

EXECUTIVE SUMMARY

The Big Sky Transportation Study was commissioned by the Big Sky Chamber of Commerce, with funding support from the Big Sky Resort Tax, Gallatin County and Madison County. The purpose of the study is to evaluate traffic safety and operations along the Highway 64 (Lone Mountain Trail) corridor, both addressing the needs of today as well as projecting the needs of the future. The study area consists of the Highway 64 corridor beginning at the Highway 191 intersection and extending to the terminus of Highway 64 near Moonlight Basin Resort, approximately 10 miles to the west. The study presents existing traffic volumes, an origin-destination survey, crash data summary, existing and proposed bike and pedestrian facilities, future development scenarios, and future traffic volumes for 10 and 20-year horizons.

The project has included a comprehensive public involvement process that started in January 2016 with two community meetings hosted by the Chamber and the Western Transportation Institute where the community identified their areas of concern related to the transportation system. A third community meeting was held in July 2017 where the draft study was presented for public comment. Additional public forums have been held as part of the review process including meetings of the Madison County Planning Board, Madison County Commission, Gallatin Canyon/Big Sky Zoning Advisory Committee, Gallatin County Planning and Zoning Commission and the Gallatin County Commission.

Existing Conditions

A thorough evaluation of existing conditions relative to traffic operations and safety was conducted to establish a baseline for this study. It included a review of available historic traffic data from MDT, collection of new peak hour turning movement counts at major intersections, and review and analysis of crash data provided by MDT for the past 10 years.

Capacity calculations conducted for existing volumes showed that all of the study area intersections currently operate at LOS C or better during both peak hours. In fact, only one of the individual intersection approaches currently operates below LOS C. Auxiliary right and left-turn lane warrants were evaluated for existing conditions and it was determined that turn lanes are currently warranted at six of the study area intersections. It should be noted that these warrant calculations were completed for the existing speed limits. If a recent speed study conducted by MDT results in any changes in speed limit, then some of the turn lane warrants may need to be reconsidered.

A crash history analysis was conducted for the 10-mile Highway 64 corridor for the ten-year period from 2006 to 2016. During this timeframe, 182 crashes were reported including 3 fatal crashes, 30 injury crashes, and 149 property-damage-only crashes. This report includes some interesting statistics related to the crash data, but there were no crash trends identified that would be eligible for safety funds through MDT.

Future Conditions

The first step in projecting future traffic volumes was to evaluate the remaining development potential along Highway 64 within the Big Sky area. Overall, it is anticipated that full buildout of area developments could result in 3,200 additional residential units. This would essentially double the number of residential units that exist in the Big Sky area today. These area developments are projected to generate approximately 1100 new trips in the AM peak hour and 1600 new trips in the PM peak hour. The resulting 20-year average annual daily traffic (AADT) volume on Highway 64 is estimated at 18,000 vehicles per day. This is a significant increase over today's AADT volume of 7,700 vehicles per day.

Capacity calculations were performed for future conditions and the results show a clear degradation in level of service as traffic volumes increase if no improvements are made. Auxiliary right and left-turn lane warrants were once again evaluated,

this time using 10-year and 20-year volume projections, and it was determined that turn lanes should be considered at nearly all of the study intersection under the future traffic volume scenarios. Traffic signal warrants were also evaluated at each of the study intersections and it was determined that signal warrants could be met at three of the study intersections under future traffic conditions. Per MDT's standard policy, roundabouts should also be considered wherever traffic signal warrants are met.

Recommended Improvements

This study outlines a series of projects that will address the transportation needs in the Big Sky area through the 20-year planning horizon. These recommendations have been organized into the following key project elements: Turn Lanes, Intersection Control, Bike & Pedestrian Facilities, Transit Facilities and Other Improvements. The combination of all of these improvements are summarized in Table ES-1 on the following page.

As shown in Table ES-1, these projects have been broken down into short-term projects (0-5 years), mid-term projects (5-10 years), and long-term projects (10-20 years) as a way of providing a relative prioritization for implementation. In general, all design elements should be implemented with the ultimate goal of constructing a cohesive corridor that operates safely and efficiently for all modes of travel. The improvements should be designed to MDT, AASHTO, MUTCD, and other standards as appropriate.

Next Steps

This report provides a summary of potential funding sources for transportation improvements in the Big Sky area. They are listed in order of federal, statewide and local funding resources. Highway 64 is not currently considered eligible for many of the federal funding sources because it's designated as an off-system route by MDT, but these sources have still been included in this summary for background information. Potential funding sources for each of the recommended improvements have been identified in Table ES-1.

All future improvements located within MDT right-of-way (Highway 64 and Highway 191) will require coordination with MDT's Systems Impact Analysis Section. They will review the desired improvements relative to MDT's current policies. The Systems Impact Analysis process includes coordination with the Montana Transportation Commission for approval of all improvements within state right-of-way.

Although there are a variety of funding sources available for transportation improvements, the Big Sky community continues to be challenged by the fact that they are split between Gallatin County and Madison County. This is further complicated by the fact that MDT has designated Highway 64 as an off-system route and they subsequently have no dedicated source of funding available for improvements to the highway. Because of this unique situation, successful project implementation will likely require creative public-private partnerships using a combination of funding sources.

It is recommended that additional, on-going discussions take place between local stakeholders, Gallatin County, Madison County and MDT to identify the most appropriate funding sources for individual projects and to secure the funding needed to move these projects forward.

Table ES-1. Summary of Recommended Improvements

Improvement	Timeframe	Opinion of Probable Cost	Potential Funding Sources
Turn Lanes			
Install left-turn lanes at Big Sky Resort Rd and Sitting Bull Rd	Short-Term (0-5 years)	\$800,000 per left-turn lane	STPX, County Funds, RID, Resort Tax, Private Funds
Install left-turn lanes west Conoco Access/Chamber Access (requires relocation of access)	Mid-Term (5-10 years)	\$800,000 per left-turn lane	STPX, County Funds, RID, Resort Tax, Private Funds
Install auxiliary left-turn lanes at Powder Light Subdivision (Ace Hardware)	Mid-Term (5-10 years)	\$800,000 per left-turn lane	STPX, County Funds, RID, Resort Tax, Private Funds
Install auxiliary left-turn lanes or two-way left-turn lane from Little Coyote (East) to Big Pine Drive	Mid-Term (5-10 years)	\$800,000 per left-turn lane	STPX, County Funds, RID, Resort Tax, Private Funds
Install auxiliary left-turn lanes at Andesite Rd and Little Coyote Rd (West)	Mid-Term (5-10 years)	\$800,000 per left-turn lane	STPX, County Funds, RID, Resort Tax, Private Funds
Intersection Control			
Install NB lead left-turn phasing, lane designation signs, and SB shoulder hatching at Highway 191	Short-Term (0-5 years)	\$10,000	STPX, County Funds, RID, Resort Tax, Private Funds
Install traffic signal or roundabout at Little Coyote Rd (East)	Mid-Term (5-10 years)	\$500,000 (Signal) \$1.5 Million (Rndbt)	STPX, County Funds, RID, Resort Tax, Private Funds
Install traffic signal or roundabout at Huntley Drive	Mid-Term (5-10 years)	\$500,000 (Signal) \$1.5 Million (Rndbt)	STPX, County Funds, RID, Resort Tax, Private Funds
Install traffic signal or roundabout at Big Pine Drive	Long-Term (10-20 years)	\$500,000 (Signal) \$1.5 Million (Rndbt)	STPX, County Funds, RID, Resort Tax, Private Funds
Install NB right-turn slip lane at Big Sky Resort Road	Long-Term (10-20 years)	\$200,000	STPX, County Funds, RID, Resort Tax, Private Funds
Install additional thru lanes in each direction (five-lane cross section) from Little Coyote (East) to Big Pine Drive	Long-Term (10-20 years)	\$2.5 million	STPX, County Funds, RID, Resort Tax, Private Funds
Bike & Pedestrian Facilities			
Extend existing paved trail south side of Hwy 64 to Andesite Road (1/3 mile)	Short-Term (0-5 years)	\$200,000	TA, RTP, FLAP, Resort Tax
Grade-separated crossing at Little Coyote (East)	Short-Term (0-5 years)	\$1.0 million	TA, RTP, FLAP, Resort Tax
New paved trail north side of Hwy 64 - Powder Light Subdivision to Lone Mountain Ranch (3 miles)	Mid-Term (5-10 years)	\$1.5 million	TA, RTP, FLAP, Resort Tax
Grade-separated crossing east end of Powder Light Subdivision	Mid-Term (5-10 years)	\$1.0 million	TA, RTP, FLAP, Resort Tax
Enhance existing grade-separated crossing at Lone Mountain Ranch for public use	Long-Term (10-20 years)	\$500,000	TA, RTP, FLAP, Resort Tax
Transit Facilities			
Expand existing transit service to meet future demand	Short-Term (0-5 years)	\$3.5 million/year	PTP, Resort Tax, County Funds
Other Improvements			
Eliminate on-street parking on Highway 64	Short-Term (0-5 years)	\$400,000	STPX, RID, Resort Tax, Private
Upgrade existing wildlife warning signage and add pull-outs	Short-Term (0-5 years)	\$1,000 per sign \$50,000 per pull-out	STPX, HSIP, County Funds
Upgrade existing curve warning signage	Short-Term (0-5 years)	\$1,000 per sign	STPX, HSIP, County Funds
Upgrade existing bridges	Short-Term (0-5 years)	\$1 million to \$5 million	STPB, NHPB
Relocate Conoco/Chamber access to west side of property	Mid-Term (5-10 years)	\$200,000	Resort Tax, Private
Ousel Falls traffic calming/crosswalk enhancements	Mid-Term (5-10 years)	\$1,000 per sign or \$100,000 per intersection	RID, TA, Resort Tax