

SYNOPSIS

The First Nations community of Pukatawagan with a population of 1,743 relies on the Hudson Bay Railway winter road and Northern Airlines for the movement of freight and passengers. This transport system has been described by the community leadership as providing an unreliable, unsafe, and very slow (yet high cost) level of service.

An analysis of the existing transport system, in comparison with an All-Weather system, indicates that an All-Weather Road would have a net cost (negative benefit) of \$63.4 M (20-year present value). This evaluation is based on the understanding that the railway would continue to operate, that the Hudson Bay Mining & Smelting's mine near Leaf Rapids remains open, and that Tolko's forestry operations are likely to continue employing a rail haul system.

If, as projected by 2005, Hudson Bay Mining & Smelting shuts down the mine near Leaf Rapids, the railway is likely to cease operations unless the lost revenue can be offset by higher charges to other users, including Tolko and the Pukatawagan First Nations community or by government subsidies. Rail closure would substantially increase passenger and freight costs to the community and haul costs in the forest industry.

Without a railway, the existing transport system costs would rise by \$52 M (20-year present value). Consequently, the net cost (negative benefit) of an All-Weather Road would be reduced to \$5.7 M (20-year present value).

An All-Weather Road to Pukatawagan generally parallelling the railway built to conventional provincial highway standards involves capital cost of approximately \$100 M. As long as the railway continues to operate, such an expenditure is difficult to justify. Lower cost alternatives, if in fact feasible, provide much lower benefits, have short-term value (limited life), and are equally difficult to justify.

To deal with this substantial uncertainty and to some degree, improve the level of service, it is recommended that the following initiatives be undertaken:

- Examine with Hudson Bay Railroad the feasibility of improving and upgrading the railway alignment, possible joint usage of the Churchill River Bridges for road traffic, and the potential, if any, for improved passenger service initiatives.
- Examine with Tolko the feasibility of improving and extending the forestry road system along the railway north of Sherridon to provide more reliable winter road access to the Pukatawagan area.

- Define the most feasible alignment of a long-term future All-Weather Road (if and when the railway shuts down), to ensure that short-term investments in the winter road/forestry road network have long-term value.

The foregoing issues need to be addressed before an overall strategy for longer-term future access to Pukatawagan can be defined.

STUDY FINDINGS

General Conclusions

- The existing railway and winter road system continues to provide marginally acceptable service to Pukatawagan in most years, but total costs are rising with the growing population.
- The Pukatawagan community would appear to support an All-Weather Road on the basis of reduced cost of living, more reliable emergency services, improved health, education and social services, and enhanced personal travel opportunities.
- These communities however have some concerns about the impacts on an All-Weather Road and the resulting resource development on traditional lifestyles, on land use, on the environment, and control over their future destinies.
- Despite a population growth (2.5%/year), an All-Weather Road for Pukatawagan is difficult to justify on a transportation economics basis. Funding of an All-Weather Road to Pukatawagan would be difficult to justify given the existing rail service.
- The construction of an All-Weather Road to Pukatawagan (built to conventional Highway standards), while the railway and HBMS (Ruttan Lake) continue to operate, would have a capital cost of \$100 M, with a 20-year present value of \$80 M. Actual transportation cost savings would be \$2.7 M/year (20-year present value of \$18 M) suggesting a 22% cost coverage. Socioeconomic benefits and undefined economic spin-offs would have to cover 78% of the cost. The net cost (negative benefit) of the All-Weather Road system would be \$63.4 M (20-year present value).

Under these circumstances, it is anticipated that the capital cost would have to be funded almost entirely by the First Nations/Federal Government. The benefits to provincial government, Manitoba Hydro, MTS, Lodges, Tolko, HBMS, and other resources industries would be relatively small.

- It is likely that an All-Weather Road for Pukatawagan will face stiff competition for government funding priority. Given the existing rail service (which has its limitations), the community does have more reliable service than most other remote communities.
- One pivotal question remains about the continuity of rail services. If the rail service were to be discontinued, the overall transport costs for the Pukatawagan community and the general area would rise from \$113 M (20-year present value) to \$165 M (20-year present value). Under such a no-rail

service scenario, the net cost (negative benefit) of an All-Weather Road system would be \$5.7 M (20-year present value).

- Mild winter conditions have and are a significant cost issue for winter road systems. If global warming forecasts are even partially correct, the frequency of weather road system failures will become a regular and very expensive occurrence.
- The forecasted doubling of the region's population within 30 years will put a tremendous strain on the existing transportation/infrastructure system and even on the social/traditional fabric of the Pukatawagan community and the regional environment.
- Environmental impacts of an All-Weather Road can be acceptably managed if the appropriate steps are taken to define the important resources in the area, to identify appropriate land uses, and to set in place a regional control process for administering access and use.
- Socioeconomic issues for Pukatawagan would probably support an All-Weather Road providing that the community and regional planning processes have definitive input to the project and post-project approval steps.
- A tourism development plan and other development strategies are needed to maximize community economic benefits.
- Traditional values/traditional land uses will have to compete actively with the growing population/infrastructure needs of the community. A rational at times compromising approach/dialogue will be required to ensure that the future development draws the best from traditional/technological sectors.

Study Qualifications

The study findings presented should be viewed in the context and scope of the Terms of Reference:

- No specific All-Weather Road route alternative was actually identified; however, several alternatives were examined at a very conceptual level. The connection to PTH 10 was assumed to follow the existing Sherridon Road. An alternative for more direct connection to Flin Flon was not precluded.
- Cost analyses of road freight rates assumed total community freight requirements at average unit freight costs. Winter road freight was based on 16 tonnes per full load; All-Weather Road freight was based on 23 tonnes per full load. Reality may be that both freight rates would be higher given that the analysis did not address such aspects as warehousing/spoilage/financing. However, freight rate savings between the All-Weather Road and Winter Road systems would be higher.
- The estimated costs and distances for an All-Weather Road are based on conceptual plans only. More reliable cost estimates can only be established after a more detailed route location study and environmental review has been carried out.
- All-Weather Road costing essentially reflected minimal travel distances/times. Hence, All-Weather Road costs could also be higher if more indirect routes are chosen.
- The economic analysis with an 8% discount factor assumed that the All-Weather Road was in place in Year One. Reality is that the All-Weather Road would not be in place until Years Five to Ten; population growths would start from a higher base and as a result, 20-Year Present Value project benefits would be greater.
- A lower net discount factor of 5% or 6% could have been considered if current borrowing costs and inflation rates were the only factors being considered; greater net benefits would result from the use of a lower discount value.
- Because no specific route was identified, environmental and social impacts could not be specifically identified. Mitigation costs should be small if good environmental and socioeconomic practices are used in route selection.
- Community leadership contacts to date should not be perceived as a substitute for public/environmental hearings.
- All-Weather Road service to Pukatawagan is more readily justified if HBMS mine operations at Ruttan Lake near Leaf Rapids were to cease and railway service were consequently discontinued.