MID-STATES CORRIDOR

SCREENING OF ALTERNATIVES REPORT

PRELIMINARY ALTERNATIVES APPENDIX

Mid-States Corridor
Tier 1 Environmental Impact Study

Prepared for
Indiana Department of Transportation
Mid-States Regional Development Authority

FEBRUARY 2020

Prepared by
Mid-States Corridor Project Consultant

INDIANA DEPARTMENT OF TRANSPORTATION INDOT

LOCHMUELLER GROUP
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1. INTRODUCTION

The Mid-States Corridor project is to provide an improved transportation link between US 231/SR 66 and I-69. Preliminary alternatives were identified by considering potential routes in three Sections, described below. The purpose of this report is to describe input on potential preliminary routes from previous studies, public input and agency input. It describes the qualitative analysis which resulted in identifying 28 preliminary alternatives. These preliminary alternatives will undergo a quantitative analysis of their costs, impacts and benefits. These analyses will result in identification of alternatives carried forward for detailed study.

Potential preliminary routes were considered in three sections. Section 1 extends from US 231/SR 66 to US 231/I-64, along US 231 in Spencer County. Section 2 extends from US 231/I-64 through Dubois County (Jasper and Huntingburg) to Dubois County Road 600N south of Haysville. Section 3 extends from the end of Section 2 to connections with I-69 to the northwest and north, or to SR 37 to the northeast. SR 37 provides a connection to I-69 for northeast alternatives.

Section 3 routes are divided into three families (Northwest, North Central and Northeast). Potential preliminary alternatives were specified as combinations of routes in Section 1, Section 2, and Section 3. This provides a series of end-to-end alternatives from SR 66 to I-69.

The preliminary routes in this document may be thought of as lines connecting points on a map. There was no consideration of potential facility type in this review of potential preliminary alternatives. Once route segments are combined to form preliminary alternatives, a range of facility types will be analyzed for each preliminary alternative.[1] Each facility type will be represented by a center line with a buffer. The width of that buffer will correspond to the potential footprint of that facility.

1.1 Section 1 – SR 66 to I-64

Section 1 primarily serves Spencer County and is the southern terminus of the Mid-States Corridor. US 231 through Spencer County has been upgraded to a 4-lane expressway, with the last section opening in March 2011. All identified preliminary alternatives use this route between SR 66 and I-64. Upgrades to US 231 will be considered as part of some preliminary alternatives.

1.2 Section 2 – From I-64 through Dubois County

Section 2 primarily serves Huntingburg, Jasper and greater Dubois County. The southern terminus of Section 2 is the existing US 231 / I-64 interchange. Multiple routes through Section 2 were suggested. Their exact route is partially dependent on the final end to end alternatives specified. These routes include bypasses around Huntingburg and Jasper as well as upgrading existing US 231 through the entirety of Section 2.

[1] One recommended preliminary alternative (Alternative R) will be analyzed with only one facility type. See **Section 4.2** and **Section 6.5** for further discussion.

1.3 Section 3 – Connections to I-69

Section 3 routes are grouped into three "families" (geographic regions). These extend from the Section 2 to I-69. The northern ends of Section 3 routes are the northern termini of Mid-States Corridor alternatives.

1.3.1 Northwest Family

Routes in the "Northwest" Family begin west or north of Jasper and continue northwest to I-69 through Pike and Daviess counties. Petersburg and Washington are directly served by routes in the Northwest Family.

1.3.2 North Central Family

Routes in the "North Central" Family generally begin at CR 600N in Dubois County and continue north to I-69 through Martin and Daviess counties. Loogootee and Naval Support Activity (NSA) Crane are directly served by routes in the North Central Family.

1.3.3 Northeast Family

Routes in the "Northeast" Family generally begin east or north of Jasper and continue northeast to SR 37 through Orange and/or Lawrence Counties. Mitchell, Bedford, French Lick and West Baden are directly served by routes in the Northeast Family. All routes in the Northeast Family use SR37 to reach I-69. Potential upgrades to SR 37 may be considered as part of preliminary alternatives.

2. IDENTIFYING POTENTIAL PRELIMINARY ALTERNATIVES

An important first step of the environmental scoping process is to identify potential alternatives. Potential preliminary alternatives were identified from previous studies, input from the public and project stakeholders, as well as from feedback from Participating Agencies.

A route designation structure assigns a unique identifier to each potential route. There is one route in Section 1, corresponding to existing US 231. It is designated S1-1.

Routes in Section 2 and 3 have a two-part route name. The names include:

- **Part 1.** An initial two character designation (S2 or S3) giving the section for the suggested route.
- **Part 2 (Section 2).** A single letter (W, C or E) and a number (1 or 2) indicating its orientation (west, central, or east) within Section 2.
    - W1 or E1 indicate a western or eastern bypass of both Jasper and Huntingburg.
    - C1 indicates an upgrade of existing US 231 through Jasper and Huntingburg. C2 indicates a bypass route west of Huntingburg and east of Jasper.
- **Part 2 (Section 3).** A two or three character designation indicating its family (west, central or east) and a unique ID within that family.

- Within the Northwest Family (W) or Northeast Family (E), a combination of the letter and a number indicating a specific alternative within that family.
- Within the Central Family (C), a combination of the letter C and a number or number and letter. The letter C indicates the Central Family. C1 indicates that the alternative is an upgrade of existing US 231 for the length of Section 3, including a route through the City of Loogootee. C2E and C2W indicates that route uses the existing US 231 corridor (but not the existing US 231 alignment), including an eastern (E) or western (W) bypass of Loogootee.

Potential preliminary routes could be considered as any of three potential facility types. All assume a 70 mph design speed. These facility types are:

- **Freeway.** This is a fully access-controlled facility, with at least two travel lanes in each direction. All access is provided via interchanges.
- **Expressway.** This is a partially accessed-controlled facility, with at least two travel lanes in each direction. Access is provided via a combination of interchanges and at-grade access.
- **Super-2.** This is a two-lane facility (with one lane in each direction) built to higher design standards. It potentially could serve as one direction of a future freeway or expressway.

2.1 Input from Previous Studies

Multiple studies during the last decade and a half have addressed the need for a major north-south transportation project in southern Indiana. Some of these projects considered major transportation enhancements in the US 231 corridor. Five (5) of these studies identified routes which were considered in the development of potential preliminary alternatives. These studies may be viewed on the project web site at https://midstatescorridor.com/project-documents/

Draft Environmental Impact Statement, US Highway 231, Dubois County Indiana (March 2004) and Supplemental Draft Environmental Impact Statement (January 2011)

A DEIS was approved in March 2004 to provide a US 231 bypass either to the west or east of Jasper and Huntingburg. The DEIS documented a planning history for such a project extending back to 1993.

I-67 Corridor Feasibility Study (October 2012)

This study analyzed a facility which would follow the Natcher Parkway (since designated as I-165) from Bowling Green to Owensboro, Kentucky; US 231 from Owensboro to I-64; bypass Huntingburg and Jasper to the east; and connect to I-69 at Washington.

Blue Ribbon Panel on Transportation Infrastructure Report (July 2014)

The study recommended the "Midstate Corridor" to Indiana Governor Michael Pence as one of a set of short-term, priority projects. The project consists of a new four-lane connector between the Ohio River near Rockport and I-69. For analytical purposes, a connection to I-69 at Petersburg was assumed.

Conexus Indiana Southwest Regional Logistics Council – A Plan for Growing Southwest Indiana's Logistic Sector (June 2015)

The study defined two possible alternatives for the Mid-States Corridor. One alternative is an upgrade of US 231 from I-69 at NSA Crane to I-64 at Dale. It would include an eastern bypass of Loogootee, Jasper and Huntingburg. The other alternative is a new highway between the Ohio River at Rockport and I-69 at Washington. Both alternatives are fully access-controlled freeways.

Midstate Corridor White Paper (August 2017)

The report recommended that a Tiered EIS be used to advance the project based upon the potential range of alternatives, the overall complexity of studying both a range of alternatives and facility types, and the flexibility of a tiered study structure to accommodate multi-year federal and state funding. It provided a map of potential routes which included some of those identified in earlier studies.

2.2 Public Input

The Mid-States Corridor Tier 1 EIS was initiated with a Notice of Intent published in the July 5, 2019 *Federal Register*. Between July and September of 2019, the project team conducted a wide range of public involvement activities. One key purpose of these activities was to seek input to ensure that all interested parties could suggest potential alternatives. Public input mechanisms included:

- Regional Issues Involvement Teams
- Public Input Meetings
- Project Office
- Project Website

Input on routes was received through the Regional Issues Involvement Teams and Public Input Meetings, described below. In describing some suggested routes, references are provided to route designations which are presented in **Section 5**. Several routes suggested in this section were not given further consideration for reasons described below. **Figure 2-2** portrays these suggested routes which were not considered.

The project website was available for input on suggested routes. There was no website input suggesting additional routes. Likewise, no potential routes were suggested via the project office.

2.2.1 Regional Issues Involvement Teams (RIIT)

In accordance with the Public Involvement Plan, four (4) RIITs were developed to represent the geographic regions within the project area. Each RIIT is composed of members representing various public interests. Membership of the four RIITs is drawn from a cross-section of affected groups, agencies, and organizations. The total size of each RIIT is limited to 30 - 35 people to ensure opportunities for interaction among RIIT members. RIIT members share their knowledge of local resources and issues with members of the project team, and with other local agencies, community organizations, and stakeholders.

RIITs were designated as “southcentral” (SC), “northeast” (NE), “northcentral” (NC) and “northwest” (NW). Each RIIT met once on either July 9 or July 10, 2019. Each RIIT discussed potential preliminary alternatives and needs within the project area. At the RIIT team meetings, a map of potential preliminary alternatives was used as a starting point to solicit suggestions for additional alternatives. **Figure 2-1** shows the map presented at the RIIT meetings.

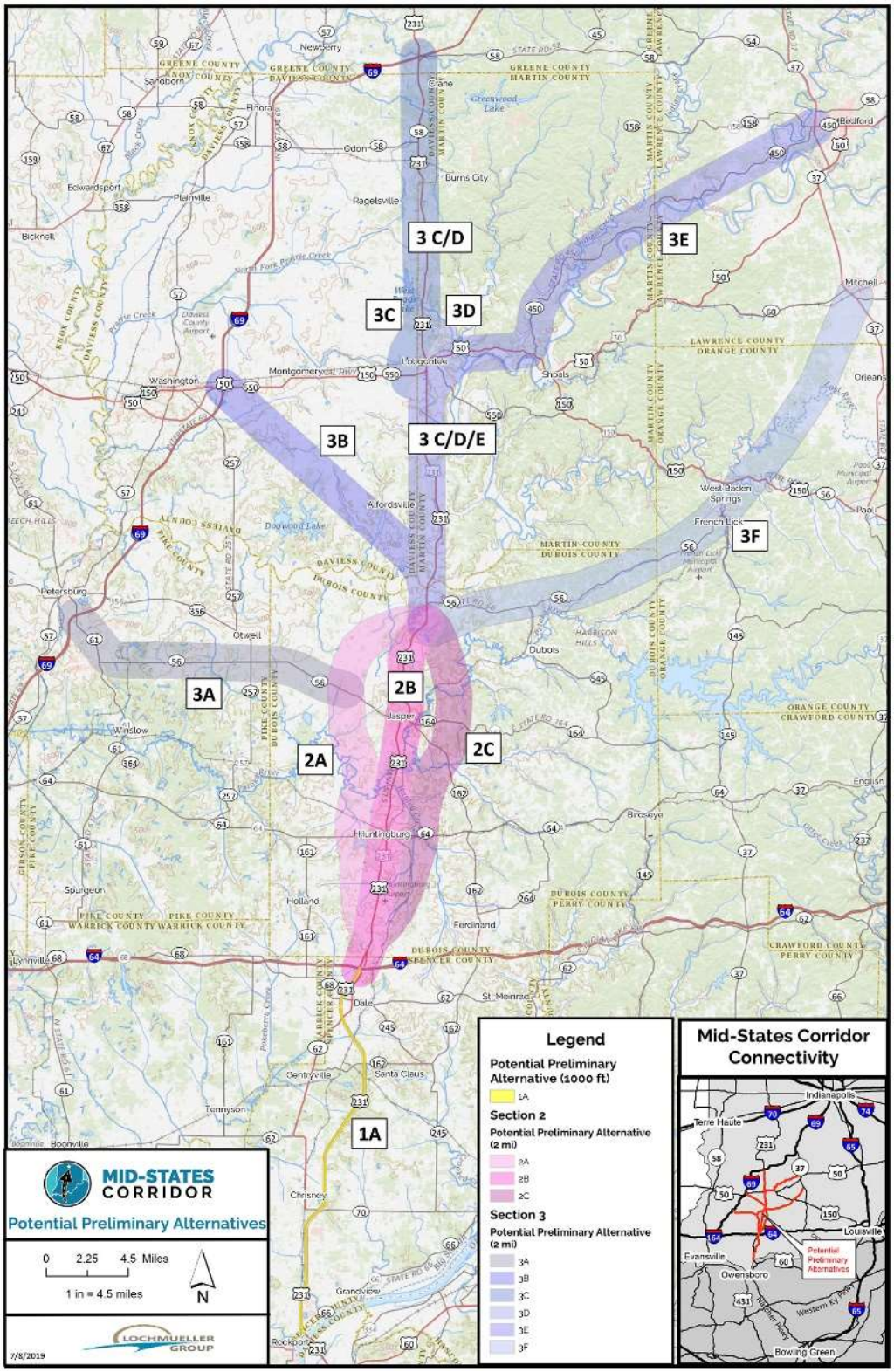

Figure 2-1 – Potential Preliminary Alternatives Presented to Regional Issues Involvement Teams

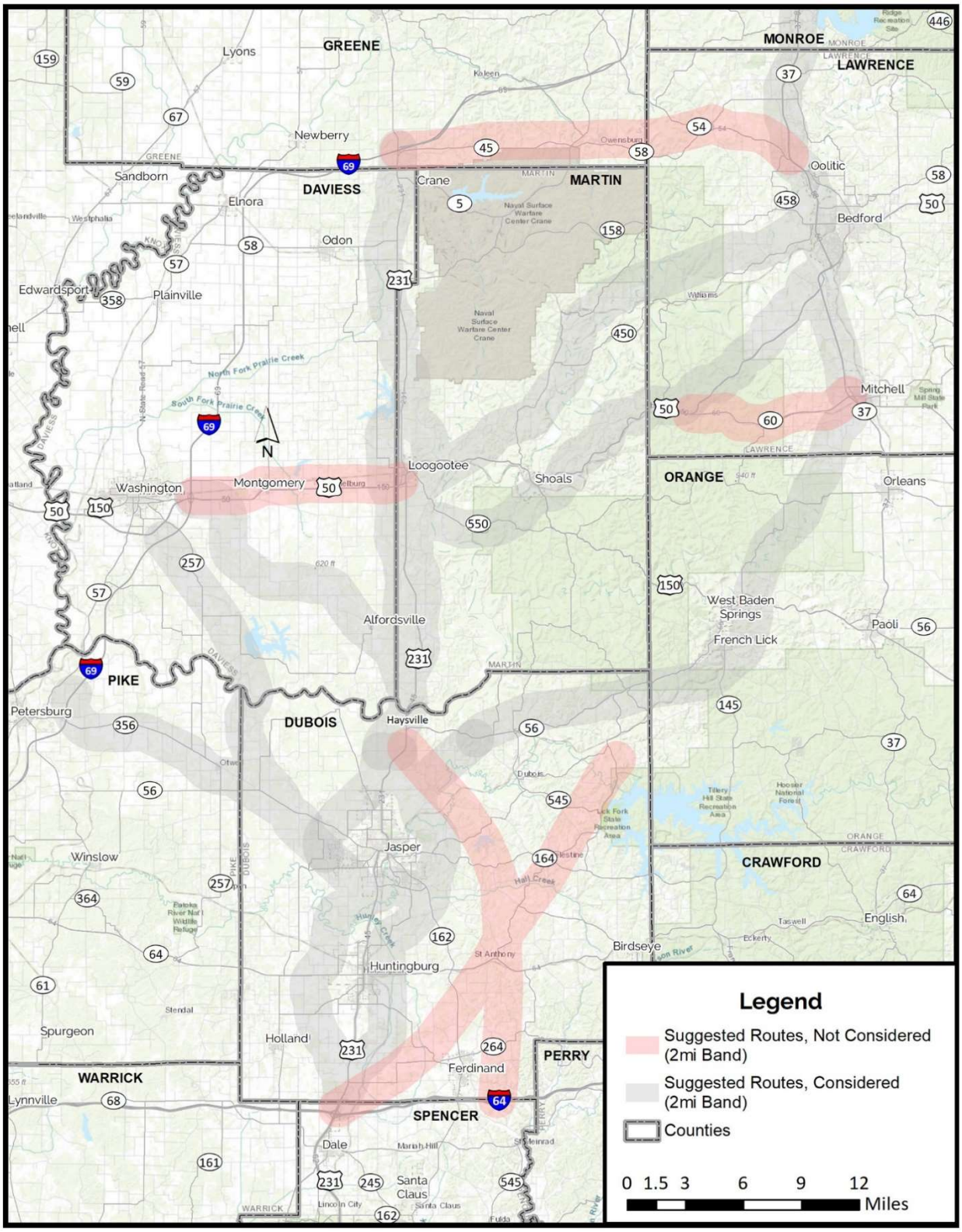

Figure 2-2 – Suggested Routes – Highlighting Those Not Considered

As part of the RIIT meetings, the following alternatives were suggested.

- SR 257 Corridor – The NW RIIT identified a corridor that connects to I-69 via SR 257. This route, as described in **Section 5.1.2.2** as Route S3-W3, was added for consideration.
- North Pike Interchange – The NW RIIT identified a corridor that uses right-of-way previously purchased for an I-69 North Pike interchange (not yet built) as a connection point to I-69. This route is described in **Section 5.1.2.1** as Route S3-W2, was added for consideration.
- US 50 Corridor – Multiple RIIT meetings brought up the potential of upgrading US 50, generally between Washington and Loogootee. Such a route may be a worthwhile stand-alone project, but would not satisfy key elements of the Purpose and Need (Goals 1 and 7, which provide for increased access to and from Jasper). It was not given further consideration.
- Hoosier National Forest / Patoka Reservoir Access – The NE RIIT identified a corridor south of French Lick that would provide for better access to Hoosier National Forest and Patoka Reservoir through a connection with SR 145. This route, as described in **Section 5.3.2.2** as Route S3-E4, was added for consideration.
- SR 60 connection from US 50 – the NE RIIT identified a variation of the US 50 alternative which would use SR 60 to access Bedford via Mitchell. This is an indirect (several miles longer) version of Route S3-E2. It offers no advantages over the shorter, more direct Route S3-E2. It was not given further consideration.

2.2.2 Public Information Meetings (PIMs)

A series of public meetings were held in Jasper, Washington and French Lick to garner input from the general public. Comments received during these meetings suggested some alternatives listed in **Section 2.2.1**. Four additional alternatives also were suggested. Each of these suggested routes would not satisfy key elements of the Purpose and Need (Goals 1 and 7, which provide for increased access to and from Jasper). These suggestions were not given further consideration. **Figure 2-2** shows these suggested routes, along with the SR 60 connection to Bedford via Mitchell (described in **Section 2.2.1**).

- Eastern Dubois County Route #1 – The public identified a route that begins at the US 231 / I-64 interchange, continuing northeast towards the Patoka Reservoir.
- Eastern Dubois County Route #2 – The public identified a route that begins on I-64 about 10 miles east of US 231 (near Ferdinand). This route continues straight north to a point about 7 to 8 miles east of Jasper. It then continues northwest, connecting to US 231 just south of Haysville.
- SR 45/SR 58 Upgrade - The public suggested an upgrade of SR 45/SR 58 between US 231 and SR 37. Much of this route would run parallel to the northern boundary of Crane NSA.
- An upgrade of US 50 between Loogootee and Washington, connecting to US 231. This route may be appropriate for consideration as a stand-alone project.

2.3 Agency Input

Formal agency involvement began with the early coordination process. This is a formal part of the scoping phase of this study. This included the Early Coordination Letter, distribution of the draft Purpose

and Need (P&N), and an Agency Scoping Meeting. Each provided an opportunity for agencies to provide input on project scoping, potential preliminary alternatives, and the Purpose and Need.

2.3.1 Early Coordination Letter (ECL)

The Early Coordination Letter was distributed to nearly 20 state and federal agencies (on August 5), six (6) tribal nations (on August 7), and over 300 local officials and historic preservation offices (on August 13). The letter provided general project information regarding potential preliminary alternatives, purpose, study area, land uses, environmental resources as well as information on upcoming steps in the environmental process. It included a map of the initial potential preliminary alternatives as an enclosure. **Figure 2-3** shows this map. These potential routes were shown in earlier studies (**Section 2.1**), were provided by project staff, or were suggested during the Regional Issues Involvement Team meetings (**Section 2.2.1**).

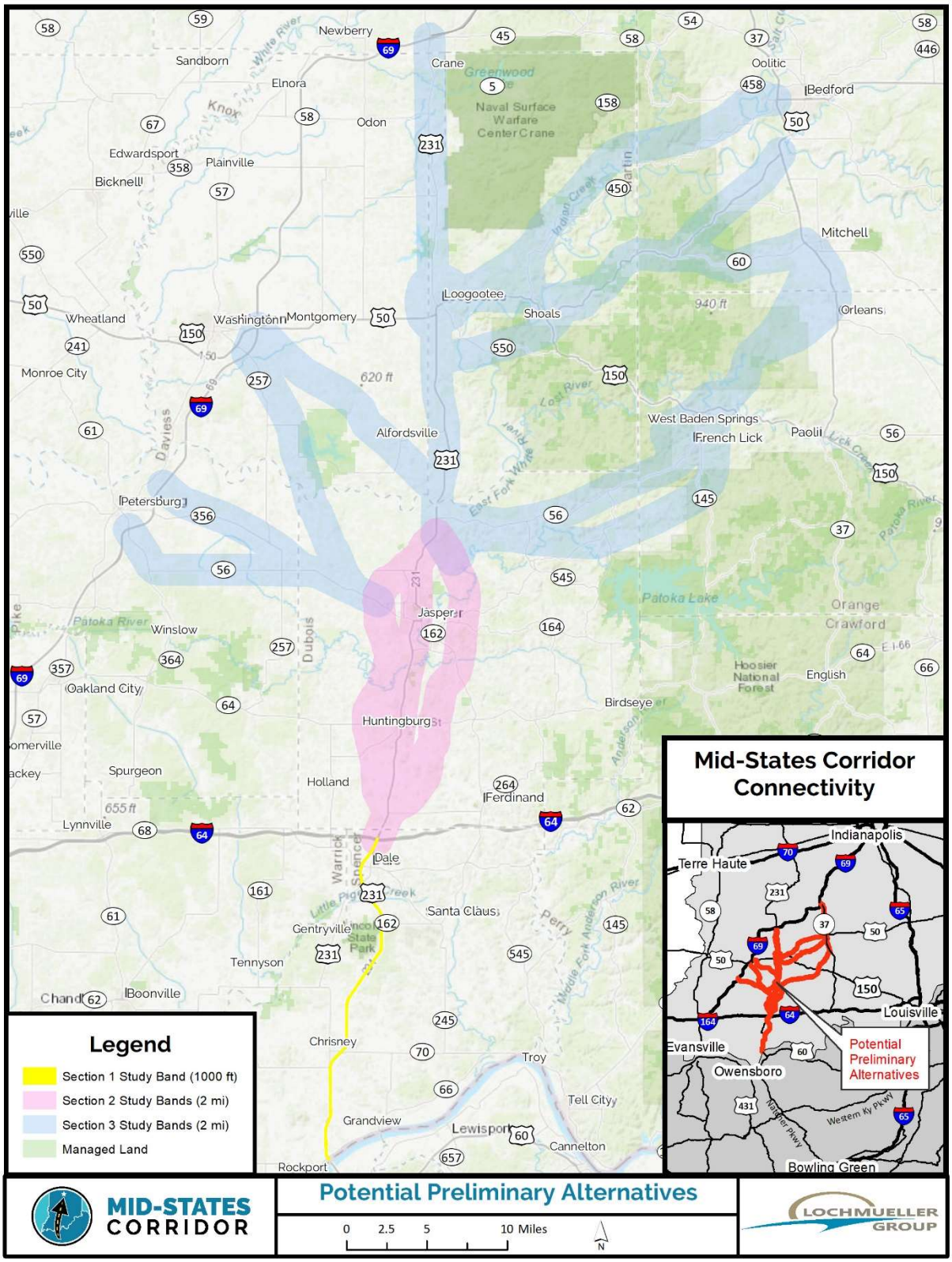

Figure 2-3 – Potential Preliminary Alternatives

The letter noted the draft P&N was under review. The approved draft was provided to ECL recipients on August 13th. Agencies were given 30 days from receipt of the draft P&N to provide comments and input on potential preliminary alternatives and the draft P&N. Feedback on potential preliminary alternatives was focused on resource impact concerns with identified potential alternatives. No new alternatives were identified in responses to the ECL and draft P&N.

Several agencies provided feedback (in formal responses to the ECL as well as comments received during the agency scoping meeting) that they did not support the Eastern Family of alternatives (those connecting to SR 37). This was due to their anticipated higher impacts to forest, aquatic and karst resources. These resources provide habitat for multiple state and federally-listed species.

2.3.2 August 20, 2019 Scoping Meeting

The formal Agency Scoping Meeting was held on August 20th, after the first round of Regional Issues Involvement Team meetings and Public Information Meetings. This allowed the project team to present an expanded list of potential preliminary alternatives to the agencies for input. There was discussion about an additional alternative for consideration that was raised by a representative of the Hoosier National Forest. The suggestion was to consider extending an alternative from the French Lick / West Baden area east to Paoli. A similar alternative was suggested during the PIM held in French Lick. This route is described in **Section 5.3.2.2** as Route S3-E4.

2.4 Input Summary

Three of the suggested additional routes (S3-W2, S3-W3 and S3-E4) were given further consideration as potential preliminary alternatives. Several others were not given further consideration for not addressing key elements of the project's purpose and need. Agencies generally did not support the Eastern Family of alternatives (those connecting to SR 37).

3. SECTION 1 ROUTES

As described in **Section 3.2**, only one route (existing US 231, including possible upgrades) was considered in Section 1. The Section 1 route is located in Spencer County. Its southern terminus is SR 66/US 231. Its northern terminus is the existing US 231 / I-64 interchange near Dale. As described in **Section 6** of this report, routes which are recommended for additional analysis will be combined with appropriate Section 2 and Section 3 routes to provide an end-to-end preliminary alternative. Costs, impacts and benefits of each end-to-end preliminary alternative will be evaluated and compared during the Screening of Alternatives.

3.1 Existing Highway Network

In 2011, INDOT completed the conversion of US 231 (from the Ohio River to I-64) in Spencer County from a 2-lane road to a four-lane expressway with limited at-grade access. US 231 has three interchanges at SR 66, SR 162, and I-64. In addition, there are eight at-grade intersections at key state and county roads. There also are two at-grade intersections for Indiana-Michigan Power's Rockport Generating Station, and AK Steel's Rockport Works Plant.

Figure 3-1 is a map of Spencer County, showing US 231 and other major roads.

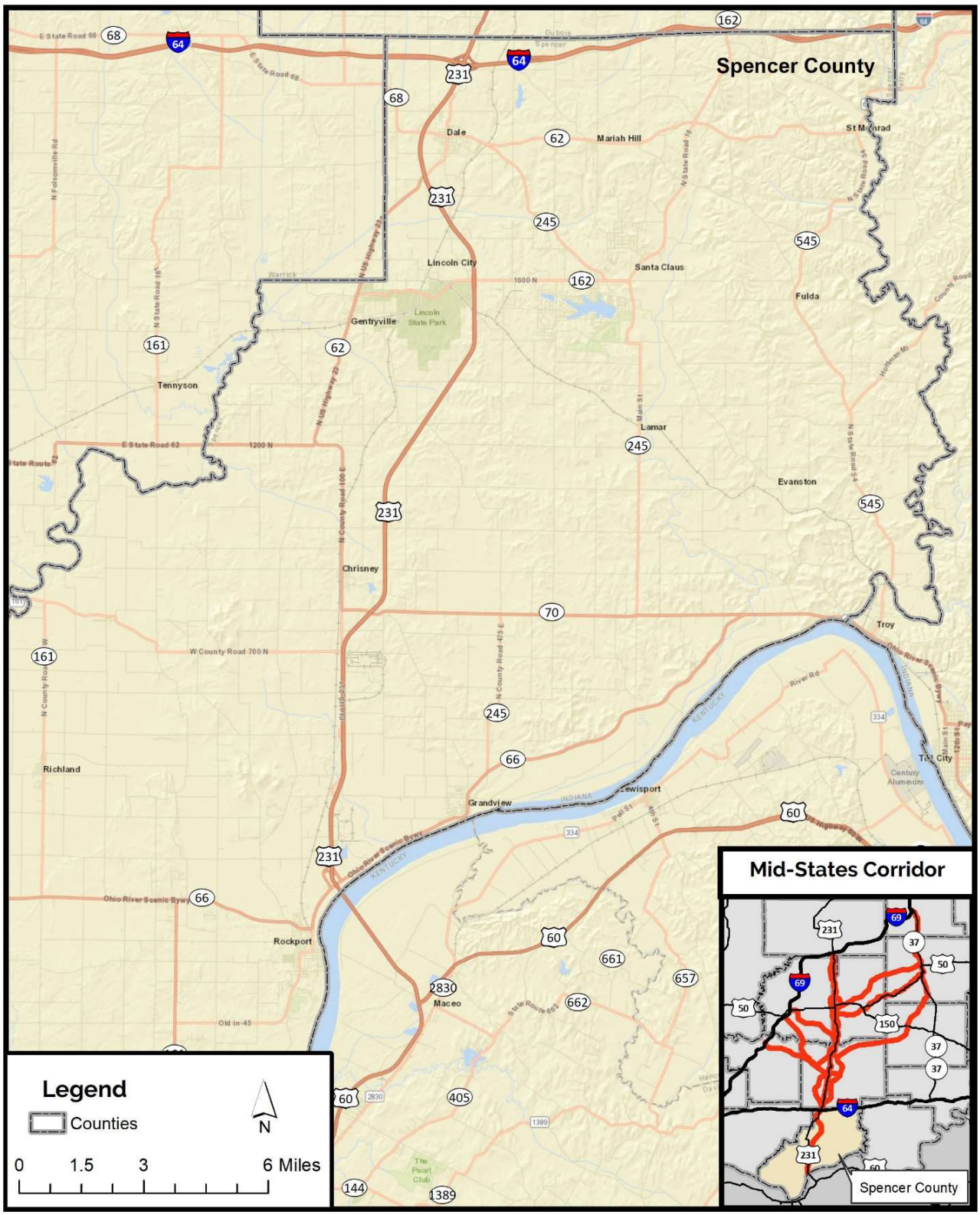

Figure 3-1 – Spencer County Roads

3.2 Suggested Routes

Existing US 231 is a recently-built expressway. It is the major north-south corridor in the project area south of I-64. It is the only route considered south of I-64.

3.3 Recommended Preliminary Routes

All recommended preliminary alternatives will use the existing US 231 alignment between SR 66 and I-64. Improvements to existing US 231 will be considered. These improvements include further limiting access, grade-separating intersections and conversion of intersections to interchanges. The screening of alternatives analysis will not consider modifications to existing US 231 for expressway or Super-2 routes. Such modifications may be considered in the analysis of detailed alternatives. For freeway alternatives, the screening of alternatives will assume that US 231 is upgraded to a freeway in Section 1.

Figure 3-2 shows existing US 231, which is the route of all potential preliminary alternatives in Section 1. It is designated as Alternative S1-1.

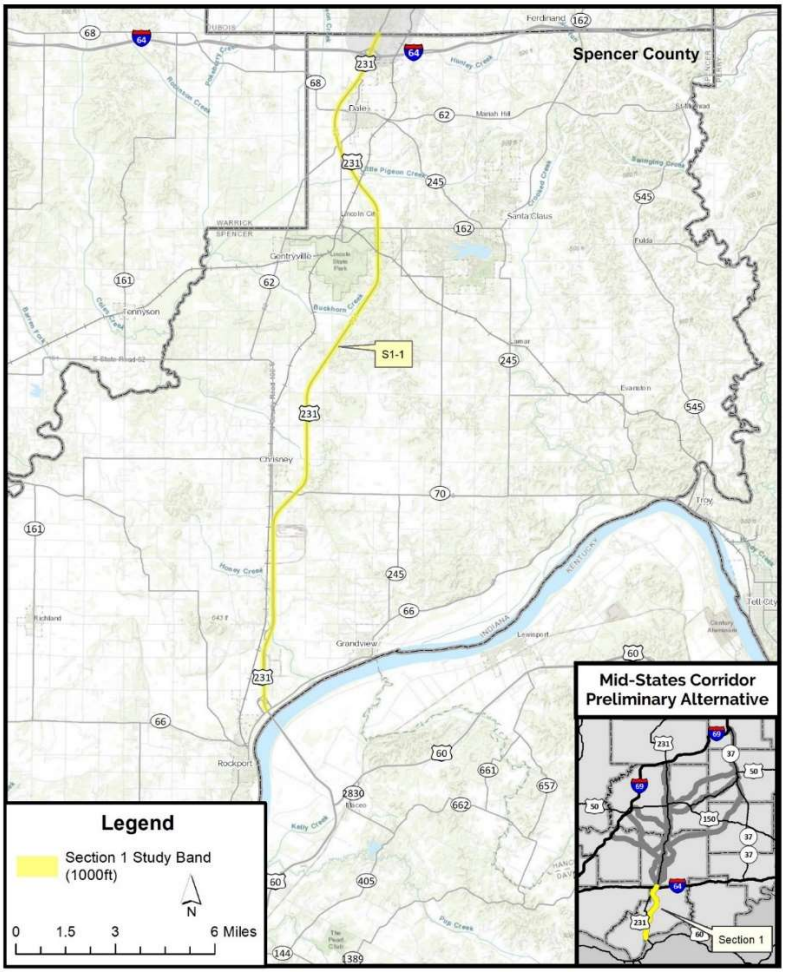

Figure 3-2 – Section 1 Suggested and Recommended Preliminary Routes

4. SECTION 2 ROUTES

Routes in Section 2 are located in Dubois County. They begin at the existing US 231 / I-64 interchange near Dale, at the northern end of Section 1. They terminate in northern Dubois County, generally near Haysville at the Dubois / Martin County line. As described in **Section 6** of this report, routes which are recommended for additional analysis will be combined with Section 1 and an appropriate Section 3 route to provide an end-to-end preliminary alternative. Costs, impacts and benefits of each end-to-end preliminary alternative will be evaluated and compared during the Screening of Alternatives.

4.1 Existing Highway Network

Existing US 231 becomes a two-way (one lane in each direction) rural arterial approximately one mile north of I-64. Travel lanes are 12' wide with 2' paved shoulders. Drainage is collected via roadside ditches. The posted speed limit is 55 mph, with auxiliary turn lanes provided at key intersections. Businesses and residents are within close proximity to the edge of pavement, with some as close as 50'. This typical section continues to Huntingburg. The posted speed limit reduces to 40 mph at East 4th Ave.

Through Huntingburg US 231 has a low-speed urban section. The typical section has one 12-foot travel lane in each direction, a 14-foot two-way left turn lane (TWLTL), and a 1.5-foot wide curb and gutter. This typical section continues to just north of East 12th St. Posted speed limits in Huntingburg vary from 25 to 30 mph.

North of East 12th St. US 231 can be described as "Super-2" rural arterial. The typical section has one 12-foot travel lane in each direction, with 10-foot paved shoulders. Drainage is collected via roadside ditches. The posted speed limit is 55 mph, with auxiliary turn lanes provided at key intersections. Businesses and residents are set back to allow for a future second lane in each direction. This typical section continues to West 2nd St. in the City of Jasper, where the posted speed limit reduces to 40 mph.

Through Jasper US 231 has a low speed urban section. The typical section has one 12-foot travel lane in each direction, a 14-foot TWLTL, and 1.5-foot wide curb and gutter. This typical section continues to just north of West 5th St. North of West 5th St. US 231 turns to the east for approximately three blocks before heading north again at 6th St. From 6th St. to 13th St., the typical section has two 12-foot travel lanes in each direction. North of 13th St. there is one 12-foot travel lane in each direction as well as a TWLTL. Posted speed limits in Jasper vary from 25 to 30 mph.

North of West 44th St. US 231 becomes a rural arterial with one 12-foot travel lane in each direction. It has 2-foot paved shoulders. Drainage is collected via roadside ditches. The posted speed limit is 55 mph, with auxiliary turn lanes provided at key intersections. Businesses and residents are close to the edge of pavement, some as close as 50'. This typical section continues to Haysville.

Figure 4-1 is a map of Dubois County, showing US 231 and other major roads.

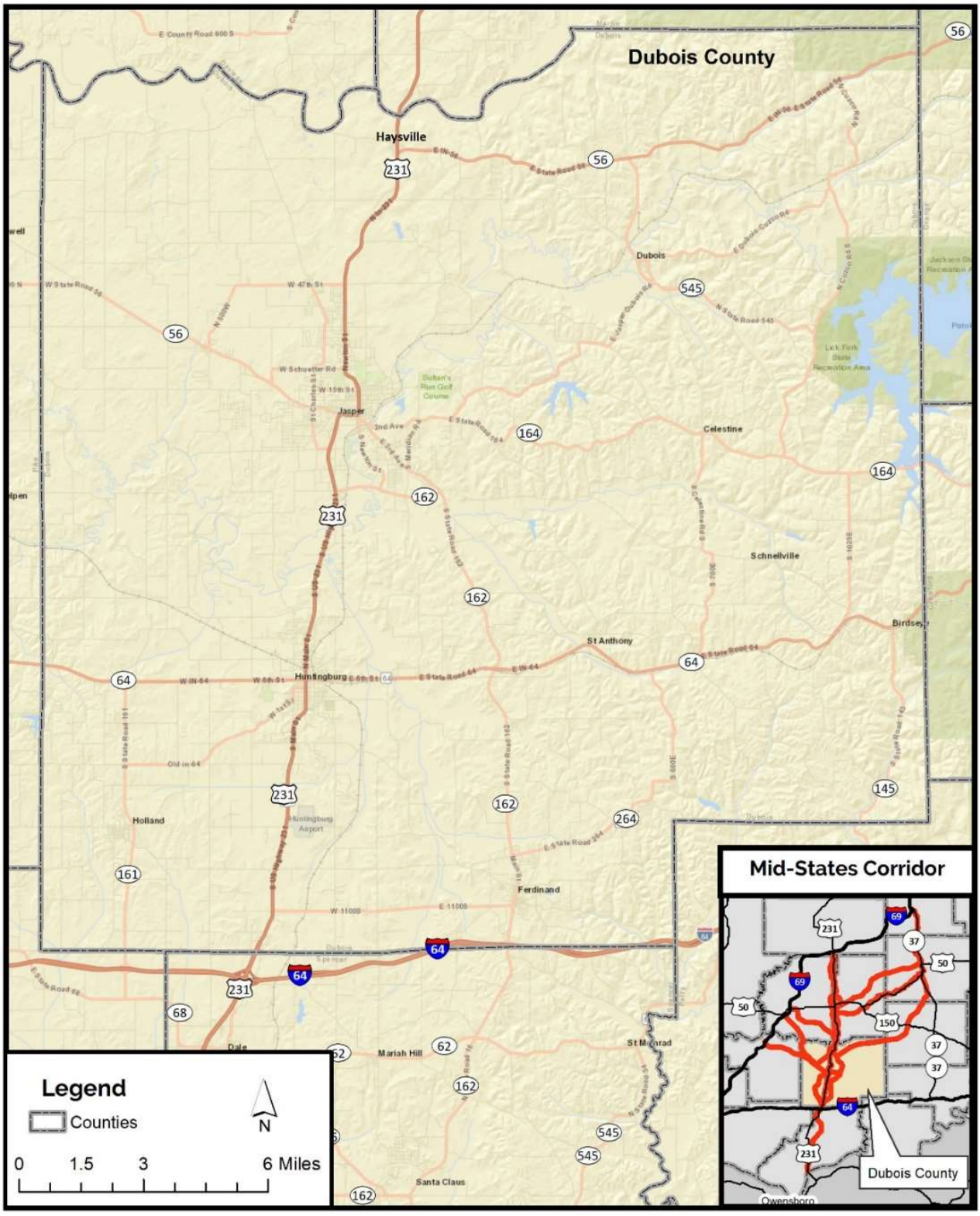

Figure 4-1 – Dubois County Roads

4.2 Suggested Routes

Figure 4-2 shows the seven suggested routes in Section 2. These routes are described in **Table 4-1**. Following the figure and table is a description of each suggested route.

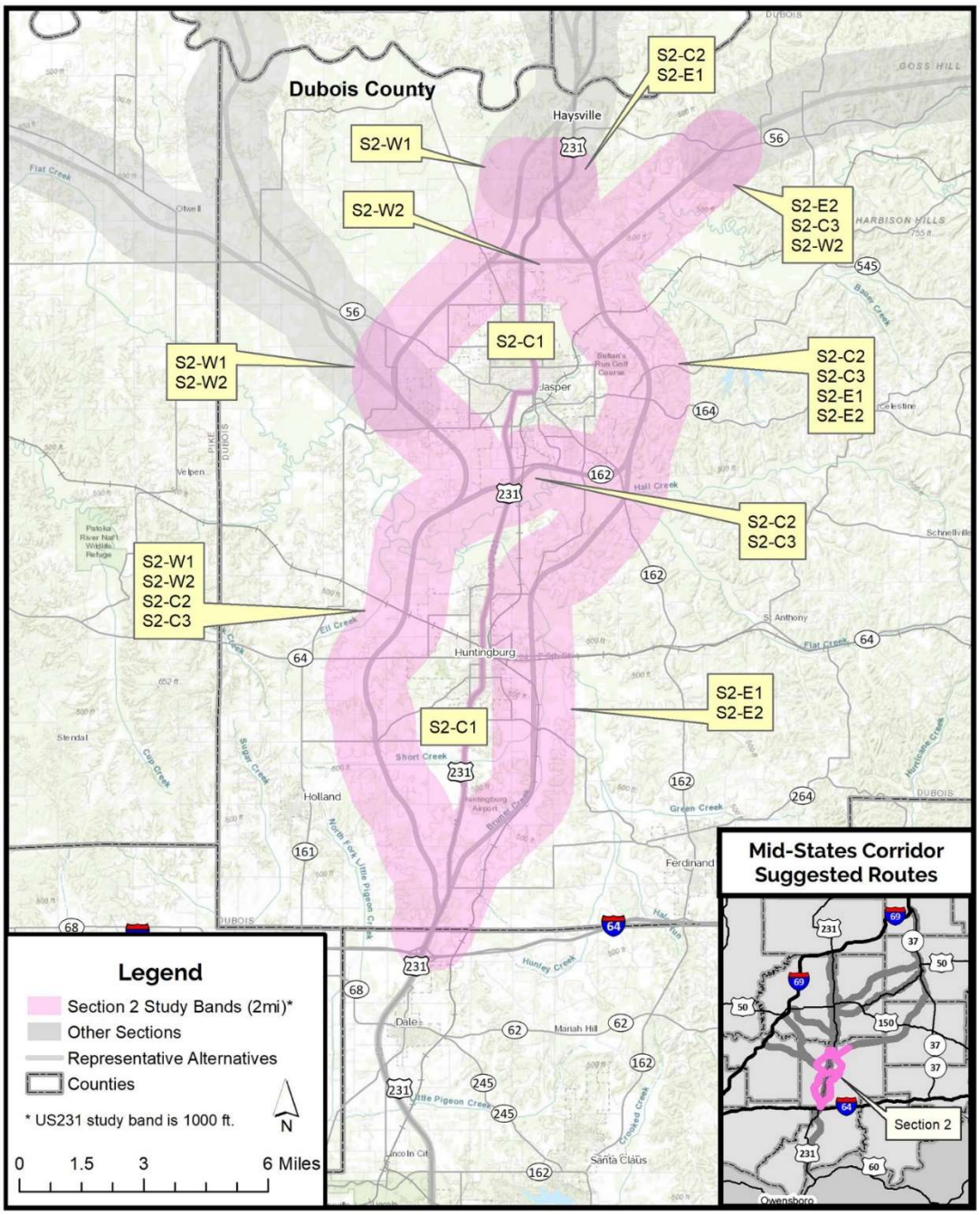

Figure 4-2 – Section 2 Suggested and Recommended Preliminary Routes

Table 4-1: Summary Of Section 2 Potential Preliminary Alternative Routes

Route	From	To	Comments
S2-W1	I-64	Haysville	New Terrain Route; Western Bypass around Jasper and Huntingburg
S2-W2	I-64	SR 56 east of Haysville	New Terrain Route; Western Bypass around Jasper and Huntingburg
S2-C1	I-64	Haysville	US 231 upgraded to a Super-2 through Huntingburg and Jasper
S2-C2	I-64	Haysville	New Terrain Route. Western bypass around Huntingburg and Eastern bypass around Jasper. Existing US 231 to be used to extent feasible.
S2-C3	I-64	SR 56 east of Haysville	New Terrain Route. Western bypass around Huntingburg and Eastern bypass around Jasper. Existing US 231 to be used to extent feasible.
S2-E1	I-64	Haysville	New Terrain Route; Eastern Bypass around Jasper and Huntingburg
S2-E2	I-64	SR 56 east of Haysville	New Terrain Route; Eastern Bypass around Jasper and Huntingburg.

The Draft Environmental Impact Statement (DEIS) for a bypass around Jasper and Huntingburg was approved in 2004. The DEIS included an Eastern and Western route, Alternates 27 and 28, respectively. The DEIS did not identify a preferred alternative. An FEIS was never prepared. Alternatives 27 and 28 from the DEIS were the basis of routes considered as part of this Tier 1 EIS.

Alternative S2-E1 (an eastern bypass of Huntingburg and Jasper) is based on Alternative 27. The only significant difference from Alternative 27 is that S2-E1 connects to US 231 north of Haysville rather than south of Haysville.

Alternative S2-E2 is a variation of Alternative S2-E1. North of Jasper, it connects to the SR 56 corridor instead of the US 231 corridor.

Alternative S2-W1 (a western bypass of Huntingburg and Jasper) is based on Alternative 28. Noteworthy residential development has occurred since the 2004 DEIS. Accordingly, S2-W1 is further west than Alternative 28. Also, S2-W1 connects to US 231 north of Haysville rather than south of Haysville.

Alternative S2-W2 is a variation of Alternative S2-W1. North of Jasper, it connects to the SR 56 corridor instead of the US 231 corridor.

Alternative S2-C1 uses the existing US 231 alignment from I-64 to just north of Haysville, including the existing US 231 alignment through Huntingburg and Jasper. It will be evaluated only as a Super-2 alternative.

Additional alternatives suggested through public input are described below.

Alternative S2-C2 is a combination of S2-W1 and S2-E1. It was suggested as having the potential to use the existing US 231 alignment between Jasper and Huntingburg.[2] It potentially will better serve heavy industries, which are concentrated on the west side of Huntingburg and the east side of Jasper. The route follows S2-W1 west of Huntingburg. North of Huntingburg it proceeds northeast to the southeast side of Jasper where it joins S2-E1.

Alternative S2-C3 is a variation of Alternative S2-C2. North of Jasper, it connects to the SR 56 corridor instead of the US 231 corridor.

4.3 Recommended Preliminary Routes

All seven potential preliminary routes (as shown in **Figure 4-2**) are recommended as preliminary routes. Three of these routes (S2-W2, S2-C3 and S2-E2) are modifications of other Section 2 routes to provide connections to the SR 56 corridor to the northeast.

5. SECTION 3

Routes in Section 3 extend in three geographic orientations. These include:

- **Northwest Routes.** These provide access to I-69 in Pike or Daviess County.
- **North Central Routes.** These provide access to I-69 in Greene County.
- **Northeast Routes.** These provide access to I-69 in Monroe County (using connections to SR 37 in Orange or Lawrence County).

As described in **Section 6** of this report, routes which are recommended for additional analysis will be combined with Section 1 and an appropriate Section 2 route to provide an end-to-end preliminary alternative. Costs, impacts and benefits of each end-to-end preliminary alternative will be evaluated and compared during the Screening of Alternatives.

5.1 Section 3 Routes – Northwest Family

Northwest Family routes would connect to I-69 via either Pike or Daviess counties. These routes have shorter connections to I-69 and have level terrain. Several routes would require a new crossing of the East Fork of the White River. All routes likely would impact reclaimed surface coal mines.

5.1.1 Existing Highway Network

Major state highways in this area are:

- **SR 56 connecting Jasper and Petersburg.** SR 56 is a two-lane major collector that serves Ireland in Dubois County and Cato in Pike County. It connects to Petersburg from the southeast.

[2] Initial engineering assessments did not determine that using the US 231 alignment between Huntingburg and Jasper was practical, due to the need to maintain appropriate design speeds. If this route is part of the alternatives carried forward for detailed study, this assessment will be revisited.

- **SR 356 connecting Otwell and Petersburg.** SR 356 is a two-lane major collector that serves Algiers and Alford in Pike County. It connects to Petersburg from the east.
- **SR 257 connecting Washington with several communities to the south in Pike County.** SR 257 is a two-lane major collector that serves the communities of Otwell, Velpen and Stendal.
- **US 50 connecting Loogootee and Washington.** This is a route on the National Highway System. It is a four-lane route west of Washington to the Indiana-Illinois State line. It is a two-lane route between Washington and Bedford. In the past, INDOT has considered widening at least portions of the route between Washington and Bedford to four lanes. However, INDOT has no such plans under consideration at this time.

Figure 5-1 shows major state highways and other roads in Daviess, Pike and Dubois counties.

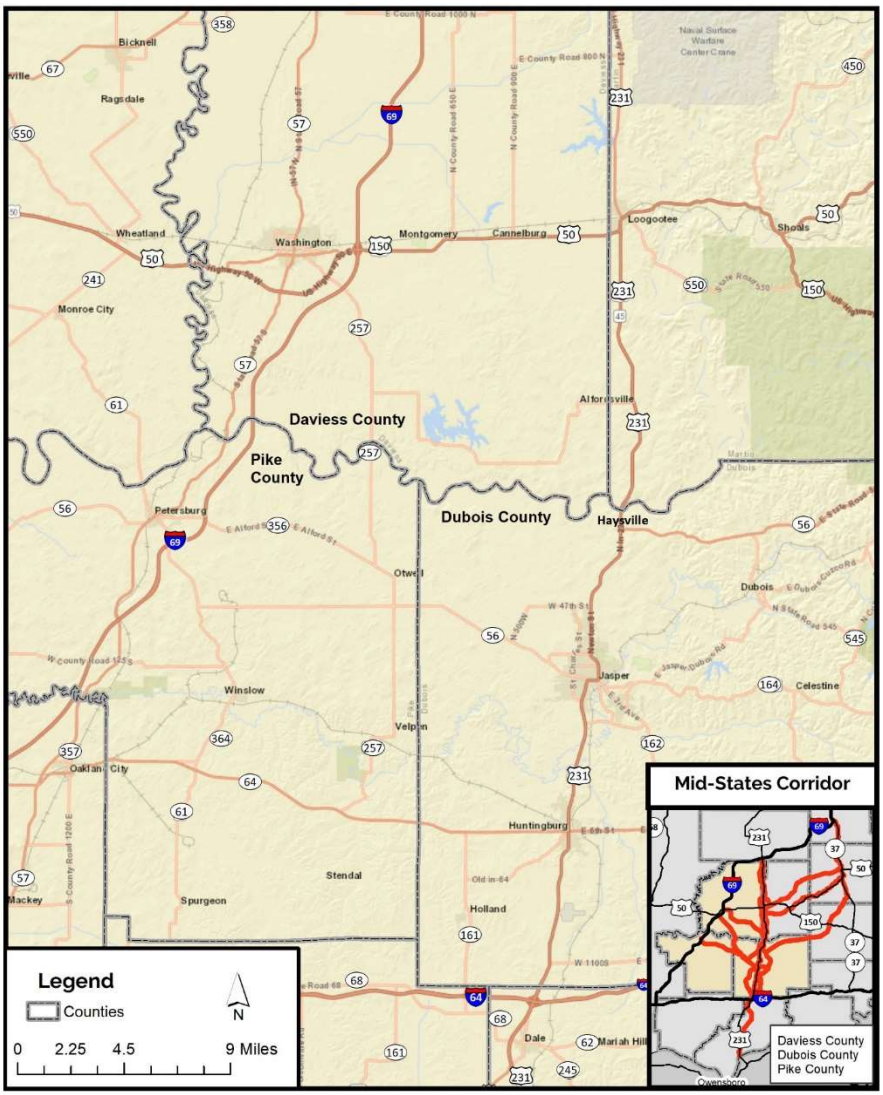

Figure 5-1 – Daviess, Pike and Dubois County Roads

5.1.2 Suggested Northwest Family Routes

Four routes were suggested as part of the Northwest Family in Section 3. **Figure 5-2** shows these suggested routes. These routes are summarized in **Table 5-1**. Following the figure and table is a description of each suggested route.

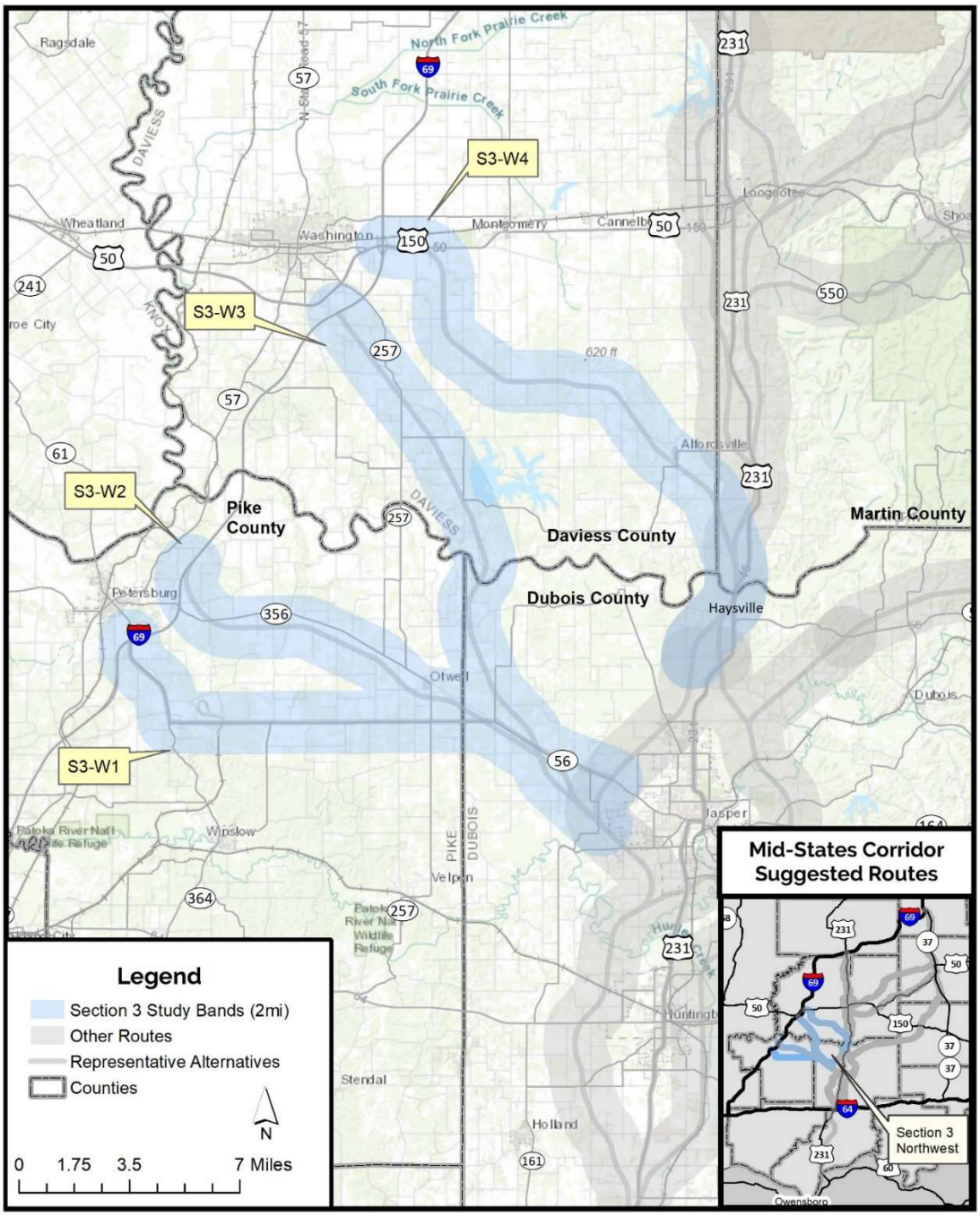

Figure 5-2 – Section 3 (Northwest Family) Suggested Routes

Table 5-1: Summary Of Section 3 (Northwest Family) Potential Preliminary Alternative Routes

Route	From	To	Comments
S3-W1	SR 56 at Jasper	I-69/SR 56 Interchange	New Terrain Route or Improve Existing Alignments of SR 56 and SR 61 Depending on Facility Type
S3-W2	West of Jasper	I-69, East of Petersburg (North Pike Interchange)	New Terrain Route or Improve Existing Alignments of SR 56 and SR 356 Depending on Facility Type
S3-W3	West of Jasper	I-69, Southeast of Washington	New Terrain Route; Northwest to I-69, Passing just West of Glendale Fish and Wildlife Area
S3-W4	US 231 Bridge over East Fork of White River	US 50, East of US 50/I-69 Interchange	New Terrain Route; Northwest to US 50 & I-69 Passing Just East of Glendale Fish and Wildlife Area

5.1.2.1 Routes Serving Petersburg

Two suggested routes serve Petersburg. They extend from the west side of Jasper in central Dubois County to Petersburg. The two routes, S3-W1 and S3-W2 differ in that they split south of Otwell. Route S3-W1 continues along SR 56 to SR 61 to the existing I-69 interchange. Route S3-W2 diverges to SR 356 through Algiers to the potential I-69 North Pike interchange near Petersburg.

The North Pike Interchange was approved in the I-69 Section 2 FEIS and ROD, but its construction was deferred. INDOT has made protective right-of-way purchases for this interchange. Local Pike County development officials prefer a connection at this location. It would allow development to continue at the existing SR 56 interchange and would open additional land for development.

A western bypass of Jasper is required for these routes. Connecting to an eastern bypass would require 5 to 7 miles of adverse (reverse direction) travel.

5.1.2.2 Routes Serving Washington

Two suggested routes serve Washington.

The first suggested route (S3-W3) would begin northwest of Jasper and require a western bypass of Jasper in Section 2. It would proceed northwest as a new terrain route across the East Fork of the White River near the Dubois-Pike County Line, passing just west of the Glendale Fish and Wildlife Area. The crossing of SR 257 south of Washington would be too close to the existing US 50 interchange to build another interchange; therefore, a new interchange with I-69 south of SR 257 would be required. Washington officials prefer this location to Alternative S3-W4 (see next paragraph), in order to avoid impacts to planned development in the southeast quadrant of the I-69 US 50 interchange.[3]

[3] The I-69 Section 2 Tier 2 FEIS approved an interchange in South Daviess County just south of Veale Creek, between CR 300S and CR 400S. At the time of the I-69 study, local officials were concerned about difficulties in extending utilities (water and sewer) to support development in this location. The proposed location of the I-69 interchange for Route S3-W3 (further north, closer to Washington) reflects these concerns. There have been no right-of-way purchases for this South Daviess County interchange.

The second suggested route (S3-W4) would use the existing US 231 bridge over the East Fork of the White River just north of Haysville. From there it would pass southwest of Alfordsville and east of the Glendale Fish and Wildlife Area prior to connecting with existing US 50 just east of I-69. The connection to I-69 depends upon the facility type. An expressway or Super-2 facility type could connect to I-69 via the existing interchange. A freeway would require construction of a new system interchange at US 50.

5.1.3 Recommended Northwest Family Preliminary Routes

Three routes from the Northwest Family are recommended to be part of preliminary alternatives. These include Alternative S3-W2 (serving Petersburg) and Alternatives S3-W3 and S3-W4 (serving Washington).

Route S3-W1 was removed from future consideration due to greater environmental and human impacts compared to route S3-W2. Route S3-W2 provides for a more direct link to I-69. Route S3-W2 connects to I-69 using right-of-way already acquired for a future I-69 interchange.

Figure 5-3 shows the three routes recommended to be preliminary alternatives for the Section 3 Northwest Family.

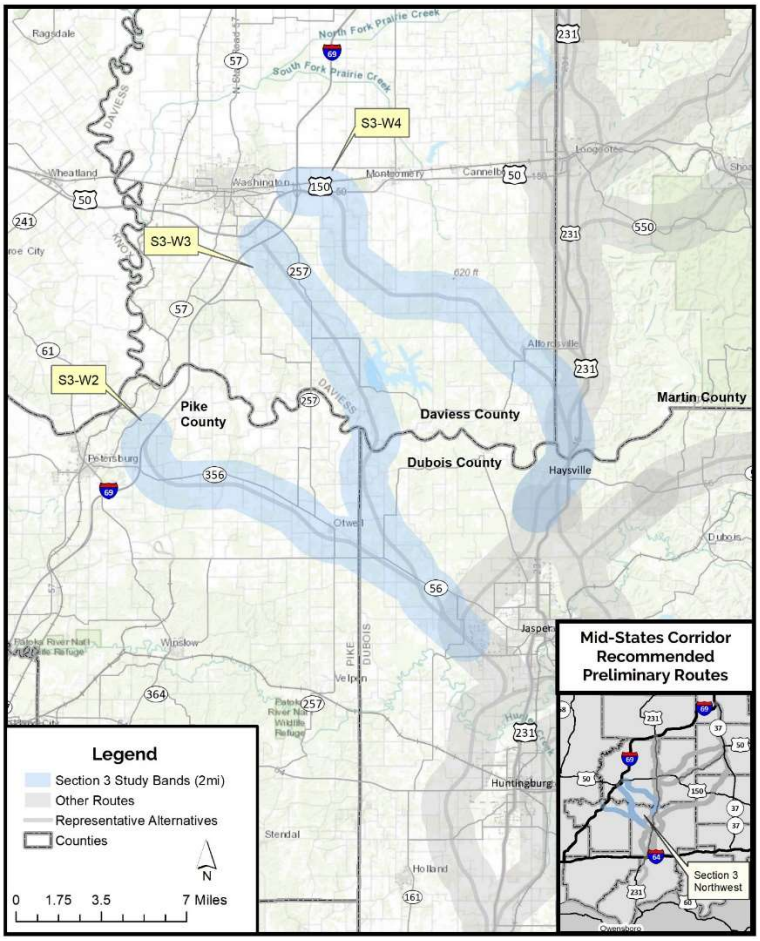

Figure 5-3 – Section 3 (Northwest Family) Recommended Preliminary Routes

5.2 Section 3 Routes – North Central Family

Section 3 North Central routes would connect to I-69 through Martin and Daviess counties. These routes are on or near existing US 231. The area generally has level terrain. Impacts to Loogootee, West Boggs Park and Reservoir and NSA Crane are a consideration for these routes.

5.2.1 Existing Highway Network

US 231 is the only north-south state highway serving the North-Central geographic region. US 231 is a rural arterial that connects Jasper to I-69. It passes through Loogootee. The main freight entrance to NSA Crane is via US 231 and SR 558, near the US 231 I-69 interchange. US 231 between Haysville and I-69 generally is a two-lane roadway with 2' paved shoulders and occasional turn lanes.

Figure 5-4 shows US 231 and other roads in northern Dubois, Daviess, Martin and southern Greene counties.

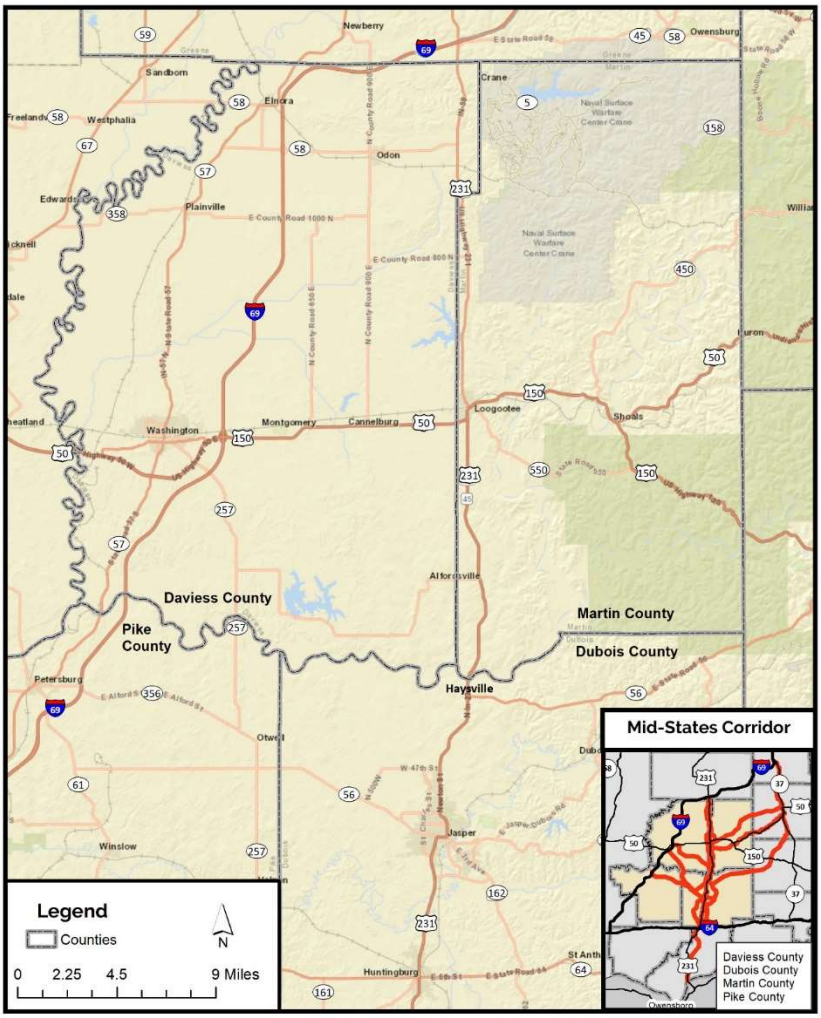

Figure 5-4 – Northern Dubois, Daviess, Martin and Southern Greene County Roads

5.2.2 Suggested North Central Family Routes

Three routes were suggested as part of the North Central Family in Section 3. These are shown in **Figure 5-5**. These routes are summarized in **Table 5-2**. Following the figure and table is a description of each suggested route.

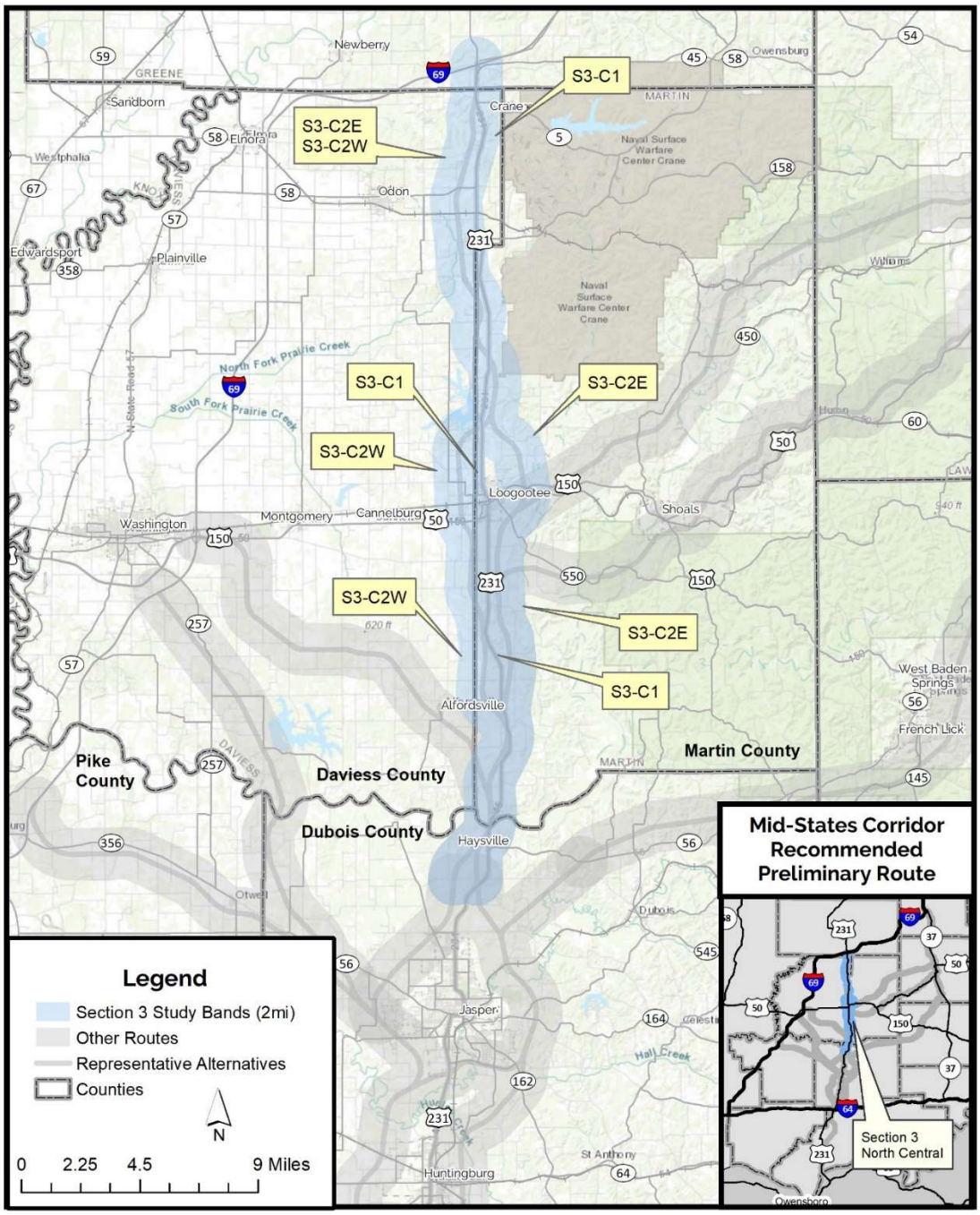

Figure 5-5 – Section 3 (North Central Family) Suggested and Recommended Preliminary Routes

Table 5-2: Summary Of Section 3 (North Central Family) Preliminary Alternative Routes

Route	Start	End	Description
S3-C1	Haysville	I-69/US 231 Interchange North of Crane	Improve Existing US 231; US 231 to be upgraded to a Super-2 from Haysville to I-69
S3-C2E	Haysville	I-69/US 231 Interchange North of Crane	New Terrain Route; Generally parallel and to east of US 231 in Martin County. Bypasses Loogootee to the East. Generally parallel to and west of US 231 in Daviess County
S3-C2W	Haysville	I-69/US 231 Interchange North of Crane	New Terrain Route; Generally parallel to and west of US 231 in Martin County. Bypasses Loogootee to the West. Bypasses West Boggs Park and Reservoir to the east. Parallel to and west of US 231 in Daviess County.

The first suggested route, S3-C1, is an upgrade of existing US 231 between Haysville and I-69. The Indiana Department of Natural Resources expressed its support for this route in comments on the Early Coordination Letter and during the Scoping Meeting for this project.[4]

Two other suggested routes (S3-C2E and S3-C2W) are new terrain routes. These routes are parallel to US 231 and bypass Loogootee to the east or west. Both routes use very limited portions of existing US 231. Generally, these routes are offset from US 231 to minimize residential impacts.

All routes use the existing US 231 bridge over the East Fork of the White River and the existing I-69 / US 231 interchange.

5.2.3 Recommended North Central Family Preliminary Routes

All suggested routes (as shown in **Figure 5-5**) are recommended as preliminary routes.

5.3 Section 3 Routes – Northeast Family

Section 3 northeast routes would connect to I-69 via SR 37 through Lawrence and Orange counties. These routes generally traverse rolling terrain. Regional Issues Involvement Teams and citizens from the northeast geographic region voiced support for northeast routes. Their input stated that the area is underserved by existing highways, as well as safety concerns with existing roadways. These alternatives generally lack resource agency support, based on feedback during the Agency Scoping Meeting and written comments[5] received in early September 2019. This is based upon the likelihood of higher impacts to multiple resources (including forest, karst and managed lands).

5.3.1 Existing Highway Network

Major north-south state highways in this area are:

[4] J. Matthew Buffington letter to Jason DuPont, September 12, 2019. P. 5.

[5] Letters by Scott Pruitt of US Fish and Wildlife Service (September 10, 2019), J. Matthew Buffington of Indiana Department of Natural Resources (September 12, 2019), and Brian Wolff of Indiana Department of Environmental Management (September 12, 2019).

- **SR 145 between SR 64 in Crawford County and US 150 in West Baden Springs.** This two-lane road has been recently improved. It provides access from the south to the major tourism destination at French Lick/West Baden Springs as well as Patoka Lake.
- **SR 37 between I-64 in Perry County and I-69 in Monroe County.** This is a four-lane highway. It has partial access control and a depressed median from north of Mitchell to Bloomington. It has been improved to have Super-2 characteristics south of Mitchell, through Orleans and into Paoli. South of Paoli, SR 37 is a rural two-lane road which lacks these Super-2 characteristics.

Major east-west state highways in this area are.

- **SR 450 between Shoals and Bedford.** This route serves portions of Martin and Lawrence counties north of the East Fork of the White River. This roadway is a rural 2-lane roadway. Large portions of this road have narrow shoulders and curves with poor sight distance.
- **US 50 between Loogootee and Bedford.** This is a two-lane road. Portions of it recently have been improved. It is part of the National Highway System. In the past, INDOT has considered widening this route to four lanes. However, INDOT has no such plans under consideration at this time.
- **US 150 between Shoals and Paoli.** This is a two-lane road with narrow shoulders and some turn lanes. West of Shoals it continues, sharing a route designation with US 50 into Loogootee.
- **SR 56 between Jasper and Paoli.** It also serves French Lick and West Baden Springs. From Jasper to West Baden Springs, it is a two-lane road with narrow shoulders and some turning lanes. Between West Baden Springs and Paoli, it shares a route designation with US 150.

Figure 5-6 shows major state highways and other roads in Greene, Martin, Monroe, Lawrence and Orange counties.

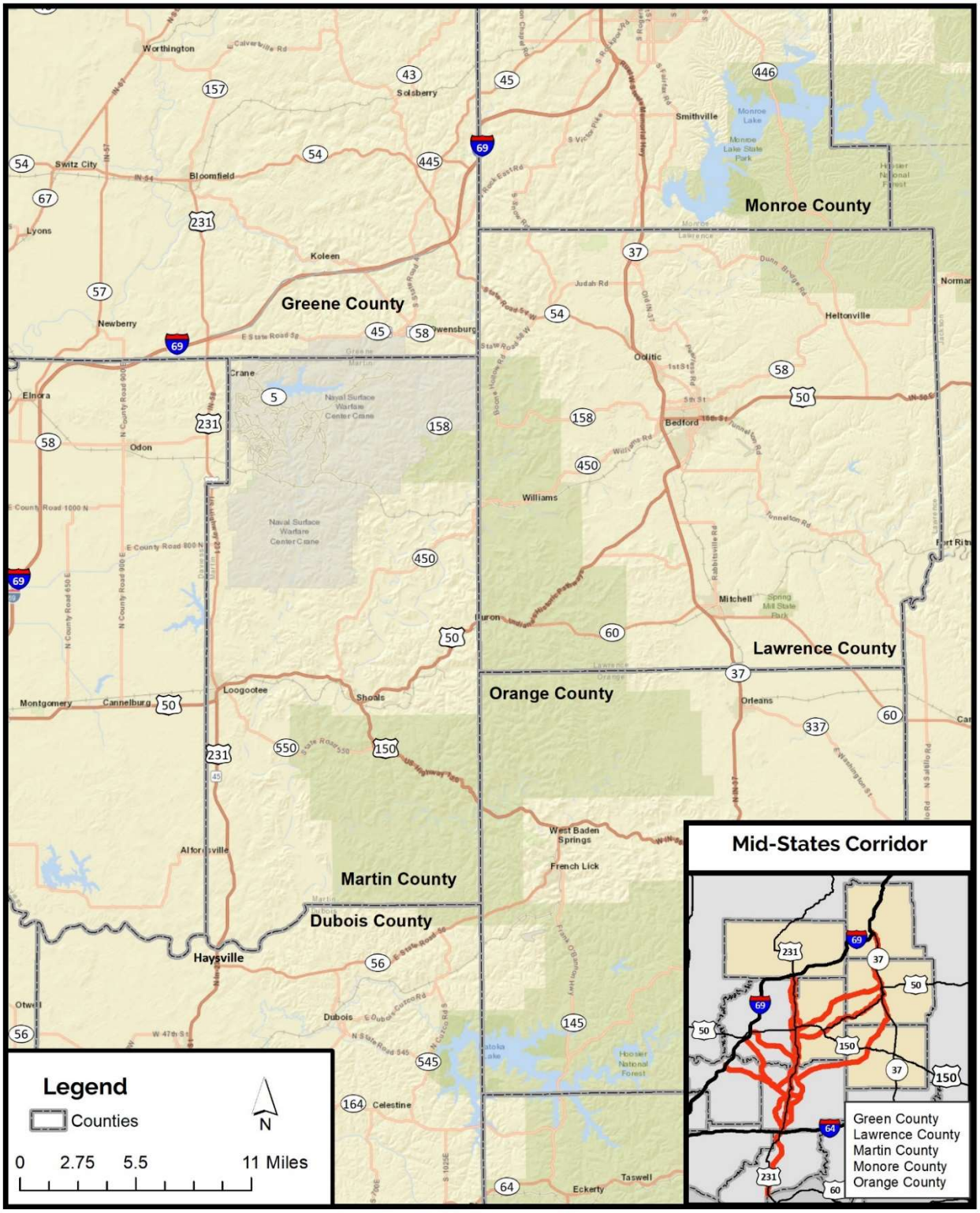

Figure 5-6 – Greene, Lawrence, Martin, Monroe and Orange County Roads

5.3.2 Suggested Northeast Family Routes

Four routes were suggested for the Northeast Family in Section 3. **Figure 5-7** shows these suggested routes. These routes are summarized in **Table 5-3**. Following the figure and table is a description of each suggested route.

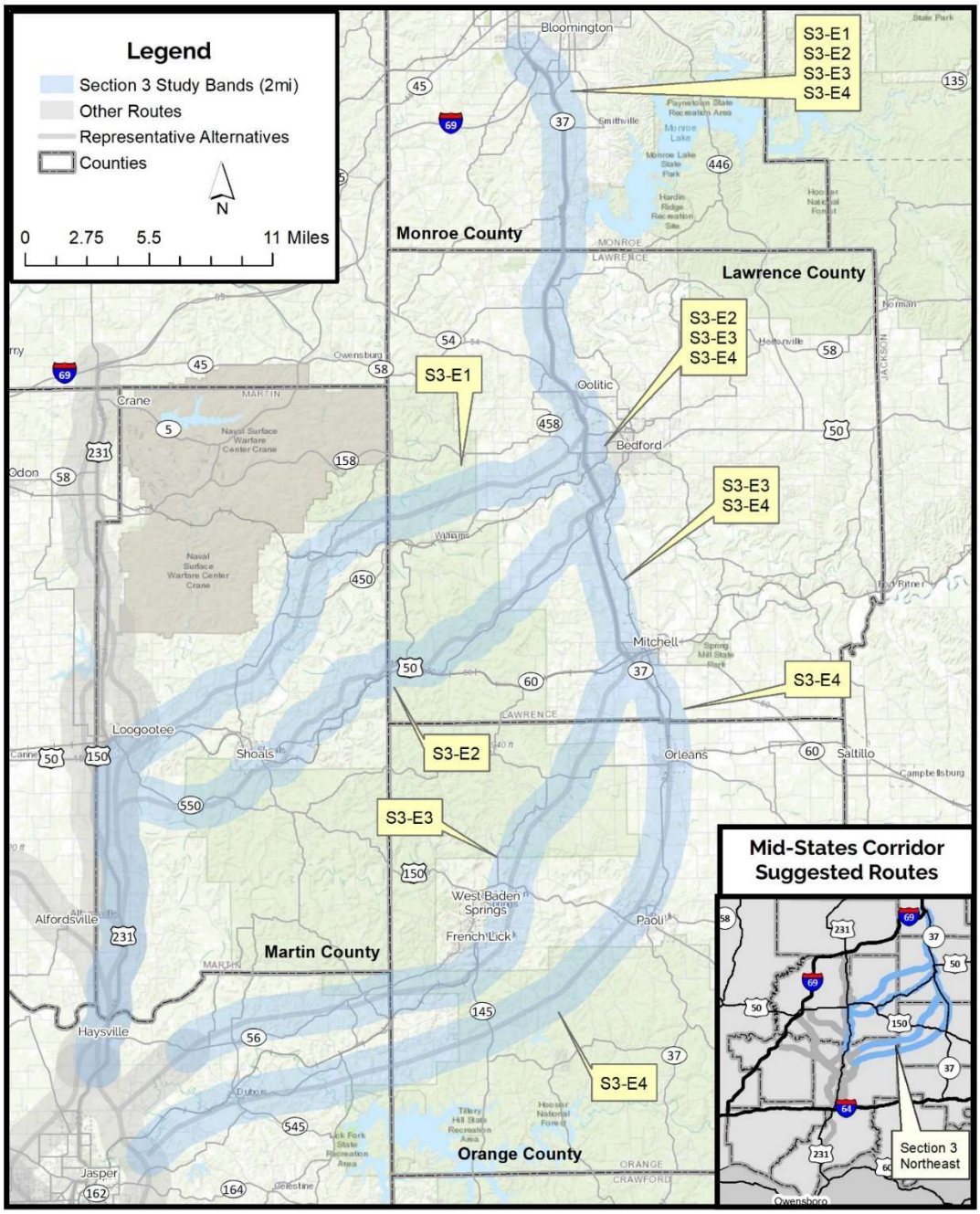

Figure 5-7 – Section 3 (Northeast Family) Suggested Routes

Table 5-3: Summary Of Section 3 (Northeast Family) Preliminary Alternative Routes

Route	Start	End	Remarks
S3-E1	East of Loogootee	Bedford	New Terrain Route or Improve Existing Alignments of SR 450. Continues to Bloomington via SR 37.
S3-E2	South of Loogootee	South of Bedford	New Terrain Route or Improve Existing Alignments of US 50. Continues to Bloomington via SR 37.
S3-E3	Northeast of Jasper	Mitchell	New Terrain Route or Improve Existing Alignments of SR 56. Continues to Bloomington via SR 37.
S3-E4	East of Jasper	Orleans	New Terrain Route south of SR 56. South of French Lick and West Baden Springs. Continues to Bloomington via SR 37.

5.3.2.1 Routes Serving Bedford

Route S3-E1 connects to a north central route (S3-C2E) near Loogootee and bypasses Shoals to the north. It roughly parallels SR 450 and connects to SR 37 at Bedford.

Route S3-E2 connects to a north central route (S3-C2E) near Loogootee and bypass Shoals to the south. It roughly parallels US 50 and connects to SR 37 south of Bedford.

5.3.2.2 Routes Serving Mitchell

Multiple recommendations were drawn by residents during the public meetings for a connection into Mitchell. These routes would connect to one of the Jasper bypass routes and proceed northeast through Orange County. Some suggestions closely parallel existing SR 56 through French Lick and West Baden Springs and continue in a northeasterly arc to SR 37 at Mitchell. Other suggestions were more removed from existing routes and would bypass both French Lick and West Baden Springs (either to the north and west or south and east). They continue to SR 37 in Mitchell. This collection of suggestions was grouped into Route S3-E3.

Residents at public meetings also suggested routes that would use the east Jasper bypass and travel south of SR 56 near Patoka Lake, continue south of French Lick, then northeast through Paoli to connect with SR 37 between Paoli and Orleans. Additional recommendations included a bypass of Paoli or a connection to SR 56 between Paoli and West Baden Springs. These recommendations also connected to SR 37 between Paoli and Orleans. Since they shared many similarities, these suggestions were grouped into Route S3-E4. Their overall intent is to better serve the Patoka Reservoir and Paoli.

5.3.3 Recommended Northeast Family Preliminary Routes

Three routes from the Northeast Family are recommended to be part of preliminary routes. These include the two routes serving Bedford, S3-E1 and S3-E2. The third is route S3-E3, serving French Lick and West Baden Springs.

As stated in the introductory text under **Section 5.3**, multiple review agencies provided comments that they did not support alternatives in the northeast area. This is a heavily forested area with significant karst resources and many sensitive ecosystems. These recommendations seek to balance the significant

public and stakeholder input favoring alternatives in this region with significant agency comments about resource impacts.

Of these four routes, S3-E4 is the most indirect route for north-south travel. It also has the most potential for higher impacts, since there are no existing facilities which potentially could be upgraded. Accordingly, route S3-E4 was removed from consideration.

The remaining three preliminary routes connect with a section of SR 37, which is a four-lane facility with partial access control. No modifications would be required for Expressway or Super-2 routes to use SR 37. Freeway routes will need to consider upgrades of SR 37 to freeway standards.

Figure 5-8 shows the three routes recommended to be preliminary routes for the Section 3 Northeast Family.

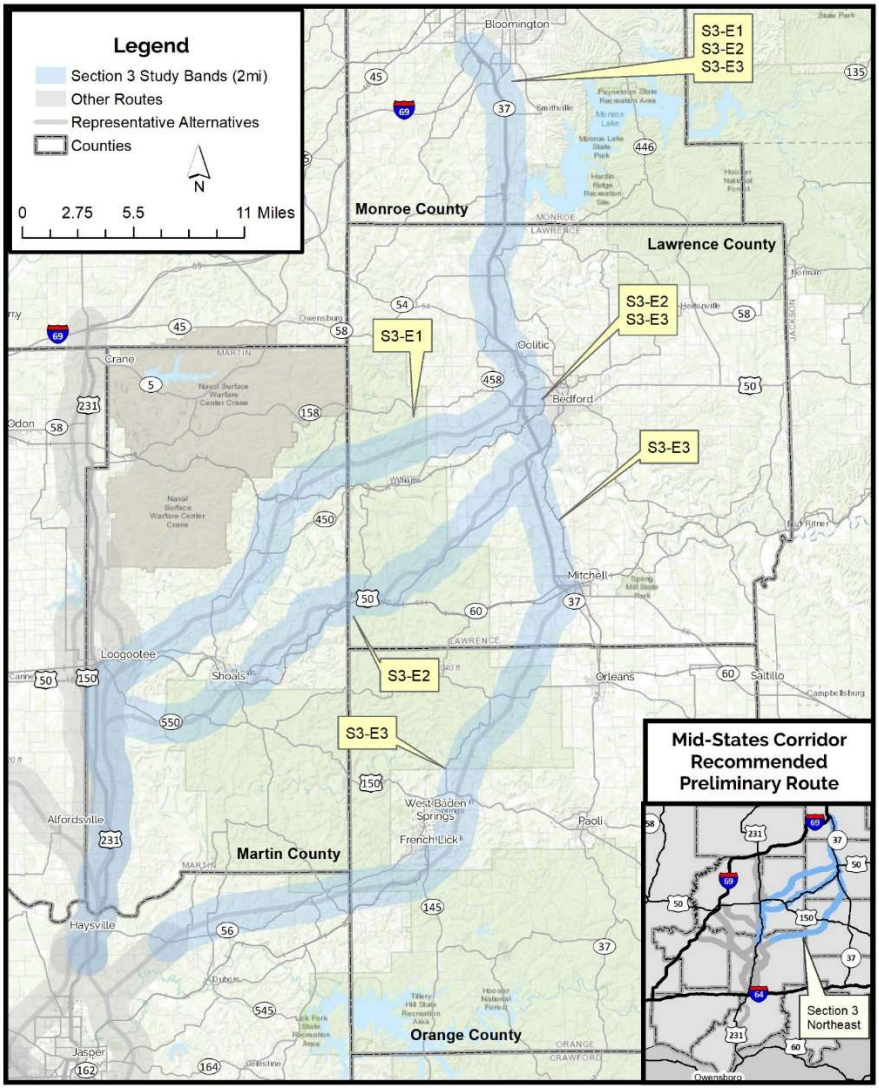

Figure 5-8 – Section 3 (Northeast Family) Recommended Preliminary Routes

6. RECOMMENDED PRELIMINARY ALTERNATIVES

Routes from Sections 1, 2 and 3 were combined to specify eighteen (18) routes as potential preliminary alternatives. Northwest routes in Section 3 generally were paired with Western routes in Section 2. Similarly, Northeast routes in Section 3 generally were paired with Eastern routes in Section 2. Some end to end routes were developed that combined Western routes in Section 2 with Northeast routes in Section 3, or Eastern routes in Section 2 with Northwest routes in Section 3. The eighteen potential preliminary alternatives were designated as Alternatives A thru R. These are summarized in **Table 6-1** and graphically represented in **Figure 6-1**.

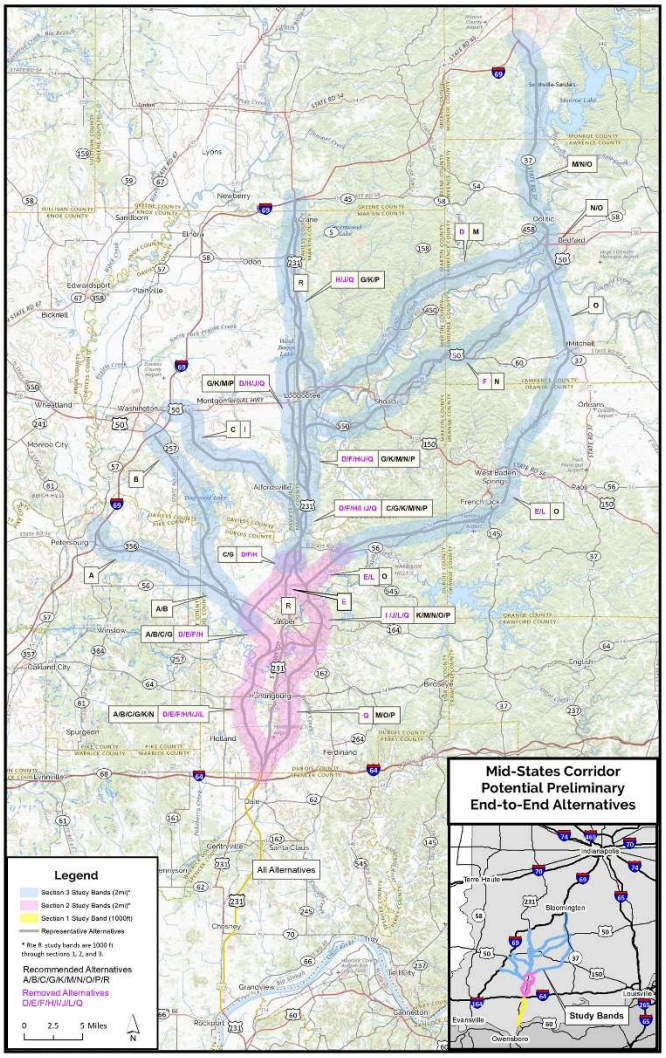

Figure 6-1 – Potential Preliminary End-to-End Alternatives

A further review of the potential preliminary routes was made in order to remove routes from consideration. This review identified routes which were similar to other routes, but which had disadvantages (in terms of anticipated traffic flows, costs and/or impacts) compared to other routes. This comparison is summarized in following sections. These reviews are organized by the route families in Section 3.

6.1 Northwest Family Routes

Potential preliminary alternatives A, B, C and I are in the Northwest Family of Routes in Section 3. Alternatives A and B are the only routes serving Petersburg and Daviess County south of Washington, respectively. Both are retained as preliminary alternatives.

Alternatives C and I have identical routes in Section 3. Each intersects I-69 at or near the current I-69 interchange at US 50. They differ in their Section 2 routing. Alternative C uses the western bypass of both Huntingburg and Jasper (Route S2-W1). Alternative I uses a western bypass of Huntingburg and an eastern bypass of Jasper (Route S2-C2). It is approximately 2.5 miles longer, which will increase both costs and impacts. Alternative C is retained as a preliminary alternative, and Alternative I is removed from further consideration.

6.2 North Central Family Routes

Potential preliminary alternatives G, H, J, K, P, Q and R are in the North Central Family of routes in Section 3.

Alternative R has unique routings in both Section 2 and Section 3. It consists of upgrades of existing US 231 to a Super-2 facility for the entire length of both Section 2 and Section 3. This includes upgrading existing US 231 through the cities of Huntingburg, Jasper and Loogootee. It is retained as a preliminary alternative.

The remaining six potential preliminary alternatives in the North Central Family differ in two respects. They primarily differ in their Section 2 routing. Of these six potential preliminary alternatives, two pass to the west of both Jasper and Huntingburg (G and H, using Route S2-W1), two pass to the east of both Jasper and Huntingburg (P and Q, using Route S2-E1), and two pass to the west of Huntingburg and east of Jasper (J and K, using Route S2-C2).

These six alternatives also differ in Section 3. Three pass to the west of Loogootee (G, J and Q) and three pass to the east of Loogootee (H, K and P). The primary differences between these two bypass treatments are anticipated to be in their costs and impacts. By comparison, traffic impacts are anticipated to be minor.

From among these remaining six potential preliminary alternatives, three were selected. One of the three included each of the three routings in Section 2. Alternative G (using Route S2-W1), Alternative K (using Route S2-C2) and Alternative P (using Route S2-E1) are retained as preliminary alternatives. Alternatives K and P use Route S3-C2E (the eastern bypass of Loogootee) in Section 3. Alternative G uses Route S3-C2W (the western bypass of Loogootee) in Section 3. Routes H, J and Q were removed from further consideration because they duplicated the key features of the other alternatives (their routing in Dubois County).

6.3 Northeast Family Routes

Potential preliminary alternatives D, E, F, L, M, N and O are in the Northeast Family of Routes in Section 3. Of these seven alternatives, three (D, E and F) use Route S2-W1 or S2-W2 (western bypasses of both Huntingburg and Jasper) in Section 2. Two alternatives (L and N) use Route S2-C2 or S2-C3 (western bypasses of Huntingburg and eastern bypasses of Jasper) in Section 2. Two alternatives (M and O) use Route S2-E1 or S2-E2 (eastern bypasses of both Jasper and Huntingburg) in Section 2.

The alternatives using Route S2-W1 in Section 2 (D, E and F) were removed from further consideration due to their being more indirect for travel to the northeast of Jasper. Alternative N uses Route S2-C2 in Section 2, and was retained in order to consider this Section 2 route as part of an alternative in the Northeast Family of routes. Alternative L (which also uses Route C2-S2 in Section 2) was removed from further consideration.

Alternatives M, N and O were retained as preliminary alternatives. Alternatives D, E, F and L were removed from further consideration.

6.4 Consideration of Range of Facility Types

With the exception of Alternative R, costs and impacts will be evaluated for all three facility types (freeway, expressway and Super-2) for all preliminary alternatives.[6] For all alternatives, traffic forecasts and performance measures will be provided for the expressway facility type.

In addition, one alternative in each Section 3 family will have traffic forecasts and performance measures calculated for freeway and Super-2 facility types. Performance measures for freeway and Super-2 facility types for other alternatives in that family will be calculated based upon the relative performance (by facility type) for the alternative in that family with forecasts for all three facility types.

Alternatives C (Northwest Family), K (North Central Family), and M (Northeast Family) are recommended for forecasts and performance measures calculations for all three facility types.

- **Alternative C** is recommended for forecasts for all three facility types in the Northwest Family. Alternative C represents the most direct connection to I-69 of the preliminary routes of the Northwest Family. It makes use of the existing I-69 interchange at US 50.
- **Alternative K** is recommended for forecasts for all three facility types in the North Central Family. Alternative K is anticipated to have slightly fewer residential and farmland impacts by using an eastern bypass of Loogootee. In addition, it provides a range of performance measures for an alternative which uses Route S2-C2 in Section 2.
- **Alternative M** is recommended for forecasts of all three facility types in the Northeast Family. It provides the most direct route to I-69 of the three alternatives in this family. It also acknowledges resource agency feedback about avoiding managed land impacts, which are anticipated to be greater for routes further to the south.

[6] Alternative R entails an upgrade of existing US 231 to a Super-2 facility. This includes existing US 231 through the cities of Jasper, Huntingburg and Loogootee. Alternative R will not be considered as a freeway or an expressway.

6.5 Recommended Preliminary Alternatives

Highlighted alternatives in **Table 6-1** are the recommended preliminary alternatives. When accounting for multiple facility types, a total of twenty-eight (28) preliminary alternatives are recommended. **Figure 6-2** shows the recommended preliminary alternatives.

Table 6-1: Potential Preliminary End-to-End Alternatives

Potential Preliminary Alternative	Section 1	Section 2	Section 3	Facility Type As:
A	S1-1	S2-W1	S3-W2	Super 2/Expressway/Freeway
B	S1-1	S2-W1	S3-W3	Super 2/Expressway/Freeway
C	S1-1	S2-W1	S3-W4	Super 2/Expressway/Freeway
D	S1-1	S2-W1	S3-E1	N/A
E	S1-1	S2-W2	S3-E3	N/A
F	S1-1	S2-W1	S3-E2	N/A
G	S1-1	S2-W1	S3-C2W	Super 2/Expressway/Freeway
H	S1-1	S2-W1	S3-C2E	N/A
I	S1-1	S2-C2	S3-W4	N/A
J	S1-1	S2-C2	S3-C2W	N/A
K	S1-1	S2-C2	S3-C2E	Super 2/Expressway/Freeway
L	S1-1	S2-C3	S3-E3	N/A
M	S1-1	S2-E1	S3-E1	Super 2/Expressway/Freeway
N	S1-1	S2-C2	S3-E2	Super 2/Expressway/Freeway
O	S1-1	S2-E2	S3-E3	Super 2/Expressway/Freeway
P	S1-1	S2-E1	S3-C2E	Super 2/Expressway/Freeway
Q	S1-1	S2-E1	S3-C2W	N/A
R	S1-1	S2-C1	S3-C1	Super 2 only
Highlighted alternatives are recommended preliminary end-to-end alternatives.				

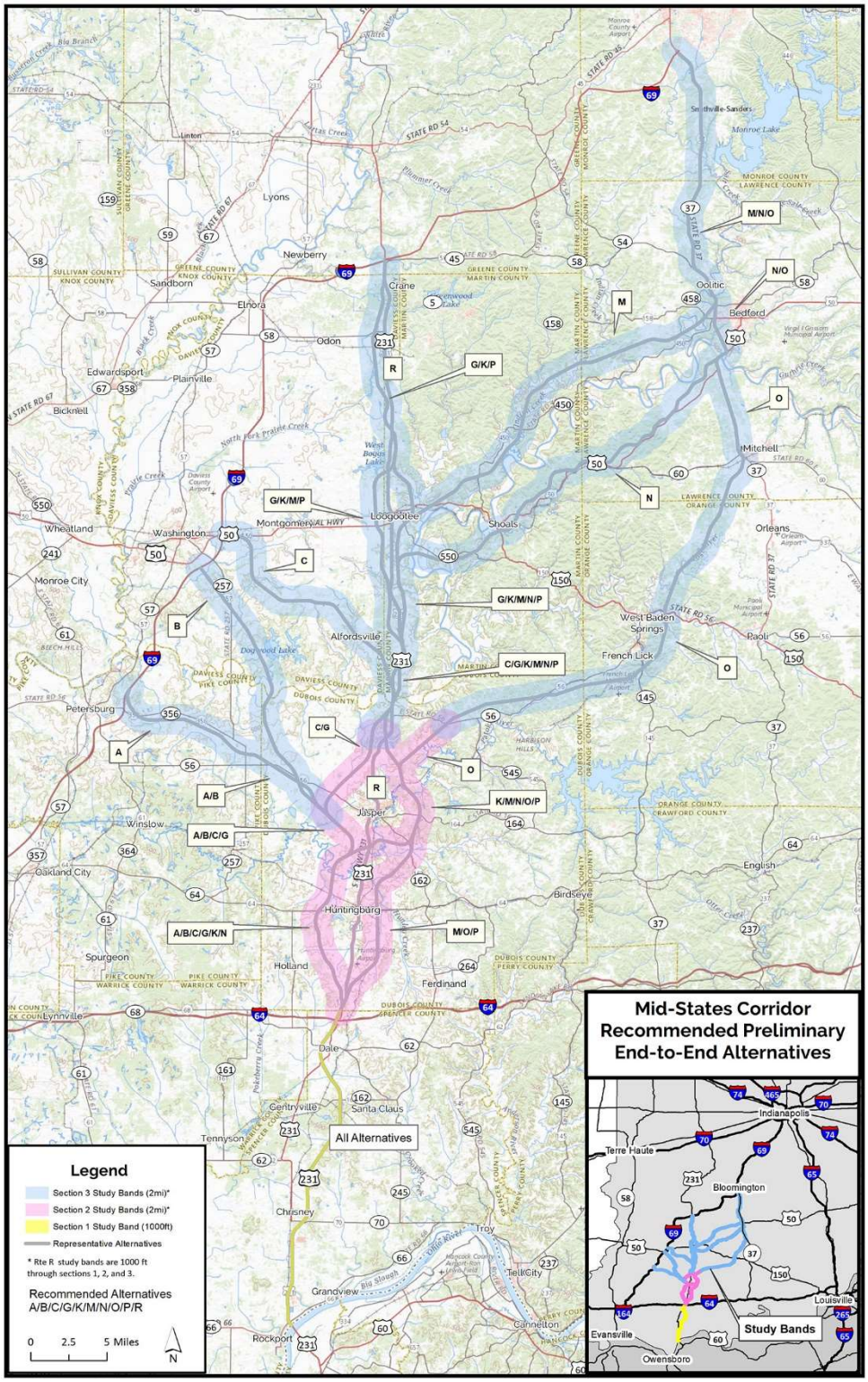

Figure 6-2 – Recommended Preliminary End-to-End Alternatives