

FAQs for the Maclay Bridge Planning Study

Informational Meeting No. 3

September 27, 2012



Q: What are the limitations of and/or problems with Maclay Bridge?

A: The general problems and limitations of the Maclay Bridge are listed below.

- *The bridge is considered functionally obsolete because it is a one-lane bridge on a two-way street and there are more than 100 vehicles per day crossing the bridge. The resulting traffic conflicts cause delays and potential safety issues.*
- *The existing bridge is load restricted which prevents some vehicles from crossing.*
- *The bridge is fracture critical. Truss bridges are typically fracture critical. If one part of the truss should fail, the entire bridge span may fail. As a bridge ages and traffic increases the steel in the truss may begin to weaken because of fatigue. The bridge requires special “fracture critical” inspections to reduce the chance of failure. With proper inspection and maintenance, the bridge is considered safe. An inspection that shows a problem could result in immediate closure.*
- *There are no bicycle or pedestrian features on the bridge.*

Q: What is the traffic count?

A: In 2010, the traffic volume was 2,610 vehicles per day, compared to 1,610 vehicles per day in 1992.

- *Existing and projected traffic volumes exceed the current national, state, and county bridge standards for a single-lane bridge.*
- *The average annual growth rate (AAGR) between 1992 and 2010 is 1.88% per year.*

Q: What are the traffic issues?

A: The traffic volume has grown over the past 20 years and will continue to increase - causing increased delays and driver frustration. There are increasing conflicts between vehicles and swimmers that jump from and congregate on the bridge. Critical emergency response vehicles cannot use the route without restrictions and realize increased response times due to the limitations of the bridge. This provides a lower quality of service to residents west of the Bitterroot River.

- *Three roadway curves on River Pines Roads and North Avenue do not meet current standards.*
- *Two of the sub-standard roadway curves that lead into and out of each side of the existing bridge restrict driver sight distance.*
- *Since 2002, there have been 17 crashes at the west end of the bridge (intersection of River Pines Road & Riverside Drive).*

- *A number of crash trends and areas of concern were identified within the crash analysis area. Specific areas of concern identified are located on the following roadways: Big Flat Road, Blue Mountain Road, North Avenue, River Pines Drive Road and South Avenue*
- *The clear zone along River Pines Road adjacent to the Bitterroot River is unprotected. The top of fill slope is within 2 to 4 feet of the edge of the travel lane.*
- *The single lane bridge width of 14 feet does not meet current standards for width given existing and projected traffic volumes.*
- *Roadway widths on River Pines Road do not have shoulders.*
- *Bicycle and pedestrian facilities are absent on River Pines Road.*

Q: What does the scour hole under the bridge tell us?

A: The Bitterroot River channel shape has been altered over time. This is partially due to increased water velocities that likely have removed stream bed material from underneath the bridge and created scour holes. Scour holes are common at bridge crossings. They develop due to changing channel conditions and can threaten the integrity of a structure by undermining its foundation.

Generally, scour susceptibility can be predicted and is addressed in the design process. Channel scour was not part of the original design in the 1940s.

- *The Maclay Bridge's piers are located in the river channel on unknown materials.*
- *The channel has been altered with the deposition of material upstream of the bridge (changing the shape of the channel changes stream flow).*
- *Increased water velocities remove material from the stream bed. If too much material is washed away, the piers in the channel may become unstable.*

Q: Is the bridge safe?

A: Yes, common passenger cars and some service vehicles can cross the bridge safely. Type 1 fire engines can cross with restrictions. School buses and other emergency vehicles can also cross subject to speed and centering conditions.

- *Any delay in emergency response travel time, typically measured in seconds, is an important consideration within the planning area.*
- *The bridge is currently posted at 11 tons. The two primary vehicles impacted by this reduction are school buses and fire trucks. School buses are generally within the 11 ton limit, as they weigh approximately 19,000 pounds when empty and 22,000 pounds (near or at the 11 tons limit) when loaded. School buses are thus allowed across the bridge, as long as they do not exceed the posted 15 mph speed limit.*
- *An agreement between the County and the Rural Fire Department Type I fire engines (i.e. overweight vehicles) across the bridge, as long as they straddle the centerline of the bridge and travel no more than 5 mph.*

Q: Who will decide whether the existing bridge stays or goes?

A: The final decision will be made by the Board of County Commissioners after the public process has been completed. If any federal aid is going to be spent on a project, the scope will be determined through the National Environmental Policy Act (NEPA) process.

Q: How does this bridge fit into the overall development plan (growth policy) for the county?

A: The Maclay Bridge Planning Study is consistent with the Missoula Growth Policy General Local Services and Facilities goals and objectives. Although the Neighborhood Plan did not identify a need for a new bridge, the numerous deficiencies that impact the bridge structure and safety are compelling this analysis to evaluate options for future bridge replacement in the study area. The County and the State will continue to meet the Target Range Neighborhood Plan bridge maintenance recommendation.

Q: Will conditions ever deteriorate to a point where the bridge will be required to be closed?

A: A bridge is required to be closed when the capacity is less than 3 tons (compared to the current 11 ton limit for Maclay Bridge). If nothing is done structurally, the bridge will deteriorate until the closure requirement is met and a new bridge will be necessary.

Q: Are there plans for a bypass?

A: No. At the request of some citizens in 2003, the metropolitan planning organization (MPO) studied a bypass as part of the long range transportation plan update. The "bypass" was discarded from further consideration by the MPO at that time and will not be included or considered.

Q: Why is the county acting on this issue?

A: The County nominated this project to MDT's Federal Aid Off-System Bridge Program in 2002 to address the safety problems and design deficiencies.

Q: Can we taxpayers afford the costs associated with a new bridge?

A: There are no local funds involved with the potential replacement of the bridge. Funding for a new bridge could be from the MDT Federal Aid Off-System Bridge Program, which is funded through gas tax revenues that are deposited into the Highway Trust Fund (HTF). The HTF does not add to or increase the federal deficit or debt. The HTF is a self-sustaining budget apart from the overall federal budget. The federal gas tax revenues annually pay for the projects across the nation without loans or deficit spending. If the Board of County Commissioners decides that they wish not to have any federal aid spent on a Maclay Bridge Project, that funding would simply be spent elsewhere in Montana.