

S.1 Introduction

No substantive comments.

S.2 Proposed Action

No substantive comments.

S.3 Process Overview - Tiering, Technical Tools, and Public Outreach

S.3.1 Tiering

No substantive comments.

S.3.2 Technical Tools

No substantive comments.

S.3.3 Public and Agency Outreach

No substantive comments.

S.4 Scoping, Purpose and Need, and Preliminary Screening

No substantive comments.

S.4.1 Scoping Process

No substantive comments.

S.4.2 Purpose and Need

No substantive comments.

S.4.3 Preliminary Screening

No substantive comments.

S.5 Performance, Cost and Environmental Analysis

S.5.1 Performance and Cost Analysis

1. “Page S-19: The sentence beginning with “Alternative 4B is a moderately high performer with high scores . . .,” is repeated.” (1107-697 Dept. of Interior, p. 8)

This has been corrected in the FEIS.

S.5.2 Environmental Impacts Analysis

1. “Page S-20: It is unclear to us why section S.5.2, environmental impacts analysis, gives no attention to the GCV as an environmentally sensitive area that may be impacted by the project, when others that may be less sensitive, such as Flat Creek Wetland Complex, are given attention.” (1107-697 U.S. Dept. of the Interior, p. 8)

The Garrison Chapel Valley area is an environmentally sensitive area, and it has been specifically disclosed in the Summary. Impacts to the Garrison Chapel Valley were a major factor in eliminating Alternative 3B. Preferred Alternative 3C does not impact Garrison Chapel Valley.

2. “Page S-21/22: Please include rivers listed on the NRI and summarize impacts with respect to significant resource values, including scenic and recreational resources. Noise and visual impacts to recreational and scenic values should be addressed.” (1107-697 U.S. Dept. of the Interior, p. 8)

NRI listed rivers have been included in the Summary and Section 5.11. Preferred Alternative 3C crosses the East Fork of the White River. The East Fork is listed on the NRI because of its scenic, recreational, geologic, fish, and historic values.

S.6 Summary Comparison of Alternatives

1. “Page S-24: Table S-6 contains a wealth of information; however, as presented here, it is exceedingly difficult for the reviewer to clearly discern which alternatives perform the best in regard to the stated purpose and need for the project and in avoiding/minimizing adverse environmental impacts. An overall index or relative ranking system for each criterion, as well as totaled for each alternative, is needed to facilitate comparisons of alternatives.” (1107-697 U.S. Dept. of the Interior, p. 8)

Given the number of performance measures and ranges of impacts, a simple index or scoring system would not add value to the analysis. The importance of various impacts depends very much upon the perspective of the reviewer, and the mission of his or her agency. The analysis presented the information necessary for the reader to evaluate the impacts, costs and performance of each of the alternatives.

2. “Page S-26 and page 6-6: Under “Advantages” of Alternative 3B is listed “Low potential impacts to karst features (e.g., caves, sinkholes, sinking streams basins; 30 acres).” The FWS strongly disagrees with this statement and feels this analysis is inadequate and

misleading. First, the DEIS fails to clearly distinguish caves (i.e., potential Indiana bat hibernacula) from other karst features. The DEIS also fails to adequately consider the remarkably high density of caves in the GCV. For example, an area having a cave density of 8 caves/km² occurs within the 2-mile study band of Alternative 3B (page 6-12, Fig. 6-6). Similarly, an area with an apparent cave density of 14 caves/km² is located approximately 1 mile east of Alternative 3B's 2-mile study band. No other alternative crosses, or comes close to, any areas having a cave density as high as, or higher, than Alternative 3B. Therefore, even though the Alternative 3B corridor itself may cross a relatively small area of karst features, the FWS believes this corridor has a HIGH potential for impacts (both direct and indirect) to caves and cave-dwelling fauna because of its proximity to the GCV karst ecosystem and its juxtaposition within an urbanizing landscape. We recommend listing alternative 3B's high potential for impacts to karst features as a disadvantage." (1107-697 U.S. Dept. of the Interior, p. 8)

The discussion of the Garrison Chapel Valley in Section 5.23 has been revised to reflect this comment. In addition, a comparison of alternatives is located in Chapter 6. The requested changes have been made to that Chapter.

3. "Page S-26/27, pages 6-6 and 6-8: Proximity to hibernacula for the federally endangered Indiana bat is listed as a "Disadvantage" of Alternatives 3A and 3C but not for alternative 3B, even though this alternative comes closer to the known hibernacula than the other two options." (1107-697 U.S. Dept. of the Interior, p. 9)

Proximity to Indiana bat hibernacula has been added as a disadvantage for Alternative 3B in the FEIS (Section 6.1). This discussion is no longer included in the Summary Chapter.

4. "Page S-26/28: Potential increased costs due to mitigative measures for karst and forest habitat within 5-miles of Indiana bat hibernacula should be listed as "Disadvantages" of Alternatives 3A, 3B, and 3C. " (1107-697 U.S. Dept. of the Interior, p. 9)

This has been added to Section 6.1 (This discussion is no longer included in the Summary Chapter). In addition, estimates of the costs associated with mitigative measures for all alternatives have been included in the FEIS. Also, as documented in the FEIS, INDOT will provide technical and financial assistance for land use planning to assist counties and local communities in minimizing these impacts.

S.7 Areas of Controversy

1. **“Page S-29:** The INDOT and FHWA use economic growth as a selling point for the I-69 project, and on page S-29 the DEIS identifies the “extent and location of economic development that would be stimulated by the highway” as a “critical issue” and an “area of controversy.” However, the DEIS fails to delineate/depict where potential development is most likely to occur along the alternative routes. The Final EIS should discuss such issues as: 1) where along the routes zoning restrictions are currently in place that would be protective of sensitive environmental areas and fish and wildlife resources; 2) the remaining capacity of existing industrial parks and the possible need for others to be developed; 3) the areas in which new industrial, commercial, and residential growth would most likely occur; and 4) whether applications for sanitary septic system permits are likely to increase, especially in karst areas. Without this type of information, we are unable to adequately assess the possible extent of indirect effects of reasonably foreseeable growth associated with each alternative on T&E species and other fish and wildlife resources. Therefore, we have based our recommendations on the cautious assumption that induced secondary impacts from I-69 are not likely to be protective of T&E species or sensitive fish and wildlife resources but are likely to destroy and/or further degrade important habitats within the vicinity of the alternative routes.” (1107-697 U.S. Dept. of the Interior, p. 9)

Potential development is closely tied to interchange locations along I-69. Controlling development around these interchanges requires local zoning and subdivision ordinances that the counties and cities can develop and use to guide development. Urbanized counties like Hendricks, Johnson, Knox, Monroe, Morgan, Vanderburgh, Vigo, and Warrick have adopted ordinances. Clay, Daviess, Gibson, Greene, Lawrence, Martin, Owen, Pike, Putnam, and Sullivan do not have ordinances. These latter counties currently have no regulations guiding industrial, commercial, and residential growth. Along the Preferred Alternative 3C, sensitive karst features are concentrated in Monroe County. Monroe County has extensive zoning and subdivision ordinances that can work towards protecting the karst areas, as further described in Section 5.2. Tier 2 will involve working with city and county officials on interchange locations and the potential for development in areas around the interchanges. Tier 2 will also encourage officials to consider using zoning and subdivision ordinances to guide development in sensitive environmental areas. As documented in the FEIS, INDOT will provide technical and financial assistance for land use planning to assist counties and local communities in minimizing these impacts.

With regard to this analysis of induced growth, Tier 1 has analyzed the potential for induced growth in the Study Area as a whole, as described in Section 5.26. More localized analysis of induced growth will occur in Tier 2 EISs.

With regard to the assumptions made in Tier 1 EIS for purposes of assessing the impacts of secondary development on threatened and endangered species and other sensitive fish and wildlife resources, FHWA and INDOT agree that it is appropriate to make cautious assumptions and to develop protective mitigation measures based on those assumptions. As noted in Chapter 7, the mitigation measures will be refined in the Tier 2 EISs when more detailed impact information is available.

In addition, since the DEIS, Section 7 consultation (Endangered Species Act) has occurred with the US Fish and Wildlife Service. This consultation has resulted in a Biological Opinion (BO). The BO concludes that the Preferred Alternative 3C would not jeopardize the continued existence of any threatened or endangered species.

S.8 Regulatory Actions Associated with This Project

No substantive comments.

S.9 Summary of Major Findings

No substantive comments.

S.10 Next Steps for Tier 1

No substantive comments.

S.11 Glossary of Key Terms

1. “Page S-33: We recommend including the definitions of “Karst” and “Threatened and Endangered Species” in this glossary of key terms.” (1107-697 U.S. Dept. of the Interior, p. 9)

Karst and Threatened and Endangered species (TES) are included in the FEIS glossary.

1.1 Previous Studies

1. “When I-69 was being constructed back during the 1960's why did it stop at Indianapolis? Did someone drop the ball at that time? I heard or read sometime ago the Representative from the Evansville district was not present at the continuation of the project meeting. What was the real reason for this stopping at Indianapolis?” (1107-025 Herr)

As Section 1.1 describes, various plans were put forward in the past several decades for an Evansville to Indianapolis highway. The initial studies of potential Interstate routes developed in Indiana during the 1940s included a route from Evansville to Indianapolis. The lack of system continuity through Kentucky to the south of Evansville was a major factor in the decision not to include that route in the initial plans for the Interstate system.

1.2 Federal Actions

No substantive comments.

1.3 Indiana Statewide Plans

No substantive comments.

1.4 Current Environmental Impact Statement (Tier 1)

1. “If I69 is really to be a new national road then I would be much happier if someone like the GAO was performing this study rather than an area firm. I do not mean to criticize BL&A specifically but local politics and special interests have an unavoidable influence. We need to determine what will be best for the nation - I believe I'm correct that most of the funding will come from my federal taxes rather than my state taxes; money that I could otherwise use to do my duty as a consumer to spend to prop up the economy or money that could be used to fight a war on terror.” (1025-033 Vernier)

The FHWA is responsible for preparing the appropriate NEPA documentation like this Environmental Impact Statement (EIS) for any project utilizing federal funds or requiring a federal action. Under FHWA regulations, the EIS is to be prepared by FHWA in cooperation with the applicant, which in this case is INDOT. (23 CFR 771.123(c)) The regulations also allow the applicant, INDOT, to select a consultant

to assist in preparing the EIS (23 CFR 771.123(d)). This EIS has been prepared in accordance with those directions.

1.5 Tier 2 NEPA Studies

1. **“Page 1-10:** We recommend the text under “Scope of Environmental Analysis” for Tier 2 NEPA Studies be expanded upon. This section should at least list the specific surveys/studies that will be conducted in tier 2 that were not conducted as part of Tier 1 studies (e.g., wetland delineations, T&E species surveys, and karst surveys).” (1107-697 U.S. Dept. of the Interior, p. 9)

This section has been expanded in this FEIS to specify the surveys and studies, which will be conducted in the Tier 2 EISs. Table 1-2 describes the specific information.

2.1 Statement of Purpose and Need

1. “The heart of INDOT’s DEIS - the purpose and need statement, reflects INDOT’s continuing attempt to create needs where they do not exist, and to invent purposes to fulfill those imaginary needs. For example, the biased purposes “strengthening the transportation network in Southwest Indiana” and “supporting economic development in Southwest Indiana” support INDOT’s pre-ordained new-terrain alternative to the detriment of Alternative 1. INDOT’s “rigging” of the DEIS in this manner, especially in the face of reasonable alternatives, violates NEPA.” (1107-705 ELPC et. al., p. 1)

“Since an all-new 150 mile long highway would be more difficult to justify simply for the purpose of connecting Indianapolis and Evansville - the environmental and economic costs far outweigh the benefits - INDOT has invented other purposes to better justify building an all-new highway. These purposes include “strengthen[ing] the transportation network in Southwest Indiana,” and “support[ing] economic development in Southwestern Indiana.” (1107-705 ELPC et al, p. 10)

“This outcome-controlled “rigging” of purpose and need violates NEPA, which “does not give agencies license to fulfill their own prophecies, whatever the parochial impulses that drive them.” Citizens Against Burlington, Inc. v. Busey, 938 F.2d 190, 195 (D.C. Cir. 1991).” (1107-705 ELPC et al, p. 10)

“Because an upgraded US 41/I-70 (Alternative 1) serves that purpose as well as INDOT’s preferred routes and at much lower cost, INDOT and FHWA repeatedly have concocted different purposes who [sic] fulfillment would require a new highway.

“For example, in the flawed 1996 DEIS for an Evansville to Bloomington highway, a primary goal of the project was to support economic development throughout Southwestern Indiana and the rest of the state, with a focus on four counties along the proposed new-terrain corridor. By 1997, INDOT had narrowed the purpose of the highway to improving economic development along just the four counties - Gibson, Pike, Daviess, and Greens - which would have eliminated the US 41/I-70 route from consideration.

“Then, in 1998, INDOT finally admitted that a “major objective” of the project was connecting Indianapolis and Evansville. Since the US41/I-70 alternative serves that purpose at much less cost and environmental destruction than a new terrain route, INDOT added another biased purpose to tilt the scales in favor of a new-terrain route: “Strengthen the entire highway network in southwestern Indiana.” (1107-705 ELPC et al, p. 11)

The Purpose and Need for this project was carefully developed based upon a review of three factors: (1) applicable transportation policies, as established by Congress in legislation and by the State of Indiana in legislation and in its long-range transportation plan; (2) a comprehensive needs assessment, which involved extensive traffic forecasting and economic modeling; and (3) public and agency consultation, which included two rounds of public comment on the purpose-and-need statement.

Based on consideration of all of these factors, INDOT and FHWA developed a multi-dimensional statement of purpose-and-need that reflects the full range of goals that are intended to be served by this large-scale project. In addition to connecting Evansville and Indianapolis, the project goals also included several other important elements, such as increasing accessibility throughout Southwest Indiana; increasing safety and reducing congestion in Southwest Indiana; supporting economic development in Southwest Indiana; and supporting national goals associated with the completion of the National I-69 project. These goals have a strong basis in the policies adopted by Indiana legislation and the statewide transportation plan, and by Congress and federally established policies and legislation. These goals also are well-supported by the needs assessment included in the FEIS. All of these goals must be taken into account in order to reflect the full range of objectives associated with this large-scale project.

It also is important to point out that the goals established in the purpose-and-need statement allowed for consideration of a wide range of alternatives and did not automatically eliminate any particular route for connecting Evansville and Indianapolis. The fact that certain alternatives (including Alternative 1) performed poorly in meeting the project's goals is a reflection of the inherent limitations of those alternatives; it is not a reflection of bias in the development of the purpose-and-need statement.

2.2 Policy Framework

2.2.1 Federal Legislation and Policies

1. “National Highway System (NHS) requirements, which help to guide the decision-making process for new highway projects, support upgrading existing roads as the best solution to the I-69 project. The DEIS, however, does not discuss the significance of these requirements. For example, one criterion for adding a highway to the NHS requires that INDOT assess whether modifications to the existing NHS routes may be preferable to new highway construction (criterion 7). (23 CFR Part 470, Appendix D)” (1107-705 ELPC et al, p. 14)

“The P & N Statement briefly discusses the National Highway System (NHS), but does not explain its relevance to the purpose and need for the I-69 project. The NHS roads in Indiana are shown in Figure 1 of the P & N Statement. Any new I-69 highway – including an upgraded US 41 and I-70 – will be included in the NHS. Therefore, INDOT needs to explain the process for adding a new road to the NHS.” (1106-147 CARR/HEC/ELPC Attachment B)

“Federal regulations set forth the criteria for state additions to the NHS. The P & N Statement should have discussed the role of these criteria in selecting a highway alternative. For example, one of the criteria requires that INDOT assess whether modifications to existing NHS routes may be preferable to new highway construction (criterion 7). This criterion strongly supports the choice of upgrading US 41, which part of the NHS, to interstate standards. INDOT also is required to evaluate the effects of adding a new NHS route on existing NHS routes that are in close proximity (criterion 6). Since US 41 is part of the NHS, INDOT will need to study the impacts of any new-highway alternatives on US 41.” (1106-147 CARR/HEC/ELPC Attachment B)

The National Highway System – as established in the National Highway System Designation Act of 1995 – already includes a NHS route connecting Evansville to Indianapolis via Bloomington. See Figure 2-1 in Volume I. Therefore, construction of Preferred Alternative 3C would not require “adding a new highway” to the NHS in Indiana. As a result, the criteria established in FHWA regulations for deciding whether to add new routes to the NHS are inapplicable.

Moreover, even if the Evansville to Bloomington to Indianapolis route was not already included on the NHS map, the addition of this route to the NHS map would be justified based on the analysis presented in this Tier 1 EIS. Specifically, the analysis contained in this document demonstrates that completion of an Interstate route linking these three major cities in Southwest Indiana is fully consistent with the goals of the NHS because this route directly connects major population and employment centers.

2. “One of INDOT’s three current purposes for the Interstate 69 project is to complete Indiana’s portion of Corridor 18. A major problem with including this purpose is that it eliminates the “no-build” alternative from consideration, despite a legal requirement to do so. See 40 CFR 1502.14(d), 1508.25(b)(1). INDOT has promised to consider the no-build alternative, which would allow INDOT to seriously consider other transportation options, such as high-speed rail. Completing Indiana’s portion of Corridor 18 – which Congress has designated as an interstate highway – requires construction of a new or upgraded highway through Southwestern Indiana. Since inclusion of that goal will force

INDOT to violate NEPA (by eliminating the no-build alternative), INDOT should eliminate the Corridor 18 goal from the project. Otherwise, INDOT's statement that it will seriously consider a no-build alternative simply is not credible." (1106-147 CARR/HEC/ELPC Attachment B)

"One of INDOT's three core goals for the Interstate 69 project is to complete Indiana's portion of Corridor 18. A major problem with including this goal is that it eliminates the No Build Alternative from consideration, despite a legal requirement to consider it. INDOT has promised to consider the no-build alternative, which would allow INDOT to seriously consider other transportation options, such as high-speed rail. Completing Indiana's portion of Corridor 18 - which Congress has designated as an interstate highway - requires construction of a new or upgraded highway through Southwestern Indian. Since inclusion of that goal will force INDOT to violate NEPA (by eliminating the no-build alternative), INDOT should eliminate the Corridor 18 goal from this project." (1107-705 ELPC et al, pp. 35-36)

The Federal Highway Administration has directed that all NEPA studies along the I-69 Corridor should include a goal related to the National I-69/Corridor 18 project, as well as state and local goals. The Notice of Intent for this study, published in the Federal Register on January 5, 2000, states: "This proposed action is intended to complete the Indiana portion of Corridor 18, a strategic, high-priority corridor linking Canada, the United States, and Mexico. ... Any alternative corridors under evaluation in Southwest Indiana must be analyzed in respect to meeting the objectives of Corridor 18." The Announcement of I-69 Status in the December 8, 2000 Federal Register states: "The I-69 corridor (originally known as Corridor 18) was designated by the U.S. Congress as a High-Priority Corridor of National Significance in the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). ... This notice also announces that the advancement of I-69 is moving from the corridor planning and feasibility stages to the state project planning development and FHWA NEPA process and decision stages. Each state will study sections identified above, addressing state and local needs, schedules, and funding constraints in accordance with the FHWA NEPA process. State and local needs for any particular project will be considered, as well as the national legislative and administrative objectives for the movement of goods across the county."

Furthermore, the completion of the National I-69 corridor between Evansville and Indianapolis is clearly a permissible objective of this proposed action. The completion of I-69 between Indianapolis and Evansville was specifically designated by Congress as a "high priority" in 1991, and that national policy has been reiterated in legislation enacted in 1995 and 1998. (See FEIS Section 1.2, for further information.) The FHWA and INDOT properly relied upon these legislatively

enacted national policies as the basis for incorporating the National I-69 goal in the purpose-and-need statement for this project.

The comments made by this commentor appear to assume that the only acceptable goals in a purpose-and-need statement are goals that can be accomplished by the No Build Alternative. The CEQ regulations simply require that the No Build Alternative be analyzed along with the other alternatives considered in an EIS. In other words, it requires agencies to consider the possibility of maintaining the status quo, rather than taking action to achieve the objectives of a proposed project. The FHWA and INDOT have fully complied with this requirement, by continuing to consider the No Build Alternative throughout the course of this study.

The No Build scenario is, by its very nature, incapable of achieving the National I-69 goal, just as it is incapable of achieving any of the goals specified in the Purpose and Need statement. The fact that the No Build scenario is incapable of achieving the national I-69 goal does not make it inappropriate to include the national I-69 goal for the purpose and need for the project. The No Build scenario was considered and analyzed throughout the document and in the selection of a preferred alternative.

3. “A separate reason to remove the Corridor 18 purpose from the P & N Statement is that a new Canada-to-Mexico highway is not necessary. Traffic already flows freely between Canada and Mexico on existing highways. There is no compelling transportation need to build a major new interstate route that would drain Indiana’s budget and simply transfer economic benefits from one area to another. INDOT concedes that federal law “does not require states to complete I-69; if an individual state does not want to complete its portion of I-69, it will not be compelled to do so. Given the voluntary nature of Corridor 18, and that it is decades away from construction, the goal of completing Indiana’s portion of Corridor 18 through new highway development is unnecessary and should be eliminated. INDOT instead should focus on the true purpose of the I-69 highway project – improving the connection between Indianapolis and Evansville in a fiscally, environmentally, and socially responsible manner.” (1106-147 CARR/HEC/ELPC Attachment B)

“Moreover, traffic already flows freely between Canada and Mexico on existing highways. There is no compelling transportation need to build a major new interstate route that would drain Indian’s budget and simply transfer economic benefits from one area to another.” (1107-705 ELPC et al, p. 36)

“It is important to remember as the DEIS notes that Indiana is not required to complete I-69 (Corr 18) through the State. INDOT’s decision to include the I-69 extension from Indianapolis to Evansville as a core goal is therefore arbitrary.” (1106-147 Tokarski, p. 5)

“A separate reason to remove the Corridor 18 goal from the DEIS is that a new Canada-to-Mexico highway is not legally or practically necessary. In the draft purpose and need statement for Evansville to Indianapolis I-69, INDOT conceded that federal law “does not require states to complete I-69; if an individual state does not want to complete its portion of I-69, it will not be compelled to do so.” (1107-705 ELPC et al, p. 36)

“Finally, the objective of facilitating freight and people through the Canada-to-Mexico I-69 corridor is wholly unsupported by the draft P & N Statement. The P & N Statement repeats the national goals for the project, but has failed to demonstrate any local need. Indeed, even at the national level, as INDOT concedes, construction of the highway is entirely voluntary. The P & N Statement’s failure to demonstrate a local need for the national I-69 project violates NEPA and should be removed from the final P & N Statement.” (1106-147 CARR/HEC/ELPC Attachment B)

The completion of the National I-69 corridor (previously known as Corridor 18) is a legislatively enacted policy of the United States. This policy was adopted by Congress based on extensive feasibility studies of the corridor. Those studies analyzed the long-term traffic trends in the corridor and considered the potential for a new Interstate route to accommodate future traffic flows, including freight flows. The resulting decision by Congress to designate I-69 as a “high priority corridor” reflects a strong national commitment to complete this new Interstate corridor as a part of our National Highway System.

The national legislation does not legally compel individual States to complete I-69 within their borders. However, the national legislation provides a sound public policy basis for individual States to adopt the goal of completing their respective sections of I-69. That is what Indiana has done here: it adopted the completion of I-69 between Evansville and Indianapolis as one of the goals of this project, while continuing to pursue its long-standing objectives of improving the transportation network and supporting economic development in Southwest Indiana. The decision to define the goals of this project in this manner is entirely consistent with NEPA and with the policies reflected in the I-69 legislation.

In addition, the National I-69 project provides for much more than a highway connecting Canada and Mexico. It is intended to benefit freight movements at all places along its designated route. As such, Congress has specified that it would connect Port Huron, Michigan; Indianapolis, Indiana; Evansville, Indiana; Memphis, Tennessee; Shreveport/Bossier City, Louisiana; Houston, Texas; and also include several connecting routes from Houston to the Mexican border.

Research by FHWA has emphasized the growing importance of freight flows on NHS routes in upcoming years. See Section 2.2.1.2 for further discussion.

2.2.2 Indiana Statewide Transportation Policies

1. “INDOT, however, places little value on the environmental and economic benefits of using existing highways. In sharp contrast, the Kentucky Transportation Cabinet has identified the following three state goals for I-69:

Maximize the use of existing parkways; (emphasis made by comment)
Serve local industry; and provide an improved facility for increasing truck traffic.

“According to the Kentucky Transportation Cabinet, ‘[e]nvironmental concerns should be reduced since the majority of corridor improvements will be made within existing right-of-way or immediately adjacent to the existing parkways.’ INDOT should have followed Kentucky’s example for I-69 and included the goal of upgrading existing roads in the purpose and need statement.” (1107-705 ELPC et al, p. 13)

“For example, Kentucky’s first two purposes for its I-69 planning process are 1) maximizing the use of Kentucky’s existing parkway system; and 2) minimizing environmental impacts. INDOT should follow the same common sense approach.” (1017-018 Hamilton)

“Interestingly, the governor of Kentucky and his legislature have already decided to use existing roads for their I-69 upgrade. Why not Indiana?” (1029-042 Kazdan)

Kentucky’s parkway system consists of limited-access highways where vehicles may enter or exit only at interchanges. By contrast, existing four-lane highways in the 26-county I-69 Study Area in Indiana (US 41, SR 37, US 50) provide at-grade access via private driveways and dozens of intersecting state and county roads. Upgrading these existing four-lane highways in the Study Area would be much more disruptive to adjacent land use than upgrading parkways that already have many freeway design features.

It also is important to note that the statements attributed to the Kentucky Transportation Cabinet are not part of any NEPA document or purpose and need statement. They represent what is best characterized as vision statement, for future NEPA studies, for particular sections of I-69.

A portion of the National I-69 Project in Kentucky has entered the NEPA process. The Purpose and Need for this project, (I-69 between Evansville, Indiana and Henderson, Kentucky) has three principal goals in its Purpose and Need Statement. These include (1) to support completion of I-69 as a national and international trade corridor; (2) to provide sufficient cross-river mobility in the Evansville/Henderson

area; and (3) to strengthen the transportation network in the Evansville /Henderson area. No statement about use of existing parkways is made in the Evansville to Henderson project’s Purpose and Need statement.

2. “Apart from a cursory discussion in Section 2.2.2.2 of the DEIS, INDOT fails to explain the relevance of the State’s transportation policies to the project.” (1107-705 ELPC et al., p. 14)

“A fundamental problem with the section on Indiana Statewide Transportation Policies is that the P & N Statement does not explain the relevance of the policies to the I-69 route selection process. The P & N Statement needs to explain how the overall transportation policies, economic growth policies, and highway system policies will impact the I-69 project. Without any explanation of either context or relevance, it is impossible to analyze the section of the P & N Statement in detail.” (1106-147 CARR/HEC/ELPC Attachment B, p.5)

The State’s transportation policies, as contained in Statewide Plans, govern all of INDOT’s transportation planning activities. These policies were included since they guided the needs analysis and helped to determine the needs that were identified. This is stated in the first sentence of Section 2.3, “Guided by the federal and state legislation and policy decisions described above, FHWA and INDOT have undertaken a comprehensive needs assessment for this project.” State transportation policies guide all activities of state transportation departments, so that it is not necessary to begin every project from a “blank slate.”

3. “*Transportation System Effectiveness* is best served by maintaining and upgrading the network of *existing* National Highway System roads in Indiana, and targeting safety “hot spots” for improvements. Building a single expensive all-new highway that drains the State budget is the least likely option to achieve a robust, well-integrated system.” (1107-705 ELPC et al, p. 14)

There are many types of actions (e.g., upgrading existing highways, making intersection improvement, building new highways, etc.) that contribute to the goal of promoting Transportation System Effectiveness. All appropriate transportation options must be considered for identified needs.

Transportation System Effectiveness measures used in this study (e.g., safety and congestion relief benefits) considered benefits to the entire transportation system. In addition, alternatives that include new construction benefit the entire transportation network. They create linkages, which provide increased mobility throughout the transportation network.

In this Study many alternatives were considered, and nearly all included a significant amount of upgrading of existing highways. For example, over one-third (35%) of Preferred Alternative 3C will be an upgrade of existing four-lane roads. Of the five preferred alternatives in the DEIS, Preferred Alternative 3C uses the second-highest percentage of existing four-lane roads.

With reference to the National Highway System, the existing National Highway System map for Indiana includes a new highway south and west of Bloomington connecting to Evansville as a placeholder for I-69. In determining Indiana's National Highway System, it was anticipated that a new highway is needed in this area.

4. ***“Natural Environment and Energy.*** The 1995 Long-Range Plan commits INDOT to establishing a transportation system that protects the environment. Building any all-new highway that destroys thousands of acres of prime farmland and forests, harms communities, and exacerbates urban sprawl is obviously incompatible with this policy.” (1107-705 ELPC et al, p. 15)

Preferred Alternative 3C is not an “all-new” highway. Thirty-five percent (35%) of its length consists of the upgrade of an existing four-lane highway (SR 37).

When a new highway is necessary, INDOT takes appropriate measures to safeguard the environment. INDOT’s planning for this project demonstrates its commitment to protecting the environment. Thousands of staff hours have been devoted to identifying the most environmentally responsible way to meet the transportation and economic development needs of Southwest Indiana.

In addition, as Chapter 7, *Mitigation and Commitments*, documents, the I-69 project will include significant environmental mitigation and environmental enhancements. It will include substantial increases in the acres of wetlands, forested lands, and protected ecosystems in Southwest Indiana. The I-69 project will have significant environmental impacts, but will also result in significant environmental enhancements to Southwest Indiana.

5. “Figures 2-3 and 2-5 show a new terrain route for the proposed I-69. Figure 2-5 even shows a connection with US 231. This indicates an inherent bias for a new terrain route for I-69.” (1106-147 Tokarski, p. 6)

“A clear reflection of the bias in the P & N Statement is that it shows INDOT’s 1996 ill-fated new terrain highway as one of Indiana’s “Commerce Corridors.” The 1996 new-terrain highway is not a Commerce Corridor because it was never built. Including the

fictional new- terrain highway in Figure 3 of the P & N Statement is prejudicial, and reflects the institutional bias in favor of a new-terrain road. INDOT should remove the road from the map.” (1106-147 CARR/HEC/ELPC Attachment B p. 6)

“Figure 2.3 in the DEIS, which illustrates the Mobility Corridors, confirms INDOT’s bias. This figure includes a dashed line representing a high-speed “Mobility Corridor” connecting Indianapolis, Bloomington, and Evansville. INDOT’s explanation for the line confirms our belief that INDOT remains committed to a new-terrain route through the Bloomington area.” (1107-705 ELPC et al, p. 18)

Figures 2-3 and 2-5 were extracted from the INDOT 2001 Statewide Transportation Plan. Each of these figures show transportation corridors designated by Indiana in its Statewide Transportation Plan. The Statewide Transportation Plan was prepared in accordance with the statewide transportation planning process as required by federal law, under 23 USC 135.

Figure 2-3 shows the planning corridor hierarchy in INDOT’s statewide transportation plan. A strategic goal in the statewide plan is to provide mobility across the state with Statewide Mobility Corridors. These Mobility Corridors directly connect major metropolitan areas of over 25,000 in population with free-flowing, high-speed connections. The dashed corridor shows a connection between Evansville and Bloomington, because no specific route for this free-flowing, high speed connection has yet been established when the Plan was adopted. However, the dashed line shows that one of INDOT’s goals is to provide a Statewide Mobility Corridor between Evansville and Bloomington. This goal was based on the population and employment of these two metropolitan areas.

Figure 2-5 shows Indiana’s Commerce Corridors, which INDOT was directed to establish in 1991 by action of the Indiana Legislature. A dotted line connecting Bloomington and Indianapolis designates a future Commerce Corridor for which no specific alignment has yet been established. This Commerce Corridor was identified in the 1992 INDOT Highway System Plan. This Plan was published four years prior to the publication of the 1996 DEIS cited above.

Preferred Alternative 3C will provide the Statewide Mobility and Commerce Corridors designated in INDOT’s Statewide Transportation Plan. If not addressed by this project, the need for such a high-speed corridor between Evansville and Bloomington would have to be addressed by another, future project. Such a project would not necessarily involve a freeway, but would involve a four-lane, divided highway between Evansville and Bloomington.

6. “Overshadowing the EIS process is Indiana Governor O’Bannon’s strong and longstanding desire to build a ‘straight-line’ direct route for I-69. According to the Governor, “I’ve been for I-69, the direct route, all my public life.” Equally troubling is the Governor’s dislike for the merit-based process of selecting the best alternative: “What would really make me feel good is if we had a Congress that would change those (NEPA) rules and regulations” that, in his view, have unnecessarily delayed the project. With such a clearly stated new-terrain highway bias from the State’s chief executive, INDOT’s burden to prepare an objective and credible analysis of reasonable alternatives – both highway and non-highway – is even heavier than usual. In this case, INDOT’s P & N Statement falls far short of meeting that burden.” (1106-147 CARR/HEC/ELPC Attachment B)

The expression of an opinion by a governor or other elected official is a normal part of the transportation planning decision-making process. The statements of the governor have no bearing on legal requirements under NEPA. It is the responsibility of the Federal Highway Administration, as the lead federal agency, to ensure that NEPA requirements have been satisfied. All stages of this project have included considerable involvement by the Indiana Division of the Federal Highway Administration and FHWA Headquarters. At key stages of this study (e.g., preparation of the DEIS and FEIS), this involvement was on a day-by-day basis. Based on this extensive oversight and independent review, FHWA is satisfied that all legal requirements have been met.

2.3 Needs Assessment

1. “The DEIS includes in the No Build scenario planned improvements along Alternative 1 but not at least one other significant improvement along the “preferred” routes. Consequently, the DEIS *understates* the benefits of Alternative 1, and *overstates* the benefits of certain other routes, which is an unfair and unlawful bias against alternative 1.” (1107-705 ELPC et al, p. 2)

“It (the DEIS) biases results against I-70/US 41 by including improvements along I-70/US 41, but not similar improvements along alternative routes, in the No-Build Scenario. This depresses I-70/US 41’s scores on numerous performance measures, and inflates the scores of Indiana DOT’s ‘preferred’ routes.” (1107-703 Smart Mobility, p. 3)

“The I-70 widening projects cover the entire distance of the I-70 portion of Alternative 1. The Terre Haute bypass (SR 641) is also part of Alternative 1. The Indiana DOT’s *Long Range Plan* lists both the Indianapolis portion of I-70 widening and the Terre Haute bypass as programmed for 2004. Inclusion of these projects in the No Build scenario

appears justified. However most (42 miles out of 48 miles) of the I-70 widening is shown in the *Long Range Plan* as scheduled for 2022 and 2024. Dates twenty years in the future do not meet the criteria “to be built in the near future.” And it strains credulity to characterize projects listed for such a distant dates as the ones that Indiana DOT “has a firm, long-term policy to build. ... Including the entire I-70 widening in the No-Build scenario results in understating the benefits of Alternative 1. Widening I-70 will provide significant travel benefits, such as decreased travel times and reduced congestion. However, much of that benefit is already included in the No-Build scenario, and it therefore does not show up in the tables as a benefit of Alternative 1 (or of other alternatives that incorporate shorter parts of I-70).” (1107-703 Smart Mobility, p. 6)

Assumptions regarding I-70 affect all alternatives, not just Alternative 1. The benefits of all alternatives increase if the I-70 upgrade is not included. The increase in benefits for alternatives that do not use I-70 is due to greater diversion from the US 41/I-70 route to the new highway due to more heavy congestion on I-70.

The No Build scenario included the added lanes on I-70 because these added lanes would be constructed regardless of whether or not I-69 is built.

The No Build scenario included the added lanes to I-70 in order to avoid the appearance that the analysis was biased against Alternative 1. If these added lanes were not considered part of the No Build scenario, the cost of Alternative 1 would have increased significantly, while the cost of many other alternatives would have remained unchanged. According to INDOT’s 2001 Statewide Plan, the projected cost of added lanes between SR 267 and the new SR 641 is approximately \$310,000,000. If these added lanes were not considered part of the No Build scenario, then their cost would need to be included for alternatives using I-70, since this added capacity would then be required. Instead of having an estimated cost of \$810,000,000 - \$1,040,000,000, Alternative 1 would have an estimated cost of \$1,120,000,000 - \$1,350,000,000. One of Alternative 1’s primary advantages, lower construction cost, would be diminished.

Since the DEIS, a sensitivity analysis has been performed to determine how the modeling results of Alternative 1 and Preferred Alternative 3C would be affected if the added lanes on I-70 were not included in the No Build scenario. Appendix FF describes this sensitivity analysis. In this appendix, formal user benefit cost analysis is conducted for Alternative 1 and Preferred Alternative 3C. The analysis compared the benefit-cost results for the following two scenarios. Scenario A: added travel lanes on I-70 are treated as committed (i.e., the EIS assumption), and; Scenario B: added travel lanes on I-70 are not committed and, hence, become a part of the cost of Alternative 1. In a comparison of the results of Scenario B to Scenario A - while total discounted user benefits increase slightly more for Alternative 1 than they do

for Preferred Alternative 3C - when the increased, discounted costs of Alternative 1 are taken into consideration, the net present value (i.e., discounted benefits minus discounted costs) for Preferred Alternative 3C increases substantially more than it does for Alternative 1. Specifically, the net present value increase between Scenario A and Scenario B is: \$530.6 million for Alternative 1 and \$696.1 million for Preferred Alternative 3C.

In short, excluding the I-70 upgrade from the No Build scenario would not have improved the comparative performance of Alternative 1. In fact, the DEIS assumption regarding I-70 occurred to the advantage of Alternative 1. Excluding this upgrade would (1) increase the disparity between Alternative 1 and other alternatives in terms of transportation benefits, and (2) reduce the disparity between Alternative 1 and other alternatives in terms of costs.

As also shown in Appendix FF, including the upgrades to SR 37 would have resulted in some diminution of benefits to several routes, including Alternative 1. However, it also would have resulted in a significant lessening of the cost of the routes that make use of the SR 37 alignment. Making the assumption that improvements to SR 37 were committed, Appendix FF shows that the net present value of Alternative 1 is reduced by almost exactly the same amount as Preferred Alternative 3C.

The average cost of Preferred Alternative 3C would have been reduced to a range of \$1.56 billion to \$1.66 billion (to reflect the \$170 million dollars which no longer would be spent to upgrade SR 37). If it is assumed that SR 37 is committed and I-70 is not committed, the cost ranges for Alternative 1 and Preferred Alternative 3C would be within \$150 million of each other. The cost advantage of Alternative 1 virtually would be eliminated.

2. “The DEIS, however, largely ignores the no-build alternative, and gives scant attention to its transportation, fiscal, and environmental benefits. In this case, the no-build alternative deserves more attention because INDOT’s own data demonstrates that none of the “build” alternatives perform significantly better than the no build alternative based on the performance measures. Among other reasons why the no-build alternative performed so well in comparison to the build alternatives is that INDOT’s no-build alternative includes hundreds of millions of dollars worth of “committed” projects that INDOT plans to complete by 2025, including:

Added travel lanes to I-70 between Terre Haute and Indianapolis
Upgrades of sections of US 231, US 50, SR 62, SR 66, US 41, SR 37, and SR 46; and
Construction of the Terre Haute Bypass (SR 641) in Vigo County.” (1107-705 ELPC et al, p. 8)

This characterization of the No Build scenario misstates its role under NEPA. For purposes of this study, the No Build scenario has no “benefits.” The No Build scenario simply is the basis for comparing the alternatives under consideration. It is the baseline against which the alternatives under consideration for the I-69 project may reasonably be evaluated. As documented in the FEIS, the No Build scenario fails to satisfy the transportation, economic development, and National I-69 goals of this project.

Likewise, the No Build scenario avoids impacts that may result from any of the build alternatives. Since it represents the *status quo*, it is not accurate to characterize it as having any environmental benefits.

In sum, the No Build scenario is the starting point for the analysis. For purposes of this study, the No Build scenario has no transportation or economic benefits, nor does it have any environmental impacts. Only Build alternatives may correctly be described as having benefits or impacts, and these are determined by comparison with the No Build scenario.

3. “These significant improvements to mobility corridors throughout the Study Area likely improved the scoring of the “no-build” alternative in comparison to the build alternatives. Given these significant improvements, INDOT’s repeated conclusions in the DEIS alternatives analysis that the no-build alternative yielded no safety or other benefits in comparison to the build alternatives is misleading. The no-build alternative produced significant transportation and economic benefits, but INDOT ignored them. INDOT should have examined to what extent the committed upgrades improved transportation and other relevant performance measures in the Study Area over existing conditions, and compared the benefits of those improvements to the regional benefits, if any, of a new highway.” (1107-705 ELPC et al, p. 8)

The needs analysis assumed the existence of all existing plus committed projects in the No Build scenario. Even after assuming these projects were in place, and their full benefits were available, significant transportation and economic development needs were identified. Thus, the full benefits offered by projects in the No Build scenario was considered before identifying needs in the purpose-and-need analysis.

4. “Since an all-new 150 mile long highway would be more difficult to justify simply for the purpose of connecting Indianapolis and Evansville - the environmental and economic costs far outweigh the benefits - INDOT has invented other purposes to better justify building an all-new highway. These purposes include ‘strengthen[ing] the transportation network in Southwest Indiana,’ and ‘support[ing] economic development in Southwestern Indiana.’” (1107-705 ELPC et al, p. 10)

“The new DEIS perpetuates these three purposes, two of which are biased in favor of a largely new highway. For example, in the ‘Transition’ document to the new EIS, INDOT explained that the first purpose - strengthening the highway network - would ‘provid[e] improved linkages among the existing highway routes in the region.’(FN 36) Almost by definition, a new highway creates new ‘linkages’ while upgrading highways only improves existing ones. Moreover, since Alternative 1 has few major western linkages due to its proximity to the Wabash River, this purpose creates a strong bias in favor of a new route and against Alternative 1.” (1107-705 ELPC et al., p. 12)

“Because an upgraded US 41/I-70 (Alternative 1) serves that purpose as well as INDOT’s preferred routes and at much lower cost, INDOT and FHWA repeatedly have concocted different purposes who [sic] fulfillment would require a new highway.

“The third core goal-supporting NAFTA interstate freight movement is a restatement of the first core goal of improving the connection between Indianapolis and Evansville. It is essentially the same goal in different clothing of drawing a straight quick line between the same two points. To give this one action the weight of two ‘core goals’ is inappropriate and skews the results of this study.” (1106-133 Hagglund, p. 1).

“For example, in the flawed 1996 DEIS for an Evansville to Bloomington highway, a primary goal of the project was to support economic development throughout Southwestern Indiana and the rest of the state, with a focus on four counties along the proposed new-terrain corridor. By 1997, INDOT had narrowed the purpose of the highway to improving economic development along just the four counties - Gibson, Pike, Daviess, and Greens - which would have eliminated the US 41/I-70 route from consideration.

“Then, in 1998, INDOT finally admitted that a “major objective” of the project was connecting Indianapolis and Evansville. Since the US41/I-70 alternative serves that purpose at much less cost and environmental destruction than a new terrain route, INDOT added another biased purpose to tilt the scales in favor of a new-terrain route: ‘Strengthen the entire highway network in southwestern Indiana.’” (1107-705 ELPC et al, p. 11)

“Having chosen broad purposes for the I-69 project – rather than simply focusing on improving the connection between Indianapolis and Evansville – INDOT crafted a purpose and need statement that supports those purposes by falsely portraying Southwestern Indiana as an isolated and impoverished region with serious road safety problems. INDOT therefore has better positioned itself to be able to claim that an all-new highway will best alleviate these alleged conditions. This outcome-controlled ‘rigging’ of purpose and need violates the national Environmental Policy Act (NEPA),

which ‘does not give agencies license to fulfill their own prophecies, whatever the parochial impulses that drive them.’ Citizens Against Burlington, Inc. V. Busey, 938 F.2d 190, 195 (D.C. Cir. 1991).” (1106-147 CARR/HEC/ELPC Attachment B)

“These three primary goals are the same as those listed as requirements in the INDOT contract with Bernardin Lochmueller & Associates for the EIS dated November 19, 1999. These goals are outcome-determinative: INDOT identified three goals, and then crafted a P & N Statement replete with fictional conditions and needs that supports those goals. It is hard to imagine a clearer case of rigging a project to support a pre-selected outcome.” (1106-147 CARR/HEC/ELPC Attachment B)

These comments raise several issues related to the determination of the purpose and need for this project, and its relationship to previous transportation studies in Southwest Indiana. These issues are (1) the adequacy of the purpose and need for previous studies, (2) the number and types of needs and project goals, (3) whether the project goals were determined because of bias for or against particular alternatives, and (4) the relationship between project goals and the work program for project consultants.

(1) Adequacy of Purpose and Need in Previous Studies

The Tier 1 EIS for the Evansville to Indianapolis transportation project is an entirely new undertaking. Possible transportation and economic development needs were objectively evaluated using state-of-the-art technical tools. It is accurate to state that the current study includes the first and only comprehensive needs assessment for transportation projects in Southwest Indiana.

As noted in Chapter 1, *Project History and Background*, various studies identified several transportation and economic development needs in Southwest Indiana. Some of these are mentioned in these comments. The purpose-and-need stage of this EIS was an entirely new undertaking. It took place over the space of more than one year in order to provide a fair, objective, and comprehensive study of possible needs, and establishing those needs as the basis for the study.

(2) Number and Types of Needs and Project Goals

The purpose-and-need statement for this project was developed based on three inputs: (1) the policy framework, as reflected in federal legislation, State legislation, and State transportation policies; (2) a comprehensive needs assessment, which involved a review of traffic and economic conditions in Southwest Indiana; and (3) public comment, which was considered at two separate coordination points during the development of the purpose-and-need statement.

As the comments note, improving the connection between Evansville and Indianapolis is an important goal of this project. Indeed, it has been identified in the purpose-and-need statement as a core goal. But as with any project of this magnitude, the goals of this project are complex and multi-dimensional. This investment is intended to benefit Southwest Indiana as a whole, not just improve travel times between Evansville and Indianapolis. In addition, it is intended to support the national goal of completing a trade corridor from Canada to Mexico. All of these objectives were incorporated into the purpose-and-need statement in order to ensure that it reflects the full range of objectives that this large-scale, regional project is intended to achieve.

The goals of this project include, among others, the goal of supporting economic growth in Southwest Indiana. This goal is well-supported by the record. First, the needs assessment clearly indicated significant levels of economic distress in Southwest Indiana. It did not characterize this entire region as “impoverished,” but did demonstrate – by several different measures – that this region is lacking in economic opportunity. In addition, the State’s long-range transportation plan places a strong emphasis on the important role of the highway network in supporting the State’s effort to promote a strong economy. These considerations clearly demonstrate that there is a strong factual basis and a strong public policy basis for defining this project’s goals to include the goal of supporting economic development in Southwest Indiana.

(3) Bias for or against Specific Alternatives in Purpose and Need

The purpose and need statement did not limit consideration to only one route. Rather, the purpose-and-need statement allowed for consideration of a wide range of alternatives and did not automatically eliminate any particular route for connecting Evansville and Indianapolis.

The transportation and economic analysis revealed that certain alternatives performed poorly in meeting the project’s goals, particularly the core goals. Their poor performance is a reflection of the inherent limitations of those alternatives, not a reflection of bias in the development of the purpose-and-need statement.

The study also determined that Alternative 1 performed very poorly in serving any of the nine needs by which routes were evaluated. It performed poorly on all nine project goals, including the goal of providing a better connection between Evansville and Indianapolis.

(4) Relationship Between Project Goals and the Work Program for Project Consultants

Statements in project contracts did not include predetermined goals; rather, they specified areas to be addressed in the needs analysis. This very public and detailed needs analysis included six public meetings held at two different stages of developing the Purpose and Need. The process demonstrated INDOT's commitment to an open process, which was guided by the objective facts of the analysis, wherever those facts led. The needs which were identified were a result of a fair, objective, and unbiased analysis.

5. "Indiana DOT's *Long Range Plan* also includes the widening of a 10-mile stretch of State Road 37 south of I-465, which Alternatives 2C, 3B, 3C, 4C and 5B generally follow. This improvement is planned for 2014, a decade earlier than the I-70 widening. But the DEIS does not include it in the No-Build scenario.... Omitting the SR 37 project from the No-Build scenario results in the opposite effect. By including the I-70 widening in the No-Build, the DEIS underestimates the benefits of alternatives-primarily Alternative 1 - that use the I-70 corridor. By excluding the SR 37 widening, the DEIS overestimates the benefits of alternatives - 2C, 3B, 3C 4C and 5B - that generally follow SR 37 into Indianapolis." (1107-703 Smart Mobility, p. 6)

There were good reasons for treating added lanes on I-70 as committed, while not treating the SR 37 improvements as committed. The added lanes project on I-70 is entirely compatible with routing I-69 via a portion of I-70. I-70 is, and would remain, an Interstate Highway. By contrast, the SR 37 project (for 10 miles south of I-465) consists of adding a fourth travel lane to SR 37, an at-grade, principle arterial facility. If I-69 is built in the SR 37 corridor, this improvement is incompatible with an Interstate highway.

Since the DEIS, a sensitivity analysis has been performed to test the effect of these assumptions. The sensitivity analysis, which is contained in Appendix FF, documents the effect on user benefits and costs of including these upgrades in the No Build scenario. It also should be noted that there are a number of improvements anticipated for the SR 37 corridor both in the Indiana Statewide Transportation Plan, and in the adopted Bloomington Transportation Plan. Were these to be included in the No-Build scenario, their cost (about \$28 million for the improvements near Indianapolis and \$142 million for the improvements near Bloomington) would then be excluded from the cost of Preferred Alternative 3C because these improvements would no longer be necessary. This sensitivity analysis demonstrated that a change in the committed status on planned improvements on SR 37 has similar cost/benefit effects for Alternative 1 as it does for Preferred Alternative 3C.

6. “The Study Area for this DEIS is too large. It includes counties that none of the proposed routes would traverse or be affected by.” (1106-147 Tokarski, p. 2)

“A basic flaw in the P & N Statement is that the Study Area for the highway is far too large. The needs assessment in the P & N Statement attempts to characterize transportation and economic conditions in a 26-county area of Southwestern Indiana. The Study Area includes five counties through which a new road almost certainly will not pass: Posey, Spencer, Perry, Crawford and Orange. By maximizing the size of the Study Area, INDOT is more likely to identify problems – however fictional they may be – for which INDOT is likely to prescribe an all-new highway as the solution.” (1106-147 CARR/HEC/ELPC Attachment B)

The Study Area was defined as all counties in Indiana to the south of or including I-70, and to the west of or including SR 37. This was the area within which major transportation system effects from I-69 alternatives would be expected. No major impacts would be expected outside of this area. The Study Area was determined early in the study, before any route concepts were determined. It was done to ensure that the project’s Geographic Information System covered a broad enough area so that it could be used to analyze the impacts of all possible routes. This determination was made without any predetermination of a “picture” which would be presented to the public. This determination was made in order so that all data gathered for the study would be accumulated for a reasonable and consistently defined areathat would potentially be affected by the highway.

The Study Area had to be specified at the outset of the study. It was specified using the best professional judgment as to areathat would be impacted by the highway. In the end, 22 of the 26 counties in the Study Area included one or more of the route concepts studied in the Screening of Alternatives.

7. “If one billion dollars were equally divided among Indiana’s ninety-two counties, each county’s share would be approximately 10.8 million dollars. Should we put that fact in the form of a referendum? Consider the impact \$10,000,000 would make in a county, that is IF we had it.” (0903-016 Lane)

Allocating funding by a simple formula, such as “\$x” per county, would result in an inefficient and ineffective distribution of transportation resources. It also is inconsistent with state and federal transportation planning requirements governing the distribution of transportation funds.

INDOT is responsible for determining priorities, based upon needs in various regions of Indiana as well as statewide transportation policies. The 2001 INDOT

Statewide Transportation Plan describes how these priorities are set in Chapter 2, in the section entitled *Program Development Process* (pp. 12-14). A key statement as to how transportation funding is determined is made on p. 14. This section describes Phase 4 of a six-phase process for determining statewide transportation priorities. It states:

Statewide Review and Program Renewal. This stage involves reviewing the recommendations from the districts and MPOs, validating needs and costs, prioritizing projects statewide, and adding new projects to the program. Project costs and planning support are validated and then prioritized on a statewide basis. New projects are reviewed in the context of the existing program and a summary report is created, the draft program renewal report. This report is reviewed by the INDOT Executive Office, revised if necessary, and then distributed to INDOT districts and MPOs for comment, resulting in a final program renewal report. Schedules are then updated and the budget estimate revised.

INDOT conducts yearly Statewide Transportation Planning public meetings at each of INDOT's six district offices (excluding the Toll Road). The comments received at these meetings from the public are considered in creating the Statewide Transportation Plan.

8. "Purpose is to provide an improved transportation link which "Supports economic development in Southwest Indiana". Where did this goal come from? Is this a Federal mandate? A State mandate? Did this come from public input? Are such goals part of all INDOT project planning? If not, why for this project? I thought the purpose of highways was to provide a safe means of transportation-period." (1105-201 Marbach)

As stated in Section 2.2.2.1, the INDOT Statewide Transportation Plan identifies economic development as one of nine overall policies. It states, "INDOT has a unique role in sustaining and fostering Indiana's economy and recognizes that policy decisions and transportation infrastructure investments have major effects on economic growth and development. To support economic competitiveness, INDOT will improve upon Indiana's high quality transportation system to reduce the cost of moving people, goods, and freight, connect Indiana with regional, national, and international markets, provide communities with an edge in competing for jobs and business locations, and connect people with economic opportunities."

Transportation safety is another of these nine policies identified in Indiana's Statewide Transportation Plan. Other policies include promoting transportation system effectiveness, and enhancing quality of life, and supporting economic

development (among others). All of INDOT’s policies were considered in determining the need for this project.

2.3.1 Transportation Needs in Southwest Indiana

1. “INDOT’s own data demonstrates that the DEIS significantly overstates transportation needs for both Evansville and Southwestern Indiana in general. INDOT claims in the DEIS that, “due to extremely poor transportation connections to the north, the [Evansville] region is economically and socially isolated from the rest of Indiana. (Task Report 6.7.4, p. 20)” INDOT’s Long Range Plan contradicts this claim, and specifically rebuts INDOT’s identified need for a mobility corridor connecting Evansville, Bloomington, and Indianapolis. According to the Long-Range Plan, Evansville ranks squarely in the middle of inter-city connectivity for the existing highway system. The following chart summarizes INDOT’s inter-city connectivity rankings:

Table 1 Current Indiana Highway System Mobility Levels (Inter City Connectivity)		
<u>Near Ideal Mobility</u> Indianapolis Northwest Indiana	<u>Average Mobility</u> Lafayette South Bend/Elkhart Columbus Bloomington Fort Wayne Richmond Terre Haute Anderson Evansville	<u>Deficiency in Mobility</u> Marion Kokomo Muncie

“Also according to INDOT’s data, Evansville’s connectivity to Indianapolis is “average,” comparable to Kokomo’s and South Bend’s connection to Indianapolis. INDOT used the same straight-line travel time analysis that it used in the DEIS to evaluate inter-city connections, in which INDOT identifies a ratio of actual time to ideal travel time. ... The data in the Long-Range Plan seriously undermine INDOT’s claim that Evansville is isolated from the rest of the state.” (1107-705 ELPC et al, pp. 15 - 16)

“The methodology used to rate cities on access to Indianapolis is arbitrary and misleading. Its sole purpose is to make the access between Evansville and Indianapolis appear poor. Contrived data such as this serves to discredit the entire analysis.” (1106-147 Tokarski, p. 7)

The Table shown above does not reflect any statement or rating in the 2001 INDOT Statewide Transportation Plan. In the chart (Figure 6-2, p. 86), accessibility ratios for various city pairs are color coded by ranges (1.0 - 1.25, 1.25 - 1.50, and over 1.50)

without characterizing the ranges as “near ideal”, “average”, or “deficient mobility.” Such words are not used in the Statewide Transportation Plan.

The analysis performed for the I-69 EIS was different, and more accurate, than analysis in the 2001 Statewide Transportation Plan, in several important respects.

First, the analysis provided in the Statewide Transportation Plan and the I-69 EIS analysis measured two different things. The analysis in the Statewide Transportation Plan was an analysis of mobility among dozens of city pairs. It was an appropriate planning-level comparison of mobility throughout Indiana. The FEIS analysis is more detailed, and focuses specifically on the connection between Evansville and Indianapolis. See also Section 2.3.1.1.

Second, the statewide traffic model used for the I-69 EIS is a more sophisticated model than the statewide model used for the 2001 Statewide Transportation Plan. In that plan, all traffic was assumed to travel at the posted speed limit on all highways in the network. For the I-69 EIS traffic model, dozens of speed studies were conducted to more accurately determine the speed characteristics of individual highways; the actual “free flow” speeds at which traffic moved (often in excess of the posted speed limit) was determined.

The I-69 analysis took into account the effects of traffic congestion. The Statewide Transportation Plan analysis assumed that traffic traveled at the posted speed limits on all highways in the network. That is, in calculating the inter city connectivity, travel times did not vary by time of day. In the I-69 analysis, an enhancement was added to the travel model and used for the first time. This enhancement calculated, for every highway in the travel network, a 24-hour average congested speed. That is, the travel time is the average speed over a 24-hour period that would reflect overall congestion levels throughout the course of the day. The next update of the INDOT Statewide Transportation Plan will include this improvement.

The I-69 EIS analysis used multiple measures that considered the effects of both time and mileage. It considered both the mileage and time difference between a straight line travel path and the actual minimum time travel path. By contrast, the Statewide Transportation Plan used a single measure, the ratio of actual to straight-line travel time.

The I-69 analysis also considered both the actual difference (in miles and minutes) between actual and straight-line travel. The Statewide Transportation Plan analysis looked only at travel time ratio. In total, the I-69 analysis used four measures, while the Statewide Transportation Plan used only one.

It should be noted that the procedure used in the Statewide Transportation Plan analysis reflects good transportation planning practice. The enhancements developed for the I-69 study represent significant improvements, which are available for use in updating the Statewide Transportation Plan as well as other future studies.

With these enhancements in place, the analysis compared access to Indianapolis for major urban areas throughout Indiana. It demonstrated, by analyzing travel times to all major urban areas, that Evansville has the least efficient connection to Indianapolis of all major cities in Indiana.

2. **“INDOT’s analysis of this goal - which is based largely on a “straight-line” measurement technique - supports the pre-ordained conclusion that only the straightest, shortest possible highway will meet the perceived need. This outcome-based analysis violates NEPA.” (1107-705 ELPC et al, p. 16)**

“The Evansville-to-Indianapolis Connection” discussion in the P & N Statement uses neither of these types (number of people within a certain distance, and accessibility indices) of commonly-used accessibility measures. Instead, it creates its own method, which is actually just a proposed solution masquerading as a need. It compares straight line travel distance with roadway distance. This is not a need; rather, it is a solution disguised as a need. The only way to make the roadway distance approach the straight line distance is to build a new and straighter road.” (1106-147 CARR/HEC/ELPC Attachment B)

The comparison of actual and straight-line travel was used only as an indicator of need. It indicates how efficient or inefficient an existing connection is. This comparison identified the inefficiency of the existing Evansville to Indianapolis connection. This approach (comparing actual travel with a straight-line path) is used in INDOT’s 2001 Statewide Transportation Plan (p. 86).

The performance measure used for addressing this identified need is simply the reduction in travel time between the two cities. There is no goal that the travel time should become equal or close to a hypothetical straight line measure. Rather, the goal is the minutes of travel time should be reduced, given the present inefficiency of this connection.

The accessibility measures cited in the second comment were used in a separate analysis of accessibility throughout the Study Area. The connection to Indianapolis is an important, separate measure, and undergoes a separate analysis.

3. “I-69's alignment between Indianapolis and Port Huron demonstrates the flimsiness of INDOT’s argument. As Smart Mobility reports in its comments, the straight line distance between Indianapolis and Port Huron is 290 miles. The distance along I-69 is 366 miles; therefore, the ratio of the distances is 0.79, which is less than the ratio of 0.81 reported for Alternative 1 in the DEIS. No one is suggesting that Indiana and Michigan construct a new I-69 segment to improve the “mileage linkage” index between the two cities, yet this is exactly what INDOT’s analysis would suggest.” (1107-705 ELPC et al, pp. 17-18)

This technique (a straight-line versus actual mileage comparison) is appropriate to compare travel between comparable cities in Indiana. A similar technique is used in INDOT’s Statewide Transportation Plan, which compared straight line versus actual travel time. The Statewide Transportation Plan determined that this kind of technique is an appropriate method to compare linkages among major cities within Indiana.

These state-level mobility goals are not related to the National I-69 project. This need (to improve the connectivity between Evansville and Indianapolis) exists independent of the National I-69 project.

In addition, Indianapolis has a unique position within the life and economy of Indiana. It is the state capital, with a central geographic location. It is the center of government activity. In addition, it is four times larger than the second-largest city in Indiana (Ft. Wayne), and thereby has a unique role in economic activity in Indiana.

4. “These data (modeling data analyzed by Smart Mobility) reveal two striking facts about travel patterns between the two cities.

“1. Total vehicular trips between Evansville and Indianapolis represent less than one-tenth of one percent of all trips originating within a 20-mile radius of either city - only about 355 vehicles in each direction under Alternative 3B.

“2. Alternative 3B only generates 175 additional trips between the two cities compared with Alternative 1, even though these two alternatives have the greatest difference in total length. The negligible difference sharply contrasts with INDOT’s misleading conclusion that Alternative 3B has “high” travel time savings and Alternative 1 has “low” travel time savings. Neither of the build alternatives substantially increases vehicle travel between the two cities in comparison to total vehicle trips from each city, or in comparison to total traffic on the new interstate.

“These facts undermine INDOT’s claimed need for an improved connection between the two cities. Whether measured in absolute numbers or percentages, very few trucks and

cars will travel between Evansville and Indianapolis in 2025 regardless of the alternative.” (1107-705 ELPC et al, p. 19)

“The DEIS leaps from the undisputed fact that there is no straight-line expressway between Evansville and Indianapolis to the conclusion that there is a “need” for such a road. There is no basis for this leap. Demonstrating that a drive from Evansville to Indianapolis on a straight-line expressway does not establish a “need” for such an expressway. Transportation projects should be justified on total time savings that they generate, for all travelers.” (1107-703 Smart Mobility, p. 9)

“After reviewing the travel demand model files provided by INDOT’s consultants, we have found that Indianapolis is simply not a major destination for Evansville residents, and vice-versa. Nor would they become major destinations if I-69 is extended. INDOT’s consultants’ figures project that in the No-Build scenario there will be only 251 daily round trips between Evansville and Indianapolis in 2025 (footnote - Numbers in this section were extracted from the travel demand model using a 20 mile radius around the city centers to define “Evansville” and “Indianapolis.”). The total number of round trips to and from Evansville projected in the No-Build is 571,728. Thus, trips between Evansville and Indianapolis account for only about four one-hundredths of one percent (0.04%) of all Evansville trips, and an even smaller number of Indianapolis trips.” (1107-703 Smart Mobility, p. 10)

As explained in Appendix FF, the forecasted number of daily trips between Evansville and Indianapolis in 2025 is over 11,000. Improving this connection will benefit many thousands of travelers daily.

The analysis performed by Smart Mobility considered only trips between two small geographic areas - a small (20-mile) radius around downtown Indianapolis and downtown Evansville. The amount of daily travel between these two cities consists of many times more vehicles than these. For example, someone making a trip between Muncie and Evansville would travel between Indianapolis and Evansville. Someone making a trip between Henderson, Kentucky and Kokomo would travel between Indianapolis and Evansville.

In the year 2025 about 7,900 one-way auto trips and 3,300 one-way truck trips are forecasted to travel the entire distance between Evansville and Indianapolis. For Preferred Alternative 3C, this translates into 4,900 daily vehicle hours saved, which is almost 900,000 vehicle hours saved on an annual basis. Daily vehicle operating cost savings for these trips alone is over \$160,000 daily, or approximately \$54,000,000 annually, for Preferred Alternative 3C.

5. “Improving personal accessibility is another purpose and core goal of the I-69 project. A basic flaw with this goal is that the underlying assumption - “Southwest Indiana is significantly less accessible than the rest of the State” - is overstated and therefore misleading. The calculated accessibility is lower in Southwest Indiana than for the State as a whole primarily because population, and therefore employment - are lower in the region. Lower population and employment translate into fewer urban areas, major airports, and universities. *The calculated accessibility for Southwest Indiana will continue to be lower in comparison to the rest of the state regardless of the transportation system.*” (1107-705 ELPC et al, p. 20)

“Smart Mobility concluded that *even the best-performing alternatives* for each measure of accessibility produced only negligible improvements to regional accessibility. Smart Mobility’s analysis of INDOT’s data demonstrates that even if improving inter-regional accessibility were possible in the ways INDOT describes, building a new highway will not accomplish that purpose.” (1107-705 ELPC et al, p. 21)

“These graphics show southwestern Indiana having low accessibility primarily because it has a low average population density and because it is distant from the more densely populated Indianapolis and greater Chicago regions. Construction of a new roadway can be expected to have very little impact on these low accessibility ratings. With or without a new highway, southwestern Indiana will still have low population density and be distant from Indianapolis and the greater Chicago region. Notably, and no doubt for this reason, the DEIS’s analysis of the alternatives fails to include similar graphics showing what regional accessibility would look like if each of the I-69 alternatives were built.” (1107-703 Smart Mobility, p. 12)

“The “personal accessibility” measures discussed in the P & N Statement are of the second type of accessibility measure as described above, and are, in principle, valid measures. However, the conclusion – “. . . there is a need for increased accessibility within Southwest Indiana” – is overstated and therefore misleading. The calculated accessibility is lower in Southwest Indiana than for the State as a whole primarily because population - and therefore employment – are lower in the region. Lower population and employment translate into fewer urban areas, major airports, and universities. The calculated accessibility for Southwest Indiana will continue to be lower regardless of the transportation system. It is not a reasonable objective for this standard to be the same for less densely populated regions as it is for more densely populated regions. These calculations will be much more useful in comparing different alternatives for the same region, as opposed to comparing different regions.” (1106-147 CARR/HEC/ELPC Attachment B)

The assertion “... accessibility is lower in Southwest Indiana than for the State as a whole primarily because population, and therefore employment, are lower in the

region” is only partially correct. It is correct insofar as sparsely developed areas in Southwest Indiana have low travel times (i.e., high accessibility) to other sparsely developed areas (i.e., traffic analysis zones or “TAZs”) in Southwest Indiana and high travel times (i.e., low accessibility) to highly developed areas that are not located in the region. It is incorrect insofar as a TAZ is surrounded by development even though it itself is not developed. In this case, the TAZ would have a relatively high accessibility score. In other words, most accessibility indices are measured relative to the degree of development in the universe of “destination zones” and are only minimally related to the development in the origin zone (a zone can be its own destination).

Accessibility to special attractors, such as major airports or universities, has nothing to do with the degree of development in Southwest Indiana since major airports and universities are located in only a handful of select destination zones. For these accessibility measures, accessibility is measured only to the TAZs in which a major airport or university is located.

Improved accessibility for Southwest Indiana has been demonstrated as a genuine need. The current lack of accessibility is due in part to characteristics of the region, such as the presence of the Wabash and Ohio Rivers, which reduce access to attractions in Illinois and Kentucky. The region may continue to have lower accessibility, whatever transportation improvement is made. It is INDOT’s responsibility to improve the present situation. Providing accessibility to rural areas often is an important reason for constructing Interstates in rural areas, which by definition have less access to opportunities that tend to be concentrated in urban areas (e.g., hospitals, universities, jobs and shopping).

This being said, Preferred Alternative 3C produces significant improvements in the number of people with access to key destinations. For example, it brings 166,000 additional people within three hours of Indianapolis. Improvements such as these are very significant and accomplish the purpose of increasing accessibility in Southwest Indiana.

For additional discussion of accessibility in Southwest Indiana and the improvement provided by Preferred Alternative 3C, see Appendix FF, Chapter 1.

6. “INDOT’s safety analysis in the DEIS is incomprehensible for several reasons. First, INDOT uses different data in contradictory ways. In Section 2 of the DEIS, INDOT argues that using data on accident *numbers* is wrong; INDOT explains that “standard engineering practice” is to use accident rate data, which accounts for different traffic volumes in ways that total accident numbers would not do. INDOT also explained that

using *rate* data “provides a baseline for evaluating safety improvements that could be achieved by each of the build alternatives.” Yet in section 3 of the DEIS, INDOT uses accident *numbers*, rather than *rates*, to evaluate the alternatives, which is exactly what INDOT said it would not do, and which INDOT says contradicts “standard engineering practice.” (1107-705 ELPC et al, p. 22)

Crash rates and the total number of crashes were used for two different purposes in the DEIS. Crash rates are an appropriate tool for determining whether there is a need to improve traffic safety. This provides a way to compare the number of crashes, which takes into account the relative amount of vehicle travel. For example, in 1998, there were 5,976 billion vehicle miles of travel in Indiana on rural principal arterial roads, and 2,763 serious crashes (resulting in a death or serious injury) on these roads. The average rate of serious crashes on these roads is 46.2 crashes per 100 million vehicle miles of travel. State Road 46 in Owen County (a rural principal arterial) had a crash rate of 91.6 serious crashes per 100 million vehicle miles traveled in the safety study. Since this crash rate is more than 50% above the statewide average, this route was identified as one with a high crash rate.

Once a need has been established, an appropriate performance measure is to compare alternatives for their ability to reduce crashes. This is determined by forecasted reduction in the number of crashes.

7. “A third flaw in the safety analysis is that the DEIS fails to explain whether INDOT could achieve its safety goal for this project - to reduce crash risk - by other practicable alternatives. ... Targeted installation of traffic lights, safety improvements along existing roads, and other upgrades in both Southwest Indiana and across the state are likely to reduce accident numbers and rates far more than the minor improvements INDOT claims for any of the build alternatives, and at far less cost.” (1107-705 ELPC et al, p. 23)

Two of the purposes for this project are to improve the connection between Evansville and Indianapolis, and to complete the section of the National I-69 project between Evansville and Indianapolis. Alternatives that fail to provide for an Evansville to Indianapolis highway are not reasonable and therefore were eliminated from consideration.

At the same time, the Purpose and Need was a broad analysis of transportation needs in Southwest Indiana. It identified a need for improved highway safety. Alternatives that connect Evansville and Indianapolis were considered for their comparative ability to reduce crashes. Preferred Alternative 3C will result in 30,000 fewer serious crashes (over a 20-year period) than would occur under the No Build scenario. A “serious crash” is one that results in at least one serious injury or fatality.

8. “A fourth flaw in INDOT’s safety analysis is that the general conclusion - interstates are safer than 4-lane divided highways with partial access control and two lane roads - proves too much. Assuming that this conclusion is true in Indiana (INDOT’s only data is an FHWA report that apparently is not based on accident rates in Indiana), it supports building interstates everywhere in Indiana to reduce accident rates.” (1107-705 ELPC et al, p. 23)

The FHWA data cited was found in Table 2-5 of the DEIS. It shows that, generally, fewer crashes per vehicle mile occur on Interstate highways than on other types of facilities. This FHWA report is the authoritative resource used nationally to measure and compare crash rates. Southwest Indiana lacks the direct Interstate connection to Indianapolis that other parts of Indiana enjoy. The lack of this Interstate connection is part of the reason that crash rates in Southwest Indiana are high.

At the same time, the determination of a safety need in Southwest Indiana was based upon a comparison using statewide crash rates for Indiana, not national crash rates. See *Technical Report 3.3.4.1, Regional Safety Analysis*, April 13, 2001.

9. “A fifth flaw in the safety analysis is that INDOT’s review of accident statistics uses only a three-year time period (1996 to 1998). Using only three years of data (whether the data are numbers or rates) renders the analysis statistically invalid.” (1107-705 ELPC et al, p. 24)

The crash analysis used in the DEIS considers all fatal and injury-causing crashes over a period of three years - approximately 155,000 crashes. This is in accordance with INDOT’s standard practice, which is to use three years of crash data in conducting a safety analysis. INDOT’s Design Manual, Part V, Section 55-8.01(02) (Accident Summaries) states, “The required time period for the collection of the accident history is three years.”

10. “INDOT claims that “in terms of percentage of serious crashes which involve fatalities, Orange County has the highest percentage in Indiana.” In fact, over the more representative eleven year period from 1986 to 1996, *Orange County averaged only three deaths per year, one of the lowest fatality rates in the entire state.*” (1107-705 ELPC et al, p. 24)

“INDOT’s review of accident statistics uses only a three-year period (1996 to 1998). Using only three years of data renders the analysis statistically invalid. High or low numbers in such a short period of time can drive averages higher or lower, thereby

resulting in an incomplete and inaccurate analysis. We used a more reasonable eleven year period (1986 to 1996) to evaluate safety data, which produces a more accurate evaluation of conditions. For example, in Knox County, the average number of fatalities in one three-year period within the 1986 to 1996 data set was 4, and in another three-year period it was 11. However, over the entire eleven year period the average as 7.5.” (1106-147 CARR/HEC/ELPC Attachment B)

These commentors consider a “rate” to be the number of crashes per county per year. The standard definition of a crash rate is the number of crashes per vehicle miles traveled. When the standard definition is applied, Orange County, for example, does have a very high rate of serious crashes.

These comments consider only fatal crashes. Of serious crashes (those involving at least one serious injury, or death) less than 2% involve a fatality. Thus, the analysis used by this respondent omits over 98% of serious crashes. Fatal crashes are so rare as to represent a statistical anomaly; considering all serious crashes provides an accurate picture of safety problems.

11. “As these data show:

“The number of accidents is no greater in the Study Area than elsewhere in the State; “Rural counties in Southwestern Indiana had fewer fatalities than other comparable areas in the State; “The most highway deaths occurred in more populous urban areas.

“INDOT’s conclusion that there is a significant safety problem in the Study Area therefore is invalid.” (1107-705 ELPC et al, pp. 24-25)

“INDOT concedes that “it is important to note that this needs analysis does not specifically address the issue of why the crash rates in certain counties and on certain routes are significantly above statewide averages.” Yet in the same paragraph, INDOT claims that each of the potential highway alternatives could result in safety improvements. If INDOT does not know why accidents happen, how can INDOT assert that a highway will reduce them? Thus, even if there were a unique safety issue in Southwestern Indiana, which there is not, INDOT could not justify building a new highway to alleviate the claimed problem.” (1106-147 CARR/HEC/ELPC Attachment B)

As noted above, the number of crashes were compared to the amount of travel to determine whether a safety problem exists. Overall, urban areas will have more crashes, since more travel occurs there. In order to determine whether there is a high number of crashes in an area, it is necessary to compare the rate of crashes (crashes per hundred million vehicle miles traveled) to some standard or average.

In the safety analysis, separate comparisons were made of rural and urban areas. Rural roads and rural counties were compared with other rural roads and rural counties in Indiana.

The methodology used to estimate crash reduction is the network-based approach that is part of the Major Corridor Investment Benefit Analysis System (MCIBAS), which is INDOT’s standard methodology for evaluating major corridor investments. It determines crashes as a function of traffic volumes and the kind of road on which that traffic exists. As traffic is diverted from lower class facilities to higher class facilities (e.g., rural collector to rural Interstate) the number of crashes are determined by the crash rates for each road. As traffic is diverted to roads with lower crash rates, the reduction in crashes is determined.

Therefore, it is not necessary to know the cause of each crash in order to determine the reduction in crashes that result from traffic being diverted to safer roads.

12. “Given that the Study Area is a relatively low congestion area, it is arguable whether there is a congestion-related “need” at all. The true benefit of reduced congestion is travel time (VHT) savings. Travel time is discussed in Section 2.4.” (1107-703 Smart Mobility, p. 19)

The analysis indicated that traffic congestion is not currently a pressing problem in Southwest Indiana as a whole, but is likely to emerge as a problem on certain roadway segments by 2025. Accordingly, congestion relief was included as a goal, although not a core goal.

13. “Another advantage of using the US-41 corridor would be reduced travel time from SW Indiana to NW Indiana. Improved access to the Gary-Hammond area and Chicago, as well as improved access to Indianapolis magnifies the benefits of Alternative 1. This advantage should have been addressed in this DEIS.” (1106-147 Tokarski, p. 6)

“U.S. 41 needs to be improved so it can be a better route to both Indianapolis and Chicago.” (1001-009 Hendricks)

“...but it will also reduce travel time from Evansville to the Gary-Hammond area by at least 20 or 30 minutes. I believe that the reduced travel time from the southwest to the northwest part of the State is another very good reason to use the U.S. 41 - I-70 route for I-69...” (1010-006 Threlkeld)

One of the goals of this project is to provide an improved transportation connection between Evansville and Indianapolis. Access from Evansville to the Gary-

Hammond and Chicago area is already at a high level because of four-lane divided highways (US 41 and SR 63).

14. “INDOT did not choose the shortest route between Indianapolis and Evansville for its no-build alternative. That would have been SR57 to SR231 and SR67 to Indianapolis. Instead it chose US41/I-70 as the no-build alternative to compare the other alternatives to. Using the SR57/231/67 would have demonstrated a better existing route and less time and distance savings by the new routes.” (1106-147 Tokarski, p. 6)

“Footnote 8, on page 2-12, is confusing. It reads: “Due to the planned construction of new projects (e.g., SR641 - Terre Haute bypass) some of the shortest time paths will change in the future.” Was the SR 641 bypass included in the No Build calculations, as stated elsewhere, page 3-21, or not?” (1106-147 Tokarski, pp. 6-7)

The shortest travel time path was determined using the Indiana Statewide Travel Demand Model, in both the base (1998) and forecast (2025) years. The shortest-time path between Evansville and Indianapolis in the No Build scenario is US 41 to I-70. The travel time by this shortest route is 175 minutes in the base year and 169 minutes in the forecast year (the forecast year assumes completion of the SR 641 bypass at Terre Haute). By comparison, according to the model the travel time using the route suggested in the comment (SR 57 to US 231 to I-70) is 177 minutes in both the base year and forecast year.

15. “It appears that the time savings benefits to trucking were not properly analyzed and may have been inflated. Truck hour benefits should be discounted at approximately 7% over 25 years. If there is not congestion, as in this case, then time savings benefits to businesses are insignificant, pennies per load on a trip from Indianapolis to Evansville. Reliability is more important than time savings for businesses. Also, time saved for businesses means lost wages to drivers; thus, this is not a societal benefit.” (1106-147 Tokarski, p. 7)

Truck hour savings in the DEIS are not expressed in dollar values. Discounting hours is not appropriate. Forecast year truck hour savings are compared in an “apples to apples” analysis. Discounting would be appropriate if the benefits were expressed in dollars over a period of time.

The analysis showed that in the Forecast Year on Preferred Alternative 3C about 5,000 trucks will travel daily between Evansville and Indianapolis, saving 27 minutes per trip. Truck savings will amount to tens of thousands of dollars daily.

Truck hour savings are an important contributor to economic growth. The *Highway Economic Requirements System* reveals that average operating costs per truck hour are \$36. For further discussion, see Section 3.4.5.1.

Time saved for businesses will make them more efficient. Drivers will still work a normal work day, but will be able to accomplish more in that day. As their businesses become more competitive, some of those benefits may accrue to them in the form of increased wages and benefits.

16. “Methods used to determine accessibility appear arbitrary and are not predictive. For example, for all of the measures shown on the maps (Figs 2-12 to 2-17) the existence of an interstate highway does not show improvements to the measures studied. Evansville has interstate connections to Louisville, Kentucky and St. Louis, Missouri yet the maps show low accessibility in the regions served by these interstates.” (1106-147 Tokarski, p. 7)

Accessibility is based on proximity (travel time) to desired destinations. The accessibility analysis takes into account major urban areas in the modeled area, including those in surrounding states (such as St. Louis and Louisville). The low accessibility for Southwest Indiana shows, that in spite of the existence of some urban areas, it has an overall low level of personal accessibility. This accessibility would be even poorer if I-64 did not serve southern Indiana. The project is a means to ameliorate this isolation. I-64 provides an east-west connection, while this project will provide a north-south interstate connection.

17. “Accessibility Index charts, Figure 2-17, showing high to low levels are incorrect; the high and low colors are reversed.” (1106-147 Tokarski, p. 7)

This has been corrected in the FEIS.

18. “Excluding the counties in the Indianapolis Metropolitan Statistical Area from this [congestion] analysis ignores existing problems and dodges the impacts a new I-69 will have on traffic in this area, especially on I-465.” (1106-147 Tokarski, p. 7)

The impacts I-69 will have in the Indianapolis area, particularly on I-465, are discussed in Section 5.8, Traffic Impacts.

19. “They also claim to want safer roads for students who travel to Bloomington. However, U.S. 41 is more dangerous. Each year from 1988 to 1997 (according to the National Highway Traffic Safety Administration) more people were killed on U.S. 41 than on the shortest route to Bloomington. How about the safety of Evansville area students

attending the many schools in Vincennes, Terre Haute and Lafayette? Also, many people from those northern areas attend the universities here in Evansville. So, many more students travel U.S. 41 than the roads to Bloomington. It's obvious to me that proponents of the new terrain highway are using student safety as another of many excuses for their self-centered goals." (1001-009 Hendricks)

No portion of US 41 between Evansville and Terre Haute has a high crash rate, by comparison to similar facilities. See *Technical Report 3.3.4.1, Regional Safety Analysis, Figure 1.*

20. "Even transportation dependent businesses are successful in Bloomington. The existing road network provides Bloomington with the competitive transportation costs and reliability of service that we need in order to prosper. Rather than a major interstate highway, Bloomington needs better management of the State Road 37 Corridor. We ask that INDOT continue with intersection improvements on SR 37, and that new road cuts directly onto SR 37 be prohibited. Frontage access roads are needed to preserve SR 37 as a safe, efficient connection to Indianapolis. Appropriate, fiscally responsible improvements to SR 37 and other area highways will help the region more than a major interstate highway." (1101-022 City of Bloomington Office of the Common Council, p. 1)

The purpose of this project is to complete I-69 between Evansville and Indianapolis. Preferred Alternative 3C completes I-69 by using a portion of SR 37. The local issues cited will be considered in the context of the planning and design for I-69.

In addition, the currently adopted Bloomington Long Range Transportation Plan still calls for the upgrade of SR 37 to a freeway-type of facility from south of Bloomington to the Morgan/Monroe county line. The type of access issues that would have to be considered in planning such a freeway are the same as those that will be considered in planning for I-69. If the decision is made to construct I-69 along SR 37, the planned improvements to SR 37 will not be needed. Also, on November 14, 2003, the Bloomington MPO adopted Preferred Alternative 3C into their plan as I-69.

21. "I am also concerned about the 4,475 bridges we have in Indiana now that are deficient. If we use the allotted funds we get to maintain our existing roads and bridges to build this proposed new-terrain I-69 highway, how safe is it going to be for us to drive in this state?" (1003-009 Hedrick)

INDOT is committed to meeting all the transportation needs of the citizens of Indiana. This includes maintaining existing transportation infrastructure, which is the focus of most of INDOT's transportation spending.

The current INDOT 25-year fiscal plan, as well as plan amendments currently under consideration, calls for approximately 55% of expenditures to be for preserving and maintaining the existing system.

Many, if not most of the bridges mentioned actually fall under the jurisdiction of county and local authorities. INDOT has been vigorous in pursuing added funds so that local units of government can properly maintain their highway infrastructure.

22. “If the extra truck travel time is a serious issue, then railroads should be supported instead of highways, as rail is a far more efficient means of transporting freight.” (1025-036 Kiechle, p. 1)

“Truck freight costs you time and money while polluting your air. It makes no sense to subsidize more of it. Transportation Consultant Wendell Cox calculated that if Indianapolis shifted just a quarter of its freight from truck to rail that it would save each commuter a week’s worth of time in traffic congestion. Every year!” (1107-278 Association of Monroe County Taxpayers)

A purpose of this project is to provide an improved transportation link which “Completes the portion of the National I-69 project between Evansville and Indianapolis.” (FEIS, Section 2.1) Completing a railroad would not achieve this objective.

In addition, businesses increasingly are dependent upon small shipments and “just-in-time” (“JIT”) delivery. Motor freight is the method of choice for providing such freight service. Businesses that have the choice of rail or highway for freight shipments tend to choose rail for bulky, low-value shipments whose delivery is not time-sensitive. Both rail and highway networks are needed to transport freight efficiently, with each serving different freight transport needs. This project is intended to serve the needs of freight that requires transport by truck.

23. “The H-T editorial argues that the twenty trucks which service Crane daily are ample justification for I-69 even though this represents just 0.2% of all the trucks expected to transit I-69 every day. A better solution is to recognize that Crane’s physical product, military ordinance, is more safely and economically carried by its existing rail infrastructure (which connects to all important national military installations) while its knowledge products are best carried by fiber-optic data cables.” (1107-281 Association of Monroe County Taxpayers, p. 1)

Crane Naval Surface Warfare Center (Crane NSWC) ships its products using the safest and most efficient means. To the extent that its products move by truck, truck represents the safest and most efficient means of transport. According to KZF Design’s Traffic Study (February 2001), approximately 10-15 large trucks per hour were observed moving about the Center throughout the day (internal circulation). Nearly all truck traffic goes through the Crane Gate located on SR 558 (Crane Village).

24. “For instance, a great deal of military explosives and hardware must travel directly through residential and business areas south of Crane. The safety of all people in this area would be greatly enhanced if the trucks could stay away from local traffic.” (0821-067 Waggoner, p. 1)

Preferred Alternative 3C will be located approximately two miles from the truck entrance at Crane. It will help to segregate military shipments from traffic using local two-lane roads.

25. “Point: In twenty years, an interstate for national or international use will probably be considered a dinosaur. We need to focus on high-speed rail travel, or other methods of transportation. By the time the interstate is build, it will be inadequate. There must be another way.” (1107-201 Richardson)

One purpose of this project is to provide an improved transportation link which “Completes the portion of the National I-69 project between Evansville and Indianapolis (FEIS, Section 2.1). A passenger rail corridor would not meet this need.

In addition, motor vehicle travel continues to grow more rapidly than population. While such growth rates are not expected to continue indefinitely, there is no indication that motor vehicle travel will be supplanted within 20 years.

26. “Our third largest city should be connected with the state capitol by the most direct route. Evansville is the largest city in the country that doesn’t have a direct corridor with its state capitol.” (0801-026 Himsel)

As the needs analysis showed, the connection between Evansville and Indianapolis is more inefficient than that of any other large city in Indianapolis. Improving this connection between Evansville and Indianapolis has been identified as a core goal for this project.

27. “What I refer to is not a house or a gas station or a restaurant, but rather reminders of tragedies which have befallen people who have driven those roads. Each cross represents

a memory of a loved one, a reminder to those who travel those roads that danger lurks where one least expects it. I often wonder who these people were who were killed while driving these roads. Were they my age? Did they have a family? Was it someone's son or daughter who was on their way to college? I probably will never know the answer to these questions. However, there is one thing of which I am absolutely certain. If the new terrain highway saves just one person's life, it has more than paid for any cost differential between it and other routes. I implore you to choose one of the new terrain routes. One can always plant more trees. A loved one can never be replaced." (0822-089 Nigg)

Providing safe highways is one of nine statewide policies of the Indiana Department of Transportation. Reducing crashes is a goal of this project. Preferred Alternative 3C reduces the number of serious crashes by over 30,000 over a 20-year period.

28. "The needs assessment of the no-build condition has an illustration showing the accessibility to employment. The model used to generate this figure is apparently flawed as the map has the Floyd County area as ranking low on the accessibility to employment scale; a situation that apparently ignores the interstate access in that county and the ease of access to the large Louisville metropolitan area." (1107-162 Branam, p. 1)

"Other errors and misleading information in INDOT accessibility data include:

- Clark and Floyd counties, immediately adjacent to Jefferson County and Louisville, Kentucky, appear to have poor access to the Louisville airport (see Figure 9), which plainly is not true.
- Evansville has an airport served by several major airlines, but, according to Figure 9, the Evansville metropolitan area has poor access to it.
- Figure 8 presumes to show accessibility to urban areas, yet northern Indiana, with interstate access to Chicago, Toledo, Fort Wayne, and Lansing, is shown to have only poor to average access to urban areas." (1106-147 CARR/HEC/ELPC Attachment B)

The accessibility to employment performance measure considers access (based on travel time) from Clark and Floyd County to Louisville. It should be noted that major river crossings, such as the Ohio River crossing to Kentucky at Louisville, add travel time. In addition, the limited number of bridge crossings presents a barrier to travel. Thus, employment which is only a "few miles away" in Louisville is not as accessible as it would be if a major river crossing were not required.

The accessibility analysis does not say that Clark and Floyd Counties have poor access to the Louisville Airport. It does show that the level of service at that airport, combined with the barrier imposed by a major river crossing, result in a comparatively low level of access to air travel in these counties, compared to other areas of Indiana. Likewise, the comparatively low level of service at the Evansville Airport means that the Evansville region has a comparatively low level of access to air travel.

Northern Indiana generally is shown with an average to above-average access to urban areas.

29. “Under the safety category there needs to be a more detailed breakdown of the traffic accident statistics such as the actual numbers and the type of accident, i.e., truck, at an interchange, drunk drive, joy-riding teenagers, etc. It is important to know what types and how many accidents are occurring because interstates will have no effect on some. Joy-riding teenagers will be involved on non-interstate roads regardless of whether there is one or not. The significant data is the truck-related accidents, these an interstate may or may not alleviate.” (1107-162 Branam, p. 1)

The safety analysis takes into account the macro-type of issues (type of highways available) that can be affected by the I-69 project. The factors mentioned here would affect all roads in the region. Shifting traffic to higher quality facilities will reduce overall crash rates. The crash analysis compared changes in the number of crashes due to all causes. The analysis did not differentiate among crashes in terms of their causes.

30. “I think there is another very important issue involved here, the matter of access to state government for the people of southern Indiana. This is a very important issue and should not be ignored.” (1107-165 Wells)

Improved access to Indianapolis will provide increased access to state government.

31. “An elected official from Bloomington stated he felt the construction of the new highway such as I-69 would have negative impact on the other highways projects in the other areas of the state would suffer. No one can make that prediction but if it happens I can only feel that it is now our turn. Southwestern Indiana has sent literally millions of dollars to the state only to see those monies spent in every area of the state except Evansville. It is our turn and there are those in other parts of the state that do not wish to see us have our fair share.” (0821-184 Abell)

INDOT plans for new and improved transportation facilities by considering needs throughout Indiana. The INDOT Statewide Transportation Plan considered all these needs in including I-69 from Evansville to Indianapolis.

32. “As a physician I have a particular interest in the transportation of the critically ill patients. It would provide faster and safer service and transportation of emergency nurtured medical care patience who critical transport to IU Med Center to the various tertiary facilities in Indianapolis. This is a critical matter because people think that transport by land is old fashioned but quite frankly over 90 percent of the transported critically ill is by land not air.” (0821-202 Pulcini)

In terms of access to medical care, it is noteworthy that nearly all critically ill patients are transported by land. A preliminary survey of four major hospitals in the Study Area, St. Mary's Hospital in Evansville, Bloomington Hospital in Bloomington, Terre Haute Regional Hospital in Terre Haute, and Methodist Hospital in Indianapolis, found that only 0.01% - 5% of the patients admitted to the emergency room per year are brought in by helicopter. The majority of their emergency room patients come by ambulance, their own vehicle, city transportation, or by walking. Preferred Alternative 3C will provide an additional 37,000 people 30-minute access to major urban areas where major medical facilities are located.

33. “Along the same lines, if we build a 41, 70 interstate highway that cost the western side of Indiana and throws half of the benefits over into Illinois for leaving Hoosier deprived in a foreign area, shame on us.” (0821-244 McManus)

Alternatives closest to Illinois can be expected to provide the greatest benefits to residents of Illinois. All alternatives benefit residents of other states to some extent. The focus of benefits for this project is benefits to residents of Southwest Indiana.

34. “But I as Manager of School Bus transportation (inaudible) school corporation (inaudible) our children. Apparently the roads that go to Indianapolis up through Bloomington. If we have to go up to Indianapolis we use the 41, 70 corridor. We took 84 trips last year in that area, traveled over 34,000 plus miles we crossed over 1000 railroad tracks. In 36, 792 crossroads while negotiating 5,712 traffic control signals. Between the Lloyd Expressway and I-70 there are 34 traffic lights. What I was asked to do was give you information, I make decisions daily based on factual information received from the children. Those are facts. We have those 84 trips, numerous trips that the corridor describe in the direct route would be for our academic competitions where we could access. Currently for our buses travel those locations they must travel single lane road that is laid out designed and constructed before most of us were born. I have to

look at conditions of the roadway in the worst case scenarios, winter, snow, ice, and single lane roads for my buses loaded with school children is a concern for me. I have a responsibility for their safety, I have (inaudible).” (0821-255 Mentzea)

“A point that has not been mentioned before, is that the IU School of Music send hundreds of musicians to Evansville and Owensboro, every week to play in the Symphony Orchestras there. They travel through back roads, in unsafe conditions, i.e. weather, darkness, animals on the highways, etc., to further their desires to become proficient in Music and make what little income they can. We owe our children the safest ways possible, for their future. I vote for I69, and as soon as possible.” (1105-102 Powell)

“Bloomington, as the home of Indiana University, is subject to a considerable amount of transient traffic. Many of these vehicles are occupied by students driving back and forth from the University on the weekends or before and after school holidays. Others are driven by alumni and fans of the university’s sports teams and arts programs who are only in town for a day or so. Especially for students and visitors who live in Evansville and other locations in southwest Indiana, the lack of an interstate between their homes and the University is a constant source of irritation and danger from being forced to drive on slow, narrow, unsafe two-lane highways for much of their journey. If the interstate between Evansville and Indianapolis is not built through Bloomington, the traffic created by those students and alumni is not going to disappear. In fact, as the university continues to grow, it will probably increase along with its concomitant problems. Squandering this opportunity to alleviate at least some of these traffic concerns by building the interstate along the route is fastest for through-traffic anyway seems myopic in the extreme.” (1104-014 Ortsey)

Improved access to Indianapolis would make the state capital more accessible and provide safer travel for students in Southwest Indiana. Preferred Alternative 3C will increase access to Indiana University for tens of thousands of people. As documented in Appendix JJ, Preferred Alternative 3C will provide approximately an additional 374,000 people with one-hour access to Indiana University - Bloomington. This access also will be safer than is provided by the existing highway system.

35. “I have often been concerned for our lives, while driving in the middle of the day behind a coal truck in foggy, misty, slick conditions. The wipers can not keep the windshield clean and the roads become unsafe at any speed.” (1106-131 Cheek)

A multi-lane highway makes travel safer for all vehicles. See DEIS Table 2-5. It summarizes findings made by FHWA that rural freeways have one-third to one-

fourth of the crash rates that rural two-lane roads have. Preferred Alternative 3C will result in a reduction of over 30,000 serious crashes over a 20-year period.

36. “I believe an additional core goal should be defined to state that improved access to Bloomington, both from Indianapolis and from Evansville, should be a criteria for this project.” (1104-008 Shook)

Improved personal accessibility is a core goal of this project. Increasing access to major population centers such as Bloomington will increase accessibility. Preferred Alternative 3C will result in a significant increase in accessibility in Southwest Indiana.

37. “In that spirit, I suggest that we consider the northern terminus of the I69 Indianapolis to Evansville project to be the current I69 - I465 interchange near the Indianapolis suburb of Castleton. They could easily route the I69 southwestward along Binford Blvd. And then south over a seldom used railroad line to junction with I65 & I70 at the Spaghetti Bowl. Not only would this make the trip shorter for anyone traveling from Canada to Mexico, having the improved infrastructure would foster development in the increasingly blighted inner-city of northeast Indianapolis.” (1104-031 Eden)

The FHWA has determined that the northern terminus of Section 3 of the National I-69 project would be I-465 on the southwest side of Indianapolis. Section 2 of the National project is the routing of I-69 from the northern terminus of Section 3 to the current I-69/I-465 interchange. This commentor’s suggestion would have to be evaluated in the context of a different study of Section 2 of the National project.

38. “3) The “sacrifice” of acreage of beautiful forests and farmland (including Sen. Lugar’s) is a very small percentage of the scenic and productive region of southern Indiana. And, more people might be motivated to enjoy the part of the state where I was raised (Bedford) if they could reach it without having to drive behind a coal or stone truck for mile after mile traveling 40 mph uphill and racing at 85 mph downhill to keep from getting run over!” (1105-025 Carter)

“And, having lost several friends over the years to the carnage of the older and more dangerous roads in the area, I applaud how the EIS confirmed that a direct I-69 would save Hoosier lives. We can replant a tree – we cannot replace a soul lost on the road.” (1030-005 Miller)

Through mitigation, impacts to forests will be ameliorated. Preferred Alternative 3C will result in over 1,500 serious crashes avoided each year.

39. “As I am sure you are aware, the interstate highway system was created to connect American population centers with one another. Bloomington is the largest city in Indiana and one of the few Metropolitan Statistical Areas (MSAs) in the country that does not have a direct connection to the interstate system. Any alternative for extending I-69 that does not include Bloomington would ignore this first principle of the interstate system and would likely meet significant resistance for that reason at the federal level.” (1104-014 Ortsey)

Bloomington and Kokomo are the only two (out of 12) Metropolitan Statistical Areas (MSAs) in Indiana not served by an Interstate highway. Of the 33 cities in Indiana with populations of at least 25,000, only Bloomington and Kokomo are presently not served by an Interstate highway; US 31 (serving Kokomo) is identified in INDOT’s Statewide Long Range Transportation Plan as a mobility corridor. INDOT and FHWA are preparing three EISs for three segments of independent utility from Indianapolis to South Bend.

40. “How many farmers are really making their livelihoods from farming? Most have another job and farming has become their second job or hobby? You need to have a good transportation source to ship your raw materials and manufactured goods to succeed in any business (farming or manufacturing).” (1107-386 Sims)

The improved access offered by I-69 will assist the farm economy in Southwest Indiana. This is reflected in the economic analysis in Chapter 3.

41. “The traffic on SR 37 corridor is highly congested, as I’m sure the traffic counts reflect. And, it’s only going to get worse. Something needs to be done along SR 37. Why not create an interstate quality highway? The alternative would be adding travel lanes to relieve the congestion. Which is only a temporary fix. So, why not use the Federal funds to assist Indiana improve its transportation system.” (1023-001 Earleywine)

The INDOT Statewide Long Range Transportation Plan provides for adding travel lanes on SR 37 for approximately 10 miles south of I-465. In addition, the Bloomington MPO’s Long Range Transportation Plan provides for upgrading SR 37 to freeway standards from south of Bloomington to the Morgan County Line. Preferred Alternative 3C will allow INDOT and Bloomington/Monroe County to forego these improvements which would still be necessary in the SR 37 corridor if another alternative were selected.

42. “INDOT omitted the Indianapolis MSA county data from the congestion estimate in Table 7 of the P & N Statement, thereby allowing any increase in congestion to appear more reasonable and tolerable. To avoid misrepresenting congestion conditions, INDOT

should have included Indianapolis MSA data in this section.” (1106-147 CARR/HEC/ELPC Attachment B)

This comment refers to Table 2-3 in the DEIS. Traffic congestion in the Indianapolis Metropolitan Statistical Area (MSA) was not included in the analysis of either the Study Area or the rest of Indiana. The exclusion of Indianapolis area counties recognizes that the amount of travel and level of congestion in the Indianapolis MSA is substantially different than that elsewhere in Indiana. To provide a fair comparison, the four Indianapolis MSA counties in the Study Area were excluded from the congestion analysis in the Study Area, as were the five counties in the Indianapolis MSA in the “rest of Indiana.” The needs analysis did not include the Indianapolis MSA to avoid overstating the needs. The impacts analysis section of the DEIS did analyze traffic impacts in the Indianapolis MSA. See Section 5.8 *Traffic Impacts*, in particular Section 5.8.4, *Impacts on Major Corridors*.

43. “We agree with the INDOT’s conclusion that “roads generally are less congested in the Study Area than in the rest of the State.” and that rural and urban interstates are more congested elsewhere than in the Study Area. Even by 2025 the areas of major congestion are concentrated in the Indianapolis metropolitan area, which already has many miles of interstates. The P & N Statement actually demonstrates that interstates typically do not relieve traffic congestion in the long run – Marion County has more miles of interstate than any other county in the State, yet INDOT predicts that will be highly congested in 2025.” (1106-147 CARR/HEC/ELPC Attachment B)

Congestion results from concentrations of population and the resulting vehicular travel causes congestion, not constructing highways. The Interstate highways in Marion County relieve much congestion that otherwise would exist on local roads.

44. “INDOT declares that evidence of significant highway safety problems in the area shows that “the Study Area has almost 30% of rural counties in the state with high fatal accident rates. What INDOT fails to note is that the Study Area has nearly 30% of the rural counties in the State; therefore, it is not surprising that it has almost 30% of the counties with high fatality rates. The same conclusion applies to high injury accident rates. The bottom line is that the Study Area is no worse than other rural areas in Indiana.” (1106-147 CARR/HEC/ELPC Attachment B)

This comment was written in September of 2001 and predates the DEIS. The statement cited in the comment was not incorporated in the DEIS.

The safety analysis documented that in the Study Area, a “band” of counties with poor safety records. These include Knox, Daviess, Pike, Martin, Lawrence, DuBois, and Orange counties. Owen County also shows high crash rates for both fatal and injury crashes. The key finding of the safety analysis was that there is a high incident of serious crashes in many parts of the Study Area. See FEIS, Section 2.3.1.4.

Crash reductions can be achieved by providing a safer, higher class of facility, such as an Interstate highway. Within the context of providing an improved link between Evansville and Indianapolis which completes a portion of the National I-69 project, it makes sense to consider the crash reduction potential of various projects. However, safety improvement is not a primary need of the project, and crash reductions are not a core goal for this project.

45. “I have been going to public meetings, writing letters, speaking with government officials regarding the proposed I-69 study for nearly 14 years. And during that time, a major point that I have made was the necessity of studying this highway from a rural perspective that considered the special and significantly different transportation needs of people in the rural areas that this highway passed through; that focused on protecting the rural areas of the state. In all that time, not once has this perspective been thoughtfully or meaningfully addressed.” (1028-038 Melchoir)

This project has considered the particular needs of rural areas. Accessibility, as compared with congestion relief, tends to be a need often found in rural areas. Accessibility in Southwest Indiana was analyzed in the needs assessment of this study, and improving accessibility was identified as a core goal for this study.

46. “The first of these core objectives is the only true purpose of the I-69 highway project. For decades, some Evansville residents have complained that they feel isolated from Indianapolis. Evansville is farther away from Indianapolis than any other large city in the State, and Evansville residents sometimes complain that they feel more a part of Kentucky than of Indiana. The lobbying group for an all-new-I-69 – Voices For I-69 – is based in Evansville, and the project’s biggest boosters are Evansville political and business leaders. Clearly, improving Evansville’s linkage to Indianapolis is the true “underlying purpose and need to which INDOT is responding. 40 CFR. 1502.13. This goal is best achieved by upgrading US 41 and connection to I-70 through the approved bypass around Terre Haute.” (1106-147 CARR/HEC/ELPC Attachment B)

Improving the transportation linkage between Evansville and Indianapolis is one of three core goals of this project, which reflects the high degree of significance associated with this goal. However, this major project is not being undertaken solely to connect these two cities. A project of this scale inevitably serves multiple

purposes. In addition to improving the connection between Evansville and Indianapolis, this project also is intended to improve transportation service and economic opportunities for the people of Southwest Indiana as a whole – not just those who happen to live in or near Evansville. It also is intended to provide a link in the National I-69 corridor, which serves broad national objectives including the promotion of trade with Canada and Mexico. Excluding these regional and national goals from the purpose-and-need statement would have biased the alternatives analysis. Instead of doing that, INDOT and FHWA carefully developed a multi-dimensional purpose-and-need statement that reflects the full range of objectives of this large-scale project. This approach is fully consistent with NEPA.

47. “The second of the “core objectives” – improving personal accessibility – is not a real purpose and need of the project. This objective is biased strongly in favor of a new-terrain highway that would bisect Southwest Indiana. By definition, building a new highway likely will “improve personal accessibility for Southwest Indiana residents,” if only marginally, since, by its very existence, a new highway adds to the network.” (1106-147 CARR/HEC/ELPC Attachment B)

The need to improve personal accessibility was identified through a thorough needs analysis. The needs analysis determined that there is a significant need for improved accessibility in Southwest Indiana. Accordingly, improved accessibility is a core goal for this project. The ability of alternatives to positively affect personal accessibility is influenced by a number of factors, and does not necessarily favor new terrain alternatives. Alternatives which involve an upgrade of existing SR 37 (2C, 3B, 3C, 4C) perform better on personal accessibility than the corresponding alternatives which do not use existing SR 37 (2A, 2B, 3A, 4A, 4B).

48. “This bias against US 41/I-70 is unjustified, because it stems from a description of the project’s purpose that does not reflect reality. Citizens hardly, if ever, argue that I-69 is needed to improve overall accessibility for Southwest Indiana residents. A glance at a road map will show that there is no shortage of roads and highways in the region. Nor, as the P & N Statement concedes, is there any significant congestion problem that requires expansion of the road network to improve accessibility. In short, INDOT’s identification of ‘accessibility’ as an objective rigs the purpose and need in favor a pre-selected, favored choice, which violates NEPA. Simmons v. US Army Corps of Engineers, 120 F.3d 664 (7th Cir. 1997). INDOT therefore should eliminate this objective from the P & N Statement.” (1106-147 CARR/HEC/ELPC Attachment B)

The goal of improving accessibility in Southwest Indiana is grounded in both Indiana’s statewide transportation plan and in the comprehensive needs assessment that was conducted as part of this study.

The Indiana Statewide Transportation Plan repeatedly refers to the importance of providing transportation access to Indiana residents. The 1994 Statewide Transportation Plan includes the following policies for the State’s transportation network. These policies are retained in the 2001 -2025 Statewide Long Range Transportation Plan (see p. 110, Chapter 6):

- **Linking Indiana’s major population concentrations to the national and international transportation networks;**
- **Providing good accessibility to Indiana’s major production and manufacturing concentrations;**
- **Providing good accessibility to Indiana’s major trade and service concentrations;**
- **Improving access to Indiana’s major tourism and recreation areas, regional economic concentrations;**
- **Adequately linking the state’s major modal facilities and intermodal connections to improve the aggregate transportation system; and**
- **Providing access to and from major population concentrations outside Indiana, major domestic and global markets, and greater integration of Indiana with the global economy.**

The needs assessment conducted for this study specifically identified the need for increased accessibility in Southwest Indiana. The study analyzed the existing transportation network by using an “accessibility index,” which measured the accessibility of Southwest Indiana residents to employment, major population centers, (including hospitals), airports, higher-education institutions, and other locations. In all of these categories, the data showed that Southwest Indiana residents experience lower levels of accessibility than exists in other regions of the State. This data strongly confirms the need for increased accessibility in Southwest Indiana as a whole.

In sum, both the Indiana Statewide Transportation Plan and the comprehensive needs assessment strongly support the decision to adopt the goal of increasing accessibility for Southwest Indiana residents as one of the core goals of this project.

49. “There are several rural counties “with crash rates significantly higher than statewide averages”. This is an apples and oranges comparison! What is the comparison to other

rural counties? Pulling more traffic into these counties via an interstate will likely increase these rates even more.

“The two hundred million dollars saved by using Alternative 1 could be used to improve these rural roads. The recommended alternatives with their higher annual maintenance costs means there will be even less state aid in future years to help these counties with their highway needs. One could argue that the net result will be higher crash rates, not lower rates.” (1105-201 Marbach)

Rural counties in the Study Area were compared with rural counties elsewhere in Indiana to determine safety needs. See the Safety Analysis conducted for this project (Technical Report 3.3.4.1, posted on the project web site www.i69indyevn.org). Also, diverting traffic from lower-classification roads to higher-classification roads (such as an Interstate) will result in fewer crashes, and will lower overall crash rates.

50. “Transportation Improvement to Bloomington will “increase the accessibility of its population to desired travel destinations”. Bloomington already has four lane service to Indianapolis and Bedford. I’m betting 85% of the travel destinations of its residents are to those two cities.” (1105-201 Marbach)

One goal of this project provides for improvements in access to population centers throughout Southwest Indiana, including Bloomington. This includes access from rural areas to locations such as Bloomington.

51. “Only 3 of the 26 counties do not have land within 20 miles of an Interstate. Those 3 (Knox, Daviess, and Lawrence) contain less than 5% of the population of the 26 county area (and only 11% of the total excluding Marion and Vanderburgh Counties).

“8 of the 10 largest cities (excluding Indianapolis and Evansville) in the area are currently served by 4 lane highways.

“REPEAT: There is NOT an accessibility issue that justifies spending an additional \$200-800 million dollars for the “preferred” routes versus Alternative 1. With Alternative 1 only one county would not be within 20 miles of an Interstate.” (1105-201 Marbach)

The needs analysis determined that increased accessibility in Southwest Indiana is a significant need. It was designated as a core goal for this project. Preferred Alternative 3C provides a significantly higher level of increase in personal accessibility than Alternative 1.

52. “The third is probably the most important is that this highway is going to serve to bridge the social and political environment that exists between Southwestern Indiana and Indianapolis and the rest of the state. We have felt like an isolated community down here in Southwestern Indiana for to long. We need to build this direct route to make sure that we are united as Hoosiers and as a state.” (0821-193 Weinzapfel)

Improving connectivity to Indianapolis is part of the core goal of increasing personal accessibility.

2.3.2 Economic Development Needs in Southwest Indiana

1. “As you know, S.I.B.A. (Southern Indiana Business Alliance) has two major missions: to leverage the economic engine that Crane represents, and to protect the base from the 2005 base realignment and closure (BRAC) round. It is crucial that Crane have reasonable access to I-69 if we are to reach these goals.” (1025-040, Southern Indiana Business Alliance)

Preferred Alternative 3C will be located approximately two miles from the truck entrance at Crane.

2. “INDOT arbitrarily omitted data from the Indianapolis Metropolitan Statistical Area (MSA) counties (Marion, Hendricks, Johnson, and Morgan) in key economic categories, even though those counties are in the Study Area. INDOT excluded data from these counties on population trends, employment trends, and personal income, which unfairly skews downward the data in these categories for the Study Area. By so doing, INDOT has made the Study Area’s economy appear worse than reality, which reflects INDOT’s biased effort to misrepresent conditions within the Study Area.

“INDOT does not explain why it omitted these counties. INDOT could not have excluded them on the basis of size, since Monroe, Vigo, and Vanderburgh Counties all are either larger than or comparable in size to Morgan, Hendricks, and Johnson counties, which are in the Indianapolis MSA and the Study Area. Since there is not valid reason to exclude the Indianapolis MSA county data from the DEIS, and INDOT has not offered any reason, excluding the data violates NEPA.” (1107-705 ELPC et al., p. 15)

“The DEIS asserts that “the Study Area (outside of the Indianapolis MSA) lagged behind both the United States and Indiana (outside of the Indianapolis MSA) in per capita personal income” (PCPI) INDOT’s exclusions of four counties within the Study Area - Marion, Morgan, Hendricks, and Johnson - unfairly and unlawfully skews the per capita income (PCPI) downward. Including the Indianapolis MSA would have raised the PCPI for the Study Area, and also would have accurately portrayed the entire area.” (1107-705 ELPC et al, p.29)

“INDOT omitted the Indianapolis MSA counties from most of the economic needs discussion. INDOT excluded data from these counties on population trends, employment trends, and personal income, which unfairly skews downward the data in these categories for the Study Area.

“INDOT does not explain why it omitted these counties. INDOT could not have excluded them on the basis of size, since Monroe, Vigo, and Vanderburgh Counties all are either larger than or comparable in size to Morgan, Hendricks, and Johnson counties, which are in the Indianapolis MSA and the Study Area. Since there is no valid reason to exclude the Indianapolis MSA county data from the P & N Statement, and INDOT has not offered any reason, excluding the data is arbitrary and capricious.” (1106-147 CARR/HEC/ELPC Attachment B)

The Indianapolis Metropolitan Statistical Area (MSA) was excluded from the analysis. As an economic region, the highly urbanized Indianapolis MSA is not typical of Southwest Indiana, which is largely rural, interspersed with small to mid-sized urban communities. In order to ensure a fair comparison between Southwest Indiana and the rest of the state, counties in the Indianapolis MSA were *excluded from both* areas. In other words, Marion, Hendricks, Johnson, and Morgan counties were excluded from the Study Area. At the same time, Boone, Hamilton, Madison, Shelby, and Hancock counties were excluded from the “rest of the state” (which are the portions of Indiana outside of the 26-county Study Area).

This rationale was explained in Chapter 11, *Comments, Coordination, and Public Involvement*. See Section 11.2.1.7.

3. “Even if a highway were to improve the (economic) indicators, INDOT has failed to show that a highway alternative is a cost-effective way to improve them. INDOT’s analysis therefore violates NEPA.” (1107-705 ELPC et al, p. 25)

The analysis in this study is consistent with NEPA. Supporting economic development is one of the nine policies of INDOT. As a transportation project, one of the core goals of the I-69 Study is an analysis of the national goal of constructing an Interstate between Evansville and Indianapolis.

4. “INDOT’s needs assessment relies heavily on a U.S. Department of Agriculture (USDA) report entitled *USDA Rural Development - Indiana Strategic Plan FY 2002*. Remarkably, the report’s authors acknowledge that it does *not* accurately detail conditions in the area: “*Because we recognize that this data is limited in terms of what it can tell us about the vitality of an area, we have begun gathering more detailed information on Indiana rural*

communities through 'Community Assessment Visits.'” Given this statement, INDOT’s heavy reliance on the report is misplaced. INDOT should not use the USDA report as the basis for any conclusions in the DEIS.” (1106-147 *The Untold Story*, p.14)(1107-705 ELPC et al., p. 25)

“INDOT’s continued reliance on an inappropriate USDA study indicates a lack of data to support its claim that SW Indiana is economically depressed.” (1106-147 Tokarski, p. 8)

The USDA report is one of several data sources used. It was used because it is an independent, authoritative source of data on economic conditions in Indiana.

The quote from the USDA Report (p. 18) refers to the follow up which is conducted by USDA to target its rural development initiatives. These “Community Assessment Visits” are described as follows: “These visits gather data at the community level rather than at the county level; gather data on community assets, capacity, and potential; and provide a more comprehensive understanding of what the town residents actually want to accomplish in terms of development, if anything.” The quote above in context does not state that the data presented in the report are not reliable. Rather, it states that it is not specific enough to target individual communities for USDA Rural Development assistance. The determination of which communities should receive this assistance is made through follow up efforts, including Community Assessment Visits.

5. “More fundamentally, INDOT’s use of the USDA report reflects an institutional prejudice against rural counties, based on the subjective assumption that an urban county is the preferred economic and social environment. ... For example, the report considers water wells and septic tank systems to be indicators of a stressed environment, even though their existence has nothing to do with individual economic circumstances, and they are simply part of the rural lifestyle.” (1106-147 *The Untold Story*)(1107-705 ELPC et al, p. 26)

“According to the report, Owen County is one of the most “stressed” counties in Indiana, yet, according to INDOT’s data, Vigo County - which also is in the Study Area - has a higher poverty rate. For a more accurate comparison, INDOT should have compared rural counties within the Study Area to rural counties in the rest of the State.” (1107-705 ELPC et al, p. 26)

The sources of drinking water is only one of 11 factors used by USDA in one indicator to determine stress. The same factors are used statewide to identify counties as “stressed.” In the Study Area, 63% (12 of 19) of rural counties (those without a city of at least 25,000 population) were identified as “stressed.” By contrast, only 51% of rural counties elsewhere in Indiana (27 of 53) were identified

as stressed. Thus, by using a consistent evaluation tool, this analysis determined that a higher percentage of rural counties in the Study Area are stressed than elsewhere in Indiana.

Vigo County is not a rural county, since it has a city (Terre Haute) with over 25,000 population. Conditions in Vigo County are addressed in other parts of the economic needs analysis.

6. “According to INDOT, Indiana’s population growth has lagged behind the rest of the United States. Between 1960 and 2000, the United States population grew at an annual rate of 0.80%, while Indiana’s rate grew at only 0.40%. Southwestern Indiana’s population growth - outside of the Indianapolis MSA - “has lagged behind even the rest of Indiana.” Yet the difference between the growth rates is minuscule - 0.40% for the State versus 0.37% for the Study Area outside of the Indianapolis MSA. This gap of only 0.03% is less than one tenth of one percent gap (sic) reported in INDOT’s 2001 draft Purpose and Need statement for I-69.” (1107-705 ELPC et al, pp. 26-27)

The FEIS has been revised to state “slightly behind.” Note also that the main point of this analysis is that population growth in Southwest Indiana lags far behind the rest of the United States.

7. “INDOT uses these data to argue that “[a] low rate of population growth compared to other parts of the United States is an indicator of the lack of economic opportunity, suggesting that many individuals are relocating to other areas where economic opportunity is greater.” Notably, INDOT did not support this conclusory statement with any facts.” (1107-705 ELPC et al, p. 27)

Lower population growth often is indicative of net out migration. Net out migration occurs when more people move out of an area move into that area. The only other factors that could affect comparative population growth (birth rates and death rates) are generally consistent among states. Information on out migration has been added to the FEIS. See section 2.3.2.1, especially Table 5A. It shows that over the period of approximately two decades, Southwest Indiana had negative net migration.

8. “INDOT’s population discussion also is flawed because INDOT itself can’t decide whether rapid growth is good. The USDA report, cited favorably by INDOT, considers rapid population growth to be an indicator of stress, whereas, as noted above, INDOT considers rapid growth to be a prerequisite for economic opportunity. Thus, the USDA report contradicts INDOT’s own assumptions.” (1107-705 ELPC et al, p. 27)(1106-147, *The Untold Story*)

The comment is describing two very different circumstances. The USDA Report refers to short-term spurts of rapid growth. Such rapid growth certainly can lead to economic stress, particularly in rural areas without adequate infrastructure to support that growth. The needs analysis compares long-term population growth rates (e.g., a national population growth rate of 0.80% annualized, as compared with a Study Area population growth rate of 0.37% annualized, over a period of 40 years). Long-term population growth in the United States is associated with favorable economic circumstances. At the same time, a growth rate of a fraction of one percent, annually, cannot be characterized as rapid growth.

9. “Fourth, even if INDOT’s premise were correct that rapid population growth is needed for economic development, the data supports the conclusion that the Study Area is doing well. According to the 2000 census data:

“7 of the top 20 growth counties are in the Study Area, which is more than any other region of the state.

“Owen County, with a 26.1 percent increase, is the fourth-fastest growing county in the State.

“Only 4 of the 17 counties in the State that lost population or grew by less than one percent are in the Study Area (Knox, Perry, Martin, and Vigo), and 2 of those counties - Perry and Vigo - are on interstate highways.

“Thus, the Study Area is growing at essentially the same rate as Indiana as a whole and faster than in some areas of the State.” (1107-705 ELPC et al, pp. 27-28)(1106-147, *The Untold Story*)

Comparing population trends among different parts of Indiana overlooks a key finding of the needs analysis - that population trends within Indiana are lagging significantly behind national population trends. For example, this comment cites population changes between 1990 and 2000. During this time, Indiana’s population growth lagged behind national trends, such that Indiana lost representation in Congress. Also, the DEIS is not stating that “rapid” population growth is needed, or is a sign of economic development. Rather, it is saying that the Study Area (along with the rest of Indiana) has lagged significantly behind national population growth rates for many decades. During the 40 year period analyzed in the DEIS, Indiana’s delegation in the US House of Representatives declined from 11 to 9 (18%) because its growth in population was significantly less than the rest of the United States.

10. “In truth, INDOT conceded in the same paragraph that employment growth in the Study Area (excluding the Indianapolis MSA), actually grew at a *higher* rate than Indiana as a whole - 1.17% annual growth versus 1.12% - between 1974 and 2000. This data flatly contradicts INDOT’s claim that the Study Area has “lower rates of job growth.” (1107-705 ELPC et al, p. 28)(1106-147 *The Untold Story*)

The section cited showed that all parts of Indiana had substantially lower rates of employment growth than the rest of the United States. The annual growth rates for employment over a quarter century (1.18% for the Study Area and 1.12% for the rest of Indiana) both are substantially less than the rate for the United States (1.79%). Employment growth in Southwest Indiana was compared to employment growth in the rest of the United States, not the rest of Indiana.

11. “Another example of INDOT’s institutional bias is that DEIS Figure 2.23 erroneously shows lower employment growth in the Study Area compared to the rest of Indiana, when the reverse is true.” (1107-705 ELPC et al, p. 28)

This typographical error has been corrected in the FEIS.

12. “Equally impressive is that unemployment dropped more in the Study Area than in any other region in the State between 1990 and 2000. Of the 43 counties that experienced at least a 50% drop in the unemployment rate, 18 were in the Study Area.” (1107-705 ELPC et al, p. 28)(1106-147 *The Untold Story*)

“The county-level 2001 employment rate ranged widely across the state. Eleven of the 25 counties with the lowest unemployment rate were in the Study Area. Six of the 25 counties with the highest unemployment rate were in the Study Area. Therefore, INDOT cannot plausibly argue that economic conditions throughout the entire Study Area are worse than elsewhere in the State.” (1107-705 ELPC et al, pp. 28 -29)

The more reliable way to look at comparative unemployment is by the overall rate compared to other locations, not changes in a rate in one location. As the DEIS documented, during an 11-year period, six of the nine Indiana counties with the highest unemployment rates in Indiana were in the Study Area.

13. “The DEIS also claims that the Study Area is suffering from low employment rates in the ‘fastest growing industries’; even though the rates are virtually the same as the entire state. According to the DEIS, the rate of employment in the 20 fastest-growing industries is ‘about the same percentage both statewide and in the Study Area (excluding the Indianapolis MSA).’” (1107-705 ELPC et al, p. 29)

The section cited showed that all parts of Indiana had substantially lower rates of employment in fast growing industries than the rest of the United States. Employment in fast growing industries in Southwest Indiana was compared to employment in fast growing industries in the rest of the United States, not the rest of Indiana.

14. “Another flaw in INDOT’s explanation is that there is no correlation made between interstates and growth in the “fastest growing industries.” Most of the listed industries - for example, motion pictures, securities and commodities brokers, museums, botanical gardens - do not require interstates for growth and success.” (1107-705 ELPC et al, p. 29)(1106-147, *The Untold Story*)

The needs analysis simply determined that there was economic need, and that one indicator was an under-representation in Southwest Indiana of employment in fast-growing industries. It was made without reference to any anticipated means of addressing these needs. Having said that, a number of these fast-growing industries do depend heavily on transportation for growth and success. These include trucking and warehousing; transportation services; auto repair, services, and parking; local and interurban passenger transportation; business services; and amusement and recreation services. See Section 2.3.2.1 for a discussion of these rapidly growing industries.

15. “From 1969 to 1998, 9 of the 20 counties in the State with the best improvement in PCPI were in the Study Area (excluding the Indianapolis MSA).

“In 1998, 8 of the top 20 counties in PCPI were in the Study Area, which is more than any other region of the State.

“The Study Area has approximately the same percentage of counties in the State in the lowest 20 for PCPI (31 percent) as the percentage of counties in the State that comprise the Study Area (30 percent), thereby indicating that Southwestern Indiana is not uniquely disadvantaged.” (1107-705 ELPC et al, p. 30)(1106-147 *The Untold Story*)

Improvements in income starting from a very low level could still leave places at very low levels. As documented in the DEIS, 12 of the 18 counties with the lowest effective buying income in Indiana (including nine of the lowest ten), were in the Study Area. The point of the income data is that there are significant parts of the Study Area with very low income levels.

16. “More fundamentally, by including a section on poverty levels in the DEIS, INDOT implies that a new interstate highway would reduce those levels. The evidence in Indiana is to the contrary. Southwestern Indiana has relatively few people in poverty, and

poverty levels in the more populous urban areas are much higher than in rural areas. According to the data:

“4 of the 12 counties identified with high poverty rates in Table 2-8 of the DEIS (page 2-29) (Crawford, Vanderburgh, Marion and Clay) are located on an interstate.

“Counties along existing I-69 have more people at the poverty level than in other areas.

“Marion County, which has more miles of interstate than any other county in Indiana, also has more people at the poverty level than the rest of the Study Area combined.” (1107-705 ELPC et al, p. 30)(1106-147 CARR/HEC/ELPC Attachment B)

“The use of rates to characterize poverty levels is misleading in the P & N Statement, since the Study Area had relatively low numbers of people in poverty. Rural counties typically have a lower population than urban counties. Not surprisingly, urban counties have the highest number of people at the poverty level.” (1106-147 CARR/HEC/ELPC Attachment B)

The needs analysis (Section 2.3.2.1) found that 12 of the 24 Indiana counties with the highest poverty rates (including five of the seven highest) were in the Study Area. While many counties in the Study Area may have fewer people in poverty (because of lower population), high *rates* of poverty are a genuine indicator of economic need. This determination was made without reference to any anticipated means of addressing it. Having said that, alternatives can be compared as to how well they perform in improving economic circumstances in Southwest Indiana.

17. “Recent U.S. Census data demonstrates dramatically that Vigo, Sullivan and Knox counties are already doing worse economically than the “new-terrain counties” - Greene, Daviess and Pike. According to the figures available as of September 2002:

“The US 41 counties are growing more slowly. Between 1990 and 2000, the US 41 counties grew in population by a total of only 1.1%. The new-terrain counties grew by 7.6%, more than six times faster.

“Poverty is worse in the US 41 counties. The US 41 counties have over 2½ times as many poor people as the new terrain counties. Among Indiana’s 92 counties, the US 41 counties have the second, third and fifth highest poverty rates.

“The US 41 counties have over twice as many unemployed people. The US 41 counties have 4,130 unemployed people. The new terrain counties have 1,860. Terre Haute has the second-highest unemployment rate (5.8%) of any metropolitan area in the state.” (1107-705 ELPC et al, p. 31)

“This statement alone demonstrates that Indiana’s choice of “improving opportunities for economic development” as a primary goal for the I-69 project is arbitrary and capricious, since INDOT cannot state with any certainty that highways do lead to economic opportunity. Indeed, in the case of a new I-69, the US Government has determined that an all-new highway would actually shift nearly 40% of travelers away from US 41 and to the new highway, and thereby seriously damage businesses along US 41. Other communities also would be hurt. Thus, the economic benefits, if any, of an all-new highway would be far offset by economic losses on US 41 and elsewhere, the damage to divided communities, and enormous construction costs.” (1106-147 CARR/HEC/ELPC Attachment B)

One purpose of the needs analysis is to determine the degree of economic need in the Study Area as a whole, not to determine which part of the Study Area should be targeted. In addition, as is documented in the Alternatives Chapter of the FEIS, Preferred Alternative 3C will provide nearly the same level of economic growth to the Terre Haute area as Alternative 1. See FEIS, Section 3.4.4.2, Table 3-26c.

18. “Building new highways shifts economic activity from one place to another; as a result, economic gains along a new route are largely offset by economic losses elsewhere. Indeed, the United States’ study of Corridor 18 (now national I-69) concluded that any economic gains along the route would cause losses elsewhere, and simply represent transfers. In the case of a new-terrain I-69, the US 41 counties will suffer many of these losses.” (1107-705 ELPC et al, p. 31)

As is documented in the FEIS, Preferred Alternative 3C will provide net economic growth to Terre Haute and other parts of the Study Area along US 41. Preferred Alternative 3C will cause overall economic activity to improve in all parts of the Study Area. Preferred Alternative 3C will result in negative impacts on traffic-dependent businesses located along US 41. These are disclosed in Section 5.5, *Economic Impacts*. As shown in Table 5.5-2, businesses along US 41 will lose about \$21 million in annual business due to the loss of pass-by traffic. However, the construction of I-69 will take place over many years, and the traffic volume changes will occur gradually.

19. “IEDC’s report is incomplete because it did not report on the number of businesses that have been lost in cities along interstates and other large highways.” (1107-705 ELPC et al, p. 32)

Major infrastructure investments, such as highways, cause net increases in overall economic activity. See Appendix EE, which discusses the relationship between

Interstate highways and economic development. The FEIS addresses impacts to roadside businesses. See Section 5.5, *Economic Impacts*.

20. “A major omission in the IEDC report is its failure to evaluate transfer and induced demand effects when new highways draw traffic away from existing corridors. We understand that, although IEDC was supposed to study the economic costs of new highway construction, INDOT never contracted with IEDC to begin this study. A balanced review of both the benefits and the costs of new highway construction is legally required under NEPA. *Therefore, INDOT should have the IEDC evaluate the economic (and social) costs of a new highway on all communities in Southwest Indiana, and not simply a cursory review of direct losses along US41.*” (1107-705 ELPC et al, p. 32)(1106-147, *The Untold Story*)

“INDOT had planned to retain the International Economic Development Council (IEDC - formerly known as the Council for Urban Economic Development) under Task 5.3.2 of the BLA contract to assess the “negative economic impacts of the corridors selected for detailed study in the Tier 1 EIS.” INDOT’s failure to retain the IEDC for this analysis violates the NEPA requirement to evaluate all impacts of the different route alternatives.” (1107-705 ELPC et al, p. 9)

The analysis of economic conditions is in compliance with NEPA. This analysis was conducted for this study, and its results are found in Sections 3.4.4, *Economic Development Indicators* and 5.5, *Economic Impacts*. It was performed by Cambridge Systematics, another member of the project team. The analysis in Section 3.4.4 provides region-wide forecasts for economic activity, and shows that all sections of Southwest Indiana, including the Terre Haute region, will have a positive economic benefits from Preferred Alternative 3C. The analysis in Section 5.5 of the FEIS shows that there will be some localized effects on businesses dependent upon pass by traffic.

Preferred Alternative 3C will result in an overall improvement to the economy in all parts of the Study Area. This has been documented in the FEIS, Section 3.4.4.

21. “Another example of incompleteness in the IEDC report is the discussion of the Crane Division Naval Surface Warfare Center (Crane). IEDC attempts to link the continued viability of Crane to the existence of a major highway. *The IEDC report does not mention that INDOT already is planning to upgrade and improve U.S. 231, which runs north-south past Crane.*” (1107-705 ELPC et al, p. 32)

The INDOT Statewide Long Range Transportation Plan has no provision for an upgrade of US 231 near Crane. US 231 is a two-lane rural highway with no access

control. A NEPA document is being prepared for US 231 improvements south of SR 56 to I-64, approximately 30 miles south of Crane.

22. “For example, from 1991 to 1995, 35 of the 40 bases closed by the Pentagon were on very near to an interstate highway. Clearly, the presence of an interstate is not an indicator that a military base will remain open; likewise, the lack of a nearby interstate does not hinder a military base’s operation.” (1107-705 ELPC et al, pp. 32-33)

Crane’s economic development potential relates to the potential to use it as an incubator for high tech employment. Unlike most military bases, Crane is a major center of high tech employment for engineers and scientists. Improving its transportation access would encourage spin-off high tech industries.

23. “Based on our analysis, highways do *not* contribute significantly to economic development in rural counties with low population. Common sense supports this conclusion, since in many rural counties the only signs of economic development along highways are gasoline stations and fast-food restaurants. Then these minimal benefits are compared to the costs- for example, construction costs, divided farms, destroyed farmland, road closures, induced demand and sprawl – highways can be net economic losers.” (1107-705 ELPC et al, p. 33)

As the International Economic Development Council (IEDC) report showed, multi-lane divided highway access is an important component in the economic development mix for small and medium sized communities that want to encourage economic development. No evidence is cited by the commentor for the statement that highways can be “net economic losers.” See also the discussion of the relationship between Interstate highways and economic development in Appendix EE.

24. “Specific examples of lack of benefit to highways to rural communities in Indiana include the following:

“The per capita personal income of largely rural counties along existing Interstates I-65 and I-69 is no better than in communities not near an interstate. The incomes in both area have tracked nearly the same.

“More than half of the counties statewide that the USDA classifies as “stressed” are on or near an interstate highway.

“11 of the 17 counties Statewide that did not increase in population between 1990 and 2000 are on or near an interstate highway.” (1107-705 ELPC et al, p. 33)(1106-147 *The Untold Story*)

“It [the Purpose and Need] does not compare counties on interstates with counties not on interstates. Such an analysis would likely show that interstates are not predictive of success in the measures studied.” (1106-147 Tokarski, p. 4)

“We already have a segment of I-69 from Indianapolis northeast, yet no economic development has occurred along this route. Similarly, the I-64 segment through Southern Indiana has produced no economic development since its construction. What makes anyone believe that a new segment will seriously change this?” (1017-019 Anonymous)

“There is not correlation between job retention or expansion and a state’s level of interstate infrastructure.” (1107-278 Association of Monroe County Taxpayers)

“One need only look to surrounding region to see which communities have been most successful at attracting business and industry in the past 3-4 decades. Access played a key role for all of them. One hears from opponents that, “interstates do not bring development” in one breath. In their next breath they say that interstates cause overbuilding. They can not have it both ways. One only need travel any of the interstate corridors to see how much of an impact a modern interstate has had on investment and job creation.” (1107-510 Lake)

“If you study the numbers high speed interstates generally harm small communities, and inhibit growth.” (0829-006 Jordan)

“First, no conclusions can be drawn from the population data relating either to economic conditions or the desirability of a highway. Rural Southwestern Indiana’s economy is based heavily on agriculture, and population densities are lower. Rural areas do not grow at the same rate as urban areas; indeed, rapid population growth can be harmful because it consumes valuable farmland. Many social, environmental, and fiscal problems occur in the fastest-growing areas of the State. And, other factors, such as industry expansion or contraction, affect population trends much more so than the presence or absence of interstate highways.” (1106-147 CARR/HEC/ELPC Attachment B)

“INDOT has failed to ask a basic question in its review of economic development and highways; namely, how do economic conditions in Indiana compare in communities on or near interstates compared with those not near interstates? Based on our analysis, highways do not contribute significantly to economic development in rural counties with low population. Common sense supports this conclusion, since in many rural counties the only signs of economic development along highways are gasoline stations and fast-food restaurants. When these minimal benefits are compared to the costs – for example, construction costs, divided farms, destroyed farmland, road closures, induced demand

and sprawl – highways can be net economic losers.” (1106-147 CARR/HEC/ELPC Attachment B)

“And we need to provide more job opportunities. All of the studies on economic development show us that the largest and the most building of economic development, most new businesses locate either on an interstate or within ten miles of an interstate. So this highway, a direct route will open up all kinds of economic development opportunities for a lot of small towns between Evansville and Indianapolis, and it is critical.” (0821-189 Becker)

It will boost the economies of Owen, Green, and other southwestern counties. Monroe County with the lowest unemployment rate in the state has much less of an economic need than does Owen and Green Counties. The latest figures indicate the unemployment rate in Green County is 6.3%. Add to this an impending loss of over 300 additional jobs and you come up with a county in need of economic assistance. (1101-010 Pate)

The association of Interstate Highways with population growth in less-populated rural areas of Indiana is remarkable. In the Year 2000 Census, there were 56 Indiana Counties with populations under 40,000. Of these, 21 had an Interstate Highway within their boundaries, and 35 did not. Between 1960 (when the Interstate Highway construction was well underway) and 2000, the population in these counties that have an Interstate highway grew from 433,000 to 584,081, an annual increase in population of 0.75%. During the same period, the population in those counties that did not have an Interstate highway grew from 659,279 to 752,068, an annual increase in population of 0.33%. In other words, population in small rural counties with an Interstate Highway grew more than twice as fast as those with no Interstate Highway. See Tables 2-5b and 2-5c in the FEIS.

While an Interstate highway cannot guarantee economic growth, there is a strong relationship between having an Interstate Highway and having higher rates of population and economic growth. Also, it should be kept in mind that much of the economic development due to the location of an Interstate highway may be located several miles from the highway, and not visible from it. An example of that is the Toyota Plant in Gibson County, which is about 10 miles from I-64.

25. “Indiana is ranked 12th in the nation in the number of interstate miles. According to the DEIS, Indiana “has lagged significantly behind the rest of the United States in population growth,” Indiana has “lagged significantly behind the rest of the United States in employment growth,” and Indiana is “significantly *under*-represented in those industries that are the fastest-growing nationally.” Given Indiana’s high number of total interstate miles, these facts, if true, would argue in favor of economic development measures other

than construction of new interstate highways to improve the state's standing relative to the rest of the United States." (1107-705 ELPC et al, pp. 34 - 35)

The primary purpose of this project is to fulfill key regional and national transportation needs. It is not an economic development project, and considering a full range of economic development strategies is outside its scope. However, given the identified economic needs, the ability of improved transportation to address these needs, and the fact that economic development is one of the stated policies of INDOT's Statewide Long Range Transportation Plan, improved economic conditions were designated as one of the project goals. Many factors affect economic development, and transportation is one of those factors.

In addition, none of Indiana's existing Interstate highway mileage serves to connect Indianapolis with Evansville. Improving this linkage has been determined to be a core goal of this project.

26. "Another flaw in the DEIS is that INDOT did not address feasible alternatives for meeting the project's economic development purpose. NEPA requires a full and fair evaluation of feasible alternatives for meeting the project's stated purpose and need. These alternatives could include upgrading the regions rail network and freight handling facilities, expanding job training and skill marketing ventures, constructing high technology parks, and creating rural enterprise zones. The cost per job for most of these programs is between \$1,000 and \$5,000. INDOT should evaluate non-highway economic development alternatives and compare the costs and benefits of those alternatives to the costs and benefits of building a new highway. INDOT's failure to perform such a cost-benefit analysis for any of the economic development measures invalidates the agency's decision making process under NEPA." (1107-705 ELPC et al, p. 35)

This is a transportation project. One project purpose is to complete the portion of the National I-69 project between Evansville and Indianapolis. Non-transportation economic development projects do not satisfy these elements of the Purpose and Need, and therefore are not reasonable. In addition, a cost-benefit analysis is not required under NEPA.

27. "It should be noted that labor costs overwhelmingly outrank infrastructure when it comes to location choices made by multi-national corporations. The Toyota truck manufacturing plant in Gibson County did not locate in southern Indiana due to its proximity to I-64 any more than RCA relocated to Mexico because of its good limited access truck highways. Toyota came here because labor and land are cheaper here than in Japan and because they were given huge economic incentives by the state." (1106-147 Tokarski, pp. 5-6)

In interviews for this study, a Toyota plant executive stated that Toyota chose to locate its plant in Gibson County for a variety of factors. In addition, they indicated that without the Interstate Highway access provided by I-64, it would not have been situated in Gibson County. The interview was conducted with Mike Goss at Toyota Motor Manufacturing Indiana (TMMI) on May 8, 2001.

28. “Crane’s relative isolation in this time of terrorist fears is a plus for the base; the weapons and munitions stored there are safer now that they would be with a Canada to Mexico truck corridor nearby.” (1106-147 Tokarski, p. 10)

“The Navy’s installation at Crane should stay a low key location. Don’t promote our defense research locations with easy Interstate access route in today’s climate of terrorism.” (1024-039 Harris)

“5. I would be very uncomfortable having a major highway passing closely to Crane Navel Base. I have children that play on the football field there. When 9/11 happened last year they were not allowed to play on that field for a couple of weeks because of a possible terrorist attack. Would my children be safe if a major NAFTA highway was cost to Crane?” (1107-072 Jenness)

There already are two state highways (SR 558 and SR 645) that provide direct access into Crane. The presence or absence of an Interstate Highway will not materially affect the ability of the United States military to provide proper security at its facilities.

29. “Crane’s physical product, military ordinance, is more safely and economically carried by existing rail infrastructure (which connects to all important national military installations) while its knowledge products are best carried by fiber optic cables.” (1106-147 Tokarski, p. 10)

The Department of Defense chooses to ship products from Crane (including munitions produced at Crane) by the most efficient means possible. Many of its products are shipped by truck. These shipments would be safer on higher quality roads.

30. “Martin County is one of the poorest counties in the state since we don’t have a large tax base due to inaccessibility or lack interstate highway. ... Martin County has a lot to offer its citizens and we have many of the ingredients to grow but what we’re lacking is access to an interstate.” (1106-146 Ader, p. 2)

“My fellow County Commissioners and our constituents strongly believe the I-70/US 41 alternative does nothing more than maintain the status quo of transportation in southwest Indiana, particularly Martin County. The status quo in Martin County means no population growth since the 1940's, no significant private sector investment since 1965, job creation that lags far behind the state average, and a tax base that is not keeping up with increases in the cost of providing government services. We are convinced that a root cause of our economic stagnation is the lack of convenient access to the nation's high-speed highway network.” (1107-419 McFeaters)

“The average person in Martin County lives no closer than 40 miles to the interstate or a limited access highway. ... Martin County is also the home of the Crane Navel [(sic)] Surface Warfare Center, one of the largest high-tech employers in the State of Indiana. It is also the home to the largest concentration of Gypsum board manufacturing in the Ohio Valley and the Great Lakes Region. We believe that the long term competitiveness of both the Crane Navel Surface Warfare Center and our Gypsum Industry is dependant on access to an interstate highway.” (0821-187 McFeaters)

The needs assessment (Table 2-7 in the DEIS) shows that Martin County has the lowest effective buying income per capita of any county in Indiana. Preferred Alternative 3C comes within approximately one mile of Martin County.

31. “Crane accounts for several hundred jobs as well as several millions of dollars in wages for Martin County. I feel that if Martin County and Crane had access to a major interstate we would have several industrial parks established and we would be able to connect with other industries easier.” (1106-146 Ader, p. 2)

The Alternatives Analysis in the FEIS (Section 3.4.2) identified that a high level of access to Crane is associated with the highest increases in business accessibility.

32. “We agree that an important part of Indiana's economic future involves supporting and building on its biomedical assets but it's a stretch to think that a truck highway is integral to that goal. The products of Life Sciences are patient records, research reports, genetic data, etc. products which require information, not truck highways. Employers and employees in the life sciences value environmental, social and civic amenities over industrial infrastructure. If we are to attract the highly-educated and highly-compensated individuals who form the core of life science research and development then we must make a concerted effort to preserve those qualities of life.” (1107-281 Association of Monroe County Taxpayers, p. 1)

“In working with our economic development agency, Vision 2000, in recent years, it is obvious that our region of the state is at a competitive disadvantage when attempting to

attract new industry. Companies seeking new plant sites are eager to learn of Evansville's access to Indianapolis and points north. Without such a direct connection, re-location consultants are quick to dismiss our area as a potential home for industry." (0821-295 Winnecke)

Transportation has different levels of importance to different industries. For many industries, access to a multi-lane, access controlled highway is an essential requirement for location decisions.

33. "I think I-69 should use as much of SR 37 as possible, preferably all the way to Bedford. The economic benefits to southern Indiana are needed badly. Many of the counties with the highest unemployment numbers are in this part of the state." (1107-308 Ingram)

As identified in the FEIS, alternatives that used SR 37 to Bedford were among the highest performers on meeting project goals. However, major environmental impacts along US 50 precluded their being considered as the Preferred Alternative. Bedford will have access to Preferred Alternative 3C using SR 37 and US 50. Preferred Alternative 3C uses most of the suggested portion of SR 37.

34. "I've read that Bloomington is the eighth largest city in Indiana but the only city in the top FORTY without an interstate or passenger rail service. This adversely affects our ability to attract new industry to the area." (1107-245 Wagner)

Of the 40 most populated cities in Indiana (Year 2000 Census) there are three which are not on or near an Interstate Highway. (Passenger rail service is not available in these cities.) These cities are Bloomington (pop. 69,300), Kokomo (pop. 46,100), and Goshen (pop. 29,300). US 31, which serves Kokomo, is programmed in INDOT's Statewide Long Range Transportation Plan to be studied between Indianapolis and South Bend. Goshen is approximately 11 miles from I-90. Preferred Alternative 3C is forecasted to provide a significant increase in economic growth to Monroe County.

35. "Virtually all new major industries are located on sites near interstate or four lane highways." (1027-015 Matthews)

Similar points were made in the IEDC Report (see pp. 48-50), which is included as Appendix OO of the FEIS.

36. "This (Alternative 1) would yield a very crooked I-69 route through Indiana that benefits Illinois as much as Indiana. For the same money we can have two good four lane divided highways with efficient and direct routes through the state improving access and economic benefits for thousands more Hoosiers." (1027-015 Matthews)

Most of the economic benefit for Alternative 1 would accrue to Indiana. However, overall levels of economic benefit which would accrue to Indiana for Alternative 1 are only one-third of the benefits that will result from Preferred Alternative 3C.

37. “I also grew up in Harrison County, I-64 is right next to it. We were out in the boonies raising chickens, pigs, cattle and it didn’t ruin our way of life, it helped us to get to the market and I think you all will find it does the same.” (0821-249 Grantz)

Interstate highways offer benefits to the agricultural sector, which is one of the major industries in much of the Study Area, by improving access to markets and suppliers.

38. “I do NOT equate population growth to positive things. High population numbers are found in inner cities with associated high crime rates and low quality of life. High population numbers can be equated with higher unemployment rates, pollution, and congestion. High growth rates can be equated to areas with high illegal immigration rates and uneducated people who don’t have a concept of birth control, which leads to higher poverty rates.” (1103-021 Werne)

Population growth is associated with improving economic conditions. It does have both positive and negative impacts.

39. “A new terrain interstate would draw activity away from Terre Haute, which is already paved, developed and in need of an economic “shot in the arm.” (1025-023 Getz)

Preferred Alternative 3C will lead to increased rates of economic growth in the Terre Haute region at nearly the same level as Alternative 1. This has been documented in the FEIS (see Section 3.4.4).

40. “Greene County has the dubious honor as being consistently in the top ten percent of unemployed in the state. In the last ten years, there have been seven major employers drastically curtail or close their operations directly effecting over 1000 jobs in a county of only 14,000 employable. ... To prove that a four-lane highway is vital to attracting business, just look at the Woods Wire distribution center in Mooresville. We offer that company free land and a much below market interest rate on a loan for their plant and equipment. Further, we promised ten-year tax abatement even if our bank had to make the tax payments! Their responses was that our offer was incredible; however, we weren’t on a four-lane. Thus, they build in Mooresville.” (0904-004 Barkley)

Greene County, which is geographically the largest in Indiana, has no multi-lane, access controlled highways. Preferred Alternative 3C serves eastern Greene County.

41. “I would hope the route would go close enough to French Lick that an improved route would increase tourism in this very historic area of the state. I believe the economic benefits of the route would outweigh any negative environmental effects.” (1107-383 Evans)

The alternatives analysis showed that Preferred Alternative 3C would provide economic benefits throughout Southwest Indiana, including tourism benefits. Preferred Alternative 3C will be about 40 miles from French Lick.

42. “...IU CANNOT BE THE ENTIRE ECONOMY OF BLOOMINGTON! Bloomington needs a diverse economic base that includes manufacturing, high technology, services, retail, and agriculture. We need to be friendly to companies (large or small) that could add to the economic diversity of our region. Part of that is providing superior transportation and accessibility for supply and distribution channels. The addition of a good highway network will also help the region to attract talented individuals, thereby reversing the “brain drain” out of South Central Indiana. We have brilliant people graduating from IU every year—why is it that so few of them stay behind to start new businesses or take high-level jobs? Because there are no high-level jobs to take! The people that stay are often relegated to serving cappuccino at Barnes & Noble.” (0828-002 Chang)

Preferred Alternative 3C is forecasted to provide a substantial increase in economic development in Monroe County. See FEIS Section 3.4.4.2.

43. “(1) There is essentially no industry along the proposed corridor. I myself had to spend 40 years driving to Indianapolis to work. You don’t mention the parents farther south who lose their children after graduation because of the lack of jobs in the area to be opened up by the road.” (1031-012 Williams)

The analysis showed that Preferred Alternative 3C would result in increases in the number of young workers (under age 45) who choose to locate or remain in Southwest Indiana. See Table 3-28.

44. “What may be more important is the lost opportunity. I know of many people in Central Indiana, including myself, who consciously avoid doing business with Southwestern Indiana because of the lack of an Interstate Highway connection. I’ll go to Cincinnati on business with little complaint because the drive is so easy. But even though Evansville is about as far away, I avoid pursuing business opportunities there because of all the travel

based variables that can erupt: no familiar interface of Interstate exists with logically clustered services, unknown travel delays caused by local issues, few late night or 24 hour services, unknown or irregular availability of gas and food along the way, longer travel time than Interstate highway travel, difficulty in estimating time of travel, annoyance of speed zone changes, concern over local law enforcement issues, and perceived hassle factors...just to name a few issues that come to mind.” (0814-010 Martindale)

As the comment points out, Interstate highways tend to attract a range of services that support business activity.

45. “Economic Development is most effectively and efficiently achieved through upgrading existing roads to 21st century highway standards, eliminating safety hazards on roads throughout the State, and otherwise developing an integrated network of highway and non-highway alternatives. Spending substantially more and a billion dollars on a single all-new interstate, in contrast, squanders State and federal money, and as explained later in this document, will not improve overall economic conditions in Southwestern Indiana.” (1106-147 CARR/HEC/ELPC Attachment B)

“*Economic Development* is most effectively and efficiently achieved through upgrading existing roads throughout the State, and otherwise developing both highway and non-highway alternatives.” (1107-705 ELPC et al, p. 14)

Key factors in economic development, particularly in rural areas, include improved access to labor, customers, business customers, and business suppliers. Given that traffic congestion tends to be a minor problem for business-related travel in rural areas, increasing access to these factors often is best accomplished by new transportation facilities. New highways can be an effective aid to economic development.

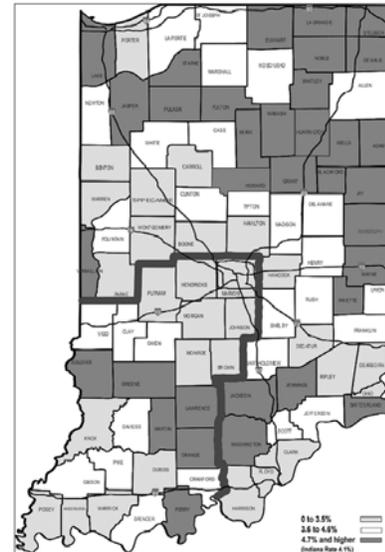
The *Regional Economic Needs Analysis* report was published by the Council for Urban Economic Development (now the International Economic Development Council) in October, 2000 as part of this study. It found that “ ... rural and small town regions wishing to experience rapid growth are much more likely to succeed if they have four-lane highway access” (p. 50). It also found that “Business representatives report problems with the existing road system in the region” (p. 63). This report is included in Appendix OO in the FEIS.

Given these factors, alternatives were studied that included various combinations of upgrades of existing roads and new road construction. Over one-third of the Preferred Alternative (35%) consists of upgrades of existing four-lane roads.

All this having been said, INDOT’s highest priority is the maintenance and upgrading of its existing infrastructure; 55% of its capital budget is for such preservation and maintenance activities.

46. “More generally, whether in the Study Area or elsewhere in the State, some counties have relatively low unemployment rates, while others are higher, regardless of whether they are on or near an interstate highway. Figure E, which illustrates the county-by-county variations in the July 2001 employment rate, demonstrates that the presence of an interstate highway does not significantly affect employment conditions. Location, in this case, means very little.” (1106-147 *The Untold Story*)

**Figure E
July 2001 Unemployment Rates³⁷**



Unemployment is one of a number of economic indicators. The unemployment indicator was used to show that there are significant pockets of high unemployment in Southwest Indiana.

47. “The argument used here seems at complete odds with the argument used in other sections of the report about the slow economic development of Southwest Indiana. This section says 303,571 acres (the midpoint of 3,500-5,000 acres divided by 1.4%) of farmland will be lost over the next 23 years in SW Indiana. Presumably this loss will occur as farmland is converted to housing, commercial buildings, factories, etc. That amount of loss implies a very healthy economic activity level – contrary to the report’s assertion that only a new Interstate can save the economy of SW Indiana.” (1105-201 Marbach)

These rates of farmland loss are extrapolations of existing trends under existing conditions. The needs analysis demonstrates that under existing conditions, there are significant economic needs in Southwest Indiana.

2.4 Public and Agency Input
No substantive comments.

2.5 Project Goals and Performance Measures
No substantive comments.

3.1 Process Overview

No substantive comments.

3.2 Level 1 Scoping and Development of Route Concepts

3.2.1 The Scoping Process

1. “We also encourage FHWA and INDOT to consider developing additional alternatives that combine and/or connect portions of the 12 alternatives analyzed in the Tier 1 DEIS in order to determine if there might be another alternative that has less adverse impact on the environment than the current five “preferred alternatives.” identified in the Tier 1 DEIS, while satisfying the project’s transportation goals.” (1107-696 USEPA Region 5, Region 5, p.2)

FHWA and INDOT considered possible combinations of existing routes, and concluded that two merited additional study. These two “hybrid” alternatives were combinations of 2 and 3C, and combinations of 4 and 5A. The findings of the analysis of these Alternatives is documented in the FEIS, as summarized in Section 6.3.2, *Post-DEIS Consideration of Hybrid Alternatives*.

2. “First, the Federal Government should be investing in high speed rail and maintaining existing roads. It is neither environmentally nor geopolitically in our interests to continue funding roads at the expense of alternative transportation systems. The environmental price tag is too high, and it increases our vulnerability to the foreign oil cartels.” (1025-039 Monroe County Board of Commissioners, Letter)

“The only solution to the economic and transportation conditions set out in the DEIS is an interstate highway, thus eliminating all other transportation, and non-highway alternatives that would be more fiscally, socially and environmentally responsible. ... Improving and upgrading the existing highway network, as well as an analysis of non highway options must be addressed in a supplemental DEIS.” (1106-147 Tokarski, p. 2)

“Put freight back on with rail system where it belongs.” (1018-013 Bruck)

“Pour money into building our railroad back - passengers trains is the answer to the future.” (1024-034 Gasten)

One purpose of this project is to provide an improved transportation link which “Completes the portion of the National I-69 project between Evansville and Indianapolis (FEIS, Section 2.1). Construction of a railroad line would not serve this national objective.

Second, businesses increasingly are dependent upon small shipments and “just-in-time” (“JIT”) delivery. Motor freight is the method of choice for providing such freight service. Businesses who have the choice of rail or highway for freight shipments tend to choose rail for bulky, low-value shipments whose delivery is not time-sensitive.

Also, vehicle miles of travel for motor vehicles continues to grow more rapidly than population. While such growth rates are not expected to continue indefinitely, there is no indication that motor vehicle travel will be supplanted within 20 years.

3. “I would think that a route that would utilize the forever-scarred coal mining land and already existing state-owned land would be among the most economical and sensible routes. There are thousands of acres in southwestern Indiana that, thanks to coal mining, are nothing more than piles of rock-strewn earth and polluted streams and lakes that can grow nothing for the next few centuries.” (0805-019 Mills)

“Begin at the Crane entrance, go south past Kregelsville(?), Glendale, Channelburg(?), Algiers and onto Highway 57. This route is mostly strip mine land and it’s not good farming land. It was stripped and there is very little trees and not too many houses.” (0905-008 Hopkins)

Many different routings were considered in determining reasonable alternatives to analyze in the DEIS. Wherever possible, former strip-mined lands were used for route alternatives. One of the preliminary alternative route concepts, Route Concept G, was added due to a public suggestion to incorporate just this sort of terrain in Pike County. The routes that were analyzed represent a full range of reasonable alternatives to connect Evansville and Indianapolis.

4. “A much better solution is this: extend I69 south from Fortville around the far east side of Indianapolis, and then on south around Indianapolis. In addition, add an extension from the south to I465.” (0909-002 McNicols)

The northern terminus for this project is I-465 on the southwest side of Indianapolis. Alternative routings around Indianapolis are not part of this study. FHWA has designated the connection between I-69 on the north and south sides of Indianapolis as Section of Independent Utility #2, separate from the Evansville to Indianapolis project.

3.2.2 Route Concepts

No substantive comments.

3.3 Level 2: Screening of Alternatives

3.3.1 Screening Approach

1. “The attached copy of your Appendix D “ Sensitivity Analysis and Screening Methodology” from the I-69 Tier 1 Draft Environmental Study is so fraught with faulty logic, new terrain I-69 route bias and over-the-top subjectivity the entire I-69 route evaluation is an embarrassment to the taxpayers.” (1103-017 Sorensen)

The attached copy had no annotations or other comments which elaborated upon these statements. This sensitivity analysis demonstrated that, given any reasonable range of possible weights and geographic groupings, the same alternatives tended to perform well. It did not favor, or even recommend, any particular alternative.

3.3.2 Route Performance and Cost

No substantive comments.

3.3.3 Alternatives Recommended for Further Study

1. “All 12 corridor alternatives identified and analyzed in the Tier 1 DEIS appear to satisfy the Purpose and Need (P & N) for the proposal.” (1107-696 USEPA Region 5 Review, p. 1)

All of the alternatives analyzed in detail in the DEIS would achieve the project’s goals to varying degrees. However, some of those alternatives consistently performed better in meeting the project’s goals, while others consistently performed poorly. These variations in performance were considered, along with cost and environmental factors, in selecting the set of five preferred alternatives in the DEIS and in selecting a single preferred alternative in the FEIS.

2. “Adds three new alternatives routes. [Makes comment that some of the routes carried forward for detailed study are modifications of route concepts which did not undergo the Level 2 Screening of Alternatives Analysis.] It fails however to subject two of them to the screening criteria used in Table S-2 to narrow the number of routes. Why not?? (Table S-3 appears to have a major typo. Alternative C-1 is on US 231, not 321.)” (1105-201 Marbach)

The typographic error you noted has been corrected.

There were a total of 14 route concepts designated in the scoping process. Some of these 14 had optional routings near Indianapolis. These were determined based upon input from the public and review agencies. These 14 route concepts were

screened in the Level 2 Screening of Alternatives to arrive at five alternatives for detailed study. As explained in Section 3.3.3.2 of the DEIS, some of the alternatives carried forward for detailed study were combinations of route concepts. These combinations were suggested by the public and environmental review agencies. The addition of these Alternatives (2C and 4C) was in response to these suggestions.

3.3.4 Summary

No substantive comments.

3.4 Level 3: Detailed Performance and Cost Analysis of Alternatives

3.4.1 Methodology

1. “The DEIS failed to perform a cost-benefit analysis for the different alternatives. A cost-benefit analysis would be especially useful to determine whether INDOT could justify spending hundreds of millions of additional dollars on more environmentally, economically, and socially damaging route alternatives.” (1107-705 ELPC et al, p. 9)

“In 1996, INDOT performed a cost-benefit analysis for the proposed Evansville to Bloomington highway, albeit a crude and inaccurate one. Inexplicably, INDOT did not perform a cost-benefit analysis as part of the new DIES. A highway should not be built if its economic benefits do not even equal its costs (broadly defined to include all positive and negative economic and social impacts). INDOT should have performed a cost-benefit analysis in that (sic) included both the national costs and benefits of a new highway and the benefits should take into account the opportunity costs of labor.” (1107-705 ELPC et al, p. 9)

“A final major failing of the DEIS is its failure to include a comprehensive cost-benefit analysis. Minimizing cost to Indiana and the U.S. taxpayers is apparently not a goal of the I-69 project, but it should be. The benefits are small. The costs are undeniably large. We conclude in Section 3 that, given the information currently available, none of the I-69 alternatives have benefits significantly enough [sic] to justify the large investment required to complete and maintain them. However, if one were to select the best I-69 alternative, it would be I-70/US 41 because it costs the h. [sic]” (1107-703 Smart Mobility, pp. 4-5)

“Given the high costs of all the alternatives, and the small benefits shown by the DEIS study’s own data, the DEIS should include a comprehensive cost-benefit analysis. It is critical that both Indiana and U.S. taxpayers get a reasonable return on their transportation investments.” (1107-703 Smart Mobility, pp. 33 - 34)

There is no requirement to monetize all benefits for a NEPA analysis, or to perform a cost-benefit analysis. The study used a very wide variety of performance measures. It would have been very problematic to reduce 28 performance measures associated with nine goals to a single monetary value. However, in response to issues raised by Smart Mobility, a limited cost-benefit analysis (considering only user benefits) was included in Appendix FF.

2. “For some analyses, Level 2, no part of the National I-69 project is assumed to be built, including the Evansville-Henderson (p.3-21). INDOT can give no assurance when the entire Corr 18 will be built, if ever; therefore, any assumptions based on the completion of Corridor 18 are not reliable.” (1106-147 Tokarski, p. 11)

In the needs analysis (Level 1), the National I-69 project was assumed *not* to be built. This was done in order to avoid overstating the needs it was identifying.

In the screening of alternatives (Level 2), the National I-69 project was assumed *not* to be built. That was done so that the benefits of the alternatives would not be overstated.

In the detailed analysis of alternatives (Level 3), the National I-69 project was assumed to be built. In addition, forecasts of highway-induced development and traffic impacts were made. This was done so that impacts to the natural and socio-economic environments would not be understated.

3. “On page 3-27 this statement appears: “This section contains the performance measure and cost information for the level 3 - Detailed Analysis of Five Alternatives.” Why only Five? Was a level 3 analysis performed only on the five “preferred” alternatives and not on Alternative 1 or the No Build Alternative?” (1106-147 Tokarski, p. 11)

This statement refers to Alternatives 1, 2, 3, 4, and 5, including all their variations, for a total of 12 routes. This analysis included Alternative 1, as well as the No Build Alternative. This wording has been changed to avoid confusion.

4. “A recent study by an independent economics expert has shown that the project would return only 81 cents for every dollar spent. Indiana and the Nation would lose money on the project.” (0916-020 Dalglish)

We believe that the comment is referring to a study performed at least six years ago for an Evansville to Bloomington highway. It is not relevant to this current study, which is for an Evansville to Indianapolis project.

5. “If this route [Alternative 1] is not thoroughly examined in your environmental study, I would press for a formal rejection of your study on the basis of incompetence and insufficient for the interests of Indiana and the rest of the country.” (1030-024 Cote)

Alternative 1 has been thoroughly examined in this study, in the same level of detail as Preferred Alternative 3C. All reasonable alternatives have been analyzed in a fair and objective manner.

6. “On August 20th I asked Vincent Bernardin why the data of Table S-6: Summary of Key Performance Measures and Environmental Impacts, did not correspond to the routes depicted on the Alternatives map. Both documents were included in the material given to participants in the Bloomington public hearing meeting. He stated that the map did in fact not correspond to the table data because the table data was derived from modeling analysis performed prior to the latest route alignment adjustments. In a follow-up question, I asked how the public is to be assured of the consistency of information that will be used as a basis for final route selection? To that question, Mr. Bernardin replied, “I don’t know? We expect to update the DEIS report before final delivery.” To carry this inquiry further, how will INDOT audit the DEIS to assure the consistency of the information provided? Is an independent audit of the report to occur? If so, who will perform the audit?” (0826-006 Martin)

Routes 3B and 3C are essentially the same except 3C enters SR-37 south of Bloomington and 3B enters SR 37 north of Bloomington. Why then is there a difference of 14,000 people within one hour of Indianapolis for these 2 routes, 6,000 in 2 hours, and 50,000 within three hours? ... Similar discrepancies appear on other similar routes. This may be due to a “cliff effect” and can be very misleading.” (1106-147 Tokarski, p. 11)

This comment refers to Alternative 3B. The original point of intersection between Alternative 3B and SR 37 was 7.2 miles north of the location shown in the DEIS. Shortly before the DEIS was published, the tie-in point of Alternative 3B with SR 37 was shifted southward to the location shown in the DEIS (specifically, just north of the existing SR 46/SR 37 interchange) to avoid environmentally sensitive areas. The performance measures for Alternative 3B were not updated in the DEIS to reflect this change, although the environmental impacts in the DEIS did reflect this change. The performance measures have been updated in the FEIS to reflect Alternative 3B’s revised location. In the FEIS, Alternative 3B has been eliminated due to its impact on sensitive environment.

7. “2) In looking at the determination of alternative routes for consideration there appears to be an implicit assumption that putting an interstate extension through an area is going to lead to an overall improved economic development for that region. Since this appears to be a heavy weighting factor in the determination I would like to know what other

studies have been used to demonstrate that this is a valid assumption.” (1021-011 Brutchen)

The forecasts of economic development were made using REMI, a state-of-the-practice economic forecasting model. The performance measures given in the DEIS were obtained using this model. No assumption was made that a certain level of economic growth would occur.

3.4.2 Factors Associated with Better Performance

1. “The factors listed on p. 3-29 are peripherally related to the project goals but are not project goals in themselves; however, they appear to become so for some of the alternative routes, e.g., service to Bloomington, Service to Crane, Service to SR 37. Elevating these “factors” to the level of project goals disturbs and biases the alternatives analysis for this project. Alternative 1 cannot satisfy these factors and is put at an unfair disadvantage.” (1106-147 Tokarski, p. 12)

These “factors associated with better performance” are not project goals. They represent conclusions, which were reached by analyzing the results of the performance analysis of different alternatives. They do not represent project goals; rather, they provide an explanation as to why some alternatives tended to perform well.

2. “As you know, S.I.B.A. has two major missions: to leverage the economic engine that Crane represents, and to protect the base from the 2005 base realignment and closure (BRAC) round. It is crucial that Crane have reasonable access to I-69 if we are to reach these goals.” (1025-040, S.I.B.A Letter)

“Two factors will be influenced if the construction is planned near Crane. One its location will enable and increase efficiency in the transportation of goods, two our Military value will be heightened. Military value will be one of the determining factors in the upcoming base realignment and closure or BRAC process to be undertaken in 2005.” (0820-099 Schulte)

“This improved infrastructure will be key to Crane’s continued support for military forces. Since 9-11 over 42 thousand shipments have been made in support of our forces, all of this largely in spite of our aging infrastructure. I-69 will help enhance our mission effectiveness.” (0821-208 Blackwell)

Service to Crane was associated with good performance on economic development measures.

3. “2. From strictly an Indiana perspective, it would appear much more beneficial to the State to place I-69 directly through the core of Southwest Indiana where the highway has the greatest potential for delivering benefits to as many Hoosier citizens as possible. Placing the new interstate on the 41 corridor along Indiana’s western border will have the effect of throwing a portion of the highway’s benefits into Illinois, while leaving the core of Southwest Indiana isolated and its desperate transportation needs unmet. I noted that INDOT’s own analysis shows that a highway oriented more directly towards Evansville from Indianapolis places thousands more people closer to Indianapolis than the I-70/41 route.” (1107-161 McManus, p. 1)

Many of the factors associated with better performance are associated with routes through the middle of the Study Area.

4. “As an employee of NSWC Crane, I understand the impediments we face in the southwestern part of Indiana in delivering our goods required to support the military forces defending the United States. Establishment of I-69 near to Crane will be a significant asset in increasing our military value to this county. Two factors will be influenced if the construction is planned near Crane. One, its location will enable an increased efficiency in the transportation of goods. Two, our military value will be heightened. Military value will be one of the determining criteria in the upcoming Base Realignment and Closure or BRAC process to be undertaken in 2005. Although the location of I-69 near Crane will not guarantee that the base would stay open, it would significantly enhance our position in BRAC.” (0820-225 Schulte)

“Since September 11, 2001, the Army and Navy commands have made over 42,000 shipments. These shipments included sophisticated guidance systems, special weapons, night vision and chemical biological detection devices, radars and electronic jamming equipment.” (0820-225 Schulte)

“Crane employs over 4000 Army and Navy civilian employees in challenging, good paying jobs. It also employs over 400 private sector engineering and technical contractors that support the efforts there. The impact is wide felt in technology areas at major research centers like IU, Purdue and Rose Hulman. A modern surface transportation infrastructure will greatly assist in accomplishing the base’s mission.” (0820-225 Schulte)

“...it appears that Crane will become within 10 years, the premier ordinance related activity in the United States.The proposal to have I-69 pass close by the northwest corner of Crane would meet our needs very well. It would also reduce the risks associated with moving ordinance on two lane country types of roadways as it now uses. These are commercial movements of explosives.” (0823-007 Groh)

The Department of Defense chooses to ship products from Crane by the most efficient means possible. Many of its products (including munitions) are shipped by truck. These shipments would be safer on higher quality roads. Preferred Alternative 3C will be located approximately two miles from the truck entrance to Crane.

5. “Although I noted the impact to Crane was not mentioned in the recent draft study for using this highway 50 routing south of Crane it is clear it would come about the same distance from Crane as the new construction routing of Alternative 3. I realize the normal access to NWSC Crane for trucks is through the Crane gate and to a lesser extent through the Bloomington gate, but know if the access to the center is as important as stated the facility at Crane would and could make the changes to shift truck entry points to accommodate the highway with much less trouble than the many people that would be effected by the more disruptive new construction alternatives through Greene County.” (0913-019 Ramsden)

Based on impacts to sensitive environmental regions, Alternatives 5A and 5B, located to the south of Crane, were designated as non-preferred in the DEIS.

6. “There are a lot of assumptions in the Section entitled “Factors Associated with Highest Levels of Performance” with no hard data backing them up. The preceding [Service to Bloomington] is one. Others include the assertion that an Interstate will relieve congestion in the SR 37 corridor. Every time the Interstates around Indianapolis are widened or added to, the traffic increases as the developers follow the roads “out” and sprawl increases. Anyone who travels I-65 from Whiteland to Indianapolis knows the traffic has gotten worse over the years as more lanes have been added, not better. And since in earlier sections the report asserts that Indiana has a below national average population growth it can’t be from that.” (1105-201 Marbach)

These “Factors Associated with Highest Levels of Performance” are not assumptions. Rather, they are observations based on data derived from the analysis. Also, the study’s models took into account the effects of induced travel. See Figure 3-7 in the FEIS.

7. “Service to Western Morgan County” discusses the need to improve the access to the intermodal facilities on the west side of Indianapolis. Do you really expect us to believe that more than a small fraction of the freight passing through those two facilities is going to western Morgan County. It would be meaningful if the study had looked at how much of the freight from those two facilities is headed north, east, and west versus the portion going to the south.” (1105-201 Marbach)

Freight accessibility measures access to major intermodal centers. Since routes in western Morgan County provide better access to major intermodal centers (Indianapolis International Airport and CSX Avon Yard), they perform well on this measure.

3.4.3 Transportation Performance Indicators

1. “INDOT’s *conclusions* regarding the safety data are misleading. INDOT inflated the apparent significance of all the safety reductions by failing to include baseline data for either the Study Area or the entire State. In 1996 (the last year for which statewide fatality information is easily obtainable), 982 persons died on Indiana roads. The highest reduction in the number of annual deaths INDOT predicts will occur is seven. Seven is only seven tenths of one percent of a reduction over the baseline no-build scenario, which hardly represents, as INDOT claims, a significant reduction in crashes.” (1107-705 ELPC et al, p. 22)

Fatal crashes are less than two percent of all serious crashes (those involving a death or serious injury). Preferred Alternative 3C results in a reduction of over 1,500 serious crashes every year. Over a 20-year period, this means that there will be over 30,000 people who will not be killed or seriously injured as compared to the No Build scenario. This is a significant reduction in crashes.

2. “INDOT claims that Route 3B would result in seven fewer fatalities than the no-build alternative, while Route 1 would result in five fewer annual deaths than no-build. Based on this two-persons difference, INDOT concludes that Route 3B reduction represents a “*much higher reduction*” than Route 1 (an other alternatives that use I-70 for a portion of travel.) In reality, however, and using the 982 annual fatalities as the benchmark, the two person difference represents only two-tenths of a percent reduction in total highway fatalities.” (1107-705 ELPC et al, p. 23)

The statement referred to in the DEIS is “Routes which are situated in a portion of the SR 37 corridor provide significantly higher crash reduction than those which use I-70.” (Section 3.4.3.4). The term “significantly” is used because (as is noted in the text) a student-t test at a 95% confidence level established that the difference in crash reduction between two groups of routes is statistically significant. For example, Alternative 3B provides an annual reduction in 1,460 injury crashes and 1,666 property-damage-only crashes. By comparison, Alternative 1 provides an annual reduction of 1,013 serious injury crashes and 985 property-damage-only crashes. Preferred Alternative, 3C, provides an annual reduction of 1,500 serious injury crashes and 1,672 property damage only crashes.

Fatal crashes are a rare event. When all serious crashes are considered (as was done for the DEIS crash analysis), Preferred Alternative 3C results in a significant reduction in crashes.

3. “Once again, like so many other statistics in the DEIS, these figures represent only the difference between the No-Build scenario and each of the alternatives, without including the context of the total accidents in the Study Area. Presenting the data in this way gives the false impression that the accident reductions are great and that there are significant differences between alternatives.” (1107-703 Smart Mobility, p. 22)

“Developing an economic cost measure for accidents is common practice. ... The cost measure can serve as a single accident performance measure. ... As shown below in proper context, the accident reductions are exceedingly small and there is not significant difference between the build scenarios. In fact, none of the build alternatives results in even a 1 percent reduction in accident cost in the Study Area.” (1107-703 Smart Mobility, p. 22)

Accepted and required practice for NEPA studies is to compare the performance of alternatives with the No Build scenario. Preferred Alternative 3C will avoid over 1,500 serious crashes every year, or over 30,000 over a 20-year period, when compared to the No Build scenario.

4. “It [the DEIS] makes much of time savings that I-69 would produce for travel between Evansville and Indianapolis, but fails to mention that extremely few travelers would benefit from them. Important data showing total time savings (travel-time savings multiplied by the number of travelers) for Evansville-Indianapolis travel are, not surprisingly, not presented.” (1107-703 Smart Mobility, p. 3)

“The great majority of traffic on new I-69 is forecast to be made up of vehicles traveling shorter distances. ... With respect to travel between Evansville and Indianapolis, the number of travelers is so low that total time savings will be very small.” (1107-703 Smart Mobility, pp. 10-11)

The conclusions reached in these comments are incorrect. The number of daily trips between Evansville and Indianapolis is over 11,000 (See Appendix FF, Section II). Improving this connection will benefit many thousands of travelers daily.

This comment’s analysis considered only trips between two small geographic areas - a small (20 mile) radius around downtown Indianapolis and downtown Evansville. The amount of daily travel between these two cities consists of many times more vehicles than these. For example, someone making a trip between Muncie and

Evansville would travel between Indianapolis and Evansville. Someone making a trip between Henderson, Kentucky and Kokomo would travel between Indianapolis and Evansville. All such trips are included in our analysis.

In the No Build scenario, in the year 2025, about 7,900 one-way auto trips and 3,300 one-way truck trips are forecasted between Evansville and Indianapolis. For Preferred Alternative 3C, this translates into 4,900 daily vehicle hours saved, which is almost 900,000 vehicle hours saved on an annual basis. Daily vehicle operating cost savings for these trips is over \$160,000 daily, or approximately \$54,000,000 annually, for Preferred Alternative 3C.

5. “Apparently through the inadvertence of INDOT or its consultants, the set of CD-ROMS that they transmitted in response to our request for information includes accessibility data in unreferenced files. While there is no way to know whether these accessibility data are the final numbers, they appear to confirm that none of the I-69 alternatives will significantly change the accessibility graphics used as the basis for Purpose and Need. Below, we show the accessibility to employment graphic for Alternative F-2, which the DEIS identifies as having the greatest benefits in employment accessibility (p. A-8), compared with data from the same computer file for the 2025 No-Build scenario. There are very minor differences between the two graphics, but the pattern is virtually identical.” (1107-703 Smart Mobility, pp. 12-13).

“Appendix A includes exact scores for the first three measures: population accessibility, employment accessibility, and population-weighted accessibility (App. A, pp. A-7 - A-9). Although the DEIS ranks the scores in order, looking at the raw model outputs is most instructive. As shown in the graphics below, the values are essentially identical across alternatives, varying by less than 1 percent across all alternatives, including No-Build.” (1107-703 Smart Mobility, pp. 13 -14)

“[O]ne of the measures [of accessibility] is the increase in population within three hours of Indianapolis. The highest number is 232,000, for Alternative 3B. This looks like a large number until it is put in perspective. The No-Build number is 15,470,342 (Table A-9, App. A, p. A-11). Therefore, the highest increase (Alternative 3B) is only 1.5 percent. Trips of three hours are a very small percentage of total daily travel. Yet the DEIS counts as a benefit moving a small percentage of people across the line from slightly greater than three hours away from Indianapolis to slightly less.” (1107-703 Smart Mobility, p. 15)

In a project of this size, small percentage differences can translate into a large difference in benefits or impacts in absolute terms.

For example, in the No Build scenario, there are forecasted to be approximately 1,620,000 persons employed in the Study Area in the Year 2025. Preferred

Alternative 3C is forecasted to add 4,300 jobs to the Study Area in 2025, a percentage increase of 0.27% in Study Area employment. Alternative 1 is forecasted to add 1,400 jobs to the Study Area in 2025, a percentage increase of 0.09%. In percentage terms, both alternatives appear to have small benefits. However, given the scale of the Study Area, the small percentages translate into thousands of added jobs. For further discussion of this issue, see Section 11.2.2.4 and Appendix FF, Section V).

6. “The DEIS lists VHT and VMT as accessibility performance measures, but it relegates the results for these measures to an Appendix, and then only presents them in a convoluted way. Instead of providing data for total VHT and VMT, the DEIS provides data only for the percentage of VHT and VMT on “interstate highways and principal arterial roads.” These metrics are not important in and of themselves. They are only important to the extent that they represent savings in travel time (which is measured by total VHT) or safety (which is addressed in Section 2.5).” (1107-703 Smart Mobility, p. 16)

“In contrast to the other personal accessibility performance measures in the DEIS, time savings (VHT) are of real economic benefit and can be easily extracted from the transportation model. Similarly, VMT reductions will translate into operating cost savings.” (1107-703 Smart Mobility, p. 15)

“As shown by the table and chart above, statewide VHT decreases in only five of the twelve I-69 alternatives, and the reductions are slight - less than one-quarter of one percent. VHT in the Study Area is reduced in only three of the alternative - 1, 3B, and 4C. Again the reductions are marginal, representing less than 0.3 percent of the total regional travel time. In a majority of the build alternatives, the number of hours people spend in their cars actually increases. In many proposed roadway projects, reductions in VHT is the single most important performance measure. For I-69, this data showing minimal changes in VHT seriously undermines the entire need for the project. ... Given that the primary potential benefit of a straight-line route would be reduced travel time, the new terrain alternatives are not successful.” (1107-703 Smart Mobility, p. 17)

“It [the DEIS] fails to present data for the standard, important performance measures of total vehicle-hours traveled (“VHT”) and vehicle miles traveled (“VMT”), on which the I-69 alternatives perform poorly.” (1107-703 Smart Mobility, p. 3)

The performance measures cited here (total VMT and total VHT) were not used as performance measures for the Alternatives Analysis. They were used in the Screening of Alternatives (Level 2 Analysis) to determine the alternatives for

detailed study. They are included in Appendix O to document the screening of alternatives.

Total VMT and VHT are not useful metrics by themselves. They do not measure the extent to which travel time savings occur to individual users because these users also make additional trips and longer trips due to the increase connectivity and added capacity in the transportation system. The models in the study account for these changes in travel patterns. For further discussion of this issue, see Appendix FF.

7. “We now discuss VMT. The table immediately above shows that statewide VMT increases for each alternative by between ½ percent and 1 percent over the No-Build. VMT in the Study Area increases by 1 to 4 percent depending on the alternative. The percentage growth in VMT is greater than the percentage growth in population, so people drive more with the alternatives. Any distance savings from straighter route between Evansville and Indianapolis is more than balanced by other travelers making longer trips than before.

“Greater VMT means higher out-of-pocket costs for drivers. The DEIS confirms this, by estimating that business and household operating costs will be higher with any of the alternatives, ranging as high as \$85 million per year (Appendix B, p. B-6)” (1107-703 Smart Mobility, p. 18)

The VMT data cited are for the screening of alternatives (Level 2 analysis). As such, they do not correspond to VMT changes for the alternatives studied in the Alternatives Analysis.

As the comment pointed out, the travel model takes into account that, in some cases, drivers make longer trips due to the increased accessibility afforded by the transportation improvements. This increased mobility is regarded by the drivers as an benefit, since they have a wider variety of destination options.

The economic analysis takes into account added consumer and business expenditures on vehicle operating costs. Even with these added vehicle operating costs, the economic benefits are substantial. A simple explanation shows how this occurs.

Suppose that a business located in Bloomington has customers in Evansville. Under the No Build scenario, the delivery trucks make one round-trip daily between Bloomington and Evansville. When Preferred Alternative 3C is built, its trucks will be able to make two round-trips daily. That business will see its vehicle operating costs increase. However, it will be making more efficient use of the truck as a

capital resource, and the wages it pays to its drivers now are more efficiently used. The business serves more customers and becomes more profitable, even though it is paying more for fuel, tires, etc. The business does better, and the overall economy benefits.

The economic model for this study takes these factors into account in determining the economic benefits expected to be generated by the highway.

8. “Rather than present the numbers for each of the scenarios [for changes in VMT and VHT] the DEIS summarizes the results in text, giving the range of results across all alternatives. As to VHT, the DEIS says only: “Overall vehicle *hours* of travel remain the same, varying within a tight range of -0.5% to +0.8%. (p.5-41). As to VMT, curiously, the DEIS describes an increase of over 3 percent as “a very small effect on traffic volumes throughout the region as a whole” (p. 5-41), even though the percentage increase is more than ten times as great as the increase in employment discussed in Section 1.0 above. That increase was labeled “high.” This is yet one more case of the DEIS authors’ misleading data presentation.” (1107-703 Smart Mobility, p. 18)

The section cited in this comment is the Traffic Impacts Section. It is evaluating the effects of added traffic on the transportation system. It is not evaluating alternative performance using transportation performance measures.

There is a difference between assessing an impact, and assessing a benefit using a performance measure. A 3% increase in traffic is, generally speaking, a negligible impact. For example, suppose one afternoon during the space of an hour, 300 cars went by a certain point on a road. If you returned the next day, and there were 309 cars that went by in one hour (an increase in traffic of 3%), you probably would observe that there was no significant difference in traffic for having nine additional cars come by in an hour (about one car every 6 minutes and 40 seconds). Further, this 3% increase in regional traffic occurs in the context of a significant increase in capacity due to the construction of a new Interstate highway.

By contrast, a small percentage increase in the efficiency of the transportation system can have significant effects, resulting in thousands of vehicle hours saved on a daily basis.

9. “Volume to Capacity Ratio is not by itself a measure of congestion, because congestion is present only at high v/c ratios.” (1107-703 Smart Mobility, p. 19)

Volume to capacity ratio is a standard measure of traffic congestion. Volume to capacity ratio is only one of several congestion measures. Others include: percent of

congested VMT; percent of congested VHT; and percent of VHT in delayed conditions. Each of these evaluates the amount of travel occurring under very congested conditions.

10. “The second item, “Percentage of Congested Lane Miles in the Study Area,” is one of the most misleading presentations in the DEIS. The DEIS shows that the percentage of congested lane miles decreases slightly with construction of each of the alternatives. In fact, the total number of congested lane miles actually increases over the No-Build in two of the alternatives, including “preferred” Alternative 3B, and decreases by less than 3% in all of the others. The number of congested lane miles, not the percentage, is what actually matters.” (1107-703 Smart Mobility, pp. 19 - 20)

As the comment points out, the number of congested lane miles decreases in 10 of the 12 alternatives, and the percentage decreases for all. Preferred Alternative 3C shows decreases in both the number and percentage of congested lane miles. The percentage of congestion in the transportation system is a valid measure of congestion.

11. “The range of differences for the other four congestion measures is also small. The greatest differences are: percent of congested VMT 3.4 percent, percent of congested VHT 1.8 percent, percent VHT in delayed conditions 3.7 percent, and ESPI by VHT 3.5 percent. The most important congestion measure is vehicle hours of travel (VHT). Traveling on a longer and less congested route is not of much benefit if not time is saved.” (1107-703 Smart Mobility, pp. 21 - 22)

Even small percentages of reduction in congestion in a model that includes all or part of five states is meaningful. For example, in the future year networks for the Statewide Model, typical VHT is about 7.6 million. Reducing the percentage of VHT in delayed conditions by even *one* percent means that over 75,000 hours of travel, daily, are no longer driven in congested conditions. Many of the alternatives result in improvements that are several times as large as this. For further discussion of this issue, see Section 11.2.2.4 and Appendix FF, Section V.

12. “In our review of the DEIS, we obtained and used some of the DEIS authors’ travel model computer files. For each alternative scenario, the model files include a variable for each roadway link, reflecting whether the link is inside the Study Area or outside. We have used this variable in calculating Study Area performance measures, and we assume that INDOT’s consultants have done likewise.

“If so, the DEIS’s calculations of the alternatives’ performance on numerous measures contain errors, because the Study Area is defined inconsistently in the model files. The Study Area for Alternative 1 appears to be correct, but the Study Area for all other

alternatives, including the No-Build, has spurious links added to it. These links are shown in red in Figure 6 below.

“The addition of these spurious links may have affected the alternatives analysis results measurably. If our suspicions are confirmed and Indiana DOT’s consultants have indeed relied on an incorrectly defined Study Area, then all of the performance measures that are reported for the Study Area need to be recalculated.” (1107-703 Smart Mobility, p. 8)

This minor error was corrected, and the revised measures are included in the FEIS. This error affected only the calculation of congestion measures. No significant changes in the performance indicators resulted.

13. “Page 3-36, Section 3.4.3.4 - Improve Traffic Safety: It is unclear whether the traffic safety analysis included any consideration of the potential for vehicular impacts with deer. We assume deer densities vary along the five alternatives and some reasonable predictions can be made from existing deer population data and crash data. Such an analysis may reveal significant differences in driver safety among the alternatives.” (1107-697 U.S. Dept. of the Interior, p. 9)

The crash analysis compared changes in the number of crashes due to all causes. The analysis did not differentiate among crashes in terms of their causes.

14. “Numerous road closings will necessitate more travel on local roads that INDOT already considers unsafe. How will this change accident rates?” (1106-147 Tokarski, p. 8)

Overall, less travel will occur on local roads due to diversion of traffic to the Interstate. Many of the road closures that would occur due to the Interstate construction were reflected in the travel model network. The trips diverted to I-69 will result in fewer crashes, since they will use a safer facility. Network changes will be analyzed in greater detail in Tier 2 Studies.

15. “Instead of saying that a route saves so many minutes of travel time, say that the route saves so many dollars. The mileage times the government allowed 34 ½ cents would make a more vivid illustration.” (0911-051 Goff)

The figure cited reflects only operating costs, and does not include the value of travel time. In addition, some portion of the travel is for business purposes, where employee wages represent an additional cost. Variable factors such as terrain and speed were included in the economic analysis for each alternative.

16. “The Mann Road option Alt. 2 Opt. C1 would not be a good route because the White River Valley fogs over severely at times.” (0916-022 Anonymous)

The Mann Road variation has been dropped, and is not part of Preferred Alternative 3C.

17. “Has a study been done to determine the number of steep grades needed or planned on the preferred routes? If there are a lot of them, with truck speed limits set at 60 mph, it would take trucks longer to climb (and descend at lower gearing and speed). Therefore, some drivers would by-pass the preferred routes and take a flat I-70/US 41 route.” (0816-007 Brannon)

As part of the preparation of this EIS, dozens of special speed studies were conducted on roads throughout the Study Area to ensure that the speeds in the travel model reflected actual experience on highways. In addition, the operating cost analysis (as input to the economic analysis) considered the additional operating cost for autos and trucks operating on grades (as opposed to operating on flat terrain). Also, portions of I-70 have variations in grades.

18. “I believe if you take 67 down to 57 and connect there, pick 57 on down, it is much more of a straight shoot, it would save money.” (0805-018 Anonymous)

This is similar to Alternative 4C, which was considered in the DEIS and this FEIS.

19. “Also, as someone who travels this corridor regularly, fog is a frequent occurrence in the low-lying areas of northern Morgan County and could lead to tragic accidents like those seen in other states with dense fog on multi-lane interstate highways.” (1107-229 Kuhn)

Preferred Alternative 3C will not traverse northern Morgan County.

20. “3. A point often overlooked in the INDOT hearings to date is that the I-69 Highway will not always be used by people from the Evansville region for travel to an Indianapolis destination. In fact many Evansville originated trips are to Bloomington, or destinations to the east of Bloomington or even east of Indianapolis. Unfortunately, INDOT’s time and distance comparison between a direct route versus the I-70/41 route fail to consider the extra driving time it would take to reach destinations from Evansville to locations south and east of Indianapolis. For example, few students from Evansville would take the I-70/41 route to Indianapolis and then proceed to Indiana University down 37. Many people will continue to use the unsafe rural roads to reach these places since a I-70/41 route would fail to shorten travel time and distance.” (1107-161 McManus, p. 1)

The transportation performance indicators take into account the ability of alternatives to serve all trips within the Study Area. For example, those alternatives which performed best on personal accessibility (a core goal) were those which serve Bloomington.

21. “Spencer County residents need an interstate highway to Indianapolis. Currently, interstate highway travel requires residents to drive I-64 to the Louisville, Kentucky vicinity in order to travel I-65 north to Indianapolis. The direct route for I-69 will save time and cost for those traveling from the Spencer County area to Indianapolis.” (1028-035 Kamp)

Preferred Alternative 3C will improve the access of Spencer County residents to Indianapolis.

22. “Presumably, the reason Alternative 1 is ranked so poorly in terms of regional accessibility is by virtue of its performance according to the following criteria listed in Table S-6, Purpose and Need Performance:
- Accessibility - Increase in # of People within 1 hour of Indy
 - Accessibility - Increase in # of People within 2 hours of Indy
 - Accessibility - Increase in # of People within 3 hours of Indy

“However while enhanced regional access to Indianapolis would certainly be desirable, it is not one of the overall goals of this project (footnote: Note that Goal 7 requires the following: “To directly connect the urban areas named by Congress (the ‘named cities’ of Indianapolis, Evansville, ...”. Alternative 1 satisfies this requirement.), and, therefore should not be listed under Purpose and Need Performance. It should be noted, however, that Alternative 1 does rank as an improvement in the following criteria:

- Accessibility - Increase in # of People within ½ hour of Major Urban Area.” (1030-004 Greater Terre Haute Chamber of Commerce, p. 4)

These are performance measures for Personal Accessibility, which is a core goal. Access to Indianapolis is important for all people in Indiana. It is Indiana’s largest city, approximately four times as large as Ft. Wayne, Indiana’s second largest city. It is the center of business for the state. It also is the state capital. Accessibility to Indianapolis is an important component of personal accessibility for Indiana residents.

23. “Of the preferred alternatives from the Tier 1-DEIS, I firmly believe it would be a serious mistake to route the I-69 extension away from the Bloomington in the seventh largest city

in the state of Indiana and home to the main campus of its premier institution of higher learning, Indiana University. It is also, by far, the largest city in the state not currently served by an Interstate highway (or even, for that matter, by a U.S. highway). For this and many other reasons, I believe an additional core goal should be defined to state that improved access to Bloomington both from Indianapolis and from Evansville, should be a criteria for this project.” (1104-008 Shook)

Those alternatives that performed best on personal accessibility (a core goal) were those serving Bloomington. Preferred Alternative 3C serves Bloomington.

24. “It [any routing via I-70] also has a very high potential to add unnecessary thru-truck traffic on the portions of I-70 within I-465, directly through crowded central areas of Indianapolis. Furthermore it provides no traffic congestion relief or accident reduction on the Indianapolis - Martinsville section of the Indiana 37 corridor, and since it creates no additional urban freeway mileage in Marion County, vehicle emissions will not be reduced through improved traffic flow.” (1104-008 Shook)

Preferred Alternative 3C does not use any portion of I-70 and will result in a lessening of congestion in the SR 37 corridor between Martinsville and Indianapolis.

25. “Please build the most direct interstate between Evansville and Indianapolis. Those of us with student athletes would appreciate a safer route between SW Indiana and Bloomington.” (1104-005 Harris)

Routes serving Bloomington produced the highest reduction in crashes. Preferred Alternative 3C will result in 1,500 fewer serious crashes each year, or over 30,000 over a 20-year period.

26. “Secondly, US 231 will be utilized leaving Bloomington and Terre Haute untouched, not disturbing some of Indiana’s largest and finest cities.” (1104-021 Rubacha)

Such routes (Alternatives 2A and 4A) were studied in the DEIS. Route Concept M also had such a route, and it was studied in the Level 2 (Screening of Alternatives).

27. “Bloomington is the largest city in Indiana and one of the few Metropolitan Statistical Areas (MSAs) in the country that does not have a direct connection to the to the interstate system. Any alternative for extending I-69 that does not include Bloomington would ignore this first principal of the interstate system and would likely meet significant resistance for that reason at the federal level.” (1104-014 Ortsey)

Those alternatives that performed best on personal accessibility (a core goal) were those that served Bloomington. Bloomington is one of only three of the 40 largest

cities in Indiana (the other two being Goshen and Kokomo) which are not served by an Interstate highway.

28. “Additionally, I don’t like the Martinsville proposals, I37 is too congested when you get near Indy and it would discourage those of us in Bloomington from making the 1-2x/month trip to Indy.” (1107-091 Olmes-Stevens)

Preferred Alternative 3C will result in a significant lessening in congestion in the Bloomington-Martinsville-Indianapolis corridor.

29. “Perhaps direct route opponents do not know that these roads are also traveled daily by hundreds of trucks, and are shared with school buses dropping off children, letter and newspaper carriers making their stops, many vehicles frequently pulling onto and off the highway, farm equipment, slow vehicles, and occasionally pedestrians and horses. If you travel this road as often as I have, you will see when the weather gets bad, this beautiful drive really gets ugly.” (1107-128 Moore)

- I think studies would show that SR 37 south of Indy already carries as much traffic as many Interstate highways.
- The current unlimited access and use of many stop lights on SR 37 make it an extremely dangerous road. Every year there are many accidents and several deaths of people trying to cross it or rear-ended at stop lights.
- It also represents the most direct route between Indy and Evansville. The route via Terre Haute is very indirect.
- Indiana University is a major facility in the state of Indiana and will benefit greatly for better access to the capitol.” (1024-042 Mescher)

Preferred Alternative 3C will result in a reduction of over 1,500 serious crashes each year. Also, Preferred Alternative 3C will result in 374,000 additional people having access within one hour of Indiana University.

30. “The second core goal, improving personal accessibility for Southwestern Indiana residents to certain urban areas such as Bloomington and Indianapolis, is antithetical to improving the economy of Southwestern Indiana as a whole. This action will suck people and money from poorer rural areas into well off urban areas, stressing conditions in both by depleting the rural areas of economic activity and increasing overcrowding and pollution in urban areas. The costs associated with these occurrences and their secondary social impacts have not been accounted for in this study. They must be included to present an accurate picture of the efforts of this project on Southwestern Indiana as a whole.” (1106-133 Hagglund)

The regional economic analysis indicates that both rural and urban areas will benefit economically from Preferred Alternative 3C. The economic analysis showed that those alternatives that provided the greatest increases in accessibility also provided the greatest improvement in economic conditions. These economic benefits occur in both the urbanized and rural areas of Southwest Indiana.

31. “An eighteenth reason why a new terrain I-69 cannot be built is the fact that the time and distance savings of a new terrain route over the US 41/I-70 route are minimal, and certainly not worth the added cost. The EIS itself states that the maximum savings over alternative one would be about 15 minutes and 13 miles, and this is not worth paying an extra billion dollars of taxpayer money for. Most new terrain alternatives would not even show this much of a travel time advantage.” (1104-053 Werne)

The transportation and economic performance analysis showed that the performance of Alternative 1 was significantly lower than any other alternative. Many indicators, both transportation and economic, were used to arrive at this conclusion. Travel time savings is only one of many indicators. The travel time savings, when multiplied by the many millions of motorists who would use this facility each year, translates into significant societal benefits.

32. “In Alternative 2C, the Evansville-area terminus would be around 4 miles west of that for the other preferred alternatives, necessitating a counter productive (unless an unlikely western routing for I-69 SIU #4 is chosen) multiplex on I-64 for that distance. Furthermore, it would not provide any congestion or crash reduction for the Martinsville - Bloomington segment of the Indiana 37 corridor, and the travel time savings between Evansville and Bloomington would be low.” (1104-008 Shook, p. 1)

“Finally, Alternative 4C, similar to 2C, does not provide any congestion or crash reduction for the Martinsville-Bloomington segment of the Indiana 37 corridor and the travel time savings between Evansville and Bloomington would also be low.” (1104-008 Shook, p. 2)

Preferred Alternative 3C serves the SR 37 corridor between Martinsville and Bloomington. Alternatives 2C and 4C have not been selected.

33. “Calculation of travel time savings should included personal and valuable commercial time. Show me any employer that would not want to improve employee productivity by 20 minutes (40 round trip) for employees traveling that route. Savings should also include fuel, tires, mileage depreciation, etc. savings should also factor in the environmental impact of a 20 minute reduction in pollution generated, again multiplied by the thousands of vehicles daily by the expected life of the highway.” (1105-080 Hughes)

We concur. All of these factors are included in the economic analysis. They are inputs into the economic model which forecasts increases in business efficiency due to factors such as these.

34. “My primary concerns are safety and congestion. I have driven I-70 from the east coast since 1972. We regularly drive I-70 to I-57 south. It is inconceivable to me that loading I-70 with additional traffic related to I-69 is a prudent strategy for the longer term. I fully expect the traffic on I-70 to continue to increase, particularly truck traffic. Even if two additional lanes are added to I-70 in each direction this would seem to be a less desirable alternative than any of the more direct options. I would also be interested in the cost to increase the capacity of I-70 just to handle the potential additional traffic related to I-69 compared to the other I-69 options.” (1106-061 Spanier)

Preferred Alternative 3C will avoid I-70.

35. “While not passing directly through Bloomington it (Alt. 4) will pass within a reasonable distance. What the citizens of the Bloomington area need is good access to an interstate highway. What they do not need is to be cut in half by one.” (1101-010 Pate)

Alternatives 4B and 4C were preferred in the DEIS; however, neither was selected as the single preferred alternative. They provided lower increases in accessibility in part because they do not connect to Bloomington. INDOT will work closely with government and stakeholders in Monroe County to assure that Preferred Alternative 3C is designed and constructed with the greatest sensitivity to local needs.

In addition, it should be noted that the current Bloomington Long Range Transportation Plan already provides for SR 37 to be upgraded to a freeway from south of Bloomington to the Morgan County line. Preferred Alternative 3C uses SR 37. Such a facility (an upgraded SR 37) would be very similar to I-69, and in the same location.

36. “Furthermore, improving US 41 does nothing to improve access between Evansville and Bloomington.” (1030-023 Lawrence)

We concur. Preferred Alternative 3C will improve access between Evansville and Bloomington.

37. “The framework is in place to build the 641 bypass from the airport exit on I-70 to US 41. Is this being taken into account? I am sure this will reduce the drive time from Indianapolis to Evansville beyond what you have estimate.” (0825-032 Springer)

The existence of the SR 641 bypass was included in the forecast year (2025) network and was taken into account in all analyses.

38. “Alternative 1 is shown as being inferior in travel time saving because the total trip will take 12 minutes longer. This appears to be a statement in support of one of the core goals “Facilitate interstate and international movements of freight through the I-69 corridor...” The distance between the two termini of I-69, Port Huron and Texas, is approximately 1,500 miles. Estimated travel time is 23 hours assuming no stops, 25-27 hours assuming stops for fuel, eating, bathroom, etc. and 33-40 hours assuming stops for resting and sleeping. THE IMPACT ON THE TOTAL TRAVEL TIME OF THE “LONGER ROUTE” IS 0.5% TO 0.9%—in other words meaningless. All alternatives are “equal” on this measure.” (1105-201 Marbach)

The core goal to which this comment refers is to facilitate interstate and international freight movements to support the National I-69 project. However, the performance measure that is given is for a different goal, to improve the connection between Evansville and Indianapolis.

In any event, the analysis of alternatives in the EIS involved consideration of several factors, two of which included interstate and international movements of freight and travel time savings. Alternative 1 performed poorly on all project goals.

3.4.4 Economic Development Indicators

1. “In the No-Build Case, regional employment is forecast to be 1.6 million in 2025. The highest increase from any new terrain alternative is 4,300. On a base of 1.6 million, this is an increase of only 0.27 percent, or as illustrated above, equivalent to 27 cents on \$100. The I-70/US 41 alternative is forecast to increase employment by 1,400, or 0.09 percent. The DEIS labels the 27 cent impact as “High” and the 9 cent impact as “Low” (Table 3-35, p. 3-54). In reality, all of the impacts on regional employment are exceedingly low. The DEIS attempt to make them look more significant by not providing any base for comparison. ... This sleight-of-hand is demonstrated by the graphics on the next page.” (1107-703 Smart Mobility, p. 1)

“[I]t is clear that none of the I-69 routes improves business accessibility by more than a few percentage points, and that the differences between alternatives are equally small. ... Considering business accessibility improvements in the context of total business accessibility in the Study Area provides a more accurate picture of the magnitude of the

changes and the actual differences between alternatives. Figures 16 and 17 below show business accessibility to labor and consumer markets, and to buyer and supplier markets, for each alternative as a percent of the No-Build total. These two figures demonstrate that the actual changes in overall business accessibility resulting from each alternative are very small, and that the differences between alternatives are equally small.” (1107-703 Smart Mobility, pp. 23 - 24)

“For example, Figure 3-20 (p. 3-46) shows that the alternatives would increase regional employment by at most 4300 jobs in 2025. As elsewhere in the DEIS, this number is put forward without any context, so it is impossible to determine its significance. Table 1 (p. 8) of Technical Report 5.3.2, Regional Economic Impact Analysis, shows that total regional employment in 2025 in the No-Build scenario is 1, 617,000. The maximum potential increase of 4300 represents an increase of only 0.27 percent, or just over one-quarter of one percent. For comparison purposes, the increase in employment between the 2000 base and 2025 No-Build scenarios is approximately 70 times as much. As demonstrated by the chart below, the highway’s contribution to employment growth would be trivial.” (1107-703 Smart Mobility, p. 25)

“As shown in the graphics below, employment in high growth industries and employment in high paying industries are also essentially unchanged across the alternatives. The differences reported between alternatives are minuscule with respect to the projected totals or even compared to the projected no-build change between 2000 and 2025.” (1107-703 Smart Mobility, p. 25)

“As Table 4 below shows, for other performance measures in this section of the DEIS the differences between alternatives are even smaller.

Economic Performance Measures in DEIS	Maximum difference from No-Build Scenario
High Growth Industry Employment Growth (with respect to total employment, not just high growth industry employment)	0.14%
High Pay Industry employment growth (with respect to total employment, not just high paying industry employment)	0.10%
Change in ratio of employment to labor force	0.02%
Change in young working age population (with respect to total employment, not just young working age population)	0.18%

(1107-703 Smart Mobility, p. 27)

“*How to Lie with Statistics*, by Darrell Huff and illustrated by Irving Geis, was published in 1954 and has sold over half a million copies. The type of distortion used in the DEIS is described in Chapter 5, “The Gee-Whiz Graphic.” ... Huff writes, “[B]ecause the whole graph is in proportion and there is a zero line at the bottom for comparison[,] [y]our ten per cent looked like ten per cent - an upward trend that is substantial but perhaps not overwhelming.

“That is very will [sic] if all you want to do is convey information. But suppose you wish to win an argument, shock a reader, move him into action, sell him something, this chart lacks schmalz. Chop off the bottom ... Nothing has been falsified - except for the impression it gives.

“The regional employment graphic is not an isolated example. This is the general approach that the DEIS uses, over and over again.” (1107-703 Smart Mobility, pp. 1-3)

“As discussed in Section 2 below, when the data are presented fairly and neutrally it is clear that none of the I-69 alternatives produces any significant benefits with respect to the DEIS’s stated purposes for this project. The DEIS’s misleading presentation of data obscures this fact.” (1107-703 Smart Mobility, p. 3)

In a project of this size, small percentage differences can translate into a large difference in benefits or impacts in absolute terms.

For example, in the No Build scenario, there are forecasted to be approximately 1,620,000 persons employed in the Study Area in the Year 2025. Preferred Alternative 3C is forecasted to add 4,300 jobs to the Study Area in 2025, a percentage increase of 0.27% in Study Area employment. Alternative 1 is forecasted to add 1,400 jobs to the Study Area in 2025, a percentage increase of 0.09%. In percentage terms, both alternatives appear to have small benefits. However, given the scale of the Study Area, the small percentages translate into thousands of added jobs. For further discussion of this issue, see Section 11.2.2.4 and Appendix FF, Section V.

2. “While the DEIS shows disposable income going up slightly (Figure 3-19, p. 3-46), the backup data show that a more meaningful measure, per capita disposable income, goes down for several alternatives and is unchanged for the rest. Per capita income is a more meaningful measure than total income because it shows whether the average person is better or worse off. ... Data on per capita disposable income is excluded from the DEIS. To find it, one must go to one of the background reports. Table 1 of *Regional Economic Impact Analysis: Technical Report 5.3.2* shows reductions in disposable income of \$100 per person per year for scenarios B1, C, H2 and K, and no change for the others.” (1107-703 Smart Mobility, pp. 27 - 28)

The increase in total disposable income in the Study Area is predicted to be accompanied by an increase in population. On balance the economic forecasts predict little or no change in per capita disposable income for each alternative. This stems in large part from a conservative assumption in the economic model used for the study. The model assumed that the labor force participation rate (the percentage of the working age workforce which seeks employment) does not change in response to increased economic opportunity. For example, if a new, large employer (such as a Toyota plant) is located in an area, the model assumes that additional local residents do not decide to enter the labor force. Instead, the model assumes that increases in employment then come either from younger workers entering the labor force, from workers who otherwise would move remaining where they are, or from those moving from other areas.

This assumption also is conservative in terms of forecasts of indirect land use impacts. If the labor force participation rate were allowed to rise in response to increased economic opportunity, the model would forecast fewer indirect land use impacts.

Also, note that historic data for Indiana counties show that Interstates do correlate with higher growth in per capita income. See Tables 2-5d and 2-5e.

3. “The authors of the DEIS apparently considered the decreases in per capita disposable income to be information that is negative regarding the new terrain alternatives, and they did not include it in the DEIS. In contrast, information showing very small decreases in transfer payments per capita (\$3 - \$10) is included. The most significant conclusion to draw from all of this income information is that the differences between the scenarios are too small to be important.” (1107-703 Smart Mobility, p. 28)

Even small differences in transfer payments per capita are significant. For example, for approximately 1,000,000 residents in the Study Area outside the Indianapolis MSA, a \$10 reduction in transfer payments per capita is a \$10,000,000 reduction in government spending for this purpose. It not only indicates that residents are better off overall, but it also represents a lessening of the tax burden on the population as a whole.

4. “While focusing on these minuscule differences, the DEIS falls far short of meaningfully analyzing the “distribution of economic benefits” and costs resulting from a new highway. It only includes aggregate numbers for within the entire Study Area, rather than analyzing which area will be economic ‘winners’ and ‘losers.’ ” (1107-703 Smart Mobility, p. 28)

“As calculated using Table 3-25, page 3-45, the number of jobs predicted due to INDOT’s “preferred” alternatives are minimal. They range from 4.1 to 6.6 per county per year over a 25 year period. It is unclear from this chart if the DEIS factored in the transfer effect of jobs lost on US41 if a “preferred alternative is chosen.” (1106-147 Tokarski, p. 12)

“My observations from driving these tens of thousands of miles on Interstate are that very few small to mid-size communities have reaped any large scale, economic business-related growth. That is not to say some communities haven’t benefited, but this tends to be the exception rather than the rule. Benefits for smaller communities from Interstate roadways are generally much smaller in the form of closer access to an Interstate. Period.” (1107-136 Halbros)

All parts of the Southwest Indiana Study Area are forecast to experience more growth in employment and personal income if I-69 is built than if the No Build scenario is chosen. Therefore, all of Southwest Indiana is expected to be a “winner” if I-69 is built. All regions of the Study Area benefit from Preferred Alternative 3C; there simply are different degrees of benefits. However, it is reasonable to expect that areas closer to the chosen alignment will experience more growth than areas located away from the alignment. Section 3.4.4 in the FEIS shows the distribution of these benefits among regions in the Study Area.

5. “Section 5.5.3 of the DEIS (pp. 5-34 - 5-35) begins to address this issue. It attempts to estimate changes in local business sales in each alternative corridor, as well as negative impacts for businesses taken from the US 41 and SR 37 corridors. However, the discussion implies that there could be a net positive benefit if access to existing businesses is maintained.

“As discussed above, the construction of any of the alternatives will have very little impact on regional population, employment, income, and travel. Therefore the total economic activity “pie” is about the same under any alternative, including the “No Build” alternative. Researchers have found that constructing new expressways generally does not increase regional population and employment. Instead it shifts them from some areas to other.” (1107-703 Smart Mobility, p. 28)

“A fourteenth reason why a new terrain I-69 cannot be built is the fact that INDOT has proven its predisposed bias toward building a new terrain route by harping on the economic advantages an interstate would bring to affected counties, but selectively ignoring any advantage that would be gleaned by communities along the US 41 route.” (1022-013 Werne)

Some researchers have indeed argued that highway capacity expansions in urban areas with mature transportation systems are more likely to redirect the geographical distribution of anticipated growth, as opposed to generating new economic activity (see, for example, M.G. Boarnet and A.F. Haughwout, “Do Highways Matter? Evidence and Policy Implications of Highways’ Influence on Metropolitan Development”, The Brookings Institution Center on Urban and Metropolitan Policy, 2000).

I-69, in contrast, would be a major new highway in a rural area that is currently underserved by existing limited access highways. In addition to the economic analysis presented in the I-69 DEIS, several studies have found that new highways and other major transportation improvements in rural areas result in economic benefits. See Nadiri, M. Ishaq and Theofanis Mamuneas, “Contributions of Highway Capital to Output and Productivity Growth in the US Economy and Industries”, prepared for Federal Highway Administration, 1998. This report is discussed in Appendix EE. Some of the key findings from the report by Ishaq and Mamuneas (Chapter X - Summary, Conclusions and Directions for Future Research) include:

- “Total highway capital contributes significantly to economic growth and productivity at the industry and national economy levels.”
- “Total highway capital has a significant effect on employment, private capital formation and demand for materials (sic) input in all industries.

See also Appendix FF, which contains a technical evaluation of the report by Smart Mobility.

6. “Construction of a new roadway will disrupt local economies. Gains in sales in some areas will be balanced by losses in others. Not all of the losses will be in the US 41 and SR 37 corridors. Other losses will be in small downtowns throughout southwestern Indiana. The project need is: “Support economic development that benefits a wide spectrum of Southwest Indiana residents (distribution of economic benefits)” (p. S-2). To meaningfully analyze the impacts of I-69 alternatives with respect to this goal, the DEIS should go much further in identifying economic winners and losers.” (1107-703 Smart Mobility, p. 29)

The economic impacts analysis indicates that all alternatives could be expected to have an overall moderate positive impact on the economy of southwest Indiana. Taking of land and loss of access can be expected to have a negative impact in some locations, and this was evaluated in Section 5.5 of the DEIS. In addition the impacts

to businesses due to diversion of traffic from the US 41 and SR 37 corridors to other routes was also evaluated.

7. “In the areas of Business Accessibility, Long-term Economic Growth, and Personal Accessibility, the DEIS may be double counting benefits. Are benefits counted for Corr 18 counted again in benefits to local and regional economies?” (1106-147 Tokarski, pp. 12 -13)

The economic analysis for the portion of I-69 between Indianapolis and Evansville was performed independently of other economic analyses that may have been published for other segments of I-69 or for the entire length of Corridor 18. The performance measures for the goals of Business Accessibility, Long-Term Economic Growth, and Personal Accessibility measure different things. The Business Accessibility performance measures gauge the increases in access to buyer, supplier, labor, and customer markets in percentage terms. The Personal Accessibility performance measures forecast the increase in the number of people who have access to various destinations. The Long-Term Growth performance measures consider changes in demographics and levels of government assistance.

8. “The statement on page 3-48, “There has been considerable anecdotal testimony offered which states that the loss of young workers due to a lack of economic opportunity is a major factor limiting economic growth in SW Indiana” is totally unsubstantiated and irrelevant. As shown in Table 4-4 “Age Distribution” there is a higher percentage of people in the 19-64 category in the Study Area than in the State as a whole.” (1106-147 Tokarski, p. 13)

Table 4-4 of the DEIS compares the percentage of the population between the ages of 19 and 64 in the 26-county Study Area to the percentage in the entire state of Indiana. The Study Area includes four counties that are part of the Indianapolis Metropolitan Statistical Area (MSA). Also, the phrase “young working-age population” is defined in Section 3.4.4.3 as the population between the ages of 25 and 44. When the populations of the four Study Area counties in the Indianapolis MSA are excluded, 28.1% of the Study Area population is between the ages of 25 and 44, compared to 32.5% of Indianapolis and 29.5% of Indiana as a whole. (Source: U.S. Census 2000). Table 4-4 has been updated in the FEIS to break out this 25 - 44 age cohort.

Negative net migration is a notable trend in some places in the Study Area. Between 1990 and 1998, six of the 22 Study Area counties outside of the Indianapolis MSA experienced negative net migration. These included many centers of economic activity in the Study Area, including Vigo County (Terre Haute), Knox County

(Vincennes), and Vanderburgh, Posey and Gibson Counties (Evansville area). See Table 2-5a in the EIS.

The anecdotal testimony cited is based on interviews of economic development officials and business leaders in the Study Area.

9. “Our corner of the world serves a 60-mile radius retail trading area and it would be nice to expose this to the rest of the Hoosier state. Finally, one of the most scenic drives in the midwest is the I-64 route between Evansville and Louisville. The new I-69 proceeding N.E. from Evansville through the hills of southern Indiana to Indianapolis would certainly equal that of I-64 and eventually draw passenger traffic with money to spend with new business development along this new roadway.” (0821-002 Replinger)

We concur. We anticipate that this will be a scenic drive and contribute to economic growth throughout the Study Area overall.

10. “Point: I-69 is designed to help trade nationally and internationally. The quality of life would not be raised much for southern Indiana’s residents. People cannot subsist on the income from minimum wage jobs.” (1107-201 Richardson)

“The new permanent jobs created will be \$7 per hour jobs at restaurants, gas stations, hotels, etc. Local taxes for present taxpayers will increase to provide services such as schools, police and fire, etc for these low income workers’ families because these low income workers will not provide sufficient tax revenue for their needs. And lastly, many businesses along the route will not only receive favorable zoning that will increase local taxes but also tax abatement, tax increment financing (TIF) and other corporate welfare that will add to the increased local taxes.” (0811-004 Pittman)

If one of the build options is selected, jobs are forecasted to be created in a range of industries. High-paying jobs account for 31 to 41% of the new jobs expected to be created if I-69 is completed.

11. “Terre Haute will not, in the long run be hurt by a direct I-69, in fact, in the long run it will be helped because what helps Indiana will help Terre Haute.” (0813-002 Wheelock)

This is consistent with our analysis. See FEIS Section 3.4.4, which breaks down the economic benefits for each alternative by region. Benefits to the Terre Haute region under Preferred Alternative 3C are comparable to those under Alternative 1.

12. “The Southwind Port in Mt. Vernon has rail, barge and road access. I believe locating another interstate near the facility will further bolster the states ability to move products and attract manufacturing.” (1107-317 Bullard)

Access to the Southwind Port was considered in the measure of access to intermodal centers. Preferred Alternative 3C will increase access to Southwind Port.

13. “But, far more importantly, access to I-69 would be an extremely valuable resource as SIBA continues its efforts to establish Crane as the centerpiece for high tech regional economic development.” (1107-444 Howard)

Service to Crane is provided by Preferred Alternative 3C. A potential interchange is located about two miles from the truck entrance to Crane.

14. “Bloomington has suffered from a considerable number of job losses in the past five years, and the creation of a similar research park in conjunction with an I-69 extension would undoubtedly benefit both the community and university through improved town-gown relations and economic growth. Locating the highway on an alignment that does not include Bloomington would do nothing to halt the flow of manufacturing jobs out of the city and would probably discourage other employees from taking advantage of the other resources the city has.” (1104-014 Ortsey)

“A route that provides better access to Indiana University for recruitment and research is imperative. Also it will lift Bloomington which has lost many manufacturing jobs and has a workforce that could benefit from new business starts that I-69 would provide.” (1107-098 Conner)

Preferred Alternative 3C will provide improved business access to Bloomington.

15. “Please send I-69 down in 67 to I57 then to Evansville. The selfishness of Terre Haute for a business venture will do nothing for the people who will stand to gain from new industry along I-69. Those people have been left out since Indiana was formed. All of the power and water is already there. Let’s take advantage of it and give those people a break. Make Southern Indiana industrial!” (1107-062 Wells)

The route described by the comment is similar to Alternative 4C, which is studied in the EIS.

16. “First of all, the unemployment rate for south-central Indiana has been rising and the prospects of attracting new corporations are not good. Why would any large company consider an area so far off of the “beaten path.” Semis cannot navigate the roads they currently travel and it is dangerous to the everyday motorist as well. If nothing is done to

dramatically improve south-central Indiana's job outlook, entire towns are going to disappear." (1107-090 Pillers)

Preferred Alternative 3C will provide a new and safer multi-lane highway for Southwest Indiana.

17. "We believe if Crane had access to a major interstate, several industrial parks would already be in place outside it's gates." (1107-018 Tucker)

Interviews with economic development officials in Southwest Indiana revealed that the absence of a four-lane highway to connect rural areas with trade centers may be one reason for the slow population and employment growth and low per capita income in the Study Area. The IEDC Report (See Appendix OO) cited improved access to Crane as being an important key to spin-off development. Preferred Alternative 3C has a potential interchange about two miles from the truck entrance to Crane. See further discussion of Crane's potential role in spurring economic development in EIS Section 2.3.2.2.

18. "Some persons make the mistake of thinking the building of the road is its self an economic benefit, or that the homes construction that will replace those that will be destroyed represents new jobs." (1104-059 Smith, p. 3)

The economic benefits described in this report represent the multiplier effects of enhanced access of businesses to suppliers and customers. They do not include the construction-related jobs associated with the highway.

19. "Even NAFTA is not working. For the past decade, NAFTA has created that "great sucking sound" that Ross Perot predicted as jobs have left the USA to Mexico. Lower transportation costs can only continue the trend toward globalization of manufacturing. This is likely understood by everyone, but the highway is being sold to the public on a hint that manufacturing might somehow return because of transportation." (1104-059 Smith, p.3)

The economic analysis for this project showed that employment growth that is forecast to accompany the I-69 build alternatives will be spread among many industries, including manufacturing. For example, the decision by Toyota to construct a major manufacturing facility in Princeton is evidence that manufacturers are not averse to locating in Southwest Indiana. According to Toyota representatives, the site's proximity to I-64 was an important factor in their location decision.

20. “2. If fiber optic cable were laid with this highway, in conjunction with other fiber optic nodes and junctions, both systems would expand the value and utility of the other. The future impact to the economy of the whole of southern Indiana should not be underestimated.” (0815-005 Robbins, p. 2)

Decisions regarding utility corridors will be made in the design phase after Tier 2 environmental studies.

21. “1. I have heard many politicians make the comment that “this road will stimulate the growth of business along its route.” This comment is false. I lived in a northern suburb of Chicago for 28 years. I have traveled from Chicago to Milwaukee many times. Do you know what? The areas that were not economically developed never did develop. The only areas that gained economically from I-94 were the cities (albeit the large ones) that were already economically developed. Have you traveled from Indy to Merrillville on I-65? I have for the last 17 years. Guess what? Most of it is still farmland. Where are the big booming businesses? There aren’t any; only Zionsville, Lafayette and Merrillville have grown. Why? Because they were already economically developed! So much for the economic growth theory related to interstate-highways!” (1015-004 Mathis, p. 2)

The economic analysis in the FEIS indicates modest growth that would be related to improved accessibility by businesses to suppliers and customers. As business transportation costs are reduced, growth occurs in many industries, often a few employees at a time. The precise location of such growth will be dependent on numerous factors besides transportation, and much of the growth may indeed locate in areas that are already somewhat developed.

22. “It will not create as many jobs as a more traditional rural economic development plan would (such as rural enterprise zones, two federal government economic development programs, business incubators and local industrial development groups) and it will be millions of dollars more expensive.” (1021-032 Jochim)

A purpose of this project is to provide an improved transportation link which “Completes the portion of the National I-69 project between Evansville and Indianapolis” (FEIS, Section 2.1). Alternatives such as economic development zones would not serve this purpose. In addition, one of INDOT’s policies is to advance projects that encourage economic development. Only one part of the Purpose and Need for the I-69 project is economic development. See also Appendix EE, which discusses the relationship between highway investment and economic development.

23. “Indiana Farm Bureau supports the development of I-69 in Indiana. Transportation is vital to Indiana farmers and rural communities. Rural communities and farmers in

Southwestern Indiana will benefit from improved transportation routes between Evansville and Indianapolis, whether through better access to off-farm employment, improved health care, or domestic and international markets for agricultural products.” (1107-685 Indiana Farm Bureau Inc.)

We concur that Preferred Alternative 3C will benefit the agricultural sector for the reasons stated by the commentor.

24. “What methodology was used to determine the impacts to private land logging economies, when considering that the highway may create market conditions that change a private landowners decision to harvest trees over the long term vs. sell to development?” (0820-226 Indiana Forest Alliance, p. 3)

The Study’s Geographic Information System (GIS) estimated the acres of forested land used by each alternative for the highway. From the most recent USDA Census of Agriculture (1997), actual average income per forested acre from forestry activities was obtained. For each alternative, the number of forested acres from each county used for the highway was multiplied by the average income per acre from that county.

25. “...have you thought about bringing in someone from SIA in Lafayette to explain the importance of I-65 in their decision to locate in Lafayette, Toyota in Princeton needing access to I-64, or even Georgetown, Kentucky Chamber of Commerce? Perhaps a few people will understand that these are not paid spin doctors, but merely showing that a interstate highway is important. I have rambled enough.” (0827-016 Moore)

As part of this study, business and economic development officials in Southwest Indiana were interviewed. Officials at the Princeton Toyota plant were among those interviewed.

26. “Recent economic studies demonstrates that the economic value of natural undeveloped areas may greatly exceed the feeble economic gains resulting from the strip-mall type of development most likely to result from new-terrain highway construction. A recent economic study published in *Science* (2002, 297, 950-953) titled “Economic Reasons for Conserving Wild Nature” provides an example of the kind of economic analysis that needs to be done in order to properly assess the economic losses that would come from new-terrain highway construction.” (1102-006 Mitch)

We have reviewed the economic study “Economic Reasons for Conserving Wild Nature” from *Science*. We largely agree with the primary finding of that study which is that there can be great inherent economic value in preserving wild nature.

Additional thoughts on your comment, the economic study, and our analysis include the following:

- 1. The I-69 EIS analysis considers the extent to which new highways may lead to nearby developments such as gas stations, convenient stores, and restaurants. The analysis is very careful to point out that such development and increases to business sales are likely to be offset by reductions in business sales elsewhere in the region so that there may be little to no net gain from that type of activity. However, the regional economic analysis explicitly considers the potential for business attraction in the region and estimates this impact based on local interviews (economic development professionals, local businesses, etc.) and proven statistical methods. This analysis only considers business attraction effects for certain industries, unlikely to crowd out other existing activity (e.g., manufacturing, warehousing).**
- 2. The regional economic analysis does consider lost forest and farm income due to the takings of new land for highway investment.**
- 3. The current NEPA EIS process calls for a very careful consideration of environmental impacts on all resources (natural, historic, etc.) but does not require the estimation of the economic loss associated with those impacts largely because the quantification of the loss is extremely difficult and subjective. So, more qualitative measures of loss may be a more reliable way to estimate the true environmental impact. In addition, most environmental impacts in highway projects are mitigated, often at the rate of several times the impact.**
- 4. There are at least three very interesting points made in the *Science* article that are relevant to the I-69 study and the economic analysis. First, the very few case studies that they find and cite that provide reliable and unbiased results tend to be from very different parts of the world and very different natural resources (e.g., logging in Cameroon, mangrove system in Thailand, draining freshwater marshes in Canada, reef exploitation in the Philippines). Though the positive benefits of conservation are shown to be large, it may be difficult to extrapolate those results to the I-69 Indiana study. Second, the authors point out that of the \$6.5 billion spent annually on maintenance of remaining habitats in protected areas, “half of this is spent in the United States alone.” This is an indication that this may actually be a larger problem for other parts of the world (where EIS-type analysis may not be done). Finally, the authors state that “we are not arguing against development” since forecasts of human population growth means that “development is clearly essential.” Their primary point is that human benefits around the world are not distributed**

equitably and that there should be more attempts at conservation when possible, and mitigation and compensation, if necessary.

27. “There appears to be an inherent assumption that all traffic on the Interstate will travel the entire 155 mile distance. I bet the data shows that a significant portion of all Interstate traffic in Indiana travels less than 25-50 miles. The trip weighted time differential between the various alternatives would thus be significantly less than 12 minutes.” (1105-201 Marbach)

Approximately 11,000 vehicles are forecasted to travel on Preferred Alternative 3C between Evansville and Indianapolis in 2025. A difference among alternatives of 12 minutes translates into a cost savings of tens of millions of dollars each year, for trips between Evansville and Indianapolis alone. Improving the linkage between Evansville and Indianapolis is a core goal for this project.

3.4.5 National I-69 Performance Indicators

1. “Another example is “Daily Truck Hours Saved (Year 2025)” (Figure 3.25, p. 3-51). In the DEIS’s graphic, the highest increase - 4,500 - looks big. What most readers have no way of knowing is that it comes on top of a base of over 1.1 million. Therefore, the increase is actually 0.4 percent, equivalent to only 40 cents on \$100. The difference between I-70/US 41 and the highest performing alternative is only 0.2 percent. These are tiny increases.” (1107-703 Smart Mobility, p. 3)

“Alternative 3B reportedly saves 4,500 daily truck hours. But without knowing the amount of total truck travel time in the region, how can we evaluate the significance of this time savings. ... Therefore, the truck travel time savings in Alternative 3B, which save the most truck hours, represents less than one-half of one percent of the total. For each of the alternatives, when the total number of truck hours is presented, it is clear that the savings in truck travel time is trivial.” (1107-703 Smart Mobility, p. 30)

Saving 4,500 truck hours every day is a very significant benefit. This results in over \$50,000,000 in annual operating cost savings to truckers. The resulting economic impacts of this savings are significant.

2. “As with other performance measures, when shown in proper context as in Figure 22 below, the improvement in accessibility to intermodal facilities with any of the alternatives is very small.” (1107-703 Smart Mobility, p. 30)

This comment states that the magnitude of any benefit should be compared to the total level of transportation or economic activity within Southwest Indiana. A more

meaningful comparison considers the benefits at the margin of a project compared to the incremental costs and impacts of that project. This is because for a project of this magnitude, small percentage changes produce numerically large results. This has been the consistent approach to analyze costs, impacts, and benefits.

For example, in the No Build scenario, there are forecasted to be approximately 1,620,000 persons employed in the Study Area in the Year 2025. Preferred Alternative 3C is forecasted to add 4,300 jobs to the Study Area in 2025, a percentage increase of 0.27% in Study Area employment. Alternative 1 is forecasted to add 1,400 jobs to the Study Area in 2025, a percentage increase of 0.09%. By this line of reasoning, both 0.27% and 0.09% are both not much different than 0. Therefore, one should select the least expensive alternative (Alternative 1), since all alternatives are “about the same.”

By a similar line of reasoning, it could be stated that the difference in farmland impacts among alternatives is insignificant. The latest Census of Agriculture shows that there are 3,564,000 acres of farmland in the 26 county Study Area (see Appendix F, Table 2). In the DEIS, the median estimate for farmland used by Alternative 1 was 1,530 acres, or 0.043% of all farmland in the Study Area. In the DEIS, the median estimate for farmland used by Preferred Alternative 3C was 4,350 acres, or 0.12% of all farmland in the Study Area. By the line of reasoning used in this comment, both farmland losses are very near 0% of the farmland in the region, and one should not consider the relative farmland losses among alternatives, since all alternatives are “about the same,” and not much different than 0.

In short, the seemingly small percentage differences among alternatives are simply a reflection of the scale of the Study Area. In a study area of this magnitude, the change induced by a single road project (or any other single project, for that matter) will be relatively small in percentage terms. On the other hand, the small percentage change may translate into relatively large change in absolute terms – and that is true whether one is considering benefits or impacts.

For purposes of this DEIS, both impacts and benefits were presented primarily in absolute terms, rather than as percentages. In particular, Table S-6, *Summary of Key Performance Measures and Environmental Impacts*, presents absolute numbers rather than percentages. This approach was used consistently for both benefits and impacts, because it was believed to be the most useful and understandable way of communicating this information to readers. See also Appendix FF, which addresses this issue further.

3. “The main performance measure supporting the Corr 18 core goal is truck Vehicle Hours Saved (VHS). Minutes from an MPO meeting, Nov. 2001, Appendix Y, page 8 states that the truck VHS will be greatest for alternatives using SR-37, and this is due mainly to diversion of traffic from I-65 south of Indianapolis. Comments from this same meeting also state that this diversion is “...only tangentially related to the objectives of this study.” Yet the DEIS bases its ratings of the alternatives for the Corr 18 goal on this measure.” (1106-147 Tokarski, p. 5)

The DEIS states that one of the Level 2 Route Concepts (Route Concept K) “reduced congestion on I-65 south of Indianapolis.” No statement is made that it diverted traffic from I-65. The statement made at the public meeting was that congestion relief on I-65 is tangentially related to the objectives of the study. That statement recognized that I-69 is not being proposed for the purpose of relieving congestion on I-65, but some alternatives will help to relieve congestion on I-65 to some extent. Route Concept K was the only route concept which used a portion of I-65. The traffic models assumed added capacity on the I-65/I-69 joint routing for Route Concept K, so that congestion which otherwise would have existed on I-65 was relieved. Route Concept K was not included in the Level 3 alternatives analysis.

Truck vehicle hours saved is an appropriate measure for the national I-69 goals of facilitating interstate and international movements of freight. This measure reflects overall improvement in travel times across the network in Southwest Indiana for truck trips.

4. “There are currently at least four main ways to get from Canada to Texas starting at I-69 using the existing interstate system. All pass through Indianapolis. Two would currently terminate at Dallas or San Antonio, the other two in Houston. The only leg missing is the Texas to Mexico route. This would cost the taxpayers a whole lot less to build. Why do we need another complete route? The time savings cannot be that great and besides if we are trying to make money from the trade between these two countries wouldn’t it be to our advantage to have their couriers spend more time on our roads paying more for our gas, providing us more federal and state tax money in the process?” (1107-162 Branam)

The FHWA, as directed by the Congress, has analyzed the costs and benefits of the National I-69 project. These analyses included the 1995 Corridor 18 Feasibility Study and the 1997 Corridor 18 Special Issues Study. FHWA has determined that the national benefits outweigh the costs, taking into account the existing Interstate Highway system.

5. “If a corridor between Mexico and Canada is the objective, why not consider a railway?” (1104-025 Forsburg)

One purpose of this project is to provide an improved transportation link which “Completes the portion of the National I-69 project between Evansville and Indianapolis” (FEIS, Section 2.1). Congress has determined that I-69 should be completed as an Interstate highway. A railroad corridor would not serve this objective.

In addition, businesses increasingly are dependent upon small shipments and “just-in-time” (JIT) delivery. Motor freight is the method of choice for providing such freight service. Businesses who have the choice of rail or highway for freight shipments tend to choose rail for bulky, low-value shipments whose delivery is not time-sensitive.

6. “As a semi-truck driver, I drove from Indianapolis to Evansville. For three years, I made that trip almost daily, Monday through Friday. The route I used 99% of the time was I-70 west to US 41 south. The other 1% of the time I took SR 67 south to SR 57 south. Even though the SR67/SR 57 route was shorter, I chose the I-70/US 41 route only because it was faster (many drivers, both commercial and private, drive at or above interstate speeds on open sections of US 41). My route preference, because I was paid by the mile (using Household Mover’s Guide miles) not by the hour, would have been to use the shortest route available, the SR 67/SR 57 route. To me however, the extra time it took to travel that route could not justify using it.” (1107-057 Moore)

Preferred Alternative 3C will have a shorter and more direct route which also is faster than I-70 to US 41.

7. “I support the New Terrain Route Alternative 3. I’m a manager at United States Gypsum Company located in Shoals, Indiana. This alternative will help keep our facility competitive in the future by allowing us to secure favorable freight rates for inbound and outbound freight.” (1107-056 Perry)

Preferred Alternative 3C will provide improved access to this facility, which is located in Martin County. While the economic benefits for Preferred Alternative 3C will be realized region-wide, places proximate to the highway corridor may realize higher levels of benefits.

8. “It is an *international* corridor- a limited access truck route that promises to become 12 lanes wide in some places. While such a route may have its benefit regarding transportation and trade, this is not the means by which the other stated goals (shortening travel time between Evansville, Indianapolis; improving access to Crane; linking rural communities) can be effectively achieved.” (0827-066 Gealt)

The selection of Preferred Alternative 3C took into account all project goals to make the best decision for the people of the State of Indiana.

9. “I have seen no evidence of coordination of planning between this segment of highway, which runs from I 64 to I 465 with the planning for the next segment to the south, through Vanderburgh County and Henderson County in Kentucky. Specifically, routes to the west of Evansville have been under study, with one west side route still under consideration.” (1104-057 Rosenquist)

The staff members of INDOT and FHWA have ensured that there is close coordination between both studies. Both projects have the same INDOT and FHWA project manager.

3.4.6 Cost and Mileage Estimates

1. “As discussed in Section 3, these negligible improvements come at a very high cost to taxpayers. The DEIS obscures this fact, too. It spends almost no time discussing costs. It also fails to include graphics showing the enormous cost differences between the alternatives. The DEIS’s “preferred” alternatives cost up to nearly twice as much as I-70/US 41 to construct, and up to ten times more to operate and maintain each year.” (1107-703 Smart Mobility, p. 3)

“For example the chart which is most detrimental to INDOT’s preferred route is the cost part. Why is that the only part out there.....that is little table of numbers.....that isn’t even ordered from minimum.....least expensive to most expensive instead of being a bar chart like all the others.....which would show what a bad decision this is. It is obvious that this study is seriously flawed by INDOT’s biases and we should all soundly reject it. Thank you.” (0820-116 Connelly)

“There are, however, two criteria upon which the alternatives are judged where there is significant variation between alternatives: 1) construction costs and 2) operation and maintenance costs. These values are presented in the DEIS (pages 3-52 and 3-53) but no figures are devoted to them. Some figures are very telling, as can be seen below.” (1107-703 Smart Mobility, p. 32)

The selection of Preferred Alternative 3C took into account all factors - impacts, performance, and cost - to arrive at the best decision for Southwest Indiana as well as the entire State. Graphs showing the capital (construction, engineering, and right-of-way), mitigation, and ongoing operating and maintenance costs are included in the FEIS, Section 3.4.6 and Appendix HH.

2. “Right-of-way and relocation costs are underestimated based upon the statement on page 5-15. Indeed, utility relocation costs have not been included, ROW and proposed interchanges have been estimated only. There is no mention of grade separation costs. Relocation costs are general and based on a “field survey” only. Mitigation costs are unknown but will be significant. Land values are generally underestimated. It is clear that the actual cost of this highway will far exceed the current estimates, as is typical for projects of this kind (See: “Underestimating Costs in Public Works Projects, error or lie?” American Planning Association Journal, Summer 2002, Vol. 68, No. 3)” (1106-147 Tokarski, p. 16)

The right-of-way and relocation cost estimates are based upon the land that would be taken for each working alignment, and the value of comparable properties in the area. They take into account acreage, improvements required for actual construction, relocation costs, and costs for acquiring structures and improvements.

Utility relocation costs cannot be accurately estimated until an actual location of the working alignment is determined. During design, the cost of utility relocations will be determined. They are, however, expected to be less than one percent of total construction costs.

Grade separation costs as well as stream/river crossings were included in the cost estimates. A three volume detailed documentation of cost estimation methodology was provided to Environmental Law and Policy Center on behalf of this commentor, as requested in ELPC’s letter of August 16, 2002. As this information showed, estimates for bridge structures as well as the additional earthwork required to construct the elevated approaches was included.

Mitigation costs were not included in the DEIS. The FEIS contains mitigation costs for each alternative. See Sections 3.4.6 and 7.4, Table 3-33a, and Appendix HH.

3. “If a new road is built, we and our descendants will then have two roads to maintain, not just U.S. 41. I’m not speaking only of surface and shoulder repairs, not just of erosion control, not just of the bridge inspections, repairs and replacements. All the new roadsides will need mowing in the summer and snow and ice removal in the winter. The costs of operating and maintaining those machines, the tools and equipment needed to maintain them, the storage of all this machinery, the wages, salaries and benefits of all the new government workers will be enormous expenses. (There are too many government workers already!” (1001-009 Hendricks)

“I’ll make one other point. We don’t seem to be able to maintain our other federal and state highways as they are. Have we figured in cost of what the maintenance of this all

these new miles are going to be, I didn't see that in the figures either." (0819-078 Cutter)

The selection of Preferred Alternative 3C took into account the added maintenance costs associated with each alternative. See Table 3-34.

4. "...our taxes will rise astronomically each year to pay for a highway we do not want or need." (1003-009 Hedrick)

"Indiana already has a shortage of funds to adequately maintain its existing road system, and adding over 100 miles of new terrain roadway would make that already existing problem much worse." (1025-032 Werne)

"The light of these facts, where is the money to build the extension of Corridor 18 through Indiana going to come from? INDOT Commissioner Nicol would like us to believe that Federal Highway Administration through the US Department of Transportation has funded an 80 percent I-69 pot of gold but is just waiting until we can make up our mind on a route. Whoa not so fast, virtually all the federal funds refer to in that 80 percent will come from Indiana's federal TEA 21 annual gas tax distribution money that can and should be spent on other more worth while and necessary improvements." (0819-075 Braun)

"Many have pointed out the folly of choosing a route that is 65% more expensive during a time of massive state budget deficits. Gas taxes were raised to cover other budget difficulties. 100% of the funding for I-69, whether directly from the state or from the reallocation of our federal gas tax dollars, will come from the pockets of Indiana drivers. This makes this a statewide issue, not just one of regional concern. Are we to raise the gas tax again, as supporters such as Bloomington's *Herald Times* suggests, to cover the needs of existing roads after I-69 has siphoned away the majority of existing road funds? If anything begs for a statewide referendum, this does." (1107-689 Flynn)

INDOT will determine funding strategies to allow the construction of Preferred Alternative 3C to proceed without requiring other transportation priorities to go unfunded.

5. "4. More State Troopers." (0923-004 Keith)

The added operating and maintenance costs for each alternative include estimates for added law enforcement and public safety which each would require.

6. “The costs of the 41/70 route and the “hypotenuse route” between Evansville and Indy are virtually the same when the cost of upgrading I-70 is included. It may not be necessary to upgrade I-70 if a direct route is built which will reduce traffic on I-70. It is misleading to fail to include I-70 upgrade cost when comparing the cost of the two routes.” (1027-015 Matthews)

“First of all I want to thank INDOT and everyone who is associated with the fair and thorough analysis of the writing for I-69, you’ve done a good job, slow and good. The only major mistake is not including substantial cause to upgrade I-70 with that alternative. This confused a lot of people about that cause we’re not dealing with apples and apples. I-70 will probably not be widening that (inaudible) a direct I-69 (inaudible). So if you compare (inaudible) the original cost among the various cost of the routes.” (0821-254 Matthews)

“Why doesn’t the cost report for option 1 include added travel lanes on I-70?” (1107-066 Robinson)

The cost of upgrading I-70 east of SR 641, which is not included in the Alternative 1 cost estimates, is estimated at \$310,000,000. This estimate is based upon the current INDOT Statewide Transportation Plan. The Statewide Transportation Plan shows the cost of the upgrade from SR 267 to US 231 as \$140 million; from US 231 to SR 59 as \$100 million; and the upgrade from SR 59 to the Illinois state line as \$135 million. The cost of the upgrade to SR 641 was determined by pro-rating the cost of the upgrade to SR 59 for the entire section. The upgrade to SR 641 will include 12 of the 23 miles of the entire section to the state line. Thus, the total cost of the I-70 upgrade to SR 641 is estimated as \$140 million + \$100 million + \$70 million, or \$310 million. See further discussion in Appendix FF, Section IV.

7. “If the new highway goes through, what’s going to happen as far as all these incidents are concerned. And I was hoping that nobody would be killed, what about the extra cost it would be to guard all this equipment so it couldn’t be firebombed.....I suggest it be taken under consideration.” (0820-104 Clevenger)

“And, based on comments made tonight, INDOT would be well advised to add to the building costs. The increased security that will no doubt be needed if they try to build a new terrain route.” (0820-227 Henshel/Walden, p. 2)

INDOT and its contractors take any and all appropriate safety and security measures on all INDOT projects.

8. “Lowest construction cost (\$0.80-\$1.04 billion) and operation and maintenance cost.

“In fact, according to figures in Table 6-1 (Summary of Key Performance Measures and Environmental Impacts), construction costs for Alternatives 2C, 3B, 3C, 4B and 4c, which are referred to as “preferred alternatives” by INDOT (see Table S-7), are anywhere from \$230 million to \$1.01 billion more than Alternative 1. It would have been advantageous to consider the benefits of using this \$230 million to \$1.01 billion for other transportation projects in Indiana which could better meet the State’s transportation goals; however, no such consideration was given in the DEIS.” (1030-004 Greater Terre Haute Chamber of Commerce, p. 3-4)

“INDOT’s preferred routes for I-69 are on average about \$600 million, or 65% more expensive to construct than US 41/I-70 and eight times more expensive to maintain every year.” (1028-047 Georges)

Cost, along with impacts and performance, all were considered in selecting Preferred Alternative 3C.

9. “...and it is irresponsible for any person, group, or agency to promote the building of a new terrain road without having taken into account not only where the construction money will come from, but the annual and perpetual maintenance costs that are associated with it.” (1025-032 Werne)

The cost estimates for each alternative include not only the annual increase in roadway maintenance, but also the annual increase in public safety costs.

10. “The DEIS reports the following on impact miles:
Alternative 1 87 to 89 [\$10,449,500 per mile]
Alt. 4B141-143 [\$7,552,450 per mile]
Alt. 4C141-144 [\$9,860,000 per mile]

“We question the numbers you have estimated for alternatives 4B and 4C.

“When you look at the other ‘preferred’ routes, the cost per mile ranges from \$10,952,380 [2C] to \$12,167,830 [3B].” (1024-031 Henry)

“The bottom line question, how can 4B/4C costs be estimated so low when their impact mileage is equal to the other “preferred” route alternatives.” (1024-031 Henry)

“We suspect the numbers are “cooked” to provide an attractive alternative to the original hopes of having 3B or 3C selected as the route. Needless to say, after 4B or 4C is selected, the error will be noticed but then it will be too late to do anything about it.” (1024-031 Henry)

A number of factors contribute to the construction costs. Careful engineering estimates were made, taking into account the terrain over which each alternative would pass. It should be noted that there are two types of costs (for pavement removal and maintenance of traffic), which do not exist, or exist to a very small extent, for construction on new terrain. However, these can be a significant portion of costs when upgrading existing facilities. In addition, Alternative 4B has a comparatively low number of relocations, which would make its cost per mile less in comparison to the other alternatives listed. See Appendix HH for further information on methodologies and for construction cost estimates.

11. “Why is cost not mentioned as a consideration? We have a State budget under extreme pressure. Surely highway construction should be subject to the same cost reduction efforts as all other areas of State spending are! I don’t want my Federal, Gasoline, and State taxes wasted to the tune of \$200-800 million. (The difference between the cost of Alternative 1 and the various other alternatives.) In addition there is a lesser annual Operating and Maintenance cost for Alternative 1 according to Table S-2 although the report mysteriously fails to quantify the difference.” (1105-201 Marbach)

Cost, along with impacts and performance, all were considered in selecting Preferred Alternative 3C.

12. “In the middle of this page there is a footnote that indicates the addition of lanes to I-70 between Indianapolis and Terre Haute are assumed to be a “given” that they will be built. In Table S-5 on page 19 where the costs of each alternative are given it is not indicated whether the cost for Alternative 1 is for Indianapolis to Evansville or Terre Haute to Evansville. I suspect it is for the former in which case the comparable costs of alternatives is completely misleading because a cost for Alternative 1 is included that will be spent regardless of which alternative is selected, thus way overstating the cost of Alternative 1.” (1105-201 Marbach)

The cost of adding lanes to I-70 is NOT included in the capital cost of any of the Alternatives (1, 2A, 2B, 3A, 4B, 4C, or 5A) that use a portion of I-70. In response to comments received on the DEIS, additional cost estimates have been prepared to show how costs would change if the cost of the I-70 widening were included in the cost of alternative that use I-70. These additional cost estimates can be found in Appendix FF.

3.4.7 Conclusion

1. “It is clear from the preceding discussion that for none of the state project purposes do any alternatives provide significant benefits whatsoever. The table below summarizes these findings by project purpose.

Purpose	Purpose Description	Benefits Summary
1#	Improve Evansville-Indianapolis Transportation Linkage	These benefits affect such a small number of trips per day that their effect is negligible
2#	Improve Personal Accessibility for SW Indiana Residents	Very minor change from No-Build for all scenarios
3	Reduce Traffic Congestion on SW Indiana Highways	Very minor change from No-Build for all scenarios. Some worsen.
4	Reduce Traffic Safety Problems	Negligible changes from No-Build for all scenarios.
5	Increase Market/Labor Accessibility for SW Indiana Businesses	Very minor change from no-build for all scenarios
6	Support Sustainable, Long Term Economic Growth	Negligible change from No-Build for all scenarios
7	Economic Development - Benefit Spectrum of SW Indiana Residents	Negligible change from No-Build for all scenarios
8#	Facilitate Freight Movement through I-69 Corridor	Negligible change from No-Build for all scenarios
9	Connect I-69 to Major Intermodal Facilities in SW Indiana	Very minor change from No-Build for all scenarios
# Core Project Goal		

“Especially striking is the fact that no alternative provides any appreciable benefits with regard to the three “core” project goals (Goals 1, 2, and 8) except that any of the build alternatives can serve as part of the national I-69. Also notable is the fact that there are no significant differences among alternatives on any of the project goals.” (1107-703 Smart Mobility, pp. 31 - 32).

In a project of this size, small percentage differences can translate into a large difference in benefits or impacts in absolute terms. The following example demonstrates Preferred Alternative 3C’s significant improvement over the No Build scenario for the project’s core goal of personal accessibility.

In the No Build scenario, there are forecasted to be approximately 1,620,000 persons employed in the Study Area in the Year 2025. The Preferred Alternative 3C is forecasted to add 4,300 jobs to the Study Area in 2025, a percentage increase of 0.27% in Study Area employment. Alternative 1 is forecasted to add 1,400 jobs to the Study Area in 2025, a percentage increase of 0.09%. In percentage terms, both alternatives appear to have small benefits. However, given the scale of the Study

Area, the small percentages translate into thousands of added jobs. For further discussion of this issue, see Section 11.2.2.4 and Appendix FF.

3.5 Tier 2 Sections

1. “Segments of Independent Utility within Alternative 3C:

If the project team settles on Alternative 3C as I have recommended, I propose that the following ‘Segments of Independent Utility’ (SIU) be defined for this project (which itself as a whole is SIU #3 of the ‘national I-69’ project)

Segment	Description
3A	I-64/I-164 to Petersburg Includes rebuilding I-64 Exit 29 as a full Freeway-to-Freeway interchange
3B	Petersburg to Washington
3C	Washington to Crane Naval Surface Warfare Center (“Crane NSWC”)
3D	Crane NSWC to Indiana 37 (SW of Bloomington)
3E	SW of Bloomington to NE of Martinsville Incorporates the existing (upgraded) Indiana 37 “Bloomington by-pass” and a new-terrain “Martinsville bypass”
3F	NE of Martinsville to I-465 includes rebuilding I-465 Exit 4 as a Freeway-to-Freeway interchange
3Y (optional)	I-369: upgrade U.S. 50/150 from U.S. 41 at Vincennes to I-69 near Washington
3Z (optional)	I-569: upgrade Indiana 37 from U.S. 50 (SW jet) near Bedford to I-69 at Bloomington

“Within each of the above SIU’s, there would be multiple ‘sections’ defined in order to break each down into manageable individual project so for bidding, design and construction purpose.” (1104-008 Shook)

These segments closely correspond to the Sections of Preferred Alternative 3C identified in Section 3.5 of the FEIS.

4.1 The GIS Approach

1. “We particularly note the high quality Geographic Information System (GIS) data base and resulting Environmental Atlas that was developed for the 26-county Study Area for this project. The GIS database will be a valuable resource to utilize for future projects in Southwest Indiana.” (1107-696 USEPA Region 5, p.3)

“I traveled up and down all the roads of routes 3 and most of 4 and 5. I had the DEIS atlas on the seat beside me for hour after hour for the past 2-1/2 months as I delivered maps to homes, businesses, farms and churches within 1000 feet. I have seen the accuracy of the maps. I have seen almost no missing homes.” (1104-059 Smith, p. 7)

A great deal of work went into developing the GIS, and we appreciate the acknowledgment. The GIS database will continue to be used and improved.

2. “How will you address inconsistent statements by the consulting firm (BLA) hired to do the EIS? [Specifically the comment that existing data was field checked when in fact no land owner in the Eastern Greene County area was contacted for access to their land to verify or check on the natural features on their lands.]” (1107-162 Branam, p. 2)

Existing data for structural features (such as churches, cemeteries, gas stations, Underground Storage Tanks, etc.) were checked, and edited if necessary, using windshield surveys from the road. No private property was accessed for the Tier 1 study. Natural features or structures that were not visible from the road were not field checked.

3. "Thirdly, on Hyden Road just west of Spencer (from your proposed underpass on Hyden to 330 west and up around the corner to Hancock School Road), I found at least 35 homes missing (and I'm round down). I realize you have a disclaimer that some of the homes may be missing due to new construction. However, 35 missing homes in a square mile is a pretty large number and many of these homes were not new by any means. I might add that from what I've seen and heard, this is not an isolated incident (at least in Owen County). It makes me question the overall accuracy of the study as well as the accuracy of the budgeting that will result from this information." (1107-690 Stewart)

"The topographical map of proposed route number three shown on page 26 of the environmental impact study would go straight through a new subdivision which was not present at the time the map was produced. The subdivision is called "Union Valley Farms", at present there are only a dozen homes within the subdivision, however there are plans for up to seventy homes in the near future." (1107-332 Hall)

“At the meetings the aerial photographs omitted many of the new homes located in Monroe County. It seem obvious that up-to-date photos have not been taken. Therefore the cost could not be accurate. My son and family have just built a new home around the Monroe Greene County line. I am very familiar with that area of the state.” (1024-029 Inman)

"Despite these obstacles, many errors were discovered in the study that need to be addressed. The estimated number of houses impacted by I-69 in Owen County is suspect. On page 14 of 29 on route 2 in Owen County you indicate that there are a total of 29 houses from the proposed overpass on Hyden Rd. to and including Hancock School Rd. within the Study Area. In fact you missed over 35 houses on these roads. Owen County is a rapidly growing area and a few of these houses have been build recently, but the great majority were simply omitted. On Goose Creek Rd. you missed 2 houses in a ½ mile stretch beginning at State Rd. 67, both of which have existed for over 5 years. You identified only 5 houses in this area. Given such huge discrepancies between your maps and reality, your estimates of the number of homes effected, and costs involved in acquiring property cannot be taken seriously." (1105-203 McCallister)

The aerial photographs are from 1998-99. They were produced for the United States Geological Survey for the continental U.S. and can be downloaded for Indiana from the Indiana University, University Information Technology Services web site (<http://storage.iu.edu/DOQQS/index.html>). We are aware that the aerials were 3-4 years old at the time of the study; however, they were the best available for the entire Study Area. In the rapidly developing area along SR 37 from SR 144 to I-465, new aerial photographs were taken in October 2003. These new aerials can be found in Section 5.3, *Social Impacts*. In addition, new aerial photographs of Preferred Alternative 3C will be taken in the winter of 2003.

The aerial photos were not used as the basis for estimating business and residential relocations. Field surveys done in the spring of 2002 were used to identify any homes or business locations not shown in the aerial photos. Additional field studies were done in 2003 to provide updates on additional development since the DEIS. This new information is reflected in the FEIS.

4. “I live on 300 S close to Old Clifty Church - Jackson Township. Our home and my two neighbors homes are not on your DEIS aerial maps. You just took pictures and used outdated plat books to mark homes.” (1021-033 Jochim)

The aerial photographs are from 1998-99. They were produced for the United States Geological Survey for the continental U.S. and can be downloaded for Indiana from the Indiana University, University Information Technology Services

web site (<http://storage.iu.edu/DOOQS/index.html>). We are aware that the aerials were 3-4 years old at the time of the study; however, they were the best available for the entire Study Area. In the rapidly developing area along SR 37 from SR 144 to I-465, new aerial photographs were taken in October 2003. These new aerials can be found in Section 5.3, *Social Impacts*. In addition, new aerial photographs of Preferred Alternative 3C will be taken in the winter of 2003.

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In addition, these homes will not be impacted by Preferred Alternative 3C.

5. “Please provide specific details on how each value was derived in the development of the study, such as source used for threatened/endangered species location/distribution and when data was from; how was data gathered to generate the geologic information in the EIS; how was the information regarding the hydrogeologic information obtained; what sources were utilized to delineate the specific Karst areas; etc. This same information and data should be presented for every factor considered as it is a matter of public record as it served as the basis for the conclusions reached in the study! It is not enough to provide conclusory statements without the data to support it or even the age of the data utilized documented-for all the public knows an intern decided to use the GIS tools to arbitrarily list such features.” (1029-031 Dittmer, p. 2)

The information requested by this comment is called metadata. This information is documented in the Environmental Atlas, which is Volume III of the DEIS and is incorporated by reference in Volume III of the FEIS. See Mapping Layer Description and Sources near the front of the GIS Atlas.

4.2 Natural Environment

4.2.1 Physiographic Regions

1. “Page 4-5, New Castle Till Plains: Change ‘Monroe’ to ‘Morgan’ County.” (1107-697 U.S. Dept. of the Interior, p. 10)

This has been corrected in the FEIS.

4.2.2 Natural Regions

No substantive comments.

4.2.3 Forests

No substantive comments.

4.2.4 Farmland

No substantive comments.

4.2.5 Wetlands

1. “Secondly, I looked at the wetlands in the area from Freedom to Spencer. I found 28 areas that the US Fish and Wildlife maps had listed as wetlands, but your maps had only listed them as lakes, ponds or floodplains. Does this mean that you don’t consider these spots as wetlands? Will they be among the items you will be obligated to replace at a 3 to 1 ratio? I hope so.” (1107-690 Stewart)

“Wetlands is another area of concern. Using Fish and Wildlife maps easily obtained from their website it was a simple matter of identifying 28 areas identified as wetlands in the Study Area from Spencer to Freedom in Owen County. While these areas appear on the DEIS maps, they are all misidentified as either lakes, ponds or floodplain. Again, this is an example of readily available information that would enable INDOT and BLA to create a more accurate study that was missing.” (1105-203 McCallister)

The methodology for identifying wetland areas in the EIS was discussed with the US Army Corps of Engineers and other resource agencies at meetings on May 18, 1999; November 27, 2001; and January 9, 2002. The methodology followed in this analysis is based upon “Classification of Wetlands and Deepwater Habitats of the United States” (Cowardin, 1979). Following this methodology, any lake, pond, or waterway that is greater than 2 meters in depth is not considered a wetland, rather it is classified as a deep water habitat.

The 28 areas shown on the NWI maps, yet listed in the DEIS as lakes and ponds, are considered deep water habitats for this analysis. NWI wetlands classified as “PEM”, palustrine emergent, “PSS” palustrine scrub-shrub, “PFO”, palustrine forested, and “PAB”, palustrine aquatic bed, were designated as wetlands in the DEIS.

The NWI maps were used in this study for relative comparison purposes. Alignments will be walked and wetlands delineated in the field during Tier 2 for Preferred Alternative 3C. Wetlands will be mitigated using ratios outlined in the

Wetland Memorandum of Understanding, signed by INDOT, IDNR, and USFWS on January 28, 1991 (Appendix T).

2. “The Wetlands discussion asserts that there are more wetlands than there were 50 years ago. I don’t know any wetland scientist who would agree with that statement.” (1105-201 Marbach)

A 1954 wetlands survey by Shaw and Fredine reported 267,100 acres of wetlands in Indiana. The Indiana Department of Natural Resources reported approximately 813,032 acres of wetlands in the 1980s. This is the best, known available data regarding wetlands for Indiana. Definitions of what constitutes a wetland may have evolved since the 1950s, which may explain some of the increase. Also, the changes in federal and state policies in wetland protection may also explain some of the increase in wetlands.

4.2.6 Water Bodies

1. “Page 4-17, Water Bodies: This section should indicate the East Fork of the White River and the West Fork of the White River are listed on the NRI, prepared by the National Park Service (NPS). The East Fork was listed on the NRI because of its outstanding scenic, recreational, geologic, fish, and historic values. The West Fork rivers were listed to the NRI because of the outstanding fish, wildlife, historic, and other values.

“The NRI is a register of rivers that may be eligible for inclusion in the National Wild and Scenic River System. These rivers were included on the NRI based on the degree to which they are free-flowing, the degree to which the rivers and their corridors are undeveloped, and the outstanding natural and cultural characteristics of the rivers and their immediate environments.

“Section 5(d) of the National Wild and Scenic Rivers Act requires, “In all planning for the use and development of water and related land resources, consideration shall be given by all Federal Agencies involved to potential national wild, scenic and recreational river areas.” In partial fulfillment of the section 5(d) requirements, the NPS has compiled and maintains the NRI.” (1107-697 U.S. Dept. of the Interior, p. 10)

Appropriate changes have been made in the FEIS. For more detailed information on NRI rivers in the project area, please see Chapter 5.11, *Wild and Scenic Rivers*.

4.2.7 Karst

1. “It is my understanding that these maps came from the Indiana Geological Survey. The co-author of the maps showed me a copy of the original maps. He stated that these maps were not intended to be used in such a manner. The maps from the IGS claim they are inconclusive and need further study. Further study was not done by Bernardin-Lochmueller & Associates. Even though the EIS studies state that the study maps do not show everything, it is not understandable how these large areas have not been marked. This is a clear case of ignoring the truth to help someone’s cause. Does the planning committee realize that caves and springs are the way the land drains of water? Swallows cannot be filled and built over without repercussions. In my opinion, it would be very important to understand the geology of the land before construction a major roadway.” (1102-016 Spatta, p.1)

The Indiana Geological Survey (IGS) is under contract to provide maps, data, and metadata for the Southwestern Indiana GIS with regard to karst features in Southcentral Indiana.

Among the digital maps that were provided by IGS were: (1) a map showing sinkhole areas and sinking-stream basins, (2) a map showing the cave density, which is cave openings per square kilometer, and (3) a map showing springs. These were derived from a mapset which was completed in 1997 and published by the IGS in 2002. The sinkhole areas and sinking-stream basins were originally mapped by Richard Powell, who is a recognized authority on karst in Indiana, whereas the springs and cave openings were derived from a database compiled by the Indiana Cave Survey (ICS) and provided by a member of the ICS.

The digital maps that were provided by IGS are among the best publicly available maps showing selected karst-related features across that entire region. They were created in a systematic manner using a consistent methodology, so that each county within the region was mapped in a similar fashion.

The map showing the cave density is based upon a predecessor coverage named "CAVES" which includes about 95% of known cave entrances. All cave entrances are large enough to allow entry by a human being; the vast majority of associated caves are more than 25 feet in length, and only a few are less than 25 feet. As indicated in the metadata, the maps of karst-related features were intended to be used solely as an overview of karst on a broad regional scale. Any map, whether paper or digital, should not be used at more detailed scales than its source scale. This and other limitations of the map layer are described in the published metadata.

According to the Director of the IGS, it is his professional opinion that the maps provided by the IGS, compiled in an objective and systematic manner across the entire region, were the best available for the intended purpose of a preliminary Tier 1 evaluation of alternative routes on a regional scale. See Appendix Y for Memorandum dated May 2003.

4.3 The Human Environment

4.3.1 Population

1. “As showing in Table 4-2, “Population Growth” the population of southwest Indiana, with and without the Indianapolis MSA counties, is growing. It is important to understand that rapid growth is not necessarily good or desirable.” (1106-147 Tokarski, P. 14)

Rapid growth certainly can lead to economic stress, particularly in rural areas without adequate infrastructure to support that growth. The needs analysis compares long term population growth (e.g., a national population growth rate of 0.80% annualized, as compared with a Study Area population growth rate of 0.37% annualized, over a period of 40 years). Long-term population growth in the United States is associated with favorable economic circumstances. At the same time, a growth rate of a fraction of one percent, annually, cannot be characterized as rapid growth.

2. “Another factor is that the Hoosier National Forest covers a lot of the area (it is part of six of the twenty six counties) thereby limiting both the number of people living there and the level of economic activity. Again, another road won’t change that impact.

“An additional factor is the geography of the area. The rugged terrain in many of the counties limited agricultural activity and is not conducive to factory construction. A new road won’t change the geography!” (1105-201 Marbach)

Improving the transportation network will support opportunities for economic development.

4.3.2 Households and Education

No substantive comments.

4.3.3 Employment and Economic Environment

1. “Employment growth in the Study Area, as shown in Table 4-8, is the same as the rest of Indiana. Even excluding the Indianapolis MSA, employment is growing significantly in SW Indiana. This is confirmed in Table 4-9. (Note: this data appears to contradict Figure 2-23. Which is correct?” (1106-147 Tokarski, p. 14)

As documented in Section 2.3.2.1 of the DEIS, employment is growing in Southwest Indiana at roughly the same rate as in Indiana as a whole. However, both of these growth rates are significantly below national trends. As Figure 2-23 shows, in the 26 years between 1974 and 2000, employment growth in all parts of Indiana was about

32-33%, versus over 55% nationally. Southwest Indiana, like Indiana as a whole, has lagged significantly behind the nation in rates of job creation.

It should be noted that Figure 2-23 shows total growth in employment from a base of 1974. By contrast, Table 4-8 shows annual compounded growth rates between 1980 and 1998. Table 4-9 shows breakdowns of employment by sector at different points in time; it does not show any growth rates. These three tables are providing different data over different time periods.

2. “Per Capita income in the Study Area, even excluding the Indianapolis MSA, is similar to the rest of the state (Table 4-10). There is only about a 5% difference, and this does not account for cost-of-living differences. Cost-of-living differences are not mentioned in this study.” (1106-147 Tokarski, p. 15)

A difference in per capita income of \$1,400 between Southwest Indiana and the rest of the State corresponds to a difference of over \$5,500 for a family of 4. This is a significant difference, especially given that both areas exclude the nine higher cost-of-living counties that comprise the Indianapolis MSA. There is no reliable county-by-county source of cost-of-living data.

4.3.4 Colleges and Universities
No substantive comments.

4.3.5 Airports
No substantive comments.

4.3.6 Churches and Cemeteries

1. “I would like to voice my opposition to a new terrain route. I have looked at the DEIS maps and have a couple of concerns I would like to share with you. First of all, I notice you have missed three cemeteries in the area by Carp, (Owen County) Indiana. The first cemetery is in Montgomery township, NE, section 21 the southeast corner. It has about 15 stones, one of which is new. The second cemetery is less than 1/4 mile away in Montgomery township, section 28 on property listed in the plat book as belonging to Robert Rupp, Jr. It too has numerous stones. The third cemetery is also in Montgomery township, section 28, and is a family cemetery on property listed in the plat book belonging to Donald and Janet Hoffman. (My plat book may be out of date so the owner’s names might not be correct, but I can assure you the gravestones are there.) All three of these cemeteries are in the area where you are planning to put a proposed underpass or overpass, and they may be in the way of the proposed cloverleaf, depending on its size.” (1107-690 Stewart)

Cemeteries are protected under Indiana Code 23-14-44-1 - Restrictions on Road and Utility Construction.

Cemeteries shown on the DEIS Atlas were identified using an existing United States Geological Survey (USGS) GIS layer, windshield field review (what could easily be seen from the road), and USGS topographic maps. The cemetery layer has been updated to reflect additional sites when specific information was provided. The updated cemetery map is in Volume III of the FEIS. Small, old, family plots are often not included in previously recorded information. Any additional cemeteries will be identified when the alignments for Preferred Alternative 3C, are walked during Tier 2.

2. “The proposed I-69 Alternate Route 3C runs through Center Township in Eastern Green County (Map 14 of 32 of your study). This will terminate and occupy a private one half mile access road called Whippoorwill Lane, intersecting Green County Road 35 N, labeled Carmichael Road on the map. It is the only ingress/egress to 15 plus subdivided residential properties. Many residents will lose their homes to this path of I-69. A local cemetery would also be destroyed.” (1107-342 Pietsch)

At this time, interchanges, underpasses, and overpasses are proposed and their location will be finalized in Tier 2. Issues of ingress and egress will be analyzed, and every effort will be made to provide access. Cemeteries are protected under Indiana Code 23-14-44-1 - Restrictions on Road and Utility Construction.

3. “One very important parcel is the Storm Cemetery with veterans from the Revolutionary War; the War of 1812; the Mexican War and The Civil War. A ceremony to honor the veterans was held in 1994. I’m enclosing copies.” (1029-041 Sirucek, p.2)

“In these segments the Draft Environmental Impact Statement (DEIS) shows 43 historic cemeteries within the Two-Mile Study Bands. The great majority of these lie outside the 2000' study corridor, and hence would be, we assume, easily avoided. However, four cemeteries (Freeman, Storm, Carmichael, Ham - all in Greene County) lie directly in the 2000' corridors. Two [sic] of these, given their locations relative to the centerline, are of particular note:

“*Storm* lies on the proposed centerline where a bridge would cross Indian Creek. This is one of the oldest cemeteries in Greene Co. (First burial 1819), and contains among it 50+ graves, including those of at least three veterans of the Revolutionary War.

“*Carmichael* lies just west of the proposed centerline where there is a proposed overpass or underpass for Carmichael Road. This is a large cemetery, with hundreds of graves.

“Of greater concern at this stage of planning are nine cemeteries that are **recorded** by the Monroe County Historical Society and the Greene County Historical and are located in the Study Bands, *but are not shown in the DEIS*. Five of these (Wright, Hoadley, Wampler, Collier, Star) are small cemeteries that lie outside the 2000' corridor, as it is presently drawn. However, the other four are of particular concern:

“*Adams*, is in the northern part of Sec. 7, Indian Creek Twp., Monroe Co. This very old well-known, well-maintained cemetery of about 75 graves lies on the centerline where Alt. 3c diverges from Alt. 3a-b.

“*Hardy Sparks*, SE 1/4 of NE 1/4 Sec. 12, Center Twp., Greene Co. (not to be confused with Sparks Cemetery near center of Sec. 1 of the same township), is about 2000' southwest of the Adams Cemetery and is on the western edge of the combined Alt. 3a-c in the 2000' Corridor. It contains at least eight graves (including one veteran of the War of 1812).

“*Philpot*, NE 1/4 of NE 1/4 sec. 25, Beech Creek Twp., Greene Co., lies along eastern edge of Alt. 3a-b's 2000' Corridor.

“*Ketcham*, NW 1/4 of NW 1/4 Sec. 6, Clear Twp., Monroe Co., is very old, well-maintained, and well-known cemetery (which is clearly marked on the USGS Clear Creek quad) of about 60 graves, including a veteran of the Revolutionary War. It lies in the Two-Mile Band and not very far outside the 2000' Corridor of Alt. 3c.” (1102-014 Munson, p. 2)

“On this farm land, at the border between Monroe and Greene counties are several family cemeteries. One in particular, off of Rock East Road is the resting place for soldiers from the Mexican-American, Civil, and Revolutionary wars.” (1023-048 Mink)

“Alt. 3 goes thru some areas of Green County that will put a family cemetery and church in danger!?” (1104-006 Chad)

Information on cemeteries was added to the GIS cemetery layer when the commentor provided specific location information. Cemeteries are protected under Indiana Code 23-14-44-1 - Restrictions on Road and Utility Construction. Cemeteries shown on the DEIS Atlas were identified using an existing United States Geological Survey (USGS) GIS layer, windshield field review, and USGS topographic maps. Historic sites within the 2-mile study band, including cemeteries, rated as “Outstanding” and “Notable” in the Indiana Sites and Structures Inventory for each county were included. In addition, those cemeteries rated as

“Contributing” are in the Environmental Atlas in the FEIS. Any additional cemeteries will be identified when the alignments for Preferred Alternative 3C, is walked during Tier 2 studies.

4. “Even a family graveyard, in which Revolutionary War veterans are buried, might be disturbed. Indeed, the house immediately south of the Landers family graveyard (currently owned by Senator Lugar’s family as part of their adjoining farm) is said to enclose the original Landers-Stone log cabin.” (1104-052 Landers)

Cemeteries are protected under Indiana Code §23-14-44-1 - Restrictions on Road and Utility Construction. This cemetery is in the vicinity of Mann Road. The Mann Road variation near Indianapolis, for Preferred Alternative 3C, has been eliminated.

5. “He is buried in a cemetery outside of Plainsville. Not only him, but my grandmother, grandfather, great uncle and my grandmother’s first husband are also buried there. That’s 5 people of our family buried in a spot they want to touch up and build a highway through it.” (1028-045 Slough)

Cemeteries are protected under Indiana Code §23-14-44-1 - Restrictions on Road and Utility Construction. This cemetery is in the vicinity of the western variation around Washington (WW1 or WW2). These variations have been eliminated.

4.3.7 Federal and State Managed Lands

No substantive comments.

4.3.8 Hospitals

1. “The DEIS says that: ‘A four-lane interstate would provide a safer and faster transport for patients’ (p. 4-27). This is irrelevant. Most critically injured patients are transported by Lifeline Helicopter Service. In other case, speed is not necessary and in rural SW Indiana highways are safer than in many other parts of the state.” (1106-147 Tokarski, p. 15)

As stated in Section 4.3.8, a survey of three major hospitals in the Study Area found that only 0.01% - 5% of the patients admitted to the emergency room per year are brought in by helicopter. The majority of their emergency room patients come by ambulance, their own vehicle, city transportation, or by walking. This data is consistent with the following comment provided by an emergency room physician.

As a physician I have a particular interest in the transportation of the critically ill patients. It would provide faster and safer service and transportation of emergency nurtured medical care patience who critical

transport to IU Med Center to the various tertiary facilities in Indianapolis. This is a critical matter because people think that transport by land is old fashioned but quite frankly over 90 percent of the transported critically ill is by land not air. (0821-202 Pulcini)

4.3.9 Transportation

No substantive comments.

4.3.10 Crane Naval Surface Warfare Center

No substantive comments.

5.1 Methodology for Evaluating Environmental Impacts

5.1.1 Tiered Approach

1. "INDOT's use of the tiering process in this case prevents the public and INDOT from meaningfully comparing the environmental impacts among the different alternatives. INDOT created a very large two-mile wide "Study Band" for each of the alternatives within which it gathered data on environmental conditions, but it did not quantify these impacts for each of the alternatives. Instead, INDOT created a fictional 240 to 470 feet wide "working alignment" within the two-mile Study Band corridor as a proxy for the final highway alignment. This working alignment, which is only 5% of the width of the 10,560 foot wide Study Band, could be completely different from the actual alignment for many of the segments." (1107-705 ELPC et al., p. 3)

"It (the DEIS) violates Council on Environmental Quality regulations. INDOT's approach does not meaningfully compare "the environmental impacts of the proposal and the alternatives" in a way that "sharply defin[es] the issues and provid[es] a clear basis for choice among options." There will be a wide variety of wetlands, prime farmland, residences, stream, and other conditions in each of the 2-mile-wide corridors. Limiting the analysis of impacts to a narrow fictional alignment that bears little relationship to reality, essentially makes the choice among route alternatives completely arbitrary instead of providing a "clear basis for choice." (1107-705 ELPC et al, p. 5)

"INDOT could have measured all relevant impacts within the 2,000 foot road corridors inside the two-mile wide Study Bands, instead, it measured impacts only within a 240 to 470 feet wide "working alignment" inside the Study Band. At only 2 to 4 percent of the width of the Study Band, the fictional working alignment is a poor substitute for measuring impacts across a broader section of the study band." (1107-705 ELPC et al, p. 38)

Early in this study, before the Tier 1 EIS had been formally initiated, FHWA and INDOT publicly released their proposal to conduct a tiered process and provided an opportunity for comment. At that point, this commentor expressed concern that a comparison of "broad corridors" could be misleading, because such a comparison would not take into account the potential for avoidance of resources within those corridors. (Letter from Alexander Ewing, ELPC, to Arthur Fendrick, FHWA, June 21, 1999). In response to that concern, FHWA and INDOT decided that the Tier 1 EIS would not simply compare the resources within broad corridors. Instead, FHWA and INDOT decided to develop a working alignment, which would be carefully developed in Tier 1 to avoid as many as possible of the known resources within each corridor. In other words, the working alignment was developed specifically for the purpose of addressing this commentor's concerns about basing the alternatives analysis solely on a comparison of broad corridors.

In developing the working alignment for each alternative, FHWA and INDOT carefully considered the environmental, socio-economic, and topographic conditions along each route, and sought to minimize impacts while at the same time providing a safe and functional highway route. Each working alignment was modified as needed during the development of the DEIS, taking into account the views expressed by the public and agencies as well as the information gathered during the course of the study.

As explained in Section 5.1.2 of the DEIS, the 240 to 470 feet wide working alignment was developed by the project engineers as a realistic right-of-way for an Interstate facility in Southwest Indiana. Three factors were considered in estimating the right-of-way for sections of each working alignment: (1) the topography of the land (i.e., flat, rolling, hilly); (2) the number of frontage roads expected; and (3) the number of lanes expected. In sum, while the working alignments do not provide absolute certainty about the exact impacts of each route, they do provide a reasonable basis for estimating those impacts for purposes of Tier 1 decision-making.

2. "INDOT's implementation of a tiered NEPA process thwarts a meaningful environmental Impact Analysis." (1107-705 ELPC et al, p. 38)

A tiered NEPA process is appropriate for this project because of the vast scale of the project area (26 counties) and the wide range of alternatives being analyzed within that area (12 routes analyzed in detail, each approximately 140-150 miles in length).

The FHWA's guidance recognizes (see Appendix X in the DEIS) that individual FHWA Division Offices have discretion to determine the appropriate approach to tiering on a case-by-case basis. In this case, FHWA and INDOT jointly developed a tiered approach within the broad guidelines established in the CEQ and FHWA regulations. The guiding principle throughout this effort has been the need to provide sufficient information at Tier 1 to allow for an informed decision about (1) whether to complete I-69 between Evansville and Indianapolis and (2) which corridor to select for the project between those termini. This study has never been intended or designed to develop sufficient information to select the exact alignment for the entire length of the project.

As in any tiered study, it was necessary to determine the appropriate level of detail needed at Tier 1. These determinations were made in consultation with resource agencies and the public. As a result of those consultations, FHWA and INDOT decided to conduct relatively in-depth analysis in this Tier 1 stage. Comprehensive

data was developed for the entire range of potential impacts. In its comments on the DEIS, the U.S. EPA stated that the document "generally provides a sufficient level of detail and analysis needed to identify likely environmental impacts for any of the 12 build corridor alternatives." Where additional information on specific issues was requested by EPA or other agencies, it has been provided in this FEIS. No additional information is needed in order to support Tier 1 decision-making.

In its comments on Preferred Alternative 3C and Mitigation Package (PAMP), the US Army Corps of Engineers stated that "In considering a project of this magnitude we believe the two-tier EIS process continues to be an appropriate tool for identifying and evaluating environmental concerns, socio-economic issues and accessibility relative to the purpose and need for the project." The comment letters from the US EPA and the US Corps of Engineers can be found in Appendix Y of the FEIS.

3. "Tiering is being abused by INDOT to avoid comparing alternatives on detailed impacts. Apparently, INDOT views this process as a test case for tiering (Appendix Y, MPO Scoping Meeting Feb. 23, 2000) for which INDOT says there are no specific guidelines. Failure to do a sufficiently thorough analysis now will lead to many problems in Tier 2." (1106-147 Tokarski, p. 11)

The CEQ and FHWA regulations and guidance provide general direction for conducting tiered NEPA studies, but provide very little specific direction. Moreover, FHWA had relatively little recent experience with tiered NEPA studies for highway projects prior to the initiation of this study. As a result, this study has required careful coordination among the agencies involved to determine how to implement a tiered process for the I-69 Evansville-to-Indianapolis project. A major focus of that coordination effort, from the very beginning, has been the need to determine how much analysis is needed at Tier 1 and how much can be done at Tier 2. The comment letters received from federal and state resource agencies on the DEIS reflect a general agreement that the level of detail provide in the DEIS was sufficient for Tier 1 decision-making. In addition, in their comments on the PAMP, the US EPA and the Corps of Engineers approved the level of detail in Tier 1. See Appendix Y for their comment letters. Where additional detail was requested, it has been provided in the FEIS. No additional information is needed in order to support Tier 1 decision-making.

4. "Why is the religion of Environment Worship given preference over other religions? Option 3B, which I otherwise favor, requires tearing down two churches to save a creek which until recently was used as a trash dump." (1017-009 Robinson)

In determining the corridors for alternatives, FHWA and INDOT were guided by all relevant legislation and regulations, which, among other things, prescribe how the waters of the United States should be safeguarded. Preferred Alternative 3C was selected as the Preferred Alternative.

5.1.2 Key Concepts: Study Bands, Corridors, and Working Alignments

1. "In at least one case - for alternatives 3 and 4 - INDOT presents two different pairs of Study Bands in the vicinity of the city of Washington. Approximately 10 miles separates one of the pairs, making any effort to quantify environmental impacts for even the fictional working alignment impossible. INDOT's "working alignment" fiction therefore is a misleading and practically useless method to estimate the possible range of environmental impacts caused by a new highway, even in a Tier 1 EIS." (1107-705 ELPC et al., p. 4)

The working alignments were carefully developed based on consideration of extensive data about environmental, socio-economic, and topographic conditions in the project area. As a result of that effort, the working alignments provide a reasonable basis for estimating and comparing the impacts of the alternatives in this Tier 1 study.

Multiple variations were developed for several of the alternatives, generally in the vicinity of populated areas. The variations were developed in recognition of the fact that there may be more than one potentially viable route for I-69 in those areas. The impact calculations in the DEIS took into account the multiple variations by presenting a range of impacts for each alternative. This approach is explained at pages 5-3 to 5-4 of the DEIS. Further discussion and comparison of variations is provided in Appendix II. Preferred Alternative 3C as identified in the FEIS represents a single corridor with no variations.

2. "As a matter of *policy*, forgoing meaningful analysis of alternatives through comparison of environmental impacts seriously impairs the decisionmaking process for a project whose outscale potential impacts make good decisionmaking vital. INDOT seeks to justify its shortcut as helping focus attention on "big picture" issues of feasibility and route. In fact, as NEPA and the CEQ regulations reflect, detailed information about impacts is essential in determining whether I-69 is feasible and in selecting among the alternative routes. To claim otherwise is to deny the obvious.

"As a matter of *law*, foregoing this analysis flouts NEPA's central requirement of a detailed examination and comparison of the impacts of all the reasonable alternatives,

and undermines NEPA's purpose of integrating information about environmental impacts into key decisions like the selection of a route." (1107-705 ELPC et al., p. 4)

The use of a tiered NEPA process is recognized in both the CEQ and FHWA regulations as an appropriate approach for large-scale, complex projects. This project meets those criteria: it involves a vast 26-county Study Area, with alternatives generally ranging in length from 140-150 miles. Tiering clearly was appropriate here.

In any tiered process, it is necessary to determine the appropriate level of detail for the Tier 1 study. In this case, comprehensive data was developed for the entire range of potential impacts. That data was presented visually in the Environmental Atlas (Volume III of the DEIS), and was analyzed and explained in the Environmental Consequences chapter of the DEIS. The level of detail presented in this document was sufficient to make possible an informed comparison of the various alternatives under consideration at this stage. As the U.S. EPA has stated in their November 7, 2002, letter,

"...the DEIS provides a good basis to identify and discuss the many complex issues and environmental impacts associated with a project of this size."

In its comments on Preferred Alternative 3C and Mitigation Package, the US Army Corps of Engineers stated that "In considering a project of this magnitude we believe the two-tier EIS process continues to be an appropriate tool for identifying and evaluating environmental concerns, socio-economic issues and accessibility relative to the purpose and need for the project."

3. "The working alignment fiction produces especially speculative impact predictions for those segments of Alternatives 2 to 5 that cross new terrain areas, where not existing road serves as the basis for the working alignment." (1107-705 ELPC et al, pp. 38 -39)

The impact calculations were developed based on careful consideration of environmental resources, socio-economic conditions, and topography. Much of this effort focused on precisely those areas noted by this commentor – i.e., the so-called "new terrain" areas in which an alternative did not follow an existing four-lane roadway. Thus, while the impact calculations will likely change to some degree in Tier 2 as design details are refined and more detailed environmental data is gathered, the working alignments presented in Tier 1 provide a reasonable basis for comparing the relative impacts of all of the alternatives (including the No Build scenario).

5.1.3 Calculation of Environmental Impacts

1. "It (the DEIS) cannot be reconciled with other laws, such as the Farmland Protection Policy Act, Endangered Species Act, Section 4(f) of the Transportation Act and Executive Order 11988. These laws require that farmland, endangered species, historic preservation and floodplain impacts of alternatives be quantified. None of these requirements can be fulfilled by considering alternatives based on narrow fictional alignments within much broader corridors." (1107-705 ELPC et al, pp. 5-6)

The integration of the tiered NEPA process with regulatory requirements under other laws is an important issue, and has been the focus of extensive inter-agency consultation from the very earliest stages of this study. In fact, FHWA and INDOT first presented the concept of tiering to the federal and state regulatory agencies in May 1999 before issuing the Notice of Intent to initiate this study. In addition, in June 2001 FHWA and INDOT provided a comprehensive briefing to federal and state regulatory agencies on the tiering process. At those meetings, and again in subsequent meetings throughout this process, the FHWA and INDOT have consulted with the regulatory agencies not only about NEPA compliance, but also about compliance with other regulatory requirements. The approach reflected in the DEIS reflects the discussion with those agencies about how to proceed.

2. "Before I discuss the proposed routes that affect the Hoosier National Forest, I would like to commend you and your staff on a job well done. I found the document easy to read and understand and I am very pleased with the way our previous input was included in the document." (1107-699 USDA, Hoosier National Forest, p. 1)

Comment noted.

3. "For example, throughout the DEIS, it is simply stated the no-build alternative will have no impacts on the resources or use (such as threatened and endangered species, core forest habitat, wetlands, forest resources, or land use) being addressed in the particular section of the DEIS. If the no-build alternative truly includes committed construction projects, we must strongly disagree with these "no impact/effect" determinations. Environmental impacts will occur in southwestern Indiana over the next 25 years whether I-69 is completed or not, and these impacts need to be described in as much detail as they were for the other alternatives." (1107-697 U.S. Dept. of the Interior, p. 7)

The No Build scenario consists of the "existing" highway network, plus projects that are considered "committed". The DEIS for I-69 presents the impacts that the alternatives will have above and beyond those of the "committed" projects. The

impacts associated with these "committed" projects have been included in the discussion of cumulative impacts (see Section 5.26 in the DEIS).

4. "The potential number of interchanges is on the high side (p. 5-4). How does this affect other calculations? E.g., economic impacts? Accessibility? It also may give a false sense of access to local communities that could be potentially cut off. The number of acres per interchange (10 acres, p. 5-4) also seems low, especially where I-69 will connect with I-70, I-465 and I-64." (1106-147 Tokarski, p. 16)

"An additional 10 acres was added beyond the footprint for these interchanges. Per interchange or for all interchanges? Certainly not enough for all interchanges. Certainly not enough in terms of total impact on land usage including the inevitable motels, fast food facilities, etc. that follow. Does this include the acres that will be impacted by earth removal needed to build the bridges, grade separations, and interchanges of each alternative? I note that the preferred alternatives have 50-85% more such impacts than the non-recommended Alternative 1." (1105-201 Marbach)

The large number of potential interchanges is intended to show reasonably foreseeable interchange locations. The decision on the number and location of interchanges will be made in Tier 2. Since the calculations for the impacts in Tier 1 include all potential interchanges, the impacts in Tier 1 may be higher than the impacts in Tier 2, which will reflect the actual number of interchanges. The figure of 10 acres of right-of-way per interchange includes the additional right-of-way needed for the ramps. The actual impacts for each interchange may be higher or lower. The 10 acres was used as a reasonable approximation. The acres of right-of-way needed for the Interstate lanes has already been accounted for in other calculations.

5. "You cannot do a study without studying the ground itself. This cannot be done in the drafting room using aerial photos and soil maps. Walk the paths of these proposed routes and see and feel what will be destroyed." (1104-055 Dunn)

At this point, all of the routes have been evaluated by a windshield survey from existing roads as well as by aerial photo and GIS data. The Tier 2 Study will include walking the entire length of the corridor.

5.1.4 Format for Impact Evaluations

No substantive comments.

5.2 Land Use Impacts

1. "The Commissions (sic) (Monroe County Plan Commission) fundamental concerns with the DEIS and the lack of comprehensiveness with the DEIS, how fundamental impacts are not addressed, and that the proposed routes through Monroe County have significant impacts that are not in the best interest of the community. Specific concerns regarding the lack of comprehensiveness of the DEIS include the following.

"Failure to adequately discuss and analyze the potential impact upon the adopted land use and development policies of local communities. All three jurisdictions potentially impacted by a route through Monroe County (Monroe County, City of Bloomington, and the Town of Ellettsville) have adopted land use plans ... These plans have been developed and adopted without consideration of nor demand for an interstate facility. Introduction of such a facility could dramatically alter the future location of land uses, public investments in infrastructure, etc." (1104-061 Monroe County Plan Commission Letter, pp. 1-2)

"Further, such a facility could dramatically alter the stated preferred development plan for the County, that is one where development is focuses within the City of Bloomington, the town of Ellettsville, and several small rural communities dispersed throughout the County. It may prove difficult if not impossible, to continue to pursue such a development pattern should an interstate cross rural portions of the County." (1104-061 Monroe County Plan Commission Letter, p. 2)

"Each of the adopted plans would likely need to undergo significant revision and update. The costs associated with such an endeavor, likely to be in the hundreds of thousands of dollars, would be borne solely by the local communities. The DEIS simply fails to consider local land use policies and to analyze what the impact of a new interstate on these policies would be." (1104-061 Monroe County Plan Commission Letter, p. 2)

A discussion of the alternatives' potential impacts on local land use plans has been included in Section 5.2 of the FEIS. For Monroe County, Preferred Alternative 3C is located on new alignment in the southwestern part of the County where the County plan seeks to limit growth due to karst terrain. In this area, Preferred Alternative 3C does not include any interchanges and thus would minimize the potential for induced growth. In other areas of Monroe County, Preferred Alternative 3C is on existing SR 37, which currently has only partially controlled access. The addition of full access control in the SR 37 corridor will assist local planners in controlling future growth.

The mitigation for this project, as discussed in Chapter 7, includes a commitment by INDOT to provide technical and financial assistance to local governments to assist them in preparing land use and economic development plans. Also, it should be noted that the currently adopted long-range transportation plan for Bloomington calls for SR 37 to be upgraded to a freeway from south of Bloomington to the Morgan County line. This is the same type of facility that will be provided for Preferred Alternative 3C. It also should be noted that on November 14, 2003, the Bloomington MPO amended its transportation plan to include I-69.

2. "Indirect land use impacts, Figure 5.2-2, page 5-8, appears very low. The Toyota plant site in Gibson County has taken more than 1000 acres. Yet 1300 acres is the maximum projected indirect land use for any of the alternatives. Low indirect land use implies low economic development from I-69. The DEIS (p 5-11) states that most indirect impacts and land use change will occur along SR 37 and SR 57. Again, this implies that most future economic development will occur in those areas, not in other rural counties." (1106-147 Tokarski, p. 16)

The land use impacts and the job growth forecasts were both projected from the same model, which is described in Section 3.4.1 and is shown in Figure 3-7 in the DEIS. In this model, the employment and population forecasts were used to generate the projected indirect land use impacts.

3. "Also, there is no estimation of the amount of karst land that would be subsequently consumed along the new-terrain routes due to the secondary impacts of highway-induced sprawl development." (1007-015 Bunting, p. 1)

The Mitchell Karst Plain map shows Lawrence, Monroe, Orange, and Owen Counties as the heart of the karst region. Preferred Alternative 3C only crosses through Monroe County. Preferred Alternative 3C currently shows no interchange locations in Monroe County except on SR 37. As a result, Preferred Alternative 3C is anticipated to have minimal indirect land use impacts in southern or western Monroe County. The indirect impacts would primarily be around the interchanges on SR 37 in Bloomington.

4. "How can a family farm be relocated when you can not produce more land? How can a hog producer move his hog operation with all of the new zoning laws created to prevent such a business from moving in?" (1104-060 Grubbs)

All efforts will be made to minimize impacts to farms. If the impacts result in the relocation of the farm, INDOT will work with the farm owner to find a replacement site and provides fees to help relocate personal property and inventory.

5. "In reviewing the Tier 1 study, I noticed that no mention was made of the high concentration of irrigation used for farming that would be destroyed if the Far Western Alignment of Alt #3 was used to go around Washington. Because of irrigation, this land has become some of the highest producing land in the County and has become a very specialized area by growing not only tomatoes, pickles and greenbeans on a commercial level but yellow seed corn for Pioneer Seed as well. I have attached a copy of the Farmland Legend from the study and attempted to mark the 2,400 acres of irrigated production that would be directly affected. You may also wish to update your Prime Farmland Legend." (1107-688 Graham Farms Inc., p. 1)

As discussed in Section 6.3.3, the Far Western Alignment (WW1) in the vicinity of Washington Indiana for Preferred Alternative 3C has been discarded. Preferred Alternative 3C is located to the east of Washington.

6. "From your Executive Summary this sentence reads "The northern terminus of the project is I-465 on the south side of Indianapolis and southern terminus is I-69 just north of Evansville."

"You need to be accurate and double-check your work before being taken seriously by those opposed to the project. The last line of this sentence should read.. 'terminus is I-64 just north of Evansville.'" (0816-006 Breach)

This has been corrected in the FEIS.

7. "The Losses in home equity need to be SUBTRACTED from the recognized benefits of the interstate." (1104-059 Smith, p. 5)

There may be situations where the proximity of the new highway causes property values for individual owners to decrease. In other situations, the proximity of the highway may cause property values to increase. Overall, the regional economic modeling shows that all regions in Southwestern Indiana will receive an economic benefit from Preferred Alternative 3C as discussed in Section 3.4.4.

8. "There is already spreading evidence of uncontrolled sprawl development on the exits and surround areas of the existing North I-69 route. Its plain to see the loss of farmland and the increase of noise and pollution, strip malls and concrete and blacktop covers." (1024-036 Ringo)

Indirect land use impacts for all the alternatives are presented in Section 5.26. The mitigation for this project as discussed in Chapter 7 includes a commitment by

FHWA and INDOT to provide technical and financial assistance to local governments to assist them in preparing land use and economic development plans.

9. "Second, the DEIS does not make reference to any other regional transportation or economic plans for southwestern Indiana, nor does it suggest how the various routes would fit in to future regional planning efforts. The DEIS should not become the de facto transportation and economic plan for the region. Instead, southwestern Indiana needs comprehensive regional transportation and economic planning to address the transportation and economic problems of southwestern Indiana are real, but a single interstate highway through the middle of the region as proposed in the preferred alternatives will not solve these problems." (1105-204 Hilden)

While there are comprehensive plans for some of the counties and communities in southwestern Indiana, there is no overall comprehensive plan for the region. The EIS is not intended to be the planning document for the region. The mitigation for this project as presented in Chapter 7 includes a commitment by INDOT and FHWA to provide technical and financial assistance to local governments to assist them in preparing land use and economic development plans.

10. "...but I want to be sure that there is an accounting for potential business lost along corridors not chosen. Growth isn't growth if you draw business to the interstate that were previously in existence elsewhere in Southwest Indiana." (1104-017 Bolden)

The regional economic analysis included in Section 3.4.4 shows that all regions of Southwestern Indiana will receive an economic benefit from Preferred Alternative 3C. In addition, Appendix B - Economic Development Performance Measures calculates the changes in roadside business sales for all the route concepts. Some of the route concepts do have potential negative effects on roadside sales. This analysis shows that there will be redistributive effects, that is, decreases in sales in a specific corridor as a result of increase in sales in another corridor. However, all economic regions in Southwest Indiana will receive net economic benefits (see Section 3.4.4).

11. "There is no mention of the land needed for rest areas. Why not? Or won't there be any? Or is this another way to hide the true land usage impact of the various alternatives?" (1105-201 Marbach)

The FEIS assumes there will be 2 sets of rest areas with each set of rest areas taking 80 acres. The exact location has not been determined but for evaluation purposes the land used for the rest areas is assumed to be farmland.

12. "I am concerned, however, because the western edge of the 2000' study area encroaches onto our storage lagoons and irrigation field that we use for land application of our whey

and wash water. The area affected is permitted under the Indiana Department of Environmental Management. It is the only economical alternative open to us as we are boxed in by the town of Elnora, highway 57, the railroad and the Vertrees Ditch lateral." (1107-684 Graham Cheese Corporation)

This specific issue will be evaluated in detail in the Tier 2 studies to identify a viable solution. Efforts will be made to avoid or minimize impacts.

5.3 Social Impacts

1. "The DEIS acknowledges (p.5-14) that the relocation impacts resulting from any of the alternatives are expected to be large and complex. The new interstate would cause some splitting of neighborhoods and communities, and cause local access problems." (1107-696 USEPA Region 5 Technical Comments, p. 12)

As part of the Tier 1 process, consideration has been given to maintaining access by providing overpasses or underpasses as shown in the Environmental Atlas, Volume III of the FEIS. Effort will be made in Tier 2 studies to avoid dividing neighborhoods and communities.

2. "One of the most detrimental aspects of controlled access highways can be to divide defined communities, regardless of whether they are EJ communities. If impacts are unavoidable, EPA recommends that coordination with these affected populations be conducted to determine and take into consideration the affected population's concerns and comments regarding the proposed project." (1107-696 USEPA Region 5 Technical Comments, pp. 12-13)

"A very high quality of life exists in Monroe County, one that includes a strong and diversified economic base, strong housing market, outstanding cultural offerings, and a unique and beautiful physical environment. Each of these face significant impact from the placement of an interstate facility within Monroe County." (1104-061 Monroe County Plan Commission Letter, p. 2)

In addition to the public hearings, there have been numerous public information meetings to hear the affected populations concerns and comments regarding the proposed project. Detailed decisions regarding road closures, interchange locations, and exact location of the highway will be made during the Tier 2 studies. Input from the affected communities will be needed and may influence the key decisions that will be made during Tier 2 development.

During Tier 2 studies, INDOT will work very closely with local governments and planning agencies to incorporate local needs and address local planning issues.

3. "Apart from a cursory discussion in Section 5.3.1, the DEIS fails to either quantify or otherwise discuss in detail the negative social impacts on resident in the path of a new highway. The DEIS does discuss negative fiscal impacts along the US 37 (sic) and US 41 corridor, but the DEIS is silent on such issues as longer school bus trips, delayed emergency service, divided communities, and other significant community issues. INDOT should have discussed these impacts in more detail, and in more areas of concern than solely residential relocations." (1107-705 ELPC et al, p. 41)

Every community along the proposed corridor will have to reevaluate local school bus routes and emergency response times. These details will be dependent on the final determination of road closures, frontage roads, and overpass and interchange locations. All of these considerations will be addressed during the Tier 2 studies and local communities will be contacted for their input regarding these important decisions.

4. "An especially serious omission in the DEIS is the lack of analysis of impacts on the Amish and Mennonite communities around Washington, Daviess County ... The impacts would be especially harmful for the Amish. For example, the Far West alternative for Route 3 could severely impact the Old Older Amish settlement near Montgomery, which is one of the largest Amish communities in Indiana and is known nationwide for breeding "pulling horses," which pull farm implements such as plows." (1107-705 ELPC et al, p. 41)

"By creating a barrier through the community (horses and buggies cannot travel on interstate highways) and requiring closures of numerous local roads, it would force the Amish to travel miles out of their way to visit friends an family that used to be "just down the road." Because travel by horse and buggy is so much slower than by car, people and places in their own community would, as a practical matter, be inaccessible to many Amish." (1107-705 ELPC et al, p. 42)

"It would divide an Amish church district, making it difficult for many member to attend Sunday church services." (1107-705 ELPC et al, p. 42)

"It would pave over five Amish farms, some of which have been in Amish families for generations. And it would make it difficult for Amish farmers on opposite sides of the highway to help each other with harvesting and other chores, as is traditional in their way of life." (1107-705 ELPC et al, p. 42)

“It would bring thousands of motorists, including tourists, through what is now a secluded community, disrupting the privacy and quiet that are critical to the Amish way of life. The Amish, whose religion forbids them from being photographed, fear becoming a "tourist attraction." (1107-705 ELPC et al. P. 42)

"Four of the five preferred routes would pass too close to an Old Order Amish settlement in Daviess County. The Amish need a certain amount of distance from non-Amish encroachments in order to maintain their culture and unlike non-Amish, the Amish have a difficult time moving to more remote locations. The State should take every step possible to prevent unnecessary encroachment upon Amish culture." (1013-003 Merrick/Laker)

“While at Raglesville in the fall of 2001, I ask several of the Amish present about the letter they signed. Some had not signed but two that had seemed to have been informed that IDOT could put a new highway anyplace through their community. When I showed them the preferred route as from previous studies it was apparent that all but a couple Amish farms were east of the proposed route, not "cutting the Amish community in half" as represented by a Bloomington city councilman." (0821-043 Dillon)

“As a owner of farmland in Minnesota, I sympathize with the Indiana farmers and the Old Order Amish who don't want to lose their land to an expensive, unnecessary environmentally-destructive rip-off!” (1021-029 Augst)

"Included in the key state policies is "quality of life". This appears to be ignored later in the report with regard to the farmers of Southwest Indiana in that the recommended alternatives would destroy much more farm acreage than those not recommended. I'm sure the Amish settlements that will be impacted won't view their quality of life as being improved." (1105-201 Marbach)

The commentors raised the following issues:

- (1) Old Order Amish/Mennonite settlement impacted by the alternatives**
- (2) A barrier to the community**
- (3) Tourists changing the quality of life**

(1) Old Order Amish/Mennonite settlement impacted by the alternatives- Section 5.13 discussed the potential for an Old Order Amish/Mennonite area to be eligible as a historic district north of Montgomery. The East and Far East variations (WE1 and WE2) around Washington for Alternatives 3 and 4 are located to the west of the Old Order Amish/Mennonite settlement. These alternatives will have the greatest potential for direct impacts with farm acreage acquired from five Amish properties

and two Mennonite properties. One Amish residence may be acquired along with the associated farm buildings.

(2) **Barrier to community - Daviess County has approximately 625 Amish families living within its boundaries, primarily in the area between Montgomery and Odon. Greene County also has a cluster of Amish families living near the Worthington area. This area has a variety of Amish businesses including buggy shops, quilt shops, restaurants, craft stores, and woodworking shops. The East and Far East variations (WE1 and WE2) around Washington for Alternatives 3 and 4 will have the greatest potential for impacts to isolated Amish farmsteads. To minimize these impacts, access options these Amish farmsteads will be investigated so that community disruption can be kept to a minimum.**

Local roads that cross I-69 and are important travel routes to the Amish community will not be closed, but will cross I-69 by either an overpass or underpass if at all possible. Every attempt will be made to accommodate the needs of the Amish community.

It is acknowledged that there will be some negative impacts to the Amish community as a result of the preferred alignment. Efforts will continue to be made during Tier 2 studies to consult with and accommodate the Amish community. The Tier 2 studies will determine which county roads are essential for the Amish communities so that grade separations can be located to provide access to the Amish communities. The final location of the highway will attempt to minimize the splitting of farms wherever possible. During Tier 2, investigations will be conducted to determine the travel patterns of the Amish and whether buggy lanes on county roads would be beneficial.

(3) **Tourists changing the quality of life - There are already bus tours that travel through this area. This area has a variety of Amish businesses that cater to the tourists. There is a local map that shows the location of these businesses that is available to tourists. It is not known if the proposed I-69 would increase this type of traffic.**

5. "The 1999 Declaration summarizes why we believe that routing I-69 through Bloomington will harm our community. The new DEIS provides details of negative impacts that the City Council did not know in 1999. Examples include the widening of the corridor to 8 lanes in our city to accommodate very large traffic increases and the taking of numerous homes, churches, and local businesses like the Oliver Winery, which the DEIS notes, "...would be very difficult to find a replacement site for..." (1101-022 City of Bloomington Office of the Common Council p. 1)

It is acknowledged that there will be unavoidable negative impacts to some businesses, homes and churches along existing SR 37 if it is upgraded to an Interstate facility. During the Tier 2 studies, decisions will be made regarding access and/or frontage roads. Every attempt will be made to reduce final impacts in a cost-effective manner.

6. "It will lower land value because people do not want to live near or around an interstate or highway. And also people on the highway can see you and you do not feel like you have enough privacy in your own backyard." (0923-006 Bengert)

Locations are selected on the basis of research, planning, construction cost, need, safety, traffic service, ecology and environment, and a minimal disturbance to the land and improvements of all property owners involved.

7. "The restructuring of the REMC electrical area grid cost as power lines will not be allowed to cross this obstruction." (0927-005 Suthard)

Utility relocations will be further evaluated during Tier 2 studies and the design phase of this project.

8. "I understand if the I-69 highway is approved there will be many county roads closed." (1003-009 Hedrick)

"....lengthen school bus travel times." (1021-020 Leake)

There is no doubt that every community along the proposed corridor will have to reevaluate local school bus routes and emergency response times. These details will be dependent on the final determination of road closures, frontage roads, and overpass and interchange locations. All of these considerations will be addressed during the Tier 2 studies and local communities will be contacted for their input regarding these important decisions.

9. "Several of the proposed corridors lie along Mann Road and would, as one Decatur Township resident put it, create "a Berlin Wall" between the park and the people." (0927-004 Carson, p. 3)

"Any of the above alternatives will have environmental and social impacts within the Indianapolis MPA depending on which corridor option is used to access I-465. The option that utilizes SR 37 north into Marion County at Edgewood Avenue would utilize a well established major transportation corridor, where as the Mann Road option would develop an interstate highway along a two-lane rural and low density suburban corridor.

The current and future land uses along the SR 37 corridor tend to be more appropriate for a major transportation facility where as those along the Mann Road corridor are less compatible.” (1106-129 Indianapolis MPO, p. 7)

"Mann Road is home to a variety of relatively new housing developments. The impact on local residents would also be significant. Besides displacing several homeowners, this route would have a negative impact on property value in this residential area. The cost of acquisition of these homes and land is also likely to be substantial." (0911-050 Behning)

“...Decatur Township is also home to the large and constantly expanding Indianapolis International Airport. The I-69 Mann road option would place an even greater transportation burden on the residents of Decatur Township. Surely these residents have endured enough traffic, noise and construction. Let’s not add another major project to the mix." (0911-050 Behning)

"The proposed Mann Road Corridor will tend to isolate the second largest City Park in Marion County, Southwest Way Park, from the public. Federal, State, and City governments have worked together to acquire this property to provide park amenities for the residents. We are advised by City Park Planners that there is not another location in Marion County that could provide the options that this park provides." (1101-018 Cockrum, p. 2)

The alternative along Mann Road is no longer part of Preferred Alternative 3C (see Section 6.3.4). Public comments and its environmental and other impacts were considered in its elimination.

10. “(4) the fact that such a highway would physically and psychologically cut off the western end of Bloomington, and the western half of Monroe County (including, for example, the county fairgrounds, the county airport, and the main county park, not to mention many residents), from the rest of the city and county." (1107-187 Hoffman)

"4. Bloomington is a unique town that attracts seniors, students and visitors because of the off-the-fast track location and serenity and beauty of this area which would be ruined by interstate noise, from dust, traffic and transients." (1021-021 Johnston)

The interchanges and overpasses planned for the Bloomington area will continue to provide access between the east and west side of Bloomington. It is expected that long term impacts will not be significant since SR 37 already exists as a potential barrier between the east and west sides of town. Also, it should be noted that the currently-adopted Bloomington long range transportation plan calls for SR 37 to be upgraded to a freeway with full access control from south of Bloomington to the Morgan County line, which is the same type of facility as Preferred Alternative 3C.

It also should be noted that on November 14, 2003, the Bloomington MPO amended its transportation plan to include the Preferred Alternative 3C for I-69.

11. "Point: After the route determination is made, landowners in the chosen path of I-69 will not be able to sell their homes and farms. All of those affected will be in limbo for many years to come. I-69 will not be built overnight, and it is a travesty to think it will benefit anyone locally. It will not." (1107-201 Richardson)

"If our house is condemned, or acquired, we would be forced to file bankruptcy. I have never heard of the state paying fair market value for property purchased." (1107-201 Richardson)

"You made the statement that the 2nd tier study would take at least 18 months and possibly up to 5 years to complete. We are buying this property on contract from the owners. If the decision is made to go through this area (route 3B), we will not be able to sell our land to anyone, nor will we really want to put time and effort into building a home on it. I would like to know what are we supposed to do? We will have to continue paying on the land that we will really not be able to use until the state does something. Because of this potential 5-year wait, we will not be able to "move on" and begin the whole task of looking for something else because we won't be able to afford anything if we find it. By the way, it took us 2 years of looking to find the land we now have. I realize that there are probably a lot of people bothering you about many of these things. But I really don't know where else to get the answers." (0913-031 Abram)

"With the proposed new terrain I-69, there are literally hundreds of families which will be displaced. "But they will get fair market value for their homes." True enough. But what will "fair market value" but to compare to what they have lost? Simple supply and demand comes into play here. With (let's say) 100 homes gone to make room for the highway, there will be 100 families looking for another place to live. Since there are likely to be fewer homes than that available in the original price range of those families, they will be forced either to get something a lot less nice than what they had, or pay a lot more than they had before. This is a negative impact on virtually everyone who is in the way of the proposed project." (1104-037 Winningham)

It is expected that individual homes to be acquired will be identified during the Tier 2 studies. Following this stage will be the design phase and then right-of-way acquisition, followed by construction. Routes have been developed that minimize impacts to the human and natural environment.

The State will offer full fair market value for the property in addition to relocation costs and moving expenses. INDOT will follow the FHWA regulations regarding right-of-way purchase.

The relocation impacts are spread over a very large geographic area. The number of residential relocations increases considerably when the alignment is close to any of the major population centers. The single-family homes to be acquired by the various alternatives represent a wide range of values. The DEIS evaluated information from multiple listing services and local publications to determine the availability of replacement housing in the various counties that are potentially impacted by the I-69 corridor. Generally, about 75% of the homes on the market are three bedroom homes with two, four, and five bedroom homes making up the remainder. It appears that there is sufficient available housing to accommodate the expected number of relocations, especially if the right-of-way acquisition takes place over an extended period of time.

No residential occupant will be required to relocate until safe and habitable housing, suitable for their needs and within their means is available.

12. "We counted every curve cut along the path through highway 41. Guess how many curve cuts we have, and this is businesses, streets and personal driveways that adjoin interstate or highway 41.....571 curve cuts. Now 41 is not any where close to interstate quality, you are going to disrupt over 600 maybe a 1000 families and businesses by updating that highway. The only choice, the only alternative is a direct route." (0821-214 Gilmer)

The analysis included in the DEIS indicated approximately 264 to 335 residences, 70 to 131 businesses, and two to four churches would possibly be acquired for Alternative 1 (US 41 and I-70).

13. "Because Alternative 4B does not include any new transportation facilities within the Indianapolis MPA, the environmental and social impacts would be minimal. The increase in traffic could result in increases of highway noise along existing interstates I-70 and I-465 within the MPA. However, these noise impacts will be examined and where appropriate mitigated as a part of already planned and in some cases programmed improvements to these facilities. Further, since traffic generated by Alternative 4B would be accommodated by existing facilities and improvements already in the Indianapolis Regional Transportation Plan, no additional environmental or social impacts would be anticipated over and above what is assumed in the Plan." (1106-0129 Indianapolis MPO, p. 6)

While Alternative 4B has less transportation impacts, it would involve construction on new alignment creating environmental and social impacts. Section 6.4

documents that its alignment in western Morgan County lies several miles beyond settlement pattern. Alternative 4B may tend to encourage sprawl.

14. "The proposed Alt 2 route would cross through our home and farm and destroy all we have worked for our entire lives." (1103-006 Johanningsmeier)

Preferred Alternative 3C would not impact this location.

15. "If one of the routes using Highway 37 is chosen and it would affect the area where our church is located, we have several questions. There is some vacant property on the opposite side of Highway 37 (across from the church). Would this property be considered before our church property-also we are very concerned about access to the new highway - closing Fox Hollow Road is proposed - we need EASY on and off access for our members and our expected future growth. (We are considering our senior saints as well as young drivers who would be using this entrance/exit several times a week). Where and how would this access tie into I69? Please consider that our church has stood on this site for over 50 years - we do not want it to go to the I69 project!" (1104-012 Noel)

It is acknowledged that there will be unavoidable negative impacts to some businesses, homes, and churches along existing SR 37 if it is upgraded to an Interstate facility. Due to terrain conditions and the distance to other roadways, it will be difficult to provide access at several locations. During the Tier 2 studies, decisions will be made regarding access and/or frontage roads. Every attempt will be made to reduce final impacts in a cost-effective manner.

16. "I did not have time to read specific details in the DEIS that I was looking for, but I want to be sure that there is an accounting of potential residential sprawl due to interchanges and its effect on the environment..." (1104-017 Bolden)

It is anticipated that a new Interstate facility will induce economic growth and development in areas of southwestern Indiana that have previously been unable to attract businesses. The associated construction of homes and support businesses is an impact that is unavoidable in a project like this. Indirect impacts are evaluated in Section 5.26 of the FEIS. In southwestern Monroe County, Preferred Alternative 3C does not include any interchanges and thus would minimize the potential for induced growth.

17. "I'69 extension between Indianapolis and Evansville will facilitate drug smuggling from Mexico and the movement of terrorists from Canada." (1107-118 Hochreiter)

"I-69 connecting Detroit to Mexico sounds like a drug freeway through the heart of Indiana - with a stop in Bloomington, a prime target for drug dealers. I-69 through Bloomington would not just bring more businesses, it would bring with it an increased crime rate. Bloomington has already experienced increased serious crimes as a result of Detroit drug connections. Why make it any easier?" (1021-030 Shank)

The safety of rural communities bordering the new highway is expected to be similar to the many other rural communities that are located along Interstate facilities throughout the United States. The completion of I-69 is not expected to markedly increase the crime rate in rural areas.

SR 37 already provides four-lane access to the Bloomington area. It should be noted that the currently adopted Bloomington/Monroe County Year 2025 Transportation Plan identifies the SR 37 corridor as a limited access freeway. It also should be noted that on November 14, 2003, the Bloomington MPO amended its transportation plan to include the Preferred Alternative 3C for I-69. The upgrading of SR 37 to an Interstate facility is not expected to affect the crime rate in the Bloomington area.

18. "Market trend analysis has shown that, in the aftermath of September 11, people have shifted their focus to their homes, the only sound investment they can safely make in this economy. They pour whatever hope they have into their homes, families and way of life. I-69 cuts through these like a knife, threatening to use our neighborhoods as the sacrificial lambs." (1021-034 James-Houff)

State and federal right-of-way acquisition guidelines provide full fair market value. INDOT will follow state and federal guidelines for any home relocation and moving expenses.

19. "It would destroy a church build during the Civil War. It would destroy a neighborhood tradition of gathering together to celebrate Christmas. It would destroy an area where I take my friends from the city to show them just how beautiful south-central Indiana is and how proud I am to call this area my home." (1021-032 Jochim)

Impacts to historic properties have been discussed in Section 5.13 of the FEIS. Historic structures will be further evaluated during Tier 2 studies. Efforts to avoid or minimize impacts to these structures will occur in Tier 2. Further opportunities to be a consulting party in the Section 106 process will occur in Tier 2.

20. "People in the rural area are 3x more likely to die from traumatic illness or injury because of the time it takes to get to definitive medical care other their metropolitan counterpart. Modern medicine can do wonderful things for strokes, heart attacks, trauma "if" it is

administered on time. I-69/Alternate Rts. 3 & 4 will save lives by saving time for the majority of S. In rural?" (1101-020 Sobecki)

"A definitive end care required which is rarely available in small rural hospitals." (1101-020 Sobecki)

Safer and quicker access to regional medical facilities is a primary benefit of the I-69 facility.

21. "If allowed to grow unhindered, Owen County has all the potential of becoming a tourist magnet in the 21st Century as Brown County did in the 20th Century. Should this natural environmental progression be compromised by I-69 with all of its adverse fallout, the future of the county would be placed in great jeopardy." (1022-015 Maley)

Preferred Alternative 3C will not go through Owen County, however, it is expected that an Interstate facility will increase tourism opportunities within Southwest Indiana.

22. "The highway would destroy Sunshine Gardens." (1025-028 Yarbrough)

The route that passed through the Sunshine Gardens subdivision near I-465 was eliminated from further study. The route now connects to I-465 near the existing SR 37 interchange.

23. "It is our understanding that if I-69 were to follow State Road 37 our homes and Oliver Winery would be acquired by the State of Indiana, because our only egress from the winery and our neighborhood is Winery Road off State Road 37." (1030-011 Richardson)"

Our neighborhood, Windsor Private Estates, is a small neighborhood of roughly thirty houses in the \$300,000 to \$500,000 price range. With the State of Indiana acquiring our homes for pennies on the dollar, virtually all of the residents will be thrown into personal bankruptcy." (1030-011 Richardson)

Where reasonable, INDOT will develop and consider avoidance options as well as innovative design techniques for lessening potential impacts to businesses and neighborhoods such as the Oliver Winery, Worm's Way, and Windsor Private Estates. The goal of these efforts will be to provide access to these businesses and neighborhoods, so that the winery and neighborhoods are not displaced by this project. Similar attention will be given to other potential commercial and

residential impacts along the project's route, so that relocations are minimized to the greatest extent possible.

24. "A much better alternative site for the highway would be new terrain from Indianapolis, perhaps between highways 37 and 67 and then using existing highways 67 or 57 or 231 which have a lot fewer homes and businesses along them than does 37." (1105-064 Allman)

Alternatives 2 and 4 evaluated such a route.

25. "Think about your own home. In Indiana, even Indianapolis, the housing market is much different than in (let's say) San Francisco or Boston or Seattle. Take the appraised price of your own home or apartment, go on the internet, and house shop in one of those cities. You will be amazed at how little you could get for the same price in those markets." (1104-037 Winningham)

"This is the situation for the people who would be displaced from little places like Hendricksville or a out-of-the-way house in a holler in the woods. Their homes don't appraise for much, primarily because of the location. If the families have to go to find housing in a bigger town, like Bloomington, Bedford, or Spencer, they will be spending a lot more money for the same size home." (1104-037 Winningham)

Payment for residences to be acquired will be based on the full fair market value within the community where the residence is located. The State will provide relocation assistance and, in some instances owner and tenant occupants maybe entitled to replacement housing compensation. No residential occupant will be required to relocate until safe and habitable housing, suitable for their needs, and within their means is available.

26. "I have searched and searched and I cannot find any assistance or information on the following items. Please help me find the answers to the following questions.
1. What happens first, if the state wants my house?
 2. Will the state pay me what my house is worth?
 3. How close can the state build to my house?
 4. Is there compensation for devaluation of my house due to the states activities?
 5. Do the powers that be realize the anxiety they are creating by not making a good profitable choice of east or west corridors?" (0816-009 Grider)

Once the project location and the right-of-way requirements have been determined in Tier 2, the property will be inspected by one or more appraisers knowledgeable

about property values. It is their job to make a fair and impartial determination of the fair market value of the part of the property needed for the new facility.

The State will offer full fair market value for the property in addition to relocation costs and moving expenses. If the State needs only part of the property, the amount offered will be equal to the difference between the fair market value before the acquisition of the required right-of-way and the fair market value of the remaining property after the acquisition of the right-of-way. If the State needs none of your property, there is no compensation.

The proximity to the new highway may cause property values to change. Overall, the regional economic modeling shows that all regions in Southwestern Indiana will receive an economic benefit from Preferred Alternative 3C.

27. "Unfortunately, this highway is predicated on an outmoded industrial world-view in which faster and bigger are seen as better despite devastating environmental and social costs. It is based on a paradigm of reality that is leading to the total destruction of the planet. And it fails to take into consideration the reality of the people whose lives it would most affect." (1028-038 Melchoir)

The FEIS discusses a wide range of social and environmental impacts associated with this project. No project of this size can avoid negative impacts, however, the safety and induced economic impacts are expected to offset many of the negative impacts.

28. "Moving and money difficulties are two of the top three causes of stress related illness, death and divorce. I am sure that many Hoosiers's emotional and physical health is not up to this challenge. Death and family destruction will follow in the wake of a "New Terrain" highway. What will be the death toll? How many new stress related divorces and disabling health related problems like strokes and emotional disorders? I would hope that the EIS study would include a Center for Disease control assessment of this environmental effect on the thousands of southern Indiana homeowners and their children involved." (0826-055 Smith)

It is expected that there will be some emotional distress to those who are directly impacted by this project. Relocation advisory services will be available to those whose homes are to be acquired and relocation costs are included in right-of-way acquisition costs. It is not expected that the project will affect the rate of divorces, disabling health problems, and emotional disorders.

5.4 Environmental Justice

1. "For the Tier 1 level of analysis, EPA concurs that the initial environmental justice review shows that none of the alternatives would have a disproportionately high and adverse effect on minority and low-income populations in the study area. The DEIS proposes (p. 5-28) that a more detailed analysis of minority and low-income populations will be included to determine specific effects to these populations in Tier 2. The FEIS should provide a specific methodology that will be used for this detailed analysis." (1107-696 USEPA Region 5 Technical Comments, p. 12)

Section 5.4 of the FEIS describes the methodology to be used in Tier 2 to determine specific effects to these populations.

2. "If percentages of low-income or minority populations are elevated within the Tier 2 project segments, Tier 2 alignment alternatives within the segments should be considered that avoid and minimize impacts to potential EJ areas. The issue of disproportionately high and adverse impacts should also be evaluated in the Tier 2 documents by comparing environmental impact data to EJ information for highway segments. Adverse effects are defined as "disproportionate" if the risk of adverse environmental impacts are predominantly borne in areas with minority or low-income populations or if the impacts are greater in magnitude in areas with minority or low-income populations than in other areas. When analyzing these impacts, it is important to assess both the negative and positive impacts, consider both the short and long-term effects as well as the secondary and cumulative impacts." (1107-696 USEPA Region 5 Technical Comments, p. 12)

These comments have been incorporated into the methodology for Tier 2 Environmental Justice evaluation.

3. "The DEIS also fails to discuss the Amish and Mennonite settlements under relevant Council on Environmental Quality guidelines, which require that the NEPA review process appropriately "analyze environmental effects on minority populations, low-income populations or Indian tribes, including human health, social, and economic effects." These guidelines emphasize that the goals of NEPA and environmental justice are complementary, such as preserving "important *historic, cultural*, and natural aspects of our natural heritage." The CEQ guidance also recognizes that environmental justice concerns "may arise from the impacts on the natural and physical environment." (1107-705 ELPC et al, p. 42)

The Environmental Justice analysis in the FEIS complies with the FHWA Order 6640.23 - *FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. Effects upon the historical expressions of Amish and Mennonite culture are being considered insofar as they fall under the heading of

Historic Impacts. See Section 5.13. More generally, potential impacts to the Amish and Mennonite communities were evaluated in the Social Impacts Section (5.3). However, neither of these groups are a disadvantaged population for environmental justice consideration under CEQ guidelines and the FHWA Order 6640.23.

5.5 Economic Impacts

1. "The DEIS identifies limited economic benefit for Monroe County residents from a new interstate traversing Monroe County. Indeed, it is our belief that most of any new jobs created as a result of a new interstate will be in the low paying service industry, often in the form of "big-box" retail and fast-food restaurants. Further, the DEIS identifies the potential for the removal of a number of existing local businesses, some that uniquely contribute to the Monroe County economy and local quality of life, such as Oliver Winery and Worm's Way Garden Center." (1104-061 Monroe County Plan Commission Letter, p. 3)

"Oliver Winery is a major tourist destination point for south central Indiana. Its loss would be a great loss to our community, both financially and culturally. The winery also employs forty-five people in a community still reeling from the loss of manufacturing jobs to Mexico." (1030-011 Richardson)

If one of the build options is selected, jobs are forecast to be created in a range of industries. High-paying jobs account for 31 to 41 percent of the new jobs expected to be created if I-69 is completed. Decisions regarding allowable land uses and the characteristics of businesses locating in the I-69 corridor are ultimately the responsibility of local governments as part of the planning, zoning, and permitting processes. Decisions regarding the final alignment of the I-69 build alternatives will take into account existing businesses, residences, natural features, wildlife habitats, and many other factors.

Where reasonable, INDOT will develop and consider avoidance options as well as innovative design techniques for lessening potential impacts to businesses and neighborhoods such as the Oliver Winery, Worm's Way, and Windsor Private Estates. The goal of these efforts will be to preserve access to these businesses and neighborhoods, so that the winery and neighborhoods are not displaced by this project. Similar attention will be given to other potential commercial and residential impacts along the project's route, so that relocations are minimized to the greatest extent possible.

The currently adopted Bloomington Transportation Plan already provides for SR 37 to be upgraded to a freeway from South of Bloomington to the Morgan County

Line. It should also be noted that on November 14, 2003, the Bloomington MPO amended its transportation plan to include I-69.

2. "INDOT's egregious failure to thoroughly evaluate negative social and economic impacts caused by the construction of a new highway. Communities along US 41 will suffer from lost traffic and business revenues, which will reduce the tax base and therefore reduce government investments and services. Communities in the path of a new terrain route will also suffer business and social impacts." (1107-705 ELPC et al., p. 2)

"None of the major corridors along the preferred alternatives would lose large amounts of traffic if Alternative 1 were chosen for I-69. The opposite is not true for US 41 (Table 5.8-1). The businesses along US 41 would suffer disproportionately if one of INDOT's preferred alternatives is chosen." (1106-147 Tokarski, p. 17)

"Finally, the DEIS and the Federal Highway Administration estimate that construction of any route other than Alternative 1 would divert 30-40 percent of traffic from existing US 41, doing significant harm to the economies of Terre Haute and other Hoosier communities on that route. The US 41 counties already have many more unemployed people, more people in poverty, and equal or worse general economic conditions than the counties between Bloomington and Evansville on INDOT's "preferred" routes. We share the concern of our sister cities on US 41 that by diminishing their existing economies, the "preferred" I-69 routes harm communities that are already suffering." (1101-022 City of Bloomington Office of the Common Council, p. 2)

"...and an accounting for potential business lost along corridors not chosen." (1104-017 Bolden)

Estimates of the changes in business sales in communities along US 41 for alternatives that use a more easterly corridor are outlined in Section 5.5 of the FEIS. These are the sales that rely primarily on pass-by traffic.

All parts of the Southwest Indiana Study Area including Terre Haute and other communities along US 41 are forecast to experience more economic growth if I-69 is built than if the No-Build scenario is chosen, regardless of the route alternative. Details of impacts by region within the Study Area are included in Section 3.4.4 of the FEIS. It is reasonable to expect that areas closer to the chosen alignment will experience more growth than areas located away from the alignment. Under Preferred Alternative 3C, the economic benefits to Terre Haute are similar to those as under Alternative 1 (see Section 3.4.4). There is no statement in the DEIS that the economy of the Terre Haute region would be harmed by any of the alternatives.

3. "D.C. Marshall auto dealership north of Sullivan, about 4 miles on 41 and I just wanted to call and express my opinion on the fact that I am one of maybe a few that does not want the project to come through Terre Haute. I know you see that the C of C supports it, but with it coming next to our 8 acres at the dealership, it would just absolutely devastate us due to the lack of ingress/egress to the dealership property. I'm sure it would be very limited access and probably would be detrimental if not destroy the business completely because of not being able to get to it. Obviously, we have to display the cars and park the cars to properly conduct business." (0821-160 Marshall)

Preferred Alternative 3C will not affect this location.

4. "My business would not be rebuilt and since I am the only registered composting facility in Monroe Co. That process large trees and land clearing debris there will be no place for this waste to be disposed of." (1107-517 Porter)

From field surveys, this business appears to be located along the corridor of Alternatives 3A and 3B and would not be impacted by Preferred Alternative 3C. It has not yet been determined exactly which businesses will need to be relocated by Preferred Alternative 3C. This will be determined in Tier 2 studies and the design stage. For those which are relocated, INDOT will provide relocation assistance in accordance with the Uniform Land Acquisition and Real Property Acquisition Policies Act of 1970.

5. "Where in this study are the economic costs to the healthcare system from the increased air and water pollution?" (0820-227 Henshel/Walden, p. 2)

"Where in this study are the economic costs to each local rural economy from the need to put people on centralized water systems because their well water is unacceptably contaminated." (0820-227 Henshel/Walden, p. 2)

The project is not expected to result in contamination to water systems. Preferred Alternative 3C will conform to the National Ambient Air Quality Standards and Indiana water quality standards. There will be no adverse impact to human health.

6. "Some folks are worried that "we might split some farmland in two." What about the little towns? Take Fort Branch. You'll literally cut the town in two. One maybe two exits at either end and Bang! the town dies." (1107-157 Perry)

Preferred Alternative 3C will not affect Ft. Branch. No city or town will be divided by a I-69 where a multi-lane, limited access, divided highway does not already exist.

7. "If the DNR and state Social Services agencies can not afford the seemingly small and not-so-small projects then where is the huge amount of money coming from to fund the I-69 and Colts project? As a citizen, property tax payer and voter in Marion County and the state of Indiana I find the above mentioned budget and expenditure issues very disturbing." (0913-032 Yakimchick)

INDOT will be developing innovative financing options for this project. Financing for transportation projects and social services are separate and distinct. Transportation projects generally are funded by federal and state motor fuel taxes.

8. "An I-69 direct route will benefit the Santa Claus economy by improving highway linkage to the Santa Claus Industrial Park and improving access to Holiday World and Splash'n Safari Theme Park, Lincoln State Park and the Lincoln Boyhood National Memorial." (1028-035 Town of Santa Claus)

Tourism is considered as part of the economic impact assessment in Section 3.4.

9. "Why would anyone want to build a new terrain highway right down the Madrid geologic fault line from Evansville, Indiana to Bloomington, Indiana." (1022-012 Donahue)

The appropriate seismic design criteria are being used in this study, and are reflected in the cost estimates. Section 4.8 discusses the seismic characteristics of the Study Area.

10. "Table 5.8-1 of Section 5.8.4 (Impacts on Major Corridors) on page 5-42 indicates that by constructing a route other than Alternative 1, traffic along US 41 would decrease by 13% to 56%. According to U.S. Census Bureau data (<http://quickfacts.census.gov>), the total land area of the 26 counties in the Study Area is 10,351 square miles. Page 5-34 of the DEIS states;

‘...the total estimated Study Area sales are about \$11.3 billion dollars.’

“This averages out to about \$1,092,000 per square mile (This is probably a conservative figure, as sales dollars per mile would be higher in commercial areas than in rural areas). For the 2-mile wide Study Band, the estimated annual sales dollars for Alternative 1 range from \$336 million to \$340 million. Therefore, assuming sales dollars lost in the Study Band are proportional to traffic level reductions, the potential lost sales dollars along US 41 could range from \$43 million to \$190 million per year.

“Oddly, this significant sales loss impact was not considered in the economic analysis, and yet clearly, these levels of decrease in traffic would result in a far greater negative economic impact on businesses along US 41 than the projects \$7.3 million impact of

Alternative 1, which the DEIS admits is probably an inflated figure. It is also strange that the DEIS seems to disregard this huge negative impact by simply stating: "Most businesses tend to adapt to changes in market conditions." (1030-004 Greater Terre Haute Chamber of Commerce, p. 4)

Different types of businesses have different dependencies on pass-by traffic, so it is not correct to use a simple average to calculate potential lost business sales based on a correlation to reduction in traffic. For example, gas stations and convenience stores would be more highly affected by reductions in pass-by traffic, but these types of businesses contribute a relatively small percentage of total sales in most areas. In contrast, a grocery store, department store, furniture store, or auto dealership would be much more dependent on the local population for business and would not be as affected by fluctuations in pass-by traffic from non-residents. These types of businesses contribute a much higher percentage of total retail sales in most areas. Furthermore, businesses not located directly on US 41 would not be affected by the decrease in traffic on this road. Because of these factors, the overall percentage reduction in sales in the US 41 corridor would be much less than the percentage change in through traffic along US 41. Refer to Table 5.5-2.

The regional impact analysis presented in Section 5.5 classified businesses into eight establishment types with common characteristics, including their dependence on pass-by traffic, for the purposes of calculating reductions in sales.

Finally, many of the affected businesses on the US 41 corridor would be concentrated in or near larger communities like Evansville, Vincennes, and Terre Haute, not spread evenly along the corridor. The average business sales per square mile would vary widely along any corridor in the Study Area.

11. "A route through Owen County (my home) will destroy hundreds of homes (mine included), farms and business eliminating a large part of the counties property tax base. With the tax base reduced, how are we to finance our schools?" (1016-008 Long)

The analysis in the DEIS showed an expected overall positive impact of the proposed build alternatives on employment and population in the Study Area. People will continue to pay property taxes in the places to which they relocate. Since the precise alignment is not known, however, precise estimates of business losses in particular parts of the Study Area have not been done. Such studies, coupled with potential mitigation measures, will be evaluated in the more detailed Tier 2 EISs.

12. "If you have not already, you will need to get ecologists, psychologists and sociologists who can put an economic value on quality of place. The ecological related field is called ecological economy. Perhaps an ecological psychologist could work with an ecological economist to come up with the psychological costs in terms of dollars. Perhaps someone in the outdoor recreation field can assess the losses in local recreation and trade. If, as I imagine, you feel that it would be unacceptable to incorporate such information in your final report, also find unacceptable the devastation to Indiana of the hypothetical highway extension." (1107-687 Buck, p. 2)

There is no established methodology for quantifying the economic impacts of intangible values such as these. "Quality of place" is very subjective. To the extent that tourism results from the project, these effects are captured in the economic modeling.

13. "As a business owner along State road 37, I oppose new terrain routes through Monroe County as we have been informed that one would not be feasible for the project to include an access road to our business. We do not classify ourselves as a small, locally owned business as your project team may identify us as noted in the research study." (1101-017 Worm's Way)

No final determination has been made about maintaining access to specific properties. This will be addressed in Tier 2 studies and every effort will be made to continue to provide access to properties that are not needed for the highway. For the location cited in the comment, I-69 will be located on an existing four-lane, divided highway (SR 37).

The currently adopted Bloomington Transportation Plan already provides for SR 37 to be upgraded to a freeway from South of Bloomington to the Morgan County Line. It should be noted that on November 14, 2003, the Bloomington MPO amended its transportation plan to include I-69.

14. "Indirect impacts being ignored include the health impacts - increase in asthma from the increased PM10/PM2.5 generated by the highway is only one example of such ignored costs. Where in this study are the economic costs to the healthcare system from one increased air and water pollution?" (1101-021 Henshel/Walden)

The entire State of Indiana is PM10 compliant. Implementation dates for PM2.5 have not been established.

15. "Nicol mentions as a negative for the I-70/SR 41 route that many small businesses would be lost. Improving that route could also work as an advantage to small businesses." (1023-050 Frey)

While economic development is one of INDOT's nine policies, the costs and losses associated with business relocations in Alternative 1 (the highest number of business relocations of all alternatives) made it an undesirable alternative. For further information on roadside business impacts, see Section 5.5, *Economic Impacts*.

16. "2. The impact study does not take into account PERSONAL LOSSES." (1104-139 Dunfee)

One of the performance measures reported in Section 3.4.4 of the DEIS is the change in personal income resulting from construction of the I-69 build alternatives. Disposable personal income is forecasted to increase by \$173 million per year by 2025 as a result of the construction of Preferred Alternative 3C.

17. "Has the impact study calculated in the loss of property values of those who fall outside the eminent domain buy zone, but whose property may still suffer a devaluation? Will the state pay me the difference in value? Will the state pay the cost of my unwanted moving?" (1104-138 Anderson)

The proximity to the new highway may cause property values to change. Overall, the regional economic modeling shows that all regions in Southwestern Indiana will receive an economic benefit from Preferred Alternative 3C.

18. "Closing this business will not only be a hardship for us but for the local and state economy as much of our work is done for commercial businesses, schools, hospitals, etc. not only in Monroe County but outside as well. This will cause a loss in annual taxes of \$7,233.00; a loss of eleven employees at a gross income of \$309,276.00 plus the loss of accountant's services of \$785.00 and an attorney on retainer of \$2,400.00 per year. This is in addition to the loss of income to our supplier's and local banks and business we deal with. The taxes lost on our farmland and homes would amount to \$1,247.00 to Monroe County which can ill afford this loss." (1031-015 Jackson)

No determination has yet been made regarding which properties will be purchased. INDOT's policies provide assistance for relocation of affected businesses.

19. "1) What will happen to all the businesses on 41 when the new road is built? Many will have to shut down do to decreased traffic." (1105-034 Fanning)

Preferred Alternative 3C will not cause construction impacts on US 41. An evaluation of the impact on local businesses was included in Section 5.5. The specific impacts will vary depending on the precise alignment and location of interchanges.

5.6 Joint Development

No substantive comments.

5.7 Pedestrian and Bicycle Impacts

1. "A road to move vehicles faster and faster is this fast-paced life by dividing neighborhoods and communities blessed with a slower way of life is a sin. We're not talking about a bike path, but that would be something worth paying for." (1022-014 Gordon-Lucas)

INDOT provides approximately \$18 million each year in Transportation Enhancement funding for projects including bicycle paths.

2. "Local movements of non-vehicular traffic such as bicycles would in effect be limited to a very few locations, many of which are quite heavily used by vehicular traffic." (1104-061 Monroe County Plan Commission Letter, p.2)

Impacts to trails and routes in the Monroe County Bicycle Plan will be minimized. Ongoing planning efforts will be reviewed in Tier 2.

5.8 Traffic Impacts

1. Specific and very detailed comments were received from the Monroe County Highway Department in a report titled "I-69, Alternative 3, on our road system." They are included in the attached letter to Lyle Sadler and Michael Grovak, dated November 4, 2002. (1104-063 Monroe County Highway Department).

"This report was prepared after a review of the DEIS for this corridor. The report does not select a preferred route along Alternative 3, given three options being considered through Monroe County, but makes comments on the affect of traffic flow that each one would have on a particular area if it were constructed at that location.

"It is anticipated that the Indiana Department of Transportation and their design consultants will cooperatively work with Monroe County on minimizing the affect an interstate would have on traffic flow in and around our County, should an alternative be selected in this area. Specifically, we expect the Federal Highway Administration and the Indiana Department of Transportation to fund and construct frontage roads, grade separations and interchanges at critical locations in order to maintain a high degree of safety for the public and our emergency response personnel." (1104-063, Monroe County Highway Department)

INDOT and FHWA will work with the Monroe County Highway Department to address these traffic issues in Tier 2 studies and design.

2. "The DEIS fails to identify the potential impact an interstate facility in Monroe County would have on the local road network, the vehicular movement of residents, emergency vehicles, and farm machinery. Without a comprehensive understanding of what local roads would be bisected or re-routed as a result of the interstate, decision makers cannot be fully aware of the impact the interstate would have on the same. Likewise, the DEIS provides no discussion regarding the funding source for construction of needed frontage roads, rerouting of local roads, etc." (1104-061 Monroe County Plan Commission Letter, p.2)

The primary objective of the Tier 1 analysis has been to select a corridor between Indianapolis and Evansville from a geographically diverse range of very different alternatives. From the outset, explanations of the tiered NEPA process as it is being applied on this project have made clear that specific, detailed traffic impacts will be studied in depth during Tier 2. Preliminary interchange locations were identified in Tier 1. The interchange locations will be finalized in Tier 2. Frontage roads were evaluated at a broad scale in Tier 1 and included in estimated right-of-way widths. The Tier 2 analysis will more fully address all of these issues. Construction of frontage roads and the rerouting of local roads will be funded by INDOT and FHWA.

3. "There is inadequate data showing what congestion problems will be created with the proposed I-69 extension. Further analyses should be done, especially for I-465 and I-70 as well as for the Evansville area." (1106-147 Tokarski, p. 7)

Percentage traffic changes and level of service impacts on both I-465 and I-70 are discussed in the DEIS in sections 5.8.4.1 and 5.8.4.5, respectively. More detailed analysis will be forthcoming in Tier 2.

4. "It is unclear which scenario this DEIS used to calculate Table 5.8-1: "Year 2025 Percentage change in VMT on Major Corridors." Was induced and national/international travel included?" (1106-147 Tokarski, p. 16)

Induced and national/international travel is included in Table 5.8-1.

5. "Why is adding travel lanes a necessary project for the highway? According to the DEIS, LOS C is 'better than accepted planning LOS Standards for urban interstate.' page 5-43." (1106-147 Tokarski, p. 16)

The series of improvements to I-465 called for in INDOT's Statewide Transportation Plan are required on the basis of forecasted travel demand; without them, the level of service on I-465 will deteriorate to unacceptable levels. Under current state policy, level of service "D" is the minimum acceptable Level of Service (LOS) for planning purposes in urban areas. LOS "D", while acceptable, involves significantly higher levels of congestion for the traveling public.

6. "For Alternatives 2C, 3B, 3C, and 4C traffic on segments of I-465 would increase significantly (Table 5.8-1). The DEIS assumes this will be mitigated by making I-465 ten lanes; however, there is no indication when that widening would occur. If an acceptable LOS on I-465 depends on lane additions then the cost of that widening must be at least partially attributed to the I-69 project." (1106-147 Tokarski, p. 17)

Adding lanes to I-465 is not assumed for traffic or economic modeling purposes. INDOT's Statewide Transportation Plan calls for the I-465 lane additions on the south end of the circumferential to be constructed. This widening of I-465 is already planned to occur. Therefore, its cost is not included with this project.

7. "The DEIS states, p. 5-44, that the I-69 extension would have little impact on the VMT for I-65 (4% to less than 1% diversion of traffic). Yet other parts of this DEIS claim that this diversion would have major impacts on NAFTA truck traffic flow for some alternatives (p. 3-50). Since alternatives were scored very differently on this core performance measure, this apparent contradiction must be better explained." (1106-147 Tokarski, p. 17)

This comment appears to be in reference to a statement on page 3-50 of the DEIS to the effect that alternatives which "serve the SR 37 corridor and/or Bloomington, had a significantly higher daily truck-hours saved" than those which do not. This does not contradict the statement on page 5-44 of the DEIS that the I-69 extension would have little impact on the VMT of I-65. The superior savings in daily truck-hours affected by the SR 37/Bloomington alternatives is primarily a result of the fact that these alternatives would provide service to markets that currently do not have direct access to an Interstate facility. It does not have to do with diversion of traffic from I-65. It also should be noted that the measure of truck hours saved reflects time savings to all truck traffic, including local truck traffic, not just trucks using I-69 in other states.

8. "The right-of-way and most of the construction for this route is already completed and even with the addition of a completely unnecessary new road, US 41 may still require a costly upgrade in the future, anyway." (0927-006 Clark)

The current INDOT Statewide Transportation Plan does not include any capacity improvements on US 41 between I-64 and Terre Haute.

9. "When I've traveled Hwy. 41 and I-70, there's always more congestion especially large trucks." (0821-007 Stanley)

The planned added lanes on I-70 will relieve forecasted congestion on that facility. Regarding US 41, any of the I-69 alternatives will provide congestion relief on US 41.

10. "(2) the fact that such a highway would undoubtedly generate intense development pressure along the highway corridor, leading to increased local traffic and further complicating cross-town and cross-country travel." (1107-187 Hoffman)

Traffic growth from the induced development is included in the traffic model.

11. "Because Alternative 4B is the only alternative that would not use the SR 37 corridor, there are not network impacts associated with this alternative. Even with the increased traffic volumes projected on I-70 of roughly 10%, no changes to the regional or local network would be required. Capacity on I-70 west would be sufficient to adequately handle the increased traffic without additional changes to the network, over and above what is already planned. It is important that close coordination occur with the planned north-south corridor Hendricks County, the planned Six Points Road/Airport interchange and the Suburban Mobility Study when considering the alternative." (1106-129 Indianapolis MPO, p. 1-2)

While Alternative 4B performed well enough to be included among the DEIS Preferred Alternatives, its advantages did not outweigh the performance of several other alternatives in terms of their ability to achieve the stated goals of the project. In addition, the SR 37 alternatives would concentrate any indirect land development along an existing, already developed corridor where there are already recognized needs for improvements, rather than introducing a new corridor in the greater Indianapolis area for development. Moreover, if Alternative 4B was selected, significant capacity improvements would still be required on SR 37 in accordance with INDOT's Statewide Transportation Plan.

12. "This option would follow the existing SR 37 corridor into Marion County to Edgewood Avenue where it would then proceed north on new alignment to I-465 just west of the existing SR 37/Harding Street interchange. This option could have significant impacts on the local arterial street network and would require modifications to insure that the local arterial system and local circulation systems remained viable. This would presumably include existing SR 37 as a collector distributor in some fashion, collecting traffic to and from I-69 to the regional and local street network. This option does not include any interchanges north of the Marion/Johnson County line other than at I-465. Depending on the function of the C-D system along SR 37, this could be a significant concern. SR 37, this could be a significant concern. SR 37 plays a significant role in funneling north-south traffic to and from I-465 as well as into downtown Indianapolis. Any alternative that would disrupt this flow of traffic would have potentially significant impacts to regional travel. SR 37 also provides significant access to local residential subdivisions as well as large amounts of commercial and industrial development." (1106-129 Indianapolis MPO, p. 2)

"Of great importance to the regional network would be the intersection of Southport Road and SR 37. Southport Road is a cross-county primary arterial connecting I-65, SR 37, SR 67 and the proposed Six Points Road interchange with I-70. This arterial also provides the only crossing of White River south of I-465. The DEIS does not show an interchange at this location, nor does it elaborate on how the important arterial functions of these facilities will be handled. It is important to insure that either an interchange is provide at this location or alternatives are provided that allow Southport and SR 37 to function as the important regional arterials that they are." (1106-129 Indianapolis MPO, p. 2-3)

Consultation has occurred with the Indianapolis MPO. A potential interchange has been added at Southport Road and is included in the FEIS. All travel demand modeling reported in the DEIS did assume the presence of an interchange at Southport Road. These and other traffic issues will be analyzed in Tier 2.

13. "Also of great importance would be the maintenance of access from Harding Street to I-465. Because this option includes a new interchange west of the current I-465/Harding Street, SR 37 interchange there is concern that local access, not only to commercial establishments in the immediate vicinity, but also to Harding Street might be disrupted. Harding Street is an important north-south arterial serving the north-south arterial serving the industrial south side of Indianapolis, as well as the Lilly Technology Center and ultimately downtown Indianapolis. It will be critical that access to and from Harding Street and SR 37, in whatever form it may take, be maintained or improved if this option is selected." (1106-129 Indianapolis MPO, p. 3)

"There are also a number of important local collectors and thoroughfares that intersect with or cross SR 37 currently that would have to be maintained in order to continue to

serve the developed and developing commercial, industrial and residential areas along the SR 37 corridor. Thoroughfares include Thompson Road, Edgewood Avenue, Stop 11 (proposed connection to SR 37) and County Line Road. Important local collector streets include Epler Avenue, Banta Road and Wicker Road. In addition, Blemont Avenue runs parallel to SR 37 between Southport Road and Epler Avenue, providing access to local development west of SR 37." (1106-129 Indianapolis MPO, p. 3)

"Another important consideration is the intersection of Bluff Road with SR 37. Bluff Road is an important primary arterial that runs from near downtown Indianapolis southwest to an intersection with SR 37 just north of the Marion/Johnson County line. Bluff Road not only serves as an important regional arterial for residential development in Marion County, but it also provides an alternative corridor for commuters to and from downtown Indianapolis. It will be important to maintain access to Bluff Road regardless of which build alternative might be selected." (1106-129 Indianapolis MPO, p. 3)

Following this consultation, the Indianapolis MPO has adopted Preferred Alternative 3C into its transportation plan. These consultations will continue during Tier 2 to address these issues, including providing access for business.

14. "This option could have significant impacts on the local arterial street network and would require modifications to ensure that the local arterial system and local circulation systems remained viable. It is unlikely that Mann Road would exist in its current form and thus significant changes to local access and commuting patterns would result. Mann Road is a primary arterial running from its intersection with Kentucky Avenue north of I-465 south well into Morgan County. While Mann Road functionally is not as important to the regional transportation network as SR 67 to the west and SR 37 to the east, it is an important corridor for distribution of trips into and out of Marion County, as well as for localized travel within Decatur Township." (1106-129 Indianapolis MPO, p. 3-4)

"Of most concern to the MPO would be the interchange at I-465, if the Mann Road option were selected. This interchange as it currently exists is only a partial interchange with ramps to and from the east. This is due primarily to its close proximity to the interchange just west of Mann Road at SR 67/Kentucky Avenue. The interchange at SR 67/Kentucky Avenue is limited due to its close proximity to the I-70/I-465 interchange and the presence of a railroad corridor parallel to SR 67 which further limits the flexibility of this interchange. Significant changes at the Mann Road interchange made to accommodate interstate to interstate traffic could have significant impacts on the SR 67/Kentucky Avenue interchange and possibly the I-465/I-70 interchange. Because these three interchanges would be so closely linked and could significantly impact one another, the MPO would require additional detailed study of how these three interchanges interrelate in the context of the improvements currently being developed to relocate and

lower I-70, as well as those related to the new mid-field terminal interchange. The efficient operation of these two down stream interchanges related to access to the airport is paramount in importance to the MPO and the entire region." (1106-129 Indianapolis MPO, p. 4)

Preferred Alternative 3C will not use the Mann Road corridor.

15. "Another advantage of Alternative 3C is that it provides a "complete" west-side freeway bypass of Bloomington, and could allow for a concurrent or future upgrading of Indiana 37 south of there to become a potential "I-569" connection down to U.S. 50 near Bedford." (1104-008 Shook)

Preferred Alternative 3C would be on existing SR 37 through the west side of Bloomington and would not provide a bypass. SR 37 has been upgraded to a 4-lane facility south to Mitchell. There are currently no plans to upgrade SR 37 to Interstate standards south to Mitchell.

16. "Also Highway 46 is busy enough as it is now and adding people using it to get to Owen County thru Ellettsville to connect to I69 would only add more traffic on a highway already heavily use." (1107-046 Cochran)

"The FAQ section of your website says that traffic congestion on I-465 will be addressed in the Tier 2 Study. Will you also address traffic congestion on SR 46?" (1009-001 Pollock)

SR 46 has been upgraded to four lanes from Bloomington to Ellettsville. The Tier 1 traffic model forecasts do not indicate the need for further added capacity on SR 46 beyond the four lanes. For further discussion of traffic impacts on SR 46, see Section 5.8. Further analysis of traffic impacts on SR 46 will occur during Tier 2.

17. "The DEIS to my knowledge didn't address the issue of closure of two out of three country roads. Think of the extra miles people will have to drive in order to cross the barrier that I-69 will invent." (1021-031 Bailey)

"The people left behind will find many cross roads closed and the need to travel several miles to a access roads." (1025-035 Flickinger)

I-69 will result in the closure of some county roads. Many roads will be bridged. Traffic studies to assess the impacts of I-69 on county roads will be undertaken during Tier 2.

18. "County Road 50E at the Owen/Green County line is a major alternative route for many of us when heavy rains or snow melt flood other county roads. This is a fairly regular occurrence. This proposed route will close 50E. Is the state prepared to offer ferry service so we can get home?" (1030-025 Crawford)

Preferred Alternative 3C does not approach the Owen/Greene County line.

19. "I am particularly concerned about alternate route 3 which would create a new exit to Fullerton Pike which would eventually connect to the road by my 1870's historic home, through a large residential area and next to a middle school. I wonder why not use the Tapp Road exit which already connects to a primarily commercial area." (1107-663 Brewer)

The interchange locations shown in the FEIS are preliminary. Final decisions regarding interchange locations will be made during Tier 2.

20. "Another thing is you might get that road to go just like you want it to go but there's another problem. Down around river basins you have a lot of fog. There's a road out there called Smokey Row Road. It was put there many years ago by our forefathers who named that road. The road is named that way because there is fog all the time. I work swing shift and I drive along Mann Road, coming home in the evening around 12 o'clock. A lot of times it can be pretty bad down there, especially the closer to the river you go. That fog is thick." (0911-044 Crowl)

Preferred Alternative 3C will not use the Mann Road Corridor.

21. "I have to suspect that for any of your preferred alternatives, SR 46 will become an important link between I-69 and I-65. SR 46 is Third Street in Bloomington. It is a congested retail and residential street, with bicycle traffic and with pedestrians using four city bus routes. You cannot seriously contemplate using Third Street as a link in the Interstate system. What will be done about bypassing Third Street?" (1009-001 Pollock)

Third Street in Bloomington is SR 48, not SR 46. SR 46 bypasses Bloomington. SR 46, not SR 48, is a principal link between I-69 and I-65.

22. "(2) have you ever driven on State Road 43 between Spencer and State Road 48? If so, you would never have suggested an intersection near where SR 43 and SR 48 come together. That would encourage truck drivers to use SR 43—one of the most twisted and hilly and dangerous state highways in Indiana! Although the route has been improved through the hamlet of Whitehall, the bulk of this route has right-angled turn, odd curves

in other areas, and is horribly dangerous in icy weather. Not a highway you would want in INCREASE traffic on." (1104-037 Winningham)

Preferred Alternative 3C does not include an interchange where SR 43 and SR 48 come together.

23. "(3) Some of the proposed routes cut right through the middle of school districts. With the overpasses being planned for only about every 10 to 20 miles." (1104-037 Winningham)

Impacts to school bus routing and other concerns associated with school districts will be analyzed during Tier 2. Also, many more overpasses will be provided than the comment suggests.

24. "In addition, we already have an increased amount of "big city" factors that we didn't a few years ago. Drugs, murders, bank robberies, etc. There is already enough congestion in the Bloomington area." (1104-019 Stewart)

Detailed studies of traffic impacts in Bloomington will occur in Tier 2.

5.9 Air Quality Impacts

1. "Carbon monoxide modeling should be conducted for the final Preferred Alternative at suspected hot spot locations to assure that no concentrations over the National Ambient Air Quality Standards (NAAQS) are expected. This information should be included in the Tier 2 NEPA documentation." (1107-696 USEPA Region 5 Technical Comments, p. 13)

This information will be included in the Tier 2 NEPA documentation.

2. "The 8 hour ozone standard and the PM 2.5 standard have been upheld by the courts. Although EPA has not designated areas under the new standards, some air monitoring data is available to determine if counties are showing attainment or non-attainment. The Tier 2 documentation should list and evaluate the available air monitoring data for the affected counties. Additional reductions in precursor emissions will be required if and when these counties are designated under the new standards." (1107-696 USEPA Region 5 Technical Comments, p. 13)

This information will be included in the Tier 2 NEPA documentation.

3. "The methodology used for the evaluation of alternatives with respect to the mobile source budgets for Indianapolis and Evansville is acceptable. It should be noted,

however, that the impacts of the final selected alternative segments must be included in the long range plans for these areas and must be modeled to demonstrate conformity before the final Tier 2 decisions are issued." (1107-696 USEPA Region 5 Technical Comments, p. 13)

This information will be included in the Tier 2 NEPA documentation.

4. "With respect to air quality issues and conformity with the State Implementation Plan, IDEM currently has no specific formal comments. Even using a worst case scenario, the Tier I EIS does not suggest the project will pose a conformity risk. However, because the Tier II EIS for the project may more specifically define the impacts the highway may have on air conformity issues (especially at the two urban "termini") the agency may comment on conformity issues at that time." (1106-148 IDEM Letter, p. 3)

This information will be included in the Tier 2 NEPA documentation.

5. "No detailed local air quality analysis was done for the DEIS (p. 5-47). Documentation of the claim of no significant impacts on air quality is assumed but will not be addressed until Tier 2 (p. 5-52). This is not acceptable. This air quality analysis is based on VMT but this data is not given." (1106-147 Tokarski, p. 17)

A preliminary analysis was contained in the DEIS. This analysis has been updated in the FEIS. Coordination with affected MPOs has occurred to ensure that Preferred Alternative 3C will not affect their conformity status. Both USEPA and IDEM have confirmed that the methodology is appropriate for a Tier 1 study.

6. "Labeling and explanations of Tables 5.9-1 and 5.9-2 are inadequate. Are these predicted levels over the baseline? There is virtually no difference in the predicted emissions amounts among the alternatives. This would indicate no difference in the expected traffic volumes among the alternatives. ... This does not correspond to the DEIS's predicted improvements in economic activity for the various alternatives. Also, Alternative 1 has less predicted traffic volumes but equal amounts of emissions? This must be explained." (1106-147 Tokarski, pp. 17 - 18)

The first column headed by "2025 LRP" reports the emissions for the Long Range Transportation Plan in Marion County or Vanderburgh County without any I-69 build alternative, and therefore, represents the baseline or No Build condition. Subsequent columns report the emissions for each build alternative. It is necessary to compare the build alternative emissions to the "2025 LRP" emissions to identify changes over the baseline or No Build condition. Because the change in daily vehicle-miles of travel associated with the I-69 build alternatives is small relative to

the total daily vehicle-miles of travel in all of Marion County or Vanderburgh County, the differences in emissions county-wide between the build alternatives and in comparison to baseline are small. While there are differences in the average daily traffic forecasted for each of the build alternatives as they enter Marion County or Vanderburgh County, these differences are again diminished by the fact that daily vehicle-miles of travel for the I-69 build alternatives are relatively small in comparison to the daily vehicle-miles of travel countywide. The vehicle-miles of travel used in the air quality assessment includes additional travel as a result of induced growth associated with the completion of National I-69. Emissions are predicted on the basis of vehicle-miles of travel and speeds on links throughout the countywide highway network, not merely the traffic volume at a point on a particular build alternative. How additional traffic associated with a build alternative disperses throughout the countywide highway network affects the countywide emissions. As a case in point, I-69 build alternatives entering Vanderburgh County in the US 41 corridor concentrate traffic in an already congested corridor, and result in greater countywide emissions than I-69 build alternatives entering Vanderburgh County in the SR 57 corridor which is less congested.

7. "The air quality analysis was done for Marion and Vanderburgh Counties only. What are the expected air quality impacts for other areas, especially those areas that currently have very clean air?" (1106-147 Tokarski, p. 18)

"Proponents of this alternative conveniently forget (or intentionally omit) the negative environmental impacts of the added vehicle emissions due to the longer route when expressing their concern over the "environmental damage" that a predominantly new-terrain route would cause." (1104-008 Shook)

The air quality conformity analysis was confined to Marion and Vanderburgh Counties because these are the only air quality "maintenance areas". Carbon monoxide is most likely to be of concern in interchange areas, and will be examined and reported in Tier 2 NEPA documentation, as recommended by USEPA.

8. "Here is an opportunity to reduce vehicular pollution by selecting a more direct route. How much would it cost to achieve that same reduction in pollution by other means if a less direct route is selected? I only noted on paragraph in the summary that addressed air quality, and I believe there is an opportunity for significant improvement by selecting a more direct route." (0819-004 Hughes)

Depending upon the type of emission and jurisdiction being considered, some build alternatives are lower than others and the No Build Alternative. However, all alternatives have similar air quality impacts.

9. "According to the analysis in the DEIS, of the preferred alternatives, 4B increases emissions in both VOC and CO the most over that of the no-build alternative. Emission rates per Vehicle Mile of Travel (VMT) for VOC and CO increase as one moves from the highest to lowest roadway functional classifications. Because Alternative 4B does not propose additional interstate facilities, it is logical to expect this increase. It is important to note however, that even with the increases in VOC and CO, the SIP budgets are not exceeded with this alternative." (1106-129 Indianapolis MPO, p. 6)

In Marion County, the SIP budgets for VOCS, CO, and NOX emissions are not exceeded by any alternative (Build or No Build). Nevertheless, the emissions vary by alternative, and the relative relationship between the alternatives varies with the type of emission being considered.

10. "All alternatives other than the no-build increase VMT in the Metropolitan Planning Area. This results in changes in the emissions over that of the no-build alternative. In this case, the no-build alternative would be the Indianapolis Regional Transportation Plan. Alternative 3B increases NOX emissions the most over that of the no-build alternative. The DEIS concludes that "Because all alternatives fall under the SIP emissions budgets when added to the Indianapolis Long-Range Transportation Plan, the addition of any alternative to the Long-Range Transportation Plan would not jeopardize conformity with the SIP. However, analysis conducted by the MPO at the request of Bernardin-Lochmueller & Associates of a worst case scenario that utilizes SR 37 to I-465 shows NOX emissions would be exceeded in the 2025 time period. Therefore, further detailed examination of these alternatives is recommended before the project can proceed as proposed." (1106-129 Indianapolis MPO, p. 6)

The Preferred Alternative 3C meets the air quality standards and is now included in the Transportation Plan for the Indianapolis area.

11. "If INDOT were truly concerned about improving air quality - which they obviously are not - they would give more weight to the No Build alternative. This alternative would require vehicular traffic to use the existing road system which would produce increasing amounts of air pollution into the future due to stopping and idling traffic, but would not draw in vast new quantities of additional traffic. The overall result would be LESS air pollution than if a new interstate was built." (0824-025 Werne)

The Preferred Alternative 3C meets the air quality standards and is found in a conforming plan. The air quality conformity analysis was confined to Marion and Vanderburgh Counties because these are the only air quality "maintenance areas."

12. "The health consideration for being against any new terrain interstate is that the ozone fact influencing asthma in the youth is more serious than ever was previously believed according to the July 1, 2002 U.S. & World News. The American Lung Association of Indiana states it is the top chronic childhood disease and has doubled in the last ten years. In one study the U.S. & World News article states that on one sixth increase in ozone increases school absences sixty three percent." (1106-139 Ihrer)

"There are 50 million children with asthma now in the country and it will increase with every new highway we build." (0820-096 Bertuccio)

The air quality analysis was confined to Marion and Vanderburgh Counties because these are the only air quality "maintenance areas" for ozone. Preferred Alternative 3C meets the air quality standards for these two counties as established by the State Implementation Plan (SIP) for air quality. The air quality analysis examines volatile organic compounds, carbon monoxide, and oxides of nitrogen emissions from mobile sources in these two counties as precursors to ozone, and compares the total emissions to budgets established for each in the SIP. No air quality requirements have been established for other counties in southwest Indiana, and no air quality analyses have been performed. However, the magnitude of the emissions of these three pollutants is driven by vehicle-miles of travel and vehicle operating speeds. Greater vehicle-miles of travel result in greater emissions. On the other hand, increases in operating speeds result in lower emissions for volatile organic compounds and carbon monoxide, and in lower emissions for nitrogen oxide until high speeds are reached. Due to induced growth, all Build alternatives result in greater vehicle-miles of travel in southwest Indiana over the No Build Alternative, but result in greater vehicle-miles of travel on higher speed facilities. Thus, emission increases associated by more vehicle-miles of travel by construction of any alternative corridor are offset by emission reductions associated by more travel at higher operating speeds on Interstates.

13. "The southwest part of Indiana with less track home and strip mall develop offering more green, trees, and agriculture than other parts of the state provides the means to reduce the ozone not only for that part of the state, but also effecting the capital city of Indianapolis which is under review by the EPA for consideration for being declared a high ozone area which would also effect the whole central Indiana area. This would definitely dampen the central Indiana commercial growth. There has never been a reversal of this declaration type once they have been declared." (1106-139 Ihrer)

While the State of Indiana has made some recommendations on county designations per the eight-hour ozone standard, some recommendations have been deferred. USEPA is not anticipated to finalize the designations until year 2004. At this time, the impact on central Indiana development is unknown.

5.10 Highway Noise Impacts

1. "Page 5-53: The final EIS should discuss whether any impacts on wildlife species were considered in the noise analysis. Any published studies that assessed impacts of highway noise on relevant T&E species that were sought and/or reviewed during the Tier 1 process should be mentioned." (1107-697 U.S. Dept. of the Interior, p. 10)

FHWA noise provisions, 23 CFR 772 Procedures for Abatement of Highway Traffic Noise and Construction Noise, do not include provisions for the analysis of the effects of highway generated noise on wildlife, nor has the FHWA issued standard guidance or assessment criteria by which such impacts could be evaluated and how abatement performance measures could be determined. Likewise, consideration of the effects of noise on wildlife is not addressed in INDOT's Noise Abatement Policy. The majority of the literature addressing the physiological and behavioral wildlife responses to noise concern aircraft over flights (usually of national parks) or specifically focuses on the effects of off-road vehicles such as motorcycles and snowmobiles.

However, Section 5.10.5 has been added to the FEIS to address the issues of noise impacts on wildlife. This section reviews a USEPA publication entitled "Effects of Noise on Wildlife and Other Animals" and other relevant literature on the subject has been reviewed and summarized in the FEIS.

2. "It is indisputable that there will be widespread and serious noise impacts due to the I-69 extension through SW Indiana. ... The DEIS makes no statement on the noise impacts to wildlife. Non-human noise impacts must be addressed." (1106-147 Tokarski p. 18)

The FEIS includes a section on noise impacts to wildlife species (see Section 5.10.5).

3. "The noise analysis was insufficient and arbitrary for the entire 26 county Study Area (Table 5.10-2), A ten minute reading of noise levels at 11 sites in the middle of the day in early June is hardly representative of noise levels throughout a 24 hour period or throughout the year. The readings are especially suspect since all "noise" is treated equally ... To equate chirping birds in the middle of the day to heavy truck traffic at night is ludicrous." (1106-147 Tokarski. p. 18)

The noise analysis conducted for the EIS was of sufficient detail to provide a relative comparison of the number and distribution of potential highway noise impacts anticipated along each of the proposed alternatives based on the appropriate noise abatement criteria given the level of alignment development that has taken place at this stage of the project. Further analysis will be conducted in Tier 2 to satisfy the

requirements of 23 CFR 772 and the INDOT Highway Noise Policy. The FEIS states that "if a build alternative is selected a more thorough analysis identifying and quantifying impacted sites will be conducted in the subsequent Tier 2 NEPA studies."

The use of the randomly distributed ambient noise measurements was never intended to represent any and all possible noise levels experienced throughout the project area. Generally, in rural areas the day and night ambient sound levels do not vary much. The exercise was simply employed to establish the range and average noise levels that can be expected in rural environments where highway traffic was not the predominant source of sound. The placement of a highway through a rural area with relatively low sound levels has the potential to increase noise by 15 dBA or more (substantial increase) even though the absolute levels may not approach or exceed the 67 dBA noise abatement criteria. The eleven rural ambient samples were used to generate an average ambient level to be used in evaluating the potential for substantial increase in rural settings based on predicted future traffic volumes for each of the alternatives. During Tier 2 the ambient noise levels at each of the potentially impacted rural receivers adjacent to the alignments will be modeled.

The Tier 1 analysis makes no attempt to compare the effects of chirping birds in the middle of the day to heavy truck traffic at night. The Tier 2 analysis in accordance with INDOT policy will evaluate anticipated noise impacts for the selected alternative at the noisiest hour. This is typically, although not necessarily, an AM or PM peak traffic volume period. Current INDOT policy does not include specific noise abatement criteria for night-time heavy truck traffic.

The study does not presume that all noise is equal. Noise, defined as nuisance sound, is not always a function of the source or composition as it is the intensity of the sound experienced.

4. "There is a concern about Highway noise as related to residential areas along Mann Road. I have discussed this issue with a representative of the Indianapolis Metropolitan Planning Organization and obtained a copy of INDOT's Highway Traffic Noise Policy. I understand a Traffic Noise study will be required, and if necessary Noise Barriers of up to 16 feet high might be required. In discussion with the Highway Consulting Engineer, I was advised that INDOT has constructed very few such Noise Barriers. Most, if not all, of the Noise Barriers along Interstates in Marion County have been constructed by property owners." (1101-018 Cockrum, p. 2)

Preferred Alternative 3C will not use the Mann Road corridor. More detailed noise analysis studies of sensitive receivers will be completed in the Tier 2 EIS.

5. “By limiting yourself to a narrow corridor around the highway, you are able to ignore most of the negative effects of I-69 on Southern Indiana. You ignore noise pollution and runoff into our waterways.” (1104-018 Bruce)

The Tier 1 analysis addresses potential highway noise related impacts and water quality along each of the proposed alternates. A more detailed analysis will be conducted, including specific mitigation measures to abate these impacts, in the Tier 2 EISs.

6. "(6) As to rural peace and quiet, won't the trucks make the same noise on Highway 41?" (1031-012, Williams)

Truck traffic on an upgraded US 41 will generate the same level of noise as it would on an alignment on new terrain.

5.11 Wild and Scenic Rivers

1. “There are no National Wild and Scenic Rivers in the study area.” (1107-696 USEPA Region 5 Technical Comments, p.4)

The East and West Forks of the White River are listed on the National Park Service Nationwide Rivers Inventory and are discussed in Section 5.11.

2. “Page 5-73 and 5-74: This section correctly identifies the East Fork of the White River and the West Fork of the White River as being listed on the NRI, prepared by the NPS, and correctly identifies the outstanding resource values (ORVs) the rivers possess.

“It should be noted the intent of the NRI is to provide information to assist in making balanced decisions regarding use of the nation's river resources. A Presidential directive and subsequent instructions issued by the Council on Environmental Quality (CEQ) requires each Federal Agency, as part of its normal planning and environmental review processes, take care to avoid or mitigate adverse effects on rivers identified on the NRI. Further, all agencies are required to consult with the NPS prior to taking actions that could effectively foreclose wild, scenic, or recreational status for rivers on the inventory. The CEQ instructions include procedures to determine if a proposed action could have an adverse effect on the natural, cultural, and recreational values of the river.

“The proposed project should be planned and implemented so as to avoid or mitigate adverse effects to the stated outstanding resources of the both rivers. While the DEIS identifies river corridor crossings associated with each alternative, it does not provide an

analysis of potential impacts to the ORVs of either river, including impacts associated with visual intrusions and noise. In the event Alternative 1, which avoids crossing the rivers is not selected as the preferred alternative, the Department strongly recommends that measures to reduce sedimentation during construction (Best Management Practices) are incorporated into all erosion control plans and adhered to throughout the duration of the project. Additionally, we recommend the bridge deck be designed to prevent pollutants (fluids, oils, salts, etc.) from entering into the river. Design features to reduce visual impacts should be evaluated.” (1107-697 U.S. Dept. of the Interior, pp. 10-11)

The NPS has been coordinated with, and will continue to be throughout Tier 2 studies. Best Management Practices will be employed during construction, and design features to reduce pollutant introduction and reduce visual impacts will be evaluated.

5.12 Construction Impacts

1. “I bet your travel time studies don’t include the 20 minute to 1 ½ hour back-ups cause by never ending road construction. And let’s not forget the complete shut down of I-70 from accidents, which seems to be occurring almost monthly now.” (0925-009 Peeler)

For each alternative, the magnitude of annual construction-related delay costs was estimated. See Table 5.12-1. The alternatives using SR 37 and/or US 41 have higher construction-related delays. For example, Alternative 2C causes added driver costs of over \$50,000,000/yr (during construction) due to added time, vehicle operating costs, and increased crashes.

2. “Upgrading 41 to a limited access highway would be: more expensive because of purchasing additional property for right of ways for access and property replacement; take longer to complete due to relocating commercial and private accesses as well as families and businesses; expose travelers to a multitude of hazardous situations involving construction equipment and congested traffic; not to mention the inevitable result of physically separating people who have well established family life and the financial impact on businesses due to disruption and separation from customers who will have to travel longer distances to purchase goods or services.” (0813-003 Lamb)

"5. One issue that deserves more attention than it has received so far is this: If 41/70 is turned into an interstate, what happens to traffic patterns between Evansville and Indianapolis during the five, seven or even ten years the Highway is under construction? It appears the delays and obstacles that could be present during this lengthy period of time, would shift even more traffic on to the rural roads of Southwest Indiana, making them even less safe and less efficient than they are now." (1107-161 McManus)

"And four I'd like to ask INDOT to dig a little deeper with their study to tell us down here what will happen to us if they build 41, 70 during that five to ten year period when that's going on. Will we also have to go onto those inappropriate rural roads with propane tanks, fuel trucks, school busses even more so than we do now, that ought to be studied a bit further." (0821-244 McManus)

"Additional, in evaluating the less direct route, which requires a major overhaul of the already heavily traveled U.S. 41 to Terre Haute, the risk to life and property over the construction period has to be weighed versus the new terrain route that substantially eliminates this interim danger and disruption." (1009-006 Evansville Regional Business Committee, Inc.)

"Please do not allow U.S. Highway 41 to be ripped up and placed under construction for years to come. I have driven U.S. Highway 41 hundreds of times and I am very familiar with the trip through Princeton, Vincennes, Sullivan, Terre Haute and on through Vermillion County. U.S. Highway 41 has undergone many improvements through the years. I have snaked around orange barrels, bumped on rough pavement and waited in countless traffic stops. Millions and millions of tax dollars have been spent. But it was all worth it. We now have a well-surfaced, straight, four-lane highway to serve the needs of western Indiana. Now that it is finally finished, please do not rip it up and force me, and the tens of thousands who utilize this highway daily, to endure additional construction for the next decade. How long would it take to drive to Indianapolis during that construction? 4 hours?" (1106-131 Cheek)

"1. Safety. Updating the existing US 41 corridor to interstate standards will be a hazardous and time consuming problem." (1106-063 Ball)

"An additional factor supporting the direct route is the concern for delay and safety associated with next best alternative (a major overhaul of existing U.S. 41)." (1010-004 Geissinger)

These factors were taken into consideration. Alternative 1 (upgrading US 41 from Evansville to Terre Haute) leads to increased user costs of \$45,000,000 annually during construction. See Table 5.12-1. \$15,000,000 of this annual cost increase (one-third) is expected to be a result of increased crashes that occur during construction. By comparison, the Preferred Alternative 3C leads to increased user costs of \$31,000,000 annually. These costs assume that most construction occurs between 2007 and 2017.

3. First of all, extensive work that is already underway for improvements along Route 46 will have to be torn up and reconfigured all over again to conform to their master plan—a blatant waste of our money." (1021-034 James-Houff)

A new interchange has been constructed on SR 37 for SR 46 as part of the added travel lanes project on SR 46. As part of Tier 2 preliminary design, consideration will be given to the need for any modifications to meet freeway standards.

5.13 Historic and Archaeology Impacts

1. "...EPA defers to the parties involved in the Section 106 consultation to consider and to address these potential adverse effects associated with the proposed project. We recommend that FHWA include, if applicable, concurrence from the SHPO regarding the results of the Section 106 consultation process for the Tier 1 NEPA process in the FEIS. This will insure that any adverse effects to cultural/historic resources, and possible mitigation measures for adverse effect, are identified, and taken into consideration when selecting the Preferred Alternative that will be identified in the FEIS." (1107-696 USEPA Region 5 Technical Comments, p. 13)

"The key question is whether the "tiered" approach to assessment of environmental impacts can be consistent with NEPA if the initial tier of data collection and manipulation does not provide adequate information and analysis to assess impacts and make informed choices among the project alternatives." (1022-017 Munson, p. 2)

"A second question is whether Section 106 compliance under NHPA is sufficient for compliance with NEPA when a Tier 2 study will be used to identify impacted archaeological resources rather than the Tier 1 study. How can the consequences of construction in the alternatives be considered when alternatives are not studied at a level of detail sufficient to know or estimate impacts?" (1022-017 Munson, p. 2)

"Landscapes and roadscape are documents of who we are—and who we were—every bit as much as papers tucked away in archives. Even the Department of Interior, never very quick to move on such things, is beginning to recognize the fact, and these valuable resources are beginning to be documented and honored as Rural Preservation Districts and Multiple Property Resources. But the process takes time, and the methodology of the consultants was insufficient to identify all the eligible properties. One needed to spend considerable time and travel all the affected routes. (I regret that I was too deep in other work to have taken the time myself.)" (1026-012 Society of Architectural Historians)

"We urge the Indiana Department of Transportation and the Federal Highway Administration to conduct a more thorough analysis of historic structures and sites before

the project selects a specific route and proceeds to Tier II." (1105-199 Owen County Preservations, Inc., p. 3)

"The Board urges the Indiana Department of Transportation and the Federal Highway Administration to require a more thorough analysis of the potential impact on historic and archaeological features be conducted prior to a decision to build I-69 and prior to the selection of a specific route." (1104-062 Monroe County Historic Preservation Board of Review Letter, p. 2)

The INDOT and FHWA consulted with the SHPO and ACHP in developing the Section 106 Compliance Plan, which discusses the "phasing" of the Section 106 consultation (see Appendix P of the FEIS). The "phasing" allows for the analysis in Tier 2 to build on information collected in Tier 1. These issues have been addressed in a Tier 1 Memorandum of Agreement which is included in the FEIS in the Appendix.

2. "More thorough methods than those used for this DEIS have been used elsewhere and are more predictive. These methods can be used without compromising the protection of sensitive archaeological sites." (1106-147 Tokarski, p. 19)

"A. Predicted Archaeological Site Densities. One of the DEIS's manipulations or interpretations of the archaeological data is projection (or prediction) of archaeological site density, using the estimated acreage required for construction of the various alternative routes. The density figure employed is one site for every six acres. The DEIS cites a study by Gary Ellis and others (1989), which refers to a reconnaissance survey in Green County, for this particular density figure. The DEIS claims this figure to be "a site density predictive model for southwestern Indiana" (App. M, p. 24), but the cited study does not ascribe such lofty status to the particular figure of 1 site per 6 acres. Given the environmental variability in Green County, let alone other parts of southwestern Indiana, archaeologists who have worked in the region know well that site density varies greatly with respect to the diverse environmental features present. Further, reports indicating variable archaeological site density in the southwestern Indiana region were cited in the DEIS, and others are on file at the Indiana Division of Historic Preservation and Archaeology and were available to the authors of the DEIS." (1022-017 Munson, p. 5)

"The use of a single density measure to compare the likely impacts to archaeological resources of the various alternatives, which contain not only diverse environmental features but also features not present in Green County, is scientifically, statistically, and logically indefensible. Therefore, the projections in Table 5.13-3 in the DEIS on the estimated density and archaeological sites that would be affected in the various alternate routes are meaningless numbers. These cannot be used to draw any conclusions or make

decisions about likely archaeological impact among the alternate routes because the numbers are not ‘information.’” (1022-017 Munson, p. 5)

"B. Prediction of Areas Where National Register of Historic Places (NRHP) Eligible Sites are Likely. The DEIS notes that archaeological resources have been destroyed or severely compromised by plowing, erosion, and modern constructions, but that floodplains of rivers and streams contain stratified prehistoric and historic archaeological resources. The DEIS claims (p. 26), ‘It is in the floodplains that much of our remaining undiscovered records of the past are to be found.’” (1022-017 Munson, p. 5)

"As archaeologists who have investigated a number of deeply buried archaeological sites in floodplains, and long argued for subsurface surveys, coring, and geoarchaeological expertise to discover such sites, we find that statement unsupported. In fact, "much" of our archaeological heritage is represented in mounds, cemeteries, earthworks, villages, farmsteads, and rockshelters, which are not in floodplains. While such sites are not covered by flood deposited sediments and often are shallow, a high proportion of these sites have intact cultural deposits that extend below the reach of the plow (e.g., structural features, storage facilities, refuse disposal areas, burial pits, etc.) or have not been affected by plowing and other recent land-alterations. Such sites make up a high percentage of the NHRP-eligible archaeological sites in Indiana and throughout the Midwestern U.S., and some number of them can be expected to be present in the alternative routes. In fact, we have been involved in the excavation of more than 41 such sites in Indiana, and 34 others in Ohio, Kentucky, Illinois, and Wisconsin. On the other hand, systematic archaeological survey of extensive outcrops of floodplain sediments in the Wabash and White River valleys, as well as others, have indicated that sites are far less common in these floodplain locales than they are in exposed outcrops of Ohio Valley floodplains. It would be gross error to focus archaeological evaluation strategies, or surveys and preservation planning, on the floodplains alone, since that would produce a highly skewed representation of the 12,000-year history of human experience in Indiana and our cultural heritage.” (1022-017 Munson, p. 6)

"Moreover, the so-called modeling in the DEIS uses opportunistic archaeological survey data rather than scientific survey data, as we noted above in our section 1. Regardless of the type of GIS manipulation or the (unknown) statistical procedures employed, the type of archaeological data utilized is not appropriate for correlating arch archeological and environmental variables or predicting likely impacts. Further, no predictive modeling statistics are offered in the DEIS to inform about correlation of archaeological and environmental variables or probability of impacts. Even if a computerized archaeological database, a GIS, a set of maps, and a series of statements is claimed to be a modeling tool, it is not necessarily a model - nor can it be reliably used as such in making decision - if the steps used in developing the "model" are not scientifically sound. Nothing in the

DEIS would support a conclusion that the supposed model is sound." (1022-017 Munson, p. 6)

"Predictive modeling is not a new science - not even in archaeology - but it is a science. When applied to a particular problem - such as choosing among alternative construction plans - the assumptions about data, analytical and statistical methods and all the results must be described in order for the model to be evaluated. In the DEIS this was not done. Very clearly, the DEIS presents neither a model nor anything like a predictive statement that can be substantiated in any way." (1022-017 Munson, p. 6)

"Last but not least, the DEIS claims (App. M, p. 27), "Although not presented here in this public document to protect specific local cultural resources, the model can easily be zoomed in...to refine our area of high probability to specific soil types or characteristics..., slope, aspect, or distance to water." But it is not necessary to compromise protection of archaeological resources in order to present the data used in developing and testing a model that predicts the locations of NRHP-eligible archaeological sites, so the claim of "protection" is not an excuse for failing to describe the essential elements of a predictive model. A map of properly developed and tested correlations would not have to be any more specific than what is illustrated in Figure 2 for the public to be able to evaluate the study of archaeological impacts." (1022-017 Munson, p. 7)

"To summarize, the DEIS's data interpretations of archaeological site densities are unsupported, and its so-called "predicted areas of potentially eligible archaeological sites" are not scientifically valid predictive statements. Regardless of having a GIS for the DEIS, and something characterized as a modeling tool, what is presented is not a model of anything." (1022-017 Munson, p. 7)

"While we agree that the GIS tool is very useful in presenting and organizing data, in terms of the archaeological information presented in the draft EIS, it appears that the information is more of an enhanced data and records check or descriptive set of data than a representative "model" or "predictive model." Although it is stated in the draft that a "GIS archaeological locational database and a GIS archaeological predictive modeling toolkit for use in the southwestern Indiana Tier 1 EIS alternative selection process has been completed," we would state that the database as described is in progress and still merits refining and the addition of information and data relevant to the accurate or precise prediction of the locations of significant archaeological sites. While recognizing and acknowledging the use of the large amount of information, the information compiled and placed in a GIS format, and that the GIS database is a work in progress, the GIS information is not statistical and is not based upon a representative sample of archaeological resources in the alternatives under study. It does not at this stage appear

to precisely "determine predicted site densities" (see Appendix M, page 1), especially those based on a number of natural and cultural attributes. On page 26 in Appendix M, it states that 'much of the data required did not exist or was not available in the right format to create useful archaeological predictive modeling tools . . .'

"The model would need to be fine-tuned to more accurately predict specific resources, of a particular time period, a particular site type, National Register eligibility, etc. We note that archaeological resources different in type, such as historical, prehistoric, and cemeteries, were not separately modeled and predicted in any detail. Additionally, there may be archaeological deposits/sites around historical structures, within historic properties and districts, in cultural landscapes, etc. These, or their potential to be present, are not treated in detail in the information presented. Given that the data utilized in the GIS database, from the DHPA, for example, may not be complete or comprehensive, we suggest more local efforts in further studies to find out more about unreported sites, sites not officially recorded, cemeteries, cultural landscapes, archaeological districts, etc. The model does not present a detailed discussion of the known archaeological resources in the study areas, which are the most common, what site types are present where, on what landforms certain sites are found or that certain cultural groups utilized, etc. We would ask for elaboration on what variables were used for the predictive modeling. For example, were soils, elevation, cultural characteristics, landforms, elevation, slope, etc. used to predict site locations? We suggest that the GIS layers and information continue to be updated, refined, and utilized." (1107-702 IDNR, Division of Historic Preservation & Archaeology, p. 3)

"So, where does the DEIS predict archaeological sites of NRHP eligibility to be located? It's hard to say, because the DEIS is silent. The DEIS presents a map showing "a simple correlation ... presented with our newly created GIS modeling toolkit to illustrate graphically where the high probability of National Register of Historic Places Eligible sites are most likely to be found (Figure 2)" (App. M, p. 28). What is being correlated? Correlation implies two or more variables. What variables? Correlation is also a statistical statement. Where are the statistics that inform us about the basis for the prediction, and the confidence that we can have in such prediction?" (1022-017 Munson, p. 7)

The GIS based archaeological analysis during Tier 1 was designed to first define what data sets were needed for the predictive analysis, then develop essential data sets for comparison of potential archaeological resources within the alternatives. Prior to this study, GIS data of adequate resolution was not digitized or did not exist for the Southwestern Indiana Study Area. Custom data sets developed as a part of this project include digitized recorded archaeological site locations; digitized, geo-referenced soil survey maps to identify drainage characteristics; 10-meter Digital Elevation Models (DEM) to determine percentage of slope; and a hydrography layer

representing natural water sources, such as rivers and streams for prehistoric archaeological sites, and man-made water sources, such as canals and ditches for historic archaeological sites.

The archaeological site potential analysis was based upon proximity to historic transportation corridors, such as traces, trails, roads and railroads, and proximity to recorded historic architectural resources, such as historic schools, farms, residences, churches, mills, and government and industrial sites. These resources were formatted for thematic GIS analysis. A GIS cemetery database was developed using Cemetery and Burial Ground Registry records from the SHPO, County Historians, and volunteers from the Indiana Pioneer Cemetery Restoration Project. The GIS database developed for Tier 1 will be refined during the Tier 2 studies. In the MOA, the SHPO has concurred that the existing level of data is sufficient for Tier 1 decision-making. The MOA is included in Appendix P.

The GIS-based archaeological site potential analysis showed that all the I-69 alternatives have the potential for numerous sites within the right-of-way of the working alignment. The MOA, signed by the SHPO, states the SHPO is satisfied that the investigation and evaluation of historic and archaeological resources completed to date is satisfactory for the purposes of Tier 1 decision-making. For further discussion of the GIS-based archaeological site potential analysis, refer to Section 5.13, *Historic and Archaeology Impacts*.

3. "The Maryland Ridge potential historic district is divided by Alternative 3. See attached comments (Attachment D)." (1106-147 Tokarski, p. 19)

"The enclosed letter, referring to our application process for the National Register of Historic Places as a Cultural Landscape and Rural Historic District, concerns the community known as Maryland Ridge that is neither marked nor included in the DEIS for the I-69 project released in July of 2002. The Maryland Ridge Community is located at the precise junction of Alternative Routes 3A, 3B, and 3C. As a community, we were extremely concerned to find that the historic and archaeological resources found throughout the community are not included in the section 106 report. We are further concerned to note no inclusion of the unusually high number of karsts, springs, and caves (an extensive report concerning the geological aspects of which has been submitted by Gary Milhoan and dated November 4, 2002) found throughout the community." (1101-013 Maryland Ridge Community)

"The community that I live in is known as Maryland Ridge. Both of my Great, Great, Great Grandfather's were part of the founding fore-fathers of this community. Now I-69 may take away the historical significance of this community forever. Our community is

currently in the process of applying for designation as a rural historic landscape as well as a cultural landscape." (1007-013 Buskirk)

"The purpose of this letter is to notify the appropriate agencies, including the Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology, of our intent to submit an application for the community historically known as 'Maryland Ridge' to the National Register of Historic Places as a Cultural Landscape and Rural Historic District. The significance of the Maryland Ridge Community to state and national historical and archaeological preservationists is found in its unequaled history as an industrial and agricultural community, founded, cleared, worked, and developed cooperatively by early black, white and freed black settlers as a part of the anti-slavery movement of the early nineteenth century history of the State of Indiana and the United States of America. The community is located in a three to seven mile wide band along the Monroe and Greene County line in South-Central Indiana, and includes roughly the vicinity of and between the towns of Elwren, Stanford, and Buena Vista in Western Monroe County; and Hendricksville, Solsberry, and Hobbieville in Eastern Greene County. Although it appears that the actual legitimate landscape based on the period of settlement and development encompasses no less than 75 sections of land and 48,000 acres, we intend to focus primarily on the core area of settlement and development, along the old Spencer Springville Road, which would allow a more workable area of approximately 25,000 acres." (1106-0147 Maryland Ridge Community p.1)

"Placement of 'The Maryland Ridge Community' as a Cultural Landscape and Rural Historic District designation on the National Register of Historic Places would lend recognition as well as preservation to an incredible resource irreplaceable in our local, State, and National history as it may be counted among the very rare, and possibly only, remaining early examples of the uniquely American diversity combining anti-slavery, industrial, agricultural, and religious movements into a single community (Diane Perrine Coon, Historian of African-American Agricultural and Industrial Settlements in Indiana). The quality of significance to American history, archaeology, and culture is present throughout the district and is communicated through sites, buildings, structures and objects that possess integrity of location, design, setting, materials, feeling, and association. We believe these will well meet the criteria for evaluation of the significance of archeological properties and rural historic districts: Association with events that have made a significant contribution to the broad patterns of American history; Association with the lives of persons significant in our past; Embodiment of the distinctive characteristics of a type, period, method of construction, representing a significant and distinguishable entity whose components may lack individual distinction; and that will yield information important in the history of the anti-slavery, agricultural, industrial, and religious movements of the United States. Further, the district includes the deep-rooted history of development, and continued existence of a unique community whose distinct The cultural heritage has survived more than 185 years through the lives

and culture of the direct descendants of the original settlers who continue to comprise the vast majority of property owners and community members." (1106-147 Maryland Ridge Community p. 1)

"Second, application to the National Register of Historic Places as a Cultural Landscape and Rural Historic District will include the period of community development from 1840 to 1953 displayed archaeologically, culturally, and structurally throughout the community and visible in no less than 142 homesteads and farmsteads, thus far documented. Again, each cleared and built by a combination of the original settlers, including freed slaves and free black settlers, and their descendants. Existing sites include structures such as houses, barns, outbuildings; spring houses, hand hewn sandstone foundations, cellars, wall, wells, and cisterns; storefronts, churches; etc." (1106-147 Maryland Ridge Community p. 2)

"Third, the application will include the homes and ancestral homesteads of significant persons associated with Indiana and U.S. culture and history as found in the Maryland Ridge Community: Marion Blair, who painted the portrait of Indiana Governor Oliver Perry Morton during the American Civil War, and portrait of Abraham Lincoln from the funeral bier; the history and home of Mae Lee Everett, the great grand daughter of General Robert E. Lee, whom the community rescued from institutionalization, caring for her until her death in 1970. Ancestral homes would include the family farm and homesteads of the Indiana writer Booth Tarkington; the home and family farmstead of country music legend Joe Edwards, and the family farmstead and ancestral home of Hoagy Carmichael." (1106-147 Maryland Ridge Community p. 3)

"Application to the National Register of Historic Places as a Cultural Landscape and Rural Historic District will also include a history of the economic and agricultural development of the community. Unlike many rural and industrial communities, the Maryland Ridge Community had no planned or formal center for social or economic development during or after the period of settlement. Rather, business undertakings and cottage industries are found dispersed throughout the community much like the farmsteads were." (1106-147 Maryland Ridge Community p. 7)

"This letter represents my distress and concern about the future of the community where I live which happens to be located in the direct route of the proposed I-69 (routes 3 A, B, and C). All three of those proposals would fragment and/or destroy the community located in Eastern Greene County and Western Monroe County whose original families still occupy the property homesteaded by their forefathers and foremothers in the early 1800's. The original families moved here from Maryland to ensure their religious freedom and the area became known as the Maryland Ridge Calvert Society. The group founded a church known as the Greene County Chapel that still stands as a landmark in this area. In addition to many structures and artifacts (houses, barns, trails, roadbeds,

wells, cellars, original fence lines, etc.) there are also many springs and karsts throughout this area. The Geology Department at Indiana University noted this area when the study began ten years ago, but the current maps and routes chose to ignore their study." (0917-014 Fowler)

Much effort has been involved in discerning if Maryland Ridge is, indeed, a potentially eligible historic district pursuant to the National Historic Preservation Act. As explained below, the SHPO has concurred that, based on existing information, the Maryland Ridge area is not likely to be a historic district.

At the consulting party meeting held August 20, 2002, one of the attendees, Alexander Scott, suggested that there may be a Maryland Ridge Historic District covering an approximately 75 square mile area of Greene, Owen, and Monroe counties.

On September 5, 2002, a meeting was held in Greene County to view resources in this proposed district. The meeting was attended by the SHPO staff, a representative of Historic Landmarks Foundation of Indiana, and Alexander Scott. According to Scott, he was researching the genealogy of the residents and had located remnants of fence lines, cabin foot prints, early roads used by the settlers, and evidence of early field patterns distinguished by the rocks along the borders of the fields cleared by early settlers and their kin. The staff of the SHPO agreed that few historic buildings with significant integrity existed – with the exception of the Edwards house (Greene 00066) (in the APE) and the central passage house (Greene 00064) (outside the APE). Most of the buildings were altered significantly.

On September 12, 2002, the further discussions with the SHPO were undertaken. At that meeting the SHPO presented a letter dated September 12, 2002, which the SHPO had written to Scott concerning the Maryland Ridge area. The letter stated:

Most of the farms we saw, or were recorded in the two Interim Reports, included a number of non-contributing barns or other buildings. In many cases, main houses were missing or replaced. On a broader scale, the whole area includes disruptive groupings of non-contributing manufactured housing or other non-traditional housing forms. The use of land and typical subdivision scale of these developments breaks the historic pattern of the area.

In summary, while we feel that the Maryland Ridge area does not meet the National Register criteria, we can change that opinion based on the information outlined in this letter.

The information outlined in the letter referred to an attachment, which described the process of conducting research on land uses and historic farms. There was a consensus that insufficient above-ground resources remained to support a historic district, but there may be archaeological sites. It was further decided that the property identified as the Edwards House (Greene County 00066) would be considered as potentially eligible for the purposes of the Tier 1 study.

At a meeting held on October 31, 2002 with the SHPO, it was reaffirmed that Maryland Ridge was not likely a district.

On November 4, 2002, the SHPO reviewed the concept of a district called Maryland Ridge when Alexander Scott submitted the first extensive information to the SHPO regarding his intention to seek National Register status for Maryland Ridge. He had reduced the size of the district by nearly half. Instead of 75 square miles, it was now approximately 40 square miles, still a vast area. Though interesting and informative, Scott's communication contained little new information. At that November 4, 2002 meeting, the SHPO reaffirmed that due to the lack of any new evidence to support a district, that this 40-square mile area clearly has an interesting history, but it lacked the favorable ratio of contributing to non-contributing properties bound by a common theme.

At this time, the best available data indicated that the Maryland Ridge area is not eligible as a rural historic district. Further analysis of this issue will occur in Tier 2.

4. "The first meeting of all the Section 106 consulting parties was not held until May of 2002. This was very late in the development process and left insufficient time for potential Section 106 impacts to be adequately addressed by all parties. Also insufficient information was supplied for consulting members to verify the locations of potentially impacted historic sites in relation to the proposed alignments. For example, the Goss house near Paragon is within a proposed ROW but was not listed." (1106-147 Tokarski, p. 19)

Section 106 consultation activities have occurred throughout the project process. A detailed chronology of activities can be found Section 5.13.2.2 of the FEIS and in Appendix P. The project historians used site numbering consistent with the inventory numbering in the Interim Reports available at the SHPO, at most public libraries, and for purchase.

The Goss house is a Hoosier Homestead Farm. It was listed in the Interim Report as a contributing property. The project historians surveyed it, but concluded that modifications made to the house over time have caused it to lose its integrity.

Therefore, the Goss House has been categorized as ineligible for the National Register. The SHPO concurred in this finding. It should be noted that Hoosier Homestead Farms, such as the Goss House, are a separate designation, based upon an Indiana Program, and have no connection to the National Register.

5. "Figures 5.13-1, 2, 3, 4, and 5 appear to show far more potentially eligible properties for Section 106 designation than does Table 5.13-1. Why the apparent discrepancy?" (1106-147 Tokarski, p. 19)

In regards to the "apparent discrepancy" between Figures 5-13,1,2,3,4, and 5 and Table 5.13-1 in the DEIS referenced by the commentor, the table lists the number of potentially eligible properties in the working alignment (240 - 470 feet) and the figures show the number of potentially eligible properties in the Area of Potential Effect (which is the 2 mile wide study band).

6. "The DEIS states, page 5-95, that "creative mitigation" measures can be employed to reduce adverse effects on historic properties. What is "creative mitigation" and are those additional costs included in the cost estimates?" (1106-147 Tokarski, p. 19)

Mitigation measures are included in the signed Section 106 Memorandum of Agreement, which is included in Appendix P. Creative mitigation includes such measures as preservation easements, interpretive sites, and educational materials. Mitigation costs have been estimated in the FEIS in Chapter 7.

7. "A third question concerns the logic of the methods used in this Tier 1 study - specifically the narrow width of the working alignments (sometimes called "footprint," [App. M, p. 14]) versus the much wider study corridors. For the archaeological impact study, the focus is on the narrow alignments. As such, the only impacts listed are those on previously recorded archaeological sites within the working alignments; see Table 1 (app. M, p. 23). A wider, corridor-wide assessment of impacts would have avoided many likely problems. What happens when the working alignment has to be moved (for example to avoid one of the historic cemeteries or fragile resources that are not plotted on the DEIS maps)? Will it be necessary to redo the DEIS for archaeology impacts whenever the alignment shifts? This seems to be a required course of action since doing otherwise would mean that the recorded archaeological resources in the "revised alignment" would be ignored in project descriptions." (1022-017 Munson, p. 2)

"A fourth, related set of questions concerning impact study of the corridors vs. the alignments is that the Tier 1 Record of Decision (ROD) is to approve a single, selected corridor. "The Tier 1 ROD will not select a specific alignment within that corridor." (DEIS, p. 2) But the DEIS for archaeology addresses the "working alignment" (App. M) rather than the wider corridors, indicating that there are already-selected alignments

within the corridors. Thus, the archaeology impact study indicates that alignments have already been chosen prior to the DEIS. Further, why are the potentially impacted recorded historic sites enumerated for the width of the corridors, but the likely impacted archaeological sites are tabulated only for the working alignment, when NHPA and Sec. 106 applies to both historic and archaeological sites?" (1022-017 Munson, p. 2-3)

Although the DEIS listed only those recorded archaeological resources within the working alignment, it is noted in the report that the actual study encompassed a mile on each side of the centerline of the working alignments, encompassing the entire two mile wide study bands. Adjustments in the working alignment are an expected part of the planning process in Tier 2. A listing of all recorded archaeological resources within all study bands is included in the FEIS as Appendix M.

8. "We would ask what "over 2088" sites in the five two-mile study bands means, and suggest that these at least be enumerated, and discussed in the archaeological portions of the EIS. Although 122 archaeological sites from the "proposed footprint" of the alternatives were discussed, mention of the other sites might serve to clarify situations when sites are reported to be missing from the study areas. As you know, it has been reported that some sites and resources are missing from some areas of some alternatives (e.g., the Virginia Ironworks site(s) or district)." (1107-702 IDNR, Division of Historic Preservation & Archaeology, p. 4)

The 122 sites within the 400-foot wide working alignment were discussed within the DEIS. The database used in preparing the DEIS included all sites within the 2000-foot wide corridor and the two mile wide study bands. All of those sites are included in the FEIS as Appendix M.

The Virginia Iron Works is discussed in great detail in the "Documentation of Section 106 Finding of Potential Adverse Effects" and is also discussed in Section 5.13 of the FEIS. The corridor was widened and the working alignment was shifted to further avoid this important archaeological resource. As for known National Register of Historic Places (NRHP) archaeological sites in Indiana, the corridors and working alignments were designed to avoid these known sites. A correlation between buried, intact archaeological resources, within floodplains was presented in the DEIS. Comments from the SHPO have correctly noted that NRHP sites are also found in other environmental situations as well. The FEIS addresses these comments more thoroughly in Appendix M. Archaeological field survey and test excavations will be conducted as a part of Tier 2.

9. "B. Data missing? Part I. In the 1990s, Bernardin, Lochmueller & Associates ("BLA") carried out, with their archaeological consultants, field surveys of portions of the project's alternative routes to discover archaeological sites. This information was conveyed at a public meeting in May 1996 about the project at Tri-North Middle School in Bloomington by Mr. Thomas Beard, of Landmark Archaeological Consultants, employed by BLA. Information from those surveys has not been included in the DEIS. Why not?" (1022-017 Munson, p. 3-4)

"Further, we have been told that the report of investigations from those surveys was withdrawn from the historic preservation review process at the State Historic Preservation Office after that report was submitted for review. We do not know who withdrew the report. But why was the report withdrawn, and why was the survey data not included in the DEIS?" (1022-017 Munson, p. 4)

All archaeological site data available within the five two-mile wide study bands was utilized, including that from unpublished sources, when available. A draft of the earlier 1990s field survey referenced was submitted to the SHPO as part of the 1996 DEIS for the Southwest Indiana Highway Project. That study was never finalized. However, all archaeological site forms derived from the 1996 DEIS were included in the State database and the information where relevance was utilized in this investigation.

10. "C. Data missing or excluded. Part 2 Unrelated to the DEIS, we have carried our professional work in several small portions of one working alignment, and so had unique expertise to assess how the DEIS studied the likely impacts to previously recorded archaeological resources in this limited area. Over a distance of three miles, four previously recorded archaeological sites are located in the Alternate 3 working alignment and were omitted from the DEIS! Our surveys covered only a small part of the alignment in this 3-mile stretch, so this is a particularly shocking number. Moreover, the sites were recorded more than 20 years ago. How many other parts of Alternate 3 have excluded data? Which other alignments have excluded data? Is 4 archeological sites per 3 linear miles an average figure for the data that was excluded from study? What types of archaeological sites were excluded from consideration?" (1022-017 Munson, p. 4)

"Three of the missing sites in the area we studied are prehistoric (12-MO-584, 12-MO-588, and 12-GR-744). 12-MO-588 is little know. However, 12-MO-584 is identified as PaleoIndian and 12-GR-744 is known to have multiple Archaic and Woodland components and densities of material that indicate a high probability of archaeological features still present below the plow zone. Neither of the sites is located in a floodplain. Both 12-MO-584 and 12-GR-744 would require intensive archaeological survey and test excavations to evaluate their National Register status." (1022-017 Munson, p. 4)

The 122 sites within the 400-foot wide working alignment were discussed within the DEIS. The database used in preparing the DEIS included all sites within the 2000-foot wide corridor and the two mile wide study bands. All of those sites are included in the FEIS as Appendix M.

11. "As we indicated in earlier, oral comments on the DEIS, we recommend that Table S-6 (and the similar Table 6-1) be revised regarding its "Historic Sites/Districts" line to show potentially eligible properties as well as those listed in, or formally determined eligible for, the National Register of Historic Places. Having compared Table S-6 with Table 8-2, we have surmised that the listed or determined eligible properties shown in Table S-6 (reported as zeroes for all alternates) were limited to those properties within any given *working alignment*. Because of the potential for the project to have impacts on historic properties besides demolitions or other takings (e.g., visual or noise impacts), Table S-6 probably understates the impacts of most or all of the alternatives. Moreover, the working alignments do not necessarily represent the exact location where the highway would be built if any one of the alternatives is chosen.

"Conversely, if one were to rely on the figures in Table 8-3 regarding individual historic properties and historic districts within the study band/APE as an estimate of the number of the properties of various kinds that would be adversely impacted, one would probably overstate the number of adverse impacts that any one alternative would have. This is so because not every individual, potentially historic property or potentially historic district that has been identified necessarily will be determined eligible for the National Register in the later and more intensive Tier 2 NEPA and Section 106 analyses that will be conducted on the alternative that ultimately is selected. Furthermore, not all of the properties or districts that ultimately are determined eligible will necessarily be found to be adversely impacted by the selected alternative. Simply finding an historic individual property or historic district within one or two miles of the selected alternative does not demonstrate that that property or district will be adversely impacted. A detailed assessment of each individual historic property or historic district will be necessary in Tier 2 in order to draw any specific conclusions about adverse impacts.

"As was suggested during our earlier discussion of this subject, given (sic) the information that has been compiled, the most accurate figures to use in Table S-6 for might be those for individual, potentially eligible historic properties and potentially eligible historic districts that are "in the Corridor," as shown in Table 8-3. We realize that even those figures are only rough estimates of the numbers of individual historic properties and historic districts that would be impacted by each alternative, but we think they probably are more nearly accurate than the figures for individual historic properties or historic districts within either the working alignment or the study band/APE. We realize, also, that using the figures for the corridors for this purpose may not be entirely

consistent with the way impacts to other kinds of resources (e.g., wetlands or threatened and endangered species) were calculated), but we would suggest that the use of the *corridors*, in contrast to the working alignments, for tabulating the numbers of potentially eligible, individual historic properties or potentially eligible, historic districts could be explained adequately in a footnote to Table S-6 (and the similar Table 6-1)." (1107-702 IDNR, Division of Historic Preservation & Archaeology, pp. 1-2)

Tables S-6, 6-1, and the table in the Atlas have been changed to reflect this comment.

12. “Based on that proposed revision of the method of tabulating individual historic properties and historic districts that would likely be adversely impacted by any given alternative, we have ranked the various alternatives, based on the number of impacts each likely would have. The alternatives identified in the EIS as "preferred" have been marked with an asterisk ("*"). The alternatives are ranked using the figures in Table 8-3, and are ranked from top to bottom (lowest ranking to highest ranking) to reflect the least number of likely adverse impacts down to the highest number of adverse impacts (i.e., the fewest impacts are ranked first, and the highest number of impacts are ranked last).

1	11 th	1 st (tie)
2A	4 th (tie)	1 st (tie)
2B	4 th (tie)	1 st (tie)
2C*	12 th	1 st (tie)
3A	3 rd	5 th (tie)
3B*	8 th (tie)	11 th (tie)
3C*	7 th	11 th (tie)
4A	1 st (tie)	5 th (tie)
4B*	1 st (tie)	5 th (tie)
4C*	4 th (tie)	5 th (tie)
5A	10 th	5 th (tie)
5B	8 th (tie)	5 th (tie)

“Looking at these rankings another way, listed in order of the assigned ranking, we see the following:

1st	4A, 4B*
3rd	3A
4th	2A, 2B, 4C*
7th	3C*
8th	3B*, 5B
10th	5A
11th	1
12th	2C*

Historic Districts

1st	1, 2A, 2B, 2C*
5th	3A, 4A, 4B*, 4C*, 5A, 5B
11th	3B*, 3C*

"Thus, the highest-ranked preferred alternative for impacts on individual, potentially eligible historic properties is 4B, although the non-preferred 4A did just as well. In the same way, the highest-ranked preferred alternative for impacts on potentially eligible historic districts is 2C, although the non-preferred 1, 2A, and 2B did just as well. Arguably only 4B and 4C among the five preferred alternates scored in the top one-half or so of all twelve alternates for least impacts to both individual properties and impacts districts." (1107-702 IDNR, Division of Historic Preservation & Archaeology, p. 2)

"Furthermore, we wonder whether Alternative 1, which would require no more than one-half as much new right-of-way as any of the other alternatives, might also cause fewer physical impacts to individual historic properties (not including archaeological sites) and historic districts than any of the other alternatives. The relatively high number of potential impacts to individual properties ranks it only 11th in that category. It seems plausible, however, that a number of those impacts would not be entirely new impacts but, rather, accentuated impacts that the existing US 41 right-of-way, pavement, overpasses, etc., already have on nearby historic properties, in the form of a expanded visual intrusion or increased highway traffic noise." (1107-702 IDNR, Division of Historic Preservation & Archaeology, p. 3)

This ranking system has been considered in the selection of a preferred alternative. However, it is important to note that impacts on historic properties are just one

factor to be weighed in selecting the corridor. Also, while this ranking system provides useful insights, the number of potentially impacted sites does not fully capture the nature of the sites and the extent of the impacts on those sites. FHWA and INDOT have considered these limitations of this ranking system in selecting a preferred alternative.

13. "As a consulting party for this project, the Western Regional Office (of the Historic Landmarks Foundation of Indiana) has remained involved in the Tier 1 EIS process and, considering such an extensive project, has been generally impressed with the work of Bernardin-Lochmueller & Associates and their consultants." (1107-700 Historic Landmarks Foundation of Indiana Letter, p. 1)

INDOT and FHWA value the input of the Historic Landmarks Foundation in the Section 106 process.

14. "I have personally visited several of the areas of Monroe, Greene, Owen, and Daviess Counties to examine first-hand the historic resources and scenic beauty that local citizens in these areas are attempting to protect. It has become quite evident through my interaction and consultation with these individuals that a "new terrain" route is seen as a direct assault on their heritage and way of life. I urge you to heed their voiced concerns through the comment period." (1107-700 Historic Landmarks Foundation of Indiana Letter, p. 1)

The concerns expressed by the residents of these communities have been considered as part of this process. Resources that meet the National Register eligibility criteria have been taken into account under Section 106. Consideration also has been given to socio-economic impacts including effects on quality of life.

15. "The Board's (Monroe County Historic Preservation Board of Review) fundamental concern with the DEIS as it relates to the potential impact on historic features in Monroe County centers on the lack of thoroughness associated with identifying features that may be impacted. Relying upon a survey that is more than ten years old without further consultation of local organizations such as the Board or local historic preservation groups causes the completeness of the analysis to be suspect. Throughout much of 2002, the Board has been conducting a review of the same report and has found it to be woefully inadequate relative to accuracy and detail and has initiated action to update the survey." (1104-062 Monroe County Historic Preservation Board of Review Letter, p. 1)

The project historians themselves have conducted numerous field visits to historic sites in Monroe County and have thoroughly reviewed all existing records including the County's *Interim Report* of historic properties. In addition, local historic groups and the Board were contacted for information regarding Monroe County because

the survey was an older survey. The project historians called Ron Baldwin, who was listed as the Monroe County Historian and who signed this letter on May 5, 2002, to ask about historic properties that previously had not been identified in the survey, and more specifically for any information that he might have on the Pleasant View Farm. On June 11, 2002, the project historians talked with Anna Burns of the Monroe County Planning Review about the efforts and sites that were being identified. At that time, help in the identification of previously unidentified properties was requested from Burns. No additional information was provided by either party.

16. "The Daviess County Old Order Amish Settlement near Montgomery is eligible for listing in the National Register of Historic Places, and therefore qualifies as a Section 4(f) property. ... The historic and cultural significance of the Daviess County Old Order Amish community are defined by the traditions, belief structure, and lifeways of the people who created the community and the descendants who have maintained the traditions to the present day. These traditions are inextricably tied to agriculture and as a result the overall cultural landscape is the principal tangible element of the community's significance." (1107-705 ELPC et al, p. 49)

"Although the (Amish) community does not retain a significant collection of historic buildings, the continuation of horse-drawn plows and other traditional farming practices has resulted in a relatively consistent appearance of the farmland itself, and the pattern of land use remains relatively consistent." (1107-705 ELPC et al, p. 49)

"The two bulletins [National Register Historic Bulletin #30 and #38] jointly support listing because of the inextricable bond between the living community's cultural traditions and landscape." (1107-705 ELPC et al, p. 49)

The Amish areas in Daviess County have been evaluated for their potential eligibility as a rural historic district and/or a traditional cultural landscape. The results of this analysis are presented in Section 5.13. As explained in that section, there is the potential for an Old Order Amish historic district located several miles east of Preferred Alternative 3C. There is also a much lower potential for a larger rural historic district associated with multiple Amish communities, which would extend closer to the Preferred Alternative 3C. Both of these areas will be further evaluated in Tier 2.

17. "Rural Preservation Districts and Multiple Property Resources need to be identified. This process takes time and the methodology of the consultants was insufficient to identify all of the eligible properties. More time should have been spent traveling all of the

prospective routes so that meaningful comparisons could be made." (1106-147 Tokarski, p. 30)

The *Documentation of Section 106, Finding of Potential Adverse Effects (800.11e documentation)* addresses the potential rural historic districts on pages 11 - 17. As presented in the Section 106 Compliance Plan in Appendix, the methodology was developed in consultation with SHPO and the Advisory Council on Historic Preservation (ACHO) and has been part of the Section 106 Process; the SHPO has concurred that the work completed was an appropriate level of detail for a Tier 1 Study.

18. "The Nicholson-Rand House, likely the most magnificent nineteenth century house in Decatur Township and a rare example of rural Gothic Revival architecture, is threatened even as the process is well underway for its listing in the National Register of Historic Places. To the consultant's credit, this resource has been reclassified, but only after the owner persisted in having them reexamine their finding that it was not eligible. How many others were missed?" (1106-147 Tokarski, p. 31)

"This letter constitutes my comments on the I-69 Draft Environmental Impact Statement issued on July 31, 2002. I have recently purchased and begun the restoration of an important historic known as the Nicholson-Rand House, located at 5010 West Southport Road, on the northwest corner of the intersection of Mann Road and Southport Road in southern Indianapolis. The house has been identified as potentially eligible for national register listing. A copy of the recently completed National Register nomination for the property is attached." (1106-130 Nicholson-Rand House, p. 1)

"For all the reasons set forth above, I urge that INDOT avoid detrimental impact on the Nicholson-Rand House and the rest of Decatur Township. While I do not oppose I-69, its entry into Indianapolis should take a route that is compatible with other existing uses. The Mann Road corridor is not the appropriate place for this project, and I would urge you to follow Senator Lugar's advice that all Mann Road options be eliminated from consideration." (1106-130 Nicholson-Rand House, p. 6)

"The Nicholson-Rand House, likely the most magnificent nineteenth century house in Decatur Township and a rare example of rural Gothic Revival architecture, was already rescued once from the wrecking ball by being moved and saved with protective covenants. It is now threatened again, even as the process is well underway for its listing in the National Register of Historic Places. To the consultants' credit, this resource has been reclassified, but only after the owner persisted in having them reexamine their finding that it was not eligible. But how many others are there?" (1026-012 Society of Architectural Historians)

In August of 2002, at the request of SHPO, the owner of the Nicholson-Rand property was contacted. At the same time, he prepared a letter outlining his reasons for having his property listed as potentially eligible. From their field reconnaissance, the historians were aware that the house had been moved from its previous location. Field reconnaissance had revealed no visible reason for the house to have been moved, i.e., the old site is still unoccupied land even several years later; the former site has not been developed and was, as of 2002, still a vacant site. All context, setting, and association for the Nicholson-Rand House have been lost. After reviewing the additional information sent by the owner and consulting with SHPO, the project historians decided to reclassify the property for Tier 1 purposes as potentially eligible, even though it had been moved, and sent documentation to the SHPO. The SHPO has sent a letter concurring that this property is potentially eligible. At this time, a National Register nomination has been prepared for this property by Glory June Gries. This nomination has been accepted. The Preferred Alternative 3C will not impact this resource.

19. "As a member of the local historic preservation commission, I am dismayed at the loss of historic structures and landscapes in Monroe and the other counties in Alternative 3B. This segment of Monroe County contains both quarries and farmstead of surprising age and integrity. It also contains a portion of the Maple Grove Road Historic District (NR), a very large rural historic district already listed on the National Register." (1107-682 Sturbaum)

"I'm concerned about the potential adverse a major truck route would have on our Maple Grove rural historic district. If the chosen alternative comes through Monroe County, even though the alternative may not technically be traversing the district, the I-69 pathway appears to be less than one mile from much of the district and ¼ to ½ mile from the southern end of the rural historic district. And I'm worried that introduction of the incompatible visual, atmospheric, or audible elements would change in integrity of the district. (indecipherable)..regarding the potential indirect effect and how would this effect our national register standing." (1107-634 McCane)

The Maple Grove Road Historic District has been identified. Alternative 3B has been discarded. At this time, Preferred Alternative 3C will use no right-of-way from this historic district.

20. "OCP's main concern with the DEIS in regard to historic resources revolves around the issue of thoroughness. As regards historic structures in Owen County, the DEIS appears to rely very heavily, if not exclusively, on *The Owen County Interim Report*. Additionally, although INDOT, via the consulting agency of Weintraut and Associates, Historians, Inc., solicited input from consulting parties, it did so on an extremely short

time table. OCP happened to have anticipated the request for such input, but in the end, the DEIS discounted the input it received from Owen County preservationists." (1105-199 Owen County Preservations, Inc., p. 1)

"On July 31, prior to the second meeting, consulting parties were mailed a packet, "Section 106 Findings and Documentations: Area of Potential Effect, Eligibility Determinations and Effect Findings," which included a list of potentially (NHR) eligible properties. The list contained none of the structures cited in the list OCP had provided on May 9th. More disturbingly, it showed a continued reliance on only the 'notable' and 'outstanding' properties as documented in the Owen County Interim Report." (1105-199 Owen County Preservations, Inc., p.2)

Preferred Alternative 3C is not located in Owen County. The project historians followed the approach established in the Section 106 Compliance Plan, which was developed in conjunction with the SHPO in Indiana. The historians used the surveys as a basis from which to begin fieldwork. They created timelines of significant events and evaluated properties that were listed as Notable and Outstanding in the Interim Reports. In the course of the field reconnaissance, the project historians evaluated many properties that were listed in the *Interim Report* as 'Contributing' or were not listed at all. When discrepancies or inaccuracies in the Interim Reports were found, the project historians contacted consulting parties for help in locating unidentified properties and conducted more in-depth research. Properties meeting a minimum level of integrity and having some significance within the APE were included in the list of potentially eligible properties in the Section 106 Report. Many more properties were evaluated than were included in the list of potentially eligible properties. The information concerning property type and history of the whole region was synthesized into a Historic Context Report.

At the consulting party meeting held May 9, 2002, in Indianapolis, the project historians did ask consulting parties to provide information as soon as they could. Field reconnaissance had been conducted for most counties, including Owen County. A member of Owen County Preservation (OCP) did provide the historians with a list of properties that OCP considered important. With the exception of only one property, a cemetery, the historians had previously identified all properties that OCP provided within the APE. In the evaluation process, the historians took into account the concerns of OCP.

On May 10, 2002, the project historians made a field visit to the cemetery identified by OCP. The cemetery possessed no art or architecture to elevate it to potentially eligible status. It is presently located within a modern housing addition; all context has been lost. Because the cemetery was associated with Owen County's African-American settlement, the historians contacted OCP to see if other properties

remained regarding African-American settlement in the county. OCP was unaware of any properties but provided a local person who has knowledge of the history of this area.

Further, because the town of "Freedom" was located nearby, the historians queried both OCP and the local knowledgeable person to see if either party knew of an association with Free Blacks in the Antebellum Era and the town of Freedom. Although neither was aware of any such association at that time the historians evaluated the town of Freedom as a potential district. As a result of field reconnaissance, the project historians found that the town had few resources of that time period; most of the construction is from a later date. There was no property located in that town that had sufficient integrity to be elevated to potentially eligible status.

The project historians did not "discount the input" of OCP; they simply disagreed with the OCP regarding the status of the properties that the organization submitted.

21. "For example, SR 67 has numerous examples of early and mid-twentieth century roadside architecture and sections that are virtual time warps of the 1930s and other periods, but most of these have not been identified." (1026-012 Society of Architectural Historians)

Preferred Alternative 3C is not located in this area. Historic properties along SR 67 that are considered potentially eligible have been included in the Section 106 documentation and were considered in this study.

22. "In regards to the archaeological aspects of the draft EIS, we have a number of comments and questions. We would first like to stress and reiterate that all necessary archaeological investigations must take place in the chosen preferred I-69 north alternate, including identification, evaluation, and mitigation. We stress that a project of this scope, importance, and magnitude, should aspire to be as complete and thorough as possible in regard to archaeological resources in the project areas, and attempt to cast as wide a net as possible to consider the protection and preservation of these resources. We would also like to underscore that the Tier 1 study has not determined all "potentially eligible" archaeological sites (refer to page 5-80)." (1107-702 IDNR, Division of Historic Preservation & Archaeology, p. 3)

The FEIS includes a table showing known archaeological sites within the 2000-foot corridor and within the two-mile wide study bands for all alternatives. These sites include sites in the National Register, sites eligible for the National Register, and sites potentially eligible for the National Register. The FEIS also includes a table showing predicted site densities for all alternatives. These predictive site densities

are shown in a range and are based upon the predictive analysis. The predictive analysis does not determine an estimated number of potentially eligible sites from the total site densities. The results of the predictive analysis do show that all alternatives have the potential for numerous sites within the right-of-way of the working alignment.

23. "We would like to comment on the statement on page 26 of Appendix M that 'much of the archaeological record has been destroyed or severely compromised, making many sites ineligible for inclusion to the National Register of Historic Places.' While damage has occurred to many archaeological sites, we would argue that there is a great amount of the archaeological record that still exists in Indiana, and a significant amount of sites which retain information or characteristics making them eligible for the National Register. Thus we would not like a impression left that indicates there is little information left in regard to significant archaeological resources." (1107-702 IDNR, Division of Historic Preservation & Archaeology, p. 3)

This statement has been corrected in the FEIS.

24. "Another comment is related to such tables as the Summary in the Environmental Atlas, the table on page S-24, and Table 8-2 (page 8-26), that list 0's in rows for such topics, for example, as sites eligible for or listed in the National Register. This could be misleading or imply that there are or will not be sites in the corridors which are eligible for the register—though there likely will be some, although they may not have been currently identified as such, determined eligible, or their eligibility researched." (1107-702 IDNR, Division of Historic Preservation & Archaeology, p. 4)

The FEIS includes the number of known archaeological sites for each alternative.

25. "The description in Appendix M (page 1) regarding archaeological investigations which will take place for the project should include Phase Ib investigations, which may be necessary in some cases to better identify and evaluate an archaeological site." (1107-702 IDNR, Division of Historic Preservation & Archaeology, p. 4)

The FEIS has been revised to state that this methodology will be used in Tier 2 as appropriate.

26. "Some specific comments and questions for Appendix M follow. On page 24, how was the acreage range for the alternates compiled? On page 26, regarding some of the information and documents used, we would suggest that the Guernsey Map may be too general, or at such a scale, that it may not be a very precise indicator of archaeological resources. Why were not sources such as Tanner (1987) or various historical maps for

the region consulted?" (1107-702 IDNR, Division of Historic Preservation & Archaeology, p. 4)

The acreage required of each alternative was calculated by the project engineers using the GIS mapping for the project. The Guernsey Maps were too general. The FEIS has been revised to reflect the information contained in Tanner (1987) and other historical maps for the region, including a 1876 county atlas.

27. "Similar concerns exist with the thoroughness of analysis conducted regarding the potential impact on possible archaeological sites. To rely solely on an anticipated density calculation creates an environment in which significant sites may be missed and in which an inaccurate view of possible impact is presented to decision makers." (1104-062 Monroe County Historic Preservation Board of Review Letter, p. 1)

The archaeological study did not rely solely on density calculations but on the various aspects of the GIS-based archaeological site potential analysis including prehistoric and historic sites, as well as, cemeteries. While Tier 1 focused upon recorded archaeological sites within the various alternatives, Tier 2 archaeological studies will include fieldwork to identify all significant sites within Preferred Alternate 3C.

28. "An example of this lack of thoroughness can be found in one three mile section of one of the alternatives located in the southwestern portion of Monroe County, where there are four recorded archaeological sites that are not identified in the DEIS. One of these sites, the Virginia Ironworks (12-MO-158), the only partially-intact pre-Civil War iron furnace in the State of Indiana, lies within one of the proposed alignments, yet is not identified in the DEIS. The same area contains a cemetery that is well known to locals and recorded yet does not appear in the DEIS." (1104-062 Monroe County Historic Preservation Board of Review Letter, pp. 1-2)

"The fourth site in the alignment that was missed by the DEIS is 12-MO-158, the furnace structure at a complex know as the Virginia Ironworks. It is located in Alternate 3A-B-C, southwest of Bloomington. The ironworks operated from about 1839-`844. The furnace structure has long been recorded by geologists and archaeologists, but our surveys in 2001-2002 revealed multiple related features and sites. Thus, the Virginia Ironworks is the focal point of a larger complex of historic archaeological features that relate to Monroe County's earliest manufacturing industry. In addition to the furnace itself, the complex includes iron mines, limestone quarries, ore and charcoal processing and stockpiling features, structure foundations, house sites (the original Freeland homestead, and then the Adams homestead), former roads, a cemetery (the Adams Cemetery), a house foundation, and in particular extensive sealed archaeological deposits associated

with the people who worked at the iron furnace. Many of these archaeological and historic features and structures are also in the alignment, but none are shown on DEIS maps, even though the cemetery and the Freeland-Adams house site had been previously recorded. An existing, occupied structure at the Freeland-Adams house site is shown on the DEIS map, but this is not reported in the DEIS to be a historic structure. That structure, recorded as Indiana Creek Township 009 in the published Interim Monroe County Survey of Historic Sites, was built ca. 1880 after the Freeland-Adams house was destroyed by fire. The Virginia Ironworks complex (VIW) is being proposed as a historic district. Its National Register status, when determined, should reference regional significance for this example of pre-Civil War iron industry. However, as the only surviving early iron furnace in Indiana, the "VIW" historic district can also be considered to have state-wide significance." (1022-017 Munson, p. 4)

"First, the significance of the historic and cultural anomaly known as Maryland Ridge is communicated archaeologically in the vast resources which remain from the period of settlement, 1816 to 1839, throughout the community. These include the limestone and iron ore mines; the actual Randolph Ross and Son's Virginia Iron Works blast iron furnace; artifacts including the cast iron gear by which the blower was operated, and numerous products scattered throughout the community; as well as the home sites of Randolph Ross, Hardy Sparks, Robert Roberts and as many as forty other pioneers thus documented and believed to be associated with the Iron Works." (1106-147 Maryland Ridge Community, p.2)

The Virginia Iron Works, recorded as 12-Mo-158 by INDOT Archaeologist Curtis Tomak in 1973 was identified early in the process as potentially eligible for the National Register of Historic Places. The 19th century stone block iron blast furnace structure was within the 2000-foot corridor and two-milewide study band of Alternative 3A, 3B, and 3C. Robert Bernacki, President of the Wabash and Ohio Chapter of the Society for Industrial Archaeology contacted Curtis Tomak at INDOT in August of 2002 expressing concern that the alternative's proximity may compromise the integrity of the site that he felt encompassed a much larger area than previously recorded.

On October 24, 2002, a field check by State Archaeologist Dr. Rick Jones, Jim Mohow of the SHPO, Curtis Tomak of INDOT, and the project historians and archaeologists, revealed two additional sites. Site 12-Mo-1186 is an iron mining pit area and site 12-Mo-1187 is a sandstone quarry located within the vicinity of the furnace. Also found were areas of charcoal and ore stockpiling piles and structure foundations on the upland adjacent to the structure. Other quarry sites in the vicinity were visited but determined not to have adequate documentation to be associated with the ironworks.

A December 13, 2002 letter from the SHPO determined that sites 12-Mo-158 and 12-Mo-1186 did indeed appear to be eligible for inclusion to the National Register of Historic Places. Site 12-Mo-1187, the sandstone quarry site, could be considered potentially eligible for the National Register.

The corridor and working alignment within the corridor of Alternatives 3A, 3B, and 3C were shifted 800 feet to the west to avoid the Virginia Iron Works site. As a result, the Virginia Iron Works area and associated sites are outside the corridor for Alternatives 3A, 3B, and 3C.

Additional individual mining pits are likely to exist, and there may be other sites associated in some way with the iron works in the vicinity yet to be recorded. The December 13 letter from the SHPO noted: "It appears possible that with further investigations, the above sites and other sites and features related to the Virginia Ironworks may be delineated as a historic district". However, at this time they are considered as individual archaeological sites.

29. "Finally, related to a programmatic agreement on mitigation of impacts to historic and archaeological resources "at the conclusion of Tier 1" (DEIS, p. 2), how is mitigation of archaeological impacts to be designed if the impacted resources are not identified and evaluated until Tier 2? (Can mitigation be planned when you don't even know the resources being impacted?) How can potential impacts to National Register-eligible properties (FHWA 4[f]) be properly considered after the Record of Decision, if the surveys are not done and the site not even identified or evaluated until after that decision? Will consulting parties who have participated under Section 106 be able to participate in the development of programmatic agreements? Will additional consulting parties be able to participate?" (1022-017 Munson, p. 3)

Attendees at the consulting party meeting of March 27, 2003 were asked to provide ideas on ways to minimize and avoid; ways to preserve and enhance; and ways to interpret and educate. A "Section 106 Consultation Worksheet for Development of Tier 1 Memorandum of Agreement" was passed out at the meeting. This worksheet was also sent to all consulting parties who could not attend the meeting. The responses to the worksheet were considered in drafting the MOA. After the MOA was drafted, it was circulated among the consulting parties and another consulting party meeting was held on August 19, 2003 to discuss the contents of the MOA. The MOA was signed and is included in the Appendix to the FEIS. Additional Section 106 consultation will be held in Tier 2 for each of the Tier 2 sections. The consulting party process is open to those who wish to join.

30. "The Board is disappointed that they were never directly contacted to serve as a consulting party in this effort ..." (1104-062 Monroe County Historic Preservation Board of Review Letter, p. 2)

FHWA (the Indiana Division) and INDOT have established Section 106 process entitled *FHWA Indiana Division Section 106 Consultation Procedures*. These procedures list specific organizations that are to be contacted to be a consulting party. These procedures were followed in this project. In addition, a booth was setup at the November 2001 public meeting for the purpose for handing out Section 106 consultation information.

The consulting party process is open to those who wish to join; at any time, the Board can request to be a consulting party. Invitations to be a consulting party were sent to: the mayor, City of Bloomington Historic Preservation, City of Bloomington Restorations, Inc., the Monroe County Historian, and the Monroe County Commissioners. An invitation was not sent specifically to Monroe County Historic Preservation Board of Review.

5.14 Mineral Resource Impacts

1. "For example on page 5-99 the DEIS states that Alternatives 3B and 4C do not cross any areas of potential limestone deposits, but Figure 5.14-6 shows these routes crossing limestone area. Also, the Indiana Geological Survey publication: Geology for Environmental Planning in Monroe County, IN, contains a map (Figure 7, p. 14) showing dimensional limestone deposits from southern Monroe County to the north of Stinesville. Routes 3A, B, and C traverse this region. No dollar value is put on the resources that could be impacted by the various alternatives." (1106-147 Tokarski, pp. 19-20)

The FEIS has been revised to include the following statement "Alternative 1 does not cross any areas of potential limestone deposits. Alternatives 2A, 2B, 2C, 3A, 3B, 3C, 4A, 4B, 4C, 5A, and 5B pass through areas containing modest amounts of limestone, with Alternatives 5A and 5B passing through the most linear miles of limestone."

Right-of-way and relocation costs include; right-of-way costs for acreage and improvements required for actual construction, relocation costs, costs for acquiring structures and improvements due to lost access, and administrative fees. These costs are estimates only and are based on a field survey. Property-specific attributes such as mineral resources were not incorporated into these preliminary estimates of new costs. According to the Land Acquisition Department of the INDOT, mineral rights are acquired as a part of the bundle of ownership rights. They have no

appraised value unless they have already been sold. If the rights have been sold, they may be appraised as a separate interest if the taking is considered to interfere with the mining interest. In some instances, INDOT will acquire surface rights only, subject to the sub-surface interests. Active mineral leases (limestone mining, oil field or coal strip pits) would be the only instances that would be appraised for value if the taking impacted the operation.

2. "Note that Alternative 1 does not cross any limestone deposits: the 'preferred' alternatives would cross 5 to 13 miles of this precious resource.

"To destroy an industry, and claim you are considering improving economic conditions in an area, shows a majority that you are only concerned with doing things your way and you will change your mind.limestone will be useless for miles. The limestone has been quarried since 1827. ... Hundreds of Hoosiers are provided with jobs from the quarrying of limestone. A highway gas-stop is not a life career.To end this guarantee of jobs in southern Indiana is reprehensible." (1025-031 Anderson)

Efforts will be made in Tier 2 to avoid known limestone deposits.

5.15 Visual and Aesthetic Impacts

1. "Excessive lighting would also impact the visual enjoyment of the night sky. The economic impacts of loss of visual pleasure, as with noise impacts, can be considerable. This cost should be included." (1106-147 Tokarski, p. 20)

Highway lighting is not provided at rural sections of Interstates except at rest areas and at some interchanges. Lights from the motor vehicles will be visible. The DEIS does not attempt to calculate economic impacts of lighting or the loss of visual pleasure because there is no established methodology for doing so.

2. "I suggest that evergreens be planted in a buffer space on both sides of the highway, like they do in Virginia. This really works at reducing the noise and unsightliness of the Interstate highways there." (1017-009 Robinson)

The revegetation plan developed and incorporated as part of the design will present measures to mitigate visual impacts.

5.16 Hazardous Waste Site Impacts

1. "The DEIS indicates that no Superfund [Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)] sites or landfills would be directly

impacted by any of the alternatives, except Alternative 5 and Alternative 3A. These alternatives pass near the Dillman Road Wastewater Treatment Plant Landfill of SR 37. It is unclear from the DEIS information exactly how Alternatives 5 and 3A would impact the Landfill and what the consequences might be. If one of these alternatives are identified in the FEIS as the Preferred Alternative, additional information and discussion of any adverse impacts associated with these alternatives should be included in the FEIS." (1107-696 USEPA Region 5 Technical Comments, p. 11)

Because Preferred Alternative 3C is not located near the Dillman Road Wastewater Treatment Plant Landfill, no further studies on possible impacts to the Dillman Road Wastewater Treatment Plant Landfill will be required.

2. "Resource Conservation and Recovery Act (RCRA), brownfield, Underground Storage Tank (UST) and Leaky Underground Storage Tank (LUST) sites are also found throughout the various alternative corridor locations. The DEIS states that the results of their analysis show that Alternative 1 may have the fewest number of hazardous waste sites and Alternative 5 may have the greatest number. If hazardous waste site remediation is likely to be needed for the Preferred Alternative identified in the FEIS, then the FEIS should discuss how FHWA and INDOT plan to coordinate these activities with EPA and the appropriate State agencies." (1107-696 USEPA Region 5 Technical Comments, p. 12)

The working alignment of Preferred Alternative 3C in the FEIS can be anywhere within the 2000-foot wide corridor, therefore the impact to RCRA, UST, and LUST sites will not be identified until the Tier 2 NEPA studies define specific alignments. If impacts to RCRA, UST, and/or LUST sites are identified in the Tier 2 NEPA studies, then appropriate coordination with EPA or IDEM will be required.

3. "Based on our review of Tier 1 of the Draft EIS, the proposed I-69 Evansville to Indianapolis corridor has the potential to impact up to 16 RCRA (Resource Conservation and Recovery Act) hazardous waste related sites, 5 UST (Underground Storage Tank) facilities, and 2 LUST (Leaking Underground Storage Tank) sites. None of the preferred alternatives described in the Draft EIS had any apparent direct impact on landfill locations, Voluntary Remediation Program sites, Commissioner's Bulletin sites, or Superfund (Comprehensive Environmental Response, Compensation and Liability Act) sites, although some are within one mile of the anticipated routes. Of the RCRA sites listed, 15 of the 16 were small quantity generators. According to the Draft EIS Mitigation Section, INDOT will coordinate with IDEM to insure proper cleanup of the contaminated sites." (1106-148 IDEM Letter, p. 3)

"The Remediation Branch of IDEM is aware of all the facilities and sites referenced by INDOT in their Draft EIS, but would also like to point out that additional unknown

contaminated properties might be present along any of the potential routes. Once the final route is chosen, the IDEM Office of Land Quality (OLQ) will work with INDOT to further identify cleanup needs at the potentially impacted facilities and will look for other potential contamination locations. None of the known sites listed along any of the preferred routes are anticipated to cause major problems if site remediation is required. In addition, OLQ will help INDOT assess conditions for sites within the one mile corridor of the chosen route." (1106-148 IDEM Letter, p. 3)

Coordination will continue in Tier 2 to assure that all sites are identified and properly addressed.

4. "Bennett's Dump is on the edge of the working alignment for Route 3B. Although it may not be directly impacted by construction, there may be underground contamination that could be disturbed and spread by nearby construction. That situation needs to be much more carefully studied." (1106-147 Tokarski, p. 20)

Alternative 3C is the preferred alternative and it will not impact Bennett's Dump. No further studies on the possible impacts to Bennett's Dump will be required.

5. "Flooding impacts from increased water run-off was not addressed for Richland creek nor were impacts on PCB laden sediments and ongoing discharges of PCB's from superfund sites." (1107-517 Porter)

Preferred Alternative 3C does not cross Richland Creek.

6. "4. Alternative 3 (A & B) go right through the Westinghouse property off route 48 (near Bloomington) - which is well know to be contaminated with PCBs. There is no description in the DEIS of special needs or treatment for preventing the spread of these PCBs to nearby areas. This also raises the concern that the cost estimates for Alternative 3 are overly conservative." (1106-140 Milhoan, p. 2)

"Alternative 3 (A & B) happen to go right through the Westinghouse property off Route 48 and Oard Road (near Bloomington). This is potentially a very serious environment concern that doesn't even appear to be addressed in the DEIS at all. This property is know to be contaminated with PCBs and resides very near the Near landfill which is "capped" to prevent further leakage of PCB effluents. There should be a substantial description in the DEIS of the engineering requirements that would be necessary to prevent any worsening of the PCB contamination in this area – if the soil must be disturbed to build I-69. This would also need to be included in the cost estimates for Alternative3 as I am sure that there would be significant costs involved in any environmentally conscious approach to disturbing this property." (1106-140 Milhoan)

Preferred Alternative 3C does not cross the Westinghouse property.

7. "It now abundantly clear one of the routes (3 B in Richland Township) is in part so aligned to allow easy disposal of a PCB ridden real estate parcel currently owned by a large multinational corp. They would be paid with taxpayer dollars by INDOT for getting rid of this toxic liability. How many other skeletons are buried in the I-69 project? SIGECO now Vectren real estate deals? Why do so many alternative run thru Elren Indiana home of Grahamn Farm Cheese? How many political favors are due? The I-69 project has reeked just like the Salt Lake City Olympic scandle." (1003-001 Sorensen)

Preferred Alternative 3C will avoid the property identified.

5.17 Threatened and Endangered Species Impacts

1. "The caves and underground drainage ways of karst areas are the unique habitat of a number of rare or endangered species, as indicated in the DEIS. Biological and hydrological surveys are incomplete in portions of the study area." (1107-696 USEPA Region 5 Technical Comments, p. 6)

Surveys will be completed in Tier 2 NEPA studies in accordance with the Karst MOA and Tier 1 Biological Opinion which is included in the FEIS as Appendix LL.

2. "We note that federally-protected species are listed for the area by the U.S. Fish and Wildlife Service (USFWS). Similarly, state-protected species are listed by the Indiana Department of Natural Resources (IDNR). EPA principally defers to the USFWS and IDNR regarding endangered species assessment, and encourages FHWA and INDOT to continue coordination with the USFWS and IDNR as appropriate. This coordination should be documented in the FEIS." (1107-696 USEPA Region 5 Technical Comments, p. 11)

Coordination with the USFWS and IDNR for the purpose of Tier 1 has been completed. This coordination included a Tier 1 Biological Opinion, which is attached as an appendix to the FEIS. The coordination with USFWS and IDNR is documented in Chapter 11 of the FEIS.

3. "In addition, in areas such as Blue Springs Cavern, the presence of federally listed endangered species adds an additional layer of concern." (1106-148 IDEM Letter, p. 2)

For this reason and others, Alternative 5 in the vicinity of Blue Springs Cavern was discarded from further consideration.

4. "Cumulative impacts to forest interior habitat will also threaten Indiana's bobcat population. The forests of southern Indiana, and Owen County forests in particular, are known to support these secretive and wide-ranging species." (1031-016 Nature Conservancy, Indiana Chapter, p.2)

"Another species of concern which could be adversely affected by construction of the highway through forest blocks is the bobcat. A few years ago, the Non-game Section of the Indiana Division of Fish and Wildlife began studying the bobcat population of southern Indiana. ... at this time they have trapped 21 different cats and radio-tagged 19 of them. ... Since the start of the project, 5 radio-tagged bobcats have died - four were struck by cars while trying to cross roads. It seems apparent that adding an interstate in this area, will decrease available habitat for this rare cat, creating a formidable barrier for dispersing cats, and create additional mortality from vehicles." (1031-016 Nature Conservancy, Indiana Chapter, p. 2)

Due consideration will be given to the bobcat and other forest dependent species in the FEIS and Tier 2 EIS studies.

5. "INDOT's DEIS impacts analysis for threatened and endangered species is based in part on outdated and flawed information. In particular, many of the last surveys were performed in 1993, and significant changes to habitat have occurred since then. The DEIS also inappropriately focuses on *occurrences* of these species and the need to avoid these sites, instead of looking more broadly at the larger and more widespread habitats." (1107-705 ELPC et al, p. 43)

The information in the FEIS is based upon the most current information available through the IDNR Heritage database. It was updated in May of 2002 by IDNR. Tier 2 NEPA studies will include field sampling to add to the current TES records for avoidance and minimization efforts.

6. "The primary cause for the decline of the Indiana bat population is not human disturbance during hibernation. The causes of the continuing decline are not fully understood, but include impacts to both hibernacula and to summer habitat (overmature riparian and upland hardwood forests). A highway will cause additional losses of Indiana bat summer habitat. ... The last bat survey done within the study area occurred in 1993, and many changes in the bat's habitat and population may have occurred in the last decade. INDOT therefore should conduct a new survey of bat habitat." (1107-705 ELPC et al, pp. 43-44)

"Indiana bats are known to forage up to 5 miles from their hibernacula during the fall swarming and spring staging periods. Therefore, any alternative that would require

removal of forest habitat within a 5-mile radius of a hibernaculum (i.e., 3A, 3B, 3C, 5A, and 5B) is likely to cause adverse effects to Indiana bats and potentially hinder recovery of the species. Therefore, we recommend preference be given to routes that would have little or no impact on karst areas (e.g., alternative 1)." (1107-697 U.S. Dept. of the Interior, p. 5)

"All new-terrain segments are likely to contain suitable Indiana bat summer habitat at multiple locations, and most segments that follow existing routes will also contain suitable habitat to a lesser extent. Where the actual alignment is placed within the study corridor will have a large bearing on the extent of summer habitat within the proposed right-of-way. In addition to direct impacts on hibernacula (caves), the study must also consider impacts upon karst features and subterranean hydrology, which are connected to hibernacula." (1107-697 U.S. Dept. of the Interior, p. 13)

"2. The study does not adequately address impact to the federally protected Indiana Bat if Alternative 3 is chosen. The DEIS study lists only the most superficial data on their know hibernaculum and includes absolutely no assessment of the impact of the substantial loss of critical habitat (to breeding, feeding, and living within a reasonable range of their hibernating areas). This have been communicated to INDOT by USFWS but seems to be categorically ignored in the DEIS." (1106-140 Milhoan, p. 2)

"The Indiana Bat is a federally endangered and protected species which resides in the exact area the Alternative 3 would be dissecting and damaging. While the DEIS study gives lip service to this issue (chapter 5.17 and the map of ATLAS, Alternative 3, page 9), there is no actual study of even the direct impact of eliminating multiple hibernaculums of these rare creatures let along the very definite impact of eliminating feeding grounds and dissecting the exact home range habitat that they breed in." (1106-140 Milhoan, p. 3)

Impacts to the Indiana bat have been evaluated through Section 7 Consultation with the USFWS. This consultation has resulted in a Tier 1 "no jeopardy" Biological Opinion which is included in the FEIS in Appendix LL. In addition, INDOT will conduct surveys for the Indiana bat during Tier 2 NEPA studies as appropriate. Such studies will be in accordance with sampling protocol developed by the USFWS and all surveys will be coordinated with the USFWS and other agencies as appropriate.

7. "The eastern fanshell and rough pigtoe mussels both are present in the East Fork of the White River. ... INDOT's review of mussel records is based on an outdated and insufficient 1993 survey." (1107-705 ELPC et al, p. 44)

"The fanshell and rough pigtoe have been found recently in the East Fork White River. The only current pigtoe record is in Martin County; however, recent evidence indicates

the fanshell may occur from Lawrence County (below Williams Dam) at least as far downstream as Daviess County. Due to lack of survey information, all of the East Fork and main stem White River should be considered potential habitat for this species. These waterways also contain populations of several species of fish and mussels listed as endangered by the State of Indiana." (1107-697 U.S. Dept. of the Interior, p. 14)

The eastern fanshell mussel is addressed in the Tier 1 Biological Assessment. Based on the Biological Assessment, the USFWS has concurred that this project is not likely to adversely affect this species. The rough pigtoe mussel is located outside the Action Area of the preferred alternative. INDOT's review of mussel records for the Tier 1 EIS are based upon IDNR's Heritage Database which is current to May of 2002.

8. "The copperbelly snake is a state endangered species, and the snakes are known to inhabit the Patoka River and Pigeon River (sic) areas. ...Additionally, Appendix I, Part 3 has inaccurate information on the copperbelly. The species is state endangered throughout *all* of Indiana, and the northern population is listed as federally-threatened." (1107-705 ELPC et al, p. 44)

Statement is duly noted and is corrected in the FEIS.

9. "The lake sturgeon is a state endangered species. There is a significant population of lake sturgeon in the lower East Fork of White River. As in 1996, the DEIS overlooks the presence of this endangered fish." (1107-705 ELPC et al, p. 45)

The IDNR Heritage Database does not show records in the crossings of the East Fork of the White River. Tier 2 NEPA studies will complete sampling of the proposed crossing of the East Fork for the occurrence of the lake sturgeon.

10. "The spotted darter is a state endangered species. A new population of the spotted darter has been found in the East Fork of the White River; three other endangered darters are known to be present there." (1107-705 ELPC et al, p. 45)

The spotted darter and other state endangered fishes have been reported from the East Fork of the White River. For the most part, these records have been upstream of the proposed crossing of the East Fork of the White River. However, these species may be present in the area of the crossing, and for this reason, ichthyological surveys will be completed during the Tier 2 NEPA studies to ascertain the presence or absence of these species.

11. "The harlequin darter is a state endangered species. A new population of the harlequin darter has been found in the Patoka River." (1107-705 ELPC et al, p. 45)

The newly discovered population is downstream of the proposed crossing of the Patoka River. Surveys will be completed during the Tier 2 NEPA studies to ascertain the presence or absence of this species and possibly others at the Patoka River crossing.

12. "The river otter is a state endangered species. The river otter has been introduced at Sugar Ridge Fish and Wildlife Area on the Patoka River. Otters have been found along the East Fork of the White River." (1107-705 ELPC et al, p. 45)

Surveys conducted during the Tier 2 NEPA studies will include an analysis of the occurrence of this species and any possible impacts.

13. "This species (Cerulean Warbler) is a forest interior-dependent species. The cerulean warbler is now being considered for listing by the U.S. Fish and Wildlife Service." (1107-705 ELPC et al, p. 45)

Statement is duly noted. It will be considered in future field surveys for I-69.

14. "In addition, there is potential for Indiana bats to occur in the Tincher Special Area. Other bats have been noted in the area. The old Gardiner mine and Pennsylvania Salt Company workings are in Tincher. Surveys thus far have not identified any Indiana bats. However, there is a known Indiana bat hibernaculum about five miles away in Martin County and it is possible the Tincher Special Area could provide foraging and roosting habitat for the Indiana bat." (1107-699 USDA, Hoosier National Forest, p. 1)

There is the strong possibility of hibernacula and summer roosting habitat for the Indiana bat in the Tincher Pond area. Alternative 5 was the only alternative that passed through the Tincher Area.

15. "There are several forest blocks immediately north of the Crane Naval Surface Warfare Center (NSWC) that would be fragmented by this alternative [3], including known habitat for the state endangered bobcat (*Lynx rufus*)." (1107-698 IDNR, Division of Water, p. 2)

This area north of the Crane Naval Surface Warfare Center (near Koleen) has much forest with many contiguous tracts. IDNR has radio-collared 1 bobcat that has moved from Crane through this area to north of Bloomington. Coordination with IDNR and other appropriate agencies to discuss minimization and develop mitigation for the bobcat will be ongoing in Tier 2 NEPA studies.

16. "This alternative [4B] poses potential impacts to the state listed Loggerhead Shrike (*Lanius ludovicianus*)." (1107-698 IDNR, Division of Water, p. 2)

"This alternative [4C] also poses potential impacts to the Loggerhead Shrike." (1107-698 IDNR, Division of Water, p. 2)

Alternatives 3 and 4 go through Daviess County which has been recognized by IDNR as a stronghold for the loggerhead shrike. Chapter 7 includes conservation mitigation measures for the wildlife, and the loggerhead shrike has been included in the FEIS.

17. "Multiple Indiana bat hibernacula (i.e., caves) are located within the GCV [Garrison Chapel Valley]; two of these caves are only about 1.5 miles from the working alignment of Alternative 3B (and 3A). Even though the GCV is the largest karst area in Monroe County with over 17 miles of known cave passages, its diversity of troglobitic species has not been fully surveyed (pers. comm. of FWS with Dr. Julian Lewis). In addition to Indiana bats, there are other bat species, cave salamanders, troglobitic isopods (*Caecidotea stygia*, *Caecidotea jordani*), amphipods (*Crangonyx*, *Bactrurus*), crayfish (*Orconectes inermis*), beetles (*Pseudanopthalmus* - a couple of species, including at least one undescribed one), millepedes (*Conotyla bollmani*), spiders (*Phanetta subterranea*), and flies (*Spelobia tenebrarum*) present in the GCV karst ecosystem. Furthermore, it is quite possible endemic species that are new to science exist in this extensive karst ecosystem and await discovery. Alternative 3 (where 3A, 3B, and 3C share a common route) also comes within approximately 1 mile of a known Indiana bat hibernaculum in eastern Greene County." (1107-697 U.S. Dept. of the Interior, p. 5)

Alternatives 3A and 3B come very close to a number of Indiana bat hibernacula in the Garrison Chapel Valley, while Alternative 3C is located on SR 37 east of the Garrison Chapel Valley. The Preferred Alternative 3C does not impact the Garrison Chapel Valley.

18. "Page 5-123: In the first sentence under Indiana bat, insert the word "eastern" before the United States." (1107-697 U.S. Dept. of the Interior, p. 11)

"Page 5-125: In the top paragraph, in the phrase: "shorter hairs on the toes, and has a calcar," insert the word "keeled" before calcar. Most all bats have a calcar. The keel on the Indiana bat's calcar helps distinguish it from *Myotis lucifugus*." (1107-697 U.S. Dept. of the Interior, p. 11)

"Page 5-127: Please include scientific names for the bat species here and for mussel species later on to avoid any confusion." (1107-697 U.S. Dept. of the Interior, p. 11)

"Page 5-129: The correct spelling of the American burying beetle's family name is Silphidae." (1107-697 U.S. Dept. of the Interior, p. 11)

The FEIS includes these revisions.

19. "Page 5-127: Regarding bald eagles in Indiana, we suggest you contact John Castrale with the IDNR, Division of Fish and Wildlife, to obtain the most current data from the 2002 breeding season. Also, Mr. Castrale's name is misspelled in the citation on this page." (1107-697 U.S. Dept. of the Interior, p. 11)

Mr. Castrale assisted in the Tier 1 Biological Assessment. The misspelling of Mr. Castrale's name was corrected.

20. "All proposed alternatives are within the range of the federally endangered Indiana bat (*Myotis sodalis*) and federally threatened bald eagle (*Haliaeetus leucocephalus*). All proposed alternatives are also within the historic range of the federally endangered American burying beetle (*Nicrophorus americanus*). Alternatives 3, 4, and 5 are also within the range of the federally endangered fanshell mussel (*Cyprogenia stegaria*) and alternative 5 is within the range of the federally endangered rough pigtoe mussel (*Pleurobema plenum*). Alternatives 1 and 2 are nearest to the most recent records of the fat pocketbook mussel (*Potamilus capax*)." (1107-697 U.S. Dept. of the Interior, p. 13)

As part of Section 7 consultation during preparation of the DEIS, FHWA requested a list from the USFWS of all federally listed threatened or endangered species that could be affected by any of the alternatives. The USFWS responded by identifying 6 federal species for consideration within southwestern Indiana. They were the Indiana bat, bald eagle, American burying beetle, fat pocketbook mussel, rough pigtoe mussel, and the eastern fanshell mussel. Upon selection of Preferred Alternative 3C, FHWA requested that the USFWS provide a revised species list for consideration in this alternative. A written response from the USFWS reported the consideration of 3 federal species for Preferred Alternative 3C. These species are the Indiana bat, bald eagle, and eastern fanshell mussel. The Tier 1 Biological Assessment discusses these species.

21. "There are several bald eagle nests on the main stem and both major forks of the White River. The West Fork White River is also a primary wintering area for this species, and new nests are being discovered along these corridors frequently. All route alternatives, except Alternative 1, pass within 5 miles of an active eagle nest (some much closer). The site of any proposed crossing of the White River that is forested and is not heavily disturbed by an existing major highway or other human activities has the potential to support a future eagle nest." (1107-697 U.S. Dept. of the Interior, p. 13)

The bald eagle was one of three species addressed in the Tier 1 Biological Assessment. Based on the Biological Assessment, the USFWS found that the Preferred Alternative 3C was likely to adversely affect this species, based on the potential for eagles to be killed in collisions with motor vehicles. The USFWS found in its Biological Opinion that the project would not jeopardize the continued existence of the bald eagle.

22. "Alternatives 3, 4, and 5 pass near populations of the copperbelly water snake; *Nerodia erythrogaster neglecta*). This species is federally listed as threatened in the northern part of its range (north of the 40th parallel). However, listing was precluded in southern Indiana by a Conservation Agreement with the coal mining industry. The CWS is of great concern to the FWS because of its specialized habitat requirements and continuing threats from several sources." (1107-697 U.S. Dept. of the Interior, p. 14)

All efforts will be made to avoid or minimize impacts to the copperbelly watersnake. Such efforts would include, but not be limited to, an avoidance of impact to their habitat by minimizing fill and completely spanning riparian and wetland habitats that they may reside such as in the Patoka River bottoms. In addition, Appendix NN of the FEIS contains the *Tier 1 Forest and Wetland Mitigation and Enhancement Plan* that includes the development of habitat for the copperbelly watersnake and other species.

23. "Because all of the build alternatives are likely to have some adverse effects on federally listed species or their habitats, the FWS anticipates that formal consultation under section 7(a)2 of the ESA will be required for this project if a build alternative is selected. If INDOT and FHWA select a build alternative as their preferred alternative, they will need to prepare a biological assessment (BA) to analyze the effects the preferred alternative will have on federally listed species and make an "effects determination." Once this determination has been made, FHWA should submit the BA and determination to the FWS's Bloomington Field Office and request concurrence with the determination or that formal consultation be initiated. If adverse effects are unavoidable, formal consultation is required and would conclude within a maximum of 135 days (unless a time extension was mutually agreed to). As this is a tiered approach, the FWS would issue a Tier 1 biological opinion (BO) and incidental take statement for the preferred alternative. This tier 1 BO will likely be appended to the tier 1 final EIS for the I-69 Evansville to Indianapolis, Indiana, project. Once the tier 1 process is completed, the FWS will continue informal and formal consultation with INDOT/FHWA throughout the tier 2 NEPA process, with tier 2 BOs appended as needed." (1107-697 U.S. Dept. of the Interior, p. 14)

These recommendations have been followed and are documented in Section 5.17 of the FEIS. Section 7 Consultation resulted in a "no jeopardy" biological opinion, which is included in Appendix LL.

24. "There is no analysis of secondary impacts on threatened, endangered and at risk species. These impacts must be addressed in the DEIS." (1106-147 Tokarski, p. 21)

Indirect or secondary land use impacts were modeled for all alternatives. These impacts were considered in evaluating impacts to TES species. In Section 5.26, threatened and endangered species were determined to be wetland dependent, and that section discusses the indirect and cumulative impacts on wetlands.

25. "Alternative 3B would push the housing, businesses, and light to medium industrial use further west towards the interstate, ruining areas like the Blair, Coon, and Garrison Chapel valleys. At least five Indiana bat hibernacula (Buckner, Coon, Grotto, King Blair, and Saltpeter) would be significantly impacted. Having been involved with the protection of Coon and Grotto caves for the past 18 years, and having witnessed the bat populations (both Indiana and Little Browns) increase to record highs (currently over 14,500 bats), it is quite disheartening to think that these populations could be lost due to pressure of development instigated by a major highway just a few miles to the west." (1107-692 Dunlap, p. 1)

"Several Alternatives, most notably Alt 3 B, pass very close to significant hibernacula of the endangered Indiana bat. Development of this alternative will likely result in take in several ways: (1) lost of spring and autumn roosting and foraging habitat, (2) loss of summer maternity habitat, (3) a direct take of individuals from traffic (as has occurred in PA), and (4) disruption (primary, secondary, and cumulative impacts) of nearly the only hibernacula throughout the range of the species that are showing an increase." (1107-221 Brack)

For this reason and others, Alternative 3B has been discarded from further consideration.

26. "Another important item is the Sexton Spring Cave. Every 2 years the Dept. of Natural Resources notifies me of their project in January or February to enter the cave to study the Indiana Brown bat population. See the enclosed letter." (1029-041 Sirucek, p.2)

The information on Sexton Springs Cave has been thoroughly studied and described within the Biological Assessment as part of the Section 7 consultation with the USFWS.

27. "2. You will destroy the many hibernaculum for the Indiana Brown Bat which is prevalent in this area (and on the endangered species list). We have anywhere from 7 to 10 bats per evening in the summer time at our home." (1015-004 Mathis, p. 1)

Impacts to the Indiana Brown Bat have been considered in the FEIS. More detailed field surveys will be completed in Tier 2 NEPA studies. This species is not federally listed as threatened or endangered.

28. "You failed to identify the bald eagle nesting area along the White River near Freedom." (1104-056 King)

Preferred Alternative 3C is not near Freedom.

29. "A twentieth reason why a new terrain I-69 cannot be built is the impact that would be sustained to endangered and threatened species. The EIS itself states that the route for alternative one had the fewest occurrences of federally threatened and endangered species. Alternative one also has the second fewest recorded occurrences of state listed rare, threatened, or endangered species of plants and animals. If minimizing impacts to RTE species carries any weight, then alternative one or the no-build alternative would be the only real alternatives to consider." (1106-136 Werne)

It is correct that the No Build Alternative has the fewest potential impacts to TES species. However, the No Build Alternative and Alternative 1 are not practicable alternatives in that they do not adequately fulfill the project purposes. Therefore, these alternatives have been eliminated from consideration.

30. "Bald Eagles do in fact nest in the Morgan County area on the White River, as supported by the IDNR-you list it as only 'may be present'-what effect would a drastically increased human encroachment and automobile activity in the immediate vicinity of nesting habitat and brood rearing access?" (1029-031 Dittmer)

Preferred Alternative 3C would be located on SR 37 in Morgan County, and would have approximately the same impacts to the bald eagle as existing SR 37 has today.

31. "The Paragon area has been utilized for years as a stopover spot for the reintroduction of Whooping Cranes due to the fertile farm fields and rural setting. They have already led the cranes through this area this year-why was this important migratory stopover of a federally endangered species not mentioned? This is widely advertised information in IDNR newsletters? Wouldn't an interstate and increased human activity adversely affect Paragon as a stopover spot for the cranes?" (1029-0031 Dittmer)

Preferred Alternative 3C is not in the vicinity of Paragon.

32. "The most important point to make regards the relatively complete dodging of the copperbelly water snake (*Nerodia erythrogaster neglacta*) as a consideration in planning. This is very disappointing. Options 3, 4 and 5 all cross the Patoka River directly through a part of what I and others consider to be habitat for the largest metapopulation of copperbellies in the state." (1105-024 Kingsbury)

Potential impacts to the copperbelly watersnake in the Patoka River Bottoms can be avoided or minimized by spanning the floodplain and minimizing the loss of their habitat as much as possible. Tier 2 studies will survey for this species and others along Alternative 3C. In the Patoka River bottoms, INDOT will develop wetland mitigation for the development of habitat for this species and others. In addition, FHWA and INDOT have committed to bridge the Patoka River floodplain, as stated in Chapter 7.

33. "This wetland loss cannot be truly mitigated and improper design will cleave the population. However if the freeway is elevated on pylons across the entirety of the Patoka River bottoms, and habitat destruction is minimized during construction, then the metapopulation would remain intact." (1105-024 Kingsbury)

As stated in Chapter 7, the Preferred Alternative 3C will bridge the Patoka River Bottoms to help minimize the impacts caused by this project to the Patoka River area.

34. "The other issue I would like to raise is that of the insincere sampling effort of two drift fence arrays set up in the Patoka River bottoms. This effort to sample biodiversity in the area was anemic. Not enough traps were set, and they were used at the wrong time of the year. That they did not reveal any copperbellies or other interesting creatures is thus of no surprise. Nevertheless, I can attest that I have removed a copperbelly attempting to cross over Highway 57 at the Patoka River, that the population and habitat extends upstream and downstream from the work site, and that in its entirety, these bottoms are the most important place in the state for this imperiled species. I have also found the state threatened eastern mud turtle in these bottoms only a few miles away." (1105-024 Kingsbury)

The drift fence arrays setup in June and July of 1993 were done in general to sample the mammal and reptile populations of the Patoka River Bottoms. The 1993 sampling methods were not directed towards the study of any one species in particular. Although federal or state listed endangered, threatened, or special concern species were not collected, it is understood that the copperbelly watersnake is known to inhabit the bottoms. Preferred Alternative 3C crosses the river within

the transportation corridor set aside by the USFWS. This corridor has the fewest wetland/forest acres. Tier 2 surveys will be completed in these bottoms to ascertain additional species for consideration, including the copperbelly watersnake, mud turtle, and others. Crossings to the east (Snaky Point) or west towards Oaktown Bottoms were rejected because they contained more suitable habitats for this species and other federal and state listed species.

35. "There are several productive eagle nests along SR 67 between Spencer and Worthington on White river. A year or two ago there was piece in the Bloomington news paper about a nest that is on White river just south of Worthington. This is considered the most productive Bald Eagle's nest in Indiana by the DNR. Routes 2 and 4 would be ran within 1.5 miles of this nest." (0903-001 Neal)

Alternatives 2 and 4 have been eliminated from further consideration.

36. "I have concerns for the Eagles along White River at Worthington, were they considered in the impact study? Were the Indiana burial and hunting grounds a consideration? Locally known is, The Buffalo Trail which may not make an impact on a study, but it is something that cannot be replaced once destroyed." (1031-009 Fuller)

There are records of the bald eagle in the Worthington area and the Buffalo Trail was identified in the archaeological report. Archaeological impacts were also evaluated.

37. "A quick look at the map included in the DEIS study reveals that there are only 49 known hibernaculums in the study area of Alternative 3. Yet four of these are directly within the two mile corridor of Alternative 3. Even more significant is that as many as 21 out to the 49 are within about 5 miles of Alternative 3. Why did the DEIS study not address these facts or assess the impact of elimination of this rare and significant bat range to the rapidly declining total population of this federally protected species?" (1106-140 Milhoan)

Not all records of the Indiana bat in the DEIS are hibernacula. Some of the records are summer roosting habitat records. Both hibernacula and summer roosting habitat are important and will be thoroughly studied in Tier 2 EIS studies.

5.18 Floodplain Impact

1. "Flooding is a natural process and it is highly desirable to have room for floodwater movement and storage, through the retention of floodplains and of wetlands in the watershed." (1107-696 USEPA Region 5 Technical Comments, p.5)

During Tier 2 NEPA studies, analysis of floodplain impacts will be undertaken. Longitudinal and latitudinal floodplain encroachments will be minimized. Detailed studies of the hydraulic profile will determine if there is any significant change to the floodplain capacity. Latitudinal encroachments have less potential to have an effect. Floodway hydraulic computations will determine the size of bridges and the need for any auxiliary structures. The Patoka River and Flat Creek floodplains will be bridged in their entirety to minimize floodplain impacts in these areas.

2. "We encourage, where practical, bridging of unavoidable wetland and floodplain areas to minimize fill and allow for movement of flood waters and wildlife." (1107-696 USEPA Region 5 Technical Comments, p. 8)

Each crossing will be evaluated during Tier 2 for the wetland impacts of the crossing as well as the hydraulic impact to the floodway. Bridges of adequate size will be designed to pass the flood flow. Bridging wetland areas will also be considered as well as openings for the passage of wildlife. The Patoka River and Flat Creek floodplains will be bridged in their entirety to minimize floodplain impacts in these areas.

3. "The DEIS "anticipates" that the floodplain of the Patoka River will be bridged. This would be a very expensive project, especially since it would have to be built to withstand a major earthquake." (1106-147 Tokarski, p. 21)

The Patoka River crossing offers extensive areas of opportunities for wetland mitigation. Recognizing the importance of these floodplain and wetland resources, the Patoka River floodplains will be bridged. This crossing will be further refined in Tier 2 studies. All bridges will be designed to current AASHTO Specifications and will take into account seismic features of the area. The costs of bridging are included in the construction costs.

4. "My next concern is that the "surveys" don't list that the fronts to our properties as being in a flood zone. Everything from Highway 48 to Richland Creek is a registered mapped flood zone but is not included on any of your mapped "surveys". It does really flood and at times all the way to the road which makes part of our front yards and driveway at times about 3 feet under water." (1103-018 Rezvan, p.1)

The GIS data set for Floodplains was developed from "The Indiana Water Resource: Availability, Uses and Needs", Governor's Water Resource Study Commission (1980). During Tier 2 detailed alignment will be developed and with that mapping of flood zones will be included to assist in the hydraulic design of the project. The Preferred Alternative 3C does not cross Richland Creek.

5. "Daviness County Plans. One of the Daviness county expansion routes runs through a flood plain, which could make this less than conducive to smooth travel and more expensive to construct." (1021-019 Carnahan)

"Development along the western route, around Washington would not include development or factories because of the flood plain issue." (1021-019 Carnahan)

Preferred Alternative 3C in Daviness County includes the easternmost variation around Washington. The selection of this route around Washington minimizes impacts to floodplains in Daviness County. This alternative will still have floodplain impacts in Daviness County at the East Fork of the White River. Efforts will be made in Tier 2 and final design to minimize those impacts.

6. "Routes 2 and 4 follow the White River, traverse its floodplain and have numerous tributary creek crossings. Especially damaging in this regard is extension 2C/4C where the route cuts from I37 south of Martinsville to I-67 at Paragon. This section of route runs the floodplain for the entire route. Route 2C1 adds an additional crossing of the White Rivers itself. Route 2C has the highest floodplain impacts of all routes considered and should be avoided. 2A, 2B are better choices to minimize this particular impact." (1103-010 Tedesco)

"Route 4C has high floodplain impacts (1550-1810 acres), the highest number of stream crossings (130-145) and the highest wetland impacts at 140-190 acres. Route 4B also has high wetland impacts at 115-165 acres and as such, should be avoided." (1103-010 Tedesco)

Alternative 3C was selected as the single preferred alternative. Of the DEIS Preferred Alternatives, Alternative 3C has the lowest floodplain impacts and wetland impacts.

7. "I believe that State Road 67 would be worse than 37 or any other routes, due to flooding, and the fact that thousands of dollars would be spent just to bring in tons of dirt for the highway to keep it above flood level." (0901-005 Rawlins)

Alternatives that follow SR 67 generally have higher floodplain impacts than those that follow SR 37. The Preferred Alternative 3C follows SR 37.

8. "Much of this area is also located in the flood plain which affects many people downstream. Adding the additional run off of water from concrete roadways will greatly

impact the amount of water that will be damaging area property from the increased flooding." (1105-030 Brown)

"This area has always been flood plain and matter of fact it is listed as a 100 year flood zone. The problem with putting a road down there is that it floods every year, it floods pretty bad. They had to evacuate a school bus in Waverly just last year and they had to use rafts to get the kids off the bus and the bus was about swept off the road. If you put an interstate going across a flood zone, which they have the technology, if they can build the Golden Gate Bridge, they can put a road about anywhere. The problem is when it rains, it pours. You get 2 inches out here and it's a flood, it's not like anywhere else in the U.S. It can rain elsewhere and it doesn't flood as much, but this land, it just doesn't absorb water as fast and it just rolls. It goes down to every creek there is. If you put an interstate there you may or may not accommodate enough for the water flow to go into that river." (0911-044 Crowl)

During Tier 2 design, hydraulic studies will compare the natural condition and the build condition. Waterway openings will be sized to prevent any significant change in upstream water surface profiles and flooding.

5.19 Wetlands

1. "The DEIS indicates that the "preferred alternatives" would directly impact between 90 and 190 acres of wetland, including 70 to 160 acres of direct impact to forested wetlands. Forested wetlands are difficult to replace." (1107-696 USEPA Region 5, p.1)

As a result of further efforts to minimize impacts on wetlands, the Preferred Alternative 3C will impact approximately 75 acres of wetlands. Of these acres, 65 acres are forested wetlands. Efforts will be made in Tier 2 to minimize impacts to forested wetlands. Because forested wetlands are difficult to replace, the minimum mitigation ratio for those wetlands is 3:1.

2. "Wetlands were identified from the National Wetlands Inventory maps for each study band. This is an appropriate approach for the Tier 1 study. Steps have been taken with several alternatives to shift the study bands away from notable wetlands areas." (1107-696 USEPA Region 5 Technical Comments, p.3)

The use of NWI mapping is appropriate for a Tier 1 study.

3. "Figure 5.19-4 shows only major wetland impacts; many smaller wetlands will also be impacted but are not shown. For this reason, it is highly probable that significant wetland impacts were not included." (1106-147 Tokarski, p. 21)

This figure shows only notable, high quality wetlands complexes. It is labeled "High Quality Wetlands." Accompanying text describes NWI wetlands mapping as the basis for the calculation of wetlands impacts. NWI mapping includes many more wetlands areas than those shown in this figure.

4. "Wetlands areas are terribly affected by Alternative 2 and 4. Many are not on the present study maps specifically several lakes and wetlands areas in Owen County. A more recent photo map and realignment is required." (0819-089 Anonymous)

Preferred Alternative 3C has fewer wetland impacts than Alternatives 2 and 4. Because NWI maps were used to identify wetlands in Tier 1, some small wetlands and lakes/ponds may not be included in the analysis. These smaller wetlands and lakes/ponds will be identified in the Tier 2 NEPA studies on Preferred Alternative 3C.

5. "None of the build alternatives avoid wetland impacts completely, and this would be unlikely in a large, linear project such as this. What is noteworthy is that Alternative 1 is likely to have three to five times less wetland impact than the other build alternatives. This difference would not likely be overcome by careful routing of the highway alignment in Tier 2." (1107-696 USEPA Region 5 Technical Comments, p. 3)

Alternative 1 was designated as non-preferred because of its consistently poor performance in meeting project objectives. In light of its poor performance, Alternative 1 is not a practicable alternative. Among the DEIS Preferred Alternatives, Alternative 3C has approximately 75 acres of wetland impact, which is the lowest among the DEIS Preferred Alternatives. Preferred Alternative 3C is the practicable alternative that causes the least impact to wetland resources.

6. "The potential adverse impact to water resources from this project must be considered in context of massive historic loss or degradation of water resources in Indiana, including a loss of about 87 percent of its historic wetlands coverage and the loss of their function and values." (1107-696 USEPA Region 5 Technical Comments, p. 3)

Preferred Alternative 3C is the practicable alternative that causes the least impact to wetland resources. Successful mitigation for this project will result in a net increase of wetlands in Indiana.

7. "Please identify and avoid any existing 404 permit compensatory mitigation sites lying within the study bands for the DEIS. We understand that the COE - Louisville District Office is currently developing this information." (1107-696 USEPA Region 5 Technical Comments, p. 4)

"Map and avoid existing compensatory mitigation sites established for 404 permits."
(1107-696 USEPA Region 5 Technical Comments, p. 9)

The US Army Corps of Engineers investigated and found no compensatory mitigation sites within the alignment for Preferred Alternative 3C.

8. "Secondary impacts are estimated to add a few more acres of wetland loss to each alternative. This will need to be a topic for greater examination in the Tier 2 NEPA analysis and documentation. An inventory and impact analysis to farmed wetlands should be included in the Tier 2 NEPA analysis and documentation." (1107-696 USEPA Region 5 Technical Comments, p. 4)

This information will be included in the Tier 2 NEPA studies on Preferred Alternative 3C.

9. "The draft EIS indicates that wetland mitigation – the restoration of wetlands to compensate for wetlands impacted by the project – would occur as a part of this project. IDEM will continue to evaluate this project as it evolves and will recommend appropriate mitigation once a final alignment has been chosen. The estimates of wetland impacts may change dramatically once an alignment is chosen, as INDOT will need to field verify the presence, size, and precise location of wetlands within the actual areas to be impacted by the proposed project.

"Therefore, the numbers listed for each alternative are only estimates and are not adequate for calculating actual mitigation ratios or the number of acres required for mitigation. Based on the Draft EIS, one or more of the alignments could impact highly sensitive wetlands, such as the Flat Creek Wetland Complex or the Prides Creek Wetland Complex. Obviously, these areas must be avoided, as the presence of endangered species and unique aquatic ecosystems make mitigation virtually impossible. Specific roadway alignments could be modified to skirt these areas if the alignment in question is carried forward to Tier II." (1106-148 IDEM Letter, pp. 1-2)

Preferred Alternative 3C bridges the Flat Creek Wetland Complex and has been shifted to miss the Prides Creek Wetland Complex.

10. "Page 5-148: The Wetland MOU was signed on January 28, 1991, not 1999." (1107-697 U.S. Dept. of the Interior, p. 11)

The date has been corrected in the FEIS.

11. "Table 5.19-1 estimates the amount of wetlands for mitigation but it does not show where they will occur, or how they will be constructed." (1106-147 Tokarski, p. 21)

The FEIS includes mitigation, which provides information about potential mitigation sites and methods. This mitigation has been developed in consultation with federal and state regulatory agencies.

12. "Routes 2 and 4 are still poor choices from a water resource perspective given that the routes continue to follow the floodplain of the White River through Morgan, Owen and Green Counties. Route 2 suffers from the additional insult of coming in close proximity to the Goose Pond, a large wetland complex enrolled in the Wetland Reserve Program." (1103-010 Tedesco)

Preferred Alternative 3C avoids these impacts.

13. "Finally Routes 2 and 4 completely fail to provide linkage between Indianapolis and Bloomington and as such fail the fundamental test of the practicality of highway construction in the first place. Both Routes 2 and 4 should be removed from further consideration based on their high impacts to water resources." (1103-010 Tedesco)

Preferred Alternative 3C avoids these impacts and provides linkage between Indianapolis and Bloomington.

14. "I am writing to you today to say I am opposed to the new terrain interstate. My wife and I have property in Pike County where we are having a new house built. The new terrain route will take our house and property, along with many acres of wildlife habitat in the Patoka river bottoms." (1104-001 Frakes)

Where Preferred Alternative 3C crosses the Patoka River Bottoms, it will be elevated, minimizing the impacts to the wetlands and associated wildlife habitat.

15. "As a closing thought, I would like to note that the Patoka River bottoms are some of our best wetlands because of their size and quality. They therefore warrant special treatment simply because of their value as an integrated unit." (1105-024 Kingsbury)

Because of the high quality of the area, INDOT will bridge the Patoka River Bottoms to minimize impacts. This area offers significant mitigation opportunities as well.

16. "The DEIS correctly acknowledges the potential and responsibility for reducing wetlands impacts during the selection of a specific construction corridor to avoid wetland areas

and, if necessary, to select less damaging portions of them to fill. It also recognizes the opportunity in design and construction techniques to lessen these impacts." (1107-696 USEPA Region 5 Technical Comments, p. 4)

The FEIS includes changes to alternatives to minimize impacts upon wetlands. This will continue in the Tier 2 studies.

5.20 Agricultural Impacts

1. "Alternative 1 would have a significantly lower impact on farmland in Southwest Indiana than any of the DEIS alternatives, including the "preferred alternatives." Alternative 1 also has an advantage in that it follows existing rights-of-way (ROW) through most of its length. This would minimize new segmentation of working farms." (1107-696 USEPA Region 5 Technical Comments, p. 11)

Alternative 1 has the least impact to farmland.

2. "The analysis of potential farmland impacts for this project did not follow the regular Farmland Conversion Impact Rating System (p. 5-155) However, the methodology was not explained, except to say it relied on GIS data." (1106-147 Tokarski, p. 22)

"INDOT should have used the normal rating system (for farmland loss) to evaluate farmland and minimize losses in the planning process. If INDOT really believed that the scoring system would prevent meaningful comparison among different alternatives, is should have used its alternative method in addition to the scoring method, rather than instead of it. By postponing the usual FPPA scoring process until Tier 2, INDOT has avoided applying the FPPA to the selection of a route corridor, which as pertains to farmland is an extremely important decision. INDOT's non-standard application of FPPA violates NEPA." (1107-705 ELPC et al, pp. 40 - 41)

The DEIS explained that coordination with the NRCS Indiana headquarters concluded that the Farmland Conversion Impact Rating System was not an appropriate assessment tool for comparing farmland impacts between the numerous alternatives, each of which crosses multiple and different counties. The protocol and methodology for assessing prime farmland impacts was developed with and approved by the NRCS prior to initiation of the assessment as outlined on page 5-156 of the DEIS. The assessment used the Land Cover and State Soil Geographic GIS datasets and a maximum corn yield of 155 bushels/acre to achieve a weighted estimate of prime farmland value for comparison purposes. This methodology is considered appropriate by the NRCS for the purposes of relative comparisons of prime farmland impacts between alternatives.

3. "In reviewing the draft EIS it appears that a very good job was done in identifying the potential for the loss of prime farmland along the many alternative routes." (1031-017 USDA, NRCS)

We appreciate NRCS involvement in the development of the methodology for the analysis of agriculture impacts.

4. "The methodology described on page 5-158 for farmland impacts appears to be flawed. The actual impacts on yield do not follow prescribed percentages and may vary widely, year to year and place to place, as shown in Table 5.20-3" (1106-147 Tokarski, p. 22)

The methodology used to estimate crop production loss for the DEIS alternatives follows the guidelines established in INDOT's Procedural Manual. The NRCS, the resource agency responsible for farmland, cooperated in the development of the methodology for the analysis of agricultural impacts. Although it is an estimate, the assumptions made in the procedures are applied to each alternative assessment. Yields do vary year to year; that is why a recent three-year average is used in the calculations. Similarly, since yields vary from place to place, individual county average statistics were used as appropriate for each alternative. While the absolute dollar range might vary year to year, the overall crop production loss anticipated for each alternative would fluctuate relative to the other estimates.

5. "Indeed, this DEIS uses a three year period for determining crop yields that were some of the worst years for crop yields in many SW Indiana counties (1998, 1999, 2000). For some counties it was the lowest yields ever for corn and also low for soybeans. An eight to ten year average should have been used for crop yields in order to get an accurate picture of crop production." (1106-147 Tokarski, p. 22)

The calculation of principal agricultural commodity mean yields for determining crop loss was conducted in accordance with the INDOT procedural manual using the most recent three years of data available from the Indiana Agricultural Statistics Service. Nonetheless, a comparison of the three-year mean versus a ten-year mean was conducted to see if the difference, if any, was significant. Corn yield means for each of 24 counties (data for Brown and Crawford Counties was incomplete and therefore not included) were calculated using 1998, 1999, and 2000 data, while ten-year corn yields using data from 1990 to 2000 (1994 data was not available) were also calculated. Based on the Indiana Agricultural Statistics Service data, the three-year corn yield mean was equal to, or as much as 20 bushels/acre more than the ten-year yield mean. This is contrary to the statement that yields over the past three years were the lowest ever in SW Indiana counties. In consideration of soybean yields, the three-year means for eight SW Indiana counties

were equal to or as much as 2.0 bushels/acre greater than the ten-year means. In contrast, the remaining 16 counties showed three-year means with yields of 0.1 to 2.8 bushels/acre below the ten-year mean. However, a statistical comparison between the three-year and ten-year soybean yields concludes that for each of the 24 counties the difference between the two sample means is not significant.

6. "Prime farmland along SR-37 must be included as such and not devalued because it may be taken at some time later for development." (1106-147 Tokarski, p. 22)

Prime farmland impacts along SR37 were included in the assessment the same as prime farmland impacts elsewhere within the working alignments of the DEIS alternatives. The assessment was conducted independent of the potential for development along SR 37 and was not devalued relative to prime farmland in other impact areas where the potential for development was minimal. The prime farmland assessment and comparisons were weighted solely on yield potential using 155 bushels/acre of corn as the maximum yield for the highest quality soils series units. No attempt was made to weight prime farmland impacts based on development potential.

7. "Secondary impacts must also be accurately estimated. Estimates of secondary impacts for this project appear unrealistically low." (1106-147 Tokarski, p. 22)

The analysis of secondary or indirect impacts and cumulative impacts for agriculture is presented in Appendix Q and in Section 5.26 of the FEIS. This analysis was conducted in consultation with the Natural Resources Conservation Service (NRCS) of the US Department of Agriculture. Comments were received from the NRCS stated that *"it appears that a very good job was done in identifying the potential for the loss of prime farmland along the many alternate routes."*

8. "Agricultural land values of \$1288 to \$4369 per acre are very low (p. 5-152). More realistic values would range for [sic] \$4000 to \$10,000 per acre in Monroe County and much higher in Morgan and Marion counties. ... Current land value appraisals must be used for more accurate and realistic estimates." (1106-147 Tokarski, p. 23)

The average value per acre estimates included in the DEIS are from the 1997 Census of Agriculture and represent the average per acre market value reported by the farmers responding to the census survey. The data should not be misconstrued as representing an overall range of real estate appraisals. It is understood that agricultural property in portions of these three counties is very expensive due to its development potential. However, the value estimates only reflect the average of what the farmers believe their agricultural property to be worth.

9. "We must have too much farmland in this country anyway, else wise Congress would not throw away millions of dollars every year paying farmers not to grow crops. So what's the real price for giving up land for a highway?" (0805-005 Mills)

The effect of the I-69 project on federal farm subsidy programs was not evaluated as part of the farmland impact assessment. Ultimately, the real price for land to be acquired for a highway is determined through an appraisal of the property based on its current use and the fair market value of that land relative to similar properties in the same general area.

10. "I would like this part of my comments to reflect my concern about a US 41 route. First, the unique farm ground of the Oaktown to Decker area is the most irreplaceable type of farmland in Indiana. This truck-crop ground is made up of sand dune tracks that is found in only a few places in Indiana. This ground yields much more in revenue than conventional crop ground. As much of the income in this area comes from roadside sales, taking the road away from the farmers considerably lessens the income potential of the crop." (0821-052 Dillon)

Preferred Alternate 3C would leave US 41 and the roadside produce market associated with this highway as is.

11. "(3) Taking farmland is a non-issue. The entire farm problem is caused by too much farmland in use." (0820-189 Larry Robinson)

Conservation of farmland is an important federal and state policy. The Farmland Protection Policy Act requires that Federal or Federal-Aid projects give due consideration to farmland resource impacts and that the assessment be conducted in a quantitative and objective manner. This project is being developed in compliance with the Farmland Protection Policy Act.

12. "Alternative 1 far exceeds all other alternatives in regards to minimal direct environmental impacts (see Table S-6). In fact, as the following table illustrates, the selection of a route other than Alternative 1 will result in tremendous additional losses of farmland, forest and wetlands:

Criteria	Minimum Additional Acres Lost	Maximum Additional Acres Lost
Farmland	2290	4460
Prime Farmland	950	4070
Forest	635	1340
Estimated Core Forest Habitat	85	440
Wetlands	50	165

“For example, while Alternative 1 would result in a loss of as much as 1780 acres of farmland, the best other alternative would consume at least 4070 acres, or at least 2290 acres more than Alternative 1.”(1030-004, Greater Terre Haute Chamber of Commerce)

"Just as Alternative 1 exceeds all other alternatives in minimizing direct impacts, so it does with indirect impacts. The following table shows the additional acres affected by selecting an alternative other than Alternative 1:

Criteria	Minimum Additional Acres Affected	Maximum Additional Acres Affected
Farmland	40	400
Forest	10	330
Wetlands	See NOTE	30

(NOTE - Indirect Wetlands impacts could potentially improve by as much as 20 acres.)"
(1030-004 Greater Terre Haute Chamber of Commerce)

The commentor accurately describes the farmland impact data presented in the DEIS. The decision to select Alternative 3C as the preferred alternative was based upon many factors, not just farmland impacts.

13. "Loss of productive farm land is in error of a factor of perhaps 2 times more loss than estimated because of the following:

Frontage road losses not calculated by the study. (60% of existing roads crossed will be closed.) Frontage and access roads not calculated will require the paving over of topsoil that blew from Kansas in the dust storm years. We should be good stewards of the land that is a gift to Indiana. With an ever growing population keeping the earth able to produce more and more food is of obvious importance. The price paid for food will rise as the demand increases and the available land decreases." (1104-059 Smith)

The width of the working alignment takes into account the need for frontage roads. Therefore, the impacts to farmland resulting from frontage roads were incorporated in the DEIS. More detailed estimates of impacts will be presented in Tier 2 as design details are developed.

14. "Point rows!" A very large percentage of the farm land that is crossed by the new-terrain routes is in a generally north/east direction. Current roads run North/South and East/West. This means that farmers who are now farming squares, are left with two triangles with what farmers call "point rows". It refers to the fact that you can not turn a tractor on rows that run out at different lengths as in triangles rather than squares. Many farmers in Gibson and Daviess counties are left with field after field with this situation. This renders their operation not viable given the loss of productivity and transportation times and costs to access remote fields that are currently continuous squares rather than isolated triangles." (1104-059 Smith)

This assessment of "point rows" is generally accurate. The formation of point rows typically is an undesirable consequence resulting from transportation corridors. While such features do reduce the efficiency of a farming operation and can complicate access to once whole fields, they do not necessarily render the entire farmland unviable for future use. The avoidance or minimization of point rows and maximizing access to severed fields will be given full consideration during the Tier 2 phase and the design of the selected alternative.

Avoidance and minimization of farm severance and the creation of point rows will be given due consideration in the Tier 2 analysis and during the design phase of the project. Such impacts will not likely be avoided altogether, but can be reduced wherever possible as the project develops in greater detail.

15. "Indiana Farm Bureau appreciates the consideration of farmland and prime farmland in the DEIS analysis. We believe that farmland should be recognized as being developed property. Through improvements, technology and ingenuity, Indiana farmers have transformed unproductive or less productive property into productive farmland. This farmland should not be the first choice on which to locate new highway construction. We oppose the construction of new highways on new terrain, especially farmland, and favor locating new highways along upgraded existing roads where feasible." (1107-685 Indiana Farm Bureau Inc.)

Preferred Alternative 3C has 35% of its length along existing roads. Conservation of farmland is an important federal and state policy. The Farmland Protection Policy Act requires that Federal or Federal-Aid projects give due consideration to

farmland resource impacts and that the assessment be conducted in a quantitative and objective manner. This project is being developed in accordance with that act.

16. "2. We oppose any highway design that indiscriminately divides existing farms. We encourage INDOT to work closely with local communities, farmers and Indiana Farm Bureau to ensure that, if construction across new terrain is necessary, I-69 be designed to follow the boundaries of farmland so as not to split the farm or disrupt access to the farm." (1107-685 Indiana Farm Bureau Inc.)

Avoidance and minimization of farm severance and the creation of point rows will be given due consideration in the Tier 2 analysis and during the design phase of the project. Such impacts will not likely be avoided altogether, but can be reduced wherever possible as the project develops in greater detail.

17. "3. Adequate drainage must be constructed and properly maintained by either the state or federal government when limited-access highways are built so as not to reduce the value of adjacent and contiguous agriculture land. If adequate drainage is not provided, landowners should be compensated for the reduction in the investment backed expectation of their land." (1107-685 Indiana Farm Bureau Inc.)

"4. We recommend that INDOT be financially responsible for repair and maintenance of roadside drainage structures and fences located on state highway property if they were designed and installed by the state during the original construction or reconstruction of the highway." (1107-685 Indiana Farm Bureau Inc.)

The design of drainage systems within and along the highway, as well as culverts and bridges which convey water under the highway, will be designed according to INDOT standards to avoid undesirable off-site drainage impacts. The continued maintenance of the roadway drainage system will be the responsibility of INDOT.

18. "If farmers or others decide to stay on their "out-in-two" properties. The state will not pay for an overpass for them to have access to the "other side" of the highway." (1025-034 Author Unknown)

Access to severed farmland will be given due consideration in the Tier 2 analysis, and where appropriate the design will attempt to accommodate farmland access.

19. "Why was the relative fertility of the farmland in this region not compared to other lands of lesser fertility when utilizing the cost comparisons?" (1029-031 Dittmer)

Due to the size of the project area, each of the study alternatives would cross farmland of varying fertility between Evansville and Indianapolis. At this level of

study, a methodology to quantitatively compare the relative fertility of the farmland encountered by one alternative to that of another alternative was not possible given available statistical data and GIS coverage. However, impacts to prime farmland were considered in the DEIS.

20. "How can no one route concept offer a particular advantage regarding lost farm revenues when your own chart suggest that one could be as much as \$580,000 and one \$219,000. Again, you contradict yourself." (1023-010 Moreland)

The data does indicate that some routes would result in relatively greater overall farm revenue losses than others.

5.21 Forest Impacts

1. "With the substantial project loss of forest land and forest fragmentation associated with any of the "preferred alternatives" implementation of the project will contribute to significant loss of forest wildlife habitat in the project area and will contribute to the loss of surface water quality. The Tier1 DEIS does not identify whether local communities in the study area have ordinances, zoning regulations or some other means to protect forest habitat. This information should be considered prior to choosing a Tier 1 Preferred Alternative and included in the FEIS." (1107-696 USEPA Region 5 Technical Comments, p. 10)

The FEIS discusses the comprehensive planning for the counties in the Study Area. While ordinances can protect sensitive environmental resources, many counties and cities within southwestern Indiana do not have any such ordinances. The counties in the Study Area with comprehensive plans and zoning ordinances include Brown, Hendricks, Johnson, Knox, Marion, Monroe, Perry, Posey, Putnam, Spencer, Vanderburgh, Vigo, and Warrick. Crawford, Clay, Daviess, Dubois, Gibson, Greene, Lawrence, Martin, Morgan, Orange, Owen, Pike, and Sullivan counties do not have ordinances. Reviewing the ordinances showed that only the Zoning Ordinance for Brown County included a Forest Reserve District for the protection of forest resources. None of the alternatives, including the Preferred Alternative 3C, studied in the FEIS are located in Brown County. This information was considered prior to the selection of Alternative 3C as the Preferred Alternative. As stated in the FEIS (see Chapter 7), INDOT has committed to offering technical and financial assistance to work with local governments in the I-69 corridor to assist them in the development of land use and economic development plans.

2. "Fragmentation of interior forest blocks also greatly increases the threat of invasive plant species introduced into the forest, including garlic mustard, Japanese stilt grass, dame's

rocket, multiflora rose, privet, and a wide variety of other invasive species. These invasive species degrade the remaining forest habitat by eliminating native plant species, and thus the food and cover necessary for native wildlife species. Again, this problem is exacerbated by INDOT's habit of planting invasive species along highway rights-of-way." (1031-016 Nature Conservancy, Indiana Chapter, p. 3)

The DEIS analyzed direct impacts to core forest. The mitigation in Chapter 7 of the FEIS includes a commitment to mitigate lost forest and core forest lands. In selecting forest mitigation lands, priority will be given to establishing or protecting large contiguous tracts with high quality habitat. Mitigation for forest lands will include efforts to preserve and expand contiguous forested areas. Where appropriate, native wildflowers, grasses and trees will be planted. The state has established an Invasive Species Task Force. As part of this Task Force, INDOT is working with other state agencies to prevent the spreading of invasive species.

3. "Page 5-169: We assume some utility rights-of-way (e.g., natural gas pipelines) would be required to be moved or shifted to accommodate the various alternatives. Similarly, induced economic development would lead to increased demand for fossil fuels and electricity, which may require expanding or clearing new rights-of-ways. Were indirect effects from these reasonably foreseeable impacts included in the DEIS impact analyses for forests, wetlands, and karst?" (1107-697 U.S. Dept. of the Interior, p. 11)

Tier 2 studies will seek to avoid, wherever possible, relocating gas pipeline rights-of-way. Pipelines, as well as power lines, were included in the GIS, and steps were taken to avoid these in determining working alignments. Likewise, forecasts of secondary development assume that development occurs along existing rights-of-way.

4. "Page 5-171: Impacts to the Keisler Forest Legacy Property in Monroe County should be avoided. Given its close proximity to Indiana bat hibernacula, it is likely Indiana bats use this large tract of contiguous forest as foraging and roosting habitat." (1107-697 U.S. Dept. of the Interior, p. 11)

Preferred Alternative 3C avoids the Keisler Forest Legacy Property.

5. "Page 5-173, Section 5.21.4 Mitigation: We recommend impacts to forests be mitigated by selecting a preferred alternative that avoids heavily forested areas. Alternative 1 would only impact a maximum of 170 acres of forest, whereas alternative 3B (considered a preferred alternative in the DEIS) would impact up to 1,450 acres of forest. Losses of large acreages of forest (especially near hibernacula) are likely to adversely affect Indiana bat foraging and roosting habitat. Likewise, the increase in forest fragmentation resulting from the highway would negatively impact many neotropical migrant birds and impede

dispersal of many small mammals, reptiles, and amphibians." (1107-697 U.S. Dept. of the Interior, pp. 11-12)

During Tier 1, a Biological Assessment (BA) was prepared as part of Section 7 Consultation. Based on the BA, US Fish and Wildlife Service has issued a “no jeopardy” in their Biological Opinion which is included in Appendix LL of the FEIS. Section 7 Consultation will continue in Tier 2. The DEIS analyzed direct impacts to core forest. The mitigation in Chapter 7 of the FEIS includes a commitment to mitigate lost forest lands at a ratio of 3:1. Mitigation for forest lands will include efforts to preserve and expand contiguous forested areas. Consideration will be given to wildlife crossing culverts in Tier 2.

6. "Table 5.26-3 shows exactly the same amount of estimated forest acreage in SW Indiana for all alternatives except Alternative 1. Alternatives 2 - 5 each show a loss of exactly 1500 acres. This table shows significant variation among the routes for direct and indirect losses of forest land, yet the DEIS apparently assumes no long-term variations." (1106-147 Tokarski, p. 23)

Table 5.26-3 shows the direct and indirect impacts to forests, and these numbers are presented in ranges and vary from alternative to alternative. The 1998 forest acreage for Southwest Indiana is 2,026,500. Since the cumulative impacts discussion for forests concluded that forest acreage in Southwest Indiana has reached a plateau and will likely remain at approximately the same level over the coming years, the 2025 forest acreage is estimated to be 2,025,000.

7. "The Indiana Society of American Foresters recognizes the values and benefits that Indiana's citizens derive from transportation corridors that effectively link all regions of the state. We also are aware of the negative effects that these corridors, especially roads, can have on the surrounding landscapes - including natural landscapes (such as forestlands and wetlands) human-modified landscapes (such as agricultural land) and human communities, when these corridors are not appropriately, planned, designed and constructed. The Society is most qualified to address natural landscapes that are forested."

"It is the position of the Society that the selected alternative should provide for the least amount of long term forest disturbance resulting from development that occurs in the vicinity of road corridors. Since all of the considered alternatives will result in at least some immediate reduction of Indiana's forestland base, the Society further recommends these losses be mitigated, by the afforestation of suitable open space within the vicinity of these conversions. In order to contribute to maintaining the current 20% of Indiana's

landscape in forest cover, it is also recommended these mitigation plantings exceed a 1:1 ratio." (1107-548 Indiana Society of American Foresters)

As stated in Chapter 7 of the FEIS, FHWA and INDOT will mitigate forest losses at a 3:1 ratio. In selecting forest mitigation lands, priority will be given to establishing or protecting large contiguous tracts with high quality habitat.

8. "The chart shows that not only is Alternative 1 clearly superior, but that alternatives 3B and 3C are particularly awful for forests." (0820-226 Indiana Forest Alliance, p. 2)
"Alternative 3B and 3C are particularly awful for forests in part due to the severe amount of core forest habitat to be lost. This fact should greatly multiply the estimated "costs" of the project due to the high biological significance of this habitat and the rarity of it on the landscape. This is totally unacceptable and in conjunction with other pressures of the industrial world will put plant and animal species in jeopardy." (0820-226 Indiana Forest Alliance, p.2)

The selection of Preferred Alternative 3C analyzed all factors (impacts, performance, and cost). As stated in Chapter 7 of the FEIS, FHWA and INDOT will mitigate forest losses at a 3:1 ratio.

9. "The issue of "core Forest" also demonstrates why the statistic that is generated in the above excerpt from the DEIS summary is not acceptable justification for the loss. It may just be one statistic to consider, or one perspective from which to look at it, but there are many other that are equally or more persuasive. While the direct, physical loss of acreage in a slice of time may seem small, the affects of fragmentation may be far reaching, especially in an ecosystem already near the threshold of what it can withstand. Bisecting forests, especially with heavy flows of toxic traffic, has effects that reach beyond the footprint. These include the "edge effect," whereby the creation of unnatural levels of forest/opening intersection creates deathtraps for migratory songbirds and the exponential decrease in the viability of the forest for interior forest-type dependent species." (0820-226 Indiana Forest Alliance, p. 3)

Mitigation efforts will also result in the establishment or protection of many additional acres of core forests in Indiana. These mitigated areas will be located so as to be particularly helpful to threatened or endangered species. FHWA and INDOT will mitigate forest losses at a 3:1 ratio. Preference will be given to areas contiguous to large forested tracts that have recorded federal and state listed species.

10. "This route also comes within a mile of "Indiana's Largest Waterfalls" - Beautiful Cataract Falls and 500 acres of forest, which was GIVEN to the STATE OF INDIANA by Agnes Stuckey." (1008-004 Minnick)

Preferred Alternative 3C is not near Cataract Falls.

11. "...there are vast areas in southern Indiana (current coal mine property and old strip mine areas) that could be reforested to replace land taken for the highway." (0821-060 Castle HS Band Boosters)

Mitigation is part of the FEIS proposed forest mitigation to replace forested lands required for right-of-way for the project.

5.22 Water Body Impacts

1. "In addition, the historic channelization of substantial proportions of streams in Southwest Indiana has resulted in loss of natural stream geomorphology and riffle-pool systems, with a loss of functions and values." (1107-696 USEPA Region 5 Technical Comments, p. 3)

As stated in Chapter 7 of the FEIS, impacts to natural stream geomorphology and riffle pool complexes will be avoided where possible. Where these impacts can not be avoided, they will be mitigated.

2. "'Open water' is not well explained in the DEIS, but appears to mean small oxbows and other lakes." (1107-696 USEPA Region 5 Technical Comments, p. 5)

The term Open Water as used in the DEIS can be described as any impoundment of water due to natural or man-made activities that has an insufficient amount of vegetation within the water body to make it an emergent wetland. This definition excludes streams and rivers. This definition of Open Water has been added to Section 5.22 of the FEIS.

3. "We note that the numbers for open water do not match between Tables 5.22-1 and 5.24-1." (1107-696 USEPA Region 5 Technical Comments, p. 5)

"Please fix the open water table entries for consistency." (1107-696 USEPA Region 5 Technical Comments, p. 10)

The table has been changed in the FEIS so that the numbers are consistent throughout the document.

4. "Much of the future Tier 2 detailed analysis of stream and open water impacts occurs in the placement of the highway corridor and the details of crossing points and highway design. Such an analysis must also consider impacts to stream riffle-pool complexes, which are considered special aquatic sites for Section 404 purposes. Natural stream segments with good riffle-pool structure are especially significant in Indiana, due to historic channelization of a substantial portion of streams. Alternative 1 presents a much greater opportunity for reducing environmental impacts to lake and stream aquatic resources." (1107-696 USEPA Region 5 Technical Comments, p.5)

As stated in Chapter 7 of the FEIS, impacts to natural stream geomorphology and riffle pool complexes will be avoided where possible. Where these impacts can not be avoided, they will be mitigated. Alternative 1 was designated as non-preferred because of its consistently poor performance in meeting project objectives. In light of its poor performance, Alternative 1 is not a practicable alternative. Among the preferred alternatives, Alternative 3C has the lowest wetland impacts with approximately 75 acres.

5. "All proposed alignments, including the I-70/U.S. 41 option, will entail the construction of bridges, culverts, and other structures designed to span or pipe waters through the right-of-way for a given alignment. At this stage, it is virtually impossible to begin to characterize these impacts, as decisions regarding the type of structure and the footprint of impact will not be made until the final design phase of the roadway.

"In general, IDEM recommends that the realignment of any surface water be avoided wherever possible, as stream channel realignments can have significant effects on short-term and long-term aquatic habitat and in-stream water quality. We recommend that, in Tier II, INDOT studies further the waters within the proposed alignment and identifies or rank-orders waters based on criteria such as ambient water quality, extent of anthropogenic impacts to the stream channel and the riparian corridor, and other activities within the watershed that may have an impact on water quality and aquatic life within the affected water body. (1106-148 IDEM Letter, p. 2)

Realignment of any surface water will be avoided wherever possible. During Tier 2, further studies will be conducted to characterize the impacted water bodies. All efforts will be made to avoid, minimize, and mitigate those impacts.

6. "It would be helpful if INDOT would provide information, in a general manner, regarding which types of water bodies would typically be culverted versus bridged, and how INDOT intends to mitigate for these impacts. IDEM will, as a part of required authorizations for the final project, require compensatory mitigation for impacts to streams, rivers, and other surface waters." (1106-148 IDEM Letter, p. 2)

Typically, INDOT uses culverts to cross intermittent water bodies and bridges perennial water bodies. Decisions are made based on flow rates and other factors. Final decisions on water body crossings will be made during final design.

7. "All of the karst topography along these routes acts as a natural filtration system. Much of the ground water that flows into Lake Monroe water shed flows through this KARST topography. Any of these proposed routes will drastically alter the flow of ground water in the natural filtration system that provides us with our major water source...Lake Monroe. With disrupted flow in water displacement comes the drying up of wet lands that may not even be directly in the path of this proposed route." (0820-107 Colby)

Karst issues will be investigated in greater detail in the Tier 2 studies in accordance to the 1993 Memorandum of Understanding for karst regions in the state of Indiana (Appendix U). In accordance with the MOU, the investigation of karst issues in Tier 2 will involve studies of potential impacts on groundwater flows and efforts to avoid, minimize, and mitigate.

8. "Just asking that you be aware of the streambank stabilization project completed by the Department of Natural Resources on State Road 37 North of Martinsville at Stotts Creek Bridge along the White River. There was a streambank stabilization project completed years ago that appears to be successful. If this route is chosen as I-69 and this area is disturbed, then this part project may have for nothing. Remember the bank of the White River is not stable in this area or DNR would not have spent so much time, effort and money to complete this project." (1004-001 Cummins)

In Tier 2 studies, INDOT will coordinate with IDNR to ensure that impacts to the restabilization area will be avoided, if possible, and if not possible then minimized and mitigated.

5.23 Ecosystem Impacts

1. "The DEIS inventoried a number of sites that the alternative study bands were able to avoid, such as Bean Blossom Bottoms, portions of which are State and Federal preserves and refuges." (1107-696 USEPA Region 5 Technical Comments, p. 4)

Input received from agencies such as USEPA was quite helpful in this regard.

2. "Still, several of the 'preferred alternatives' may affect high quality natural areas:

"The Patoka Wildlife Refuge/Patoka River Bottoms Area - 7-8 acres of wetland, for alternatives 3, 4 and 5. The routing lies within the prospective acquisition boundary of the refuge.

"Flat Creek wetland complex - potential impacts from alternatives 3, 4, and 5.

"Prides Creek wetland complex - crossed by alternatives 3, 4, and 5.

"West Fork White River wetland complex - crossed by alternative 4. This is potentially eligible for inclusion in the National Wild and Scenic Rivers System.

"The FEIS needs full identification on the designation of these and any other natural sites in primary impact zones that are sanctuaries and refuges, consisting of acres designated under State and Federal laws or local ordinances to be managed principally for the preservation and use of fish and wildlife resources. Please also indicate all natural areas that are not designated as a federal, state or local sanctuaries or refuges. Sanctuaries and refuges, such as the Patoka Wildlife Refuge, must generally be avoided to receive a Section 404 permit, see below. Alternatives 1 and 2C avoid this area while the other 'preferred alternatives' do not." (1107-696 USEPA Region 5 Technical Comments, pp. 4-5)

"Clarification on the full inventory of designated sanctuaries and refuges, including ones recognized by local ordinance, needs to be provided in the FEIS. Please also indicate all natural areas that are not designated as a federal, state or local sanctuaries or refuges. Impacts to wetlands and to riffle-pool complexes would have to be evaluated thoroughly, in light of being special aquatic sites in the Guidelines, in Tier 2." (1107-696 USEPA Region 5 Technical Comments, p. 8)

"Identify designated refuges or preserves within the study bands - State, Federal, local; and, also note where an area is not designated." (1107-696 USEPA Region 5 Technical Comments, p. 9)

Natural environmentally sensitive areas have been identified in the FEIS. They are identified and discussed in Chapters 5 and 8. Where applicable the state or federal designation is noted. Chapter 8 provides further detail regarding the designation, use, and ownership of natural areas close to the alternatives. Impacts of Preferred Alternative 3C on the Patoka National Wildlife Refuge (NWR) have been minimized. In the Patoka area, Preferred Alternative 3C is located within a highway corridor that was reserved for this project by the US Fish and Wildlife Service in their FEIS for the creation of the Patoka refuge. Preferred Alternative

3C does not use any refuge lands. In addition, Preferred Alternative avoids the West Fork of the White River. Preferred Alternative 3C bridges the Flat Creek Wetland Complex and has been shifted to miss the Prides Creek Wetland Complex.

3. "Sycamore Land Trust (SLT) strongly opposes I-69 route 3A and 3B through or near SLT property. These two routes, 3A and 3B, pass through segments of the ecologically rich Beanblossom Bottoms (BBB). Corridor 3A includes about 65 acres in the west and south part of the preserve. In addition, corridor 3B could clip off several acres of SLT property near Bottom Road to the east." (1107-701 Sycamore Land Trust, p. 1)

Preferred Alternative 3C will not impact this area.

4. "SLT representative Dave Hudak gave a detailed history (at a June 5 meeting with the Study Team and environmental review agencies) of our land acquisition in the bottoms and our overview of biotic values, including documentation of the federally threatened bald eagle (*Haliaeetus leucocephalus*) or state-threatened Kirtland's snake (*Clonophis kirtlandii*), northern crawfish frog (*Rana areolata circulosa*), barn owl (*Tyto alba*), northern harrier (*Circus cyaneus*) and bobcat (*Lynx rufus*). Also, a large great blue heron rookery is located in the state nature preserve on the BBB preserve." (1107-701 Sycamore Land Trust, pp. 1-2)

Preferred Alternative 3C will not impact this area.

5. "Bean Blossom Bottoms has a known outstanding biotic community, the almost certain as yet unknown biota which would add to the richness of the community, and to the biologically connected Muscatatuck National Wildlife Refuge. Naturalists have documented numerous resident and migratory birds here." (1107-701 Sycamore Land Trust, p. 2)

Preferred Alternative 3C will not impact this area.

6. "... we were surprised to learn that some of the preferred routes (routes 3A, 3B, 3C, 4A, 4B, and 4C) are in close proximity to Thousand Acre Woods Nature Preserve, despite our earlier concerns and comments. We were also concerned that nowhere in the DEIS does it note that this area is, in fact a state-dedicated nature preserve. It was dedicated in July 2000 by the Natural Resources Commission with the articles of dedication subsequently signed by the governor." (1031-016 Nature Conservancy, Indiana Chapter, p. 2)

Preferred Alternative 3C incorporates the easternmost variation around Washington (WE2). This routing avoids impacts to Thousand Acre Woods.

7. "We own several nature preserves bordered by highways managed by INDOT, and are very disturbed by INDOT's practice of planting known invasive species such as crown vetch and tall fescue directly adjacent to high quality natural areas. INDOT should try and avoid negative environmental impacts to the greatest extent possible, and should avoid planting invasive species." (1031-016 Nature Conservancy, Indiana Chapter, p. 2)

Planting of native wildflowers, grasses, and trees will be incorporated into the project where appropriate.

8. "The Tincher area has not been studied intensely. We believe such surveys should be completed before a decision to utilize the Highway 50 corridor for I-69 is made:

Additional dye tracing

Heritage resource surveys

Plant and animal surveys due to the habitat that is available

Cave bioinventories." (1107-699 USDA, Hoosier National Forest, p. 2)

Preferred Alternative 3C does not use the US 50 corridor.

9. "There is one correction we would like to see made in future documents. Please delete the term Fuzzy Hole Natural Area on pages 5-194 and 5-196. We do not use the term natural area when designating areas. Fuzzy hole is a karst feature in the Tincher Special Area and references should be to the Tincher Special Area." (1107-699 USDA, Hoosier National Forest, p. 3)

This has been changed in the FEIS.

10. "Waverly Bog Natural Area Registry site is located almost directly in the proposed route. If the route will be near this site, we recommend that the actual highway be located away from Waverly Bog as far as possible, within the two-mile study corridor, to avoid any impacts to this important natural area." (1107-698 IDNR, Division of Water, p. 1)

Originally, the alternatives that used the SR 37 footprint had an additional variation to I-465 that branched off towards Mann Road. Waverly Bog Natural Area was within the corridor for this variation. The Mann Road variation has been eliminated from consideration. Preferred Alternative 3C will use the SR 37 footprint in this area, and the Waverly Bog Natural Area Registry Site is outside the corridor.

11. "The Combs Forestry Property, the Keisler Forest Legacy Property, and the Waverly Bog Natural Area Registry Site are all located along this alternative [3B]." (1107-698 IDNR, Division of Water, p. 2)

Since the DEIS, Preferred Alternative 3C was shifted to avoid the Combs Unit of Martin State Forest. Preferred Alternative 3C now avoids all of these properties.

12. "The following significant natural areas/features are also located along this proposed alternative [3C]: Patoka River NWR, Capehart Sandflats and Thousand Acre Woods, forest blocks of Crane NSWC, bobcat habitat, Combs Forestry Property, and the Waverly Bog Natural Area Registry Site." (1107-698 IDNR, Division of Water, p. 2)

Except for bobcat habitat, which covers a broad range in Southwest Indiana, all of the above properties have been avoided. In the vicinity of the Patoka NWR, Preferred Alternative 3C utilizes a highway corridor that was reserved by the US Fish and Wildlife Service in the Patoka NWR FEIS. The FEIS includes a new table showing avoidance and minimization of impacts on sensitive areas (see Table 5.23-2). To minimize impacts to this area, the Patoka River Bottoms will be bridged.

13. "The Patoka River NWR and the Capehart Sandflats and Thousand Acre Woods are located along this alternative [4B]." (1107-698 IDNR, Division of Water, p. 2)

Alternative 4B was not selected as the Preferred Alternative.

14. "The following significant natural areas/features are also located along this proposed alternative [4C]: Patoka River NWR, Capehart Sandflats and Thousand Acre Woods, and the Waverly Bog Natural Area Registry Site." (1107-698 IDNR, Division of Water, p. 2)

Alternative 4C was not selected as the Preferred Alternative.

15. "Page 5-186: 'The Garrison Chapel Valley area includes a large karst valley, just east of the Monroe County Airport.' Change direction to read 'west,' not east." (1107-697 U.S. Dept. of the Interior, p. 12)

The correction has been made in the FEIS.

16. "Page 5-187: The FWS thanks the INDOT for shifting Alternative 3's alignment to avoid a high priority Indiana bat hibernaculum that has been designated as critical habitat under the ESA." (1107-697 U.S. Dept. of the Interior, p. 12)

INDOT and FHWA thank USFWS for their coordination regarding the Indiana bat and other threatened and endangered species.

17. "Page 5-195: Because Alternatives 3 and 5 would have the greatest impacts to core forest habitat (398 to 682 acres), these routes would also be most likely to negatively impact Indiana bats and neotropical migrant birds. Therefore, we recommend Alternatives 1, 2, and 4 be given preference over Alternatives 3 and 5." (1107-697 U.S. Dept. of the Interior, p. 12)

"I am writing to express my concerns about the possible routing of I-69 through the Monroe County karst. There are a number of regional endemic troglotic (obligate cavernicolous) or phreatobitic (Obligate groundwater) species that will potentially be impacted if the karst corridor is selected. I would urge you to choose a route that does not traverse this karst area." (1107-295 Lewis)

Alternatives 1, 2B, 4A, and 4B were designated as non-preferred in the DEIS. Among the preferred alternatives, Alternative 3C was selected based upon considerations of cost, performance, and environmental impacts. Also, the Preferred Alternative 3C is the practicable alternative that causes the least impact to wetlands as documented in Appendix DD of the FEIS. FHWA and INDOT are committed to mitigating forest loss at a 3 to 1 ratio and will target existing forest blocks in an attempt to add to core forest. FHWA and INDOT will comply with the Karst MOU, which is contained in Appendix U.

18. "Our house is in the potential path of Route 3C and it is located near two caves with Indiana bats which are not even shown on the DEIS. There are also numerous sinkholes on our property (4850 W. Evans Road) which are not on the DEIS." (1107-356 Henderson)

"Subsurface drainage area are impacted by Alternative 3B and C. These crossings occur in areas other than along SR 37. For example, Alt. 3 crossing sinking stream basins not shown on the Environmental Atlas. These drainage patterns should be studied now and not put off until Tier 2." (1106-147 Tokarski, p. 24)

"The Draft Environmental Impact Statement has missed a large spring and probably cave system located at the eastern edge of the 2000' Study Corridor of Alt. 3a-c. the location of the spring is in the SW 1/4 of NE 1/4 Sec. 7, Indiana Creek Twp. (T7N R2W), at the location shown on your maps (Alt. 3, p. 15) as a small pond about 1200 feet ESE of the divergence of the centerlines of Alt. 3c from 3a-b (the pond is fed by the spring, which issues on its NW side.)" (1102-015 Munson)

"The spring flows from what is an obvious collapsed cave mouth. This cave and spring has historical documentation. Dr. John Thomas Freeland (born 1813) resided until about 1834 in a house on the location now occupied by the home of Mary Lisa Swoape (about

150 feet W of the spring). In 1891 Dr. Freeland wrote a letter, which contains this statement:

"To the right (east) of the house is a cave that, with a little work, made us a fine milk house...The roof of the cave has fallen in but the spring water still flows through it. With some work it could be cleared out and be as good as new..."

"On the basis of the geological member from which this spring issues (upper Ste. Genevieve Limestone), the relation of the spring to base level of streams, and the volume of water flow it is very likely that the spring issues from a large cave system. It has the same external characteristics as three large spring caves in western Indian Creek Twp. And adjacent Center Twp. of Greene Co. (*viz.* Weaver Spring Cave, Buena Vista Cave, Deckard Spring Cave), each of which has 2000 to 5000 feet of mapped trunk passage." (1102-015 Munson)

"On my property I have found 4 caves - 2 I have gone into - one has a 24 foot drop and opens up into a 30 foot room with side tunnels - the other one had a 14 foot drop and opened into about a 10 foot room with side tunnels. I also have at least 3 large sinkholes. My neighbors property has various large sink holes (I have seen 6 of them) and numerous caves one of which has a 60+ vertical shaft and there is also a year round spring near the top of the hill. The Mills have given permission for these sites to be mapped and I would love the chance to have some one from your department verify this information." (1103-018 Rezvan, p. 1)

"Comments from others (e.g. G. Milhoan) have provided you documented evidence of the incompleteness of karst features and springs in Eastern Greene County and Western Monroe County. The reason these data sets were incomplete is that most of the new discoveries occurred on the private property of landowners that until recently discovering they lie in the path of new road, would not allow access to their property for fear of liability and unwanted attention and traffic." (1107-162 Branam)

"It is my understanding that the amount of karst features that would be affected by the new terrain routes was underestimated in the Draft Environmental Impact Statement. Landowners along the corridors in Monroe and Owen counties have noted that there are springs and caves in these areas that INDOT apparently was unaware of. Karst systems represent fragile ecosystems which could be irreparably altered by runoff from petroleum and salt runoff as well as spills occurring on the highway, and these impacts are not presented in the Draft EIS." (1021-025 Mominee)

"...this was not a true statement. Per the Indiana University Geological Department, we have more than 100 caves in this area; was this data purposely left out of your report or

just overlooked? There are also many caves that have been covered by dirt in hopes to seal them up. What about those caves?" (1015-004 Mathis, p. 2)

"I saw only two sections of it and it left off more than it showed. The map said there were no caves in the corridor. Well that is untrue. I have been underground in a few of them around my house. Not one spring icon was shown on the map. There are at least 5 within 1 mile of my house, including what the NSS says is Owen County's largest." (1023-052 Axis Enterprises)

Only very large sinkholes and sinking stream basins were shown in the DEIS. This information was not intended to show all karst features in the area, but rather give a general idea of where karst terrain may be. Karst terrain is prevalent throughout the Mitchell Plateau and Crawford Upland physiographic regions. Cave densities are shown on maps to keep the actual cave locations confidential and avoid damage from people trespassing on the property. The discussion in Section 5.24 regarding highway runoff concluded that the levels of runoff are below pollutant concentrations that produce toxic effects.

19. "In summary, the non-renewable natural resources, such as the bat caves, tinchor, and beanblossom, and any other unique ecosystem impacts should be avoided at all cost. NO route options should be further pursued that disrupt, in any way, such resources." (1107-102 Prater)

Preferred Alternative 3C avoids the Tincher Special Area and Beanblossom Bottoms. The Section 7 consultation process has concluded with a finding by the US Fish and Wildlife Service that the Preferred Alternative 3C will cause no jeopardy to the Indiana bat.

20. "Ongoing work by Dr. Julian Lewis in the Hoosier National Forest is uncovering life systems in the karst region which are barely understood. Route 5 in particular cuts through this study area." (1025-033 Vernier)

Preferred Alternative 3C does not pass through the Hoosier National Forest.

21. "It would be a drastic mistake to run I-69 through Norwest Woods (alternative route 3B). Our neighborhood, which is situated in Norwest Woods behind the old Ivy Tech building, is sitting on top of a cave. This cave has many caverns, one of which is located on our property. Many bats can be seen in our woods near the entrance of this cave. This cave has been spelunked and explored before. Our neighborhood is honeycombed with

several sinkholes, some near the entrance to the cave. As such, this IS NOT a viable route for a highway, nor is it a responsible choice." (1106-135 James-Houff)

Preferred Alternative 3C does not pass through this property.

22. "Some karst features can be addressed with pollution control measures, such as those contemplated in the 1993 Interagency Memorandum of Understanding regarding Karst and Transportation Projects. Other impacts to karst, such as stormwater from roadways, may need to be mitigated within the proposed alignment. Page 7-2 details that INDOT will work with local units of government to encourage planning for development. This is useful, but some sections of roadway may require mitigation concurrent with construction, as detailed on page 7-7." (1106-148 IDEM Letter, p. 2)

A Karst Memorandum of Understanding (MOU) (see Appendix U) was signed on October 13, 1993. This MOU was signed by INDOT, IDNR, IDEM, and US FWS and delineates guidelines for construction of transportation projects in karst regions in Indiana.

In the MOU, INDOT in cooperation with these other agencies will determine the location of sinkholes, underground streams, and other karst features prior to proposed alterations or construction in karst regions. This identification of karst features includes research from public and private sources, field checks, and preparation of a report documenting karst features and drainage areas. The report will be used as a tool in assisting the determination of the proposed highway alignment.

The Karst MOU specifies efforts to minimize or negate impacts to karst features. These measures include hazardous materials traps, monitoring and maintenance plans for the karst features, and low salt or no spray strategies. All agencies are to be involved throughout to review and comment on strategies, reports, and plans for dealing with karst features.

5.24 Water Quality Impacts

1. "The DEIS indicates that the 5 'preferred alternatives' would impact karst areas, including impacts from induced development associated with an interstate highway. Karst areas experience a very high, rapid interaction between groundwater and surface water, with little buffering or filtration. Current technical capacity for mitigating adverse impacts to ground/surface water and aquatic biota in karst terrain is very limited. Based on information in the DEIS, much of the karst region appears to have limited sanitary sewer service and little regulatory control over on-site wastewater treatment systems and

limited local land use planning or controls to protect these resources." (1107-696 USEPA Region 5, p.1)

The Karst MOU (see Appendix U) will be followed to address highway runoff in these areas. The mitigation plan includes technical and financial assistance to local governments for land use planning. Potential impacts to karst areas have been considered when determining the number and location of potential interchanges.

2. "The information provided in the DEIS is generally adequate for this level of assessment - a comparison of the study bands with best estimates for their environmental impacts to water resources." (1107-696 USEPA Region 5 Technical Comments, p. 2)

Tier 2 will provide a more detailed analysis of water resources.

3. "I've noticed a very glaring error in their tier one big picture process that is suppose to consider Environmental Impact. It does not mention water quality.....not one little word about water quality, they say something about wetlands but nothing about water quality." (0820-105 Schelicher)

"Water Quality not even mentioned in Environment Study." (0916-019 Hutte)

Water Quality is addressed in Section 5.24, *Water Quality Impacts*.

4. "In the Tier 1 EIS, we are interested in finding the corridor alternative with the greatest potential for first avoiding and then minimizing locational impacts to water resources." (1107-696 USEPA Region 5 Technical Comments, p.3)

Preferred Alternative 3C is the practicable alternative with the least impact to aquatic resources. In a letter dated September 25, 2003, the US Army Corps of Engineers concurred in this determination for Preferred Alternative 3C.

5. "The DEIS identifies six streams having a high or medium degree of impairment, for various reasons, crossed by the five "preferred alternatives" and Alternative 1. The impacts assessment focuses on the presence of PCB's in each of these water bodies, but does not describe the mechanisms of environmental impact. The FEIS should identify these mechanisms, such as resuspension of PCB's mercury and lead in sediments during construction. Some water bodies are listed for impairments of low dissolved oxygen, high *E. coli* (bacterial) levels or impaired biota. Please explain whether the filling of these waters, and their associated wetlands, or the project's "temporary" construction impacts will aggravate impairments to these water bodies. Additional secondary impacts may be incurred from changes in watershed use due to highway access/interchange

locations, a Tier 2 subject. Depending on the nature of these impacts, appropriate mitigation must be planned.” (1107-696 USEPA Region 5 Technical Comments, pp. 5-6)

"Expand discussion on why crossing impaired waters is problematic; address increasing designated impairments from indirect watershed impacts." (1107-696 USEPA Region 5 Technical Comments, p. 9)

Clear Creek, Stout Creek, and Conrad’s Branch were identified in the analysis as impaired streams that required special mitigation. The mitigation in Chapter 7 of the FEIS states that all crossings of Clear Creek, Stout Creek, and any impacts to springs that flow into Conrad’s Branch, which flows into Richland Creek, will be constructed to ensure, as much as possible, that sediments containing PCB and/or Hg are not re-suspended into the water column during construction and that proper characterization and disposal of any removed sediments will be required.

6. "The study area has varied geological regions, ranging from areas of glacial till deposits, to the interactive surface-groundwater karst region of dissolved limestone. Groundwater in glacial till areas is much more protected from surface pollution than is groundwater in karst areas. For groundwater protection purposes, it is advantageous to locate major highways and their induced development in till regions.” (1107-696 USEPA Region 5 Technical Comments, p.6)

"Much of the karst region has limited sanitary sewer service and little regulatory control over on-site wastewater treatment systems. It also has limited local land use planning or controls. Portions of it are served by public rural water supplies, permitting additional growth and development, potentially spurred at interchanges or by easier commuting accessibility. Poorly designed or operated on-site wastewater treatment systems (e.g., septic systems) have a high potential for ground/surface water contamination, since it can be easy to discharge wastewater into the ground and hard to achieve good soil filtration from a drain field." (1107-696 USEPA Region 5 Technical Comments, p. 6)

"Good planning and management principles and practices for the primary impacts due to highway construction and operation in karst country were developed in the 1993 Memorandum of Understanding (MOU) between INDOT, IDEM and USFWS. We are pleased that INDOT and FHWA are committed to following the MOU on this project. However, those principles do not substitute for avoiding karst resource areas, if possible." (1107-696 USEPA Region 5 Technical Comments, pp. 6-7)

"EPA requests that FHWA and INDOT conduct an assessment of the adequacy of any State, regional and/or local regulations (e.g., zoning, land use plans, on-site septic system regulation, etc.) that would protect sensitive karst features for those karst areas that the Tier 1 alternatives are located in. This assessment should also evaluate and discuss

whether adequate implementation and/or enforcement of any control measures identified are taking place. In addition, if areas are found to have inadequate controls and/or enforcement for protecting sensitive karst features, an assessment should be made of the likelihood that proper control mechanisms will be put in place if an alternative is implemented through karst areas. This information should be taken into consideration prior to choosing a FEIS preferred alternative. The assessment and its results should be included in the FEIS." (1107-696 USEPA Region 5 Technical Comments, p. 7)

"Include the detailed identification, evaluation and assessment of State, regional and local regulation for protecting sensitive karst features for each of the 12 alternative as discussed above." (1107-696 USEPA Region 5 Technical Comments, p. 9)

Section 5.2 of the FEIS has been updated to include information on local land use plans. While ordinances and local regulations can protect sensitive environmental resources, many counties and cities within Southwest Indiana do not have any such ordinances. The counties in the Study Area with comprehensive land use plans and zoning ordinances include Brown, Hendricks, Johnson, Knox, Marion, Morgan, Perry, Posey, Putnam, Spencer, Vanderburgh, Vigo, and Warrick. Crawford, Clay, Daviess, Dubois, Gibson, Greene, Lawrence, Martin, Morgan, Orange, Owen, Pike, and Sullivan counties do not have ordinances or plans.

Reviewing the ordinances showed that only the Zoning Ordinance for Monroe County included a section on karst and sinkhole development standards. This section is being implemented by the Monroe County Plan Commission and by established review procedures, use limitations, design standards, and performance standards for site development that encompass or affect sinkholes or karst features. While Monroe County has control measures in place to protect sinkholes and karst features, Crawford, Greene, Lawrence, Martin, Orange, and Owen counties have karst features and do not have land use plans or zoning ordinances. As discussed in Chapter 7, the mitigation for this project includes technical and financial assistance to local governments for land use planning.

7. "It is not clear what spill and hazardous response capacity exists along the study bands in the karst/cave region. This should be explained in the FEIS." (1107-696 USEPA Region 5 Technical Comments, p. 7)

"Identify existing spill and hazardous response capacity in place or needed for public wells/water supply areas in the highway study bands and for study bands in the karst/cave region." (1107-696 USEPA Region 5 Technical Comments, p. 9)

Section 5.24 of the FEIS discusses hazardous spill response. Through coordination with law enforcement and fire departments along the Study Area, it was determined

that these departments possess either awareness level or operations level capabilities for responding to hazardous material spills or release.

8. "Alternatives 1 and 2C have between 1 and 4 public wells and 4 well heads in their study bands. The other "preferred alternatives" have none. Some of these sites are near existing highways. It is not clear what existing measures are in place for spill response to protect them. This should be addressed in the FEIS." (1107-696 USEPA Region 5 Technical Comments, p. 7)

"Although it (Alternative 1) contains several public wells and well heads in its study band, many of these are located near existing Highway 41. With or without a new highway, there needs to be a good emergency response capacity for spills. This was not addressed in the DEIS and should be included in the FEIS, if possible. If either Alternative 1 or 2C are developed in the Tier 2 EIS, studies should be conducted to understand the nature of the groundwater flow geometry to the wells, to aid in spill response. The FEIS should also evaluate and document whether the existing public water supply systems have adequate capacity to serve new customers anticipated from secondary growth induced by the new highway." (1107-696 USEPA Region 5 Technical Comments, pp. 8-9)

"Identify capacity of existing public water supply systems to handle additional customers from growth induced by the new highway." (1107-696 USEPA Region 5 Technical Comments, p. 9)

Table 5.24-1 in Section 5.24 of the FEIS is based on the most current information and is a comparison of alternatives showing numbers of open water, impaired streams, sinking streams, sinkholes, public water supplies, public wells, and wellhead protection areas.

9. "All proposed alignments have the potential to directly and indirectly affect water quality, wetlands, and various other surface waters. Any proposals carried forward into Tier II should, to the extent practicable, minimize impacts to sensitive water resources such as wetlands and karst features." (1106-148 IDEM letter, p. 1)

The Preferred Alternative 3C is the practicable alternative that causes the least impacts to aquatic resources. In a letter dated September 25, 2003, the US Army Corps of Engineers has concurred in this determination.

10. "Some proposed alignment would pass through areas underlain by karst, or directly impact significant karst features, such as mapped caves. Surface and sub-surface karst features must be avoided by any alignment carried forward to Tier II, as roadway

construction and long-term operation could have detrimental impacts to water quality within these areas. Features such as sinkholes, which are in essence direct conduits to groundwater, can pipe pollutants directly into underground rivers and other sub-surface water resources." (1106-148 IDEM Letter, p. 2)

Efforts will be made to avoid impacts to karst features. Where karst features cannot be avoided, the Karst MOU (see Appendix U) will be implemented to minimize potential impacts.

11. "As project plans evolve, IDEM recommends dye tracing and other tests to gain further understanding of karst features within any alignment carried forward to Tier II that impacts karst terrain, before specific roadway alignments are designed. Assessment of the interface of roadway features, non-point source pollutant transport, and karst features will be critical to the construction and long-term maintenance of any future alignment of I-69 that may be located within sections of the study area where karst is present." (1106-148 IDEM Letter, p. 2)

These analyses will be performed in accordance with the Karst MOU in Appendix U.

12. "The I-69 project also will be subject to regulation under the NPDES (National Pollutant Discharge Elimination System) Stormwater program. The construction phase of the project must comply with the terms and conditions in 327 IAC 15-5 (Rule 5) to ensure that sediment and other pollutants are not discharged into waters of the state. Furthermore, based on the route utilized, this project could be subject to an individual NPDES Stormwater construction permit.

"In addition, the project will have to comply with Phase II Municipal Separate Storm Sewer System (MS4) regulations. INDOT will be issued an individual NPDES MS4 permit that will contain requirements for post-construction storm water management. To meet these requirements, INDOT will need to develop and implement strategies that include a combination of structural and/or nonstructural Best Management Practices. Two of the most substantial impacts of post-construction runoff are caused by: 1) an increase in the type and quantity of pollutants in storm water runoff and 2) an increase in the quantity of water delivered to the adjacent water bodies during storms. Given that some of the Best Management Practices available to reduce these impacts require a large land area for their installation, decisions to commit to such practices will need to be made during the planning phase, and prior to the initiation of construction activities." (1106-148 IDEM Letter, p. 3)

All NPDES stormwater requirements will be addressed in the design phase of the project, following completion of Tier 2 and prior to the initiation of construction. Section 5.25 includes information on permits.

13. "The analyses of pollutants in highway runoff was based on one 1981 study that is out of date and unreliable (p. 5-204). This highway will be a major truck corridor and hazardous materials route. Twenty-year-old studies are not adequate for this project." (1106-147 Tokarski, p. 24)

The 1981 study by the FHWA, which contains valid and accepted data and methodology, has been updated by a 1990 FHWA study. The 1990 FHWA study is entitled "Pollutant Loadings and Impacts from Highway Stormwater Runoff". The FEIS includes the results of the 1990 study. In the absence of route designations, all Interstates are available for transport of hazardous material.

14. "1) A large cave just west of a local county road is not identified on the INDOT maps. This cave appears to be very close to, if not directly in the path of, proposed route 3C. I have personally explored this cave on many occasions and have frequently seen bats roosting in the cave.

"2) Another cave slightly further to the west is also not identified on the INDOT maps. This cave appears to run directly under a section of proposed route 3C. Even though this cave is large enough to enter, there is a spring that keeps it partially full of water, making exploration difficult. However, the presence of large numbers of bats in the area around the mouth of the cave would lead one to believe this is a likely bat habitat area.

"3) There is a large band of sink holes in the area that traverse the proposed path of route 3C. While some of the sink holes in this area are identified on the INDOT maps, many others are not. This area has extremely complex karst topology and I fear your study has not properly identified the extent of these features and the potential damage to the area drinking water." (1107-691 Henderson)

"The karst areas along Alternative 3 have been poorly surveyed, if at all, and many karst features were missed and not shown on the Environmental Atlas. Potential impacts on caves, especially, is unknown. The area of sinking stream basins shown along route 3C is too small. ... Many, many sinkholes were missed on route 3 through Greene and Monroe Counties and in Owen County on Alternatives 2 and 4." (1106-147 Tokarski, p. 21)

"...also passes through a farm and forest. This farm's woodland is riddled with sink holes and cave openings, which do not appear on your detail photos." (1006-009 Hewitt)

"To the north of the farmhouse, 100 sinkholes or more fall close to the proposed route."
(1006-009 Hewitt)

"I suspect that others have informed you, but I have heard of two or three caves that the opening is exactly under the road. I have not confirmed these, but I could take your investigators to the locations described to me. One is right behind an old location, and the other is on 3C. Both of these are right in the center of the road I am told. There is another one close to the mouth of the cave, but not directly over it." (1104-059 Smith, p.8)

"The DEIS did not identify the karst features on my farm which is selected to die for route 3. It did not take into account the constructed wetland nor the environmental restoration that has been taking place on the farm." (1107-517 Porter)

"The Draft EIS underestimates the presence of springs on the proposed routes; landowners confirm the existence of springs in those corridors. Landowners have also pointed out to INDOT the existence of caves in proposed corridors that INDOT was unaware of. These are indications that the karst portion of the Draft EIS is clearly incomplete. The Draft EIS is also silent on how damage to karst areas will be mitigated or reduced both during and after construction." (1010-005 Scott)

"3. Karst feature topology impact is dramatically understated for Alternative 3. Again, the study is based on only the most superficial data and it is apparent that no "extensive field studies" were performed as the study claims. This could result in huge cost increases for specialized filtration systems to avoid environmental damage (similar to the Mitchell plain fiasco on Route 37 a few years ago). Substantiation of additional Karst features in a very small area of Alternative 3 (A & B) is included with this letter. Nearly two dozen additional undocumented caves have been identified (by this citizen's group) within the two mile study bank of Alternative 3 (A, B, and C) but have not yet been documented by the Indiana Geological Survey or explored for Indiana Bat hibernaculum by USFWS. This is from a few dozen properties out of several hundred in this small area alone." (1106-140 Milhoan, p. 2)

"At least 50% of the Karst geology wasn't even marked... Not one spring was marked on the map. There are at least 5 within 1 mile of my house." (1028-040 Spatta)

"Your maps of routes 2 and 4 failed to identify extensive areas of sink holes. Our farm has at least a dozen sink holes on it and your highway goes right through our farm but you don't even know there are sink holes there." (1104-140 King)

"The two maps sections I studied mark less than 1/4 of the karsted land that is known to be present in these areas. This is a problem. Page 15 of alternative 4 fails to show that

all the Texas Pike Basin drains underneath the proposed route to come out of Shiverly Springs. This is thought to be Owen County's largest spring. This means that there is a major passage, possibly one of the largest in the county. The majority of people in this area get their drinking water from a well. Because most the water in this area is groundwater, the runoff from this highway would effect the potable water used to live by this community. Furthermore, the sink and swallow holes of the vicinity would not be feasible to pave without eventual collapse." (1102-016 Spatta, p.1)

"Page 14 of Alternative 4 is grossly inaccurate. It looks more like features are trying to be hidden than exposed in an informative manner. Anyone doing research of the area could easily find archived grotto newsletters that point to caves, springs and possible endangered blind cave fish. Two of the caves that the fish were once spotted will be paved. One very small area on this map is shown to be karst, where in fact more than ½ the page should be marked that way. Ironically, this is the area that the proposed highway runs through. More study of this specific area needs to be done. The Indiana Geological Survey does not even mark the couple of springs that they have on file correctly. Blindfish Springs Cave is one of them. It is thought after a rain to release more than 1/5 of all the water that makes up Rattlesnake Creek. This is right before the creek dumps into the White River. The cave is suspected to be only an overflow for the spring that the county has partially filled to make a road. This passage is critical for this area's drainage." (1102-016 Spatta, p.1)

"The areas investigated represent only a limited sampling of terrain in the region that will have karst features or is susceptible to karst development. Observations in more of this region would reveal large numbers of additional karst features. Cracks and crevices below surface karst features are often not discernable until uncovered during construction. Sinkholes and subsidence may also develop post construction where rock crevices and rock voids may not be found during planning and construction. Prudence dictates the need for a great deal more investigation of karst in the proposed construction corridors. From an economic standpoint, the avoidance of karst regions for major construction projects is justified on the basis of greatly increased construction costs." (1105-200 Frushour, p. 4)

"This citizens group recognized (based on knowledge of the area) that the DEIS study is based on insufficient knowledge of the actual Karst features along Alternative 3.

- Studying the map of Karst feature concentration (ATLAS, Alternative 3, Page 7 of the DEIS study) reveals that it is based only on the existing superficial data provided by the Indiana Geological Survey. This same information (for Greene and Monroe counties) is provided as Appendix 1 of this letter.

- Far more Karst features exist in the proposed two mile corridor of Alternative 3 than the DEIS data would suggest.
- The entire Karst region could have been avoided by keeping Alternative 3 slightly further West.” (1106-140 Milhoan)

"The lack of karst area detail is astounding. In the study area north of the town of Spencer there are springs, caves and sinkholes in the study area too numerous to count, yet only isolated areas are indicated as Karst terrain. The only conclusion that can be reached is that neither INDOT or BLA desired to have an accurate accounting of this feature. Again, the residents of this area stand ready to assist in identifying these features if INDOT and BLA wish to have accurate information included in the study." (1105-203 McCallister)

“I would like to know what groups were worked with in determining what karst areas would be affected and how large the impact would be? I did not see this ingiven in the DEIS. Blue Springs is not the only cave system in the area that would be potentially be impacted.” (1021-011 Brutchen)

“There are many creeks and springs within I-69 path in my area which will be altered.” (0927-005 Suthard)

The commentors raise the following water quality issues:

- (1) Quality of drinking water**
- (2) Location of karst features**

(1) Section 5.24 of the FEIS discusses the impacts of the alternatives upon drinking water. Aquifers underlie much of the Study Area. All the alternatives cross over aquifers. Roadway runoff can impact aquifers. The analysis showed that the pollutant concentrations due to runoff from any of the alternatives are below the levels that will produce toxic effects. Consequently, the alternatives will have minimal impact on aquifers as a result of runoff.

(2) Specific cave locations were not shown on the Atlas due to the sensitivity of this data. Instead the Environmental Atlas presents cave densities. The potential impacts to bats and their habitat is being evaluated and will continue to be evaluated in Tier 2 Studies in coordination with the USFWS and IDNR. Not all sinkholes are identified at this time. However, in the Tier 2 Studies, more detailed information will be considered along with specific measures to protect drinking water supplies.

15. "6) Were private wells included in the water quality impact evaluation?" (1107-162 Branam, p. 2)

The water quality impact evaluation focused on public drinking water wells. Private wells were mapped based Indiana Geological Survey data. Consideration was given to areas where the water supplies for these wells could be at higher risk.

16. "...you're going to go through the Patoka River National Wildlife Refuge, you're water is of poor quality and at high risk in southern Indiana so any population growth in that area will be at risk of even destroying their water supplies even more especially with the water standards that came out of our water pollution control board." (0819-044 Flenner)

Since the Patoka River National Wildlife Refuge is an environmentally sensitive area, special efforts will be made to protect the water quality including the bridging of the Patoka River floodplains. Additional measures will include wetland creation and Best Management Practices during construction. Chapter 7 presents the mitigation in detail.

17. "5. You will destroy the main water tables in this area which affects those people with wells." (1015-004 Mathis, p. 2)

Best Management Practices (BMPs) will be implemented to protect groundwater resources in the vicinity of the roadway. Chapter 7 presents mitigation in detail.

18. "Secondly, as a member of the Indiana University Spelunking Club, I am troubled by the consumption of karst land not only affected by the highway itself, but by the aforementioned sprall. Highway runoff will also cause catastrophic damage to karst land ecosystems and affect drinking water." (1010-005 Scott)

Best Management Practices (BMPs) will be implemented to protect surface and ground water resources in the vicinity of the roadway. In addition, construction through karst terrain will follow the Karst Memorandum of Understanding (see Appendix U).

19. "There is the potential for contamination of water company wells due to accidental spills. There are three water companies operating wells in the White River area. The Indianapolis Water Works has several wells on the east side of the river just south of Southport Road providing water to Indianapolis. The Indiana American Water Company provides water to the communities of Greenwood, Franklin, Whiteland, and New Whiteland. Their wells are on the west side of the river just east of Mann Road. Mann Road is within the five-year capture zone (3,000 feet) Well Head Protection area. The third company is Bargersville Utilities. Their current wells are on the west side of the river in the area of HWY 144 and Smokey Road. I have discussed this issue with

representatives of all three companies and the Indiana Department of Environmental Management. They all expressed varying levels of concern about potential contamination of the wells. However, none of them dismissed this as "no concern." In discussions with a Highway Consultant Engineer, I was advised that some type of special drainage system would be required to protect the wells." (1101-018 Cockrum, p. 1)

Special design, construction, and operational methodologies in wellhead protection areas will be used. These may include drainage system modifications as well as coordination with local emergency services on hazardous material spill containment and cleanup. These details will be addressed in Tier 2 studies.

20. "Where in this study are the economic costs to each local rural economy from the need to put people on centralized water systems because their well water is unacceptably contaminated." (1101-021 Henshel/Walden)

In Section 5.24, *Water Quality*, Table 5.24-3 shows the mean pollutant concentrations in runoff from rural highways with an average daily traffic of less than 30,000 vehicles. The results of the information in the table show that the pollutant concentrations due to runoff from the highway are below the levels that will produce toxic effects. Consequently, the alternatives will have minimal impact as a result of runoff on receiving waters including private and public wells.

21. "The road will be a dam to many water ways and creeks unseen on the surface. Karst topography also will be destroyed as well as underground water that feeds our wells." (1104-055 Dunn)

The highway will be designed to maintain drainage patterns. The sensitivity of karst topography and the associated groundwater will be a primary consideration in the design of facilities in these regions, as identified in the Karst MOU (see Appendix U).

22. "With water pollution standards as weak as they are in Indiana, I do not want to see industry invited to your "preferred routes." You cross too many streams and underground waterways. I do not believe you have researched thoroughly enough the potential for the degradation that will bring to our water. The groundwater along the "preferred routes" are known to be among the most threatened in the State (Groundwater: Indiana's Unseen Resource, Sponsored by Hoosier Environmental Council, 1987). The 41/70 route has no sinkholes thereby clearly making it much more likely to protect groundwater, even when industry locates nearby." (1031-013 Flenner)

Indirect impacts of the roadway are assessed in the evaluation of corridors, which considers potential increased development. As part of the mitigation for this project

which is discussed in Chapter 7, FHWA and INDOT will offer technical and financial assistance to local governments to develop and update land use plans to protect sensitive resources including groundwater from the impacts of development. In many cases, public water supplies are drawn from Indiana aquifers. To protect these water supplies, public drinking water systems are evaluated by IDEM for compliance with safe drinking water standards as set forth in 327 IAC 8.

23. "No information regarding the unique artesian springs found in Alternate 3 in Morgan County were documented or addressed. Martinsville High School even has an athletic team called the "arties" for artesian springs-why weren't these considered as important natural features fairly unique in Indiana?" (1029-031 Dittmer)

Artesian springs are a unique resource and will be avoided if possible. A discussion of artesian springs is included in Section 5.24 of the FEIS. The location referenced on Alternate 3A is not part of Preferred Alternative 3C.

24. "How would the stream quality of Fall Creek on Alternate 3, Page 27 of 32 as well as the White River downstream be protected in order to comply with the narrative water quality criteria an fully support designated uses during and after construction? See 327IAC 2-1-6. It appears the entire streambed would be disrupted in places and surface water flow patterns would be changed and require monumental management of stream and wet weather surface runoff flows to prevent localized flooding/impairment of waters." (1029-031 Dittmer)

Preferred Alternative 3C does not impact Fall Creek. The impact referenced by the commentor was associated with Alternative 3A, which was not selected.

25. "There should be an accounting of the expected increase in pollutant loads to the White River, Fall Creek and other tributaries in regards to the increased emissions of vehicle exhaust from the increased vehicle traffic in the area. This could contribute to use impairment of the White River and Fall Creek will regards to mercury and other metals air quality in the region should also be documented based on human health impacts and assessed for potential adverse effect due to increased traffic." (1029-031 Dittmer, p. 2)

Pollutant loads for the White River and Fall Creek as well as other waters crossed or potentially impacted by the selected route will be evaluated in the Tier 2 studies when detailed information is available on the crossing location and roadway design in the vicinity of the water body.

26. "This area serves a water source for hundreds of thousands of water uses and is protected by the Indianapolis and Bargersville Water Companies. Adding this potential pollution hazard will affect many more than just property owners in the area." (1105-030 Brown)

Preferred Alternative 3C does not utilize the Mann Road corridor where this area is located.

27. "We would like to add to our previous comments about water quality in Owen County. You must realize the only area with water lines is in the area of Spencer. Everybody else uses wells and sewer drainage. What do you think this new highway will do to our wells/drinking water. Not a pretty picture, is it??? Would you want this to happen to your families????" (0826-011 Floyd)

Preferred Alternative 3C will not impact Owen County.

28. "Water resources are non-renewable and impacts are essentially impossible to correct. It is also fair to say that the importance of improving water quality to our rivers and streams and groundwater resources will only increase as we look to the future. An additional note is that while impacts to wetlands are routinely 'mitigated', the failure rate for mitigation is exceedingly high. Failure rates are as high as 71% for forested wetlands in Indiana (James Robb, IDEM, 2000) and 67% for riparian woodlands nationally (National Research Council, 2001)." (1103-010 Tedesco)

Protection of water quality will be a high priority in the development of the project. Avoidance and minimization of impacts are the primary measures for protecting wetlands. For those impacts that can not be avoided, mitigation will be provided at the required ratio with a 5-year monitoring plan to assure the success of the mitigation site.

29. "Routes 2 and 4 are still poor choices from a water resource perspective given that the routes continue to follow the floodplain and have numerous tributary creek crossings. Especially damaging in the regard is extension 2C/4C where the route cuts from I37 south of Martinsville to I67 at Paragon. This section of route runs the floodplain for the entire route. Route 2C1 adds an additional crossing of the White Rivers itself. Route 2C has the highest floodplain impacts of all routes considered and should be avoided. 2A, 2B are better choices to minimize this particular impact." (1103-010 Tedesco)

Of the five DEIS preferred alternatives, Preferred Alternative 3C impacts the fewest acres of floodplains.

30. "Under water quality impacts category, SUBJECTS: Water treatment facilities; Public Drinking Water Supply Sites; Public water supply wells; Wellhead Protection Areas; all

show 0 under alternatives 3, 4 and 5. State Road 37 from Fairview Road on the south to at least Southport Road on the north is a wellhead protected district and has public drinking water supply sites and water supply wells for those facilities sites located within the study area. There is an Indiana Water Company treatment facility at approx. Mt. Pleasant Road and Fairview Road and an Indianapolis Water Company treatment facility at approx. Southport and Tibbs. The largest aquifer in central Indiana lies beneath SR 37 surrounding those located water treatment facilities. If a toxic spill incident were to occur on any of these proposed routes of that area over this protected wellfield, wellhead areas and associated treatment facilities, most drinking water for the area could become contaminated. I urge you to have your staff review my comment at your earliest convenience. Bringing any potential I-69 route alternative up SR 37 over that aquifer is a very bad idea." (1106-020 Braun)

The upgrading of SR 37 to a controlled access freeway, like other existing freeways in the area (I-70, I-465, and I-65), improves safety and reduces the chance of a spill contaminating any aquifer. All aquifers are important for they provide water to the public. Section 5.24 shows the aquifers in the area. Additionally, any segment which crosses a wellhead protection area will include measures for the protection of that groundwater resource. The specific measures for an area will be identified in Tier 2 studies.

31. "I would like to comment on the environmental impact this could have in Indy and Perry Twp specifically. I don't know for sure if they plan to go thru Perry Twp would go across the aquifer which is in Perry Twp and its part of the Indy water supply. My comment would be the more semi-trucks that we get hauling hazardous materials toward the aquifer, it this is the way it's going to be. My thought would be that trucks if there are accidents that could contaminate our water supply which would be a terrible thing for the City of Indianapolis." (0816-010 Schattner)

Through coordination with law enforcement and fire departments along the Study Area, it was determined that these departments possess either awareness level or operations level capabilities for responding to hazardous material spills or release.

32. "Enclosed is a report and maps pertaining to the proposed routing and construction of an interstate highway through parts of Monroe and Greene Counties in Indiana. These materials are provided with the hope that they will be diligently reviewed prior to further decisions pertaining to the I69 project. My expertise on this matter is based on nearly 40 years of cave and karst related research projects and 9 ½ years experience with highway construction practices." (1105-200 Frushour, p. 1)

"This report is the result of recent field observations to determine the extent of karstification in Eastern Greene County and parts of Monroe County where proposed interstate highway construction may occur. Field observations were accomplished at selected sites that were available for inspection by the consent of landowners. Observations were made within the proposed highway corridors or nearby. The information collected was added to existing data on topographic maps. Karst features added were caves, sinkholes, springs and swallowholes. The purpose of compiling these maps is to illustrate that the degree of development and density of karst features is far more expensive than can be determined by studying USGS 7 ½ minute topographic maps, aerial photographs and karst information supplied by the Indiana Geological Survey via GIS coverage." (1105-200 Frushour, p. 3)

This information has been added to our database.

33. "The GIS coverage provided to Bernardin, Lochmueller & Associates, by the Indiana Geological Survey, was created in 1997 by Richard L. Powell and was not intended to be all inclusive of karst in the Mitchell Plain or the Crawford Upland. This GIS coverage inadequately illustrates the degree of karst development in southern Indiana as is shown by the enclosed maps. The author of this report was coauthor of the map produced by the Indiana Geological Survey (Miscellaneous Map #65) that the karst GIS coverage was created from." (1105-200 Frushour, p. 3)

"This report does not attempt to enumerate all karst features in the study area but sufficient numbers of them to demonstrate that enough karst and related subsurface drainage features exist to warrant close scrutiny pertaining to the advisability of construction of a proposed interstate highway in Monroe and eastern Greene Counties." (1105-200 Frushour, p. 3)

"The study area was in eastern Greene County and Monroe County. This included a portion of the Crawford Upland adjoining Neal's landfill in Monroe County and a small part of the Mitchell Plain located south of Bloomington. Five days were spent in direct field observation of sinkholes, springs, swallowholes and caves. The object was to learn the extent that karst features have developed in the study area. Of the karst features located and placed on maps, only a couple of sinkholes and none of the springs or caves could be observed on USGS topographic maps." (1105-200 Frushour, p. 4)

The Indiana Geological Survey (IGS) is under contract to provide maps, data, and metadata for the Southwest Indiana GIS with regard to karst features in Southcentral Indiana.

Among the digital maps that were provided by IGS were: (1) a map showing sinkhole areas and sinking-stream basins, (2) a map showing the cave density, which

is cave openings per square kilometer, and (3) a map showing springs. These were derived from a mapset, which was completed in 1997 and published by the IGS in 2002. The sinkhole areas and sinking-stream basins were originally mapped by Richard Powell, who is a recognized authority on karst in Indiana, whereas the springs and cave openings were derived from a database compiled by the Indiana Cave Survey (ICS) and provided by a member of the Indiana Cave Survey.

The digital maps that were provided by IGS are among the best available maps showing selected karst-related features across that entire region. They were created in a systematic manner using a consistent methodology, so that each county within the region was mapped in a similar fashion.

The map showing the cave density is based upon a predecessor coverage named "CAVES" which includes about 95% of known cave entrances. All cave entrances are large enough to allow entry by a human being; the vast majority of associated caves are more than 25 feet in length, and only a few are less than 25 feet. As indicated in the metadata, the maps of karst-related features were intended to be used solely as an overview of karst on a broad regional scale. Any map, whether paper or digital, should not be used at more detailed scales than its source scale. This and other limitations of the map layer are described in the published metadata.

According to the Director of the Indiana Geological Survey in a memorandum of May 5, 2003, it is his professional opinion that the maps provided by the IGS, compiled in an objective and systematic manner across the entire region, were the best available for the intended purpose of a preliminary Tier 1 evaluation of alternative routes on a regional scale.

34. "Springs, sinkholes, swallowholes, and caves (see enclosed copies of topographic maps) are indicators that significant underground drainage is occurring and that the bedrock is significantly altered by solution. These features adversely affect construction. Some examples of increased cost due to karst features are State Road 135 south of Corydon, State Road 37 between road U 50 south of Bedford and Mitchell, and the south bound exit ramp of State Road 37 at State Road 45 in Bloomington. During field investigations, the number of karst features encountered, and previously unknown to the author is as follows:

86 sinkholes or groups of sinkholes
5 sinkholes with swallowholes in them
22 springs
9 caves." (1105-200 Frushour, p. 4)

Cost estimates for all segments crossing karst areas have taken into account the need for special construction methods that would be required in these areas. Tier 2 studies will identify any additional caves and other features. These features will be avoided if possible. If avoidance is not possible, every effort will be made to minimize potential impacts.

35. "One example, is the consequences of decreased flood protection from loss of the vegetation that prevent flooding. Account for bodies of water clogged with sediment. Account for the increased loss of loss crop productivity due to more flooding and loss of topsoil. Account for the increased flow of contaminants in the forms of pesticides and sediment that are washed into and damaging bodies of water, including the Gulf of Mexico where there is and should not be a dead zone below Louisiana. Account for the reactions of Hoosiers and others who would suffer from those results, especially their political and legal actions. Let's instead be good neighbors to other states and exercise responsible leadership for the citizens of Indiana." (1107-687 Buck, p. 6)

Sedimentation will be minimized by the implementation of Best Management Practices (BMPs) during construction, and pesticide use in the right-of-way will be controlled to minimize runoff contamination. In addition, some major floodplains will be bridged to avoid further flooding and floodplain impacts. These issues as well as indirect impacts that could affect water quality will be further evaluated in Tier 2 studies. Loss of topsoil is typically caused by runoff erosion as opposed to flooding. These eroded sediments, predominantly from agricultural activities, are the primary source of water body sedimentation.

36. "The DEIS identifies 7 CERCLA sites located within 1 mile of some of the alternatives. The DEIS identifies that the Lemon Lane Landfill, the Benett Stone Quarry, and the Neal's Landfill have impacted the water quality of Clear Creek, Stout Creek, and springs that flow into Conrad's Branch which flows into Richland Creek. These streams (sic) have elevated levels of mercury (Hg). These streams would be crossed by Alternatives 3 and 5. If applicable, the Tier 2 NEPA documentation should provide detailed construction mitigation measures for any culvert or bridging activity proposed for these streams to insure as much as possible that sediments containing PCB or Hg are not re-suspended into the water column during construction and that proper characterization and disposal of any removed sediments occurs." (1107-696 USEPA Region 5 Technical Comments, p. 11)

Chapter 7 includes a mitigation measure that states "All crossings of Clear Creek, Stout Creek, and any impacts to springs that flow into Conrad's Branch, which flows into Richland Creek, will be constructed to ensure, as much as possible, that sediments containing PCB and/or Hg are not re-suspended into the water column during construction and that proper characterization and disposal of any removed

sediments will be required." More detailed avoidance and mitigation will be developed in Tier 2.

5.25 Permits

1. "Section 404 requires the selection of the least damaging practicable alternative (LEDPA) under the Section 404(b)(1) Guidelines. We are concerned the selection of the Preferred Alternative in the FEIS/Record of Decision (ROD) from among the DEIS "preferred alternatives" would not be consistent with the selection of the LEDPA. This is due to the magnitude and severity of the impacts associated with these alternatives as compared to other alternatives analyzed, but not preferred, in the DEIS. EPA believes that the level of detail and analysis in the DEIS should contain alternatives that are likely to be raised for analysis under the Section 404(b)(1) Guidelines. We feel that coordination on this point early in the process will assist future project development by ensuring that all requirements for Section 404 compliance are addressed. Therefore, prior to determining the Preferred Alternative for the FEIS, we strongly recommend that FHWA and INDOT meet jointly with the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, the Indiana Department of Environmental Management, and EPA to discuss compliance with the 404(b)(1) Guidelines and the choice of the LEDPA corridor for this project." (1107-696 USEPA Region 5, p.2)

"The Tier 1 information and analysis should allow FHWA and INDOT to identify the corridor that is the Least Environmentally Damaging Practicable Alternative (LEDPA) for compliance with the Clean Water Act (CWA) Section 404(b)(1) Guidelines. We strongly encourage FHWA and INDOT to include sufficient documentation in the FEIS to allow for the identification of the LEDPA corridor ." (1107-696 USEPA Region 5 Technical Comments, p. 1)

"Wetlands are considered to be special aquatic sites for Section 404 permitting, see below." (1107-696 USEPA Region 5 Technical Comments, p. 4)

"It (the DEIS) cannot be reconciled with Section 404 of the Clean Water Act and EPA's Section 404 Guidelines. Section 404 requires an affirmative determination that the proposed project location constitutes the least environmentally damaging practicable alternative. Unless the impacts of all the reasonable alternative are quantified, which cannot be accomplished looking only at either 2-mile-wide corridors of fictional alignments within those corridors, there will be no basis for making such a determination." (1107-705 ELPC et al, p. 5)

"It (the DEIS) is at odds with the NEPA/404 Merger Agreement among FHWA, USEPA, the Army Corps of Engineers and the U.S. Fish and Wildlife Service. That Agreement

emphasizes the need to collect sound, hard data on various alternatives' impacts on wetlands and other resources. In order to identify the "least damaging practicable alternative available," the Agreement states that "[t]he alternatives analysis needs to explicitly evaluate ... all the environmental factors for all of the alternatives." That is precisely what INDOT is NOT doing." (1107-705 ELPC et al, p. 5)

FHWA and INDOT have considered Section 404 permitting requirements, and in particular, the need to satisfy the Section 404(b)(1) Guidelines, throughout the process of developing and evaluating alternatives. These issues have been discussed with the agencies involved in Section 404 permitting – namely, the US EPA, US Fish and Wildlife Service, the Corps of Engineers, and the Indiana Department of Environmental Management – at various points in the process, including most recently a meeting in Indianapolis on April 17, 2003. Based on those meetings, the FHWA and INDOT are proceeding as follows:

- **The FEIS includes a Section 404(b)(1) consistency analysis. This analysis evaluates the Preferred Alternative 3C in terms of consistency with the LEDPA standard and other requirements in the Section 404(b)(1) Guidelines. See Appendix DD, LEDPA Consistency Analysis.**
- **Section 404/Section 401 and Construction in a Floodway Permit applications will not be submitted during Tier 1, because at this stage of the process, there is not sufficient design detail available for permit decisions to be made. Instead, these permits will be applied for and acquired before construction begins.**
- **Since the publication of the DEIS, several actions have been taken, in response to specific resource agency comments, to reduce the wetlands impacts associated with several of the alternatives. These decisions have included:**
- **Selecting the eastern route around Washington (WE2, affects Alternatives 3 and 4).**
- **Shifting the route to avoid the Prides Creek Wetlands Complex, as requested by IDNR (affects Alternatives 3, 4, and 5).**
- **Selecting the SR 37 variation (affects Alternatives 2C, 3B, 3C, 4C, and 5B).**
- **In addition, the FHWA and INDOT have given great weight to Section 404(b)(1) requirements during the process of selecting a preferred alternative, and are satisfied that the Preferred Alternative 3C is consistent with those requirements. The full analysis of Section 404(b)(1) consistency has been included in the FEIS, Appendix DD. In summary, the Section 404(b)(1) consistency analysis concluded that the Preferred Alternative 3C is the practicable alternative with the least impact to the aquatic ecosystem.**

It also is important to note that FHWA and INDOT have had discussions with U.S. EPA and the Corps of Engineers regarding the policy issue of whether it is necessary to apply LEDPA requirements at the scale of a Tier 1 decision. At this

time, there is no established policy on this issue. However, in order to avoid delays, FHWA and INDOT have agreed to conduct a Section 404(b)(1) consistency analysis voluntarily as part of Tier 1 and have included it in the FEIS. As stated above, this consistency analysis supports the selection of Alternative 3C as the preferred alternative for this project.

On September 25, 2003, the Corps of Engineers issued a letter commenting on the Preferred Alternative and Mitigation Package (PAMP). In that letter, the Corps recognized that “Alternative 3C was selected as the ‘Single Preferred Alternative.’” The Corps indicated that the analysis that had been completed for the Preferred Alternative 3C combined with further site assessment and construction measures in Tier 2 is the

“[t]ype of analysis (that) would satisfy the Section 404(b)(1) guidelines to insure that the alternative construction methods for each crossing of a ‘water of the U.S.’ is the least environmentally damaging practicable alternative when considering cost, existing technology and logistics in light of the overall project purpose.”

In addition, the Corps concurred that the use of the tiering process by FHWA and INDOT was appropriate for this project and consistent with the LEDPA requirements:

“In considering a project of this magnitude we believe the two-tier EIS process continues to be an appropriate tool for identifying and evaluating environmental concerns, socio-economic issues and accessibility relative to the purpose and need for the project. More importantly, the Tier 1 EIS has specifically identified all of the important natural resource areas within the five alternative corridors. This process is satisfactory to the Corps for early coordination under Section 404 of the CWA.”

This letter can be found in Appendix Y, *Agency Coordination Materials*.

2. “Four of the ‘preferred alternatives’ (3B, 3C, 4B, 4C) would involve filling wetlands within the designated acquisition boundary of the Patoka River National Wildlife Refuge. This would effectively segment the refuge and preclude the potential for acquiring a contiguous minimally disturbed river refuge system. While Alternative 2C also avoids the Patoka River National Wildlife Refuge area, it has an estimated wetlands impact of about three times that of Alternative 1. Alternative 1 avoids this refuge area entirely, and would fulfill the requirements of the 404(b)(1) Guidelines, with significantly less wetland impact.” (1107-696 USEPA Region 5 Technical Comments, p. 8)

Within the Patoka area, Preferred Alternative 3C (as well as 3A, 3B, 4A, 4B, and 4C) would remain within a highway corridor that was reserved for this project by the US Fish and Wildlife Service in their FEIS for the Patoka project. Construction of the highway within the corridor is consistent with the US Fish and Wildlife Service plans for the refuge. The plans for crossing the Patoka River include bridging the floodplain. This will reduce the wetland impacts as well as provide for the continuity of the river system with as little impact as possible.

3. "Based on information presented in the DEIS, Alternative 1 appear to be the alternative that most fully complies with the Section 404(b)(1) Guidelines. Full determination of compliance would need to be based on a more detailed level of information than is appropriate for this Tier 1 EIS." (1107-696 USEPA Region 5 Technical Comments, p. 9)

"Select the practicable alternative with the least adverse impact on aquatic ecosystems. It must not contribute to the degradation of special aquatic sites, including wetlands, refuges, or riffle-pool stream segments." (1107-696 USEPA Region 5 Technical Comments, p. 9)

"The Section 404(b)(1) Guidelines at 40 CFR Part 231.10(a) state that "... no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences." A practicable alternative is one "available and capable of being done after taking into consideration cost, existing technology and logistics in light of overall project purposes." All 5 "preferred alternatives" and Alternative 1 have been seriously proposed as DEIS alternatives and meet the overall project purpose of providing an interstate highway route between Evansville and Indianapolis. Furthermore, there is a substantial and striking difference in the amount of environmental impacts to aquatic resources between alternative 1 and the 5 "preferred alternatives." Alternatives from the NEPA documents (including this DEIS) are considered to be the basis for alternatives for the 404 analysis [40 CFR 230.10(a), not just the alternative selected in the FEIS/ROD." (1107-696 USEPA Region 5 Technical Comments, p. 7-8)

In the DEIS, Alternative 1 was identified as a "non-preferred" alternative because of its poor performance on all of the project goals. In response to comments from several resource agencies, FHWA and INDOT re-examined the data presented in the DEIS and developed additional data where needed. Although this analysis yielded new insights, it confirmed the same conclusions that were reached in the DEIS. Essentially, the data revealed that Alternative 1 performed poorly relative to the other alternatives in meeting project goals and provided little improvement over existing conditions. In addition, the data revealed that Alternative 1 would

have significant socio-economic impacts, and its cost would be substantial. For these reasons, Alternative 1 is not a practicable alternative for purposes of the LEDPA analysis.

5.26 Cumulative Impacts

1. **"Page 5-217: Table 5.26-1 estimates 100 acres of forest and 10 acres of wetland would be impacted by adding an additional lane to I-70 from SR 641 to SR 267. However, the text near the bottom of this page states "no federal threatened and endangered species would be impacted" by this project. The FWS believes the federally endangered Indiana bat may be negatively affected by the loss of 100 acres of forest and 10 acres of wetland. Furthermore, an Indiana bat maternity colony is known to exist near the eastern terminus (SR 267) of the proposed I-70 widening project." (1107-697 U.S. Dept. of the Interior, p. 12)**

Section 5.26 of the FEIS has been revised to state that adding an additional lane to I-70 from SR 641 to SR 267 may impact Federal threatened and endangered species, such as the Indiana bat. This will be a separate project of independent utility.

2. **"Cumulative impacts on rivers and streams, karst, areas, wildlife, including at risk species, must be included in this Tier 1 study." (1106-147 Tokarski, p. 25)**

In identifying those major resources, ecosystems, and human communities that will be impacted by cumulative effects, the Council on Environmental Quality handbook entitled *Considering Cumulative Effects* suggests consulting with other federal and state agencies. During the consultation for this project, the resources of farmland, wetlands, and forests were presented at a November 27, 2001 meeting with state and federal agencies.

Initially, threatened and endangered species were considered to be included as a fourth resource to be analyzed. As information on threatened and endangered species was obtained, it became apparent that threatened and endangered species are very wetland and forest dependent. Since wetlands and forests are analyzed as part of the cumulative effects, threatened and endangered species were not analyzed separately from wetlands and forests in the cumulative effects analysis.

3. **"The percentage of wetland losses are based on 1980 acreage. What is the current acreage of wetlands?" (1106-147 Tokarski, p. 25)**

The most recent analysis of statewide wetland acreages was conducted by the Indiana Department of Natural Resources in the mid- 1980's by R. E. Rolley. These figures were 813,032 acres for the State of Indiana and 245,817 acres for Southwest Indiana and were used in the analysis of cumulative effects for wetlands.

4. "Figure 5.26-4 has not predicted forest acreages for 2025. However, pp. 221 and 223, and Table 5-26.3 indicate very low impacts to forest land from I-69 over time. For routes 2C, 3A,B, and C, and routes 5A and 5B, Table 5.26-3 shows forest land increasing over the losses due to I-69. These optimistic projections are unfounded. Although forest losses declined in Indiana over a period of years they are once again increasing." (1106-147 Tokarski, p. 25)

Looking at the data for both Indiana and Ssouthwestern Indiana, the data appears to indicate that the amount of forests is reaching a plateau. Information from the US Department of Agriculture Forest Service indicates that we have achieved a balance between forest interests and users. With such a balance, there is expected to be little change in the amount of forests in the foreseeable future. Given that trend, Table 5.26-3 shows that the estimated 2025 forest acreage would change very little from the present day acreage. Losses in forests are expected to be offset by other actions that increase forest acres (for example, the Patoka River National Wildlife Refuge).

5. "The DEIS assumes farmland will continue to be lost at the same rate in the future as it has been in the past (P. 221). This assumption may not be justified as concern for farmland loss is growing." (1106-147 Tokarski, p. 25)

While concern for farmland loss is growing, few if any counties in Ssouthwest Indiana have enacted land use policies that would protect farmland (see Section 5.2). The District Conservationist in Vanderburgh County has stated that if the current trends of low interest rates and a growing economy continue then past trends in farmland conversion will continue.

6. "Cumulative effects of salt and other pollutants over time must be addressed in this DEIS, especially in karst areas." (1106-147 Tokarski, p. 25)

Roadway runoff and the resulting impacts are discussed in Section 5.24, *Water Quality*. This section addresses the effects of salt and other pollutants upon aquatic and terrestrial organisms. The MOU in Appendix U for karst states that a low salt strategy will be developed for projects in karst areas.

5.27 Energy Impacts

1. "The differences between alternative 3C and 3B in Table 5.27-1, "Additional Energy Consumed," is suspicious. These alternatives are essentially the same as most of the route and enter SR 37 only a few miles apart. This difference must be explained. Is it once again due to the cliff effect?" (1106-147 Tokarski, p. 25)

Route 3B was slightly modified to avoid environmentally sensitive areas just prior to the DEIS. The effects of this shift were not reflected in the performances measures in the DEIS. These changes are documented in the FEIS. However, these modifications do not involve Preferred Alternative 3C.

2. "The Terre Haute advocates have underestimated the longer drive times, especially if you take into consideration the certain delays on an already overcrowded I-70. Even with the addition of a third lane, bad weather and accidents will cause long delays, increasing drive times and consumption of gasoline/diesel fuel thus increasing air pollution and our dependency on Middle East oil. I drive a lot and have an estimated 1.5 million miles behind the wheel and in my estimation I-70 needs a third lane if no additional traffic is added." (0818-008 Standifird)

Alternative 1 has higher energy impacts than six other routes. Alternative 1 is estimated to use an additional 50,779 gallons of fuel and 6,243,333,000 BTUs.

3. "Lets talk about the environmental issue. Lets talk about energy conservation. Lets talk about human time wasted and productivity lost. The most direct route would be at least 20 to 30 miles closer between Evansville and Indianapolis. This means that each vehicle must drive 20 or 30 miles extra. It means that each vehicle occupant is wasting 20 to 30 minutes or time. It means each vehicle is using from 1 to 6 or 7 gallons more fuel to get from Indianapolis to Evansville. In the early years I-69 will carry thousands of vehicles each and every day. Over a 40 year period this becomes a very large number." (0813-002 Wheelock)

The energy consumption for the various alternatives is found in Section 5.27.

4. "The time saved by using the most direct route translates into more savings in gasoline and diesel usage. Thus, becoming an environmental advantage over the years; overcoming any environmental disadvantage of requiring new terrain in its construction." (0804-001 Atkisson)

All other things being equal, a shorter route also offers an economic advantage. Lower vehicle operating costs decrease business costs of production, as well as increase disposable income for consumers.

5. "A sixteenth reason why a new terrain I-69 cannot be built is the lack of long-range planning associated with a form of infrastructure so totally dependent upon fossil fuels. It is an undisputable fact that fossil fuels - especially oil - are in quite limited supply. At the current rate of consumption, world oil reserves will probably increase exponentially. Consequently, for a highway project to be considered a long-term project, planning should take into account that the only current method of utilizing a new interstate highway is completely dependent upon a scarce resource that will be mostly exhausted in the foreseeable future." (1028-037 Werne)

The energy analysis for this project has been based on the assumption that motor vehicles will continue to be used for the foreseeable future. This assumption follows the standard practice for preparing EISs.

5.28 Short Term Use vs. Long Term Productivity

No substantive comments.

5.29 Irreversible and Irretrievable Commitment of Resources

1. "As long as the land above the deposits is used for a highway and surrounding development takes place, these deposits taken directly will no longer be available for use. (from the DEIS) (1030-004 Greater Terre Haute)

Following the sentence quoted by the commentor, the next sentence states that "there is a possibility of below ground extraction that could access these deposits, while keeping a sufficient over... above the limestone to ensure stability of the road. One limestone company presently has the capability to do that type of mining."

6.1 Alternative Advantages and Disadvantages

1. “While EPA’s comments indicate areas where additional analysis and information is needed, the Tier 1 DEIS provides a good basis to identify and discuss the many complex issues and environmental impacts associated with a project of this size.” (1107-696 USEPA Region 5, p. 3)

We concur.

2. “EPA recognizes that some alternatives satisfy the P & N better than others on the transportation performance measures identified for the Level 3 analysis. For many of the core goals performance measures, the difference between the best and worst performers does not appear to be substantial. For example, the Tier 1 DEIS documents incremental travel time improvements for each alternative compared with the 2025 no-build baseline. The difference between the slowest performing Alternative (Alternative 1) and the fastest performing alternative (Alternative 3B) for the measurable objectives of Travel Time Savings between Evansville and Indianapolis, is 13 minutes for Freeflow Travel Time Savings and 17 minutes for Typical Travel Time Savings. The percent difference in typical travel time saved is 10% between Alternative 1 and Alternative 3B. The percent difference between Alternative 1 and the remaining “preferred alternatives” is less than 10%. We do not consider this difference to be compelling.” (1107-696 USEPA Region 5 Technical Comments, pp. 1-2)

The improvement in travel time offered by Preferred Alternative 3C is substantial. The nearly one-half hour in travel time savings (for an approximately 3 hour trip) will provide substantial personal and economic benefits. It is forecasted that 11,200 vehicles will make this trip every day in the year 2025; this results in an annual operating cost savings of approximately \$54,000,000 for those traveling between Evansville and Indianapolis. By comparison, the 12 minute savings offered by Alternative 1 results in less than half that, or \$25,000,000. Over a 20-year period, the difference in cost savings between Alternatives 1 and 3C for Evansville to Indianapolis trips alone is approximately \$580,000,000.

3. “Alternatives 5A and 5B have severe environmental impacts on sensitive karst areas, including the Tincher Special Management Area of the Hoosier National Forest.” (1107-696 USEPA Region 5 Technical Comments, p. 7)

Alternative 5 was not one of the preferred alternatives for this reason.

6.2 Preferred Alternatives

1. “Given the multiplicity of magnitude of environmental impacts, including but not limited to, wetlands, karst, forest and farmland associated with the “preferred alternatives,” EPA believes Alternative 1 (i.e. utilizing existing U.S. 41/I-70 corridor) is a viable alternative. Alternative 1 has, at least, 2 to 3 times less impact on multiple resources when compared to the “preferred alternatives,” with the lowest construction costs and very low operation and maintenance costs. EPA recommends that FHWA and INDOT reevaluate Alternative 1 before choosing a Tier 1 FEIS Preferred Alternative.” (1107-696 USEPA Region 5, p.2)

“It is clear that this decision (not to designate Alt. 1 as a “preferred alternative”) was based more on the instructions from Brian Nichol [(sic)] than on any real rationale for completing a highway that would serve to benefit the transportation needs of moving goods and people from Windsor, Ontario to northern Mexico.” (1105-207 Valley Watch Letter)

“a. The study is flawed on a macroscopic level. The summary pages S-21, S-22, and Table data on S-24 very clearly specify that Alternative 1 is the logical choice from an environmental impact perspective, yet the “environmental impact” study doesn’t recommend this route.” (1106-140 Milhoan, p. 2)

“b. Environmental impact and cost are obviously given very little weighting in the recommendations at all since Alternative 1 is not among the preferred routes.” (1106-140 Milhoan, p. 2)

“In fact, Alternative 1 performs best in more criteria than all other “preferred” alternatives combined, including cost, farmland impacts, forest impacts, wetlands impacts and new right-of-way impacts. On this basis, Alternative 1 stands out as the clear choice.” (1030-004 Greater Terre Haute Chamber of Commerce, p. 4-5)

“The preferred alternatives cost 16% to 88% more than US 41/I-70, yet none of the performance criteria measurements exceed an 8% difference. The preferred alternatives cost \$600 million more, on average, than Alternative 1 - the state of Indiana does not have the extra revenue to throw at new construction - gasoline taxes have been raised this year to address what is already a shortfall in highway funds. Yet instead of analyzing how much Indian can afford to pay for I-69, and comparing the costs to the claimed benefits, the DEIS virtually ignores cost considerations.” (1103-020 Handley)

The DEIS points out that Alternative 1 consistently performs poorly on all project goals, including core goals. Based on that poor performance, Alternative 1 was identified as a non-preferred alternative in the Tier 1 DEIS.

Following the close of the comment period on the Tier 1 DEIS, additional consideration was given to Alternative 1. Based on this additional analysis, Alternative 1 was eliminated from further consideration, as explained in Section 6.3. Subsequently, it was determined that the preferred alternative – taking into account cost, environmental impact, and performance in meeting project goals – was Alternative 3C. The reasons for selecting Alternative 3C are given in Section 6.4.

2.

	1107-696 USEPA NEPA Ratings - pp. 4 - 5	
2C	<p>Travel Time Savings 19 minutes</p> <p>Karst Sinkhole Areas and Sinking Stream Basins (110 acres) Wetlands (90 - 110 acres), including Forested Wetlands (70 - 80 acres) Streams (120 - 140), including Perennial streams (40 - 45) Floodplains (1,540 - 1,850 acres) Forest (840 - 935 acres), including Core Forest (85 acres) T & E (2 federal, 15 state) Farmland (4,300 - 5,070 acres), including Prime Farmland (3,100 - 4,100 acres) Relocations: Homes (280 - 408), Businesses (56 - 113)</p>	EO-2
3B	<p>Travel Time Savings 29 minutes</p> <p>Karst Sinkhole Areas and Sinking Stream Basins (30 acres) Wetlands (90 - 110 acres), including Forested Wetlands (90 - 135 acres) Streams (115 - 135), including Perennial streams (35 - 45) Floodplains (800 - 1,060 acres) Forest (1,315 - 1,450 acres), including Core Forest (440 acres) T & E (2 federal, 13 state) Farmland (4,290 - 4,850 acres), including Prime Farmland (2,300 - 3,750 acres) Relocations: Homes (346 - 484), Businesses (42 - 66)</p>	EO-2
3C	<p>Travel Time Savings 26 minutes</p> <p>Karst Sinkhole Areas and Sinking Stream Basins (50 acres) Wetlands (90 - 150 acres), including Forested Wetlands (80 - 130 acres) Streams (95 - 120), including Perennial streams (30 - 40) Floodplains (820 - 1,080 acres) Forest (1,140 - 1,275 acres), including Core Forest (398 acres) T & E (2 federal, 15 state) Farmland (4,070 - 4,630 acres), including Prime Farmland (2,280 - 3,730 acres) Relocations: Homes (370 - 458), Businesses (51 - 75)</p>	EO-2

1107-696 USEPA NEPA Ratings - pp. 4 - 5		
4B	<p>Travel Time Savings 27 minutes</p> <p>Karst Sinkhole Areas and Sinking Stream Basins (140 acres) Wetlands (115 - 165 acres), including Forested Wetlands (105 - 145 acres) Streams (105 - 120), including Perennial streams (35 - 40) Floodplains (1,080 - 1,120 acres) Forest (935 - 1,005 acres), including Core Forest (142 acres) T & E (2 federal, 9 state) Farmland (4,970 - 5,020 acres), including Prime Farmland (3,290 - 4,130 acres) Relocations: Homes (158 - 179), Businesses (11 - 12)</p>	EO-2
4C	<p>Travel Time Savings 26 minutes</p> <p>Karst Sinkhole Areas and Sinking Stream Basins (110 acres) Wetlands (140 - 190 acres), including Forested Wetlands (115 - 160 acres) Streams (130 - 145), including Perennial streams (45 - 50) Floodplains (1,550 - 1,810 acres) Forest (805 - 935 acres), including Core Forest (97 acres) T & E (2 federal, 15 state) Farmland (5,170 - 5,730 acres), including Prime Farmland (3,480 - 4,880 acres) Relocations: Homes (247 - 336), Businesses (35 - 59)</p>	EO-2

It should be noted that there were many more impacts and performance measures than these. In particular, the performance measure given (travel time savings between Evansville and Indianapolis, is only one of 9 performance measures on core goals, and only one of 28 for all project goals. Also, in response to comments on the DEIS, modifications have been made to alternatives such that their environmental impacts have, overall, been reduced. For example, on Preferred Alternative 3C, impacts to wetlands have been reduced from a range of 90 - 150 acres to 75 acres.

3. “Alternative 1 meets the stated needs identified under the three core goals for the project: (1) Improve the transportation linkage between Evansville and Indianapolis, (2) Improve personal accessibility for Southwest Indiana residents, and (3) facilitate interstate and international movements of freight through the I-69 corridor, in a manner consistent with the National I-69 policies.

“Given the substantial difference between the estimated environmental impacts for Alternative 1 and the remaining 11 build Alternatives, including the 5 “preferred alternative,” we highly recommend that Alternative 1 be re-evaluated prior to making a “Preferred Alternative” decision for the Preferred Corridor.” (1107-696 USEPA Region 5 Technical Comments, p. 2)

“Given that no one alternative scores significantly better on any of the performance measures, the significantly lower environmental impacts of Alternative 1 - together with the alternative’s much lower costs - should be decisive factors in INDOT’s decision making process.” (1107-705 ELPC et al, p. 39)

There are substantial differences among the alternatives in terms of their performance in meeting the project’s objectives, particularly the core objectives. In particular, Alternative 1 was consistently the poorest-performing alternative.

Following the close of the comment period on the Tier 1 DEIS, additional consideration was given to Alternative 1. Based on this additional analysis, Alternative 1 was eliminated from further consideration, as explained in Section 6.3.1. Subsequently, it was determined that the preferred alternative – taking into account cost, environmental impact, and performance in meeting project goals – was Alternative 3C. The reasons for selecting Alternative 3C are given in Section 6.4.

4. “We agree that Alternatives 5A and 5B and “non-preferred” alternatives, due to their severe environmental impacts on sensitive resource areas.” (1107-696 USEPA Region 5 Technical Comments, p. 2)

We concur.

5. “None of the highway alternatives significantly improve upon the “no build” conditions in virtually all performance categories, notwithstanding INDOT’s prejudicial and meaningless use of labels such as “high,” “medium,” and “low” to explain the modeling results.” (1107-705 ELPC et al., p. 2)

All of the DEIS Preferred Alternatives offer significant improvements over the No Build condition on most measures. The designation of performance as “high”, “medium”, and “low” has been revised to “higher” and “lower” to emphasize that these descriptions show the relative performance of the alternatives. For example, on the goal to Improve Traffic Safety, six alternatives provide forecasted annual injury crash reductions of between 1,357 and 1,626 crashes, while six other alternatives provide forecasted annual injury crash reductions of between 847 and 1,013 (See Section 3.4.3.4). Stating that these respective groups have “higher” and “lower” performance is a meaningful way to describe the relative ability of alternatives to satisfy this goal.

6. “Equally troubling was the Governor’s expressed disdain for the NEPA environmental review process that is at the heart of the route selection process: “What would really make me feel good is if we had a Congress that would change those [NEPA] rules and regulations” that, in his view, have unnecessarily delayed selection of the “direct route. The Governor’s public declaration confirmed that the “deal is done” in favor of a new-terrain route, and the EIS would change nothing.” (1107-705 ELPC et al, p.6)

The expression of an opinion by the Governor or another elected official is a normal part of the transportation decision-making process. The statements of the Governor have no bearing on legal requirements under NEPA. It is the responsibility of FHWA, as the lead federal agency, to ensure that NEPA requirements have been satisfied. All stages of this project have included considerable involvement by the Indiana Division of the FHWA and FHWA Headquarters. At key stages of this study (e.g., preparation of the DEIS), this involvement was on a day-by-day basis. Based on this extensive oversight and extensive review, FHWA is satisfied that all legal requirements have been met.

7. “While a properly executed cost-benefit analysis would greatly inform the judgment whether to pursue any of the I-69 alternatives, given the information currently available it would be seen that, since none of the build alternatives provides significant benefits over the No-Build scenario, it would be unwise to make the large investment required to complete and maintain any of the project alternatives. However, if one were to select the best build alternative, based on the costs and benefits outlines above it would clearly be Alternative 1.” (1107-703 Smart Mobility, p. 34)

All of the DEIS Preferred Alternatives offer significant improvements over existing conditions on most measures. In addition, there is no requirement to monetize all benefits for a NEPA analysis, or to perform a cost-benefit analysis. The study used a very wide variety of performance measures. It would not have been meaningful to attempt to reduce 28 performance measures associated with 9 goals to a single monetary value.

Appendix FF, Chapter 6 responds directly to the assertion that Alternative 1 would have been superior to Preferred Alternative 3C if a benefit cost analysis was undertaken. Responding to Smart Mobility’s comment, Appendix FF reports on a formal user benefit cost analysis for Alternatives 1 and 3C. The benefit cost analysis applied two discount rates, one at 7% and the other at 4%. Alternative 1 failed to demonstrate a benefit/cost ratio in excess of 1.0 even at the low 4% discount rate. By contrast, Preferred Alternative 3C had a benefit/cost ratio of 1.1 associated with the 7% discount rate and a net present value (i.e., discounted benefit minus discounted costs) of about 139.3 million. At the 4% discount rate, Alternative 3C’s benefit/cost ratio moved up to 1.8 with a net present value in excess of \$1 billion.

8. “I would like to repeat our desire that alternatives that utilize Highway 50 not be selected as the preferred route. The portion of the national forest split by Highway 50 has been designated as the Tincher Special Area due to its karst features and cave fauna. There are 18 known caves and over 32 other karst features in this 4,180 acre special area. Only a few of the caves have been inventoried for species and all inventories have been north of

Highway 50. Eighteen cave species, three of which are new to science, have been found since the inventory work started in 2000. The Tincher Special Area is one of the most significant karst areas in Indiana. If two more cave species are found, and we expect they will be, the Tincher Special Area will be a global subterranean hotspot. At least 14 of the cave fauna found to date are ranked G3 or higher.” (1107-699 USDA, Hoosier National Forest, p. 1)

Thank you for the information on Tincher Special Area. As explained in Chapter 6 of the DEIS, Alternative 5 was designated as a “non-preferred” alternative due to its environmental impacts.

9. “The department wishes to express its appreciation for the classification of alternatives 3A, 5A, and 5B as “non-preferred” alternatives in recognition of their exceedingly high impacts to ecologically sensitive areas.” (1107-698 IDNR, Division of Water, p.1)

We concur.

10. “Of the possible alternatives [for 3 and 4] in this vicinity [of Washington], we recommend the Washington eastern bypass. If this alternative is chosen, the actual highway should be located within the study corridor as far to the east as possible, and thereby away from the Thousand Acre Woods bottomland wetland complex.” (1107-698 IDNR, Division of Water, p. 2)

We concur. This comment was a factor in determining that the Preferred Alternative 3C should be routed east of Washington. See Section 6.3.3.

11. “In summary, of the ‘preferred’ alternatives being considered, alternative 2C poses the least amount of potential impact to natural resources.” (1107-698 IDNR, Division of Water, p. 2)

In some respects, Alternative 2C has fewer natural impacts than other DEIS Preferred Alternatives. However, refinements of the alternatives resulted in reductions of the wetlands impacts for many of the alternatives. As a result, Alternative 3C has the least wetlands impacts of all DEIS Preferred Alternatives. See Section 5.19 and Appendix DD.

12. “In general, the Department supports routes that upgrade or closely follow existing highways because new-terrain routes often result in the greatest loss and fragmentation of natural habitats and involve the most stream and river crossings at new locations. According to data presented in the DEIS, alternative 1 (upgrading I-70 and U.S. 41) would have far fewer negative environmental impacts than any of the other “build”

alternatives. The DEIS clearly reveals that Alternative 1 would have the least impact on fish and wildlife resources, including federally threatened and endangered (T&E) species and their habitats, karst features, and rivers listed on the Nationwide Rivers Inventory (NRI). Because Alternative 1 would have the least impacts on forests, wetlands, floodplains, rivers listed to the NRI, karst features, water quality, and section 4(f) resources, the Department supports this route as the most environmentally preferable of the build alternatives. In light of its many environmental (and cost) advantages, we recommend the FHWA and the Indiana Department of Transportation (INDOT) consider removing Alternative 1 from the list of “non-preferred” alternatives and selecting it as their preferred alternative. Furthermore, the U.S. Fish and Wildlife Service (FWS) believes selection of Alternative 1 would best fulfill FHWA’s responsibility to use its authorities to conserve endangered and threatened species as set forth in Section 7(a) 1 of the Endangered Species Act (ESA).” (1107-697 U.S. Dept. of the Interior, pp. 4-5)

We agree that Alternative 1 would have the least amount of impacts to the natural environment of any build alternative. However, it also has high impacts to the socio-economic environment. For example, it has the highest number of business relocations of any alternative. However, Alternative 1 was consistently the poorest performing alternative in meeting the project’s objectives. Alternative 1 was re-examined following the DEIS, and was eliminated from further consideration, as described in Section 6.3.1.

It should also be noted that Preferred Alternative 3C does make extensive use of an existing four lane road. Thirty-five percent (35%) of it is located on existing SR 37.

13. “We fully concur with Alternatives 3A, 5A, and 5B being considered “non-preferred” alternatives because they would cause “such serious impacts on critical, high quality natural areas that they present virtually insurmountable obstacles to selection as a preferred alternative, particularly in light of the availability of other alternatives with similar or better performance that avoid these highly sensitive resources.” We also believe alternative 3B (and to a lesser extent 3C) should also be considered as a non-preferred alternative and eliminated from further consideration because of its adverse direct and indirect effects on the federally endangered Indiana bat and on the unique karst features and fauna within the Garrison Chapel Valley (GCV) in western Monroe County.” (1107-697 U.S. Dept. of the Interior, p. 5)

Alternatives 3A, 5A, and 5B are non-preferred in the DEIS. Alternative 3B was dropped from further consideration after the DEIS in response to comments regarding its environmental impacts. See Section 6.4.

14. “Alternative 1

- “Has the fewest impacts to T&E species, forests, core forests, wetlands, floodplains, karst features, rivers listed on the NRI, and water quality.
- “The Department’s most preferred of the build alternatives.” (1107-697 U.S. Dept. of the Interior, p. 6)

Alternative 1 was reexamined following the DEIS, and was eliminated from further consideration, as described in Section 6.3.26.3.1.

15. “Alternative 2

- “Relatively low impacts to forests, wetlands, and T&E species. The Department prefers 2A or 2B rather than 2C. All three have similar environmental impacts, although 2A and 2B do not include NRI river crossings.
- “The Department does not have significant objections to any of the Alternative 2 routes.” (1107-697 U.S. Dept. of the Interior p.6)

Comment noted. Alternatives 2A, 2B, and 2C were eliminated, as explained in Section 6.4.

16. “Alternative 3

- “High impacts to forest, core forest, and karst features associated with new-terrain alignments. All three alternatives include a river crossing over the East Fork of the White River which was listed on the NRI because of scenic and recreational values, among other significant characteristics.
- “Close proximity to multiple Indiana bat hibernacula.
- “The Department considers 3A and 3B environmentally unacceptable because of their serious impacts to Bean Blossom Bottoms and Indiana bat hibernacula and habitat within the GCV, respectively.
- “The Department has significant objections to 3C. However, because 3C would have fewer impacts to forest, core forest, wetlands, and streams, it is preferred over either 3A or 3B.” (1107-697 U.S. Dept. of the Interior, p. 6)

The Department of the Interior’s evaluation of Alternative 3B as “environmentally unacceptable” was a factor in its not being considered as the Preferred Alternative.

17. “Alternative 4

- “Low impacts to forests, core forests, and caves.
- “High impacts to wetlands and streams.
- “The Department has little preference between 4A, 4B, and 4C, as all three have similar environmental impacts.
- “At the Tier 1 level of analysis, the Department does not have significant objections to alternative 4 corridors unless wetland impacts cannot be adequately mitigated. The Department considers Alternative 4 corridors to be better than the Alternative 3 or Alternative 5 corridors in terms of impacts to Indiana bat habitat.” (1107-697 U.S. Dept. of the Interior, p. 6)

Alternatives 4A, 4B, and 4C were eliminated, as explained in Section 6.4.

18. “Alternative 5

- “The Department considers Alternative 5 (5A and 5B) environmentally unacceptable because of its serious impacts to caves, karst features, karst hydrology, and troglobitic fauna; very high impacts to forests and core forests and their associated fauna (e.g., neotropical migratory birds); and its likelihood of adversely affecting federally endangered mussel species and Indiana bat foraging and roosting habitat.” (1107-697 U.S. Dept. of the Interior, p. 7)

Alternatives 5A and 5B were eliminated, as explained in Section 6.4.

19. “No-Build Alternative

- “According to NEPA regulations (Sec. 1502.14), all reasonable alternatives are to be “rigorously” explored and given an equal level of analysis and consideration. The DEIS fails to give the no-build alternative a rigorous or equal analysis. Therefore, we were unable to adequately compare or evaluate differences between the no-build alternative and other build alternatives in regard to their direct, indirect, and cumulative effects on the environment.” (1107-697 U.S. Dept. of the Interior, p. 7) ... We recommend the no-build alternative be clearly defined (i.e., define the project baseline) and that it be given a level of analysis consistent with that of the build alternatives. The Final EIS should also disclose whether the no-build alternative is either a “preferred” or “non-preferred” alternative (pages S-32 and S-33).” (1107-697 U.S. Dept. of the Interior, p. 7)

The No Build Alternative is “non-preferred” because it does nothing to meet the needs for this project. The No Build Alternative is defined in Section 3.3.2.5. The discussion of cumulative impacts (Section 5.26) shows the impacts of major projects in the No Build Alternative. All impacts and benefits of each alternative (as shown

in Table S-6) are computed as the difference between that alternative and the No Build.

20. “Section 1. That Alternative 3 as shown on the Proposed Route Map is the route that will have the greatest positive influence on increasing the safety of travel and providing for continued economic development in Spencer County, Crane Naval Base, and all counties along Alternative 3. ... Section II. That the Spencer County Commissioners fully endorse and support Alternative 3 and find it to be in the best interest of the citizens of Spencer County, Indiana.” (1105-208 Spencer County Commissioners)

Preferred Alternative 3C will provide for a significant crash reduction in Southwest Indiana.

21. “Based on the data presented in the DEIS Summary, we believe Alternative 4C (Evansville-Washington-Spencer-Martinsville-SR37) is the most cost-effective choice for the following reasons:

- Achieves “high” performance for seven project goals and “medium” for the remaining two goals.
- Has nearly 20% lower capital costs than two other alternatives (3B and 3C) that are only slightly higher in performance toward project goals.
- Significantly outperforms the remaining two “preferred” alternatives (2B and 4B) that have lower capital costs.
- Provides significant improvement in access to Bloomington and Crane Naval Surface Warfare Center by providing Interstate service within 10-15 miles of each location, at significantly lower costs than Alternatives 3B and 3C which provide closer interstate connections but save only a few minutes of total travel time.” (1014-009 Shields)

“1. Alt. 4C is better than Alt. 1 and 5 because it is more direct (Alt. 1 is almost the same as doing nothing.)

“2. Alt. 4C is better than Alt. 3 and 5 because it crosses less karst terrain which is environmentally sensitive and difficult to build on.

“4. Alt. 4C is better than Alt. 3 because it is not close to Bloomington. Bloomington is the focus of the opposition to I-69 and the majority of the people in Bloomington do not want it. Avoiding Bloomington will reduce the quantity and intensity of protests and legal challenges, thereby reducing the political and legal costs. The challenges and protest engendered by a route close to Bloomington would delay construction.

“5. Alt. 4C is better than Alt. 4A, 4B, 2A and 2B because it is more direct and comes close to Martinsville and most people there would support the highway if it were close.

“6. Alt. 4C has the advantage of using the part of State Road 37 north of Martinsville. This section of highway will almost certainly be made limited access in the near future anyway.” (1107-318 Baus)

Alternative 4C has lower performance than Preferred Alternative 3C. In addition, it has significantly higher impacts to wetlands and floodplains.

22. “The south side of Indianapolis already has a large number of large divided four lane highways (I-74, I-65, I-70, S.R. 67, S.R. 37, S.R. 31). Development along them has already accommodated itself to the noise of high volumes of heavy traffic. For example, along S.R. 37, most of the development is commercial and/or industrial, and some of it directly serves the transportation industry already (truck stops, transportation-oriented hospitality industries, etc.) while S.R 37 has certain issues relating to relocation of certain businesses and road access, changing it into I-69 would not greatly change the area’s primarily commercial/industrial development.” (1106-130 Nicholson-Rand House, p. 5)

This was a consideration in using the SR 37 corridor for Preferred Alternative 3C, as opposed to the Mann Road.

23. “The MPO recommends that if a build alternative is deemed necessary, that Alternative 4B that utilizes I-70 from I-465 west to western Morgan County and then south, be selected. Should any of the other build alternatives be selected, the MPO would recommend that Mann Road corridor option be eliminated from consideration.” (1106-129 Indianapolis MPO, p. 8)

The Mann Road variation has been eliminated. Preferred Alternative 3C follows SR 37. Alternative 4B was eliminated, as explained in Section 6.4. After the announcement of a single preferred alternative, the Indianapolis MPO amended their TIP and Plan to incorporate Preferred Alternative 3C.

24. “Route 2 cuts a terrible diagonal swath across some of the best farmland in Knox County. It cuts off access to my farm and takes my farm house on Stoelting Road near Freelandville, Indiana. I am for I-69 and want route 3 and 3B.” (1103-013 Morley)

Preferred Alternative 3C avoids the impacts described here.

25. “Please do not run the I-69 ext. on the west side of White River along Mann Road coming off of I-465. This area includes Southwestway Park, which is one of the few places mountain bike riders are allowed to ride in Metro Indy.” (1104-020 Lawrence)

The variation along Mann Road is no longer under consideration for this project.

26. “It makes much more sense to go along the east side of White River since the Hwy. 37 corridor already exists.” (1104-020 Lawrence)

Preferred Alternative 3C uses the corridor suggested.

27. “Now that Senator Lugar has come out in favor of the I-70/US 40 route [(sic)], it would seem to me that is now the only politically viable option.” (1104-013 Terrill)

Comment noted.

28. “The connection of Alternative 3A at I-70 makes it possible to further extend the interstate system northward to I-74, I-65 and beyond, as circumstances may dictate over the long-term. Further, from a “people” perspective, this alternative is clearly less disruptive than others.” (1107-033 Judson)

The high level of impacts to key resources led to Alternative 3A being designated as non-preferred.

29. “Indiana Hardwood Lumbermen’s Association strongly urges the Indiana Department of Transportation to carefully reconsider its alternatives for highway routes from Indianapolis to Evansville and to select a route that has the least impact on Indiana’s forestland base. The US 41 and I-70 route, with its existing roadbed and right-of-way, would cause the least impact and would be the most cost effective.” (1024-040 Indiana Hardwood Lumbermen’s Association)

Any forested land taken by Preferred Alternative 3C will be mitigated at a ratio of 3:1.

30. “It is my intention to document the I-69 route most preferred by the Spencer County Regional Chamber of Commerce. We seek a route that most effectively connects to Highway 231. We also understand the critical importance of Crane Naval depot to Southern Indiana. We feel that Routes #3 best fill this Region’s needs.” (1104-058 Spencer County Regional Chamber)

Preferred Alternative 3C has a potential interchange with US 231 about two miles from the truck entrance to Crane naval base.

31. “The Society of Architectural Historians is on record as favoring the route that INDOT chooses to ignore, even though logic and good sense AND fiscal responsibility all point toward routing I-69 along the present I-70 and US 41 rights-of-way.” (1026-012 Society of Architectural Historians)

Comment noted.

32. “The DEIS study does not define any weighting for factors considered in recommending preferred alternatives.” (1106-140 Milhoan, p. 3)

Given the complexity of performance factors and impacts, a weighting scheme would be impractical. The sensitivity analysis performed in the Level 2 Screening of Alternatives did, however, demonstrate that for any reasonable assignment of weights, that the same sets of alternatives tended to perform better. See Appendix D.

33. “Lowest improvements to business accessibility.” Completely undocumented in the report. As shown above 80% of the major cities and 89% of the population already are in close proximity to 4 lane highways.” (1105-201 Marbach, p. 5)

Accessibility is not determined by access to 4-lane highways, per se. It is determined by the time required to reach key attractions. Accessibility also is affected by the location of highways.

34. “Low potential for reduction of crashes...” Undocumented. As noted above, this alternative would eliminate ‘Killer SR 41.’” (1105-201 Marbach, p. 6)

The Safety Analysis (see Technical Report 3.3.4.1, p. 4) determined that US 41 does not have unusually high crash rates.

35. “Highest potential business relocations.” If one compares Business relocations and Home relocations, the result is much different. The combined relocations of Alternative 1 are less than those of three of the Preferred Alternatives (2C, 3B, and 3C). Why are Homes relocations considered of less significance than Business relocations?” (1105-201 Marbach, p.7)

Home and business relocations have different types of effects, and are tabulated differently. Business relocations can be expected to affect the economy to a greater extent than residential relocations.

36. “By converting SR 41 to I-69 status, Hoosiers will foot the bill, save a measly 25% and have NO NEW HIGHWAY for its most needy citizens. This while the great state of Illinois will profit more than our own people with a highway that is all but the property of the state of Illinois due to being located virtually on the Illinois/Indiana boarder. Also, lets not forget the economic loss to such highway that will be lost due to being built right near the Wabash River, cutting off and losing much of the economic gain to the west. Tear our one highway, then PAY THREE QUARTERS OF A BILLION DOLLARS to build on top of the old highway AND HAVE NO NEW HIGHWAY! Let me say this again, save 25% and end up with ONE highway instead of TWO! DOES THIS MAKE SENSE TO YOU!” (1020-004 Wilson)

Alternatives closest to Illinois provide benefits to residents of Illinois. All alternatives benefit residents of other states to some extent.

37. “As a side note, I believe it would also be useful to upgrade 37 from Bloomington to Bedford as an offshoot of I-69, hence my reason for favoring 3C over 3B. It could be called I-169. This section is practically interstate already, so impact would be minimal.” (1016-003 Blonader)

Comment noted.

38. “The compromise: Alternatives #2. Why is this alternative a compromise? First of all, US 41 will be utilized from Vincennes/Knox County to Evansville. It may not be the fastest route, but it truly presents compromise. Secondly, US 231 will be utilized leaving Bloomington and Terre Haute untouched, not disturbing some of Indiana’s largest and finest cities. Third, I-70 can be utilized to approximately the Cloverdale/US 231 areas. It may not be the fastest route, but it truly presents compromise. Finally, alternative #2 presents a low-cost build option with low-cost maintenance cost. The final view is something which very few Indiana residents have expressed during the length of this project. A low-cost maintenance interstate will prevent the next generations from paying to maintain this interstate.” (1104-021 Rubacha)

Comment noted.

39. “To reduce the individual and community conflicts, I believe that the route of SR 37, US 50 and SR 57 should be the preferred route. You have a SR 37 corridor that can be upgraded to interstate stands (sic) and you would have one major roadway (not two like I70 & US 40 in southern Indiana.” (0926-003 Graves)

This route corresponds to Alternative 5, which was a high-performing alternative. However, it was designated non-preferred in the DEIS, due to high impacts in the Tincher Special Area.

40. “If you care about quality of life for Hoosiers, you must thoughtfully weight the costs of a new-terrain highway against the gains of only minutes in driving time and the economic pluses of the plan. These costs have not ever been addressed by the DEI studies, which makes the studies invalid and raises issues of trust between the public and the Department.” (1104-011 Lethem)

The EIS studied the impacts, performance, and cost of all alternatives to arrive at a set of preferred alternatives.

7.1 Introduction

1. “Due to the severity of impacts, mitigation measures are a crucial part of this project. We encourage the project sponsors to keep in mind that some impacts may be more adaptable to mitigation than others. This may further influence the selection of the Tier 1 FEIS Preferred Alternative. For NEPA Tier 1, avoidance through selection of alternatives should be the first step, but for those impacts that cannot be avoided, commitments to mitigation, and conceptual mitigation plans, if feasible, should be created for the Tier 1 Preferred Alternative chosen and documented in the Tier 1 FEIS.” (1107-696 USEPA Region 5, p.2)

Efforts will be made to avoid resources. Mitigation for those impacts that can not be avoided is included in Chapter 7 of the FEIS

2. “At this information level, consideration of mitigation through specific construction techniques and wetland replacement is largely conceptual, as has been addressed in the Tier 1 DEIS document.” (1107-696 USEPA Region 5 Review, p. 3)

Efforts will be made to avoid resources. Mitigation for those impacts that cannot be avoided is included in Chapter 7 of the FEIS.

3. “Finally, compensatory mitigation would be provided to offset any permitted wetlands loss, preferably by wetland restoration at ratios at several times the acres lost to the acres restored. This attempts to address the serious problem of the time and uncertainty it takes to restore a wooded wetland. The difficulty of restoring wooded wetlands is acknowledged in the 2002 Compensating for Wetlands Losses Under the Clean Water Act report of the National Research Council, National Academy of Sciences. The specifics of mitigation will need to be added in the Tier 2 documents and would be finalized as part of any 404 permit.” (1107-696 USEPA Region 5 Review, p.4)

The Tier 1 Forest and Wetland Mitigation and Enhancement Plan uses replacement ratios of 3:1 for wetland forests, wetland scrub/shrub, and upland forests; and 2:1 for emergent wetlands. The specifics of mitigation will be determined in Tier 2 studies. The Plan is summarized in Chapter 7 and included in Appendix NN.

4. “We recommend that tree mitigation for any unavoidable tree loss be undertaken. This might occur by planting replacement trees in areas that are associated with upland buffers for wetland mitigation. Mitigation might also include assisting county, state or federal agencies with any on-going or planned forest reclamation projects in the watersheds affected. We recommend that the proponents commit to voluntary forest mitigation in the Tier 1 FEIS and provide, as detailed as possible, a conceptual forest mitigation plan

that compensates for the loss and fragmentation of forest habitat due to the alignment or alignments chosen for the preferred alternative.” (1107-696 USEPA Region 5 Review, p. 10)

Upland forest impacts will be mitigated at a ratio of 3:1 for the Project through the preservation or replacement of forested lands within Southwest Indiana. All forest mitigation lands will be protected in perpetuity by conservation easements. Preference will be given to areas contiguous to large forested tracts that have recorded federal and state listed species. Coordination with environmental review agencies will assure that these forest mitigation sites are strategically situated in biologically attractive ecosystems.

5. “Appropriate mitigation measures (for farmland) should be developed by coordinating with the appropriate state and federal agencies, and landowners. Mitigation measures, if feasible, should be identified, and committed to, in the Tier 1 FEIS, and in the Tier 2 NEPA documentation.” (1107-696 USEPA Region 5 Review, p. 11)

Appropriate resource agencies (e.g., NRCS and USDA) will be contacted and appropriate analyses will be conducted in accordance with the Farmland Protection Policy Act during Tier 2. In addition, coordination will continue with the NRCS in Tier 2 to determine the feasibility of participating in the Farm and Ranch Lands Protection Program, formerly known as the Farmland Protection Program, or any other state farmland conservation program in place.

6. “However, the proposed mitigation for these (farmland) losses is inadequate in our opinion. I would like to suggest an alternative method of mitigation that the Department should consider. Prime farmlands are not like wetlands. Mitigation can not be achieved by creating additional farmland. However, INDOT could help mitigate the effect of the loss of prime farmland by protecting other farmland in the state from development. Typically land can be protected from development by buying the development rights from the farmer and placing an easement on the land that limits its use to agricultural purposes. One method of doing this is through the USDA Farmland Protection Program. This program allows the Federal government to pay 50% of the costs to protect farmland from development. This could leverage any money invested by the state and significantly increase the amount of farmland that could be protected. Details about this program can be found at the follow website www.nrcs.usda.gov/programs/fpp/.” (1031-017 USDA, NRCS)

During the meeting on November 22, 2002 with the Natural Resources Conservation Service to discuss mitigation options, the USDA Farmland Protection Program was discussed. As a result of the meeting, INDOT and FHWA have agreed to determine the feasibility of participating in the Farm and Ranch Lands Protection Program,

formerly known as the Farmland Protection Program. Decisions about acquisition of any protective easements will be made in consultation with local officials responsible for economic development in land use planning.

In addition, the I-69 Community Planning Program is discussed in the FEIS. This Program will set in place a regional strategy for providing resources to local communities to manage the growth and economic development associated with I-69. This Program will provide grants for local communities to prepare land use plans to manage potential new developments along with the I-69 corridor.

7. “We would like to see forested lands mitigated at a 1:3 ratio for every acre of forested land needed for I-69, replace it with 3 acres protected somewhere else. One method of such mitigation is to acquire other forested lands that would become part of the Hoosier National Forest, a Fish and Wildlife Refuge, or an Indiana Department of Natural Resources property. The Hoosier National Forest always receives more inquiries from people who wish to sell their land to the national forest than our budget will ever cover. We use 12 criteria, including potential wetland restoration and threatened or endangered species habitat, to prioritize acquisitions. Foraging habitat for Indiana bat could be covered as part of the overall prioritization.” (1107-699 USDA, Hoosier National Forest, p. 2)

Upland forest impacts will be mitigated at a ratio of 3:1 for the Project through the preservation or replacement of forested lands within Southwest Indiana (i.e., three acres of mitigation for every acre of impacted land). All forest mitigation lands will be protected in perpetuity by conservation easements. Preference will be given to areas contiguous to large forested tracts that have recorded federal and state listed species. Coordination with environmental review agencies will assure that these forest mitigation sites are strategically situated in biologically attractive ecosystems.

8. “We would like to see wetlands mitigated beyond “no net loss” on a 1:4 ratio. Wetlands are disappearing in Indiana at a high rate. The same process as for forested land could be used - acquire lands suitable for wetlands restoration.” (1107-699 USDA, Hoosier National Forest, p. 2)

The mitigation of wetlands follows the Wetland Memorandum of Understanding (MOU) signed by INDOT, the Indiana Department of Natural Resources, and the US Fish and Wildlife Service on January 28, 1991. This MOU sets out acceptable mitigation measures that are followed on state transportation projects in Indiana. Replacement ratios for wetland forests and scrub/shrub are 3:1, emergent wetlands are at 2:1; and aquatic bed (open water) wetlands are at 1:1. Mitigation of upland forests in the Project will be at a 3:1 ratio.

9. “We would also like to see karst mitigated. We believe that this should also be a 1:4 ratio. There may be opportunities near Wesley Chapel Gulf in the national forest to acquire important karst features so that they can be protected and studied. Most karst features in private ownership are not protected and in many cases are actually harmed due to the lack of understanding about this unique, important part of Indiana.” (1107-699 USDA, Hoosier National Forest, p. 2)

The construction of transportation projects in karst areas follows the Karst Memorandum of Understanding (MOU) signed by INDOT, the Indiana Department of Natural Resources, the Indiana Department of Environmental Management, and the U.S. Fish and Wildlife Service on October 13, 1993. This MOU sets out terms and conditions for the identification, study, and treatment of drainage in karst regions. Efforts will be made to acquire upland forest in Karst areas for mitigation.

10. “Mitigation plans for loss of forests are totally inadequate. There are no ratios given and no indication where mitigation might occur or when, and no cost estimates are given.” (1106-147 Tokarski, p. 23)

Upland forest impacts will be mitigated at a ratio of 3:1 for the Project through the preservation or replacement of forested lands within Southwest Indiana. All forest mitigation lands will be protected in perpetuity by conservation easements. Preference will be given to areas contiguous to large forested tracts that have recorded federal and state listed species. Coordination with environmental review agencies will assure that these forest mitigation sites are strategically situated in biologically attractive ecosystems.

11. “This chapter on mitigation of impacts is so vague and general that it is virtually worthless. No mitigation is assured.” (1106-147 Tokarski, p. 28)

The mitigation chapter of the FEIS has been updated to include additional mitigation commitments as well as preliminary estimates for mitigation costs. Some of the mitigation measures are conceptual, while others are specific. Mitigation measures will be reviewed and refined during Tier 2.

12. “The karst MOU states under item 1, p. 1, ‘INDOT in cooperation with the IDNR, IDEM and USFWS shall determine the location of sinkholes, caves, underground streams, and other related karst features and their relationship prior to proposed alterations or construction in karst regions of the state.’ ... To date, this has not been done.” (1106-147 Tokarski, p. 29)

A report discussing karst features for the where appropriate sections will be prepared in Tier 2 following the guidelines as set forth in the karst MOU. Measures to offset unavoidable impacts to any karst features will be provided as part of the design review process. For any section that affects karst features, a monitoring and maintenance plan will developed during design. Prior to acceptance of the final design plans, an agreement will be developed which will set out the appropriate and practicable measures to offset unavoidable impacts to any karst features.

13. “There is no mention in the DEIS of compliance with the Federal Cave Protection Act which may be relevant here.” (1106-147 Tokarski, p.29)

The Federal Cave Protection Act provides for the Secretary of the Department of Agriculture or the Department of the Interior to (1) identify significant caves on federal lands; (2) regulate or restrict of use of significant caves, as appropriate; (3) enter into volunteer management agreements with persons of the scientific and recreational caving community; and (4) appoint appropriate advisory committees. The Preferred Alternative 3C does not impact any federal lands containing caves designated as significant under this Act.

14. “Does INDOT intend to follow the rules in the Natural Resources Commission Information Bulletin #17? Subject: Wetlands and Habitat Mitigation states ‘The standard mitigation ratio may be increased if replacement does not occur on the same stream or within a 2.5 mile diameter of the disturbed site’. Also, on page 4 of this document is the statement: ‘mitigation outside of the 8 digit hydrologic unit will likely be denied.’ If not, are the wetland mitigation measures discussed in this DEIS credible?” (1106-147 Tokarski, p. 29)

The Tier 1 Forest and Wetland Mitigation and Enhancement Plan locates forest and wetland mitigation sites within the same 8-digit hydrologic unit as the impacted or disturbed sites. Wetland replacement ratios will be 3:1 or possibly 4:1 for forested wetlands, 3:1 for scrub/shrub wetlands; 2:1 for emergent wetlands; and 1:1 for aquatic bed (open water) wetlands following the Wetland Memorandum of Understanding signed by INDOT, IDNR, and USFWS on the 28th day of January, 1991. In addition, the Tier 1 Forest and Wetland Mitigation and Enhancement Plan calls for forest impacts to be replaced at a ratio of 3:1.

In finding appropriate mitigation sites, considerable time and effort will beis invested in looking for prior- converted, bottomland farm fields next to existing wetlands and forests. Such sites make for excellent mitigation sites. After finding a site, INDOT would provide a Wetland or Forest Mitigation and Monitoring Report to the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, Indiana

Department of Natural Resources (Division of Fish and Wildlife), Indiana Department of Environmental Management, and Natural Resource Conservation Service for their review.

A field review at the mitigation site follows with each agency providing verbal or written comments on the site and proposed plans. If revisions are required, the design and report are revised and the project moves into the R/W acquisition phase. If an agency thinks that the mitigation site is too far from the impact site, it may request a higher ratio. INDOT would consider such information and make a decision to either discard the site from further consideration or go with the higher ratio. Mitigation sites are bought from only “willing sellers.”

The conceptual mitigation sites identified in the Plan are located next to and connect with existing environmentally attractive areas that today have wetlands and forests harboring habitat for both federal and state listed species. Such a concept provides for a greater core habitat and greater opportunities for increased biodiversity. INDOT is committed to replacing wetlands at ratios agreed upon in the Wetland MOU and working with appropriate agencies for the betterment of water quality, wetlands, and biodiversity in the area.

15. “For this DEIS, INDOT did not use this manual [Federal Manual for Identifying and Delineating Jurisdictional Wetlands] and wetlands potentially impacted were not delineated (p. 5-142).” (1106-147 Tokarski, p. 29)

The National Wetland Inventory maps produced by the US Fish and Wildlife Service were used to identify potential wetland impacts for the Tier 1 DEIS and FEIS. In a recent letter from EPA dated November 7, 2002, they stated the following: “Wetlands were identified from the National Wetlands Inventory maps for each study band. This is an appropriate approach for the Tier I study.” Similarly, a recent letter dated September 25, 2003 from the U.S. Army Corps of Engineers stated “In considering a project of this magnitude we believe the two-tier EIS process continues to be an appropriate tool for identifying and evaluating environmental concerns, socio-economic issues and accessibility relative to the purpose and need for the project. More importantly, the Tier 1 EIS has specifically identified all of the important natural resource areas within the five alternative corridors. This process is satisfactory to the Corps for early coordination under Section 404 of the CWA.” As part of the Tier 2 environmental documentation, field reconnaissance of the alternatives and wetland delineations and identification using the Corps of Engineer’s Wetland Delineating Manual will be conducted.

16. “Simply stating that social impacts will be mitigated “where reasonable” by the use of frontage and access roads to maintain accessibility is vague and offers no assurance of any mitigation. The same is true of noise mitigation.” (1106-147 Tokarski, p. 30)

Under statute, INDOT cannot take a property owner’s access without due compensation or provision of alternative access to the property. The location of frontage roads and access roads to resolve access issues will be identified in the Tier 2 studies. All reasonable and feasible noise abatement measures will be included in this project.

17. “Mitigation could involve the purchase of thousands of acres of additional land, yet there is not indication of the potential cost of these purchases and how they may vary among the alternatives.” (1106-147 Tokarski, p.30)

Chapter 7 includes an estimate of mitigation costs for Preferred Alternative 3C. This cost estimate includes the purchase of mitigation land.

18. “Quality wetlands aren’t build by man in a short time but take centuries to become healthy ecosystems. Therefore, mitigation of wetlands destroyed by highway construction will almost certainly be inadequate.” (1025-036 Kiechle, p. 1)

As part of wetland mitigation, a monitoring plan is developed to ensure that a mitigation site is constructed and develops as designed. The monitoring plan covers 5 years. Annual inspections document the progress of the site. This report is submitted to the US Army Corps of Engineers, the Indiana Department of Natural Resources (Division of Fish and Wildlife), the Indiana Department of Environmental Management, and the US Fish and Wildlife Service. If problems are encountered, recommendations to correct the problems will be part of the annual report.

19. “I heard earlier a gentlemen referring to the wetland and if we destroyed wetlands they would be replaced at a three to one ratio. Well if we do that then you need to add the three x-factors which is the number of farm acres that=s going to be destroyed.” (0820-120 Robinson)

“Recognition of farming as the huge business of production of food is seemingly missed. Food production is one of the last USA manufacturing strong holds, yet every environmental concern of the Draft EIS is addressed by taking more farmland. Some routes will mitigate up to 1000 acres of lost forests with something. Will this be farm land? What ratio will the forests be replaced? Has that been estimated into the loss in the amount of farm land, or is the 4000 acres lost on some routes before more land is taken to

replace lost wetlands and lost forests? The total loss of farm land needs to be accurately calculated.” (1104-059 Smith)

“Farmland should not be sacrificed to mitigate conversion of other valued natural resources such as wetlands or endangered species habitat. Because productive agricultural lands are a vital resource, we support voluntary, incentive laden policy designed to encourage the protection of these lands as a base for future food production and a viable agricultural industry.” (1107-685 Indiana Farm Bureau Inc.)

Replacement ratios of 3:1 for wetland forests, wetland scrub/shrub and upland forests; 2:1 for emergent wetlands; and 1:1 for aquatic bed (open water) wetlands are proposed. In general, INDOT seeks to use farmlands that flood or are prior converted wetlands for wetland replacement. These areas are often more suitable for wetland restoration because of their limited productivity. The majority of replacement acreage though would be upland forests. It would be replaced at a ratio of 3:1.

20. “An additional note is that while impacts to wetlands are routinely ‘mitigated,’ the failure rate for mitigation is exceedingly high. Failure rates are as high as 71% for forested wetland in Indiana (James Robb, IDEM, 2000) and 67% for riparian woodlands nationally (National Research Council, 2001).” (1103-010 Tedesco)

To help the success of wetland mitigation sites, a monitoring plan is developed to ensure that a mitigation site is constructed and develops as designed. The monitoring plan covers five years. Annual inspections document the progress of the site. This report is submitted to the US Army Corps of Engineers, the IDNR Division of Fish and Wildlife, the IDEM, and the USFWS. If problems are encountered, recommendations to correct the problems will be part of the annual report.

21. “Furthermore, replacement of wetland and forest area should be guaranteed, with an emphasis on the tripling of wetland area, and at least an equal-acreage expansion of forest area. This could include expanding Dean wilderness area near Monroe reservoir.” (1107-102 Prater)

Replacement ratios of 3:1 are proposed for wetland forests, wetland scrub/shrub and upland forests; 2:1 for emergent wetlands; and 1:1 for aquatic bed (open water) wetlands. There is a parcel of land in the Lake Monroe watershed that conceptually could be used for mitigation. The theme for this site would be watershed protection and habitat for federal and state listed species.

22. “The EIS does address the environmentally sensitive areas in the study region, but pays no more than lip service to actually trying to mitigate environmental effects.” (1103-022 Werne)

Chapter 7 has been updated to include additional mitigation commitments as well as preliminary estimates for mitigation costs. Some of the mitigation measures are conceptual, while others are specific. Mitigation measures will be reviewed and refined during Tier 2.

8.1 Proposed Action

1. “Along Mann Road, for example, lies Southwestway Park, soon to be second only to Eagle Creek in size in our community. The expansion of the park and its offerings has engaged amazing neighborhood investment and fund-raising in a straightened economy.” (0927-004 Carson, p. 3)

“The 2000 foot study corridor for Alternative 3B/C1 cuts across Southwestway Park, which is owned by the City of Indianapolis. The DEIS does not mention this area in the Section 4(f) evaluation. ... the noise, pollution, and other impacts from the highway will result in a constructive use of the park ...” (1107-705 ELPC et al, p. 48)

“There are also a number of parks existing or recommended along the corridor that could be impacted. Of special note is Southwestway Park south and east of the intersection of Mann Road and Southport Road. This park is one of few park areas in Decatur Township and was just recently double in size through significant efforts of local citizens, Indy Parks and developers to make it second in size only to Eagle Creek park in northwest Marion County. The Mann Road option would potentially impact this park due to corridor right-of-way needs, as well as additional right-of-way needed to accommodate the proposed interchange at Southport Road.” (1106-129 Indianapolis MPO, p. 7)

“I’ve recently learned that the proposed route for the I-69 extension from Indy to Evansville could wipe out the trail system at Southwestway Park (Mann Hill). As you may know this is one of the very few mountain bike trails in Metro Indianapolis and has the only trails with true elevation in the area.” (1030-021 Lawrence)

The reference to Mann Hill in the Atlas has been changed to Southwestway Park in the FEIS. The 2000- foot study corridor for Alternative 3B and the Mann Road variation of Alternative 3C are close to the park but avoid the park. Preferred Alternative 3C is located approximately 2 miles to the east of Southwestway Park.

8.2 Section 4(f) Resources - Parks, Recreation Areas, and Wildlife Refuges

1. Prior to approving any corridor that runs through or near any of these areas, FHWA must determine that there is not prudent and feasible alternative to using that land. FHWA cannot make that determination in view of the substantially less destructive Alternative 1. ... Figure 8-1 of the DEIS makes clear that Alternative 1 would impact the fewest Section 4(f) lands, and is a feasible and prudent alternative.” (1107-705 ELPC et al, p. 46)

The FHWA Section 4(f) regulations establish the procedures for Section 4(f) compliance at Tier 1. Under those regulations, it is not necessary to make a final

Section 4(f) determination at the Tier 1 stage. Rather, the regulations provide that “a preliminary determination may be made at this time (i.e., in Tier 1) as to whether there are prudent and feasible locations or alternatives for the action to avoid the use of Section 4(f) land.” The regulations also state that the preliminary determinations “shall consider all possible planning to minimize harm to the extent that the level of detail at the Tier 1 EIS stage allows.”

In accordance with this regulation, the FEIS includes a preliminary Section 4(f) determination. The preliminary determination is included in Chapter 8.

2. “Alternatives 3, 4 and 5 would cross the Patoka River National Wildlife Refuge. The refuge is designated as a “wildlife refuge” as described in Section 4(f). At present, the PRNWR has a total of 5,131, acres, not the 2,670 acres mentioned in the DEIS.” (1107-705 ELPC et al, p. 46)

As of May 2003, the refuge has acquired 5,211 acres. This fact has been corrected in the FEIS. The July 1994 FEIS for the refuge states that “the Service [US Fish and Wildlife Service] would attempt to avoid buying lands within the chosen alignment thereby avoiding or minimizing the applicability of Section 4(f).” The USFWS has kept to that commitment and has purchased no land that is within the proposed corridor for I-69. As such, the location where Preferred Alternative 3C crosses the Patoka River utilizes privately owned land. Therefore, the completion of I-69 in the area of the Patoka River National Wildlife Refuge would not be considered a use of a Section 4(f) resource.

3. “Building a highway through the PRNWR will trigger Section 4(f) review, since Alternatives 3, 4, and 5 will directly harm the wildlife refuge, notwithstanding the preservation of a corridor for a highway through the refuge area. Building a highway through the refuge also will result in a constructive use of the refuge. Constructive use occurs when land is not directly taken for the project but the project is so close to the land that its impacts substantially impair the environmental and other values of the protected site. ... The highway will substantially impair the use of the resource as a refuge for wildlife because a highway corridor will act as a barrier to bird and animal movement, and increase the likelihood of roadway crossing mortality among wildlife. In particular, a direct physical barrier such as an interstate highway will adversely affect less mobile species such as many amphibians and reptiles.” (1107-705 ELPC et al, p. 46 - 47)

“The second paragraph of the Section 4(f) evaluation (page 8-1) mentions proximity impacts as potentially constituting a “use” of section 4(f) resources. However, the Evaluation does not provide any discussion of potential proximity impacts, such as increased noise and visual intrusion, of project alternatives on areas determined to be 4(f)

resources. The DEIS section on highway noise impacts (section 5.10) mentions parks and recreation areas as potential sensitive receptors to be addressed in the noise analysis but fails to specifically mention other 4(f) resources. To the extent possible, the section 4(f) evaluation to be included with the Tier 1 Final EIS should discuss these potential impacts and possible measures to ameliorate any such impacts.” (1107-697 U.S. Dept. of the Interior, p. 4)

The July 1994 FEIS for the refuge states that “the construction of the proposed Evansville-to-Indianapolis highway (I-69) would not be stopped by any of the (Patoka River National Wildlife Refuge) alternatives.” It is possible that construction of I-69 in the Patoka area will have indirect impacts on refuge lands located on either side of the highway. However, the alternatives that cross through the Patoka area are all located in a corridor that was designated for a future I-69 at the time the refuge was established. Thus, the impacts of the highway (including indirect impacts) were assumed at the time the refuge was created. Construction of the highway within this reserved corridor does not constitute a constructive use of the Patoka River National Wildlife Refuge for the purposes of Section 4(f).

4. “Alternatives 3, 4 and 5 would cross very close to the boundary of the Sugar Ridge State Fish and Wildlife Area (Sugar Ridge). Sugar Ridge is a designated “wildlife refuge” as provided in Section 4 (f). Constructing a new interstate next to Sugar Ridge also will cause a constructive use by impairing use of the resource for wildlife.” (1107-705 ELPC et al, p. 47)

“Alternatives 3B, 3C and 5 would cut through Morgan-Monroe State Forest, and Alternative 5 would cut through Martin State Forest. These forests are subject to Section 4(f) because the “organic” act for the Indiana State Forests provides that protecting and conserving “wildlife” in the state forests is one of their designated uses, and that the “equal enjoyment and guaranteed use of future generation” (i.e., outdoor recreation use) the overarching public policy reason to protect state forest.” (1107-705 ELPC et al, p. 47)

“The Combs Unit of Martin State Forest lies directly in the route of Alternative 3, but is not identified in the Environmental Atlas or the DEIS Section 4(f) evaluations. AsS a state forest property, it should be a Section 4f property.” (1107-705 ELPC et al, p. 48)

“Several areas were determined not to be section 4(f) resources based upon the fact that the areas provide only dispersed recreation. These areas include the Tincher Special Area (TSA) of the Hoosier National Forest, the Morgan/Monroe State Forest, and the Martin State Forest. The Keisler Forest Legacy Property was determined not to be subject to section 4(f) due to the fact that it is not open to the public and is not for recreational activities. Unfortunately, the Evaluation focuses entirely on the recreational-use aspects

of these areas and fails to address the question of the potential applicability of section 4(f) to these areas as wildlife refuges or natural preserves.” (1107-697 U.S. Dept. of the Interior, p. 1)

“Neither the section 4(f) policy paper [FHWA, dated 9-24-87 and revised 6-7-89] nor section 4(f) of the Department of Transportation (DOT) Act of 1966 explicitly define what constitutes a “wildlife or waterfowl refuge.” In addressing the potential applicability of section 4(f) to wildlife management areas, the policy paper indicates “the property should be examined to determine its ‘refuge’ characteristics. If the wildlife management area primarily functions as a sanctuary or refuge for the protection of species, section 4(f) would apply.” This functional definition of a refuge is basically consistent with that expressed by Congress in the National Wildlife Refuge System (NWRS) Administration Act of 1966 and the NWRS Improvement Act of 1997.” (1107-697 U.S. Dept. of the Interior, p. 2)

“Congress recognized the taking of individuals of wildlife species through regulated hunting is not inherently incompatible with the conservation mission of individual national wildlife refuges. Neither do we believe that the allowance of hunting on other types of multiple-use public lands should disqualify the lands from the requirements of section 4(f) if a major purpose or function of the land is the conservation of wildlife and/or the preservation of ecological functions or geological features of the area.” (1107-697 U.S. Dept. of the Interior, p. 2)

“Tincher Special Area of the Hoosier National Forest: As indicated in appendix BB of the DEIS, the TSA was established in April 1991 by the Hoosier National Forest Land and Resource Management Plan Amendment, and a Special Area Management Plan (SAMP) was approved for the Area in 1995. The management practices as set forth in the 1995 SAMP are found on page 23 of the SAMP included in appendix BB, and are also discussed on pages 5-183 through 5-185 of the DEIS. These practices indicate the ‘Area shall be managed in a near natural condition with minimal manipulative disturbance. Emphasis is on preservation of the karst environment and conservation of the biological resources.’ Timber harvesting would not occur unless necessary to maintain the unique geologic or ecologic character of the area or support recreational development such as vistas or parking areas. In light of the conservation purposes for the TSA, we do not understand how a determination could be made that ‘Section 4(f) does not apply to the TSA as a whole’ (page 8-8). The Department requests that FHWA reevaluate this determination and, in the Section 4(f) evaluation portion of the Tier 1 Final EIS, specifically address the applicability/nonapplicability of Section 4(f) to the TSA as a refuge or natural preserve.” (1107-697 U.S. Dept. of the Interior, p. 2)

“Morgan/Monroe State Forest and Martin State Forest: The DEIS/section 4(f) evaluation (page 8-13) indicates the Morgan/Monroe State Forest (Forest) provides for dispersed recreation. No information is provided concerning the primary purposes for which the Forest is managed or whether the Forest, or some portions of it, functions as a refuge or natural preserve.

“Page 8-8 of the Section 4(f) evaluation indicates that the Martin State Forest is a recreational area with hiking, camping, fishing, and hunting, and that the Forest encompasses an arboretum and an educational center...

“We recommend the Section 4(f) Evaluation portion of the Tier 1 Final EIS provide information concerning the management plans for these two State forests and specifically address whether the forests, or portions of them, are managed or function as a refuge or natural preserve.” (1107-697 U.S. Dept. of the Interior, p. 3)

“Keisler Forest Legacy Property: On page 8-3, the Section 4(f) evaluation indicates that the Keisler Property is not subject to Section 4(f) due to the fact it is not open to the public and is not for recreational activities. If the area were managed or functioned as a refuge or natural preserve, the lack of public access would not preclude the area from being considered a Section 4(f) resource. However, it is our understanding the purpose of the Forest Legacy Program is to protect environmentally important forestlands by purchasing the development rights from willing sellers. The owners retain all other rights, including the right to harvest timber. Thus, it is likely Section 4(f) is not generally applicable to such areas.” (1107-697 U.S. Dept. of the Interior, p. 3)

“Page 8-8 states that section 4(f) does not apply to the TSA of the Hoosier National Forest because the U.S. Forest Service (USFS) describes the recreational activities within the TSA as “dispersed.” However, page 11-12 indicates the USFS concluded the TSA had a recreational use and on page 11-16 the DEIS states the USFS manages the TSA “to provide for recreational use.” Similarly, the Indiana Department of Natural Resources (IDNR) manages Morgan-Monroe State Forest and Martin State Forest for recreational resources. Opportunities for hiking, camping, fishing, and other pursuits are provided by these areas (<http://www.state.in.us/dnr/forestry/index.html>). However, the DEIS (8-13) concludes the dispersed recreational activities of Morgan/Monroe State Forest do not make it subject to the requirements of Section 4(f).

“While the final decision on applicability of Section 4(f) to a particular type of land is made by FHWA, the FHWA normally relies on the official having jurisdiction over the land to identify the kinds of activity or functions that take place. Please clarify the contradictory statements on pages 8-8, 11-12, and 11-16 and document whether or not the USFS or the IDNR considers recreation as one of the major purposes of the respective

properties, and therefore, a Section 4(f) resource.” (1107-697 U.S. Dept. of the Interior, pp. 3-4)

The FEIS has reevaluated the applicability of Section 4(f) for the resources identified by the commentors. Chapter 8 has been updated to include this analysis. The following discussion summarizes the evaluation of these resources:

Pike State Forest/Sugar Ridge State Fish and Wildlife Area
Morgan-Monroe State Forest
Martin State Forest
Combs Unit of the Martin State Forest
Keisler Forest Legacy Property
Tincher Special Area of the Hoosier National Forest

Pike State Forest/Sugar Ridge State Fish and Wildlife Area - Further investigation revealed that the area shown in the DEIS as to the Sugar Ridge State Fish and Wildlife Area actually is part of the Pike State Forest. The Sugar Ridge State Fish and Wildlife Area is actually located several miles to the east.

According to representatives of the Patoka River NWR Area, the Pike State Forest is within the refuge and management acquisition area. However, there are no plans for the Patoka River NWR to acquire any portion of the Pike State Forest.

Within the Pike State Forest, various recreational activities are available including primitive camping, hunting, horseback riding, picnicking, bird watching, and hiking. These activities are dispersed throughout Pike State Forest. The Property Manager was contacted to determine if the Pike State Forest would function primarily as a sanctuary or a refuge for the protection of species. There was no specific management plan for the Pike State Forest that discussed its primary function as a sanctuary or refuge. There are no goals or objectives in a management plan that describe a sanctuary or refuge function. According to the Property Manager, the area is managed as a forest with the harvesting of timber whenever possible. As a result, the requirements of Section 4(f) do not apply to the Pike State Forest.

Morgan-Monroe State Forest - Coordination with the Property Manager of Morgan-Monroe State Forest and officials at the Department of Natural Resources indicated that the forest offers dispersed recreational opportunities for the public and timber management. The Property Manager was contacted to determine if the State Forest would function primarily as a sanctuary or a refuge for the protection of species. There was no specific management plan for the State Forest that

discussed its primary function as a sanctuary or refuge. There are no goals or objectives in a management plan that describe a sanctuary or refuge function. According to the Property Manager, the area is managed as a forest with the harvesting of timber whenever possible. As a result, the requirements of Section 4(f) do not apply to the Morgan-Monroe State Forest.

Martin State Forest - Coordination with the Property Manager of the Martin State Forest indicated that the forest offers hiking, camping, fishing, and hunting. The hiking activities use old fire lanes that are dispersed throughout the state forest. The Property Manager was contacted to determine if the State Forest would function primarily as a sanctuary or a refuge for the protection of species. There was no specific management plan for the Martin State Forest that discussed its primary function as a sanctuary or refuge. There are no goals or objectives in a management plan that describe a sanctuary or refuge function. As a result, the requirements of Section 4(f) do not apply to the Martin State Forest.

Combs Unit of the Martin State Forest - This property is a recent addition to Martin State Forest and is located in Greene County just south of Kolean. The Property Manager was contacted and stated that there is no management plan for the Combs Unit. The property is open to the public for hunting and fishing. There is no campground and no hiking trails. There was no mention of the property serving primarily as a refuge or sanctuary. The requirements of Section 4(f) do not apply to the Combs Unit of Martin State Forest.

Keisler Forest Legacy Property - This property is part of the Forest Legacy Program and has several conservation purposes. As part of the Forest Legacy Program, there is a conservation easement between the owner and the Department of Natural Resources. The conservation easement provides for several conservation purposes. The purposes are:

- (1) to retain the property as an economically viable and sustainable tract of forestland for the production of timber, pulpwood, and other forest products;**
- (2) to sustain the production of quality of life benefits including water quality, clean air, noise reduction, and scenic views and to provide wildlife habitat as a natural by-product of forest retention and management;**
- (3) to protect water quality in the Little Richland Creek watershed; and**
- (4) to encourage non-industrial private forestland owners to wisely manage their forestland.**

This property is managed for the harvesting of the timber, pulpwood, and other forest products, and wildlife habitat is a “by-product of forest retention and management.” The requirements of Section 4(f) do not apply to the Keisler property.

Tincher Special Area of the Hoosier National Forest - Coordination with officials of the Hoosier National Forest indicated that the Tincher Special Area offers hiking, camping, fishing, and hunting. These activities are dispersed throughout this Special Area. The Special Area Management Plan discusses management practices and states that there is an “emphasis on preservation of the karst environment and of the biological resources.” The plan will “manage federally-listed threatened and endangered species and regional sensitive species.” With these plans, the Tincher Special Area acts as a refuge and is subject to Section 4(f).

5. “Alternative 5 would pass through the Tincher Special Area. Notably, the entire Special Area, and not just the pond site described in the DEIS, is a Section 4(f) area.” (1107-705 ELPC et al, p. 48)

“The Tincher Special Area has one designated recreation site, Tincher Pond. Berry Pond has potential for dispersed recreation use since it has good fishing. Georgia Pond has been breached and now serves as a wetland. Although there are a few developed recreation sites, the area is available for dispersed recreation. Backpacking, hiking, camping, hunting, and fishing are some of the recreational activities in Tincher. There is a trail to Tincher Pond and plans for a hiking trail in the future.” (1107-699 USDA, Hoosier National Forest, p. 2)

We have re-evaluated the Tincher Special Area and determined that the area acts as a refuge. Publicly owned lands within the Tincher Special Area are subject to Section 4(f). Chapter 8 of the FEIS has been updated to reflect this analysis. Preferred Alternative 3C does not impact this resource.

6. “We noticed a discrepancy in the location of sugarloaf mound/pyramid mound. You can get the location from Rachel Perry, Division of Historic Sites at 232-1633 or Hank Huffman, Division of Nature Preserves, at 232-5052.” (1107-698 IDNR, Division of Water, p. 1)

Pyramid Mound and Sugar Loaf Mound are two separate historic places in Vincennes. Pyramid Mound is located along US 41 in Vincennes as shown in the DEIS. Sugar Loaf Mound is located at the intersection of Prospect and Washington Streets and would not be impacted by any of the alternatives.

7. “This alternative [3B] passes near two Division of Nature Preserves owned properties: Capehart Sandflats and Thousand Acre Woods, which are located south of the town of Plainville, and North of Washington, respectively.” (1107-698 IDNR, Division of Water, p.2)

Thousand Acre Woods and the Capehart Sand Flats Nature Preserve (also known as Prairie Creek Barrens Nature Preserve) are both shown in the Environmental Atlas. Thousand Acre Woods is owned by The Nature Conservancy. The Nature Conservancy is a private institution, but the IDNR does have an easement for the property. Capehart Sand Flats (Prairie Creek Barrens Nature Preserve) is owned and managed by the IDNR Division of Nature Preserves. The working alignment for the Preferred Alternative 3C with the far eastern variation (WE 2) around Washington is approximately 1 1/2 miles to the east of Thousand Acre Woods and five miles to the east of the Capehart Sand Flats (Prairie Creek Barrens Nature Preserve). Thousand Acre Woods is outside the corridor and the study band for Preferred Alternative 3C.

8.3 Section 4(f) Resources - Historic and Archaeological Resources

8.3.1 Historic Resources

No substantive comments.

8.3.2 Archaeological Resources

No substantive comments.

8.3.3 Summary

No substantive comments.

8.4 Coordination

No substantive comments.

8.5 Section 6(f) Resources

1. “In this case, at least two properties trigger Section 6(f) review and approval by the National Park Service. Neither of these properties is addressed in the DEIS. First, virtually all of the PRNWR was acquired with LAWCON monies. Therefore, Section 6(f) applies to this area. The impairments to wildlife discussed above trigger the Section 6(f) approval requirements, notwithstanding the prior arrangement of the agencies to reserve a highway corridor through the refuge.” (1107-705 ELPC et al, p. 50)

Section 6(f) of the Land and Water Conservation Fund Act of 1965 prohibits the conversion of any property acquired or developed with the assistance of the fund to anything other than public outdoor recreation use without the approval of the Secretary of the Department of the Interior. FHWA requested information from the Department of the Interior regarding any Section 6(f) lands affected by any of the alternatives. In a letter dated August 27, 2003, the Department of the Interior stated, “it appears that no project’s funded with Land and Water Conservation Funds will be affected.” There is no known property acquired under this act that would be taken as right-of-way for any of the I-69 alternatives.

2. “Second, according to the Indiana Department of Natural Resources, “portions of Sugar Hill [sic] Fish and Wildlife Area have been acquired or developed (or both) with federal Land and Water Conservation Act (LAWCON) funds. Any negative impacts to this or other LAWCON sites may require a Section 6(f) conversion.”... Alternatives 3 and 4 would impair Sugar Ridge’s use for conservation and recreation, thereby constructively converting at least part of Sugar Ridge.” (1107-705 ELPC et al, p. 50)

Further investigation since the DEIS has revealed that the area described in the DEIS as to the Sugar Ridge State Fish and Wildlife Area actually is located several miles to the east of the Preferred Alternative 3C. Thus, Preferred Alternative 3C will not impact this property.

3. “Since then there has been a negotiated agreement to buy the 101 acres of Park Land along White River. Since the land purchase includes funding from the Federal Land & Water Conservation funds, any acquisition by INDOT for the Southport Road interchange will require a “6F Conversion.” That compels parkland replacement of equal or better land.” (1101-018 Cockrum, p. 1)

This comment appears to refer to the property known as Southwestway Park. Alternatives 3B and the Mann Road variation of Preferred Alternative 3C have a possible interchange at Southport Road which would be near Southwestway Park. The Mann Road variation has been eliminated. Preferred Alternative 3C, which has a possible interchange at Southport Road at a different location, is located approximately 2 miles to the east of Southwestway Park and the White River.

4. “After a more detailed review of the 2000 feet Corridor, as related to the Soccer Complex, it appears that it might be possible to route I-69 to the west edge of the Mann Road corridor and avoid relocation of the Soccer Complex.” (1101-018 Cockrum, p. 1)

Preferred Alternative 3C is located approximately 2 miles to the east of the soccer complex by Mann Road.

Chapters 9 and 10 are not subject to comments and are therefore not addressed.

11.1 Introduction

1. “This is supposed to be the last day for comments on I-69, but your site says the comment period is already over and won’t take an e-mail.”

“The link for complaining about faults in the website is not found.” (1107-470 Robinson)

Due to technical difficulties, the web site was unavailable for receiving comments on the DEIS for about 15 minutes on the final day on which comments were received - November 7, 2002. This was quickly corrected. On November 7, 2002, over 550 comments were submitted to the project web sites.

11.2 Major Themes

No substantive comments.

11.3 Public and Community Outreach

1. “INDOT’s refusal to release key DEIS background data seriously impeded the public’s review of the DEIS. Without this data, Public Interest Organizations and others could not meaningfully comment on many aspects of the DEIS.” (1107-705 ELPC et at, p.2)

“A second serious flaw in INDOT’s public outreach is the agency’s ‘privatization’ of the EIS process, with the resulting ‘walling off’ of key documents and data used to create the DEIS. According to INDOT, the background documents and data are exempt from public review because they are the property of Bernardin, Lochmueller & Associates (BLA). INDOT argues that since BLA is not a public agency, the documents therefore are not ‘public records’ under the Indiana Access to Public Records Act (APRA).” (1107-705 ELPC et al., p. 6)

Extensive technical data, including background documents prepared by the EIS consultants, were provided to the commentor in response to public record requests. The information provided was sufficient to enable the commentor to conduct an independent evaluation of the analyses presented in the DEIS, as is reflected by the technical comments submitted by a consultant (Smart Mobility) on behalf of this commentor. Information which was disclosed included:

- **Eight compact discs (CDs) containing 2025 Model Runs without Induced Growth; 2025 Model Runs with Induced Growth; 1998 Model Runs; 2025**

Model Directory; 1998 Model Directory; TAZ layer with induced growth; Accessibility, GIS/DK Batch, and POSTALT Programs; and NET_BC Program;

- **MCIBAS Model Documentation in 4 parts (hard copy), plus Appendices A, B, and C to this 4-part report;**
- **Economic Impact Analysis System (EIAS) Documentation in hard copy;**
- **Seven diskettes containing MCIBAS EIAS installation files; EIAS Input Spreadsheets; Level 3 REMI Inputs; and REMI Output details; and**
- **Three large volumes (weighing approximately 11 pounds total) of technical information concerning cost estimates for the alternatives.**

In addition prior to the publication of the FEIS, INDOT provided to the Indiana Geological Survey the GIS shapefiles for Preferred Alternative 3C once a single variation was selected.

2. “INDOT’s position that it can maintain blanket secrecy for all of the documents used to create the DEIS violates state law. The Indiana APRA defines a ‘public record’ in relevant part as any document ‘used’ by an Agency. Since INDOT is the official author of the DEIS, and the background documents and data unquestionably were ‘used’ to create the DEIS, INDOT must have ‘used’ the documents at issue, even if BLA, as agent for INDOT prepared most of the DEIS.

“INDOT’s privatization of the NEPA process also unlawfully thwarts public review and comment of the DEIS under 40 C.F.R. § 1503.1 and other applicable federal law. INDOT’s DEIS contains many conclusions, but does not include most of the background data that informed INDOT’s conclusions. INDOT’s refusal to provide this data limits our ability to meaningfully comment on the DEIS.” (1107-705 ELPC et al, p. 7)

After receiving public -record requests from this commentor for information contained in the working files of the EIS consultant, INDOT consulted with the Indiana Public Access Counselor. The Public Access Counselor is the State official responsible under Indiana law for advising State agencies and the public on issues of interpretation under the Indiana Access to Public Record Act. The Public Access Counselor advised INDOT and stated publicly that the requested materials did not constitute public records and thus were not subject to the Indiana public records law. INDOT accepted the advice of the Public Access Counselor and proceeded accordingly.

Extensive information has been released throughout the NEPA process. These materials included 6 technical reports, including technical reports on traffic modeling issues; the DEIS and its appendices; and additional technical data, which was released during the DEIS comment period in response to this commentor's public record requests. The release of all of this data provided an ample basis for this commentor and others to evaluate the findings presented in the DEIS, as is reflected in the lengthy technical report submitted by Smart Mobility Inc, on behalf of this commentor, as a comment on the DEIS.

In sum, FHWA is satisfied that a vast quantity of information has been released publicly as part of this NEPA process, and the release of this information has provided this commentor and others with a much greater level of knowledge about the technical underpinnings of the NEPA document than is normally the case in the NEPA process. This level of openness not only satisfied NEPA's public disclosure requirements, but exceeded those requirements.

3. "Although the GIS information was used extensively in this DEIS, the digital route overlays were withheld from the public. Therefore, it is not possible to verify or contradict the DEIS's GIS data. This makes much of the study unverifiable and questionable. All of the GIS data should be released and the comment period extended to allow citizens to do an adequate review of the DEIS." (1106-147 Tokarski, p. 14)

The routes for the alternatives – including the study bands, corridors, and working alignments – are fully presented in Volume III (the Environmental Atlas) in the DEIS. The Environmental Atlas contains highly detailed maps overlaid on aerial photographs showing the locations of each alternative in relation to each of the resources described in the DEIS. The Environmental Atlas provides an easy-to-use, readily accessible resource for the public to use in determining the locations and impacts of the alternatives. The Environmental Atlas provides a much greater level of technical information about locations and impacts than is typically available in a NEPA document. INDOT provided the IGS with the GIS shapefiles for the Preferred Alternative 3C once a single variation was selected.

4. "The DEIS information on INDOT's website was not accessible to many people. We received many complaints that files could be downloaded but not opened, and it could take hours trying to download maps. We were never able to open many DEIS files." (1106-147 Tokarski, p. 3)

A special "help" e-mail address was provided to assist anyone experiencing such problems. The I-69 web master personally corresponded with anyone who notified us of such problems, and was able to solve most difficulties. Some difficulties were

due to slow user connections, or to the age of the software and computers which some were using.

5. “INDOT’s prohibition of signs in meeting rooms is discriminatory and possibly illegal. Such behavior is allowed under the First Amendment to the U.S. Constitution. INDOT’s intention is to stifle dissent and control all aspects of the public hearings in contempt of the democratic process.” (1106-147 Tokarski, p. 3)

Citizens were permitted to set up any displays in public viewing areas adjacent to the meeting hall. Due to security concerns, some items were not allowed in the actual meeting halls.

6. “Pages 11-7 to 11-10 list the meetings that took place between INDOT/BLA and various groups. A total of 144 meetings are listed. 64 (44%) were with pro new terrain highway groups, 20 (14%) were with supporters of the US 41/I-70 groups, and 60 (42%) were with neutral groups. Three times as many meeting [sic] were held with pro-new terrain groups and with pro US 41/I-70 groups. A clear bias shows here. In addition, the INDOT sponsored I-69 newsletter is blatantly pro new highway and little more than a propaganda tool for INDOT’s preferred alternatives.” (1106-147 Tokarski, p. 32)

When schedules would allow, the public outreach staff met as requested with any interest groups. The groups with whom they met is an indication of the interest expressed in the project by various stakeholder groups. The newsletter was used as a method to keep the public informed about the project.

7. “Then the public debate could at least be fair with all having the proper information. You must extend the public debate about this highway after notifying landowners that might be involved. If you do not, then I am sure you will be met with many forms of deterrents.” (1107-155 Ezell)

I do want to call into question the notification procedure. In this day and age posting a notice with a vague map saying go the library perhaps 20 miles away or more is not a reasonable notification. I have witnessed the ease of generating a mailing list to every person in Monroe and Owen Counties with GIS technology. The time to create mailing labels for every person in Monroe County on all three of the routes who owned property within 1000 feet of the route was less than a minute. The time to sort it by zipcode, also less than one minute. The cost to mail the notification to 2000 persons less than \$400.00. (1104-059 Smith, p. 8)

Many efforts were made to notify interested parties (including potentially affected property owners) of the possibility of being affected by this project through public hearings, public notices, study documents, news releases, and the project web site.

For example, at public hearings stations were set up where project staff used the project GIS to show the possible routes in relation to specific locations. During Tier 2 NEPA studies and the design phase, property owners are notified when access to their property is needed. During the design phase, property owners whose land will be used for the highway are notified in writing by INDOT.

8. “As recently as two weeks ago option C1 on the alternate route number two, the Mann Road Corridor has been told to me that the map of that has simply has just appeared in the last two weeks. Nowhere until in the last week did any resident to my knowledge in Decatur Township know of the proposed route through our township following Mann Road. I must also tell you I am the Vice President of the Decatur Township Civic Council which is a 300 plus member organization neighborhood organization in Decatur Township. The proposed Mann Road Route will route this highway very near very many new housing developments, it will also route the interstate near what is to be know as the Southwest Way Park Expansion program, Councilor Cockrum talked about that earlier. To sum up my concerns is we believe that this is rather unfair that the Mann Road Corridor up until the last few weeks is not been discussed or made known to any of the residents of Decatur Township in Indianapolis, this is said in view of the proposed announcement of the final route of the interstate due some time within the next few months. We in Decatur Township certainly need more time to review this proposal as this has come as quite as a surprise to us in just the last two weeks. Thank you.” (0819-068 Sylvester)

Until the DEIS was released, routes had been publicly described as “route concepts;” simple lines connecting points on the map. A possible routing using Mann Road was proposed as part of the refinement in going from route concept to route corridor. This refinement occurred along all routes studied in the DEIS.

Based upon public comments and environmental and socio-economic impacts, the Mann Road corridor was not selected as part of Preferred Alternative 3C.

11.4 Agency Review and Coordination

No substantive comments.