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3.2 LAND USE IMPACTS

3.2.1 Introduction

The following substantive changes have been made to this section since the Draft Environmental Impact Statement (DEIS) was published:

- This chapter has been updated to reflect new information associated with impacts from RPA P and Alternative R

Transportation projects can have a wide range of influence on land use along their corridors. Direct impacts are the most immediate and are initiated when right-of-way (ROW) is purchased to convert the land from its original use into a transportation use; however, projects can also produce indirect and/or cumulative effects.

Indirect and cumulative impacts are discussed further in **Section 3.6 – Indirect and Cumulative Impacts**. This section will focus on direct impacts associated with the ROW footprints and access features for the alternatives. **Figure 3.2-1** shows the Study area and alternatives analyzed in this EIS.

3.2.2 Methodology

The analysis of land-use impacts included (1) a review of all land-use plans adopted by counties in the Study Area; (2) an evaluation of the alternatives to determine consistency with land-use plans; and (3) quantifying the direct impacts of each alternative on different land-use types.

The land-use plan review assessed countywide land-use plans for the 12 counties in the Mid-States Corridor Study Area. The date of adoption and horizon year of growth projections were included where available. Where countywide land-use plans were not adopted, municipal and sub-area plans were reviewed. Consistency with land-use plans was evaluated by comparing alternatives with growth, development, and conservation patterns identified within each plan. This review is provided in **Appendix U – Land Use Plan Review**.

The direct impacts of each alternative were calculated using the project's Geographic Information System (GIS). The project GIS is discussed further in **Section 3.1 - Methods**. Direct land-use impacts for each alternative were calculated using the ROW footprints for each of the working alignments. The working alignment includes ROW for both road mainline and access features. Current land cover was represented by the 2016 National Land Cover Database layer, which was updated for forests and farmland using 2018-19 aerial photography. Land cover impacted by the working alignment ROW is grouped into four categories: forest, agriculture, developed areas and other. The "other" category includes emergent and forested wetlands, open water areas, quarries, bare rock areas, shrubland, and non-agriculture grasses. Direct impacts are given as ranges to reflect the potential range of facility types for each alternative. Decisions about facility types, as well as exact alignments, will be made in Tier 2 studies. Refer to **Section 3.1 - Methods** for a description of the Tier 1 approach to impact calculations.

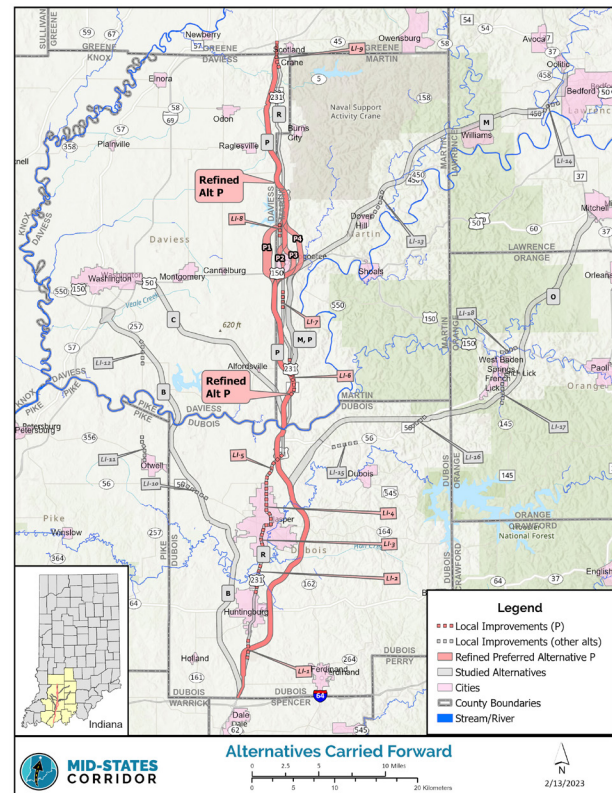


Figure 3.2-1: Mid-States Study Area with Alternatives Carried Forward



3.2.3 Analysis

This section addresses the impacts of Mid-States alternatives upon current and planned land uses in the 12-County Study Area. Analysis was based on a review of land-use plans and direct impact calculations.

3.2.3.1 Review of Land-use Plans

Comprehensive planning is a process that identifies community goals and documents community development aspirations. These goals and aspirations are formally documented in “Comprehensive Plans.” These are used to guide public policies on transportation, utilities, land use, recreation, and housing.

The Mid-States Project Study Area consists of Spencer, Dubois, Perry, Warrick, Pike, Daviess, Crawford, Orange, Martin, Lawrence, Greene, and Monroe counties. Counties with comprehensive plans include Daviess, Dubois, Greene, Martin, Monroe, Perry, Pike, and Spencer. Where countywide comprehensive plans were not available, municipal and other plans were reviewed. Warrick County has a Land Use and Development Thoroughfare Plan. Crawford, Lawrence, and Orange counties do not have comprehensive plans but do have municipalities with comprehensive plans.

Detailed summaries of this review are given in **Appendix U – Land Use Plan Analysis**. **Appendix U** includes maps, figures and sources for all countywide and municipal plans.

3.2.3.1.1 Key Growth Areas

These planning documents anticipate low to modest growth and development in the Study Area. Areas forecasted for growth most commonly are proximate to Interstate highways (I-64 and I-69) and connections to those highways. Multiple countywide and local plans emphasized improved mobility near US 231 in Martin, Dubois, and portions of Daviess counties. Modest growth also was forecasted in and near Jasper, Loogootee, Washington, Petersburg, and Bloomington, as well as in other areas of Spencer and Warrick counties. Growth in rural portions of the Study Area is limited by terrain and access to utility services including water, gas, electricity, and internet.

3.2.3.1.2 Conflicts

Where countywide plans exist, most were adopted prior to 2010. Orange, Crawford, and Lawrence counties have no land-use plans. Inconsistencies and conflicts between future land-use plans and the Mid-States Corridor alternatives were identified. Some of these inconsistencies may be attributed to the length of time since some plans were adopted. **Table 3.2-1** shows each alternative and identifies whether there are conflicts between Mid-States alternatives and county/local land-use plans.

A conflict also was identified between a countywide and municipal plan in Martin County. Martin County’s Comprehensive Plan, adopted in 2009, anticipates a future bypass of US 231 west of the City of Loogootee. The Loogootee Comprehensive Plan, adopted in 2014, anticipates a future bypass of US 231 east of Loogootee. RPA P has variations to the east and west of Loogootee, in addition to one passing through Loogootee. Alternative P has variations to the west and east of Loogootee, with the western variation being the preferred variation in the DEIS.

3.2.3.1.3 Mid-States Coordination

None of the countywide plans explicitly reference the Mid-States project. Both Jasper and Huntingburg published municipal comprehensive plans in 2019. These plans state no alternative preference for the Mid-States corridor. Both direct their respective municipalities to make necessary plans to be consistent with the selected corridor. See **Section 2.3-** of **Appendix U** for details.



CONSISTENCY OF MID-STATES ALTERNATIVES COUNTY LAND USE PLANS							
County	Alternative B	Alternative C	Alternative P	RPA P	Alternative R	Alternative O	Alternative M
Crawford	--	--	--			--	--
Daviess	Conflict: Recreation	Conflict: Recreation	Conflict: Industrial	May have Industrial conflict		--	--
Dubois	Consistent	Consistent	Consistent	Consistent	Consistent	Consistent	Consistent
Greene	--	--	Consistent	Consistent	Consistent	--	--
Lawrence	--	--	--	--	--	Consistent	Conflict: Agriculture, open space (Bedford Comprehensive Plan)
Martin	--	--	Conflict: Residential (Loogootee Comprehensive Plan); State managed lands, conservations lands	Depending upon Loogootee variation selected in Tier 2, may conflict with one or more plans	Consistent	--	Conflict: Open Space (NSA Crane Joint Land Use Study)
Monroe	--	--	--	--	--	Consistent	Consistent
Orange	--	--	--	--	--	--	Consistent
Perry	--	--	--	--	--	--	--
Pike	Conflict: Residential	--	--	--	--	--	--
Spencer	Consistent	Consistent	Consistent	Consistent	Consistent	Consistent	Consistent
Warrick	--	--	--	--	--	--	--

"--" indicates that alternative does not serve that county, or that county has no comprehensive plan.

Table 3.2-1: Consistency of Mid-States Alternatives and Existing Land-use Plans

3.2.3.1.4 Summary of Land-use Plan Reviews

The land-use plan review concluded the following:

- Perry and Warrick counties are not impacted by any alternative, therefore; consistency with these counties' comprehensive plans is not a concern.
- Alternative B generally is consistent with future land-use plans in Daviess and Pike counties. It may impact land designated in the comprehensive plan for residential development in Pike County along SR 356 near the Dubois County boundary. Alternative B has the potential to impact land designated in the comprehensive plan for rural residential development in Dubois County.
- Alternative C generally is consistent with Dubois County plans. Alternative C in Daviess County impacts land designated in the comprehensive plan for industrial use north of Dogwood Lake. However, Alternative C could provide improved access to this area to support development.
- Alternative P is consistent with a previously identified US 231 Huntingburg-Jasper relocation documented in the region's 25-year long range transportation plan. In Martin County, Alternative P's, variation west of Loogootee is consistent with land-use plans in Daviess and Martin counties but impacts planned residential development identified in the City of Loogootee Comprehensive Plan. The Alternative P variation east of Loogootee would not impact this planned development.
- RPA P is consistent with a previously identified US 231 Huntingburg-Jasper relocation documented in the region's 25-year long range transportation plan. RPA P has four variations which are aligned west, east, and through Loogootee. The variation of RPA P selected in Tier 2 may not be consistent with some local plans. Its eastern variations are consistent with planned future roadways and development in the City of Loogootee



Comprehensive Plan. The eastern variation may negatively impact land designated for residential infill in Martin County’s Comprehensive Plan. Its western variation is consistent with land-use plans in Daviess and Martin Counties, but impacts planned residential development identified in the City of Loogootee Comprehensive Plan.

- Alternative O is consistent with the Dubois County Comprehensive Plan and the City of Bedford Comprehensive Plan.
- Alternative M has the potential to impact designated open space in the Bedford Comprehensive Plan. It also could support development of incompatible land uses near Naval Surface Warfare Center – Crane.
- Though no alternatives directly impact Perry County, induced development pressure from the construction of the Mid-States Corridor could result in indirect impacts to agriculture land near I-64 identified for preservation.
- The No-Build Alternative will have no impact on land-use plans.

3.2.3.2 Comparison of Alternative Impacts

Table 3.2-2 shows the range of acreage impacts of the ROW for each alternative. These represent the direct impacts of each alternative. For discussion of indirect and cumulative impacts of this project, see Section 3.6.

Land Use Impacts (acres)					
Alternative	Land Use Categories [^]				Total ROW
	Forests	Agriculture	Developed	Other	
B	306 to 341	1,517 to 1,764	284 to 299	113 to 121	2,220 to 2,525
C	408 to 536	1,082 to 1,408	288 to 319	122 to 141	1,900 to 2,403
M	1,973 to 2,284	1,465 to 1,857	517 to 550	184 to 208	4,138 to 4,900
O	1,572 to 1,734	1,091 to 1,381	367 to 465	133 to 149	3,162 to 3,730
P	613 to 902	1,354 to 1,832	360 to 400	140 to 166	2,497 to 3,226
RPA P	590 to 854	1,272 to 1,832	359 to 400	140 to 164	2,370 to 3,218
R	160	236	693	109	1,198

Tier 1 alternative impacts are reported in ranges including all the alternative variations and facility type options.

**Facility type 1, freeways, has been removed from consideration. Therefore, no modifications to existing US 231 in Section 1 and existing SR 37 in Section 3 are anticipated. No impacts are anticipated on either of these facilities.

[^] Agriculture = cropland and pastureland/hay; Forests = Deciduous, Evergreen, Mixed; Developed = Open, High, Medium, Low; Other= Barren, Emergent Wetland, Grassland/Herbaceous, Open Water, Scrub-Shrub, Woody Wetland

Table 3.2-2: Land-Use Impacts by Alternative



3.2.3.2.1 Forests

Alternative R is along an existing roadway alignment and has the least overall impact to forests. Of the new terrain alignments, Northeastern Alternatives M and O have significantly greater forest impacts than the other new alignment alternative families. They impact two to five times the forest acreage of Alternatives B, C, P and RPA P. Alternative B has the lowest forest impacts and the smallest range of such impacts for the new alignment alternatives.

3.2.3.2.2 Agriculture

Alternative R is along an existing alignment and has the least overall impact to agricultural lands. Of the new alignment alternatives, Alternatives B, M and RPA P have a higher range of agricultural impacts. Alternatives C and O have a lower range of agricultural impacts.

3.2.3.2.3 Developed Areas

Alternative R is along an existing alignment and has the highest impact to developed lands. The makeup of impacts to developed areas are similar for all new alignment alternatives. Each of the new alignment alternatives impacts approximately 60 to 80 percent developed open space, 15 to 30 percent low intensity development, 5 to 15 percent medium intensity development and 1 percent high intensity development. Alternative M has the highest range of impacts to developed lands. This is caused largely by impacts near Bedford, where Alternative M accesses SR 37. Alternative B has the lowest range of impacts to developed lands. Alternative P and RPA P's impacts are below those of Alternatives M and O but higher than those of Alternatives B and C. The larger range of impacts for Alternative O is due to different connection variations to SR 37 for different facility types.

3.2.3.2.4 Other Areas

"Other" land uses include barren land, emergent and woody wetlands, grasslands, shrublands, and open water. Alternative R is along an existing alignment and has the lowest impact to other land uses. The new alignment alternatives have a similar range of impacts, with Alternative B having the smallest impact on these other uses while Alternative M has the most. Impacts of Alternatives C, P, RPA P and O fall between those of Alternatives B and M and are relatively similar to impacts on these other land uses. Alternative M has the largest impacts largely due to the presence of non-agricultural grasslands in the rolling terrain in eastern Dubois County and Lawrence County.

3.2.3.2.5 Total Right-Of-Way

Among the new alignment alternatives, the Northeastern Alternatives M and O require significantly more ROW than Northwestern and North Central Alternatives B, C, P and RPA P. Alternatives M and O are 62 and 53 miles in length, respectively. This difference accounts for the approximately 900 acres of additional ROW for Alternative M compared with Alternative O. Alternative B is the shortest, at 33 miles, but its ROW impacts are similar to those for Alternative C, at 40 miles. This is due to the large area required for its interchange with I-69. RPA P has the widest range of impacts, due to the four variations around Loogootee.

3.2.3.2.6 No-Build Alternative

The No-Build Alternative will have no impacts on land use.

3.2.4 Mitigation

Discussions of mitigation plans for various land-use resources are contained throughout **Chapter 3 – Environmental Resources, Impacts and Mitigation**. For a consolidated summary of proposed mitigation measures, see **Chapter 6 – Environmental Commitments**.



3.2.5 Summary

Alternative O is consistent with existing land-use plans. Alternatives B and C generally are consistent with existing land-use plans, while Alternatives P, RPA P and M have some level of inconsistency with existing land-use plans. Alternative O's lack of conflicts is due in large part to the lack of land-use plans in areas which it impacts. The No-Build Alternative has no conflicts with the land-use plans reviewed.

Alternative M has the highest impacts for total ROW and for all land-use types, except agriculture. Alternative O has higher forest and total ROW impacts. Alternative P generally has a mid-range of impacts to most resources. RPA P, the preferred alternative, has the widest range of impacts, due to its four variations at Loogootee. Alternative B, although it is the shortest alternative, has the highest impact to agricultural land. Alternative C has the overall lowest impacts in all categories.

