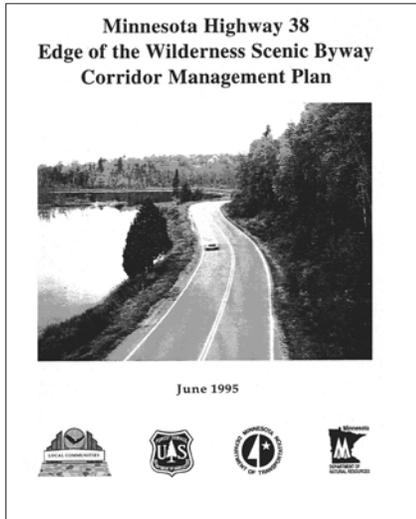


# CORRIDOR MANAGEMENT PLAN

## MINNESOTA HIGHWAY 38 EDGE OF THE WILDERNESS NATIONAL SCENIC BYWAY



Itasca County, Minnesota  
Between Grand Rapids and Effie

Minnesota Department of Transportation (Mn/DOT) in partnership with  
United States Forest Service and Minnesota Department of Natural Resources

1995

Project Type: Rural, 2-lane

### PURPOSE

The purpose of creating a Corridor Management Plan was to coordinate the philosophies and activities of land management agencies with those of the state and county authorities responsible for planning, designing, constructing, and maintaining a forty-seven mile transportation corridor between Grand Rapids and Effie, Minnesota.

### DESCRIPTION

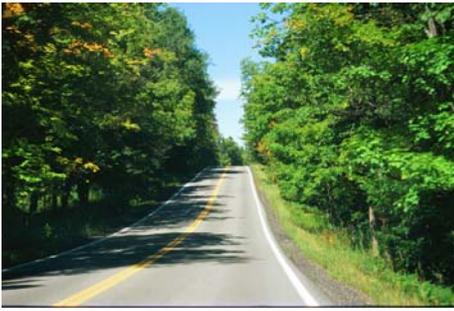
An existing road, Trunk Highway 38, was originally developed in the 1920s to replace a parallel logging railroad that was no longer responsive to the community's need for mobility. The road was surfaced in the 1940s and resurfaced in the 1970s. In cross section, the road typically consisted of two 12-foot lanes with narrow (2-foot) gravel shoulders. Ditch embankments were 1:1 or at best 3:1 with a "V" bottom. The backslope was frequently vegetated with second-growth 40-foot aspen, cedar, or spruce.



Twenty-five of the road's 47 miles were within the boundaries of Chippewa National Forest and the entire route is designated as a Scenic Byway.

The highway conformed to topography with many speed advisory signs. The Average Daily Traffic (ADT) averaged 4,500 in Grand Rapids but dropped to under 800 at the entrance to Chippewa National Forest, 12 miles out of town. Going north, the ADT dropped progressively except for minor blips in the towns of Marcell, Bigfork, and Effie, dropping to 370 just south of Effie. The road was used as a bicycle and pedestrian route by a substantial number of people, especially children, who lived near Grand Rapids or other towns.

In some segments a trail, typically on the abandoned railroad right-of-way, had been constructed for snowmobiles.



The road was primarily a commuter route. It also had a significant amount of trucks hauling timber to mills in Marcell and Grand Rapids. Seasonally, the corridor attracted a significant amount of tourist traffic. Fishing, snowmobiling, and fall color touring were favorite pastimes.

Bordering the road was a boreal forest with wetlands of all types, lakes, and streams. The road crossed a state wild and scenic river, the Big Fork, in the town of Bigfork. The road and underground utilities in the cities of Grand Rapids, Marcel, Bigfork, and Effie all needed improvement. Overhead utilities paralleled the road for much of its length.

The road was significantly substandard. Mn/DOT estimated that in order to reconstruct the highway to conform with standards associated with a 45 mile per hour design speed, it would require 80% of the road to be re-graded. To reach the preferred 55 mile per hour design speed, 90% of the road would need to be re-graded, creating cuts and fills up to 26 feet high and clearing limits as much as 190 feet. Neither alternative would be acceptable to the community, nor to the land-management agencies.



Fortunately, traffic accident data suggested that accidents were concentrated at a few particular intersections or occurred under particular conditions, such as inattentive driving that caused people to run off the road or into oncoming traffic. Since the whole route was substandard, poor geometrics were not, in general, causing the accidents nor would improving the geometrics for the whole corridor guarantee that there would be fewer accidents.

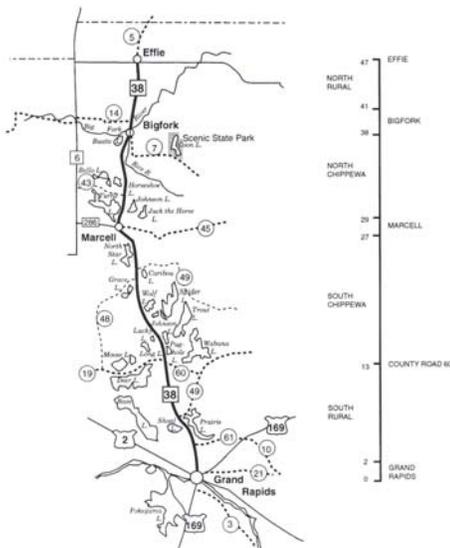
## PUBLIC ENGAGEMENT

A three-tiered public engagement effort evolved over the course of the project, starting with an *ad hoc* process at the beginning of the project and becoming institutionalized by the time the management plan was complete.

Using an existing inter-governmental agency, the Northern Itasca County Joint Powers Board, as a springboard, Mn/DOT and USFS held a series of public discussions with the general public and a host of special interests to define issues and needs. These *ad hoc* public forums were held monthly throughout the project (approximately 18 months) and provided a conduit for direct public input and review.

The second tier was to involve representative agencies. Mn/DOT, in coordination with USFS, created 23 interagency work teams charged with developing design and management guidelines for specific resources. Each group was asked to answer three questions: 1) what was the status of its resource in the corridor; 2) how was the resource affected by highways in general; and 3) how can the highway be designed to enhance the resource or at a minimum, how it could be designed to avoid, minimize, or mitigate adverse impacts to the resource?

The process made the regulators who usually review the project part of the design team. The regulators' involvement had the unforeseen effect of creating





a broad spectrum of support for the project, allowing political leadership to find extra funding that moved the reconstruction of TH 38 ahead by at least ten years!

Some work teams also engaged the public directly. For example, the visual quality work team gave disposable cameras to Girl and Boy Scouts and asked them to take pictures of what they did and did not like about the corridor. Their images, mounted on posters with text explaining why the photographers took the pictures, served as a basis for more community discussion during the *ad hoc* committee meetings.

The third tier of public involvement was the official public meetings/public hearings that were required by rules or laws. Although these events attracted an occasional NIMBY actor, their concerns were answered effectively by neighbors who had been to the *ad hoc* meetings, not agency people, creating a sense of believability that no agency person would have been able to muster.

## CONTEXT SENSITIVE SOLUTIONS APPROACH

The development of the corridor management plan defined for Mn/DOT a state-of-the-art CSS approach. The public and interagency working groups defined the issues, developed solutions, for not only the transportation system but for managing land adjacent to the highway. A completely coordinated schedule of improvement projects (transportation, recreation, water quality, economic development, etc.) for the whole corridor was the result. The schedule by which these projects would be implemented was also defined by the community, which included Mn/DOT as a development partner. Funding for projects that had been previously difficult for a single agency to justify became easier once all parties were in agreement in terms of project scope and schedule. The actual cost of the highway work was considerably less than anticipated because the reconstruction, particularly grading, was designed to solve problems, not achieve abstract standards.



The approach was institutionalized by a Corridor Management Plan and a corridor management organization (Edge of the Wilderness Leadership Board) that has dutifully executed the plan for ten years. The management organization monitors the corridor and assesses if the goals and objectives of the plan are being met or if they are still relevant. Currently the ten-year old plan is now undergoing a thorough review.

## OUTCOME

Most of the road has been reconstructed 10 years ahead of schedule. Before listening to the users of the highway, Mn/DOT had assumed that flattening and straightening out the road would be crucial to the logging industry, the major employer in the corridor. An influential mill operator disabused Mn/DOT of that notion when, at the first *ad hoc* meeting of the community, he stated that by “making the road flat and straight will allow us to get to the mill in Grand Rapids perhaps ten minutes faster.” He explained that logging trucks did not need to get to the mill ten minutes faster, especially if his neighbors who ran resorts needed the scenery to rent their cabins. What he needed was a year-round ten-ton road that would allow him to run his trucks throughout the year, even in spring when Mn/DOT significantly restricted vehicle weights. He didn’t need ten minutes a day; he needed ten tons every day. “I don’t care if we have to drive around



every swamp and over every hill, just fix the road so it can support commerce throughout the year,” he concluded.

By listening to the public, Mn/DOT was able to concentrate its repairs where the public got the most return for its investment.

Although the road does not meet geometric standards, it does not mean that it is unsafe. Several features, such as placing a rumble strip in the center of the road and on edges of the driving lane, have reduced accidents caused by inattentive driving. Accidents at particular intersections that had been deemed troublesome have also been significantly reduced. By using a CSS approach, Mn/DOT was able to concentrate improvements where they mattered the most to people, effectively improving transportation in the corridor, at a reduced cost, ahead of schedule.

## CHALLENGES

The biggest challenge was to get regulatory authorities to see themselves as designers. When the inter-agency work teams first began working together, a regulatory agency biologist, who had traditionally been very hostile to Mn/DOT projects, when asked how transportation projects affected fisheries, antagonistically suggested that “they destroyed them.” The Mn/DOT landscape architect, rather than getting defensive, asked how roads adversely impact fish populations, expecting a discussion about runoff. The answer he got was more forthcoming and probably revealed why the biologist did not like road projects.



The biologist simply said that roads divide watersheds so fish populations become divided reducing the genetic health of fish species. The biologist suggested a particular type of barrel culvert with a natural gravel bottom that would allow fish to travel between isolated pools. The cost of the culvert over the cost of a standard culvert was approximately 25 to 50% more he guessed.

It seemed to landscape architect, who was also the corridor manager for Mn/DOT, that if the public was going to spend millions of dollars improving the road, it certainly didn't want its fish populations harmed in the process. A few thousand dollars to ensure healthy fish seemed like a good idea and the biologist became part of the design team.

## FUNDING

Funding has come from various sources. A transportation demonstration project grant was critical in getting the project moving. Transportation Enhancement funds have been used to develop interpretive sites. State highway improvement dollars have also contributed. Forest recreation dollars have been used to develop interpretive turn-outs, rest areas, boat access sites, and parallel trails. Municipal funds have been used to improve urban segments, sidewalks, and streetscapes. Private money from utilities has been used to bury utilities along the whole corridor.

## LESSONS LEARNED

- Let the public define the project. The public is just as concerned about wasting money as any agency and they can help you decide where public funds would best be spent but this can only occur when the public is included in defining the scope and schedule of the project.
- State your non-negotiable design criteria up front. Mn/DOT came with only one requirement, based on the amount of logging trucks sharing the road with passenger vehicles—lanes needed to be 12 feet wide, *everything* else was negotiable.
- Make the regulators be part of the design team to achieve widespread support for transportation improvements.
- Be flexible in design so that you are solving problems not simply implementing standards.
- Continue a team approach to maintaining the corridor even after the transportation project is complete. Two-way communication is critical to operating the transportation system as an integral part of the community.

**KEY WORDS** *Applicable Project Delivery Stages:* Administration, Planning, Design

*Applicable Transportation Modes:* Vehicular, Bicycle, Pedestrian

*Applicable Transportation Professionals:* Highway Engineers, Structural Engineers, Urban Designers, Biologists, Landscape Architects, Recreational Planners, Historians

*Transportation Topics:* Visual Quality, Scenic Byways, Safety, Geometrics, Design Speed, Vegetation, Recreation, Fisheries, Threatened and Endangered Species, Water Quality.

**WEB LINKS** <http://www.byways.org/browse/byways/2455/> (Promotional, FHWA America's Byways)

<http://www2.exploreminnesota.com/destinations/byway.cfm?oid=4770>  
(Promotional, State Tourism)

<http://www.edgeofthewilderness.org/index.html> (Promotional, Northern Itasca Joint Powers Board)

<http://www.edgeofthewilderness.org/tour/embark.htm> (Promotional, Tour of Route)

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