



Louisville–Southern Indiana Ohio River Bridges Project

***Assessment of Economic Effects of Tolling and Strategies for  
Mitigating Effects of Tolling on Environmental Justice Populations***

**April 24, 2015**

*Prepared by:*



Kentucky Transportation Cabinet



Indiana Department of Transportation

*Submitted to:*



United States Department of Transportation  
Federal Highway Administration



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## PREFACE

This report has been prepared by the Kentucky Transportation Cabinet (KYTC) and Indiana Department of Transportation (INDOT) in fulfillment of certain requirements in the *Revised Record of Decision* (RROD) for the Louisville-Southern Indiana Ohio River Bridges (LSIORB) Project (the Project) regarding the effects of tolling on low-income and minority populations, also known as environmental justice (EJ) populations. The intent of this report is to document KYTC and INDOT's consideration of potential tolling mitigation strategies and document the basis for KYTC and INDOT's decisions about which strategies to include in the Tolling Mitigation Plan.

The User Cost Analysis prepared for the Project demonstrated that the average user cost for the EJ community members' cross-river travel is likely to increase by a greater percentage (21%) than for a non-EJ community members (11%), as the result of implementation of tolling with the Project. The "user cost gap" between these two populations was the basis for Federal Highway Administration's (FHWA's) finding in the RROD that EJ populations are likely to experience a disproportionately high and adverse economic effect as a result of tolling.

Because of that finding, the Federal Highway Administration (FHWA) included several requirements in the RROD, including the following<sup>1</sup>:

- Prepare a report assessing the economic effects of tolling on the EJ populations, and evaluating measures to mitigate those effects.
- Make the economic effects and tolling mitigation report publicly available.
- Provide an opportunity for public input in determining measures for mitigating the effects of tolling.
- Adopt a Tolling Policy, including a Tolling Mitigation Plan, that is "sensitive and responsive" to EJ populations.
- Conduct traffic monitoring in EJ communities after the Project is in operation, in order to assess whether tolling has caused traffic-diversion effects in those communities.

In compliance with those requirements, this report summarizes the environmental justice commitments in the RROD; evaluates the potential economic impacts of tolls associated with the Project on EJ populations; assesses a wide range of potential methods to mitigate the effect of tolling on EJ

### ENVIRONMENT JUSTICE POPULATIONS DEFINED

*The environmental justice assessment presented in Chapter 5.0 of the LSIORB Project's SFEIS evaluated the potential for the Project to cause disproportionately high and adverse human health or environmental effects on the minority and low-income populations within the study area as a result of the proposed tolling of the new bridges. FHWA Order 664.23 defines these terms as follows:*

- **Minority**—A minority population is classified as any readily identifiable group of minority persons, living in geographic proximity, or, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans), who would be similarly affected by a proposed FHWA program, policy, or activity. A minority individual is classified as belonging to one of the following groups: American Indian or Alaskan Native; Asian American; Black; and Hispanic.
- **Low Income**—A low-income population is classified as any readily identifiable group of low-income persons, living in geographic proximity, or, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans), who would be similarly affected by a proposed FHWA program, policy, or activity. The U.S. Department of Health and Human Services (HHS) characterizes a low-income household as being a household with an income level below the 2010 HHS poverty guidelines.

<sup>1</sup> See RROD, Sections 2.5 and 4.1.17.

populations; and includes a Tolling Mitigation Plan for addressing those impacts. The Tolling Mitigation Plan is provided as Appendix A.

This report also includes an assessment of the effects of tolling on traffic patterns, as a baseline for future traffic monitoring studies required by the RROD.

INDOT and KYTC released a draft of this report for public comment on June 24, 2013. That report recommended implementation of several tolling mitigation measures, while recommending that other potential measures be removed from further consideration, including toll discounts. Following the publication of the June 2013 draft report, KYTC and INDOT accepted public comments on the report and conducted additional public outreach to the EJ communities in the Project area.

After considering the public comments, KYTC and INDOT conducted more in-depth analyses of toll discounts and other measures for mitigating tolling impacts. This work resulted in the development of additional studies, which have been incorporated into this final report. Since publication of the June 2013 draft, the *Economic Effects Assessment* has been comprehensively updated. Key changes include:

- Section IV now includes a summary of public outreach efforts that occurred after the release of the June 2013 draft report, including public surveys and meetings, and the input received during that process. These reports are included in Appendix E.
- Section V now includes additional analysis of the practicability of implementing one-time transponder credits, toll discounts, and tax credits as potential measures for mitigating the effects of tolling. This analysis includes:
  - A report estimating the administrative costs of these toll mitigation options (Appendix B)
  - A report estimating the potential traffic and revenue impacts of these toll mitigation options (Appendix C)
- Section VI adds discussions of the 2013 pre-construction traffic monitoring and further measures to be taken to monitor for and address any unexpected adverse traffic diversion effects in EJ communities.
- Section VII recaps the strategies to be adopted by KYTC and INDOT to mitigate adverse economic impacts of tolling on EJ populations.

The cumulative effect of all of the mitigation measures to which the States are committed will narrow the user cost gap and, thereby, mitigate the disproportionately high and adverse effect of tolling that would otherwise be experienced by the EJ populations.

The mitigation measures identified in the Tolling Mitigation Plan will be submitted for adoption by the Tolling Body, which is a bi-state authority created by the Indiana Finance Authority (IFA), the Indiana Department of Transportation (INDOT), the Kentucky Transportation Cabinet (KYTC), and the Kentucky Public Transportation Infrastructure Authority (KPTIA)<sup>2</sup>. The Tolling Body is comprised of six members, three from each state. The member organizations of the Tolling Body have assigned that group the responsibility and authority to approve an overall Tolling Policy, which includes the adoption of a Tolling

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<sup>2</sup> Section 3.02, *Interlocal Cooperation Agreement for the Design, Procurement, Construction, Financing, Tolling, Operation and Maintenance for the Louisville-Southern Indiana Ohio River Bridges Project*. October 2012. The Agreement was made among the Indiana Finance Authority, the Kentucky Public Transportation Infrastructure Authority, INDOT, and KYTC. Section 3.02 of the Agreement established the Tolling Body for the Project.

Mitigation Plan. The Tolling Body adopted initial tolling rates in September 2013<sup>3</sup> to facilitate the planning process.

The States recognize that ultimately KYTC and INDOT are responsible for implementing the commitments made in the RROD. To the extent that these commitments involve matters related to Toll Policy, such as transponder pricing and availability or minimum account balance requirements, it is appropriate for KYTC and INDOT to fulfill those commitments through actions of the Tolling Body. In the unlikely event that the Tolling Body does not adopt some or all of the mitigation measures proposed in the Tolling Mitigation Plan, KYTC and INDOT will work with FHWA to find acceptable alternative mitigation measures to replace those that the Tolling Body failed to adopt.

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<sup>3</sup> *Resolution TB-2013-2: Resolution of Tolling Body Setting Initial Toll Rates in Accordance with Toll Rate Covenants Established in the Development Agreement.* September 11, 2013 (Appendix D, herein).

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## I. PROJECT BACKGROUND

The purpose of the Project is “to improve cross-river mobility between Jefferson County, Kentucky, and Clark County, Indiana.” (*Supplemental Final Environmental Impact Statement [SFEIS]* p. 2-1) Proposals to improve cross-river mobility through construction of an additional bridge or bridges across the Ohio River have been in every local and regional long-range planning study for decades. The three existing Ohio River roadway bridges in the area are located primarily in densely populated urban areas: the John F. Kennedy (I-65) and George Rogers Clark Memorial (US 31) bridges provide cross-river access between Downtown Louisville, Kentucky and Downtown Jeffersonville and Clarksville, Indiana; and the Sherman Minton Bridge (I-64) provides access between western Louisville and Downtown New Albany, Indiana, approximately five miles downstream from the Clark Memorial Bridge.

The Project includes construction of a new Downtown Bridge, immediately east of and adjacent to the existing Kennedy Bridge, to carry I-65 northbound traffic; reconstruction of the existing Kennedy Bridge to accommodate I-65 southbound traffic; reconstruction of the Kennedy Interchange (“Spaghetti Junction”) where I-64, I-65, and I-71 converge in Downtown Louisville; and construction of an East End Bridge connecting KY 841 in Kentucky to SR 265 in Indiana approximately six miles upriver from the Downtown I-65 bridges.

Factors that contribute to the need for the Project, as described in both the 2003 FEIS and 2012 SFEIS, include traffic congestion on the Kennedy Bridge and in the Kennedy Interchange, traffic safety problems in the Kennedy Interchange and on the Kennedy Bridge, inefficient mobility for existing and planned growth in population and employment in the Downtown area and in eastern Jefferson and southeastern Clark counties, and inadequate cross-river transportation system linkage and rerouting opportunities in the eastern portion of the region. The 2003 FEIS and 2012 SFEIS contain detailed discussions of the needs for the Project, as well as the benefits that are anticipated to result from the Project’s new Downtown and East End bridges and reconstructed Kennedy Interchange. (See SFEIS Chapter 2, “Purpose and Need” and Chapter 3, “Alternatives.” In summary, the benefits of the Project include:

- Improved cross-river mobility in the region.
- Reduced traffic congestion on the Kennedy Bridge and within the Kennedy Interchange.
- Improved traffic safety within the Kennedy Interchange and on the Kennedy Bridge.
- Adequate cross-river transportation system linkage in the eastern portion of the Louisville metropolitan area.

The Downtown I-65 bridges “couplet” (existing bridge southbound/new bridge northbound) and the new East End Bridge will improve access to employment centers in the downtown areas on both sides of the river, as well as to the fast-growing eastern Jefferson County and southeastern Clark County, which are experiencing growth in both population and employment. Congestion will be reduced, travel times will be improved, and safety will be enhanced for all cross-river travelers using those facilities. Upon completion of the Project, area residents who cross the river for such activities as work, shopping, medical services, recreation, and dining will have more and better options for crossing the Ohio River, including the existing Sherman Minton (I-64) and Clark Memorial (US 31) bridges, the new Downtown I-65 bridges, and the new East End Bridge. This expanded cross-river road network will improve cross-river access for a wider range of the community, relieve congestion (particularly in the vicinity of the Kennedy Bridge) and improve motoring safety; and will result in fewer miles traveled and improved travel times for regional commuters. Reductions in travel times and miles traveled also will result in

reduced vehicle operator costs in terms of less time spent in traffic, reduced fuel consumption, and less vehicle wear and tear.

The States' evaluation of funding options for the Project revealed that while a mix of traditional federal and state highway funds will be used to construct the Project, additional funding is required to meet the Project cost. The SFEIS evaluated the potential for tolling to close this funding gap. The SFEIS also evaluated whether the incorporation of tolling in the Project would have a disproportionate effect on EJ communities, as part of the EJ assessment required by Executive Order 12898, Environmental Justice, FHWA Directive 6640.23A, and U.S. Department of Transportation (USDOT) Order 5610.2(a).

The SFEIS concluded that the cost of tolls would not be borne predominantly by EJ populations; it also found that, for both EJ and non-EJ users, the increase in average cost for all trips (both intra-state and cross-river) would be "minimal"—approximately 3%. However, as noted below (SFEIS p. 5-36), the SFEIS further concluded that the increase in average user costs for cross-river travelers originating in EJ areas, as a result of the Project, would be appreciably greater than the increase in average user costs for non-EJ travelers, and thus, those EJ users would likely experience a disproportionately high and adverse effect from the imposition of tolls as part of the Project:

*The comparison of the No-Action Alternative to the Modified Selected Alternative indicates that the Non-EJ community cars would experience an 11% increase in average cost per trip for bridge crossings (\$9.15 to \$10.13) while the EJ community cars would experience a 21% increase in the average cost per trip for bridge crossings (\$6.75 to \$8.16). The average user cost for EJ community cars would still be significantly less—almost \$2.00 or 24% less—than the average user cost for non-EJ community cars (\$8.16 vs. \$10.13, respectively). As a result, although the cost would increase by a greater percentage for EJ cars than for Non-EJ, as compared to the No-Action Alternative, the average cost per cross-river trip would still be lower for EJ community cars.*

*For both the intrastate (non bridge) trips and the combined intrastate and interstate trips, the variation between the No-Action Alternative and either build alternative is minimal, for EJ cars and non-EJ cars (i.e., for Bridge and Non Bridge EJ cars for the No-Action Alternative would be \$3.68 while that for the Modified Selected Alternative would be \$3.79, an increase of 3%).*

Based on this analysis, the RROD concluded the following regarding the effects of tolling on EJ communities:

*Based on the analyses presented in Section 5.1.7 of the SFEIS, FHWA has determined that neither the cost of tolls, nor other direct or indirect impacts, would be "predominantly borne" by environmental justice populations. FHWA has also concluded that, based on the vehicle user cost data as presented in Section 5.1.7, the Modified Selected Alternative is likely to cause disproportionately high and adverse effects on minority and low-income populations. Although the impacts would not be "predominantly borne" by environmental justice populations, the impact would be appreciably more severe or greater in magnitude for these populations.*

Notwithstanding the finding of disproportionately high and adverse effects of tolling on EJ populations, the RROD (p. 64) approved tolling on the Downtown and East End bridges based on a finding that tolling is necessary to fund the Project. The RROD identified the following measures (RROD, pp. 64–65) that are to be implemented to minimize and mitigate the economic effect of tolling on EJ populations:

- *INDOT and KYTC have committed to include enhanced bus service as part of the Modified Selected Alternative....(See Section V.A.1.)*

- *Prior to the implementation of tolling, the states of Indiana and Kentucky will adopt a policy that is sensitive and responsive to low-income and minority (environmental justice) populations (“Tolling Policy”). The development of this policy will include additional outreach and public involvement with the environmental justice populations. During the development of the Tolling Policy, KYTC and INDOT will:*
  - *Conduct a detailed assessment of the potential economic effects of tolls on low-income and minority populations, using the latest publicly available population data, traffic forecasts, and community input. (See Section III.)*
  - *Make the results of that study publicly available. (See Section IV.)*
  - *Identify and evaluate a range of measures for mitigating the effects of tolling on low-income and minority populations. (See Section V.)*
  - *Provide an opportunity for additional public input on those potential measures.*
- *As part of the Tolling Policy, KYTC and INDOT will adopt a plan for mitigating the effects of tolling on low-income and minority populations (“Tolling Mitigation Plan”). The Tolling Mitigation Plan [see Appendix A] will:*
  - *Include practicable measures for minimizing impacts of tolling on low-income and minority communities.*
  - *Comply with FHWA policy, including FHWA “Guidance on Environmental Justice and NEPA” dated December 16, 2011; FHWA Order 6640.23A, “FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations” (June 14, 2012); and any update or other current FHWA policy available at the time of the assessment.*
- *The Tolling Policy will be completed before tolling is allowed to be initiated on the LSIORB Project.*
- *In determining practicability of measures to mitigate effects on low-income and minority communities, KYTC and INDOT may take into account the financial requirements of the project, the technical and logistical issues associated with toll collection methods, and other needs.*
- *In developing the Tolling Policy, consideration shall be given to the information contained in the FHWA report, “Environmental Justice Emerging Trends and Best Practices Guidebook” (November 2011), the “Department of Transportation Environmental Justice Strategy” (March 2, 2012), and other applicable publications available at the time the toll policy is developed.*

The RROD (pp. 19–20) found that tolling “will not result in a noticeable increase in congestion” and that “no adverse effects on nearby environmental justice communities are anticipated” from traffic diversion caused by tolling. The RROD also included a commitment to conduct traffic monitoring in the EJ communities to determine whether changes in traffic patterns caused by the Project will adversely affect EJ communities, and to work with local authorities to identify mitigation strategies that could be implemented. The RROD (p. 19) concluded that:

*...while changes in traffic patterns are expected due to the imposition of tolls...because the changes will be minimally perceptible and will not result in a noticeable increase in congestion, no adverse effects on nearby environmental justice communities are anticipated.*

The RROD committed Project funds to the Transit Authority of River City (TARC) to improve cross-river mobility. The States have entered into a Memorandum of Agreement (MOA) with TARC (see Appendix F1) to provide for enhanced cross-river bus service in the region.

Of the Ohio River bridges that will exist in the Louisville metropolitan area following construction, only the new East End Bridge and the Downtown I-65 Bridges will be tolled. The Sherman Minton and Clark Memorial bridges will remain non-tolled following Project completion, providing two free options for cross-river travelers who wish to avoid a toll. These cross-river connections are familiar and readily accessible to most residents of EJ areas in Louisville, Clarksville/Jeffersonville, and New Albany; in fact, both are located near the largest concentrations of EJ populations in both Jefferson and Clark/Floyd counties. (See Figure 1) Because they would be toll free and are located within proximity to the majority of the EJ communities they would continue to provide an easily accessible opportunity for EJ travelers to cross the Ohio River without paying a toll.



Figure 1: EJ Populations in Relation to Tolled and Non-Tolled Bridges

All planning for the Project, including traffic and financial studies, has been based on the Sherman Minton and Clark Memorial bridges remaining untolled. There are no current proposals to place tolls on the Sherman Minton Bridge or the Clark Memorial Bridge, and tolling of those crossings is not included in the region's long-range transportation plan, which has a 20-year horizon. Moreover, any future proposal to implement tolling on either of those river crossings, or any other transportation facility in the region, would be subject to an independent review process under the National Environmental Policy Act (NEPA) and approval by both States and FHWA. Such a review would analyze the effects of tolling on the natural and human environment, including socioeconomic and EJ impacts, consistent with NEPA review processes in effect at that time.

## **II. PURPOSE OF THIS REPORT**

The purpose of this report is to evaluate the potential economic impacts of tolls associated with the Project on EJ populations, to describe public outreach efforts and public input regarding mitigation measures, and to provide measures for mitigating the impacts of tolling on EJ populations. The information presented in this *Economic Effects Assessment* report will be submitted to the bi-state Tolling Body and used in establishing a Tolling Policy for the Project, including the Tolling Mitigation Plan (see Appendix A), that is sensitive and responsive to low-income and minority (environmental justice) populations, as required by the RROD.

The remainder of this report is organized into the following sections:

- Section III presents the assessment of the potential economic effects of tolls on the EJ populations. This section summarizes the economic effects analysis that was in the SFEIS and updates that analysis based on the initial toll rates adopted by the Tolling Body, and the latest publicly available population data and traffic forecasts.
- Section IV summarizes the community input relevant to this *Economic Effects Assessment*, including input obtained from the EJ populations regarding the potential economic effect of tolls on EJ populations and the desirability of various potential tolling mitigation measures.
- Section V identifies and evaluates a range of potential measures for mitigating the economic effects of tolling on EJ populations. Within this section, Section V.A describes mitigation measures already required under the RROD; and Section V.B describes potential additional mitigation measures.
- Section VI provides a discussion of the measures to be taken to monitor for and address any unexpected adverse traffic diversion effects in EJ communities.
- Section VII recaps the strategies to be adopted by KYTC and INDOT to mitigate adverse economic impacts of tolling on EJ populations.

## **III. ECONOMIC EFFECTS**

Section III presents an update of the assessment of the potential economic effects of tolls on the EJ populations, and reviews the population data and traffic forecasts used in that assessment.

### **III.A SFEIS Economic Effects Analysis**

As part of the SFEIS, FHWA conducted a User Cost Analysis of the effects of tolling on vehicle user costs for EJ populations. This included a detailed breakdown of the average cost-per-trip in 2030 for various

population groups within the Louisville metropolitan area. The analysis showed that tolling had the potential to cause EJ users to experience a greater increase in average user costs than would be experienced by non-EJ users. (See SFEIS pp. 5-34 to 5-38.)

The analysis of the economic impacts of tolling took into account both the actual cost of the toll and the non-toll costs incurred by vehicle users in making cross-river trips, including vehicle operating costs and the cost of time spent in traffic. The time spent in traffic was derived from the *Time-of-Day Travel Model*,<sup>4</sup> Phase 2. (See SFEIS Appendix H.3.)

These costs were identified for “EJ Community Cars” (defined as car trips that originated from an area identified as an EJ community) and “Non-EJ Community Cars” (car trips originating outside areas identified as EJ communities). The analysis of average user costs found that non-EJ community cars would experience an 11% (\$0.98) increase in average cost per trip for Ohio River bridge crossings (from \$9.15 to \$10.13), while EJ community cars would experience a 21% (\$1.41) increase in the average cost per trip for bridge crossings (from \$6.75 to \$8.16). The SFEIS notes that, for cross-river trips, “[t]he average user cost for EJ community cars would still be significantly less—almost \$2.00 or 24% less—than the average user cost for non-EJ community cars (\$8.16 vs. \$10.13, respectively).” The SFEIS also noted that the average cost for *all* trips (both intrastate and cross-river) would increase only a “minimal” amount—about 3%—for EJ users and for non-EJ users, and would remain lower for EJ users than for non-EJ users. See Table 1 (which is Table 5.1-14 in the SFEIS). Nonetheless, because the increase in the average cost per trip for EJ community cars is expected to be greater than the increase for non-EJ community cars, FHWA found that the Project is likely to cause a disproportionately high and adverse economic effect on EJ populations. This disparity is referred to as the user cost gap, herein.

**Table 1: SFEIS Table 5.1-14—2030 Average Cost Per Trip**

Average Cost Per Trip	EJ Community Cars	Non-EJ Community Cars	External Cars	Trucks	Regional Average
<b>No Action Alternative</b>					
Intrastate Trips (Non Bridge)	\$3.48	\$4.69	\$10.42	\$18.34	\$6.05
Trips Across Bridges	\$6.75	\$9.15	\$14.87	\$46.45	\$16.55
Bridge and Non Bridge	\$3.68	\$4.89	\$11.53	\$22.50	\$6.87
<b>FEIS Selected Alternative</b>					
Intrastate Trips (Non Bridge)	\$3.43	\$4.51	\$10.28	\$18.12	\$5.88
Trips Across Bridges	\$6.40	\$8.36	\$14.11	\$44.48	\$14.92
Bridge and Non Bridge	\$3.65	\$4.71	\$11.29	\$22.03	\$6.67
<b>Modified Selected Alternative With Tolls</b>					
Intrastate Trips (Non Bridge)	\$3.44	\$4.55	\$10.32	\$18.17	\$5.92
Trips Across Bridges	\$8.16	\$10.13	\$15.82	\$49.65	\$17.13
Bridge and Non Bridge	\$3.79	\$4.84	\$11.77	\$22.84	\$6.90

<sup>4</sup> The time-of-day (TOD) model is a state-of-the-art traffic forecasting model that was developed for the Project, based on the Kentuckiana Regional Planning and Development Agency (KIPDA) regional model, and is designed to predict traffic demand and congestion on each of the Ohio River bridges at specific times during the day.

In addition to calculating the impact of tolls on the average cost per trip, an analysis also was conducted to assess the annual cost of tolls in relation to income. The annual cost of tolls was calculated based on a daily commute. The calculations used a tolling scenario of \$1.00 each way (i.e., \$2.00 roundtrip)<sup>5</sup>, multiplied by 5 days a week, 4 weeks a month, for 12 months per year. In this manner, the cost for tolls would be \$40.00 per month and approximately \$480.00 annually. This would equate to approximately 4% of a low-income person's 2010 annual income, based on an estimated gross annual income of \$11,139, which was the 2010 Health and Human Services (HHS) poverty guideline at the time the SFEIS was published. The 2013 HHS poverty guideline for an individual is \$11,490; thus, in both 2010 and 2013, the annual cost of tolls would still be about 4% of the single-person low-income threshold. American Community Survey (ACS) one-year survey data for income<sup>6</sup> lists the 2013 per capita income for Indiana as \$24,796 and for Kentucky as \$23,668; therefore, the annual toll cost would constitute approximately 2% of the each state's annual per capita income, the same as was reported for 2010 in the SFEIS. The calculations for both 2010 and the updated value for 2013 demonstrate that in general, and as one would expect, low-income persons who use the bridges for a daily commute would have a higher percentage of their annual income used for tolls than would non low-income populations using the bridges.

User data were also obtained from a telephone survey, *Ohio River Bridge Users Study* (SFEIS Appendix B.8.2) conducted in October 2011 to gain a better understanding of residents' use of the Ohio River bridges, including the bridge usage patterns of EJ populations. The study indicated that 36% of low-income populations and 57% of minority populations cross the Ohio River by car every weekday or several times per week.

The SFEIS analyzed the user costs for trips originating from both EJ and non-EJ areas (see Figures 2a and 2b, p. 10), and compared the effect that tolling would have on the overall cost of these trips. The tolling component of the cost was based upon the baseline tolling scenario of \$1.50 for passenger cars, \$3 for light trucks, and \$6 for heavy trucks. The trips were analyzed using the time-of-day travel demand model.

The SFEIS also documented a sensitivity analysis that considered the effects of toll rates other than those in the base scenario, including the toll rates that were proposed in the *KRS 175B Financial Plan* scenario (\$1/\$2/\$5/\$10). (See SFEIS Appendix H.4.) The \$1 rate was considered to apply to frequent users, which were defined as "vehicles that use a crossing twice a day, 20 days a month."

The analysis concluded that variation in toll rates would have very little effect on the overall number of cross-river trips but that higher rates would result in greater diversion to the non-tolled bridges—the I-64 Sherman Minton Bridge in the West End and the US 31/George Rogers Clark Memorial ("Second Street") Bridge in the downtown. The analysis also concluded: "Regarding the differences between the SFEIS baseline scenario (\$1.50/\$3/\$6) and the *KRS 175B Financial Plan* scenario (\$1/\$2/\$5/\$10), the model predicts virtually no difference in total cross-river trips or trips on the East End Bridge, and approximately 2% to 4% differences between the I-65 tolled bridges and the non-tolled I-64 and US 31 bridges."

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<sup>5</sup> Assumes the use of the toll scenario identified in the March 5, 2012 *KRS 175B Financial Plan*, which includes a \$2.00 "frequent user" rate for a round trip across the Ohio River (i.e., \$1.00 each way).

<sup>6</sup> Source of ACS data: [www.deptofnumbers/income/Kentucky](http://www.deptofnumbers/income/Kentucky), and [www.deptofnumbers/income/Indiana](http://www.deptofnumbers/income/Indiana). (2013 is the most current data available.)

Based on the vehicle user cost data, FHWA concluded that the Modified Selected Alternative is likely to cause a disproportionately high and adverse effect on EJ populations. Although the impacts would not be “predominantly borne” by EJ populations, the impact—measured as the increase in average user cost—would be appreciably more severe or greater in magnitude for these populations. Therefore, in accordance with FHWA Order 6640.23A, it is necessary to consider strategies for minimizing and mitigating the economic effects of tolling on EJ populations.

### III.B Initial Toll Rates

Since publication of the RROD and the *Draft Economic Effects Assessment*, the Tolling Body has adopted initial toll rates as listed in Table 2. The Tolling Body’s September 2013 resolution is in Appendix D.

**Table 2: Initial Toll Rates**

	Passenger Vehicles	Medium Trucks	Heavy Trucks*
<b>Transponder—Frequent User</b>	\$1.00	N/A	N/A
<b>Transponder—Non-Frequent User</b>	\$2.00	\$5.00	\$10.00
<b>Registered Video</b>	\$3.00	\$6.00	\$11.00
<b>Other Video</b>	\$4.00	\$7.00	\$12.00

Source: Resolution TB-2013-2: Resolution of Tolling Body Setting Initial Toll Rates in Accordance with Toll Rate Covenants Established in the Development Agreement, September 11, 2013 (Appendix D, herein).

\* Vehicle classifications are preliminarily defined in the Traffic and Revenue Study [discussed in Section III.E, herein] and will be finalized in the Toll Policy Agreement.

The lowest toll rates (the \$1 and \$2 rates in the case of the *KRS 175B Financial Plan* scenario) would apply only to those vehicles using a transponder. A transponder is a small device or sticker, similar in size to a credit card, that is placed in the vehicle and that communicates wirelessly with the tolling system through sensors placed on overhead gantries when the vehicle crosses the tolled bridge, automatically charging an established user account for toll payment. Two types of transponders will be recognized by the toll collection system. A transponder, compatible with tolling systems used in other areas of the country (e.g., EZ Pass, Sun Pass, etc.) will be available (i.e., a “regional system” transponder). The specifications required to manufacture these transponders require a hard plastic casing and result in a relatively high production cost. A less costly type of transponder will also be available for the local system.) This type of transponder (local transponder) may have compatibility with other tolling systems in the future, and costs considerably less than the national-system transponder.

Tolls will be collected from bridge users who do not have transponders by taking a picture of the vehicle’s license plate and charging the vehicle’s registered owner (either to an established account or by mail, as discussed below). To offset the administrative costs of user identification, collection, and enforcement of these charges, bridge users who do not have transponders will be charged a higher rate (a “video rate”). The higher rate also provides an incentive for the public to acquire and use transponders, which provide the easiest and most accurate means of identifying bridge users and collecting tolls. A “pre-paid video rate” is also to be implemented. This will allow a user to establish a pre-paid account that can be used to pay a video-based toll. The rate for a pre-paid video toll (\$3.00) will be less than the video toll rate (\$4.00) because the existence of the pre-paid account reduces collection expenses, etc., but more than the cost for transponder-equipped vehicles.

KYTC and INDOT considered whether the inclusion of video toll rates could have a material effect on the conclusions contained in the SFEIS and RROD based on the User Cost Analysis. Transponder usage by EJ populations, and particularly low-income populations, may encounter obstacles related to difficulties with affording/purchasing a transponder, initially establishing a transponder account with a cash



balance, as well as managing and replenishing a transponder account. To the extent that EJ populations pay toll rates of \$3.00 or \$4.00 (i.e., the toll rates for non-transponder use), their user costs would increase relative to the user costs estimated in Section 5.1.7.2 of the SFEIS. Therefore, maximizing the availability and usage of local transponders will be an important part of minimizing the effects of tolling on EJ populations. As discussed further in Sections V and VII, the States intend to implement an array of mitigation measures to maximize the availability of local transponders to EJ communities.

### **III.C Updated Population Data**

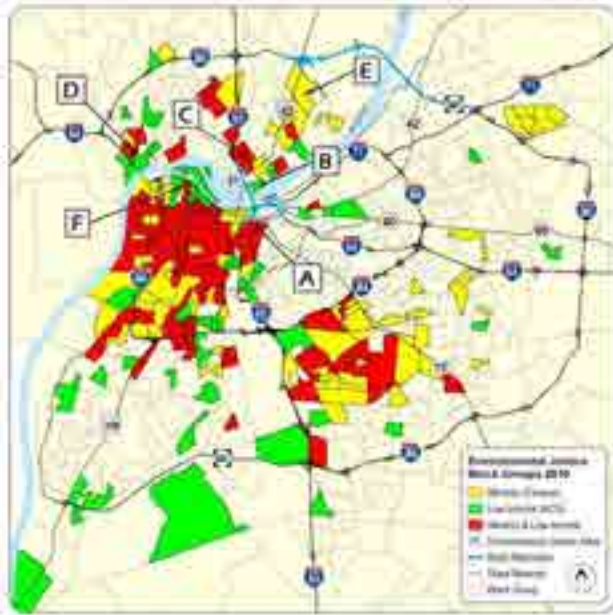
The RROD requires this report to be prepared “using the latest publicly available population data.” Therefore, as part of this *Economic Effects Assessment*, KYTC and INDOT reviewed the population data relied upon in the SFEIS, and in particular the income and race data used in the environmental justice analysis, to determine whether new data were publicly available and, if so, whether those new data changed any of the previous conclusions regarding the potential economic effects of tolling on EJ populations.

The 2012 SFEIS used year 2010 demographic data for the environmental justice analysis, which included the 2006–2010 American Community Survey (ACS) data for income and the 2010 U.S. Census data for race. The data identified six areas in the vicinity of the Project (Areas A–F on Figures 2a–2b, p. 10) that had disproportionately high concentrations of EJ populations, where proximity effects of the Project were considered possible. Those areas were evaluated to determine whether the Project was likely to have adverse effects on EJ populations, including adverse effects as a result of toll-related traffic diversion. As noted previously, the SFEIS and the RROD concluded that no adverse effects on nearby environmental justice areas were anticipated as a result of the minimal traffic diversion expected to be caused by tolls (which would be minimally perceptible and not result in any noticeable increase in congestion).

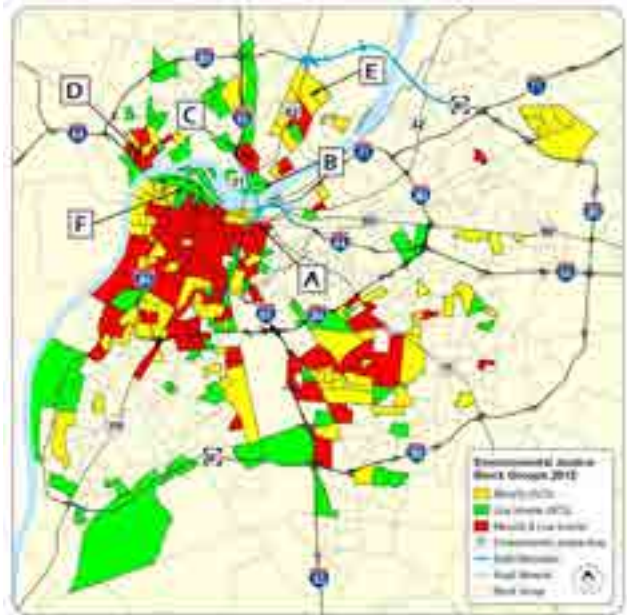
Since the publication of the SFEIS, the more current ACS 2008–2012 5-Year Estimates data at the Block Group level for the study area have been published. These ACS data include both race and income. As illustrated in Figures 2a–2b, since the publication of the SFEIS there have been only minor changes in the distribution of EJ populations; therefore, the updated data reaffirm the overall conclusions from the SFEIS with regard to the locations of low-income and minority populations.

The general consistency in areas of the community with EJ populations, as shown in Figures 2a–2b, also supports a conclusion that the changes in income data between 2010 and 2012 do not undermine the conclusions in the SFEIS and RROD regarding average user costs. “EJ Community Cars” and “Non-EJ Community Cars” would still be originating largely from the same areas, resulting in similar estimates of average user cost increases associated with the implementation of tolling for the Project.

The HHS poverty level data, updated from \$11,139 in 2010 to \$11,490 in 2013, also reflects a very minor (3.2%) change; in both 2010 and 2013, the annual cost of tolls for a frequent user would comprise about 4% of the income of an individual living at the HHS poverty level. Similarly, per capita income in both states changed by only a small percentage between 2010 and 2013, and for both of those years, the annual cost of tolls would comprise only about 2% of the income of a person earning the per capita income in both states.



**Figure 2a—Original SFEIS Data: 2010 Census and 2006-2010 ACS 5-Year Estimates**



**Figure 2b—Updated Data: 2008-2012 ACS 5-Year Estimates**

### **III.D Economic Impact Study of Ohio River Bridges Project 2014 Update**

In March 2014 Indiana Finance Authority (IFA) published the *Economic Impact Study of Ohio River Bridges Project 2014 Update*.<sup>7</sup> The study included quantitative modeling analysis of the overall regional impact of the Project in the Indiana counties of Clark and Floyd as well as the Kentucky counties of Bullitt, Jefferson, and Oldham. The report documents the Project’s long-term employment, personal income, and business economic output. The report’s conclusion states the following:

*Overall, the Ohio River Bridges Project is expected to have a positive impact on the overall five-county study region, allowing the regional economy to generate significantly more jobs, personal income and business output than could occur without the Project. Furthermore the positive impacts of the Project’s economic impact from construction jobs, market access, transportation efficiency and land use impacts far outweigh any adverse regional economic effects of tolling. The overall land use impacts on development near the Project will be positive and are expected to lead to a gain of over 11,000 direct new jobs in Indiana over the life of the project as well as the induced and indirect (multiplier effects) of this new employment on Indiana’s economy (Land use impacts in Kentucky are not addressed as part of this study).*

*Other changes in the Indiana business environment include changes in the access to downtown Jeffersonville, both during and after construction. Marketing and appropriate signage will be key success factors for enabling Jeffersonville’s downtown business environment to adjust to these changes.*

*Because of the amount of additional economic growth that is enabled in Indiana as a result of the Project, significant increases in population and employment are anticipated with the associated increases in government revenue, and corresponding demand for government*

<sup>7</sup> The study is posted on the IFA’s website at: [http://www.in.gov/ifa/files/EDRG\\_-\\_Ohio\\_River\\_Bridges\\_Update-12\\_March2014\\_FINAL.PDF](http://www.in.gov/ifa/files/EDRG_-_Ohio_River_Bridges_Update-12_March2014_FINAL.PDF).

*infrastructure and services. By full build-out of the land use impact in 2030, all of the cost of county and local services needed to accommodate this growth is anticipated to be covered by tax revenue generated by project-related growth, leaving a local fiscal annual surplus of just over \$7.0 Million (\$2012) annually (at full build-out) in 30 years. (p. 33)*

This anticipated growth will benefit the EJ populations by providing employment opportunities, and increasing government revenue that can be used to increase public services. Efforts to minimize any transportation barriers that EJ communities may face in accessing these new jobs will be important to improving their overall economic growth and prosperity. Section V.A.1, *Mitigation Measures Required by the RROD*, identifies Project commitments, many of which are already underway, that enhance transit options for cross-river travel and directly benefit TARC users from EJ communities.

### **III.E Updated Traffic Forecasts**

The RROD also requires this report to be prepared “using the latest publicly available...traffic forecasts.” Therefore, as part of this report, KYTC and INDOT considered the SFEIS forecasts as well as newer forecasts developed as part of the traffic and revenue (T&R) studies for this Project, as described below.

The traffic forecasts in the SFEIS were prepared using a time-of-day (TOD) model developed specifically for this Project. Those forecasts are documented in the *Traffic Forecast* report, dated February 22, 2012. (See SFEIS Appendix H.1.) The TOD traffic model used in the SFEIS includes assumptions consistent with predicting the most probable case, as was explained in the SFEIS and its appendices. These assumptions and the overall approach taken in the SFEIS are in keeping with the standards of the traffic forecasting industry and the overall transportation planning process established under federal guidance.

Since publication of the RROD, an investment grade traffic and revenue study (*T&R Study*)<sup>8</sup> has been completed for KYTC to assess the financing of the Project. The purpose of the *T&R Study* was to provide a conservative estimate of the cross-river trips on the new and rehabilitated bridges, and, with a margin of fiscal safety, forecast the tolling revenues that can be expected with high probability. The study was conservative from a financial standpoint; that is, its assumptions were intended to ensure that the toll revenue forecasts would provide assurances to the financial markets of the Project’s financial soundness with an adequate margin of safety and, therefore, would provide a reliable basis for bond financing. The *T&R Study* also evaluated the possibility of a video toll rate and a pre-paid video toll rate as part of the overall toll rate structure, as part of its evaluation of traffic demand and potential toll revenues.

For the *T&R Study*, the TOD model’s socioeconomic assumptions were modified to include more conservative assumptions regarding travel demand and traffic movements in the area. The socioeconomic assumptions in the TOD model were modified to reflect lower growth in the area and, thus, a reduced volume of traffic crossing the river.

This adjustment was designed to ensure that even if the region grows at rates that are significantly lower than those that are reasonably anticipated in the Louisville Metropolitan Planning Organization (MPO)<sup>9</sup> and TOD models, the Project would remain financially viable, thus providing bond investors with revenue forecasts in which they can have high confidence.

The *T&R Study* also differed from the TOD model in that it did not forecast traffic volumes under both a

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<sup>8</sup> *Louisville–Southern Indiana Ohio River Bridges Traffic & Revenue Study: Final Report*. Steer Davies Gleave, August 30, 2013.

<sup>9</sup> The Kentuckiana Regional Planning and Development Agency (KIPDA) provides regional planning, review, and technical services for the Louisville Metropolitan Planning Organization (MPO), and is often referred to as being the Louisville MPO. The Louisville MPO serves the following counties: Oldham, Bullitt, and Jefferson in Kentucky; Clark, Floyd, and 1/10th of a square mile of Harrison in Indiana.

“No Build” and a “Build” scenario, as the TOD model did; it only provides forecasts for the “Build” scenario. Thus, the *T&R Study* cannot be used to quantify the likely changes in traffic, or in average user costs, between those scenarios. (The “No Build” scenario provides the base against which the “Build” scenario can be compared and any Project-related changes measured.)

Because it serves a much different purpose than does the SFEIS TOD model, the *T&R Study* is not directly relevant or useful in evaluating the SFEIS’s User Cost Analysis or the potential of the Project to have a disproportionately high and adverse economic effect on low-income EJ populations, as was found in the User Cost Analysis. Therefore, the T&R study was not used in preparing this report.

### **III.F Conclusions of Economic Analysis of Tolling Impacts**

The TOD traffic model and socioeconomic data used in the SFEIS remain the most reliable data publicly available for use in evaluating the potential economic effects of tolling on EJ populations, and the tolling rates used in the SFEIS, including the sensitivity analyses, remain similar to those that have been adopted by the Tolling Body. While updated income data from 2012 are available and the HHS poverty guidelines increased slightly between 2010 and 2013, an examination of those data did not reveal any change in EJ population distribution that would reasonably be expected to alter the results of the previous User Cost Analysis. The States have concluded that these minor differences are not significant when assessing the User Cost Analysis conducted for the SFEIS and would not alter the conclusions previously reached.

The User Cost Analysis demonstrated that the average user cost for an EJ Community Car is likely to increase by a greater percentage than for a non-EJ Community Car, as the result of implementation of tolling with the Project. As a result, FHWA determined in the RROD that EJ populations are likely to experience a disproportionately high and adverse economic effect as a result of tolling. Since the RROD, the States have adopted initial toll rates. The initial toll rates for transponder users are consistent with the toll rate assumptions used in the SFEIS; the initial toll rates for non-transponder users are higher than the rates assumed in the SFEIS. Therefore, the finding that tolling is likely to cause disproportionately high and adverse effects on EJ populations remains valid.

Given the toll rate schedule that has been adopted, ensuring the widespread availability and use of local transponders will contribute to minimizing the effects of tolling on EJ populations. A detailed explanation of how this will lessen the tolling impact on the EJ populations appears in Section V.C.1.

## **IV. PUBLIC INPUT**

Numerous public meetings have occurred during the Project development to inform the public and solicit public input. In addition to these meetings, several surveys have been conducted to gauge public opinion and inform decision-makers. To gain insight into the perspectives of the EJ populations, several public involvement efforts have specifically been undertaken with a focus on these communities.

The SFEIS documents FHWA’s finding that there is potential for a disproportionately high and adverse effect on environmental justice communities from the implementation of tolling. As a result, the States committed to completion of this *Economic Effects Assessment* and to make the results available for public comment. A *Draft Economic Effects Assessment* was published for comment in June 2013. Two public meetings, one in Kentucky and one in Indiana, were held following publication of the draft to provide an opportunity for public input. These meetings were held within or near the EJ communities. The final *Economic Effects Assessment* report will be posted to the Project website ([www.kyinbridges.com](http://www.kyinbridges.com)).

To gain insight into the perspectives of the EJ populations, several public involvement efforts have specifically been undertaken since the SFEIS with a focus on these communities. This section reports the results of these additional public outreach efforts.

#### **IV.A Opinion Survey**

In February and March 2013, KYTC and INDOT conducted an opinion survey to better understand the perceptions and opinions of the low-income and minority communities regarding tolling, its impacts, and potential measures to mitigate those impacts. The survey report, *Impacts on Environmental Justice Populations* (IQS Research, April 2013), included telephone interviews with low-income and minority individuals who frequently cross the Ohio River, and a focus group meeting with minority business owners. Four subsets of the EJ populations were surveyed in the first portion of the study:

- Racial minority residents who cross the Ohio River for work-related reasons
- Racial minority residents who cross the Ohio River for reasons other than work
- Low-income residents who cross the Ohio River for work-related reasons
- Low-income residents who cross the Ohio River for reasons other than work

The survey also included owners of minority-owned businesses that use vehicles to cross the Ohio River on most days of the week and/or have employees who cross the Ohio River.

Each of the five groups of respondents was provided with a basic description of the Project and educational information regarding all-electronic tolling, and then asked to indicate the burdens that may result from tolling and identify a variety of potential mitigation measures. These were found generally to fall within the following categories: toll payments, transponders, discounted tolls, and public transit.

The following excerpt from the April 2013 report summarizes the purpose, methodology, and findings of the survey. The full survey report is included as Appendix E1.

*The purpose of this study was to perform comparisons of Ohio River bridge usage patterns and perceptions around future tolling between specific segments of the population within Louisville and Southern Indiana. We interviewed racial minorities who cross the river for work and non-work activities and low-income individuals crossing for work and non-work activities. Both groups were identified using the Federal Highway Administration definitions of EJ race and low-income. Minority business owners who regularly cross the bridge were also targeted to take part in a focus group to better understand the impacts tolls would have on their business operations.*

*Tolls were considered by many to be a necessary function of the new bridges, and many residents believe that the proposed tolls are reasonable. However, there was more concern among those with lower-incomes (particularly who cross the river for work related reasons) that tolls will be a burden. For these individuals, they recognize that they will have the ability to reroute to non-tolled bridges, but they have concern regarding the added congestion on these bridges and the time it will take to cross the river. Added fuel costs related to this rerouting was also mentioned.*

*This concern is prevalent among minority business owners as well. They believe that the additional costs to their business, created by tolling, will have to be passed on to their customers, and they worry that they may become less competitive as a result. (p. 3)*

Input obtained from the survey and focus groups has been considered in the preparation of this report and identification of potential mitigation measures identified in Section V.

#### **IV.B Public Outreach and Comments**

On June 24, 2013, KYTC and INDOT released a 21-page draft of the *Economic Effects Assessment*, and launched an extensive outreach effort, which included:

- Announcing the availability of the *Draft Economic Effects Assessment* for public review.
- Announcing public Open Houses on July 22 and 23, 2013, to review and provide comments on the *Draft Economic Effects Assessment*—one Open House in Indiana adjacent to EJ neighborhoods and one in Kentucky in an EJ neighborhood.
- Announcing a 30-day public comment period, beginning on June 24, 2013, and ending July 26, 2013, to receive comments on the *Draft Economic Effects Assessment* and the potential mitigation measures identified therein.
- Issuing a news release regarding the publication of the *Draft Economic Effects Assessment* to generate media coverage and public awareness.
- Making the report easier to understand by publishing a five-minute explanatory video (in English and Spanish) and posting it on the Project website and YouTube. The video has received 660 views, to date.
- Publicizing the *Draft Economic Effects Assessment*, public Open Houses, and public comment period through advertising and the distribution of flyers and posters at nearly 50 area public libraries, community centers, and churches located primarily in EJ neighborhoods.

*Public Outreach and Comments: Tolling Impacts On and Mitigation for EJ Residents* (Doe-Anderson, August 2013) details the results of these efforts, which are summarized below. The full report, together with appended outreach materials and comments received, is provided as Appendix E2.

**Open Houses.** As noted in the report, news coverage leading up to the Open Houses was extensive: The Project issued two news releases which prompted substantial coverage, and more than 100 news stories ran on this topic. Also, the day before the first public meeting, several Louisville Metro Council members held a news conference urging residents to attend the public meetings. These public meetings and online comment opportunities were open to all residents.

More than 100 people attended each Open House. At the Indiana gathering, 119 people signed in, while 101 registered their attendance at the Kentucky meeting. An estimated 10 to 20 people attended each Open House without signing in. Numerous representatives from KYTC and INDOT were on hand to interact with the public, provide more information about the Project and tolling, and answer questions. All public comments except one came from people within the Louisville Metro area.

At the Indiana Open House, 25 people submitted written comments, and 31 people submitted comments by talking to a court reporter. At the Kentucky Open House, 21 people submitted written comments, and 7 spoke to court reporters. In addition, a petition was submitted with 67 signatures pledging support for Kentucky House Bill 129, which called for reimbursing low-wage workers for tolling expenses and exempting TARC vehicles from tolls. During the Kentucky Open House, a news conference was held in an adjacent room, organized by several Kentucky state legislators, showing support for House Bill 129. Several low-income residents spoke at the news conference. The states' Project representatives were not involved in organizing this news conference.

**Comments Submitted.** Two hundred thirty-seven written comments were received during the 30-day comment period. In addition to the written comments received at the Open Houses, 148 comments were submitted using a form from the Project’s website; 7 comments were mailed; and 1 was hand-delivered. Table 3 provides a summary of the general categories into which the comments fell:

**Table 3: Summary of Public Comments on *Economic Effects Assessment***

Theme	IN & KY	KY	KY-EJ	IN	IN-EJ
Don't toll anything	46	19	17	16	10
No toll or lower toll based solely on income, not minority status	42	21	17	13	3
Everyone should pay the same	40	26	19	12	5
No toll or lower toll for low-income and minorities	22	13	7	5	4
Low-income and minorities should not be considered together	13	7	7	5	3
TARC should not pay tolls	2	0	0	2	2
Other	117	28	21	55	43
<b>Total</b>	282	114	88	108	70

*Note: The total number of comments is more than the number of people who submitted comments. This is because comments from one person may fit in more than one of the categories listed above. EJ in the above charts means these are the number of comments from residents who live in a zip code with EJ neighborhoods. It does not necessarily mean the person fits the EJ profile of being low-income or minority.*

In addition to individual comments, a resolution was submitted from TARC officials requesting that TARC buses be exempt from tolls.

The Doe-Anderson August 2013 report states: “The most popular sentiment expressed in online comments was that *everyone should pay the same rate with no special considerations provided to anyone*. At the public Open Houses, the most-frequently-heard comment was that *low-income residents should be given a reduced rate or be exempt from tolls*. Overall the number of comments supporting each of these positions was relatively balanced, with 42 supporting breaks for low-income residents and 40 advocating no price concessions for anyone.” An often expressed sentiment was that *paying tolls just to get to work will make it harder for low-income parents who are already struggling to make ends meet*.

Comments specifying support of some type of tolling mitigation specifically for low-income residents and/or low-wage workers include (but are not limited to) those listed below.

- Offer an annual reimbursement of toll costs to working poor who are eligible for FEITC and whose job requires them to commute.
- Allow low-income households with frequent commuters to pay a reduced price (\$0.50 rather than \$1.00). Could be rebate system where low-income households have a portion of their tolls paid each year returned at a particular date, or the discount could be established when renewing enrollment each year by providing proof of gross-income from the previous year's tax return.
- Provide a \$500 toll subsidy available to low-wage workers and residents eligible for FEITC.
- Allow low income/poverty level residents of Louisville and Southern Indiana to apply for a deferment from the toll.
- Let income be a major factor in setting tolls.

- Use Food Stamp /Medicaid cards (as TARC does) to determine who gets reduced rate.
- Provide free transponders for EJ drivers who live here and demonstrate an economic need, qualifying by proving residency and receipt of state/federal economic assistance.
- Provide a discounted rate (i.e., \$0.25/ trip) to low-income persons meeting the federal income qualifications.
- Enable low-income residents to receive free or reduced bridge vouchers, coordinated with state and local agencies.
- Lower tolls during off-peak hours, which would help the low income individuals and minorities to schedule hours/transportation at a less costly amount.

A recurring theme in the public comments involved questions/disapproval of **grouping low-income and minority populations** together: 30 comments noted that race should not be a determinant for toll discounts because not all minority individuals are low-income.

In addition, 33 comments dealt with questions about or the recommendation of **toll-free crossings/discounted rates for other than EJ populations**, including: Southern Indiana residents, seniors, all local residents, veterans, small businesses that make cross-river deliveries and those who cross the river to work, those visiting medical facilities, and fishermen.

**Tolls and collection methods** were the subject of 86 comments, many of which addressed the impacts of tolls in general, not on EJ populations. While 34 comments specifically stated opposition to tolling and 5 stated support, most comments submitted online and at meetings included statements of concern about or opposition to anticipated adverse impacts of tolls.

Collection-related comments referenced such issues as the cost of tolls and transponders (several stating they should be free to all), payment methods, the definition of “frequent,” impacts to businesses, the duration of tolling, and concerns for personal privacy/security related to video tolling.

#### **IV.C EJ Community and EJ Community Leader Surveys**

In addition to the Open Houses and other initiatives, the EJ outreach plan included surveys of both leaders of the EJ communities as well as individual members of the EJ community. To solicit input from EJ community leaders, IQS Research conducted interviews with 38 leaders of EJ communities. To gather input from individuals in the EJ communities, approximately 250 Metro area low-income and minority residents were interviewed at grocery stores in EJ neighborhoods. The results are contained in two reports prepared by IQS Research:

- *EJ Community Survey*, August 2014 (in Appendix E3)
- *EJ Community Leader Survey*, August 2014 (in Appendix E4)

For the *EJ Community Survey* research, traveling kiosks were used to collect survey data at four grocery stores in EJ areas. The data collection process took place between Wednesday, July 3 and Sunday, July 14, 2013. In all, 287 individuals completed the survey. Of these, 247 (86%) identified themselves as EJ community members. Statistical analysis of the survey results considered only responses from respondents who were identified as part of the EJ community. The survey contained demographic and Project-related questions regarding the following types of information: reasons for crossing the Ohio River, tolling impact on commuting behavior and lifestyle, opinions about transponders, and potential measures to mitigate the effects of tolling, etc. Prior to responding to survey questions, persons who



agreed to participate were shown a short educational video that outlined the Project, tolling assumptions, and recommended potential mitigation measures.

For the *EJ Community Leader Survey* research, beginning on June 21, 2013, invitations to participate in the interview process were extended. Between June 21 and July 19, 2013, at least three phone and/or email attempts were made to involve each leader on an initial list of 70 persons in a phone or face-to-face interview. On July 22, additional requests for participation were emailed to those who had not completed an interview, were not scheduled for one, or had not declined to participate. In all, 38 interviews were completed with community leaders who advocate for or work with low income and/or minority populations in the areas identified as EJ for the Project, including 28 interviews by telephone or in person, and 10 online interviews. Questions asked were similar to those asked of the *EJ Community Survey* participants; the leaders were asked how they expected tolling would affect the low-income and minority communities. Prior to responding to survey questions, persons who agreed to participate were provided (via email) links to the following materials describing the Project, the tolling assumptions, and the mitigation measures considered for implementation: (1) the *Draft Economic Effects Assessment* and (2) the same educational video provided to the *EJ Community Survey* participants prior to their responding to the survey questions.

While some questions varied, several of the questions asked of the two groups (EJ community individuals and EJ community leaders) were similar. These questions (in italics, below) and summaries of the responses to them are provided below. The summaries from the Individual Survey include only the 86% who identified themselves as EJ community members.

- **Tolling Impact on Commuting Behavior—**

*Individuals / [Leaders]: ...how will the addition of tolls impact your commuting decisions / [the commuting decisions of the individuals you represent]?*

Responses: Approximately 79% of the leaders indicated that commuters may switch to non-tolled routes and 45% also believed that drivers may attempt to reduce their number of trips across the river. Correspondingly, 31% of individuals in the *EJ Community Survey* responded that tolling might cause them to consider alternative non-tolled routes and 26% indicated that they may reduce their number of trips. Nearly 31% indicated that tolling would have no effect on their commuting behavior. The remaining comments from individuals and leaders, alike, noted tolling would result in a switch to either carpools (18%) or public transit (18%).

- **Tolling Impact on Lifestyle—**

*Individuals / [Leaders]: How will the addition of tolls impact your lifestyle / [the lifestyles of the individuals you represent]?*

Responses: Almost 65% of individuals in the *EJ Community Survey* noted tolling would not impact/change their lifestyles, while, in contrast, only 11% of leaders indicated the same. Leaders suggested that tolling would reduce available income, affect shopping and entertainment decisions, and cause individuals to reduce the number of trips crossing the river.

- **Free Bridges as an Effective Option to Avoid Tolls—**

*Individuals and Leaders: The video / [materials] indicated that the Sherman Minton Bridge (I-64) and the Clark Memorial Bridge (US 31/Second Street Bridge) will remain non-tolled as part of the*

*Bridges project, meaning cross-river travelers will have two free river crossing alternatives. In your opinion, are these effective options for travelers who wish to avoid paying a toll?*

Responses: Most responses agreed that the free bridges would be an effective alternative to using the toll bridges.

- **Impact of TARC Changes for All Travelers—**

*Individuals and Leaders: ...funds have been provided for TARC to buy more buses and vans, create more park-and-ride lots, and make other public transportation improvements. In your opinion, are these effective options for travelers who wish to avoid paying a toll?*

Responses: Over 60% of the individuals agreed that efforts to improve TARC and its services would be an effective option to avoid toll costs while slightly over 30% of the leaders expressed this same sentiment.

- **Will People Change/Consider Using TARC—**

*Individuals/[Leaders]: Given the proposed improvements to TARC's service would you / [the individuals you represent] consider using public transportation to cross the bridge instead of driving?*

Responses: Approximately 48% of the individuals indicated that they would consider public transit as an option for crossing the river. An additional 19% indicated that they might consider transit as a cross-river travelling option. Leaders were less certain that this choice would be made with 18% indicating that people would consider the transit alternative and 42% indicating that they might. Overall, both surveys reflected that 60% to 67% of respondents would/might consider transit to be a viable option for avoiding toll expenses.

- **Strategies Likely to Increase Transponder Usage—**

*Individuals and Leaders: If the following conditions were met, would this increase, decrease, or not impact your likelihood of using a transponder: Lower Toll Rate / Free Transponder / Convenient Locations / Online Ordering / Low Minimum Balance / Convenient Transponder Refills / Account Tied to Card or Bank Account?*

Response: In every case but one, the leaders recorded higher percentages of likelihood that specific strategies would increase transponder use than did individuals. “Free Transponder” recorded the greatest percent of likelihood (over 86% for leaders and 58% for individuals). Leaders were also very positive regarding the potential for lower toll rates and having convenient locations for acquiring transponders and refilling accounts to increase transponder usage. Individuals were less enthusiastic about these measures. Receiving a free transponder was the most highly rated measure (58%), while “Convenient Locations” was rated second highest (48%), and only 40% indicated that getting a reduced toll rate when using a transponder would increase the likelihood of their using one. Approximately 44% of the individual respondents identified each of the other measures—“Online Ordering,” “Low Minimum Balance,” and “Account Tied to Card or Bank Account”—as being effective tools for increasing transponder use.

- **Minimum Transponder Balance—**

*Individuals / [Leaders]: The report and video indicated that transponder accounts could require only a low minimum account balance to be established. In your opinion, what amount of money would you [your constituents] consider to be a low minimum amount?*

Response: Nearly 70% of individuals surveyed identified \$20 as what they would consider to be a “low minimum balance” while approximately 70% of leaders felt that it should be something less than \$20. Twenty percent (20%) of the individuals recommended a minimum balance of less than \$20.

- **Multi-Level Tolling Rate—**

*Individuals / [Leaders]: The proposed mitigation measures do not include a multi-level tolling rate which would give general motorists one rate and low-income residents or minorities another. In your opinion, how do you think this decision will impact you [individuals for whom you advocate]?*

Response: Nearly 30% of leaders responded to this open-ended question by saying, “Lack of a two-tier system would be a hardship,” while 13% of individuals responded, “Will impact me in a negative way.” Sixteen percent (16%) of Leaders responded, “Tolling system is fine as proposed,” while 43% of individuals responded, “Will not impact me.”

As responses to these survey questions demonstrate, perceptions of the effect of tolling and potential mitigation measures are not uniform, and many of the responses vary significantly between EJ community members and EJ leaders. Appendix E contains the IQS *Community* and *Community Leader* surveys and the *Comparison of Surveys* report (Qk4, August 2014), which presents, in bar graph format, an illustrated comparison of the community members’ and leaders’ responses to survey questions that were similar.

In addition to the questions that were similar or the same in both surveys, questions unique to either the leaders’ survey or the community members’ survey were also asked. The following provides an overview of the results of those surveys. (Note: comments categorized as "other" are so noted when the sentiment was expressed by just one individual.)

#### **Leaders’ Responses—**

Question: *In your opinion, how will the Ohio River Bridges Project affect the neighborhoods where low-income and minority residents reside?*

Responses: Of the 51 comments received, the majority (25%) indicated the Project will result in increased traffic on non-tolled routes. In addition, the following opinions were expressed:

- Project would decrease economic development (14%)
- Neighborhoods would alter their habits (14%)
- Individuals would have less money for their needs (12%)
- Project would have little/no effect (8%)
- Uncertain of an impact (8%)
- Project would have a negative impact/reduce quality of life (4%)
- Project would decrease property values/disrupt neighborhoods (4%)

*Question: What other investments and improvements, if any, could be made to mitigate the impact of tolling on low-income and minority residents and neighborhoods?*

Responses: Of 43 comments, there are several categories shown below in the order of decreasing frequency.

- Other—11 (26%)
- Price reduction—9 (21%)
- Use other taxes—6 (14%)
- No suggestions/don't know—5 (12%)
- No tolls—4 (9%)
- Structured payments—4 (9%)
- Invest in light rail transit—2 (5%)
- Give low-income individuals jobs on the Project—2 (5%)

The “Other” category represents 11 unique responses, i.e., not replicated by any responder. These included “using ferries”; “improve streets, signage, and other neighborhood improvements”; “recognition for using [the bridge] like...awards”; have a “seamless” way of identifying who is low income; “improve the lives of low-income people [so they are] no longer low-income”; “building nice low-income housing in Indiana” so people would not be “moving to Louisville as a result of tolls”; and “invest into an EJ consulting firm...to look into how they can better service this group.”

Before finishing the interview, the respondents were given the opportunity to make additional comments about either tolling or the Project in general. The responses were widely varied, however, 22% of the comments were related to the issue of the bridges’ direct financial effects on the EJ populations. Leaders want the EJ community members to be included in the conversation and want governments to understand their needs and how the cost of cross-river travel will impact them.

#### **Community Members’ Responses—**

*Question: ... is there anything else you would like to share about the bridges project and the impact of tolling?*

Responses: Of the 52 comments received, the following specific responses were made by more than one person:

- No additional comments—(42%)
- No tolls—(12%)
- General overall support of Project—(10%)
- Keep tolls affordable—(8%)
- Stop tolls once bridges are paid for—(4%)
- Expand bus service in southern Indiana—(4%)

Table 4 (p. 21) compares community individuals’ and leaders’ responses to the survey questions.

**Table 4: Comparison of Responses to EJ Community and Community Leader Surveys**

	Leaders responded...	Individuals responded...
<b>Tolling Impact on Commuting Behavior—</b> <ul style="list-style-type: none"> <li>• Change / impact</li> <li>• Switch to non-tolled routes</li> <li>• Reduce cross-river trips</li> <li>• Carpool, use public transit</li> </ul>	<b>No change— 11%</b> <b>Yes—79%</b> <b>Yes—45%</b> <b>Yes—18%</b>	<b>No change— 31%</b> <b>Yes—31%</b> <b>Yes—26%</b> <b>Yes—18%</b>
<b>Tolling Impact on Lifestyle—</b> <ul style="list-style-type: none"> <li>• Change/ impact</li> <li>• Switch jobs*</li> <li>• Change residence, doctors*, schools</li> <li>• Other**</li> </ul>	<b>No change/Other— 11%</b> <b>Yes—24%</b> <b>Yes—21%</b> <b>Various changes—68%</b>	<b>No change— 66%</b> <b>Yes— 9%</b> <b>Yes—10%</b> <b>Various changes —9%</b>
<b>Free Bridges as an Effective Option to Avoid Tolls</b>	<b>Yes—58%</b> <b>No— 18%</b> <b>Unsure—21%</b>	<b>Yes—70%</b> <b>No— 14%</b> <b>Unsure—</b>
<b>TARC Changes as Effective Options for All Travelers</b>	<b>Yes—34%</b> <b>No—24%</b> <b>Unsure—42%</b>	<b>Yes—63%</b> <b>No—17%</b> <b>Unsure—20%</b>
<b>Will People Change/Consider Using TARC</b>	<b>Yes—18%</b> <b>No— 37%</b> <b>Maybe—42%</b>	<b>Yes—48%</b> <b>No— 27%</b> <b>Maybe—</b>
<b>Strategies Likely to Increase Transponder Usage—</b> <ul style="list-style-type: none"> <li>• Lower Toll Rate</li> <li>• Free Transponder</li> <li>• Convenient Locations</li> <li>• Online Ordering</li> <li>• Low Minimum Balance</li> <li>• Convenient Transponder Refills</li> <li>• Account Tied to a Card or Account</li> </ul>	<b>Yes overall—86%</b> <b>76%</b> <b>87%</b> <b>79%</b> <b>53%</b> <b>45%</b> <b>71%</b> <b>45%</b>	<b>Yes overall—58%</b> <b>40%</b> <b>58%</b> <b>48%</b> <b>45%</b> <b>44%</b> <b>44%</b> <b>43%</b>
<b>Minimum Transponder Balance</b>	<b>Less than \$20—70%</b>	<b>\$20—70%</b>
<b>Multi-Level Tolling Rate—</b> <ul style="list-style-type: none"> <li>• [Leaders] Lack of... will be hardship / [Individuals] ...will have negative impact</li> <li>• [Leaders] Tolling system is fine as proposed / [Individuals] Will not impact me</li> </ul>	<b>30%</b> <b>16%</b>	<b>13%</b> <b>43%</b>

% in bold indicates that leaders' and individuals' responses differ by 10 percentage points or more.

\* Leaders in Indiana were more likely than their Kentucky counterparts to believe the populations they represent will need to change jobs or change doctors.

\*\* Leaders whose responses placed them in the "Other" category provided comments outside the given choices, including that the burden of tolls will impact families in their travel activities and their ability to use their income for family and household expenses. Community members in this category also noted a variety of anticipated changes or impacts such as: would be unable to afford tolls, would carpool/bike/make fewer trips, would lose money that goes to child support, etc.

## V. MITIGATION

This section identifies and evaluates potential measures to mitigate the economic effects of tolling on EJ populations. Section V.A summarizes mitigation measures that were included in the RROD and are already being implemented. Section V.B evaluates the additional mitigation measures that have been committed to since the RROD was issued.

### V.A Mitigation Required by the RROD

#### V.A.1 Transit Service Enhancements for Cross-River Travel

The survey of bridge users conducted for the SFEIS (*Ohio River Bridge Users Study*, October 21, 2011) found that when comparing the travel patterns of TARC users versus automobile drivers, those who use TARC for cross-river travel cross the bridges on a more regular basis than drivers. Specifically, the *Users' Study* found that 53% of the TARC users crossed the bridges several times a week or every weekday. The study further determined that 30% of those users were low-income while 85% were minorities. In updated information, TARC officials noted that, based upon 2013 survey results, 55% of ridership had an annual income of less than \$25,000. The Project will directly benefit TARC users from EJ communities as well as the general community, by enhancing transit options for cross-river travel and providing two additional bridges and thereby increasing capacity and reducing travel time. Given the high percentages of EJ ridership, benefits to TARC stand to disproportionately benefit the EJ populations.

In addition, as documented in the SFEIS and RROD, the States have provided \$20 million to TARC for an enhanced bus program. The commitments for enhanced bus service in the RROD (pp. 67–68) are listed below:

- *Constructing and/or expanding park and ride facilities.*
- *Purchasing buses and vans for express and shuttle bus service during construction.*
- *Purchasing and rehabilitating additional facilities to accommodate the increased fleet.*
- *Improving and consolidating existing bus stops and constructing new bus stops.*
- *Developing a public awareness and communications program, including advertising, using emerging technology to communicate with the public to encourage ridership, and informing low-income populations of the enhanced bus service options.*

After the RROD was issued, KYTC, INDOT, and TARC executed an MOA to fulfill these commitments. (See Appendix F1.) The MOA, signed May 2, 2013, specifically identifies the objective of serving EJ populations, as follows:

[**Bold** text calls attention to the Project's EJ mitigation commitments.]

*WHEREAS, Section 4.1.17 of the Revised ROD describes the measures that have been identified by INDOT and KYTC, in cooperation with FHWA, to mitigate the economic effect of tolling on minority and low-income populations, including the commitment to include enhanced bus service as part of the Modified Selected Alternative, as described in Section 4.3.2 of the Revised ROD;*

*NOW, THEREFORE, INDOT, KYTC, and TARC [the Parties]...have entered into this Memorandum of Agreement (MOA) to satisfy the requirements of the SFEIS and the Revised ROD with respect to the inclusion of enhanced bus service as an element of the Modified Selected Alternative and*

***as partial mitigation for the economic effect of tolling on environmental justice populations.***  
(p. 2)

\* \* \*

*The Parties agree that, following the end of construction of the Project, INDOT and KYTC will coordinate with TARC to determine how the investment in transit equipment can continue to promote **cross-river** mobility. Matters that may...be explored at the time include **continued monitoring and adjustment of cross-river transit service to address the needs of environmental justice populations....** (MOA II.A, p. 5)*

In *The Ohio River Bridges Project: Enhanced Bus Service* report of June 2014 (see Appendix F2), TARC identified the investments that have been/will be funded with the \$20 million as part of the Bridges Project. The report describes these investments, as well as TARC's associated plans for enhanced bus service and improvements to benefit the Louisville and Southern Indiana area, with a key focus on EJ populations on both sides of the river. The following excerpts from TARC's 2014 report identify some of the enhancements associated with TARC's commitments to assist EJ populations and improve cross-river travel.

- *The funding [through the LSIORB Project] for vehicles [including 21 buses, 8 vans, and 12 TARC3 vehicles] has thus far allowed TARC to significantly modernize its aging fleet [by purchasing] more efficient vehicles that save on operating and maintenance costs which improves service that is used predominately by low income communities and takes pressure off of TARC's operating budget. [Note: TARC's 2013 onboard survey results showed 55% of ridership had household incomes of less than \$25,000, and 17% had from \$25,000 to less than \$35,000. Approximately 75% of the riders on TARC3's paratransit service had household incomes of less than \$25,000.]*
- *The passenger vans...purchased with project funding will help meet a growing demand in the region's vanpool (ridesharing) program. TARC provides vehicles for the vanpool program which is administered by KIPDA, the region's MPO. These vans can be dedicated to cross-river travel for groups of individuals going to a common destination and provide a cost-effective travel option compared with driving a personal car. The vans could also be used as a shuttle service linking a community or group of riders to a common destination such as a grocery store or a mall or as a circulator from park-and-ride lots to work locations.*
- *An overarching communications plan including Environmental Justice community outreach has been developed and will continue to be followed.*
- *Downtown circulators/all-electric buses will provide mobility and relief for passengers throughout downtown, including connectivity with Environmental Justice communities. The rides will be fare-free.*
- *Distribution of Information...throughout the region including in Environmental Justice communities through a variety of ways including...The Louisville Defender and Al Dia en America. Information is also distributed and displayed at 19 public libraries in Louisville Metro and Southern Indiana, churches, schools, community centers, housing authorities and other organizations serving low-income communities.*
- *To improve cross-river mobility during the Downtown Bridge construction and the Spaghetti Junction rebuild, in January 2014 TARC introduced a new express service between downtown Louisville and Sellersburg in Southern Indiana.*

- *A new shelter and signage [on the Ivy Tech College campus in Southern Indiana]...using the ORBP enhanced bus service funding.*
- *TARC will develop plans for permanent transit facilities improvements in the downtown area and in Southern Indiana.*
- *TARC is in the process of determining other major improvements in the service area...primarily focused on improving facilities in the environmental justice areas and along major commuter or high frequency routes. [Note: Many of TARC's Park and Ride areas are within or adjacent to EJ areas based on the ACS data mapped herein.]*
- *TARC is exploring options for service enhancement on both sides of the river and in the downtown area.*
- *TARC is partnering in major transportation planning processes Move Louisville, Connecting Kentuckiana and the Downtown Mobility Plan to improve public transportation and cross-river mobility in the TARC service area.*

***FHWA GUIDEBOOK... Use of toll revenues to support improved transit service has been one of the most successful strategies at gaining support from lower income groups as it provides mobility options that best serve these communities.***

*Source: Guidebook for State, Regional, and Local Governments on Addressing Potential Equity Impacts of Road Pricing, April 2013, p. 28.*

***Though toll revenues will not be used, KYTC and INDOT have provided \$20 million to TARC toward the goal of supporting improved transit service and, thereby, in concert with FHWA guidance, are providing improved “mobility options that best serve these [EJ] communities.***

These and other capital investments and infrastructure improvements used to enhance cross-river mobility (see the TARC report in Appendix F2) will provide benefits that will aid in mitigating the effect of tolling on EJ communities. While some of these measures may be short-term and subject to be discontinued once Project funding is exhausted (e.g., the marketing campaign), capital investments in new buses, paratransit vehicles, new bus stops, etc., will remain in use and provide benefits long after the Project construction is complete. Benefits to the EJ communities will include increased reliability, improved frequency of buses crossing the bridges, and increased number and convenience of both park-and-ride facilities and bus stops.

As part of the LSIORB Project funding, in January 2014, TARC introduced a new express service between downtown Louisville and Sellersburg in Southern Indiana. The new 65X route provides express commuter service to downtown employment areas from a new, LSIORB Project-funded Park and Ride lot and covered shelter at the Ivy Tech Campus to Louisville's Medical Campus on Broadway, Preston Street, and Jackson Street; and connections for college students at Ivy Tech and Jefferson Community and Technical College (JCTC) in downtown Louisville ([www.ridetarc.org/65X](http://www.ridetarc.org/65X)). This new route creates a connection to educational and employment areas, which serves to create new opportunity for the EJ populations. Using funds provided by the Project, an extensive marketing campaign to promote this site was undertaken by TARC, including mailers to all residents in the area, posters with the message “Park your troubles in Sellersburg,” outreach to businesses, non-profit organizations, Ivy Tech, and email and social media blasts.

As of this writing, TARC is in the process of determining other major improvements in the service area, such as new Park and Ride lots and improved or consolidated bus stops at major routes and transfer



locations. In TARC's 2009 Long Range Plan, the need for new Park and Ride facilities is identified but specific locations or number of such facilities is not.

During construction, TARC has implemented a texting service to alert passengers to detours, stop relocations, and other impacts, and is seeking real time rider feedback on TARC services as it relates to Bridge-related construction traffic and issues.

TARC officials noted in a meeting in March 2015 that plans to improve bus stops in the downtown area are being developed, but implementation would not occur until Project construction affecting the downtown streets is complete. The plans will include ADA compliant access on sidewalks, sidewalk rehabilitation, new signage, and improvements to covered bus stops. As stated in the MOA, one of the key objectives is to "address the needs of the environmental justice populations" with such services. Therefore, INDOT and KYTC will continue to monitor the progress made by TARC in its use of funds provided by the Project for improvements that can benefit the EJ populations. Monitoring includes reviewing TARC's quarterly reports documenting the status of the agency's use of these funds. Independent of the MOA and the SFEIS, during the 2013 Kentucky General Assembly, HB441 was introduced, passed by the Senate and House, and then signed by the Governor on March 19, 2013. HB441 has not yet been codified, but includes the following language regarding tolling and transit:



Source: [www.ridetarc.com](http://www.ridetarc.com)

*The General Assembly encourages the Kentucky Transportation Cabinet...to consider the feasibility of exempting mass transit vehicles from the payment of tolls for any project developed under the provisions of that chapter. (pp. 6–7)*

During meetings in March 2015, TARC officials stated that toll costs placed on TARC vehicles would have an adverse effect on TARC's Operations Budget, which would, in turn, affect its ability to serve a ridership that is primarily composed of members of EJ communities. The resulting commitment to exempt mass transit vehicles from the payment of tolls is discussed in Section V.C.2, *No Tolls for Public Transit Vehicles*.

#### **V.A.2 Post-Construction Monitoring**

Increased traffic congestion, as a result of traffic diverting to avoid the tolled bridges, could contribute to economic effects, even for drivers not using the tolled bridges, because traffic congestion lengthens the time needed to complete a trip, and increased travel times contribute to higher "user costs." Time of travel is influenced by traffic and congestion along the travel corridor. Improving the travel time, with attention to travel corridors used by EJ populations, could be accomplished by general transportation system measures (TSMs) such as optimizing signal timing, improving signal technology and identifying signal relationships within the overall traffic network. Modifying lane widths, minimizing conflicts, reducing parking, access management, and converting one-way or two-way streets could help to facilitate improved travel times for trips originating in EJ areas.

**As required by the RROD (pp. 19–20), the States commit to post-construction monitoring of traffic to determine whether there are adverse effects to EJ communities as a result of traffic diversion.**

Should this monitoring identify congestion-related problems associated with traffic diversion through these environmental justice areas, the States will work with the local authorities (who generally have

jurisdiction over local traffic management issues), as well as TRIMARC<sup>10</sup> and the Louisville MPO, and representatives of the EJ community to identify options to mitigate these traffic diversion impacts. (See Section VI, *Traffic Diversion*.)

**V.B. Traffic Control Measures Approved by the RROD as Elements of the Selected Alternative**

Regarding the US 31/Clark Memorial Bridge, it should be noted that the Indiana approach to the bridge is being substantially improved (see Figure 3) as part of the LSIORB Project design approved in the RROD. In its pre-Project configuration, US 31 sloped down from the bridge to intersect at-grade with Court Avenue, and then continued north on surface streets, never directly reconnecting to I-65. As part of the Project, US 31 will remain elevated as it extends from the bridge deck north to bridge over Court Avenue and connect with I-65. The Court Avenue at-grade intersection is being replaced with a much safer and efficient grade-separated interchange. The non-tolled US 31 Clark Memorial Bridge and the I-64 Sherman Minton Bridge lie adjacent to identified EJ populations in the study area. (See Figure 1, p.4.) The reconfiguration of the US 31/I-65 connection provides a very direct connection to the bridge for southbound travelers originating from EJ areas that lie adjacent to the corridor. It also creates much improved northbound access to I-65 for the EJ communities in downtown Louisville.

**V.C Additional Mitigation Measures Considered**

The following sections present additional potential mitigation measures that have been considered. This broad range of measures was identified during the preparation of the SFEIS and RROD, through the community input survey process summarized in Section IV, *Public Input*, as well as through review of EJ-related FHWA publications and other appropriate documents such as the following:

- “Environmental Justice Reference Guide.” FHWA, April 2015.
- “Environmental Justice Strategy.” Department of Transportation, March 2012.



Figure 3: Future Access to Clark Memorial Bridge in Southern Indiana

<sup>10</sup> TRIMARC is the Intelligent Transportation Systems (ITS) for the Louisville Metropolitan area. The system includes an integrated network of sensors, cameras, dynamic message signs, highway advisory radio, and computers monitoring traffic in Louisville and Southern Indiana. Source: [http://www.trimarc.org/per/about\\_trimarc.pl#Overview](http://www.trimarc.org/per/about_trimarc.pl#Overview)

- “Environmental Justice Emerging Trends and Best Practices Guidebook.” FHWA, November 2011.
- “Guidebook for State, Regional, and Local Governments on Addressing Potential Equity Impacts of Road Pricing” (*Guidebook*). FHWA, April 2013.
- Transportation Research Record: Journal of the Transportation Research Board, “Environmental Justice Issues Related to Transponder Ownership and Road Pricing.” Transportation Research Board, Volume 1932, 2005.

Some of these measures were introduced in the June 2013 *Draft Economic Effects Assessment* and commented upon during the public involvement process, while others newly came to light during that process. Based upon consideration of the comments received and additional research, this report expands upon possible mitigation options outlined in the *Draft Economic Effects Assessment* and adds substantive modifications and updates regarding the options presented in the original draft. The potential mitigation measures and sections in which they are addressed are as follows. Sections V.C.1–3 present mitigation measures that were considered and found practicable, and those described under Section V.C.4 were found not to be not practicable.

**V.C.1 Transponders and User Accounts**

**V.C.1(a) Obtaining Transponders**

**V.C.1(b) Managing Transponder User Accounts**

**V.C.1(c) “Getting the Word Out” about Transponders**

**V.C.2 No Tolls for Public Transit Vehicles**

**V.C.3 Signage for Access to Non-Tolled Bridges**

**V.C.4 One-Time and Ongoing Mitigation Programs Considered but Found Not Practicable**

**V.C.4(a) One-Time Transponder Account Credit Program**

**V.C.4(b) Ongoing Percentage Toll Rate Toll Rate Discount Program**

**V.C.4(c) Ongoing Tax Credit**

**V.C.4(d) Conclusion**

Many of the mitigation measures discussed in this section have been incorporated into the Tolling Mitigation Plan. For a complete list of the adopted mitigation measures, refer to Appendix A.

**V.C.1 Transponders and User Accounts**

Because the Tolling Body has adopted initial base toll rates requiring the use of a transponder to obtain the **lowest toll rates**, measures that help to maximize the use of transponders within the EJ communities would be among the **most effective means to minimize the adverse economic effect of tolls** on EJ populations. Therefore, measures to make local transponders affordable and easy to acquire, and to maximize their availability and use, would reduce tolling costs for members of the EJ communities. As a result, this cost-savings commitment will serve to narrow the user cost gap between the EJ and the non-EJ communities

For both occasional and frequent cross-river travelers, EJ community members will realize a financial benefit by establishing a transponder account. For example:

- A low-income EJ community member who travels across the river occasionally and uses a transponder would pay a toll of \$2 each way. Tolls will be collected from those without a transponders by taking a picture of the vehicle’s license plate and charging the vehicle’s registered owner (either to an established account or by mail). The toll rate will be higher for

those who rely on video method of toll collection (as discussed in Section III.B): \$3/trip with an established pre-paid video account or \$4/trip for those who do not establish a pre-paid account. The greatest value of the transponder to the low-income transponder user is the ability to avoid the higher toll rates charged to those without transponders.

- A low-income member of the EJ community who travels across the river twice per day for work would make an average of 40+ trips per month across a tolled bridge. Without a transponder, this would result in a tolling expense of approximately \$80 per month, or \$960 per year. If this person's earnings were at the 2013 HHS poverty threshold of \$11,490, this would amount to 8% of their income. With a transponder, the driver would qualify for the frequent user rate and their costs would be reduced by half thus saving 4% of their income that would otherwise have been required for tolling expenses. In comparison, a non-EJ driver with a per capita income of approximately \$24,000, as identified by the American Community Survey, would save approximately 2% of their income by using a transponder. Thus, the savings experienced by using a transponder and obtaining the discounted transponder toll rate would be greater for low-income EJ drivers than for non-EJ drivers.

A 2005 study sponsored by the Transportation Research Board, "Environmental Justice Issues Related to Transponder Ownership and Road Pricing<sup>11</sup>," concluded that "many lower-income potential road users cannot obtain transponders because they lack credit cards or checking accounts or they cannot easily invest money in a transponder account, which often requires a significant deposit and toll prepayment." It also found that "transponder barriers are real impediments for equal access to toll roads. Obtaining a relatively inexpensive transponder account requires paperwork, money, and payment methods that are not available to between 10% and 20% of the population." Of 24 U.S. electronic toll systems considered in the study, all but two required a deposit in amounts ranging from \$10-\$40 per transponder. The study also found that 20 of the systems required minimum replenishment amounts of \$25-\$50 to maintain an account and that "higher-income households are more likely to have transponders and to use toll roads frequently." By including methods to reduce the barriers to transponder usage for EJ community members, what might otherwise result in a greater disparity in user costs will be minimized.

Specific measures to minimize these barriers—**providing transponders at no cost and at convenient locations, facilitating management of transponder user accounts** (e.g., allowing cash payments, lowering the minimum initial deposit, providing convenient locations/methods for account replenishment, etc.), and "**getting the word out**" by setting up a transponder marketing campaign directed at the EJ community—are described in the following subsections. These measures have been incorporated into the Tolling Mitigation Plan. (See Appendix A.)

#### **V.C.1(a) Obtaining Transponders**

Because transponder use would contribute to a reduction in the economic burden low-income individuals would incur with tolls, the first objective will be to facilitate the ability of low-income users to obtain transponders. Therefore, the following measures have been identified as practicable mitigation commitments.

- Providing local transponders **at no cost** and with **no sign-up time limit** for users who open an account.

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<sup>11</sup> *Transportation Research Record: Journal of the Transportation Research Board, No. 1932*, Transportation Research Board of the National Academies, Washington, D.C., 2005, pp. 97–108.

- Establishing locations within existing brick-and-mortar retailers, such as grocery stores, gas stations, and markets within EJ communities for obtaining transponders and establishing/replenishing accounts.
- Making local transponders readily available—such as at the two walk-up centers in EJ communities (one each in Louisville and Southern Indiana)—to provide a convenience for obtaining transponders and replenishing accounts, which would increase the likelihood of transponder usage and minimize tolling expense.
- Partnering with other Governmental Services offices to establish a wide range of locations where transponders can be obtained would also provide opportunities to acquire transponders at locations already frequented by members of EJ populations. This convenience could result in higher use of the transponders and reduce tolling costs.
- Establishing two walk-up centers operated by the Toll System Provider, one on each side of the river, providing easy access to the EJ communities, where individuals can obtain transponders and establish/replenish accounts in person. This will afford EJ residents the opportunity to interact directly and conveniently with persons involved in managing the tolling operations of the Project. Embedding the tolling representative within the community will give local residents ready access to someone knowledgeable about the electronic tolling system. The representative could address concerns with transponders, maximize their usage and benefit, and help eliminate other frustrations that may impair efficient use of the improved cross-river transportation system.
- Identifying partnering opportunities with TARC to make transponder procurement and account establishment/ replenishment available at TARC’s Union Station headquarters at 1000 West Broadway and at the NIA Center on West Broadway at 29<sup>th</sup> Street. The NIA Center is one of TARC’s major transfer points and information centers. Both facilities serve significant numbers of EJ community members. As with the walk-up centers and Governmental offices, convenient accessibility could facilitate access to and, therefore, use of transponders. Additional efforts to promote, within EJ communities, the use of transponders and TARC programs directed toward assisting low-income individuals with the cost of transportation are also being explored, as discussed in Section V.C.1(c), *Getting the Word Out*.
- Developing a website and/or smart phone mobile app, so users can order transponders online and have them shipped directly to their homes and/or businesses. Offering this convenient method to acquire a transponder could increase the potential for low-income and minority users to take advantage of lower toll rates that require use of a transponder. According to TARC’s 2013 on-board survey of ridership, 54% of the low-income riders have a smart-phone and 53% have internet access (compared with 60% and 66%, respectively, of the general ridership). Furthermore, as the survey report states (p. 52):

*...in the case of Facebook and Twitter, the rates of ownership are marginally higher in the Low Income ridership than that of the General Ridership. Therefore, while lower device ownership may act as an obstacle to effectively communicating to Low Income riders, the prevalence of social media usage does appear to offer some advantage to doing so.*

For EJ users who may not own a smart phone or have internet access in their residences, access to ordering transponders online will be available through computers located at public libraries throughout EJ areas.

Types of Transponders—It should be noted that two types of transponders will be recognized by the toll collection system established for the Project:

- A national-system transponder that is compatible with tolling systems used in other areas of the country (e.g., EZ Pass, Sun Pass, etc.). The specifications to manufacture these transponders require a hard plastic casing and result in a relatively high production cost.
- A less costly, local transponder. This type of transponder may have compatibility with other tolling systems that do not use the hard casing transponder, but would cost considerably less than the national-system transponder.

Whereas providing free local transponders would help to address the effects of tolls associated with this Project, KYTC and INDOT do not believe it is either reasonable or practicable for the States to incur the additional expense of providing national-system transponders at no cost to users. The national-system transponders are significantly more costly, and would not provide any additional mitigation of the economic effects of tolls for this Project. Moreover, the mitigation developed for this Project is not intended to address the effects of tolling costs associated with toll systems elsewhere in the country.

Commitment—The States will provide local transponders at no cost, which would assist low-income and minority users in minimizing their tolling expense by avoiding the higher “video rate.” Developing a system for acquiring transponders that is user-friendly and convenient could also play an important role in assuring maximum use of transponders. By removing or minimizing impediments to transponder procurement, EJ populations would have the opportunity to take advantage of the lower system toll rates that require use of a transponder. When evaluating transponder-related mitigation, this measure received the highest positive response from EJ community individuals and leaders. (See *EJ Community Survey* and *EJ Community Leader Survey* in Appendices E3 and E4.)

Providing free local transponders would render a proportionately greater benefit to low-income populations, as the money saved on the transponder purchase by low-income people would be a higher percentage of their income than would the money saved by people with higher incomes. In addition, because the cost of the toll constitutes a greater percentage of the average cross-river trip cost for EJ users than for non-EJ users (as demonstrated in the User Cost Analysis discussed in Section III, *Economic Effects*), access to the lowest available toll rates (i.e., the transponder rates) will provide a proportionately greater benefit (proportionately greater mitigative effect) for EJ users than for other travelers. Ensuring widespread transponder availability and usage should, in turn, effectively minimize any potential additional adverse effects from implementation of a video toll rate and/or prepaid video toll rate as part of the overall toll rate structure. **Maximizing transponder usage through the provision of free local transponders would help to mitigate the potential disproportionately high and adverse effect on EJ populations identified through the User Cost Analysis.**

To be eligible for the lowest tolling rate, one must have a transponder. It will be important for members of the EJ community that locations where transponders are available for account setup be convenient and accessible. Having only a limited number of locations that are distant from these communities could discourage participation in the program. Adopting measures that will make transponders available in retail stores at walk-up centers, and Governmental Services offices within or proximate to these communities will minimize travel expenses, time involved and inconvenience, and help to promote transponder access.

TARC surveys indicate that some 60% of their users, who are predominantly from the EJ community, have smart phones. With this in mind, their marketing strategies include social media and applications that are accessible using smart phones. Because it will be important to take advantage of current

technology to maximize the availability of transponders and their use throughout the EJ communities, an app will be developed that will provide easy access to obtaining and managing transponders. This app will provide easy access to the lowest possible toll rates and an opportunity to minimize the impact of tolling expenses on members of the EJ communities.

#### **V.C.1(b) Managing Transponder User Accounts**

As stated above, because transponder use would contribute to a reduction in the economic burden low-income individuals would incur with tolls, the following measures have been identified as practicable mitigation commitments for convenient management of transponder accounts for EJ populations.

- Establishing a low minimum balance of \$20 to be deposited by users to open their user accounts. **This measure could make establishing an account less of a financial burden and reduce the probability that low-income populations will be excluded from the financial advantages of transponder usage.** Nearly 70% of the surveyed individuals in the EJ community were receptive to a \$20 minimum balance for establishing an account. (See *EJ Community Survey*, p. 22.)
- Establishing a wide range of options for the replenishment of funds in a user's account, including cash, credit/debit cards, money orders, bank transfers, online payments, a smart phone mobile app, and other typical means of paying for goods and services. A diversity of funding options to replenish an account (including cash payment at convenient locations for those who do not have bank accounts or the other options) will provide opportunities for persons to take advantage of low transponder rates and best manage their tolling expenses. When evaluating transponder-related mitigation, this measure received the fourth highest positive response from the EJ community and its leaders. (See *EJ Community Survey* and *EJ Community Leader Survey*.)
- Establishing brick-and-mortar locations (e.g., government buildings, gas stations, grocery stores), with particular emphasis on locations in low-income areas and minority neighborhoods, where individuals can replenish or make deposits to tolling accounts. Likewise, a mobile source could be used to improve convenience. Convenience of these locations could increase the probability that these populations will be eligible to receive the lowest possible rates and reduce their costs of cross-river travel. When evaluating transponder-related mitigation, this measure received the second highest positive response from the EJ community and its leaders. (*EJ Community Survey* and *EJ Community Leaders Survey*.)
- Developing a website that would allow for the management of accounts online. Offering this convenient method to manage accounts would reduce the costs of mailing or otherwise traveling to central points in the area to address account needs. When evaluating transponder-related mitigation, this measure received the third highest positive response from the EJ community. (*EJ Community Survey*.)
- Establishing opportunities for multiple users/ transponders to be funded under a single account. Especially for low-income individuals, establishing multiple transponder accounts for family members or multiple vehicles, each with its own minimum balance requirement, could create a financial burden. Creating the opportunity to link multiple transponder accounts to a single funding source would minimize the initial cost of an account and make it easier to take advantage of the low transponder rates.

Commitment—As documented in the 2005 TRB Report, there are real barriers that prevent or discourage low-income populations from obtaining and managing transponders. Many in the EJ community do not have a bank account or credit/debit card that can be linked to the transponder account and used for payment of tolls. Bank accounts require minimum balances be maintained in order to avoid monthly charges that are costly to people of low income. For these members of the community, it is important that alternative means of payment be made available. The mitigation measures to be adopted will include the opportunity to replenish accounts with cash and a variety of other alternatives that are sensitive and responsive to that portion of the population that do not use banks.

At the time that an account is established, an applicant will be provided with a free transponder and a minimum balance will be required for the account. For a person with limited income, this expense could be a hardship and a barrier to their recognizing the benefits of a reduced toll rate. Responsive to input gathered from EJ community members, a low minimum balance of \$20 for a user account that provides the flexibility to establish a single account for multiple users/transponders will be incorporated into the mitigation. These commitments by the States will minimize the money required to apply for an account—money not readily available to many in the EJ communities. Reducing the initial cost of investment will help to remove barriers to obtaining transponders and achieving the lowest available toll rates for EJ community members.

It is important to point out that providing this combination of measures (i.e., free transponders without a sign-up time limit, a low minimum balance, and convenient transponder and account access locations within EJ communities) is not a routine practice when looking at Electronic Toll Collection systems nationally, and demonstrates a commitment to take appropriate measures to mitigate the disproportionately high and adverse economic effect of tolling on EJ populations.

All transponder user account mitigation measures listed and described above are included in the Tolling Mitigation Plan because they will serve to narrow the user cost gap between the EJ and non-EJ communities. The contract to be established with the Toll System Provider will include provisions to effectively facilitate implementation of these measures.

#### **V.C.1(c) “Getting the Word Out” about Transponders**

A marketing campaign directed toward EJ populations to increase transponder usage will be important to increasing awareness of the opportunities to minimize tolling expenses. Therefore, the following measures have been identified as practicable mitigation commitments toward this end.

- Developing a marketing campaign to promote the use of transponders among EJ community members. The States have retained the services of New West—a Louisville marketing firm that is a certified Minority Owned Business Enterprise (MBE)—to act as a public relations and marketing agent for the tolling aspects of the Project. As part of their scope of work, New West is tasked with creating marketing outreach campaigns directed at several specific audiences. One such audience is the EJ community. The contract with New West requires engaging EJ community members to gauge their knowledge of the tolling system, including the benefits associated with transponder usage. Further, New West will direct public information campaigns in local media markets and in locations frequented by EJ populations to educate the EJ community on the benefits of transponder usage. The toll system will record statistics related to the transponder usage rate for EJ communities and for the area as a whole. If it is discovered that the EJ transponder usage rate lags behind that of the population as a whole, the Tolling System Provider will be tasked with investigating the reasons for the gap and presenting a plan for addressing the issue.



- Creating partnering opportunities with TARC. Reaching EJ populations with information about transponder availability, procurement, account management, etc., will involve an extensive marketing campaign. With funds obtained from the Project (i.e., the \$20 million), TARC has already initiated a marketing campaign promoting its cross-river transit service and other Project-related transportation activities. As noted in Section V.A.1, KYTC, INDOT, and TARC are in the process of identifying partnering opportunities that will promote programs that assist low-income populations with the cost of transportation. The States are investigating the possibility of using TARC’s marketing to reach an established EJ audience; and TARC is exploring the potential for working with the States to market its discount ridership and associated programs to the large EJ audience toward which the States’ campaign will be directed. This partnership would benefit EJ populations due to the comprehensive outreach it would provide: the States can benefit from TARC’s marketing opportunities (display areas on buses, the TARC website, the NIA Center and Union Station, etc.) and established network of EJ community resources and services, while TARC can benefit from the States’ outreach campaign to be directed toward TARC’s primary ridership—EJ community members.

Commitments—As noted, the States are initiating an extensive marketing campaign that will be directed toward the Louisville-Southern Indiana region as a whole but with special emphasis given to reaching members of the area’s EJ populations to help narrow the user cost gap caused by tolling. In addition, the States will pursue marketing opportunities with TARC as outreach to TARC’s established network of EJ community resources. The goal of the marketing commitments is encouraging members of the EJ communities to take advantage of opportunities to reduce the cost of cross-river transportation by using transponders, which will be free and will provide lower toll rates than those required of drivers who rely on video capture of license plates and mailed billing as their toll payment option.

## **V.C.2 No Tolls for Public Transit Vehicles**

Following the Kentucky Open House in July 2013, TARC officials submitted a resolution requesting that TARC buses be exempt from tolls; and a petition with 67 signatures was submitted in support of House Bill 129, which included a call for exempting TARC from tolls.

Recent coordination with TARC officials indicated the imposition of a toll on buses and TARC3 Paratransit would affect TARC’s limited Operations Budget, thereby causing TARC to evaluate options to use non-tolled bridges, or reduce services in the form of eliminating routes or reducing the number of crossings or, as a last resort, increasing fares. The reduction of services would be an adverse impact to EJ populations, since a key element of TARC’s mission is to provide mobility to low-income and minority populations. The 2011 *Users Study* (see *SFEIS River Bridge Users Study*, Appendix B.8.2) conducted for KYTC and INDOT identified 53% of the TARC ridership as “heavy user” cross-river riders (i.e., crossing several times a week), of which 85% were minority and 30% low-income riders. According to TARC’s most recent (2013) onboard passenger survey, minorities comprise 63% of its total bus ridership, 55% of whom are African Americans; and 55% of all riders have an annual income of less than \$25,000. TARC officials also noted that TARC3 Paratransit ridership is more disproportionately low-income than the bus ridership.

As noted, adding the cost of the toll to TARC would put an additional strain on an already limited Operations Budget. Exempting mass transit vehicles from the payment of tolls may prevent reduction in or loss of services. Because TARC’s ridership is primarily composed of EJ populations, any negative impact to services would have a negative impact to EJ ridership in the form of reduced trips, longer trips (to access non-tolled bridges), or eliminated routes. Increased operational costs may also result in a

need to increase rider fares. (NOTE: The process for increasing fares is complex and requires an economic analysis of all TARC services. Fare rate hikes are governed by many policies and must be vetted through a public hearing process, and include an Environmental Justice analysis to consider disproportionately high and adverse impacts to low-income and minority populations.)

Because members of the EJ populations use public transit at a higher rate than the general population, **providing toll-free transit service will lessen the economic impact of tolling on EJ populations and provide a disproportionately greater benefit to that portion of the population.** The exemption is included in the Tolling Mitigation Plan. (See Appendix A.)

### **V.C.3 Signage for Access to Non-Tolled Bridges**

The I-64 Sherman Minton Bridge and the US 31 Clark Memorial Bridge are located in close proximity to major EJ populations in the area. KYTC and INDOT propose to deploy signage along traffic corridors within the EJ communities that will clearly identify routes to the non-tolled bridges. Clearly identifying travel corridors from EJ areas to these non-tolled facilities will make EJ drivers aware of choices that are available for toll-free cross-river travel.

### **V.C.4 Toll Credit and Discount Programs Evaluated and Determined Not Practicable**

As an aid in the evaluation of input received on the *Draft Economic Effects Assessment*, KYTC and INDOT conducted an additional assessment of toll mitigation options, including a one-time credit, a toll discount, and a tax credit. When evaluating potential methods for implementing such a program, it was recognized that there may be efficiencies in program administration by aligning the tolling mitigation program with other state/federal assistance programs that provide benefits to EJ community members. Since eligibility criteria for these assistance programs are primarily based upon income, estimates for administration of the tolling mitigation programs evaluated and the associated potential loss of revenue also considered income as the primary eligibility criterion.

To assess these options, the following two reports were prepared:

- *Administrative Cost Estimates of Implementing a Toll Mitigation Program for Low Income Customers (Administrative Cost Estimates)*, Computer Aid, Inc. (CAI), December 2014. The purpose of this report is to provide an estimate of initial capital costs and near-term operations and maintenance (O&M) costs for implementing a toll mitigation program for low-income residents in the Project area. The full text of this report is in Appendix B.
- *Toll Discount Analysis (Discount Analysis)*, Steer Davies Gleave (SDG), November 2014. Following the investment grade T&R study (referenced in Section III.E, *Updated Traffic Forecasts*), an analysis was prepared primarily to evaluate potential revenue impacts of a toll mitigation program for low-income residents in the Project area. The full report is in Appendix C.

While the focus of each report is different, both reports share some common criteria upon which their cost estimates/revenue impact estimates are based. Program options evaluated in these reports incorporated mitigation approaches initially identified in the *Draft Economic Impacts Assessment*. Three types of potential mitigation programs were considered—a one-time transponder account credit program, an ongoing percentage toll discount program, and an ongoing state income tax credit program. These program options have been determined not to be practicable for the reasons described in Sections V.C.4(a–d).

#### **V.C.4(a) One-Time Transponder Account Credit Program**

To incentivize transponder usage and to offset initial tolling costs, EJ residents could receive a one-time transponder account credit. This program would be offered for a limited time and, as currently envisioned, would expire after approximately 90-days. The objective of this measure is to assist low-income people with the transition to using tolls and give them the opportunity to use the new facility or seek alternative routes across the river. Eligibility could be determined based on individual income (e.g., based on participation in one or more existing, state/federal assistance programs that provide benefits to low-income individuals) or based on residence in a geographic area identified as low-income (e.g., based on residence in a Census “block group” with a high percentage of low-income residents). The actual amount of a credit and the time duration would be explored in greater depth during the development of the Tolling Policy.

Based on the initial identification of this approach in the June 2013 *Draft Economic Effects Assessment* and public support for this approach as reflected in comments received, further analysis was conducted. The *Administrative Cost Estimates* and the *Discount Analysis* reports included this program for evaluation—the former to estimate capital and O&M costs and the latter to determine the program’s effects on the Project’s toll revenue stream.

*Administrative Cost Estimates*—The one-time credit program would provide a fixed dollar amount that would only be available to those who are identified as low-income under the income-based eligibility criteria (e.g., participation in a designated governmental, income-based benefits program) and who establish and maintain a transponder account. This approach would be more efficient and less intrusive than the percentage toll discount program because it would avoid the need for the Tolling Body to collect information regarding income from each person who applies for a toll discount.

The estimated capital and O&M costs for the one-time transponder account credit are based on enrollment steps identified in the *Administrative Cost Estimates* report, including a minimal quality control check for income eligibility verification. The report describes the potential enrollment process, and estimates program costs for staffing, facilities and equipment, staff training, and other requirements. Because this scenario would provide a one-time credit, there would be no cost associated with a renewal/re-verification process.

The estimated capital cost for a one-time credit program is approximately \$1.7 million, and the one-year operation cost estimate is \$487,000 for a total cost of approximately \$2.2 million. This one-year operations cost includes approximately six months to plan the program and begin enrollments prior to the commencement of toll collections on the bridge, and another six months to implement and support the program. Tables 3 and 4 in the *Administrative Cost Estimates* report provide detailed cost breakdowns that compare this program’s estimated costs with the ongoing percentage toll rate discount program discussed in Section V.C.4(b).

The administrative cost estimate assumed that eligibility for the one-time credit would be based on participation in an existing income-based government program that provides benefits to low-income individuals, the most affected members of the EJ community. This approach would minimize administrative costs by avoiding the need to obtain individual income information from each individual applying for the one-time credit.

*Discount Analysis*—To determine what, if any, impact to toll revenues could be expected as a result of a one-time credit program, the *Discount Analysis* report evaluated the one-time credit program using both income-based and area-based eligibility for two levels of one-time credit—\$50 (Low) and \$100 (High)—resulting in four account credit scenarios. The total impact of the one-time credit program on toll

revenue would be between \$22,000 and \$206,000. All of these costs would be incurred prior to and during the initial year of operation.

Total Impact to Revenue—Considering the estimated expenses to administer this one-time account credit program (\$2.2 million) in addition to the potential revenue losses (\$22,000–\$206,000), the total costs for a one-time credit program are estimated to be between \$2.2 and \$2.4 million.

#### **V.C.4(b) Ongoing Percentage Toll Rate Discount Program**

The June 2013 *Draft Economic Effects Assessment* considered the option of providing toll discounts to mitigate the effects of tolling on low-income users, but recommended that it not be further considered, noting the following concerns:

*From a system management perspective, the implementation of reduced tolls for specific segments of the population would be a significant administrative and enforcement challenge. Vetting of system users to determine whether individuals meet low-income or minority-status requirements would be onerous and intrusive and likely require a large staff and significant financial resources to manage, including processing, reviewing, and acting on applications and verifying continued eligibility. The implementation of discounts for EJ populations would be further complicated by the need for constant updating of data to assure that changes in people's economic status would be properly reflected by their toll system status. Administratively, a re-verification process would be necessary on a routine and on-going basis throughout the period when tolls were being collected, which would have its own demand for additional staffing and associated expenses. Administration costs for the LSIORB Project must come from tolls, as opposed to other sources of government revenue. Therefore, these costs would either require an increase in the toll rates, or an increase in the length of time the tolls will be in operation.*

\* \* \*

*The Project would not be possible without tolling, because tolling is necessary for the project to be financially feasible. [RROD, p. 21] Rates must be set such that they generate the revenues needed to pay for construction, maintenance and on-going operations of the project. Adjusting the toll rates to provide a discount to a segment of the population, and incurring the additional expense for administration, extra staff, enforcement, etc., would reduce the toll revenues available to address Project needs and could result in the need to adjust the overall Project toll schedule. As shown in the sensitivity analysis conducted for the SFEIS (see SFEIS pp. 3–19), higher toll rates would likely result in greater traffic diversion to the untolled bridges. As a result, by increasing toll rates on a majority of bridge users, greater congestion and delays may be created on the untolled bridges, thereby causing EJ users who are seeking to avoid paying a toll to experience longer trips and greater travel delays on the untolled bridges.*

During the public outreach process following the release of the June 2013 *Draft Economic Effects Assessment*, survey respondents expressed support for continued consideration of toll discounts. In addition, during the 2013 Kentucky General Assembly, House Bill 441 (HB441) was passed by the House and Senate and signed by the Governor on March 19, 2013. This bill requires the Tolling Authority “to consider establishing toll rates based on user income level or any other mechanism to ameliorate financial hardship to low-income users of a tolled project.”

Because of the interest in discounted tolls identified during the public outreach and the Kentucky General Assembly's action, KYTC and INDOT conducted two additional analyses of toll discount programs. These analyses addressed (1) the administrative costs of toll discounts and (2) the toll revenue and traffic effects of toll discounts.

The toll mitigation program was assumed to include an ongoing percentage toll rate discount for low-income users, whereby the toll rates would be discounted by a fixed percentage of the applicable transponder toll rate. As established by the Tolling Body, the initial toll rate, per crossing, for passenger vehicles with a transponder, is \$1 for frequent users and \$2 for non-frequent users. For the purpose of this analysis, it was assumed that a frequent user was defined as one who crosses a tolled bridge a minimum of 40 times per month (e.g., twice per day, five times a week, four weeks per month).

As with the one-time credit, eligibility could be based on participation in one or more existing, state/federal assistance programs; or based on residence in a geographic area identified as low-income (e.g., based on residence in a Census “block group” with a high percentage of low-income residents).

Unlike the one-time credit, the percentage toll rate discount program is assumed to remain in effect on an ongoing basis, defined as a 35-year period for purposes of estimating administrative costs and traffic and revenue impacts.

Administrative Cost Estimates—For the percentage toll rate discount program, recurring due diligence would be performed for randomly selected accounts on an on-going basis to validate customers’ eligibility for this program. Through the duration of the percentage toll rate discount program, on a frequent and consistent basis, EJ accounts would be selected at random for verification of information provided by the customers. The sample size, confidence level, and confidence interval would be determined once the program is underway and adjusted as needed throughout the life of the program. This quality control approach would result in a higher confidence level than the one-time quality control check that would be implemented for a one-time credit program.

The verification process would consist of contacting the office of the state or federal program that was used to demonstrate the individual’s eligibility in order to validate the individual’s current eligibility for that program. Agreements with these other government programs would likely be required for sharing of this information. If the individual’s eligibility is not validated by the applicable office, the applicant would be notified that additional verification is needed or the discount would be discontinued. Throughout the discount program, samples would be recorded and evaluated to identify possible program errors. For the area-based approach, verification would consist of confirming residency within the defined EJ area for the discount.

Cost estimates for implementing and running an ongoing percentage discount program will require the development of software integrated with the tolling system, testing of the system, increased staff to support this long-term program, State oversight, facilities and equipment, staff training, and other requirements. A detailed discussion of the cost estimate is provided in the *Administrative Cost Estimates* report in Appendix B.

Tolling will continue until the Project’s financing requirements have been met, approximately 35 years. It is assumed the capital investments for the ongoing percentage toll rate discount program would have an average of an eight-year life span as more efficient methods and business rules are developed and new technology advancements are employed to realize efficiencies and cost savings. It is, therefore, anticipated that there would be approximately five life cycles during the expected 35-year tolling process. The total estimated capital investment cost would be approximately \$7.5 million for an ongoing program, including an initial capital cost of approximately \$2.5 million, plus approximately \$5.0 million in additional capital costs over the 35-year period. The total cost over the 35-year period—including annual operating costs of approximately \$737,000 and capital cost of approximately \$7.5 million—would be approximately \$33.0 million.

Discount Analysis—Three levels of discount were evaluated: 10%, 25%, and 50%. The percentage of

discount was applied to the toll rate to be paid by a passenger vehicle with a transponder. The discount was applied regardless of whether the user was a frequent or non-frequent traveler. These discounted rates were used in conjunction with the Traffic and Revenue model to analyze the revenue and traffic projections under each discount scenario. The discounted rates used in the analysis are listed in Table 5.

Table 6 summarizes the impact to revenue for each of the levels of on-going discount and for both the income-based and area-based eligibility methodologies. Revenue losses are expressed in nominal dollars over the period of analysis extending from 2017 to 2054. The *Discount Analysis* in Appendix C provides a detailed explanation of the methods used to develop the revenue projections.

**Table 5: Opening Year Base Toll Rates (2017 \$) for Passenger Vehicles**

Payment Type	Base Toll Rate	Basis for Discount	10% Discount Toll Rate	25% Discount Toll Rate	50% Discount Toll Rate
Transponder – Frequent User	\$1.00	\$1.00	\$0.90	\$0.75	\$0.50
Transponder – Non- Frequent User	\$2.00	\$2.00	\$1.80	\$1.50	\$1.00
Registered Video	\$3.00	NA	NA	NA	NA
Other Video	\$4.00	NA	NA	NA	NA

**Table 6: Total Revenue Impact of Discount Scenarios (Sum of 000s Nominal \$ from 2017 to 2054)**

Discount Type	Individual Income-Based	Area-Based
Discounted Toll – Low (10%)	-6,550	-12,452
Discounted Toll – Medium (25%)	-15,670	-43,579
Discounted Toll – High (50%)	-37,992	-109,808

Total Impact to Revenue—Operation of an on-going discount program across the 35-year period will require an initial capital investment, a commitment of additional resources during the period to upgrade the system and employment of trained staff throughout the period to provide customer service for the program at an estimated cost of \$33 million. In addition to these operational costs, the discount will reduce toll revenues between \$6.5 million and \$110 million (as shown in Table 6), depending upon the level of discount and the eligibility criteria used. In total, program costs would be between \$39.5 million and \$143 million. Although it is customary for cost streams that reach years into the future to be discounted in an effort to "translate" those streams into current dollar values, that exercise has not been undertaken here because the exercise is very sensitive to the discount rate selected. Readers should understand that discounting future cash flows can have a large impact on overall results.

**V.C.4(c) Ongoing Tax Credit**

Another approach could be to provide a state tax credit that would reimburse a percentage of tolls paid in the tax year by an individual filing a state income tax return. Eligibility for the tax credit would ultimately be defined through each state’s legislative process. For the purpose of this analysis, and consistent with public input received, it has been assumed that eligibility might be aligned with that of the Federal Earned Income Tax Credit (FEITC). It has been further assumed that only individuals taking the FEITC on their federal tax return would be eligible to claim the state tax credit. To be eligible for the FEITC, a person must have earned income from employment, self-employment, or another source; meet rules for workers without a qualifying child or have a child that meets all the qualifying-child rules; meet other requirements such as having a Social Security Number; and file a federal income tax return. The 2011 income limits for FEITC eligibility are shown in Table 7.

**Table 7: Income Limits for FEITC in 2011**

Children	Maximum Income (Earned or Gross Adjusted)	
	Single filing	Joint filing
3 or more	\$43,998	\$49,078
2	\$40,964	\$46,044
1	\$36,052	\$41,132
0	\$13,660	\$18,740

Source: IRS.gov

Persons who meet these eligibility criteria could receive toll relief in the form of a state income tax credit for all or a percentage of tolls paid in a given year. Eligibility based upon the FEITC would only be applicable to an ongoing tax credit program—not for a one-time account credit or ongoing percentage toll discount program. An individual seeking a tax credit would be required to file a state income tax return. The state tax return would be needed because the credit would be a state-provided credit on the income reported on the state tax forms.

Toward the goal of improving Indiana’s state income tax structure, in September 2014 the State published the *Tax Competitiveness and Simplification Report*<sup>12</sup> identifying the state’s income tax return forms as “unwieldy and burdensome,” the report noted this complexity “creates a perception of unfairness...and imposes a high administrative burden on both taxpayers and the state....An ideal remedy would eliminate nearly all of the modifications, deductions, and [tax] credits,” (p. 30) including the FEITC. Neither the likelihood nor effects of modifying/eliminating tax credit programs in Indiana can be known at present. However, it is probable that any changes to tax credits in general by the States would affect a tolling-related tax credit program.

While providing an ongoing income tax credit program would be a potential method of mitigating the financial effect of tolling on low-income populations, the cost of implementing and maintaining this type of program has not yet been calculated. Evaluating the program requirements on which a cost estimate would be based—including making statutory changes in state tax laws within the two states, and working within the established policies and procedures of the two states’ taxing agencies, as well as the IRS—are beyond the expertise of the authors of this report.

*Administrative Cost Estimates*—For a state income tax credit, verification of eligibility would potentially be much more involved than for the other methods. The sharing of information would require the approval of the Internal Revenue Service (IRS). Adherence to security standards and requirements of the IRS would be necessary. Modification of the tax forms, instructions, software, database, etc., would be required to manage this new tax credit. If the state taxing authorities were not responsible for verifying whether individuals claiming the state tax credit had also claimed the FEITC credit, this responsibility would fall to the TSP. Upon receipt of a statement identifying the person claiming the credit and the amount claimed, the TSP would need to verify the amounts claimed by reconciling with toll system records. Persons found to have claimed a credit without having claimed the FEITC on their federal return or who claimed more credit than that for which they were eligible would be reported to the state tax agency for appropriate action.

<sup>12</sup> The report was the product of a day-long conference, “Tax Simplification and Competitiveness,” hosted by Governor Mike Pence on June 24, 2014. The report is posted on the Indiana Department of Revenue’s website at <http://www.in.gov/dor/files/tax-conference-report-final.pdf>.

*Discount Analysis*—During the public outreach process following the release of the June 2013 *Draft Economic Effects Assessment*, some survey respondents expressed support for consideration of providing a tax credit for low-income individuals who are eligible for FEITC. This type of mitigation program was evaluated in the *Discount Analysis* report (Appendix C) to identify potential revenue impacts should the program be recommended for implementation. Three levels of tax credits were considered: 10%, 25%, and 50% of the total tolls paid in the tax year.

The tax credit was evaluated using some of the elements of the approach to the ongoing percentage toll discount approach. The key difference between these approaches was the time lag between when the toll is paid and when the tax credit is received. As the credit is tied to state income tax, it was assumed that a tax refund would be received at the end of March. Depending on when tolls were paid during the previous year, there could be a lengthy time between the payment of tolls and receipt of the credit. For purposes of determining the impact of a tax credit on toll revenues, a “time value discount rate” of 15% was assigned to reflect the time value of money over a lag time of 9 months (assumed). Based on the calculations resulting from these assumptions (see Sections 4.10–4.14 of the *Discount Analysis*), the nominal toll rate for a transponder user under the “10% Discount” scenario is \$0.90—a discount of ten cents. But because the discount is received later in time, the formula converts that discount to a “perceived” toll rate of \$0.91—equivalent to a discount of nine cents. The resulting perceived opening year toll rates are presented in Table 8.

**Table 8: Perceived Opening Year Passenger Vehicle Toll Rates with Ongoing Tax Credits**

Payment Type	Base Toll Rate	Basis for Discount	10% Discount Toll Rate	25% Discount Toll Rate	50% Discount Toll Rate
Transponder—Frequent User	\$1.00	\$1.00	\$0.91	\$0.77	\$0.55
Transponder—Non-Frequent User	\$2.00	\$2.00	\$1.82	\$1.55	\$1.10
Registered Video	\$3.00	NA	NA	NA	NA
Other Video	\$4.00	NA	NA	NA	NA

*Total Impact to Revenue*—The tax credit would reduce the States’ tax revenues; it would not directly reduce toll revenues at the point of collection. The reduction in tax revenue would range from \$8.5 million (for Low, 10% tax credit for individual income-based eligibility) to \$90.6 million (for High, 50% tax credit for area-based eligibility), depending upon the level of discount and the eligibility criteria used. These sums are shown in nominal dollars over a 35-year period. (*Discount Analysis*, Section 5, presents the traffic and revenue analysis and results.)

**V.C.4(d) Conclusion**

After careful evaluation of the information in this report, as well as the information contained in the *Administrative Cost Estimates* and *Discount Analysis* reports and feedback received through extensive public outreach, KYTC and INDOT have determined that the toll mitigation options identified and evaluated in Section V.C.4, above—i.e., a one-time transponder account credit program, an ongoing percentage toll rate discount program, or an ongoing tax credit program—are not practicable, and therefore have not included them in the Tolling Mitigation Plan. While potentially providing some mitigative effect for EJ drivers using the tolled bridges, each of these measures would involve significant administrative costs (both capital and operating); and pose substantial technical, logistical, and enforcement challenges. The relatively modest benefits provided by these mitigation options do not



adequately offset these significant costs and challenges and, therefore, these would not be practicable options.

KYTC and INDOT have included numerous other mitigation measures in the Tolling Mitigation Plan that will provide meaningful mitigation for the effects of tolls on EJ populations and that do not involve the significant concerns associated with the toll mitigation options discussed in Section V.C.4.

The costs of administering each of the toll mitigation options—a one-time transponder account credit program, an ongoing percentage toll rate discount program, or an ongoing tax credit—would be substantial, and in the latter two cases, would continue for at least the estimated 35-year duration of tolling. Those costs include up-front capital costs (which, in the case of the ongoing discount program, would be repeated every eight years based on capital reinvestment needs) as well as ongoing operations costs. Over the 35-year period, the estimated costs range from approximately \$2.2 million to set up and operate a one-time credit program to approximately \$33 million to set up and operate an ongoing toll discount program (or almost \$1 million a year for the 35-year lifespan of tolling). (Costs for a tax credit program have not been estimated, but they are likely to be comparable to the costs for an ongoing toll discount program.)

In addition to costs between \$2.2 million and \$33 million to set up and operate these toll mitigation programs, each would result in a loss of toll revenue for the LSIORB Project. Revenue losses are estimated to range from up to \$206,000 for a one-time credit program, to between \$6.5 million and \$110 million for an ongoing toll discount program (depending on the level of discount and eligibility criteria used), with revenue losses from a tax credit program falling in a similar range. These costs are in nominal dollars over a 38-year period, from 2017 through 2054.

Combined with these substantial administrative costs and losses of toll revenue, implementation of each of these toll mitigation options would pose substantial administrative and enforcement challenges. Determinations of eligibility would pose significant challenges in terms of obtaining and verifying applicants' information—and maintaining data security with respect to that information. The complexity and challenges of that task are greatest for the ongoing toll discount program, which would require periodic re-verification of an applicant's information. Reliance on applicants' participation in other governmental programs would alleviate some of those burdens, but raises its own issues with respect to the lack of standardization in eligibility criteria among governmental benefit programs, and the challenges in obtaining and sharing information with those agencies for purposes of determining eligibility for the LSIORB toll mitigation program. In addition, under any scenario, a discount would require KYTC and INDOT (through their contractors) to collect and maintain confidential information regarding toll customers.

Other administrative challenges include determining the approach to verification of eligibility, and re-

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*...discounts/exemptions—in essence, varying pricing by person type—are a way of mitigating some demographic equity effects. However, such discounts and exemptions often lead to a greater need for enforcement and high administrative costs, and so should be avoided unless no other means of equity mitigation exists.*

*Source: Guidebook p. 25.*

**KYTC and INDOT...**

**The costs of administering a one-time transponder account credit program, an ongoing percentage toll rate discount program, or an ongoing tax credit would be substantial, and in the latter two cases, would continue for at least the estimated 35-year duration of tolling—approximately**

- **\$2.2 million for a one-time credit program**
- **\$33 million for an ongoing toll discount program**

verification, for program participants. While a less intensive verification program would help to reduce costs, it also may increase the risk of toll revenue loss due to participation by those who do not qualify for the toll mitigation program. A more intensive verification would help to reduce the loss of toll revenues, but would have higher capital and operating costs. Administration of a toll mitigation program also may increase toll enforcement costs, as it may increase the number of disputed tolls or notices of violations for those who claim they are entitled to the toll mitigation (either credit or discount) that is being provided. This additional enforcement activity would increase the operational costs of the program, delay the transfer of toll revenues owed to the states' trustees, and limit timely enforcement actions by the states and the toll system provider.

It should also be noted that the tax credit option is also subject to considerable uncertainty because such an option would depend on legislative action in both Kentucky and Indiana. While KYTC and INDOT could propose the adoption of appropriate legislation, the ultimate outcome of that process is outside their control (and outside the control of the Tolling Body) and would be extremely difficult to predict. Moreover, because a tax credit program would likely operate primarily through the state revenue departments, it is extremely difficult to predict what the costs of such a program would be, how it might be implemented, or how it would ultimately affect LSIORB toll revenues. (These are key reasons why administrative costs for this program were not estimated in the *Administrative Cost Estimates* report.)

In summary, KYTC and INDOT have concluded that these toll mitigation measures are **not practicable, based on their significant costs, loss of toll revenues, and administrative and enforcement challenges**. KYTC and INDOT believe that the other mitigation measures described in this report will provide significant and meaningful mitigation that will serve to narrow the user cost gap between the EJ and non-EJ communities.

The combination of the substantial assistance being provided to TARC, significant transponder procurement and user account management measures proposed above, and potential traffic control measures will ameliorate the effects of tolling on EJ populations and help facilitate their use of the Project tolling system in the most efficient and economical manner possible.

Consequently, in light of the financial requirements of the LSIORB Project, the technical and logistical issues associated with toll collection methods and the identified toll mitigation options, and other needs of the Project, as discussed in this *Economic Effects Assessment*, KYTC and INDOT have not included a one-time transponder account credit program, an ongoing percentage toll rate discount program, or an ongoing tax credit program as part of the Tolling Mitigation Plan for the LSIORB Project.

## VI. TRAFFIC DIVERSION

### VI.A SFEIS Traffic Study

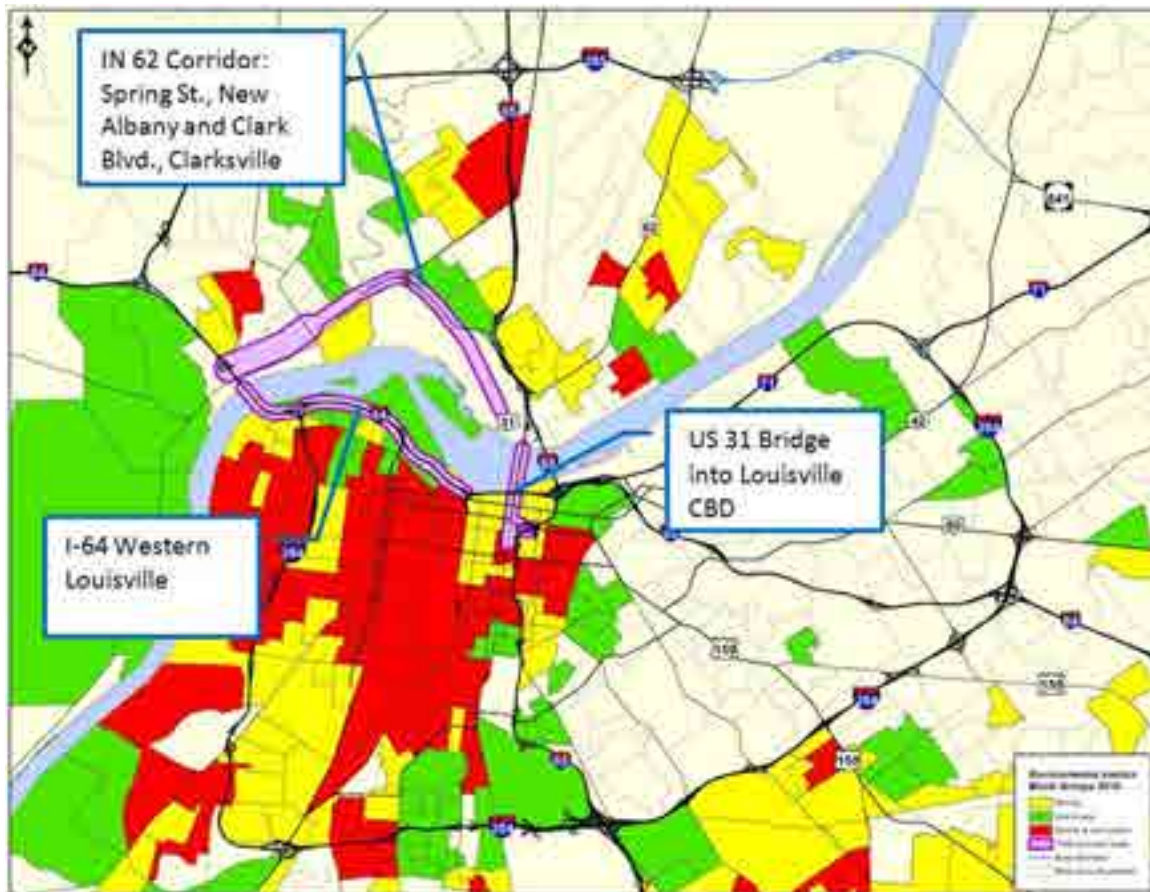
During the development of the SFEIS, a traffic study (SFEIS Appendix H.1) was completed that analyzed the potential for changes in traffic patterns resulting from the introduction of tolls that could affect areas with high concentrations of EJ populations. That evaluation concluded that while some changes in traffic patterns are anticipated as a result of tolling, the changes are anticipated to be minimal and would not have an adverse effect on those EJ populations. The introduction of tolls will likely cause some users to alter their travel patterns to non-tolled or lower-cost alternatives. Changes in travel patterns can result from:

- Route changes: shift to a toll-free route.
- Mode shift: move to an alternative mode of travel, such as transit or carpool.
- Change of destination: choose a similar or related destination that does not require traversing tolled facility.
- Frequency of use/trip elimination: reducing the frequency of a trip, combining multiple trips, or eliminating the trip altogether.

The study in the SFEIS predicted that a small portion of cross-river traffic would shift from the tolled river crossings to the non-tolled I-64 Sherman Minton and US 31 Clark Memorial bridges as a result of toll implementation. In addition to the bridges themselves, increases in traffic can be expected on certain arterial or high-volume roadways that connect to I-64 and US 31. As shown in Figure 4, (p. 44) the primary routes that likely will be used to accommodate the changes in travel patterns due to bridge tolling are the SR 62 Corridor in Indiana, I-64 and the Sherman Minton Bridge, and US 31 on the Clark Memorial Bridge, all of which pass through or near areas that are considered to be EJ communities. The provision of two non-tolled bridges is an important consideration when assessing the economic impacts of tolls on persons of low income.

In the 2012 RROD (p. 19), FHWA determined that the traffic increases associated with this diversion are not expected to adversely affect environmental justice areas or communities due to the low volume of additional traffic that is predicted. The increased traffic is not expected to contribute to additional congestion on those roadways or to be perceptible over existing traffic levels. Thus, FHWA concluded that the Project would not cause a disproportionately high and adverse effect on EJ communities as a result of toll-related traffic diversion.

To verify this conclusion, KYTC and INDOT have committed to pre-and post-construction monitoring of the traffic in these communities to identify whether any unanticipated traffic increases caused by toll-related diversion result in adverse effects to EJ populations in these areas and, if so, to work with local authorities to identify strategies that would be implemented to address the unanticipated disproportionately high and adverse effect.



**Figure 4—Areas Likely to Experience Traffic Diversion and Their Relationship to EJ Communities**  
**VI.B Strategies to Address Unanticipated Traffic Diversion**

KYTC and INDOT gathered baseline traffic information in the relevant EJ communities (using traffic counts at relevant times of day, etc.) in the summer and fall of 2013, prior to the start of Project construction. The results of this pre-construction monitoring will provide a baseline against which to measure future traffic conditions in those areas, based on data to be collected following completion of construction. Post-construction traffic monitoring will occur in the same areas after construction is completed and tolling is commenced on the new and reconstructed bridges. This monitoring will occur no sooner than 12 months and no later than 15 months following completion of construction—providing time for new traffic patterns to establish themselves, but ensuring that monitoring will still be completed in a timely manner.

KYTC and INDOT have engaged local authorities to discuss strategies that would be implemented to mitigate any unanticipated adverse effects of traffic diversion on EJ communities, if such effects are identified as a result of the traffic monitoring conducted after Project implementation. In July 2013 INDOT and KYTC held meetings with public officials and representatives of Clark County and the cities of Clarksville, Jeffersonville, and New Albany, Indiana (July 22); and from Louisville Metro, the Louisville MPO (KIPDA), and TARC (July 23). The primary purpose of the meetings was to discuss potential measures to address adverse effects from traffic diverting onto local streets through EJ communities to reach non-tolled bridges, should such effects be identified after the bridges are open to traffic. An overview was presented of the Project commitment to address potential adverse effects to EJ populations as a result of traffic diversion, noting the following:

- A traffic study conducted for the Project analyzed the potential for changes in traffic patterns resulting from the introduction of tolls, and the potential effect of diversion on areas with high concentrations of EJ populations.
- The analysis concluded that changes in traffic patterns would be minimal and are not anticipated to have an adverse effect on the EJ populations.
- To ensure the validity of this conclusion, the States committed to (1) monitor traffic before and after construction to confirm the accuracy of the conclusion, and (2) to work with local authorities to identify mitigation measures if there are found to be adverse effects to EJ communities as a result of traffic diversion.

Following completion of construction and commencement of tolling, traffic data will be collected from all locations where baseline data was gathered. KYTC and INDOT will analyze the data collected, compare it with the baseline data, and provide a report to FHWA documenting the evaluation and conclusions regarding post-construction traffic volumes and the effects of diverted traffic, if any, on the local EJ communities.

Should unanticipated adverse effects be identified, KYTC and INDOT will reengage with the relevant local authority(ies) to identify those strategies that may be implemented to minimize, reduce, or eliminate the adverse effects. Prior to the post-construction data collection, KYTC and INDOT will also identify members of the local EJ communities for the formation of a traffic advisory group. The charge given to this group will be to:

- Review and consult regarding the results and conclusions of pre-construction and post-construction traffic studies.
- Consult regarding potential strategies that could be pursued with local authorities should unanticipated changes in traffic volumes result in unexpected adverse effects on EJ populations in these areas.

Many strategies exist that could reduce the effects of traffic diversion onto non-interstate or arterial roadways, if such diversion is identified. Options could include measures that would make the roadway safer (if accidents become an issue) and/or increase the travel time (reduce speed) through the area, thus discouraging diverted traffic. The appropriateness of each strategy will depend on the exact location, nature and extent of any traffic diversion effect that is identified, and will be affected by the conditions and characteristics of the existing network in the area where an effect is recognized. These strategies may include any one or combination of the following: adjustments to traffic signals (signal timing changes, upgrading traffic signals technologies, etc.); traffic calming (speed bumps, raised intersections, roundabouts, etc.); “road diets”; conversion of one-way to two-way traffic flow; closing roadway connections; access management; development of complete streets; reduced lane widths; development of gateway signage; changing the roadside context; changing, adding or removing on-street parking; and use of medians. Again, the need for and appropriateness of any of these measures can only be determined definitively after post-construction monitoring is completed. FHWA and the States currently do not anticipate any adverse effects on EJ communities from traffic diversion.

Nevertheless, the Tolling Mitigation Plan (see Appendix A) identifies potential measures that would be implemented if unanticipated effects occur, and the States commitment to work with local authorities and the traffic advisory group to identify and evaluate such measures to be implemented, if necessary, once post-construction monitoring is complete.

## VII. SUMMARY OF PROJECT BENEFITS AND COMMITMENTS TO MITIGATE TOLLING-RELATED EFFECTS ON EJ POPULATIONS

This section summarizes the Project's benefits for EJ populations as well as commitments to mitigate the Project's tolling-related effects on EJ populations. The tolling mitigation commitments summarized in this section have been incorporated into the Tolling Mitigation Plan, which is attached to this report as Appendix A.

### VII.A *Project Benefits*

The Project will improve the transportation system as a whole, which will benefit all residents of the Louisville metropolitan area, including EJ populations. Several of the overall Project benefits have benefits to environmental justice populations in particular:

- Economic Development [III.D]—Per the Economic Impact Study (2014 Update), the Project is expected to generate substantial economic growth and activity. This anticipated growth will benefit the EJ populations by providing employment opportunities, and increasing government revenue that can be used to increase public services.
- Access to Non-Tolled US 31 Bridge [V.A.2]—The reconfiguration of the US 31/I-65 connection will improve travel to and from EJ areas and improve EJ communities' access to the non-tolled Clark Memorial Bridge. The design provides a very direct connection to the bridge for southbound travelers originating from EJ areas that lie adjacent to the corridor. It also creates much improved northbound access to I-65 for the EJ communities in downtown Louisville. At present there is not a direct connection between these two roadways, and the surface streets include several at-grade signalized intersections.
- Improved Travel Time and Reliability for Transit Service on Tolled Bridges [V.A.2]—The reconstruction and expansion of the Downtown (I-65) Bridges, the reconstruction of the Kennedy Interchange, and the construction of the new East End Bridge will improve cross-river mobility in the Louisville metropolitan area. By reducing congestion, the Project will facilitate faster and more reliable transit service for transit routes that serve cross-river traffic. Further, as noted below, TARC's public transit vehicles will use the bridges without paying a toll. Thus, the Project will provide a benefit to public transit users, without causing transit fares to increase.

### VII.B *Commitments in RROD*

As approved in the RROD, the Project included several measures to mitigate the effects of tolling on EJ populations. These commitments remain in effect and have already begun to be implemented. These existing commitments are incorporated into the Tolling Mitigation Plan.

- \$20 Million Allocation to TARC [V.A.1]—The RROD included a commitment to provide \$20 million in funding to the Transit Authority of River City (TARC) for capital investments to enhance bus service. After the RROD was issued, KYTC, INDOT, and TARC executed an MOA (signed May 2, 2013) to fulfill these commitments. TARC's ridership is predominantly composed of members from the EJ communities. The enhancements to cross-river mobility afforded with these funds will, therefore, be a greater benefit to EJ populations as compared to the general population. As noted in Section IV.C, over 60% of the individuals who responded to the *EJ Community Survey* agreed that efforts to improve TARC and its services would be an effective option to avoid toll costs; while both the *EJ Community* and *EJ Leader* surveys reflected that

60% to 67% of respondents would/might consider transit to be a viable alternative to paying tolls for cross-river travel.

- Traffic Monitoring [VI.A]—The RROD included a commitment to conduct pre- and post-construction monitoring of the traffic to identify whether any unanticipated traffic increases caused by toll-related diversion result in adverse effects to EJ communities. If adverse effects are found, the States will work with local authorities and a traffic advisory group to identify strategies to address the impacts.

### **VII.C Additional Commitments in Tolling Mitigation Plan**

- Non-Tolled TARC Crossing [V.C.2]—KYTC and INDOT have committed to exempting TARC buses and paratransit from paying tolls. This exemption will directly benefit EJ populations by avoiding an additional strain on TARC's Operations Budget that could contribute to reduced services and/or increased fares.
- Access to Transponders [V.C.1]—Use of transponders by the EJ populations will reduce the financial impact of tolling. Therefore, KYTC and INDOT have adopted several commitments to facilitate access to transponders by EJ populations. These commitments include:
  - Providing local transponders at no cost and with no sign-up time limit to users who establish an account.
  - Establishing a comprehensive marketing campaign with a key focus on increasing transponder use by EJ populations.
  - As an element of the marketing campaign, partnering with TARC to provide wide-ranging outreach to EJ populations with regard to distribution of the States' transponders.
  - Establishing convenient locations (e.g., TARC's Union Station and NIA Center, Government Service offices, walk-up centers, stores, etc.) within EJ communities where transponders can be obtained.
  - Develop a website and/or smart phone mobile app where transponders can be obtained.
- Transponder Account Management [V.C.1]—In addition to facilitating access to transponders, KYTC and INDOT have adopted commitments to reduce the financial burden of maintaining a transponder account. These commitments will further reduce the barriers to transponder usage in EJ populations. These commitments include:
  - Establishing a \$20 minimum balance to be deposited by users to open their user accounts.
  - Establishing a wide range of options for the replenishment of funds in a user's account, including cash, credit/debit cards, money orders, bank transfers, on-line payments, a smart phone mobile app, etc.
  - Establishing convenient locations (e.g., TARC's Union Station and NIA Center, Government Service offices, walk-up centers, stores, etc.) within EJ communities where transponder accounts can be managed and replenished.
  - Maintaining a website and/or smart phone mobile app where transponder accounts can be managed.

- Establishing opportunities for multiple users/ transponders to be funded under a single account.
- Signage Benefits [V.C.3]—KYTC and INDOT have committed to deploy signage along traffic corridors within the EJ communities that will clearly identify routes to the non-tolled bridges. Clearly identifying travel corridors from EJ areas to these non-tolled facilities will make EJ drivers aware of choices that are available for cross-river travel.
- Progress Reports on Mitigation Effectiveness—A central element of the Tolling Mitigation Plan are the commitments associated with the cost-saving benefit of transponder usage by members of the EJ communities. The cumulative effect of the cost-saving opportunities represented by the States’ commitments will serve to narrow the user cost gap between the EJ and non-EJ communities and minimize the disproportionately high and adverse economic effect of tolling on EJ populations.

Consideration of the effectiveness, over time, of the transponder-related commitments is essential to achieving and maintaining a positive result throughout the extent of the tolling program. Therefore, KYTC and INDOT commit to a periodic assessment of transponder usage by members of EJ communities to determine whether the program objective is being met and, if it is not, to make adjustments where practicable. The program would not be meeting its objective if there is found to be a statistically significant difference between the transponder usage rate in the general population and the transponder usage rate in the EJ populations.

To this end, the assessment will be conducted annually and the results will be included in the Tolling Body’s annual progress report to be prepared by the Tolling System Provider. The assessment will, to the extent practicable:

- Review data collected through the tolling process to determine the transponder usage rate for members of EJ communities compared with the usage rate of the general population.
- Where inefficiencies are found, identify changes in strategies to be considered for implementation.
- Provide recommendations for improvement or modification of existing strategies for consideration and adoption by the Tolling Body.

Successive assessments of the transponder program’s effectiveness will be prepared as a function of the Tolling Body’s standard progress reporting process, and will, to the extent practicable:

- Report on the progress of the transponder use by the EJ populations since the previous assessment, including any changes that have been implemented, to determine whether the measure is meeting its objective.
- Should an assessment determine that the transponder program is not meeting its objective, identify changes to be considered for implementation.
- Provide recommendations for improvement or modification of existing strategies for consideration and adoption by the Tolling Body.



#### **VII.D Conclusion**

In summary, the User Cost Analysis demonstrated that the average user cost for an EJ Community Car is likely to increase by a greater percentage (21%) than for a non-EJ Community Car (11%), as the result of implementation of tolling with the Project. The user cost gap between these two populations was the basis for FHWA's finding in the RROD that EJ populations are likely to experience a disproportionately high and adverse economic effect as a result of tolling. To address this economic disparity, the States have identified practicable measures to minimize the economic effect on EJ populations and commit to implement and monitor the above measures. The cumulative effect of all of the mitigation measures to which the States are committed will narrow the user cost gap; therefore, the States conclude that these measures, in concert with the Project's overall benefits, will effectively minimize the disproportionately high and adverse effect of tolling that would otherwise be experienced by the EJ population.

