

**Granite Falls Bridge #102 Replacement
TIGER Grant Application
Benefit Cost Analysis**

Criteria	Current Status (Baseline)	Planned Improvement	Benefit
Safety	81 year old bridge utilizing a structural method no longer accepted	Construct new bridge utilizing current approved construction methodology	• 75 year useful life
	Structurally deficient and functionally obsolete	Construct to current design standards	• Ensured economic and employment access • Improved safety for all vehicle and modal types
State of Good Repair	Poor geometrics for current volumes and weight	Incorporate approach geometry into new structure	• Improve travel time by eliminating speed reductions • Minimize structural stress
	High likelihood of 4-week closure within 5 years	Replace inherently weak construction methodology with more reliable system	• Eliminate long closure
	High likelihood of one - year closure within 10 yrs	Same as above	• Maintain essential economic, recreational, safety connections
Economic Competitiveness	Vulnerable economically viable access to critical markets with national significance	• Design for redundancy • Connect with existing alignment in an integrated system	• Reliable, continuous access to markets • Increase speeds, delivery time safely
Quality of Life	No non-motorized alternatives meeting current design standards	Construct wider shoulders and wider, more protected pedestrian and bicycle pathways	• Enhance non-motorized safety • Support and encourage non-motorized usage
Environmental Sustainability	Only detour route to markets is 94 miles	New structure designed to withstand all predictable eventualities	• Maintain air quality by avoiding heavy truck detours • Ensure continued convenient recreational access
	Current approach alignment does not protect adjacent wetlands or wildlife habitat	Map, evaluate and protect natural areas using context sensitive design	• Protected natural habitat
	Current structure does not manage water run-off	New structure will manage run-off	• Protect water quality in the river
Innovation	Alignment, structural design and context integration was developed 81 years ago	Incorporate interdisciplinary team analysis into project development process	• Assurance that project will be integrated into the entire community for its design life - 75 years
	Existing project was constructed using the traditional design-bid-build concept	Explore using alternative construction approaches such as design-build or GCCM	• Lower overall construction costs and potential construction schedule improvements
Partnership	Originally constructed by a single entity with no public input or partnership collaboration	Develop project through robust planning process including multiple stakeholders	• Integration of new structure into local, regional and state plans and existing projects; local support for a regionally significant project