## PREFACE | ABSTRACT, ACKNOWLEDGEMENTS, AND CONTENTS

February 2013

## **KYOVA 2040 Metropolitan Transportation Plan (MTP)**

### **KYOVA Interstate Planning Commission**

400 Third Avenue Huntington, West Virginia 25701

www.wvs.state.wv.us/kyova/

The contents of this report reflect the view of KYOVA Interstate Planning Commission, which is responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the West Virginia Division of Highways, the Ohio Department of Transportation, or the U.S. Department of Transportation, Federal Highway Administration and Federal Transit Administration. This report does not constitute a standard, specification, or regulation.

May 2013







### **Abstract**

TITLE: KYOVA 2040 Metropolitan Transportation Plan<sup>1</sup>

AUTHORS: KYOVA Interstate Planning Commission

Kimley-Horn and Associates, Inc. (lead consultant)

SUBJECT: The development of the year KYOVA 2040 Metropolitan Transportation Plan (MTP)

was accomplished by the means of a qualitative and quantitative analysis of all factors required by the Moving Ahead for Progress in the 21st Century Act (MAP-21)—signed into law on July 6, 2012—and in cooperation with the West Virginia Department of Transportation, Ohio Department of Transportation, Federal Highway Administration (FHWA), Federal Transit Administration (FTA), Tri-State Transit Authority (TTA),

and Lawrence County Public Transit System.

DATE: May 2013

**SOURCE:** KYOVA Interstate Planning Commission

400 Third Avenue <a href="www.wvs.state.wv.us/kyova/">www.wvs.state.wv.us/kyova/</a>

Huntington, West Virginia 25701

<u>AUTHORIZED OFFICER:</u> Michele Craig, Executive Director <u>mcraig@ntelos.net</u>

**ABSTRACT:** This document describes the process of the development of the KYOVA 2040 MTP.

The KYOVA 2040 MTP recommends the region's transportation system needs through 2040, based on best analysis of current conditions and projected needs and guided by the complex requirements of the Moving Ahead for Progress in the 21st Century Act (MAP-21) and Clean Air Act Amendment (CAAA). The KYOVA 2040 MTP recognizes the relationship between transportation facilities, employment, population, goods movement, land use, and air quality. The KYOVA 2040 MTP emphasizes maintaining and increasing the operating efficiency of the existing system before expensive new facilities are considered. It recognizes that improvement to river, rail, air, trail, and transit systems are equally important as improvement to the highway system. It is estimated that \$6.7 billion in WVDOT, ODOT, FTA and FHWA funds will be available through 2040 to fund capital, maintenance, and operation projects.

### 1 KYOVA 2040 MTP Development Schedule

• 03/01/2013—First Draft KYOVA 2040 MTP✓

• 05/03/2013—Final Draft✓

### **KYOVA Staff Members**

Michele Craig, Executive Director

Saleem A. Salameh, Technical Study Director

Jody Sigmon, Associate Planner/GIS

Bethany Wild, Associate Planner/GIS Specialist

Dora A. Young, Fiscal/Office Manager Danielle Slusher, Secretary/Bookkeeper

Cara Adams, Administrative Assistant/Data Entry Clerk

#### RESOLUTION

#### KYOVA INTERSTATE PLANNING COMMISSION

2040 METROPOLITAN TRANSPORTATION PLAN AND 2014-2017 TRANSPORTATION IMPROVEMENT PROGRAM (TIP) CONFORMITY DETERMINATION WITH 1990 CLEAN AIR ACT AMENDMENTS

WHEREAS, the KYOVA Interstate Planning Commission (KYOVA) is the officially designated Metropolitan Planning Organization (MPO) for transportation planning in the Huntington, West Virginia, Ashland, Kentucky and Ironton, Ohio Metropolitan Area.

WHEREAS, KYOVA is responsible for developing 2040 Metropolitan Transportation Plan and a fouryear Transportation Improvement Program for the Huntington, Ashland, Ironton, and completed the modeling process for the purposes of air quality analysis/conformity Analysis.

WHEREAS 40 CFR Parts 51 and 93 of the Final Rule under the Clean Air Act Amendments of 1990 requires the MPO to use latest and most current information and data to determine Air Quality Conformity for the 2040 Metropolitan Transportation Plan for the Huntington-Ironton MSA, and;

WHEREAS, the KYOVA Interstate Planning Commission has, in coordination with the West Virginia Department of Transportation, Division of Highways; the West Virginia Department of Environmental Protection, Division of Air Quality; Kentucky Transportation Cabinet and the Ohio Department of Transportation determined that the 2040 Transportation Plan and 2014-2017 TIP is in conformity, and;

WHEREAS, the selection priorities, design concept, and scope of projects from the current TIP have not changed as a result of the adoption of this plan. Therefore, the conformity determination of the TIP is unchanged and is consistent with the conformity determination of the transportation plan. The adoption of the Air Quality Conformity Determination for the Transportation Plan reaffirms the Air Quality Conformity Determination, for the TIP.

NOW, THEREFORE BE IT RESOLVED THAT: KYOVA determines that there is conformity between the adopted FY 2040 Metropolitan Transportation Plan and the West Virginia and Ohio State Implementation Plan for the attainment of the National AirQuality Ambient Quality Standards (NAAQS), as described below.

KYOVA determines that the MetropolitanTransportation Plan and the Transportation Improvement Program as endorsed for the Huntington-Ironton MSA conforms to the West Virginia and Ohio State Implementation Plans, by supporting their intentions of achieving and maintaining NAAQS.

KYOVA assures that the adopted Transportation Plan contains no goals, directives, recommendations, or projects, which contradict any requirements or commitments of the West Virginia or Ohio State Implementation Plans.

Based upon the attached support documentation, KYOVA has determined that the adopted Transportation Plan will contribute to annual reductions in ozone emissions in the area for the maintenance -attainment area for 8 Hour ozone Standard of Ambient Air Quality and Particulate Matter (PM 2.5) Standards (NAAQS) compliance. Based upon the same support documentation, KYOVA further determined that the 2040 Metropolitan Transportation Plan and 2014-2017 Transportation Improvement Program does not increase the emissions of ozone precursors in the future, in excess of the emissions budget included in the State Implementation Plan.

Jason Stephens

KYOVA Interstate Planning

Commission

Michele P. Craig, Executive Director KYOVA Interstate Planning Commission

March 1, 2013

#### RESOLUTION

- WHEREAS, Moving ahead for progress in the 21<sup>st</sup> Century (MAP-21) requires a Transportation Improvement Program (TIP) be adopted by each Metropolitan Planning Area, and;
- WHEREAS, KYOVA Interstate Planning Commission (KYOVA) is the Metropolitan Planning Organization for the Huntington, Ashland, Ironton Metropolitan Area, conducting the Huntington, Ashland, Ironton Area Transportation Study (HAIATS), and;
- WHEREAS, The Huntington, Ashland, Ironton Area Transportation Study has met the provisions of the (MAP-21), in the Transportation Improvement Program (TIP) for Fiscal Years 2014-2017.
- WHEREAS, The selection priorities, design concept and scope of projects from the current TIP have not changed as a result of the adoption of this plan, therefore the conformity determination of the TIP is unchanged and is consistent with the conformity determination of the transportation plan. The adoption of the Air Quality Conformity Determination for the Transportation Plan reaffirms the Air Quality Conformity Determination for the TIP.
- NOW, THEREFORE BE IT RESOLVED, that the KYOVA Interstate Planning Commission adopt the Transportation Improvement Program (TIP) for the Fiscal Years 2014-2017. To become effective upon its inclusion in the State's Transportation Improvement Program (STIP) and its adoption by FHWA and FTA at the beginning of their fiscal year.

Jason Stephens, Chairman XYOVA Interstate Planning Commission

Date: March 1, 2013



## Acknowledgements

On behalf of the project team, the KYOVA Interstate Planning Commission thanks the diverse group of participants whose input was instrumental to create a blueprint for a safe and sustainable transportation system that provides real choice among modes of travel. The KYOVA 2040 Metropolitan Transportation Plan is the direct result of a collaborative effort between the MPO and its member jurisdictions with support from the West Virginia and Ohio Departments of Transportation, numerous federal agencies, and a host of stakeholders. We extend our sincere appreciation to the elected officials, residents, stakeholders, and local staff who participated in the planning process and guided the development of this plan. Everyone's time, input, and energy are greatly appreciated.

### **KYOVA**

Michele Craig, Executive Director Saleem Salameh, Technical Study Director Jody Sigmon, Associate Planner Bethany Wild, Associate Planner Dora A. Young, Fiscal/Office Manager Danielle Slusher, Secretary/Bookkeeper

Cara Adams, Administrative Assistant

### **Consultant Team**

### Kimley-Horn and Associates, Inc.

HDR Engineering, Inc.
Michael Baker Corporation
RLS & Associates, Inc.
E.L. Robinson, Inc.

### **Steering Committee**

Tom Bell - Huntington Municipal Development Authority

Rich Blankenship - Mayor, City of Ironton

Jerry Brienza – Huntington Tri-State Airport

Douglas Cade - Lawrence County Engineer

Nancy Cartmill - Cabell County Commission

Randy Cheetham – CSX

Paul Davis - Tri-State Transit Authority

Bill Dingus – Lawrence County Chamber of Commerce

Greg Farley - Wayne County Sheriff

Dave Graley - Cabell Huntington Hospital Foundation

David Hagley - City of Huntington Public Works

Charles Holley – Huntington Planning Department

Dan Jeffries- Prestera Trucking

Ralph Kline - Ironton-Lawrence County Area CAO

Dr. Stephen Kopp - President, Marshall University

Jeff Lawless – Lawrence County Sheriff

Matt Mannis - Superior Marine

Drew Marrs - Nofolk Southern

Brent Marsteller - Cabell Huntington Hospital

Tom McComas – Cabell County Sheriff

A. Gordon Merry – Cabell County EMS

Bob Pasley - Wayne County Commission

Rob Pennington – WV Division of Highways

Don Perdue - Wayne County Economic Development Authority

Bob Plymale – Rahall Transportation Institute

Lake Polan – Allied Logistics

Michael Sellards – St. Mary's Medical Center

Marc Sprouse – HADCO

Jason Stephens – Lawrence County Auditor

Chris Tatum – Village of Barboursville

Ty Thompson – Ohio Department of Transportation

James Turner - Huntington Regional Chamber of Commerce

Bill Willis – Wayne County EMS

Kim Wolfe – Former Mayor, City of Huntington



# **Table of Contents**

Chapter 1   Introduction and vision	
Background	1-1
Planning Process	1-7
Vision, Guiding Principles, and Goals	1-18
Plan Organization	1-24
Chapter 2   Social and Environmental Element	
Introduction	2-1
Socioeconomic Conditions	2-3
Environmental Assessment	2-22
Conclusion	2-25
Chapter 3   Roadway Element	
Introduction	3-1
Corridor Characteristics	3-3
Recommendations	3-18
Chapter 4   Safety and Security Element	
Introduction	4-1
Safety Element	4-4
Security Element	4-26
Additional Considerations	4-31
Chapter 5   Bicycle and Pedestrian Element	
Introduction	5-1
Facility Recommendations	5-5
Program and Policy Issues	5-22
Additional Considerations	5-24
Chapter 6   Transit Element	
Introduction	6-1
Existing Conditions	6-2
Service Analysis	6-27

Chapter 7   Aviation, Freight, Maritime, and Rail Element	
Introduction7-1	
Existing Conditions7-3	
Recommendations	
Chapter 8   Land Use Considerations	
Land Use and Urban Form8-1	
Urban Form and Travel Behavior8-2	
Influence of Urban Form – The Four D's 8-3	
Accommodating Future Growth8-6	
Suitability Assessment8-9	
Chapter 9   Financial Plan	
Introduction9-1	
Financial Plan Scenarios9-2	
Transportation Funding Sources9-16	
Chapter 10   Implementation Plan	
Introduction10-1	
Implementation Philosophy10-2	
Guiding Principles10-4	
Conclusion	
Chapter 11   Air Quality Conformity	
Introduction11-1	
Methodology11-2	
Results Summary11-9	



# **Figures**

Chapter 1 — Introduction and Vision	
Figure 1.1 – Study Area.	1-5
Chapter 2 — Social and Environmental Element	
Figure 2.1 – Percent Minority Population.	2-5
Figure 2.2 – Percent Elderly Population	2-7
Figure 2.3 – Population Density	2-11
Figure 2.4 – Percent Low Income Population	2-15
Figure 2.5 – Percent No Vehicle Population	2-19
Figure 2.6 – Environmental Context	2-23
Chapter 3 — Roadway Element	
Figure 3.1 – Existing (2010) Traffic Volumes	3-7
Figure 3.2 – Base Year Congestion (2010)	3-11
Figure 3.3 – Existing+Committed Congestion (2040)	3-15
Figure 3.4 – 2040 Roadway Recommendations	3-21
Figure 3.4a – 2040 Roadway Recommendations (Huntington Detail)	3-23
Chapter 4 — Safety and Security Element	
Figure 4.1 – Intersection Recommendations	4-7
Figure 4.1a – Intersection Recommendations (Huntington Detail)	4-9
Figure 4.2 – Incident Management Improvements	4-35
Traffic and Safety Study for US 52 and SR 7 (Figure 14 – Western Corridor Alternatives)	4-39
Traffic and Safety Study for US 52 and SR 7 (Figure 15 - Central Corridor Alternatives)	4-41
Traffic and Safety Study for US 52 and SR 7 (Figure 16 – Eastern Corridor Alternatives)	4-43
Chapter 5 — Bicycle and Pedestrian Element	
Figure 5.1 – Preliminary PATH System	5-9
Figure 5.2 – Bicycle and Pedestrian Recommendations	
Chapter 6 — Transit Element	
Figure 6.1 – TTA West Virginia Routes	6-3
Figure 6.2 – TTA Lawrence County Routes	6-9
Figure 6.3 – Wayne Express Routes	6-13
Chapter 7 — Aviation, Freight, Maritime, and Rail Element	
Figure 7.1 – Aviation Facilities	7-7
Figure 7.2 – Aviation Recommendations	
Figure 7.3 – Freight, Maritime, & Rail Recommendations	
Chapter 8 — Land Use Considerations	
Figure 8.1 – Future Growth Classification	8-13
Chapter 9 — Financial Plan	
Figure 9.1 – Financially Constrained Roadway Recommendations	9-11
Figure 9.2 – Financially Constrained Congestion (2040)	



# **Selected Tables**

Chapter 3 — Roadway Element	
Table 3.2 – HIATS 2012-2015 TIP Projects	3-13
Table 3.3 – Prioritization Matrix	3-25
Chapter 4 — Safety and Security Element	
Table 4.2 – HIATS 2012-2015 TIP Projects	4-3
Chapter 5 — Bicycle and Pedestrian Element	
Table 5.2 – Bicycle Recommendations – Lawrence County, Ohio	5 13
Table 5.3 – Bicycle Recommendations – Lawrence County, Onlo	
Table 5.4 – Bicycle Recommendations – Wayne County, West Virginia	
, , , , ,	5-21
Chapter 6 — Transit Element	
Table 6.20 – Proposed Lawrence County Routes	
Table 6.21 – Current and Proposed Route Frequencies	6-33
Chapter 7 — Aviation, Freight, Maritime, and Rail Element	
Table 7.1 – Top 10 Truck Commodities Originating by Tonnage	7-10
Table 7.2 - Top 10 Truck Commodities Terminating by Tonnage	7-10
Table 7.5 – Major Commodities Shipped by Direction	7-14
Table 7.6 – Inbound and Outbound West Virginia Rail Tonnage	7-17
Chapter 8 — Land Use Considerations	
Table 8.1 – Character Area Density Range	8-9
·	
Chapter 9 — Financial Plan Table 9.1 – 2040 LRTP Revenue Forecast (Cabell and Wayne Counties)	0.2
Table 9.2 – 2040 LRTP Costs (Cabell and Wayne Counties)	
Table 9.3 – 2040 LRTP Costs (Cabell and Wayne Country)	
Table 9.4 – 2040 LRTP Costs (Lawrence County)	
· · · · · · · · · · · · · · · · · · ·	
Table 9.5 – Highway Costs and Revenues (Cabell and Wayne Counties)	
Table 9.7 – Roadway Project Cost Estimates (2030 Horizon)	
Table 9.9 – Roadway Project Cost Estimates (2040 Horizon)	
Table 9.10 – Pedestrian & Bicycle Costs and Revenues (Cabell and Wayne Counties)	
Table 9.11 – Pedestrian & Bicycle Costs and Revenues (Lawrence County)	
Table 9.12 – Transit Costs and Revenues (TTA and Wayne Express)	
Table 9.13 – Transit Costs and Revenues (Lawrence County Port Authority)	9-15
Chapter 10 — Implementation Plan	
Table 10.1 – Roadway Element Recommendations	
Table 10.2 – Safety and Security Element Recommendations	
Table 10.3 – Bicycle and Pedestrian Element Recommendations	
Table 10.4 – Transit Element Recommendations	
Table 10.5 – Aviation, Freight, Maritimes, and Rail Element Recommendations	10-10
Chapter 11 — Air Quality Conformity	
Table 11.1 – 8-Hour Ozone Motor Vehicle Emission Budgets	11-1
Table 11.2 – HPMS Vehicle Type VMTs	
Table 11.3 – Projected NOx and VOC Emissions	11-9