

 <p style="text-align: center;">Montana Department of Transportation</p> <p style="text-align: center;">ENGINEERING DIVISION MANAGEMENT MEMO</p>	Management Memo number: ENG-03-01
	Date issued: October 23, 2003
	Date effective: October 23, 2003
	Date revised: N/A
Subject: Context-sensitive solutions on projects	

To: All offices

From: Joel M. Marshik, P.E., Engineering Division Administrator

INTRODUCTION

Although safety and mobility are critical design elements, there is an increased demand for us to preserve and enhance the natural environment as well as the livability of communities. The challenge is to employ innovative ideas and solutions while remaining cost-effective.

BACKGROUND

In 1997, the Federal Highway Administration published *Flexibility in Highway Design* as a guide to assist state highway departments in meeting the provisions found in the Intermodal Surface Transportation Efficiency Act (ISTEA) and the National Highway System Designation (NHS) Act of 1995. The intent of this document is to encourage innovative thinking when considering community values.

In the majority of its projects, MDT has considered context-sensitive solutions throughout the project development process but has typically waited to apply cost-effective solutions in the final design. In some of these projects, the determination of final context-sensitive solutions to be implemented has been the result of a long and sometimes frustrating process. There has to be a more effective way to do business.

PURPOSE

The intent of this memo is to:

- reinforce MDT's commitment to work with communities and local stakeholders to assure that MDT transportation facilities meets their needs as well as the needs of the traveling public
- establish that pursuing context-sensitive solutions is to be an integral part of all phases of all projects – **it must become part of our organizational culture**
- provide conceptual guidance to staff regarding the context-sensitive design solution decisions that they will make while nominating projects, evaluating needs, prioritizing, designing, constructing, and maintaining highway projects

Revenue & Transportation Committee Meeting
December 2, 2005

POLICY

- ***Start early***

Making context-sensitive solutions part of our culture means beginning *early* in the project selection process and continuing on through design, construction and maintenance with consideration for community and customer values and needs.

- ***Involve local government and citizens***

To help the process get off to the best possible start, remember to include all affected parties (e.g. local government) and those with a partnership interest (e.g. Federal Highway Administration.) In fact, to make this concept work, local government and citizens **must** be a genuine part of the process and feel they have been heard...otherwise we are just offering lip service.

- ***Balance wants, needs, money and the law***

Since the availability of transportation funds will also continue to be a major factor affecting decision-making during the project development process, balancing the needs of the community with safety/mobility and multiple project needs will certainly challenge the transportation designers of the future.

And, of course, any context-sensitive solution must be accomplished within the parameters of existing laws, rules and regulations.

- ***Think “outside the box”– innovation is key***

No “cookie cutter” approach is available on exactly how to approach context-sensitive solutions.

- ***Listen and keep an open mind***

Be willing to listen to our customers – some of our best solutions come from them.

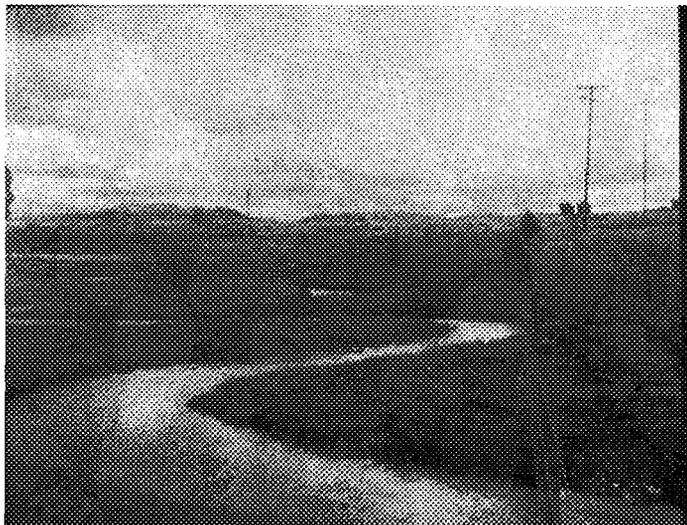
Individuals and communities will have different ideas on what constitutes the ideal context-sensitive solution in any given situation. The fact that there are differences does not mean there is a “right” or “wrong” outcome.

- ***Support, teamwork and communication***

To make this policy work at MDT, all staff need to support context-sensitive solutions, recognize the physical and financial limitations involved, and communicate as a team to make the best possible decision.



Wetland Mitigation



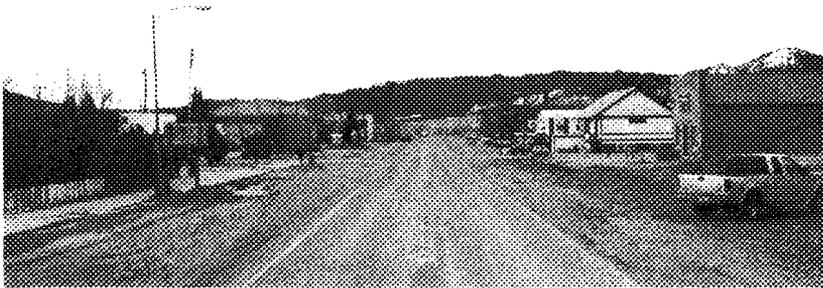
- State and Federal laws are designed to protect wetlands within Montana
- The state is divided up 16 watersheds.
- The department attempts to avoid impacts on wetlands wherever possible. If that isn't possible we minimize and mitigate the impacts.
- Our first preference is have mitigation in place prior to impacting wetlands.
- MDT currently has 36 offsite wetland reserves totaling approximately 930 acres.
- Over the last 8 years we have built an average of 92 acres a year.
- We add 3 to 5 new mitigation sites a year





Boulder Main Street

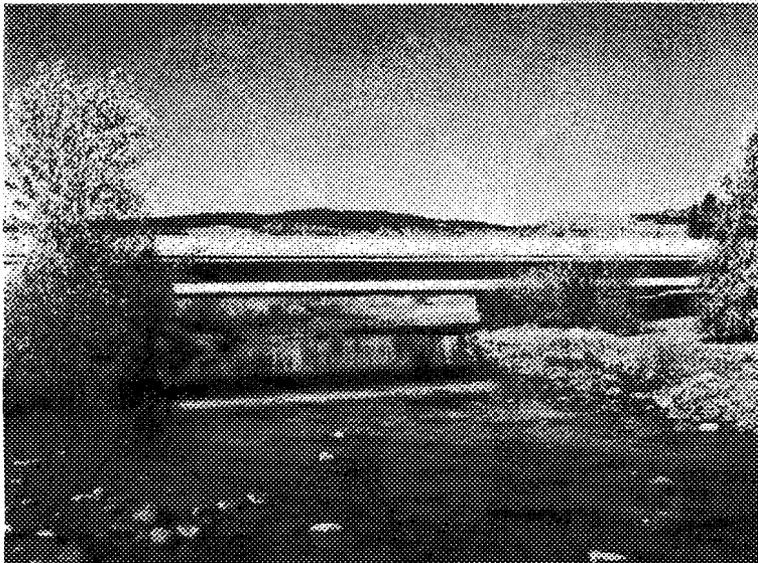
BEFORE



Boulder Main Street and Boulder River South of Boulder were two projects that merged into one construction project, functionally classified as Rural Minor Collector. State Route 69, the main thoroughfare in Boulder, Montana (population 1300), was reconstructed and widened during the Main Street-Boulder project. Boulder River South of Boulder was a bridge replacement project widening the bridge to allow for pedestrian traffic and to transition the bridge into Boulder Main Street.

Context Sensitive Features

- Landscaping (trees, bushes)
- Decorative grates
- Keystone blocks
- Colored concrete
- Period Lighting
- Textured architectural design on bridge
- ADA and Pedestrian improvements





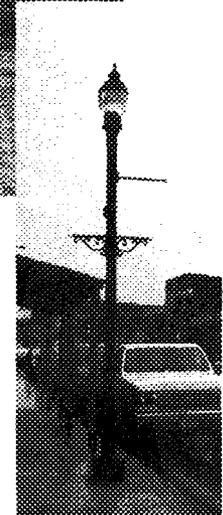
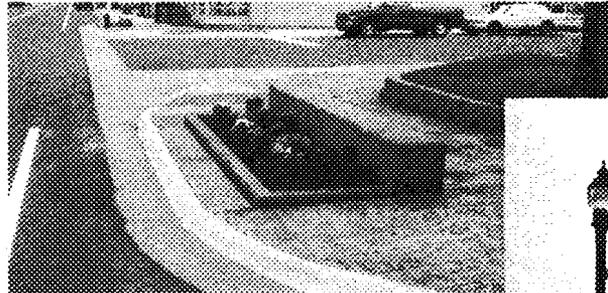
Woodard Avenue-Absorkee



This project was a reconstruction of Woodard Avenue in Absarokee, Montana (Stillwater County). Project includes storm drain system construction, water line and water services replacement, plant mix bituminous surfacing, curb and gutter, sidewalk, signing and pavement markings. The project begins near Willow Street and extends northerly through Absarokee to the vicinity of Montana Avenue.

Context Sensitive Features

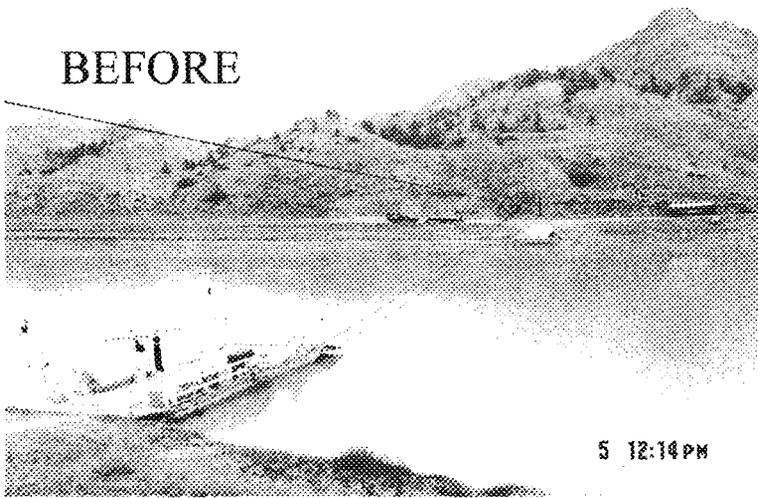
- Landscaping/planters
- Period style lighting with plant hangars, banner arm, flag pole holder and duplex receptacle
- Benches
- Patterned/colored concrete
- ADA and Pedestrian Improvements





Ferry Rehabilitation

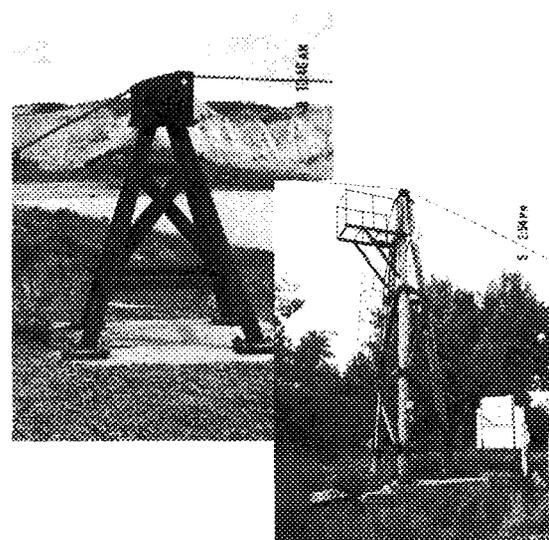
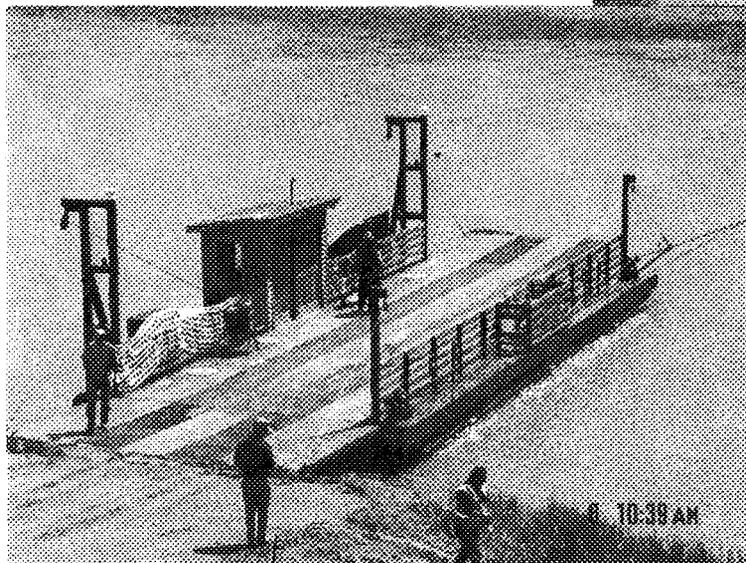
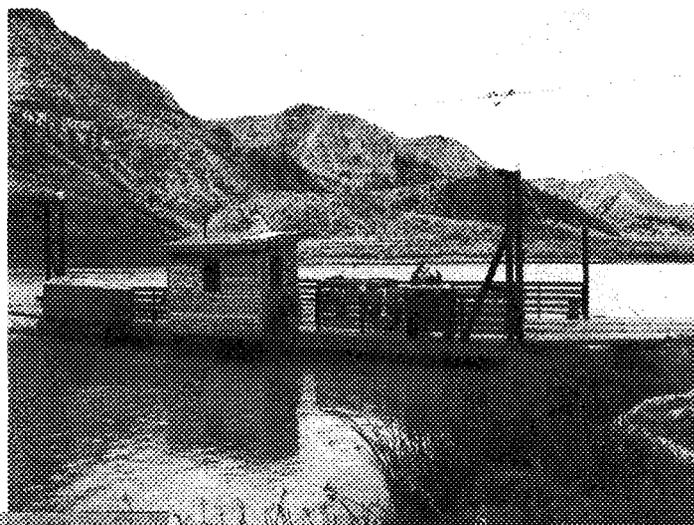
BEFORE



This project consisted of constructing new ferry terminal buildings and appurtenances at two sites on the Missouri River in north central Montana. One site, McClelland/Stafford Ferry, was located between Chinook and Winifred in Section 27, Range 18 East, Township 23 North in Fergus and Blaine Counties. The other site, Virgelle Ferry, is located between Geraldine and Big Sandy in Section 24, Range 11 East, Township 26 North in Chouteau County.

Context Sensitive Features

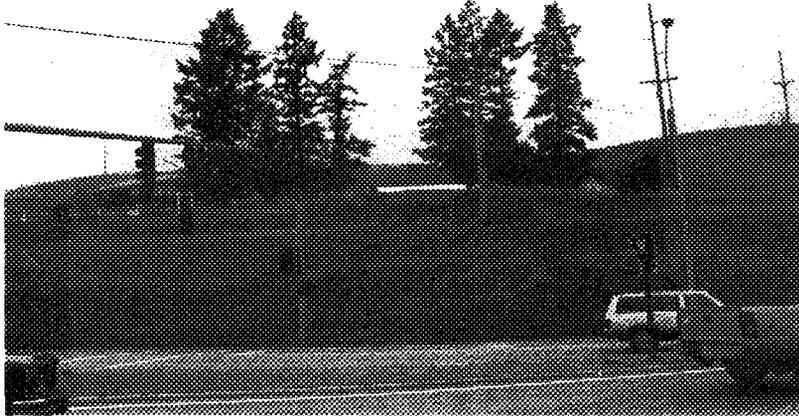
- Log siding used to match environment
- Weathered steel was used to give the ferry an older look
- Steel fabricated to look more like the original wood towers





Polson East

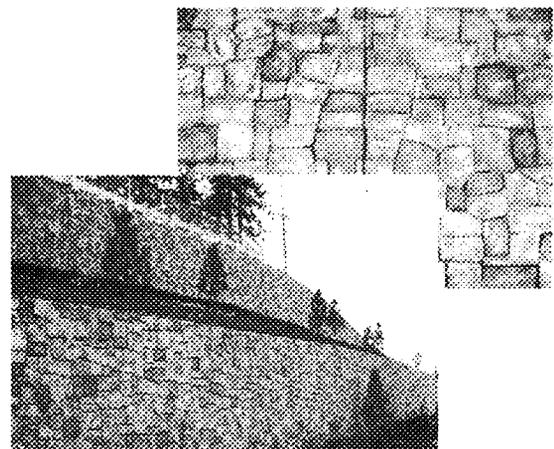
BEFORE



This project was a reconstruction of the intersection of MT 35 and US 93 and extending easterly along MT 35 a distance of 4.6 km. The project includes 2 km of US 93 beginning 1.5 km south of the US 93/MT 35 intersection and ending .5 km north of the MT 35 intersection. The project also includes providing encasement pipes for future water and sanitary lines and replacing existing water mains and service lines.

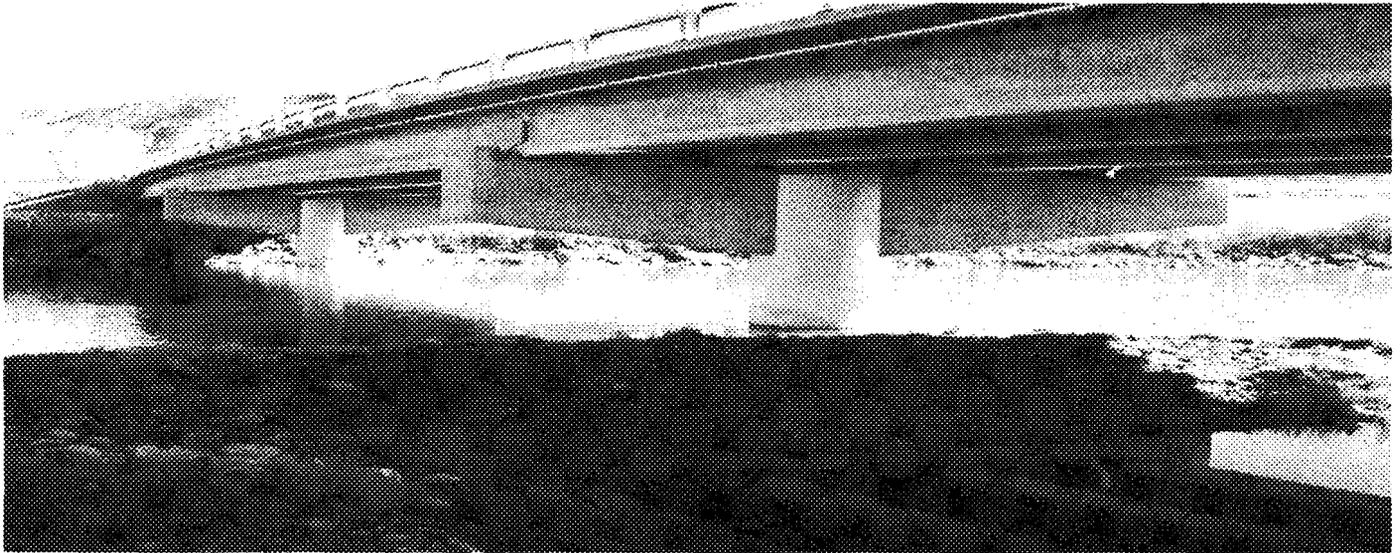
Context Sensitive Features

- Landscaping
- Bike Path
- Two tier retaining wall
- Stained precast formlines

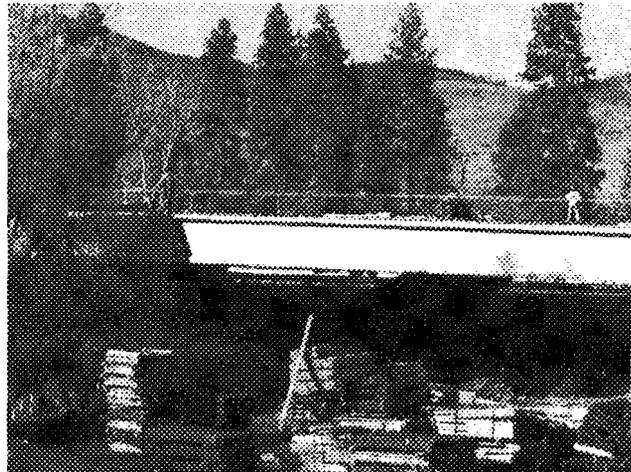




Bridge Stream Access



- Montana has approximately 5,400 bridges.
- MDT is responsible for approximately 2,900 of those bridges.
- Our policy is to allow for stream access along our right of way at all stream crossings where possible.



- We are now including a walk through or gate in order to insure bridge inspector access at bridge ends.
- During 2004 and 2005 we worked on 36 bridges and all of them provided stream access.