

# Libby North Corridor Study

## Implementation of 23 Code of Federal Regulations Part 450, Appendix A: Planning Assistance and Standards, Linking Transportation Planning and National Environmental Policy Act Processes

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The Montana Department of Transportation (MDT) developed the corridor-planning process to bridge the gap between its statewide long-range transportation policy plan and project-level National Environmental Policy Act (NEPA) processes. MDT cooperated with Lincoln County, Montana; the USDA Forest Service; and FHWA to complete the Libby North Corridor Study. The approach used new rules and regulations: 23 Code of Federal Regulations, Part 450, Appendix A: Linking the Transportation Planning and NEPA Processes. Corridor planning complements NEPA and ensures that decisions are made at the appropriate level with consideration of low-cost alternatives and available funding. Environmentally complex issues in the Pipe Creek area, north of Libby, prompted the study. It was uncertain whether any project was possible on this secondary highway (MT-567) because of its environmentally challenging location: parallel to Pipe Creek (Bull Trout Critical Habitat), within the Kootenai National Forest and grizzly bear habitat distribution area, and just outside the Cabinet–Yaak grizzly bear recovery zone. If this project had been developed under traditional methods beginning with the NEPA-compliant environmental review, a full environmental impact study would have been likely. Concerned that any reconstruction would be insurmountable and not fundable because of environmental sensitivities, MDT and the county took a step back. The corridor was reassessed at the planning level to obtain a better understanding of corridor limitations and needs and to determine what improvements, if any, could be pursued. With the aid of many stakeholders and agencies, the study identified recommendations for improving safety, maintaining the scenic character of the corridor, and minimizing impacts to threatened and endangered species.

The historic approach to highway projects involves identification of an engineering deficiency, advancement of a preliminary design concept, and development of an environmental document under the National Environmental Policy Act (NEPA) that discloses all alternatives and associated impacts. Except for routine projects, the envi-

ronmental review process can be controversial and costly and require significant time to be completed.

FHWA—under the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)—requires planning-level coordination with natural-resource regulatory agencies and encourages consideration of results of transportation planning efforts in the NEPA process. Despite long-standing federal mandates for statewide and metropolitan planning, NEPA analysis has usually been disconnected from long-range transportation plan analysis.

When the NEPA and planning processes are not coordinated, the NEPA process often results in more costly outcomes and redundancy in development of information that is more appropriately developed in the planning process. Planning for transportation improvements at an early stage is critical for agencies seeking to meet the current and future demands for their transportation infrastructure. Environmental sensitivities, rising material costs, fiscal constraint, and increased public awareness have elevated the need for the corridor-planning process.

A corridor-planning study develops specific products that can advance into subsequent environmental review. The corridor-planning review process is conducted at a considerably lower level than a full environmental impact statement (EIS). The products of a corridor-planning study include a purpose and need statement, significant reduction in the number of alternatives subject to detailed environmental review, an environmental scan documenting the issues that natural resource agencies will want mitigated, and documentation of public support or nonsupport. The corridor-planning process can lower environmental review costs in several ways, including these:

- Reduce alternatives from further evaluation,
- Scope the project at the lowest possible level,
- Identify fatal flaws before initiation of the NEPA process, and
- If public opposition exists, identify preservation strategies that may eliminate further environmental review costs.

The concern that prompted this Libby North Corridor Study was that environmental issues are so complex in this area north of Libby, Montana, that it was uncertain if improvements of any type were possible on this secondary highway. The uniqueness of the area and limitations set forth by a federal district court ruling in 2005 (*I*) concerning its threatened or endangered species combine to make this project stand out nationally. The court ruled “no-take” of the Cabinet–Yaak grizzly bear, as the species is in decline. The Montana Department of Transportation (MDT) needed to update the roadway

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*Transportation Research Record: Journal of the Transportation Research Board*, No. 2123, Transportation Research Board of the National Academies, Washington, D.C., 2009, pp. 1–7.  
DOI: 10.3141/2123-01

for safety. These two concerns were in direct conflict under the normal project development process for a roadway reconstruction project. To advance a project, MDT needed to work directly with resource agencies and stakeholders to determine the needs and issues of the roadway and to identify what improvements, if any, would be allowed under the court's decision.

## LINKING TRANSPORTATION PLANNING AND NEPA PROCESSES

This study was performed in accordance with the "linking transportation planning and NEPA" guidelines contained in FHWA and FTA's February 14, 2007, 23 Code of Federal Regulations (CFR) Part 450: *Final Rule on Statewide Transportation Planning and Metropolitan Transportation Planning*: Appendix A: Linking the Transportation Planning and NEPA Processes. The linking transportation planning and NEPA framework provided in Appendix A, which includes environmental review, analyses, and coordination at the planning level, states that these efforts should provide for better project scoping before a formal environmental review process is initiated (2). When this is done, savings in project development and implementation time and cost should be realized. The products and analyses developed through this planning-level study are intended to be incorporated into and relied upon in a future, more detailed NEPA document.

Part 450's Appendix A discusses documentation needs and the level of detail of a planning product compared with that of a full NEPA analysis. Outlined are the type and extent of involvement by "Federal, Tribal, State and local environmental and regulatory, and resource agencies" (2) for a planning process to be more readily accepted in NEPA process. Also provided are the procedures for using decisions or analyses from the transportation planning process and the extent to which FHWA can provide up-front assurance that decisions made during the planning process can be used. These include addressing the 3-C planning principles: comprehensive, cooperative, and continuous.

Several substantive issues are also discussed in Appendix A of Part 450. One general issue that requires consideration is the question, What should be considered so as to rely on transportation planning studies in NEPA? While they are not to be treated as a formal checklist, items in the form of questions include these:

- How much time has passed since the planning study decisions were made?
  - Is the information still relevant or valid?
  - What changes have occurred in the area since the study?
  - Are the analyses reliable, defensible, and consistent with other regional studies?
    - Were FHWA and other agencies involved?
    - Were planning products available to other agencies and the public?

As a transportation-planning process feeds into the NEPA process, questions in the appendix include, During NEPA scoping, was a clear connection between decisions made during the planning process and those to be made in project development explained adequately to the public? What was the response? and Are natural resource and land use plans informed by the "planning products and vice versa?" (2).

Also included are the methods for which the transportation planning can be used to

- Shape a project's purpose and need in the NEPA process,
- Determine the conditions under which the NEPA process can be initiated in conjunction with transportation planning studies,
- Define the meaning of the term "alternatives" as used in the appendix,
  - Identify potential mitigation opportunities and investments, and
  - Determine the circumstances under which alternatives (or options, in the case of the study) may be eliminated from more detailed consideration during NEPA due to the results of the planning product.

The contents of Appendix A were discussed in detail between MDT environmental and planning managers, the consultant who worked with MDT, and the FHWA staff who participated from the beginning of the study process. Throughout the study, MDT emphasized the need for each step to address the aspects of Appendix A that would allow a smooth transition to the eventual NEPA process and potential project development.

## CORRIDOR STUDY BACKGROUND

MT-567 is a two-lane roadway, functionally classified as a rural major collector and part of the Montana Secondary Highway system. Also called Pipe Creek Road, it is located in the Kootenai National Forest and runs between the city of Libby and the community of Yaak, Montana (Figure 1) (3). The roadway was originally built as a logging road. With continued use, it became a link between these two rural communities. It is also used to access the National Forest recreation areas. The roadway is almost entirely within lands owned by the U.S. Forest Service (USFS) and is considered a forest highway. The roadway is substandard, in some areas only 15 ft (4.6 m) wide, with deficient curves. With an accident severity rate more than double the statewide average for rural major collector roads in Montana, this roadway became a priority for upgrading for Lincoln County and MDT.

MDT proposed a roadway reconstruction project for this corridor in early 2005. After the preliminary field review, the U.S. district court set aside and remanded a biological opinion prepared in 2003 by the U.S. Fish and Wildlife Service (USFWS). Special interest groups sued the USFWS and obtained a decision prohibiting taking any grizzly bears from the Cabinet–Yaak ecosystem, within which the proposed project is located. Following this ruling, MDT determined that reconstruction of this roadway may be insurmountable due to the grizzly bear ruling, limited funding, and excessive project costs. The traditional project development process, beginning with the formal environmental review through the NEPA process, would not work.

MDT used the guidance from SAFETEA-LU, 23 CFR, Part 450: *Planning Assistance and Standards*, Appendix A: Linking the Transportation Planning and NEPA Processes to initiate a planning-level effort. This guidance provides detailed process recommendations about linking the transportation planning and NEPA processes and design. A corridor-type study was deemed appropriate because it was hoped that this method would result in development of affordable improvement options that could take into account all constraints. The corridor study process also facilitated discussions and an understanding with the county and public about whether the no-take grizzly bear ruling would completely limit MDT's ability to make improvements along this 14-mi segment of the Pipe Creek Road corridor.

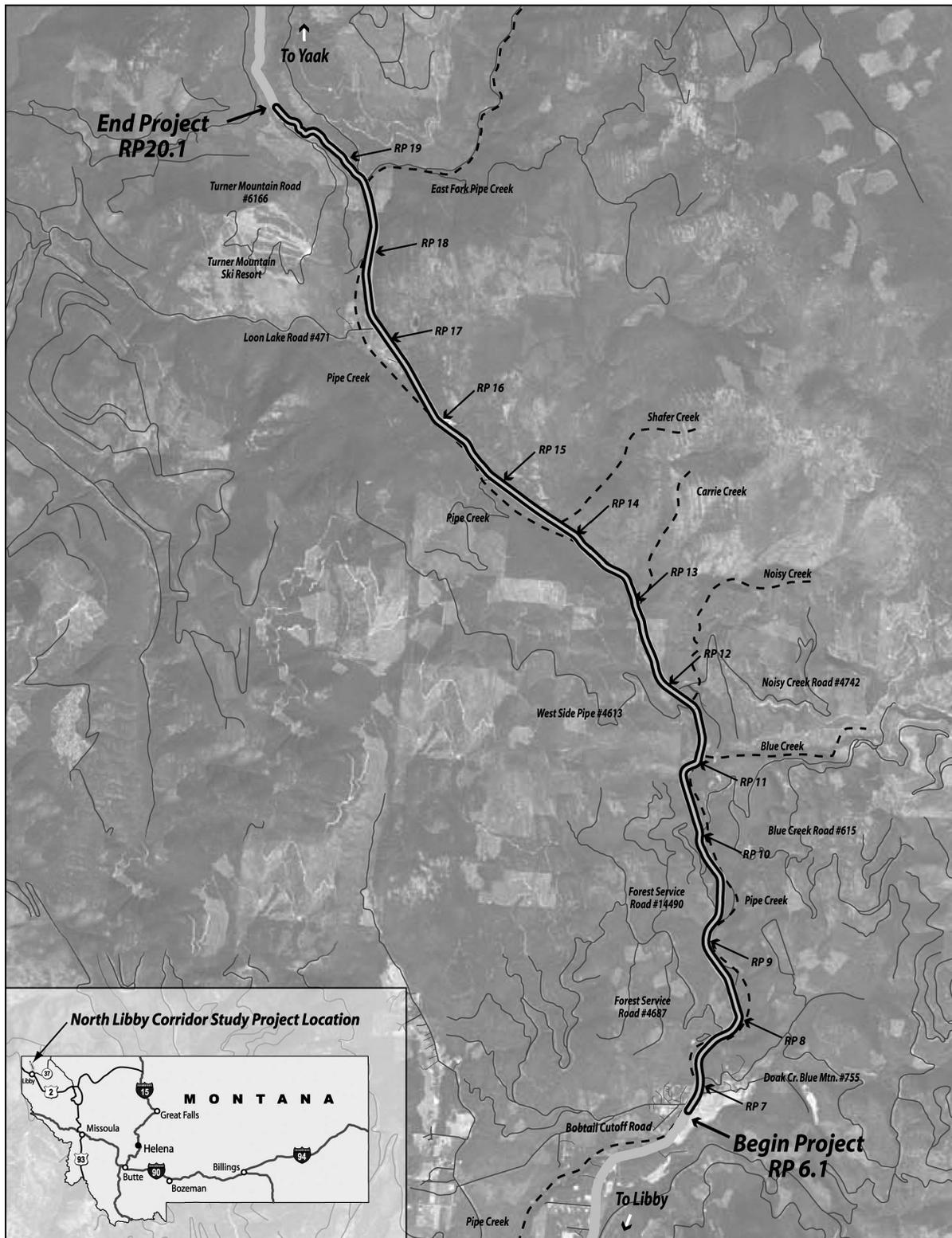


FIGURE 1 Project location map (3, Fig. 1) (not to scale).

## COLLABORATIVE APPROACH

Throughout the study process, MDT focused on identifying upgrades to the roadway that could be forwarded into the project development process. MDT obtained concurrence from USFS, FHWA, USFWS, other federal agencies, state agencies, and the county government on the study recommendations. Members of the public who live along and use the roadway were also satisfied with the outcome. The federal district court determination of no take of grizzly bears has stopped other road projects in the area. However, on the basis of this study, a project to improve roadway safety was now moving forward into design.

The recommendation that resulted from the study process proposed to minimize impacts and in some areas correct existing environmental concerns. The coordination with various agencies, the public, and other stakeholders brought everyone together to develop recommendations that could move forward within the environmental and funding constraints. Reduction of the impacts can result in the design project moving forward without the need to develop an expensive EIS and also with reduced costs for the road upgrade. MDT received comments from the resource agencies stating that this was a worthwhile process and that it should be used in all challenging areas. They appreciated working toward a solution that met everyone's needs.

MDT's working with the various agencies at the planning level and setting aside the preliminary design concept are vast changes from its previous implemented projects. The Pipe Creek Road reconstruction project was initially advanced through the usual MDT project development process. The project had already been considered a priority at the county level and was advanced to MDT for project development and funding.

The original proposed scope of work was to reconstruct the roadway to upgrade the road to a modern, safe facility that provides the structural and operational characteristics appropriate for the current and projected traffic volumes. The current roadway is substandard, with poor geometrics and inconsistent widths. The typical section proposed for reconstruction of the roadway was for a 26-ft paved width and standard 6:1 surfacing in slopes, with standard cut-and-fill slopes. It included upgrading the horizontal and vertical curves to meet the 45-mph design criteria. This scope was determined from existing MDT standards for rural major collectors before MDT staff met with the public and resource agencies. At the initiation of scoping work for the project, the issues of the grizzly bear and bull trout habitats became apparent. Project development was put on hold while the corridor-planning study was conducted.

During the first public meeting for the study in October 2006, it became clear that full reconstruction of the roadway was inconsistent with community desires. The public stated the desire to improve safety of the roadway. They wanted a road on which two cars could pass in the winter, a centerline stripe, and a consistent roadway surface. At the time, the road was constricted to one lane during winter months, from lack of snow storage; no striping existed for shoulders or centerline; and the roadway average surface width was 20 ft (6.1 m) but varied from 15 to 26 ft (4.6 to 7.9 m). The public did not want the roadway to change in character; the existing mountain highway with numerous curves and slower speeds was the character they wanted to maintain.

After meeting with the public, MDT staff decided to meet with the resource agencies. MDT provided project information and mapping of resources and sensitive areas that were included with the invitation to agency staff to participate in this planning-level approach. MDT staff requested information from the resource agency staff members

about their concerns, concerns voiced by the public during the first meeting, and any additional issues that would need to be addressed.

The first agency meeting was held later in October 2006. The agencies wanted the minimum possible impact to the surrounding environment. In areas where the creek is directly adjacent to the roadway, there was concern about sediment and contaminants from the roadway affecting the stream. The grizzly bear and bull trout were the two endangered species of greatest concern. There are also lynx, wolves, and numerous other animal species of concern in the area. During the meeting, the group discussed what improvement options suggested by the public might be advanced and specific concerns with those options. The options included items as minor as centerline striping and guardrails and as major as full reconstruction to design standards. Potential impacts and possible methods to avoid them were discussed.

From the first agency meeting, ideas were reviewed internally by MDT and used as a basis for further discussion and meetings. Various members of the study team reviewed existing information and had additional studies completed. These included geotechnical analysis, a memorandum on wildlife and biological resources, an analysis of wildlife linkage zones, and development of a memorandum comparing alternatives. The team then prepared cost estimates for five design options, illustrated cross sections, and provided a detailed inventory of the existing roadway.

During a second meeting with resource agency staff in May 2007, the range of improvement options was presented. The options were discussed, and the group determined that the options met both the range of concerns and possible improvements. Option 6 was created as a combination of aspects from the original improvement options. An on-site field visit along the roadway was conducted after the morning meeting with the resource agency staff. During the field visit, numerous stops were made to look carefully at the dangerous curves, the proximity of the roadway to Pipe Creek and adjacent wetlands, and newly constructed structures (USFS had recently modified a small bridge and installed culverts near the northern end of the corridor). Areas of interest to the various resource agency staff were viewed and discussed. The suggestion for a compromise between the suggested width that would normally be constructed under a full reconstruction project and the existing roadway width was made by the USFWS staff member during the field visit. This suggestion was incorporated into Option 6 to be presented for public review.

Following final public review during the fall of 2007, Improvement Option 6 was chosen as the design option that best met the expectations of the public and had the least impacts on the environment. The final Libby North Corridor Study document was published in December 2007 (Figure 2).

## STUDY OUTCOME

During the development of the study, MDT held monthly meetings with USFS, FHWA, and county staff and elected officials. Coordination was accomplished with other regulatory agencies as issues arose. All discussions were documented and recommendations forwarded to the agency and MDT staff for input. Once the range of recommendations was developed, meetings with the resource agency staff allowed discussion of concerns with the proposed build alternatives and the improvement options. Working with the agencies, MDT identified improvements that would not only enhance the safety of the traveling public and protect the environment but remain within the constraints of the U.S. district court order. In addition, the study identified a phas-

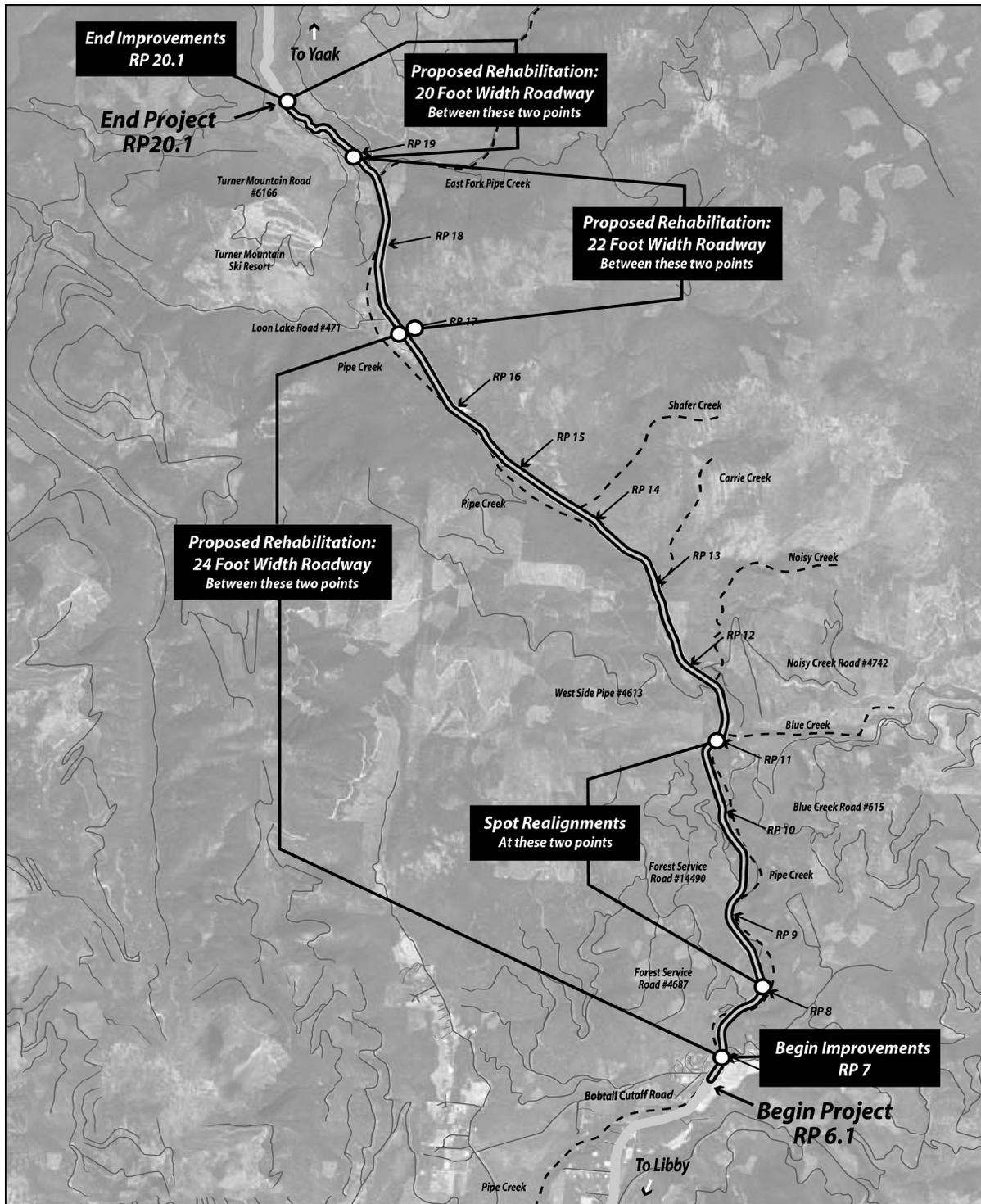


FIGURE 2 Proposed rehabilitation and minor realignments of roadway (3, Fig. 14).

ing plan for the improvements so as to allow flexibility to advance a project that fit within the available funds.

The chosen option included these provisions:

- To remain on the existing alignment,
- To rebuild two very dangerous curves,
- To rehabilitate the roadway to maintain a consistent width,

- To add striping, and
- To provide some areas for snow storage.

MDT met with the public and other stakeholders to review all concerns and needs and to outline how the recommended improvement option met the requirements. The cost savings of Option 6 were explained and illustrated during that final public meeting, and MDT

received feedback that the residents and landowners along the roadway understood that a cost savings could move the project forward in a more timely manner (Table 1).

The largest concern heard in the public meetings was, "When can you get started on construction to improve the roadway?" As this project moves forward from the planning-study process into environmental review and then design and construction, MDT staff from the environmental, planning, road design, and district offices who worked on the original study will be involved during the next steps.

During late 2008, MDT planning and environmental staff anticipated updates to the preliminary field work along the project corridor; they will then use the information from the study to complete an expanded categorical exclusion document. It is hoped that this document will result in completion of the NEPA-compliant environmental document in 2009. The use of this study process addresses the three main categories of Appendix A: procedural, substantive and administrative issues.

A reasonable level of detail was considered in the study and documented so as to address the stipulation in Appendix A that "a planning-level analysis does not need to rise to the level of detail required in the NEPA process, [but] needs to be accurate and up-to-date . . . [and] also emphasizes consultation with Federal, State and Tribal land management, wildlife and regulatory agencies" (2). In addition, the decisions and analysis used during the study process can now be used by FHWA, the county, and MDT as lead agencies as the categorical exclusion document is completed. The checklist in Item 7 of Appendix A was thoroughly addressed by the study process. The highlights of the response to the checklist state that the information will still be relevant and valid because it can be used within a year to 18 months of the completion of the study; that FHWA, other agencies, and the public were involved in the "relevant planning analysis and corresponding planning decisions"; and that the planning products were available to other agencies before the scoping process (2).

The result of the process was a complete study document that was printed and distributed to numerous locations where members of the public could review it. It was converted to CD-ROM for ease of distribution to agencies and entities that prefer an electronic format to paper. In addition, it was published on the MDT project website for review.

## LESSONS LEARNED

This effort is unique because MDT obtained information from the public and resource agencies at the transportation planning level before initiating formal environmental review. Because of the significant change in the project scope that was initially proposed, from full reconstruction to minor widening and alignment changes, the project will have much less impact. With this reduction in impact to environmental, cultural, and social resources, a shift away from a costly EIS process was possible. The project can be reviewed by using a categorical exclusion process and will undergo that process in spring and summer 2009. As MDT moves the project forward, there will be less time from proposal of a design concept to preliminary and final designs. The corridor study process will reduce the potential of having multiple alternatives to consider and design changes due to unanticipated environmental constraints. In other words, the process used by MDT allows for more efficient scoping and project development involving early public and agency input and will result in a less-complicated and less-costly NEPA process.

The study team received comments from the resource agencies and the public that this was the way to proceed with the project before initiating the NEPA process. The participating staff member from USFWS stated, "I think the study does a good job of identifying and discussing concerns and opportunities in this corridor. Evaluating these topics at an early stage of planning seems to be an efficient and intelligent way to approach potential project development in sensitive areas like this. I applaud MDT's planning efforts and encourage you to continue involving stakeholders at the earliest stages feasible."

Having a meeting early to determine the public's concerns with the roadway brought the public into the decision-making process for the roadway people use daily. The public appreciated the ability to express their concerns. Early engagement of the public helped in determining their most important concerns and needs for the roadway. Meeting these requirements assisted in the scoping of the project. After the second public meeting, several attendees stated that they liked the process and the recommended improvement (Option 6), and they wished only that the construction could take place sooner. They stated that they liked that MDT would be advancing a project into the NEPA process and then moving on to detailed design and construction.

TABLE 1 Summary of Costs

	Roadway, 2006 (\$)	Right of Way, 2006 (\$)	Total, 2006 (\$)	Total, 2012 (\$)	Total, 2012, Including 12% Indirect Cost Recovery (\$)
Option 1—full reconstruction	22,711,542	2,015,490	24,727,032		
Option 2—rehab with widening to 24 ft	9,832,487	333,500	10,165,987		
Option 3—rehab with no widening	5,604,001	94,041	5,698,042		
Option 4—spot improvements	187,501	—	187,501		
Option 5—snow storage widening	444,778	5,750	450,528		
Option 6—corridor plan	15,280,000	219,000	15,500,000	18,510,000	20,730,000
Corridor plan realign RP 8	890,000	6,000	900,000	1,070,000	1,200,000
Corridor plan realign RP 11	1,110,000	6,000	1,110,000	1,330,000	1,490,000
Corridor plan Segment 1—RP 7 to RP 12	4,970,000	52,000	5,020,000	5,990,000	6,710,000
Corridor plan Segment 2—RP 12 to RP 17	4,910,000	161,000	5,070,000	6,050,000	6,780,000
Corridor plan Segment 3—RP 17 to RP 20.1	6,330,000	6,000	6,330,000	7,560,000	8,470,000

NOTE: Costs inflated by 3% per year to obtain 2012 costs; indirect cost recovery rate estimated and may vary from year to year.

This process has improved MDT's relationships with multiple resource agency staffs. Engaging the agency staffs before development of a project scope made them part of the solution. Building better relationships with stakeholders is likely to lessen conflicts in the future. MDT is presently documenting this process and developing procedures to be used as MDT guidance and policy with this study, along with others, as a model. The intention of MDT is to use the Libby North Corridor Study as an example for other areas throughout the State of Montana to maximize the ability to implement improvements given limited funding for transportation projects while effectively meeting NEPA requirements.

## CONCLUSION

The pre-NEPA corridor-planning process can significantly decrease the time and money spent on developing and evaluating alternative improvement options. The planning-study effort was completed within 18 months, costing approximately \$330,000 and minimizing the level of environmental documentation, anticipated to be an expanded categorical exclusion. As the categorical exclusion process unfolds, the cost is anticipated to be \$100,000. The total cost of the Libby North Corridor Study and the expanded categorical exclusion is anticipated to be one-fourth to one-third its cost by historical or traditional methods.

Under traditional project development approaches, beginning with the NEPA-compliant environmental review, an EIS for this corridor was likely estimated to cost approximately \$1,500,000 to \$2,000,000 and take multiple years to complete. Despite environmental sensitivities and funding constraints, planning-level consultation through the linking transportation-planning and NEPA processes achieved consensus between the general public and local, state, and federal agencies, resulting in a lower-cost, less-impactful improvement option for meeting the needs of the corridor.

## REFERENCES

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*The Environmental Analysis in Transportation Committee sponsored publication of this paper.*