



# INDIANA DEPARTMENT OF TRANSPORTATION

*Driving Indiana's Economic Growth*

3802 Industrial Blvd  
Unit 2  
Bloomington, Indiana 47403

PHONE: (812) 334-8869

**Mitchell E. Daniels, Jr., Governor**  
**Michael B. Cline, Commissioner**

## Memorandum

**To:** Raymond Hess, BMCMPPO

**From:** Sandra Flum

**cc:** Richard Martin, Robert Tally, Sam Sarvis, Audra Blasdel

**Date:** October 7, 2011

**Re:** Responses to BMCMPPO 9/21/11 Questions

The attached document contains INDOT's responses to the 109 questions submitted by the BMCMPPO on September 21st. Some of the questions could be read in different ways, so if INDOT has misunderstood the question, please feel free to contact us via email or letter. INDOT will respond in writing to follow up questions.

In providing these responses, INDOT is hopeful that the BMCMPPO will recognize the continuing efforts of coordination and on November 4th, vote to include the construction of I-69 Section 4 into its new TIP. As referenced in some of the responses, INDOT and local officials have discussed coordination meetings specifically for local officials for Section 4, offering an opportunity to share information about design elements and gather input. Once the construction phase is included in the TIP, those coordination meetings will serve as valuable updates.

I look forward to our continued work together.

**Response to I-69 Questions from BMCMPO**  
**10/7/2011**

*Note: The following questions were submitted to INDOT and FHWA by Policy Committee members and staff. The Responses represent the information presented in the question as INDOT understood the question.*

- 1) Of the projected job increases due to I-69, what percent of those will be new jobs as opposed to transfers from other regions of the state and country? *Andy Ruff*

**RESPONSE:** The forecasted job increases are based upon reductions in business cost (which makes businesses more profitable and able to expand and hire more employees). These forecasted increases also account for changes in “economic geography,” whereby businesses have access to increased numbers of potential customers and suppliers. This increased access also results in business growth. The modeling, however, did not identify specific locations where these additional jobs “might have located elsewhere” if I-69 were not built. Nor did it identify other relocations from which jobs “were relocated” due to the cost and accessibility advantages provided by I-69. Please see Chapter 3.4.1 and 3.4.4 of the Tier 1 FEIS for more information.

- 2) Please provide an official document from the Dept. of Defense that indicates that I-69 is crucial to the survival of Crane. *Andy Ruff*

**RESPONSE:** Those responsible for activities at Crane NSWC have routinely spoken publicly about the value of the planned interstate to mission of their facility. In addition, the Tier 1 Final Environmental Impact Statement, Appendix OO contains a report entitled “Evansville-to-Indianapolis (I-69) Project: Regional Economic Needs Analysis”, prepared by The Council for Urban Economic Development, *et. al.* The report discusses the surface transportation situation at Crane and can be found at <http://deis.i69indyevn.org/FEIS/index.html>

- 3) What is the net economic impact (subtracting out any economic activity shifted from other parts of the state) compared with the net economic impact of repairing the aforementioned bridges along with the over 400 bridges that currently have the same structural rating that the bridge in Minnesota had before its collapse? *Andy Ruff*

**RESPONSE:** The type of comparative economic analysis that this comment requests was not required for the I-69, Section 4 project under the National Environmental Policy Act (NEPA) process. For further information about the requirements of NEPA as related to the type of analysis requested, please see the Tier 1 Final Environmental Impact Statement Appendix FF, Technical Critique of Smart Mobility Report.

In general, transportation planning and prioritization of projects affecting regional and statewide mobility are a responsibility of INDOT.

- 4) How much more will it cost to upgrade IN-37 to an interstate from Bloomington to Indianapolis than constructing I-69 along the least expensive alternative route from the Section 3 terminus to I-70? How much quicker could an interstate connection from Evansville to Indianapolis be completed due to these cost savings *Andy Ruff*

**RESPONSE:** The route described in this question was considered as Alternative 4A in the Tier 1 FEIS. This alternative was non-preferred because it performed poorly on purpose and need. Due to its poor performance, Alternative 4A was eliminated in Tier 1. Refer to the Tier 1 EIS for additional information regarding the costs of Alternative 4A and other alternatives considered in that study.

- 5) What rule allows fiscal constraint to be determined for the MPO portion of I69 in the MPO jurisdiction when construction funds are not included in the TIP? *Richard Martin*

**RESPONSE:** See FHWA response.

The projects listed in the Indiana STIP can be found at this link  
<http://indot.IN.gov/2348.htm>

- 6) Does INDOT, according to Federal guidelines, have proper fiscal constraint to construct I-69 section 4? *Richard Martin*

**RESPONSE:** See FHWA response.

- 7) Does failure of the MPO to add the portion of I69 inside the BMCMPPO's boundary to its TIP for construction, mean the determination of fiscal constraint for Section 4 is no longer valid and must be revisited? *Richard Martin*

**RESPONSE:** See FHWA response.

- 8) Indiana currently has many bridges in need of upgrades and repairs. Some major bridges, such as the Cline Ave, Bridge, MLK Bridge, and Sherman-Minton Bridge area closed to traffic. How has the need to repair and upgrade these bridges affected INDOT's budget? *Andy Ruff*

**RESPONSE:** INDOT's fiscally constrained STIP shows how projects move in and out of our program. Bridges are an example of priorities, but INDOT utilizes an asset management process that helps establish priorities on the statewide system. Much like local governments prioritize projects on a variety of factors, the State exercises similar planning and budgeting. In general, transportation planning and prioritization of projects affecting regional and statewide mobility are a responsibility of INDOT and local projects are planned by local planning agencies.

- 9) What is the estimated economic losses state-wide due to bridge closings as well as lane and weight restrictions? *Andy Ruff*

**RESPONSE:** INDOT is responsible for the mobility on the system of state routes and interstate systems. Each local planning agency is responsible to monitor local road systems and bridges and manage the mobility within its jurisdiction. INDOT does not analyze the economic effects of local decisions. Respectfully, the information requested in this comment is beyond the scope of the decision currently pending before the BMCMPPO, namely the adoption of a new TIP that includes the construction phase of Section 4 of I-69.

10) Could you please list INDOT's projected total revenues and total expenditures for the years 2012 to 2015. *Andy Ruff*

**RESPONSE:** According to pages 28 and 29 of INDOT's Statewide Transportation Improvement Program (STIP), the following is the projected revenues and projected identified project obligations for fiscal years 2012 to 2015. Note that some project obligations are yet to be indentified in each year. Actual project obligations in 2014 and 2015 are expected to approach the revenue projections for those years.

	<b>Projected Revenue</b>	<b>Projected Identified Project Obligations</b>
<b>FY 2012</b>	\$ 2,001,179,501.00	\$ 1,529,977,821.00
<b>FY 2013</b>	\$ 1,593,885,921.00	\$ 1,324,995,887.00
<b>FY 2014</b>	\$ 1,638,205,699.00	\$ 772,774,092.00
<b>FY 2015</b>	\$ 1,686,351,187.00	\$ 748,031,843.00
<b>Total</b>	<b>\$ 6,919,622,308.00</b>	<b>\$ 4,375,779,643.00</b>

11) List all I-69 related activities that have taken place in Section 4 and the total amount of money already spent in Section 4. *Andy Ruff*

**RESPONSE:** The I-69, Section 4 corridor has undergone extensive studies through the National Environmental Policy Act (NEPA) which resulted in the September 8, 2011 Record of Decision (ROD) which approves an alignment for the project. The activities conducted to prosecute the NEPA study are fully discussed in the Final Environmental Impact Statement and its appendices.

With the issuance of the ROD, the NEPA analysis for Section 4 is now complete. Preliminary engineering, right of way acquisition, and design work all are underway within Section 4. Bids for the first construction contract, a design-build contract, are scheduled for opening on October 26, 2011.

\$46.5 million in project obligations for the activities in Section 4 conducted from the beginning of the Tier 2 analysis and through September 23, most of which was spent outside of the BMCMPPO jurisdiction.

- 12) List all I-69 related activities including purpose, dates of activities, specific location, costs, detailed results, contractors that have taken place in Section 4 and the total amount of money already spent in Section 4 *Andy Ruff*

**RESPONSE:** The Tier 2 NEPA analysis for Section 4 began in 2004 and has continued through the issuance of the Tier 2 Section 4 Record of Decision on September 8, 2011. The NEPA analysis for Section 4 is now complete. The purpose of the analysis was to comply with federal law. The team involved in preparing the Tier 2 EIS for Section 4 ~~included was led by DLZ Corporation and Bernardin Lochmueller and Associates and~~ also included numerous sub-contractors with specific expertise; a list of preparers can be found in Chapter 9 of the Tier 2 EIS.

In addition to the completed NEPA work, there is now design work under way for Section 4. Design work being conducted in Section 4 is being led by URS Corporation and several specialized sub-contractors.

Below is a list of design consultants and their role in preparing the Section 4 contract designs: URS Corporation (Project Management and engineering services); Acququest, Appraising Indiana, Bartlett and Associates, Beam Longest & Neff\*, Bernardin Lochmueller & Associates\*, Boomerang Ventures, CPS Acquisitions, E. Valuations, First Appraisal Group, Grimes Appraisal Services, Herbert Pritchett and Associates, Indiana Acquisitions of Indiana, Larry Allison, Mark Keutzer Appraiser, Metropolitan Abstracting consultants, Monroe/Owen Appraisals, Patterson Agency, Right of Way Jones, Roadway Services, RWS South, Security Title Services, Susan Neal, Traynor & Associates (land acquisition,); ATC Group, Earth Exploration\*, K & S Engineers (Geotechnical services); Cardno TBE (Utility); Corradino\* (public involvement); Hydrogeology (karst); Parsons Cunningham & Shartle Engineers (survey); Stephen J Christian & Associates (design). Firms indicated with a \* also serve other roles in the design services listed above.

- 13) INDOT has stated that some of the toll road money budgeted for Sections 1-3 will be left over and used to help build Section 4. How much of the original \$700 million budgeted is left over and will be used for Section 4? *Andy Ruff*

**RESPONSE:** In the Major Moves program, funded in part by the lease of the Indiana Toll Road, \$700 million was prioritized for the construction of I-69 Sections 1, 2 and 3. The construction bids for the first three Sections total approximately \$600 million.

Section 4 will be funded with a combination of state and federal dollars, often referred to as traditional highway funding. The state expects to use some Toll Road lease proceeds to construct Section 4 of I-69.

- 14) What is the current total cost estimate for all I-69 related activities for Section 5, including ALL costs not just construction costs? *Andy Ruff*

**RESPONSE:** The Tier 2 Section 5 environmental studies are underway at this time, in the Draft Environmental Impact Statement (DEIS), the cost estimates will be refined based on the conditions and data found through the study. Once the DEIS is published INDOT will have a much firmer understanding of the costs ranges for Section 5.

Currently INDOT is working from the Tier 1 Final Environmental Impact Statement cost estimates for Section 5 until additional analysis is complete. The Tier 1 estimates range between \$405- \$431 million using 2010 dollars.

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15) What innovative funding options are being considered for funding Sections 5 and 6?

*Andy Ruff*

**RESPONSE:** INDOT is considering a range of funding options for Section 5 and 6. Various forms of innovative project delivery and financing methods may be considered, but tolling is not being considered as an option for funding.

16) What is the current estimate of lost revenue for Monroe Co. due to the construction of I-69? Please include property tax losses and losses to businesses, especially during construction and any other anticipated losses. *Andy Ruff*

**RESPONSE:** The Section 4 FEIS estimated some short-term costs to Monroe County from the Refined Preferred Alternative 2. It estimated that it would result in an annual crop production loss of \$38,000 - \$49,000 (Table 5.5-1, p. 5-187). It also estimated that it would remove from the tax rolls property which provides annual tax receipts of \$342,000 - \$365,000 (Table 5.5-6, p. 5.198).

On the other hand, there will be a significant increase in economic activity associated with the project during the construction phase. The construction in Section 4 will provide hundreds of construction-related jobs, as well as increase local tax receipts. There will be positive indirect impacts due to construction-related expenditures for services and materials, which will increase business revenues significantly. There also will be significant, positive induced impacts as construction personnel secure lodging, meals and incur other expenses. None of these positive impacts were quantified in the FEIS.

In addition, in the longer term, the project will result in new residential and commercial development. This will result in increased property valuations and add to the local tax base. Given the imprecision in assessing the timing and magnitude of these increases in assessed valuation, the FEIS did not attempt to quantify them.

Overall, I-69 will have a significant, positive impact to the economy of Monroe County.

17) Will Indiana receive any additional federal funds to construct I-69 than it's normal share of federal funds that would be received by not building I-69 or building along a less costly route? Since earmarks have been discontinued by Congress, what is the source of any additional funds, and what additional amount beyond Indiana's normal share is projected? What are the projections based on? *Andy Ruff*

**RESPONSE:** INDOT is not expecting earmarks or special designation of federal funds for the completion of I-69. The Congress will determine federal transportation funding, most likely through a six-year transportation authorization act, as it appropriates federal gas tax revenue. INDOT will then set the priorities for the use of the federal funding designated by Congress.

- 18) Is completing I-69 to Indianapolis a higher or lower priority than repairing the structurally deficient bridges around the state? Are priorities set based on net economic impact? If not, on what basis are highway priorities set? *Andy Ruff*

**RESPONSE:** Priorities for transportation projects are set through the transportation planning process in accordance with 23 CFR Part 450. INDOT's priorities for improvements to the state highway network are reflected in the wide range of projects included in the STIP. The STIP includes numerous projects to maintain and improve existing transportation infrastructure, as well as some projects (such as I-69) that involve construction of new capacity.

- 19) What budget line of INDOT will fund construction of I69 in the MPO jurisdiction if the MPO does not include that portion in its TIP? *Richard Martin*

**RESPONSE:** INDOT expects that construction of I-69 Sections 4 and 5 will be included in the BMCMPPO's TIP. If I-69 is not included in the TIP, the current TIP will expire and funds for federal transportation projects in the BMCMPPO's planning area will be cut off until the impasse is resolved. INDOT does not expect, and is not planning for, a scenario in which I-69 is omitted from the BMCMPPO's TIP.

- 20) By which mechanism will funds be moved to the I69 budget line for construction if the MPO does not approve the use of Federal funds for I69? *Richard Martin*

**RESPONSE:** INDOT expects that construction of I-69 Sections 4 and 5 will be included in the BMCMPPO's TIP. If I-69 is not included in the TIP, the current TIP will expire and funds for federal transportation projects in the BMCMPPO's planning area will be cut off until the impasse is resolved. INDOT does not expect, and is not planning for, a scenario in which I-69 is omitted from the BMCMPPO's TIP

- 21) What amount of funding over-run is allowed for the I69 project in Monroe County?  
*Richard Martin*

**RESPONSE:** INDOT works diligently to limit change orders in construction management. At the same time the agency establishes a program of highway projects that accounts for both planned spending as well as unexpected conditions. There is no additional funding set aside specifically for Monroe County, but field conditions requiring contract adjustments can be made, if warranted.

INDOT does set an amount in our Capital Program budget for construction overruns anticipated to occur in our projects under construction. The line item is not specific to any

defined project but is additional funding to complete these projects as necessary. Historically about 3 percent of our Capital Construction budget is set aside for this purpose and is monitored each year to determine if adjustments are needed.

- 22) What is the process for deciding to fund design changes not recommended in the EIS 2 document? *Richard Martin*

**RESPONSE:** The Tier 2 EIS for I-69 Section 4 was based on preliminary engineering. ~~In the design phase, which occurs after completion of the EIS, more detailed engineering drawings are developed.~~ It is typical for refinements to be made during the design phase. The project

For the I-69 project, engineering plans are developed by the design consultant and are reviewed by INDOT with the participation of the Monroe County Engineer on a weekly basis. Additionally, the project has engaged local officials communicate findings and coordinate the design suggestions, and will continue to do so throughout the design phase.

- 23) What process should be employed to fund changes outside Section 4, the need for which arises as a consequence of Section 4 use, and inability to construct as part of Section 5 prior to the opening of Section 4 (specifically the Vernal Pike underpass, signalization of existing 37 intersections, and additional left turn lanes)? *Richard Martin*

**RESPONSE:** INDOT utilizes an asset management process to determine necessity and funding for improvement projects on the state highway system. In the Tier 2 EIS for I-69 Section 4, INDOT identified a need for safety improvements along existing SR 37 in the vicinity where I-69 and SR 37 meet and at Vernal Pike. These improvements will be implemented as part of a separate project. INDOT will coordinate with the BMCMPPO regarding the timing of those improvements.

Additionally, INDOT has been in dialogue with local officials about concern for motorist safety at Vernal Pike. INDOT is continuing with the environmental studies in Section 5 in anticipation of having a Record of Decision in the fall of 2013. Improvements at Vernal Pike can begin after the Section 5 ROD is issued. If the Section 5 ROD is issued on schedule, improvements at Vernal Pike can be underway prior to the completion of Section 4.

INDOT continues to investigate other methods of responding to the safety concerns at Vernal Pike and is committed to a continued dialogue with local officials.

- 24) How will the State fund Section 5 if the MPO does not include Section 5 in its TIP?  
*Richard Martin*

**RESPONSE:** INDOT expects that construction of I-69 Sections 4 and 5 will be included in the BMCMPPO's TIP. If I-69 is not included in the TIP, the current TIP will expire and funds for federal transportation projects in the BMCMPPO's planning area will be cut off

until the impasse is resolved. INDOT does not expect, and is not planning for, a scenario in which I-69 is omitted from the BMCMPPO's TIP

- 25) If MPO adopts a resolution committing to not include any portion of I69 Section 5 into its TIP and maintains the effect of that resolution through continued requests from INDOT, does the state have sufficient resources to fund that project? *Richard Martin*

**RESPONSE:**INDOT expects that construction of I-69 Sections 4 and 5 will be included in the BMCMPPO's TIP. ~~If I-69 is not included in the TIP, the current TIP will expire and funds for federal transportation projects in the BMCMPPO's planning area will be cut off until the impasse is resolved. INDOT does not expect, and is not planning for, a scenario in which I-69 is omitted from the BMCMPPO's TIP~~

- 26) If MPO adopts a resolution committing to not include any portion of I69 Section 5 into its TIP and maintains the effect of that resolution through continued requests from INDOT, i.e. no approval for preliminary design, ROW acquisition, or construction, can the state achieve fiscal constraint for Section 5 to receive matching funds from FHWA for that portion outside of the MPO jurisdiction? *Richard Martin*

**RESPONSE:** See FHWA response.

- 27) Would the failure of the state to achieve fiscal constraint for Section 5 resulting from MPO action make the Section 4 ROD untenable as a means to achieve the larger goal of I69 through Indiana? *Richard Martin*

**RESPONSE:** See FHWA response.

- 28) What limits, in terms of dollars or time, exist for recovery by the State of funds spent At Risk, i.e. without Federal approval for recovery? *Richard Martin*

**RESPONSE:** See FHWA response.

- 29) Is the State required to continue projects already in the TIP and STIP at funding levels and schedule specified or can they unilaterally modify funding or schedule without MPO approval? *Richard Martin*

**RESPONSE:** See FHWA response.

- 30) Is there a limit for the amount of funding that is not approved but still allows a project to go forward, i.e. what extent or percent of total budget is considered still within fiscal constraint requirements for Federal funding? *Richard Martin*

**RESPONSE:** See FHWA response.

- 31) With its refusal to accept our new TIP can INDOT withhold our Federal funds and/or redirect those funds for construction of I-69? *Richard Martin*

**RESPONSE:** See FHWA response.

- 32) Since at present the expiration of the current TIP is June 26, 2013, are Federal funds not available for any BMCMPPO projects after that date? *Richard Martin*

**RESPONSE:** See FHWA response.

- 33) Are there other ways for the MPO to access Federal funds that do not include INDOT STIP requirements? *Richard Martin*

**RESPONSE:** See FHWA response.

As a point of further clarification, STIP requirements are established in federal regulations that govern the transportation planning process (23 CFR 450).

- 34) Given that 23 CFR 450.330 (b) states that: "In metropolitan areas not designated as Transportation Management Agencies (TMAs), projects to be implemented using title 23 USC funds or funds under title 49 USC Chapter 53, shall be selected by the State and/or the public transportation operator(s), in cooperation with the MPO from the approved Metropolitan TIP.", under which circumstances does the "State or public transportation operator(s)" govern the expenditure process between the MPO and FTA? *Richard Martin*

**RESPONSE:** See FHWA response.

INDOT acts as the pass-through agency for transit funding to the Bloomington transit system. A grant agreement is executed between the state and the transit operator for every allocation of funding.

- 35) Can FTA funds be used as match for interstate construction? *Richard Martin*

**RESPONSE:** See FHWA response.

- 36) To what extent are Federal funds directed for public mass transportation support eligible for discretionary allocation by the State? *Richard Martin*

**RESPONSE:** See FHWA response.

INDOT acts as the pass-through agency for transit funding to the Bloomington transit system. A grant agreement is executed between the state and the transit operator for every allocation of funding

- 37) Which projects in the list of SR37 improvements prior to Section 5 construction have been programmed to be completed concurrent with Section 4 construction? *Richard Martin*

**RESPONSE:** INDOT is actively considering the possibility of expediting near-term safety improvements at one or more intersections on SR 37, with the goal of completing

those improvements concurrently with construction of Section 4. Based on input received at the September 7 meeting with local officials, INDOT understands that improvements at Vernal Pike are an especially high priority for local officials.

INDOT looks forward to continued close cooperation with the BMCMPPO regarding the timing of intersection improvements on SR 37.

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38) ~~Do Federal or State \$\$ limits exist for elements of INDOT's Interstate programing phases? Would you explain the \$\$ amounts and how they affect programming?~~ *Jack Baker*

**RESPONSE:**

The Federal Highway Administration allocates Federal Interstate Maintenance (IM) funds for each State for each Federal fiscal year. These funds can be used to maintain the existing Interstate System. In that Section 4 of I-69 is a new road the IM category of Federal funds cannot be used but National Highway System (NHS) can be and are being used. For the recently closed Federal fiscal year 2011 (10/1/2010 to 09/30/2011), INDOT was allocated \$205.7 million of NHS funds. There are five core Federal funding programs; Interstate Maintenance, National Highway System, Surface Transportation Program, Bridge, along with Equity Bonus which can be used for any federal eligible project. States are allowed to request the ability to transfer funds between the five core programs in order to have the necessary contract authority to use. The only "limits" on Federal and State funds are the legislatively passed Biennium Budget for INDOT. The budget is subject to budget augmentations if actual revenue exceeds our estimate, or prior year funds are not used and available for the current year.

INDOT's total highway program takes into account the status of all the projects planned and the phase at which the funding is needed. The STIP is the state's program schedule and the funding plan by phase (preliminary engineering, right-of-way, construction). The STIP can be found at: <http://www.in.gov/indot/files/STIP2012-2015Final.pdf>

39) Will INDOT and their contractor be following Monroe County regulations for building in karst areas? *Andy Ruff*

**RESPONSE:** INDOT will follow the steps established in the Karst Memorandum of Understanding (MOU). This agreement was entered into by INDOT, IDNR, IDEM, and USFWS in order to delineate guidelines for the construction of transportation projects in karst regions of the state. Appropriate Best Management Practices (BMPs) will be utilized throughout the project to avoid and minimize impacts to karst features and water quality. A list of potential BMPs being considered is provided in Section 4 FEIS Table 5.21-2a. This list is not intended to be all inclusive. Other appropriate water quality protection/treatment measures may be developed and implemented. The karst MOU can be found in the Section 4 FEIS Appendix AA

Indiana Code Section 36-7-4-1104 addresses the relationship between state and local governments. INDOT is working with Monroe County and other local officials on design features and coordinating with storm water officials, and will continue to do so for those portions of the Section 4 Project located in Monroe County.

- 40) Does this route alignment for Section 4 meet acceptable criteria for environmental impacts? *Richard Martin*

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**RESPONSE:** See FHWA response.

- 41) Could Section 4 be built at acceptable criteria for environmental impacts if it used the full cost project specifications? *Richard Martin*

**RESPONSE:**

The term 'full cost project specifications' in this the question may refer to the design criteria that were initially used to develop alternatives for I-69 Section 4. The Tier 2 EIS for Section 4 analyzed each alternative using two different sets of design criteria – the "initial design criteria" and the "low cost" design criteria. Both sets of design criteria meet the minimum standards for Indiana highways. The determination of the design criteria to be used will be made as part of final design. The final design may consist of a combination of both "initial design" criteria and "low cost" design criteria. As demonstrated in the Tier 2 EIS for Section 4, the "initial design criteria" often resulted in greater environmental impacts than the use of the "low cost" criteria. The Section 4 ROD allows the use of both sets of criteria, or a combination of the two in implementing the Section 4 project.

As part of the design phase, which is under way now, the design consultant is gathering data on field conditions to determine an appropriate design solution within the Refined Preferred Alternative 2. Field conditions will dictate many of the decisions on the road and bridge design. The county engineer attends many of the meetings where design criteria are discussed.

- 42) What standards will be employed to safe-guard over sensitive karst features in or near the I69 corridor? *Richard Martin*

**RESPONSE:** INDOT will follow the steps established in the Karst Memorandum of Understanding (MOU). This agreement was entered into by INDOT, IDNR, IDEM, and USFWS in order to delineate guidelines for the construction of transportation projects in karst regions of the state. Appropriate Best Management Practices (BMPs) will be utilized throughout the project to avoid and minimize impacts to karst features and water quality. A list of potential BMPs being considered is provided in Section 4 FEIS Table 5.21-2a. This list is not intended to be all inclusive. Other appropriate water quality protection/treatment measures may be developed and implemented. The karst MOU can be found in the Section 4 FEIS Appendix AA.

- 43) Karst area construction activities / mitigation *Bill Williams*

**RESPONSE:** INDOT will follow the steps established in the Karst Memorandum of Understanding (MOU). This agreement was entered into by INDOT, IDNR, IDEM, and

USFWS in order to delineate guidelines for the construction of transportation projects in karst regions of the state. Appropriate Best Management Practices (BMPs) will be utilized throughout the project to avoid and minimize impacts to karst features and water quality. A list of potential BMPs being considered is provided in Section 4 FEIS Table 5.21-2a. This list is not intended to be all inclusive. Other appropriate water quality protection/treatment measures may be developed and implemented.

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44) ~~Did INDOT use the latest air quality conformity data and traffic modeling data to~~ determine the impact of increased traffic emissions on Bloomington and Monroe County?  
*Andy Ruff*

**RESPONSE:** INDOT used the latest quality assured data available for the Greene County Conformity Analysis. The decision regarding which data to use was determined through interagency consultation with the Indiana Department of Environmental Management (IDEM), Federal Highway Administration (FHWA) and United States Environmental Protection Agency (US EPA). For more information on the conformity analysis, see Appendix MM of Section 4's FEIS. Bloomington and Monroe County are in attainment of all of the National Ambient Air Quality Standards (NAAQS) and therefore are not subject to conformity. However, hotspot analyses for Carbon Monoxide (CO) and a qualitative analysis of Mobile Source Air Toxics (MSAT) emissions were performed for Monroe County using the latest planning assumptions and traffic modeling data. This analysis was performed for informational purposes under NEPA. For more information regarding these analyses see Chapter 5.9 and Appendix J of Section 4's FEIS.

45) What air quality and traffic models were used for these determinations? *Andy Ruff*

**RESPONSE:** All air quality analysis supporting Section 4's FEIS were based on US EPA's MOBILE6.2 emissions factor model. The CO hotspot analyses also made use of CAL3QHC dispersion model. Traffic forecasts were generated using both the I-69 Corridor Travel Demand Model and the Indiana Statewide Travel Demand Model. For details regarding traffic modeling, see Appendix B of Section 4's FEIS.

46) Were changes in design, such as the deferral of the interchange at SR-37, taken into account in the air quality modeling? If not, please explain why these changes were not addressed. *Andy Ruff*

**RESPONSE:** The air quality impacts of the interim SR 37 interchange were explicitly investigated in a CO hotspot analysis. The results of this investigation are documented in Appendix J of Section 4's FEIS. The analysis demonstrates an interim intersection would result in CO levels well below the NAAQS.

- 47) Since Section 5 will not be constructed for some time, was this taken into account when doing the air quality modeling? For example, there are many stop lights on existing SR-37 which means more idling and more emissions as traffic increases. *Andy Ruff*

**RESPONSE:** The Greene County Conformity Analysis includes I-69 Section 4 being open to traffic without the completion of Section 5 in 2015. Results show that conformity is achieved under these conditions. Please see Appendix MM of Section 4's FEIS for more information. For Monroe County, a CO hotspot analysis was conducted for the interim intersection at I-69 and SR-37. This location provides a "worst case analysis" because this location has the largest increase in traffic on SR 37 due to the construction of Section 4. The analysis demonstrates that no localized air quality impacts are anticipated. Please see Appendix J of Section 4's FEIS for more information. Based on the results of the CO hotspot analysis and the fact that Monroe County is in attainment of all of the NAAQS, no further air quality analysis was conducted. However, traffic analysis examining SR 37 during the interim period between the completion of Sections 4 and 5 shows that SR 37 could continue to operate at acceptable levels of service with minor intersection improvements. Please see Appendix QQ of Section 4's FEIS for more information.

- 48) What is the current and projected air quality impact of I-69 Sections 4 and 5 over the next 30 years if the low cost alternative is implemented on Section 4 and Section 5 construction is delayed for 10 years? *Richard Martin*

**RESPONSE:** The interim condition between the completion of I-69 Sections 4 and before the completion of Section 5 was studied in several analyses. No instances resulted in any violation of the NAAQS. Please see response to comment 47 for more information. Most of the low-cost design standards (such as narrower clear zones) would not result in any additional air quality impacts. Although grade is known to influence emissions (e.g., Cicero-Fernandez et al., 1997; Kelly and Groblicki, 1993), EPA's MOBILE6.2 emissions factor model is not able to represent changes in grade. A literature search found no published research on the effect of length of grade on vehicle emissions. It was therefore not possible to predict the impact of varying length of grade requirements on air quality.

- 49) Has anyone determined the additional emissions from truck traffic on a 4% versus a 5% grade and the cumulative affect this will have on air quality in the areas of the proposed steeper grades? *Richard Martin*

**RESPONSE:** The determination of grade will be made at the design phase once field data is analyzed for soil and subsurface conditions. For the portion of Section 4 that is within the BCMPO's jurisdiction, INDOT will continue to coordinate with local officials to share information and provide an opportunity for local officials to provide input on design issues.

US EPA's MOBILE6.2 emissions factor model does not take into account differences in roadway grade, and as there are no requirements or guidance for estimating emissions related to grade, it was therefore not analyzed in the Section 4 FEIS. Although various research studies (e.g., Cicero-Fernandez et al., 1997; Kelly and Groblicki, 1993) have attempted to measure the effect of grade on emissions, their results have varied significantly. Please see response to comment 48 for additional information.

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~~50) Air quality—2004 data vs. 2009 data—Bill Williams~~

**RESPONSE:** The 2004 vehicle fleet age distribution was used for the Greene County Conformity Analysis. The corresponding 2009 data could not be quality assured at the time of the analysis. This determination was made through interagency consultation between INDOT, IDEM, FHWA and EPA on August 17, 2010

51) What is the expected effect of interstate traffic upon our air quality? Is a study required by State or Federal agencies to determine the effect? If not required will one be done? What is INDOT's current opinion – will Interstate traffic have a significant effect; will it take us over the limit for a non-attainment area? What is INDOT's responsibility if this occurs? *Jack Baker*

**RESPONSE:** See FHWA response.

During the environmental studies for Section 4, localized hotspots were analyzed in the study area for Carbon Monoxide (CO). In Monroe County this included the interim intersection and full interchange at SR 37. All analysis confirmed that CO levels would remain well within the national standards. Please see Appendix J of Section 4's FEIS for more information.

An analysis of Mobile Source Air Toxics (MSAT) emissions was conducted for each of the counties in the study area, including Monroe and Greene counties. The analysis concluded that MSAT emissions rates would likely decrease due to national efforts to produce cleaner vehicles and fuels. Even with additional traffic from I-69, future MSAT levels would be at or lower than those today. Please see Chapter 5.9. of Section 4's FEIS for more information.

Similar CO and MSAT studies will be conducted in the Section 5 study area. This approach to air quality analysis was developed in coordination with FHWA and is fully consistent with FHWA's policies and procedures.

Both Monroe and Greene counties are in attainment of national standards for fine particulate matter (PM 2.5). Monroe County air quality monitoring data for PM 2.5 shows it has the lowest PM 2.5 concentrations in the state. These levels are well below the national standards for what constitutes unhealthy conditions. Please see Chapter 5.9 of Section 4's FEIS for more information.

There is no air quality monitoring data for ozone in Monroe County. INDOT is not aware of Monroe County making a request for IDEM to monitor ozone levels. Monroe County is officially designated an attainment county, meaning it is in compliance with national ozone standards. "Maintenance areas," such as Greene County, have additional study requirements as compared to communities which have not violated federal air quality standards. In Section 4, an air quality conformity analysis was performed because Greene County had been in violation of ozone standards in the past.

~~The Section 4 FEIS contains an air quality conformity analysis for Greene County. An~~ air quality analysis was required because Greene County is designated a "maintenance area" for federal air quality standards for ozone. As part of that conformity analysis, INDOT performed an in-depth emissions assessment of ozone precursors in consultation with FHWA, US EPA, and IDEM. All concurred that Section 4 I-69 conforms to the State Implementation Plan (SIP), and therefore meets the conformity requirement. No further study is required for I-69 Section 4.

The I-69 Section 5 environmental studies will include additional air quality studies for Monroe and Morgan counties.

- 52) The FEIS indicates that Monroe County's VMT is expected to increase by 22% (p. 5-277) by 2030 as a result of I-69. What assurances is INDOT willing to provide that this will not result in reduced air quality and non-conformity with the Clean Air Act? *Staff*

**RESPONSE:** No absolute assurances can be made regarding Monroe County's future ozone attainment status. However, the Greene County Ozone conformity analysis shows a 40% reduction in ozone precursor emissions from 2002 to 2009 with continued decreases expected. This reduction occurred even with the addition of I-69. This is due to national efforts to produce cleaner vehicles and fuels. For Green County, emissions are forecasted to be less than ¼ of 2002 levels in 2025. Please see Appendix MM of Section 4's FEIS for more information. It would be reasonable to conclude national trends of cleaner vehicles and fuels will also produce lower vehicle emissions of ozone precursors in Monroe County, even with increased traffic volumes.

- 53) What are the traffic estimates for the stop light at SR-37? *Andy Ruff*

**RESPONSE:** Detailed traffic estimates for the interim intersection with SR 37 are reported in Appendix PP of Section 4's FEIS. These estimates, include turning movements by time of day, were developed using Synchro's traffic simulation program.

- 54) What happened to the study done by BLA for App. NN? :How much were they paid?  
*Andy Ruff*

**RESPONSE:** The text in the Section 4 Final Environmental Impact Statement that refers to Appendix NN was in error. There was no Appendix NN in the Section 4 FEIS. The erroneous reference was removed and corrected copies were distributed to all who received the Section 4 FEIS. It was determined that there was no need for an appendix and the determination could be fully explained in responses to comments. Additional analysis of the suggested alignments made in comments to the Draft Environmental Impact Statement was performed and has been made part of the administrative record for Section 4 of I-69.

~~Further detail is available in the I-69 Section 4 Record of Decision, page 97.~~

- 55) Why was Appendix NN removed from the Section 4 FEIS? How much was BLA paid to do the Appendix NN Study? Who made the decision to remove Appendix NN after the FEIS was issued? Who at the Federal Highway Administration approved the ROD knowing Appendix NN was removed post issuing of the FEIS. If FHA did not know about removal of Appendix NN from the FEIS how was the Record of Decision for Section 4 a valid decision? *Andy Ruff*

**RESPONSE:** See FHWA response.

- 56) What projections do you have for truck and non-truck traffic increase, in five year increments, over the first 30 years of Section 4 use? *Richard Martin*

**RESPONSE:** Traffic forecasts in five year increment are not required as part of a NEPA analysis. Such traffic projections have not been produced for Section 4's FEIS. The traffic forecasts can be found in Chapter 5.6 of Section 4's FEIS.

- 57) What local emergency response entities will be held responsible for accidents on I-69? For example, will the Indian Creek Firefighters be responsible for accidents on I-69 through their area of responsibility? *Andy Ruff*

**RESPONSE:** I-69 will not alter current responsibilities of emergency responders in Monroe County. It will be the responsibility of the emergency responder within its boundaries to respond to an accident. For instance, if an accident occurs along a portion of I-69 within Van Buren Township, it is Van Buren Townships responsibility to respond to the accident. It is anticipated that most local emergency responders will have mutual aid agreements between townships.

- 58) What are the anticipated cost to Bloomington/Monroe County due to I-69 induced crime? *Andy Ruff*

**RESPONSE:** There is no evidence that I-69 will "induce" crime in Monroe County or elsewhere. Hence, there is no basis for estimating any associated cost. This issue was addressed in the Responses to Comments on the Section 4 DEIS. See Section 4 FEIS, Volume III, Part A (pp. 839 – 840), Response to Comment PI619-02.

59) What specific criteria must be met to allow an emergency access on Burch Road for the purpose of decreasing response time to environmental emergencies unique to the new terrain highway? *Richard Martin*

**RESPONSE:** See FHWA response.

60) How do we delay the opening of I69 Section 4 until after specific safety concerns for existing SR 37 intersections are addressed with sufficient roadway improvements to meet anticipated traffic flow needs? *Richard Martin*

**RESPONSE:** INDOT does not intend to delay the opening of I-69, Section 4. The traffic analysis performed for Section 4 concluded “current safety problems in the SR 37 corridor through Bloomington are relatively limited. Although several intersections have a meaningful number of crashes (as noted by the BMCMPPO’s comments), our assessment indicates that most have crash indices in line with expectations based on statewide averages.” Two locations warrant attention based on compelling indices of crash cost, which indicate potentially hazardous conditions due to higher than expected crash severities, Vernal Pike and Bloomfield Road. Each of these locations can be assessed for short-term improvements while long-term solutions are analyzed as part of the Section 5 EIS. More information about the analysis is in Appendix QQ of the Section 4 EIS.

INDOT utilizes an asset management process to determine necessity and funding for improvement projects on the state highway system. In the Tier 2 EIS for I-69 Section 4, INDOT identified a need for safety improvements along existing SR 37 in the vicinity where I-69 and SR 37 meet and at Vernal Pike. These improvements will be implemented as part of a separate project. INDOT will coordinate with the BMCMPPO regarding the timing of those improvements.

Additionally, INDOT has been in dialogue with local officials about concern for motorist safety at Vernal Pike. INDOT is continuing with the environmental studies in Section 5 in anticipation of having a Record of Decision in the fall of 2013. Improvements at Vernal Pike can begin after the Section 5 ROD is issued. If the Section 5 ROD is issued on schedule, improvements at Vernal Pike can be underway prior to the completion of Section 4.

INDOT continues to investigate other methods of responding to the safety concerns at Vernal Pike and is committed to a continued dialogue with local officials.

61) Emergency access – Harmony (ICFD) & Burch (VBFD) *Bill Williams*

**RESPONSE:** Please see FHWA response to question 59 for specific requirements. In addition, INDOT requests the local emergency service providers develop a plan for use of a proposed emergency access point through interlocal agreements or other coordinating

documentation. Emergency response is important for the safety of both the community and traveling public, a demonstration of need based on response time will include a plan for use.

- 62) Commitment to SR 37 improvements prior to Section 5 construction - are the projects listed in the FEIS real projects? I know the INDOT has began design of the intersection improvements at State Road 45 with Harmony / Garrison Chapel Road and with Breeden Road. Progress? Vernal Pike has the highest crash rate in the area and we are extremely concerned with the safety of travelers in this area, as well as the other intersections mentioned in the FEIS. What commitment will INDOT make to assure they become a reality as soon as possible? *Bill Williams*

**RESPONSE:** INDOT has programmed improvements to SR 45 at Harmony/Garrison Chapel Road and with Breeden Road. The minor improvement projects at these locations are on schedule to open by the end of 2012.

INDOT utilizes an asset management process to determine necessity and funding for improvement projects on the state highway system. In the Tier 2 EIS for I-69 Section 4, INDOT identified a need for safety improvements along existing SR 37 in the vicinity where I-69 and SR 37 meet and at Vernal Pike. These improvements will be implemented as part of a separate project. INDOT will coordinate with the BMCMPPO regarding the timing of those improvements.

Additionally, INDOT has been in dialogue with local officials about concern for motorist safety at Vernal Pike. INDOT is continuing with the environmental studies in Section 5 in anticipation of having a Record of Decision in the fall of 2013. Improvements at Vernal Pike can begin after the Section 5 ROD is issued. If the Section 5 ROD is issued on schedule, improvements at Vernal Pike can be underway prior to the completion of Section 4.

INDOT continues to investigate other methods of responding to the safety concerns at Vernal Pike and is committed to a continued dialogue with local officials.

- 63) Appendix QQ indicates several intersections along SR37 beyond the project limits of Section 4 have demonstrable safety concerns which will likely be exacerbated by the construction of Section 4. When will INDOT proceed with improvements to SR37/Vernal Pike and SR37/Bloomfield Rd? When can the BMCMPPO expect a TIP amendment request for these improvements? Will these improvements be in place by the time I-69 is complete? If each section of I-69 is deemed to have independent utility, how can Section 4 rely on improvements anticipated as part of Section 5 to address these safety concerns, especially in the absence of a schedule or budget for Section 5? *Staff*

**RESPONSE:** The determination that a project has independent utility signifies that it serves an independent transportation purpose. The Tier ROD established the termini for

the Tier 2 sections of the project. The Tier 1 ROD also determined that each of the Tier 2 sections serves an independent transportation purpose, in addition to being part of the overall Evansville-to-Indianapolis project.

The fact that a project serves an independent transportation purpose does not preclude it having impacts upon other parts of the transportation system. Each I-69 Tier 2 EIS contains the analysis of these effects in Section 5.6, *Traffic Impacts*. This portion of each EIS discloses the impacts which each Tier 2 section has upon other parts of the transportation system.

In response to comments from the Bloomington MPO on the Section 4 DEIS, the Section 4 FEIS includes more detailed analyses of impacts to the existing transportation system than were provided in the FEISs for Sections 1, 2 and 3. These analyses include recommendations to alleviate some of these impacts. See FEIS Appendix OO, *SR45 Operational and Safety Analysis*, and Appendix QQ, *SR 37 Operational and Safety Analysis*.

- 64) Does Crane have plans to store nuclear waste on site? If so, will I-69 facilitate that plan?  
*Andy Ruff*

**RESPONSE:** INDOT has no knowledge of nuclear waste being stored at Crane.

- 65) Please list all changes in construction that have and are occurring, after the ROD was issued, in Sections 1-3. *Andy Ruff*

**RESPONSE:** The Tier 2 EIS for I-69 Sections 1-3 were based on preliminary engineering. In the design phase, which occurs after completion of the EIS, more detailed engineering drawings were developed. It is typical for refinements to be made during the design phase.

Any refinements that caused an impact not disclosed in the EIS for a given Section were analyzed. Changes to the impacts were then documented in the form of a reevaluation, submitted to FHWA for concurrence and posted on the project Website. Every change that resulted in an impact that was not previously disclosed is available for review at the following links under the title 'reevaluation'.

Section 1 <http://www.i69indyevn.org/section-1/>

Section 2 <http://www.i69indyevn.org/section-2/>

Section 3 <http://www.i69indyevn.org/section-3/>

- 66) Numerous changes in design and construction have occurred, after the ROD was approved, in Section 1-3. Does INDOT anticipate similar changes in Section 4? *Andy Ruff*

**RESPONSE:** The Tier 2 EIS for I-69 Sections 1-3 were based on preliminary engineering. In the design phase, which occurs after completion of the EIS, more detailed

engineering drawings were developed. It is typical for refinements to be made during the design phase.

The Section 4 ROD is also based on preliminary engineering. For the I-69 project, engineering plans are developed by the design consultant and are reviewed by INDOT with the participation of the Monroe County Engineer on a weekly basis. Additionally, the project has engaged local officials communicate findings and coordinate the design suggestions, and will continue to do so throughout the design phase.

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67) What is the life expectancy of asphalt versus concrete pavement for a major truck corridor such as I-69? *Andy Ruff*

**RESPONSE:** The design to determine thickness of asphalt pavement uses a 20 year design life. The design to determine thickness of concrete pavement uses a 30 year design life. The final determination to construct the roadway with asphalt or concrete is based on a life cycle cost analysis. This analysis compares the expected initial construction as well as maintenance/rehabilitation over a 50 year period. A decision is then made based upon which option has the lowest overall life cycle cost. On many recent projects, INDOT has asked contractors to submit bids using both asphalt and concrete pavements. These actual bid prices, along with maintenance and rehabilitation costs over a 50 year life, are used to specify the pavement which has the lowest life-cycle cost

68) What thickness of pavement will be used for Section 4? *Andy Ruff*

**RESPONSE:** Based on the final geotechnical report and forecasted traffic (including truck volumes), pavement design/thickness will be specified for the final set of contract documents for construction. The thickness of the pavement, as well as whether concrete or asphalt will be used, is specified at that time.

69) As part of the I-69 project, will intelligent traffic systems be installed to monitor traffic? *Andy Ruff*

**RESPONSE:** Intelligent traffic systems are an element of final design. It is not known if a system of this nature will become part of final design at this time

70) List all areas in Monroe County that will be subject to blasting during the construction of I-69. *Andy Ruff*

**RESPONSE:** The need for cut or fill work in any given area is an element of final design. The final road elevation within the BMCMPPO jurisdiction has not been designed, therefore it is not yet known what areas may require blasting.

71) How can the MPO become more involved in the analysis and decision process related to design trade-off studies to assure that local concerns are given greater priority in a regional context where Bloomington and Monroe County are the dominate economic influence? *Richard Martin*

**RESPONSE:** This question was discussed at a local official coordination meeting on September 7, 2011. At that time a decision was made to hold periodic coordination meetings with local officials where information about proposed designs and project progress would be shared and ideas discussed. INDOT expects that this format would be an opportunity for concerns to be raised. Individuals are encouraged to contact our Section 4 project office in Bloomington for concerns or ideas that surface between the periodic meetings. The Bloomington project office can be reached at 812-334-8869.

72) Since the justification of steeper grades on Section 4 seems very weak in terms of risk assessment, what additional studies or data have been collected to support the low cost recommendation in terms of risk to life and property? *Richard Martin*

**RESPONSE:** INDOT does not believe that there is a risk with the proposed grades. The INDOT Design Manual specifies that the maximum grade for any freeway in a rural area in rolling terrain is 4%. This is the maximum grade that will be used on I-69 in Section 4.

73) What specific mitigation steps will be taken to eliminate the increased soil loss caused by the low cost roadway side slope implementation that was not considered in the FEIS. *Richard Martin*

**RESPONSE:** Multiple options exist for addressing slope stability pending final soil analysis. Many slopes are anticipated to be constructed with rock, and slopes may be protected with rock or other measures to address soil stability concerns. The final slope angle and stability measures will be analyzed based on final geotechnical evaluations to assure all slopes are stabilized appropriately

74) Is it possible to construct Section 4 in the assigned alignment corridor without resorting to low cost construction alternatives and still meet environmental impact criteria? *Richard Martin*

**RESPONSE:**

This the question may refer to the design criteria that were initially used to develop alternatives for I-69 Section 4. The Tier 2 EIS for Section 4 analyzed each alternative using two different sets of design criteria – the "initial design criteria" and the "low cost" design criteria. Both sets of design criteria meet the minimum standards for Indiana highways. The determination of the design criteria to be used will be made as part of final design. The final design may consist of a combination of both "initial design" criteria and "low cost" design criteria. As demonstrated in the Tier 2 EIS for Section 4, the "initial design criteria" often resulted in greater environmental impacts

that the use of the "low cost" criteria. The Section 4 ROD allows the use of both sets of criteria, or a combination of the two in implementing the Section 4 project.

As part of the design phase, which is under way now, the design consultant is gathering data on field conditions to determine an appropriate design solution within the Refined Preferred Alternative 2. Field conditions will dictate many of the decisions on the road and bridge design. The county engineer attends many of the meetings where design criteria are discussed.

75) Intersection vs. Interchange vs. Roundabout at SR 37 *Bill Williams*

**RESPONSE:** In the Tier 2 EIS for I-69 Section 4, a proposed solution was offered for the intersection of I-69 where it meets SR 37 based on preliminary engineering. A goal of the intersection is to provide good service for traffic meeting at that location, while allowing flexibility for Section 5 as they analyze the continuation of I-69 onto SR 37. Another goal for this intersection is to limit the amount of temporary roadwork that may be removed when Section 5 begins construction.

The decision about an intersection, interchange or use of roundabouts at this location will be considered in final design with input from local officials.

76) Truck Grades - the FEIS references a study conducted in Brazil as it relates to grades for trucks. In reviewing the document and having had correspondence with the author of the study, the referenced study may not be suitable for application to this project. It specifically states that additional data and study should be conducted. We are concerned that this has not been thoroughly reviewed and have concerns with the application of the Brazil study. Also, as it relates to truck grades over the study period of the FEIS, what data or further studies have been conducted to account for additional trucks in the 20 year design period? Has anyone determined the additional emissions from truck traffic on a 4% versus a 5% grade and the cumulative affect this will have on air quality in the areas of the proposed steeper grades? *Bill Williams*

**RESPONSE:** The study mentioned in this comment is "Revising the AASHTO Curve: Accident Involvement Rates for Trucks and Speed Differentials on Highway Grades" (Brazil, 2007). This study was considered in a technical appendix to the I-69 Section 4 FEIS. See Section 4 FEIS Appendix GG, "Section 4 Level Two Design Exception for Critical Length of Grade." Appendix GG considered the 2007 Brazil study because it provided useful information, even while taking into account the differences in road infrastructure between Brazil and the United States. The call by Melo and Setti (the authors of the Brazil study) for additional research is typical of such studies (e.g., researchers will typically warrant that additional research would be helpful) and does not in any way impeach the research findings.

There is no need for studies on additional emissions in going from a 4% to a 5% grade. The design calls for a maximum grade of 4%.

77) Slopes - There has been a lot of work reviewing the clear zone requirements relative to a 3:1 slope versus a 2:1 slope. It appears the safety issue has been adequately addressed with the 30 foot clear zone requirement. The concern we have with increasing the slope is the erodability of the soils in this area. In reviewing the Universal Soil Loss Equation LS table, it appears that soil loss would almost double given the proposed increase in slope, going from LS factor of 6.5 to LS factor of 13 over a 50' horizontal area. What will be done to mitigate this and how will the slopes be maintained? *Bill Williams*

**RESPONSE:** The use of 2:1 slopes with guardrail in areas of "high" fills (embankment heights > 24') was identified as a potential cost savings measure in the EIS/Engineer's Report; however, the final location(s) of any 2:1 slopes would be determined during final design. Preliminary geotechnical investigations have been completed and a determination was made that for embankment heights < 40 feet, the use of 2:1 slopes presents an acceptable amount of "risk" related to future maintenance of the slopes (erosion, slides, etc.) and therefore could be implemented during the design phase in locations deemed appropriate (e.g. to minimize the amount of borrow material or R/W required to construct the embankment). Embankment heights greater than 40 feet would require individual geotechnical slope stability analysis to determine if the use of 2:1 slopes is prudent.

This is an example of a design issue that would be a topic of consultation in the on-going discussions between public officials and the project. As the design develops into the BMCMPPO jurisdiction, additional coordination and communication is expected.

78) In 2010, INDOT requested a TIP amendment which included construction of I-69 at a cost of \$61,693,000. In 2011, the I-69 construction cost within the urbanized area was \$32,000,000. Please specify the changes to the project which have resulted in this change to the construction cost in the urbanized area. *Staff*

**RESPONSE:** The level of preliminary engineering completed with the FEIS allowed INDOT to better analyze the expected costs associated with the portion of Section 4 within the BMCMPPO boundary. The 2010 TIP request included a large interchange with temporary pavement at SR 37. It also relied on the preferred alternative recommended in the DEIS for the two EIS segments within the BMCMPPO boundary. Those segments were refined in the FEIS allowing for a more refined cost analysis. The amount of information collected in preliminary engineering efforts between 2010 and 2011 allowed INDOT to reduce the expected construction cost to the amount requested in 2011.

79) Amenities, such as bicycle and pedestrian paths, etc., have been promised to Bloomington/Monroe County. In light of funding shortfalls and other pressing needs, are these amenities still going to be built? What are the "consequences" for INDOT if they are not? *Andy Ruff*

**RESPONSE:** Shared shoulder/bicycle lanes are provided as part of the project where Breeden Road, Harmony Road, Rockport Road, Tramway Road, and Bolin Lane cross the I-69 right-of-way. Providing these bicycle lanes is a commitment in the Section 4 ROD (see Section 2.1.1, p. 3). These facilities are included in designs now underway. Not providing them would require formal modification of the Section 4 ROD.

80) What agreements need to be made now so that in the future as project plans and funding sources are programmed for non-vehicular use of the I-69 ROW, as identified in the Monroe County Alternative Transportation Plan, that use of selected portions of the corridor is made available? *Richard Martin*

**RESPONSE:** Throughout the development of I-69, Section 4 INDOT has attempted to reduce the footprint of the interstate and thereby reduce the impacts to property owners and the natural resources in the corridor. The planning for the Interstate pre-dates many of the multi-use trail plans, but INDOT will continue to discuss the needs of local roads within the I-69 right of way, in cooperation with local units of government.

INDOT will continue to exercise economy in Section 5 to reduce the footprint of the Interstate and thereby reduce impacts to property owners and the natural resources. In areas of Section 5 where the existing right-of-way size supports additional uses, INDOT can consider a shared-use agreement with local government as a mechanism for the local agency to plan and program a local project.

81) Why is a parallel multi-use trail not incorporated into the project? Please provide specific rationale. What would have to be done to incorporate such a facility into the I-69 project? *Staff*

**RESPONSE:** The I-69, Section 4 project does not include a multi-use trail in parallel with the interstate. Throughout the development of I-69, Section 4 INDOT has attempted to reduce the footprint of the interstate and thereby reduce the impacts to property owners and the natural resources in the corridor. The planning for the interstate pre-dates many of the multi-use trail plans, but INDOT has demonstrated flexibility in adjusting the shoulder widths on local roads within the I-69 right of way, in cooperation with local units of government.

- a. The inclusion of I-69 in the adopted LRTP has been cited as justification for the I-69 TIP amendment. The LRTP specifically calls for a parallel multi-use trail to be incorporated into the project. How can the LRTP be used to support one aspect of the project (road) and not the other (trail)? *Staff*

**RESPONSE:** INDOT is responsible for the development and funding of the I-69 corridor and has determined that increasing the impacts to right-of-way and to the natural environment alongside the Interstate is not justified given the purpose and need of the project.

INDOT is not responsible to fund or develop every project listed in a community's long range plan. Long range planning documents are global in nature, whereas the Transportation Improvement Program is a specific plan of action for a set number of years. INDOT is asking the BMCMPPO to include construction of I-69 into its TIP because the state has funding and intention of building the project in the TIP-covered years.

If the community chooses to dedicate resources to the development of a separate project creating a north-south multi-use trail, INDOT is willing to discuss the state's involvement. As a separate project a multi-use trail must undergo a separate environmental analysis, including purpose and need and alternatives analysis. The analysis for a multi-use trail would need to consider which modes (pedestrian, bicycle, other non-motorized transportation) would use it, and the right-of-way/typical sections required for each, all as part of a stand-alone NEPA analysis.

INDOT has demonstrated flexibility in adjusting the shoulder widths on local roads within the I-69 right of way, in cooperation with local units of government. The dialogue with local government on the plan for multi-use trails in conjunction with existing local paths or roads within the I-69 right-of-way will continue with the development of the project.

- b. INDOT's response to the BMCMPPO's comment on the inclusion of the trail states, "INDOT will support the efforts of other government agencies who wish to consider (as a separate project) multi-use facilities parallel to I-69." Please identify what "other government agencies" are expected to build the trail. Why would "other government agencies" be expected to build the trail and not the interstate? *Staff*

**RESPONSE:** INDOT is responsible for the development and funding of state and interstate projects with FHWA oversight. A multi-use trail can be developed by local government or private entities, without state or federal oversight. The development of multi-use trails can be a goal of local government, a city, town, township or county. INDOT offers support in these efforts, but not as a component of the I-69 development.

- c. Given the effort required to procure right-way, design, and construct a statewide multi-use trail, why has the State not planned to incorporate a trail in all Sections of the project despite it being identified as a Priority Visionary Trail in the Indiana State Trails, Greenways and Bikeways Plan? *Staff*

**RESPONSE:** Throughout the development of I-69, Section 4 INDOT has attempted to reduce the footprint of the interstate and thereby reduce the impacts to property owners and the natural resources in the corridor. The planning for the

Interstate pre-dates many of the multi-use trail plans, but INDOT will continue to discuss the needs of local roads within the I-69 right of way, in cooperation with local units of government.

- d. National Highway System funds can be used for bicycle transportation and pedestrian walkways (23 USC 217(b)). The State has claimed that other sections of I-69 have come in under budget and are ahead of schedule. If this is true, is it correct to assume that funding is available to include a multi-use trail into the project? *Staff*

**RESPONSE:** First, the comment is correct in stating that the first three Sections of I-69 were bid under budget. INDOT does not currently plan to divert any National Highway System funds to the purpose of multi-use trails as part of the development of the I-69 project.

If the community chooses to dedicate resources to the development of a separate project creating a north-south multi-use trail, INDOT is willing to discuss the state's involvement

- 82) In the July 11, 2011 letter to INDOT approving the FY 2012-2015 STIP, FHWA reminded INDOT that it must take action on the BMCMPPO FY 2012-2015 TIP "within a reasonable time." BMCMPPO approved the TIP on May 13, 2011, but the state has not submitted it to FHWA/FTA for certification yet.

Several other MPOs around the state have adopted 2012-2015 TIPs around the same time as BMCMPPO, all of which have been certified (See below). TIP approval letters indicate that the TIPs were only reviewed for accuracy and compliance with SAFETEA-LU before certification. In light of the quick approval of other TIPs, how does INDOT justify the unreasonable delay in submitting the BMCMPPO 2012-2015 TIP to FHWA/FTA for certification?

Indianapolis – May 4, 2011 / Certified May 26, 2011  
MCCOG – April 7, 2011 / Certified May 18, 2011  
Columbus (2012-2016 TIP) - April 27, 2011 / Certified April 28, 2011  
Fort Wayne – April 12, 2011 / Certified May 24, 2011  
Tippecanoe County – April 20, 2011 / Certified May 18, 2011  
Muncie – April 20, 2011 / Certified May 18, 2011  
MACOG – April 13, 2011 / Certified April 25, 2011  
Terre Haute – May 10, 2011 / Certified May 18, 2011  
OKI – April 14, 2011 / Certified April 28, 2011  
*Mark Stoops & Andy Ruff*

**RESPONSE:** INDOT's response to the Bloomington MPO's TIP was provided on August 23, 2011, via letter to MPO staff. The letter explained why INDOT was declining to approve the TIP, and described the steps that should be taken by the BMCMPPO in

order for INDOT to accept the 2012-2015 TIP. To date, INDOT has not received a response to this letter from the BMCMPPO.

- 83) Given that the 1978 MOU governing relations between BMCMPPO and INDOT gives the MPO sole responsibility for “[d]evelopment and endorsement of a Transportation Improvement Programs” (sic), from where does INDOT believe it is given the authority to withhold an adopted TIP from federal certification? *Mark Stoops & Andy Ruff*

**RESPONSE:** The only MOU that INDOT is aware of is the MOU developed and signed in 1981. Any provisions in a 1978 MOU would be overridden by the execution of the 1981 MOU. In any event, the MOU cannot override federal laws and regulations. Under the transportation planning regulations, a TIP is not incorporated into the STIP until after “approval by the MPO and the Governor.” See 23 U.S.C. 450.326(b). This regulation provides the authority under which INDOT acted when it declined to approve the BMCMPPO’s proposed TIP..

- 84) According to Chapter 1.4 C of the BMCMPPO Bylaws, “[r]eports, programs, and plans become official process documents following adoption by resolution of the Metropolitan Planning Organization Policy Committee.” Therefore, the 2012-2015 TIP became the official TIP upon adoption by resolution on May 14, 2011. Since the operating agreement currently in place does not grant INDOT the authority to override the decisions of the MPO, where does INDOT attain the authority to continue to recognize the 2010-2013 TIP and to represent to FHWA that the previous TIP remains valid? *Mark Stoops & Andy Ruff*

**RESPONSE:** As noted in the response to Question # 83, 23 CFR 450.326 states “After approval by the MPO and the Governor, the TIP shall be included without change into the STIP...”. This provision of Federal Regulation provides that both the MPO and Governor shall approve the TIP prior to inclusion in the STIP. The MPO’s bylaws do not contradict this regulation. The bylaws simply state that the plan or program approved by the Policy Committee becomes an “official process document.” It is an official process document in the sense that it moves on to the next step in the process, which is INDOT’s approval pursuant to 23 CFR 450.326(b). Without INDOT’s approval, the TIP is not incorporated into the STIP and therefore does not become effective.

- 85) A Record of Decision (ROD) for a federally funded transportation project within an MPO’s border can not be issued if the project is not included in that MPO’s current TIP. If the 2012-2015 TIP is certified by FHWA/FTA without Section 4 of I-69 included, will the ROD be invalidated? Alternatively, if the 2010-2013 TIP is amended to remove Section 4 of I-69, will the ROD be invalidated? Does INDOT believe that the portion of the project outside the MPO boundary may continue if the project is not included in the TIP? If so, from where does INDOT get its authority to proceed with an unapproved project? *Mark Stoops & Andy Ruff*

**RESPONSE:** See FHWA response.

86) Does INDOT consider the construction of Sections 1-4 to have independent utility and a stand alone project? Even if Sections 5-6 are not built? *Andy Ruff*

**RESPONSE:** Sections 1 to 4 (as well as each of these sections individually) have independent utility. The cited example (Sections 1 through 4) connects two major cities (Bloomington and Evansville) which presently do not have a high-level road connecting them. INDOT also remains committed to the completion of the entire Evansville-to-Indianapolis project, including Sections 5 and 6. INDOT's *2010-2035 Draft Long Range Transportation Plan* shows the completion of I-69 between Bloomington and Indianapolis along SR 37 as one of four high-priority corridors statewide.

87) Does the decision regarding the independent utility of I69 Sections 1 thru 6 mean that there is no dependency between the sections with regard to completion of I69 through Indiana? *Richard Martin*

**RESPONSE:** In order to complete I-69 between Evansville and Indianapolis, each of Sections 1 through 6 must be completed. In that sense, each section "depends" upon the other sections. However, each Tier 2 section also has independent utility, and serves an independent transportation purpose. For statewide and national connectivity, all Sections must be completed.

88) Has a Project Management Plan been completed for Section 4? If so, please supply us with a copy of that plan. *Andy Ruff*

**RESPONSE:** See FHWA response.

89) Please supply with complete plans for the EIS process through construction and completion of Sections 5 and 6. *Andy Ruff*

**RESPONSE:** In September, INDOT announced the acceleration of the Tier 2 I-69 Section 5 environmental studies, after receiving the Section 4 Record of Decision. The current expectation is to publish a Draft EIS for Section 5 in fall 2012 and a Final EIS in summer 2013. This would allow for a ROD in late summer 2013.

Once the ROD for Section 5 is issued, INDOT will turn its resources to the completion of the Tier 2 I-69 Section 6 EIS.

90) At what date does a vote by the MPO become irrelevant regarding the expenditure of federal funds for that portion of I69 in the MPO jurisdiction, i.e. when does FHWA eliminate the use of Federal funds for construction in Section 4 within the MPO jurisdiction? *Richard Martin*

91) **RESPONSE:** See FHWA response. Are there any mechanisms by which the State can use Federal funds to construct I69 within the MPO jurisdiction without inclusion of that portion of I69 in the MPO TIP? *Richard Martin*

**RESPONSE:** See FHWA response.

92) Why has the State not engaged with the MPO within a Context Sensitive Solutions process, as recommended by FHWA, as the means to resolve conflicts between State and Local standards to find solutions that work for both the State and the Community? *Richard Martin*

**RESPONSE:** Additional information is needed to understand the question's reference to conflict with state and local standards. INDOT uses Context Sensitive Solutions and has applied some of the concepts, including public involvement and communication in the development of Section 4, I-69. INDOT will continue through the design phase of a project to engage public officials. INDOT has demonstrated its ability to work with local communities along I-69 where the road is currently under construction (Sections 1 through 3). In Section 4, INDOT looks forward to a similar collaborative working relationship with local communities.

93) Does STIP failure to show I69 Section 5 as a scheduled project for 2012 – 2015 mean that they do not meet the requirements for STIP inclusion or that they expect to not be performing any I69 Section 5 work during 2012 -2015? *Richard Martin*

**RESPONSE:** See FHWA response. In addition, it should be noted that INDOT is working on finalizing the 2014 and 2015 transportation plans. Once final scheduling and funding determinations are made, appropriate TIP and STIP amendment requests will be made. I-69 Section 5 will be a part of those amendments.

94) Does the use of Federal funds for highway projects within the MPO jurisdiction always require concurrence in MPO TIP whether or not it is included in STIP? *Richard Martin*

**RESPONSE:** See FHWA response.

95) Can INDOT continue to reject our most recent adopted TIP; for how long? What are Federal requirements regarding State acceptance or rejection of a locally adopted TIP? *Richard Martin*

**RESPONSE:** See FHWA response.

96) Was it appropriate for INDOT to ask that I-69 be included in our local TIP prior to the completion of a final EIS? *Richard Martin*

**RESPONSE:** See FHWA response.

97) Is the MPO obligated to now include construction of this project in our TIP if environmental questions still cannot be answered during the September 9 meeting?  
*Richard Martin*

**RESPONSE:** See FHWA response.

98) To what extent can a local community standard be over-ridden by state and federal authorities to promote regional objectives? *Richard Martin*

**RESPONSE:** See FHWA response.

99) Since the Governor and the BMCMPPO do not agree upon a list of projects at this point, is it the desire of FHWA that the BMCMPPO defer to the state policy? *Richard Martin*

**RESPONSE:** See FHWA response.

100) Are any local permits needed for activities related to I69? *Richard Martin*

**RESPONSE:** No local permits are anticipated at this time. INDOT will coordinate with the appropriate agencies if local permits are needed.

101) Permits needed from other regulatory agencies to proceed to construction *Bill Williams*

**RESPONSE:** The following permits will be required for the project: Indiana Department of Environmental Management (IDEM) Section 401 Water Quality Certification, a Rule 5 Erosion Control Permit, U.S. Army Corps of Engineers (USACE) Section 404 Permit, Indiana Department of Natural Resources (IDNR) Construction in a Floodway Permit. A U.S. Environmental Protection Agency (USEPA) Class V Injection Well Permit may be required if untreated fluids are discharged to the ground water.

102) Staff is of the impression that the comments submitted by the BMCMPPO Director on the DEIS were largely dismissed or remain unresolved. What is FHWA's impression of the responses given by INDOT to the BMCMPPO's DEIS comments and how this adheres to the 3-C process? *Staff*

**RESPONSE:** See FHWA response.

103) It has been suggested that INDOT may proceed with construction of I-69 up to the urbanized boundary absent inclusion of the project in the BMCMPPO's TIP. Wouldn't the BMCMPPO and INDOT need to come to resolution of the segment within the urbanized boundary before any aspect of the project proceeds with construction? How could Section 4 function without the connection to SR37? *Staff*

**RESPONSE:** See FHWA response.

104) INDOT has threatened "consequences" if this MPO does not include all aspects of I-69 in its TIP. Indeed, some funds were withheld for a period of time. What are the consequences for INDOT if it does not design and build I-69 in Section 4 to its original plans? For example, numerous changes in design and construction have been made after the ROD in Sections 1-3/ If similar changes are made in Section 4 what are the consequences for INDOT? *Andy Ruff*

**RESPONSE:** See FHWA response.

105) By what means does the MPO, and its LPA's, maintain productive relationships in terms of project acceptance, funding, scheduling, and completion, if the MPO does not approve the use of Federal funds for I69 construction in Section 4 and/or preliminary design, ROW acquisition, and construction for Section 5? *Richard Martin*

**RESPONSE:** Concerns such as this should be taken into consideration by the BMCMPPO Policy Board when making decisions regarding state projects in the BMCMPPO area.

106) Is the rejection on 06/20/2011 of Monroe County funding for Stinesville Bridge #12 of 4/22/11 for \$1,132,100, Unionville Rail Trail of 3/11/11 for \$532,680, and Kinser Pike Bridge #46 of 4/22/11 for \$1,858,400 = \$3,523,180 the result of BMCMPPO action in May, and if not, what was the reason for rejection? *Richard Martin*

**RESPONSE:** All local funding programs are highly competitive across the state and applications always total more than is available. The Stinesville Bridge and the Kinser Pike Bridge competed for funding with 49 other projects totaling over \$55 million in the Bridge program call. Available in the Bridge program call was \$20 million. The Unionville Rail Trail competed with 79 other projects totaling approximately \$48 million in the most recent Transportation Enhancement program call. Available funding in the transportation enhancement program call was \$20 million. The Monroe County projects did not rank high enough for funding.

107) Future MPO funding if TIP does not include I-69 *Bill Williams*

**RESPONSE:** INDOT expects that construction of I-69 Sections 4 and 5 will be included in the BMCMPPO's TIP. If I-69 is not included in the TIP, the current TIP will expire and funds for federal transportation projects in the BMCMPPO's planning area will be cut off until the impasse is resolved. INDOT does not expect, and is not planning for, a scenario in which I-69 is omitted from the BMCMPPO's TIP.

108) Project funding losses to date – (applications denied on 6/20/2011 for Stinesville Bridge #12 of 4/22/11 for \$1,132,100, Unionville Rail Trail of 3/11/11 for \$532,680, and Kinser Pike Bridge #46 of 4/22/11 for \$1,858,400 = \$3,523,180) *Bill Williams*

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109) If the BMCMPPO's actions are unacceptable to the State, is the State willing to document this in writing with suggested remedies? Is it fair for the BMCMPPO to assume it is in good standing with the State and that projects will not be adversely affected absent any formal written notification to indicate otherwise? *Staff*

**RESPONSE:** INDOT provided, in writing, on July 27, 2011, and August 23, 2011, comments regarding the BMCMPPO's actions in regards to the 2012-2015 TIP. These communications have specifically outlined INDOT's concerns with the actions taken by the BMCMPPO Policy Board and have outlined suggested remedies. Further communications regarding the MPO's actions will continue to be in writing.