

An Innovative Approach to Highway Construction

Impact on a gateway community, active landslides, and a short construction season are accommodated.

By Pat Collins

U. S. Highway 26-287 is a narrow, two-lane highway between Dubois and Moran Junction in Western Wyoming that has not undergone major improvements in its 50-year existence. It is a heavily traveled highway that winds through the nation's first national forest and through habitat for numerous species of wildlife. Nicknamed "The Togwotee Trail to Yellowstone," it brings travelers through the cities and towns that are gateways to the nation's first national park. It is also the only way into and out of one of the towns—Dubois—for which tourism and recreation are primary economic resources. Major improvements were needed and after several years of plan-

ning and preparation, the Wyoming Department of Transportation (WYDOT) began construction in April 2006.

The 38-mile project's classification will not change; it will continue to be a two-lane highway. Improvements include expanding shoulder widths to eight ft with the highway running 12 ft wide on both sides. Four pairs of passing lanes will also be added. To increase safety for both motorists and wildlife, the speed limit will be reduced from 65 mph to 55 mph. Timber clearing is also taking place throughout the project for increased sight distance. Over 230,000 tons of Superpave asphalt will be placed over 14 in. of crushed base on the Brooks Lake section, which is currently

underway. Fourteen in. of sub-base and six in. of crushed based will be used on the remaining sections.

Community Collaboration

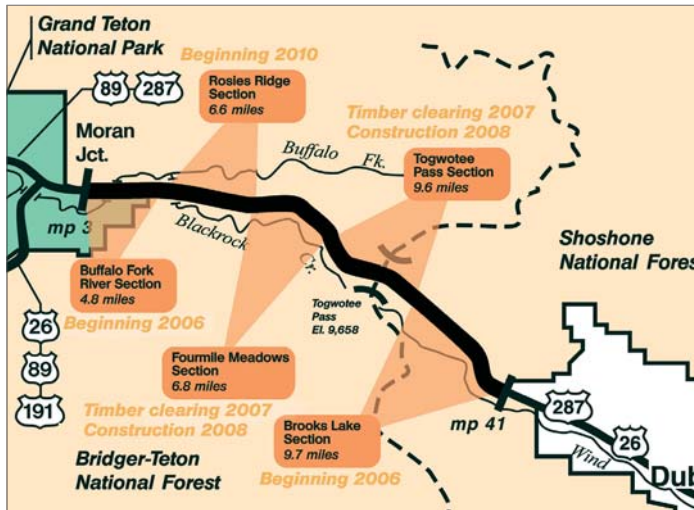
WYDOT faced one of its most unique challenges when improvements were imminent for this stretch of highway. When the surrounding communities of Dubois, Jackson Hole, Lander, and Riverton voiced strong opinions—in some cases, strong objections—to the major improvements and the length of time they would take, WYDOT came to understand that a different, more innovative approach would be needed to address the socioeconomic impact that the construction project would have on surrounding communities.

Due to a lack of socioeconomic impact information available in the Environmental Impact Statement, WYDOT agreed to create a socioeconomic committee, comprised of affected business and community members, to address the effects of construction on the local economy. WYDOT set out to see how much research was available on mitigating the impact on local businesses from similar projects in the past—only there were no similar projects to use as benchmarks.

The agency was engaged in economic impact research in several Wyoming communities, where traffic control affected the main street inside city limits where businesses were located, but no research existed on the impacts to gateway communities. WYDOT told the committee that the agency would be starting from scratch and was willing to try and find some solutions.



Crews moving dirt and laying out material separation fabric through soft subgrade as part of the preparation to widen the highway on the east end of the Brooks Lake section of The Togwotee Trail corridor. Credit: Wyoming Department of Transportation.



Current project schedule for WYDOT's Togwotee Trail project.

Engineered Solutions

Some of the solutions came to light after the formation of a constructibility committee, where, based on the desires of the affected communities, the decision was made to maintain two-way traffic as much as possible. Additionally, WYDOT committed to a shorter construction period of seven years instead of the original 11 to 14 years. The fine balance between the possibility of heavy construction over a short period of time resulting in greater impacts versus a potentially lower percentage of impact over a longer period of time was taken into consideration during the decision-making process. Based on the average estimated five percent decrease in business during a construction project, an 11- to 14-year project could result in some businesses closing down completely after being unable to withstand the revenue loss over an extended period of time. When given the alternatives, residents and businesses chose the accelerated schedule.

Maintaining two-way traffic during construction due to the narrowness of the corridor in spots is a definite challenge. There are obvious constraints due to the environmental sensitivities, which in a broad sense are natural resource concerns. Roadside vegetation removal is one example of certain disturbances that resource agencies will not allow. But WYDOT is committed to doing this project in a way that minimizes delays to the traveling public. By maintaining two-way traffic as much as possible, the

agency is accomplishing this goal. On the Brooks Lake section of the project, two or three pilot cars are being used in both directions to keep the two-way traffic flowing as much as possible through the narrowest portion of the construction. A stipulation that WYDOT has given the contractor is that stop delays are not to exceed 15 minutes through the length of the project. If the maximum time is exceeded, the contractor faces liquidated damages for each occurrence.

Another unique challenge is landslide stabilization. This 38-mile corridor has more active landslides than any other highway in Wyoming. On the Brooks Lake section, there are four active landslides that are being stabilized. Rosie's Ridge, the last section of the project, has six active landslides that require constant monitoring and maintenance. WYDOT considered an alternate alignment to the north of the existing alignment and ultimately rejected it after a feasibility study determined that the risks along the current alignment would be easier to gauge and manage. The realignment would have also encroached on grizzly bear habitat and caused disturbances to the Rosencrans Cabin District, which is listed on the National Register of Historic Places. WYDOT geologists continue to work on the assessment of the slides throughout the project to determine the best course of action for each one. The Rosie's Ridge section is not slated to begin until 2010.

The short construction season dictated by the area's climate is yet another challenge, especially with having the completion time shortened to seven years. Togwotee Pass itself—which is one of the project sections—is 9,658 ft in elevation, and often snow still

remains on the ground into late June. One method WYDOT has employed to lessen the impact and to gain a head start is to identify "hot spots" in each section of the project where prep work can be done in advance that will not disrupt traffic. This work, which includes landslide stabilization and rock cutting, is being let separately from the rest of the construction.

While an accelerated construction schedule could be cause for concern in rising costs of the project, the shorter timeframe could save money. After some hard lessons learned during prior construction projects, WYDOT took steps to maintain mobility in work zones, which resulted in a 20 to 25 percent increase in costs per project. But even though The Togwotee Trail project has the projected 20 to 25 percent added to the original \$80 million estimate, the shortened construction time could counteract that increase. Shortening the overall schedule may lower the cost because of the incredible inflation that is occurring right now. If costs keep rising at the current rate of 25 percent per year and the project is completed four years earlier than the original schedule, it could be a wash.

Communicating with Project Stakeholders

Another innovative aspect of The Togwotee Trail project is a marketing effort focused on alleviating potential economic impacts of the project. The program, a first for WYDOT, began as a result of recommendations from a marketing committee, which was an offshoot of the socioeconomic committee that WYDOT formed before beginning work on The Trail.

At the marketing committee's recommendation, WYDOT contracted with Cameron Christopher Thomas Advertising (www.cctadvertising.com) to take a proactive approach to keep traffic and visitors coming through while the project is underway. As required by Consolidated Federal Regulations, the marketing program is a collaborative effort tied to The Togwotee Trail construction project, not tourism or a specific community.

The marketing plan, entitled "The Togwotee Trail to Yellowstone," is slated

to span the entire seven years of the project. It includes a comprehensive web site, www.GoTogwoteeTrail.com, with construction and weather updates, a message board for local residents, and a password-protected page offering businesses tips and ideas for retaining and increasing business during construction. The web site media room includes updated construction information as a resource for local, national, and trade media seeking information about the project. Online advertisements help drive traffic to the web site, and print advertisements inform local residents and businesses of project progress and give suggestions for speaking with the traveling public about the road improvements. "Roamin' Wyoming," a project representative, narrates radio ads and makes appearances on The Trail, handing out a project-specific CD entitled "Two Whoops and a Holler" to motorists as they wait to be escorted through the project. Local chambers of commerce and businesses also offer travelers the free CDs that feature songs and tales of The Togwotee Trail by local musicians and performers. Proactive public relations and communication efforts are being covered by a contract employee hired by WYDOT to serve as an on-the-ground public involvement specialist for the duration of the project.

Togwotee Trail Progress

The Togwotee Trail project has a scheduled completion date of 2011. The first stretch of construction, the Brooks Lake section, encompasses 14 miles on the east side of the project and is headed up by E.H. Oftedal and Sons, Miles City, MT. Buffalo Fork, the second section, begins on the west end of the project and was awarded to LeGrand Johnson Construction, Logan, UT, in August. The three remaining sections, Togwotee Pass, Fourmile Meadows, and Rosie's Ridge, are scheduled to begin in 2007, 2008, and 2010, respectively. **GE**

Mr. Collins is the Assistant Chief Engineer, Engineering and Planning, for WYDOT. For more information on The Togwotee Trail project, contact Sheri Howe, Public Involvement Specialist, at 307-455-3590 or visit www.GoTogwoteeTrail.com. For Trail improvement updates, call 877-WYO-TRAIL.