STERLING HIGHWAY MP 58-79 PROJECT

Specific Recommendations (Map 8, Appendix A):

1. Fence the highway between MP 69.2 and 75.2. This section of highway includes 45% of WVC, 68% of the Wildlife Hotline sightings, and 81% of the GPS moose and caribou crossings. Allow for human crossings through the fence via stairs, gates, etc. Also include earthen escape ramps for wildlife that inadvertently enter the fenced corridor. Do not install one-way gates.

2. Within the fenced section (approximately 6 miles) include 4 wildlife crossings. This provides for greater permeability of the fenced section of highway, even though it is less than one crossing structure per mile. The proposed passing lanes should be built within the fenced section of highway. This will allow higher traffic speeds with increased safety from WVC.
   • A wildlife overpass near MP 73. The overpass will provide benefit for a wide array of wildlife. Most recent literature suggests wildlife overpasses accommodate a greater number of species than a wildlife underpass. A comparison between the use of the wildlife overpass and the underpass will then be possible in the second phase of the study.
   • A single or better yet, a multi-span bridge over the East Fork of the Moose River at MP 71.4. The multi-span, preferred over a single span, will alleviate wetland impacts of a single span while creating a much greater openness ratio for a greater number of species. It may even create a net increase in wetlands. Include soundproof barriers on sides of roadway on the bridge.
   • Provide for wildlife “crosswalks” near the east and west ends of the fencing. This may be standard wildlife fence with cattle-guards across the highway or the use of Electro-braid™ fencing and electric mats across the road. Properly managed, electric fences are an effective method to reduce moose-vehicle collisions (Leblond et al. 2007). Electric fencing has the advantages of being less expensive and less obvious in terms of visual impact than conventional metal wired fences. This is important for the area is a “State Scenic Byway”.

3. There are several areas where large amounts of gravel fill have been deposited in wetlands when the highway was first built. Steel guardrails are also present. Put large culverts (suitable for moose/bears) in at MP 58.2, 58.5, 61.9, and 64.6. This provides crossings for wildlife while restoring hydrologic flow. These are also in areas likely to be used by black and brown bears which comprise the bulk of the road-kill in this area. This may also provide a net increase in wetlands.

4. Extend the post-construction phase of this study for a minimum of 4 years, not the original study plan for only 2 years. It is clear from recent research that it takes wildlife time to adjust and learn to use the structures. And this post-construction phase of the
study will provide critically important findings for future transportation projects in Alaska and elsewhere.

(MP 58.5 failed culvert where hydrologic flow is an issue.)

5. Any culvert or underside of bridge should include texturing (popcorn) to reduce sound and echoing. Rhino-lining culverts and use of natural stone or brick (uneven surfaces) for retaining walls will help reduce noise levels to enhance wildlife use. Noise abatement through the use of “quiet pavement” may help and should be considered for use within a half mile zone of crossing structures to further encourage their use by wildlife. This type of pavement may need to be evaluated as “experimental” and funded as such.

6. Contour shoulders for easier clearing of brush and less erosion.

7. Provide information to the public, via kiosks along the highway, websites, public meetings, newspaper/TV/Radio stories etc., to explain the purpose of the project and the ongoing study. Hopefully this project will show the public a much improved transportation project.

8. Limit human use in the vicinity (1 mile) of crossing structures. No parking areas, pullouts, trailheads, rest stops, picnic sites, campgrounds, bike paths.

SAFETEA-LU, the national highway legislation, through Transportation Enhancement provides funding for environmental mitigation to reduce vehicle-caused wildlife mortality while maintaining habitat connectivity (wildlife crossings). But it is up to the state to use the funding mechanisms in the bill. Federal Lands Highway Program is a possible funding source since the Sterling Highway crosses federal public land (refuge). Monies from this source qualify as the 20% “non-federal” match for mitigation. Alaska’s congressional delegation could fund Sterling Highway mitigation via line item when the highway bill is reauthorized by Congress in 2009. It is likely that the WVC will rise given an increased moose population, increased traffic volume and speeds if nothing is done to protect both motorists and wildlife along the Sterling Highway. Del Frate and Spraker (1991) state that moose road-kills nearly doubled when motorists increased speed following ADOT&PF’s “dry road” policy in 1983. The time to mitigate highways is during any upgrades. Reference the Glenn Highway corridor - a $1,000,000 investment in 1986 dollars for fencing and an expanded bridge at Ship Creek to allow moose to migrate beneath it has resulted in a $13,000,000 vehicle collision savings alone. Over 800 moose saved and an unknown number of human lives.