



**K I P D A**

Kentuckiana Regional Planning  
& Development Agency

## Amendment 3

# Connecting Kentuckiana 2050 Metropolitan Transportation Plan (MTP) & Fiscal Year 2023- 2026 Transportation Improvement Program (TIP)

TPC Approval Scheduled for

*July 27, 2023*



## AMENDMENT 3 SCHEDULE

### Connecting Kentuckiana 2050 Metropolitan Transportation Plan (MTP) & Fiscal Year (FY) 2023- 2026 Transportation Improvement Program (TIP)

#### WHY ARE THERE AMENDMENTS TO THE MTP & TIP?

New projects that are not regionally significant and qualify as Group Projects, as well as many minor changes to existing projects, can be added through an administrative modification. Administrative modifications can be processed within 30 days.

New projects and project changes that do not fit the criteria above must be added to the MTP and/or TIP through an amendment. There are many reasons why a project must be amended. Adding a regionally significant project that does not fit KIPDA's Group Projects policy or changing the scope of a roadway project to add a travel lane are both examples of projects that must be amended. While every effort is made to expedite amendments, the process can take up to 6 months.

#### KEY STEPS & TIMING

Project Applications (new or modified) are due from sponsors	May 3, 2023
KIPDA staff completes project review	May 4, 2023 - May 12, 2023
Interagency Consultation Group (IAC) Coordination	May 17, 2023
Public comment period	June 23, 2023 - July 8, 2023
Transportation Technical Coordinating Committee (TTCC) Recommendation	July 12, 2023
Comments sent to the Transportation Policy Committee (TPC)	July 12, 2023
TPC Action	July 27, 2023
Federal Review Begins	July 28, 2023

#### ADDITIONAL INFORMATION

The MTP & TIP amendment process is NOT an opportunity to request MPO dedicated funds. All new projects and changes to existing projects must be submitted through the Project Application form found on KIPDA's Transportation Planning Portal.

The Portal can be accessed at the following address: <https://kipdatransportation.org/forms/>





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Area Development District  
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**FY 2023-2026 Transportation Improvement Program  
&  
Connecting Kentuckiana 2050 Metropolitan Transportation Plan**

The Kentuckiana Regional Planning and Development Agency (KIPDA) is the Metropolitan Planning Organization (MPO) for the five-county region covering Jefferson, Bullitt and Oldham Counties in Kentucky and Clark and Floyd Counties in Indiana. The MPO's responsibilities include producing a long-range transportation document, known as *Connecting Kentuckiana 2050* Metropolitan Transportation Plan (MTP) and a short-range planning document, the Fiscal Year (FY) 2023-2026 Transportation Improvement Program (TIP)

Changes have been proposed to the TIP and MTP. The TIP, with the proposed changes, remains fiscally constrained. This packet includes the following document:

- A listing of all projects being added, removed and/or modified
- Schedule for Amendment 3
- Air Quality conformity documentation
- Meeting minutes from the Interagency Consultation (IAC) conference call

Providing comments for the proposed changes can be submitted by any of the following methods:

- Visiting <https://kipdatransportation.org/amendment3/> and click on the *Amendment 3 Map* link
- Emailing [kipda.trans@kipda.org](mailto:kipda.trans@kipda.org)
- Mail to the following address
- Call with your comments at 502-266-6144 ext 123, 1-800-648-6056 (KY TDD) or 1-800-962-8408 (IN TDD)

**TIP and MTP Amendment, KIPDA**

**11520 Commonwealth Drive, Louisville, KY 40299**

- Attend the virtual open house on July 5<sup>th</sup> from 5:00 to 6:00 pm via Zoom. Members of the public are encouraged to ask questions and leave comments. A link to the virtual public meeting can be found at: <https://kipdatransportation.org/amendment3/>

Please contact Community and Committee Engagement Specialist Greg Burress at 502-562-6144 ext. 123 or via email at [greg.burress@kipda.org](mailto:greg.burress@kipda.org) for additional questions or information.

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<b>MTP Action:</b>	Update status to Non-exempt, Update project cost				
<b>TIP Action:</b>	Update status to Non-exempt, Modify TIP funding				
<b>Exempt/Non-Exempt:</b>	Exempt Non-Exempt	<b>Model Impact:</b>	Modify the 2030 and later scenarios to reflect the revised project limits.		
<b>Project Sponsor:</b>	Indiana Department of Transportation (INDOT)	<b>KIPDA ID:</b>	2616	<b>State ID:</b>	1700135
<b>County</b>	Clark	<b>Parent ID:</b>	N/A	<b>Group ID:</b>	N/A
<b>Project Name:</b>	Widening of I-65	<b>Funding Source:</b>	National Highway Performance Program (NHPP)	<b>Open to Public Date:</b>	2025
<b>Total Estimated Project Cost:</b>	\$154,418,894 \$270,796,953		<b>Total Cost Programmed in TIP to date:</b>	\$146,566,086 \$270,796,953	
<b>Description:</b>	Widen I-65 from 4 to 6 lanes from 0.25 miles south of Biggs Road (RP 16+42) in Clark County to Scottsburg (RP 28.88).				
<b>Justification:</b>	The purpose of this project is to address the safety concern of the wet spots, remove the stripped HMA pavement, replace the existing underdrain system, and improve the subgrade beneath the pavement and construct added travel lanes in this portion of I-65.				
<b>FY 23-26 TIP Funding:</b>	<p>FY 2023 Preliminary Engineering phase with NHPP funds: \$29,640 (Federal) + \$3,290 (Other) = \$32,900 (Total)</p> <p>FY 2023 Preliminary Engineering phase with NHPP funds: \$0 (Federal) + \$32,900 (Other) = \$32,900 (Total)</p> <p>FY 2024 Preliminary Engineering phase with NHPP funds: \$1,350,000 (Federal) + \$150,000 (Other) = \$1,500,000 (Total)</p> <p>FY 2024 Construction phase with NHPP funds: \$199,338,331 (Federal) + \$49,834,582 (Other) = \$249,172,913 (Total)</p>				

<b>MTP Action:</b>	Update project cost				
<b>TIP Action:</b>	Add new project phases and Update TIP Funding				
<b>Exempt/Non-Exempt:</b>	Non-Exempt	<b>Model Impact:</b>	No Change to Model		
<b>Project Sponsor:</b>	Louisville Metro	<b>KIPDA ID:</b>	2733	<b>State ID:</b>	5-80252.00
<b>County</b>	Jefferson	<b>Parent ID:</b>	N/A	<b>Group ID:</b>	N/A
<b>Project Name:</b>	Reimagine 9th Street	<b>Funding Source:</b>	Various	<b>Open to Public Date:</b>	2027
<b>Total Estimated Project Cost:</b>	\$24,640,000 \$28,548,000		<b>Total Cost Programmed in TIP to date:</b>	\$24,640,000 \$28,548,000	
<b>Description:</b>	<p>This project will transform 9th Street/Roy Wilkins Avenue just west of the downtown Louisville from the Main Street to Broadway from a six-lane thoroughfare with extremely wide right-of-way into a "Complete Street." Improvements to be considered during the Design process include: Reduce the number and width of lanes, convert one-way traffic to two-way (with a two-way left turn lane) on Muhammad Ali Blvd. and Chestnut St./River Park Drive, eliminate negative offset left-turn lanes, adequately dimensioned turn bays, traffic signal upgrades, expanded fiber throughout the corridor, protected/permissive left turns at signals, sidewalk expanded up to 20-feet wide, curb extensions, pedestrian refuge islands, pedestrian scale lighting, crosswalk visibility enhancements, tabled intersections, protected bike lanes, improved signage, bus shelters, kiosks with real-time bus information, dedicated bus lanes, bus bulbs, increased tree canopy, bioswales, and improved storm drainage.</p>				
<b>Justification:</b>	<p>Eliminate the physical and psychological barrier that the "9th Street divide" creates between Louisville's Central Business District and the West End neighborhoods; create a safe and accessible travel experience for all users including pedestrians, cyclists and transit riders; increase economic vitality through creating a safe, attractive and comfortable environment; provide opportunities for parks and open spaces, playgrounds, recreation access, street tree canopy and storm water management features; and provide a safe and efficient corridor for vehicle and freight travel.</p>				

**FY 23-26 TIP Funding:**

FY 2023 Planning phase with Local funds:  
\$0 (Federal) + \$75,000 (Other) = \$75,000 (Total)

FY 2023 Design phase with State funds:  
\$0 (Federal) + \$500,000 (Other) = \$500,000 (Total)

FY 2023 Design phase with Local funds:  
\$0 (Federal) + \$250,000 (Other) = \$250,000 (Total)

FY 2024 Planning phase with Local funds:  
\$0 (Federal) + \$100,000 (Other) = \$100,000 (Total)

FY 2024 Design phase with Local funds:  
\$0 (Federal) + \$1,000,000 (Other) = \$1,000,000 (Total)

FY 2024 ROW phase with Local funds:  
\$0 (Federal) + \$110,000 (Other) = \$110,000 (Total)

FY 2024 Utilities phase with Local funds:  
\$0 (Federal) + \$200,000 (Other) = \$200,000 (Total)

FY 2025 Planning phase with Local funds:  
\$0 (Federal) + \$100,000 (Other) = \$100,000 (Total)

FY 2025 Design phase with Local funds:  
\$0 (Federal) + \$250,000 (Other) = \$250,000 (Total)

FY 2025 ROW phase with Local funds:  
\$0 (Federal) + \$110,000 (Other) = \$110,000 (Total)

FY 2025 Utilities phase with Local funds:  
\$0 (Federal) + \$200,000 (Other) = \$200,000 (Total)

FY 2025 Construction phase with RAISE funds:  
\$1,558,400 (Federal) + \$204,000 (Other) = \$1,762,400 (Total)

FY 2025 Construction phase with RAISE funds:  
\$3,000,000 (Federal) + \$750,000 (Other) = \$3,750,000 (Total)

FY 2026 Planning phase with Local funds:  
\$0 (Federal) + \$100,000 (Other) = \$100,000 (Total)

FY 2026 Construction phase with RAISE funds:  
\$6,233,600 (Federal) + \$0 (Other) = \$6,233,600 (Total)

FY 2026 Construction phase with STBG-MPO funds:  
\$3,896,000 (Federal) + \$974,000 (Other) = \$4,870,000 (Total)

\*FY 2027 Planning phase with Local funds:  
\$0 (Federal) + \$100,000 (Other) = \$100,000 (Total)

\*FY 2027 Construction phase with RAISE funds:  
\$6,233,600 (Federal) + \$816,000 (Other) = \$7,049,600 (Total)

\*FY 2028 Planning phase with Local funds:  
\$0 (Federal) + \$25,000 (Other) = \$25,000 (Total)

\*FY 2028 Construction phase with RAISE funds:  
\$1,558,400 (Federal) + \$204,000 (Other) = \$1,762,400 (Total)

<b>MTP Action:</b>	Update project cost and project description				
<b>TIP Action:</b>	Modify TIP funding and project description				
<b>Exempt/Non-Exempt:</b>	Non-Exempt	<b>Model Impact:</b>	No change to model impact.		
<b>Project Sponsor:</b>	Indiana Department of Transportation (INDOT)	<b>KIPDA ID:</b>	2899	<b>State ID:</b>	1900162
<b>County</b>	Floyd	<b>Parent ID:</b>	N/A	<b>Group ID:</b>	N/A
<b>Project Name:</b>	I-64 Added Travel Lanes	<b>Funding Source:</b>	Various	<b>Open to Public Date:</b>	2027
<b>Total Estimated Project Cost:</b>	\$138,229,021 \$191,240,000		<b>Total Cost Programmed in TIP to date:</b>	\$138,229,021 \$191,240,000	
<b>Description:</b>	<p>Added travel lanes project on I-64 from US 150 to Spring Street. Project also includes added lanes on I-265 from I-64 to State Street and improvements to the interchanges of I-64 at US 150 and I-265.</p> <p>Added travel lanes project on I-64 from US 150 to just north of Cherry Street with additional pavement rehabilitation extending to Main Street. Project also includes added lanes on I-265 from I-64 to north of State Street and improvements to the interchanges of I-64 at US 150 and I-265.</p>				
<b>Justification:</b>	<p>The addition of the mainline through and auxiliary lanes on I-64 as well as additional ramp lanes at the US 150 and I-265 interchanges will provide improved densities, levels of service and travel times with significant reduction in driver delay west of I-265.</p> <p>To improve traffic congestion and accessibility</p>				
<b>FY 23-26 TIP Funding:</b>	<p>FY 2023 Preliminary Engineering phase with NHPP funds: \$13,500,000 (Federal) + \$1,500,000 (Other) = \$15,000,000 (Total)</p> <p>FY 2023 Preliminary Engineering phase with NHPP funds: \$9,379,332 (Federal) + \$5,248,368 (Other) = \$14,627,700 (Total)</p> <p>FY 2023 Utilities PE phase with NHPP funds: \$0 (Federal) + \$68,500 (Other) = \$68,500 (Total)</p> <p>FY 2024 Right of Way phase with IM funds: \$225,000 (Federal) + \$25,000 (Other) = \$250,000 (Total)</p> <p>FY 2025 Construction phase with NHPP funds: \$109,279,099 (Federal) + \$12,142,122 (Other) = \$121,421,221 (Total)</p> <p>FY 2025 Construction phase with NHPP funds: \$19,842,336 (Federal) + \$2,204,704 (Other) = \$22,047,040 (Total)</p> <p>FY 2025 Utilities PE phase with NHPP funds: \$360,000 (Federal) + \$40,000 (Other) = \$400,000 (Total)</p> <p>FY 2026 Construction phase with NHPP funds: \$110,063,202 (Federal) + \$12,229,245 (Other) = \$122,292,447 (Total)</p>				



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## MINUTES

### KENTUCKIANA REGIONAL PLANNING & DEVELOPMENT AGENCY (KIPDA)

#### KIPDA INTERAGENCY CONSULTATION

11492 BLUEGRASS PARKWAY, LOUISVILLE, KY 40299  
TRANSPORTATION CONFERENCE ROOM  
MEETING ALSO CONDUCTED THROUGH ZOOM

WEDNESDAY MAY 17, 2023 – 3:00 P.M.

#### MEMBERS ATTENDING

Mr. Isidro Delgado Herrera  
Ms. Tonya Higdon  
Ms. Michelle King  
Ms. Dianna Myers  
Mr. Richard Wong  
Mr. Nick Vail  
Mr. Craig Butler  
Ms. Erica Tait  
Ms. Sarah LaRocca  
Mr. Andy Rush

#### REPRESENTING

KYTC  
FHWA-KY  
LOUISVILLE METRO APCD  
EPA-R4  
EPA-R4  
FHWA-KY  
LOUISVILLE METRO APCD  
FHWA-IN  
EPA-R4  
KIPDA

#### OTHERS ATTENDING

Mr. Randy Simon  
Ms. Chris Nicolas  
Mr. Mick Logsdon  
Mr. Greg Burress

#### REPRESENTING

KIPDA  
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## Welcome/Roll Call

A total of eight state, regional, federal, and local agencies were in attendance with 14 representatives to participate in the IAC video conference call for Amendments 2 and 3 of the *Connecting Kentuckiana 2050* Metropolitan Transportation Plan and the *FY 2023-2026 Transportation Improvement Program*. The meeting began just after 3:00 p.m.

## Amendment 1 Project discussion

Before the discussion of Amendments 2 and 3, FHWA requested an update on the development of the new KIPDA MTP & TIP and Amendment 1 of the new TIP. Those are scheduled for KIPDA TPC approval at their May 25<sup>th</sup> meeting. Amendment 1 was discussed. Mr. Andy Rush provided updates to the TIP and MTP statuses. Details were provided for Amendment 1 including the public review being recently completed. Mr. Rush asked if there were any questions.

Mr. Nick Vail states a non-exempt project was included in Amendment 9 (of the current MTP & TIP), which is now in Amendment 1 and asks if analysis needs to be re-run. Mr. Vail leans to a no and Ms. Dianna Myers asks for an additional explanation of Amendment 1. It is then discussed that the Louisville Area has been changed to moderate for ozone and projects in Amendment 1 will need new analysis that includes a new 2023 model year. Without this change, the analysis for Amendment 1 would be the same analysis used previously for the MTP update. Discussion is then turned to the updates to the MTP and the TIP. It is determined that the analysis was underway prior to January 7, 2023, change so the updates to the MTP and TIP can continue. Ms. Myers says that a 2023 model is required in MOVES and that Mr. Simon will provide information to Mr. Craig Butler for a MOVES model run. Mr. Simon and Mr. Butler agree.

## Amendments 2 and 3 Project discussion

KIPDA staff presents the following exempt projects for comment and there are no objections on any:

- an Oldham County trail project (KIPDA ID 2981),
- a new Louisville Metro project “Sidewalk Rehabilitation- Community Project Funding”,
- a reduction in project size for East Market Streetscape improvements (KIPDA ID 2064) in Louisville.
- Reimagine 9<sup>th</sup> Street (KIPDA ID 2733) is introduced as a non-exempt project but only due to two-way conversions and there are no objections.

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- Mr. Rush also presents a funding change for a center turn lane project on Buechel Bank Road (KIPDA ID 381) in Louisville and there are no objections.
- A new project for road diets on 10 separate roadways (KIPDA ID 3160) in Louisville is presented as exempt. Mr. Vail concurs that road diets are exempt and there are no objections.
- A new electric vehicle charging infrastructure project, “National Electric Vehicle Infrastructure (NEVI)” is presented as exempt with no objections.
- An I-64 added travel lanes project (KIPDA ID 2899) in Floyd County, Indiana is presented as non-exempt due to funding change and a negligible project description and scope change. The change affects approximately 1/3 of a mile and the project is due to open in 2027. Mr. Rush asks if a new analysis is needed. Ms. King raises the concept of “*de minimis*.” Ms. Myers suggests new modeling is required. Mr. Butler disagrees. Ms. King discusses technical details. Mr. Rush states that KIPDA will remodel the project but that it will therefore need to be included in a full amendment to be known as Amendment 3.
- KIPDA staff continues to present a TARC project “Purchase Replacement Fixed Route Buses” as exempt and there are no objections.

#### Other Business

Mr. Simon presents changes to the Memorandum of Understanding between the IAC members. Ms. Myers acknowledges changes to local governments and recommends that local governments sign, but that EPA Region 4 will not sign. The meeting is adjourned at approximately 6:00 p.m.

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**Connecting Kentuckiana 2050 Metropolitan Transportation Plan- Amendment 3  
FY 2023-2026 Transportation Improvement Program- Amendment 3  
Interagency Consultation Group Conference Call Meeting Minutes  
June 21, 2023  
9:30 AM EDT**

**Participants:**

EPA – Dianna Myers, Anthony Maietta, & Simone Jarvis  
FHWA – Nick Vail, Tonya Higdon & Erica Tait  
KYTC – Tom Hall & Isidro Delgado Herrera  
LMAPCD – Michelle King & Craig Butler  
KYDAQ- Lauren Hedge, Anna Bowman  
KIPDA – Andy Rush, Greg Burress, Randy Simon, Jeremeih Shaw, Chris Nicolas, Brady Hill, Spencer Williams, & Kyle Thorne

**Welcome/Roll Call:**

A total of 20 participants, representing six local, state, regional, and federal agencies participated in the IAC Conference Call for Amendment 3 of KIPDA's *Connecting Kentuckiana 2050* Metropolitan Transportation Plan and the *FY 2023-2026 Transportation Improvement Program*. The meeting began shortly after 9:30 AM EDT on June 21, 2023. Mr. Andy Rush began the meeting with some introductions to new KIPDA staff.

**Project Discussion:**

Mr. Rush offered an overview of the updates to the 3 non-exempt projects included in Amendment 3 acknowledging the previous discussion during the May 17<sup>th</sup>, 2023, IAC meeting. The most notable update since the previous meeting is that the air-quality analysis scenarios now include the year 2023. This change occurred because the Kentucky portion of the Louisville area's 8-Hour Ozone (2015 Standard) Classification was recently updated from "Marginal" to "Moderate", and the additional analysis year is now required.

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Mr. Rush reported that KIPDA uses 2019 as the base year and the Year 2025 for the travel model interpolation to generate the 2023 values. All scenarios fall under the respective budgets for NOX and VOCs.

He added a reminder that Amendment 3 of the *Connecting Kentuckiana 2050 Metropolitan Transportation Plan* and the *FY 2023-2026 Transportation Improvement Program* are contingent on federal approval at the time of this meeting.

**Schedule Discussion:**

KIPDA staff discussed key dates (shown below) of the anticipated schedule for the amendment:

Key Dates for the schedule for Amendment 3

Project applications due from sponsors-	May 3, 2023
KIPDA Staff Reviews projects-	May 4, 2023- May 12, 2023
Air Quality Conformity Activities-	May 17, 2023- June 21, 2023
Public Comment Period-	June 23, 2023- July 8, 2023
Comments sent to Transportation Policy Committee-	July 12, 2023
Transportation Technical Coordinating Committee Recommendation-	July 12, 2023
Transportation Policy Committee Action-	July 27, 2023
Federal Review Begins-	July 28, 2023

**Other Discussion:**

Ms. Dianna Myers discussed the MOVES 4 Model availability and up and coming grace period which will be announced soon. Ms. Myers mentioned that there is likely to be a new NAAQS standard for particulate matter coming out in the fall of 2023 and discussed the Ozone Maintenance Plan comments with Ms. Michelle King.

Mr. Nick Vail confirms with KIPDA staff that the new air quality analysis with the 2023 scenario will be included in the Amendment 3 packet for public review. Additionally, he gives the group of reviewing agencies a reminder regarding the federal deadline for review of KIPDA's new MTP and TIP by close of business today (6/21/23).



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Mr. Rush informs the group that Amendment 4 will likely be needed this fall and that we should expect the next IAC Call to occur within the next few months.

The conference call adjourned at approximately 10:00 am.

## **AIR QUALITY CONFORMITY**

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At this time, the Louisville, KY-IN transportation planning study area consists of Clark and Floyd counties and 0.1 square miles of Harrison County in Indiana, and Bullitt, Jefferson, and Oldham counties and approximately 4 square miles of Shelby County in Kentucky. (However, this description of the planning area is subject to changes due to the results of the 2020 Census, which have been released recently. The effect on the Louisville, KY-IN transportation planning study area has not been determined at this time.) Much of the existing planning area coincides with the local ozone nonattainment area. In the past, a portion of the planning study area also coincided with a local fine particulate matter (PM 2.5) nonattainment area, but that standard was revoked in April, 2015. The Louisville, KY-IN maintenance area for the 1997 8-hour ozone standard consisted of Clark and Floyd counties, IN, and Bullitt, Jefferson, and Oldham counties, KY. It was designated as a basic non-attainment area in June, 2004 and redesignated as an attainment area with a maintenance status in July, 2007. The 1997 8-hour ozone standard was revoked for the local area in April, 2015, and at that time, it was not necessary for the local area to determine conformity. (However, the local area was still eligible to receive Congestion Mitigation/Air Quality funding).

In June 2018, the former Louisville, KY-IN 1997 ozone maintenance area was designated as a marginal nonattainment area for the 2015 8-hour ozone standard. Since that time, the monitoring data has indicated that the design value is sufficiently low that the local area can be redesignated as attainment of the 2015 8-hour ozone standard, and the air quality agencies with responsibility for the local area have undertaken steps to do so. The redesignation State Implementation Plan has been submitted to Regions 4 and 5 of US EPA, and the Motor Vehicle Emission Budgets (MVEBs) have been found adequate by Region 5. They are still under review by Region 4. Meanwhile, in January, the Kentucky portion of the local ozone nonattainment area was “bumped up” to a moderate ozone nonattainment area.

KIPDA is updating the metropolitan transportation plan (MTP), (now to be known as *Connecting Kentuckiana 2050*) and the FY 2023 – FY 2026 Transportation Improvement Program (TIP). This conformity analysis will support conformity determinations by the metropolitan planning organization and the U. S. Department of Transportation agencies for both documents. This analysis is intended to support determinations of conformity under the 2015 8-hour ozone standards.

## CONFORMITY UNDER THE 2015 8-HOUR OZONE STANDARD

When an area such as the Louisville area becomes nonattainment, the area must undertake a process known as conformity. This process provides a linkage between transportation planning and air quality planning. One of the key activities of conformity is to quantify the level of emissions of the air pollutant(s) and/or precursor(s) for certain analysis years and compare those levels to the motor vehicle emission budgets (MVEBs)—if they exist. The MVEBs limit the amount of a pollutant or precursor that can be emitted. If MVEBs do not exist, the area must rely on interim tests, such as comparing the emissions to the level of emissions in a baseyear, to determine conformity. The baseyear would be set by US EPA when the standard is promulgated.

When the local area was designated as nonattainment of the 2015 8-hour ozone standard, the air quality agencies with responsibility for the local area were charged with the additional responsibility to develop a set of actions that could be taken to reduce pollutant/precursor emissions. These actions were to be included in air quality plans known as State Implementation Plans (SIPs). Since the Louisville nonattainment area is a bi-state area, these sets of actions to reduce precursor emissions were to be incorporated into both the Indiana and Kentucky SIPs. It was during this process that MVEBs were established. Subsequent to the local area being designated as a nonattainment area but before the SIPs were completed, the data from the air quality monitors in the area indicated that the 2015 8-hour ozone standard had been met. With this data in hand, the air quality agencies were each able to submit a SIP known as a redesignation request. The establishment of the MVEBs was one of the components of the redesignation request. Since the SIPs were redesignation requests for ozone, the MVEBs were established for the precursors of ozone -- volatile organic compounds and oxides of Nitrogen.

## CONSULTATION FOR *CONNECTING KENTUCKIANA 2050*

The first step in determining conformity of *Connecting Kentuckiana 2050* was to consult with the interagency consultation (IAC) group concerning matters not explicitly determined by the conformity rule. Conformity under the 2015 8-hour ozone standard has been previously determined. Therefore, many of the issues normally arising in conformity had undergone consultation previously when the local area was a nonattainment or maintenance area under the 1997 8-hour ozone standard or during the previous conformity process for *Connecting Kentuckiana 2050*.

Consultation for this update occurred during video conferences on May 17 and June 21, 2023. The following items were reviewed and discussed.

- (a) important dates in the schedule for the update;
  - May 3 -- Project applications due from sponsors
  - May 12 -- Project review by KIPDA staff completed
  - May 17 & June 21 -- IAC consultation video conferences
  - June 23 -- Public Involvement begins for Amendment 3 begins, (ends on July 8)
  - July 12 -- Action by the Transportation Technical Coordinating Committee
  - July 12 -- Public comments sent to Transportation Policy Committee
  - July 27 -- Action by the Transportation Policy Committee
  - July 28 -- Federal review begins;
- (b) a draft list of projects—sent to the IAC with consultation notice;
- (c) Horizon year of *Connecting Kentuckiana 2050* Metropolitan Transportation Plan – 2050
- (d) AQ Conformity Tests – see table below

<b>2015 8-hour Ozone Standard</b>	
<b>Analysis Year</b>	<b>Conformity Test(s)</b>
2023	Less than the 2019 SIP Base Year Emissions
2025	Less than the 2019 SIP Base Year Emissions
2030	Less than the 2019 SIP Base Year Emissions
2035	Budget test using the 2035 MVEBs for the 2015 8-hour standard
2040	Budget test using the 2035 MVEBs for the 2015 8-hour standard
2050	Budget test using the 2035 MVEBs for the 2015 8-hour standard

- (e) Analysis years – see table above
- (f) Pollutants/Precursors of concern and related budgets
  - SIP base year (2019) emissions
    - i. VOCs: 13.65 tons/day or 12,383 kg/day
    - ii. NOx: 33.03 tons/day or 29,964 kg/day
  - SIP regional budget (2035) emissions
    - iii. VOCs: 5.51 tons/day or 4,999 kg/day
    - iv. NOx: 17.18 tons/day or 15,585 kg/day



- (g) Upcoming Air Quality Considerations
  - i. Promulgation of new NAAQS for Particulate Matter
  - ii. Release of MOVES4
  - iii. Development and Promulgation of new NAAQS for Ozone

Other Issues affecting the update

- (1) a listing of any transportation control measures (TCMs) in SIPs, if applicable—there are none.
- (2) Travel Model discussion
  - i. Model was recalibrated for a 2019 Base Year
    - a. New Socioeconomic Data based on new Census estimates
    - b. Travel estimates based on Streetlight data
- (3) Air Quality Model discussion
  - i. MOVES 3.1 is now being used.

ESTABLISHED PRACTICE

In addition to the issues discussed during consultation, there were several issues which were not explicitly discussed or received little discussion during the video conference consultation, but which had impacts on the analysis. Many of these issues had been discussed during previous consultations. These issues were handled in a manner consistent with the previous established practice. The more prominent issues are discussed below.

Relationship of MTP and TIP for Conformity Purposes

The Transportation Improvement Program (TIP) is maintained as a subset of the Metropolitan Transportation Plan (MTP). Therefore, the conformity determination for the MTP will serve as the conformity determination for the TIP.

**Conclusion: The IAC members are informed of this from time to time in order to clarify the conformity determination for the MTP also serves as the conformity determination for the TIP.**

Vehicle Registration (Fleet Mix) Data

At various times in the past, new vehicle registration data has been provided for use in developing pollutant emissions. This vehicle registration data has been reviewed and accepted by the IAC. The data being used for the Indiana counties has been updated to 2017, and the data being used for the Kentucky counties is for 2018. These data represent the most recent information available for this issue.

**Conclusion: Based on a consensus of the IAC members, vehicle registration data for 2017 for the Indiana counties and for 2018 for the Kentucky counties is now being used in developing emission estimates.**

## CONFORMITY OF *CONNECTING KENTUCKIANA 2050*

The MTP, *Connecting Kentuckiana 2050*, was examined to determine if it met the requirements of the conformity rule under the 2015 8-hour ozone standards. In general, the process leading to a conformity determination has two major components:

- (1) a regional emissions (air quality) analysis to determine that air pollutant emissions do not exceed the budgets set in the SIPs, if applicable, or the emission levels for a given base year; and
- (2) a monitoring of the progress in implementation of the Transportation Control Measures (TCMs) contained in the SIPs.

In the past, consultation with the state and local air quality agencies and EPA had determined that there are no approved TCMs in the SIPs of Indiana and Kentucky. Therefore, it is possible to show conformity of *Connecting Kentuckiana 2050* simply by determining that the air pollutant emissions do not exceed the budgets in the SIPs or the base year emissions.

## ANALYSIS PROCESS

The process of calculating the regional emissions for *Connecting Kentuckiana 2050* involved three main procedures. The first procedure was a review of the projects to determine which projects needed to be included in the regional emissions analysis. The second procedure was to perform the calculations necessary to quantify certain measures of travel behavior. The third procedure was to calculate the pollutant / precursor emissions. These activities are discussed below in greater detail.

### *Project Review*

The first procedure was to review the projects to determine which projects were exempt or non-exempt and which projects were “regionally significant.” The combination of these two considerations was the basis for determining which projects were recommended for inclusion in the regional emissions analysis. During Amendment 3 of the MTP, *Connecting Kentuckiana 2050*, a group of projects had been proposed for the plan. These projects were reviewed by KIPDA staff, who prepared a list of the projects with information about the projects and a staff recommendation concerning the project’s status relative to its being included in the regional emissions analysis. There is usually a straightforward explanation for why projects are included in or excluded from the analysis and why they are analyzed as

they are. Most of the projects which were excluded were exempt projects as defined in the Code of Federal Regulations in 40 CFR 93.126 and 40 CFR 93.127.

During consultation, this list was reviewed and accepted by the IAC as described under the section entitled "CONSULTATION FOR *CONNECTING KENTUCKIANA 2050*." (Please see above.) The projects in *Connecting Kentuckiana 2050* were analyzed as indicated on the list provided to IAC.

In the past, there were several projects which could not be analyzed using the travel model. In the past, most of these projects had been evaluated using spreadsheet methods using emission factors (rates). Since the MOVES emissions model was being used in the inventory mode, emission factors were not available for this analysis. However, experience had shown that the emission impacts for these projects were always small and positive (i.e., emission reducing). Therefore, it is reasonable to predict that the emission impacts of these projects—if they could be quantified—would decrease the emissions shown in the tables at the end of this document.

Also, there was one project affecting Bullitt County that could not be included in the travel model. Unlike the projects described in the paragraph above, this project could have the potential to increase emissions. Therefore, a special effort was made to include its impacts in the analysis of travel behavior impacts and, consequently, in the regional emissions analysis. This project is the relocated (southern) section of US 31E. This project, which had been discussed during consultation in the past, involves the relocation of a small (approximately 0.2 mile) section of US 31E from Nelson County (outside of the nonattainment area) to Bullitt County (inside the ozone nonattainment area) during the reconstruction of that road. Estimates of the VMT for this project were developed using a spreadsheet approach. The VMT estimates were the product of the estimated traffic volumes for each of the analysis years and the length of the relocated section in Bullitt County. The VMT estimates for this project were then added to other Bullitt County VMT estimates of the same functional class. Consequently, the VMT estimates from this project were included with the other Bullitt County VMT, and the emissions in Bullitt County associated with this project were included in the overall emission estimates for Bullitt County.

### *Calculation of Travel-Related Information*

The analysis of the travel behavior impacts for the nonattainment area primarily involved using the KIPDA travel demand forecasting model to determine measures of travel such as vehicle-miles-traveled (VMT) and speed. The method for determining these measures was to input the appropriate roadway and transit information into the model and to run the model using the appropriate socioeconomic information for a given analysis year. This analysis is explained below in further detail in the sections

concerning the KIPDA travel demand forecasting model and adjustment factors for travel model output.

### KIPDA Travel Demand Forecasting Model

The KIPDA travel demand forecasting model is a mathematical model which relates travel to the transportation system and basic socioeconomic information. The domain of the model is a study area which includes the Louisville (KY-IN) Metropolitan Planning Area. The Louisville (KY-IN) Metropolitan Planning Area consists of Clark and Floyd counties, and 0.1 square miles in Harrison County in Indiana, and Bullitt, Jefferson, and Oldham counties and approximately 4 square miles in Shelby County in Kentucky. This area is divided into 984 smaller units called traffic analysis zones.

As previously mentioned, the KIPDA regional travel demand forecasting model was updated and calibrated in 2022. This update established 2019 as the new base year for the model. The model update utilized the information incorporated into the travel model during previous updates. In addition, a significant amount of data from Streetlight Data, Inc. was incorporated into the updated model, particularly for trips which crossed the external boundary of the model. During the update, the model parameters were adjusted such that the model output matched—within reason—two main calibration criteria based on measured data. These criteria were: (1) the total daily VMT for all highway facilities except local roads for the region; and (2) highway traffic volumes crossing the Ohio River screenline. The result of the update was a travel model which generally replicated travel in the Louisville area for 2019. The updated travel model was used in the regional emissions analysis.

The KIPDA travel demand forecasting model uses the standard four steps of modeling: trip generation, trip distribution, mode choice, and trip assignment. In addition, it considers travel by vehicles entering, leaving, and crossing the study area. These types of trips are known as external-internal, internal-external, and external-external, respectively. The internal ends of these trips are determined by the methods described below for internal-internal travel. The external ends are determined from the volume of traffic crossing the study area boundary at any of the 46 external stations.

Trip generation is the process of determining the number of unlinked trip ends--called productions and attractions--and their spatial distribution based on socioeconomic variables such as households and employment. The trip rates used to define these relationships were derived from the travel data collection efforts described above. This information was supplemented by use of the *National Cooperative Highway Research Program Report #365* and the Institute of Transportation Engineers' *Trip Generation Report*. The KIPDA travel demand model uses three internal-internal trip purposes. Internal-internal trips are those which have both ends inside the modeling

domain. The three purposes are home-based work, home-based other, and non-home-based. The set of trip rates is one of the calibration parameters of the model.

Trip distribution is the process of linking the trip ends thereby creating trips which traverse the area. The KIPDA travel model uses a gravity model to link all trips except the external-external ones. The gravity model is based on the principle that productions are linked to attractions as a direct function of the number of attractions of a zone and as an inverse function of the travel time between zones. This inverse function of travel time is used to generate parameters called friction factors which, in turn, direct the gravity model. In addition, information from a study which investigated the behavior of travelers crossing the Ohio River and traffic count information from years near 2019 were utilized to develop additional parameters called K-factors. The K-factors are used by the model to ensure that it is predicting the correct volume of traffic crossing the Ohio River. Friction factors and K-factors are two of the calibration parameters of the model.

Mode choice is the process used to separate the trips which use transit from those which use automobiles. It is also used to separate the auto drive-alone trips from auto shared-ride trips. In some previous KIPDA travel demand models, mode choice was based primarily on information provided by the *TARC Travel Forecasting Study* from some time ago. In that model, the user's benefit or utility was calculated for each mode based on zonal socioeconomic characteristics and the cost and time of the trip using the various modes. A nested logit model was used to determine the probability of the trip being made by each of the modes. This probability was then multiplied by the number of trips between zones to determine the number of trips by each mode.

As previously stated, the conformity analysis for *Connecting Kentuckiana 2050* utilizes transit information from previous travel demand models. The results of the 2004 TARC on-board survey had been used to factor the data in the previous transit files. This was deemed acceptable for several reasons. The primary reason was that the transit network envisioned by *Connecting Kentuckiana 2050* is essentially the same as the existing one. In addition, the number of total trips from the two models was similar. Therefore, the use of the factored transit trip information from previous travel models did not significantly change the proportion of trips allocated to transit. Finally, the proportion of trips utilizing transit is less than 2% of the total trips. So small differences in the number of transit trips should provide a negligible effect on overall travel.

Trip assignment is the process used to determine which links of the network a given trip will use. There are several assignment schemes which may be used. Two of the more common schemes are All-or-Nothing (AON)--in which all trips between two zones follow the shortest time path--and Stochastic--in which trips between two zones may be assigned to several paths based on their relative impedances or travel times.

It is not uncommon for travel models to use several assignment schemes in sequence to converge to a better assignment. A sequence commonly used involves using several AONs with the traffic volumes reported at the end of each scheme being a weighted average of the volumes from the most recent scheme and the volumes from the previous schemes. A capacity restraint provision is used to adjust travel times between assignment schemes. This sequence is called an equilibrium assignment. The KIPDA travel model uses an equilibrium assignment which converges when the change in system-wide travel time over successive iterations is estimated to be within 0.0001 or less.

Tolls are being used as a means of providing for a portion of the cost of the Louisville Southern Indiana Ohio River Bridges project. To reflect the effect of the tolls in the KIPDA travel model, time penalties have been used in the model on the bridges where tolls are being collected. As mentioned above, the toll structure was recently changed. To reflect this in the MTP update, the time penalties used in the KIPDA travel model were likewise changed to reflect the effect of the new toll structure. The time penalties also reflect some travel effects which could not otherwise be quantified.

The output from the KIPDA travel model is in the form of a series of links with each link having certain associated data such as number of lanes, capacity, facility type, area type, functional class, and volume. This data allows for the calculation of other link information such as vehicle-miles-traveled (VMT). The VMT can be calculated as the product of the volume of traffic using a link times the distance (length) of the link.

#### Adjustment Factors for Travel Model Output

The VMT and speeds from the travel demand model were adjusted before being used in the calculation of regional emissions. The purpose of these adjustments was to reconcile the model output with travel estimates from other sources, such as the Highway Performance Monitoring System (HPMS) estimates of VMT. To perform this adjustment, factors were developed for the baseyear of the model using HPMS or other estimates and applied to model output for other years.

The development of the VMT adjustment factors involved comparing the VMT outputs of the travel demand model to the HPMS VMT estimates for 2019. Factors were developed to adjust the model output to account for variation between the model and HPMS within each of the counties. To do this, the VMT from the 2019 model run was tabulated by county and functional classification. The VMT estimates derived from the model were then compared to the HPMS VMT estimates for 2019 to develop adjustment factors to be applied to the model output for subsequent years. The 8-hour ozone analysis is based on a level of traffic and the accompanying emissions expected on a typical summer weekday. For that analysis, the adjustment factors were increased by 2.9% to reflect the higher volume of traffic that can be

expected on a typical summer weekday relative to the annual average daily traffic. The adjustment factors for VMT were developed on a functional classification basis for each county.

The development of the speed adjustment factors involved a similar process. The outputs of the travel demand model were compared to estimates of speed based on the equations of the Highway Economic Reporting System (HERS).

In general, the HERS equations were used to estimate speeds for five functional classifications of urban roadways and for five functional classifications of rural roadways. The speeds from these roadway sections were used to determine the average speed for each of five rural and urban functional classes. The speeds used in the travel model were also averaged for each of the five rural and urban functional classes for which HERS estimates had been developed. The speed adjustment factor for each of these functional classes was calculated as the ratio of the average speed using the HERS equations to the average speed using the travel model data. In some cases, the adjustment factors for some functional classes for some counties had to be based on the combined effects of the functional classes due to the sparseness of data for one or more of the functional classes.

The procedures described above produced speed adjustment factors for all functional classes except rural and urban local roads and ramps. (Ramps are not officially a separate functional class, but the speed behavior of traffic on ramps is not expected to be like that of any other functional class. Therefore, the ramps were treated as a separate "functional class".) There was not sufficient data to estimate speeds for the roadways of these classes. For rural and urban local roads and ramps, the speeds in the travel model were used without adjustment (i.e., the speed adjustment factor for rural and urban local roads and for ramps = 1).

### *Calculation of Pollutant/Precursor Emissions*

The calculation of the pollutant/precursor emissions for the nonattainment area involved using the adjusted output data from the KIPDA travel demand forecasting model as input to the MOVES model. KIPDA staff provided adjusted travel model output data in the form of vehicle-miles-traveled (VMT), VMT by speed bin by MOBILE 6 facility type, VMT fractions by speed bin by county by MOBILE 6 facility type, and VMT and average speed by functional class to the staff of the Louisville Metro Air Pollution Control District (LMAPCD). LMAPCD staff utilized this data along with other necessary inputs to run the MOVES model and develop emission estimates for volatile organic compounds (VOCs) and oxides of Nitrogen (NO<sub>x</sub>). They then provided these estimates to KIPDA staff. This analysis is explained below in further detail in the section below.

### MOVES Emissions Model

As previously mentioned, the Louisville region is a nonattainment area for the pollutant ozone and must therefore control the precursors of ozone, VOCs and NO<sub>x</sub>. The emission estimates for VOCs and NO<sub>x</sub> were determined using the MOVES 3.1 emissions model. The staff of the Louisville Metro Air Pollution Control District (LMAPCD) produced the emissions for all of the counties in the nonattainment area. The methodology used in calculating these emission estimates is discussed below.

There are a number of factors affecting the emission estimates developed from the MOVES model. In the past, these factors included the presence of inspection/maintenance (I/M) programs in some of the counties. During that time period, the VMT generated in Clark, Floyd, and Jefferson (KY) counties came from some vehicles subject to an I/M program and from some vehicles not subject to an I/M program. The I/M program in Clark and Floyd counties was discontinued at the end of 2006. The I/M program in Jefferson County (KY) was discontinued in 2003. Therefore, these programs are no longer a factor in estimating emissions.

One of the other factors is the fuel used by the vehicles in the various counties. The fuels which are used in Clark, Floyd, and Jefferson counties include reduced Reid vapor pressure gasoline (RVP) and reformulated gasoline (RFG). While RFG is used in some portions of Bullitt and Oldham counties, unregulated gasoline is used in the other portions of those counties as well as the areas adjacent to the nonattainment area. Vehicles from these other areas can be expected to travel in the Clark, Floyd, and Jefferson (KY) counties also. In the past, the emission factors (from the MOBILE 6 model) for Clark, Floyd, and Jefferson (KY) counties used in the air quality analysis varied by county because they represent a VMT-weighted composite based on an estimate of travel in each county by vehicles from the various portions of the region. For this analysis, the MOVES model was used in what is known as the inventory mode. Using the inventory mode, it is possible to define the fuel characteristics and the presence of an I/M program for each county, but it is not possible to represent the effect of travel in a county by vehicles from other counties. Therefore, the use of composite emission factors was not possible. Other than that, the assumptions used in the analysis were consistent with those of the appropriate air quality agency for each of the counties. For Clark and Floyd counties, the assumptions of the Indiana Department of Environmental Management (IDEM) were used. Some assumptions of LMAPCD were also used for Clark and Floyd counties. For Jefferson County (KY), the assumptions of the LMAPCD were used. These assumptions had been previously reviewed and accepted by the IAC partners.

The assumptions used in developing the emissions for Clark, Floyd, and Jefferson (KY) counties were the same as those used in developing the ozone budgets update (for VOCs and NO<sub>x</sub>) for the recent redesignation request in 2022. These assumptions included some changes which were incorporated in recent years prior to 2022. The changes which affected the VOC and NO<sub>x</sub> emissions included:



- (1) improved consistency and completeness of gasoline data provided with the new MOVES model,
- (2) the incorporation of newer vehicle registration data (for 2017) for Clark and Floyd counties (provided by INDOT),
- (3) the development and use of newer vehicle registration data (for 2018) for Jefferson County (KY), and
- (4) improvements in internal model calculations to account for emission controls, driving profiles and engine characteristics.

The emissions for Bullitt and Oldham counties were also developed by LMAPCD. As with the other counties, the assumptions for these counties were consistent with those used in the redesignation request developed in 2022. Most of the inputs to the MOVES model were defaults and/or data used that was consistent with previous SIPs or data updated for the redesignation request. As mentioned above, RFG is used in some portions (the “original” portions) of Bullitt and Oldham counties, and unregulated gasoline is used in the other portions (the “new” portions) of those counties as well as the areas adjacent to the nonattainment area. The “original” portions and “new” portions refer to whether a portion of these counties had originally designated as a nonattainment/maintenance status for the 1-hour ozone standard (used in the 1990’s) or had only been designated under the 1997 8-hour ozone standard. Neither portion of either county had an I/M program. So, it was not necessary to have I/M input information for MOVES. However, it was possible that the gasoline formulation in the different portions of these counties could be different.

It was determined—based on data provided by US EPA for the MOVES model—that the gasoline formulation for Bullitt and Oldham counties is essentially the same as that for Jefferson County with respect to the use of RFG. Since the use of the MOVES model in the inventory mode does not allow for the characteristics of different blends of gasoline within the same county, the gasoline formulations of Bullitt and Oldham counties were modeled the same as for Jefferson County.

The assumptions used for Bullitt and Oldham counties were consistent with those for the ozone budgets update for the recent redesignation request in 2022. The changes which affected the VOC and NO<sub>x</sub> emissions included:

- (1) improved consistency and completeness of gasoline data provided with the new MOVES model,
- (2) the characterization of gasolines described in the previous paragraph,
- (3) new 2018 vehicle registration data for Bullitt and Oldham counties, and
- (4) improvements in internal model calculations to account for emission controls, driving profiles and engine characteristics.

LMAPCD developed emission estimates of VOCs and NO<sub>x</sub> using the MOVES model. To review, the following steps were undertaken.

- (1) LMAPCD staff received (from KIPDA staff) the adjusted travel model output in the form of VMT, VMT by speed bin, and VMT fractions by speed bin, all by county and by MOBILE facility type by analysis year.
- (2) LMAPCD reformatted the data from KIPDA to prepare it as input to the MOVES model. Other necessary data was also prepared.
- (3) The MOVES model was run in inventory mode to determine emission estimates of each precursor for each county for each analysis year.
- (4) LMAPCD staff provided the emission estimates to KIPDA staff.

## RESULTS OF THE ANALYSIS

The transportation plan, *Connecting Kentuckiana 2050*, has been examined to determine if it is in conformity with the SIPs of Indiana and Kentucky and fulfills the criteria in the federal conformity rule (found in 40 CFR 93). The examination has been based on an air quality analysis to determine that air pollutant emissions of the appropriate areas did not exceed the VOC and NO<sub>x</sub> motor vehicle emission budgets.

As previously mentioned, the other criterion for determining conformity would have been the progress in implementation of the Transportation Control Measures (TCMs) contained in the SIPs. However, since previous consultation had determined that there were no approved TCMs, that criterion did not affect the determination of conformity. The results of the regional emissions analyses for ozone precursors are discussed below.

### 8-hour Ozone Analysis

The eight-hour ozone redesignation SIPs of Indiana and Kentucky contain emission budgets for the precursors of ozone, volatile organic compounds (VOCs) and oxides of Nitrogen (NO<sub>x</sub>). The regional emissions analysis was conducted to provide estimates of the levels of emissions of VOCs and NO<sub>x</sub> for the various analysis years. These emission levels were then compared to the budgets in the SIPs to determine if the conformity tests were passed.

The results of the regional emissions analysis are summarized in Tables 1 and 2. Table 1 shows the summer weekday vehicle-miles-traveled from the analysis. Table 2 shows that for 2023, 2025, and 2030, the summer weekday VOC and NO<sub>x</sub> emission levels for the 2015 8-hour nonattainment area are less than the 2019 base year emissions in the 2015 8-hour ozone redesignation SIP. Table 2 also shows that for 2035, 2040, and 2050, the summer weekday VOC and NO<sub>x</sub> emission levels for the 2015 8-hour nonattainment area are less than the emission budgets established in the 2015 8-hour ozone redesignation SIP.

### Conclusions – 8-hour Ozone

The regional emissions analysis of *Connecting Kentuckiana 2050* indicates that the Metropolitan Transportation Plan is consistent with the goals and emission budgets established in the State Implementation Plans of Indiana and Kentucky. The cumulative effect of the results shown in Table 2 indicates that *Connecting Kentuckiana 2050* has met the requirements of conformity under the 2015 8-hour ozone standards. In summary, it can be concluded that *Connecting Kentuckiana 2050* conforms to the SIPs and meets the requirements of the federal conformity rule.

**TABLE 1**

<b>SUMMER WEEKDAY VEHICLE-MILES-TRAVELED (VMT) ESTIMATED FOR THE 8-HOUR OZONE NONATTAINMENT AREA</b> (in 1000's of vmt/day)			
<b>YEAR</b>	<b>INDIANA</b>	<b>KENTUCKY</b>	<b>TOTAL</b>
<b>2023</b>	<b>7863</b>	<b>26021</b>	<b>33884</b>
<b>2025</b>	<b>8073</b>	<b>26577</b>	<b>34650</b>
<b>2030</b>	<b>8484</b>	<b>28010</b>	<b>36494</b>
<b>2035</b>	<b>8908</b>	<b>29332</b>	<b>38240</b>
<b>2040</b>	<b>9348</b>	<b>30545</b>	<b>39893</b>
<b>2050</b>	<b>10220</b>	<b>32931</b>	<b>43151</b>

**TABLE 2**

<b>SUMMER WEEKDAY EMISSIONS FOR THE 8-HOUR NONATTAINMENT AREA (kg/day)</b>				
<b>EMISSION LEVELS FOR VARIOUS YEARS</b>				
<b>YEAR</b>	<b>Area</b>	<b>VOCs</b>	<b>NOx</b>	<b>PASS</b>
<b>2023</b>	<b>Regional</b>	<b>8071</b>	<b>21233</b>	<b>YES</b>
<b>2025</b>		<b>6994</b>	<b>18845</b>	<b>YES</b>
<b>2030</b>		<b>4937</b>	<b>14547</b>	<b>YES</b>
<b>2035</b>		<b>4314</b>	<b>13344</b>	<b>YES</b>
<b>2040</b>		<b>4159</b>	<b>13728</b>	<b>YES</b>
<b>2050</b>		<b>4159</b>	<b>13948</b>	<b>YES</b>

NOTE: The criteria for conformity are as follows:

2023, 2025, and 2030 Regional emission levels for VOCs must be below the redesignation SIP base year emissions of 13.65 tons/day or 12,383 kg/day.

2023, 2025, and 2030 Regional emission levels for NOx must be below the redesignation SIP base year emissions of 33.03 tons/day or 29,964 kg/day.

2035, 2040, and 2050 Regional emission levels for VOCs must be below the redesignation SIP emission budget of 5.51 tons/day or 4,999 kg/day.

2035, 2040, and 2050 Regional emission levels for NOx must be below the redesignation SIP emission budget of 17.18 tons/day or 15,585 kg/day.