placed underneath the highway to prevent large sink holes;
- The negotiations to purchase the land on which the A. Fraser Farmhouse was located look promising, with the owners willing to sell;
- In regards to the dirt road which will lead to the river at Dunn's Loop, public access will be limited with the gate. Additional work needs to be done to ensure that no building permits will be issued for that area and that road will not be considered usable by the general public; and
- The culvert 8+150 at Beaver Dam will have a floor (due to the box structure), but the floor will be covered with dirt and made to look like natural ground.

6 West River Bridge

A position paper was written based on the comments made at the CLC meeting on April 21, 2010. It was emailed to all members of the CLC for review and comments. Three comments were made, resulting in minor revisions. Once completed, the position paper was submitted to NSTIR.

Dwayne Cross stated that a package is being put together for Nova Scotia Environment (NSE) recommending that the shorter span (140m) be used. NSTIR met with the Paq'tnkek recently and they felt that the shorter span adequately addressed their environmental concerns. NSE will review the information package and new design and either approve or request that an additional EA be conducted. However, the design is advancing before any approval has been given in order to reduce the duration of the project. Approval may take some time because the proposal must also be reviewed by the Department of Natural Resources and the Department of Fisheries and Oceans.

Public engagement will be carried out regardless of the NSE's decision. If the NSE calls for an additional EA, then a public hearing will be required. If they approve the bridge, NSTIR will hold a public information session to inform the public of the design changes. The CLC is also welcome to hold a public meeting to discuss the West River Bridge.