

**AIR QUALITY CONFORMITY DETERMINATION
OF THE OKI 2040 REGIONAL TRANSPORTATION PLAN AND THE OKI FY
2018-FY2021 TRANSPORTATION IMPROVEMENT PROGRAM FOR THE
CINCINNATI-HAMILTON OH-KY-IN, AREA FOR NATIONAL AMBIENT AIR
QUALITY STANDARDS (NAAQS) – TECHNICAL DOCUMENTATION**

April 13, 2017



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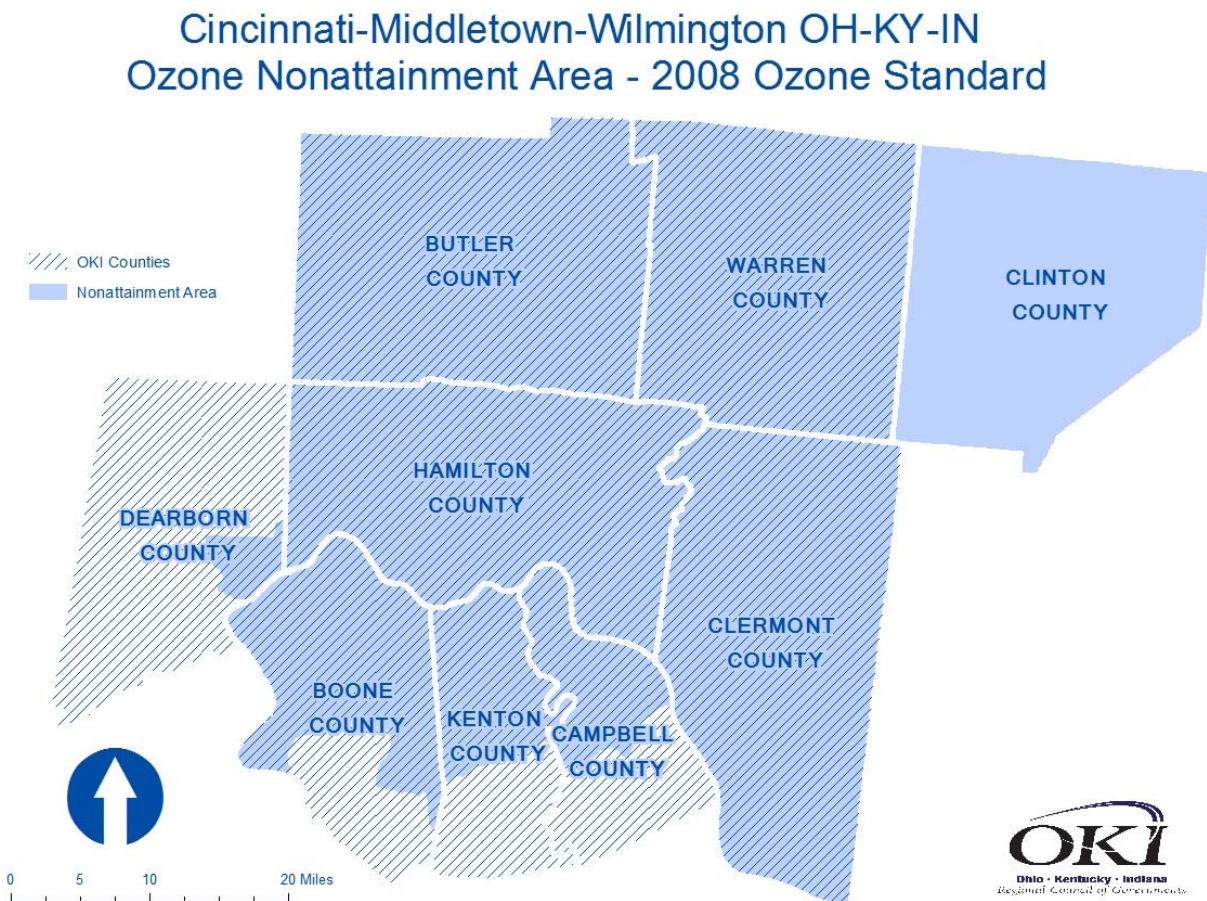
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I. BACKGROUND

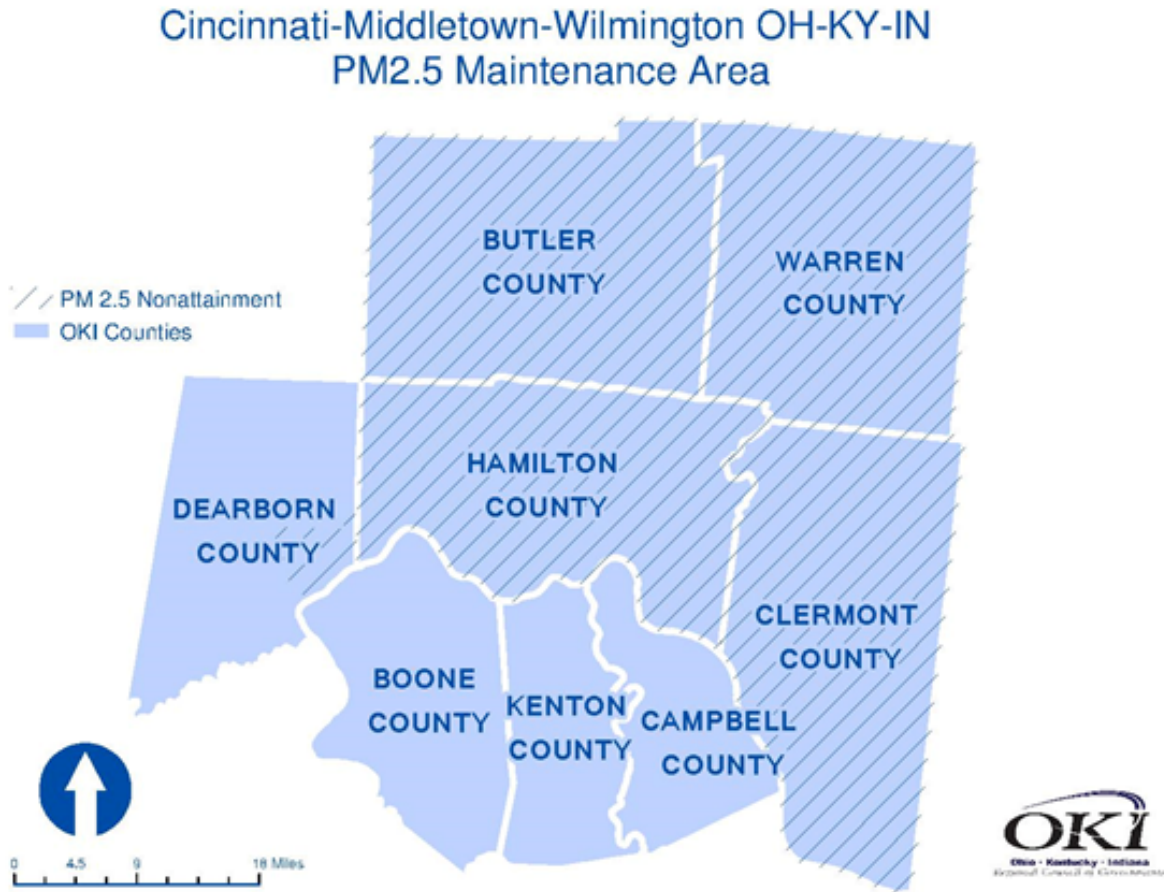
In May 2016, the U.S. EPA made a determination of attainment for the Cincinnati area 2008 8-hour ozone area. In December 2016, the U.S. EPA approved the Ohio submitted maintenance plans and redesignated the Ohio portion of the Cincinnati area as a maintenance area. The Cincinnati ozone area includes Lawrenceburg Township in Dearborn County Indiana, portions of the Kentucky counties of Boone, Campbell and Kenton, and the Ohio counties of Butler, Clermont, Clinton, Hamilton and Warren. Clinton County is outside of the OKI region, but is part of the maintenance area. The Ohio Department of Transportation (ODOT) is the lead planning agency for Clinton County.

Figure 1.



In October 2016, U.S. EPA revoked the 1997 annual PM_{2.5} standards for fine particulates. With the revocation of that standard, areas that have already been redesignated to attainment for the 1997 annual PM_{2.5} standards, transportation conformity no longer applies. The Ohio and Indiana portions of the Cincinnati area remain designated nonattainment for PM_{2.5} and will continue to demonstrate PM_{2.5} conformity.

Figure 2.



Transportation conformity is a mechanism to ensure that federal funding and approval are given to those transportation activities that are consistent with air quality goals as contained in the State Implementation Plans (SIPs). OKI is responsible for the air quality conformity determination for the region's Transportation Plan and Transportation Improvement Program.

The *OKI 2040 Regional Transportation Plan* (also called the Metropolitan Transportation Plan) and the *FY 2018-2021 TIP* involves additions and changes to eight projects, which, due to their scope and regional significance, trigger the need for a new regional emissions analysis and finding of conformity. A summary of the proposed changes were shared with the Interagency Consultation Group on January 25, 2017.

II. DESCRIPTION OF CHANGES TO TRANSPORTATION NETWORKS

This report documents that *OKI 2040 Regional Transportation Plan* and its short range component, the *OKI FY 2018-2021 Transportation Improvement Program* are in conformance with the State Implementation Plans (SIPs) of Indiana, Kentucky and Ohio, complies with the Clean Air Act, and the analysis is in accordance with federal Transportation Conformity Regulations, 40 CFR Parts 51 and 93. The analysis is also in accordance with other applicable federal and state requirements such as the *Ohio State Transportation Conformity Rules, Ohio Administration Code Part 3745-101-01 through 20* and the Commonwealth of Kentucky's *Conformity of Transportation Plans, Programs and Projects: 401 KAR 50:066*. Methodologies and results of the conformity determination are presented herein.

This *OKI 2040 Regional Transportation Plan* (also called the Metropolitan Transportation Plan (MTP)) and the *FY 2018-2021 TIP* involves additions and changes to six non-exempt projects. OKI's highway and transit networks include the existing transportation system plus all regionally significant, non-exempt projects in the Plan and TIP regardless of funding source. Five projects (6-352, 77889, 82288, 83723, and 104667) are already in the existing TIP, however the proposed changes to funding and timing will move the date open to traffic beyond the original 2020 analysis year. The remaining project (103753) is a new project being added to the MTP and TIP.

Table 1 - Changes to Transportation Networks

Project ID	State	County	Facility	Description	Scope Change	Original AQ Analysis Year	Revised AQ Analysis Year
6-352	KY	Campbell	KY 536	Extend from US 27 to AA Highway	No	2020	2030
77889	OH	Hamilton	IR 75	Widen for additional through lanes, reconstruct interchanges as needed. MCE Phases 8 and 8A	No	2020	2030
82288	OH	Hamilton	IR 75	Reconstruct IR 75 between Shepherd Lane and Glendale-Milford Road. TTV Phase 1	No	2020	2030
83723	OH	Hamilton	IR 75	Add a lane to IR 75 and reconfigure the IR 74/75 interchange. MCE Phase 5	No	2020	2030
104667	OH	Hamilton	IR 75	Add a lane to IR 75 and reconfigure the IR 74/75 interchange. MCE Phase 5	No	2020	2030
103753	OH	Warren	SR 741	Widen Sr 741 between Spy Glass Hill and Weldon Drive to 2 travel lanes each direction	Add	N/A	2030

III. OKI'S CONFORMITY PROCESS

Transportation networks

The conformity analysis involves the use of the four CUBE-based transportation networks. Each transportation network consists of highway and transit components. The Ohio Department of Transportation provided emissions data for Clinton County.

The four networks specifically developed for use in this conformity process represented an ozone budget year (2020), a PM2.5 budget year (2021), an interim year (2030) and the Regional Transportation Plan horizon year (2040). All regionally significant projects regardless of the funding source were evaluated for their impacts on air quality in the maintenance area.

- The 2020 transportation network includes the current year network plus projects in the *FY 2018-2021 Transportation Improvement Program* and the *OKI 2040 Regional Transportation Plan* that are expected to be open to traffic before the year 2020.
- The 2021 transportation network is identical to the 2020 network.
- The 2030 transportation network includes the 2021 network plus projects in the *FY 2018-2021 Transportation Improvement Program* and *OKI 2040 Regional Transportation Plan* that are expected to be open to traffic before the year 2030.
- The 2040 transportation network includes the 2030 network plus projects in the *OKI 2040 Regional Transportation Plan* that are expected to be open to traffic before the year 2040.

OKI Travel Demand Model

Vehicle miles traveled and vehicle hours were estimated using the OKI Travel Demand Model Version 8.0. The OKI Travel Demand Model utilizes the Citilabs CUBE transportation modeling platform and includes a series of CUBE Voyager programs written by OKI. It is a state of the practice model that uses the standard four phase sequential modeling approach of trip generation, distribution, modal choice and assignment. The model uses demographic and land use data and capacity and free-flow speed characteristics for each roadway segment in the network to produce a "loaded" highway network with forecasted traffic volumes with revised speeds based on specified speed/capacity relationships.

Travel analysis zones are the basic geographic unit for estimating travel in the OKI model. The OKI region is subdivided into 2299 traffic analysis zones to permit detail as well as manageability. A variety of socioeconomic data items are used in the OKI transportation planning process. These data are used primarily to forecast future travel patterns by serving as independent variables in OKI trip generation equations. The following categories of planning data are utilized:

- Population (household and group quarter)
- Households
- Household vehicles
- Employment (by employment category and zone of work)
- Labor force participation (by zone of residence)

- Area type

The principal data requirements of the OKI travel demand forecasting model are population and employment. From these variables, other characteristics including households, labor force, and personal vehicles may be derived. The *OKI 2040 Regional Transportation Plan* provides a complete demographic overview of the region.

OKI utilizes both base year (2010) and future year data (2020, 2030, and 2040) in the planning process. Planning data are maintained at the Traffic Analysis Zone (TAZ) level, and originate in the 2010 Census of Population and Housing. Base year 2010 and future year data for each variable are developed through various methods. More detailed explanation of base year and future year data generation for each of the above-mentioned categories of planning data follows. All of the variables represent the latest OKI planning assumptions.

Population

Base and Future Year Data: Population data for base year 2010 and future years 2020, 2030, and 2040 originate with the 2010 Census of Population and Housing. Utilizing ArcGIS, population data at the zonal level for 2010 was derived from the area proportion allocation of block level population.

As a tri-state regional planning agency, OKI uses the most current county level population projections as prepared by the respective state data centers (Ohio Development Services Agency Department of Research, Kentucky State Data Center and Indiana Business Research Center) as control totals. Projections based on the 2010 census for years 2020 to 2040 were released by the Ohio state data center in 2013, the Indiana state data center in 2012 and the Kentucky state data center in 2011. Population projections at the zonal level are calculated by multiplying household size by the projected zonal households. Household size is factored so that, in each county, the sum of the zonal populations equals the county control total.

Households

Base Year Data: Household data for base year 2010 originates with the 2010 Census of Population and Housing. Utilizing the geographic information system ArcGIS, household data at the zonal level for 2010 was derived from the area proportion allocation of block level households.

Future Year Data: The preparation of household projections was accomplished by calculating the number of households for a projected county population using ratios of householders to total population by age specific cohorts derived from the 2010 Census for each analysis year. Disaggregation to TAZs was determined by historical trends, existing and future land use, topography, flood plain information, availability of land, local knowledge and other factors.

Household Vehicles

Base and Future Year Data: Base and future year household vehicle data were obtained from the 2009-2013 American Community Survey. Average vehicles per household were calculated for

block groups then applied to the TAZs associated with each block group. The 2020, 2030 and 2040 vehicles per household were held at the 2009-2013 level based on the fact that, since 2002, the number of vehicles per household has exceeded the number of drivers per household.

Labor Force

Base and Future Year Data: The OKI labor force is a function of the population as determined by a labor force participation rate (the number of employed persons in the labor force per persons 16 and over). Household data for base year 2010 originates with 2019-2013 American Community Survey. Utilizing the geographic information system ArcGIS, household data at the zonal level for 2010 was derived from the area proportion allocation of block group level employed labor force. The labor force projections for 2020, 2030, and 2040 were based on the most recent projections of national labor force participation rates by age and sex cohorts from the U.S. Department of Labor, Bureau of Labor Statistics for each of those years. These rates were then applied to the projected county age/sex cohorts and adjusted to eliminate the unemployed to arrive at a county employed labor force control total. Employed labor force at the zonal level is calculated by multiplying the labor force participation rate by the zonal population. The labor force participation rate is adjusted so that, in each county, the sum of the zonal labor force counts equals the control total.

Employment

Base Year Data: Quarterly Census of Employment and Wages (QCEW) data for 2010 was utilized as the primary tool to calculate base year employment at the zonal level. Individual business records containing physical location, number of employees and North American Industry Classification System (NAICS) code were geocoded in ArcGIS and aggregated to the TAZ level. This data set was supplemented by other sources of data to complete the commuting employment picture in the OKI region. Each zone's employment was divided into twelve categories based on two-digit NAICS sector codes. The categories represent sectors grouped according to their similarity in generating trips.

Future Year Data: For future year employment projection, calculation was first made of the employment at the regional level. At the regional level, employment is a calculation of the region's employed labor force minus workers who live in the region but commute out to work, plus workers who live outside the region but commute in to work. The regional total was disaggregated first to the county level based on historic trends and expected changes in the county's share of the region's employment and then to the TAZ level. Disaggregation to TAZs was determined by historical trends, existing and future land use, topography, flood plain information, availability of land, local knowledge and other factors.

Area Type

Base and Future Year Data: For each analysis year, each TAZ is assigned an area type designation as CBD, Urban, Suburban or Rural based on population and employment densities.

Model Calibration

OKI's Travel Demand Model has been validated to observed traffic volumes for the model base year 2010. The modeling network encompasses the entire ozone Maintenance area with the

exception of Clinton County, Ohio. The modeling network also includes Greene, Miami and Montgomery counties in Ohio and the remainder of Dearborn County Indiana. The difference between estimated vehicle miles traveled (VMT) and 2010 observed VMT is less than 3%. A highway screenline analysis compares the screenline observed and simulated traffic volume discrepancies with the ODOT standard of maximum desirable deviation. The comparison shows that the model performs at a satisfactory level. For the calibration, OKI used over 3000 traffic counts collected through 2016 by OKI, the Ohio Department of Transportation (ODOT), the Kentucky Transportation Cabinet, the Indiana Department of Transportation (INDOT) and local governments. These traffic counts cover nearly 50% percent of the links in the OKI portion of the modeling network. The methodology provides consistency with past emission inventory and conformity analysis work performed by OKI.

Local Inputs and Post-Model Processing

OKI incorporates a variety of sources of local data to both improve and confirm the accuracy of VMT, as well as other travel-related parameters. Free flow speeds used on the highway and transit networks are based on travel time studies performed locally. The OKI post-processing program, IMPACT, uses the loaded highway network to generate VMT by hour, VMT by speed distribution and VMT by facility type. These tables are then included as input into MOVES. Two separate sets of VMT tables are generated: one for the four Ohio counties plus Dearborn County Indiana, and a second for the three Kentucky counties. The VMT by hour tables utilize hourly traffic distribution and directional split factors for different roadway types as developed by OKI. The main source of the data was the permanent traffic counting stations located throughout the OKI region for the years of 2009-2014. This data was supplemented with data collected at coverage count stations (locations with counts taken on only one-two days). The stations were classified by area type: urban and rural, and functional classification: freeway, arterial and collector. Speeds representing various "loaded" conditions (with traffic volumes) are estimated using techniques from the 1997 Highway Capacity Manual. This permits the estimation of speeds as conditions vary from hour to hour on the different facility types throughout the region. The IMPACT program performs the appropriate summation by area and roadway type as well as regional totals. OKI has also developed seasonal conversion factors to adjust traffic volumes to summer conditions. The factors were derived for June, July and August from local data collected at permanent traffic counting stations.

Emission Factor Models

OKI's conformity assessment utilized U.S.EPA's emission model MOVES2014a to develop emission factors for VOC's, NO_x and PM_{2.5}. The MOVES input files contain local parameters, developed through consultation with state partners, for temperature, fuel programs, fuel characteristics, and vehicle fleet composition. The local parameters are combined with the VMT and speed data from the OKI Travel Demand Model to produce emission factors measured in grams per mile and grams per vehicle for the appropriate analysis year. These emission factors are then multiplied by VMT and vehicle population. The methodologies incorporated into MOVES for estimating emissions are based on methods and research conducted by U.S.EPA. OKI's development of MOVES input values were guided by the U.S.EPA's document "*MOVES2014 and*

MOVES2014a Technical Guidance: Using MOVES to Prepare Emission Inventories for State Implementation Plans and Transportation Conformity”, November 2015.

Table 2 summarizes the settings used in the MOVES run specification file. Table 3 lists the data and sources used in the MOVES County-Data Manager.

Table 2

MOVES RunSpec Parameter	Settings
MOVES2014a-20151201; movesdb20151028	
Scale	County, Emission Rates
Time Span	Time aggregation = Hour July and April weekday, July meteorological data and annual average meteorological data used in place of April data All hours of day selected Weekdays only
Geographic Bounds	Two Custom Domains 1) 4 Ohio counties and Lawrenceburg IN, 2) 3 Kentucky counties
Vehicles/Equipment	All source types available for gasoline,diesel, & ethanol. CNG transit buses
Road Type	All road types including off-network
Pollutants and Processes	VOC, hydrocarbons, NOx and all PM2.5 pollutants. No emissions from refueling.
Strategies	Default
General Output	Units= grams, joules and miles
Output Emissions	Time = hour, Location =county, on-road emission rates by road type and source use type.
Advanced Performance	none

Table 3

MOVES County Data Manager	Data Source
Source Type Population	Local and default. Local data from KYTC (2014) and ODOT (2012) from motor vehicle registration data. Default data used for source types 41, 51, 52, 53, 61 and 62 in Ohio and types 41, 42, 43, 51, 52, 53, 61 and 62 in Kentucky.
Vehicle Type VMT	Local and default. HPMSVTypeYear VMT=daily VMT from OKI travel demand model with EPA’s daily to annual VMT converter applied. MonthVMTFraction = default. dayVMTFraction=default, hourVMTFraction=default.
I/M Programs	No I/M Program. Default setting.

Fuel Supply	Default for Hamilton County, OH and Boone County, KY as representative counties.
Meteorology Data	Local. MOBILE6 converted values for Ohio and Kentucky values from Kentucky Division for Air Quality.
Ramp Fraction	Local. OKI travel demand model.
Road Type Distribution	Local. OKI travel demand model.
Age Distribution	Local and default. Local data from KYTC (2014) and ODOT (2012) from motor vehicle registration data. Default data used for source types 41, 51, 52, 53, 61 and 62 in Ohio and types 41, 42, 43, 51, 52, 53, 61 and 62 in Kentucky.
Average Speed Distribution	Local. OKI travel demand model.

Complete MOVES input and output files are available electronically upon request.

IV. DESCRIPTION OF CONFORMITY TESTS

The selection of analysis years and tests were determined through interagency consultation with federal, state and local partners and in accordance with 40 CFR 23.118(d)(2). The selection of analysis year 2040 represents the “build” condition of the entire *OKI 2040 Regional Transportation Plan*.

Table 4 - Conformity Analysis Years and Tests
Ozone

<u>Ozone</u>	
Attainment status:	Ozone maintenance area – 2008 standard.
Geography:	Butler, Clermont, Clinton, Hamilton, & Warren Counties in Ohio; Boone (partial), Campbell (partial), & Kenton Counties (partial) in Kentucky; Dearborn County (partial) in Indiana
A/Q Budget Status:	8-Hour revised ozone budgets determined adequate and effective 10/12/2016 for OH/IN. <i>Revised ozone budgets in KY are pending adequacy determination.</i>
SIP Commitments:	RVP 7.8 in Ohio Counties (except Clinton) RFG in Kentucky Counties
Conformity Tests:	8-Hour ozone budget tests of OKI Plan/TIP & Clinton Co. TIP analysis year networks. 24-hour summer emissions.
Analysis Years:	2020 Budget year, 2030 Interim year, 2040 Plan horizon year.
Other:	ODOT provided Clinton Co. ozone emissions to OKI. OKI performs conformity analysis for Warren County portion of MVRPC.

Table 5 - Conformity Analysis Years and Tests
PM2.5

<u>PM2.5</u>	
Attainment status:	PM _{2.5} nonattainment area (OH/IN), annual standard PM _{2.5} maintenance area (KY), annual standard. Status continues until US EPA revokes 1997 standard.
Geography:	Butler, Clermont, Hamilton, & Warren Counties in Ohio; Boone, Campbell, & Kenton Counties in Kentucky; Lawrenceburg Twp, Dearborn County Indiana
A/Q Budget Status:	MOVES-based budgets from the revised 1997 PM2.5 SIP.
SIP Commitments:	None
Conformity Tests:	Annual PM _{2.5} budget tests of OKI Plan/TIP analysis year networks
Analysis Years:	2021 Budget year, 2030 Interim year, 2040 Plan horizon year
Other:	PM _{2.5} includes brake and tirewear

V. CONFORMITY DETERMINATION FOR THE OHIO AND INDIANA PORTION OF THE NONATTAINMENT AREA

OKI has determined that the projects in this amended *OKI 2040 Regional Transportation Plan and FY2016-2019 TIP* are consistent with the air quality goals of the SIP and the conformity requirements under the 8-hour ozone standard and the annual PM_{2.5} standard. OKI's quantitative conformity findings for ozone-forming emissions of volatile organic compounds (VOC) and oxides of nitrogen (NO_x) in the Ohio and Indiana portion of the ozone maintenance area are found in Table 10-6. Table 10-7 shows the quantitative conformity finding for annual PM_{2.5} and NO_x emissions in the Ohio and Indiana portion of the PM_{2.5} area. In 2016, Ohio and Indiana are submitted ozone redesignation requests, with revised VOC and NO_x mobile vehicle emission budgets, to U.S. EPA for approval. The revised budgets were determined adequate in October 2016.

Table 6
Quantitative Conformity Findings of Ozone-forming Emissions (tons per day) for the Ohio¹ and Indiana Portion² of the Maintenance Area

	<u>2020</u>	<u>2030</u>	<u>2040</u>
Ohio/Indiana VOC Budget	30.00	18.22	18.22
Ohio/Indiana VOC Emissions	24.16	14.79	10.52
Ohio/Indiana NO _x Budget	30.79	16.22	16.22
Ohio/Indiana NO _x Emissions	24.12	13.10	10.04

Table 7

Quantitative Conformity Findings of PM_{2.5} Emissions (tons per year) for the Ohio and Indiana Portion² of the Maintenance Area

	<u>2021</u>	<u>2030</u>	<u>2040</u>
Ohio Annual Direct PM _{2.5} Budget	1241.19	1241.19	1241.19
Ohio Annual Direct PM _{2.5} Emissions	238.66	187.06	163.68
Ohio Annual NO _x Budget	21747.71	21747.71	21747.71
Ohio Annual NO _x Emissions	7570.78	4595.73	3637.11

¹Includes Clinton County

²Dearborn County emissions are for the nonattainment portion only

- VOC and NO_x emissions in the Ohio and Indiana portion of the ozone area do not exceed the 2020 VOC or NO_x budget for the budget year 2020, the intermediate year 2030, or the Plan year 2040.
- Annual Direct PM_{2.5} and annual NO_x emissions in the Ohio and Indiana portion of the PM_{2.5} maintenance area do not exceed the budget year 2021, the intermediate year 2030, or the Plan year 2040.
- OKI qualitatively finds no factors in the *OKI FY 2018-2021 TIP* or the *OKI 2040 Regional Transportation Plan* that would cause or contribute to a new daily ozone or annual PM_{2.5} violation or exacerbate an existing violation in the years before 2020 for the Ohio and Indiana portion of the nonattainment area.
- OKI qualitatively finds that no goals, directives, recommendations or projects identified in the *OKI FY 2018-2021 TIP* or the *OKI 2040 Regional Transportation Plan* contradict in a negative manner any specific requirements or commitments of the applicable state implementation plan.
- The applicable implementation plans do not contain any transportation control measures (TCM's), therefore; nothing in *OKI FY 2018-2021 TIP* or the *OKI 2040 Regional Transportation Plan* can interfere with their timely implementation.

VI. CONFORMITY DETERMINATION FOR THE KENTUCKY PORTION OF THE MAINTENANCE AREA

OKI has determined that the recommended projects in this *OKI FY 2018-2021 TIP* and the *OKI 2040 Regional Transportation Plan* are consistent with the air quality goals of the SIP and the conformity requirements under the 8-hour ozone standard and the annual PM_{2.5} standard. OKI's quantitative conformity findings for ozone-forming emissions of volatile organic compounds (VOC) and oxides of nitrogen (NO_x) are found in Table 8. In 2016, Kentucky submitted ozone redesignation requests, with revised VOC and NO_x mobile vehicle emission budgets, to U.S. EPA for approval. The revised budgets are for the partial counties included in the nonattainment area. The table 8 shows the pending, partial county budgets and emissions in italics.

Table 8
Quantitative Conformity Findings of Ozone-forming Emissions (tons per day) for the Kentucky
Portion of the Nonattainment Area

	<u>2020</u>	<u>2030</u>	<u>2040</u>
N. Kentucky VOC Budget	8.76	8.76	8.76
N. Kentucky VOC Emissions	3.96	2.25	1.92
<i>Pending N. Kentucky VOC Budget (partial)</i>	4.11	2.82	2.82
<i>N. Kentucky VOC Emissions (partial)</i>	3.46	1.98	1.69
N. Kentucky NO _x Budget	28.13	28.13	28.13
N. Kentucky NO _x Emissions	6.83	2.98	2.30
<i>Pending N. Kentucky NO_x Budget (partial)</i>	7.39	4.37	4.37
<i>N. Kentucky NO_x Emissions (partial)</i>	5.94	2.59	2.00

- VOC and NO_x emissions in the Kentucky portion of the ozone nonattainment area do not exceed the 2020 VOC or NO_x budget for the budget year 2020, the intermediate year 2030, or the Plan year 2040.
- OKI qualitatively finds that no goals, directives, recommendations or projects identified in the *OKI FY 2018-2021 TIP* or the *OKI 2040 Regional Transportation Plan* contradict in a negative manner any specific requirements or commitments of the applicable state implementation plan.
- The applicable implementation plan in Kentucky does not contain any transportation control measures (TCM's), therefore; nothing in the *OKI FY 2018-2021 TIP* or the *OKI 2040 Regional Transportation Plan* can interfere with their timely implementation.

VII. INTERAGENCY CONSULTATION AND PUBLIC INVOLVEMENT

OKI has engaged in consultation procedures with the Indiana Department of Transportation, the Indiana Department of Environmental Management, the Ohio Department of Transportation, the Ohio Environmental Protection Agency, the Kentucky Transportation Cabinet, the Kentucky Division of Air Quality, Miami Valley Regional Planning Commission, the U.S. Environmental Protection Agency, and the U.S. Department of Transportation before making this conformity determination and throughout the conformity process as appropriate. The criteria and procedures for the conformity determination of transportation plans, programs and projects are found in the OKI Transportation Conformity Consultation Memorandum of Understanding as adopted by the OKI Board of Directors in 2008. Interagency consultation for this conformity analysis was initiated on January 25, 2017. This document, in draft form, was distributed via email. Any interagency comments are included below.

The *OKI 2040 Regional Transportation Plan* was developed with significant attention to public involvement in accordance with *OKI's Participation Plan, November 2013*. Notice of the availability of the draft documents, the announcement of the public comment period and the April 10, 2017 public hearing were published in several local newspapers in March 2017.

Beginning March 10, 2017 the draft conformity report was made available for public inspection on OKI's website and at OKI's office. Comments specifically regarding this conformity determination are included in the Appendix. Information on general comments received, and details on the entire public involvement process may be found on in the TIP document. All public comments and the conformity results were reported to the OKI Board of Directors on April 13, 2017.

APPENDIX A
Non-Exempt Project Listing

Non-Exempt Projects Beyond Existing System Included in Transportation Networks

PID	Plan ID	Facility	Location	Description
Additional Non-Exempt Projects Identified for the 2020 Transportation Network				
Kentucky				
Boone				
6-700	523	Veterans Way	Existing Veterans Way between KY 18 and KY 237	2-lane extension of existing Veterans Way between KY 18 and KY 237
6-14.50	153	IR 75	From KY 536 to US 42.	Widen to 10 lanes
6-8001.21	501	KY 237	Valley View to Rogers Lane--Toll credits	Reconstruct and widen to 4 lanes
Campbell				
6-8101.25	0	KY 9	North of 10th Street to 5th Street	Reconstruct KY 9 along a new route
6-8706	611	US 27	MP 17.9 in Pendleton County to MP 1.9 in Campbell County	Widen to 4 lanes
SNK16-15	4981	US 27	Southbound right lane from Marshall Lane south 450'.	Add lane to provide three continuous southbound through-lanes to Johns Hill Road.
Ohio				
Butler				
98852		Salzman Road	Intersection of Todhunter to northern terminus of Salzman, approx. 2,750'	New 2-lane extension from Todhunter Rd. to SR 63. Added as Yankee Rd extension in MTP Amendment#3.
96452	101	CR 19 (Cin-Day Road)	West Chester Road to Station/LeSourdsville West Chester Road	Widening from 2 lanes to 4 lanes
99558	4354	SR 747	Between Princeton and Millikin Roads	Widen from 2 to 5 lanes, Princeton Rd. to Milliken Rd.
Clermont				
82552	448	Clepper Lane	Existing Clepper Lane from Gate Drive to new interchange just east of Elick Lane/Bach-Buxton Road.	2-lane extension of existing roadway. Added as part of Amendment#3 to MTP
82557	207	CR 171 (Old SR 74) Phase 1	Schoolhouse Road to Glen Este-Withamsville Road	Add center turn lane
103755	4363	SR 32	Glen Este Withamsville Road to Olive Branch-Stonelick Road	Construct a third lane EB along SR 32
Warren				
	0	Clearcreek Franklin Road (MVRPC #715)	Whispering Pines to Pennyroyal Road	Add TWLTL from SR 73 to Pennyroyal
93964	339	IR 71	IR 71 at Western Row Road	Convert existing partial interchange to full interchange with new ramps and auxiliary lanes

Non-Exempt Projects Beyond Existing System Included in Transportation Networks

PID	Plan ID	Facility	Location	Description
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Additional Non-Exempt Projects Identified for the 2030 Transportation Network

Kentucky

Boone

6-18.00	120	IR 75/KY 338 Interchange	KY 338 (Richwood Road) Interchange	Add 2 lanes (DCD) at I-75 interchange
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Campbell

6-8105.00	5027	I-275/AA Connector	Between I-275 and the AA Highway (KY 9)	Construct a new connector road
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6-8105.06	5027	I-275/AA Connector	Johns Hill Road to AA Highway (KY 9) Toll credits as match	New 2-lane road with center turn lane
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	601	I-471	US 27 to Ohio State line	Widen to four lanes to improve safety and reduce congestion
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6-8104.00	303	IR 471	KY 8 interchange	Construct a new southbound off-ramp from I-471 to KY 8
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6-352	335	KY 536	US 27 to AA Highway (KY 9)	Extension of existing roadway
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Kenton

	701	Brent Spence Bridge	I-71/I-75 bridge over the Ohio River to Dixie Hwy Interchange	New 8 lane I-75 bridge west of current BSB. Widen 1 lane each direction to Dixie.
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6-17.03	702	IR 75	MP 191.277 to 191.777--Brent Spence Bridge	KY portion of Brent Spence Bridge replacement
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	4975	KY 536	Norfolk Southern RR bridge to KY 17	Widen to 4 lanes on existing and new alignment.
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6-162.01	715	KY 536	Boone County Line to KY 17--toll credits	Widen to 4 lane divided roadway
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Ohio

Butler

	107	SORTA Liberty Twp Park & Ride Lot	Vicinity of SR 129 and Cincinnati-Dayton Rd	Utilize ODOT/BCTID Liberty Twp P&R; extend Rt 42X to new location. Replace leased facility w new P&R
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	4863	S. Gilmore Rd	Resor Rd to Mack Rd	Widen to 4 lanes
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	4870	Grand Blvd	SR 4 to Five Points	Widen to 4 lanes
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	4871	Tylersville Rd	Bypass 4 to Five Points	Widen to 4 lanes with TWLTL
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	4902	BCRTA New Service connecting Hamilton and Liberty	Vicinity of SR 129 and Cincinnati-Dayton Rd	Add BCRTA service connection from Liberty Twp/Liberty Center to Market Street Station in Hamilton
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	4354	SR 747	Milliken Rd to SR 4 (N. Jct)	Widen to 5 lanes
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	4865	US 127	Augusta Blvd to Patterson Blvd	Widen 3 lanes to Resor, 4 lanes to Wessel, 5 lanes to Patterson
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Clermont

	4894	Aicholtz Rd	Eastgate Blvd to Glen-Este-Withamsville Rd	Widen to 4 lanes
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Hamilton

	301	Brent Spence Bridge	IR 71/IR 75 bridge over the Ohio River to Western Hills Viaduct	Construct new I-71/I-75 bridge adjacent to the existing Brent Spence Bridge
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	321	Eastern Corridor Oasis Line Segments 1, 2, 3 & 4	Oasis Rail Line (downtown Cincinnati to Milford)	Rail transit plus feeder bus. PID 86463
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	3773	Wooster Rd	Beechmont Ave to Red Bank Rd	Add TWLTL from Beechmont to Red Bank Road
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	102	Babson/Hetzel Connector	Terminus of Babson PI to Old Red Bank Rd	New 2 lane connection
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	103	Old Red Bank Rd	Medpace Dr to Erie Ave	Rebuild bridge over RR and improve roadway with pedestrian facilities
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	1526	Ebenezer Rd	Werk Rd to Rapid Run Pk (Green Township)	Add TWLTL
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88135	313	GE Parkway	Shepherd Lane to Glendale Milford Road	Add local roadway connection on eastside of IR 75. TTV Phase 2
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Non-Exempt Projects Beyond Existing System Included in Transportation Networks

PID	Plan ID	Facility	Location	Description
Additional Non-Exempt Projects Identified for the 2030 Transportation Network				
98109	304	Elmore Street Connector	West of IR 74 to Central Parkway near Cincinnati State Technical College	New 2-lane connector from west side of I-75 to Central Pkwy near Cincinnati State.
89077	301	IR 71	Part of the Brent Spence Bridge project	Ohio's share of design and construction of the new Ohio River Bridge
94741	338	IR 71	0.1 mi south of Williams Avenue Overpass to 0.04 mi north of Red Bank (SLM 6.86-9.74)	Widen northbound IR-71 to provide three continuous through lanes through the SR-562 interchange.
104668	0	I-74	I-74/75 Interchange	MCE Ph5B, split from PID 83723. Interchange and I-75 ramps to I-74 WB
104667	3150	IR 75	Phase 5A, split off from PID 83723. Environmental and R/W under PID 83723	Adds a lane to SB IR 75, provides 4 lane continuity NB and reconfigures IR 74 EB ramps to IR 75
76256	316	IR 75	Glendale Milford Road to IR 275	Add 4th lane each direction with an auxiliary lane where warranted, upgrade interchanges. TTV Ph8
77889	307	IR 75	From south of SR 562 to north of SR 4	Widen for additional through lanes, reconstruct interchanges as needed. MCE Phases 8 and 8A
82288	312	IR 75	0.3 mi S of Shepherd to 0.2 mi N of Glendale-Milford	Reconstruct IR 75 between Shepherd Lane and Glendale-Milford Road. TTV Phase 1
83723	304	IR 75	Monmouth overpass to just south of Clifton	Add a lane to IR 75 and reconfigure the IR74/75 interchange. MCE Phase 5
88124	314	IR 75	From bridge at 10.10 (over Mill Creek) to SR 126	Add 4th lane in each direction and associated improvements. TTV Phase 3
88132	314	IR 75	Galbraith Road to Shepherd Lane, SB only	Add one lane SB. TTV Phase 5
88133	314	IR 75	Between Galbraith and Shepherd Roads	Add 4th lane and auxiliary lane for NB IR 75. TTV Phase 6
89068	301	IR 75	Brent Spence Bridge (Ohio only)	Brent Spence Bridge replacement (Ohio portion)
Warren				
	3353	Union Rd	SR 63 to SR 123 interchanges	Widen to 4 lanes with connection to Gateway Blvd. Extension
	1500	Snider Rd	Fields Ertel to Hunters Green Dr	Widen to 4 lanes
103753	3678	SR 741	Between Spy Glass Hill and Weldon Drive	Widen SR 741 to 2 travel lanes each direction with left turn lanes at all intersections.

Non-Exempt Projects Beyond Existing System Included in Transportation Networks

PID	Plan ID	Facility	Location	Description
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Additional Non-Exempt Projects Identified for the 2040 Transportation Network

Kentucky

Boone

	4656	I-275	Graves Rd	New interchange at Graves Road
6-8000.20	108	IR 275	I-275/KY 212 Interchange and KY 20 reconstruction	Airport access interchange improvements with new ramp I-275 WB to KY 212 SB and upgrade KY 20

Campbell

	4977	NKY Streetcar Phase 1	Newport	Extension of Cincinnati Streetcar to Newport (Phase 1)
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Kenton

	710	KY 16 (Taylor Mill Rd)	KY 2047 (Senour Rd) to KY 536 (Harris Pike)	Widen to 5 lanes
	4677	KY 536	Staffordsburg Rd to Campbell County line	Reconstruct on new alignment with multi use path as recommended by KY 536 Scoping Study
	716	KY 536	KY 17 (Madison Pike) to Staffordsburg Rd	Reconstruct on existing and new alignment with bike/ped facilities KY 536 Scop
	709	KY 1303 (Turkeyfoot Rd)	Dudley to US 25 (Dixie Hwy)	Widen to 4 lanes from I-275 to US25 (Dixie Hwy)
	4666	KY 1303 (Turkeyfoot Rd)	Crestview Hills Mall Rd and Thomas Moore Pkwy intersections	Relocate the intersection of Crestview Hill Mall Rd to improve traffic flow

Ohio

Butler

	4869	Black Street Bridge	Over Great Miami River	Replace 2 lane bridge with new 4 lane bridge
	3609	River Rd	Williams Ave to St Clair Ave	Widen to 4 lanes
	3626	Butler-Warren/Cox Connector Rd	Bethany Rd to SR 63	New facility. 5 lane route from Cox Rd. to SR 63
	3735	Cincinnati-Dayton Rd	Milliken Rd to Monroe South Corp Line	Add TWLTL
	108	Bethany Rd	Cincinnati Dayton Rd to Butler Warren Rd	Widen to 4 lanes
	3662	I-75	Milliken Rd	New interchange at Milliken and widen Milliken from Cin-Day to Butler-Warren
	104	SR 128	Rossgate Ct to Cincinnati-Brookville Rd	Add TWLTL
	257	US 27	South of Oxford between SR 732 and US 27	New 2-lane connector

Clermont

	201	Aicholtz Rd Extension	Glen Este-Withamsville Rd to Bach-Buxton Rd	New 3 lane extension
	2621	Branch Hill - Guinea Pike	SR 28 to Wards Corner Rd	Add TWLTL
	235	SR 32	SR 32/Main St interchange in Village of Batavia	Convert existing half interchange to full.
	205	SR 32	Glen Este-Withamsville Dr to Old SR 74	Grade separation at Glen-Este and add 1 lane each direction between GEW and Old 74
	3701	SR 32 (Frontage Rd)	Bauer Rd to Half Acre Rd	New three-lane frontage road with turn lanes at major intersections. PID: 82586
	3646	SR 32	1000' west of existing Herold Rd intersection on SR 32	Replace intersection with new grade separated interchange

Hamilton

	3736	Fields Ertel Rd	Reed Hartman Hwy to IR 71 (Warren Co - Butler Warren Rd to Wilkens Rd) widen to 5 lanes	Add TWLTL
	3338	Ancor Connector	Between Broadwell Rd and SR 32, east of Roundbottom Rd	Construct a two-lane facility with appropriate turn lanes
	3667	North Bend Rd	Kleeman Rd to Westwood Northern Blvd	Widen to 4 lanes

Non-Exempt Projects Beyond Existing System Included in Transportation Networks

PID	Plan ID	Facility	Location	Description
Additional Non-Exempt Projects Identified for the 2040 Transportation Network				
1521		New Haven Rd	I-74 to Harrison (City of Harrison)	Continue with 2 lanes each direction to Harrison Avenue
3651		Cheviot Rd	Tallahassee Dr to Jessup Rd	Widen to 4 lanes
3703		I- 275	US 52 to Five Mile Rd	Widen to 3 lanes each direction
3615		US 42 (Reading Rd)	Dorchester St to Burnet Ave	Provide 5 lanes and intersection improvements
Warren				
3746		Gateway Blvd	Gateway Blvd Extension north from SR 63 to Union Rd	4 Lane Extension to Union Road
3705		Gateway Blvd	Gateway Blvd Extension to Butler/Warren/Cox Extension	5 Lane Extension
3778		Greentree Rd	SR 123 to Cox Road Extension	Widen to 4 lanes from Cox Road Ext. to SR123
3698		Mason-Morrow-Millgrove Rd	US 42 to Columbia Rd	Widen to 5 lanes
402		Bethany Rd	West Mason Corp Limit to Mason-Morrow-Millgrove Rd	Widen to 5 lanes and extend Bethany to Mason-Morrow-Millgrove
406		Mason Montgomery Rd	Fields Ertel Rd to Socialville Fosters Rd	Widen to 6 lanes
0		I-75 (MVRPC #338G)	Pennyroyal Lane to I-675 in Montgomery Co.	Widen from 6 to 8 lanes from approximately Pennyroyal Lane to I-675.
4811		SR 48	I-71 to Kingsview Dr	Widen to 6 lanes
3740		SR 48	Mason-Morrow-Millgrove Road to Stephens Rd (south of US 22/3)	Widen to 4 lanes
3631		SR 48	Miller Rd to SR 122	Widen to 4 lanes
4810		SR 48	I-71 to Mason-Morrow-Millgrove	Widen to 6 lanes
3713		SR 63	Union Rd to SR 741	Widen to 4 lanes
3699		SR 741	SR 63 to Greentree Rd	Widen to 4 lanes
3678		SR 741	Parkside Dr to US 42	Widen to 4 lanes with TWLTL
3720		SR 741	SR 63 to US 42	Widen to 4 lanes

APPENDIX B
Interagency Consultation and
Public Comments

NO COMMENTS RECEIVED