PERFORMANCE MANAGEMENT PLAN

UPDATED FEBRUARY 2019

KIPDA
Kentuckiana Regional Planning and Development Agency

PERFORMANCE MANAGEMENT PLAN

for the
Louisville/Jefferson County (KY-IN) Metropolitan Planning Organization

UPDATED FEBRUARY 2019

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SUMMARY

Performance-based planning is a strategic approach that uses data to support investment decisions that help to achieve performance goals. Performance-based programming refers to the application of performance management within the project selection process. Aging infrastructure combined with limited funding resources make it challenging to address all of the needs of the transportation system simultaneously, and performance-based planning can prioritize improvements for the most effective and efficient use of those limited resources.

KIPDA's transportation planning process utilizes the performance-based planning and programming approach. This document specifically details both the federally-required and MPO-developed performance measures that will impact project selection within the MTP and TIP. The MTP uses data and performance trends to identify Focus Areas where investments will be prioritized. The KIPDA Project Management Process takes performance measures into consideration when programming projects in the TIP. Any future project that helps achieve performance targets will have a better opportunity to receive funding through the TIP than projects that do not directly address performance targets.

The Louisville/Jefferson County, KY-IN Metropolitan Planning Organization (MPO), Kentuckiana Regional Planning and Development Agency (KIPDA), has developed this *Performance Management Plan* (PMP) to utilize the framework established by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) by incorporating the National Performance Measures and Planning Factors as defined by MAP-21, the *Moving Ahead for Progress in the 21st Century Act* and continued with the FAST Act, *Fixing America's Surface Transportation Act*. MAP-21 provided a strong emphasis on performance-based transportation planning and required states and MPOs to incorporate performance measures, objectives, and targets into their planning and programming processes. The FAST Act, implemented in 2015 and which replaced MAP-21, sustained these requirements.

Per MAP-21, MPOs must transition to a performance-driven, outcome-based program that focuses on national transportation goals, increases accountability and transparency of the Federal-Aid Highway Program, and improves project decision-making. The FHWA-required and FTA-required performance measures were implemented on staggered timelines; therefore, the first deadlines by which MPOs must have established their first performance measure targets are staggered as well.

This PMP outlines all of the federally-required measures, both FHWA-required and FTA-required. KIPDA has also developed additional performance measures outlined in this plan and referred to as "MPO-developed performance measures." These were developed to support KIPDA's long-range, regional goals as identified in the Metropolitan Transportation Plan (MTP).

The Kentucky Transportation Cabinet (KYTC) and the Indiana Department of Transportation (INDOT) were allowed one year after the effective date of each federal Final Rule to develop statewide measures and targets consistent with federal guidelines. Within 180 days of the state DOTs' deadlines, KIPDA must finalize their federal performance measures and targets for the MPO region. Targets for all of the federal measures were established for the first time in 2018. Once targets were established, State DOTs and MPOs began tracking progress towards achieving those targets and will report to the appropriate federal agency. This process will repeat itself every four years.

Coordination and data-sharing among agencies at all levels is crucial in the performance-based planning process to ensure progress is made towards achieving state DOT and MPO targets.

This PMP is a component of KIPDA's MTP and will incorporate the following:
- The National Transportation Goals
- FHWA-Required Performance Measures
- FTA-Required Performance Measures
- KYTC and INDOT Performance Targets
- The Goals & Objectives of KIPDA's MTP
- KIPDA's Performance Measures and Targets
- Data Collection Plan
- Baseline Data
- Target-Setting Methodology
- Reporting Processes

This PMP will be reflected in KIPDA's transportation planning documents, including:
- The 2015 Planning Process Memorandum of Agreement (MOA) by and between KIPDA, INDOT, KYTC, and Transit Authority of River City (TARC) that details KIPDA's metropolitan transportation planning effort, coordination responsibilities, and the creation of this PMP.
- Unified Planning Work Program (UPWP)
- Metropolitan Transportation Plan (MTP)
- Transportation Improvement Program (TIP) and the Project Management Processes for both Kentucky and Indiana
- Congestion Management Process (CMP)
- Participation Plan
- Freight Mobility Study
- KIPDA Online Resource Center
- Any other relevant planning documents, programs, and procedures

MAP-21 elevated performance measures to a cornerstone in transportation planning at the MPO-level. While the performance measures will be most associated with the MTP, they will thread their way through most of the planning activities at KIPDA, including the Transportation Improvement Program (TIP), which is a subset of projects listed in the MTP that are currently programmed to receive funding for development. The MTP and TIP must include, to the maximum extent practical: a discussion of the anticipated effect of the improvement program toward achieving the performance targets established in the MTP, and they must link investment priorities to the performance targets. This helps ensure that projects are reflective of the goals and objectives agreed upon by the community's stakeholders and are supportive of the MPO's performance targets.

State DOTs and MPOs are required to report their progress to the appropriate federal agencies on a regular basis. States are required to report every two years and MPOs will be required to report every four years during their Federal Certification Review. Should states not achieve their established targets, the consequence may be a redirection of funding to address the missed targets. There are currently no consequences for MPOs who do not achieve their established targets; however, KIPDA will strive to assist our partner agencies achieve their targets.

The PMP will be reviewed when KIPDA collects or analyzes new data, when targets are adjusted, when the state DOTs adjust their targets, and with every update of the MTP. At a minimum, KIPDA staff anticipates reviewing the PMP annually. Any modifications to the PMP must be approved by KIPDA's Transportation Policy Committee (TPC).

NATIONAL GOALS

Federal regulation requires MPOs to incorporate the following National Goals into their planning processes. Per *23 USC 150(b)*, it is in the interest of the United States to focus the Federal-Aid Highway Program on the following national goals as established by Congress:

Safety: to achieve a significant reduction in traffic fatalities and serious injuries on all public roads.

- This goal seeks to reduce fatalities and serious injuries in motor vehicle crashes, with particular emphasis in reducing fatalities and serious injuries of non-motorized individuals (such as a bicyclist or pedestrian). The safety of all public roads is assessed and projects should identify strategies to minimize the exposure of the public, personnel, and property to hazards and unsafe conditions.
- Per *23 CFR Part 490 Subpart B*, a Rule by the Federal Highway Administration titled "National Performance Management Measures: Highway Safety Improvement Program" (effective date April 14, 2016) established performance measures relating to this national goal. At times this Rule is referred to as "PM 1" within this document.

Infrastructure Condition: to maintain the highway infrastructure asset system in a state of good repair.

- This goal seeks to preserve bridges and pavements on the Interstate and non-Interstate National Highway System (NHS), but states and MPOs are encouraged to include all infrastructure assets within their right-of-way and may include roads other than on the NHS. While the condition of bridges and pavements has been assessed and reported for many years, FHWA has developed new criteria for reporting the conditions of these assets.
- Per *23 CFR Part 490 Subparts C and D*, a Rule by the Federal Highway Administration titled "National Performance Management Measures; Assessing Pavement Condition for the National Highway Performance Program and Bridge Condition for the National Highway Performance Program" (effective date February 17, 2017) established performance measures relating to this national goal. At times this Rule is referred to as "PM 2" within this document.

Congestion Reduction: to achieve a significant reduction in congestion on the National Highway System (NHS).

- This goal seeks to improve the performance of the Interstate and non-Interstate National Highway System (NHS); to enhance the mobility of freight on the Interstate system; and to reduce traffic congestion and on-road mobile source emissions.
- Per *23 CFR Part 490 Subparts E, F, G, and H*, a Rule by the Federal Highway Administration titled "Assessing Performance of the National Highway System, Freight Movement on the Interstate System, and Congestion Mitigation and Air Quality Improvement Program" (effective date February 17, 2017) established performance measures relating to this national goal. At times this Rule is referred to as "PM 3" within this document.
- KIPDA's Congestion Mitigation Process (CMP) plays an integral role in developing strategies in meeting the national, state, regional, and local goals relating to congestion and air quality.

<u>System Reliability</u>: to improve efficiency of the surface transportation system.
- This goal seeks to ensure that the transportation system is preserved, reliable, and safe for all users.
- Both PM 2 and PM 3 Final Rules address the efficiency of the system as well as the FTA measures.
- Per *49 CFR Part 625 and 49 CFR Part 630*, a Rule by the Federal Transit Administration titled "Transit Asset Management; National Transit Database" (effective date October 1, 2016) established performance measures relating to this national goal. At times this Rule is referred to as "FTA measures" within this document.

<u>Freight Movement and Economic Vitality</u>: to improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.
- This goal seeks to improve the freight transportation system so that goods are moved quickly and reliably to their destinations and economic activity can be stimulated.
- The PM 3 Final Rule addresses freight movement on the Interstate system.

<u>Environmental Sustainability</u>: to enhance the performance of the transportation system while protecting and enhancing the natural environment.
- This goal seeks to meet air quality standards by reducing air pollution from on-road mobile source emissions and to reduce the effects on climate change.
- The PM 3 Final Rule addresses air quality and on-road mobile source emissions.

<u>Reduced Project Delivery Delays</u>: to reduce costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion.
- This goal seeks to eliminate delays in the project development and delivery process, by reducing regulatory burdens and improving agencies' work practices and encouraging collaboration.

KIPDA MTP GOALS & OBJECTIVES

KIPDA took the National Goals into consideration when developing goals for the Metropolitan Transportation Plan (MTP). These goals and objectives were developed with the assistance of stakeholders and committees in the KIPDA planning process. This document takes the MTP goals one step further by implementing performance measures and setting targets. This document is a component of the MTP, and it provides the foundation for project development in the MTP process and inspires project prioritization in the TIP.

Goal 1: Transit
Improve public transit connectivity to identified Community Access Clusters, including, but not limited to, high density employment, high density residential, high density retail, commerce centers, and Access to Education.

- By 2040, and where opportunities for growth exist, increase by 20% the percent of land area within identified clusters of Community Access, high density employment, high density medical, high density shopping, high density housing, and schools served by public transit.
- Increase the number of occupied spaces in Park and Ride Lots by 40% by 2040.
- By 2040 increase the number of park and ride lots with dedicated bicycle access by 10**%**.
- By 2040 increase the number of park and ride lots with pedestrian access by 20**%**.

Goal 2: Non-Motorized (Pedestrian)
Improve the connectivity of the pedestrian network.

- By 2040, increase by 10% pedestrian walkways within identified Community Access Clusters (including, but not limited to, high density employment, high density residential, high density shopping, and Access to Education clusters) and to public transit stops.

Goal 3: Non-Motorized (Bicycle)
Improve the connectivity of bicycle facilities.

- By 2040, increase by 10% the number of miles of dedicated bicycle facilities within identified Community Access Clusters, high density employment, high density medical, and high density shopping and within 1 mile of the boundary, and near schools by adding new facilities, filling in gaps in existing facilities, and improving access to transit stops on functionally classified roadways.

Goal 4: Safety
Increase safety for all users.

- By 2040, reduce by 20% the ratio of all crashes to regional Vehicle Miles Traveled with high priority given to reducing crashes involving bicycles and pedestrians.

Goal 5: Congestion
Manage and reduce roadway congestion where appropriate.

- Maintain or improve Level of Service on freeway and Interstate roadway miles with a Level of Service of D or worse through 2040.
- Maintain or improve Level of Service on arterial roadway miles with a Level of Service of D or worse through 2040.

Goal 6: Multi-modal
Increase the availability and efficiency of person based multi-modal options.
- Increase system wide transit ridership by 20% by 2040.
- Reduce by 20% the identified gaps in pedestrian walkways along functionally classified roadways by 2040.
- Reduce by 20% the identified gaps in bikeways along functionally classified corridors by 2040.

Goal 7: Maintenance
Maintain the existing transportation network in a state of good repair.
- By 2040, increase by 10% the miles of functionally classified roadways that meet or exceed the federally defined Good pavement condition.
- Reduce the number of bridges that are identified as Poor (using federally defined criteria) by 50% by 2040.
- By 2040, reduce the percent of transit fleet (both revenue and non-revenue vehicles) that have met or are above the useful life benchmark.

Goal 8: Freight
Ensure timely and efficient movement of freight within, departing, and entering the region.
- Maintain or improve Level of Service on roadway miles included on the KIPDA Freight Network through 2040.
- By 2040, reduce by 10% the number of locations on the KIPDA Freight Network and within 1.0 miles of identified clusters of freight distributors where roadway geometry (turning radii, lane width, shoulder width, roadway curvature, etc.) contributes to delay or hinders freight truck access to and from destinations.

Goal 9: Economy
Influence positive economic impacts.
- Reduce the average headway time on public transit by 40% on TARC-defined Title VI Routes by 2040.
- By 2040, increase by 10% pedestrian walkways within areas with moderate to significant employment growth and to public transit stops.
- By 2040, increase by 10% the number of miles of dedicated bicycle facilities within areas with moderate to significant employment growth by adding new facilities, filling in gaps in existing facilities, and improving access to transit stops on functionally classified roadways.

Goal 10: Environment
Reduce and/or mitigate negative environmental impacts, including climate change.
- Meet or be under mobile source budgets in State Implementation Plans for Air Quality with each update and amendment to the Metropolitan Transportation Plan.

TABLE 1: RELATIONSHIP BETWEEN NATIONAL GOALS, MTP GOALS, AND PERFORMANCE MEASURES

National Goals		MTP Goals		Performance Measure Sections and PM Codes
Safety	To achieve a significant reduction in traffic fatalities and serious injuries.	Safety	Increase safety for all users.	**Safety** S1, S2, S3, S4, S5, S6, N1
Infrastructure Condition	To maintain the highway infrastructure asset system in a state of good repair.	Maintenance	Maintain the existing network in a state of good repair.	**Roadway Maintenance** M1, M2, M3, M4, T2, T9
Congestion Reduction	To achieve a significant reduction in congestion on the National Highway System.	Congestion	Manage roadway congestion.	**Motor Vehicle Access** V1, V2, V3, V4 **Freight Movement** F1, F2, F3
System Reliability	To improve the efficiency of the surface transportation system.	Multi-modal	Increase the availability and efficiency of multi-modal options.	**Transit** T2, T3, T4, T5, T6, T7, T8, E1 **Non-Motorized** N2, N3, N4, N5, N6, E1, E2
Freight Movement and Economic Vitality	To improve the national freight network and support regional economic development.	Freight	Ensure timely movement of freight.	**Freight Movement** F1, F2, F3
		Economy	Influence positive economic impacts.	**Economic Impact** E1, E2
Environmental Sustainability	To enhance the performance of the transportation system while protecting and enhancing the natural environment.	Environment	Reduce environmental impacts.	**Air Quality** A1
Reduced Project Delivery Delays	To reduce project costs by accelerating project completion through eliminating delays in the project development and delivery process.	**Not an MTP Goal: KIPDA Project Management Process**	KIPDA's policy for planning, programming, and prioritizing federal funds dedicated to the KIPDA MPO.	Not addressed in the Performance Management Plan, this is a component of the TIP
		Transit	Improve transit connectivity to clusters.	**Transit** T1, T2, T3, T4, T5, T6, T7, T8, T9, E1
		Non-Motorized	Improve connectivity of the pedestrian network.	**Non-Motorized** N2, N3, N4, N5, N6, T7
			Improve connectivity of dedicated bicycle facilities.	

The Performance Measure Sections identified here are the sections in which all of KIPDA's performance measures are categorized, including both federal and MPO-developed measures. Refer to the tables on pages 9-18 for more details.

LISTING OF PERFORMANCE MEASURES

Per federal regulation *23 USC 150(b)*, state DOTs and MPOs must take a performance-based approach to planning and programming by incorporating the FTA measures and PM 1, PM 2, and PM 3 issued by FHWA. However, at the discretion of the Transportation Policy Committee (TPC), KIPDA has included MPO-developed performance measures in addition what is federally-required. These additions prioritize specific issues the region faces. This section of the PMP details KIPDA's Performance Measures, both federally-required and MPO-developed.

These performance measures are listed in tabular format and each line item includes the following:
- Who requires the performance measure: FHWA, FTA, or the MPO
- A unique PM Code (ex: S1, V3, M2b, etc.)
- Performance Measure
- Baseline (if available, will be listed as "TBD" if it is still in development)
- Target
  - Federal Measures: as required by FHWA or FTA
  - MPO-developed Measures: will list the goal and the time frame to be completed

The following are the performance measures set forth by the KIPDA Transportation Policy Committee (TPC), which have been categorized into several sections and subsections:
- Safety
- Transit
  - Ridership
  - Age of Fleet
  - Transit Access to Clusters and Schools
  - Headway Time
  - Park and Ride Lots and Rideshare
  - TARC Facilities
- Non-Motorized
  - Bicycle and Pedestrian Safety
  - Bicycle and Pedestrian Network
  - Bicycle and Pedestrian Access to Schools and Clusters
- Economic Impact
- Motor Vehicle Access
  - Level of Travel Time Reliability
  - Congestion
- Roadway Maintenance
  - Pavement Condition
  - Bridge Condition
- Freight Movement
- Air Quality

TABLE 2: PERFORMANCE MEASURES, BASELINES, AND TARGETS

SAFETY			
REQUIRED BY:	PERFORMANCE MEASURE	BASELINE	TARGET
FHWA	**S1** Number of Fatalities	125.8 Fatalities (2013-2017 5-year rolling average)	133.7 Fatalities (2015-2019 5-year rolling average)
FHWA	**S2** Fatality Rate	1.14 Fatalities per 100 million VMT (2013-2017 5-year rolling average)	1.18 Fatalities per 100 million VMT (2015-2019 5-year rolling average)
FHWA	**S3** Number of Serious Injuries	877.7 Serious Injuries (2013-2017 5-year rolling average)	766.0 Serious Injuries (2015-2019 5-year rolling average)
FHWA	**S4** Serious Injury Rate	7.93 Serious Injuries per 100 million VMT (2013-2017 5-year rolling average)	6.74 Serious Injuries per 100 million VMT (2015-2019 5-year rolling average)
FHWA	**S5** Number of Non-Motorized Fatalities and Serious Injuries	104.0 Non-Motorized Fatalities and Serious Injuries (2013-2017 5-year rolling average)	114.5 Non-Motorized Fatalities and Serious Injuries (2015-2019 5-year rolling average)
MPO	**S6** Crash Rate	399.0 Crashes per 100 million VMT (2012-2016 5-year rolling average)	Reduce by 20% by 2040 to 319 crashes per 100 million VMT

TRANSIT

REQUIRED BY:	PERFORMANCE MEASURE		BASELINE		TARGET
	RIDERSHIP				
MPO	**T1**	Transit Ridership	11,811,902	Boardings on TARC buses during FY 2017	Increase by 20% by 2040 to 14,174,282 boardings
	AGE OF FLEET				
FTA	**T2**	**(a)** Percent of non-revenue vehicles exceeding the useful life benchmark (ULB)	53%	of TARC's non-revenue vehicle fleet (equipment) above the ULB	≤ 10% of non-revenue service vehicles exceed default ULB of 8 years
			34%	of TARC's revenue bus fleet (rolling stock) above the ULB	≤ 10% of bus fleet exceeds ULB of 15 years/600K miles
		(b) Percent of revenue vehicles exceeding the useful life benchmark (ULB)	47%	of TARC's revenue cutaway bus fleet (rolling stock) above the ULB	≤ 5% of cutaway bus fleet exceeds ULB of 10 years/300K miles
	TRANSIT ACCESS TO CLUSTERS AND SCHOOLS				
MPO	**T3**	**(a)** Community Access Clusters served by transit	91.03%	of land area within these clusters are within ¼ mile of a transit route	Increase to 100% by 2040
		(b) High Density Medical Clusters served by transit	100%	of land area within these clusters are within ¼ mile of a transit route	Maintain at current levels in 2040
		(c) High Density Shopping Clusters served by transit	100%	of land area within these clusters area within ¼ mile of a transit route	Maintain at current levels in 2040
		(d) High Density Housing Clusters served by transit	TBD	of land area within these clusters are within ¼ mile of a transit route	Increase by 20% by 2040
MPO	**T4**	Enhance transit access to schools	230	Schools are within ¼ mile of a transit route	Increase by 20% by 2040 to 276 schools

TRANSIT (CONTINUED)

REQUIRED BY:		PERFORMANCE MEASURE	BASELINE		TARGET
		HEADWAY TIME			
MPO	**T5**	Reduce average headway time on TARC's defined Title VI routes	1:04	Average weekday headway time on TARC Title VI Routes	Reduce by 40% by 2040 to 0:38 average weekday headway time
		PARK AND RIDE LOTS AND RIDESHARE			
MPO	**T6**	Number of Park and Ride lot spaces occupied during peak hours	TBD	# of Park and Ride lot spaces that are occupied during weekday business hours	Increase by 40% by 2040
MPO	**T7** **(a)**	Number of Park and Ride lots with pedestrian access	24	Park and Ride lots have pedestrian access	Increase by 20% by 2040 to 29 lots
	(b)	Number of Park and Ride lots with dedicated bicycle access	3	Park and Ride lots have dedicated bicycle access	Increase by 10% by 2040 to 4 lots
MPO	**T8**	Number of commuters in the Ticket to Ride program	1,377	Active commuters in the Ticket to Ride program	5,000 commuters in the Ticket to Ride program by 2040
		TARC FACILITIES			
FTA	**T9**	Percent of facilities rated under 3.0 on the TERM scale	0%	of facilities within an asset class, rated below condition 3 on the TERM scale (partial inventory)	≤ 10% of facilities rated under 3.0 on the TERM scale Each On-Route Bus Charging Station > 3.0 on the TERM scale USTA Emergency Power Station at ≥ 95% availability

NON-MOTORIZED

REQUIRED BY:	PERFORMANCE MEASURE			BASELINE		TARGET
BICYCLE AND PEDESTRIAN SAFETY						
MPO	**N1**	(a)	Reduce number of crashes involving pedestrians	555.2	Crashes involving pedestrians (2012-2016 5-year rolling average)	Reduce by 20% by 2040 to 444 crashes involving pedestrians
		(b)	Reduce number of crashes involving bicyclists	238.0	Crashes involving bicyclists (2012-2016 5-year rolling average)	Reduce by 20% by 2040 to 190 crashes involving bicyclists
BICYCLE AND PEDESTRIAN NETWORK						
MPO	**N2**	(a)	Reduce gaps in the existing pedestrian network	212.0	Miles of gaps in the pedestrian network (within 1 mile of existing facilities on the same roadway)	Reduce by 20% by 2040 to 169.6 miles of gaps in the pedestrian network
		(b)	Reduce gaps in the existing bicycle network	40.0	Miles of gaps in the bicycle network (within 1 mile of existing facilities on the same roadway)	Reduce by 20% by 2040 to 32.0 miles of gaps in the bicycle network
BICYCLE AND PEDESTRIAN ACCESS TO SCHOOLS AND CLUSTERS						
MPO	**N3**	(a)	Enhance pedestrian access to schools	291	Schools are located within ¼ mile of pedestrian facilities	Increase by 20% by 2040 to 349 schools
		(b)	Enhance dedicated bicycle access to schools	71	Schools are located within ¼ mile of dedicated bicycle facilities	Increase by 20% by 2040 to 85 schools
MPO	**N4**	(a)	Enhance pedestrian access within Community Access Clusters	296.8	Miles of pedestrian facilities inside these clusters	Increase by 10% by 2040 to 326.5 miles of pedestrian facilities
		(b)	Enhance dedicated bicycle facilities leading to and within Community Access Clusters	129.1	Miles of dedicated bicycle facilities inside these clusters and within 1 mile of the boundary	Increase by 10% by 2040 to 142.0 miles of bicycle facilities

NON-MOTORIZED (CONTINUED)

REQUIRED BY:		PERFORMANCE MEASURE	BASELINE		TARGET
MPO	**N5**	**(a)** Enhance pedestrian access within High Density Medical Clusters	73.4	Miles of pedestrian facilities inside these clusters	Increase by 10% by 2040 to 80.7 miles of pedestrian facilities
		(b) Enhance dedicated bicycle access leading to and within High Density Medical Clusters	64.4	Miles of dedicated bicycle facilities inside these clusters and within 1 mile of the boundary	Increase by 10% by 2040 to 70.8 miles of bicycle facilities
MPO	**N6**	**(a)** Enhance pedestrian access within High Density Shopping Clusters	142.9	Miles of pedestrian facilities inside these clusters	Increase by 10% by 2040 to 157.2 miles of pedestrian facilities
		(b) Enhance dedicated bicycle access leading to and within High Density Shopping Clusters	78.9	Miles of dedicated bicycle facilities inside these clusters and within 1 mile of the boundary	Increase by 10% by 2040 to 86.8 miles of bicycle facilities

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ECONOMIC IMPACT

REQUIRED BY:			PERFORMANCE MEASURE	BASELINE		TARGET
MPO	E1	(a)	Enhance transit access leading to High Density Employment Clusters	1,117	Miles of transit routes within 1 mile of the boundary of these clusters	Increase by 20% by 2040 to 1,340 miles of transit routes
		(b)	Enhance pedestrian facilities within High Density Employment Clusters	384.1	Miles of pedestrian facilities inside these clusters	Increase by 10% by 2040 to 423 miles of pedestrian facilities
		(c)	Enhance dedicated bicycle facilities leading to and within High Density Employment Clusters	126.2	Miles of dedicated bicycle facilities inside these clusters and within 1 mile of the boundary	Increase by 10% by 2040 to 139 miles of bicycle facilities
MPO	E2	(a)	Enhance pedestrian facilities within areas of moderate to significant employment growth	268.4	Miles of pedestrian facilities inside areas of moderate to significant employment growth	Increase by 10% by 2040 to 295.2 miles of pedestrian facilities
		(b)	Enhance dedicated bicycle facilities leading to and within areas of moderate to significant employment growth	45.1	Miles of dedicated bicycle facilities inside areas of moderate to significant employment growth and within 1 mile of the boundary	Increase by 10% by 2040 to 49.6 miles of bicycle facilities

MOTOR VEHICLE ACCESS

REQUIRED BY:		PERFORMANCE MEASURE	BASELINE		TARGET	
LEVEL OF TRAVEL TIME RELIABILITY						
FHWA	**V1**	Level of Travel Time Reliability (LOTTR) on Interstates	KIPDA supports the statewide targets set forth by KYTC and INDOT by planning and programming projects that contribute to the accomplishment of each state's Interstate LOTTR target			
FHWA	**V2**	Level of Travel Time Reliability (LOTTR) on the non-Interstate NHS	KIPDA supports the statewide targets set forth by KYTC and INDOT by planning and programming projects that contribute to the accomplishment of each state's non-Interstate NHS LOTTR target			
CONGESTION						
MPO	**V3**	Maintain or improve level of service on Interstates at LOS D or worse	56.5%	of Interstate and freeway roadway miles were at LOS D, E, or F in 2016	≤ 56.5%	of Interstate and freeway roadway miles at LOS D, E, or F in 2040
MPO	**V4**	Maintain or improve level of service on arterials at LOS D or worse	28.0%	of arterial roadway miles were at LOS D, E, or F in 2016	≤ 28.0%	of arterial roadway miles at LOS D, E, or F in 2040

ROADWAY MAINTENANCE

REQUIRED BY:			PERFORMANCE MEASURE	BASELINE		TARGET	
			PAVEMENT CONDITION				
FHWA	M1	(a)	Percent of pavements in "Good" condition on Interstates	46.2%	of pavements in "Good" condition	50.0%	of pavements in "Good" condition on Interstates by 2022
MPO		(b)	Percent of pavements in "Borderline" or worse condition on Interstates	13.0%	of pavements in "Borderline" or worse condition	10.0%	of pavements in "Borderline" or worse condition on Interstates by 2022
FHWA		(c)	Percent of pavements in "Poor" condition on Interstates	1.9%	of pavements in "Poor" condition	1.0%	of pavements in "Poor" condition on Interstates by 2022
FHWA	M2	(a)	Percent of pavements in "Good" condition on non-Interstate NHS	24.9%	of pavements in "Good" condition	27.0%	of pavements in "Good" condition on non-Interstate NHS by 2022
MPO		(b)	Percent of pavements in "Borderline" or worse condition on non-Interstate NHS	16.0%	of pavements in "Borderline" or worse condition	13.5%	of pavements in "Borderline" or worse condition on non-Interstate NHS by 2022
FHWA		(c)	Percent of pavements in "Poor" condition on non-Interstate NHS	3.9%	of pavements in "Poor" condition	3.5%	of pavements in "Poor" condition on non-Interstate NHS by 2022
			BRIDGE CONDITION				
FHWA	M3	(a)	Percent of deck area in "Good" condition on bridges carrying the NHS	30.5%	of deck area in "Good" condition	30.5%	of deck area in "Good" condition on bridges carrying the NHS by 2022
		(b)	Percent of deck area in "Poor" condition on bridges carrying the NHS	10.5%	of deck area in "Poor" condition	7.1%	of deck area in "Poor" condition on bridges carrying the NHS by 2022
MPO	M4	(a)	Percent of bridges on functionally classified roads that are in "Good" condition	27.8%	of bridges in "Good" condition		Increase by 50% by 2040 to 41.7% of bridges in "Good" condition
		(b)	Percent of bridges on functionally classified roads that are in "Poor" condition	6.9%	of bridges in "Poor" condition		Reduce by 50% by 2040 to 3.5% of bridges in "Poor" condition

FREIGHT MOVEMENT

REQUIRED BY:		PERFORMANCE MEASURE	BASELINE		TARGET	
MPO	F1	Maintain or improve roadways on the KIPDA Freight Network that are LOS D or worse	TBD	% of roadway miles on the KIPDA Freight Network were at LOS D, E, or F in 2016.	TBD	% of roadway miles on the KIPDA Freight Network at LOS D, E, or F in 2040
MPO	F2	Number of locations on the KIPDA Freight Network within 1 mile of Freight Clusters where roadway geometry and/or restrictions impede freight movement	TBD	# of locations that impede freight movement		Reduce by 10% by 2040
FHWA	F3	Truck Travel Time Reliability (TTTR) on the Interstate	KIPDA supports the statewide targets set forth by KYTC and INDOT by planning and programming projects that contribute to the accomplishment of each state's TTTR target			

AIR QUALITY			
REQUIRED BY:	PERFORMANCE MEASURE	BASELINE	TARGET
MPO	**A1** Meet or do better than mobile source budgets in the State Implementation Plan (SIP)	TBD MTP Air Quality Analysis	Meet or do better than mobile source budgets in the SIP

DETAILS OF PERFORMANCE MEASURES

The following section provides a narrative of each performance measure that includes the following:

- Detailed Description
- Data Sources and Review Frequency
- Historical Data
- Baseline Data
- State DOT Targets (if applicable)
- Target
    - Federal Measures: as required by FHWA or FTA
    - MPO-developed Measures: will list the goal and the time frame to be completed
- Target-Setting Methodology

While KIPDA is largely responsible for collecting, organizing, and analyzing the data that is used to assess performance measure progress, partner agencies will provide KIPDA with some data. The appropriate partner agencies that KIPDA relies on for data are identified in each performance measure narrative under the "Data Sources and Review Frequency" section. Collaboration is critical between KIPDA, KYTC, INDOT, TARC, all local public agencies, and any other agency that could provide and/or analyze relevant data. Much of this data will be made available on the KIPDA Online Resource Center.

This section also explains the methodologies behind why certain targets were selected for each measure. Setting targets first relies on collecting baseline information of the region's current conditions. Next, analysis is completed to assess expected future performance. Targets are then selected based on the anticipated future conditions, attainable performance levels, and the priorities of the KIPDA committee members and community stakeholders. Committee members and working groups have collaborated to establish the targets. The targets should be ambitious but feasible.

FHWA-REQUIRED MEASURES

The following are performance measures required by the Federal Highway Administration per *23 CFR Part 490*.

PM 1: SAFETY

This section includes all five PM 1 performance measures that are required per federal regulation *23 CFR Part 490 Subpart B*.

S1 - Number of Fatalities - 490.207(a)(1)

Detailed Description

This performance measure seeks to reduce the number of fatalities in motor vehicle collisions.

Data Sources and Review Frequency

- Kentucky crash data: Kentucky Collision Analysis for the Public
    - This data is available on an ongoing basis, thus it will be updated yearly.
- Indiana crash data: ARIES Collision Data
    - This data is available on an ongoing basis, thus it will be updated yearly.
- Number of fatalities nationwide: Fatality Analysis Reporting System, also called "Final FARS"
    - Due to various circumstances, a death as a result of involvement in a motor vehicle collision may or may not be counted as traffic fatality. In these instances, data inconsistencies can occur between the state crash databases and the Final FARS data. Federal regulation states that Final FARS shall have the final authority over the state crash databases on the number of traffic fatalities in that year.
    - New data is available every year, thus it will be updated yearly.
    - Final FARS data is generally available 18 months after the end of the calendar year. Due to the lag in this data being finalized, FHWA allows the use of the FARS Annual Report File (ARF) if Final FARS data is not available.

Historical Data

The following table details the number of fatalities in the KIPDA region from 2005 to 2018. Data from 2017 was downloaded shortly after the end of that calendar year and may be subject to change as the data is finalized. 2018 data was projected using a linear trendline.

YEAR	KY MPO FATALITIES	IN MPO FATALITIES	KIPDA MPO FATALITIES
2005	121	22	143
2006	90	23	113
2007	97	17	114
2008	93	23	116
2009	76	17	93
2010	91	22	113
2011	76	20	96
2012	77	23	100
2013	100	12	112
2014	98	16	114
2015	98	23	121
2016	114	20	134
2017	124	26	150
2018	117	21	138

Actual as of 1/23/18

2018 calculated trend as of 1/23/18

	KY MPO	IN MPO	KIPDA MPO
2012-2016 5-Year Rolling Average	97.4	18.8	**116.2**
2013-2017 5-Year Rolling Average	106.8	19.4	126.2
2014-2018 5-Year Rolling Average	110.2	21.2	**131.4**

Baseline Data

Per federal regulation, the five-year rolling average from 2012 to 2016 will be the baseline condition that KIPDA will report in its 2018 Baseline Performance Period Report. The baseline (highlighted in tan in the above table) is: 116.2 fatalities.

State Targets

- o Kentucky
  - o KYTC set the statewide target of 730 fatalities for the five-year rolling average from 2014 to 2018 (source: Kentucky Statewide 2018 Safety Performance Targets).
- o Indiana
  - o INDOT set the statewide target of 814.9 fatalities for the five-year rolling average from 2014 to 2018 (source: Indiana Statewide 2018 Safety Performance Targets).

Target (as required by FHWA)

Per federal regulation, the five-year rolling average from 2014 to 2018 is the target that KIPDA will report in its 2018 Baseline Performance Period Report. The target (highlighted in yellow in the above table) is: 131.4 fatalities. The KIPDA Transportation Policy Committee adopted this short term target on February 22, 2018.

Target-Setting Methodology

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

S2 - Fatality Rate - 490.207(a)(2)

Detailed Description

This performance measure seeks to reduce the rate of fatalities in motor vehicle collisions per 100 million VMT.

Data Sources and Review Frequency

- Kentucky crash data: Kentucky Collision Analysis for the Public
  - This data is available on an ongoing basis, thus it will be updated yearly.
- Indiana crash data: ARIES Collision Data
  - This data is available on an ongoing basis, thus it will be updated yearly.
- Number of fatalities nationwide: Fatality Analysis Reporting System, also called "Final FARS"
  - New data is available every year, thus it will be updated yearly.
- Kentucky VMT: KYTC Planning Highway Information (HIS) Database
  - KYTC provides county-level estimates of daily VMT, and we multiply it to calculate the annual VMT.
  - New data is available every year, thus it will be updated yearly.
- Indiana VMT: INDOT Traffic Data
  - INDOT provides county-level estimates of daily VMT, and we multiply it to calculate the annual VMT.
  - New data is available every year, thus it will be updated yearly.

Historical Data

The following table details the rate of fatalities per 100 million VMT in the KIPDA region from 2005 to 2018. Data from 2017 was downloaded shortly after the end of that calendar year and may be subject to change as the data is finalized. 2018 data was projected using a linear trendline.

	YEAR	KY MPO FATALITY RATE	IN MPO FATALITY RATE	KIPDA MPO FATALITY RATE
	2005	1.42	1.01	1.34
	2006	1.05	1.05	1.05
	2007	1.14	0.75	1.06
	2008	1.11	1.03	1.09
	2009	0.91	0.67	0.85
	2010	1.06	1.00	1.05
	2011	0.89	0.81	0.88
	2012	0.92	0.99	0.93
	2013	1.19	0.57	1.07
	2014	1.15	0.67	1.05
	2015	1.14	0.93	1.09
	2016	1.29	0.77	1.18
Actual as of 1/23/18	2017	1.41	1.01	1.32
2018 calculated trend as of 1/23/18	2018	1.33	0.82	1.22

2012-2016 5-Year Rolling Average	1.14	0.79	**1.06**
2013-2017 5-Year Rolling Average	1.24	0.79	1.14
2014-2018 5-Year Rolling Average	1.26	0.84	**1.17**

Baseline Data

Per federal regulation, the five-year rolling average from 2012 to 2016 will be the baseline condition that KIPDA will report in its 2018 Baseline Performance Period Report. The baseline (highlighted in tan in the above table) is: 1.06 fatalities per 100 million VMT.

State Targets

- o Kentucky
    - o KYTC set the statewide target of 1.50 fatalities per 100 million VMT for the five-year rolling average from 2014 to 2018 (source: Kentucky Statewide 2018 Safety Performance Targets).
- o Indiana
    - o INDOT set the statewide target of 1.036 fatalities per 100 million VMT for the five-year rolling average from 2014 to 2018 (source: Indiana Statewide 2018 Safety Performance Targets).

Target (as required by FHWA)

Per federal regulation, the five-year rolling average from 2014 to 2018 is the target that KIPDA will report in its 2018 Baseline Performance Period Report. The target (highlighted in yellow in the above table) is: 1.17 fatalities per 100 million VMT. The KIPDA Transportation Policy Committee adopted this short term target on February 22, 2018.

Target-Setting Methodology

Please see the Target-Setting Methodology section under *"S1 - Number of Fatalities - 490.207(a)(1)"* for a detailed explanation of the methodology in setting this target.

S3 - Number of Serious Injuries - 490.207(a)(3)
Detailed Description
This performance measure seeks to reduce the number of serious injuries in motor vehicle collisions. Serious injuries are to be classified as an incapacitating injury, otherwise known as an "A" on the KABCO Injury Classification Scale.

Data Sources and Review Frequency
- Kentucky crash data: KYTC
  - While most crash data is available via the Kentucky Collision Analysis for the Public database, the Kentucky State Police (KSP), who manage that public database, restricts access to serious injury data. KYTC has signed an MOU with KSP granting them access to the serious injury data. Some KIDPA staff have signed an extension of that MOU allowing KYTC to share serious injury data with KIPDA. KIPDA relies on KYTC to share the data every year.
  - This data is available on an ongoing basis, thus it will be updated yearly.
- Indiana crash data: ARIES Collision Data
  - This data is available on an ongoing basis, thus it will be updated yearly.

Historical Data
The following table details the number of serious injuries in the KIPDA region from region from 2005 to 2018. In the Indiana MPO counties, preliminary data for 2017 was downloaded shortly after the end of that calendar year and may be subject to change as the data is finalized; data was projected for 2018 using a linear trendline. In the Kentucky MPO counties, data was projected for both 2017 and 2018 using a linear trendline. Due to a lack of serious injury data made available to KIPDA, historical data for the Kentucky MPO counties only dates back to 2011.

	YEAR	KY MPO SERIOUS INJURIES	IN MPO SERIOUS INJURIES	KIPDA MPO SERIOUS INJURIES
	2005		118	
	2006		123	
	2007		109	
	2008		95	
	2009		81	
	2010		105	
	2011	981	118	1,099
	2012	770	153	923
	2013	754	95	849
	2014	796	115	911
	2015	785	114	899
	2016	768	114	882
Actual as of 1/23/18	2017		93	818
2017 calculated trend as of 1/23/18	2017	783		
2018 calculated trend as of 1/23/18	2018	683	115	787

2012-2016 5-Year Rolling Average	774.6	118.3	**892.9**
2013-2017 5-Year Rolling Average	777.1	106.2	871.8
2014-2018 5-Year Rolling Average	763.0	110.2	**859.4**

Baseline Data

Per federal regulation, the five-year rolling average from 2012 to 2016 will be the baseline condition that KIPDA will report in its 2018 Baseline Performance Period Report. The baseline (highlighted in tan in the above table) is: 892.9 serious injuries.

State Targets

- o Kentucky
  - o KYTC set the statewide target of 2,800 serious injuries for the five-year rolling average from 2014 to 2018 (source: Kentucky Statewide 2018 Safety Performance Targets).
- o Indiana
  - o INDOT set the statewide target of 3,479.8 serious injuries for the five-year rolling average from 2014 to 2018 (source: Indiana Statewide 2018 Safety Performance Targets).

Target (as required by FHWA)

Per federal regulation, the five-year rolling average from 2014 to 2018 is the target that KIPDA will report in its 2018 Baseline Performance Period Report. The target (highlighted in yellow in the above table) is: 859.4 serious injuries. The KIPDA Transportation Policy committee adopted this short term target on February 22, 2018.

Target-Setting Methodology

Please see the Target-Setting Methodology section under "S1 - Number of Fatalities - 490.207(a)(1)" for a detailed explanation of the methodology in setting this target.

S4 - Serious Injury Rate - 490.207(a)(4)

Detailed Description

This performance measure seeks to reduce the rate of serious injuries in motor vehicle collisions per 100 million VMT.

Data Sources and Review Frequency

- Kentucky crash data: KYTC
  - This data is available on an ongoing basis, thus it will be updated yearly.
- Indiana crash data: ARIES Collision Data
  - This data is available on an ongoing basis, thus it will be updated yearly.
- Kentucky VMT: KYTC Planning Highway Information (HIS) Database
  - New data is available every year, thus it will be updated yearly.
- Indiana VMT: INDOT Traffic Data
  - New data is available every year, thus it will be updated yearly.

Historical Data

The following table details the rate of serious injuries per 100 million VMT in the KIPDA region from 2005 to 2018. In the Indiana MPO counties, preliminary data for 2017 was downloaded shortly after the end of that calendar year and may be subject to change as the data is finalized; data was projected for 2018 using a linear trendline. In the Kentucky MPO counties, data was projected for both 2017 and 2018 using a linear trendline. Due to a lack of serious injury data made available to KIPDA, historical data for the Kentucky MPO counties only dates back to 2011.

	Year	KY MPO SERIOUS INJURY RATE	IN MPO SERIOUS INJURY RATE	KIPDA MPO SERIOUS INJURY RATE
	2005		5.41	
	2006		5.63	
	2007		4.83	
	2008		4.24	
	2009		3.21	
	2010		4.77	
	2011	11.53	4.81	10.02
	2012	9.18	6.61	8.62
	2013	8.97	4.55	8.09
	2014	9.37	4.77	8.36
	2015	9.09	4.64	8.10
	2016	8.71	4.43	7.74
Actual as of 1/23/18	2017		3.60	7.22
2017 calculated trend as of 1/23/18	2017	8.08	5.07	
2018 calculated trend as of 1/23/18	2018	7.68	4.56	6.86

2012-2016 5-Year Rolling Average	9.06	5.00	**8.18**
2013-2017 5-Year Rolling Average	8.85	4.40	7.90
2014-2018 5-Year Rolling Average	8.59	4.40	**7.66**

Baseline Data

Per federal regulation, the five-year rolling average from 2012 to 2016 will be the baseline condition that KIPDA will report in its 2018 Baseline Performance Period Report. The baseline (highlighted in tan in the above table) is: 8.18 serious injuries per 100 million VMT.

State Targets

- o Kentucky
    - o KYTC set the statewide target of 5.76 serious injuries per 100 million VMT for the five-year rolling average from 2014 to 2018 (source: Kentucky Statewide 2018 Safety Performance Targets).
- o Indiana
    - o INDOT set the statewide target of 4.347 serious injuries per 100 million VMT for the five-year rolling average from 2014 to 2018 (source: Indiana Statewide 2018 Safety Performance Targets).

Target (as required by FHWA)

Per federal regulation, the five-year rolling average from 2014 to 2018 is the target that KIPDA will report in its 2018 Baseline Performance Period Report. The target (highlighted in yellow in the above table) is: 7.66 serious injuries per 100 million VMT. The KIPDA Transportation Policy committee adopted this short term target on February 22, 2018.

Target-Setting Methodology

Please see the Target-Setting Methodology section under "*S1 - Number of Fatalities - 490.207(a)(1)*" for a detailed explanation of the methodology in setting this target.

S5 - Number of Non-Motorized Fatalities and Serious Injuries - 490.207(a)(5)

Detailed Description

This performance measure seeks to reduce the number of fatalities and serious injuries of non-motorized individuals involved in motor vehicle collisions.

Data Sources and Review Frequency

- Kentucky crash data: Kentucky Collision Analysis for the Public and KYTC for serious injury data
  - This data is available on an ongoing basis, thus it will be updated yearly.
- Indiana crash data: ARIES Collision Data
  - This data is available on an ongoing basis, thus it will be updated yearly.
- Number of fatalities nationwide: Fatality Analysis Reporting System, also called "Final FARS"
  - New data is available every year, thus it will be updated yearly.

Historical Data

The following table details the number of non-motorized fatalities and serious injuries in the KIPDA region from 2009 to 2018. In the Indiana MPO counties, preliminary data for 2017 was downloaded shortly after the end of that calendar year and may be subject to change as the data is finalized; data was projected for 2018 using a linear trendline. In the Kentucky MPO counties, data was projected for both 2017 and 2018 using a linear trendline. Due to a lack of serious injury data made available to KIPDA, historical data for the Kentucky MPO counties only dates back to 2011.

	YEAR	KY MPO NON-MOTORIZED FATALITIES AND SERIOUS INJURIES	IN MPO NON-MOTORIZED FATALITIES AND SERIOUS INJURIES	KIPDA MPO NON-MOTORIZED FATALITIES AND SERIOUS INJURIES
	2009		4.0	
	2010		13.0	
	2011	101.0	14.0	115.0
	2012	84.0	16.0	100.0
	2013	78.0	4.0	82.0
	2014	100.0	7.7	107.7
	2015	104.0	6.5	110.5
	2016	106.0	6.1	112.1
Actual as of 1/23/18	2017		3.8	108.8
2017 calculated trend as of 1/23/18	2017	106.2		
2018 calculated trend as of 1/23/18	2018	109.3	4.6	110.0

2012-2016 5-Year Rolling Average	94.4	8.1	**102.5**
2013-2017 5-Year Rolling Average	98.8	5.6	104.5
2014-2018 5-Year Rolling Average	105.1	5.7	**110.1**

Baseline Data

Per federal regulation, the five-year rolling average from 2012 to 2016 will be the baseline condition that KIPDA will report in its 2018 Baseline Performance Period Report. The baseline (highlighted in tan in the above table) is: 102.5 non-motorized fatalities and serious injuries.

State Targets

- o Kentucky
    - o KYTC set the statewide target of 293.0 non-motorized fatalities and serious injuries for the five-year rolling average from 2014 to 2018 (source: Kentucky Statewide 2018 Safety Performance Targets).
- o Indiana
    - o INDOT set the statewide target of 417.0 non-motorized fatalities and serious injuries for the five-year rolling average from 2014 to 2018 (source: Indiana Statewide 2018 Safety Performance Targets).

Target (as required by FHWA)

Per federal regulation, the five-year rolling average from 2014 to 2018 is the target that KIPDA will report in its 2018 Baseline Performance Period Report. The target (highlighted in yellow in the above table) is: 110.1 non-motorized fatalities and serious injuries. The KIPDA Transportation Policy committee adopted this short term target on February 22, 2018.

Target-Setting Methodology

Please see the Target-Setting Methodology section under "S1 - Number of Fatalities - 490.207(a)(1)" for a detailed explanation of the methodology in setting this target.

PM 2: ASSET MANAGEMENT

This section includes all six PM 2 performance measures that are required per federal regulation *23 CFR Part 490 Subparts C and D*.

M1a - Percent of Pavements in "Good" Condition on Interstates - 490.307(a)(1)
M1c - Percent of Pavements in "Poor" Condition on Interstates - 490.307(a)(2)
M2a - Percent of Pavements in "Good" Condition on non-Interstate NHS - 490.307(a)(3)
M2c - Percent of Pavements in "Poor" Condition on non-Interstate NHS - 490.307(a)(4)

Detailed Description

These performance measures seek to increase the percent of pavements classified in "Good" condition and reduce the percent of pavements classified in "Poor" condition on the Interstate system and on the non-Interstate NHS.

Pavement condition is calculated based on (1) International Roughness Index (IRI), (2) Cracking, and (3) either Rutting (asphalt) or Faulting (concrete). Pavements are assessed on three metrics, and the overall condition is determined based on a combination of those ratings. All pavement data collected after January 1, 2018 for Interstates and January 1, 2020 for non-Interstate NHS shall meet the data requirements of classifying overall pavement condition with all three metrics. Pavements are only classified in "Good" condition if the section exhibits a "Good" rating on all three metrics. Pavements are classified in "Poor" condition if the section exhibits a "Poor" rating in two or more metrics. Pavements are otherwise classified in "Fair" condition if any combination of the metrics does not meet the "Good" or "Poor" requirements.

KIPDA has also developed the concept of a "Borderline" pavement condition, please see the MPO-developed measure, *"M1b - Percent of Pavements in "Borderline" or Worse Condition on Interstates"* for an explanation of "Borderline" condition.

The performance measures are calculated separately by roadway type, but they are combined in this narrative.

Data Sources and Review Frequency

- Kentucky pavement condition
  - Interstates: KYTC
    - New data is available every year, thus it will be updated yearly.
  - Non-Interstate NHS: KYTC
    - Even though there are NHS roadways that KYTC does not maintain, they are still responsible for collecting the data and reporting it to FHWA.
    - New data is available every year, thus it will be updated yearly.
- Indiana pavement condition
  - Interstates: INDOT
    - New data is available every year, thus it will be updated yearly.
  - Non-Interstate NHS: INDOT
    - New data is available every year, thus it will be updated yearly.

Historical Data

While state DOTs have been collecting pavement condition data for some time, the method of classifying the overall pavement condition based on a combination of IRI, Cracking, Rutting and/or Faulting is new. Therefore, there is a lack of historical data of overall pavement condition in the KIPDA region. The first time data with all four pavement conditions was available at an MPO-level was in 2017.

To see an interactive map of pavement condition, please visit the KIPDA Online Resource Center.

YEAR	CONDITION	KY MPO PAVEMENT CONDITION ON INTERSTATES		IN MPO PAVEMENT CONDITION ON INTERSTATES		KIPDA MPO PAVEMENT CONDITION ON INTERSTATES	
		Lane Miles	% Lane Miles	Lane Miles	% Lane Miles	Lane Miles	% Lane Miles
2017	Good	289.3	40.6%	98.5	78.0%	387.8	**46.2%**
	Fair	408.2	57.2%	27.7	21.9%	435.9	51.9%
	Poor	15.7	2.2%	0.1	0.1%	15.8	**1.9%**
	Total	713.2	100.0%	126.3	100.0%	839.5	100.0%
	Not Available	*0.0*		*63.7*		*63.7*	

YEAR	CONDITION	KY MPO PAVEMENT CONDITION ON NON-INTERSTATE NHS		IN MPO PAVEMENT CONDITION ON NON-INTERSTATE NHS		KIPDA MPO PAVEMENT CONDITION ON NON-INTERSTATE NHS	
		Lane Miles	% Lane Miles	Lane Miles	% Lane Miles	Lane Miles	% Lane Miles
2017	Good	102.3	19.2%	45.2	77.7%	147.5	**24.9%**
	Fair	409.0	76.6%	12.8	22.0%	421.8	71.2%
	Poor	22.7	4.3%	0.2	0.3%	22.9	**3.9%**
	Total	534.0	100.0%	58.2	100.0%	592.1	100.0%
	Not Available	*2.8*		*0.8*		*3.6*	

Baseline Data

The baseline conditions that KIPDA reports in its 2018 Baseline Performance Period Report are pavement conditions collected during 2017. The baselines (highlighted in tan in the above table) are: 46.2% Good Interstates, 1.9% Poor Interstates, 24.9% Good non-Interstate NHS, and 3.9% Poor non-Interstate NHS.

State Targets

o Kentucky
   o KYTC set the following statewide targets in 2018:

Kentucky Statewide Targets (2018)		
PM 2: Asset Management	**Target**	
Pavement Performance	**2-Year (2020)**	**4-Year (2022)**
% Good Interstate	50.0%	50.0%
% Poor Interstate	2.0%	2.0%
% Good Non-Interstate NHS	35.0%	35.0%
% Poor Non-Interstate NHS	4.0%	4.0%

o Indiana
   o INDOT set the following statewide targets in 2018:

Indiana Statewide Targets (2018)		
PM 2: Asset Management	**Target**	
Pavement Performance	**2-Year (2020)**	**4-Year (2022)**
% Good Interstate	84.2%	84.2%
% Poor Interstate	0.8%	0.8%
% Good Non-Interstate NHS	78.7%	78.7%
% Poor Non-Interstate NHS	3.1%	3.1%

Targets (as required by FHWA)

Per federal regulation, the targets that KIPDA will report in its 2018 Baseline Performance Period Report are 2022 targets. The targets are detailed in the following table. The KIPDA Transportation Policy committee adopted these targets on October 25, 2018.

KIPDA MPO Targets (2018)	
PM 2: Asset Management	**Target**
Pavement Performance	**4-Year (2022)**
% Good Interstate	**50.0%**
% Poor Interstate	**1.0%**
% Good Non-Interstate NHS	**27.0%**
% Poor Non-Interstate NHS	**3.5%**

Target-Setting Methodology

Statewide baselines and targets from each state were reviewed to examine each state's approach to target setting. Due to the difference in each state's approach and in the baseline conditions of each state's pavements, the 4-Year Targets established by each state DOT are significantly different. INDOT has chosen to set their statewide targets for pavement condition at the baseline percentages. KYTC has chosen to set their targets at levels that are relatively worse than (i.e. fewer Good pavements and more Poor pavements) the baseline conditions statewide. INDOT's pavements, both statewide and in the KIPDA Region, are reported as being significantly better than Kentucky's pavements. The causes of these

differences between the two states are unknown. This makes regional target setting challenging when setting a bi-state target.

KIPDA has chosen to set targets that are relatively better than (i.e. more Good pavements and fewer Poor pavements) the baselines, while maintaining targets that are not well outside the approaches that either state has developed statewide. The number of net lane miles of pavement that must be rehabilitated to achieve a certain percentage were calculated. Based on the projects that could be reasonably expected to be completed by 2022, and also based on a reasonable estimate of the pavement that might degrade into lower conditions, staff determined a reasonable amount of net change in lane miles, and set targets based on these reasonable amounts.

For example, in order to reach a target 50.0% of Good Interstate pavements, 32.0 more (net) lane miles must be rehabilitated to the Good condition by 2022. In order to reach a target of 1.0% of Poor Interstate pavements, there must be 7.5 fewer (net) lane miles of Poor pavement by 2022, which means that at least 7.5 more lane miles that are currently in Poor condition will need to be rehabilitated than the lane miles that will fall into Poor condition by 2022.

M3a - Percent of Deck Area in "Good" Condition on Bridges Carrying the NHS - 490.407(c)(1)
M3b - Percent of Deck Area in "Poor" Condition on Bridges Carrying the NHS - 490.407(c)(2)

Detailed Description

These performance measures seek to increase the percent of bridge deck area in "Good" condition and reduce the percent of deck area in "Poor" condition on bridges that carry NHS roads, including on- and off-ramps connected to the NHS.

Bridge condition is calculated based on the condition ratings for the following National Bridge Inventory (NBI) Items: 58–Deck, 59–Superstructure, 60–Substructure, and 62–Culverts. Culverts are assessed on just the Culvert metric, while bridges are assessed on the other three metrics; the overall condition is determined based on the lowest rating of all the metrics. For example, if a bridge's substructure is "Poor" but the deck and superstructure are both "Good," the bridge will be classified as "Poor" overall. This measure is also based on the deck area of each bridge, which assigns more precedence on the condition of large bridges such as the Kennedy and Lincoln Bridges on I-65 and the I-64 Riverside Expressway through downtown Louisville.

Data Sources and Review Frequency

- Bridge condition and deck area: National Bridge Inventory
  - New data is available every year, thus it will be updated yearly.

Historical Data

While state DOTs have been collecting bridge condition data for some time, the method of classifying the overall bridge condition based on a combination of NBI Items: 58–Deck, 59–Superstructure, 60–Substructure, and 62–Culverts is new. The former system of classifying bridges as "Structurally Deficient" and "Functionally Obsolete" has been discontinued. Therefore, there is a lack of historical data of overall bridge condition in the KIPDA region. To see a map of NHS-carrying bridges in "Good," "Fair," and "Poor" condition in 2017, please see the KIPDA Online Resource Center.

Baseline Data

Per federal regulation, state DOTs will annually submit their most current NBI data on highway bridges to FHWA no later than March 15 of each year. The baseline condition that KIPDA will report in its 2018 Baseline Performance Period Report is the 2017 bridge condition. The baseline is: 30.5% of deck area on NHS-carrying bridges was in "Good" condition and 10.5% of deck area on NHS-carrying bridges was in "Poor" condition.

BRIDGES & CULVERTS CARRYING THE NHS (ALL MPO COUNTIES)				
	NUMBER OF BRIDGES & CULVERTS	**% OF BRIDGES & CULVERTS**	**DECK AREA**	**% OF DECK AREA**
Good	135	28.4%	2,732,031	**30.5%**
Fair	319	67.2%	5,291,146	59.0%
Poor	21	4.4%	938,815	**10.5%**
Total	475	100.0%	8,961,992	100.0%

State Targets
- o Kentucky
  - o KYTC set the following statewide targets in 2018:

Kentucky Statewide Targets (2018)		
PM 2: Asset Management	**Target**	
NHS Bridge Performance	**2-Year (2020)**	**4-Year (2022)**
% Good Condition by Deck Area	35.0%	35.0%
% Poor Condition by Deck Area	3.7%	3.2%

- o Indiana
  - o INDOT set the following statewide targets in 2018:

Indiana Statewide Targets (2018)		
PM 2: Asset Management	**Target**	
NHS Bridge Performance	**2-Year (2020)**	**4-Year (2022)**
% Good Condition by Deck Area	48.3%	48.3%
% Poor Condition by Deck Area	2.6%	2.6%

Targets (as required by FHWA)
Per federal regulation, the targets that KIPDA will report in its 2018 Baseline Performance Period Report are 2022 targets. The targets are detailed in the following table. The KIPDA Transportation Policy committee adopted this target on October 25, 2018.

KIPDA MPO Targets (2018)	
PM 2: Asset Management	**Target**
NHS Bridge Performance	**4-Year (2022)**
% Good Condition by Deck Area	**30.5%**
% Poor Condition by Deck Area	**7.1%**

Target-Setting Methodology
Statewide baselines and targets from each state were reviewed to examine each state's approach to target setting. Due to the difference in each state's approach and in the baseline conditions of each state's bridges, the 4-Year Targets established by each state DOT are significantly different. INDOT has chosen to set their statewide targets for bridge condition at the baseline percentages. KYTC has chosen to set their targets at levels that are relatively worse than (i.e. less percentage of deck area in Good condition, and more percentage of deck area in Poor condition) the baseline conditions in Kentucky. INDOT's bridges, both statewide and in the KIPDA Region, are reported as being significantly better than Kentucky's bridges. The causes of these differences between the two states are unknown. This makes regional target setting particularly challenging when setting a bi-state target.

KIPDA has chosen to set targets that are relatively better than the baseline for Poor bridges (i.e. less percentage of deck area in Poor condition) and maintaining the baseline for Good bridges. Even though the KIPDA target percentage for Good bridges (30.5%) is lower than the Kentucky (35.0%) and Indiana (48.3%) statewide targets, KIPDA maintains similar methodology to the statewide Indiana target in

maintaining the baseline. Similarly, while the KIPDA target percentage for Poor bridges (7.1%) is higher than the Kentucky (3.2%) and Indiana (2.6%) statewide targets, KIPDA has established a more aggressive target by setting a declining target instead of maintaining the baseline or setting a rising target like the two states.

Based on the projects that could be expected to be completed by 2022 and based on a reasonable estimate of the deck area that may deteriorate into lower conditions within the next four years, staff determined a realistic amount of net change in Poor deck area, and set targets based on these reasonable amounts.

PM 3: SYSTEM PERFORMANCE

This section includes all seven of the PM 3 performance measures that are required per federal regulation *23 CFR Part 490 Subparts E, F, G, and H*.

V1 - Level of Travel Time Reliability (LOTTR) on the Interstate - 490.507(a)(1)
V2 - Level of Travel Time Reliability (LOTTR) on the non-Interstate NHS - 490.507(a)(2)

Detailed Description

These performance measures seek to increase the percent of person-miles traveled on the Interstate and non-Interstate NHS that are reliable. Level of Travel Time Reliability (LOTTR) is defined as the ratio of the longer travel times (80th percentile) to a "normal" travel time (50th percentile), using data from FHWA's National Performance Management Research Data Set (NPMRDS) or equivalent. Data are collected in 15-minute segments during all time periods between 6 a.m. and 8 p.m. local time. The measures are the percent of person-miles traveled on the relevant portion of the NHS that are reliable. Person-miles take into account the users of the NHS. Data to reflect the users can include bus, auto, and truck occupancy levels.

This performance measure is included in KIPDA's Congestion Mitigation Process (CMP) because it relates to reducing congestion; therefore, the strategies discussed in the CMP might have an impact on meeting this measure's target.

Data Sources and Review Frequency

- Travel Time Data: National Performance Management Research Data Set (NPMRDS)
  - FHWA has contracted with the Regional Integrated Transportation Information System (RITIS) to collect and provide travel time data to state DOTs and MPOs. This data is not available publicly.
  - This data is available on an ongoing basis, thus it will be updated yearly.

Historical Data

There is very little historical data since travel time data has only been collected and made available to state DOTs and MPOs in response to the PM 3 Final Rule being published in 2017.

Baseline Data

A unified baseline condition for the entire KIPDA MPO region is currently unavailable. The following table details the separate baselines for the three Kentucky MPO counties and the two Indiana MPO counties in the KIPDA region during 2017:

PM 3: System Performance		KENTUCKY MPO	INDIANA MPO	KIPDA MPO
Level of Travel Time Reliability (LOTTR) - Interstates	% of person-miles traveled on the Interstate that are reliable	91.3%	99.6%	TBD
Level of Travel Time Reliability (LOTTR) – non-Interstate NHS	% of person-miles traveled on the non-Interstate NHS that are reliable	86.5%	92.1%	TBD

State Targets

o Kentucky

    o KYTC set the following statewide targets in 2018:

PM 3: System Performance		KENTUCKY STATEWIDE	
		2-YEAR TARGET	**4-YEAR TARGET**
Level of Travel Time Reliability (LOTTR) - Interstates	% of person-miles traveled on the Interstate that are reliable	93.0%	93.0%
Level of Travel Time Reliability (LOTTR) – non-Interstate NHS	% of person-miles traveled on the non-Interstate NHS that are reliable	N/A	82.5%

o Indiana

    o INDOT set the following statewide targets in 2018:

PM 3: System Performance		INDIANA STATEWIDE	
		2-YEAR TARGET	**4-YEAR TARGET**
Level of Travel Time Reliability (LOTTR) - Interstates	% of person-miles traveled on the Interstate that are reliable	90.5%	92.8%
Level of Travel Time Reliability (LOTTR) – non-Interstate NHS	% of person-miles traveled on the non-Interstate NHS that are reliable	N/A	89.8%

Target (as required by FHWA)

KIPDA is not establishing quantifiable targets at this time. KIPDA is committed to support the statewide targets set forth by KYTC and INDOT by planning and programming projects that contribute to the accomplishment of each state's Interstate and non-Interstate NHS Level of Travel Time Reliability (LOTTR) targets.

Target-Setting Methodology

KIPDA was not able to analyze the enormous amount of data required to calculate travel time reliability using NPMRDS and meet the federal deadline to report targets. The separate Kentucky MPO and Indiana MPO baselines were provided to KIPDA by their respective state DOTs. Unified MPO-wide baselines have not yet been calculated, and therefore quantifiable targets have not been set prior to the deadline. In compliance with federal regulation, KIPDA has elected to support each state's targets. However, it continues to be a priority to identify unified MPO-wide baselines and establish targets on Level of Travel Time Reliability (LOTTR).

F3 - Truck Travel Time Reliability on the Interstate - 490.607

Detailed Description

This performance measure seeks to increase the percent of person-miles traveled on the Interstate that are reliable. Please see the *Detailed Description section under "V1 – Level of Travel Time Reliability (LOTTR) on the Interstate - 490.507(a)(1)"* for further description of travel time reliability.

This performance measure is included in KIPDA's Congestion Mitigation Process (CMP) because it relates to reducing congestion; therefore, the strategies discussed in the CMP might have an impact on meeting this measure's target.

Data Sources and Review Frequency

- Travel Time Data: National Performance Management Research Data Set (NPMRDS)
  - This data is available on an ongoing basis, thus it will be updated yearly.

Historical Data

There is very little historical data since travel time data has only been collected and made available to state DOTs and MPOs in response to the PM 3 Final Rule being published in 2017.

Baseline Data

A unified baseline condition for the entire KIPDA MPO region is currently unavailable. The following table details the separate baselines for the three Kentucky MPO counties and the two Indiana MPO counties in the KIPDA region during 2017:

PM 3: System Performance		KENTUCKY MPO	INDIANA MPO	KIPDA MPO
Truck Travel Time Reliability (TTTR) on Interstates	% of the Interstate system mileage providing for reliable truck travel time	1.35	1.20	TBD

State Targets

- Kentucky
  - KYTC set the following statewide targets in 2018:

PM 3: System Performance		KENTUCKY STATEWIDE	
		2-YEAR TARGET	4-YEAR TARGET
Truck Travel Time Reliability (TTTR) on Interstates	% of the Interstate system mileage providing for reliable truck travel time	1.19	1.19

- Indiana
  - INDOT set the following statewide targets in 2018:

PM 3: System Performance		INDIANA STATEWIDE	
		2-YEAR TARGET	4-YEAR TARGET
Truck Travel Time Reliability (TTTR) on Interstates	% of the Interstate system mileage providing for reliable truck travel time	1.27	1.24

Target (as required by FHWA)

KIPDA is not establishing quantifiable targets at this time. KIPDA is committed to support the statewide targets set forth by KYTC and INDOT by planning and programming projects that contribute to the accomplishment of each state's Truck Travel Time Reliability (TTTR) targets.

Target-Setting Methodology

KIPDA was not able to analyze the enormous amount of data required to calculate travel time reliability using NPMRDS and meet the federal deadline to report targets. The separate Kentucky MPO and Indiana MPO baselines were provided to KIPDA by their respective state DOTs. A unified MPO-wide baseline has not be calculated, and therefore a quantifiable target has not be set. In compliance with federal regulation, KIPDA has elected to support each state's targets. However, it continues to be a priority to identify unified MPO-wide baselines and establish targets on Truck Travel Time Reliability (TTTR).

PM 3: System Performance Measures that are Not Applicable to KIPDA

On-Road Mobile Source Emissions - 490.507(b)
Detailed Description

KIPDA is exempt from this federal performance measure at this time. This is the Greenhouse Gas measure on the NHS which was postponed when the PM 3 Final Rule became effective. KIPDA is awaiting further guidance to determine if this measure will ever become applicable to the MPO.

Peak Hour Excessive Delay (PHED) Measure - 490.707(a)
Detailed Description

KIPDA is exempt from this federal performance measure. Only urbanized areas with a population over 1 million for the first performance period (2018-2022) that are also in nonattainment or maintenance areas for ozone (O_3), carbon monoxide (CO), or particulate matter (PM_{10} and $PM_{2.5}$) are required to adhere to this measure. At this time, the population of KIPDA's urbanized area is below 1 million. Urbanized areas with a population over 200,000 must adhere to this measure during the second performance period (2022-2026). During that time this measure will become applicable to KIPDA.

Non-Single Occupancy Vehicle (SOV) Measure - 490.707(b)
Detailed Description

KIPDA is exempt from this federal performance measure. Only urbanized areas with a population over 1 million for the first performance period (2018-2022) that are also in nonattainment or maintenance areas for ozone (O_3), carbon monoxide (CO), or particulate matter (PM_{10} and $PM_{2.5}$) are required to adhere to this measure. At this time, the population of KIPDA's urbanized area is below 1 million. Urbanized areas with a population over 200,000 must adhere to this measure during the second performance period (2022-2026). During that time this measure will become applicable to KIPDA.

Total Emissions Reduction - 490.807
Detailed Description

KIPDA is exempt from this federal performance measure. This measure is applicable to all projects financed with funds from the *23 USC 149* CMAQ program apportioned to State DOTs in areas designated as nonattainment or maintenance for ozone (O_3), carbon monoxide (CO), or particulate matter (PM_{10} and $PM_{2.5}$). KIPDA finances projects that utilize the CMAQ program, however, air quality standards are currently under review by the EPA; consequently KIPDA is awaiting further guidance to determine if this measure will ever become applicable to the MPO.

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FTA-REQUIRED MEASURES

This section includes all four FTA performance measures that are required per federal regulation *49 CFR Part 625 and 49 CFR Part 630*.

T2a - Percent of Non-Revenue Service Vehicles Exceeding ULB - 625.43(a)
T2b - Percent of Revenue Vehicles Exceeding ULB - 625.43(b)

Detailed Description

These performance measures seek to reduce the percent of TARC's transit fleet, both non-revenue service vehicles (equipment) and revenue vehicles (rolling stock), that are classified as above the useful life benchmark (ULB). TARC has not yet set their performance targets addressing the FTA-required measures, therefore these transit measures may be subject to change after TARC sets their targets. These measures are primarily a maintenance component, ensuring transit vehicles are in a state of good repair.

Data Sources and Review Frequency

- Age of transit fleet, percent above the useful life: TARC
  - This data is available on an ongoing basis, thus it will be updated yearly.

Historical Data

To be determined. Data regarding the age and mileage of the transit fleet possibly exists, but it is unlikely that the percentage below the ULB was calculated historically.

Baseline Data

To be determined. At this time, a baseline condition is still being calculated and this PMP will be updated when it is complete. KIPDA will report the baseline condition in its 2018 Baseline Performance Period Report.

Transit Agency Targets

- TARC: Transit Authority of River City

Class	Performance Target
Automobile – Supervisor, Support, and Security	≤ 10% of non-revenue service vehicles exceed default ULB of 8 years of duty
Buses	≤ 10% of fleet exceeds default ULB of 15 years/600K miles in service
Cutaway Buses	≤ 5% of fleet exceeds default ULB of 10 years/300K miles in service
Vans	≤ 10% of fleet exceeds default ULB of 10 years/300K miles in service

Target (as required by FTA)

These are the targets that are established in TARC's Transit Asset Management Plan (TAM) which was be completed in October 2018. KIPDA will report this target in its 2018 Baseline Performance Period Report.

Target-Setting Methodology

TARC set targets that could be reasonably attained.

T9 - Percent of Facilities Rated Under 3.0 on the TERM Scale - 625.43(d)
Detailed Description
This performance measure seeks to reduce the percent of TARC's facilities that are rated below condition 3 on FTA's Transit Economic Requirements Model (TERM) scale. Transit agencies are required to report the overall condition of each administrative, maintenance, and passenger facility that is listed in the NTD Asset Inventory Module. The overall condition of a facility is specified using the following scale: 5—Excellent, 4—Good, 3—Adequate, 2—Marginal, 1—Fair. A facility is deemed to be in good repair if it has a condition rating of 3, 4, or 5 on this scale and is deemed to not be in good repair if it has a rating of 1 or 2.

Data Sources and Review Frequency
- Facility condition rating: TARC
  - Transit agencies must update facility conditions every three years at a minimum, thus this will be updated every 3 years.

Historical Data
To be determined. Data regarding the historical condition of transit facilities is unlikely to exist.

Baseline Data
To be determined. At this time, a baseline condition is still being calculated and this PMP will be updated when it is complete. KIPDA will report the baseline condition in its 2018 Baseline Performance Period Report.

Transit Agency Targets
- TARC: Transit Authority of River City

Class	Performance Target
Admin/Maintenance Facilities	≤ 10% facilities rated under 3.0 on the TERM scale
On-Route Bus Charging Stations	Each station > 3.0 on the TERM scale
USTA Emergency Power Station	≥ 95% availability

Target (as required by FTA)
These are the targets that are established in TARC's Transit Asset Management Plan (TAM) which was be completed in October 2018. KIPDA will report this target in its 2018 Baseline Performance Period Report.

Target-Setting Methodology
TARC set targets that could be reasonably attained.

FTA Performance Measure that is Not Applicable to KIPDA

Percent of Track Segments Under Performance Restriction - 625.43(c)
Detailed Description

KIPDA is exempt from this federal performance measure as it is only applicable to rail fixed guideway systems that TARC does not operate.

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MPO-DEVELOPED MEASURES

SAFETY

This section includes one MPO-developed performance measure regarding safety. The following is a performance measure that is not required by federal regulation, but it was determined by KIPDA that it was a priority and that progress should be tracked and reported.

S6 - Crash Rate

Detailed Description

This performance measure seeks to reduce the rate of crashes per 100 million VMT. The federal performance measures on safety seek to reduce fatalities and serious injuries but do not seek to reduce the overall crash rate. While primarily a safety component, reducing crashes will also reduce non-recurring congestion.

This performance measure is included in KIPDA's Congestion Mitigation Process (CMP) because it relates to reducing congestion; therefore, the strategies discussed in the CMP might have an impact on meeting this measure's target.

Data Sources and Review Frequency

- Kentucky crash data: Kentucky Collision Analysis for the Public
    - This data is available on an ongoing basis, thus it will be updated yearly.
- Indiana crash data: ARIES Collision Data
    - This data is available on an ongoing basis, thus it will be updated yearly.
- Kentucky VMT: KYTC Planning Highway Information (HIS) Database
    - KYTC provides county-level estimates of daily VMT, and we multiply it to calculate the annual VMT.
    - New data is available every year, thus it will be updated yearly.
- Indiana VMT: INDOT Traffic Data
    - INDOT provides county-level estimates of daily VMT, and we multiply it to calculate the annual VMT.
    - New data is available every year, thus it will be updated yearly.

Historical Data

The following table details crash rate in the KIPDA region from 2005 to 2017. Data from 2017 was downloaded shortly after the end of that calendar year and may be subject to change as the data is finalized.

YEAR	KY MPO CRASH RATE	IN MPO CRASH RATE	KIPDA MPO CRASH RATE
2005	378	316	365
2006	378	312	365
2007	383	310	368
2008	365	313	354
2009	379	264	352
2010	380	306	365
2011	394	287	370
2012	408	300	384
2013	399	324	384
2014	414	304	390
2015	442	317	415
2016	450	326	422
2017	421	284	390

Actual as of 1/23/18

2012-2016 5-Year Rolling Average	422.6	314.2	**399.0**

Baseline Data

To be consistent with the federal safety performance measures, the five-year rolling average from 2012 to 2016 is the baseline condition. The baseline (highlighted in tan in the above table) is 399.0 crashes per 100 million VMT.

Target

The target is to reduce the crash rate by 20% by 2040 to 319 crashes per 100 million VMT.

Target-Setting Methodology

The 20% reduction target was derived from an objective under the Goal 4: Safety MTP goal. That objective was developed by a working group consisting of Transportation Technical Coordinating Committee (TTCC) members and adopted by the Transportation Policy Committee (TPC) in August 2013.

TRANSIT

This section includes eleven MPO-developed performance measures regarding transit. The following are performance measures that are not required by federal regulation, but it was determined by KIPDA that they were a priority and that progress should be tracked and reported.

T1 - Transit Ridership

Detailed Description

This performance measure seeks to increase the number of boardings on TARC buses. The federal performance measures on transit facilities seek to maintain transit facilities and vehicles in a state of good repair, but do not seek to increase ridership. While primarily a transit component, increasing transit ridership also has the potential to mitigate congestion.

Data Sources and Review Frequency

- Transit ridership: TARC Planning Department Route Performance Reports
  - This data is available on an ongoing basis, thus it will be updated yearly.

Historical Data

The following table details annual system ridership from FY 2012 to FY 2017.

YEAR	NUMBER OF BOARDINGS
FY 2012	13,807,539
FY 2013	13,577,582
FY 2014	13,537,653
FY 2015	13,309,631
FY 2016	12,471,673
FY 2017	11,811,902

Baseline Data

Annual system ridership in fiscal year 2017 is the baseline condition. The baseline is: 11,811,902 boardings.

Target

The target is to increase the number of boardings by 20% to 14,174,282 by 2040.

Target-Setting Methodology

The target was derived from an objective under the Goal 6: Multi-modal MTP goal. That objective was developed by a working group consisting of Transportation Technical Coordinating Committee (TTCC) members and adopted by the Transportation Policy Committee (TPC) in August 2013.

Detailed Description

These performance measures seek to increase the percent of land area served by transit within each type of cluster, with particular interest in expanding transit service to any clusters that are not currently served. The area is considered served by transit if it is within ¼ mile of a transit route, regardless of location of stops. Transit stops are disregarded since they can be moved more easily than the routes themselves. It is unlikely for every cluster to have 100% land area within ¼ mile of a transit route due to the land use of each cluster in which large commercial buildings, natural barriers, etc. compromise some portion of the cluster. ¼ mile was chosen as this is the typical distance people are willing to walk from a transit stop to their destination.

- Community Access Clusters are defined when three or more of the following were within ¼ mile of each other: community centers, senior centers and nutrition sites, libraries, museums, colleges or universities, schools, government facilities, high density shopping, shopping malls, entertainment venues, and parks.
- High Density Medical Clusters are defined as: 26 or more medical facilities (doctors' offices, hospitals, and other facilities) located within ¼ mile of each other.
- High Density Shopping Clusters are defined as: 40 or more retail stores located within ¼ mile of each other.
- High Density Housing Clusters are to be determined.

Data Sources and Review Frequency

- Cluster data: InfoUSA business data
  - InfoUSA data is available on an ongoing basis, however it must be purchased. KIPDA last purchased this in 2015 and it has not yet been determined when another purchase will be made; as such, cluster data will remain constant until such time.
- Transit routes: TARC
  - The routes incorporated in this analysis were current as of February 2018.
  - This data is available on an ongoing basis, thus it will be updated yearly.

Historical Data

There is no historical data as the current iteration of High Density Clusters is the first time KIPDA has ever conducted a cluster-based analysis.

Baseline Data

More analysis will be needed before High Density Housing Clusters can be included in the baseline. The table below details the percent of land area that is within ¼ mile of a transit route within each cluster type as of February 2018.

CLUSTER TYPE	PERCENT OF LAND WITHIN ¼ MILE OF A TRANSIT ROUTE
Community Access Clusters	91.03%
High Density Medical Clusters	100%
High Density Shopping Clusters	100%
High Density Housing Clusters	TBD

Target

The target is to increase by 20% (where opportunities for growth exists), or increase to 100% (where the baseline is already within 20% of the maximum) of land within ¼ mile of a transit route; or maintain the current levels (if the cluster is already 100% served) by 2040.

Target-Setting Methodology

Staff determined that maintaining current levels in 2040 within clusters that already have 100% of land area within ¼ mile of transit routes was an acceptable target. The target was derived from an objective under the Goal 1: Transit MTP goal. That objective was developed by a working group consisting of Transportation Technical Coordinating Committee (TTCC) members and adopted by the Transportation Policy Committee (TPC) in August 2013.

T4 - Enhance Transit Access to Schools

Detailed Description

This performance measure seeks to increase the number of schools that are served by transit. Schools are defined as public/private primary schools (PS/PK-K-5-8), public/private secondary schools (9-12) and public/private post-secondary schools (colleges/universities).

Please see the Target-Setting Methodology section under "*T3a – Community Access Clusters Served by Transit*" for a detailed definition of transit access.

Data Sources and Review Frequency

- Schools: KIPDA
  - KIPDA has collected an inventory of all schools in the region.
  - This data is available on an ongoing basis, thus it will be updated yearly.
- Transit routes: TARC
  - The routes incorporated in this analysis were current as of February 2018.
  - This data is available on an ongoing basis, thus it will be updated yearly.

Historical Data

There is no historical data as an inventory of the number of schools with access to transit has not been conducted previously.

Baseline Data

230 schools (out of 373 total schools) are located within ¼ mile of a transit route.

Target

The target is to increase by 20% by 2040 to 276 schools.

Target-Setting Methodology

The target was derived from an objective under the Goal 1: Transit MTP goal. While the objective references clusters and not schools explicitly, staff determined that the goal was also applicable to this measure. That objective was developed by a working group consisting of Transportation Technical Coordinating Committee (TTCC) members and adopted by the Transportation Policy Committee (TPC) in August 2013.

T5 - Reduce Average Headway Time on TARC's Title VI Routes

Detailed Description

This performance measure seeks to reduce the average headway time on routes that travel on TARC's Title VI Routes. Routes are categorized as Title VI routes if the majority of the route goes through TARC's Title VI areas. These routes are defined in TARC's Title VI Program Update, which was last updated in January 2017. Headway time in this context is defined as the time interval between two vehicles traveling in the same direction on the same route. There is particular emphasis in reducing headway time on routes that travel from Environmental Justice Areas to High Density Employment Clusters, High Density Shopping Clusters, or near Major Employers. The primary intention of this performance measure is to decrease the amount of time it takes for low income and minority populations to get to work.

Data Sources and Review Frequency

- Title VI routes: TARC
  - TARC defines Title VI areas and determines which routes are Title VI routes in their Title VI Program Update
  - TARC updates and reports this to FTA every 3 years
- Headway time: KIPDA
  - This will be calculated in conjunction with the updated Title VI routes, every 3 years

Historical Data

The first analysis of average headway time on TARC routes was created in April 2018 using 2018 data.

Baseline Data

Average weekday headway on TARC Title VI Routes is the baseline condition. The baseline is: 1 hour and 4 minutes.

Target

The target is to reduce average weekday headway time on TARC Title VI Routes by 40% by 2040 to 38 minutes.

Target-Setting Methodology

The target was derived from an objective under the Goal 9: Economy MTP goal. That objective was developed by a working group consisting of Transportation Technical Coordinating Committee (TTCC) members and adopted by the Transportation Policy Committee (TPC) in August 2013.

T6 - Number of Park and Ride Lot Spaces Occupied During Peak Hours

Detailed Description

This performance measure seeks to increase the number of Park and Ride lot spaces that are occupied during peak hours. Peak hour in this context is defined as weekdays between the hours of 9:00 am and 4:00 pm, which are the standard business hours that most Park and Ride lots are likely to be utilized, therefore inventorying the number of spaces occupied during these hours will provide the most accurate snapshot as to how many people are utilizing Park and Ride lots in their commute.

This performance measure is included in KIPDA's Congestion Mitigation Process (CMP) because it relates to reducing congestion; therefore, the strategies discussed in the CMP might have an impact on meeting this measure's target.

Data Sources and Review Frequency

- Park and Ride lots: TARC, KIPDA
  - TARC maintains several Park & TARC lots.
  - KIPDA maintains an inventory of the unofficial lots.
    - This data is updated on an ongoing, as-needed basis.
- Number of occupied Park and Ride lot spaces: KIPDA
  - KIPDA will conduct an inventory to gather this data.

Historical Data

KIPDA conducted an inventory on Park and Ride lots in 2011, which included the total number of spaces, but there is no historical data on the number of occupied spaces, since this has never been calculated.

Baseline Data

To be determined. At this time, a baseline condition is still being calculated and this PMP will be updated when it is complete.

Target

The target is to increase the number of occupied Park and Ride lot spaces by 40% by 2040.

Target-Setting Methodology

The target was derived from an objective under the Goal 1: Transit MTP goal. That objective was developed by a working group consisting of Transportation Technical Coordinating Committee (TTCC) members and adopted by the Transportation Policy Committee (TPC) in August 2013.

T7a - Number of Park and Ride Lots with Pedestrian Access
T7b - Number of Park and Ride Lots with Dedicated Bicycle Access
Detailed Description
These performance measures seek to increase the number of Park and Ride lots with pedestrian access and dedicated bicycle access leading directly to the lot. The performance measures are calculated separately by mode, but they are combined in this narrative.

Data Sources and Review Frequency
- Park and Ride lots: KIPDA, TARC
  - This data is updated on an ongoing, as-needed basis.
- Bicycle and Pedestrian Facilities: KIPDA, Local Public Agencies
  - KIPDA staff conducted an inventory of these facilities throughout the MPO region in 2016.
  - This data is updated on an ongoing, as needed basis.

Historical Data
There is no historical data as there was no bicycle and pedestrian facilities inventory prior to 2016.

Baseline Data
The following table details the baseline condition of Park and Ride lots with pedestrian and/or dedicated bicycle access in 2017:

TOTAL PARK AND RIDE LOTS	PEDESTRIAN ACCESS	DEDICATED BICYCLE ACCESS
49 lots	24 lots	3 lots

Target
The target is to increase the number of Park and Ride lots with pedestrian access by 20% by 2040 to 29 lots; and to increase the number of Park and Ride lots with dedicated bicycle access by 10% by 2040 to 4 lots.

Target-Setting Methodology
The target was derived from an objective under the Goal 1: Transit MTP goal. That objective was developed by a working group consisting of Transportation Technical Coordinating Committee (TTCC) members and adopted by the Transportation Policy Committee (TPC) in August 2013.

T8 - Number of Commuters in the Ticket to Ride Program

Detailed Description

This performance measure seeks to reduce the amount of SOV travel in the region by increasing the number of active commuters in the Ticket to Ride program. Ticket to Ride is a regional rideshare program in the Louisville, KY area that offers a number commuter-based SOV reduction alternatives. Active commuters are defined as people registered in the Ticket to Ride database as active and engaged for matching or are currently participating in a vanpool, carpool, or bikepool.

Data Sources and Review Frequency

- Number of active commuters in the Ticket to Ride program: Ticket to Ride
    - This data is available on an ongoing basis, thus it will be updated yearly.

Historical Data

With the introduction of updated Commuter Pool/Rideshare data management tools, applicable performance management data was introduced to Ticket to Ride in 2018.

NUMBER OF ACTIVE COMMUTERS	
2018	1,377

Baseline Data

The baseline is: 1,377 active commuters in the Ticket to Ride program in FY 2018.

Target

The target is to increase the number of commuters to 5,000 active commuters in the Ticket to Ride program by 2040.

Target-Setting Methodology

Ticket to Ride seeks to fully capture the total number of people in the region who use alternative forms of transportation to commute to work. As a result of a marketing and outreach initiative, "Every Commute Counts," commuters in the region are encouraged to document their commute if they carpool, vanpool, take transit, walk, bike, or telecommute. Part of the increase in the target can be attributed to better data that documents the actual number of people participating in alternative forms of transportation for their commutes within the region. However, the primary objective of this performance measure is to increase the number of new users who have switched their commutes from a single-occupant vehicle to carpooling, vanpooling, or bikepooling.

NON-MOTORIZED

This section includes twelve MPO-developed performance measures regarding non-motorized forms of transportation. The following are performance measures that are not required by federal regulation, but it was determined by KIPDA that they were a priority and that progress should be tracked and reported.

N1a - Reduce the Number of Crashes Involving Pedestrians
N1b - Reduce the Number of Crashes Involving Bicyclists

Detailed Description

These performance measures seek to reduce the number of crashes involving non-motorized individuals. While the federal performance measure "*S5 - Number of Non-Motorized Fatalities and Serious Injuries - 490.207(a)(5)*" seeks to reduce non-motorized fatalities and serious injuries, it does not seek to reduce the overall number of crashes involving pedestrians or bicyclists.

The performance measures are calculated separately by mode, but they are combined in this narrative.

Data Sources and Review Frequency

- Kentucky crash data: Kentucky Collision Analysis for the Public
  - This data is available on an ongoing basis, thus it will be updated yearly.
- Indiana crash data: ARIES Collision Data
  - This data is available on an ongoing basis, thus it will be updated yearly.

Historical Data

The following tables detail crashes involving pedestrians and bicyclists in the KIPDA region from 2005 to 2018. Data from 2017 was downloaded four months after the end of the calendar year and may be subject to change as the data is finalized. 2018 data was projected using a linear trendline.

YEAR	KY MPO CRASHES INVOLVING PEDESTRIANS	IN MPO CRASHES INVOLVING PEDESTRIANS	KIPDA MPO CRASHES INVOLVING PEDESTRIANS
2005	409	59	468
2006	390	54	444
2007	428	55	483
2008	442	64	506
2009	413	52	465
2010	457	46	503
2011	455	50	505
2012	496	53	549
2013	481	44	525
2014	498	54	552
2015	522	53	575
2016	518	57	575
2017 *Actual as of 4/14/18*	481	46	527

2012-2016 5-Year Rolling Average	503.0	52.2	**555.2**

YEAR	KY MPO CRASHES INVOLVING BICYCLISTS	IN MPO CRASHES INVOLVING BICYCLISTS	KIPDA MPO CRASHES INVOLVING BICYCLISTS
2005	163	25	188
2006	172	22	194
2007	165	24	189
2008	169	25	194
2009	160	23	183
2010	174	20	194
2011	198	26	224
2012	162	39	201
2013	216	15	231
2014	199	21	220
2015	159	26	384
2016	140	14	154
2017 *Actual as of 4/14/18*	138	19	157

2012-2016 5-Year Rolling Average	175.2	23.0	**238.0**

Baseline Data

To be consistent with the federal safety performance measures, the five-year rolling average from 2012 to 2016 is the baseline condition. The baselines (highlighted in tan in the above tables) are: 555.2 crashes involving pedestrians and 238.0 crashes involving bicyclists.

Target

The target is to reduce by 20% by 2040 the number of crashes involving pedestrians to 444 crashes; and to reduce by 20% by 2040 the number of crashes involving bicyclists to 190 crashes.

Target-Setting Methodology

The 20% reduction target was derived from an objective under the Goal 4: Safety MTP goal. That objective was developed by a working group consisting of Transportation Technical Coordinating Committee (TTCC) members and adopted by the Transportation Policy Committee (TPC) in August 2013.

N2a - Reduce Gaps in the Existing Pedestrian Network
N2b - Reduce Gaps in the Existing Bicycle Network

Detailed Description

These performance measures seek to reduce the miles of gaps in the existing pedestrian and dedicated bicycle networks. Pedestrian facilities are classified as sidewalks, multi-use paths, and crosswalks. Dedicated bicycle facilities are bike lanes, multi-use paths, and sharrows with signage; since all surface streets can legally be used by bicycles, the term "dedicated" intentionally describes locations where the use of bicycles is clearly encouraged. Gaps in this context are defined as a lack of pedestrian facilities or dedicated bicycle facilities within 1 mile of existing facilities on the same roadway. If there are no facilities within 1 mile on the same roadway, then it is not considered a gap.

The performance measures are calculated separately by mode, but they are combined in this narrative.

This performance measure is included in KIPDA's Congestion Mitigation Process (CMP) because it relates to reducing congestion; therefore, the strategies discussed in the CMP might have an impact on meeting this measure's target.

Data Sources and Review Frequency

- Bicycle and Pedestrian Facilities: KIPDA, Local Public Agencies
  - KIPDA staff conducted an inventory of these facilities throughout the MPO region in 2016.
  - This data is updated on an ongoing, as needed basis.

Historical Data

There is no historical data as there was no KIPDA maintained bicycle and pedestrian facilities inventory prior to 2016.

Baseline Data

The following table details the baseline condition of the dedicated bicycle and pedestrian facilities throughout the entire KIPDA MPO region in 2017:

	TOTAL MILES ON THE NETWORK	TOTAL MILES OF GAPS
Pedestrian Facilities	877.5	212.0
Dedicated Bicycle Facilities	145.1	40.0

To see a map of the bicycle and pedestrian inventory, please visit the KIPDA Online Resource Center.

Target

The target is to reduce the total miles of gaps in the pedestrian and bicycle networks by 20% by 2040 to 169.6 miles of gaps in pedestrian facilities and 32.0 miles of gaps in dedicated bicycle facilities.

Target-Setting Methodology

The targets were derived from objectives under the Goal 6: Multi-modal MTP goal. Those objectives were developed by a working group consisting of Transportation Technical Coordinating Committee (TTCC) members and adopted by the Transportation Policy Committee (TPC) in August 2013.

N3a - Enhance Pedestrian Access to Schools
N3b - Enhance Dedicated Bicycle Access to Schools

Detailed Description

These performance measures seek to increase the number of schools that have pedestrian access and dedicated bicycle access. Schools are defined as public/private primary schools (PS/PK-K-5-8), public/private secondary schools (9-12) and public/private post-secondary schools (colleges/universities). The school is considered as having pedestrian or bicycle access if it is within ¼ mile of the bicycle or pedestrian network. It is possible to reach a maximum number of schools since there are only a finite number of schools in the region and all of them could have bicycle and pedestrian access. ¼ mile was chosen as this is the typical distance people are willing to walk from a transit stop to their destination.

The performance measures are calculated separately by mode, but they are combined in this narrative.

Data Sources and Review Frequency

- Schools: KIPDA
  - This data is available on an ongoing basis, thus it will be updated yearly.
- Bicycle and Pedestrian Facilities: KIPDA, Local Public Agencies
  - This data is updated on an ongoing, as needed basis.

Historical Data

There is no historical data as there was no KIPDA maintained bicycle and pedestrian facilities inventory prior to 2016.

Baseline Data

- 291 schools (out of 373 total schools) are located within ¼ mile of pedestrian facilities.
- 71 schools (out of 373 total schools) are located within ¼ mile of dedicated bicycle facilities.

Target

The target is to increase the number of schools with pedestrian access by 20% by 2040 to 276 schools; and to increase the number of schools with dedicated bicycle access by 20% by 2040 to 85 schools.

Target-Setting Methodology

The target was derived from an objective under the Goal 1: Transit MTP goal. While the objective is a Transit goal, this performance measure relates to the Transit performance measure "*T4 - Enhance Transit Access to Schools*," which has an identified target of a 20% increase. That objective also references clusters and not schools explicitly, but staff determined that the goal was also applicable to this measure. That objective was developed by a working group consisting of Transportation Technical Coordinating Committee (TTCC) members and adopted by the Transportation Policy Committee (TPC) in August 2013.

N4a - Enhance Pedestrian Access within Community Access Clusters
N4b - Enhance Dedicated Bicycle Access within Community Access Clusters
N5a - Enhance Pedestrian Access within High Density Medical Clusters
N5b - Enhance Dedicated Bicycle Access within High Density Medical Clusters
N6a - Enhance Pedestrian Access within High Density Shopping Clusters
N6b - Enhance Dedicated Bicycle Access within High Density Shopping Clusters

Detailed Description

These performance measures seek to increase the number of miles of bicycle and pedestrian facilities within each type of cluster.

Please see the Detailed Description section under "*T3a – Community Access Clusters Served by Transit*" for further definition of clusters.

In the pedestrian measures, the number of miles of pedestrian facilities inside the clusters are calculated; while in the bicycle measures, the number of miles of dedicated bicycle facilities inside these clusters and within 1 mile of the boundary are calculated. The term "enhance" was intentionally chosen to encourage project sponsors to rehabilitate existing facilities within these clusters in addition to adding new facilities.

The performance measures are calculated separately by mode, but they are combined in this narrative.

Data Sources and Review Frequency

- Cluster data: InfoUSA business data
  - InfoUSA data is available and must be purchased. KIPDA last purchased this in 2015.
- Bicycle and Pedestrian Facilities: KIPDA, Local Public Agencies
  - Due to the various data sources, this data is updated on an ongoing, as needed basis.

Historical Data

There is no historical data as there was no KIPDA maintained bicycle and pedestrian facilities inventory prior to 2016; and because the current iteration of High Density Clusters is the first time KIPDA has ever conducted a cluster-based analysis.

Baseline Data

The following table details the baseline condition of the dedicated bicycle and pedestrian facilities in clusters in 2017:

CLUSTER TYPE	TOTAL PEDESTRIAN MILES	TOTAL BICYCLE MILES
Community Access Clusters	296.8	129.1
High Density Medical Clusters	73.4	64.4
High Density Shopping Clusters	142.9	78.9

Target

The target is to increase the number of miles of pedestrian facilities within Community Access Clusters by 10% by 2040 to 326.5 miles; and to increase the number of miles of dedicated bicycle facilities by 10% by 2040 to 142.0 miles.

The target is to increase the number of miles of pedestrian facilities within High Density Medical Clusters by 10% by 2040 to 80.7 miles; and to increase the number of miles of dedicated bicycle facilities by 10% by 2040 to 70.8 miles.

The target is to increase the number of miles of pedestrian facilities within High Density Shopping Clusters by 10% by 2040 to 157.2 miles; and to increase the number of miles of dedicated bicycle facilities by 10% by 2040 to 86.8 miles.

Target-Setting Methodology

The target was derived from an objective under the Goal 6: Multi-modal MTP goal. That objective was developed by a working group consisting of Transportation Technical Coordinating Committee (TTCC) members and adopted by the Transportation Policy Committee (TPC) in August 2013.

ECONOMIC IMPACT

This section includes five MPO-developed performance measures regarding economic impact. The following are performance measures that are not required by federal regulation, but it was determined by KIPDA that they were a priority and that progress should be tracked and reported.

E1a - Enhance Transit Access Leading To High Density Employment Clusters
E1b - Enhance Pedestrian Facilities Within High Density Employment Clusters
E1c - Enhance Dedicated Bicycle Facilities Leading To and Within High Density Employment Clusters

Detailed Description

These performance measures seek to increase the number of miles of transit routes, pedestrian facilities, and dedicated bicycle facilities leading to and within High Density Employment Clusters.

Please see the Detailed Description section under "T3a – Community Access Clusters Served by Transit" for further definition of clusters.

The purpose of these measures is to provide more opportunities for people to use alternate modes when traveling to work. The term "enhance" was intentionally chosen to encourage project sponsors to rehabilitate existing facilities within these clusters in addition to adding new facilities.

The performance measures are calculated separately by mode, but they are combined in this narrative.

- Transit access is assessed by the number of miles of transit routes within 3 miles of the outer boundary of a High Density Employment Cluster. This was intentionally chosen in an effort to get people to the cluster using transit.
- Pedestrian facilities are assessed by the number of miles of pedestrian facilities inside the High Density Employment Cluster. It is assumed that people may take transit to the cluster, but once they arrive, they need safe pedestrian facilities to get around within the cluster.
- Dedicated bicycle facilities are assessed by the number of miles of dedicated bicycle facilities inside the High Density Employment Cluster and within 1 mile of the outer boundary. This was intentionally chosen in an effort to get bicyclists to the cluster and around the cluster once they arrive.

Data Sources and Review Frequency

- Cluster data: InfoUSA business data
    - InfoUSA data is available and must be purchased. KIPDA last purchased this in 2015.
- Transit routes: TARC
    - The routes incorporated in this analysis were current as of February 2018.
    - This data is available on an ongoing basis, thus it will be updated yearly.
- Bicycle and Pedestrian Facilities: KIPDA, Local Public Agencies
    - Due to the various data sources, this data is updated on an ongoing, as needed basis.

Historical Data

There is no historical data as there was no KIPDA maintained bicycle and pedestrian facilities inventory prior to 2016; and because the current iteration of High Density Clusters is the first time KIPDA has ever conducted a cluster-based analysis.

Baseline Data

The following table details the baseline condition of the number of miles of transit routes, pedestrian facilities, and dedicated bicycle facilities in High Density Employment Clusters in 2017:

HIGH DENSITY EMPLOYMENT CLUSTERS	
Number of miles of transit routes within 1 mile of the boundary of these clusters	1,117
Number of miles of pedestrian facilities inside these clusters	384.1
Number of miles of dedicated bicycle facilities inside these clusters and within 1 mile of the boundary	126.2

Target

The target is to increase the number of miles of transit routes within High Density Employment Clusters and within 1 mile of the boundary by 20% by 2040 to 1,340 miles.

The target is to increase the number of miles of pedestrian facilities inside High Density Employment Clusters by 10% by 2040 to 423 miles.

The target is to increase the number of miles of dedicated bicycle facilities within High Density Employment Clusters and within 1 mile of the boundary by 10% by 2040 to 139 miles.

Target-Setting Methodology

The targets were derived from an objective under the Goal 9: Economy MTP goal. That objective was developed by a working group consisting of Transportation Technical Coordinating Committee (TTCC) members and adopted by the Transportation Policy Committee (TPC) in August 2013.

E2a - Enhance Pedestrian Facilities Within Areas with Moderate to Significant Employment Growth

E2b - Enhance Dedicated Bicycle Facilities Leading To and Within Areas with Moderate to Significant Employment Growth

Detailed Description

These performance measures seek to increase the number of miles of pedestrian facilities inside areas with moderate to significant employment growth; and to increase the number of miles of dedicated bicycle facilities inside areas with moderate to significant employment growth and within one mile of the boundary. The definition of moderate to significant employment growth is currently in development and this PMP will be updated when that definition is finalized. The purpose of these measures is to provide more opportunities for people to use alternate modes when traveling to work in areas that have expected moderate to significant employment growth. The term "enhance" was intentionally chosen to encourage project sponsors to rehabilitate existing facilities within these clusters in addition to adding new facilities.

The performance measures are calculated separately by mode, but they are combined in this narrative.

- Pedestrian facilities are assessed by the number of miles of pedestrian facilities inside TADs with moderate or significant employment growth. The TADs are so large that they incorporate residential areas where pedestrians' trips may originate. It is also assumed that people may take transit to the TAD with expected moderate to significant employment growth; so once they arrive, they need safe pedestrian facilities to get around within that TAD.
- Dedicated bicycle facilities are assessed by the number of miles of dedicated bicycle facilities inside all TADs with moderate or significant employment growth and within 1 mile of the outer boundary. This was intentionally chosen in an effort to get bicyclists to the TAD and around the TAD once they are within it.

Data Sources and Review Frequency

- Areas with moderate to significant employment growth: KIPDA
  - KIPDA conducted a socioeconomic analysis in 2018 which determined which TADs are expected to have moderate or significant employment growth by 2040.
- Bicycle and Pedestrian Facilities: KIPDA, Local Public Agencies
  - Due to the various data sources, this data is updated on an ongoing, as needed basis.

Historical Data

There is no historical data as there was no KIPDA maintained bicycle and pedestrian facilities inventory prior to 2016.

Baseline Data

The following table details the baseline condition of the number of miles of pedestrian facilities and dedicated bicycle facilities in TADs with moderate to significant employment growth in 2018:

	TOTAL MILES IN TADS WITH MODERATE TO SIGNIFICANT EMPLOYMENT GROWTH
Pedestrian Facilities	268.4
Dedicated Bicycle Facilities	45.1

Target

The target is to increase the number of miles of pedestrian facilities inside TADs with moderate to significant employment growth by 10% by 2040 to 295.2 miles; and to increase the number of miles of dedicated bicycle facilities inside TADs with moderate to significant employment and within 1 mile of the boundary by 10% by 2040 to 49.6 miles.

Target-Setting Methodology

The targets were derived from an objective under the Goal 9: Economy MTP goal. That objective was developed by a working group consisting of Transportation Technical Coordinating Committee (TTCC) members and adopted by the Transportation Policy Committee (TPC) in August 2013.

MOTOR VEHICLE ACCESS

This section includes two MPO-developed performance measures regarding motor vehicle access and congestion. The following are performance measures that are not required by federal regulation, but it was determined by KIPDA that they were a priority and that progress should be tracked and reported.

V3 - Maintain or Improve Level of Service on Interstates at LOS D or Worse
V4 - Maintain or Improve Level of Service on Arterial Miles at LOS D or Worse
Detailed Description

These performance measures seek to maintain or improve the level of service (LOS) on freeways and Interstates at LOS D, E, and F and arterials at LOS D, E, and F.

The performance measures are calculated separately by roadway type, but they are combined in this narrative.

This performance measure is included in KIPDA's Congestion Mitigation Process (CMP) because it relates to reducing congestion; therefore, the strategies discussed in the CMP might have an impact on meeting this measure's target.

Data Sources and Review Frequency

- Traffic Counts – KIPDA, KYTC, INDOT, Local Public Agencies
  - This data is available on an ongoing basis, thus it will be updated yearly. Even though this will be updated annually, the LOS may not actually change from year to year.
- 2012 Generalized Service Volume Tables – Florida Department of Transportation
  - While this guide on determining level of service has not been changed since 2012, KIPDA will continue to search for the most up-to-date guidance on level of service every year.

Historical Data

The first congestion analysis that calculated level of service in the KIPDA region was created using 2016 data. The current analysis uses 2017 data.

Baseline Data

The following table details the baseline condition of the number and percent of miles that are at LOS D, E, and F on Interstates/Freeways and Arterials in 2017:

	INTERSTATES/FREEWAYS		ARTERIALS	
	MILES AT THIS LOS	PERCENT OF TOTAL MILES	MILES AT THIS LOS	PERCENT OF TOTAL MILES
LOS D	96.04	30.3%	122.65	17.1%
LOS E	48.40	15.3%	27.46	3.8%
LOS F	34.65	10.9%	50.64	7.1%
Total at LOS D, E & F	179.09	56.5%	200.75	28.0%

To see a map of congestion in the region, please visit the KIPDA Online Resource Center.

Target

The target is to maintain or improve Level of Service on freeway and Interstate roadway miles with a Level of Service of D, E, or F at 56.5% or better by 2040; and to maintain or improve Level of Service on arterial miles with a Level of Service D, E, or F at 28.0% by 2040.

Target-Setting Methodology

The targets were derived from an objective under the Goal 5: Congestion MTP goal. That objective was developed by a working group consisting of Transportation Technical Coordinating Committee (TTCC) members and adopted by the Transportation Policy Committee (TPC) in August 2013.

ROADWAY MAINTENANCE

This section includes four MPO-developed performance measures regarding roadway maintenance. The following are performance measures that are not required by federal regulation, but it was determined by KIPDA that they were a priority and that progress should be tracked and reported.

M1b - Percent of Pavements in "Borderline" or Worse Condition on Interstates
M2b - Percent of Pavements in "Borderline" or Worse Condition on non-Interstate NHS

Detailed Description

These performance measures seek to reduce the percent of pavements classified in "Borderline" condition on the Interstate system and the non-Interstate NHS. Pavement condition is calculated based on (1) IRI, (2) Cracking, and (3) either Rutting (asphalt) or Faulting (concrete). Pavements are assessed on all three metrics, and the overall condition is determined based on a combination of those ratings. The concept of a "Borderline" condition is a KIPDA-developed rating that captures pavements that are in overall "Fair" condition but are at risk of falling into "Poor" condition; for example, if a pavement is in "Poor" condition in one metric and "Fair" in the other two metrics, it is at risk of falling into "Poor" condition if either of the "Fair" metrics deteriorates to become the "Poor" metric.

The performance measure is intentionally worded to incorporate both "Borderline" and "Poor" pavement conditions. This is to ensure that when making progress in reducing the amount of "Borderline" pavements, we are not allowing "Borderline" pavements to fall into the "Poor" category; the intention is to rehabilitate "Borderline" pavements before they fall into "Poor" condition.

The performance measures are calculated separately by roadway type, but they are combined in this narrative.

Data Sources and Review Frequency

- Kentucky pavement condition on Interstates: KYTC
    - New data is available every year, thus it will be updated yearly.
- Indiana pavement condition on Interstates: INDOT
    - New data is available every year, thus it will be updated yearly.
- Kentucky pavement condition on non-Interstate NHS: KYTC
    - Even though there are NHS roadways that KYTC does not maintain, they are still responsible for collecting the data and reporting it to FHWA.
    - New data is available every year, thus it will be updated yearly.
- Indiana pavement condition on non-Interstate NHS: INDOT
    - New data is available every year, thus it will be updated yearly.

Historical Data

While state DOTs have been collecting pavement condition data for some time, the method of classifying the overall pavement condition based on a combination of IRI, Cracking, Rutting and/or Faulting is new. Therefore, there is a lack of historical data of overall pavement condition in the KIPDA region. The first time data with all four pavement conditions was available at an MPO-level was in 2017.

To see a map of all pavement conditions on Interstates and non-Interstate NHS, please visit the KIPDA Online Resource Center.

YEAR	CONDITION	KY MPO PAVEMENT CONDITION ON INTERSTATES		IN MPO PAVEMENT CONDITION ON INTERSTATES		KIPDA MPO PAVEMENT CONDITION ON INTERSTATES	
		Lane Miles	% Lane Miles	Lane Miles	% Lane Miles	Lane Miles	% Lane Miles
2017	Good	289.3	40.6%	98.5	78.0%	387.8	46.2%
	Fair	314.6	44.1%	27.7	21.9%	342.3	40.8%
	Borderline (subset of total in Fair condition)	*93.6*	*15.1%*	*0.0*	*0.0%*	*93.6*	*11.1%*
	Total Borderline or Worse (Poor)	*109.3*	*17.6%*	*0.1*	*0.1%*	*109.4*	*13.0%*
	Poor	15.7	2.2%	0.1	0.1%	15.8	1.9%
	Total	713.2	100.0%	126.3	100.0%	839.5	100.0%
	Not Available	*0.0*		*63.7*		*63.7*	

YEAR	CONDITION	KY MPO PAVEMENT CONDITION ON NON-INTERSTATE NHS		IN MPO PAVEMENT CONDITION ON NON-INTERSTATE NHS		KIPDA MPO PAVEMENT CONDITION ON NON-INTERSTATE NHS	
		Lane Miles	% Lane Miles	Lane Miles	% Lane Miles	Lane Miles	% Lane Miles
2017	Good	102.3	19.2%	45.2	77.7%	147.5	24.9%
	Fair	338.0	63.3%	12.1	20.8%	350.1	59.1%
	Borderline (subset of total in Fair condition)	*70.9*	*13.3%*	*0.7*	*1.2%*	*71.6*	*12.1%*
	Total Borderline or Worse (Poor)	*93.6*	*17.5%*	*0.9*	*1.5%*	*94.5*	*16.0%*
	Poor	22.7	4.3%	0.2	0.3%	22.9	3.9%
	Total	533.9	100.0%	58.2	100.0%	592.1	100.0%
	Not Available	*2.8*		*0.8*		*3.6*	

Baseline Data

The baseline condition that KIPDA reports in its 2018 Baseline Performance Period Report is pavement condition collected during 2017. The baseline (highlighted in tan in the above table) is: 13.0% Borderline or Worse Interstates and 16.0% Borderline or Worse non-Interstate NHS.

Target

The targets are detailed in the following table. The KIPDA Transportation Policy Committee adopted these targets on October 25, 2018:

KIPDA MPO Targets (2018)	
Pavement Performance	4-Year Target (2022)
% Borderline or Worse on Interstates	10.0%
% Borderline or Worse on non-Interstate NHS	13.5%

Target-Setting Methodology

Please see the *Target-Setting Methodology section under "M1a – Percent of Pavements in "Good" Condition on Interstates - 490.307(a)(1)"* for a detailed explanation of the methodology in setting this target.

M4a - Percent of Bridges in "Good" Condition
M4b - Percent of Bridges in "Poor" Condition

Detailed Description

These performance measures seek to increase the percent of "Good" bridges and reduce the percent of "Poor" bridges regardless of what type of roadway the bridge is carrying. The federal performance measures regarding bridge condition only seek to rehabilitate bridges that carry the NHS. These federal measures also report targets based on the deck area of bridges, which assigns more precedence on the condition of large bridges such as the Kennedy and Lincoln bridges on I-65. KIPDA is interested in rehabilitating "Poor" bridges regardless of whether or not they carry the NHS and regardless of their deck area.

Data Sources and Review Frequency

- Bridge condition and deck area: National Bridge Inventory
    - New data is available every year, thus it will be updated yearly.

Historical Data

While state DOTs have been collecting bridge condition data for some time, the method of classifying the overall bridge condition based on a combination of NBI Items: 58–Deck, 59–Superstructure, 60–Substructure, and 62–Culverts is new. The former system of classifying bridges as "Structurally Deficient" and "Functionally Obsolete" has been discontinued. Therefore, historical data of overall bridge condition in the KIPDA region dates back to 2016.

YEAR	CONDITION	NUMBER OF BRIDGES & CULVERTS	PERCENT OF BRIDGES & CULVERTS
2016	Good	313	27.3%
	Fair	749	65.4%
	Poor	84	7.3%
	Total	1,146	100.0%

To see the map of all bridges in "Good," "Fair," and "Poor" condition in 2017, please visit the KIPDA Online Resource Center.

Baseline Data

The following table details the number and percent of bridges and culverts in "Good," "Fair," and "Poor" condition in the KIPDA region in 2017:

YEAR	CONDITION	NUMBER OF BRIDGES & CULVERTS	PERCENT OF BRIDGES & CULVERTS
2017	Good	324	27.8%
	Fair	763	65.4%
	Poor	80	6.9%
	Total	1,167	100.0%

Target

The target is to increase the percent of bridges in "Good" condition 50% by 2040 to 41.7%; and to reduce the percent of bridges in "Poor" condition by 50% by 2040 to 3.5%.

Target-Setting Methodology

The targets were derived from an objective under the Goal 7: Congestion MTP goal. That objective was developed by a working group consisting of Transportation Technical Coordinating Committee (TTCC) members and adopted by the Transportation Policy Committee (TPC) in August 2013.

FREIGHT MOVEMENT

This section includes two MPO-developed performance measures regarding freight movement. The following are performance measures that are not required by federal regulation, but it was determined by KIPDA that they were a priority and that progress should be tracked and reported.

F1 - Maintain or Improve Roadways on the KIPDA Freight Network that are LOS D or Worse

Detailed Description

This performance measure seeks to maintain or improve the level of service on roadways designated as the KIPDA Freight Network that are at LOS D or worse. This measure is different from the federal measure "*F3 - Truck Travel Time Reliability on the Interstate - 490.607*" because the federal measure only looks at reliability of the Interstate system. This measure is also different from other MPO-developed measures "*V3 - Maintain or Improve Level of Service on Interstates at LOS D or Worse*" and "*V4 - Maintain or Improve Level of Service on Arterial Miles at LOS D or Worse*" because it emphasizes reduction of congestion on roadways that are significant for freight movement. Since the freight sector relies on on-time delivery, reducing congestion is vital to the economy.

This performance measure is included in KIPDA's Congestion Mitigation Process (CMP) because it relates to reducing congestion; therefore, the strategies discussed in the CMP might have an impact on meeting this measure's target.

This performance measure will also be included in KIPDA's Freight Plan, which is currently under development.

Data Sources and Review Frequency

- Freight Network: KIPDA
  - o This will be updated every 4 years in conjunction with an updated MTP. This was last updated in April 2018.
- Traffic Counts: KIPDA, KYTC, INDOT, Local Public Agencies
  - o This data is available on an ongoing basis, thus it will be updated yearly. Even though this will be updated annually, the LOS may not actually change from year to year.
- 2002 Generalized Service Volume Tables: Florida Department of Transportation
  - o KIPDA anticipates continuing to use this source when determining level of service.

Historical Data

The first congestion analysis that calculated level of service in the KIPDA region was created using 2016 data. The current analysis uses 2017 data.

To see a map of congestion in the region, please visit the KIPDA Online Resource Center.

Baseline Data

The following table details the baseline condition of the number and percent of miles that are at LOS D, E, and F on the KIPDA Freight Network in 2017:

	MILES ON THE FREIGHT NETWORK AT THIS LOS	PERCENT OF THE FREIGHT NETWORK AT THIS LOS
LOS D	TBD	TBD
LOS E	TBD	TBD
LOS F	TBD	TBD
Total at LOS D, E & F	TBD	TBD

Target

The target is to maintain or improve Level of Service on the KIPDA Freight Network with a Level of Service of D or worse by 2040.

Target-Setting Methodology

The targets were derived from an objective under the Goal 5: Congestion MTP goal. That objective was developed by a working group consisting of Transportation Technical Coordinating Committee (TTCC) members and adopted by the Transportation Policy Committee (TPC) in August 2013.

F2 - Number of Locations on KIPDA Freight Network Within 1 Mile of Freight Clusters Where Roadway Geometry and/or Restrictions Impede Freight Movement

Detailed Description

This performance measure seeks to reduce the number of locations on the KIPDA Freight Network within 1 mile of Freight Clusters that are difficult for freight to move safely and efficiently through the transportation system due to tight turning radii, height restrictions, weight limits, etc. Since the freight sector relies on on-time delivery, eliminating impedances is vital to the economy. While primarily a freight component, reducing roadway impedances also ensures that roads are properly maintained and compliant with current design standards.

- Freight Clusters are defined as: 5 or more freight distributors located within ½ mile of each other.

This performance measure will be included in KIPDA's Freight Plan.

Data Sources and Review Frequency

- Freight Network: KIPDA
  - This will be updated every 4 years in conjunction with a new MTP. It was last updated in April 2018.
- Cluster data: InfoUSA business data
  - InfoUSA data is available and must be purchased. KIPDA last purchased this in 2015.
- Roadway Impedances Inventory: KIPDA anticipates this inventory to be complete in the near future.

Historical Data

There is a lack of historical data since there has never been a Roadway Impedances Inventory in the KIPDA region.

Baseline Data

To be determined.

Target

To be determined.

Target-Setting Methodology

To be determined.

AIR QUALITY

This section includes one MPO-developed performance measure regarding air quality. The following is a performance measure that is not required by federal regulation, but it was determined by KIPDA that it was a priority and that progress should be tracked and reported.

A1 - Meet or Do Better Than Mobile Source Budgets in State Implementation Plan (SIP)

Detailed Description

This performance measure seeks to, at a minimum, meet the mobile source budgets that are identified in the State Implementation Plans (SIP) for Air Quality. The SIP complies with the Clean Air Act and is overseen by the Environmental Protection Agency (EPA). The SIP is developed when an area is designated as nonattainment, and further describes how the state will reach attainment and maintain National Ambient Air Quality Standards (NAAQS). KIPDA will strive to meet these standards, although exceeding them (do better than) would be ideal.

Data Sources and Review Frequency

- Air Quality Data: Louisville Metro Air Pollution Control District (APCD)
  - This data is available on an ongoing basis
- MTP Air Quality Analysis: KIPDA
  - KIPDA will conduct an air quality analysis for the MTP.
  - This analysis will be updated in conjunction with a new MTP, every 4 years.

Historical Data

Not applicable.

Baseline Data

To be determined.

Target

The target is to meet or do better than mobile source budgets in the SIP through 2040.

Target-Setting Methodology

The target was derived from an objective under the Goal 10: Environment MTP goal. That objective was developed by a working group consisting of Transportation Technical Coordinating Committee (TTCC) members and adopted by the Transportation Policy Committee (TPC) in August 2013.

REPORTING PROCESSES

One of the most important aspects of the PMP is tracking progress towards achieving the performance targets. The underlying purpose in establishing these performance measures and targets is to assist decision makers in determining how, where and when improvements should be mad to the region's transportation system. The reporting process will provide the necessary performance-based feedback to the KIPDA Transportation Policy Committee (TPC), as well as our federal, state, local, and community planning partners. The reporting processes will also help KIPDA committees and community stakeholders decide how to program limited funding resources among the many needs of our regional transportation system.

Reporting to KIPDA Committees

KIPDA staff will, at a minimum, provide yearly updates on all federal measures and MPO-developed measures to the Transportation Technical Coordinating Committee (TTCC) and the Transportation Policy Committee (TPC) on the status of performance targets. During times of target-setting and when updating this PMP document, staff may provide more frequent updates and may require the assistance of a working group, which would consist of a subset of TTCC members.

Reporting to State DOTs

KIPDA staff will report federal performance targets, target-setting methodology, and progress toward achieving those targets to state DOTs before the required deadlines. Federal regulation requires state DOTs to report their performance targets and progress to FHWA and FTA; therefore, KIPDA will provide assistance in the state DOT reporting processes to the furthest extent practical. KIPDA will also be prepared to provide all documentation on MPO-developed performance measures if the state DOTs show an interest.

Reporting to FHWA and FTA

MPOs are not required to report federal performance targets, target-setting methodology, or progress toward achieving those targets directly to FHWA or FTA. KIPDA staff will report this information to the state DOTs who will then report on a statewide basis to the relevant federal agency. However, KIPDA will be prepared to submit all documentation on federal performance measures upon request by a federal agency and during KIPDA's Federal Certification Reviews, which are held every four years. The next Federal Certification Review will be held in late 2018.

Reporting to the Public

All of KIPDA's TTCC and TPC meetings are open to the public, recorded, and posted online for public viewing. In addition to a transparent committee process, KIPDA is developing dashboards and methods of reporting data, targets, and progress towards achieving those targets in a way that is easily consumed by the public. This PMP will be updated with links to these dashboards once they are published. The KIPDA Online Resource Center will be one of the ways the public can access much of the data that KIPDA provides.

Please see the Participation Plan for further details on how the public is involved in KIPDA's overall planning and reporting processes.

PERFORMANCE PERIOD REPORTS

KIPDA will create a *Baseline Performance Period Report*, a *Mid Performance Period Report*, and a *Full Performance Period Report* and present them to our committees. While these reports will focus mainly on the federally-required FHWA and FTA performance measures, the MPO-developed measures that are discussed in this PMP will also be included in these performance period reports. All of the performance measures listed in this document are a priority in the KIPDA region, regardless of whether they are federally-required or if they were established in order to accomplish the goals and objectives of the MTP.

BASELINE PERFORMANCE PERIOD REPORT

The first *Baseline Performance Period Report* is due for state DOTs on October 1, 2018. This report will include 4-year targets and 2-year targets for certain federal measures (ex: FHWA PM 2 Level of Travel Time Reliability on Interstates). KIPDA expects to present its first *Baseline Performance Period Report* to TTCC and TPC during Winter 2019 and it will report on the baseline condition and performance of the transportation system and performance targets of all performance measures, regardless of whether they are federally-required or MPO-developed measures.

The second *Baseline Performance Period Report* is due for state DOTs on October 1, 2022, in concurrence with the due date of the first *Full Performance Period Report*. KIPDA expects to present its second *Baseline Performance Period Report* by the end of 2022.

MID PERFORMANCE PERIOD REPORT

The first Mid Performance Period Report is due for state DOTs on October 1, 2020. This report will include progress made towards achieving the targets and will allow for an opportunity to revise the initial 4-year targets if significant progress has not been made on the federal measures. KIPDA expects to present its first *Mid Performance Period Report* to TTCC and TPC by the end of 2020 and it will report on progress towards achieving the targets of all performance measures between 2018 and 2020, regardless of whether they are federally-required or MPO-developed measures. An evaluation of how local policies and investments have impacted performance targets may also be included in this *Mid Performance Period Report*.

FULL PERFORMANCE PERIOD REPORT

The first *Full Performance Period Report* is due for state DOTs on October 1, 2022. This report will include a determination of whether the targets were met or if significant progress was made towards achieving the targets. KIPDA expects to present its first *Full Performance Period Report* to TTCC and TPC by the end of 2022 and it will report on progress towards achieving the targets of all performance measures between 2018 and 2022, regardless of whether they are federally-required or MPO-developed measures. An evaluation of how local policies and investments have impacted performance targets shall be included in this *Full Performance Period Report*.

CONNECTIVITY WITH OTHER KIPDA PLANNING DOCUMENTS

This *Performance Management Plan* (PMP) provides the foundation for performance-based planning within the KIPDA MPO and will be integrated into the various transportation planning activities, including but not limited to the Metropolitan Transportation Plan (MTP) and performance-based programming within the Transportation Improvement Program (TIP).

The performance measures identified herein have influenced the project selection process in which project sponsors apply to add new projects to the MTP. Potential projects are evaluated based on the needs within the project area and the potential impacts the project may have on those needs. Projects that address more of the performance measures and/or are more likely to help achieve performance targets are more likely to be selected for inclusion within the MTP.

While these performance measures do not directly influence project prioritization within the TIP process like they do in the MTP process, projects that address performance targets are more likely to be prioritized for TIP funding through the Kentucky and Indiana *Project Management Processes.* Project development for the TIP will further the intent of funding projects that contribute to meeting the performance targets identified in this PMP.

The Unified Planning Work Program (UPWP) summarizes the 2015 Planning Process Memorandum of Agreement (MOA) by and between KIPDA, INDOT, KYTC, and TARC (Transit Authority of River City) that details KIPDA's metropolitan transportation planning effort, coordination responsibilities, and the creation of this PMP. The UPWP also outlines the dedication of KIPDA staff hours on performance management.

The Participation Plan details community outreach and public involvement within KIPDA's transportation planning activities, which includes the reporting of performance targets and progress towards achieving those targets to the public and community stakeholders.

The PMP is integrated into the Congestion Management Process (CMP). Any performance measures relating to reducing congestion were included in the CMP, since the strategies discussed in the CMP might have an impact on meeting those measures' targets.

The PMP is also integrated into the Freight Plan. Any performance measures relating to enhancing freight movement within the region were included in the Freight Plan, since the strategies discussed in the Freight Plan might have an impact on meeting those measures' targets.

All of the data described in the PMP is available to the public on the KIPDA Online Resource Center.

At the discretion of KIPDA staff and with approval of the Transportation Policy Committee (TPC), this PMP may be integrated into any other relevant planning documents, programs, and procedures.

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