

**COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS
DIVISION OF PLANNING**



**ANNUAL PERFORMANCE AND
EXPENDITURE REPORT
FOR
FISCAL YEAR 2016 ANNUAL WORK PROGRAM
PROJECT SP 0016 (001)
JUNE 16, 2015 THROUGH JUNE 15, 2016**

SEPTEMBER 2016

Introduction

The Annual Performance and Expenditure Report is required under 23 CFR 420.117. This document outlines the transportation planning activities conducted by the Kentucky Transportation Cabinet (KYTC) under Planning (Part I) of the SPR work program for the period of June 16, 2015 through June 15, 2016 (Fiscal Year 2016).

Many issues faced the Division of Planning during the period of this work program. Many analyses, studies, and traffic forecasts were initiated during the past year to support the KYTC lettings. The Division continued to work to increase our utilization of our roadway data management software, Highways by EXOR. Improvements to the quality of the data were made through collection efforts with our Area Development District (ADD) partners, and efficiencies in this program resulted in our ability to collect updated data quicker than was previously expected. Planning continued work with our ADD partners to maintain the digital base map of roadways and utilize that information to create visual representations of the state highway systems for use by KYTC, other agencies, and the general public. The Division continued efforts at intermodal planning and completed an update of the Rail and Freight Plan. The Division made great efforts to aid the Cabinet and our MPO partners in reviewing various Notices of Proposed Rule Making. We worked closely with the Office of Special Programs in getting CMAQ, TE, and Safe Routes to School projects into the MPO Transportation Improvement Programs so funding could be authorized. The Division made great strides in developing a framework for a data driven project prioritization during the 2016 plan and began modifications to ensure the process is ready for complete implementation for the 2018 plan.

All these activities occurred while the Division of Planning continued to collect necessary data, manage and report the data as required, respond to requests for data both within and outside the Cabinet, forecast future transportation demands, plan for the transportation needs within the Commonwealth, coordinate with our rural and metropolitan planning partners, address air quality concerns, support project selection for the Six-Year Highway Plan and Statewide Transportation Improvement Program, and address other State and Federal requirements.

Attached are accomplishments for each chapter of the FY 2016 Work Program. Expenditures are summarized in the document showing the initial budget, expenditures, and percentages of expenditures.

FY 2016
SPR CHAPTER FUNDING SUMMARY

<u>CHAPTER AND TITLE</u>		<u>BUDGETED</u>	<u>EXPENDED</u>
1	SPR Work Program	\$43,000	\$3,674
2	Personnel Training	\$121,100	\$135,971
3	Traffic and Equipment Management	\$2,508,800	\$1,616,999
4	Roadway Systems	\$629,300	\$401,175
5	Cartography	\$506,400	\$222,113
6	Highway Information System	\$1,835,800	\$1,165,331
7	Strategic Corridor Planning	\$2,208,200	\$1,500,213
8	Statewide Transportation Planning	\$1,351,600	\$1,463,652
9	Metropolitan Planning Organizations	\$581,800	\$374,122
10	Performance Measures and Congestion/Mobility Analysis	\$207,700	\$188,202
11	Air Quality	\$70,100	\$62,330
12	Multimodal Transportation	\$514,800	\$294,860
13	Traffic Data Forecasting	\$809,000	\$372,465
14	Bicycle and Pedestrian Program	<u>\$120,300</u>	<u>\$178,379</u>
	Planning Total	\$11,507,900	\$7,979,495
	Percent Expended		69%
15	Highway Safety Improvement Program	\$500,000	\$323,404
16	Value Engineering and Quality Assurance	<u>\$500,000</u>	<u>\$358,422</u>
	Other Items Total	\$1,000,000	\$681,826
	Percent Expended		68%
	TOTAL	\$12,507,900	\$8,661,321
	Percent Expended		69%

CHAPTER 1

SPR Work Program

RESPONSIBLE UNIT

Division of Planning
Customer Service Branch

PURPOSE AND SCOPE

The Customer Service Branch in the Division of Planning is responsible for administrative, budgetary, and expenditure tracking activities directly attributable to the completion of the SPR Planning Work Program chapters.

PROPOSED ACTIVITIES FOR 2015-2016

- Coordinate with all other branches in the Division of Planning in order to prepare the annual SPR Planning Work Program.
The Customer Service Branch created well over 400 pieces of correspondence in the form of memos and letters. Almost all of which were related to processing contracts, MOAs, letter agreements and other activities related to the SPR Work Program. 100% Complete
- Prepare monthly expenditure reports for each chapter of the SPR Planning Work Program.
Ran 12 expenditure reports, one per month. 100% Complete
- Update accomplishments of the SPR Planning Work Program quarterly.
Ran 12 expenditure reports, one per month. Communicated the results of those reports to branch managers and District Office Planning Supervisors quarterly to assist them in reporting quarterly accomplishments. 100% Complete
- Coordinate and prepare the annual SPR Planning Work Program and Accomplishments and Expenditures Report.
Ran final expenditure reports and reported total expenditures as well as percentage of budgeted amounts. Prepared FY 2014 Work Program. 100% Complete

PRODUCTS

The Internal Customer Service Section will coordinate and prepare the annual SPR Planning Work Program and the annual SPR Planning Work Program Accomplishments and Expenditures Report. This Section will also prepare and distribute to other Branches monthly expenditure reports for all chapters in the SPR Planning Work Program. The Internal Customer Service Branch will update accomplishments to the SPR Planning Work Program quarterly and distribute these updates to other Branches.

DISTRIBUTION OF ESTIMATED COST FOR 2015-2016

	2015-2016	Expended	Percent Expended
PERSONNEL	\$43,000	\$3,674	1%
OTHER			
TOTAL	\$43,000	\$3,674	1%

CHAPTER 2

Personnel Training

RESPONSIBLE UNIT

Division of Planning

PURPOSE AND SCOPE

The training of personnel is essential to the transportation program in order to keep pace with changing techniques and evaluate new procedures and developments as well as to help better develop the abilities of employees as they assume the vacated duties brought on through mass retirements, promotions, and transfers. This is particularly essential to the Cabinet’s programs as more efficient and detailed technical analyses and assistance are required.

PROPOSED ACTIVITIES FOR 2015-2016

An effort will be made to continue a level of staff training which will maintain the integrity of professional career development and improvement of technological skills. Such training will include, but not be limited to the following workshops, classes, and conference or like training. This will not include registration fees to attend annual meetings or conferences except fees for portions of such conferences that do provide eligible training. We will also provide annual in-state Traffic Count Technician Training for District personnel. Training for Highway District Office Planning personnel, ADD personnel, and MPO personnel in procedures, regulations, technical issues, etc., may also be included as necessary to provide for improved coordination and efficiency within and between the Statewide and Metropolitan planning efforts.

SEE THE FOLLOWING 3 PAGES FOR PROPOSED TRAINING AND CONFERENCES

PRODUCTS

Personnel with career development opportunities, improved technological skills, broadened knowledge, enhanced capabilities, and more efficient operation.

DISTRIBUTION OF ESTIMATED COST FOR 2015-2016

	2015-2016	Expended	Percent Expended
PERSONNEL	\$86,100	\$107,424	125%
OTHER	\$35,000	\$28,546	82%
TOTAL	\$121,100	\$135,971	112%

Other

- Other Operational Cost \$35,000
For items such as travel, mileage, equipment and other cost directly associated with the completion of this work chapter.

Chapter 2 Personnel Training

	SPR Work Program	Personnel Training	Traffic and Equipment Management	Roadway Systems	Cartography	Highway Information System	Strategic Corridor Planning	Statewide Transportation Planning	Metropolitan Planning Organizations	Performance Measures and Congestion/ Mobility Analysis	Air Quality	Multimodal Transportation	Traffic Data Forecasting	Bicycle and Pedestrian Program	Highway Safety Improvement Program
Conferences	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
GIS T				A	A	A				X					
GIS-KYTC				A	A	A	X			X		A	X	A	
KAMP Annual Meeting				A	A							A			
COGNA Annual Meeting					X										
HIS Conf						A						X	X		
Asset Mangement Conf										X		X			
Bentley Training Conf						A									
HIDAC						A									
ACEC Partnering Conference			A	X		A	A	A	A	A	A	A	A	A	
TRB Annual Meeting							X	A	X	A	X	X	X	X	
TRB Tools of the Trade: Small and Medium Communities							X		X	X	X	X	X	X	
National Freight Conf							X					A			
Bicycle and Pedestrian Facilities Conf							X		X					A	
ITE Section Conference							X	A	X			X	X	X	
American Planners Association							X	A	X		X	X	X	X	
AMPO									X						
NADO								A							
North American Travel Monitoring Expo & Conf			A										X		
AASHTO Standing Committees			A	X	X	A	A	A	X	A	X	A	X	A	
The Committee for Non Motorized Transportation														A	
TRB Workgroups/Research			A	X	X	A	A	A	X	A	X	A	X	X	
WVDOH Planning Conference									X	A		A			
Ohio Planning Conference									X						

X =Planned to attend but did not attend

A =Planned to attend and did attend

A =Did not plan to attend but did attend

Chapter 2 Personnel Training	SPR Work Program	Personnel Training	Traffic and Equipment Management	Roadway Systems	Cartography	Highway Information System	Strategic Corridor Planning	Statewide Transportation Planning	Metropolitan Planning Organizations	Performance Measures and Congestion/ Mobility Analysis	Air Quality	Multimodal Transportation	Traffic Data Forecasting	Bicycle and Pedestrian Program
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Training Events	1	2	3	4	5	6	7	8	9	10	11	12	13	14
PEEK			A											
TMG			A										A	
TRADAS			A							A			A	
Adobe Illustrator					A								A	
Microstation				A	A	X	X							
HPMS						A							A	
Business Objects Training						A	A	X		A		A	A	
SQL Training						A				A			A	
Visual Basic (macros)						X				A			A	
Bentley InRoads							A							
Public Involvement in Transportation Decision Making Process							X	A	X				A	A
Effective Communications in Public Involvement							X	A	X				A	A
Fundamentals of Title VI/EJ							A	A	X					
Practical Conflict Management Skills for Env Issues							X	X						
Highway Capacity 2010							X			A		A	A	
KYTC Traffic Engineering Design							X	A	X				A	A
Public Involvement							X	A	X			A	A	A
Road Safety Audit Training							X		X			A		A
Highway Safety Manual Training							A		X					A
Purpose and Needs Statement Training							X							
NEPA							X	A	X					
GIS							X	A	X	A	A	A	A	A
Microsimulation							X						A	

Chapter 2 Personnel Training	SPR Work Program	Personnel Training	Traffic and Equipment Management	Roadway Systems	Cartography	Highway Information System	Strategic Corridor Planning	Statewide Transportation Planning	Metropolitan Planning Organizations	Performance Measures and Congestion/ Mobility Analysis	Air Quality	Multimodal Transportation	Traffic Data Forecasting	Bicycle and Pedestrian Program
	Administration of FHWA Planning and Research Grants									X			A	A
Planning for Operations									A	A	A	A		X
Congestion Management and Reliability									X	A	A	A	A	
Transportation and Land Use									A			A	A	
Climate Change									X		A			
STAQS											A			
MOVES									X		A			
TransCAD/Modeling									X				A	
Census Training					A			A	X	A	A		A	
Training ofr State Bike/Ped Coordinator										A		A		A
Air Quality Conformity									X		A			

X =Planned to attend but did not attend

A =Planned to attend and did attend

A =Did not plan to attend but did attend

CHAPTER 3

Traffic and Equipment Management

RESPONSIBLE UNIT

Division of Planning
Traffic and Equipment Management Branch

PURPOSE AND SCOPE

The primary functions of the Traffic and Equipment Management Branch are to collect, process, and store traffic data. Traffic data is used in virtually every decision made in transportation engineering. Applications of this information include, but are not limited to: project/program planning, project selection, pavement design, safety analysis, capacity analysis, air quality assessment, and federal funding.

The Branch is comprised of two Sections: the Equipment Section and the Data Section.

The Equipment Section is responsible for the procurement, distribution, operation, maintenance, and repair of all equipment used at traffic data acquisition stations. Personnel perform site designs, installations, construction inspections, and maintenance at traffic data acquisition stations throughout the state. Additional duties of Equipment Section personnel include providing technical expertise and training to District personnel and performing traffic counts as necessary.

The Data Section is responsible for performing quality control, processing, and maintaining data collected from data acquisition stations located statewide. Personnel generate several different reports from said data throughout the year. These reports are prepared for the Federal Highway Administration (FHWA), Kentucky Transportation Cabinet (KYTC), Kentucky Transportation Center (KTC), various planning agencies, and other governmental agencies. Data is also made available for public consumption.

PROPOSED ACTIVITIES FOR 2015-2016

- Maintain, update, analyze, provide QA/QC, and make available data from approximately 17,300 traffic count stations including coverage, interstate, automatic traffic recorder (ATR), weigh in motion (WIM), and ramp sites. **All traffic count station data were checked for quality control and assurance of data prior to entering into database. Data was updated as it was received. Data was continuously maintained and made available via regularly updated information on the Division of Planning website and by request from the TEMAC Branch. 100% Complete**
- Download, process, and analyze data for every day of the year from approximately 95 permanent ATR stations. **Available ATR data was downloaded daily. All ATR data was checked for quality control and assurance of data upon entering into database. 100% Complete**
- Submit monthly reports of hourly ATR records to FHWA. **Reports were generated and sent to FHWA monthly. 100% Complete**
- With KYTC District Offices, collect and process vehicle volume data from approximately 5,000 short-duration, portable-machine, coverage and ramp counts. **Received approximately 4,550 counts of approximately 4,900 assigned (93% complete) from District Offices for short-duration counts in calendar year 2015. Assigned approximately 5,040 short-duration counts to Districts in calendar year 2016.**

CHAPTER 3

Traffic and Equipment Management (continued)

RESPONSIBLE UNIT

Division of Planning
Traffic and Equipment Management Branch

PROPOSED ACTIVITIES FOR 2015-2016 (continued)

- With KYTC District Offices, collect and process vehicle volume data from approximately 500 short-duration, portable-machine, local-road, bridge counts. *Short duration local road bridge counts are typically performed in the off-peak for counting (December-February). Due to the harsh 2014-15 winter, no short duration local road bridge counts were performed in calendar year 2015.*
- With KYTC District Offices, review, assign, collect, process, analyze, and distribute data from special count stations that are requested by the highway districts and other divisions. The number of special counts varies from year to year with the average being approximately 100 total, each of which typically includes multiple volume and turning movement counts. *Approximately 75 special counts (100% of those received) were reviewed, assigned, processed, analyzed and distributed in calendar year 2015.*
- Concurrent with coverage, interstate, ATR, WIM, and ramp counts, collect and process vehicle classification data from approximately 1,000 stations, which complies with the FHWA, *Traffic Monitoring Guide* recommendation of 25%-30% for Major Collectors and above. *Vehicle classification data was collected and processed from approximately 823 stations of 4,100 non-local roads (~20%) in calendar year 2015.*
- Provide traffic data for annual FHWA required Highway Performance Monitoring System (HPMS) report. *All data required of the Data Team for the annual FHWA HPMS report was provided. 100% Complete*
- Update axle and monthly factors used in adjusting short term counts from data collected at ATR and vehicle classification stations. *Updated seasonal, axle and design hour factors at the end of calendar year 2015. 100% Complete*
- Update in-house databases to include any new stations or roadway alignment changes. Correct beginning and ending milepoints to better represent traffic generators. *All in-house databases were updated in a timely manner as needed. 100% complete*
- Collect, process, and analyze continuously collected data. Submit a minimum of one-week, WIM data from permanent WIM stations to FHWA quarterly. Periodically calibrate WIM data collection equipment, as needed, in order to assure quality data. *WIM data was collected daily from approximately 30 traffic data collection stations and was processed and analyzed weekly. 100% complete. File format issues (FHWA switched from the 2001 Traffic Monitoring Guide (TMG) format to the 2013 TMG format this fiscal year) were still hindering complete quality assurance capabilities. We are working with Oklahoma State University to develop complete quality assurance capabilities. Once the quality assurance issue is rectified, continuous data (in lieu of monthly, one-week data) will be submitted to FHWA. This includes past data and all future data. WIM data collection sites are monitored daily and maintained by Equipment Team personnel, when possible. Maintenance activities beyond the capabilities of in-house personnel are assigned to private electrical consultants through a maintenance contract.*
- Review proper operation and coverage of ATR sites. Install additional ATR sites as necessary. *Review of functional classifications and geographic locations of all ATR sites was performed – 100% Complete*

CHAPTER 3

Traffic and Equipment Management (continued)

RESPONSIBLE UNIT

Division of Planning
Traffic and Equipment Management Branch

PROPOSED ACTIVITIES FOR 2015-2016 (continued)

- Investigate and purchase new traffic data collection equipment to provide for safer, more efficient and more accurate methods of collection. Investigated new technologies including but not limited to new automatic data recorder (ADR) hardware, handheld data collectors, data collection applications for smart phones, laser detectors, and inductive loop installation materials. Purchased modems and antennae, pneumatic tubing, miscellaneous portable count materials, and protective clothing. 100% Complete
- Certify, repair, and maintain approximately 800 traffic data recorders. The TEMAC Equipment Team certified approximately 800 automatic data recorders (ADRs). ADRs were maintained and repaired throughout the year, as required. 100% Complete
- Inspect, repair, and maintain, where possible, approximately 570 vehicle sensor locations (~100 ATRs and ~470 semi-permanent). Permanent vehicle sensor locations were inspected concurrent with annual short term traffic data collection. Sites requiring maintenance were noted and, where feasible, repaired by Equipment Team personnel. Maintenance activities beyond the capabilities of in-house personnel are assigned to private electrical consultants through a maintenance contract as funding allows. 100% Complete
- Administer contracts and provide oversight of Contractor(s) for the repair and maintenance of ATR and semi-permanent vehicle sensor locations. Major maintenance activities (at a minimum, the replacement of in-pavement sensors) for 10 ATR stations totaling in excess of \$200,000 were assigned to the electrical contractors.
- Track upcoming highway projects and produce plans, specifications, and construction cost estimates for new and replacement traffic sensor installations for submittal into construction and pavement rehabilitation contracts. Approximately 32 sets (100% of requested) of plans and specifications including approximately 54 ATR and semi-permanent count station sites were produced and submitted by the Equipment Team for construction and pavement rehabilitation contracts.
- Provide construction oversight, when required, and perform final inspections of new and replacement traffic sensor installations. Performed final inspections on approximately 65 newly installed traffic sensor stations. Provided construction oversight periodically, as required. 100% Complete
- Provide contract management and oversight of Consultant assisting with field data collection and other tasks. Process and provide quality assurance of the provided counts. Assigned and provided oversight for approximately 160 individual traffic counts. Processed and provided quality assurance of all submitted counts.
- Provide traffic count technician training and support, as needed. Individual traffic count technician training and support was provided throughout the year as requested.

CHAPTER 3

Traffic and Equipment Management (continued)

RESPONSIBLE UNIT

Division of Planning
Traffic and Equipment Management Branch

PRODUCTS

- Volume and classification data from ATRs. Data was retrieved for a minimum of six months from 85 ATR stations. Automatic Traffic Recorder (ATR) data was downloaded and processed daily and a report of hourly records was submitted to FHWA monthly. Data was analyzed to ensure proper operation of ATRs. Maintenance issues were referred to the Equipment Team and repaired where feasible. As funding permits, sites that require in-pavement sensor maintenance will be repaired by electrical contractors through the maintenance agreements or by future projects let by the Division of Planning.
- Volume, classification, and weight data from WIM sites. WIM data is collected daily from approximately 30 traffic data collection stations and is processed and analyzed weekly. 100% Complete File format issues (FHWA switched from the 2001 Traffic Monitoring Guide (TMG) format to the 2013 TMG format this fiscal year) are still hindering complete quality assurance capabilities. We are working with Oklahoma State University to develop complete quality assurance capabilities. Once the quality assurance issue is rectified, continuous data (in lieu of monthly, one-week data) will be submitted to FHWA. This includes past data and all future data. WIM data collection sites are monitored daily and maintained by Equipment Team personnel, when possible. Maintenance activities beyond the capabilities of in-house personnel are assigned to private electrical consultants through a maintenance contract.
- Volume and classification data from short-duration machine counts. Received approximately 4,550 counts of approximately 4,900 assigned (93%) from District Offices for short-duration counts in calendar year 2015. Assigned approximately 5,040 short-duration counts to Districts in calendar year 2015. Of 216 interstate sites, completed data collection from approximately 142 (76%); were unable to collect data from remaining stations due to construction in the vicinity and/or malfunctioning sensors.
- Volume and classification data from special counts Approximately 75 special counts (100% of those received) were reviewed, assigned, processed, analyzed and distributed.
- Axle and monthly factors Updated seasonal, axle and design hour factors at the end of calendar year 2015.
- Databases containing count station and count data information Database information for count station and count data was updated as needed.
- Accurate local DVMT data for FHWA reporting through HPMS. Accurate local DVMT data for FHWA was reported through HPMS.

CHAPTER 3

Traffic and Equipment Management (continued)

RESPONSIBLE UNIT

Division of Planning
Traffic and Equipment Management Branch

DISTRIBUTION OF ESTIMATED COST FOR 2015-2016

	2015-2016	Expended	Percent Expended
PERSONNEL	\$2,283,800	\$1,344,436	59%
OTHER	\$225,000	\$272,563	121%
TOTAL	\$2,508,800	\$1,616,999	64%

ESTIMATED OUTSOURCING EXPENSES AND PURCHASES

Outsourcing

- \$50,000 contract for outsourced traffic counts to be performed by consultant under Statewide Traffic Counting contract.
- \$250,000 for traffic data collection station installation and maintenance

Other

- \$150,000 for purchase of new traffic data collection equipment and supplies
- \$75,000 Other Operational Cost

For items such as travel, mileage, equipment and other cost directly associated to the completion of this work chapter.

CHAPTER 4

Roadway Systems

RESPONSIBLE UNIT

Division of Planning
Transportation Systems Branch

PROPOSED ACTIVITIES FOR 2015-2016

- Track roadway construction or maintenance projects to identify changes in roadways and their effect on roadway system designations. **Daily activity including contact and email with District Offices for project status updates. Posting notification for Data Management when traffic dates are changed as well as updating the Project Tracker Database with current information. 100% Complete**
- Coordinate the two-way flow of information between the Highway District planning staffs and Central Office Transportation Systems and Data Management branch staffs regarding roadway construction and ownership status. **Communicate almost daily with Data Management personnel on activities regarding updating and/or revising H.I.S. based on District Planning recommendations. Phone calls, emails, regular meeting with Data Management Staff, and sometime visits are made to the respective Highway District Office to check on project status. 100% Complete**
- Generate official documentation recommending appropriate SPRS revisions to the Commissioner of the Department of Highways for approval. (KRS 177.020 and 603 KAR 3:030). **Currently Official orders are required for all changes to the SPRS. Created official orders for all new construction projects and began doing official orders for data review changes as well, instead of electronic change orders. 100% Complete**
- Ensure the SPRS reflects roadways of significance, and correlates with the functional classification system and the electronic base map coverage. **Reviewed SPRS and functional class for all new road alignments along with recommendations and input from the Districts to make classification changes. Evaluate as projects were opened and official orders were generated. 100% Complete**
- Prepare quarterly reports for publication on the internet of SPRS mileage and of the designated routes and mileage of roads in the NHS and NN systems. **Reports every quarter and made sure they were published on the website. 100% Complete**
- Review revisions to the SPRS to discover any modifications made necessary to other systems such as functional classification, NHS, or NN classifications. **Typically new alignment reviews check to see if any surrounding roads needed classification changes due to the new alignment. Changes to NHS and NN require a separate official order. This is a part of the process of doing an Official Order. Map updated December 2015. 100% Complete**
- As requested by local public agencies or Highway Districts, review requests for revisions of functional classification, NHS and NN. As appropriate, prepare request from Cabinet to FHWA for system revision. **Did several official orders to reclassify SPRS road system as well as functional class at the districts requests. 100% Complete**
- As necessary or appropriate, review interstate frontage roads. Coordinate documentation by Highway District offices of suitability for transfer to local government and prepare request from Cabinet to FHWA for permission to complete transfer of property to local government. **These require that the District (for KYTC) address certain criteria from the Federal-Aid Policy Guide 23 CFR 620B. 100% Complete**

CHAPTER 4

Roadway Systems (continued)

RESPONSIBLE UNIT

Division of Planning
Transportation Systems Branch

PROPOSED ACTIVITIES FOR 2015-2016 (continued)

- As necessary or appropriate, prepare and submit request for approval by AASHTO Standing Committee on Highways, U.S. Route Numbering Special Committee, for any significant change to routing of a U.S. numbered highway. **No submittal for FY 2016**
- Provide all system revision information to the Data Management branch and others as appropriate. **Daily contact with Data Management to ensure that all Systems data is accurate in HIS. 100% Complete**
- Compile data to provide ton-mile statistics to the Governor's Office for Local Development for coal transported on Kentucky Highways as required by KRS 177.977 and KRS 42.455. **Reports are drawn in Exor forms from data entered for the previous calendar year. "Ton-Miles by County – posted August 2015 Office of Budget and Fiscal Management on August 24, 2016. 100% Complete**
- Publish Kentucky's Official Coal Haul Highway System Report as required by KRS 177.977 and KRS 42.455. **New Coal Haul Report and supporting maps were published to the website in late August 2016. Website updated for Coal Haul – Updated listing and map in August 2016. The 2015 Official Order filed November 2015 – OO# 109965 100% Complete**
- Provide the Division of Maintenance coal haul route information for their review of bridge weight limits. Develop the update of the Extended Weight Coal and Coal By-Products Haul Road System for replacement of the current system in the Highway Information System database. Prepare the Official Order for approval of the updated Extended Weight system. **Bridge information for review by Maintenance was sent on July 2015. The Extended Weight data was updated in HIS at the end of mid-August 2016. Official Order updates for the Secretary's signature and it was distributed by early November. 100% Complete**
- Review and coordinate right-of-way information between the HDO staffs and Central Office Transportation Systems and Division of Right-of-Way and Utilities staffs regarding request for official transfers. Compile data in Project Wise. **Several Covered Bridges were transferred along with nearly 7 miles of roadway removed from the State Primary Road System for a total of 17 Official Order send to Right-of-Way and Utilities and the Secretary of the Finance and Administration Cabinet. 100% Complete**
- Compile and provide Governmental Accounting Standards Board (GASB) information on total mileage and estimate value of state roads removed from the SPRS for the FY 2014 to KYTC's Office of Budget and Fiscal Management. **GASB report was send to the Office of Budget and Fiscal Management in July. A total of 6.481 miles was removed from the State Primary Road System and 5.578 miles was added to the State Primary Road System. 100% Complete**

CHAPTER 4

Roadway Systems (continued)

RESPONSIBLE UNIT

Division of Planning
Transportation Systems Branch

PRODUCTS

- Official Order Changes to the State Primary Road System 29 Official Orders pertaining to 54 state and/or local roads were completed, including transfers. Discovered and processed changes resulting from roadway data collection and roadway system data reviews. 100% Complete
- State Primary Road System Official Order Listings and Functional Classification Reports Update State Primary Road listings for each official order completed. Revise mileage totals and update revisions page to reflect current changes. Revised SPRS listing to the Planning webpage. 100% Complete
- Quarterly Reports on internet: State Primary Road System Mileage, National Highway System routes and mileage, Designated National Truck Network routes and mileage Updated NHS and NTN reports on web at beginning of each quarter. Put SPRS mileage report back out on the web upon Districts requests. 100% Complete
- GIS map files incorporating project design files for decision-making and use by other Branches Incorporated project design files into GIS map documents to create decision-making maps for nearly 30 projects. Communicated with Data Management Branch on information obtained for input into HIS for HPMS reporting. 100% Complete
- Coal Haul System Report with associated maps and separate datasets to Department of Local Governments, KYTC Budgets and KYTC Bridge Maintenance. Compiled Coal Haul reports and shapefiles. Created maps of producing counties as well as a statewide map. Mailed out 654 Coal Haul forms and 347 Coal Haul Updates. 100% Complete
- Inform FHWA of modification of functional classification None Required
- Request to FHWA for modification of National Truck Network (NN) or Official Order Change to State Designated National Truck Network Request to delete KY 151 from NN – Emergency deletion from NN effective 4-29-16 by Official Order 110314. 100% Complete
- Request to FHWA for modification of National Highway System None Required
- Request to FHWA for permission to relinquish interstate frontage road to local government None Required

PRODUCTS

- Official Order Changes to the State Primary Road System 29 Official Orders pertaining to 54 state and/or local roads were completed, including transfers. Discovered and processed changes resulting from roadway data collection and roadway system data reviews. 100% Complete
- State Primary Road System Official Order Listings and Functional Classification Reports Update State Primary Road listings for each official order completed. Revise mileage totals and update revisions page to reflect current changes. Revised SPRS listing to the Planning webpage. 100% Complete
- Quarterly Reports on internet: State Primary Road System Mileage, National Highway System routes and mileage, Designated National Truck Network routes and mileage Updated NHS and NTN reports on web at beginning of each quarter. Put SPRS mileage report back out on the web upon Districts requests. 100% Complete

CHAPTER 4

Roadway Systems (continued)

RESPONSIBLE UNIT

Division of Planning
Transportation Systems Branch

PRODUCTS (continued)

- GIS map files incorporating project design files for decision-making and use by other Branches
Incorporated project design files into GIS map documents to create decision-making maps for nearly 30 projects. Communicated with Data Management Branch on information obtained for input into HIS for HPMS reporting. 100% Complete
- Coal Haul System Report with associated maps and separate datasets to Department of Local Governments, KYTC Budgets and KYTC Bridge Maintenance. Compiled Coal Haul reports and shapefiles. Created maps of producing counties as well as a statewide map. Mailed out 654 Coal Haul forms and 347 Coal Haul Updates. 100% Complete
- Inform FHWA of modification of functional classification None Required
- Request to FHWA for modification of National Truck Network (NN) or Official Order Change to State Designated National Truck Network Request to delete KY 151 from NN – Emergency deletion from NN effective 4-29-16 by Official Order 110314. 100% Complete
- Request to FHWA for modification of National Highway System None Required
- Request to FHWA for permission to relinquish interstate frontage road to local government None Required

DISTRIBUTION OF ESTIMATED COST FOR 2015-2016

	2015-2016	Expended	Percent Expended
PERSONNEL	\$605,300	\$399,118	66%
OTHER	\$25,000	\$2,057	1%
TOTAL	\$629,300	\$401,175	64%

Other

- \$25,000 Other Operational Cost
For items such as travel, mileage, equipment and other cost directly associated to the completion of this work chapter.

CHAPTER 5

Cartography

RESPONSIBLE UNIT

Division of Planning
Transportation Systems Branch

PROPOSED ACTIVITIES FOR 2015-2016

- Provide electronic mapping for all city, county, district, state, and special-purpose cartographic products. Over 174 County Maps, SPRS, and Functional Classification Maps were updated and exported on the internet. About 130 City Maps, SPRS, and Functional Classification Maps were updated and exported on the internet. District Maps for SPRS and Functional Class were exported and updated to the internet. 28 District maps. 100% Complete
- Maintain and publish electronic formats of cartographic products for display on the Internet. Web pages updated regularly. Over 369 SPRS/Functional Maps. Posted Planning study, 551 Report Documents for SPAC placed on Web. Updated your turn page and image slider on planning page. 100% Complete
- Update the Official State Highway Map electronic files and accomplish necessary publication. Monitor inventory at 17 locations and coordinate additional deliveries as needed. Reviewed updated highway information from Districts and Systems Team to ensure routes are correct on Official Highway Map. Obtained printing exception from Finance, processed form for contract and updated RFP document for contract. Revised coloration of map to match KY Tourism materials and updated roads on statewide map and 15 inset maps as required. Prepared for publication and press-checked printing of 800,000 maps. Continue to monitor inventory and shipping of product to 17 locations. Created alternate format digital versions of the map for publication on the web page and for usage in GIS software. 100% Complete
- Create reports and exhibits for various Division projects and studies to assist transportation decision-makers in their roles. Complied over 347 coal haul reports and 654 Route segments as well as a statewide map. Created several maps for each District for use in developing District/Regional Transportation Plans, such as Priority Routes and the Top 30 Unscheduled Project List. 72 Maps prepared for 6 districts. Created numerous exhibits and posters for KYTC's Your Turn Project. 100% Complete
- Provide mapping and graphic assistance to other Divisions and Departments as requested. Create 56 County Coal Haul Maps, 1 Statewide Coal Haul Map. Updated and produced a new map of all Scenic Byways Updated the data for all state rest areas. Updated a new Functional Classification Code. There were several maps prepared for Multimodal Freight Transportation NTN, NHS, TWC, Interstate and Parkways. Also prepared 31 YOU ARE HER enlarged maps generated for all rest areas and welcome centers. 100% Complete
Develop and provide to outside entities digital maps as requested. Responded to nearly 2,941 map sales request/emails – mailed out 22,579 maps. Provided highway updates to Rand McNally and AAA. Map Sales generated \$733. 100% Complete
- Develop and provide geographic information systems (GIS) files locating non-roadway modes of transportation. Map 21 Associated shapefiles. 100% Complete

PRODUCTS

- Official Highway Map Contract obtained for 2016 map, graphic files generated, roadway updates made to statewide map and 15 inset maps, printing QC'd and 800,000 copies printed and distributed as needed. 100% Complete

CHAPTER 5

Cartography (continued)

RESPONSIBLE UNIT

Division of Planning
Transportation Systems Branch

PRODUCTS

- State Primary Road System Maps Updated county maps at least 174 times. Updated city maps 130 times. 100% Complete
- Functional Classification Maps Same as for State Primary Road Systems. 100% Complete
- Other Highway Data Maps (i.e., traffic counts, NHS, NN, etc. maps) 100% Complete
Statewide Coal Haul Map
National Highway System (NHS)
FHWA Urbanized Areas
County Reference Map
- Cabinet and Planning Project Exhibit Maps/Displays Special large 31 2016 Highway Map You Are Here with enlarged. Provide highway updates to Rand McNally, AAA. 100% Complete
- GIS Analyses of various data for transportation decision-making
As requested – See Comments above. 100% Complete
- General and special purpose maps as requested by other agencies
As requested – See Comments above. 100% Complete
- Geographic information systems (GIS) electronic files
Map 21 Associated shapefiles. 100% Complete

DISTRIBUTION OF ESTIMATED COST FOR 2015-2016

	2015-2016	Expended	Percent Expended
PERSONNEL	\$361,400	\$168,806	47%
OTHER	\$145,000	\$53,306	37%
TOTAL	\$506,400	\$222,113	44%

ESTIMATED OUTSOURCING EXPENSES AND PURCHASES

Outsourcing

- \$10,000 for highway map outsourced production assistance.

Other

- \$140,000 for Official Highway Map Publication.
- \$5,000 Other Operational Cost
For items such as travel, mileage, equipment and other cost directly associated to the completion of this work chapter.

CHAPTER 6

Highway Information System

RESPONSIBLE UNIT

Division of Planning
Data Management Branch

PURPOSE AND SCOPE

The Highway Information System chapter enables the Data Management Branch to oversee maintenance of the Transportation Cabinet's Highway Information System (HIS) database. This database serves as the Cabinet's storage unit for Geographic Information System (GIS) road centerlines and information about roadway characteristics, transportation systems, and roadway analysis. The branch contributes to the KYTC Asset Management program by providing an up-to-date route network of asset locations for other divisions and also providing asset extraction capabilities for updates to the network. The branch uses HIS information to produce the Highway Performance Monitoring System (HPMS) data submittal required annually by the Federal Highway Administration (FHWA). The HPMS submittal is also used within the Cabinet to assist with the analysis and measurement of highway system performance. The branch regularly reviews Functional Classification with the Highway District Offices, Metropolitan Planning Organizations (MPOs), and local officials. It also coordinates all Functional Classification and National Highway System (NHS) changes associated with road changes or external entity requests. The branch provides roadway information to many areas within the Cabinet, other governmental agencies, consultants, and the public via the Division's website, the Cabinet's Transportation Enterprise Database (TED), or direct requests. In order to support all of these functions with accurate and timely data, the branch routinely extracts and analyzes data from Computer-Aided Design (CAD) project construction plans, Cabinet Photo Van collection efforts, and on-site collection activities performed by branch staff.

PROPOSED ACTIVITIES FOR 2015-2016

- Maintain the Cabinet's GIS route network for Kentucky's public highways. Improve processes and procedures for reviewing, editing, and updating the network. **Updated centerline locations and attributes impacted by 125 state road projects. Processed over 4,100 local road centerline location and attribute changes in 115 counties. 100% Complete**
- Provide up-to-date route network locations, route lengths, and highway data for use by internal and external customers. Ensure accuracy of information provided. **Provided up-to-date information to customers inside and outside the Cabinet using CAD design files, Photo Van data, field collection, GIS tools, and aerial imagery. 100% Complete**
- Adapt CAD project construction plans and use GIS software to generate maps for resolving road ownership and highway data questions caused by road construction impacts. **Generated 125 maps for road construction projects and distributed to appropriate staff for review and response as appropriate. 100% Complete**
- Update the route network with newly acquired road centerline data extracted from CAD project construction plans, Global Positioning System (GPS) collection methods, and Photo Van collection methods. Update and verify roadway mileage and highway data. **Used CAD design files to update new state road centerlines, mileages, and inventory on pace with project openings for 125 projects. Used GPS collection methods to field-verify information obtained with CAD design files. Used Photo Van data and images to improve accuracy of road centerlines and inventory. 100% Complete**

CHAPTER 6

Highway Information System (continued)

RESPONSIBLE UNIT

Division of Planning
Data Management Branch

PROPOSED ACTIVITIES FOR 2015-2016 (continued)

- Utilize Photo Van images and data to verify accuracy and validity of route log entries, roadway features and information, and other highway data stored within HIS. **Data in HIS regularly reviewed and updated as necessary with more accurate and valid information captured from Photo Van images and data. 100% Complete**
- Perform office reviews to verify HIS data meets the required standards established by this Division and FHWA. **Reviewed weekly reports and quality control checks to ensure proper data maintenance. Utilized HPMS Field Manual to verify data quality and completeness. Performed checks to ensure local road centerline changes met standards. 100% Complete**
- Assist the Division of Maintenance in the implementation of pavement performance measures reporting and analysis via HPMS. **Adapted Division of Maintenance pavement data to meet HPMS software requirements and ensure its successful load into the software. Provided Division of Maintenance with the preliminary Pavement Report Card and pavement data validation errors in a timely manner (relative to data receipt). 100% Complete**
- Develop appropriate Cabinet sources for providing data screening methods used in the assembly of the Cabinet's Highway Plan. Modify HIS data collection, storage, and analysis processes as needed in order to satisfy Highway Plan assembly requirements. **Helped determine appropriate sources and uses of Cabinet data for screening methods. Created new HIS data types to store the locations of the National and Kentucky Freight Networks. 100% Complete**
- Assist with analyses of highway system performance and the Unscheduled Projects List. Provide an up to date route network for locating Unscheduled Projects. **Maintained up-to-date route network location of Unscheduled Projects. Created HIS data extraction procedures to satisfy Highway Plan project scoring. 100% Complete**
- Update Rating Indices, Capacities, and Volume/Service Flow ratios in the HIS database and distribute to customers. **Completed the Kentucky Transportation Center (KTC) study to re-develop the capacity and V/SF calculation procedures using the 2010 Capacity Manual. New capacity and V/SF values calculated. Determination on how to incorporate these new calculations into HIS still needed so that the data can be consumed by data customers. 75% Complete**
- Improve production methods used to calculate Rating Indices, Capacities, and Volume/Service Flow ratios. **Completed the Kentucky Transportation Center (KTC) study to re-develop the capacity and V/SF calculation procedures based on the 2010 Capacity Manual. KTC supplied a database tool that allows KYTC to generate these calculations. Testing of results indicates the database tool calculates appropriate values given data limitations. 100% Complete**
- Process and submit annual HPMS report. **HPMS submitted on time, June 15 (1,932 sample sections). Gathered and processed data from other areas of the Cabinet. 100% Complete**
- Improve HPMS submittal production methods. Investigate results of HPMS report and analyze potential process changes to improve submittal. **Generated the HPMS data extract using Bentley's TIG tool for the first time, resulting in improved data extraction methods. 100% Complete**
- Maintain currency of HPMS software and update procedures as required by federal legislation, regulations, policies, and/or guidelines. **Used web-based HPMS 8.0 and followed software validations and requirements. Used the latest edition of the HPMS Field Manual. Updated data storage model to reflect HPMS guidelines. 100% Complete**

CHAPTER 6

Highway Information System (continued)

RESPONSIBLE UNIT

Division of Planning
Data Management Branch

PROPOSED ACTIVITIES FOR 2015-2016 (continued)

- Coordinate with other Cabinet Divisions regarding their asset management needs. Assist with Cabinet-wide asset management data collection and data dissemination. Coordinated data collection and dissemination efforts with Divisions of Maintenance, Traffic Operations, Highway Design, Right of Way and Utilities, Program Management, and Motor Carriers, as well as the Office of Rural and Municipal Aid. Generated 125 maps for resolving road ownership and highway data questions caused by road construction impacts. Updated metadata in HIS to communicate information about data collection and usage to customers. 100% Complete
- Work with the Office of Information Technology (OIT) to maintain the most current version of the HIS database. Perform acceptance testing and help deploy upgrades to other data owners within the Cabinet. Worked with OIT testing several HIS database fixes to confirm product reliability and functionality prior to installation. 100% Complete
- Work with OIT to improve HIS data exchange with TED and other Cabinet databases. Worked with TED and GIS Branches in OIT for reporting, mapping, and sharing of HIS data within the Cabinet. Supported OIT efforts to develop new routines to more efficiently exchange data between HIS and TED. Continued development of a link between HIS and the Division of Maintenance's OMS/PMS databases (Bentley Systems contract). 80% Complete
- Provide assistance to Cabinet areas updating maps and database systems with Functional Classification changes generated through statewide Adjusted Urban Area Boundary review. Assisted other Cabinet areas to ensure successful dissemination of Functional Classification changes. 100% Complete
- Review Functional Classification in cooperation with Highway Districts and MPO's. Review Functional Classification change requests from Highway Districts and other external entities. Completed in-depth and cooperative Functional Classification review with staff from seven MPO's and the corresponding Highway District Offices. Requested and received FHWA approval of over 350 segment changes. Updated HIS data to reflect changes. One remaining MPO scheduled to be completed in FY17 90%. Complete
- Coordinate changes to the NHS and Strategic Highway Network following proper procedures for approval from FHWA and the Department Of Defense. Still waiting for a response from FHWA HQ regarding the list of discrepancies KYTC provided following a statewide comparison of NHS data 50%. Complete
- Process Superload route network changes to support the Department of Vehicle Regulation's overweight/overdimensional permitting procedures. Superload implementation was significantly delayed by KYTC stakeholders, therefore no route network changes were available to process. Training for this task is scheduled for FY17. 0% Complete
- Accurately locate Photo Van images to the HIS route network. Provide an up-to-date route network for image location accuracy. Accurately located Photo Van data to HIS up-to-date route network. 100% Complete

CHAPTER 6

Highway Information System (continued)

RESPONSIBLE UNITDivision of Planning
Data Management Branch**PRODUCTS**

- Certification of Public Road Mileage by June 1 **Submitted June 1 (79,858 centerline miles). 100% Complete**
- HPMS submittal by June 15 **Submitted June 15 (1,932 sample sections). 100% Complete**
- Weekly snapshots of HIS route network and highway data **HIS data extracted weekly and provided to TED for Cabinet-wide consumption. 100% Complete**
- Up-to-date and accurate route network locations, route lengths, and highway data to support Cabinet Performance Measures and Asset Management activities **Provided information to customers inside and outside the Cabinet with timely updates. 100% Complete**
- Maps for resolving road ownership and highway data questions caused by road construction **125 maps created. 100% Complete**
- Official Cabinet Route Logs **Updated timely due to on-the-ground changes 100% Complete**
- Unscheduled Project locations and Highway Plan data screening **Updated timely due to on-the-ground changes. 100% Complete**
- Rating Indices, Capacities, and Volume/Service Flow ratios **Continued supplying slightly outdated data until new calculations are ready for distribution. 100% Complete**
- Route network and highway data Change Reports reflecting HIS processing activities **Completed in a timely manner for each processing activity that required notification to other stakeholders. 100% Complete**
- Queries and routines for quality control of HIS data **Reviewed Quality Assurance report weekly and parameter-based inquiry (PBI) and TIG results monthly. 100% Complete**
- Functional Classification change requests **Requested and received FHWA approval of over 350 segment changes identified during cooperative reviews with seven MPO's. 100% Complete**
- Photo Van image locations **Updated timely due to on-the-ground changes. 100% Complete**

DISTRIBUTION OF ESTIMATED COST FOR 2015-2016

	2015-2016	Expended	Percent Expended
PERSONNEL	\$1,485,800	\$1,162,132	78%
OTHER	\$350,000	\$3,199	1%
TOTAL	\$1,835,800	\$1,165,331	63%

CHAPTER 6

Highway Information System (continued)

RESPONSIBLE UNIT

Division of Planning
Data Management Branch

ESTIMATED OUTSOURCING EXPENSES AND PURCHASES

Outsourcing

- \$200,000 for database development and enhancement projects
- \$150,000 for data research and analysis projects
- \$200,000 for Local Road Centerline collection with all of the 15 Area Development Districts, with contracts less than \$100,000 for each
- \$75,000 for special road data collection projects
- \$0 for production of FHWA 536 Report (\$75,000 in odd year WPs)

Other

- \$50,000 for Asset Management Data Collection (Photo Van Operation)
- \$150,000 for IT database support
- \$100,000 for data expansion, improvement, and maintenance
- \$50,000 for Other Operational Costs (items such as travel, mileage, equipment and other costs directly associated to the completion of this work chapter)

CHAPTER 7

Strategic Corridor Planning

RESPONSIBLE UNIT

Division of Planning
Strategic Planning Branch
Strategic Corridor Planning Team

PURPOSE AND SCOPE

The Strategic Corridor Planning Team evaluates system and corridor needs for the state maintained roadways. It enhances and continues to update an evaluation process for prioritizing projects for consideration for inclusion in the Six-Year Highway Plan, the District Transportation Plan (Consisting of the Unscheduled Projects List) and the Unscheduled Needs List. It also conducts technical project studies consisting of large studies to Data Needs Analysis (DNA) Studies in order to perform the necessary levels of planning to develop a conceptual and draft purpose and need statement, identifies major environmental issues including environmental justice, initiates consultation with local officials, initiates agency coordination and conducts appropriate levels of public involvement. It identifies and evaluates alternatives, generates project cost estimates and recommends phasing priorities where appropriate. The team oversees outsourced activities and works with the Highway District Offices (HDOs), Metropolitan Planning Organizations (MPOs), and Area Development Districts (ADDs) as needed to complete necessary tasks. Through analysis of data, sustainable and fundable projects will be identified.

PROPOSED ACTIVITIES FOR 2015-2016

- Continue to develop and update policy and procedures for evaluating corridor level needs. **This task is on-going. We continue to evaluate the policy and procedures for each study, placing emphasis on practical solutions. 100% Complete**
- Conduct corridor, scoping, programming, small urban area, data needs analyses (DNA), and other studies. **For a list of active studies and percent complete, please see the PRODUCTS below or view the attached spreadsheet.**
- Respond to inquiries about corridor planning issues. **All inquiries to planning studies are responded to in a timely manner. Recently completed studies are available online for the public to view and posted on ProjectWise. 100% Complete**
- Identify, evaluate and prioritize corridor, system, and small urban area needs through data analysis and public involvement. **Corridor and Small Urban Area Studies involve the identification, evaluation, and prioritization of recommended roadway improvements through data analysis and involvement from the public, and/or local officials/stakeholders advisory committees. 100% Complete**
- Oversee outsourced activities. **Many of our studies are completed by consultants with district and Division of Planning assistance in the form of co-Project Managers who oversee the study. At the end of the FY 2016 fourth quarter, KYTC had 11 active planning studies that were outsourced to a consultant. 100% Complete**
- Evaluate identified needs statewide to assist in prioritizing projects for programming in the Highway Plan. **PIFs are made for long-term needs identified through our corridor and Small Urban Area studies. Our studies also provide cost estimates to be used in programming future projects. This process is on-going. Every two years District Transportation Plans are developed to assist in prioritizing projects for the Highway Plan. 100% Complete**

CHAPTER 7

Strategic Corridor Planning (continued)

RESPONSIBLE UNIT

Division of Planning
Strategic Planning Branch
Strategic Corridor Planning Team

PRODUCTS

Four studies were completed during the period of June 16, 2015 to June 15, 2016. All were completed by consultants. The completed studies are as follows:

- Corbin Bypass Extension Scoping Study, Knox & Laurel Co.'s – 11-190.00 – November 2015
- US 41 Traffic Study, Henderson Co. – N/A – January 2016 (SHN)
- US 150 Scoping Study, Nelson & Washington Co.'s – 4-396.00 – February 2016
- KY 69 Scoping Study, Hancock Co. – 2-8708.00 – June 2016

Ongoing studies and their respective status at the end of FY 2016 are as follows:

<u>County(ies)</u>	<u>Route</u>	<u>Item No.</u>	<u>% Complete</u>
Lewis/Rowan	KY 59/KY 344/KY 377	9-231.00	98%
Warren	US 31W	N/A (SPR)	98%
Larue/Hardin	Hodgenville to I-65	4-8505.00	95%
Jefferson	KY 1932	5-531.00 (partial SPR)	89%
Letcher	US 119	12-199.00	45%
Kenton/Campbell	KY 8	6-1086.00 (SPR)	95%
All District 10 Counties	Various Routes	N/A (SPR)	98%
Barren	KY 90	3-8819.00	80%

<u>County</u>	<u>Small Urban Area</u>	<u>Item No.</u>	<u>% Complete</u>
Madison	Richmond/Berea	N/A (SPR)	51%
Barren	Glasgow	N/A (SPR)	95%
Carter	Grayson	N/A (SPR)	26%
Mason	Maysville	N/A (SPR)	15%

Many of the current studies are large-scale efforts that have included or will include agency coordination and significant public involvement activities. All of the studies have required or will require coordination with the Highway District Offices and Area Development District Offices to assemble the project team, provide input on study issues, assist with scheduling meetings, and review reports. The Area Development District Offices will also develop Socioeconomic Studies/Environmental Justice reports for many of the studies.

Those projects listed above followed by (SPR) were funded with SPR Work Program funds. In addition, some SPR funding was used for management, oversight, and review of strategic corridor planning activities.

Summarizing, 16 projects have been worked on during the past fiscal year, with four being completed, and 12 others in various stages of completion. With the start of the new fiscal year, additional projects will soon begin. Please refer to the table at the end of this document to see a list of active projects and details including completion percentages for FY 2016.

CHAPTER 7

Strategic Corridor Planning (continued)

RESPONSIBLE UNIT

Division of Planning
Strategic Planning Branch
Strategic Corridor Planning Team

PRODUCTS (continued)

- Data Needs Analysis (DNA) Studies
A DNA study will be completed for all projects in the Highway Plan, that have not already been the subject of a planning study and that are intended to be advertised for Consultant services, prior to the Advertisement. **Three DNA studies have been completed by District and Central Office Planners in FY 2016. These studies include projects identified by Item No.'s 4-8702.00, 4-8703.00, and 7-415.00.**
- Priorities for Highway Plan Programming that are sustainable and fundable.

DISTRIBUTION OF ESTIMATED COST FOR 2015-2016

	2015-2016	Expended	Percent Expended
PERSONNEL	\$2,183,200	\$1,494,264	68%
OTHER	\$25,000	\$5,948	24%
TOTAL	\$2,208,200	\$1,500,213	68%

ESTIMATED OUTSOURCING EXPENSES AND PURCHASES

Outsourcing

- \$1,200,000 to outsource for Research and/or Planning Studies.

Other

\$25,000 Other Operational Cost

For items such as travel, mileage, equipment and other cost directly associated to the completion of this work chapter.

PLEASE SEE ATTACHED PAGE FOR A LIST AND DETAILS OF ACTIVE STUDIES!

PROJECT I.D.	ITEM NO.	COUNTY(S)	CONTRACT NO.	TYPE OF WORK	District Project Manager	Central Office Co-Project Manager	Consultant	NTP Date	Contract/L.A. Amount	Funds Expended in FY 2016 ¹	Total Funds Expended ¹	Overrun?	Schedule met?	Approximate % Complete (via billing)	Were needs for this corridor/SUA identified, evaluated, and prioritized?	FY 16 SPR Work Program Funds	Were there contract revisions?
KY 59/KY 344/KY 377	9-231.00	LEWIS, ROWAN	Agree. No. 2015-03-3	SCOPING STUDY	Callahan	Mills	Qk4	2/5/2015	\$579,342.00	\$442,422.39	\$565,068.54	Yes	No	98%	Yes	No	Yes
US 31W/KY 446	N/A	WARREN	LA No. 3, Agree. No. 201465	SCOPING STUDY	J. Moore	McKenzie	Qk4	1/22/2015	\$249,520.00	\$86,119.98	\$244,529.60	No	No	98%	Yes	Yes	No
HODGENVILLE TO I-65	4-8505.00	LARUE, HARDIN	LA No. 4, Agree. No. 201467	SCOPING STUDY	K. Young	Vaughan	Parsons Brinckerhoff	4/23/2015	\$194,979.19	\$146,234.39	\$185,230.22	No	No	95%	Yes	No	No
KY 1932	5-531.00	JEFFERSON	LA No. 4, Agree. No. 201465	SCOPING STUDY	Hickerson	Pelfrey	Qk4	8/7/2015	\$185,633.00	\$165,117.50	\$165,117.50	No	Yes	89%	In progress	Yes	No
US 119	12-199.00	LETCHER	Agree. No. 2015-09-2	DESIGN STUDY	Slone	Sandefur	Palmer	8/13/2015	\$880,124.00	\$396,024.81	\$396,024.81	No	Yes	45%	In progress	No	No
KY 8	6-1086.00	KENTON, CAMPBELL	LA No. 4, Agree. No. 201466	SCOPING STUDY	Callan-Ramler	Vaughan	Stantec	8/31/2015	\$249,251.00	\$236,788.45	\$236,788.45	No	Yes	95%	In progress	Yes	No
DISTRICT 10 INTERSECTIONS STUDY	N/A	ALL D-10 COUNTIES	LA No. 5, Agree. No. 201467	INTERSECTION IDENTIFICATION STUDY	Blackburn	Pelfrey	Parsons Brinckerhoff	8/24/2015	\$249,997.18	\$249,997.18	\$249,997.18	No	Yes	100%	Yes	Yes	Yes
RICHMOND/BEREA SUA	N/A	MADISON	LA No. 6, Agree. No. 201467	SMALL URBAN AREA STUDY	Ham	Pelfrey	Parsons Brinckerhoff	11/30/2015	\$173,902.88	\$88,701.06	\$88,701.06	No	Yes	51%	In progress	Yes	Yes
KY 90	3-8819.00	BARREN	LA No. 5, Agree. No. 201466	SCOPING STUDY	D. Henderson	McKenzie	Stantec	1/7/2016	\$198,371.00	\$158,696.80	\$158,696.80	No	Yes	80%	In progress	No	No
GLASGOW SUA	N/A	BARREN	LA No. 6, Agree. No. 201466	SMALL URBAN AREA STUDY	J. Moore	McKenzie	Stantec	1/7/2016	\$121,092.00	\$115,037.40	\$115,037.40	No	Yes	95%	In progress	Yes	No
GRAYSON SUA	N/A	CARTER	LA No. 5, Agree. No. 201465	SMALL URBAN AREA STUDY	Callahan	Mills	Qk4	4/11/2016	\$134,575.00	\$35,436.86	\$35,436.86	No	Yes	26%	In progress	Yes	No
MAYSVILLE SUA	N/A	MASON	LA No. 6, Agree. No. 201465	SMALL URBAN AREA STUDY	Callahan	Mills	Qk4	4/11/2016	\$135,262.00	\$20,711.88	\$20,711.88	No	Yes	15%	In progress	Yes	No

¹In-house studies using SPR funds do not have have a tracking mechanism for funding that identifies charges to individual studies.

PROJECT I.D.	ITEM NO.	COUNTY(S)	PROJECT DESCRIPTION	TYPE OF WORK	Project Manager	Backup Manager	Consultant	COMPLETION DATE
KY 69	2-8708.00	HANCOCK	IMPROVEMENTS FROM OHIO CO. LINE TO US 60	SCOPING STUDY	N. Hall	McKenzie	Stantec	June-16
US 150	4-396.00	NELSON, WASHINGTON	IMPROVEMENTS FROM BLUEGRASS PARKWAY IN BARDSTOWN TO US 150X	SCOPING STUDY	C. Allen	Vaughan	Palmer	February-16
US 41	N/A	HENDERSON	TRAFFIC STUDY FROM US 60 TO WOLF HILLS ROAD	SCOPING STUDY	N. Hall	McKenzie	Stantec	January-16
KY 3041	11-190.00	KNOX, LAUREL	INTERCHANGE KY 3041 EXTENSION NORTH	SCOPING STUDY	Chappell	Higdon	Stantec	November-15

CHAPTER 8

Statewide Transportation Planning

RESPONSIBLE UNIT

Division of Planning
Strategic Planning Branch

PURPOSE AND SCOPE

The Statewide Planning Team conducts a comprehensive statewide transportation planning process with the Area Development Districts (ADDs), Metropolitan Planning Organizations (MPOs), and the Highway District Offices (HDOs). This process includes consideration of all modes and development of a policy driven and data-based approach to identification, analysis and prioritization of needs. The team also updates a Statewide Transportation Plan (STP) as needed and ensures that the STP and STP Program are MAP-21 compliant. Through these processes and partnerships, this team provides meaningful input to the Highway Plan through the Unscheduled Needs List (UNL) and District Transportation Plan (DTP).

PROPOSED ACTIVITIES FOR 2015-2016

- Review and update the Public Participation Plan as needed. Last updated February 2016 and was posted to the KYTC Your Turn Website at <http://yourturn.transportation.ky.gov>. 100% Complete
- Review and update the Statewide Strategic Plan as needed. Last updated in September 2015 and posted on KYTC Home page at www.transportation.ky.gov. 100% Complete
- Develop and implement processes as needed to ensure MAP-21 compliance. Continued development of the prioritization process to become more data driven in accordance with MAP-21 and the recently authorized FAST Act. 100% Complete
- Coordinate with other transportation modes, land use, environmental, and other resource agencies. Coordinated with Office for Civil Rights & Small Business Development to ensure compliance with Title VI requirements via site visits and training at Statewide Transportation Planning meetings. Continuing coordination with Environmental to ensure Planning level socioeconomic studies are in compliance. 100% Complete
- Enhance the statewide transportation planning process by including data collection and analysis, public involvement, and coordination. Facilitated the collection of bicycle/pedestrian data through ADDs for the purpose of including multi-modal considerations earlier in the project development process. 100% Complete
- Identify, evaluate, and prioritize transportation projects through data analysis and public involvement. Facilitate the review and improvement of PIF data for use in scoring process to be used as a component in the development of the Recommended Highway Plan. Assisted with the development of scoring and reporting information for use as a component in the development of the Recommended Highway Plan. 100% Complete
- Recommend sustainable and fundable projects through performance based planning. Assisted in development of a data driven scoring and prioritization process, Performance-Based Planning and Programming (PBPP) processes to identify projects for the Recommended Highway Plan. 100% Complete
- Maintain and oversee further development of the Project Identification Form/Unscheduled Needs List (an online database for use as a tool in project prioritization and analysis) Worked with OIT to begin developing an updated, streamlined version of PIF. 100% Complete

CHAPTER 8

Statewide Transportation Planning

RESPONSIBLE UNIT

Division of Planning
Strategic Planning Branch

PROPOSED ACTIVITIES FOR 2015-2016 (continued)

- Maintain and oversee further development of the District Transportation Plan containing the Unscheduled Projects List (UPL) and supporting arguments for prioritization using Performance Based-Planning and Programming (PBPP) principles in compliance with MAP-21 initiatives. Coordinated with the Districts to develop the internal KYTC District Transportation Plan (DTP) and submitted to the KYTC Secretary of Transportation and the KYTC Executive Oversight Committee (EOC) in September 2015 as part of the prioritization process for further consideration in the Recommended Highway Plan. 100% Complete
- Coordinate with other Divisions, Districts, and Agencies and incorporate applicable plans as necessary to ensure compliance with new authorization or MAP-21 extension. Worked cooperatively with ADD, MPO, and HDO planners to identify transportation related issues on both a local and regional scale in an effort to better determine quality data driven needs as part of our prioritization efforts for the District Transportation Plan as a resource in the development of the Recommended Highway Plan. 100% Complete
- Coordinate and oversee the ADD Regional Transportation Program. Coordinate and assist the Highway District Offices as they develop the District Transportation Plan. Revised and forwarded new ADD contracts for signatures. Provided ADDs guidance on deliverables, addressed Regional Transportation Committees, attended Regional Transportation Committees both as an observer and presenter, processed invoices, and facilitated ADD Planner Assessments. Coordinated between ADD's and HDO's on the development and presentation of District Transportation Plans. 100% Complete
- Provide guidance and review of Socio-economic reports for quality, consistency and completeness. Continuing coordination with Environmental to ensure Planning level socioeconomic studies are in compliance. 100% Complete

PRODUCTS

- Long Range Statewide Transportation Plan Ongoing review for future development. Final document is on the KYTC Your Turn Homepage at <http://yourturn.transportation.ky.gov> with a direct link on the KYTC Main Web Page to the Your Turn Website. 100% Complete
- Statewide Strategic Plan Update Last updated in September 2015 and posted to KYTC Homepage as noted above. 100% Complete
- Unscheduled Needs List Managed data entry, verification, and refinement of existing PIF's into web application, and reviewed for quality and consistency. Reviewed proposed PIF's and assigned control numbers. Consulted with developers on beginning development of a streamlined, updated PIF. 100% Complete
- Annual Work Programs and Contracts for 15 Area Development Districts Completed revisions for FY17 work program and forwarded for signatures. Clarified ADD deliverables and their due dates, and reviewed deliverables for completeness. 100% Complete
- Statewide Transportation Planning Meetings Held STP, ADD, HDO Planner or equivalent meetings. 100% Complete

CHAPTER 8

Statewide Transportation Planning (continued)

RESPONSIBLE UNIT

Division of Planning
Strategic Planning Branch

PRODUCTS (continued)

- Individual ADD Planner Assessments Tracking deliverables and attending/presenting at meetings as necessary for use in evaluation. Released checklist to ADD planners for verification, and solicited feedback from HDO planners for potential use in said assessments. 100% Complete
- Public Participation Plan Update Worked to incorporate public comments into updated document and finalized in February 2016. 100% Complete.
- District Transportation Plan (DTP) containing the Unscheduled Projects List. Provided DTP to Secretary and Executive Oversight Committee in September 2015. 100% Complete

DISTRIBUTION OF ESTIMATED COST FOR 2015-2016

	2015-2016	Expended	Percent Expended
PERSONNEL	\$1,326,600	\$1,431,239	108%
OTHER	\$25,000	\$32,413	130%
TOTAL	\$1,351,600	\$1,463,652	108%

ESTIMATED OUTSOURCING EXPENSES AND PURCHASES

Outsourcing

- \$75,000 to outsource for studies and assistance related to the Statewide Planning SPR Work Program

Other

- \$25,000 Other Operational Cost
For items such as travel, mileage, equipment and other cost directly associated to the completion of this work chapter.

CHAPTER 9

Metropolitan Planning Organizations
(Areas over 50,000 Population)

RESPONSIBLE UNIT

Division of Planning
Strategic Planning Branch
MPO Team

PURPOSE AND SCOPE

The MPO Team provides technical assistance to and coordination with the Metropolitan Planning Organizations (MPOs) for developing and maintaining a continuing, cooperative, and comprehensive (3C) transportation planning process in each of the urbanized areas. This process ensures that state and local transportation projects remain eligible to receive Federal funding. Specific planning activities to be conducted in each MPO area are outlined in the MPOs' Unified Planning Work Programs (UPWPs).

PROPOSED ACTIVITIES FOR 2015-2016

- Draft and administer contracts with MPOs and Local Public Agencies (LPAs), providing oversight for Federal funds. **Continuing activity: Administered contracts with nine MPOs, plus Louisville Metro Government, for planning activities during FY 2016. Drafted contracts for planning activities to be undertaken in FY 2017.**
- Provide technical assistance, oversight and review of MPO activities, programs, documents, models, and tools. **Continuing activity: Provided technical assistance, oversight, and review of MPO activities, programs, documents, models, and tools as needed. Assisted with functional classification reviews. Attended certification review for the Huntington MPO.**
- Represent the Cabinet at technical, policy, and other committee meetings. **Continuing activity: Participated in technical and policy committee meetings at each of the nine MPOs throughout FY 2016.**
- Promote planning processes in each MPO area that are consistent with current Federal regulations. **Continuing activity: Worked with MPOs to promote consistency of planning processes with Federal regulations. Reviewed proposed regulations resulting from MAP-21 and FAST Acts to determine impacts on MPO operations and provided comments as needed.**
- Work with MPOs, transit agencies, and other state transportation agencies to implement performance-based planning processes, including selection of appropriate performance targets and development and implementation of processes to achieve those targets. **Continuing activity: Reviewed performance measures regulations and guidance. Coordinated with MPOs, transit agencies, and other KYTC offices to discuss requirements and explore data sources.**
- Work with the MPOs, Highway District Offices (HDOs), other agencies, and representatives of various modes of transportation to collect data, identify needs (including connectivity gaps in access to essential services such as housing, employment, health care, education, and recreation), identify funding sources, complete Project Identification Forms (PIFs) and evaluate and rank projects, encouraging consistency between local, regional and state plans and programs and across various modes of transportation. **Continuing activity: Worked with various agencies to collect data, identify needs and funding sources, complete PIFs, and evaluate and rank projects as needed. Assisted with the development of a statewide project scoring system.**

CHAPTER 9

Metropolitan Planning Organizations (continued)
(Areas over 50,000 Population)

RESPONSIBLE UNIT

Division of Planning
Strategic Planning Branch
MPO Team

PROPOSED ACTIVITIES FOR 2015-2016 (continued)

- Participate in planning studies affecting the metropolitan planning areas, including planning studies for rural and small urban areas near metropolitan planning area boundaries. **Continuing activity: Participated in the following studies: Chenoweth Lane (Louisville), Richmond-Berea Small Urban Area Study; KY 8 (Northern Kentucky); US41A (Henderson); Boyd-Greenup Non-motorized Transportation Plan; US 231 Corridor Traffic Study (Bowling Green); Transit Needs Assessment and Route Realignment Study (Bowling Green); I-75 – Man O’ War Small Area Study (Lexington); Jessamine County Bike and Pedestrian School Connector Study (Lexington); Downtown Lexington Traffic Movement and Revitalization Study (Lexington); Bicycle and Pedestrian Master Plan Update (Lexington); and Bicycle Facilities Study (Radcliff-Elizabethtown).**
- Conduct regular Statewide Transportation Planning meetings, to include discussions on current metropolitan planning issues. **Continuing activity: Participated in Statewide Transportation Planning Meetings in October and January.**
- Coordinate with MPOs and other agencies on air quality issues. **Continuing activity: Participated in Interagency Consultation activities in areas subject to air quality conformity and maintained knowledge of existing and proposed air quality regulations.**
- Collaborate with representatives of neighboring MPOs and transportation agencies to promote consistency in performance measures, performance targets, data collection and analysis, and transportation plans and programs within multi-state MPOs and between adjacent MPOs, as applicable. **Continuing activity: Met periodically with the Charleston MPO to coordinate activities with the Huntington MPO.**
- Develop and update metropolitan planning agreements, as needed. **Continuing activity: Reviewed proposed regulations to identify impacts to metropolitan planning agreements. Efforts to develop new planning agreements were initiated in two MPOs (Bowling Green and Radcliff-Elizabethtown).**

PRODUCTS

- Compliant and consistent Transportation Improvement Programs (TIPs), Metropolitan Transportation Plans (MTPs) and other documents. **Current TIPs and MTPs in place for all nine MPOs.**
- A Statewide Transportation Improvement Program (STIP) that is consistent with the MPOs’ TIPs. **2015-2018 STIP complete and updated as needed.**
- Contracts with MPOs and LPAs to carry out planning activities in the urbanized areas.
- Statewide Transportation Planning meetings. **Meetings held in October and January.**
- Special studies as needed. **No special studies were undertaken in FY16.**

CHAPTER 9

Metropolitan Planning Organizations (continued)
(Areas over 50,000 Population)

RESPONSIBLE UNIT

Division of Planning
Strategic Planning Branch
MPO Team

DISTRIBUTION OF ESTIMATED COST FOR 2015-2016

	2015-2016	Expended	Percent Expended
PERSONNEL	\$556,800	\$366,944	66%
OTHER	\$25,000	\$7,177	29%
TOTAL	\$581,800	\$374,122	64%

ESTIMATED OUTSOURCING EXPENSES AND PURCHASES

Outsourcing

- \$25,000 Various studies, as needed.

Other

- \$25,000 Other Operational Cost
For items such as travel, mileage, equipment and other cost directly associated to the completion of this work chapter.

CHAPTER 10

Performance Measures and Congestion/Mobility Analysis

RESPONSIBLE UNIT

Division of Planning

PURPOSE AND SCOPE

The federal transportation legislation Moving Ahead for Progress in the 21st Century (MAP-21) requires state identify state-level performance measures/targets for various performance management areas related to safety, pavements, bridges, freight, emissions, reliability, and congestion. The analysis required for performance and congestion is included in this chapter. The analysis includes reviewing FHWA's Proposed Rule relating to these measures, coordinating KYTC's comments, and adapting existing performance measurements to comply with the final rule. In the future, the state level performance measures may be considered in the national level standards by the United States Department of Transportation (U.S. DOT). The Planning Team will focus on emissions, freight/highway congestion and reliability performance measures.

Performance-based planning involves the use of data to direct project-selection decisions. Such measures can provide a more objective framework to evaluate KYTC's progress towards such performance standards.

PROPOSED ACTIVITIES FOR 2015-2016

Using National Performance Management Research Data Set (NPMRDS) provided by FHWA, the Division of Planning is tasked with developing performance measures and establishing performance targets for the following categories. **Provided critical comments to the rulemaking. 100% Complete**
Freight

- Annual Hours of Truck Delay (AHTD) - Travel time above a KYTC-defined, congestion threshold in units of vehicle-hours of delay for Trucks on the Interstate Highway System. **Subpart F proposes 95th Percentile of travel time for Reliable Truck Travel. Developing method to abide by the proposed rulemaking for filling in data gaps. 50% Complete**
- Truck Reliability Index (RI₈₀) - The ratio of the 80th percentile truck travel time to the KYTC-determined threshold travel time for trucks on the Interstate Highway System. **Without gap filling, successfully tested approach using select counties & year. 50% Complete**

System Performance

- Annual Hours of Delay (AHD) - Travel time above a KYTC-defined, congestion threshold in units of vehicle -hours of delay on all Interstate Highways as well as National Highway System (NHS) corridors excluding Interstate Highways. **Created a spreadsheet to compile Peak Hour Travel Times as described in the proposed rulemaking to all TMCs in Kentucky using a select month and year of data. Able to isolate Interstate from NHS. 80% Complete**
- Reliability Index (RI₈₀) - The ratio of the 80th percentile travel time to the KYTC-determined threshold travel time for all vehicles on Interstate Highways as well as National Highway System (NHS) corridors excluding Interstate Highways. **Created a Spreadsheet to compile Subpart E method for urbanized areas to all TMCs in Kentucky using a select month and year. Able to isolate Interstate from NHS. 80% Complete**

CHAPTER 10

Performance Measures and Congestion/Mobility Analysis
(continued)

RESPONSIBLE UNIT

Division of Planning

PROPOSED ACTIVITIES FOR 2015-2016 (continued)

Congestion Mitigation (CM)

- Annual Hours of Delay (AHD) - Travel time above a KYTC-defined, congestion threshold in units of vehicle-hours of delay will be estimated for evaluating CMAQ projects. **Proposed rulemaking specifies Excessive Daley per Capita. Reviewed proposed rulemaking. 80% Complete**

Process Analysis

Awareness:

- Participate in NPMRDS educational opportunities including monthly webinars, as available. **100% Complete**
- Serve as primary point of contact for KYTC's response to upcoming FHWA Notice of Proposed Rule Making (NPRM) for both AASHTO and the Federal Register. **100% Complete**
- Participate in the Texas Transportation Institute's (TTI) pooled-funded Urban Mobility Study. Several elements of research affect measuring mobility, working with travel time data, and MAP-21 Performance Measures. **100% Complete**

Performance Measurement Precursors

- Establish KYTC definitions for reference speeds/travel times for uninterrupted and interrupted flow scenarios. **Proposed definition for desired speed for urbanized areas > one million population. 80% Complete**
- Establish Daily, AM Peak, PM Peak, and Off-peak threshold speeds for each TMC **100% Complete**
- Define, evaluate, and refine, based on the observed data, representative periods to determine KYTC free-flow speeds Develop methodologies for calculating segment and statewide AHTD, Freight RI₈₀, AHD, and System RI₈₀ **80% Complete**
- Formalize and implement methodology to aggregate TMC data into corridor segments for all roads on the NHS **100% Complete**
- Formalize approach and data sources to estimate vehicle hours traveled and vehicle miles traveled for NHS and all roads, where appropriate **100% Complete**
- In coordination with Data Management Branch develop and maintain a correlation between the NPMRDS Traffic Message Channel (TMC) and KYTC's Linear Referencing System (LRS) at a sub-TMC, or Link, level for each unique TMC network **100% Complete**

Performance Measurement

- Implement performance measures approach on federally required facilities. **50% Complete**
- Review results to determine appropriateness of measurement methodology. **50% Complete**
- If needed, modify methodology to reflect local sensitivities while retaining federally required methodology. **50% Complete**

Target Setting

- Interrogate Performance Results for current performance trends. **Awaiting final rulemaking**
- Participate in collaborative target setting opportunities with MPOs **Awaiting final rulemaking**
- Propose Annual Performance Measure targets for AHTD, Freight RI₈₀, AHD, and System RI₈₀ **Awaiting final rulemaking**

CHAPTER 10Performance Measures and Congestion/Mobility Analysis
(continued)**RESPONSIBLE UNIT**

Division of Planning

PROPOSED ACTIVITIES FOR 2015-2016 (continued)**Housekeeping**

- Acquire monthly NPMRDS data, keep server up to date, and assist in implementing improved data location. Check changes in network quarterly. **100% Complete**
- Assist in rolling reliability measures into readily accessible format. Assist planners and designers in using mobility measures in studies and projects. **100% Complete**
- Assist in any efforts to make travel time/speed data readily available to other personnel of KYTC and partners, as appropriate. Evaluate, refine, and report a KYTC-defined congestion threshold **100% Complete**
- Refine the mobility component of the Adequacy Rating System as necessary for new priority processes. **Used Travel Time Savings as component 100% Complete**
- Acquire, evaluate, and develop analysis tool of monthly NPMRDS non-factored travel time data for available NHS statewide. **Using PHTTFR 100% Complete**

PRODUCTS

- Provide comments to AASHTO and Federal Register comments on upcoming Performance Measure NPRM. **100% Complete**
- Geo-reference performance measures (reliability and delay) for NHS and other routes. **100% Complete**
- Draft KYTC operational performance targets. **Awaiting Final Rule**
- Performance reporting in compliance with Final Rule (anticipated October 2015). **Awaiting Final Rule**
- Simplified, streamlined process or products to share travel time data with KYTC staff and public. **50% Complete**

DISTRIBUTION OF ESTIMATED COST FOR 2015-2016

	2015-2016	Expended	Percent Expended
PERSONNEL	\$192,700	\$188,142	98%
OTHER	\$15,000	\$59	1%
TOTAL	\$207,700	\$188,202	91%

ESTIMATED OUTSOURCING EXPENSES AND PURCHASES**Outsourcing**

- \$150,000 Purchase and Analysis of 2012 and 2013 link level data

Other

- \$5,000 Other Operational Costs
For items such as travel, mileage, equipment and other cost directly associated to the completion of this work chapter.
- \$10,000 TTI Urban Mobility Study (pooled-fund study)

CHAPTER 11

Air Quality

RESPONSIBLE UNIT

Division of Planning
Multimodal Programs Branch
Air Quality Team

PURPOSE AND SCOPE

The Air Quality Team will coordinate and perform analyses necessary to determine regional air quality conformity. They will also assist in the development of regulations, guidance, and best practices in order to ensure compliance and deliver transportation projects within designated nonattainment and maintenance areas. The team will communicate and coordinate with KYTC Offices and Divisions as well as other Cabinets as needed.

PROPOSED ACTIVITIES FOR 2015-2016

- Perform Regional Air Quality (AQ) Conformity Analysis for metropolitan and rural areas as needed. **100% Complete**
- Monitor AQ data submissions to other agencies – State, federal, local, and academic research. **Reviewed AQ conformity analysis reports from State, Federal, and Local agencies for the AQ affected area(s). OKI, EMPO, and KIPDA were the main ones monitored. 100% Complete**
- Provide Kentucky transportation-related data to KY EEC-DAQ for their development of the State Implementation Plans (SIPs) for nonattainment and maintenance areas as well as for other projects. Review, comment, and participate during the preparation of mobile budgets for the development of SIPs, SIP amendments, maintenance demonstrations, and budget adjustments. **Provided KY EEC-DAQ requested data for Stage 2 and the new Ozone standard. 100% Complete**
- Work with KYTC-IT to develop annual Kentucky VIN/Fleet registration age/type distribution data for use with MOVES. Explore incorporation of other useful datasets. **The 2014 registration data was accepted by stakeholders. 100% Complete**
- Prepare Cabinet responses to citizen/agency inquires for the signature by Governor, Secretary, or Director. **Drafted 7 letters for the director's response to requests for Louisville, KYOVA, and NKY for amendments to the TIPs or MTPs. 100% Complete**
- Attend necessary meetings and conferences to stay abreast of the AQ issues as needed. **Attended 14 AQ related meetings. 100% Complete**
- Monitor changes and maintain a clearinghouse of knowledge for the Division/Cabinet concerning AQ regulations. This includes maintaining a working knowledge of the NAAQS for the 8-hour ozone and PM_{2.5} standards, EPA's current emissions model, air quality regulations, and implementation guidance. Inform KYTC staff, KYTC management, partner cabinets, MPOs, ADDs, public officials, and the general public about air quality, conformity analysis, federal guidelines, and new developments regarding greenhouse gas/climate change requirements. Disseminate information about same. **No PM_{2.5} changes. EPA released their new ozone standard at the beginning of October, which had no new areas in the state affected. EPA released a major update from MOVES_2014 to MOVES_2014a. 100% Complete**
- Depending on new ozone standards, travel statewide to help local governments understand transportation impacts. **The new ozone standards did not cause any travel, as no new areas were affected. 100% Complete**

CHAPTER 11

Air Quality

RESPONSIBLE UNIT

Division of Planning
Multimodal Programs Branch
Air Quality Team

PROPOSED ACTIVITIES FOR 2015-2016 (continued)

- AQ Website development- Maintain appropriate active web-links. **Developed and implemented plans to update the AQ Website in regards to PM_{2.5} and Ozone information, which included new maps and links as the new information was received. 100% Complete**
- Develop and maintain a KYTC AQ email distribution list for AQ information. **100% Complete**
- Participate and/or facilitate monthly AQ conference calls and quarterly meetings. This includes participating in interagency consultation calls regarding transportation conformity for updates and amendments to MTP plans, SIPs, TIPS, and STIPs. **Active in five conference calls regarding amendments for KIPDA, OKI, other areas, and FHWA. 100% Complete**
- Assist with new programs as required by MAP-21, CAAA, NAAQS, and others. **No new programs 100% Complete**
- Maintain KY rideshare and park-n-ride database of locations. **Update the website and database as needed. 100% Complete**
- Work with FHWA-KY to host biennial statewide air quality conference. **Conference was a success and was held on April 14, 2016. 100% Complete**
- Maintain literacy in MOVES_2014 or current AQ model. This includes performing the emissions model run for ozone and PM_{2.5} regional conformity analyses for areas designated as nonattainment, including Louisville, NKY, Ashland, and Christian County areas as well as other newly designated areas. **Have detailed knowledge on MOVES_2014a model and the post-processing of the data in MySQL. Have only completed test runs with the current model. 100% Complete**
- Coordinate special AQ/MOVES training when needed. **100% Complete**
- Provide support to the Office of Local Government and local agencies for Congestion Management and Air Quality (CMAQ) related issues, as requested. Assist District Offices with the preparation of CMAQ applications including emission calculations and documentation. **Waiting for more information on CMAQ performance measures from FHWA from the FAST-ACT. 100% Complete**
- Maintain a working knowledge of emerging issues and best practices, such as emission reduction strategies. **Freight team and AQ coordinate regularly to share information that might be helpful for emission reductions and diesel retrofitting. 100% Complete**
- Implement congestion reduction performance measures as indicated in FHWA final rule. **Provided comments to Federal Register. Reviewing data for impacted areas. 50% Complete**
- Other duties and special projects as assigned. **100% Complete**

PRODUCTS

- Ozone and PM_{2.5} regional conformity analysis as required for nonattainment and maintenance areas. **100% Complete**
- Conforming statewide and MPO planning documents. **100% Complete**
- Data to Division of Air Quality as requested. **100% Complete**
- Emission calculations for CMAQ, GHG/CC as requested. **100% Complete**
- VIN/Fleet data for use with MOVES. **100% Complete**
- FHWA-KYTC AQ Biennial AQ Conference. **100% Complete**

CHAPTER 11

Air Quality

RESPONSIBLE UNIT

Division of Planning
Multimodal Programs Branch
Air Quality Team

DISTRIBUTION OF ESTIMATED COST FOR 2015-2016

	2015-2016	Expended	Percent Expended
PERSONNEL	\$65,100	\$62,191	96%
OTHER	\$5,000	\$139	1%
TOTAL	\$70,100	\$62,330	89%

Other

- \$5,000 Other Operational Cost

For items such as travel, mileage, equipment and other cost directly associated to the completion of this work chapter

CHAPTER 12

Multimodal Freight Transportation

RESPONSIBLE UNIT

Division of Planning
Multimodal Programs Branch

PURPOSE AND SCOPE

The Modal Team will collect data, plan, promote, and assist in the development of a multimodal and intermodal transportation system in Kentucky. The programs addressed in this chapter are public riverports, railroads, freight, and ferryboats. The team will administer and have oversight/support of ferry operations, Ferryboat Formula Funds (FBP), KSRA, KRI, and other federal or state multimodal contracts. The team serves as staff support for the Water Transportation Advisory Board.

PROPOSED ACTIVITIES FOR 2015-2016

Public Riverports

- Maintain Kentucky's guidelines for Kentucky Riverport Improvement (KRI) grant applications, as defined by current budget bill. Review any KRI grant applications received. **100% Complete**
- Provide staff support for the Water Transportation Advisory Board. **100% Complete**
- Plan and host riverport meetings as needed. **100% Complete**
- Interface with the public riverports in the state by responding to information requests and serving as a member of the Kentucky Association of Riverports. **100% Complete**
- Actively participate as a member on the AASHTO Standing Committee on Water Transportation (SCOWT). **100% Complete**
- Conduct annual on-site visits of active public riverports in the state. **100% Complete**
- Update the KYTC Waterways Plan as needed. **100% Complete**
- Maintain Riverports website. **100% Complete**

Railroads

- Oversee Kentucky Shortline Railroad Assistance projects including contract administration, project tracking, and project inspection. **100% Complete**
- Work with Division of Right of Way (or assigned Division) to administer KY Rail Crossing Improvement (KRCI) projects as defined by the current budget bill. Review any KRCI grant applications received. **100% Complete**
- Assist with development and maintenance of the statewide railroad GIS mapping and data set using RR GIS, RR maps, RR annual reports, and aerial photographs. Rail maps may be used by KYTC for roadway planning and project development. **100% Complete**
- Update the current Kentucky Statewide Rail Plan as needed. **100% Complete**
- Participate in various rail studies and research with KYTC involvement. **100% Complete**
- Collect railroad annual reports and rail accident/incident reports as directed in 603 KAR 7:090. **100% Complete**
- Actively participate as a member on the AASHTO Standing Committee on Rail Transportation (SCORT), American Railway Engineering and Maintenance-of-Way Association (AREMA), American Short Line & Regional Railroad Association (ASLRRRA), and Kentucky Operation Lifesaver. **100% Complete**
- Plan and host rail industry stakeholder meeting as needed. **100% Complete Summer 2016**
- Maintain KYTC's Railroads website. **100% Complete**

CHAPTER 12

Multimodal Freight Transportation (continued)

RESPONSIBLE UNIT

Division of Planning
Multimodal Programs Branch

PROPOSED ACTIVITIES FOR 2015-2016 (continued)

- Monitor, track, and distribute information about railroad line abandonments in Kentucky. **100% Complete**
- Respond to public inquiries on passenger and freight rail issues. **100% Complete**

Freight

- Provide technical assistance and disseminate information to MPOs, ADDs, HDOs, and project teams regarding freight movement, planning, and safety. **100% Complete**
- Evaluate, log, store, and update freight data from MPOs, ADDs, and HDOs as needed. **100% Complete**
- Participate in regional freight planning efforts. **100% Complete**
- Continue involvement with Mid-America Freight Coalition (MAFC), Institute for Trade and Transportation Studies (ITTS), and National Cooperative Highway Research Program (NCHRP), as appropriate. **100% Complete**
- Visit intermodal sites and communicate with rail, water, and road modes to identify freight-related needs and concerns involving highways. **100% Complete**
- Continue developing relationships with Economic Development to identify and promote intermodal freight needs. **100% Complete**
- Update information for FHWA Intermodal Connector Assessment Tool (ICAT) as needed. **100% Complete**
- Update the State Freight Plan. **In final stages; expected publish September 2016. 90% Complete**
- Review draft procedure and analysis for MAP-21 Freight Performance Measures. **100% Complete**
- Maintain KYTC's Freight website. **100% Complete**
- Create methodology for considering freight in PIFs, plans, and projects. **Attended project scoping meetings but methodology has not been documented. Began developing Freight LOS form. 50% Complete**

Ferryboats

- Coordinate the Kentucky Ferryboat Program. **100% Complete**
- Share information concerning Federal Ferryboat Formula Fund (FBP) program and administer remaining FBD funds. Plan and host the ferryboat meeting as needed. **100% Complete**
- Conduct annual on-site visits of Kentucky ferryboat operations. **100% Complete**
- Work with ferry authorities to develop fiscally constrained plans for FBP funds. **Worked with ferries to develop projects for FBP and other funds. FBP funds not distributed by FHWA for FY 15 or FY 16. 50% Complete**
- In accordance with the current budget bill, assist with development of state ferryboat licensure requirements. **Coordinated with KYTC Legal and Executive staff. 100% Complete**
- Maintain KYTC's ferryboat website. **100% Complete**

CHAPTER 12

Multimodal Freight Transportation (continued)

RESPONSIBLE UNIT

Division of Planning
Multimodal Programs Branch

PRODUCTS

- Kentucky Riverport Improvement project/contract administration. **100% Complete**
- Updated Statewide Rail Plan **100% Complete**
- Updated Statewide Freight Plan **In final stages; expected publish September 2016.**
- **90% Complete**
- Statewide Waterways Plan – RFP for FY 2017 **Framework is prepared but RFP is not written. 75% Complete**
- Updated railroad GIS database and maps for KYTC and public purposes **100% Complete**
- Annual Rail Report **100% Complete**
- Ferryboat operation contracts, site inspections, and invoice review/approval **100% Complete**
- ICAT documentation **0% Complete no activity**
- FBP awards administered. **100% Complete**
- Annual Waterways meeting as needed **100% Complete**
- Invoices for Kentucky Shortline Railroad Assistance Program and contract closeouts **100% Complete**
- Contracts and guidance for Kentucky Rail Crossing Improvement Program **100% Complete**
- Updated website, meeting minutes, agendas, logistics, and guidance for Water Transportation Advisory Board **100% Complete**

DISTRIBUTION OF ESTIMATED COST FOR 2015-2016

	2015-2016	Expended	Percent Expended
PERSONNEL	\$469,800	\$287,904	61%
OTHER	\$45,000	\$6,956	1%
TOTAL	\$514,800	\$294,860	57%

ESTIMATED OUTSOURCING EXPENSES AND PURCHASES

Outsourcing

- \$75,000 Freight Plan completion
- \$75,000 Waterways Plan initiation.

CHAPTER 12

Multimodal Freight Transportation (continued)

RESPONSIBLE UNIT

Division of Planning
Multimodal Programs Branch

ESTIMATED OUTSOURCING EXPENSES AND PURCHASES (continued)

Other

- \$25,000 Mid America Freight Coalition, a MAASHTO subcommittee paid as a pooled fund* study (0% Complete-In process)
- \$0 Institute for Trade and Transportation Studies, a SAASHTO subcommittee paid as a pooled fund* study. KYTC has pre-paid July 2012-June 2017.
- \$5,000 Operation Lifesaver - Educational Material (School Children) (100% Complete)
- \$15,000 Other Operational Cost-
For items such as travel, mileage, equipment, and other costs directly associated to the completion of this work chapter
- Tennessee Tombigbee Waterway Dues are paid through Regional Planning (EA51 General Fund \$50,000) (100% Complete)

* Pooled Fund projects paid via KYTC Research Arm/Innovation Engineer.

CHAPTER 13

Traffic Data Forecasting Statewide Traffic Model

RESPONSIBLE UNIT

Division of Planning
Multimodal Programs Branch
Forecasting and Modeling Team

PURPOSE AND SCOPE

The Forecasting and Modeling Team maintains traffic trends, provide current and projected traffic volume estimates for planning, project development, environmental analysis, operations, and other purposes. They update and maintain local, regional, and statewide traffic models (KySTM). They collect, process, and assemble data for determining route location or relocation, selecting among alternate routes, or as input into KySTM.

PROPOSED ACTIVITIES FOR 2015-2016

Traffic Forecasting- Reports, Studies, and Analysis

- Prepare traffic estimates for planning studies, design projects, maintenance, and other purposes, as requested and/or needed. **100% Complete**
- Administer statewide traffic forecasting contracts. Provide quality review for traffic projections prepared by the MPOs' and Project Development consultants. **100% Complete**
- Maintain databases that track traffic forecasts and traffic forecast parameters. Make databases available to other users and offices as appropriate. **100% Complete**
- Maintain the traffic forecasting web page as a tool for other users. Develops database to track model development and archive status. **100% Complete**
- Maintain and update internal traffic forecasting tools (e.g. ESAL spreadsheets; turning movement spreadsheets) and Traffic Forecasting report. **100% Complete**
- Provide future year forecasting of K-factors/D-factors for the Highway Performance Monitoring System (HPMS) and compare result with TRADAS outputs. **100% Complete**
- Participate in Regional Forecaster User's Group. This group includes forecasters from surrounding states that are trying to identify the state of practice for traffic forecasts. **Participated in Ohio DOT forecasting workshop. 100% Complete**
- Provide support to Division of Highway Design in implementation of new Mechanical Pavement Design Guide (MEPDG). **100% Complete**
- Create, publish, and email monthly Traffic Forecast Status Report. Update Forecast due dates on Branch Calendar, at least monthly. **100% Complete**

Modeling- Reports, Studies, and Analysis

- Administer statewide modeling contracts. Provide quality review for models prepared by the MPOs and Project Development consultants. **100% Complete**
- Maintain databases that track traffic models, traffic modeling parameters, model use, and archive status. Make databases available to users. **100% Complete**
- Maintain the traffic modeling web page as a tool for users. **100% Complete**
- Obtain vehicle registration, employment, and travel time data for use in Travel Demand Models. Research other data sources available. **100% Complete**
- Host/Facilitate the Traffic Model Users Group and TransCAD workshop for traffic forecasters and traffic modelers composed of members from government, academia, and the private sector. **100% Complete**

CHAPTER 13

Traffic Data Forecasting
 Statewide Traffic Models(continued)

RESPONSIBLE UNIT

Division of Planning
 Multimodal Programs Branch
 Forecasting and Modeling Team

PROPOSED ACTIVITIES FOR 2015-2016 (continued)

- Participate in Caliper workshops held at adjacent states, foster a peer exchange with such agencies regarding statewide model and regional models. **Participated in model peer exchange with West Virginia DOT. 100% Complete**
- Create city, county, multi-county, regional models as needed for Project Development **100% Complete**
- Conduct studies to better calibrate and validate models. Attend peer reviews of large MPO models and coordinate model updates as needed for small MPO models. **100% Complete**
- Identify areas needing an area-wide model. Further standardize the interface and formats used in macro level models. **100% Complete**

PRODUCTS

- Project, Corridor, Road User Cost Reports or other traffic forecasts **100% Complete**
- Monthly Traffic Forecast Status Report **100% Complete**
- Bi-Monthly Traffic Model Status Report **100% Complete**
- Monthly review/update of Branch calendar. **100% Complete**
- District Office coordination regarding models and forecasts **100% Complete**
- Travel Time Analysis for models **100% Complete**
- Traffic forecast factors for HPMS **100% Complete**
- Updated tools for consultants and District (e.g. ESAL Calculator; look-up tables) **100% Complete**
- Various sized Travel Demand Models such as, but not be limited to the following:
- County or highway district area macro models **100% Complete**
- Corridor and small area micro-simulation models **100% Complete**
- Continued validation and calibration of new and existing models **100% Complete**

DISTRIBUTION OF ESTIMATED COST FOR 2014-2015

	2015-2016	Expended	Percent Expended
PERSONNEL	\$774,000	\$371,652	48%
OTHER	\$35,000	\$813	1%
TOTAL	\$809,000	\$372,465	46%

CHAPTER 13

Traffic Data Forecasting
Statewide Traffic Models (continued)

RESPONSIBLE UNIT

Division of Planning
Multimodal Programs Branch
Forecasting and Modeling Team

ESTIMATED OUTSOURCING EXPENSES AND PURCHASES

Outsourcing

- \$300,000 for County-Wide Traffic models (outsource)

Other

- \$25,000 Other Operational Cost - For items such as travel, mileage, meeting registration, and membership fees.
- \$10,000 VISSIM License for PTV Micro-Simulation Software.

CHAPTER 14

Pedestrian and Bicycle Program

RESPONSIBLE UNIT

Division of Planning
Modal Programs Branch

PURPOSE AND SCOPE

The team coordinates and manages the state's Bicycle and Pedestrian Program within Transportation Cabinet and coordinates associated efforts and work within other Cabinets and organizations. They work to expand active transportation opportunities in Kentucky by providing assistance to state and local governments and other groups, as requested. This assistance will be in the form of technical advice, development of plans, review of engineering elements, and coordinating studies. The responsibility of the Kentucky Pedestrian and Bicycle Coordinator is to prepare, assist, and promote bicycle and pedestrian programs throughout the state by working with project teams to recommend opportunities for bicycle and pedestrian facilities for proposed and ongoing highway projects. The Bicycle and Pedestrian Coordinator will act as the secretariat for the Kentucky Bicycle and Bikeway Commission and continue to coordinate regular meeting, special meetings, and the annual conference.

The Bicycle and Pedestrian team will coordinate with the Cabinet for Tourism, Arts and Heritage, the Governor's Office of Local Development, the Cabinet for Health and Family Services, the TAP and LPA programs, and the Department for Local Governments to promote and implement pedestrian and bicycle travel within the state.

The KYTC Office of Local Programs and the Department for Local Government both coordinate programs that support and encourage active transportation. The team will coordinate with them, regarding Scenic Byways, the Transportation Alternatives Program (Now called STP Set Aside), Recreational Trail Programs, and the CMAQ program.

PROPOSED ACTIVITIES FOR 2015-2016

Planning

- Assist local governments in the planning, development, improvement and implementation of local bicycle and pedestrian network facilities and provide guidance from and to the FHWA, AASHTO and other national organizations. **The team worked with 27 communities (three of which were in MPO areas) to improve or create plans for bicycle and or pedestrian facilities. 100% Complete**
- Participate in the KYTC Strategic Highway Safety Plan development and implementation. Pedestrian and bicycle safety are now stand alone sections. **The team helped to develop and implement the long term highway safety plan (3 meeting for this time period). 100% Complete**
- Participate in FHWA Pedestrian Fatality Focus Study for Louisville and Kentucky. **100% Complete**
- Revise, update, and provide guidance for the development of the US Bike Route and statewide bike route touring network. Provide guidance for any changes to the USBR system by submittal to AASHTO for approval and the coordination with the Adventure Cycling Association for route concurrence. **US Bike Route 76 now has complete way finding signage in both directions of travel. 100% Complete**
- Review, revise, and update the Pedestrian and Bicycle Travel Policy, as needed. **100% Complete**

CHAPTER 14

Pedestrian and Bicycle Program (continued)

RESPONSIBLE UNIT

Division of Planning
Modal Programs Branch

PROPOSED ACTIVITIES FOR 2015-2016 (continued)

Engineering and Projects

- Answer requests concerning planning and design guidelines regarding pedestrian and bicycle facilities and provide consideration reviews of bicycle and pedestrian projects and facilities with KYTC's HDO and CO Divisions, ADDs, MPOs, and local government. **100% Complete**
- Review the list of proposed resurfacing projects for opportunities to improve biking and walking facilities through restriping and other improvements as part of Maintenance activities. Review for compliance with local bike/ped plans where appropriate. **The team is working to complete the GIS data base of all bike/ped facilities within state right-of-way. This will provide greater opportunities for inclusion of bike/ped facility enhancements, ADA sidewalk upgrades, and better planning for an estimate of what work needs to be done and the cost; creating a better basis for data driven project planning. 100% Complete**
- Provide bicycle and pedestrian consideration reviews within traffic forecast summaries. **The team completed 20 ped/bike consideration reviews in conjunction with forecast reports in FY 2016. 100% Complete**
- Work with the Department of Local Government, Office of Rural and Municipal Aid, and the Local Public Agency with bike/ped projects; providing reviews, recommendations, and current resource guidance (from KYTC, FHWA, AASHTO, ADA, and more). **The team worked with eight LPA projects that included bike/ped facilities. 100% Complete**
- Review Share the Road sign requests for applicability and proper system placement. **The team reviewed Share the Road Sign requests from five different counties. 100% Complete**
- Develop/update coordination with HDO, Maintenance, Traffic Operations, Design, and Planning the Share the Road (STR) sign procedures. **100% Complete**
- GIS applications- Develop and maintaining a GIS data base of:
 - a. Bicycle and pedestrian network facilities associated with state maintained roadways. **The KY Transportation Center (KTC) collected a complete GIS database of bike/ped facilities adjacent to state maintained roads. The ADD collection efforts provided bike/ped facility data for all roadways within city boundaries. This data is displayed and available via online interactive maps. 100% Complete**
 - b. Local government and Regional bicycling & pedestrian master plans. Documenting the linkage between the local and regional network facilities. **The online index of available bike/ped plans are now more readily available through sorting by approved/non-approved, county/city, and advocacy organization. 100 % Complete**
- Coordinate to obtain federal, state, local, or private funds available to the cabinet. **100% Complete**

Education & Enforcement

- Provide technical training that includes pedestrian and bicycle best practices and design elements to planners, designers, maintenance and other KYTC staff statewide. **100% Complete**
- Provide technical training that includes pedestrian and bicycle best practices and design elements to planners, designers, and maintenance staff with local governments and other organizations statewide. **The team partnered with the State Health Dept to hold two national webinars: one with the CDC and the other with America Walks. 100% Complete**
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CHAPTER 14

Pedestrian and Bicycle Program (continued)

RESPONSIBLE UNIT

Division of Planning
Modal Programs Branch

PROPOSED ACTIVITIES FOR 2015-2016 (continued)

- Provide training to HDO, ADD, MPO, and local staffs on how to conduct walkability and bikeability audits as requested. The FHWA staff coordinates one bike/walk assessment a year as part of a national emphasis on bike/ped travel and safety. 100% Complete
- Facilitate public education and awareness of non-motorized modes of transportation, as opportunity arises. The team presented bike/ped planning information and resource material at five state level bike/ped planning events, seven community planning meetings and workshops, three regional planning meetings, and many other community level events to promote and improve conditions for bicycling and walking. 100% Complete
- Provide educational brochures for DMV offices, bike shops, bike/run clubs, multi-sport retail businesses, health departments, and various bike/ped advocacy groups. 100% Complete
- Work with local law enforcement to promote education and enforcement of pedestrian and bicycle safety laws. Provide information brochures and prepare a presentation at the annual Life Savers Conference. The team coordinated with local law enforcement, KY State Police and the Eastern KY Criminal Justice College to develop an educational curriculum and brochures for law enforcement officer training. 100% Complete
- Respond to citizens' need for information; maps, suggested bike routes/events, walking trails, and the availability of funding sources for projects as requested. The Bike/Ped team responded to 20 different letters or emails specifically related to bicycling or pedestrian travel concerns in KY. 100 % Complete
- Develop and maintain a clearinghouse of information concerning active transportation - research, methods, the criteria to CO Divisions, ADDs, MPOs, and the local government. 100% Complete
- Maintain and update the <http://transportation.ky.gov/Bike-Walk/Pages> and the <http://transportation.ky.gov/share-the-road> websites. The team continues to maintain and update 11 pages on the KYTC web site associated with the Bike/Ped program and bike/ped travel. The bike/ped plans pages was recently redesigned to provide sorting by approved/non-approved, county/city, and advocacy organization. 100% Complete

Kentucky Bicycle and Bikeways Commission (KBBC)

- Plan quarterly KBBC meetings. The team coordinated and conducted four regular KBBC meetings and one annual business meeting with KYTC staff, and other organizations throughout the year. 100% Complete
- Plan annual KBBC Conference. The 2015 annual meeting was held in Elizabethtown, KY. 100% Complete
- Prepare agenda before each KBBC meeting and minutes after each KBBC meeting. 100% Complete
- Assist KBBC on communications and technical matters. The team worked with the KYTC Office of Audits to determine a set process for completing the necessary financial audits each year associated with the Share the Road License Plates funds. 100% Complete
- Assist in facilitating the Paula Nye Education Grant program. The team worked with 13 communities or organizations (16 different applications) in 2015 to prepare their final Paula Nye Grant applications. 100% Complete

CHAPTER 14

Pedestrian and Bicycle Program (continued)

RESPONSIBLE UNIT

Division of Planning
Modal Programs Branch

PRODUCTS

- Local pedestrian and bicycle master plans and project plans; as needed. **100% Complete**
- Provide a clearing house/tool box of bike/ped resources and related items for the creation or improvement of local master plans. **100% Complete**
- Updated bicycle and pedestrian brochures and promotional materials. **100% Complete**
- Provide pedestrian and bicycle technical training courses as appropriate. **100% Complete**
- Walkability/Bikeability audit material. **100% Complete**
- Quarterly and annual KBBC meetings. **100% Complete**
- NYE Grant status reports. **100% Complete**
- KYTC Bike/Walk web pages (maintenance and updates). **100% Complete**

DISTRIBUTION OF ESTIMATED COST FOR 2015-2016

	2015-2016	Expended	Percent Expended
PERSONNEL	\$85,300	\$176,924	207%
OTHER	\$35,000	\$1,455	1%
TOTAL	\$120,300	\$178,379	148%

ESTIMATED OUTSOURCING EXPENSES AND PURCHASES

Other

- \$10,000 Pedestrian and bicycle training course instructor
- \$2,500 for attendance of national conference
- \$10,000 for Kentucky Bicycle and Bikeway Commission meetings.
 - \$5,000 for Bicycle and Pedestrian Brochures
 - \$5,000 for Bicycle and Pedestrian Promotional Items (bike lights, reflectors, pedometers)
- \$5,000 Other Operational Cost
For items such as travel, mileage, equipment and other cost directly associated to the completion of this work chapter.

CHAPTER 15

Highway Safety Improvement Program

RESPONSIBLE UNIT

Division of Traffic Operations
Traffic Engineering Branch
Highway Safety Improvement Program Team

PURPOSE AND SCOPE

The Highway Safety Improvement Program (HSIP) Team evaluates, develops, and implements safety improvements on all roadways. It enhances and continues to update an evaluation process for prioritizing projects for consideration for inclusion in the Highway Safety improvement Program. It also conducts Road Safety Audit Reviews performing the necessary levels of evaluation to identify and develop a conceptual purpose and need statement of safety issues needs. It identifies and evaluates alternatives, generates project cost estimates and recommends phasing priorities where appropriate. The team oversees outsourced activities and works with the other Division and Agencies as needed to complete necessary tasks.

PROPOSED ACTIVITIES FOR 2015-2016

- Continue to develop and update procedures for evaluating safety needs.
- Conduct Roadway Safety Audit Reviews.
- Respond to inquiries about safety issues.
- Identify, evaluate and prioritize safety needs through data analysis and public involvement.
- Evaluate identified needs District wide/Statewide to assist in prioritizing projects for programming in the Highway Safety Improvement Program.

PRODUCTS

- Crash Analysis
- Road Safety Audit Reviews
- Alternatives Studies
- Feasibility Studies
- Special Studies
- Environmental Studies
- Utility Studies
- Project Estimates
- Priorities for Highway Safety Improvement Program

CHAPTER 15

Highway Safety Improvement Program (continued)

RESPONSIBLE UNIT

Division of Traffic Operation
Traffic Engineering Branch
Highway Safety Improvement Program Team

DISTRIBUTION OF ESTIMATED COST FOR 2015-2016

	2015-2016	Expended	Percent Expended
PERSONNEL	\$500,000	\$321,780	64%
OTHER		\$1,623	
TOTAL	\$500,000	\$323,404	65%

ESTIMATED OUTSOURCING EXPENSES AND PURCHASES

Provide \$25,000 to each of 12 Districts to administer the Highway Safety Improvement Program (HSIP), including planning, implementation, evaluation, and reporting.

SEE ATTACHED SPREADSHEET FOR ACCOMPLISHMENTS

District	County	Road	BMP	EMP	DESCRIPTION	Total Cost	Design Cost	R/W Cost	Utility Cost	Construction Cost	ITEM_NO	REMARK	Project Type
01	LYON	I-24	51.278	69.832	INSTALLATION OF A CABLE MEDIAN BARRIER ON I-24 FROM 0.512 MI W OF KY 903 IN LYON COUNTY (MP 51.278), COUNTINUING SE THROUGH CALDWELL AND TRIGG COUNTIES, AND ENDING JUST OVER THE CHRISTIAN COUNTY LINE (MP 69.832). (2014BOP)	\$ 2,685,110	\$ 50,000			\$ 2,635,110.00	01-00908	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% FOR ENGINEERING.	Cable Median Barrier
01	CALLOWAY	KY 94/US 45	7.600	7.700	TRAFFIC SIGNAL REBUILDS AT THE INTERSECTIONS OF KY 94 AND KY 1660 IN CALLOWAY COUNTY, AND US 45 AND KY 1276 IN GRAVES COUNTY. (2014BOP)	\$ 232,293			\$ 4,000	\$ 228,293.00	01-00909	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% FOR ENGINEERING.	Systemmic Intersection Project
01	CALLOWAY	VARIOUS	-	-	INTERSECTION IMPROVEMENTS AT VARIOUS LOCATIONS IN MCCRACKEN, GRAVES AND CALLOWAY COUNTIES LOCATED IN DISTRICT 1. (2014BOP)	\$ 120,000	\$ 120,000				01-09004	THIS AUTHORIZATION PROVIDES INITIAL DESIGN FUNDS FOR THE PROJECT. LC	Intersection Emphasis List
01	CRITTENDEN	US 60	15.647	23.018	PERFORM LOW COST SAFETY IMPROVEMENTS ON US 60 FROM KY 654 (MP 15.647) TO THE CRITTENDEN/UNION COUNTY LINE (MP 23.018). (2016BOP)	\$ 250,000	\$ 250,000				01-09005	THIS AUTHORIZATION PROVIDES INITIAL DESIGN FUNDS FOR THE PROJECT. LC	RD Corridor
02	CHRISTIAN	VARIOUS	-	-	REPLACE TURNDOWN END TREATMENTS ON VARIOUS ROUTES LOCATED IN DISTRICT 2 ALONG I-24, US-41, US-68, AND US-68B IN CHRISTIAN COUNTY, KY. (2014BOP)	\$ 196,796				\$ 196,796.00	02-00988	THIS AUTHORIZATON PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE. TJ	NHS-ET
02	HENDERSON	VARIOUS	-	-	REPLACE TURNDOWN END TREATMENTS ON VARIOUS ROUTES LOCATED IN DISTRICT 2 ALONG KY-425, US-41, US-41A, US-60 IN HENDERSON CO, AND KY-54 IN DAVIESS CO, KY. (2014BOP)	\$ 324,685				\$ 324,685.00	02-00989	THIS AUTHORIZATON PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE. TJ	NHS-ET
02	CHRISTIAN	KY 1007	0.485	0.495	SIGNAL REBUILD AT KY 1007 @ WEST 15TH ST. IN CHRISTIAN COUNTY. (2014BOP)	\$ 88,787				\$ 88,787.00	02-00990	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% FOR ENGINEERING.	Systemmic Intersection Project
02	DAVIESS	KY 2127	0.000	5.762	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 2127 FROM KY 1207 WEST OF HANDYVILLE (MP 0.000), NORTH TO KEELER ROAD (MP 5.762).	\$ 1,943,393	\$ 149,362			\$ 1,794,031.00	02-09000	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 15% FOR ENGINEERING.	RD Corridor
02	DAVIESS	VARIOUS	-	-	INTERSECTION IMPROVEMENTS AT VARIOUS LOCATIONS IN DAVIESS, HENDERSON, AND MCLEAN COUNTIES LOCATED IN DISTRICT 2. (2014BOP)	\$ 120,000				\$ 120,000.00	02-09004	THIS AUTHORIZATION PROVIDES INITIAL DESIGN FUNDS FOR THE PROJECT. LC	Intersection Emphasis List
02	OHIO	US 231	1.810	6.590	PERFORM LOW COST SAFETY IMPROVEMENTS ON US 231 FROM KY 505 (MP 1.810) TO CR 1610 (MP 6.590). (2016BOP)	\$ 250,000	\$ 250,000				02-09005	THIS AUTHORIZATION PROVIDES INITIAL DESIGN FUNDS FOR THE PROJECT. LC	RD Corridor
03	VARIOUS	VARIOUS	-	-	INSTALL NEW GUARDRAIL AT UNPROTECTED BRIDGE ENDS AT VARIOUS LOCATIONS IN MONROE, LOGAN, TODD, BARREN, AND ALLEN COUNTIES IN DISTRICT 3. (2014BOP)	\$ 836,244				\$ 836,244.00	03-00922	THIS AUTHORIZATON PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE. (SCHEDULED FOR OCTOBER 2015 LETTING) TJ	LRMP
03	LOGAN	KY 3240/US68	0.300	0.400	TRAFFIC SIGNAL REBUILDS AT THE INTERSECTIONS OF KY 3240 AND KY 3519 IN LOGAN COUNTY, AND US 68 AND FRONT STREET IN BARREN COUNTY.	\$ 292,137				\$ 292,137.00	03-00923	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET. LC	Systemmic Intersection Project
03	WARREN	KY 185	0.000	0.428	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY-185 FROM US-68 TO DOUBLE SPRINGS ROAD IN BOWLING GREEN. (2016BOP)	\$ 50,000				\$ 50,000.00	03-00924	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS FOR THE PROJECT. LC	LRMP
03	BARREN	KY 2189	0.000	6.010	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 2189 FROM US 31W EAST OF PARK CITY (MP 0.000), SOUTH TO US 68 WEST OF GLASGOW (MP 6.010).	\$ 1,959,584				\$ 1,959,584.00	03-09006	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 15% FOR ENGINEERING.	RD Corridor
03	WARREN	KY 0526	5.600	5.700	INTERSECTION IMPROVEMENTS AT THE INTERSECTION OF KY 526 AND KY 1320, PURCHASE R/W FOR SIGHT DISTANCE IMPROVEMENTS ON KY 526 FROM 0.046 MI WEST OF KY 1320 TO 0.099 MI WEST OF CR 1532A. (2012BOP)	\$ 255,000		\$ 65,000	\$ 190,000		03-09007	THIS AUTHORIZATION PROVIDES INTITIAL RIGHT OF WAY AND UTILITY FUNDS FOR THE PROJECT. LC	LRMP
03	WARREN	VARIOUS	-	-	INTERSECTION IMPROVEMENTS AT VARIOUS LOCATIONS IN WARREN COUNTY LOCATED IN DISTRICT 3. (2014BOP)	\$ 120,000				\$ 120,000.00	03-09010	THIS AUTHORIZATION PROVIDES INITIAL DESIGN FUNDS FOR THE PROJECT. LC	Intersection Emphasis List
03	BARREN	KY 63	6.344	13.171	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 63 FROM CR 1186 (MP 6.344) TO LN 9008 UNDERPASS (MP13.171). (2016BOP)	\$ 250,000				\$ 250,000.00	03-09011	THIS AUTHORIZATION PROVIDES INITIAL DESIGN FUNDS FOR THE PROJECT. LC	RD Corridor
04	MEADE	KY 710	0.000	7.066	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 710 FROM KY 428 AT GUSTON (MP 0.000) TO KY 1051 AT BRANDENBURG (MP 7.066).	\$ 1,125,000				\$ 1,125,000.00	04-00923	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET.	RD Corridor
04	HARDIN	I-65	96.000	97.500	INSTALL HIGH FRICTION SURFACE ON I-65 FROM 0.676 MI N OF TUNNEL HILL RD UNDERPASS AT (MP 96.0), EXTENDING N TO (MP 97.5). (2014BOP)	\$ 75,000	\$ 75,000				04-00934	THIS AUTHORIZATION PROVIDES INITIAL DESIGN FUNDS FOR THE PROJECT. TJ	LRMP
04	HARDIN	I-65	100.509	102.200	INSTALLATION OF CABLE MEDIAN BARRIER ON I-65 FROM 2.024 MI SOUTH OF KY 313 UNDERPASS (MP 100.509) TO 0.333 MI SOUTH OF KY 313 UNDERPASS (MP 102.200). (2014BOP)	\$ 368,532	\$ 50,000			\$ 318,532.00	04-09001	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% FOR ENGINEERING.	Cable Median Barrier
04	HARDIN	VARIOUS	-	-	INTERSECTION IMPROVEMENTS AT VARIOUS LOCATIONS IN HARDIN, NELSON, AND TAYLOR COUNTIES LOCATED IN DISTRICT 4. (2014BOP)	\$ 120,000	\$ 120,000				04-09003	THIS AUTHORIZATION PROVIDES INITIAL DESIGN FUNDS FOR THE PROJECT. LC	Intersection Emphasis List
04	NELSON	US 62	20.141	27.006	PERFORM LOW COST SAFETY IMPROVEMENTS ON US 62 FROM KY 1858 (MP 20.141) TO CS 4021 (MP 27.006). (2016BOP)	\$ 250,000	\$ 250,000				04-09004	THIS AUTHORIZATION PROVIDES INITIAL DESIGN FUNDS FOR THE PROJECT. LC	RD Corridor

05	FRANKLIN	VARIOUS	-	-	REPLACE TURNDOWN AND OTHER DEFICIENT END TREATMENTS ON I-64, US-127, US-421 AND KY-676 IN FRANKLIN COUNTY.	\$	328,536		\$	328,536.00	05-00923	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET. LC	NHS-ET	
05	JEFFERSON	US31W/KY 841	-	-	REPLACE TURNDOWN AND OTHER DEFICIENT END TREATMENTS ON US-31W AND KY-841 IN JEFFERSON COUNTY.	\$	417,065		\$	417,065.00	05-00924	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO MATCH THE LOW BID PLUS 5% FOR ENGINEERING.	NHS-ET	
05	JEFFERSON	VARIOUS	-	-	REPLACE TURNDOWN AND OTHER DEFICIENT END TREATMENTS AT VARIOUS LOCATIONS ON I-64, I-265, US-31E, US-42, KY-913, AND KY-1747 IN JEFFERSON COUNTY.	\$	460,748		\$	460,748.00	05-00925	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO MATCH THE LOW BID PLUS 5% FOR ENGINEERING.	NHS-ET	
05	BULLITT	KY 480	3.292	11.723	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 480 FROM KY 1442 (MP 3.292) EXTENDING EAST TO THE NELSON CO. LINE (MP 11.723) IN BULLITT COUNTY, KY. (2014BOP)	\$	135,000	\$	135,000		05-09007	THIS MODIFICATION PROVIDES ADDITIONAL DESIGN FUNDS FOR THE PROJECT. LC	RD Corridor	
05	JEFFERSON	VARIOUS	-	-	INTERSECTION IMPROVEMENTS AT VARIOUS LOCATIONS IN JEFFERSON COUNTY LOCATED IN DISTRICT 5. (2014BOP)	\$	120,000	\$	120,000		05-09010	THIS AUTHORIZATION PROVIDES INITIAL DESIGN FUNDS FOR THE PROJECT. LC	Intersection Emphasis List	
05	SPENCER	KY 44	0.000	7.542	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 44 FROM THE BULLIT/SPENCER COUNTY LINE (MP 0.00) TO OAK TREE WAY (MP 7.542). (2016BOP)	\$	250,000	\$	250,000		05-09011	THIS AUTHORIZATION PROVIDES INITIAL DESIGN FUNDS FOR THE PROJECT. LC	RD Corridor	
06	GRANT	VARIOUS	-	-	IMPLEMENTATION OF HIGH FRICTION SURFACE ON VARIOUS ROUTES IN KENTON AND GRANT COUNTIES IN DISTRICT 6.	\$	8,267		\$	8,267.00	06-00929	THIS AUTHORIZATON PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE. TJ	HFS	
06	CAMPBELL	I-275	73.400	74.800	INSTALLATION OF A CABLE MEDIAN BARRIER ON I-275 FROM KY 8 OVERPASS (MP 73.4) CONTINUING SW TO 0.057 MI E OF I-471 OVERPASS (MP 74.8) IN CAMPBELL COUNTY, KY. (2014BOP)	\$	301,940	\$	5,000	\$	296,940.00	06-00930	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 15% FOR ENGINEERING.	Cable Median Barrier
06	BOONE	KY 18/US 42	-	-	TRAFFIC SIGNAL REBUILD AT THE INTERSECTIONS OF KY 18 AND SHAUN ALEXANDER WAY IN BOONE COUNTY, AND US 42 AND KY 320 IN CARROLL COUNTY. (2014BOP)	\$	255,280		\$	255,280.00	06-00931	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET.	Systemmic Intersection Project	
06	BRACKEN	KY 9	-0.097	19.857	REPLACE TURNDOWN AND OTHER DEFICIENT END TREATMENTS AT VARIOUS LOCATIONS ALONG KY 9 IN BRACKEN COUNTY, KY.	\$	515,211		\$	515,211.00	06-00932	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 5% FOR ENGINEERING.	NHS-ET	
06	PENDLETON	KY 9	1.100	3.200	REPLACE TURNDOWN AND OTHER DEFICIENT END TREATMENTS AT VARIOUS LOCATIONS ALONG KY 9 IN PENDLETON COUNTY, KY.	\$	133,990		\$	133,990.00	06-00933	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 5% FOR ENGINEERING.	NHS-ET	
06	BOONE	VARIOUS	-	-	REPLACE TURNDOWN AND OTHER DEFICIENT END TREATMENTS ON VARIOUS ROUTES IN BOONE, CAMPBELL AND KENTON COUNTIES IN DISTRICT 6. (2016BOP)	\$	580,000		\$	580,000.00	06-00934	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET.	NHS-ET	
06	BOONE	US 42	0.000	5.673	PERFORM LOW COST SAFETY IMPROVEMENTS ON US 42 FROM THE GALLATIN/BOONE COUNTY LINE TO KY 338. (2014BOP)	\$	25,000	\$	25,000		06-09010	THIS MODIFICATION PROVIDES ADDITIONAL DESIGN FUNDS FOR THE PROJECT. LC	RD Corridor	
06	BOONE	VARIOUS	-	-	INTERSECTION IMPROVEMENTS AT VARIOUS LOCATIONS IN BOONE AND KENTON COUNTIES LOCATED IN DISTRICT 6. (2014BOP)	\$	120,000	\$	120,000		06-09013	THIS AUTHORIZATION PROVIDES INITIAL DESIGN FUNDS FOR THE PROJECT. LC	Systemmic Intersection Project	
06	KENTON	KY 17	3.974	8.969	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 17 FROM KY 14 (MP 3.974) TO 0.143 MI NORTH OF HERGOTT DRIVE (MP 8.969). (2016BOP)	\$	250,000	\$	250,000		06-09014	THIS AUTHORIZATION PROVIDES INITIAL DESIGN FUNDS FOR THE PROJECT. LC	RD Corridor	
07	JESSAMINE	KY 169	16.685	19.180	IMPROVE SUPERELEVATION, ADD EMBANKMENT, IMPROVE SIGHT DISTANCE, AND REMOVE ROADSIDE HAZARDS ON KY 169 FROM KY 1267 (MP 16.685) TO JESSAMINE-WOODFORD COUNTY LINE (MP 19.180).	\$	75,000	\$	75,000		07-00931	THIS AUTHORIZATION PROVIDES INITIAL DESIGN FUNDS FOR THE PROJECT. LC	LRMP	
07	VARIOUS	VARIOUS	-	-	IMPLEMENTATION OF HIGH FRICTION SURFACE ON VARIOUS ROUTES IN CLARK, FAYETTE, GARRARD, AND MONTGOMERY COUNTIES IN DISTRICT 7.	\$	29,416		\$	29,416.00	07-00941	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 15% FOR ENGINEERING.	HFS	
07	JESSAMINE	KY 3433	1.453	1.534	INSTALL GUARDRAIL ALONG KY 3433 FROM 0.054 MILES EAST OF BRANDENBURG ROAD (MP 1.453) TO 0.018 MILES WEST OF FRANKFORT FORD ROAD (MP 1.534).	\$	681		\$	681.00	07-00942	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 20% ENGINEERING. DE.	FE06 Match	
07	CLARK	VARIOUS	-	-	SIGNAL REBUILDS AT THE INTERSECTION OF KY 627 & KY 1927 IN CLARK COUNTY, AND AT THE INTERSECTION US 25 & KY 595 IN MADISON COUNTY. (2014BOP)	\$	195,470		\$	195,470.00	07-00943	THIS AUTHORIZATION PROVIDES FEDERAL CONSTRUCTION FUNDS (HSIP) FOR THE PROJECT. TJ	Systemmic Intersection Project	
07	SCOTT	US 460	0.000	6.830	PERFORM LOW COST SAFETY IMPROVEMENTS ON US 460 FROM FRANKLIN-SCOTT CO. LINE EXTENDING EAST TO (MP 6.830) 0.063 MI EAST OF CANE RUN RD IN SCOTT COUNTY, KY. (2014BOP)	\$	95,000	\$	75,000	\$	20,000	07-09001	THIS AUTHORIZATION PROVIDES INITIAL RIGHT OF WAY FUNDS FOR THE PROJECT. LC	RD Corridor
07	FAYETTE	VARIOUS	-	-	INTERSECTION IMPROVEMENTS AT VARIOUS LOCATIONS IN FAYETTE COUNTY LOCATED IN DISTRICT 7.	\$	120,000	\$	120,000		07-09003	THIS AUTHORIZATION PROVIDES INITIAL DESIGN FUNDS (HSIP) FOR THE PROJECT. TJ	Intersection Emphasis List	
07	MADISON	US 421	2.442	9.741	PERFORM LOW COST SAFETY IMPROVEMENTS ON US 421 FROM KY 21 (MP 2.442) TO KY 3376 (MP 9.741) IN MADISON COUNTY. (2016BOP)	\$	250,000	\$	250,000		07-09004	THIS AUTHORIZATION PROVIDES INITIAL DESIGN FUNDS FOR THE PROJECT. TJ	RD Corridor	

08	WAYNE	KY 0090	8.710	9.100	APPLICATION OF HIGH FRICTION SURFACE ON KY 90 FROM 0.571 MILES EAST OF SPORTSMAN CLUB DR (MP 8.710) TO GREGORY STREET (MP 9.100).	\$	5,000		\$	5,000.00	08-00928	THIS MOD. PROVIDES ADDITIONAL CONSTRUCTION FUNDS TO COVER CURENT EXPENDITURES.	LRMP				
08	CASEY	US 127	0.000	6.266	REPLACE SUBSTANDARD END TREATMENTS AND GUARDRAIL, AND TRENCH AND PAVE SHOULDERS ON US 127 FROM THE RUSSELL/CASEY COUNTY LINE TO KY 501.	\$	1,050,000		\$	1,050,000.00	08-00930	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET.	Roadway Shouldering				
08	CASEY	US 127	6.266	13.844	REPLACE TURNDOWN END TREATMENTS ON US 127 FROM KY 501 (MP 6.266) TO KY 70 (MP 13.844).	\$	575,338		\$	575,338.00	08-00931	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% FOR ENGINEERING.	NHS-ET				
08	CASEY	KY 70	1.500	2.300	INSTALL HIGH FRICTION SURFACE AND DELINEATORS ON EXISTING GUARDRAIL ON KY 70 FROM SOUTHEAST OF DRY CREEK BRIDGE (MP 1.500) TO JUST NORTH OF MAPLE HILL ROAD (MP 2.300).	\$	194,544		\$	194,544.00	08-00935	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 15% FOR ENGINEERING.	LRMP				
08	PULASKI	KY 3260	0.000	3.158	INSTALL HIGH FRICTION SURFACE (MP 0.7-1.0), ENHANCED SIGNAGE, DELINEATION, AND IMPROVE SIGHT DISTANCE ALONG KY 3260 FROM MP 0.00 TO MP 3.158.	\$	516,428		\$	516,428.00	08-00937	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% FOR ENGINEERING.	LRMP				
08	LINCOLN	KY 1194	0.000	6.602	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 1194 FROM US 127 TO KY 78.	\$	1,648,174		\$	1,648,174.00	08-09000	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE ENGINEER'S ESTIMATE PRIOR TO THE PROJECT BEING LET.	RD Corridor				
08	PULASKI	VARIOUS	-	-	INTERSECTION IMPROVEMENTS AT VARIOUS LOCATIONS IN PULASKI COUNTY LOCATED IN DISTRICT 8.	\$	120,000	\$	120,000		08-09004	THIS AUTHORIZATION PROVIDES INITIAL DESIGN FUNDS (HSIP) FOR THE PROJECT. TJ	Intersection Emphasis List				
08	RUSSELL	KY 76	7.000	7.700	REALIGN THE INTERSECTION OF KY 76 AND KY 80 (MP 7.0-7.7) IN RUSSELL COUNTY LOCATED IN DISTRICT 8.	\$	20,000	\$	20,000		08-09005	THIS AUTHORIZATION PROVIDES INITIAL DESIGN FUNDS (HSIP) FOR THE PROJECT. TJ	LRMP				
08	PULASKI	KY 192	1.076	7.435	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 192 FROM KY 692 (MP 1.076) TO JAMES MEECE RD (CR-1233) AT (MP 7.435) IN PULASKI COUNTY. (2016BOP)	\$	250,000	\$	250,000		08-09006	THIS AUTHORIZATION PROVIDES INITIAL DESIGN FUNDS FOR THE PROJECT. TJ	RD Corridor				
09	BOYD	KY 1012	0.564	0.844	INSTALL GUARDRAIL ALONG KY 1012 FROM 250 FEET NORTH OF SKYLINE DRIVE (MP 0.564) TO 600 FEET SOUTH OF GARVER ROAD (MP 0.844).	\$	33,067		\$	33,067.00	09-00932	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO MATCH THE LOW BID PLUS 10% FOR ENGINEERING.	FE06 Match				
09	GREENUP	KY 1459	2.635	2.832	INSTALL GUARDRAIL ALONG KY 1459 FROM 450 FEET NORTH OF CARTER HOLLOW (MP 2.635) TO MCGUIRE CEMETERY ROAD (MP 2.832).	\$	20,392		\$	20,392.00	09-00933	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO MATCH THE LOW BID PLUS 10% FOR ENGINEERING.	FE06 Match				
09	BATH	US 60	4.980	6.429	INSTALL GUARDRAIL ALONG US 60 FROM 700 FEET WEST OF NORTH STEPS ROAD (MP 4.980), EXTENDING EAST TO 175 FEET WEST OF MANDY AVENUE (MP 6.429)	\$	320,200		\$	320,200.00	09-00936	TO BE LET TO CONTRACT.	FE06 Match				
09	BOYD	KY 168	4.857	4.882	SIGNAL REBUILD AT KY 168 @ 29TH STREET IN BOYD COUNTY, KY.	\$	56,000		\$	56,000.00	09-00937	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET.	Systemmic Intersection Project				
09	CARTER	KY 1	11.391	11.543	TRAFFIC SIGNAL REBUILD AT THE INTERSECTION OF KY 1 (CAROL MALONE BOULEVARD) AND EVERMAN STREET (MP 11.391) TO BRIDGE EDGE OF I-64 OVERPASS (MP 11.543).	\$	209,029		\$	209,029.00	09-04501	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% FOR ENGINEERING. ALSO INCLUDES \$18,042 FOR EQUIPMENT TO BE SUPPLIED BY THE CABINET AND INSTALLED BY THE CONTRACTOR. ALSO INCLUDES FE01 022 0001 011-012	Systemmic Intersection Project				
09	BOYD	VARIOUS	-	-	INTERSECTION IMPROVEMENTS AT VARIOUS LOCATIONS IN BOYD, ROWAN, & GREENUP COUNTIES LOCATED IN DISTRICT 9.	\$	120,000	\$	120,000		09-09002	THIS AUTHORIZATION PROVIDES INITIAL DESIGN FUNDS (HSIP) FOR THE PROJECT. TJ	Intersection Emphasis List				
09	ROWAN	KY 32	8.545	13.645	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 32 FROM 0.106 MI E OF US 60 (MP 8.545) TO VETERANS LN (CR-1009) AT (MP 13.645) IN ROWAN COUNTY. (2016BOP)	\$	250,000	\$	250,000		09-09003	THIS AUTHORIZATION PROVIDES INITIAL DESIGN FUNDS FOR THE PROJECT. TJ	RD Corridor				
10	PERRY	KY 80	8.400	8.600	INTERSECTION IMPROVEMENTS AT KY 80 AND JUSTICE DRIVE (CR 1863) INTERSECTION AT HAZARD, KENTUCKY IN PERRY COUNTY. (2012BOP)	\$	360,000	\$	115,000	\$	100,000	\$	145,000	10-00925	THIS MODIFICATION PROVIDES ADDITIONAL DESIGN FUNDS FOR THE PROJECT. LC	LRMP	
10	MORGAN	KY 772	4.800	4.900	INTERSECTION AND SIGHT DISTANCE IMPROVEMENTS ON KY 772 AT KY 985 INTERSECTION (MP 4.8 - 4.9). (2014BOP)	\$	501,667		\$	10,000	\$	75,000	\$	416,667.00	10-00929	THIS AUTHORIZATON PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE. TJ	LRMP
10	BREATHITT	KY1812/US460	-	-	TRAFFIC SIGNAL REBUILDS AT THE INTERSECTIONS OF KY 1812 AND KY 2472 IN BREATHITT COUNTY, AND US 460 AND KY 7 IN MAGOFFIN COUNTY. (2014BOP)	\$	261,534		\$	261,534.00	10-00930	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% FOR ENGINEERING.	Systemmic Intersection Project				
10	POWELL	KY 15/KY 11	20.930	21.050	INTERSECTION IMPROVEMENTS AT KY 15 AND KY 11 IN POWELL COUNTY LOCATED IN DISTRICT 10. (2014BOP)	\$	70,000		\$	15,000	\$	55,000	10-00932	THIS AUTHORIZATION PROVIDES INITIAL RIGHT OF WAY AND UTILITY FUNDS FOR THE PROJECT. LC	Intersection Emphasis List		
10	POWELL	KY 11	13.544	13.882	INSTALL GUARDRAIL ALONG KY 11 FROM 0.331 MILES NORTH OF THE SOUTH END OF BRIDGE OVER MOUNTAIN PARKWAY (MP 13.544) TO 0.669 NORTH OF SOUTH END THE BRIDGE (MP 13.882).	\$	79,368		\$	79,368.00	10-00933	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% FOR ENGINEERING.	FE06 Match				

10	POWELL	KY 11	20.971	25.039	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 11 FROM KY 15 (MP 20.971) TO THE POWELL-MONTGOMERY CO. LINE (MP 25.039) IN POWELL COUNTY, KY. (2014BOP)	\$ 25,000	\$ 25,000	10-09004	THIS AUTHORIZATION PROVIDES INITIAL RIGHT OF WAY FUNDS FOR THE PROJECT. LC	RD Corridor
10	POWELL	KY 11	0.000	3.598	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 11 FROM POWELL-WOLFE COUNTY LINE (MP 0.0) TO KY 15 (MP 3.598) IN POWELL COUNTY. (2016BOP)	\$ 250,000	\$ 250,000	10-09005	THIS AUTHORIZATION PROVIDES INITIAL DESIGN FUNDS FOR THE PROJECT. TJ	RD Corridor
10	BREATHITT	KY 15	8.976	9.376	INTERSECTION IMPROVEMENTS AT KY 15 (MP 8.976-9.376) AND KY 1110/FISH POND LOOP IN BREATHITT COUNTY, KY. (2016BOP)	\$ 35,000	\$ 35,000	10-09006	THIS AUTHORIZATION PROVIDES INITIAL DESIGN FUNDS (SAF) FOR THE PROJECT. TJ	Intersection Emphasis List
10	ESTILL	KY 52	6.548	6.948	INTERSECTION IMPROVEMENTS AT KY 52 (MP 6.548-6.948) AND KY 499/SHADY LANE IN ESTILL COUNTY, KY. (2016BOP)	\$ 40,000	\$ 40,000	10-09007	THIS AUTHORIZATION PROVIDES INITIAL DESIGN FUNDS (SAF) FOR THE PROJECT. TJ	Intersection Emphasis List
10	POWELL	KY 11	14.791	15.191	INTERSECTION IMPROVEMENTS AT KY 11 (MP 14.791-15.191) AND AIRPORT RD/WHITE AVE IN POWELL COUNTY, KY. (2016BOP)	\$ 15,000	\$ 15,000	10-09008	THIS AUTHORIZATION PROVIDES INITIAL DESIGN FUNDS (SAF) FOR THE PROJECT. TJ	Intersection Emphasis List
11	HARLAN	US 421	20.400	20.900	CURVE IMPROVEMENTS ON US 421 FROM MP 20.4 TO MP 20.9.	\$ 120,000	\$ 120,000.00	11-00933	THIS MOD PROVIDES ADDITIONAL CONSTRUCTION FUNDS TO COVER CHANGE ORDER #1 (\$92,890.01) ROCK EXCAVATION, ASPH BASE, CHANNEL LINING, 85' OF 24" CMP PIPE. PROJECT LET WITH ITEM NUMBER 11-932.00	LRMP
11	CLAY	KY 638	10.100	10.400	CURVE REALIGNMENT ON KY 638 FROM 0.063 MI WEST OF BALES CREEK RD (MP 10.1) TO 0.054 MI EAST OF JARVE HOLLOW RD (MP 10.4).	\$ 150,000	\$ 150,000.00	11-00940	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET. LC	LRMP
11	WHITLEY	US 25W	25.923	26.023	LOWER EXISTING CURVE GRADE TO INCREASE INTERSECTION SIGHT DISTANCE ON US 25W FROM 0.05 MI SOUTH OF SPRUCE CREEK RD EXTENDING NORTH TO 0.05 MI NORTH OF SPRUCE CREEK RD. (2014BOP)	\$ 498,796	\$ 498,796.00	11-00942	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 15% FOR ENGINEERING.	LRMP
11	LAUREL	HR 9006	1.000	2.000	INSTALL RIGHT TURN LANE TO NORTH LAUREL HIGH SCHOOL ON HR 9006 FROM 0.03 MI EAST OF KY 6261 TO 0.25 MI WEST OF KY 638.	\$ 338,900	\$ 338,900.00	11-00943	SCHEDULED FOR THE JUNE 24 2016 LETTING.	LRMP
11	LAUREL	HR 9006	1.000	3.000	INSTALL LEFT TURN LANE ON HR 9006 FROM 0.03 MI EAST OF KY 6261 EXTENDING EASTWARD TO 0,010 MI WEST OF KY 472.	\$ 38,000	\$ 38,000.00	11-00944	SCHEDULED FOR THE JUNE 24, 2016 LETTING	LRMP
11	VARIOUS	VARIOUS	-	-	INSTALLATION OF HORIZONTAL ALIGNMENT SIGNING ON VARIOUS ROUTES IN DISTRICT 11.	\$ 754,742	\$ 754,742.00	11-00947	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% ENGINEERING. DE.	Horizontal Alignment Signing
11	CLAY	KY 11	2.955	7.200	INSTALL GUARDRAIL ALONG KY 11 FROM BRIDGE OVER COLLINS FORK OF GOOSE CREEK (MP 2.955) TO 0.191 MILE SOUTH OF ENGINE BRANCH ROAD (MP 7.200).	\$ 148,432	\$ 148,432.00	11-00948	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% FOR ENGINEERING.	FE06 Match
11	WHITLEY	KY 1064	12.000	13.830	INSTALL GUARDRAIL ALONG KY 1064 FROM 0.075 MILES NORTH OF GAIL HART ROAD (MP 12.00) TO 0.550 MILES SOUTH OF MOSLEY BRANCH ROAD (MP 13.830).	\$ 180,908	\$ 180,908.00	11-00949	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% FOR ENGINEERING.	FE06 Match
11	WHITLEY	KY 204	3.710	4.312	INSTALL GUARDRAIL ALONG KY 204 FROM 0.208 MILES SOUTH OF KY 3422 (MP 3.710) TO 0.011 MILES NORTH OF PATRICK HOLLOW ROAD (MP 4.312).	\$ 97,625	\$ 97,625.00	11-00950	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% FOR ENGINEERING.	FE06 Match
11	BELL	KY 188	0.700	1.300	INSTALL GUARDRAIL ALONG KY 188 FROM 0.7 MILES EAST OF US 25E (MP 0.700) TO 0.811 MILES WEST OF TIWANI RIDGE ROAD (MP 1.300).	\$ 106,601	\$ 106,601.00	11-00951	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% FOR ENGINEERING.	FE06 Match
11	HARLAN	KY 522	0.000	6.000	INSTALL GUARDRAIL ALONG KY 522 FROM US 119 (MP 0.00) TO 0.05 MILES WEST OF JUNCTION LOOP (MP 6.00).	\$ 152,198	\$ 152,198.00	11-00952	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% FOR ENGINEERING.	FE06 Match
11	KNOX	KY 1304	0.000	6.110	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 1304 FROM US 25E TO KY 11. (2014BOP)	\$ 25,000	\$ 25,000	11-09003	THIS MODIFICATION PROVIDES ADDITIONAL DESIGN FUNDS FOR THE PROJECT. LC	RD Corridor
11	LAUREL	VARIOUS	-	-	INTERSECTION IMPROVEMENTS AT VARIOUS LOCATIONS IN LAUREL, KNOX, & BELL COUNTIES LOCATED IN DISTRICT 11.	\$ 120,000	\$ 120,000	11-09005	THIS AUTHORIZATION PROVIDES INITIAL DESIGN FUNDS (HSIP) FOR THE PROJECT. TJ	Intersection Emphasis List
11	CLAY	US 421	8.128	14.049	PERFORM LOW COST SAFETY IMPROVEMENTS ON US 421 FROM KY 873 (MP 8.128) TO WADE HACKER RD (CR-1183) AT (MP 14.049) IN CLAY COUNTY. (2016BOP)	\$ 250,000	\$ 250,000	11-09006	THIS AUTHORIZATION PROVIDES INITIAL DESIGN FUNDS FOR THE PROJECT. TJ	RD Corridor
12	FLOYD	KY 979	0.000	0.250	CURVE REVISION ON KY 979 FROM KY 122 (MP 0.00) TO CR 1184 (MP 0.25). (2012BOP)	\$ 283,500	\$ 93,500 \$ 190,000	12-00939	THIS AUTHORIZATION PROVIDES INITIAL RIGHT OF WAY FUNDS (3 PARCELS), AND ALSO PROVIDES INITIAL UTILITY FUNDS (5 UTILITY ADJUSTMENTS) FOR THE PROJECT. TJ.	RD Corridor
12	VARIOUS	VARIOUS	-	-	INSTALLATION OF HORIZONTAL ALIGNMENT SIGNING ON VARIOUS ROUTES IN DISTRICT 12. (2014BOP)	\$ 1,241,152	\$ 1,241,152.00	12-00951	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO MATCH THE LOW BID PLUS 5% FOR ENGINEERING.	Horizontal Alignment Signing

12	FLOYD	VARIOUS	-	-	INSTALLATION OF HORIZONTAL ALIGNMENT SIGNING ON VARIOUS ROUTES IN FLOYD, JOHNSON, AND LETCHER COUNTIES LOCATED IN DISTRICT 12.	\$	131,266		\$	131,266.00	12-00952	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% FOR ENGINEERING.	Horizontal Alignment Signing			
12	LETCHER	KY 2545	1.725	1.973	INSTALL GUARDRAIL ALONG KY 2545 FROM 459 FEET SOUTH OF MALLARD DRIVE (MP 1.725) TO 528 FEET SOUTH OF MCCRAY LANE CONNECTOR (MP 1.973).	\$	33,284		\$	33,284.00	12-00953	TO BE LET TO CONTRACT.	FE06 Match			
12	FLOYD	KY 1428	8.806	8.977	INSTALL GUARDRAIL ALONG KY 1428 FROM 0.037 MILES WEST OF KY 194 (MP 8.806) TO 0,208 MILES WEST OF KY 194 (MP 8.977).	\$	28,739		\$	28,739.00	12-00954	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 20% ENGINEERING. DE.	FE06 Match			
12	MARTIN	KY 1439	4.333	4.849	INSTALL GUARDRAIL ALONG KY 1439 FROM 4.333 MILES NORTH OF THE PIKE CUUNTY LINE (MP 4.333) TO 0.037 MILES NORTH OF MIDDLE FORK ROAD (MP 4.849)	\$	66,360		\$	66,360.00	12-00955	TO BE LET TO CONTRACT.	FE06 Match			
12	JOHNSON	KY 40	11.512	11.513	SIGNAL REBUILD AT KY 40 @ KY 1428 IN JOHNSON COUNTY, KY.	\$	40,000		\$	40,000.00	12-00956	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET.	Systemmic Intersection Project			
12	KNOTT	KY 160	0.000	8.155	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 160 FROM KY 15 TO KY 899. (2014BOP)	\$	75,000	\$	75,000		12-09000	THIS MODIFICATION PROVIDES ADDITIONAL DESIGN FUNDS FOR THE PROJECT. LC	RD Corridor			
12	PIKE	VARIOUS	-	-	INTERSECTION IMPROVEMENTS AT VARIOUS LOCATIONS IN PIKE AND LAWRENCE COUNTIES LOCATED IN DISTRICT 12.	\$	120,000	\$	120,000		12-09001	THIS AUTHORIZATION PROVIDES INITIAL DESIGN FUNDS (HSIP) FOR THE PROJECT. TJ	Intersection Emphasis List			
12	PIKE	KY 632	0.000	7.000	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 632 FROM KY 194 (MP 0.00) TO 0.037 MI EAST OF BLACKBERRY FRK (CR-1576) AT (MP 7.00) IN PIKE COUNTY. (2016BOP)	\$	250,000	\$	250,000		12-09002	THIS AUTHORIZATION PROVIDES INITIAL DESIGN FUNDS FOR THE PROJECT. TJ	RD Corridor			
99	VARIOUS	VARIOUS	-	-	STATEWIDE REPLACEMENT OF RAISED PAVEMENT MARKERS ON VARIOUS ROUTES IN DISTRICTS 4, 6, 7 ,9, 10 AND 11. (2014BOP)	\$	225,857		\$	225,857.00	99-00916	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% FOR ENGINEERING.	Pavement Markers			
99	VARIOUS	STATEWIDE	-	-	STATEWIDE REPLACEMENT OF RAISED PAVEMENT MARKERS ON VARIOUS ROUTES IN DISTRICTS 1, 2, 3, 5, 8 & 12. (2014BOP)	\$	1,203,884		\$	1,203,884.00	99-00918	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% FOR ENGINEERING.	Pavement Markers			
01	CRITTENDEN	VARIOUS	-	-	STATEWIDE IMPLEMENTATION OF HIGH FRICTION SURFACE ON VARIOUS ROUTES IN CRITTENDEN AND DAVIESS COUNTIES IN DISTRICTS 1 AND 2. (2014BOP)	\$	13,672		\$	13,672.00	99-00919	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 15% FOR ENGINEERING.	HFS			
99	PULASKI	VARIOUS	-	-	IMPLEMENTATION OF HIGH FRICTION SURFACE ON VARIOUS ROUTES IN PULASKI AND WHITLEY COUNTIES LOCATED IN DISTRICTS 8 & 11.	\$	59,455		\$	59,455.00	99-00921	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 20% FOR ENGINEERING.	LRMP			
99	VARIOUS		-	-	STATEWIDE INTERSECTION SIGNAL REBUILDS.	\$	35,000	\$	35,000		99-09000	THIS MOD. PROVIDES ADDITIONAL DESIGN FUNDS TO COVER THE CURRENT LETTER-AGREEMENT.	Systemmic Intersection Project			
	VARIOUS	VARIOUS	-	-	TECHNICAL SUPPORT FOR THE CABINET'S HIGHWAY SAFETY IMPROVEMENT PROGRAM, TO BE PROVIDED BY THE UK TRANSPORTATION CENTER.	\$	360,000	\$	360,000			THIS MOD. PROVIDES ADDITIONAL FUNDS FOR CONTINUATION OF TECHNICAL ASSISTANCE INCLUDING PREPARATION OF THE ANNUAL HSIP REPORT AND 5% REPORT, IMPROVEMENTS IN COLLECTION AND ANALYSIS OF SAFETY DATA, DEVELOPING SAFETY PERFORMANCE FUNCTIONS AND INCORPORATE DATA FOR USE IN SAFETY ANALYSIS, AND PLANNING.	Planning			
	VARIOUS	VARIOUS	-	-	DATA COLLECTION TO FACILIATE IMPROVING THE RAILROAD CROSSING INVENTORY.	\$	200,000	\$	200,000			DATA COLLECTION AND INVENTORY IMPROVEMENTS TO BE ACCOMPLISHED BY STATE FORCES. THIS MOD. PROVIDES ADDITIONAL FUNDS TO CONTINUE THESE ACTIVITIES.	Other			
99	VARIOUS	VARIOUS	-	-	OFFICE OF HIGHWAY SAFETY	\$	500,000	\$	500,000			.	Other			
99	VARIOUS	VARIOUS	-	-	OFFICE OF HIGHWAY SAFETY	\$	500,000	\$	500,000			.	Other			
99	VARIOUS	VARIOUS			STATEWIDE PLANNING FUNDS (ZS30)	\$	500,000	\$	500,000				Planning			
							\$	32,453,277	\$	6,889,362	\$	328,500	\$	659,000	\$	24,576,415.00

CHAPTER 16

Quality Assurance

RESPONSIBLE UNIT

Division of Highway Design
Quality Assurance Branch

PURPOSE AND SCOPE

The purpose of the Quality Assurance Branch is to ensure that federal guidelines are met and to improve Kentucky Transportation Cabinet's (KYTC) design deliverables and its policy, processes and procedures. There are three programs within the QAB designed to reach these objectives: Value Engineering (VE), Constructability Review, and Post-Construction (PC) Review.

The KYTC **Value Engineering (VE)** program was established in 1995 as an independent review process to examine potential ways to improve a project's design or reduce its cost. The current federal transportation law, titled Moving Ahead for Progress in the 21st Century (MAP-21), now specifies that all roadway projects on the NHS that have a total phase cost exceeding \$50 million and bridge projects exceeding \$40 million will require a VE study when there are any federal funds used for the project. The "total phase cost" of a project is that which is estimated for planning, environmental, design, right-of-way, utility relocation, and construction. Recommendations developed in a VE study are shared with the project development team to consider for implementation. In addition, the VE program may be used to address other projects that may be used to review processes, standards and/or specifications.

The **Constructability Review** program assists Project Managers by examining projects for errors, omissions, and issues related to the constructability of a project. Currently much of a project review focuses on two "red-flags" – Maintenance of Traffic (MOTs) and horizontal/vertical alignments for roadways and structures. Along with these two topics, QAB is currently compiling an annual check list comprised of other "red-flag" issues that frequently reoccur during the plan review process. The follow-up action is to present these findings at various conferences and meetings. These presentations facilitate discussions on items that need to be addressed.

The **Post-Construction Review (PCR)** program was established to identify issues that arise in the construction phase that could have been avoided or improved during the design phase. Typically, projects that exceed \$1 million dollars (state and federally funded) in construction cost and have been open to the public for approximately one year are reviewed.

Each year, QAB staff identifies potential projects for the PCR program, with assistance from the District Project Development staff in July and August. PCR meetings are then held between the months of August and April. Consultants, Contractors, Federal Highway Administration (FHWA) and KYTC Personnel are invited to participate. Prior to the meeting, invitees are provided information such as documented change orders to review. During these meetings, it is discussed how each project progressed and what the major issues were. The attendees participate as a team to identify collective solutions for the relevant issues. After the meeting, a draft Fact Sheet for each project is created and sent back to the participants for review. Once finalized, the Fact Sheet is distributed among KYTC staff, FHWA and the American Council for Engineering Companies of KY (ACEC-KY).

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Quality Assurance

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Data collected from each of the three programs are entered into the **Lessons Learned** database. The collection of data may also substantiate follow-up meetings or contacting those KYTC staff who can make decisions to improve, change, or revise the design process to improve overall quality and cost savings of future projects.

PROPOSED ACTIVITIES (Annually)

- Conduct Constructability Reviews to improve quality of designs and enhance efficiency of work flow during the construction phase. **There were 150 Constructability Reviews completed by QAB staff.**
- Continue to develop and update policy and procedures for all aspects of each program. **Further changes were made to the VE monitoring process based on feedback from FHWA during the audit of the program. Post Construction Review program guidance was developed.**
- Conduct mandated Value Engineering studies to meet federal guidelines. **One VE study was completed. The data for the federal annual VE report was also compiled for FHWA.**
- Conduct VE Mod 1 and overview training for KYTC staff and design consultants, as needed. **No VE training was needed or requested during this time.**
- Conduct Post-Construction Reviews in their prescribed cycle. **New staff was hired and the PCR resumed in 2016. There were 26 projects reviewed resulting in 149 identified issues, 14 of which have been elevated for further examination and action.**
- Collect data for the 3 program datasets to include in the Lessons Learned GIS geodatabase. **Major improvements were made to each of the VE, and Constructability program databases. A new database was developed for the PCR program. Manuals for the programs databases have begun.**
- Provide technical assistance from the programs to identify, evaluate and prioritize needs for improvements and coordinate those recommendations within the Cabinet through the collection and analysis of data. **Participated in the Work Zone Traffic Control Committee reviews. Assisted in developing the Traffic Control Management Plan training course. Developed and analyzed data for measuring PM performance of plan delivery to Highway Design and the lettings.**
- Educate KYTC staff and others on topics identified through the various reviews and analysis of the Lessons Learned data. **Began the new Elevated Issues categorization of Post Construction Review and Constructability findings. Review findings are designated and then followed up on with district staff to develop a course of action which may include policy changes, standards changes, or education.**
- Educate KYTC staff and others by developing and publishing the Quality Matters newsletter, containing content about findings from the reviews or design innovations. **Three issues were published.**
- Educate KYTC staff and others by developing and publishing Tech Briefs, each focused on a single, important topic identified through the reviews. **ADA Tech Brief started.**
- Train in-house and consultant personnel on findings for the betterment of designs and design processes. **NA**

CHAPTER 16

Quality Assurance (continued)

RESPONSIBLE UNIT

Division of Highway Design
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PROPOSED ACTIVITIES (Annually) (continued)

- Ensure consistency and quality of design products delivered by KYTC. Reviewed prequalification applications from design firms for Advanced Traffic Engineering Design and Modeling. Began reviewing prequalification applications from design firms for Rural and Urban Roadway Design, Surveying, and Photogrammetry categories.
- Oversee outsourced activities.

PRODUCTS

- VE Studies One study completed and report issued
- VE Punch Lists & Monitoring One punch list issued. Follow up made to district managers to receive updates on decisions and implementation of approved recommendations.
- VE Project Database Database updated. Entering of VE recommendations began.
- VECF Database Database updated.
- Post-Construction Review Fact Sheets 26 fact sheets completed and distributed.
- Post-Construction Review Database A new Database was developed and updated to include Elevated Issues categorization.
- Constructability Review Database All data entered from reviews.
- Quality Matters Newsletter Three issues completed (Fall 2015, Spring 2016, Summer 2016)
- Tech Brief Publication One tech brief started
- Lessons Learned Geodatabase No updates.
- Annual Reports from all Programs
FHWA FFY15 VE Annual Report
FHWA FY15 Annual Work Program Accomplishments
Semi-regular reporting on Constructability Review performance
- Special Studies Continuation of measuring the performance of plan delivery to Division of Highway Design and construction letting. KTC research study: Predicting bridge end settlement

DISTRIBUTION OF ESTIMATED COST FOR 2014-2015

	2015-2016	Expended	Percent Expended
PERSONNEL	\$325,000	\$356,303	71%
OTHER	\$175,000	\$2,118	
TOTAL	\$500,000	\$358,422	72%

CHAPTER 16

Quality Assurance (continued)

RESPONSIBLE UNIT

Division of Highway Design
Quality Assurance Branch

ESTIMATED OUTSOURCING EXPENSES AND PURCHASES

- \$175,000 to outsource but not limited to the following: Publishing newsletter and briefs, Value Engineering Training, SAVE International Membership fees, SAVE International Annual Conferences, AASHTO VE Committee Conferences, Transportation Research Board (TRB) attendance, VE studies that are state funded, participation in TRB committees, American Society for Quality (ASQ) membership and attendance to meetings, research or assistance related to Quality Assurance and Quality Control, research projects initiated by QAB.

Note: FHWA will be notified in advance when the Quality Assurance Branch needs to utilize the funds.