1.0 INTRODUCTION

1.1 Project Description

The Indiana Department of Transportation (INDOT), in cooperation with the Federal Highway Administration (FHWA), is preparing an Environmental Impact Statement (EIS) to evaluate the US 31 Improvement from Plymouth to South Bend in Marshall and St. Joseph counties, Indiana. As shown in Figure 1.1.1, the US 31 improvement corridor is about 20 miles long, running from the southern terminus at US 30 near Plymouth to the northern terminus at US 20 near South Bend.

Existing US 31 provides four through lanes in the corridor. There are approximately 480 private driveways, 20 cross road intersections, and 50 "T" road intersections along US 31 from US 30 to US 20. However, the character of the facility varies significantly along the 20-mile corridor with respect to the level of access control (frequency of drives or public road intersections), median width/type and shoulder treatment. The five-mile segment from US 30 to Michigan Road (Old US 31) is a four-lane facility with a wide median (50 feet) and access limited to county public crossroads (i.e., partial access control). The remaining 15-mile segment from Michigan Road to US 20 has no median or a narrow median ranging from four feet to sixteen feet wide (sufficient only for a left-turn lane), and access is only controlled to adjacent property through driveway permits (i.e., no access control). Four traffic signals exist on this stretch of US 31 at US 6, SR 4, Kern Road and Johnson Road. On-street parking is permitted along US 31 through Lakeville. Through the towns of LaPaz and Lakeville and the south side of South Bend, the land uses along existing US 31 include churches, cemeteries, historic structures, businesses, and homes.

In 1991, the Indiana General Assembly passed legislation establishing US 31 as a "Commerce Corridor" (consisting of Interstates and four-lane divided Rural Principal Arterials with full or partial access control). US 31 is also designated as a "Statewide Mobility Corridor" (consisting of Interstates, and select arterial highways in INDOT's 2000-2025 Long Range Plan. Existing US 31 is also functionally classified as a Rural Principal Arterial on the National Highway System (NHS). (The NHS consists of about 155,000 miles of interstate and principal arterial highways nationwide designated by the US Congress as having national significance.) US 31 is also on INDOT's 4R road network and the National Truck Network. Serving as the northern and southern termini of the US 31 Corridor, US 20 and US 30 are also designated "Commerce Corridors" and "Statewide Mobility Corridors". They are four-lane divided Principal Arterials, and exhibit full access control at existing US 31.

This Preliminary Alternatives Analysis and Screening Report is being distributed to provide opportunity for citizens, public officials, and state and federal agencies to comment on the alternatives being examined by INDOT to improve the US 31 corridor. Following this process, the FHWA and INDOT will prepare a Draft Environmental Impact Statement (DEIS) for the US 31 Improvement Project.

The INDOT 2000-2025 Long Range Plan and the Michigan Area Council of Governments (MACOG, South Bend Area Metropolitan Planning Organization, MPO) Transportation Plan identify the need to improve existing US 31. The Notice of Intent to prepare an EIS for the US 31 Improvement Project was issued on March 26, 2002. An Early Coordination Letter was also sent to resource agencies on August 6, 2002. Agency responses are included in Appendix A.

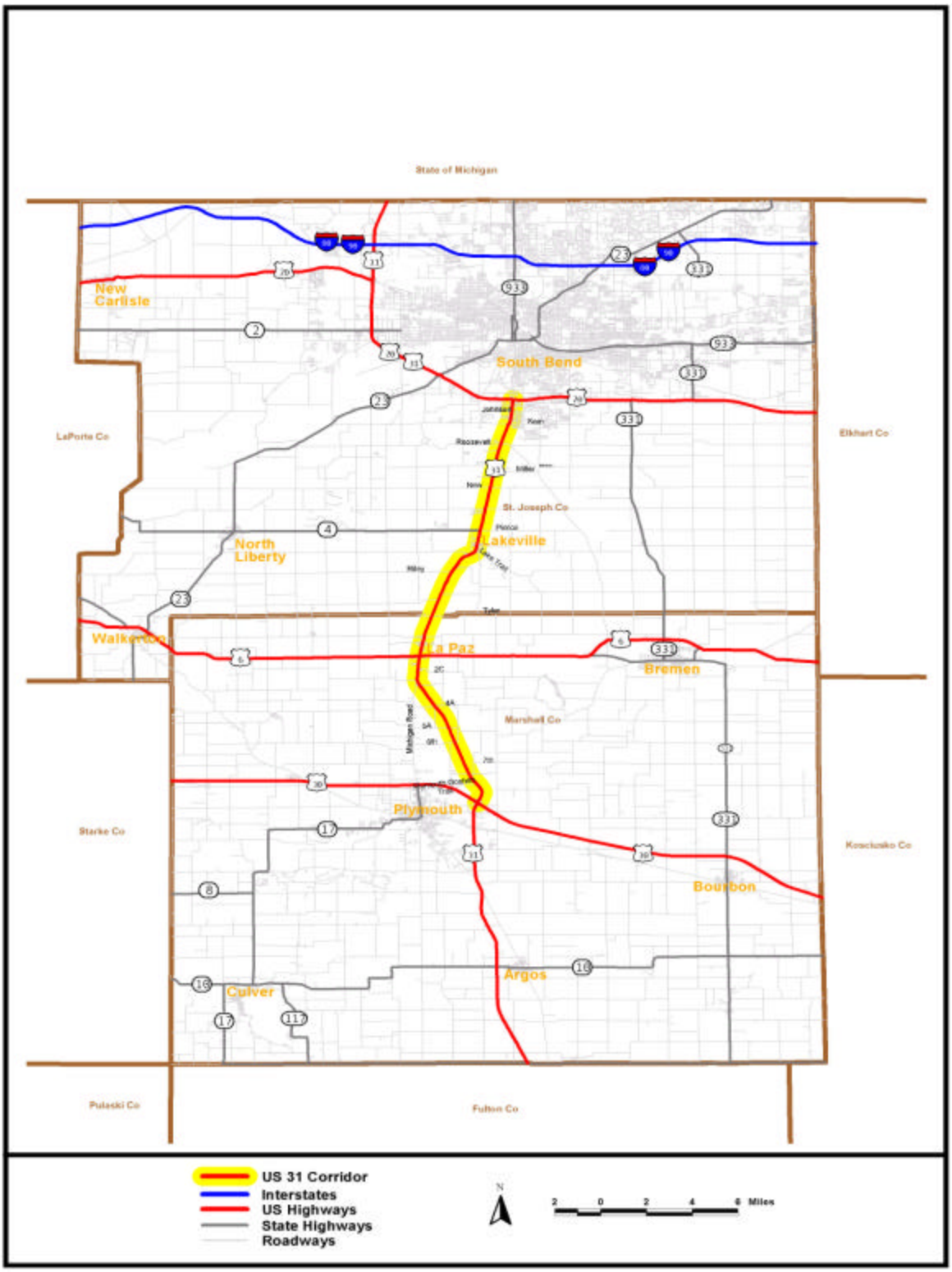

Figure 1.1.1: US 31 Regional Map

1.2 Summary of Purpose and Need

1.2.1 Project Need Statement

Transportation improvements to US 31 between US 30 near Plymouth and US 20 near South Bend are needed for the following three reasons:

1) Traffic Congestion -- The majority of the US 31 Corridor is presently experiencing high levels of congestion with unacceptable operating conditions (based on INDOT's roadway design standards on level-of-service). As growth of the South Bend metropolitan area and Indiana fuels increasing traffic volumes, traffic flow conditions will further deteriorate to an unacceptable level from the Michigan Road intersection (north of Plymouth) to the US 20 Bypass.

Traffic operating conditions are typically described through a level-of-service (LOS) rating of six levels from "A" through "F". The LOS rating scale is a qualitative method for describing traffic conditions. The scale ranges from LOS "A", which corresponds to free-flowing traffic and minimal delays at intersections, to LOS "F", which corresponds to a complete breakdown in traffic flow. Based on INDOT reconstruction (4R) standards outlined in the Indiana Design Manual, a LOS "C" is the minimum acceptable LOS for rural and suburban areas, and LOS "B" is desirable. In intermediate and built-up areas, a LOS "D" is the minimum acceptable LOS, and LOS "C" is desirable. Except for a short segment south of US 20, the US 31 corridor is considered rural where a level of service falling below "C" is unacceptable. Table 1.2.1 shows the present (2000) and future (2030) LOS of the US 31 segments. Figure 1.2.1 shows segments and intersections failing to meet INDOT minimum design standards for level-of-service for the years 2000 and 2030. The methods for calculating LOS are given in the Transportation Research Board's (TRB) *Highway Capacity Manual (HCM),* recently revised in year 2000.

Table 1.2.1: Present and Future Levels-Of-Service of US 31 Segments

Termini	Area Type	2000 Base Year				2030 Horizon Year			
		AADT*	Daily Vehicle Capacity	v/c Ratio	LOS	AADT	Daily Vehicle Capacity	V/C Ratio	LOS
US 20 – Roosevelt Rd.	Urban	31,526	27,700	1.14	F	46,000	27,700	1.66	F
Roosevelt Rd. – Miller Rd.	Urban	26,419	27,700	0.95	E	37,500	27,700	1.35	F
Miller Rd. – SR 4	Rural	24,240	27,700	0.89	E	34,400	27,700	1.24	F
SR 4 – Lake Trail	Rural	27,217	22,300	1.22	F	40,300	22,300	1.81	F
Lake Trail – Tyler Rd.	Rural	21,400	39,800	0.54	C	29,300	39,800	0.74	D
Tyler Rd. – US 6	Rural	19,845	22,300	0.89	E	28,200	22,300	1.26	F
US 6 – Michigan Rd.	Rural	24,232	39,800	0.61	C	35,200	39,800	0.88	E
Michigan Rd. – US 30	Rural	16,989	39,800	0.43	B	23,500	39,800	0.59	C

US 31 and its major intersections were analyzed in accordance with the *Highway Capacity Manual* to determine their LOS. Between Plymouth and South Bend, US 31 was analyzed in eight segments, and a LOS was determined for each segment. For intersections, traffic counts were taken, and a LOS was calculated for all four signalized intersections and six notable two-way stop-controlled intersections (stop control for the crossroad approaches). The LOS in both the base and future year for the segments of US 31 and its major intersections are displayed in Figure 1.2.1 and Table 1.2.1.

Present LOS conditions are unacceptable for:

- For the year 2000, 3 out of 4 signalized intersections operate at a level of service (LOS) E or F during the AM and/or PM peak hours.
- For the year 2000, 3 out of 6 major unsignalized intersections operate at a level of service (LOS) D, E, or F during the AM and/or PM peak hours.
- For the year 2000, 5 out of 8 US 31 segments operate at an unacceptable level of service (LOS). US 31, from US 6 through La Paz to Tyler Road, operates at a level of service (LOS) E. US 31, from Lake Trail south of Lakeville to US 20, operates at a LOS E or F.

Future (year 2030) LOS conditions are unacceptable for:

- For the year 2030, 4 out of 4 signalized intersections operate at a level of service (LOS) D, E, or F during the AM and/or PM peak hours.
- For the year 2030, 5 out of 6 major unsignalized intersections operate at a level of service (LOS) D, E, or F during the AM and/or PM peak hours.
- For the year 2030, most US 31 segments operate at an unacceptable level of service (LOS). US 31, from Michigan Road south of La Paz to US 20, operates at LOS D, E, or F.

2) Safety -- Present and future crash rates on segments of US 31 were compared to the average statewide crash rates for rural principle arterials (the federal functional classification for US 31). Crash rates are equal to personal injury accidents plus property damage only accidents per 100 million annual vehicle-miles of travel. The statewide average crash rate for Rural Principal Arterials is 186.57 accidents per 100 million annual vehicle miles of travel. Present and future total crash rates on US 31 exceed the statewide average from US 6 through La Paz, through Lakeville and from Lakeville to US 20. Figure 1.2.2 shows the areas of US 31 where crash rates exceed the statewide rates for the years 2000 and 2030.

3) Consistency with Transportation Plans -- US 31 is designated a "Commerce Corridor" and a "Statewide Mobility Corridor" in the INDOT 2000-2025 Long Range Plan. The Indiana General Assembly in 1991 passed legislation directing INDOT to establish "Commerce Corridors." A "Commerce Corridor" connects major population concentrations to the National Highway Network, and provides good connectivity to major manufacturing and trade service concentrations. It also improves access to tourism and recreation areas, economic concentrations, and those areas with demonstrated and anticipated potential growth. The "Commerce Corridor" designation is more restrictive than the "Statewide Mobility Corridor" designation. This designation consists of the interstates plus select arterials with full or partial access control that are identified as having significant importance to statewide and national transportation. When compared to other "Commerce Corridors," US 31 lacks good connectivity without even partial access control, and provides poor accessibility due to congestion.

A "Statewide Mobility Corridor" is the highest tier of INDOT's three-tiered planning-level corridors. Such corridors have upper level design standards, high-speeds, minimal travel delay, free-flowing conditions, and no less than partial access control. Attainment of these minimum characteristics for US 31 requires reduced congestion, increased speeds, reduced travel times, and establishment of at least partial access control.

The Michigan Area Council of Governments (MACOG, South Bend Area Metropolitan Planning Organization, MPO) Transportation Plan identified the need to improve existing US 31.

Each Alternative was evaluated to determine consistency with the INDOT 2000-2025 Long Range Plan for Statewide Mobility Corridors and consistency with the MACOG Transportation Plan. Alternatives will not be required to meet this criteria to satisfy the project's meeting purpose and need.

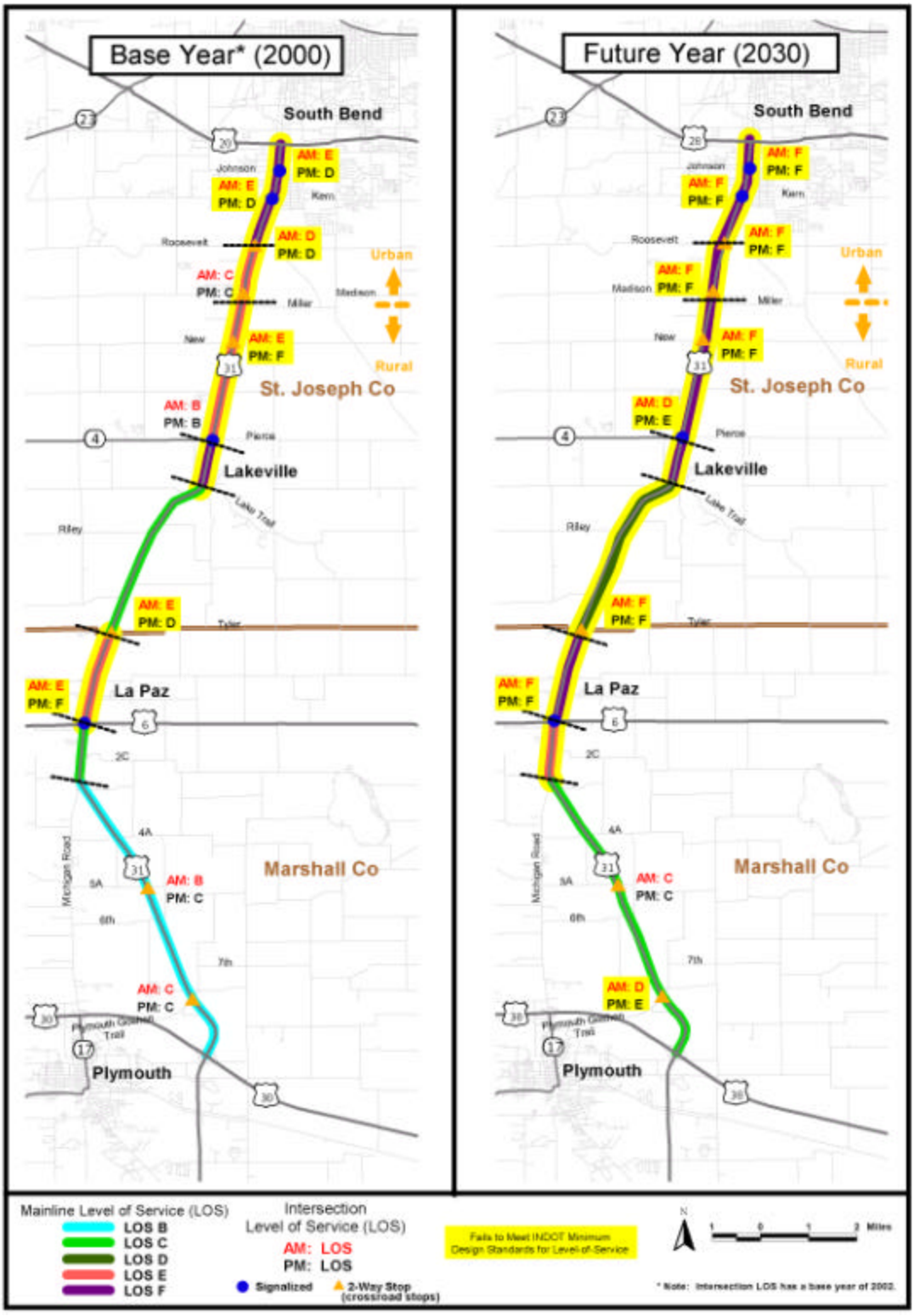

Figure 1.2.1: US 31 Segments and Intersections Failing to Meet INDOT Minimum Design Standards for Level-of-Service (LOS) assuming no improvements to US 31

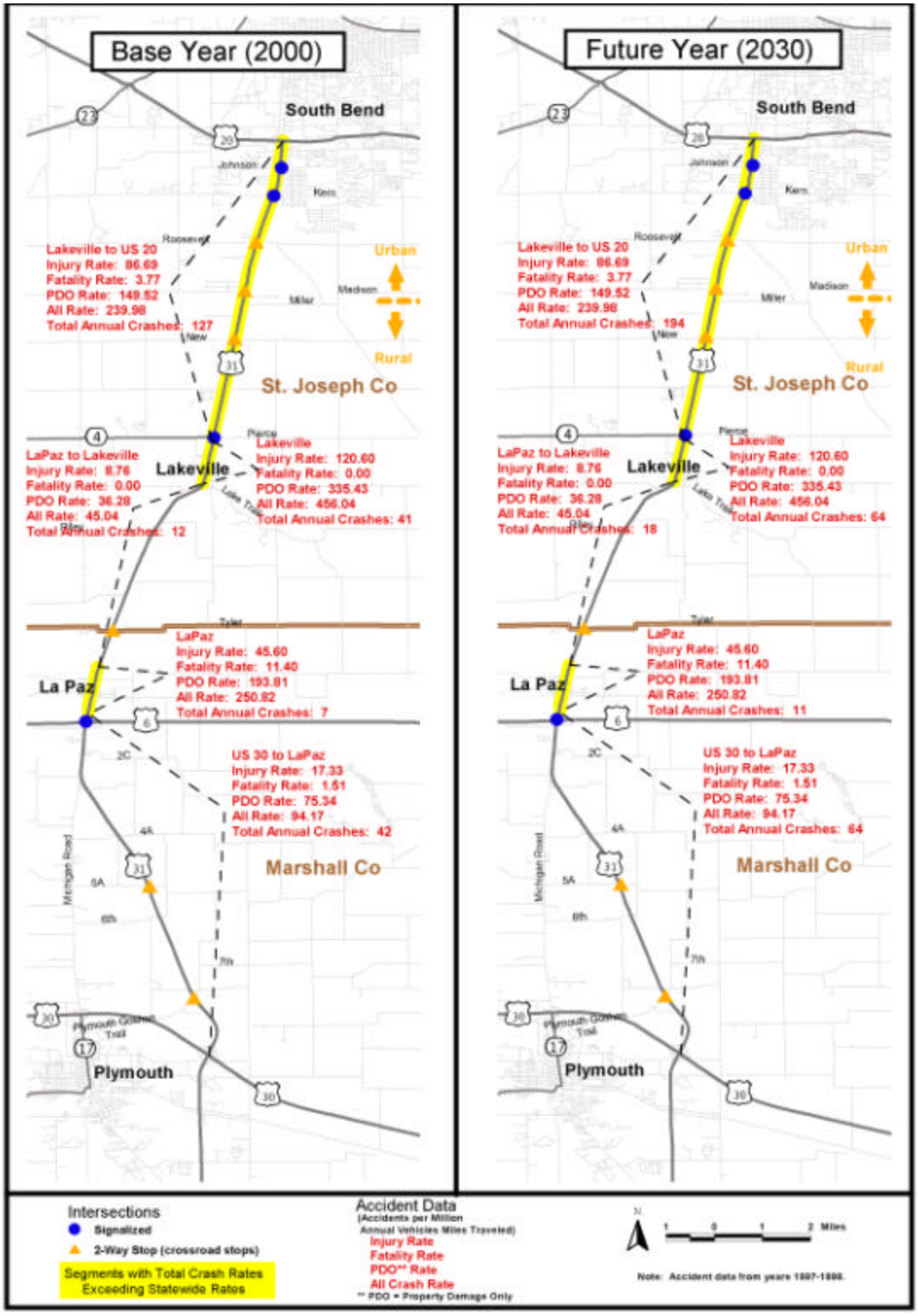

Figure 1.2.2: US 31 Segments with Crash Rates Exceeding Statewide Rates assuming no improvements to US 31

1.2.2 Project Purpose Statement

Based on the identified transportation needs, three overall project purposes (goals) have been established for the US 31 Improvement Project:

- **Purpose 1 (Congestion):** Reduce congestion on US 31 by providing the capacity to meet the forecasted travel demand for 2030 at an acceptable level-of-service (LOS).
- **Purpose 2 (Safety):** Improve safety on US 31 between US 30 and US 20.
- **Purpose 3 (Consistency with Transportation Plans):** Determine consistency with statewide (INDOT) and regional (MACOG) transportation plans. Project Alternatives will not be required to meet this criteria in order to satisfy the project's meeting purpose and need.

1.3 Public Meetings and Interagency Review Meeting/Tour

The first Public Information meeting on the US 31 Improvement Project was held at the LaVille Jr.-Sr. High School on March 21, 2002. An overview of the US 31 Corridor Study process was presented, and the public was asked to provide oral and written comments on issues and concerns associated with the improvement of US 31. Earlier that day, the same presentation was made to the Community Advisory Committee (CAC) consisting of representatives of elected officials and stakeholders in the Study Area.

A second Public Information meeting was held at the Laville Jr.-Sr. High School on April 10, 2003, preceded by another CAC meeting. The draft *Purpose and Need Statement and Preliminary Alternatives* was presented, and comment was requested on the project needs and purposes as well as the preliminary US 31 improvement alternatives.

On May 15, 2003, an Interagency Review meeting was held to review the draft *Purpose and Need Statement and Preliminary Alternatives*. A field trip was conducted for all agency representatives to see the general corridors of the preliminary alternatives. In addition to supplemental information on environmental issues and concerns, this Interagency Review meeting generated two additional preliminary alternatives, Alternatives J and K.

On June 6, 2003, the first consulting party meeting was held at the Old Lakeville School in order to obtain input from consulting parties. The meeting was held with the intention of aiding in the implementation of Section 106 of the National Historic Preservation Act. At this meeting, the Area of Potential Effect (APE) for the preliminary alternatives was presented. The consulting parties were asked to help identify historic resources and districts that may be eligible for the National Register.