

TRANSPORTATION TECHNICAL COORDINATING COMMITTEE

1:00 p.m., Wednesday, October 13, 2021

**KIPDA Burke Room
11520 Commonwealth Drive
Louisville, Kentucky 40299**

Please review the following notes:

- TTCC members may attend the meeting in person at 11520 Commonwealth Drive, Louisville KY.
- TTCC members and the public may participate, observe, and comment online.
- Each TTCC member will also be provided a unique web-link to the Zoom video conference.
- The public may review the meeting materials and find the web-link to the video meeting at:
<https://www.kipda.org/committees-and-councils/transportation-technical-coordinating-committee/meeting-information/>
- There will be a public comment period at the beginning of the TTCC meeting. The public may also submit comments in advance of the meeting by emailing: KIPDA.trans@kipda.org

AGENDA

- 1) *Call to Order, Welcome, Roll Call*
- 2) *August 2021 TTCC Meeting Minutes* – The Chair will entertain a review and the approval of the prior meeting’s minutes (see enclosed). **Action Requested.**
- 3) *Transportation Policy Committee Report* – Staff will report on the activities of the August and September 2021 TPC meetings.
- 4) *Public Comment Period* – The Chair will facilitate a review of comments submitted prior to the TTCC meeting and entertain comments offered as part of Agenda Item 4.
- 5) *Quarterly Review of MPO Dedicated Programs* – Staff will present a review and proposed cost increases to projects funded with MPO dedicated funds and seek a recommendation for approval (see enclosed). **Action Requested.**
- 6) *KIPDA Transportation Online Library* – Staff will present the updated and expanded KIPDA Transportation Online Library (see enclosed).
- 7) *County Level Demographic Changes* – Staff will present information concerning demographic changes for the five county Metropolitan Planning Area (see enclosed).
- 8) *Kentucky / Indiana Transportation Excellence Award* – Staff will update the TTCC about the 2021 KITE Award and the project nomination process (see enclosed).
- 9) *INDOT and KYTC Bicycle and Pedestrian Coordinators* – Brian Burgoa, INDOT Statewide Bicycle and Pedestrian Coordinator and Keith Lovan, KYTC Bicycle and Pedestrian Coordinator will update the TTCC on recent statewide activities, information, and trends.

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- 10) *Amendment to the Connecting Kentuckiana 2040 Metropolitan Transportation Plan (MTP) and FY 2020-2025 Transportation Improvement Program (TIP)* – Staff will present Amendment 4 to the MTP and TIP and seek a recommendation for approval (see enclosed). **Action Requested.**
- 11) *Other Business*
- 12) *Adjourn*

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MEETING MINUTES
TRANSPORTATION TECHNICAL COORDINATING COMMITTEE (TTCC)
1:00 p.m., Wednesday, August 11, 2021
In-Person and Via Video Conference

Call to Order

Chair Keith Griffie called the meeting to order at 1:01 p.m. After introductions were made, it was determined that there was a quorum present.

Review and Approval of Minutes

Curtis Hockenbury, City of Shepherdsville, made a motion to approve the minutes for the May TTCC meeting. Matt Meunier, City of Jeffersontown, seconded the motion and it carried with a unanimous vote.

Transportation Policy Committee (TPC) Report

Andy Rush, KIPDA staff, reported on the May TPC meeting. No action was required.

Public Comment Period

There were no public comments.

Quarterly Review of MPO Dedicated Programs

Nick Vail, KIPDA staff, presented a project review, proposed cost increases, and a funding swap to projects funded with MPO dedicated funds. **Carrie Butler, TARC, made a motion to recommend approval of the proposed cost increases and funding swap to the TPC. Jim Urban, Oldham County Planning Commission, seconded the motion and it carried with a unanimous vote.**

KYTC SHIFT

Andy Rush, KIPDA staff, updated the committee on the status of the KYTC SHIFT process. There was discussion. No action was required.

KIPDA Performance Management Plan (PMP) Transit Safety Targets

Andy Rush, KIPDA staff, presented transit safety targets being proposed for addition to the KIPDA PMP. **Barry Armstrong, City of Mt. Washington, made a motion to recommend approval of the proposed transit safety targets to the TPC. Jim Silliman, Oldham County, seconded the motion and it carried with a unanimous vote.**

Louisville Metro Prestation on Vision Zero Louisville

Dirk Gowin (Louisville Metro staff) and Will Conkin (Palmer Engineering) reported on efforts to reduce traffic fatalities and serious injuries. No action was required.

Other Business

Andy Rush, KIPDA staff, announced that KIPDA Transportation committee meetings will continue to be held with the option of in-person or Zoom attendance for the foreseeable future.

Adjournment

The meeting was adjourned at 2:13 p.m.

Andy Rush
Recording Secretary

Members Present:

Keith Griffie (Chair)	Bullitt County
Matt Meunier	City of Jeffersontown
Barry Armstrong	City of Mt. Washington
Curtis Hockenbury	City of Shepherdsville
Kathy Eaton-McKalip	Indiana Department of Transportation – Public Transportation
Taylor Herrin	Indiana Department of Transportation – Seymour District
Sadie Middleton	Kentucky Transportation Cabinet
Tom Hall	Kentucky Transportation Cabinet – District 5
Andy Rush	KIPDA
Michelle King	Louisville Metro Air Pollution Control District
Dirk Gowin	Louisville Metro Public Works & Assets
Jim Silliman	Oldham County
Jim Urban	Oldham County Planning Commission
Carrie Butler	TARC
Brittany Montgomery	Town of Clarksville
*Vince Robison	TRIMARC

Members Absent:

*AARP – Kentucky
*Bullitt County Chamber of Commerce
City of Charlestown
City of Jeffersonville
City of New Albany
City of St. Matthews
Clark County
Clark County Air Board
*Clark County Fire Chiefs Association
Clark County Planning Commission
*Federal Aviation Administration – Memphis
*Federal Highway Administration – Indiana
*Federal Highway Administration – Kentucky
*Federal Transit Administration – Region 4
Floyd County
*Greater Louisville Inc.
Indiana Department of Environmental Management
Indiana Department of Transportation – Urban & MPO Section
*Indiana Motor Truck Association
Kentucky Division for Air Quality
Kentucky Transportation Cabinet – Office of Transportation Delivery
*Kentucky Trucking Association
Louisville & Jefferson County Riverport Authority
Louisville Metro Economic Development
Louisville Metro Planning & Design Services
Louisville Regional Airport Authority
*Louisville Water Company
*Louisville/Jefferson County Metro Sewer District
*Oldham Chamber & Economic Development
*One Southern Indiana
Ports of Indiana – Jeffersonville
*River Hills Economic Development District
*Southern Indiana Transit Advisory Group
TARC Accessibility Advisory Council
*University of Louisville

Other Attendees

John Callihan	AECOM
Jason Littleton	American Engineers, Inc.

Agenda Item #2

Arthur Jones	City of Shepherdsville
Rob Frazier	HDR Inc.
Travis Thompson	HDR Inc.
Karlei Metcalf	Indiana Department of Transportation – Seymour District
Lisa Willner	Kentucky State House of Representatives
Steve Ross	Kentucky Transportation Cabinet
Larry Chaney	Kentucky Transportation Cabinet – District 5
Greg Burress	KIPDA
David Burton	KIPDA
Stacey Burton	KIPDA
Randall Embry	KIPDA
Elizabeth Farc	KIPDA
Adam Forseth	KIPDA
Randy Simon	KIPDA
Mike Hill	Lochmueller Group
Craig Butler	Louisville Metro Air Pollution Control District
Bradley Coomes	Louisville Metro Air Pollution Control District
Amanda Deatherage	Louisville Metro Public Works & Assets
Michael	Open Mobility Foundation
Will Conkin	Palmer Engineering
Karen Mohammadi	Michael Baker International
Mike Levy	TARC

* Denotes Advisory Members



*Area Agency on Aging and Independent Living
Area Development District
Metropolitan Planning Organization*

Agenda Item #5

MEMORANDUM

TO: Transportation Technical Coordinating Committee
FROM: Nick Vail
DATE: October 7, 2021
SUBJECT: Quarterly Review of MPO Dedicated Programs

As the Metropolitan Planning Organization (MPO) for the Louisville, KY-IN Metropolitan Planning Area (MPA), the Transportation Policy Committee (TPC) has the authority to award and manage Federal funds from four programs in Indiana and two programs in Kentucky. On a quarterly basis, KIPDA staff provides an update on the status of projects funded by these programs, presents any cost increase and phase shift requests, and highlights any project phases for which funds were obligated in the previous three months.

This quarter KIPDA staff held project review meetings with Indiana and Kentucky project sponsors. Staff received cost increase requests from Indiana and Kentucky project sponsors. Since the requests for funding exceeded the available balance in Indiana, a TTCC Working Group was convened to develop a recommendation. Staff will request that TTCC recommend TPC approval of the cost increases. Please see the attachments for more information.

Action is requested to recommend that TPC approve the cost increases and phase shifts requested by Indiana and Kentucky project sponsors.

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MPO Dedicated Projects FY22 Cost Increases

Indiana Cost Increases Available Balance: \$145,872						
Project Sponsor	Project Name	KIPDA ID	State ID	Funding Source	Phase	Increase
Clarksville	Riverside Drive	2393	1700725	Surface Transportation Block Grant (STBG-MPO)	FY22 Preliminary Engineering	\$107,000
New Albany	East Main Street	2392	1700730	Surface Transportation Block Grant (STBG-MPO)	FY22 Construction	\$38,872
Total						\$145,872

Kentucky Cost Increases Available Balance: \$6,543,229						
Project Sponsor	Project Name	KIPDA ID	State ID	Funding Source	Phase	Increase
Louisville Metro	Hubbards Lane	384	05-00479.00	Surface Transportation Block Grant (STBG-MPO)	FY22 Construction	\$900,000
Louisville Metro	River Road	163	05-00091.02	Surface Transportation Block Grant (STBG-MPO)	FY22 Construction	\$4,400,000
Oldham County	Buckner Connector	1808	05-00754.00	Surface Transportation Block Grant (STBG-MPO)	FY22 Utilities	\$28,400
University of Louisville	Campus Improvements	2150	05-08805.00	Surface Transportation Block Grant (STBG-MPO)	FY22 Utilities	\$506,000
					Total	\$5,834,400

Sponsor	KIPDA ID	State ID	Project Name	Phase	Shift
Jeffersontown	2774	TBD	Galene Drive/Sprowl Road Collector Extension	Planning	FY21 to FY22
Jeffersontown	1582	05-3031.00	Watterson Trail Phase I	Design	FY21 to FY22
Jeffersontown	1582	05-3031.00	Watterson Trail Phase I	Construction	FY21 to FY22
Jeffersontown	1583	05-518.00	Watterson Trail Phase 2	Right of Way	FY21 to FY22
KYTC	188	05-353.00	English Station Road	Construction	FY21 to FY22
KYTC	2214	05-536.00	KY 1931	Right of Way	FY21 to FY22
KYTC	1271	05-441.00	US 42	Construction	FY21 to FY22
Louisville Metro	1662	05-529.00	AB Sawyer Greenway Shared Use Path	Utilities	FY21 to FY22
Louisville Metro	1662	05-529.00	AB Sawyer Greenway Shared Use Path	Construction	FY21 to FY22
Louisville Metro	1353	TBD	Baxter/Bardstown Premium Transportation Corridor - Section 1	Construction	FY21 to FY22
Louisville Metro	2239	05-3212.00	Cannons Lane	Utilities	FY21 to FY22
Louisville Metro	2239	05-3212.00	Cannons Lane	Construction	FY21 to FY22
Louisville Metro	223	05-404.01	Cooper Chapel Road Phase 3	Utilities	FY21 to FY23
Louisville Metro	2064	05-80053.10	East Market Street Streetscape Improvements	Construction	FY21 to FY22
Louisville Metro	2897	TBD	Hikes Lane Rehabilitation	Construction	FY21 to FY22
Louisville Metro	384	05-479.00	Hubbards Lane	Utilities	FY21 to FY22
Louisville Metro	384	05-479.00	Hubbards Lane	Construction	FY21 to FY22
Louisville Metro	224	05-378.10	I-65	Utilities	FY21 to FY24
Louisville Metro	2539	05-3034.00	Louisville Loop Shared Use Path - McNeely Lake Park Segment	Design	FY21 to FY22
Louisville Metro	2388	05-758.00	Main Street/Story Avenue Intersection	Right of Way	FY21 to FY22
Louisville Metro	2269	05-3030.20	Northeast Louisville Loop MET Section 2	Utilities	FY21 to FY22
Louisville Metro	2269	05-3030.20	Northeast Louisville Loop MET Section 2	Construction	FY21 to FY22
Louisville Metro	2271	05-3030.40	Northeast Louisville Loop MET Section 4	Right of Way	FY21 to FY22
Louisville Metro	2622	05-3709.00	Olmsted Parkways Multi-Use Path System Section 1	Construction	FY21 to FY22
Louisville Metro	2627	TBD	Olmsted Parkways Multi-Use Path System Section 6	Design	FY21 to FY22
Louisville Metro	2628	TBD	Olmsted Parkways Multi-Use Path System Section 7	Design	FY21 to FY22
Louisville Metro	2629	TBD	Olmsted Parkways Multi-Use Path System Section 8	Design	FY21 to FY22
Louisville Metro	2540	05-2317.00	River Road Multi-Modal Improvements - 3rd Street to 7th Street	Construction	FY21 to FY22
Louisville Metro	2594	TBD	Stony Brook Drive Sidewalk Connector	Right of Way	FY21 to FY22

Middletown	2228	05-3221.00	Bliss Avenue	Construction	FY21 to FY22
Middletown	2229	05-3222.00	Wetherby Avenue	Construction	FY21 to FY22
Oldham County	1808	05-754.00	Buckner Connector	Utilities	FY21 to FY22
Oldham County	1808	05-754.00	Buckner Connector	Construction	FY21 to FY22
Oldham County	1877	05-542.00	KY 329	Utilities	FY21 to FY22
Oldham County	321	05-434.00	LaGrange Underpass West of LaGrange	Utilities	FY21 to FY22
Oldham County	2236	05-757.00	Spring Hill Trace Sidewalk	Construction	FY21 to FY22
University of Louisville	2150	05-8805.00	Campus Improvements	Design	FY21 to FY22
University of Louisville	2225	05-3218.00	University of Louisville Pedestrian Improvements - Lighting	Construction	FY21 to FY22
University of Louisville	2585	05-3220.00	University of Louisville Pedestrian Improvements - ADA Curb Cuts & Ramps	Construction	FY21 to FY22



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Agenda Item #6

MEMORANDUM

TO: Transportation Technical Coordinating Committee
FROM: Greg Burress
DATE: October 5, 2021
SUBJECT: KIPDA Transportation Online Library

KIPDA staff is delighted to announce a new online location for transportation studies and other related regional studies, [the KIPDA Transportation Online Library](#). The site has been updated, expanded, and houses a list of projects or studies that KIPDA or a regional partner has completed. The goal was to develop a convenient, easily accessible site for members of the public and planning partners to access pertinent data and information.

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Agenda Item #7

MEMORANDUM

TO: Transportation Technical Coordinating Committee

FROM: Spencer Williams

DATE: October 1, 2021

SUBJECT: KIPDA MPO Area Population Changes from the 2020 Census

In September 2021, data from the 2020 Census was released as part of the Census Redistricting Data. This is exciting news as the long-awaited official results from the 2020 Census are beginning to be made available. While most of the changes thus far have been predictable thanks to the ongoing American Community Survey data we receive from the Census Bureau, it's nice to have official numbers as opposed to estimates. Per the Census Bureau, additional data can be expected in 2022. [Here is a link for more information.](#)

According to the Census Bureau, the South region grew at the fastest rate with an increase of 12.3%. Growth in the KIPDA MPO area from the 2010 to the 2020 Census was 7%, from 1,060,541 to 1,134,367 people. While not as high as the rest of the South, the KIPDA MPO region exceeded the Midwest's population growth rate which was 4.8%. Being an MPO area on the border of what is considered the South and the Midwest, this seems to be an expected level of growth.

KIPDA Regional Population Change Statistics

Place	2020 Population	2010 Population	Numeric Change	Percent Change	Annual Growth Rate
Jefferson County	782,966	741,096	41,873	5.7%	0.56%
Bullitt County	82,217	74,319	7,898	10.6%	1.01%
Oldham County	67,607	60,316	7,291	12.1%	1.15%
Floyd County	80,484	74,578	5,906	7.9%	0.76%
Clark County	121,093	110,232	10,861	9.9%	0.95%
5 County MPO	1,134,367	1,060,541	73,829	6.5%	0.68%
Kentucky	4,505,836	4,339,367	166,469	3.8%	0.38%
Indiana	6,785,528	6,483,802	301,726	4.7%	0.46%
National	331,449,281	308,745,538	22,703,743	7.4%	0.71%

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Agenda Item #8

MEMORANDUM

TO: Transportation Technical Coordinating Committee
FROM: Greg Burress
DATE: October 5, 2021
SUBJECT: 2021 Kentucky-Indiana Transportation Excellence (KITE) Award

The Kentucky-Indiana Transportation Excellence (KITE) Award has been awarded each year since 2015 to an exemplary transportation project in the KIPDA Region. The KITE Award recognizes a project that stands out above the others. This can include the project standing out in its: Innovation, Efficiency in the use of funds and/or schedule, meeting of the MTP Goals & Objectives, being multi-modal, being engaging to the public, among other factors.

To be eligible for the 2021 KITE Award, a project must have been opened to the public in 2021 or completed a phase of the project in 2021. Only projects in the KIPDA MPO Region that have participated in the KIPDA MPO process are eligible. A 2021 KITE Award Nomination Form is included.

Nominations are due to KIPDA by October 15th. The winning project will be announced at the November TPC Meeting and will be recognized at the KIPDA Boards of Directors Meeting as well.

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Agenda Item #9

MEMORANDUM

TO: Transportation Technical Coordinating Committee

FROM: Nick Vail

DATE: October 7, 2021

SUBJECT: INDOT and KYTC Bicycle and Pedestrian Coordinators

The Bicycle and Pedestrian Coordinators from both Indiana and Kentucky will discuss their roles and responsibilities as well as a number of other topics related to bicycle and pedestrian infrastructure and planning. Below are their bios.

Brandon Burgoa (bur-go-uh) works in the Technical Planning and Programming Division of the Indiana Department of Transportation's Central Office. He serves two roles at INDOT as Statewide Pedestrian Bicycle Coordinator and Greenfield District Planning Liaison, and recently covering duties as Scenic Byways Coordinator. Brandon has a background in Urban Planning and Regional Development as well as a Master's in Urban Design from Ball State University where he developed a passion for active transportation, community mobility planning, and real estate development. When he's not on the clock Brandon enjoys playing old school Magic the Gathering, writing progressive metal music, and playing team-based PC games.

Keith Lovan, is a professional engineer for the KY Transportation Cabinet (KYTC) where he is the State Bike and Pedestrian Coordinator. He graduated from the University of Kentucky in 1978 with a bachelor's degree in Civil Engineering. As a native Kentuckian, he has spent most of his professional career practicing his profession in various parts of Kentucky either as a consulting engineer or as a project manager with the Lexington-Fayette Urban County Government. During his career with the LFUCG he was primarily responsible for building the bike and pedestrian infrastructure for Lexington.

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Agenda Item #10

MEMORANDUM

TO: Transportation Technical Coordinating Committee

FROM: Nick Vail

DATE: October 7, 2021

SUBJECT: Amendment 4 to the Connecting Kentuckiana 2040 Metropolitan Transportation Plan (MTP) and FY 2020-2025 Transportation Improvement Program (TIP)

KIPDA staff is ready to present Amendment 4 to the committees for consideration. Sponsors were given until June 28th to submit project changes. The air quality conformity analysis and the public comment period have been completed. Greg Burress sent all public comments to the Transportation Policy Committee (TPC) members as part of their 15-day review.

Two actions are requested for TTCC to recommend TPC:

- 1) Approval of Amendment 4 to the Connecting Kentuckiana 2040 MTP, and**
- 2) Approval of Amendment 4 to the FY 2020-2025 TIP.**

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**Connecting Kentuckiana 2040 Metropolitan Transportation Plan and
FY 2020-2025 Transportation Improvement 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, Connecting Kentuckiana 2040 Metropolitan Transportation Plan (MTP) and a short-range planning document, the Fiscal Year (FY) 2020-2025 Transportation Improvement Program (TIP)

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

- A listing of all projects being added, removed and/or modified
- Air Quality conformation 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/amendment-4/> and click on the *Amendment 4 Map* link
- Emailing kipda.trans@kipda.org
- Mail to the following address

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

- Attend the virtual open house on September 28th from 5:00-6:00 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/amendment-4/>

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

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Amendment 4
Connecting Kentuckiana 2040 Metropolitan Transportation Plan
FY 2020 - FY 2025 Transportation Improvement Program
TPC Approval Scheduled for October 28, 2021

TIP Action:	N/A - Not in TIP				
MTP Action:	Revise Project Description and Update Open to Public Date				
Exempt/ Non-Exempt:	Non-exempt	Model Impact:	Remove from 2025 scenario. Adjust project limits to reflect the existence of KYTC ID 5-80101.00 in 2030, 2035, and 2040 scenarios.		
Project Sponsor:	Bullitt County	KIPDA ID:	2758	State ID:	TBD
County	Bullitt	Parent ID:	N/A	Group ID:	N/A
Project Name:	KY 1450 Blue Lick Road Widening		Total Estimated Cost in MTP (i.e. CK 2040):	\$8,000,000	
			Total Cost Programmed in TIP to Date:	N/A	
Funding Source:	N/A		Open to Public Date:	2027 2024	
Description:	Widen KY 1450 (Blue Lick Road) from 2 to 4 lanes from Bullitt/Jefferson County line to KY 1526 John Harper Way CR 1512A (Jeffie Lane)				
Purpose & Need:	Congestion, visibility, intersection realignment, and safety are all issues needing to be addressed that have created the need for this project.				
FY 20-25 TIP Funding:	N/A				
TIP Action:	Remove Project				
MTP Action:	N/A - not in MTP				
Exempt/Non- Exempt:	Exempt	Model Impact:	No change to model		
Project Sponsor:	Indiana Department of Transportation (INDOT)	KIPDA ID:	2489	State ID:	1701215
County	Floyd	Parent ID:	N/A	Group ID:	2676
Project Name:	IN 111		Total Estimated Cost in MTP (i.e. CK 2040):	N/A	
			Total Cost Programmed in TIP to Date:	\$180,420	
Funding Source:	National Highway Performance Program (NHPP)		Open to Public Date:	2021	
Description:	Road resurface on Old IN 62 (Elm Street) from I-64 off ramp to State Street.				
Purpose & Need:	HMA overlay, preventive maintenance.				
FY 20-25 TIP Funding:	FY 2021 Construction phase with the following NHPP funds: \$144,336 (Federal) + \$36,084 (Other) = \$180,420 (Total)				

*This phase will only be shown in the TIP for illustrative purposes since it is outside of the first four years of the FY20-25 TIP.

Amendment 4
Connecting Kentuckiana 2040 Metropolitan Transportation Plan
FY 2020 - FY 2025 Transportation Improvement Program
TPC Approval Scheduled for October 28, 2021

TIP Action:	Remove Project				
MTP Action:	Remove Project				
Exempt/Non-Exempt:	Exempt	Model Impact:	No change to model		
Project Sponsor:	Indiana Department of Transportation (INDOT)	KIPDA ID:	2279	State ID:	1592187
County	Floyd	Parent ID:	N/A	Group ID:	N/A
Project Name:	I-64		Total Estimated Cost in MTP (i.e. CK 2040):	\$23,500,000	
			Total Cost Programmed in TIP to Date:	\$23,500,000	
Funding Source:	National Highway Performance Program (NHPP)		Open to Public Date:	2021	
Description:	Bridge painting of the Sherman Minton Bridge over the Ohio River.				
Purpose & Need:	Bridge painting of the Sherman Minton Bridge over the Ohio River to maintain the integrity of the bridge.				
FY 20-25 TIP Funding:	FY 2021 Construction phase with the following NHPP funds: \$20,700,000 (Federal) + \$2,300,000 (Other) = \$23,000,000 (Total)				
TIP Action:	Remove Project				
MTP Action:	N/A - not in MTP				
Exempt/Non-Exempt:	Exempt	Model Impact:	No change to model		
Project Sponsor:	Indiana Department of Transportation (INDOT)	KIPDA ID:	2649	State ID:	1702260
County	Jefferson	Parent ID:	N/A	Group ID:	2676
Project Name:	I-64 Bridge Deck Replacement on Sherman Minton KY Approach		Total Estimated Cost in MTP (i.e. CK 2040):	N/A	
			Total Cost Programmed in TIP to Date:	\$12,095,501	
Funding Source:	National Highway Performance Program (NHPP)		Open to Public Date:	2021	
Description:	Bridge deck replacement on the I-64 Kentucky approach to the Sherman Minton Bridge over the Ohio River.				
Purpose & Need:	Bridge deck replacement on I-64 at the Kentucky approach to the Sherman Minton Bridge.				
FY 20-25 TIP Funding:	FY 2021 Construction phase with the following NHPP funds: \$10,885,951 (Federal) + \$1,209,550 (Other) = \$12,095,501 (Total)				

*This phase will only be shown in the TIP for illustrative purposes since it is outside of the first four years of the FY20-25 TIP.

Amendment 4
Connecting Kentuckiana 2040 Metropolitan Transportation Plan
FY 2020 - FY 2025 Transportation Improvement Program
TPC Approval Scheduled for October 28, 2021

TIP Action:	Remove Project				
MTP Action:	N/A - not in MTP				
Exempt/Non-Exempt:	Exempt	Model Impact:	No change to model		
Project Sponsor:	Indiana Department of Transportation (INDOT)	KIPDA ID:	2647	State ID:	1702258
County	Floyd	Parent ID:	N/A	Group ID:	2676
Project Name:	I-64 Sherman Minton Bridge EB Indiana Approach (1) Deck Overlay	Total Estimated Cost in MTP (i.e. CK 2040):		N/A	
		Total Cost Programmed in TIP to Date:		\$226,084	
Funding Source:	National Highway Performance Program (NHPP)		Open to Public Date:		2021
Description:	Bridge deck overlay on the I-64 Indiana EB approach (1 of 2) to the Sherman Minton Bridge over the Ohio River.				
Purpose & Need:	Bridge deck overlay on I-64 at the Indiana EB approach (1 of 2) to the Sherman Minton Bridge.				
FY 20-25 TIP Funding:	FY 2021 Construction phase with the following NHPP funds: \$203,476 (Federal) + \$22,608 (Other) = \$226,084 (Total)				
TIP Action:	Remove Project				
MTP Action:	N/A - not in MTP				
Exempt/Non-Exempt:	Exempt	Model Impact:	No change to model		
Project Sponsor:	Indiana Department of Transportation (INDOT)	KIPDA ID:	2648	State ID:	1702259
County	Floyd	Parent ID:	N/A	Group ID:	2676
Project Name:	I-64 Sherman Minton Bridge EB Indiana Approach (2) Deck Overlay	Total Estimated Cost in MTP (i.e. CK 2040):		N/A	
		Total Cost Programmed in TIP to Date:		\$339,126	
Funding Source:	National Highway Performance Program (NHPP)		Open to Public Date:		2021
Description:	Bridge deck overlay on the I-64 Indiana EB approach (2 of 2) to the Sherman Minton Bridge over the Ohio River.				
Purpose & Need:	Bridge deck overlay on I-64 at the Indiana EB approach (2 of 2) to the Sherman Minton Bridge.				
FY 20-25 TIP Funding:	FY 2021 Construction phase with the following NHPP funds: \$305,213 (Federal) + \$33,913 (Other) = \$339,126 (Total)				

*This phase will only be shown in the TIP for illustrative purposes since it is outside of the first four years of the FY20-25 TIP.

Amendment 4
Connecting Kentuckiana 2040 Metropolitan Transportation Plan
FY 2020 - FY 2025 Transportation Improvement Program
TPC Approval Scheduled for October 28, 2021

TIP Action:	Remove Project				
MTP Action:	N/A - not in MTP				
Exempt/Non-Exempt:	Exempt	Model Impact:	No change to model		
Project Sponsor:	Indiana Department of Transportation (INDOT)	KIPDA ID:	2645	State ID:	1702254
County	Floyd	Parent ID:	N/A	Group ID:	2676
Project Name:	I-64 Sherman Minton Bridge Painting		Total Estimated Cost in MTP (i.e. CK 2040):	N/A	
			Total Cost Programmed in TIP to Date:	\$11,270,214	
Funding Source:	National Highway Performance Program (NHPP)		Open to Public Date:	2021	
Description:	I-64 bridge painting on the Kentucky approach to the Sherman Minton Bridge over the Ohio River.				
Purpose & Need:	Sherman Minton bridge painting				
FY 20-25 TIP Funding:	FY 2021 Construction phase with the following NHPP funds: \$10,143,193 (Federal) + \$1,127,021 (Other) = \$11,270,214 (Total)				
TIP Action:	Remove Project				
MTP Action:	N/A - not in MTP				
Exempt/Non-Exempt:	Exempt	Model Impact:	No change to model		
Project Sponsor:	Indiana Department of Transportation (INDOT)	KIPDA ID:	2646	State ID:	1702257
County	Floyd	Parent ID:	N/A	Group ID:	2676
Project Name:	I-64 Sherman Minton Bridge WB Indiana Approach Deck Overlay		Total Estimated Cost in MTP (i.e. CK 2040):	N/A	
			Total Cost Programmed in TIP to Date:	\$678,252	
Funding Source:	National Highway Performance Program (NHPP)		Open to Public Date:	2021	
Description:	Bridge deck overlay on the I-64 Indiana WB approach to the Sherman Minton Bridge over the Ohio River.				
Purpose & Need:	Sherman Minton Bridge deck overlay on I-64 at the Indiana WB approach to the Sherman Minton Bridge.				
FY 20-25 TIP Funding:	FY 2021 Construction phase with the following NHPP funds: \$610,427 (Federal) + \$67,825 (Other) = \$678,252 (Total)				

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Amendment 4
Connecting Kentuckiana 2040 Metropolitan Transportation Plan
FY 2020 - FY 2025 Transportation Improvement Program
TPC Approval Scheduled for October 28, 2021

TIP Action:	Modify TIP Funding and Project Description				
MTP Action:	Modify TIP Funding and Project Description				
Exempt/Non-Exempt:	Exempt	Model Impact:	No change to model		
Project Sponsor:	Indiana Department of Transportation (INDOT)	KIPDA ID:	2533	State ID:	1702255
County	Floyd	Parent ID:	N/A	Group ID:	N/A
Project Name:	I-64 Sherman Minton Corridor Maintenance		Total Estimated Cost in MTP (i.e. CK 2040):	\$75,895,844	
			Total Cost Programmed in TIP to Date:	\$48,675,000	
Funding Source:	Bridge National Highway Performance Program (NHPP)		Open to Public Date:	\$62,106,247	
				\$40,382,079	
Description:	Bridge Rehabilitation Or Repair: I 64 Sherman Minton Bridge over Ohio River 3.95 miles W of I-65, Painting, MOT, Interchanges and Pavement NBI 034520, Bridge Painting: I 64 Sherman Minton Bridge over the Ohio River 3.95 miles W of I-65 NBI 034520, HMA Overlay, Preventive Maintenance: SR 111 Old SR-62 (Elm Street) from I-64 Off Ramp to State Street NBI (KY)-IN, Bridge Painting: I 64 Kentucky Approach to Sherman Minton Bridge over the Ohio River 3.6 miles W of I-65 NBI 034523, Bridge Deck Overlay: I 64 Indiana WB Approach to the Sherman Minton Bridge over Ohio River 3.93 miles W of I-65 NBI 034515, Bridge Deck Overlay: I 64 Indiana EB Approach (1 of 2) Sherman Minton Bridge over Ohio River 4 miles W of I-65 NBI 034510, Bridge Deck Overlay: I 64 Indiana EB Approach (2 of 2) Sherman Minton Bridge over Ohio River 4 miles W of I-65 NBI 034513, Bridge Deck Replacement: I 64 Kentucky Approach to the Sherman Minton Bridge over Ohio River 3.61 miles W of I-65 NBI 034523, Bridge Painting: I 64 00.11 miles W of SR 111 over Market Street NBI 034490.				
	Maintenance of the I 64 Sherman Minton Bridge and three Indiana approach bridges and one Kentucky approach bridge.				
Purpose & Need:	Rehabilitate the bridge decks, perform minor structural repairs on the five bridges in the I-64 Sherman Minton Corridor. These maintenance efforts are required to sustain the bridges through their 100 year design life.				

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Connecting Kentuckiana 2040 Metropolitan Transportation Plan
FY 2020 - FY 2025 Transportation Improvement Program
TPC Approval Scheduled for October 28, 2021

FY 20-25 TIP Funding:	<p>FY 2020 Preliminary Engineering phase with the following NHPP funds: \$3,467,430 (Federal) + \$385,270 (Other) = \$3,852,700 (Total)</p> <p>FY 2020 Utilities Construction phase with the following NHPP funds: \$18,000 (Federal) + \$2,000 (Other) = \$20,000 (Total) \$1,431,000 (Federal) + \$159,000 (Other) = \$1,590,000 (Total)</p> <p>FY 2021 Preliminary Engineering phase with the following NHPP Bridge funds: \$3,806,496 (Federal) + \$422,944 (Other) = \$4,229,439 (Total) \$2,250,000 (Federal) + \$250,000 (Other) = \$2,500,000 (Total)</p> <p>FY 2022 Utilities phase with the following Bridge funds: \$1,098,000 (Federal) + \$122,000 (Other) = \$1,220,000 (Total)</p> <p>FY 2021 Construction phase with the following NHPP Bridge funds: \$5,625,000 (Federal) + \$625,000 (Other) = \$6,250,000 (Total) \$23,795,441 (Federal) + \$2,643,938 (Other) = \$26,439,379 (Total)</p> <p>FY 2022 Construction phase with the following Bridge funds: \$18,688,802 (Federal) + \$2,076,534 (Other) = \$20,765,336 (Total)</p> <p>FY 2023 Construction phase with the following Bridge funds: \$18,889,894 (Federal) + \$2,098,877 (Other) = \$20,988,771 (Total)</p>
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Amendment 4
Connecting Kentuckiana 2040 Metropolitan Transportation Plan
FY 2020 - FY 2025 Transportation Improvement Program
TPC Approval Scheduled for October 28, 2021

TIP Action:	Add Project				
MTP Action:	Add Project				
Exempt/Non-Exempt:	Exempt	Model Impact:	No change to model		
Project Sponsor:	Indiana Department of Transportation (INDOT)	KIPDA ID:	NEW	State ID:	2100048
County	Clark	Parent ID:	N/A	Group ID:	N/A
Project Name:	SR 60 Intersection Improvement, Roundabout	Total Estimated Cost in MTP (i.e. CK 2040):		\$5,821,839	
		Total Cost Programmed in TIP to Date:		\$925,000	
Funding Source:	National Highway Performance Program (NHPP)		Open to Public Date:		2026
Description:	Intersection improvement going to a roundabout at SR 60 and CR 311.				
Purpose & Need:	The purpose of this project is to reduce the number of traffic crashes being experienced at this location, in particular the rear end, left turn, and right-angle crashes. Using HAT 3 as the analysis tool the 129 crashes resulted in a 4.01 lcc crash severity value. The crash frequency value (lcf) is 6.68. The need for this project is to provide a geometric improvement to the intersection which will provide sufficient capacity and reduce these rear end, left turn and right angle crashes going forward to allow this intersection to operate at a more acceptable overall safety operating condition.				
FY 20-25 TIP Funding:	FY 2023 Preliminary Engineering phase with the following NHPP funds: \$382,500 (Federal) + \$42,500 (Other) = \$425,000 (Total)				
TIP Action:	Add Project				
MTP Action:	Add Project				
Exempt/Non-Exempt:	Non-Exempt	Model Impact:	Add an additional travel lane in the 2030, 2035, and 2040 scenarios.		
Project Sponsor:	Indiana Department of Transportation (INDOT)	KIPDA ID:	NEW	State ID:	2100036
County	Floyd	Parent ID:	N/A	Group ID:	N/A
Project Name:	SR 64 Added Travel Lane	Total Estimated Cost in MTP (i.e. CK 2040):		\$13,735,051	
		Total Cost Programmed in TIP to Date:		\$2,270,000	
Funding Source:	Surface Transportation Block Grant (STBG) - State		Open to Public Date:		2026
Description:	Added travel lane on SR 64 from 2,150' west of the existing Oakes Road intersection to Edwardsville-Galena Road in Floyd County.				
Purpose & Need:	The purpose of this project is to improve throughput on SR 64 by improving intersection operations. Adding these travel lanes will reduce driver delay for the side roads and mainline SR 64 in the design year. The added lanes to SR 64 will continue the multi-lane cross section further west towards Georgetown to benefit commuter trips to and from I-64.				
FY 20-25 TIP Funding:	FY 2022 Preliminary Engineering phase with the following STBG-ST funds: \$1,040,000 (Federal) + \$260,000 (Other) = \$1,300,000 (Total)				
	FY 2023 Right of Way phase with the following STBG-ST funds: \$776,000 (Federal) + \$194,000 (Other) = \$970,000 (Total)				

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Amendment 4
Connecting Kentuckiana 2040 Metropolitan Transportation Plan
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TIP Action:	Remove Project				
MTP Action:	Remove Project				
Exempt/Non-Exempt:	Exempt	Model Impact:	No change to model		
Project Sponsor:	Indiana Department of Transportation (INDOT)	KIPDA ID:	2902	State ID:	2000220
County	Clark, Floyd	Parent ID:	N/A	Group ID:	N/A
Project Name:	Traffic Signal Mods	Total Estimated Cost in MTP (i.e. CK 2040):		\$1,450,000	
		Total Cost Programmed in TIP to Date:		\$1,450,000	
Funding Source:	National Highway Performance Program (NHPP)		Open to Public Date:		2021
Description:	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 Road (Sellersburg); SR 60 @ I-65 NB (Sellersburg); SR 60 @ I-65 SB (Sellersburg); and US 150 @ Navilleton Road (Greenville).				
Purpose & Need:	To modernize the signals in order to meet current standards. All locations will need new backplates, heads, span/tether/catenary/overhead signage, conduit, and upgraded signal equipment in the cabinets. Navilleton intersection will need upgraded signal cabinet and new foundation.				
FY 20-25 TIP Funding:	FY 2021 Construction phase with the following NHPP funds: \$1,305,000 (Federal) + \$145,000 (Other) = \$1,450,000 (Total)				
TIP Action:	Add Project				
MTP Action:	Add Project				
Exempt/Non-Exempt:	Exempt	Model Impact:	No change to model		
Project Sponsor:	Indiana Department of Transportation (INDOT)	KIPDA ID:	NEW	State ID:	2100047
County	Floyd	Parent ID:	N/A	Group ID:	N/A
Project Name:	US 150 Intersection Improvement of Old Vincennes Road / Lawrence Banet Road	Total Estimated Cost in MTP (i.e. CK 2040):		\$5,226,000	
		Total Cost Programmed in TIP to Date:		\$1,334,000	
Funding Source:	Surface Transportation Block Grant (STBG) - MPO		Open to Public Date:		2026
Description:	Intersection improvement at the intersection of Old Vincennes Road/Lawrence Banet Road.				
Purpose & Need:	An intersection improvement project is recommended for US 150 and Lawrence Banet Road in Floyds Knobs, Floyd County, IN. This location has experienced higher than anticipated crash frequency and cost. The recommended alternative would reconfigure US 150 and Lawrence Banet Road as a median U-turn intersection, eliminating left turns at the intersection and installing U-turn access points on US 150.				
FY 20-25 TIP Funding:	FY 2023 Preliminary Engineering phase with the following STBG-ST funds: \$667,200 (Federal) + \$166,800 (Other) = \$834,000 (Total)				

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Amendment 4
Connecting Kentuckiana 2040 Metropolitan Transportation Plan
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TPC Approval Scheduled for October 28, 2021

TIP Action:	Add Project				
MTP Action:	Add Project				
Exempt/Non-Exempt:	Exempt	Model Impact:	Reflect a 3-lane section in 2030, 2035, and 2040 scenarios. (Changes are related to KIPDA ID 2758)		
Project Sponsor:	Kentucky Transportation Cabinet (KYTC)	KIPDA ID:	NEW	State ID:	05-80101.00
County	Bullitt	Parent ID:	N/A	Group ID:	N/A
Project Name:	KY 1450	Total Estimated Cost in MTP (i.e. CK 2040):		\$8,630,000	
		Total Cost Programmed in TIP to Date:		\$8,630,000	
Funding Source:	State	Open to Public Date:		2027	
Description:	Improve safety and reduce congestion on KY 1450 (Blue Lick Road) between the intersection with KY 1526 (John Harper Way) and CR 1512A (Jeffie Lane). (2020CCN) Project may consider addition of a two-way left turn lane.				
Purpose & Need:	The following needs have been identified for this section of KY 1450, generally as a result of significant commercial and residential growth in the area: 1) To improve capacity, 2) To provide an improved highway that meets current safety design standards, 3) To enhance network connections, 4) To increase freight capacity, 5) To address recent and planned growth.				
FY 20-25 TIP Funding:	FY 2022 Design phase with the following State funds: \$0 (Federal) + \$1,045,000 (Other) = \$1,045,000 (Total) FY 2023 Right of Way phase with the following State funds: \$0 (Federal) + \$1,125,000 (Other) = \$1,125,000 (Total) *FY 2024 Utility phase with the following State funds: \$0 (Federal) + \$2,300,000 (Other) = \$2,300,000 (Total) *FY 2025 Construction phase with the following State funds: \$0 (Federal) + \$4,160,000 (Other) = \$4,160,000 (Total)				

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Amendment 4
Connecting Kentuckiana 2040 Metropolitan Transportation Plan
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TPC Approval Scheduled for October 28, 2021

TIP Action:	Modify TIP funding to add a project phase in the first four years of the TIP				
MTP Action:	None				
Exempt/Non-Exempt:	Exempt	Model Impact:	No change to model		
Project Sponsor:	Louisville Metro	KIPDA ID:	2624	State ID:	05-03709.00
County	Jefferson	Parent ID:	1273	Group ID:	N/A
Project Name:	Olmsted Parkways Multi-Use Path System Section 3		Total Estimated Cost in MTP (i.e. CK 2040):	N/A	
			Total Cost Programmed in TIP to Date:	\$2,550,494 \$2,427,994	
Funding Source:	Surface Transportation Block Grant (STBG) - MPO		Open to Public Date:	2025	
Description:	Construction of a 0.30 mile shared use path system along Algonquin Parkway between Beech Street and Cypress Street.				
Purpose & Need:	To improve and enhance bicycle and pedestrian access opportunities along parkways that extend and link to existing and proposed Louisville Loop.				
FY 20-25 TIP Funding:	<p>FY 2022 Design phase with the following STBG-MPO funds: \$100,000 (Federal) + \$22,500 (Other) = \$122,500 (Total)</p> <p>*FY 2025 Right of Way phase with the following STBG-MPO funds: \$308,370 (Federal) + \$77,092 (Other) = \$385,462 (Total)</p> <p>*FY 2025 Utility phase with the following STBG-MPO funds: \$34,026 (Federal) + \$8,506 (Other) = \$42,532 (Total)</p> <p>*FY 2025 Construction phase with the following STBG-MPO funds: \$1,600,000 (Federal) + \$400,000 (Other) = \$2,000,000 (Total)</p>				

*This phase will only be shown in the TIP for illustrative purposes since it is outside of the first four years of the FY20-25 TIP.

Amendment 4
Connecting Kentuckiana 2040 Metropolitan Transportation Plan
FY 2020 - FY 2025 Transportation Improvement Program
TPC Approval Scheduled for October 28, 2021

TIP Action:	Modify TIP funding to add a project phase in the first four years of the TIP				
MTP Action:	None				
Exempt/Non-Exempt:	Exempt	Model Impact:	No changes to model. Project changes are limited to funding changes only.		
Project Sponsor:	Louisville Metro	KIPDA ID:	2630	State ID:	TBD
County	Jefferson	Parent ID:	1273	Group ID:	N/A
Project Name:	Olmsted Parkways Multi-Use Path System Section 9		Total Estimated Cost in MTP (i.e. CK 2040):	N/A	
			Total Cost Programmed in TIP to Date:	\$2,812,814 \$2,690,314	
Funding Source:	Surface Transportation Block Grant (STBG) - MPO		Open to Public Date:	2025	
Description:	Construction of a 3.55 mile road diet system along Algonquin Parkway between 41st Street and Winkler Avenue.				
Purpose & Need:	To improve and enhance bicycle and pedestrian access opportunities along parkways that extend and link to existing and proposed Louisville Loop.				
FY 20-25 TIP Funding:	<p>FY 2022 Design phase with the following STBG-MPO funds: \$100,000 (Federal) + \$22,500 (Other) = \$122,500 (Total)</p> <p>*FY 2025 Design phase with the following STBG-MPO funds: \$152,251 (Federal) + \$38,063 (Other) = \$190,314 (Total)</p> <p>*FY 2025 Construction phase with the following STBG-MPO funds: \$2,000,000 (Federal) + \$500,000 (Other) = \$2,500,000 (Total)</p>				
TIP Action:	Remove Project				
MTP Action:	N/A - not in MTP				
Exempt/Non-Exempt:	Exempt	Model Impact:	No change to model		
Project Sponsor:	Transit Authority of River City (TARC)	KIPDA ID:	2454	State ID:	N/A
County	Jefferson	Parent ID:	585	Group ID:	N/A
Project Name:	TARC Purchase Two (2) 40' Buses		Total Estimated Cost in MTP (i.e. CK 2040):	N/A	
			Total Cost Programmed in TIP to Date:	\$994,399	
Funding Source:	Grants for Buses and Bus Facilities Formula Program (Section 5339)		Open to Public Date:	2021	
Description:	Purchase two (2) forty-foot, low-floor diesel buses.				
Purpose & Need:	TARC will purchase two (2) diesel buses to replace existing buses that have far exceeded their expected minimum useful life.				
FY 20-25 TIP Funding:	FY 2021 Transit Capital phase with the following Section 5339 funds: \$795,519 (Federal) + \$198,880 (Other) = \$994,399 (Total)				

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Connecting Kentuckiana 2040 Metropolitan Transportation Plan
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TIP Action:	Remove Project				
MTP Action:	N/A - not in MTP				
Exempt/Non-Exempt:	Exempt	Model Impact:	No change to model		
Project Sponsor:	Transit Authority of River City (TARC)	KIPDA ID:	2462	State ID:	N/A
County	Jefferson	Parent ID:	585	Group ID:	N/A
Project Name:	TARC Rehab Administrative Building		Total Estimated Cost in MTP (i.e. CK 2040):	N/A	
			Total Cost Programmed in TIP to Date:	\$500,000	
Funding Source:	Grants for Buses and Bus Facilities Formula Program		Open to Public Date:	2021	
Description:	Rehabilitate an administrative facility with the goal of reducing operating costs by maintaining a state of good repair.				
Purpose & Need:	TARC will apply these funds to a rehabilitation project for an existing administrative building.				
FY 20-25 TIP Funding:	FY 2021 Transit Capital phase with the following Section 5339 funds: \$400,000 (Federal) + \$100,000 (Other) = \$500,000 (Total)				

*This phase will only be shown in the TIP for illustrative purposes since it is outside of the first four years of the FY20-25 TIP.

AIR QUALITY CONFORMITY

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 would be 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) 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 zoom meeting was held on July 27 to discuss issues relative to amendment 4 of the MTP. It involved a review and discussion of the following items:

- (a) important dates in the schedule for the amendment;
 - September 17 -- Regional Emissions (Air Quality) Analysis completed
 - September 20 -- Public Review begins
 - October 13 -- Action by the Transportation Technical Coordinating Committee
 - October 28 -- Action by the Transportation Policy Committee

October 29 -- Documentation sent to review agencies for the federal conformity determination;

- (b) a draft list of projects—sent to the IAC 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 Projects

KIPDA staff had provided the IAC with a list of 17 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 in the list, including recommendations on whether each project was exempt or non-exempt and how the projects were included in or excluded from the regional travel demand model.

Points of discussion of the projects included:

- **KY 1450 projects in Bullitt County, KIPDA ID 2758 and KYTC 80101.00 projects:** These projects were created by the division of an older project on KY 1450 from the Bullitt County/Jefferson County line to John Harper Highway. It was noted that KIPDA ID 2758 (sponsored by Bullitt County) covers the northern portion of the older project (from the Bullitt/Jefferson County line to Jeffie Lane) and will remain a 4-lane project. The KYTC project (from Jeffie Lane to John Harper Highway) will be a 3-lane project.

- **INDOT I-64 Sherman Minton bridge projects, KIPDA IDs 2489, 2279, 2649, 2647, 2648, 2645, and 2646:** The second topic of discussion concerned a series of INDOT projects involving the I-64 Sherman Minton bridge and its approaches. There are a number of projects which represented parts of the overall project. Those projects are being removed and will be consolidated into a single overall project to replace them. FHWA-IN staff made the comment that KIPDA staff should consult with INDOT staff to be sure that the overall project includes information about the various improvements that were to be included in the projects being removed. In addition, information concerning funding for FY2024 was to be removed since it was not part of this TIP.
- **INDOT intersection projects, INDOT DES 2000220 and 2100048:** The next pair of projects to be discussed were INDOT DES 2000220, which is being removed, and INDOT DES 2100048, which is being added. The first project was to improve the traffic signals at a series of intersections. The latter is to construct a roundabout at the intersection of SR 60 and CR 311, one of the intersections which was to have its traffic signal improved under the first project. There were no questions or comments.
- **INDOT SR 64 project, INDOT DES 2100036:** The next project is to add travel lanes to SR 64 near the Georgetown community. This is considered to be a very straightforward project from the standpoint of modeling. There were no questions or comments.
- **INDOT US 150 and Lawrence Banet Rd intersection project, DES 2100047:** The next project is to improve the intersection of US 150 with Old Vincennes Road and Lawrence Banet Road. It was noted that there was no way to reflect this project in the modeling of Amendment 4. There were no questions or comments.
- **Louisville Metro Olmstead Parkways projects, KIPDA IDs 2624 and 2630:** The next two projects concern the Olmstead Parkways: Multi-use Path System. The projects are to modify the TIP funding to add a project phase in the first four years of the TIP. There were no questions or comments.
- **TARC Bus and Administration Building projects, KIPDA IDs 2454 and 2462:** The final two projects are sponsored by the Transit Authority of River City (TARC), the local transit provider. Both of these projects are being removed from the TIP. One of the projects involved the purchase of two full-size buses, and the other involved rehabilitation of TARC's administration building.

Conclusion: The IAC members, after discussing the details of the projects listed above, accepted the recommendations concerning the incorporation of these project as described in the documentation into the regional emissions analysis.

Discussion of the Conformity Analysis

The following items of the conformity analysis were discussed.

- (1) KIPDA staff discussed the key components of the conformity analysis that are expected to be presented to the KIPDA TPC in May. The analysis years will be the ones that were used when the existing MTP was previously amended. The analysis years will be 2025, 2030, 2035, and 2040.
- (2) 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 2025, 2030, 2035, and 2040 travel model scenarios, *Connecting Kentuckiana 2040* will demonstrate conformity to both the 1997 and 2015 8-Hour Ozone Standards.
- (3) The pollutants of concern for the analysis are the precursors of Ozone, volatile organic compounds (VOCs) and oxides of Nitrogen (NO_x). The emission budgets for these pollutants are 20,793 kg/day and 26,726 kg/day, respectively.
- (4) The newest version of the MOVES emissions model, MOVES 3.0, will be used for the analysis.

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

SIP Status Discussion

A topic which had been raised during consultation for Amendment 3 was the status the two new State Implementation Plans (SIPs). These SIPs are being or about to be developed to address the need for a new maintenance plan for the 1997 Ozone standard and for the 2015 Ozone standard. The consultation meeting for Amendment 4 was an opportunity to hear an update concerning the status for the two new SIPs.

LMAPCD staff provided a presentation concerning the two SIPs which are presently under development. One of these SIPs is the second maintenance SIP for the 1997 Ozone standard. (The first maintenance SIP was developed years ago when the 1997 Ozone standard was first achieved.) The second maintenance SIP was originally scheduled to be completed some years ago but was not because EPA rescinded the 1997 ozone standard, and at that time that happened, it seemed that it would not be necessary to develop the second maintenance SIP. However, the courts overturned some of EPA’s actions concerning the 1997 Ozone standard (the case known as South Coast II). So, the second maintenance SIP is now under development and should be finished soon.

The other SIP is being developed to meet the requirements relative to the 2015 Ozone standard. At this time, air monitoring data has indicated that the 2015 standard has not been met. The steps that need to be undertaken in the future may depend partially on whether the monitoring data for the remainder of the “ozone season” for this year is sufficiently “clean” to justify a clean air finding. Regardless of that situation, the local area is likely to have its nonattainment status changed from marginal to moderate. This change, along with the results of the monitoring data, will affect the steps to be taken to address the needs for the 2015 ozone standard SIP.

Other items for discussion

KIPDA staff offered the opportunity for any other business or questions to be brought to the IAC. 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 zoom meeting of March 4, 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.

Issues related to the KIPDA travel demand forecasting model

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

- (1) First, the proposed toll structure for the Louisville Southern Indiana Ohio River Bridges project changed in the last few years. Changes were made to the KIPDA travel demand forecasting model to reflect the changes in the toll structure.
- (2) During 2017 and 2018, 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 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 (NO_x). 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 NO_x for 2003 (the attainment year) and 2020 (the last year of the maintenance plan). Since the attainment year and the last year of the maintenance plan are now in the past, those years are no longer included in the analysis.

In order to have the required analysis years, several changes were made in recent years. Years have been added to the list of analysis years, and later, when those years were passed, they were removed. When the MTP was updated in 2020, the horizon year of the plan was 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 moves to the past. This year 2020 moved to the past, and it was removed from the list of analysis years. This left the years 2025, 2030, 2035, and 2040 as analysis years.

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

1997 8-hour Ozone Standard	
Analysis Year	Conformity Test(s)
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. 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 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 as described under the section entitled “CONSULTATION FOR *CONNECTING KENTUCKIANA 2040*.” (please see above.) Those projects in *Connecting Kentuckiana 2040* which were not changed were analyzed as they had been 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.

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 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* 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 2040* utilizes transit information from the previous travel demand model. 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 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 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 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 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, 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_x). 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_x. The emission estimates for VOCs and NO_x were determined using the MOVES 3.0 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 that were used in developing the ozone budget update (for VOCs and NO_x) in 2003 with a few exceptions where newer data was incorporated. The changes which affected the VOC and NO_x 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. 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_x 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_x 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_x). The regional emissions analysis was conducted to provide estimates of the levels of emissions of VOCs and NO_x 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 2025, 2030, 2035 and 2040, the summer weekday VOC and NO_x 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

SUMMER WEEKDAY VEHICLE-MILES-TRAVELED (VMT) ESTIMATED FOR THE 8-HOUR OZONE NONATTAINMENT AREA (in 1000's of vmt/day)			
YEAR	INDIANA	KENTUCKY	TOTAL
2025	7894	27297	35191
2030	8425	28719	37144
2035	8953	30053	39006
2040	9440	31183	40623

TABLE 2

SUMMER WEEKDAY EMISSIONS FOR THE 8-HOUR NONATTAINMENT AREA (kg/day)				
EMISSION LEVELS FOR VARIOUS YEARS				
YEAR	Area	VOCs	NOx	PASS
2025	Regional	6968	18524	YES
2030		4942	14492	YES
2035		4342	13553	YES
2040		4174	13821	YES

NOTE: The criteria for conformity are as follows:

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.

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 4
FY 2020-2025 Transportation Improvement Program Amendment 4
Interagency Consultation Group Conference Call Meeting Minutes
July 27, 2021
10:00 AM EDT**

Participants:

EPA – Dianna Myers, Richard Wong, Will Carpenter, & Anthony Maietta

FHWA – Bernadette Dupont & Erica Tait

INDOT – Jay Mitchell

IDEM – Shawn Seals

KYTC – Tom Hall, Larry Chaney, & Grant Williams

LMAPCD – Michelle King, Byron Gary, & Craig Butler

TARC – Aida Copic

KIPDA – Andy Rush, Greg Burress, Randy Simon, & Nick Vail

Welcome/Roll Call:

A total of 19 participants, representing eight local, state, regional, and federal agencies participated in the IAC Conference Call for Amendment 4 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 July 27, 2021.

Schedule Discussion:

KIPDA staff discussed key dates (shown below) of the anticipated schedule for the amendment. It was mentioned that there will be multiple activities (including the travel demand modeling and MOVES

modeling) as part of the conformity analysis. Also, there will be a public meeting (in-person or zoom) during the public review period.

Key Dates for the schedule for Amendment 4

Project applications due from sponsors --	June 28
KIPDA staff reviews projects --	June 29 – July 16
Air Quality conformity activities --	July 19 – Sept. 17
Public Comment period --	Sept. 20 – Oct. 4
Comments sent to the Transportation Policy Committee --	Oct. 7
Transportation Technical Coordinating Committee recommendation --	Oct. 13
Transportation Policy Committee action --	Oct. 28
Federal review --	Oct. 29 – Nov. 29

Project Discussion:

KIPDA Staff presented the list of seventeen (17) projects that are included in Amendment 4. The following projects were highlighted.

The discussion started with the KIPDA ID 2758 and KYTC ID 80101.00 projects. These projects were created by the division of an older project on KY 1450 from the Bullitt/Jefferson County line to John Harper Highway. It was noted that KIPDA ID 2758 (sponsored by Bullitt County) covers the northern portion of the older project (from the Bullitt/Jefferson County line to Jeffie Lane) and will remain a 4-lane project. The KYTC project (from Jeffie Lane to John Harper Highway) will be a 3-lane project.

The second topic of discussion concerned a series of INDOT projects involving the I-64 Sherman Minton bridge and its approaches. There are a number of projects which represented parts of the overall project. Those projects are being removed and will be consolidated into a single overall project to replace them. Erica Tait (FHWA-IN) made the comment that KIPDA staff should consult with INDOT staff to be sure that the overall project includes information about the various improvements that were to be included in the projects being removed. In addition, information concerning funding for FY2024 was to be removed since it was not part of this TIP.

The next pair of projects to be discussed were INDOT DES 2000220, which is being removed, and INDOT DES 2100048, which is being added. The first project was to improve the traffic signals at a series of intersections. The latter is to construct a roundabout at the intersection of SR 60 and CR 311, one of the intersections which was to have its traffic signal improved under the first project. There were no questions or comments.

The next project is to add travel lanes to SR 64 near the Georgetown community. This is considered to be a very straightforward project from the standpoint of modeling. There were no questions or comments.

The next project is to improve the intersection of US 150 with Old Vincennes Road and Lawrence Banet Road. It was noted that there was no way to reflect this project in the modeling of Amendment 4. There were no questions or comments.

The next two projects concern the Olmstead Parkways: Multi-use Path System. The projects are to modify the TIP funding to add a project phase in the first four years of the TIP. There were no questions or comments.

The final two projects are sponsored by the Transit Authority of River City (TARC), the local transit provider. Both of these projects are being removed from the TIP. One of the projects involved the purchase of two full-size buses, and the other involved rehabilitation of TARC's administration building.

Conformity Analysis Discussion:

KIPDA Staff discussed the key components of the conformity analysis that is expected to be presented to the KIPDA TPC in October. The analysis years for the regional emissions analysis will be 2025, 2030, 2035, and 2040 (the horizon year of the MTP). The regional emissions estimates for all scenarios will be compared to Year 2020 Budgets established for the ozone precursors. Further, there are no TCMs in a SIP for the local area.

It was noted that MOVES 3 was used for the previous MTP/TIP amendment. It will also be used for this amendment.

SIP Status Discussion:

LMAPCD staff provided a presentation concerning the two SIPs which are presently under development. One of these SIPs is the second maintenance SIP for the 1997 Ozone standard. (The first maintenance SIP was developed years ago when the 1997 Ozone standard was first achieved.) The second maintenance SIP was originally scheduled to be completed some years ago but was not because EPA rescinded the 1997 ozone standard, and at that time that happened, it seemed that it would not be necessary to develop the second maintenance SIP. However, the courts overturned some of EPA's actions concerning the 1997 Ozone standard (the case known as South Coast II). So, the second maintenance SIP is now under development and should be finished soon.

The other SIP is being developed to meet the requirements relative to the 2015 Ozone standard. At this time, air monitoring data has indicated that the 2015 standard has not been met. The steps that need to be undertaken in the future may depend partially on whether the monitoring data for the remainder of the "ozone season" for this year is sufficiently "clean" to justify a clean air finding. Regardless of that situation, the local area is likely to have its nonattainment status changed from marginal to moderate. This change, along the results of the monitoring data, will affect the steps to be taken to address the needs for the 2015 ozone standard SIP.

Other Discussion:

KIPDA staff offered the opportunity for any other business or questions to be brought before the IAC. There was no other business discussed. The conference call adjourned at approximately 10:30 AM EDT.

Amendment 4 to the Connecting Kentuckiana 2040 Metropolitan Transportation Plan; FY 2020-2025
Transportation Improvement Program
Public Comments

Project Name: SR 60 Intersection Improvement, Roundabout
KIPDA ID: 2964
Project Sponsor: INDOT

Comments: “Generally I approve of roundabouts – but the devil is in the details, so please make sure this design accommodates walkers and bikers.”

Project Name: SR 64 Added Travel Lane
KIPDA ID: 2967
Project Sponsor: INDOT

Comments: “13 million for a road expansion project here is a waste. Instead it should be to build safe ways to allow better walking and e-bike access for nearby neighborhoods to get where they need to without adding to the car traffic.”

“I strongly disapprove of this project – it is fiscally irresponsible and environmentally irresponsible. It will induce more car traffic and encourage development to spread to undeveloped land – instead of encouraging infill of existing developed land.”

Project Name: KY 1450
KIPDA ID: 2966
Project Sponsor: KYTC

Comments: “Disapprove of this. This is a waste of millions of dollars that could instead go to making this road slower, more reliable, and safer for those nearby. Improving sidewalks and making a multi-use path would be much better for residents.

“I do not support this project. It will simply induce MORE demand for travel and bring more cars and development here and further out. Do not waste our money to erode development in the core city and further develop green space, which we need to conserve.”

Project Name: TARC Rehab Administration Building
KIPDA ID: 2462
Project Sponsor: TARC

Comments: “Cannot comment on this until we know the reason for the removal, which is not visible in this map nor the amendment 4 information packet. Is it because TARC does not need this funding, or has found another solution? Or because KYTC has shifted goals?

Project Name: TARC Purchase Two (2) 40' Buses
KIPDA ID: 2454
Project Sponsor: TARC

Comments: "Cannot comment on this until we know the reason for the removal, which is not visible in this map nor the amendment 4 information packet. Is it because TARC does not need this funding, or has found another solution? Or because KYTC has shifted goals?"

Project Name: KY 1450 Blue Lick Road
KIPDA ID: 2758
Project Sponsor: Bullitt County

Comments: "Disapprove. This is a lot of money to be spent on a road widening for cars that is not needed and negatively impact low income and minorities and others living nearby."

"Please do not widen this road. Widening this road will cause further development to spread outward – and will discourage investment in the city that already has infrastructure. We need to save green space and save undeveloped parcels from development."

Project Name: I-64 Sherman Minton Corridor Maintenance
KIPDA ID: 2533
Project Sponsor: INDOT

Comments: "Can this huge amount of funding include 1-2% on other modes (bikes, ebikes, scooters, walking) of getting across this vital west end bridge for those in west Louisville who can't afford cars? Would help with job and retail access for low income residents."

"This project should be revised to include multi modes – this is a LOT of money to be spending only on car travel. Do not approve of this project unless there is accommodation in the design for bikes and walking."

Project Name: Olmstead Parkways Multi-Use Path System
KIPDA ID: 2630
Project Sponsor: Louisville Metro

Comments: "Strongly support this idea to make this parkway, instead of the expressway it is! This multi-use path will improve job, retail, and recreation access for low-income residents all along the parkway who can't afford a car."

"Wonderful! Let's bump this one up to the top of the list."

"Strongly support this project – as long as there is a SEPERATED lane and space for cyclists and bicyclists."

Project Name: Olmstead Parkways Multi-Use Path System Section 3

KIPDA ID: 2624

Project Sponsor: Louisville Metro

Comments: “Strongly support this idea to make this parkway, instead of the expressway it is! This multi-use path will improve job, retail, and recreation access for low-income residents all along the parkway who can’t afford a car.”