



**MEMORANDUM**

**TO:** Transportation Policy Committee

Kentucky  
Member  
Counties

**FROM:** David Burton and Nick Vail

**DATE:** July 9, 2020

Bullitt

**SUBJECT:** Amendment 1 to the Connecting Kentuckiana 2040 MTP, FY 2020 – FY 2025 TIP, and the KIPDA Performance Management Plan

Henry

Jefferson

KIPDA staff is ready to present Amendment 1 to the committees for consideration. Sponsors were given until April 13<sup>th</sup> to submit project changes. In addition to the project changes that are being proposed, staff is also updating the Federally required safety performance measures and targets. Staff have already completed the air quality conformity analysis and the public comment period. All public comments were sent to the Transportation Policy Committee (TPC) for their consideration. The TTCC did recommend approval at the July 8<sup>th</sup> meeting. Please find attached the full Amendment 1 packet for your review.

Oldham

Shelby

Spencer

Trimble

**Action is requested for TPC approval of Amendment 1 to the Connecting Kentuckiana 2040 MTP, the FY 2020 – 2025 TIP, and the Safety Targets found in the KIPDA Performance Management Plan.**

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## Connecting Kentuckiana 2040 Metropolitan Transportation Plan and FY 2020 – FY 2025 Transportation Improvement Program

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The Kentuckiana Regional Planning and Development Agency (KIPDA) is the metropolitan transportation planning organization for the five county region including Jefferson, Bullitt and Oldham counties in Kentucky and Clark and Floyd counties in Indiana. Our responsibilities include producing a long range transportation document, Connecting Kentuckiana 2040 Metropolitan Transportation Plan (MTP) as well as a short range planning document the Transportation Improvement Program (TIP).

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Changes have been proposed to the MTP and TIP. The MTP with the proposed changes is financially reasonable, and the proposed TIP is fiscally constrained. You will find a two page document that provides information about the proposed project changes. KIPDA has also proposed changes to KIPDA's [Performance Management Plan](#). The proposed changes are being made to three pages of the Performance Management Plan. You will find the specific changes are highlighted in yellow in this packet.

We invite you to review the proposed changes and submit comments to the following address from June 12 to June 26, 2020.

Indiana  
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**TIP & MTP Amendment**  
**KIPDA**  
**11520 Commonwealth Drive**  
**Louisville, KY 40299**

Clark

Floyd

**Or, email comments to: [kipda.trans@kipda.org](mailto:kipda.trans@kipda.org)**

You can also review the documents, project map and provide comments by visiting <http://kipdatransportation.org/amendment1/>.

Last, you can ask questions or provide comments in person during a virtual open house held at the following date and time:

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- **June 25, 2020, 5:00 p.m. – 7:00 p.m.** A link to the virtual meeting is provided at <http://kipdatransportation.org/amendment1/>.

For additional information, call Nick Vail at 502-266-6144, ext. 118.



**Amendment 1 to the Connecting Kentuckiana 2040 Metropolitan Transportation Plan and FY 2020 - 2025 Transportation Improvement Program**

**Proposed Project Changes**

**To Be Presented to the Transportation Policy Committee on July 23, 2020**

Project Sponsor	County	KIPDA ID	State ID	Project Name	Description	Purpose & Need	MTP Project Cost	Open to Public Date	Funding Source	Change to TIP	Change to MTP
<b>INDIANA PROJECTS</b>											
INDOT	Clark	2616	1700135	I-65 Road Reconstruction	Upgraded to added travel lanes I-65 from RP 19+0.995 to RP 28+0.883 is a composite pavement section, and is exhibiting severe stripping in the HMA layers beneath the surface. During the last construction contract (RS-37549), the centerline and edgelines were patched to the top of concrete to mitigate severe joint deterioration. Unfortunately, these partial depth patches effectively created a dam in the stripped layers, forcing water to come up through the new surface under traffic loading. 71 wet spots have been inventoried and are creating a safety hazard, especially during the winter months, when the water turns to ice. Additionally, questionable subgrade conditions were discovered under the last contract on the southern portion of the job from 16+0.417 to RP 19+0.995 (R-33813) demonstrating yet another water issue. Given these observations, it is likely that the existing underdrains are not performing as intended. 3 pavement drains were installed as experimental features on October 26, 2017 in the driving lane between Scottsburg and Henryville. These consisted of 2.5' wide trenches that were milled to the top of the underlying concrete (approx. 8" depth) and backfilled with permeable concrete. 1" PVC drains were also installed at the HMA/concrete interface to facilitate drainage. During the installation of the drains, stripped aggregate was observed beneath the surface and water flowed out of the HMA layers at a fairly substantial rate. These drains were considered a success, at least temporarily, since the water that was permeating to the surface was eliminated. Thus, the safety was improved especially during the winter months when freezing occurs. However, during this field work, the concerns of stripping were validated leaving the element of time as the unknown variable before substantial pavement distress occurs. Traffic will be maintained utilizing a 3/1 configuration to maintain 2 lanes in each direction throughout construction, with all ramps remaining open. Restricting the length allowed between crossovers is being considered. Project length is 7.25 miles in Clark County.	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.	\$155,923,188	2024	Interstate Maintenance	Revise project name to: Widening of I-65  Revise project description to: Widen I-65 from 4 to 6 lanes from 0.25 miles S of Biggs Road (RP 16+42) in Clark County to Scottsburg (RP 28.88).  Revise Purpose & Need to: 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 widening from 4 to 6 added travel lanes in this portion of I-65.	Revise project name to: Widening of I-65  Revise project description to: Widen I-65 from 4 to 6 lanes from 0.25 S of Biggs Road (RP 16+42) in Clark County to Scottsburg (RP 28.88).  Revise Purpose & Need to: 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 widening from 4 to 6 added travel lanes in this portion of I-65.
INDOT	Floyd	NEW	1900162	I-64 Added Travel Lanes	Added Travel Lanes Project from US 150 to I-64 and Spring Street Interchange	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.	\$30,000,000	2026	National Highway Performance Program (NHPP)	Add project to the TIP with the following project phases: FY 2024 Construction using NHPP funds \$27,000,000 (Federal) \$3,000,000 (Other) \$30,000,000 (Total)	Add project to the MTP
INDOT	Floyd	NEW	1900118	US 150	Intersection Improvement with added turn lanes at the intersection of Scenic Valley/Brush College Road	To improve the geometrics to allow for safer and more efficient operation without adjacent residential impacts. Certain trucks cannot turn WB from US 150 to NB TO EB on Brush College without impacting the adjacent or opposing lanes.	\$2,126,585	2024	Surface Transportation Block Grant (STBG) - State	Add project to the TIP with the following project phases: FY 2023 Right of Way using STBG-ST funds \$200,000 (Federal) \$50,000 (Other) \$250,000 (Total)  FY 2024 Construction using STBG-ST funds \$1,681,268 (Federal) \$420,317 (Other) \$2,101,585 (Total)	Add project to the MTP
INDOT	Floyd	NEW	1800318	SR 64	Intersection Improvement with Added Turn Lanes on IN 64 at Copperfield Drive to reduce queueing and delay for motorists at this intersection.	To help reduce congestion at IN 64 and Copperfield Drive due to traffic at large subdivision causing motorists to back up and cause long delays. Culvert beneath will be extended to allow for widening of road.	\$1,523,957	2024	Surface Transportation Block Grant (STBG) - State	Add project to the TIP with the following project phases: FY 2022 Right of Way using STBG-ST funds \$136,000 (Federal) \$34,000 (Other) \$170,000 (Total)	Add project to the MTP
INDOT	Clark Floyd	NEW	2000220	Traffic Signal Mods	Traffic Signal Modernization in various locations in the Seymour District on SR 60, SR 46, US 150, and US 31. Locations in KIPDA MPO area are: SR 60 @ Old 311 (Sellersburg) SR 60 @ Payne Kohler Rd (Sellersburg) SR 60 @ I-65 NB (Sellersburg) SR 60 @ I-65 SB (Sellersburg) US 150 @ Navilleton Rd (Greenville)	To modernize the signals in order to meet current standards. All locations will need new backplates, heads, spars/tether/catenary/overhead signage, conduit, and upgraded signal equipment in the cabinets. Navilleton intersection will need upgraded signal cabinet and new foundation.	\$1,450,000	2021	National Highway Performance Program (NHPP)	Add project to the TIP with the following project phases: FY 2021 Construction using NHPP funds \$1,305,000 (Federal) \$145,000 (Other) \$1,450,000 (Total)	Add project to the MTP
INDOT	Floyd	NEW	1901972	Traffic Modernization in Floyd County	Traffic signal modernization at various locations in Decatur and Floyd Counties. Locations in Floyd County (New Albany) are: Spring and Scribner; US 150 and Paoli Pike; Charlestown Road and St. Joe Road; Charlestown Road and Kamer Miller; IN 111 and Budd Road; IN 111 and Corydon Pike.	To modernize the signals at various locations in Floyd County to meet current standards.	\$1,460,946	2022	National Highway Performance Program (NHPP)	Add project to the TIP with the following project phases: FY 2022 Construction using NHPP funds \$1,242,000 (Federal) \$138,000 (Other) \$1,380,000 (Total)	Add project to the MTP

**Amendment 1 to the Connecting Kentuckiana 2040 Metropolitan Transportation Plan and FY 2020 - 2025 Transportation Improvement Program**

**Proposed Project Changes**

**To Be Presented to the Transportation Policy Committee on July 23, 2020**

Project Sponsor	County	KIPDA ID	State ID	Project Name	Description	Purpose & Need	MTP Project Cost	Open to Public Date	Funding Source	Change to TIP	Change to MTP
<b>KENTUCKY PROJECTS</b>											
KYTC	Oldham	1271	441.01	US 42	KYTC Highway Plan (June, 2018): Reconstruct US 42 and widen from 2 lanes to 3 lanes (3rd lane will be a center turn lane) from Jefferson/Oldham County Line to Ridgemoor Drive. Project will include the consideration of improvements to the Hayfield Way intersection (2004BOPC).	CHAF Purpose: The purpose of the project is to improve traffic flow, minimize congestion, and address safety issues on US 42 between the Jefferson County/Oldham County line and Ridgemoor Drive. CHAF Need: Due to an increase in commuters to and from Louisville and the development along the project corridor, the traffic volumes are expected to double in the next 20 years. The accident data for the last 3 years shows that there are between 10 and 14 rear end	\$10,284,000	2021	Surface Transportation Block Grant (STBG-MPO)	Add project to the TIP with the following project phases: FY 2020 Design using STBG-MPO funds \$51,000 (Federal) \$0 (Other) \$51,000 (Total)  FY 2020 Utilities using STBG-MPO funds \$300,000 (Federal) \$0 (Other) \$300,000 (Federal)  FY 2020 Construction using STBG-MPO funds \$5,020,000 (Federal) \$0 (Other) \$5,020,000 (Total)	None
Louisville Metro	Jefferson	1352		US 60 Premium Transportation Corridor Project - Section 1	Conduct US 60 (Shelbyville Road) Corridor Transportation Management Study between KY 1747 (Hurstbourne Parkway) and English Station Road, approximately 4.1 miles.	The US 60 Premium Transportation Corridor Project will improve access and mobility along one of Louisville Metro's most heavily travelled corridors. It highly-prioritized in Move Louisville, Louisville Metro's 20-year transportation plan, as both a "Major Corridor" and a "Premium Transit Corridor." US 60's success as a commercial destination has led to major mobility challenges in the area. Transitioning from a "traditional neighborhood marketplace" to a "suburban marketplace corridor" about halfway through the project area, Section 1 of this project will need to account for various demands across its 7.84 mile length; however, these two sub-areas, despite their differences are united in their demand for significantly improved mass transit service and complete multi-modal connections. The vibrant commercial corridor, anchored by two of Louisville's three regional malls, needs investment and improvements to maintain its success over the years to come. The improvements outlined in this design-build project are comparable to those seen in the "Transforming Dixie Highway" project, which received 16.9 million in federal funds. US 60 generally has poor access management, crash-inducing typical cross-sections, and poor transit accommodations and connections. It also fails to provide complete pedestrian connections and few to no safe bicycle facilities. Taken together, these issues need to be addressed to ensure that the US 60 of the future continues to succeed while providing even greater access to people of all ages and abilities.	\$16,000,000	2030	None	None	Revise project description to: The US 60 Premium Transportation Corridor Project is a design-build project that will: 1) streamline transit service on a key corridor by adding traffic signal bus prioritization, new bus stops, and increasing bus service frequency; 2) bring intelligent signal upgrades, which will include upgraded traffic signals and communication equipment to support premium transit and overall mobility; 3) incorporate complete streets roadway improvements by including bicycle and pedestrian facilities, intersection safety improvements, access management strategies for surrounding land uses, and new streetscape design elements.

# PERFORMANCE MANAGEMENT PLAN

UPDATED APRIL 2020



# KIPDA

Kentuckiana Regional Planning  
and Development Agency

## KIPDA PERFORMANCE MANAGEMENT PLAN

**TABLE 2: PERFORMANCE MEASURES, BASELINES, AND TARGETS**

<b>SAFETY</b>					
REQUIRED BY:	PERFORMANCE MEASURE	BASELINE		TARGET	
FHWA	<b>S1</b> Number of Fatalities	127.8	Fatalities (2014-2018 5-year rolling average)	132.0	Fatalities (2016-2020 5-year rolling average)
FHWA	<b>S2</b> Fatality Rate	1.14	Fatalities per 100 million VMT (2014-2018 5-year rolling average)	1.16	Fatalities per 100 million VMT (2016-2020 5-year rolling average)
FHWA	<b>S3</b> Number of Serious Injuries	817.0	Serious Injuries (2014-2018 5-year rolling average)	707.9	Serious Injuries (2016-2020 5-year rolling average)
FHWA	<b>S4</b> Serious Injury Rate	7.26	Serious Injuries per 100 million VMT (2014-2018 5-year rolling average)	6.19	Serious Injuries per 100 million VMT (2016-2020 5-year rolling average)
FHWA	<b>S5</b> Number of Non-Motorized Fatalities and Serious Injuries	115.2	Non-Motorized Fatalities and Serious Injuries (2014-2018 5-year rolling average)	117.2	Non-Motorized Fatalities and Serious Injuries (2016-2020 5-year rolling average)
MPO	<b>S6</b> Crash Rate	399.0	Crashes per 100 million VMT (2012-2016 5-year rolling average)	Reduce by 20% by 2040 to 319 crashes per 100 million VMT	

## KIPDA PERFORMANCE MANAGEMENT PLAN

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### *Target-Setting Methodology*

At the time of target-setting in early 2018, four out of five of the target years were completed. Actual crash data for 2014 to 2017 had already been downloaded by KIPDA. A projection for 2018 was developed using a linear trendline. The five-year rolling average using four years of actual data plus one year of projected data was calculated at 131.4 fatalities.

In February 2020, KIPDA's Transportation Policy Committee approved a change to the target setting methodology utilized to develop the 2016-2020 Targets for the FHWA-required safety performance measures listed on Page 9 of this document. In place of using a linear trendline to project the estimate for the fifth and final year of the five-year target, as is described above, the target was set by assuming that the number of fatalities in 2020 would be equal to the number of fatalities that occurred in 2019. This updated methodology was consistently utilized for the updates of the 2016-2020 Targets for Measures S2 through S5 as well.

## **AIR QUALITY CONFORMITY**

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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. Much of this area coincides with the local ozone nonattainment area. In the past, a portion of the planning study area also coincided with a local 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 nonattainment 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. One of the requirements of this designation as a nonattainment area is that it will once again be necessary to determine conformity for the local area.

KIPDA is amending *Connecting Kentuckiana 2040*, the metropolitan transportation plan (MTP) and the FY 2021 – FY 2025 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 both the 1997 and 2015 8-hour ozone standards.

### **CONFORMITY UNDER THE 1997 AND 2015 8-HOUR OZONE STANDARDS**

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 was set by US EPA when the standard is promulgated.

Subsequent to being designated as nonattainment of the 1997 8-hour ozone standard and prior to being redesignated as attainment of the standard, the Louisville area



relied on the use of interim tests to demonstrate conformity. These tests had been established during a 2004 update to the federal conformity rule. When the Louisville area was designated as nonattainment of the 2015 8-hour ozone standard, there were no MVEBs for that standard. However, there were MVEBs for the 1997 8-hour ozone standard, and they were used in the process of determining conformity to both the 1997 and 2015 standards.

When the local area was designated as nonattainment of the 1997 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 the actions to reduce precursor emissions were to be incorporated into the Indiana and Kentucky SIPs. It was during this process that MVEBs were established. Originally, the SIPs were to include sets of actions to bring the local area into attainment of the ozone standard. This type of SIP is known as an attainment demonstration. However, while these SIPs were being developed, the data from the air quality monitors in the area indicated that the 1997 8-hour ozone standard had been met. With this data in hand, the air quality agencies were able to submit a SIP known as a redesignation request instead. 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 2040*

The first step in determining conformity of *Connecting Kentuckiana 2040* was to consult with the interagency consultation (IAC/ICG) group concerning matters not explicitly determined by the conformity rule. Conformity under the 1997 8-hour ozone standard had been previously determined. Therefore, many of the issues normally arising in conformity had undergone consultation previously. Since these issues were not raised during consultation this time, the portions of the analysis involving those issues were accomplished consistent with established practice.

A consultation conference call was held on May 7 to discuss issues relative to the amendment of the MTP. It involved a review and discussion of the following items:

- (a) important dates in the schedule for the amendment;
  - June 5 -- Regional Emissions (Air Quality) Analysis completed
  - June 12 -- Public Review begins
  - July 8 -- Action by the Transportation Technical Coordinating Committee
  - July 23 -- Action by the Transportation Policy Committee

July 24 -- Documentation sent to review agencies for the federal conformity determination;

- (b) a draft list of projects—sent to the IAC/ICG with consultation notice— included in accompanying documentation;
- (c) the horizon year of the transportation plan—2040;
- (d) the proposed conformity test methodology/ies and analysis years—see the discussion of issues and ESTABLISHED PRACTICE sections below;
- (e) the pollutant(s)/precursor(s) of concern and the motor vehicle emissions budget(s), if applicable—see table 2 at the end of the report;
- (f) information concerning the inputs for the travel demand model and the approved emissions model—see the issues section below, the list of projects included in accompanying documentation, and the items concerning the travel demand model and emissions model under Other Planning Issues; and
- (g) a listing of any transportation control measures (TCMs) in SIPs, if applicable—there are none.

### Issues

#### Discussion of Schedule

KIPDA staff discussed the schedule for amendment 1. KIPDA staff also noted the schedule for amendment2, which is expected to occur later this year. There were no questions concerning either amendment.

#### Discussion of Projects

KIPDA staff had provided the IAC/ICG with a list of 8 projects that will be amended in *Connecting Kentuckiana 2040*. The projects are a mix of new projects and projects already in the MTP that were being amended. Key details about the projects were presented, including information on how the projects were included in or excluded from the regional travel demand model.

Other points of discussion of the projects included:

- **US 42 Reconstruction and Widen, KIPDA ID 1271:** A clarification was noted. Only the construction phase of this project is being amended into the TIP at this time. There were no comments or questions concerning this project.

- **Widening of I-65, KIPDA ID 2616:** This INDOT project was discussed, but there were no comments or questions concerning it.
- **Widening of I-64, new project – no KIPDA ID yet:** This INDOT project was discussed, but there were no comments or questions concerning it.

**Conclusion: The IAC/ICG members, after discussing the details of the projects listed above, accepted the recommendations of KIPDA staff concerning the incorporation of these projects and the other projects described in the documentation into the regional emissions analysis.**

#### Discussion of the Conformity Analysis

KIPDA staff discussed the key components of the conformity analysis that are expected to be presented to the KIPDA TPC in July. The analysis years will be the ones that were used when the existing MTP was updated.

The Budget Test utilizing the Year 2020 Motor Vehicle Emissions Budgets created for the 1997 8-Hour Ozone Standard will continue to be used until a new set of budgets are established. By not exceeding these budgets in the year 2020, 2025, 2030, 2035, and 2040 travel model scenarios, *Connecting Kentuckiana 2040* will demonstrate conformity to both the 1997 and 2015 8-Hour Ozone Standards.

Louisville Metro Air Pollution Control District (LMAPCD) staff reported that he had recently prepared the 2018 Kentucky fleet data for use in the MOVES model. He will be using that data in the upcoming analysis. MOVES 2014b will be used for the analysis.

Federal Highway Administration—Kentucky Division staff asked about the age of the Indiana fleet data. When told that the most recent version is from 2014, she questioned when newer data will be available. Indiana Department of Transportation staff indicated that there may be 2017 Indiana fleet data available. After some discussion, it was decided that it would not be available for this analysis, but it would probably be available for amendment 2, which will occur later this year.

NOTE: (See also the “Analysis Years and Conformity Tests” portion of the “ESTABLISHED PRACTICE” section below for more information on these issues.)

#### Other Discussion

KIPDA staff sought information concerning the status of an updated State Implementation Plan (SIP) for the 2015 ozone standard. LMAPCD staff noted that an updated emissions inventory was being developed. She also stated that the local region had been designated as a marginal non-attainment area, and therefore, new emission budgets were not required to be developed at this time. It was also

stated that if the local region were to be reclassified as a moderate non-attainment area, the development of a new SIP would be necessary, and emission budgets would be included in that SIP.

In another matter, a question was raised about the necessity of using the 2020 scenario as an analysis year in calendar year 2021 and beyond. It was stated that the 2020 scenario will be necessary through the end of calendar year 2020 but will not be required in calendar year 2021 and beyond.

KIPDA Staff offered the opportunity for any other business or questions to be brought to the IAC/ICG. There was no other business discussed.

## 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 consultation call of May 7, 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/ICG 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.**

### Issues related to the KIPDA travel demand forecasting model

During recent changes to the MTP, there were three changes of note to the KIPDA travel demand forecasting model.

- (1) First, the census urbanized area has recently been updated to include a small area in northwest Shelby County, KY. The metropolitan planning area has been updated to reflect the 2010 census urbanized area. This area was added to the KIPDA travel demand forecasting model to be consistent with this amendment.
- (2) Second, the proposed toll structure for the Louisville Southern Indiana Ohio River Bridges project changed. Changes were made to the KIPDA travel demand forecasting model to reflect the changes in the toll structure.
- (3) During recent years, KIPDA staff have updated and calibrated the travel demand forecasting model. This activity involved updating the inputs to the model and developing new values for the parameters of the model. The resulting model was

considered calibrated when the model outputs matched observed data (e.g. HPMS VMT), within reason, for the baseyear. This update established 2015 as the baseyear (the year on which calibration was based) for the model.

**Conclusion: The IAC/ICG members have been informed that the KIPDA travel demand forecasting model has been updated and calibrated and that 2015 is now the baseyear for the model.**

#### Analysis Years and Conformity Tests

Motor Vehicle Emissions Budgets (MVEBs) for the 1997 8-hour ozone standard were approved by EPA in July, 2007. The MVEBs were for the precursors of ozone, volatile organic compounds (VOCs) and oxides of Nitrogen (NOx), The Federal Register notice can be found at 72 FR 36601. The budgets are shown in Table 2 at the end of this document. Since there are MVEBs for the ozone precursors, the conformity rule requires that ozone analyses be done for the attainment year and the last year of the transportation plan. In addition, other intermittent year(s) are required such that no two analysis years are more than ten years apart. The maintenance plan established when the local area was redesignated established MVEBs for VOCs and NOx for 2003 (the attainment year) and 2020 (the last year of the maintenance plan). Since the attainment year is now in the past, that year is no longer included in the analysis.

In order to have the required analysis years, several changes were made in recent years. During an amendment of the MTP in 2013, it was necessary to replace 2012 as an analysis year because it was in the past, and 2015 was chosen. When the MTP was updated in 2020, the horizon year of the plan was being changed to 2040, and that year had to be added to the analysis years. At the same time, in order to allow for more orderly transition as time progressed, 2025 and 2035 have been added as analysis years, allowing for analysis years every five years. By having the analysis years five years apart throughout the life of the MTP, it was noted that there would always be an analysis year within five years of the time of the analysis. Further, when the horizon year of the MTP is extended, that year will be added as an analysis year. Otherwise, the analysis years can remain constant except for the removal of an analysis year when it occurs in the past. Recently, 2015 was removed because it is in the past. Because of the previous practice to have analysis years five years apart, it was not necessary to add another analysis year. 2020 was already an analysis year and within five years of the present.

**Conclusion: The established practice is that the analysis years and conformity tests for the regional emissions analysis are as shown in the tables below. Years prior to the present year have been removed from the list.**

1997 8-hour Ozone Standard	
Analysis Year	Conformity Test(s)
2020	Budget test using the 2020 MVEBs for the 1997 8-hour standard
2025	Budget test using the 2020 MVEBs for the 1997 8-hour standard
2030	Budget test using the 2020 MVEBs for the 1997 8-hour standard
2035	Budget test using the 2020 MVEBs for the 1997 8-hour standard
2040	Budget test using the 2020 MVEBs for the 1997 8-hour standard

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/ICG. As discussed above, the vehicle registration data now being used for the Indiana counties is for 2014, and the registration data now being used for the Kentucky counties is for 2018. This data represents the most recent information available for this issue.

**Conclusion: Based on a consensus of the IAC/ICG members, vehicle registration data for 2014 for the Indiana counties and for 2018 for the Kentucky counties is now being used in developing emission estimates.**

CONFORMITY OF *CONNECTING KENTUCKIANA 2040*

The MTP, *Connecting Kentuckiana 2040*, was examined to determine if it met the requirements of the conformity rule under the 1997 and 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 2040* 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 2040* 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 the 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 the amendment of *Connecting Kentuckiana 2040*, 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 being exempt, non-exempt, etc. 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/ICG as described under the section entitled “CONSULTATION FOR *CONNECTING KENTUCKIANA 2040*.” (please see above.) Those projects in *Connecting Kentuckiana 2040* which were not changed will be analyzed as they were previously. The projects which were newly added to the MTP or had been changed in *Connecting Kentuckiana 2040* were analyzed as indicated on the list provided to IAC/ICG.

In addition, 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 factors. 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 recently. This update established 2015 as the new base year for the model. The model update utilized the information incorporated into the travel model during previous updates. In particular, information from the 2000 KIPDA Household Travel Survey, and the 2004 on-board survey of transit riders by the Transit Authority of River City had been previously incorporated. Information from



2010 Census, the 2012-2016 American Community Survey, the 1990 and 1995 National Personal Transportation Surveys, and the 2001 and 2009 National Household Travel Surveys was incorporated to update the previous source data, particularly the 2000 KIPDA Household Travel Survey. During the update, the model parameters were adjusted such that the model output matched—within reason—three 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; (2) the distribution of trip lengths (duration in time) for each of the main trip purposes used in the model; and (3) 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 2015. 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. 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 and utilizes different trip rates for each. 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.

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. The friction factors used in the gravity model were developed as part of the calibration effort performed during the model update. In addition, information from a study which investigated the behavior of travelers crossing the Ohio River and traffic count information from years near 2015 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.

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*. 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 2040* utilizes transit information from the previous travel demand model. The results of the 2004 TARC on-board survey had been used to supplement the previous information. This was deemed acceptable for several reasons. The primary reason was that the transit network envisioned by *Connecting Kentuckiana 2040* 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 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 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 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 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 2015. 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 2015 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 2015 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).

The HERS equations were used to estimate speeds on 6239 sections for five functional classifications of urban roadways and 2278 sections 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.

There were not many HPMS minor collector and local roadway sections with data that allowed for the calculation of adjustment factors. Since the model contained the minor collector roadways in the area and these roadways were similar to the major collector roadways in the area, the adjustment factor for the rural major collectors was used for the rural minor collector roadways, and the adjustment factor for the urban major collectors was used for the urban minor collector roadways.

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 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, and VMT fractions by speed bin by county and by MOBILE 6 facility type 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 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/ICG partners.

The assumptions used in developing the emissions for Clark, Floyd, and Jefferson (KY) counties were the same as those that were used in developing the ozone budget update (for VOCs and NO<sub>x</sub>) in 2003 with a few exceptions where newer data was incorporated. 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 2014) for Clark and Floyd counties (provided by IDEM),
- (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. Most of the inputs to the MOVES model were defaults and/or data used that was consistent with previous SIPs. 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 or had only been designated under the 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 was modeled the same as for Jefferson County.

The assumptions used for Bullitt and Oldham counties were consistent with those for the 2003 ozone budget update with the following exceptions:

- (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 2040*, 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 maintenance 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 2020, 2025, 2030, 2035 and 2040, 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 1997 8-hour ozone maintenance SIP.

### Conclusions – 8-hour Ozone

The regional emissions analysis of *Connecting Kentuckiana 2040* 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 2040* has met the requirements of conformity under the 1997 and 2015 8-hour ozone standards. In summary, it can be concluded that *Connecting Kentuckiana 2040* 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>2020</b>	<b>7346</b>	<b>25935</b>	<b>33281</b>
<b>2025</b>	<b>7888</b>	<b>27301</b>	<b>35189</b>
<b>2030</b>	<b>8426</b>	<b>28719</b>	<b>37145</b>
<b>2035</b>	<b>8961</b>	<b>30059</b>	<b>39020</b>
<b>2040</b>	<b>9441</b>	<b>31182</b>	<b>40623</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>2020</b>	<b>Regional</b>	<b>13652</b>	<b>23746</b>	<b>YES</b>
<b>2025</b>		<b>9448</b>	<b>16912</b>	<b>YES</b>
<b>2030</b>		<b>6621</b>	<b>11889</b>	<b>YES</b>
<b>2035</b>		<b>5341</b>	<b>9795</b>	<b>YES</b>
<b>2040</b>		<b>4974</b>	<b>9422</b>	<b>YES</b>

NOTE: The criteria for conformity are as follows:

2020, 2025, 2030, 2035, and 2040 Regional emission levels for VOCs must be below the maintenance plan emission budget of 22.92 tons/day or 20,793 kg/day.

2020, 2025, 2030, 2035, and 2040 Regional emission levels for NOx must be below the maintenance plan emission budget of 29.46 tons/day or 26,726 kg/day.





***Connecting Kentuckiana 2040* Metropolitan Transportation Plan Amendment 1  
FY 2020-2025 Transportation Improvement Program Amendment 1  
Interagency Consultation Group Conference Call Meeting Minutes  
May 7, 2020  
10:00 AM EDT**

**Participants:**

FHWA – Bernadette Dupont & Erica Tait

KYTC – Tom Hall, Tonya Higdon, & Jahan Khan

INDOT – Jay Mitchell

EPA – Sarah LaRocca, Kelly Sheckler & Anthony Maietta

KYDAQ – Anna Bowman

IDEM – Shawn Seals

LMAPCD – Michelle King, Craig Butler, & Matt King

Louisville Metro – Mike King

KIPDA – Elizabeth Farc, David Burton, Randy Simon, Nick Vail, Andy Rush, & Amanda Spencer

**Welcome/Roll Call:**

A total of 21 participants, representing nine local, state, regional, and federal agencies participated in the IAC Conference Call for Amendment 1 of KIPDA's *Connecting Kentuckiana 2040* Metropolitan Transportation Plan and the FY 2020-2025 Transportation Improvement Program. The meeting began shortly after 10:00 AM EDT on May 7, 2020.

**Schedule Discussion:**

KIPDA staff discussed the anticipated schedule for the amendment, including the various steps and in the amendment process. The amendment is tentatively scheduled to be presented to KIPDA's Transportation Policy Committee (TPC) for adoption on July 23<sup>rd</sup>. Also discussed by KIPDA staff was Amendment 2 of the MTP & TIP, which is currently scheduled for TPC adoption in October 2020. There were no questions from other agencies.

**Project Discussion:**

KIPDA staff presented the list of eight (8) projects that are included in Amendment 1. A change to KIPDA ID 1271 (US 42 Reconstruction and Widen) was noted. Only the Construction phase of that project is being amended into the TIP at this time. Two INDOT interstate widening projects (KIPDA ID 2616: Widening of I-65 and KIPDA ID (New): I-64 Added Travel Lanes) were discussed. There were no comments or questions about those three projects.

KIPDA staff asked if there were any questions about the other five projects on the list. There were no questions.

**Conformity Analysis Discussion:**

KIPDA staff discussed the key components of the conformity analysis that is expected to be presented to the KIPDA TPC in July. KIPDA will continue to utilize Year 2020, 2025, 2030, 2035, and 2040 scenarios for analysis years in the upcoming analysis. The regional emissions estimates for all scenarios will be compared to Year 2020 Budgets established for ozone precursors.

Other than the changes to the two INDOT projects mentioned earlier, the only change to this analysis from the analysis performed in 2019 for the MTP and TIP Updates will be the inclusion of new vehicle fleet mix information for the Kentucky counties. Craig Butler, Louisville Metro Air Pollution Control District (LMAPCD) staff, recently prepared the Year 2018 Kentucky fleet data for its use in the MOVES Model. Mr. Butler noted that the data were summarized and distributed via email to the IAC recently for their review. Mr. Butler also noted that he believes that the impact of the new fleet Kentucky fleet data will be positive (reduces modeled emissions) should VMT remain constant from prior analyses.

Bernadette Dupont, FHWA-Kentucky Division staff, inquired about the age of the fleet data from each state. Mr. Butler responded that the recently updated data from Kentucky is from 2018, and the most recent version of Indiana fleet data is from 2014. Ms. Dupont asked about when Indiana might update their data. Jay Mitchell, INDOT staff, noted that he believes that 2017 fleet data for Indiana may exist. Ms. Dupont asked if the 2017 Indiana data could be used for the Amendment 1 Regional Emissions Analysis. KIPDA and LMAPCD staff noted that it takes some time to prepare the data for its use as input in a regional emissions analysis. They are hopeful that if the 2017 Indiana data exists in a usable format, it can be prepared to be available to use for Amendment 2, which is currently scheduled to occur later this year.

KIPDA staff asked if there were any other questions or comments concerning the analysis. Mr. Butler noted that the version of MOVES to be used for this analysis is MOVES 2014b, which is consistent with the most recent analysis.

#### **SIP Status Discussion:**

KIPDA staff sought input on the status of an updated Ozone State Implementation Plan (SIP) for the 2015 ozone standard. Michelle King, LMAPCD staff, noted that LMAPCD is currently developing an updated emission inventory, which will be submitted later this year. She also noted that the region has been designated as a Marginal Non-Attainment Area, and therefore new motor vehicle emissions budgets are not required. Should the region be reclassified as a Moderate Non-Attainment Area, new budgets would be developed in a new SIP that would be required to be developed at that time. There was additional discussion.

The discussion continued into the status of 2020 as an analysis year and budget year in future regional emissions analyses. For the time being, and at least through the end of Calendar Year 2020, 2020 will be a required analysis and budget year. It will remain a budget year until further notice. KIPDA staff asked if in Calendar Year 2021, could a Year 2020 scenario be dropped from the analysis as an analysis year. Kelly Sheckler, EPA Region 4 staff, answered affirmatively.

#### **Other Discussion:**

KIPDA staff offered the opportunity for any other business or questions to be brought to the IAC. There was no other business discussed. The conference call adjourned at approximately 10:45 AM EDT.

**Amendment 1 to the Connecting Kentuckiana 2040 Metropolitan Transportation Plan (MTP) and FY 2020 - 2025 Transportation Improvement Program (TIP)**

**Public Comments**

1. Project Sponsor: Indiana Department of Transportation

Project Name: Widening of I-65

KIPDA ID: 2616

Project Description: Widen I-65 from 4 to 6 lanes from 0.25 S of Biggs Road (RP 16+42) in Clark County to Scottsburg (RP 28.88).

Public Comment: No! Do not add lanes to our interstate system.

2. Project Sponsor: Indiana Department of Transportation

Project Name: I-64 Added Travel Lanes

KIPDA ID: NEW (not yet assigned)

Project Description: Added Travel Lanes Project from US 150 to I-64 and Spring Street Interchange

Public Comment: No! Please do not add lanes to our interstate system!! More lanes EQUALS more driving - instead, we MUST reduce VMT for our community.

3. Project Sponsor: Kentucky Transportation Cabinet

Project Name: US 42

KIPDA ID: 1271

Project Description: Reconstruct US 42 and widen from 2 lanes to 3 lanes (3rd lane will be a center turn lane) from Jefferson/Oldham County Line to Ridgemoor Drive. Project will include the consideration of improvements to the Hayfield Way intersection (2004BOPC).

Public Comment: In support of this project

4. General comment: Need for commuter rail and other alternative modes of transportation between Louisville and Lexington.



**Amendment 1 to the Connecting Kentuckiana 2040 Metropolitan Transportation Plan (MTP) and FY 2020 - 2025 Transportation Improvement Program (TIP)**

**Public Comments**

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4. General comment: Need for commuter rail and other alternative modes of transportation between Louisville and Lexington.

## **Responses from TPC Members to Public Comments**

1. The Indiana Department of Transportation (INDOT) strives to maintain an appropriate balance between safety, mobility, and maintaining infrastructure for economic development with safety being INDOT's priority. INDOT believes that the added travel lanes for this project will result in reduced congestion and a safer network while providing Hoosiers and others with the infrastructure to support economic stability and growth.



U.S. Department  
of Transportation  
**Federal Highway  
Administration**

**Kentucky Division**

September 3, 2020

330 West Broadway  
Frankfort, KY 40601  
PH (502) 223-6720  
FAX (502) 223-6735  
<http://www.fhwa.dot.gov/kydiv>

In Reply Refer To:  
HDA-KY

Mr. Jarrett Haley, Executive Director  
Louisville Area Metropolitan Planning Organization  
c/o Kentuckiana Regional Planning and Development Agency  
11520 Commonwealth Drive  
Louisville, KY 40299

Dear Mr. Haley:

The Kentucky Division Office of the Federal Highway Administration (FHWA) and Region 4 of the Federal Transit Administration (FTA), in consultation with the Indiana Division Office of the Federal Highway Administration and Regions 4 and 5 of the United States Environmental Protection Agency (EPA), have reviewed the following documents:

Amendment 1 to the 2020-2025 Transportation Improvement Program (TIP) and  
Amendment 1 to the 2040 Metropolitan Transportation Plan (MTP) for the  
Louisville Area Metropolitan Planning Organization (MPO)  
(MPO approval date July 23, 2020)

The Kentucky Environmental and Public Protection Cabinet's Division for Air Quality, the Kentucky Transportation Cabinet's Division of Planning, the Kentucky Transportation Cabinet's Office of Transportation Delivery, the Louisville Metro Air Pollution Control District, and the Transit Authority of River City also had an opportunity to review and comment on the aforementioned documents.

We found that these documents meet the five primary criteria of the Transportation Conformity Rule (40 CFR Part 93):

- use of the latest planning assumptions,
- use of the latest emissions model,
- use of appropriate consultation procedures,
- consistency with the mobile vehicle emission budgets in the State Implementation Plan (SIP), and
- provisions for timely implementation of transportation control measures in the SIP.



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We found that these documents met the criteria outlined in the July 1, 2004 Transportation Conformity Rule Amendments for New 8-hr Ozone and PM<sub>2.5</sub> National Ambient Air Quality Standards (NAAQS), Response to March 1999 Court Decision and Additional Rule Changes (69 FR 40004). We therefore find that these amendments conform to the 2015 8-hour Ozone NAAQS.

Sincerely,

Todd Jeter  
Division Administrator

cc: Aviance Webb, FTA-R4  
Erica Tait, FHWA-IN  
Jane Spann, EPA-R4  
Melissa Duff, KEEC-DAQ  
Keith Talley Sr., Louisville Metro APCD  
Laura Douglas and Margaret Handmaker, TARC  
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