

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



**ANNUAL PERFORMANCE AND  
EXPENDITURE REPORT  
FOR  
FISCAL YEAR 2012 ANNUAL WORK PROGRAM  
PROJECT SP 0012 (001)  
JUNE 16, 2011 THROUGH JUNE 15, 2012**

**SEPTEMBER 2012**

## 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, 2011 through June 15, 2012 (Fiscal Year 2012).

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 Statewide Transportation Plan. The Division made great efforts to aid the Cabinet and our MPO partners in making sure our required documents and processes were compliant with SAFETEA-LU and the associated revised regulations promulgated in 23 CFR 450. 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 the implementation of the Data Needs Analysis (DNA) scoping study process for the Six Year Plan Projects. The Division developed and implemented the District Transportation Plan (DTP) process resulting in the first DTP.

All these activities occurred while the Division of Planning continued to collect necessary data, manage and report the data as required, respond for 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 2012 Work Program. Expenditures are summarized at the end of the document showing the initial budget, final budget, expenditures, encumbered (remaining to be spent) monies, and unspent funds.

**FY 2011**  
**SPR CHAPTER FUNDING SUMMARY**

<b><u>CHAPTER AND TITLE</u></b>	<b><u>BUDGETED</u></b>	<b><u>EXPENDED</u></b>
1 SPR Work Program	\$68,000	\$51,919
2 Personnel Training	\$330,300	\$58,530
3 Traffic and Equipment Management	\$2,895,000	\$1,357,480
4 Roadway Systems	\$721,900	\$549,156
5 Cartography	\$520,100	\$373,999
6 Highway Information System	\$1,916,100	\$1,020,288
7 Strategic Corridor Planning	\$1,055,100	\$643,421
8 Statewide Transportation Planning	\$780,300	\$1,198,193
9 Metropolitan Planning Organizations	\$562,200	\$375,411
10 Air Quality	\$136,800	\$84,162
11 Multimodal Transportation	\$261,300	\$109,514
12 Congestion, Mobility, and Access Management	\$144,900	\$136,005
13 Traffic Data Forecasting	\$459,000	\$426,873
14 Bicycle and Pedestrian Program	<u>\$107,500</u>	<u>\$52,214</u>
Planning Total	\$9,958,500	\$6,437,165
Percent Expended		65%
15 Highway Safety Improvement Program	\$300,000	\$151,680
16 Value Engineering and Quality Assurance	<u>\$500,000</u>	<u>\$199,381</u>
Other Items Total	\$800,000	\$351,061
Percent Expended		44%
 TOTAL	 \$10,758,500	 \$6,788,226
Percent Expended		63%

**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 2011-2012**

- 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.*
- 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 2012 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 2011-2012**

	<b>2011-2012</b>	<b>Expended</b>	<b>Percent Expended</b>
<b>PERSONNEL</b>	<b>\$65,000</b>	<b>\$51,919</b>	<b>80%</b>
<b>OTHER</b>			
<b>TOTAL</b>	<b>\$65,000</b>	<b>\$51,919</b>	<b>80%</b>

## 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 2011-2012

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.

PEEK Training (Chapter 3 – Traffic and Equipment Management) **No formal PEEK Training was held this fiscal year.**

NATMEC Training (Chapter 3 – Traffic and Equipment Management) **Two Staff attended the NATMEC Conference on June 4-7, 2012 in Dallas, Texas.**

TMG Training (Chapter 3 – Traffic and Equipment Management) **TMG training was not held. This was replaced by a District Traffic Count Training on May 24<sup>th</sup>. (see Pg 11)**

TRADAS (Chapter 3–Traffic and Equipment Management and Chapter 13–Traffic Data Forecasting) **Two Staff attended TRADAS Training conducted by Chaparral Systems on September 26-29, 2011 in St. Louis, Missouri.**

Other – **Two Staff attended the International Conference on Weigh-in-motion (held concurrently with the NATMEC Conference) on June 4-7, 2012 in Dallas, Texas.**

GIS Conference (Chapter 4 – Roadway Systems, Chapter 5 – Cartography, Chapter 6 – Highway Information System and Chapter 12 – Congestion, Mobility and Access Management) **GIS Conference was held October 11 & 13, 2011 Several Staff Attended**

Adobe Illustrator (Chapter 5 – Cartography) **Not Attended**

KAMP (Ky Assoc of Mapping Professionals) Annual Meeting (Chapter 4 – Roadway Systems, Chapter 5 – Cartography) **This meeting occurs in conjunction with the GIS Conferences.**

GIS-T (GIS for Transportation) Annual Meeting (Chapter 4 – Roadway Systems, Chapter 5 – Cartography) **Several Staff Attended**

COGNA Annual Meeting (Chapter 5 – Cartography) **Not Attended**

Microstation (Chapter 4 – Roadway Systems, Chapter 5 – Cartography, Chapter 6 – Highway Information System) **Attended**

**CHAPTER 2**

Personnel Training (continued)

**RESPONSIBLE UNIT**

Division of Planning

**PROPOSED ACTIVITIES FOR 2011-2012 (continued)**

Highway Performance Monitoring System (HPMS) (Chapter 6 – Highway Information System) **Attended**

Highway Information System Conference (HIS) (Chapter 6 – Highway Information System) **Several Staff represented the Division at the HIS conference conducted by FHWA on November 14-17 in Arlington, Virginia.**

Asset Management Conference (Chapter 6 – Highway Information System) **Not Attended**

Bentley Training conference (Upgrade of HIS) (Chapter 6 – Highway Information System)

HIDAC Training (Chapter 6 – Highway Information System) **Attended**

Business Objects Training (Chapter 6 – Highway Information System) **Not Attended**

Standard Query Language (SQL) (Chapter 6 – Highway Information System) **Attended**

Visual Basic (Chapter 6 – Highway Information System) **Not Attended**

Public Involvement (Chapter 7 –Strategic Corridor Planning, Chapter 8–Statewide Transportation Planning, and Chapter 9 – Metropolitan Planning Organization) **Not Attended**

Road Safety Audit Training (Chapter 7 –Strategic Corridor Planning) **Not Attended**

Highway Safety Manual Training (Chapter 7 –Strategic Corridor Planning) **Not Attended**

Purpose and Needs Statements Training (Chapter 7 –Strategic Corridor Planning, Chapter 8–Statewide Transportation Planning Chapter 9 – Metropolitan Planning Organization) **Not Attended**

NEPA(Chapter 7 –Strategic Corridor Planning, Chapter 8–Statewide Transportation Planning, and Chapter 9 – Metropolitan Planning Organization) **Not Attended**

GIS (Chapter 7 –Strategic Corridor Planning, Chapter 8–Statewide Transportation Planning

Microsimulation (Chapter 7 –Strategic Corridor Planning) **Not Attended**

Administration of FHWA Planning and Research Grants Chapter 9 – Metropolitan Planning Organization) **Not Attended**

TRB Small and Medium Communities Conference (Chapter 9 – Metropolitan Planning Organization) **Not Attended**

Transportation and Land Use (Chapter 9 – Metropolitan Planning Organization) **Not Attended**

Climate Change (Chapter 9 – Metropolitan Planning Organization, Chapter 10 – Air Quality Conformity Analysis) **Two Staff Attended**

**4 Statewide Planning Meetings with ADDs/MPOs/FHWA/KYTC (Chapter 7 - Strategic Corridor Planning, Chapter 8 Statewide Planning and 9-Metropolitan Planning Organization)**

**Livability Conference - Nature's Call to Action (Chapter 9-Metropolitan Planning Organization)**

**Southern District Institute of Transportation Engineers Annual Conference (Chapter 7 - Corridor Planning and Chapter 9 - Metropolitan Planning Organization)**

**Post Award Contract Management Training (Chapter 7 – Corridor Planning and Chapter 9-Metropolitan Planning Organization)**

**NHI Access Management (Chapter 9-Metropolitan Planning Organization)**

**Scenario Planning Webinar (Chapter 9-Metropolitan Planning Organization)**

**AMPO Climate Change Webinar: Climate Change and Collaboration (MPO) (Chapter 9-Metropolitan Planning Organization)**

**ADA Transition Workshop (Chapter 9-Metropolitan Planning Organization)**

**Managing Travel Demand (Chapter 9-Metropolitan Planning Organization)**

**CHAPTER 2**

Personnel Training (continued)

**RESPONSIBLE UNIT**

Division of Planning

**PROPOSED ACTIVITIES FOR 2011-2012 (continued)**

STAQS (Chapter 10 – Air Quality Conformity Analysis) **Not Attended**

MOVES (Chapter 10 – Air Quality Conformity Analysis) **One Staff Attended**

National Freight Conference (Chapter 11 – Multimodal Transportation) **Not Attended**

Modeling Conferences and Training (Chapter 9 – Metropolitan Planning Organization, Chapter 13 – Traffic Data Forecasting) **Not Attended**

TransCAD Training (Chapter 13 – Traffic Data Forecasting) **Not Attended**

Census Training (Chapter 5 – Cartography, Chapter 9 – Metropolitan Planning Organization, Chapter 10 – Air Quality Conformity Analysis, Chapter 13 – Traffic Data Forecasting) **Several Staff Attended**

Bike/Ped Conferences (Chapter 9 – Metropolitan Planning Organization, Chapter 14 – Bicycle and Pedestrian Program) **Several Staff Attended**

Bicycle and Pedestrian Facilities Conference (Chapter 9 – Metropolitan Planning Organization, Chapter 14 – Bicycle and Pedestrian Program) **Not Attended**

Training for State Bicycle and Pedestrian Coordinator (Chapter 14 – Bicycle and Pedestrian Program) **Not Attended**

Partnering Conference (Chapter 3 – Traffic and Equipment Management, Chapter 4 – Roadway Systems, Chapter 6 – Highway Information System, Chapter 7 – Strategic Corridor Planning, Chapter 8 – Statewide Transportation Planning, Chapter 9 – Metropolitan Planning Organization, Chapter 13 – Traffic Data Forecasting, and Chapter 14 – Bicycle and Pedestrian Program) **Several Staff Attended**

TRB Annual Meeting (Chapter 13 – Traffic Data Forecasting) **One Staff Attended**

West Virginia Planning Conference (Chapter 13 – Traffic Data Forecasting) **One Staff Attended**

**PRODUCTS**

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

**DISTRIBUTION OF ESTIMATED COST FOR 2011-2012**

	<b>2011-2012</b>	<b>Expended</b>	<b>Percent Expended</b>
<b>PERSONNEL</b>	<b>\$317,200</b>	<b>\$45,202</b>	<b>14%</b>
<b>OTHER</b>	<b>\$35,000</b>	<b>\$13,328</b>	<b>38%</b>
<b>TOTAL</b>	<b>\$352,200</b>	<b>\$58,530</b>	<b>17%</b>

**Other**

- Other Operational Cost \$35,000

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

## 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 acquisition, distribution, operation, maintenance, and repair of all equipment used at traffic data acquisition stations. The Equipment Section performs site design, 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 performs quality control for, and processes and maintains data collected from data acquisition stations located statewide. The Data Section generates several different reports from said data throughout the year. These reports are prepared for the Federal Highway Administration (FHWA), Kentucky Transportation Center (KYTC), various planning agencies, and other governmental agencies. Data is also made available for public consumption.

### PROPOSED ACTIVITIES FOR 2011-2012

- Maintain, update, analyze, provide assurance of data, and make available data from approximately 15,000 traffic count stations including coverage, interstate, automatic traffic recorder (ATR), weigh in motion (WIM), and ramp counts.  
*All traffic count station data were checked for quality control and assurance of data upon 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 from approximately 80 permanent ATR stations.  
*ATR data was downloaded daily. All ATR data was checked for quality control and assurance of data upon entering into database. Reports were generated and sent to FHWA monthly. 100% complete.*
- With the KYTC District Offices, collect and process vehicle volume data from approximately 4,900 short-duration, portable-machine, coverage and ramp counts.  
*Received approximately 4550 counts of approximately 4800 assigned (95% complete) from District Offices for short-duration counts in calendar year 2011. The majority of the uncounted short-duration sites (approximately 190) were in Jefferson County where a moratorium was placed on data collection due to the closure of the Sherman-Minton Bridge. Assigned approximately 5000 short-duration counts to Districts in calendar year 2012.*



## CHAPTER 3

## Traffic and Equipment Management (continued)

### RESPONSIBLE UNIT

Division of Planning  
Traffic and Equipment Management Branch

### PROPOSED ACTIVITIES FOR 2011-2012 (continued)

- With KYTC District Offices, collect and process vehicle volume data from approximately 1,400 short-duration, portable-machine, local-road, bridge counts.  
*Approximately 503 short duration local road bridge counts were performed (36% of triennial program; 108% of expected goals) in calendar year 2011.*
- 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 can vary significantly from year to year with the average being approximately 400 counts.  
*Approximately 300 special counts (100% of those received) were reviewed, assigned, processed, analyzed and distributed in calendar year 2011.*
- Concurrent with coverage, interstate, ATR, WIM, and ramp counts, collect and process vehicle classification data from approximately 1,400 stations, which is 28% of all traffic count stations statewide to comply with the FHWA, *Traffic Monitoring Guide* recommendation of 25%-30%.  
*Vehicle classification data was collected and processed from approximately 950 stations (~19%) in calendar year 2011. This number was low due to a software issue. TOPS, the software that we began using to download data from the data recorders had a compatibility issue with our mainframe database. This should be rectified upon changing to the TRADAS database.*
- 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 2011. 100% complete.*
- Review and analyze functionally classified local road data to validate formula used to calculate local road Daily Vehicle-Miles of Travel (DVMT).  
*This task is still in progress. All local road data has been collected however, due to an unexpected number of functionally classified roadway changes, analysis of the data to validate the formula was not completed. We had originally hoped to have this complete in early FY12, however, due to various other issues, we lowered the priority level on this task and postponed completion until early FY13.*
- Update in-house databases to include any new stations or roadway alignment changes. Correct beginning and ending mile points to better represent traffic generators.  
*All in-house databases were updated in a timely manner as needed. 100% complete. When statewide count station audit is completed, beginning and ending mile points will be adjusted to better represent traffic generators.*
- Review, analyze, and update data summaries for vehicle weights and calculating Equivalent Single Axle Loads (ESALs).  
*ESAL tables have not been updated in a few years due to lack of vehicle weight data from the WIM program. Once we accumulate enough data for the update, it will be reviewed and analyzed to serve this purpose.*

## CHAPTER 3

Traffic and Equipment Management (continued)

### RESPONSIBLE UNIT

Division of Planning  
Traffic and Equipment Management Branch

### PROPOSED ACTIVITIES FOR 2011-2012 (continued)

- Maintain parallel data on mainframe until full implementation of TRADAS.  
Data was entered into and maintained in both the mainframe and TRADAS throughout FY12.
- Continue to grow and maintain the WIM data program to collect, process, analyze, and submit monthly, one-week, WIM data at permanent WIM stations. Periodically calibrate WIM data collection equipment in order to assure quality data.  
Efforts to grow and maintain the WIM data program were mixed this year. Ten WIM stations were calibrated at least once, some additional times. Data is collected daily from a total of 12 locations (KTC collects data from four) – 100% of available data. Data has not been submitted to FHWA due to a lack in expertise with regard to the submittal process. 0% for this task. After learning the submittal process, we will submit the data that has yet to be submitted and then begin submitting regular quarterly updates. A project that was let in June 2012 to add to and update several ATRs throughout the state. These ATR locations (and existing ATR locations) are being evaluated to determine which are to be added to the WIM program.
- Review proper operation and coverage of ATR sites. Install additional stations as necessary. Review of functional classifications and geographic locations of ATR sites was completed – 100% complete. Some functional classifications were over-represented so some of the higher maintenance ATRs in these classifications were abandoned. Other functional classifications were under-represented. Seventeen new ATRs will be added to the Traffic Management System via a contract let in June. In addition to functional classification representation, sites for new ATRs were selected statewide to provide geographic diversity.
- 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 and software, video detectors, wireless detectors, modems, microwave detectors, GPS units, and data retrieval software. Purchased ADRs, SD modules, road tube, miscellaneous portable count materials, and protective clothing.
- Certify, repair, and maintain approximately 700 traffic data recorders.  
The TEMAC Equipment Team certified approximately 700 automatic data recorders (ADRs). ADRs were maintained and repaired throughout the year, as required. 100% complete.
- Inspect, repair, and maintain approximately 600 ATR and semi-permanent vehicle sensor locations.  
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. Sites that require in-pavement sensor maintenance are being repaired by electrical contractors through the District maintenance agreements.

## CHAPTER 3

Traffic and Equipment Management (continued)

### RESPONSIBLE UNIT

Division of Planning  
Traffic and Equipment Management Branch

### PROPOSED ACTIVITIES FOR 2011-2012 (continued)

- Track upcoming highway projects and produce plans and specifications for new and replacement traffic sensor installations for submittal into construction and pavement rehabilitation contracts.  
More than 25 sets (100% of requested) of plans and specifications including approximately 50 ATR and semi-permanent count station sites were produced and submitted by the Equipment Team for construction and pavement rehabilitation contracts. Completed PS&E for a project that was let in June 2012 to add to and update 35 ATR and semi-permanent collection sites throughout the state. Additionally, the Construction Notes and Standard Detail Sheets were completely rewritten and updated in this fiscal year.
- Update the traffic management system (TMS) as needed.  
The TMS process documentation was updated throughout the year as needed. A draft chapter for The Division of Planning Guidance manual draft which provides the general guidelines for the TMS was completed this fiscal year and is expected to be finalized next fiscal year. An updated, process document which will provide detailed information about the TMS is currently being drafted.
- Provide contract management and oversight of consultants assisting with field data collection and other tasks. Process and provide quality assurance of the provided counts.  
Renewed contract with Southern Traffic Services. Provided contract management and oversight of consultants performing the following: WIM calibration training, WIM data collection and processing, ATR troubleshooting and repair.
- Provide traffic count technician training.  
The annual traffic count technician training program was developed and presented by TEMAC personnel on May 24, 2012 and attended by all TEMAC personnel and District count technicians.

### PRODUCTS

- Volume and classification data from ATRs.  
Data was retrieved for a minimum of six months from 62 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. Sites that require in-pavement sensor maintenance are being repaired by electrical contractors through the new District maintenance agreements or by project let in June, 2012.
- Volume, classification, and weight data from WIM sites  
Data has not been submitted to FHWA due to a lack in expertise with regard to the submittal process. 0% for this task. After learning the submittal process, we will submit the data that has yet to be submitted and then begin submitting regular quarterly updates.

**CHAPTER 3**

Traffic and Equipment Management (continued)

**RESPONSIBLE UNIT**Division of Planning  
Traffic and Equipment Management Branch**PRODUCTS (continued)**

- Volume and classification data from short-duration machine counts.  
Received approximately 4550 counts (of approximately 4800 assigned (95%)) from District Offices for short-duration counts in calendar year 2011. Assigned approximately 5000 short-duration counts (including counts not completed in calendar year 2011) to Districts in calendar year 2012. Of 189 interstate sites, completed data collection from approximate 170 (90%); were unable to collect data from remaining stations due to construction in the vicinity. Approximately 503 short duration local road bridge counts were performed (36% of triennial program).
- Volume and classification data from special counts.  
Approximately 300 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 2011.
- Databases containing count station and count data information.  
Database information for count station and count data was updated as needed. In FY13, with upgrade to new Viper Software, we will be working with Information Technology personnel to develop a new, more robust, user-friendly database for count station information.
- Accurate local DVMT data for FHWA reporting through HPMS.  
Accurate local DVMT data for FHWA was reported through HPMS.

**DISTRIBUTION OF ESTIMATED COST FOR 2011-2012**

	<b>2011-2012</b>	<b>Expended</b>	<b>Percent Expended</b>
<b>PERSONNEL</b>	<b>\$2,509,800</b>	<b>\$1,196,477</b>	<b>48%</b>
<b>OTHER</b>	<b>\$455,000</b>	<b>\$161,004</b>	<b>35%</b>
<b>TOTAL</b>	<b>\$2,964,800</b>	<b>\$1,357,481</b>	<b>46%</b>

**Outsourcing**

- \$700,000 contract for outsourced traffic counts and sensor installations to be performed by consultant under Statewide Traffic Counting contract. \$10,857 expended 1.6% of budgeted from contract let in June
- \$100,000 for WIM data compilation to be performed by UK \$0.00 expended
- \$575,000 Interstate and Arterial contract for Loop/Piezo installation and maintenance \$6,662 expended 1% of budgeted

**Other**

- \$250,000 for purchase of new Traffic Data Collection Equipment \$0.00 expended
- \$100,000 for Piezos, Road Tube, and counting supplies \$0.00 expended
- \$105,000 Other Operational Cost \$161,004 expended 153% of budgeted  
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

### PURPOSE AND SCOPE

The Roadway Systems Team maintains the official Department of Highways records for the following: State Primary Road System (SPRS); National Highway System (NHS); Functional Classification; Designated National Truck Network (NN); Coal Haul Highway System; and Forest Highway System. The team works with Highway District Office Planning Section and Central Office Data Management staffs and other sources as available to track changes in roadways and highway systems, accomplish systems changes, and prepare official documents for approval. The team annually gathers and compiles source data on the transportation of coal by trucks in the Commonwealth of Kentucky to prepare the tables, maps and descriptive information published in the Coal Haul Highway System Annual Report and other coal transportation information.

### PROPOSED ACTIVITIES FOR 2011-2012

- Track roadway construction or maintenance projects to identify changes in roadways and their effect on roadway system designations.  
**Tracked all project authorizations for projects affecting roadway systems as well as projects that required data updates, but no changes to SPRS. 100% Complete**
- Adapt project design plans and use GIS software to generate maps for resolving issues of roadway system and ownership designations and for use by other branches.  
**Incorporated project design files into GIS map documents to create decision-making maps as needed. 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.  
**Regularly communicated with Highway Districts and Data Management Branch on all information obtained for input into HIS. 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)  
**Generated, processed to obtain necessary signatures and distributed 93 Official Order revisions to the SPRS. 100% Complete**
- Ensure the SPRS reflects roadways of significance, and correlates with the functional classification system and the electronic base map coverage.  
**Discovered and processed changes resulting from roadway data collection and roadway system data reviews. 100% Complete**
- Review the Functional Classification of roadways and consult with Data Management branch and others as appropriate to ensure the system reflects roadways of significance and correlates with the SPRS and the electronic base map coverage.  
**This task was transferred to the Data Management Branch.**
- 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.  
**Updated quarterly reports on the internet for NHS and NN routes and mileage. Renewed the practice of publishing State Primary Road System mileage report on a quarterly basis to the internet. 100% Complete**

## CHAPTER 4

Roadway Systems (continued)

### RESPONSIBLE UNIT

Division of Planning  
Transportation Systems Branch

### PROPOSED ACTIVITIES FOR 2011-2012 (continued)

- Review revisions to the SPRS to discover any modifications made necessary to other systems such as functional classification, NHS, or NN classifications.  
*Reviewed projects regularly for necessary system classification revisions. 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.  
*Reviewed and revised the current process. This was in preparation for updates to be made in FY 2013.*
- 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.  
*None required. 100% Complete*
- 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  
*Four quarterly reviews completed, no updates needed. 100% Complete*
- Provide all system revision information to the Data Management branch and others as appropriate.  
*Provided information as received via emails, meetings and video conferences to Data Management and others as appropriate. 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.  
*Provided information to DLG in September 2011. 100% Complete*
- Publish Kentucky's Official Coal Haul Highway System Report as required by KRS 177.977 and KRS 42.455.  
*Report published to internet in September 2011. 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.  
*Provided information to Div of Maintenance in September, Official Order designating Extended Weight system signed and published in November. 100% Complete*

### PRODUCTS

- Official Order Changes to the State Primary Road System  
*93 Official Orders processed and distributed including 37 transfer OOs.  
Discovered and processed changes resulting from roadway data collection and roadway system data reviews.*
- State Primary Road System Official Order Listings and Functional Classification Reports  
*Updated each county State Primary System Official Order Listing document when each Official Order was processed (nearly 200 times)*



**CHAPTER 4**

Roadway Systems (continued)

**RESPONSIBLE UNIT**

Division of Planning  
Transportation Systems Branch

**PRODUCTS (continued)**

- Quarterly Reports on internet: State Primary Road System Mileage, National Highway System roadway classification, National Truck Network roadway classification  
Updated NHS and NTN reports on web at beginning of each quarter. Put SPRS mileage report back out on web upon District requests
- 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 over 50 projects. Regularly communicated with Data Management Branch on all information obtained for input into HIS for HPMS reporting.
- Coal Haul System Report with associated maps and separate datasets to Department of Local Governments, KYTC Budgets and KYTC Bridge Maintenance  
Produced approximately 30 Coal Haul System County Maps and Statewide routes map  
Published Annual Coal Haul System Report to web page in September 2011  
Ton-miles information provided to Dept for Local Governments August 2011  
Local road coal haul data provided to KYTC Accounts August 2011  
Forms for 1<sup>st</sup> and 2<sup>nd</sup> half of 2011 compiled and mailed to approximately 700 coal shippers  
Met with Div of Maintenance to refine the process of monitoring and maintaining the extended weight coal haul network
- 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 **None required**
- 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, Miscellaneous**  
Completed “Mileage removed from state maintenance” chart with estimated dollar values for GASB transmitted to Florence Wiley in Office of Budge & Fiscal Mgmt  
Submitted 4 applications to the fall 2010 meeting of the AASHTO US Route Numbering Committee including re-routing of US60A in Louisville. Approval received in November. Worked on maps and route log for bicycle tour submission but decided not to submit at this time. No applications for the spring meeting.

**DISTRIBUTION OF ESTIMATED COST FOR 2011-2012**

	<b>2011-2012</b>	<b>Expended</b>	<b>Percent Expended</b>
<b>PERSONNEL</b>	<b>\$676,400</b>	<b>\$547,155</b>	<b>81%</b>
<b>OTHER</b>	<b>\$25,000</b>	<b>2,001</b>	<b>1%</b>
<b>TOTAL</b>	<b>\$701,400</b>	<b>549,156</b>	<b>78%</b>

**Other**

- \$25,000 Other Operational Cost **\$2,001 expended less than 1% budgeted**  
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

### PURPOSE AND SCOPE

The Cartography Team meets the needs of the Division, Cabinet, other state agencies, and entities outside state government for general and special purpose maps. The team creates, updates, and distributes a wide variety of standard cartographic products in electronic and/or paper format. The team creates maps depicting various analyses of highway transportation data in digital and/or printed format. They also work to develop procedural and technical standards for digital mapping.

### PROPOSED ACTIVITIES FOR 2011-2012

- Provide electronic mapping for all city, county, district, state, and special-purpose cartographic products. County maps were updated about 200 times, with separate maps for SPRS and Functional Class exported and updated on the internet. City maps were updated about 130 times with separate maps for SPRS and Functional Class exported and updated on the internet. District maps for SPRS and Functional Class were updated and exported about 25 times and updated on the internet. Updated National Truck Network statewide and 3 metro area maps. Updated 100 city and county traffic count maps. 100% Complete
- Maintain and publish electronic formats of cartographic products for display on the Internet. Updated regularly as maps updated. 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 correct on Official Highway Map. Obtained printing exception from Finance, processed E01 for contract, updated RFP documents for contract which was let 11/09/11. Revisions to coloration of map to match KYTC materials and updated roads on statewide map and 15 inset maps as required. Prepared for publication and press-checked printing of 750,000 maps. Continue to monitor inventory and ship 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. Produced various project maps for the Strategic Planning Branch. Provided analysis and resulting map and county listing for annual KYTC statutory certification of counties for Kentucky Rural Economic Development Act. Created several maps for each District with different sets of data for use in developing District/Regional Transportation Plans. 100% Complete
- Provide mapping and graphic assistance to other Divisions and Departments as requested. Produced maps of Kentucky Speedway area for the Secretary. Updated legislator photo map as photos became available and as legislative leadership was decided. Prepared maps of I-75 detour for Sprint Cup at Ky Speedway. Developed/Updated study maps for KY 441 in Middlesboro, I-69, KY 3161 and for Middlesboro Small Urban Area study. 100% Complete
- Develop and provide to outside entities digital maps as requested. Responded to map review and update requests from AAA and Rand McNally.
- Develop and provide geographic information systems (GIS) files locating non-roadway modes of transportation. Reviewed and edited rail lines from GIS data provided by major rail companies. 100% Complete



## CHAPTER 5

Cartography (continued)

### RESPONSIBLE UNIT

Division of Planning  
Transportation Systems Branch

### PRODUCTS

Official Highway Map

Task 100% completed:

Contract obtained for 2011 map, graphic files updated, roadway updates made to statewide map and 15 inset maps, printing QC'd and 750,000 copies printed. Inventory replenished as requested

State Primary Road System Maps

Task 100% completed:

Updated county maps at least 200 times

Updated city maps at least 130 times

Updated highway district maps 13 times

County road reference maps: 84 County maps with 23 additional pages of insets for those maps, 74 city maps and Excel files of roads in each area were created

Updated 100 city and county traffic count maps

Functional Classification Maps

Task 100% completed:

Same as for State Primary Road System

Other Highway Data Maps (i.e., traffic counts, NHS, NN, etc. maps)

Task 100% completed:

Updated NN statewide and 3 metro area maps

Cabinet and Planning Project Exhibit Maps/Displays

Task 100% completed:

Provided analysis and resulting map and county listing for annual KYTC statutory certification of counties for Kentucky Rural Economic Development Act.

Created several maps for each District with different sets of data for use in developing District/Regional Transportation Plans

Bicycle maps of District 3 and District 6 for MultiModal

Maps of Kentucky Speedway area for Secretary meeting with local officials.

Updated legislator photo map as photos became available and as legislative leadership was decided.

Maps of I-75 detour for Sprint Cup at Ky Speedway.

Study maps for KY 44 in Spencer County, KY 441 in Middlesboro, KY 3161 and for Middlesboro Small Urban Area study.

- GIS Analyses of various data for transportation decision-making

Task 100% completed as requested:

See above

- General and special purpose maps as requested by other agencies

Task 100% completed as requested:

See above

Geographic information systems (GIS) electronic files

Task 100% completed:

Reviewed and edited digitized rail lines for all major railroads, more than 300 miles

**CHAPTER 5**

Cartography (continued)

**RESPONSIBLE UNIT**

Division of Planning  
Transportation Systems Branch

**DISTRIBUTION OF ESTIMATED COST FOR 2011-2012**

	<b>2011-2012</b>	<b>Expended</b>	<b>Percent Expended</b>
<b>PERSONNEL</b>	<b>\$415,500</b>	<b>\$295,403</b>	<b>71%</b>
<b>OTHER</b>	<b>\$105,000</b>	<b>\$78,596</b>	<b>75%</b>
<b>TOTAL</b>	<b>\$520,500</b>	<b>\$373,999</b>	<b>72%</b>

**ESTIMATED OUTSOURCING EXPENSES AND PURCHASES**

**Outsourcing**

- \$150,000 for Technical Assistance program with UK to provide Interns to help with various SPR program items. **\$58,794 expended 39% of budgeted**
- \$50,000 for highway map outsourced production assistance. **\$1,165 expended 2% of budgeted**

**Other**

- \$100,000 for Official Highway Map Publication. **\$77,348 expended 77% of budgeted**
- \$5,000 Other Operational Cost **\$84 expended less than 2% of budgeted**  
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 Data Management Branch responsibilities include assistance and support for maintenance of the Transportation Cabinet's Highway Information System (HIS) which includes storage of all roadway characteristic information, transportation systems information, and the Cabinet's roadway centerline Geographic Information System (GIS). The branch contributes to the KYTC Asset Management program, providing an up-to-date route network of asset location for other divisions and provides asset extraction for updates to the network. They perform data collection activities for the statewide Geographic Information System (GIS) transportation layer, HPMS data, operational performance data, and roadway characteristics using data collected from Division of Maintenance Photo Van. From this information the Branch uses the Highway Performance Monitoring System (HPMS) to establish a baseline and assist with analysis for measuring highway system performance and produce the highway data submittal required annually by the Federal Highway Administration (FHWA). They provide information to the Transportation Cabinet, other governmental agencies, consultants, and private organizations via requests or by posting data to the Division's web site.

### PROPOSED ACTIVITIES FOR 2011-2012

- Work with the Office of Information Technology (OIT) to upgrade the HIS database to the next release of "Highways by EXOR" and deploy to other data owners within the cabinet. **In progress and continuing 75% Complete**
- Work with OIT to assist with database upgrades that include links, functionality, and data exchange with other division databases. **In progress and continuing 25% Complete**
- Assist with implementation of new Traffic System database including links, functionality, and data exchange between HIS and the new database. **Loaded into Production database and continuing to perform troubleshooting and functionality improvements 75% complete**
- Assist with implementation of the photo van imaging system for data collection purposes. This will include providing up to date route network for photo location accuracy and data extraction oversight. **Significant time has gone into locating photos to accurate centerline locations, which contributes to accuracy in the Photo Log Viewer application 100% Complete**
- Assist with cabinet wide asset management data collection and data dissemination. **Field collection activities are now on pace with the opening of new roadway projects, which has improved the timeliness of providing up-to-date information to Cabinet data consumers 100% Complete**
- Continue to develop processes and procedures to review, edit, and update Cabinet's base map and HIS database. **Improved efficiency of field collection processes 100% Complete**
- Assist with testing, training, report migration, and enhancements with the HIS. **Continuing to work with TED Branch in OIT for reporting and mapping of HIS data 100% Complete**
- Assist in the development and maintenance of a Cabinet GIS and maintain database network for Kentucky's public highway system. **Completed GIS maintenance activities in 79 counties 100% Complete**
- Improve and update roadway characteristic, HPMS, Performance Measure, and analysis data through Division of Maintenance Photo Van data collection project. **Significant time has gone into continually updating HIS with more complete and accurate data collected by the Photo Van 100% Complete**

## CHAPTER 6

Highway Information System (continued)

### RESPONSIBLE UNIT

Division of Planning  
Data Management Branch

### PROPOSED ACTIVITIES FOR 2011-2012 (continued)

- Update newly acquired road centerline data collected from Division of Maintenance Photo Van or central office staff using GPS collection methods or CAD design file extraction to the existing highway network. Update and verify roadway mileage, highway systems data, for use in maintaining and generating data driven maps. **161 new roadway alignment updates of GIS and HIS data completed 100% Complete**
- Perform office reviews to verify data meets the required standards and confidence levels established by this Division and FHWA. **QA performed on new and existing data in HIS. Additional QA performed on extracted data to submit to FHWA. 100% Complete**
- Provide up-to-date route network, DMI, roadway characteristics and system information through various programs. **Provided through the Internet and as requested 100% Complete**
- Process and submit annual HPMS submittal. **Successful 2011 submittal in July 2012 due to FHWA software issues and slow cooperation from other Cabinet data sources 100% Complete**
- Utilize HPMS to update Rating Indices, Capacity, and Volume/Service Flow ratio in the HIS database. **In process 100% Complete**
- Use HIS to measure highway system performance and assist with analyses of the Unscheduled Projects List. **Provided mappable data to District offices to assist with the District Transportation Plan, which was used to help guide Cabinet project priorities 100% Complete**
- Maintain currency of HPMS software and perform changes required by federal legislation, regulations, policies, and/or guidelines, as needed to the HPMS. **Attended many webinars and the Highway Information Seminar 100% Complete**
- Investigate results of HPMS each year and analyze changes in processes to improve output of report. **Complete review completed with considerations of trying to obtain necessary data from other Cabinet sources earlier in the year 100% Complete**
- Assist in processing and reporting of the FHWA 534 and 536 reports. **534 completed. 536 not due in FY 2012. 100% Complete**

### PRODUCTS

- Routines to extract better road information from the GPS files (i.e. vertical grade, horizontal curve) **In process of working with Mandli to develop better method for calculating horizontal curve information 50% Complete**
- Queries and routines for quality control of the database concerning asset items and road information **QA report performed weekly and improved as needed 100% Complete**
- Database and GIS application troubleshooting when errors take place **Weekly checks took place and adjustments made when appropriate 100% Complete**
- Database and GIS upgrades **With assistance of OIT, successfully upgraded to Exor NM 4.4.0.0 and ArcGIS 9.3.1 100% Complete**
- Other agency information loaded or linked to HIS database **Discussions ongoing regarding HIS linkage to Division of Maintenance and ROW/Utilities databases 25% Complete**
- New roadway centerlines obtained through GPS technology and CAD design files and updates to both the GIS layers and HIS database **Completed and ongoing 100% Complete**

**CHAPTER 6**

Highway Information System (continued)

**RESPONSIBLE UNIT**Division of Planning  
Data Management Branch**PRODUCTS (continued)**

- New roadway inventory either through field collection or extracted from CAD design files to update the GIS layers and HIS database **Completed and ongoing 100% Completed**
- New roadway inventory extracted through photo van software **Completed and ongoing 100% Complete**
- Existing roadway characteristic inventory QC checks from photo van pictures **Completed and ongoing 100% Complete**
- Transportation Enterprise database updates for cabinet wide consumption of data **Completed and ongoing 100% Complete**
- Cabinet wide Asset Management updates and route locations to update other divisions **Completed and ongoing 100% Complete**
- HPMS 534 and 536 Reports **534 completed. 536 not due in FY 2012. 100% Complete**
- HPMS submittal due June 15, 2011 **Submitted July 15 due to FHWA software issues and slow cooperation from other Cabinet data sources; deadline was extended to August 31 by FHWA due to software issues 100% Complete**
- Reports created concerning information about transportation network stored in HIS database **Completed as needed/requested 100% Complete**
- Provide Certification of Public Road Mileage by June 1 **Signed and submitted on June 11 100% Complete**

**DISTRIBUTION OF ESTIMATED COST FOR 2011-2012**

	<b>2011-2012</b>	<b>Expended</b>	<b>Percent Expended</b>
<b>PERSONNEL</b>	<b>\$1,416,906</b>	<b>\$1,016,080</b>	<b>72%</b>
<b>OTHER</b>	<b>\$250,000</b>	<b>\$72,246</b>	<b>29%</b>
<b>TOTAL</b>	<b>\$1,666,906</b>	<b>\$1,020,288</b>	<b>61%</b>

**ESTIMATED OUTSOURCING EXPENSES AND PURCHASES****Outsourcing**

- \$50,000 to outsource to 15 ADDs to collect one-way/two-way operation on local road centerline **\$35,783 expended 72% of budgeted**
- \$75,000 Special GPS Maintenance **\$6,267 expended 8% of budgeted**
- \$200,000 Asset Management & Support through IT **\$110,193 expended 55% of budgeted**
- \$135,000 to outsource for Local Road Attribute Data Collection to all of the 15 ADD's, with contracts less than \$100,000 for each **\$126,531 expended 94% of budgeted**
- \$98,306 Roadway Attribute Data Collection **\$35,100 expended 36% of budgeted**
- \$100,000 to outsource for Asset Management Data extraction from photo van images **\$83,729 expended 84% of budgeted**

**Other**

- \$100,000 for EXOR ecredits **\$68,038 expended 68% of budgeted**
- \$75,000 Other Operational Cost For items such as travel, mileage, equipment and other cost directly associated to the completion of this work chapter. **\$4,208 expended 6% of budgeted**
- \$75,000 computer software maintenance for upgrading HPMS. **\$0.00 expended**

## 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 and the Unscheduled Projects List. It also conducts technical project studies performing 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 2011-2012

- 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.**
- Conduct corridor, system, small urban area studies, data needs analyses, and other studies. **For a list of active studies 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.**
- 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.**  
Oversee outsourced activities. **Several of our studies are done by consultants with someone from the district or from the Division of Planning acting as the Project Manager who oversees the study. At the end of the FY 2012 fourth quarter, KYTC had six active planning studies that were outsourced to a consultant and District Transportation Plans facilitated by a consultant.**
- 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. District Transportation Plans have also been developed to assist in prioritizing projects for the Highway Plan.**

**CHAPTER 7**

Strategic Corridor Planning (continued)

**RESPONSIBLE UNIT**

Division of Planning  
 Strategic Planning Branch  
 Strategic Corridor Planning Team

**PRODUCTS**

Such Studies will include, but not be limited to the following:

				<u>% Study Complete</u>	<u>% for Year</u>
• Programming Studies					
<b>Bell</b>	<b>KY 441</b>	<b>Programming Study</b>	<b>11-110.00</b>	<b>100%</b>	<b>100%</b>
• Alternatives Studies					
<b>Bullitt, Spencer</b>	<b>KY 44</b>	<b>Alternative Study</b>	<b>05-396.00</b>	<b>80%</b>	<b>100%</b>
• Scoping Studies					
<b>Hardin</b>	<b>KY 251</b>	<b>Scoping Study</b>	<b>04-153.00</b>	<b>100%</b>	<b>100%</b>
<b>McCracken</b>	<b>US 60</b>	<b>Scoping Study</b>	<b>01-125.00</b>	<b>35%</b>	<b>100%</b>
<b>Montgomery</b>	<b>Mt. Sterling</b>	<b>Scoping Study</b>	<b>N/A</b>	<b>100%</b>	<b>100%</b>
<b>Todd</b>	<b>KY 41</b>	<b>Scoping Study</b>	<b>03-8630.00</b>	<b>100%</b>	<b>100%</b>
<b>Webster, Hopkins,</b>	<b>US 41A</b>	<b>Scoping Study</b>	<b>02-8303.00</b>	<b>35%</b>	<b>100%</b>
<b>Henderson, Daviess,</b>					
<b>Ohio, Butler,</b>	<b>I-66, I-66/</b>				
<b>Warren</b>	<b>I-65 Spurs</b>	<b>Scoping Study</b>	<b>2-85.00</b>	<b>5%</b>	<b>100%</b>
<b>Perry</b>	<b>KY 80</b>	<b>Scoping Study</b>	<b>N/A</b>	<b>100%</b>	<b>100%</b>
<b>Johnson</b>	<b>KY 321</b>	<b>Scoping Study</b>	<b>N/A</b>	<b>85%</b>	<b>100%</b>
• Small Urban Area Studies					
<b>Knox, Whitley</b>	<b>Corbin</b>	<b>Small Urban Area Study</b>		<b>98%</b>	<b>100%</b>
<b>Shelby</b>	<b>Shelbyville</b>	<b>Small Urban Area Study</b>		<b>15%</b>	<b>100%</b>
<b>Marion</b>	<b>Lebanon</b>	<b>Small Urban Area Study</b>		<b>5%</b>	<b>100%</b>

Eleven studies were completed during the period of June 16, 2011 to June 16, 2012.

Four were completed in-house and 7 were completed by consultants.

The studies completed are as follows:

- US 421, Franklin County – 5-8109 - July 2011
- I-265/I-64 IJS, Jefferson Co. – 5-21 – August 2011
- I-264/US 42 Scoping Study, Jefferson Co. – 5-390 – August 2011
- Leitchfield SUA Study – August 2011 (SPR)
- KY 441 Programming Study, Bell County – 11-110 - December 2011
- Mt. Sterling Scoping Study, Montgomery County – January 2012 (SPR)
- KY 80 Traffic Study, Perry Co. – February 2012 (SPR)
- I-69 SIU #6 – March 2012
- District Plans – April 2012 (SPR)
- KY 41, Todd County – 3-6830 – April 2012
- KY 251, Hardin County – 4-153 – Jun 2012



## CHAPTER 7

## Strategic Corridor Planning (continued)

### RESPONSIBLE UNIT

Division of Planning  
Strategic Planning Branch  
Strategic Corridor Planning Team

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 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, 20 projects have been worked on during the past fiscal year, with 11 being completed, and 9 others in various stages of completion. Please refer to the table at the end of this document to see percentages of projects complete and percentage of FY 12 project goals that were met.

- Data Needs Analysis (DNA) PreDesign Scoping Studies  
A DNA for Six-Year Plan and Unscheduled Projects. Over 30 DNA studies have been completed by District and Central Office Planners since the beginning of the fiscal year. These studies include projects identified by Item #1-1062, #2-8631/2-194, #2-8632, #2-8300, #3-8401, #4-1066, #4-8705, #4-8307.1, #4-198, #5-1057/#5-1058/#5-1059, #5-284, #5-367.2, #6-1075/#6-1070, #6-1075, #6-407, #7-1116, #7-1118, #9-1075, #10-8302, #10-167, #10-1098, #10-1099, #10-8702, #11-1069, #11-1075, #11-1076, #11-1077, #11-1078, #11-1079, #12-1085.
- Priorities for Highway Plan Programming that are sustainable and fundable.

### DISTRIBUTION OF ESTIMATED COST FOR 2011-2012

	2011-2012	Expended	Percent Expended
<b>PERSONNEL</b>	<b>\$1,054,000</b>	<b>\$1,036,169</b>	<b>98%</b>
<b>OTHER</b>	<b>\$20,000</b>	<b>\$3,983</b>	<b>20%</b>
<b>TOTAL</b>	<b>\$1,074,000</b>	<b>\$1,040,152</b>	<b>97%</b>

### ESTIMATED OUTSOURCING EXPENSES AND PURCHASES

#### Outsourcing

- \$700,000 to outsource for Planning Studies. FHWA will be notified when planning studies utilizing SPR funds are initiated. \$396,731 expended 57% of budgeted

#### Other

- \$20,000 Other Operational Cost \$3,983 expended 20% of budgeted  
For items such as travel, mileage, equipment and other cost directly associated to the completion of this work chapter.

**PLEASE SEE ATTACHED PAGE FOR LIST OF STUDIES!**



PROJECT I.D.	ITEM NO.	COUNTY(S)	CONTRACT NO.	TYPE OF WORK	Project Manager	Backup Manager	Consultant	NTP Date	Contract/L.A. Amount	Funds Expended in FY 2012 <sup>1</sup>	Total Funds Expended <sup>1</sup>	Overrun?	Schedule met?	Approximate % Complete	Were needs for this corridor/SUA identified, evaluated, and prioritized?	FY 12 SPR Work Program Funds	Were there contract revisions?
KY 441	11-110.00	BELL	In-House	PROGRAMMING STUDY	Witt	Higdon	In-House	N/A	-	-	-	-	-	100%	Yes	No	N/A
CORBIN	N/A	KNOX, WHITLEY	In-House	SMALL URBAN AREA STUDY	Higdon	Asher	In-House	N/A	-	-	-	-	-	99%	Yes	Yes	N/A
LEITCHFIELD	N/A	GRAYSON	In-House	SMALL URBAN AREA STUDY	Witt	Asher	In-House	N/A	-	-	-	-	-	100%	Yes	Yes	N/A
SHELBYVILLE	N/A	SHELBY	In-House	SMALL URBAN AREA STUDY	Pelfrey	Higdon	In-House	N/A	-	-	-	-	-	15%	In progress	Yes	N/A
KY 44	05-396.00	BULLITT, SPENCER	In-House	SCOPING STUDY	Gutti	Asher	In-House	N/A	\$ 300,000.00	\$ 22,602.00	\$109,415.36	No	Yes	80%	Yes	No	N/A
I-69	N/A	LYON, LIVINGSTON, MARSHALL, GRAVES, HICKMAN, FULTON	No. 201025	CORRIDOR STUDY	McGregor	Asher	Palmer	4/12/2010	\$ 254,736.00	\$ 28,530.20	\$ 254,736.00	No	No	100%	Yes	No	Yes
LEBANON	N/A	MARION	In-House	SMALL URBAN AREA STUDY	TBD	Spalding	In-House	N/A	-	-	-	-	-	5%	On Hold	Yes	N/A
KY 251	04-153.00	HARDIN	Agree. No. 201125	SCOPING STUDY	Allen	Asher	Stantec	12/3/2010	\$ 228,971.00	\$ 124,503.55	\$ 228,971.00	No	Yes	100%	Yes	No	No
MT. STERLING	N/A	MONTGOMERY	LA No. 1, Agree. No. 201027	CORRIDOR STUDY	Turner	Gutti	QK4	1/13/2011	\$124,781.17	\$62,390.94	\$124,781.17	No	Yes	100%	Yes	Yes	No
KY 41	03-8630.00	TODD	LA No. 1, Agree. No. 201028	SCOPING STUDY	J.Moore	Higdon	Stantec	1/13/2011	\$89,915.00	\$67,134.55	\$89,915.00	No	Yes	100%	Yes	No	No
US 41A	2-8303.00	HOPKINS, WEBSTER	LA No. 3, Agree. No. 201027	SCOPING STUDY	N. Hall	Asher	QK4	5/26/2011	\$165,430.35	\$147,668.00	\$165,402.00	No	Yes	99%	Yes	No	Yes
US 60	1-125.00	MCCRACKEN	LA No. 2, Agree. No. 201028	SCOPING STUDY	J. Herring	Higdon	Stantec	4/27/2011	\$160,365.00	\$102,306.61	\$130,375.48	No	Yes	82%	Yes	No	No
I-66 / I-69 SPURS - OWENSBORO	2-85.00	DAVISS, OHIO, HENDERSON, BUTLER, WARREN	Agree. No. 201210	CORRIDOR STUDY	N. Hall	A. Thomas	Palmer	9/21/2011	\$278,802.00	\$119,445.07	\$119,445.07	No	No	43%	In progress	No	No
KY 321	N/A	JOHNSON	LA No. 4, Agree. No. 201027	PROGRAMMING STUDY	Cuzzort	Pelfrey	QK4	6/10/2011	\$112,924.13	\$90,338.00	\$95,984.00	No	No	85%	In progress	Yes	No
KY 80	N/A	PERRY	LA No. 3, Agree. No. 201028	TRAFFIC STUDY	Blackburn	Gutti	Stantec	5/5/2011	\$28,169.00	\$28,169.00	\$28,169.00	No	Yes	100%	Yes	Yes	No
District Transportation Plans	N/A	Districts 1,2,6,7,8,9	LA No. 4, Agree. No. 201028	District Transportation Plans	Damron	Ross	Stantec	5/17/2011	\$150,204.00	\$120,163.20	\$150,204.00	No	Yes	100%	N/A	Yes	No
District Transportation Plans	N/A	Districts 3,4,5,10,11,12	LA No. 2, Agree. No. 201027	District Transportation Plans	Damron	Ross	QK4	5/17/2011	\$137,525.00	\$110,029.00	\$137,525.00	No	Yes	100%	N/A	Yes	No
KY 38	N/A	HARLAN	In-House	SCOPING/DNA STUDY	Mosely	Pelfrey	In-House	N/A	-	-	-	-	-	90%	Yes	Yes	N/A
KY 15	N/A	BREATHITT, PERRY	LA No. 5, Agree. No. 201027	SCOPING STUDY	Blackburn	Asher	QK4	1/19/2012	\$174,851.49	\$52,400.00	\$52,400.00	No	Yes	15%	In progress	Yes	No
HOPKINSVILLE	N/A	CHRISTIAN	LA No. 5, Agree. No. 201028	SMALL URBAN AREA STUDY	Asher	N. Hall	Stantec	3/15/2012	\$108,581.00	\$20,197.81	\$20,197.81	No	Yes	19%	In progress	Yes	No
US 460	N/A	MAGOFFIN	LA No. 6, Agree. No. 201027	SCOPING STUDY	Westfall	Pelfrey	Stantec	4/3/2012	\$97,610.00	\$73,722.65	\$73,722.65	No	No	76%	Yes	Yes	No

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

## 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 SAFETEA-LU compliant. Through these processes and partnerships, this team provides meaningful input to the Highway Plan.

### PROPOSED ACTIVITIES FOR 2011-2012

- Review and update the STP document as needed. 100% complete and ongoing regular reviews.
- Develop and implement processes as needed to ensure SAFETEA-LU compliance. 100% complete. District Transportation Plan revision schedule has been revised and distributed to ADD/MPO/HDO planners for coordination.
- 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 upcoming Statewide Transportation Planning meeting. 100% Complete
- Enhance the statewide transportation planning process by including data collection and analysis, public involvement, and coordination. Held STP meetings with presentations on Census data, Social Media Use for public involvement and discussed the importance of public involvement for the planning process. 100% complete
- Identify, evaluate, and prioritize transportation projects through data analysis and public involvement. Coordinated between ADD's and HDO's on development of revision schedule of District Regional Plans. Continue to analyze and proof complete PIF listing for quality. Instituted "live" prioritization for future meetings. 100% complete 122 New and 1,899 Current
- Recommend sustainable and fundable projects. Coordinated discussion sessions and gave presentations on proper development of PIF's, as well as what should be appropriate for submittal as a PIF. Developed group exercise aimed at spurring discussion on PIF development. 100% complete
- Maintain and oversee further development of the Project Identification Form/Unscheduled Projects List online database for use as a tool in project prioritization and analysis. Continue to work with developers as bugs arise in PIF application and look for ways to improve existing practices and information 100% complete
- Coordinate with other Divisions, Districts, and Agencies and incorporate applicable plans as necessary to ensure compliance with new authorization or SAFETEA-LU extension compliance. Working 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. 100% complete

**CHAPTER 8**

## Statewide Transportation Planning (continued)

**RESPONSIBLE UNIT**

Division of Planning  
Strategic Planning Branch

**PROPOSED ACTIVITIES FOR 2011-2012 (continued)**

- Coordinate and oversee the ADD Regional Transportation Program. Coordinate and assist the Highway District Offices as they develop the District Regional Transportation Plan. Revised and forwarded new contracts for signatures. Provided guidance on deliverables, addressed Regional Transportation Committees, attended Regional Transportation Committees as an observer, processed invoices, and continued with ADD Planner Assessments. Coordinated between ADD's and HDO's on development and presentation of District Regional Plans. 100% complete 405 UPL Projects

**PRODUCTS**

- Statewide Transportation Plan updates as needed. 100% complete. Reviewed current plan this quarter and will continue to assess need to update throughout remaining fiscal year.
- Unscheduled Projects List database 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. 100% complete
- Annual Work Programs and Contracts for 15 Area Development Districts Completed revisions for FY13 work program and forwarded for signatures. Clarified deliverables and their due dates. Reviewed deliverables for completeness. 100% complete\
- Statewide Transportation Planning Meetings Held April STP meetings. 100% complete
- 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.
- District Regional Transportation Plan that is sustainable and fundable. District Transportation Plan revision schedule has been completed and distributed to ADD/MPO/HDO planners for coordination. Raw files were collected and distributed to HDO planners for efficient and effective revision cycle. 100%.

**DISTRIBUTION OF ESTIMATED COST FOR 2011-2012**

	<b>2011-2012</b>	<b>Expended</b>	<b>Percent Expended</b>
<b>PERSONNEL</b>	<b>\$822,600</b>	<b>\$788,908</b>	<b>96%</b>
<b>OTHER</b>	<b>\$35,000</b>	<b>\$12,553</b>	<b>36%</b>
<b>TOTAL</b>	<b>\$857,600</b>	<b>\$801,461</b>	<b>93%</b>

**CHAPTER 8**

Statewide Transportation Planning (continued)

**RESPONSIBLE UNIT**

Division of Planning  
Strategic Planning Branch

**ESTIMATED OUTSOURCING EXPENSES AND PURCHASES**

**Outsourcing**

- \$75,000 to outsource for studies and assistance related to the Statewide Planning SPR Work Program **\$188,213 expended 251% of budgeted**

**Other**

- \$35,000 Other Operational Cost **\$12,553 expended 36% of budgeted**  
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. This process ensures that KYTC and local transportation projects remain eligible to receive federal funding. The scope of work is in accordance with the Unified Planning Work Program (UPWP), which describes all anticipated urban transportation and transportation-related planning activities to be performed.

### PROPOSED ACTIVITIES FOR 2011-2012

- Review and implement any changes to the MPO planning process as a result of an expected new federal transportation bill. **0% complete. MAP-21 was not enacted until the last days before the end of fiscal year 2012. Other than a brief review of summaries provided by the media, the final enacted bill was not reviewed or implemented.**
- Incorporate statewide changes and provide data, analysis, and support in implementation of new Census 2010 data within the planning process including activities such as updating the PL distribution formula for state FY 2013, coordinating the review of MPO urban boundaries, responding if new MPOs are identified, etc. **50% of total task complete-100% for the year. Urbanized boundaries and populations from Census 2010 were released on March 26, 2012. PL formula recalculation was delayed until 1<sup>st</sup> quarter of FY 2013 to rely on the Federal Register announcement of the TMA status of Ashland-Huntington. FY 2014 UPWPs will include the new formula distributions.**
- Provide technical assistance and oversight review of MPO activities, programs, documents, models and/or tools. **100% complete. Daily monitoring, reviewing, and recommending improvements to MPO activities were completed. 69 non-specific MPO meetings, 39 conference and/or training meetings or webinars took place to maintain knowledge and understanding of MPO requirements.**
- Attend technical, policy, and other committee meetings to represent the Cabinet. **100% complete. 32 Policy, 50 Technical, and 93 other committee meetings were attended during the FY 2012.**
- Conduct contract management and oversight for federal funds. **100% complete. All contracts, invoices, and auditing requirements were met as expected. Audit reviews of the subrecipient process for FY 2011 were conducted in the 2<sup>nd</sup> and 3<sup>rd</sup> quarters. There were no significant findings for the Division of Planning's MPO Team contracts as a result from the audit reviews.**
- Ensure consistency between local and state plans and programs. **100% complete. Coordination continued for encouraging consistency across the state while providing flexibility for local and regional variances.**
- Coordinate with other transportation modes to obtain input on multimodal issues for the Metropolitan Transportation Plans (MTPs). **100% complete. Coordination continued with Office of Transportation Delivery for transit and the Division of Planning's Modal Branch on bicycle, pedestrian, freight, and other modes.**

## CHAPTER 9

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

### RESPONSIBLE UNIT

Division of Planning  
Strategic Planning Branch  
MPO Team

### PROPOSED ACTIVITIES FOR 2011-2012 (continued)

- Work with the MPOs and Highway District Offices (HDOs) on Project Identification Forms (PIFs), data collection, project evaluation and ranking, and training. 100% complete. All expected deliverables were met.
- Conduct regular statewide meetings. 100% complete. Four statewide planning meetings were held, while additional correspondence through electronic mail and telephone contacts helped ensure consistent information was being provided.
- Coordinate with the Transportation Management Areas (TMAs) on the programming and tracking of dedicated Federal Statewide Transportation Program (STP) funded projects and the development of compliant Congestion Management Processes (CMPs). 100% complete. Coordination continued to ensure federal transportation requirements were met by TMAs.
- Coordinate with MPOs on air quality issues, analysis, and conformity. 100% complete. Coordination continued to educate and cooperatively work with MPOs to address air quality issues.

### PRODUCTS

- Assistance to MPOs in preparing compliant Transportation Improvement Programs (TIPs), MTPs, Participation Plans (PPs), CMP's and UPWP's 100% complete. 1 new MTPs, 2 new TIPs, 22 TIP Amendments, 40 TIP Administrative Modifications, and 3 Participation Plan were approved during the FY 2012. 9 original Performance and Expenditure reports were submitted for review and approvals. 9 original or revised Annual Obligation reports were submitted for review and approvals.
- MPO Self Certifications (participant) 100% complete. 3 new Self-Certifications were approved during FY 2012.
- Establish new MPOs as identified by Census 2010 100% complete. Although no new MPO areas have been identified by Census 2010, and no challenges are expected that will result in a new MPO area for Kentucky, there is expected to be a new TMA established in Huntington, WV, which impacts the Ashland MPO.
- Assistance to MPOs in updating their urban boundaries 15% total task complete-100% for the year. MPOs began work to update urban boundaries based on the March 26, 2012 submission of Census 2010 urbanized boundaries. This work element will be primarily addressed during 1st quarter FY 2013 SPR Work Program.
- Updated MPO PL distribution formula 15% total task complete-100% for the year. MPO PL distribution formula update had been expected to take place during the 4th quarter of FY 2012. However, the Federal Register announcement had not yet been made and the decision was made to wait until the Huntington-Ashland TMA had been finalized before updating the PL distribution formula. It is expected that the formula will be updated in the 1<sup>st</sup> quarter of FY 2013.

**CHAPTER 9**

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

**RESPONSIBLE UNIT**

Division of Planning  
Strategic Planning Branch  
MPO Team

**PRODUCTS (continued)**

- MPO UPWP Contracts and administration 100% complete. 16 UPWP contracts have been monitored for necessary oversight activities during FY 2012. In addition, 9 draft FY 2013 UPWP contracts were prepared and completely enacted, with a notice to proceed prepared and sent on June 29, 2012, the last working day of FY 2012.
- MPO dedicated STP fund contracts and administration 100% complete. 16 STP contracts and 4 other contracts were monitored for necessary oversight activities during the FY 2012.
- Statewide Transportation Planning Meetings 100% complete. Four STP meetings were held during the FY 2012.
- Special Studies 100% complete. 11 ongoing studies were monitored.

**DISTRIBUTION OF ESTIMATED COST FOR 2011-2012**

	<b>2011-2012</b>	<b>Expended</b>	<b>Percent Expended</b>
<b>PERSONNEL</b>	<b>\$509,200</b>	<b>\$373,164</b>	<b>73%</b>
<b>OTHER</b>	<b>\$25,000</b>	<b>\$2,247</b>	<b>9%</b>
<b>TOTAL</b>	<b>\$534,200</b>	<b>\$375,411</b>	<b>70%</b>

**ESTIMATED OUTSOURCING EXPENSES AND PURCHASES**

**Outsourcing**

- \$50,000 Various studies (CTPP participation, etc.), as needed. \$0.00 expended

**Other**

- \$25,000 Other Operational Cost \$2,247 expended 9% of budgeted  
For items such as travel, mileage, equipment and other cost directly associated to the completion of this work chapter.



## CHAPTER 10

## 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 non-attainment and maintenance areas.

### PROPOSED ACTIVITIES FOR 2011-2012

- Host and/or participate in interagency consultation calls regarding transportation conformity for updates and amendments to MTP plans, TIPs, and STIP. **Currently gather updates from KIPDA, FHWA, EPA, MPOs/ADDs and Program Management regarding any updates/amendments. (100% complete).**
- Run the current emissions model for ozone and PM2.5 regional air quality conformity analyses for Ashland and Christian County areas as well as other newly designated areas. **The initial runs of the MOVES model for Christian County are complete. Waiting to hear what the next move will be from the Clarksville/Christian County IAC as the analysis years might need to be changed. (100% complete).**
- Maintain a working knowledge of the guidelines for the 8-hour ozone and PM 2.5 standards, EPA's current emissions model, air quality regulations, and implementation guidance. Attend necessary meetings and conferences to stay abreast of air quality issues. **EPA has delayed the new standards for Ozone and has proposed what they believe the new PM2.5 standard will be. EPA plans on proposing its report in December 2012. (100% complete).**
- Facilitate monthly conference calls with federal, state, and local partners to discuss timely air quality regulations and conformity issues. **Have participated in meetings/IACs with KIPDA, Clarksville/Christian Co IAC, Ashland IAC, AQ Advisory Committee, SEDC, FHWA. (100% complete).**
- Educate KYTC staff, KYTC management, public officials, and the general public about air quality, conformity analysis, and federal guidelines and on new developments with greenhouse gas/climate change requirements. Disseminate information about the PM2.5 and 8-hour ozone standards and designation process and on new developments with greenhouse gas requirements. **Update managers concerning the MOVES pilot group on any information deemed necessary i.e.EPA updates regarding standards or any information that would impact AQ overall (100% Complete).**
- Provide VMT, speeds, and vehicle registration age/type distribution to DAQ for their development of the State Implementation Plans (SIPs) for non-attainment and maintenance areas as well as for other projects such as emissions analyses for Southeastern Modeling, Analysis, and Planning Project (SEMAP) to evaluate visibility in the Southeast. **Gathered information/data for DAQ to run the MOVES model for Clarksville/Christian Co. Completed several attempts to quality assure 2010 and 2011 KY VIN data. Significant discrepancies were found. The team continues the analysis for MOVES/SIP use (100% complete).**



## CHAPTER 10

## Air Quality (continued)

### RESPONSIBLE UNIT

Division of Planning  
Multimodal Programs Branch  
Air Quality Team

### PROPOSED ACTIVITIES FOR 2011-2012 (continued)

- Work with KYTC IT to develop Kentucky vehicle registration age/type distribution for use with MOVES. 2010 and 2011 VIN data is in, and once it is quality assured, it will be used to update the Age Distribution Type and perhaps the Source-Type for the County Data Manager files in MOVES. (100% complete).
- Review, comment, and participate during the preparation of mobile budgets for the development of the attainment demonstration and maintenance SIPs for the 8-hour ozone and PM2.5 standards designations, SIP amendments, and budget adjustments. Currently involved in the Clarksville/Christian Co. MOBILE to MOVES Model update. EPA has delayed the new standards for Ozone, which has delayed the need to prepare budgets for new non-attainment areas throughout the state. EPA is in the process of vacating the 1997 standard and implementing the 2008 Ozone standard until a newer one is available. (100% complete).
- Provide support to the Office of Local Government for CMAQ related issues, as needed. On hold indefinitely due to budgetary constraints (No activity).
- Assist District Offices with the preparation of CMAQ applications including emission calculations and documentation. On hold indefinitely due to budgetary constraints (No activity).
- Maintain a working knowledge of emerging issues and best practices, such as diesel emissions reduction strategies and greenhouse gases. EPA and The White House have come out with proposed fuel standards regarding MPG that affect diesel and GHG emissions, and staff will stay current with the issues. (100% complete).
- Work with the freight team to address pertinent air quality issues including diesel retrofits on locomotives and emission reduction best practices at rail yards and ports. Staff shares information that might help with diesel retrofitting or emission reductions dealing with freight. (100% complete).
- Implement Central Kentucky Vanpool CMAQ project if approved. On hold indefinitely due to budgetary constraints (No activity).
- Develop working knowledge of MOVES, EPA's current mobile emissions model. Staff has learned how to run the MOVES\_2010a and MOVES\_2010b emission model(s). Staff continue to seek help from other MOVES colleagues, and the sporadic webinars from the EPA. Staff attended a two-day MySQL training course here within the Cabinet in April. EPA is proposes to be bringing out a MOVES\_2013 model sometime during the next FY Chapter of 20120-2013 to replace the MOVES\_2010a and MOVES\_2010b Models. New training might be needed once that is released. (100% complete).
- Manage 2011 Air Quality Media Campaign. (No Activity).
- Work with FHWA-KY to host a biennial statewide air quality conference. Worked with FHWA, DAQ, Department of Education, and others to conduct on the 2012 AQ conference. It was a great success and some of the extra material will be used in later conferences/meetings. (100% complete).

**CHAPTER 10**

Air Quality Conformity Analysis (continued)

**RESPONSIBLE UNIT**

Division of Planning  
Multimodal Programs Branch  
Air Quality Team

**PRODUCTS**

- Ozone and PM 2.5 Regional Conformity Analysis for required all non-attainment 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 needed. **100% complete**

**DISTRIBUTION OF ESTIMATED COST FOR 2011-2012**

	<b>2011-2012</b>	<b>Expended</b>	<b>Percent Expended</b>
<b>PERSONNEL</b>	<b>131,800</b>	<b>\$83,616</b>	<b>63%</b>
<b>OTHER</b>	<b>5,000</b>	<b>\$546</b>	<b>11%</b>
<b>TOTAL</b>	<b>136,800</b>	<b>\$84,162</b>	<b>62%</b>

**ESTIMATED OUTSOURCING EXPENSES AND PURCHASES**

**Outsourcing**

- \$20,000 Greenhouse Gas/Climate Change and Land Use training – **No Activity**
- \$30,000 Travel Time Reliability and Incidents research – **Partial payment in progress \$17,130 expended 57% of budgeted**

**Other**

- \$5,000 Other Operational Cost – **\$546 expended 11% of budgeted**  
For items such as travel, mileage, equipment and other cost directly associated to the completion of this work chapter

## CHAPTER 11

## 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 of TIGER Grant, KSRA, and other federal or state contracts as well as serve as staff support for the Water Transportation Advisory Board.

### PROPOSED ACTIVITIES FOR 2011-2012

#### Public Riverports

- Develop Kentucky's guidelines for public riverport applications to submit to the Secretary's Office for approval. Review and approve any public riverport applications received for grants. **One inquiry was made about creating a public Riverport, but no public Riverport applications or grant applications have been received to date. (100% Complete)**
- Provide staff support for the Water Transportation Advisory Board. **KYTC attended and provided staff support for July 29, 2011, September 15, 2011, and February 7, 2012 Advisory Board meetings. Assisted with creation of recommendation list and facilitated online survey. (100% Complete)**
- Plan and host Riverport Meeting as needed. **The Public Riverports determined with the meetings of the Water Transportation Advisory Board, a separate Riverport Meeting was unnecessary (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. **KYTC staff attended the Waterways Subcommittee meeting and the KBT Waterways Celebration. KYTC serves as the staff support for the Kentucky Association of Riverports. KYTC staff also met with Economic Development and Corp of Engineers on KTC Waterways research. (100% Complete)**
- Actively participate as a member on the AASHTO Standing Committee on Water Transportation (SCOWT). **Travel restrictions prevented attendance at the SCOWT annual meeting in Detroit, Michigan. (0% Complete)**
- Conduct annual on-site visits of active public riverports in the state. **Site visits have been conducted of the active Riverports of Eddyville Riverport and Industrial Development Authority, Greenup Riverport, Paducah-McCracken County Riverport Authority, Jefferson Riverport International, Hickman-Fulton County Riverport Authority, Henderson County Riverport Authority and Owensboro Riverport Authority. (100% Complete)**

#### Railroads

- Administer KYTC's TIGER Grant Project with RJ Corman Railroad. **KYTC staff continues to administer the grant including weekly status meetings, approving invoices, construction inspection, and consultant oversight. (100% Complete)**

## CHAPTER 11

Multimodal Freight Transportation (continued)

### RESPONSIBLE UNIT

Division of Planning  
Multimodal Programs Branch

### PROPOSED ACTIVITIES FOR 2011-2012 (continued)

#### Railroads (continued)

- Administer Kentucky Shortline Railroad Assistance program including advertising fund availability, receiving and disseminating applications, contact administration and project inspection. KYTC staff finalized contracts for all KSRA awards, held kick-off meetings, conducted pre-inspection site visits, conducted construction inspection, and post-construction inspection. Three of the awarded projects have been completed (100% Complete).
- Assist with development and maintaining the statewide railroad GIS mapping and data set using aerial photographs to be used by KYTC for roadway planning and project development. Worked with all active railroads within the Commonwealth to obtain GIS layers of all railroad track owned within Kentucky. Data was compiled by Transportation Systems branch. Working on final verification from railroads (100% Complete).
- Update the 2002 Kentucky Statewide Rail Plan to meet current requirements (From the Passenger Rail Investment and Improvement Act (PRIIA) of 2008). Due to budgetary constraints, the complete update of the Statewide Rail Plan was postponed but the contact information was updated. (100% Complete).
- Participate in various rail studies and research with KYTC involvement. Division of Planning staff provided input into an ongoing study with KTC and the Division of Right of Way and Utilities (100% Complete)
- Collect railroad annual reports and rail accident/incident reports as directed in 603 KAR 7:090. KYTC staff sent letters to all operating railroads within Kentucky requesting annual reports. Rail accident/incident reports are submitted to KYTC by the railroads on a monthly basis. Rail accident/incident reports were distributed to the Division of Right of Way and Utilities (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 (ASLRRA), and Kentucky Operation Lifesaver. Due to budgetary constraints, KYTC staff was unable to attend the annual SCORT, AREMA, and ASLRRA meetings; however KYTC staff has participated in conference calls and webinars whenever available. KYTC staff is actively involved with Kentucky Operation Lifesaver meetings and serves on its Board of Directors. (100% Complete)
- Monitor, track, and distribute information about railroad line abandonments in Kentucky. Two rail abandonment notices were received and distributed to relevant agencies for comment and action. (100% Complete)
- Review need to update the 1999 passenger rail feasibility study. Due to budgetary constraints, it was determined that an update of the passenger rail feasibility study was unnecessary (100% Complete)
- Respond to public inquiries on passenger and freight rail issues. KYTC staff has responded to numerous letters and emails for information about rail issues. (100% Complete)

## CHAPTER 11

## Multimodal Freight Transportation (continued)

### RESPONSIBLE UNIT

Division of Planning  
Multimodal Programs Branch

### PROPOSED ACTIVITIES FOR 2011-2012 (continued)

#### Freight

- Provide technical assistance and disseminate information to MPOs, ADDs, and project teams regarding freight movement, planning, and safety. KYTC regularly reviews industry publications and news articles and forwards relevant information to the MPOs and ADDs. KYTC staff also serves on the Freight Advisory Panels of the Louisville, Lexington, and Northern KY MPOs. KYTC staff attends and presents at Statewide Transportation Planning meetings. Made Freight in KY presentation to FBI Infragard group. Attended OKI Freight Plan meeting. Met with Division of Air Quality on Freight program. (100% Complete)
- Evaluate, receive and update Freight data from MPOs, ADDs, and HDOs as needed. Area Development Districts provided updates to Major Freight Users Inventory, List of Railyards, Multimodal Contact Information, and Kentucky Freight Focus Network (100% Complete).
- Participate in regional freight planning efforts. KYTC staff serves on the Freight Advisory Panels of the Louisville, Lexington, and Northern KY MPOs and as part of the Delta Regional Authority (DRA), Institute for Trade and Transportation Studies (ITTS), and the Mid America Freight Coalition (MAFC). (100% Complete)
- Continue involvement with Delta Regional Authority (DRA), Mid-America Freight Coalition (MAFC), Institute for Trade and Transportation Studies (ITTS), and National Cooperative Freight Research Program (NCFRP). KYTC staff regularly participates in conference calls for these coalitions. (100% Complete)
- Visit intermodal sites and communicate with rail, water, and road modes to identify freight-related needs and concerns involving highways. KYTC staff conducted site visit trips throughout the state that included seven railroads, one recreational railroad, four Amtrak stations, two lock and dam operations, seven active Riverports, seven state funded ferry operations, two federally funded ferry operations, and one privately funded ferry operation (100% Complete)
- Continue developing relationships with Economic Development to identify and promote intermodal freight needs. KYTC staff has held several meetings with Economic development staff to discuss partnering on Corp of Engineers study and works with Ed staff on the Water Transportation Advisory Board. (100% Complete)
- Research, prepare, and populate information for FHWA Intermodal Connector Assessment Tool (ICAT). KYTC staff has populated the FHWA Intermodal Connector Assessment Tool. (100% Complete)

#### Ferryboats

- Coordinate the Kentucky Ferryboat program. KYTC staff provides ongoing oversight on the operation of 7 state funded ferries and is responsible for all of the contracting and invoicing of these ferries. (100% Complete)

## CHAPTER 11

Multimodal Freight Transportation (continued)

### RESPONSIBLE UNIT

Division of Planning  
Multimodal Programs Branch

### PROPOSED ACTIVITIES FOR 2011-2012 (continued)

#### Ferryboats (continued)

- Share information concerning Ferryboat Discretionary Fund (FBD) Grant program. Review and prioritize applications received for submitting to the State Highway Engineer's Office and the Secretary's Office for approval. Administer FBD funds. FHWA will be provided all applications for review and approval. KYTC staff managed two ARRA FBD awards, one of which was completed. KYTC was also awarded two new FBD awards and one joint award with Ohio. KYTC staff completed one of the new FBD awards and has met with Ohio DOT to begin managing the joint award. (100% Complete)
- Plan and host the Ferryboat Meeting as needed. The ferryboat operators determined that there was no need for a Ferryboat Annual Meeting. (100% Complete)
- Conduct annual on-site visits of Kentucky Ferryboat Operations. KYTC staff conducted on-site visits of the state funded Augusta Ferry, Dorena-Hickman Ferry, Reeds Ferry, Rochester Ferry, Turkey Neck Bend Ferry, Valley View Ferry, and Cave in Rock Ferry. The privately funded Anderson Ferry was also visited as were the two federally funded ferry operations green River Ferry and Houchins Ferry. (100% Complete)

### PRODUCTS

- Revised riverport application guidelines. One inquiry was made about creating a public Riverport, but no public Riverport applications or grant applications have been received to date. (100% Complete)
- Updated Statewide Rail Plan. Due to budgetary constraints, the complete update of the Statewide Rail Plan was postponed but the contact information was updated. (100% Complete)
- Updating railroad GIS database and maps for KYTC purposes Worked with all active railroads within the Commonwealth to obtain GIS layers of all railroad track owned within Kentucky. Data was compiled by Transportation Systems branch. Needs final verification from railroads (100% Complete)
- Working ferryboat operations. KYTC staff provides ongoing oversight on the operation of 7 state funded ferries and is responsible for all of the contracting and invoicing of these ferries. (100% Complete)
- ICAT documentation KYTC staff has populated the FHWA Intermodal Connector Assessment Tool. (100% Complete)
- FBD awards administered. KYTC staff managed two ARRA FBD awards, one of which was completed. KYTC was also awarded two new FBD awards and one joint award with Ohio. KYTC staff completed one of the new FBD awards and has met with Ohio DOT to begin managing the joint award. (100% Complete)
- Annual Waterways meeting as needed The ferryboat operators and port directors determined that there was no need for annual waterways meetings.(100% Complete)
- RJ Corman TIGER Grant administration KYTC staff continues to administer the grant including weekly status meetings, approving invoices, construction inspection, and consultant oversight. (100% Complete)

**CHAPTER 11**

Multimodal Freight Transportation (continued)

**RESPONSIBLE UNIT**Division of Planning  
Multimodal Programs Branch**PRODUCTS (continued)**

- Kentucky Shortline Railroad Assistance administration. KYTC staff finalized contracts for all KSRA awards, held kick-off meetings, conducted pre-inspection site visits, conducted construction inspection, and post-construction inspection. Three of the awarded projects have been completed (100% Complete).
- Water Transportation Advisory Board staff support. KYTC attended and provided staff support for July 29, 2011, September 15, 2011, and February 7, 2012 Advisory Board meetings. Assisted with creation of recommendation list and facilitated online survey. (100% Complete)

**DISTRIBUTION OF ESTIMATED COST FOR 2011-2012**

	2011-2012	Expended	Percent Expended
<b>PERSONNEL</b>	191,300	\$102,374	54%
<b>OTHER</b>	70,000	\$2,139	3%
<b>TOTAL</b>	261,300	\$104,513	40%

**ESTIMATED OUTSOURCING EXPENSES AND PURCHASES****Outsourcing**

- \$100,000 Rail Plan **No Activity**

**Other**

- \$5,000 Operation Lifesaver **expended \$5,000 100% of budgeted**
- \$5,000 Kentucky Association of Riverports Dues **No Activity**
- \$10,000 Other Operational Cost **\$2,139 expended 21% of budgeted**

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

**Items paid from other funding sources**

- Tombigbee Waterway Dues are paid through Regional Planning (EA51 General Fund). **\$50,000 expended 100% of budgeted**
- \$25,000 Mid-America Freight Coalition, an AASHTO subcommittee paid as a pooled fund study transfer of L550 funds **\$25,000 expended 100% of budgeted**
- \$25,000 Institute for Trade and Transportation Studies, a SAASHTO subcommittee paid as a pooled fund study transfer of L550 funds **\$25,000 expended 100% of budgeted**



## CHAPTER 12

## Congestion and Mobility Analysis

### RESPONSIBLE UNIT

Division of Planning  
Multimodal Programs Branch

### PURPOSE AND SCOPE

Congestion mitigation and smooth traffic flow is important for continuing safe, efficient operation of Kentucky's roadways. During the normal transportation planning processes, traffic congestion is routinely considered when selecting and prioritizing long range planning projects. Therefore, the Congestion and Mobility Management Team will work to improve the planning methods, strategies, and policies used by KYTC and local planning organizations that lead to a more efficiently planned multimodal transportation system for Kentucky.

### PROPOSED ACTIVITIES FOR 2011-2012

#### Measure Mobility & Identify Congestion

- Continue efforts to acquire 2010 speed data for freeways and arterials statewide.  
**Data Acquired 100% complete**
- Analyze the 2010 speed data and develop travel time index for all segments.  
**100% complete data is geo located and compared to current network.**
- Investigate using the 2010 speed data file to develop reliability for all segments.**10% complete**
- Using the 2010 speed data, continue research efforts to develop mobility performance measures compatible with the speed data and HPMS traffic volumes. **10% complete**
- Using 2010 speed data, develop GIS-based maps to aid in the identification of mobility and congestion related issues. **100% complete**
- Using the 2010 speed data and the "Kentucky Backbone Network", create the first Annual Congestion Report for calendar year 2010 showing current conditions and trends (changes) over time. **100% complete**
- Assist TMAs to develop and implement performance measures into their congestion management process. **100% complete TMAs invited to be part of Research team. All 4 represented.**
- Fund participation in the Texas Transportation Institute's (TTI) pooled-funded Urban Mobility Study. There are several elements of research that affects measuring mobility. **100% complete**
- Purchase and analyze 2011 speed data if warranted. **50% Complete. Data purchased but analysis is not complete.**
- Refine the mobility component of the Adequacy Rating System using new performance measures. Assist planners and designers in using mobility measures in studies and projects.  
**No Activity.**

#### Provide Information and Educate about Congestion Management Measures

- Update and maintain the web-based Kentucky Congestion Mitigation Toolbox.  
**100% Complete Worked to keep format with KYTC/COT changes to website**
- Continue the update of the Planning Units (planning & zoning) GIS database. **100% complete**
- Maintain a park and ride GIS database of existing assets. **100% complete**



**CHAPTER 12**

Congestion, Mobility, and Access Management (continued)

**RESPONSIBLE UNIT**

Division of Planning  
Multimodal Programs Branch

**PROPOSED ACTIVITIES FOR 2011-2012 (continued)**

**Congestion Initiatives**

- Follow up on Ramp Metering as a planning tool for congestion reduction **100% complete**
- Implement a Statewide Vanpool Program with assistance as directed by KYTC management and Finance Cabinet. **No Activity**
- Ensure the rollout of the Road Diet Guidelines being developed by KTC. **100% complete**

**PRODUCTS**

- Maps and database of mobility measures on freeways and arterials **100% complete**
- Updated Congestion Toolbox website **100% complete**
- Updated Park and Ride GIS Database **100% complete**
- Updated Planning Unit Database **100% complete**
- Creation of a new Statewide Vanpool Program, if approved by the Secretary **No Activity**
- Research findings on impacts of connectivity and ramp metering **100% complete**

**DISTRIBUTION OF ESTIMATED COST FOR 2011-2012**

	<b>2011-2012</b>	<b>Expended</b>	<b>Percent Expended</b>
<b>PERSONNEL</b>	<b>\$129,900</b>	<b>\$135,994</b>	<b>105%</b>
<b>OTHER</b>	<b>\$15,000</b>	<b>\$11</b>	<b>0%</b>
<b>TOTAL</b>	<b>\$144,900</b>	<b>\$136,005</b>	<b>94%</b>

**ESTIMATED OUTSOURCING EXPENSES AND PURCHASES**

**Outsourcing**

**Other**

- \$10,000 for 2011 for TTI Urban Mobility Study (pooled-fund study) **100% complete**
- \$50,000 for analysis of speed (mobility) data for calendar year 2010 **\$33,602 expended 67% of budgeted**
- \$100,000 for purchase of speed (mobility) data for calendar year 2011. **\$73,191 expended 73% of budgeted**
- \$5,000 Other Operational Cost **\$11 expended less than 1% budgeted**  
For items such as travel, mileage, equipment and other cost directly associated to the completion of this work chapter.

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

#### PROPOSED ACTIVITIES FOR 2011-2012

- Prepare traffic estimates for planning studies, design projects, road user costs, maintenance, and other purposes, as needed.  
Received 43 traffic forecast and 1 model requests while completing 19 reports during the 4<sup>th</sup> quarter. Overall 92 traffic forecast requests were received and 59 completed. Eight forecasts were completed using consultant forces. Currently, with 3 forecasts and 7 modeling projects open. (100% Complete)
- Administer statewide traffic forecasting contracts and provide quality review for traffic projections made by the MPOs and planning consultants.  
Initiated 1 new forecasting contract during the final quarter. Overall, 8 forecast and 3 modeling contracts were initiated and 11 contracts completed. Continuing to manage seven contracts to update the Statewide, the Lexington Area MPO, and a Boyle County Traffic Demand Models plus two forecast contracts. Work will continue into FY 2013. (50% Complete)
- Maintain databases that track traffic forecasts and traffic forecast parameters. Make databases available to other users and offices. Maintain the traffic forecasting web page as a tool for other users.  
Database maintained and a copy made available to other users within the Division of Planning. Reviewed the forecasting web page and updated information (100%)
- Maintain and update internal traffic forecasting tools (e.g. ESAL spreadsheets; turning movement spreadsheets).  
Awaiting WIM data to initiate global growth factors
- Provide future year forecasting of K-factors/D-factors for the Highway Performance Monitoring System (HPMS) and compare result with TRADAS outputs.  
ATR data received in May and results forwarded to HPMS on June 12, 2012. (100%)
- Update ESAL tables utilizing available 2009 and 2010 vehicle classification data  
Awaiting WIM data to initiate global growth factors
- Update ESAL Forecasting for Superpave computer program  
Awaiting WIM data to initiate global growth factors
- Update the annual Traffic Forecast Report (TFR) utilizing KTC.  
Awaiting WIM data to initiate global growth factors

## CHAPTER 13

### Traffic Data Forecasting Statewide Traffic Model

#### RESPONSIBLE UNIT

Division of Planning  
Multimodal Programs Branch  
Forecasting and Modeling Team

#### PROPOSED ACTIVITIES FOR 2011-2012 (continued)

- 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.  
Forecaster User's Group sessions were held in July, September, January, February, March, April and on June 26th.(100%)
- Host/Facilitate the Traffic Model Users Group, which is a peer group for traffic forecasters and traffic modelers composed of members from government, academia, and the private sector.  
No Model Users Group meetings were held during the year. (100%)
- Participate in Caliper workshops held at adjacent States, foster a peer exchange with such agencies regarding statewide model and regional models.  
One person attended West Virginia's DOT/FHWA/MPO Transportation Planning Conference held in Daniels, WV on September 20-22, 2011 and fostered associations with WVDOT modelers and planners. Three forecasters attended a Caliper workshop in Indianapolis from May 14-18, 2012. (100%)
- Update the KySTM model to 2010 conditions including the incorporation of socio-economic data from existing county-wide models. Forecast future KySTM to 2040. Document the process.  
The update of the KySTM model began March 2011. A model was received on April 20, 2012 as a Beta. Several 'fixes' have been performed to enhance the model's function. Run time for the model has actually improved even with the greater detail incorporated into the model. Awaiting the written documentation. Work will continue into FY 2013. (90% Complete).
- Conduct studies to better calibrate and validate models. Extend peer review of large MPO models and coordinate model updates as needed for small MPO models.  
KYTC meet with the Lexington Area MPO and held a workshop, and follow-up correspondence to develop a strategy using traveltime data for congestion mitigation. Attended a Texas Transportation Institute meeting in New York to discuss travel time performance measures and how to estimate free flow speed. (100% Complete)
- Identify areas needing an area-wide model. Develop small area and county-wide models using a standardized interface.  
As a result of the peer review which included the input of the MPO, an update of the Lexington MPO model was unanimously recommended. Notices to Proceed for the Lexington Area MPO model were given to the three consultants in April. Innovative origin/destination data acquisition was initiated in April as well. Still awaiting the data. Work will continue into FY 2013. (30% Complete)

**CHAPTER 13**

Traffic Data Forecasting (continued)  
Statewide Traffic Model

**RESPONSIBLE UNIT**

Division of Planning  
Multimodal Programs Branch  
Forecasting and Modeling Team

**PRODUCTS**

- Corridor or other traffic forecasts  
50 Forecast reports were completed during the year. 100% Complete
- District Office coordination regarding models and forecasts  
The Multi-Modal branch reviewed consultant work in Districts Two, Ten, & Seven.
- Travel Time and Road User Cost Studies  
Travel Time data with modeling assisted projects in Simpson, I-75 connector in Jessamine, Glasgow Bypass extension in Barren, KY 30 Corridor in Jackson, Winchester Bypass extension in Clark, and US25 in Whitley Counties. 100% Complet
- Traffic forecast factors for HPMS  
100 % Completed
- Updated tools for consultants and District (e.g. ESAL Calculator; look-up tables)  
Waiting for validated WIM data. 0% Complete

**DISTRIBUTION OF ESTIMATED COST FOR 2011-2012**

	2011-2012	Expended	Percent Expended
<b>PERSONNEL</b>	\$455,700	\$424,582	93%
<b>OTHER</b>	\$10,000	\$2,291	23%
<b>TOTAL</b>	\$465,700	\$426,873	92%

**ESTIMATED OUTSOURCING EXPENSES AND PURCHASES**

**Outsourcing**

- \$50,000 for annual ESAL table and program updates by KTC using WIM  
Task deferred. Awaiting KTC WIM site study
- \$25,000 for annual Traffic Forecasting Report updates by KTC  
Task deferred. Awaiting KTC WIM site study
- \$200,000 for County-Wide Traffic models (outsource)  
Task is in progress. Boyle County - 30%, LAMPO – 30%, Statewide Model – 90%--\$26,439 expended—NOTE: \$199,919 expended for Statewide Model

**Other**

- \$5,000 Other Operational Cost  
No equipment purchased.
- \$5,000 TransCAD & TransModeler Workshops  
One attended MPO workshop in WVa, and three attended a Caliper Training Workshop in Indiana.

## CHAPTER 14

## Pedestrian and Bicycle Program

### RESPONSIBLE UNIT

Division of Planning  
Modal Programs Branch

### PURPOSE AND SCOPE

The team will coordinate the state's Bicycle and Pedestrian Program, develop a statewide bikeway system, and work within Transportation and with other Cabinets. They will work to expand non-motorized 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, and coordinating studies. The responsibility of the Kentucky Pedestrian and Bicycle Coordinator is to prepare, assist, and promote bicycle and safety programs throughout the state and to recommend opportunities for bicycle-pedestrian facilities for proposed highway improvements. The Bicycle and Pedestrian Coordinator will also act as secretariat for the Kentucky Bicycle and Bikeway Commission to provide assistance to the general public, municipal governments, and other state agencies in the planning and development of bicycle and pedestrian facilities and programs.

The Bicycle and Pedestrian team will coordinate with the Cabinet for Tourism, Arts and Heritage, the Government of Local Development as well as the Cabinet for Health and Family Services to promote pedestrian and bicycle travel as well as recreational trail and Adventure Kentucky programs.

The Office of Local Programs coordinates several programs that support and encourage bicycling and walking as viable forms of transportation. The team will coordinate with them, especially in regards to Safe Routes to School, Scenic Byways, Transportation Enhancements, Recreational Trails, and CMAQ programs.

*\*\*KYTC was without a designated Statewide Pedestrian and Bicycle Coordinator for the entire SPR Work Program year. Significant effort went into interviewing and hiring a new coordinator. The BP activities completed were added to the Branch Manager and existing staff's work load. Limited program work was completed due to this vacancy. (KYTC has hired a new Statewide Pedestrian and Bicycle Coordinator, Troy Hearn.)*

### PROPOSED ACTIVITIES FOR 2011-2012

#### Planning

- Assist local governments in the development of local bicycle and pedestrian network facilities and plan using bikeability and walkability audits **Responded to emails from local government and citizens 100% Complete**
- Participate in the KYTC Strategic Safety Plan implementation. **Participated in analysis and coordination of research regarding KY and Louisville designated as a Safety Focus Area for Pedestrian Fatalities (9/23/2011). Attended Pedestrian Fatality Focus Plan 3 day training. 100% Complete**

## CHAPTER 14

## Pedestrian and Bicycle Program (continued)

### RESPONSIBLE UNIT

Division of Planning  
Modal Programs Branch

### PROPOSED ACTIVITIES FOR 2011-2012 (continued)

- Revise and update the statewide bike tour system and associated maps. **Drove D-7 sections of the USBR 76 collecting data to quantitatively select better cycling routes for AASHTO/ACA update of USBR in KY. Calculated Bike LOS for a section of the TransAmerican Trail. Researched Bike LOS and especially rural rating systems. 10% Complete-on going activity**
- Review and update the Kentucky Bicycle and Pedestrian Plan. Review and revise the Kentucky Pedestrian and Bicycle Travel Policy, as needed. **No Activity**

#### Engineering and Projects

- Answer requests concerning planning and design guidelines regarding pedestrian and bicycle facilities and provide review of bicycle and pedestrian projects and facilities with KYTC's HDO and CO Divisions, ADDs, MPOs, and local government.- **Responded to 35 requests for information. 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. **Worked with maintenance and learned that the Secretary's Office now requires public involvement when changing striping plan of resurfacing projects. Ongoing discussion on how to identify routes earlier. 100% Complete**
- Review Share the Road sign requests for applicability and proper system placement. **100% Complete**
- Develop in coordination with HDO, Maintenance, Traffic Operations, Design, and Planning Share the Road sign procedures for review, placement, and maintenance. **Confirmed with Design and Traffic Operations Divisions the current procedure for Share the Road signs. 100% Complete**
- Provide and assist with implementation of the Lane Reconfiguration Guide to KYTC district Maintenance and Traffic staff. Update as need with their input. **Change in Cabinet policy. 100% Complete**
- GIS applications- Develop and maintaining a GIS of bicycle and pedestrian network facilities and plans statewide. – **Developed GIS application for soliciting routing information at KBBC annual meeting. 100% Complete**
- Obtain any federal, state, local, or private funds available to the cabinet. **-No activity**

#### Education & Enforcement

- Provide technical training that includes pedestrian and bicycle design to planners, designers, local governments, and other KYTC staff statewide. **Attended Statewide Bicycle and Pedestrians meeting in conjunction with the Annual APBP conference. 100% complete**
- Promote the Complete Streets principals with KYTC staff. **No Activity**
- Provide training to HDO, ADD, MPO and local staffs on how to conduct a walkability and bikeability audits. **No Activity**
- Facilitate public education of non-motorized modes of transportation, as opportunity arises. **KY and Louisville designated as a Safety Focus Area for Pedestrian Fatalities (9/23/2011). Attended training on plan development. 100% Complete**

## CHAPTER 14

## Pedestrian and Bicycle Program (continued)

### RESPONSIBLE UNIT

Division of Planning  
Modal Programs Branch

### PROPOSED ACTIVITIES FOR 2011-2012 (continued)

- Work with local law enforcement to promote education and enforcement of pedestrian and bicycle safety laws. **No Activity**
- Coordinate with the Office of Local Government. **Included OLG in meetings, conference calls and webinars as appropriate. 100% Complete**
- Citizen responses-Respond to citizens' need for information, maps, bike routes, walking trails, availability of funds for projects. **Responded to 35 requests for information. 100% Complete**
- Information Clearinghouse-Provide latest research, methods, criteria to CO Divisions, ADDs, MPOs, and local government. **Used Pedestrian/Bicycle email list serve to share 25+ emails concerning information, research and opportunities. Continuously updated the bike/ped contacts list. 100% Complete**
- Website-Maintain [www.bikewalk.ky.gov](http://www.bikewalk.ky.gov) website. **Revised bicycling funding sources document published on website. Published 2011 KBBC Annual Meeting presentations on website. Published KBBC Video Conference information and handouts. 100% Complete**

### Kentucky Bicycle and Bikeways Commission (KBBC)

- Plan quarterly KBBC meetings. **Assisted in planning for KBBC Annual meeting Oct 27-29, 2011. Posted registration on BikeWalk.ky.gov website. Coordinated video conference locations for quarterly KBBC meetings. Prepared agenda prior to meetings and distributed minutes after each meeting. Prepared agenda for July KBBC quarterly meeting and coordinated video conference locations. 100% Complete**
- Prepare agenda before each KBBC meeting and minutes after each KBBC meeting. **Assisted with preparation of agenda for KBBC annual meeting and distributed minutes of meeting thereafter. Coordinated KBBC annual meeting registrations prior the meeting and sign-in at the meeting. Worked with Systems Team to develop maps of statewide bicycle tours for review of routing at the KBBC annual meeting. 100% Complete**
- Assist KBBC on communications and technical matters **Shared and communicated in new and ongoing matters. Published 2011 KBBC Annual Meeting presentations and quarterly meeting information on website. 100% Complete**
- Assist in facilitating the Paula Nye Education Grant program. **Prepared packets of submitted Nye Applications. Developed and distributed to KBBC commissioners spreadsheets for review of Nye Grant applications. Created and maintained spreadsheet of status of Nye Grants and map showing amounts granted by counting, highlighting counties by amount granted. Prepared letter to KYTC Sec recommending KBBC Nye Grant approvals. Forwarded requests from awardees to KBBC for decision and response. Prepared 100% Complete**



**CHAPTER 14**

Pedestrian and Bicycle Program (continued)

**RESPONSIBLE UNIT**

Division of Planning  
Modal Programs Branch

**PRODUCTS**

- Local pedestrian and bicycle master plans, as needed **No Activity.**
- Updated bicycle and pedestrian brochures and promotional materials
- Updated statewide bicycle tour maps **10% Complete**
- Pedestrian and Bicycle technical training course **100% Complete**
- Walkability/Bikeability Audit training course **No Activity.**
- Quarterly KBBC meetings **KBBC Annual Meeting assistance, coordination and facilitation including publication of presentations on website and meeting minutes to Commissioners. 100% Complete**

**DISTRIBUTION OF ESTIMATED COST FOR 2011-2012**

	<b>2011-2012</b>	<b>Expended</b>	<b>Percent Expended</b>
<b>PERSONNEL</b>	<b>\$52,500</b>	<b>\$49,214</b>	<b>94%</b>
<b>OTHER</b>	<b>\$50,000</b>	<b>\$2,625</b>	<b>5%</b>
<b>TOTAL</b>	<b>\$102,500</b>	<b>\$51,839</b>	<b>51%</b>

**ESTIMATED OUTSOURCING EXPENSES AND PURCHASES**

**Other**

- \$10,000 Walkability/Bikeability training course instructor **\$375 expended 4% of budgeted**
- \$10,000 Pedestrian and bicycle training course instructor
- \$2,500 for attendance of national conference **\$979 expended 39% of budgeted**
- \$10,000 for Kentucky Bicycle and Bikeway Commission meetings.  
**\$1,595 expended 16% of budgeted**
- \$7,500 for Bicycle and Pedestrian Brochures and Bicycle Route Tour Guides **\$0 expended**
- \$10,000 for Bicycle and Pedestrian Promotional Items (bike lights, reflectors, pedometers)  
**\$0 expended**
- \$5,000 Other Operational Cost **\$51 expended 1% of budgeted**  
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 2011-2012**

- 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 2011-2012**

	<b>2011-2012</b>	<b>Expended</b>	<b>Percent Expended</b>
<b>PERSONNEL</b>	<b>\$500,000</b>	<b>\$151,680</b>	<b>30%</b>
<b>OTHER</b>			
<b>TOTAL</b>	<b>\$500,000</b>	<b>\$151,680</b>	<b>30%</b>

**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 FOLLOWING 2 PAGES OF SPREADSHEETS FOR ACCOMPLISHMENTS**

District	County	Route	BMP	EMP	Category	Cost	Description
01	004 Ballard	US 51	5.100	5.200	NHS-ET	\$ 15,000	G/R End treatments
01	004 Ballard	US 60	1.800	11.600	NHS-ET	\$ 180,000	G/R End treatments
01	018 Calloway	US 641	0.000	12.000	NHS-ET	\$ 90,000	G/R End treatments
01	042 Graves	US 45	20.000	21.000	NHS-ET	\$ 40,000	G/R End treatments
01	073 McCracken	US 45	0.000	5.000	NHS-ET	\$ 65,000	G/R End treatments
01	079 Marshall	US 641	0.000	5.000	NHS-ET	\$ 50,000	G/R End treatments
01	079 Marshall	US 68	27.000	28.000	NHS-ET	\$ 40,000	G/R End treatments
01	111 Trigg	US 68	8.000	19.000	NHS-ET	\$ 410,000	G/R End treatments
03	002 Allen	US 31E	0.000	8.607	NHS-ET	\$ 42,000	G/R End treatments
03	071 Logan	KY 178	0.000	8.206	RD Plan	\$1,100,000	Ditching, shouldering and Culvert extension
03	071 Logan	US 68	8.756	9.046	<sup>30</sup> Worst Intersections	\$315,000	Offset left turn lanes
03	114 Warren	KY 1402	0.000	5.701	LD-R	\$300,000	Extend culverts, add embankment, remove headwalls and add metal end sections
03	121 Various	Various			NHS - ET	\$162,800	Replace turndown end treatments on NHS Routes in District 3.
04	078 Marion	US 68	0.000	4.503	LD-R	\$ 354,000	Trench and widen shoulders for ELRS and CLRS
04	082 Meade	US 31W	2.524	3.389	NHS-ET	\$ 250,000	Replace Guardrail End Treatments
04	090 Nelson	US 150	2.260	7.680	RD Plan	\$ 398,000	Trench and widen shoulders for ELRS and CLRS
04	115 Washington	US 150	0.000	4.245	RD Plan	\$ 316,000	Trench and widen shoulders for ELRS and CLRS
05	056 Jefferson	KY 1703	2.380	2.380	NHS-ET	\$15,075	G/R End treatments
05	056 Jefferson	KY 1934	5.002	5.002	NHS-ET	\$ 15,225	G/R End treatments
05	056 Jefferson	US 31W	0.265	5.002	NHS-ET	\$ 97,325	G/R End treatments
07	034 Fayette	US 27	4.674	5.769	KTC	\$ 200,675	Develop, implement, control, & study ACSlite signal control
07	034 Fayette	KY 1927	6.098	6.660	LD-R	\$ 185,000	Culvert extensions, adding embankment, aluminum box culvert replacement
07	076 Madison	I-75	89.000	91.000	RD Plan		Mill and inlay with polish resistant aggregate, ditch, and delineate ramp from I-75 SB to US 25 (Exit 90A MP 0.000-0.440) and entrance ramp from US 25 to I-75 SB (MP 0.00-0.200) at the 90 Interchange.
08	074 McCreary	US 27	10.700	22.200	NHS-ET	\$ 407,000	G/R End treatments
08	100 Pulaski	KY 80	18.800	39.600	NHS-ET	\$ 213,000	G/R End treatments
08	100 Pulaski	KY 90	0.421	2.408	NHS-ET	\$ 798,000	G/R End treatments and Shouldering
09	010 Boyd	KY 5	0.000	6.800	LD-R	\$ 1,135,300	Drainage Structure Repair
09	035 Fleming	US 68	0.000	5.423	NHS-ET	\$ 487,000	G/R End treatments

09	081 Mason	KY 10	5.200	9.500	LD-R	\$ 330,000	G/R End treatments, Ditching and Shouldering and Drainage Structure Repair
09	091 Nicholas	US 68	0.000	12.132	NHS-ET	\$ 220,000	G/R End Treatments
09	101 Robertson	US 68	0.000	1.357	NHS-ET	\$ 127,000	G/R End Treatments
10	033 Estill	KY 499	6.020	7.741	LD-R	\$ 335,000	Extend culverts, signing, ditching
10	088 Morgan	KY 172	5.800	18.075	RSA	\$ 196,000	Guardrail, improve cross section, resurface with "A" aggregate
10	099 Powell	KY 11	3.598	21.000	NHS-ET	\$ 60,000	G/R End treatments
10	099 Powell	KY 15	0.261	7.186	NHS-ET	\$ 50,000	G/R End treatments
10	099 Powell	KY 9000	35.280	36.023	RD Plan	\$ 375,000	Mill/Inlay with polish resistant stone, signs
10	119 Wolfe	KY 15	9.250	18.701	NHS-ET	\$ 100,000	G/R End treatments
10	119 Wolfe	KY 9000	38.144	38.500		\$ 225,000	Mill/Inlay with SMA, flashing beacons, signs
11	007 Bell	US25E	13.000	14.200	Low Cost	\$ 23,400	Install guardrail, signs, double reds, backplates, right turn lane, striping
11	007 Bell	US25E	3.800	4.100	Low Cost	\$ 82,500	Remove median x-overs, install left turn lane
11	048 Harlan	US 119	0.000	39.182	NHS-ET	\$ 450,000	G/R End treatments
11	061 Knox	US 25E	6.900	7.100	Low Cost	\$ 65,700	Widen Goodin Branch @ int. of US 25E
11	061 Knox	KY 11	0.000	3.200	LD-R	\$ 800,000	Roadway Exc., Widen Shoulders, Enbankment, and Drainage Structures.
11	063 Laurel	KY 1006	6.500	6.550	LCS	\$ 90,000	Widen Shoulder
11	063 Laurel	KY 312	6.720	6.720	Low Cost	\$ 117,100	Add left turn lanes
11	063 Laurel	KY 472	0.442	0.601	LCS	\$ 250,000	Construct Right turn lane
12	058 Johnson	KY 172	9.950	12.370	LD-R	\$ 279,000	Ditching and Shouldering, Drainage Structures, Excavation
12	060 Knott	KY 1393	1.570	1.758	LCS	\$ 132,000	Repair Superelevation, High Friction Treatment
12	060 Knott	KY 15	0.000	9.329	NHS-ET	\$ 210,000	G/R End treatments
12	060 Knott	KY 80	0.000	20.930	NHS-ET	\$ 50,000	G/R End treatments
12	067 Letcher	KY 15	0.000	10.675	NHS-ET	\$ 110,000	G/R End treatments
12	067 Letcher	KY 7	14.157	15.295	NHS-ET	\$ 10,000	G/R End treatments
12	067 Letcher	US 119	0.000	27.917	NHS-ET	\$ 150,000	G/R End treatments
12	067 Letcher	US 23	0.000	7.139	NHS-ET	\$ 15,000	G/R End treatments
12	067 Letcher	KY 588	5.000	7.500	LD-R	\$ 335,000	Ditching and Shouldering, Drainage Structures, Excavation
Statewide	121 Various	Various			RD Plan	\$ 2,821,000	Pavement Surface Friction Treatments Phase 2
Statewide	121 Various	Various			RD Plan	\$ 525,000	Install CLRS systematically on eligible routes, phase 2
Statewide	121 Various	Various			RD Plan	\$ 2,975,000	Install CLRS systematically on eligible routes, phase 3
Statewide	121 Various				RD Plan	\$ 12,000,000	Design Engineering for statewide corridor curve signing initiative
Statewide	121 Various	Various			Roadway Departure	\$ 792,464	Statewide FE06 Supplemental funds from HSIP (see attached) for FY 12

## **CHAPTER 16**

## Value Engineering and Quality Assurance

### **RESPONSIBLE UNIT**

Division of Highway Design  
Quality Assurance Branch

### **PURPOSE AND SCOPE**

The Quality Assurance Branch (QAB) includes three programs: Value Engineering (VE), Constructability Review and Post-Construction (PC) Review. The purpose for this 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 through early intervention in preparation and planning. Below is a brief scope of each program:

The 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. A VE study may be done for any project, but federal regulations require that a VE study be conducted on highway projects over \$25 million and bridge projects over \$20 million on the National Highway System (NHS). These cost thresholds include the summation of all project development costs: design, environmental, right-of-way, utility relocation, and construction. Recommendations developed in a VE study are shared with the project development team to consider for implementation.

Constructability Review program is a work in progress. It has traditionally consisted of formal meetings prescribed by the Project Manager during the design phase as spelled out in the KYTC's Design Manual. However, due to declining levels of personnel, in the last several years constructability reviews have only been completed on a selected number of projects. Therefore, in order to address potential constructability issues on a broader range of projects, the Constructability Review Program is undergoing a revamping process. Currently it has been tasked to review all projects throughout the state while in "Design" phase for 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 items at our Annual ACEC/FHWA/KYTC Partnering Conference. The attendees are usually roadway and structure designers in the state of Kentucky gathering to share an all-encompassing transportation experience. Furthermore, this venue will facilitate discussions on items that need to be addressed. Another follow-up action will be to meet with Cabinet Officials to propose recommendations and changes to our internal processes for the betterment of the Cabinet.

Post-Construction (PC) Review program is a cyclic process. Projects that meet the criteria of over \$1 million dollars (state and federally funded) and have been open to the public for approximately one year are solicited from the District's Transportation Engineer Branch Managers (TEBM) in July and August. The target is 4 projects per district per fiscal year. There is a possibility to review more and smaller projects in the future.

## CHAPTER 16

## Value Engineering and Quality Assurance (continued)

### RESPONSIBLE UNIT

Division of Highway Design  
Quality Assurance Branch

### PURPOSE AND SCOPE (continued)

Meetings are scheduled from August to April. Consultants, Contractors, Federal Highway Administration (FHWA) and KYTC Personnel are invited and provided prior information such as documented change orders. During these meetings, it is discussed how the project(s) progressed and what were the major issues that arose.

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 Cabinet Personnel, FHWA Personnel and an American Council for Engineering Companies of KY (ACEC-KY) Organizer. Following the completion of the team meeting and data collection phases, data entry of the issues/solutions are inputted to the Lessons Learned GIS geodatabase. (The other programs are compiled into this database at different intervals throughout the year). The collection of data may also substantiate follow up meetings or contacting those who can make decisions to improve/change/revise the design process to improve overall quality and cost saving in future projects.

### PROPOSED ACTIVITIES (Annually)

- Continue to develop and update policy and procedures for all aspects of each program.  
VE Policy Manual – Updated the manual to reflect changes in process, including the implementation of VE findings.  
Draft Constructability Review Manual ~ revisions in process  
Draft Post-Construction Review Manual ~ revisions in process
- Conduct mandated Value Engineering studies to meet federal guidelines.  
8 VE Studies were performed
- Conduct Post-Construction Reviews in their prescribed cycle.  
13 Post-Construction Reviews were made  
165 Post-Construction Translations were made and Completion of this task July 2012
- Conduct Constructability Reviews to improve quality of designs and enhance efficiency of workflow during the construction phase.  
125 Constructability Reviews were made – of that, 76 reports were created and the remainder were in attending meetings (i.e., preliminary line and grade, final inspections and informal contacts/emails.) August 2012 marks the start of using the Phase I tool using ACCESS to submit CR reports.
- Collect data for the three program datasets to include in the Lessons Learned GIS geodatabase.  
VE, VECPs and PCR are current in the each dataset for ArcGIS  
Constructability dataset continues to be worked on through KTC/KYTC research (See outsourced activities below)



## CHAPTER 16

## Value Engineering and Quality Assurance (continued)

### RESPONSIBLE UNIT

Division of Highway Design  
Quality Assurance Branch

### PROPOSED ACTIVITIES (Annually) continued

- 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.  
Quality Matters Newsletter – Volume 2, Issue 1 (March 2012), Volume 2, Issue 2 (June 2012) & Volume 2, Issue 3 (September 2012) – shared with KYTC personnel, KY Consultant and Contractor Industry, TRB Quality Assurance Committee (AFH 20) and TRB Friends email distribution list  
Participate in multi-divisional process ~ Erosion Control Blankets for Cable Guardrail, creation of new Bid Item “ECB – Short Term,” experimental use for Dec. 2012 project to follow-up.  
Participate in an internal attempt to try Alternative Technical Concepts (ATC) with a project from Pavement Design Branch  
Participate in Division of Highway Design ~ Highway Design Manual Updates  
Participate in Division of Construction ~ VECP process  
Advanced Traffic Engineering Design pre-qualification and database  
Providing VE Implementation meetings after each VE study to continue work on the VE recommendations’ Punch List
- Ensure consistency and quality of design products delivered by the Cabinet.  
Work with Plan and Processing Branch in the Division of Highway Design  
Constructability Reviewers (prior to letting):
  - Attending Preliminary Line and Grade Meetings
  - Attending Joint and Final Joint Inspections
  - Correspondence via email on reviewsValue Engineering Team Participation  
Value Engineering Performance Internal Audit - Completed
- Train in-house and consultant personnel on findings for the betterment of designs and design processes.  
Lessons Learned and Follow up Findings Training (separate meetings):
  - Division of Traffic
  - Division of Planning
  - Districts – 3, 4, 7, 8, 9, 10 & 11
  - Section Supervisor Meeting (Spring)Gave PCR/LLDB presentation at the 91<sup>st</sup> TRB Annual Meeting, Washington D.C.  
Introduction Meeting to explore CM/GC as a project delivery method for KYTC  
CM/GC presentation delivered at KSPE’s Annual Convention, Bowling Green, KY  
Gave VE in Government presentation at the 2012 SAVE International Conference, Orlando, Florida  
Gave presentation at two Project Development Academy Trainings, Frankfort, KY  
Lessons Learned Web Application unveiled in June 2012 via Quality Matters (Summer)

## CHAPTER 16

Value Engineering and Quality Assurance (continued)

### RESPONSIBLE UNIT

Division of Highway Design  
Quality Assurance Branch

### PROPOSED ACTIVITIES (Annually) continued

Gave three (3) program presentations at the 2012 KYTC/ACEC/FHWA Partnering Conference – Involved in a whole Quality Assurance Tract that partnered with Division of Construction and Division Maintenance and Operation, Louisville, KY

- Oversee outsourced activities.

Working with KTC for research projects:

- Tools for Applying Constructability Concepts to Project Development (Design)
  - Phase I complete with ACCESS - input form available to database and form for CR reports in pdf format to distribute to Project Teams
  - Phase II starting now
- Evaluation of Design and Construction of Mechanically Stabilized Earth Walls
  - Web Application developed to track inventory of MSE abutment walls in KY
  - Rating system for MSE abutment walls

Nationwide survey underway

- Intersection Design Analysis Tool
- Design of Transition Areas

### PRODUCTS

- VE Studies 8
- VE Check Lists Document for Project Manager to submit items to the VE Team
- VE Punch Lists 8
- VE Project Database Build and maintain ACCESS database for current and future VE projects
- VECP Database Updated ArcGIS
- Post-Construction Review Fact Sheets  
16 posted in ProjectWise and emailed to Transportation Group including but not limited to FHWA, ACEC, KAHC & KYTC
- Post-Construction Review Database Updated with ArcGIS
- Constructability Review Database Being developed through KTC/KYTC Research Project
- *Quality Matters* Newsletter
- Three Issues completed, moving to make QM a quarterly newsletter (March, June, September and December)
- Lessons Learned Geodatabase Updated with ArcGIS
- Lessons Learned Mapping 30 maps developed for various presentations
- Annual Reports from all Programs  
FHWA VE Annual Report  
Constructability Status Report in ProjectWise – updated in March 2012 using 6YP data from Transportation Enterprise Data (TED or Oracle or Pre-Con)  
QAB Monthly Reports – final report for August 2012, management felt that three (3) years of positive reporting justified QAB's existence.  
Internal QAB Momentous Events Report (calendar year 2011) submitted to KYTC upper management.

**CHAPTER 16**

Value Engineering and Quality Assurance (continued)

**RESPONSIBLE UNIT**

Division of Highway Design  
Quality Assurance Branch

- Special Studies  
Involved in KY 811 – Before U Dig legislation  
Working on integral end bents (I.E.B) and approach slab study

**DISTRIBUTION OF ESTIMATED COST FOR 2011-2012**

	<b>2011-2012</b>	<b>Expended</b>	<b>Percent Expended</b>
<b>PERSONNEL</b>	<b>\$500,000</b>	<b>\$199,381</b>	<b>40%</b>
<b>OTHER</b>			
<b>TOTAL</b>	<b>\$500,000</b>	<b>\$199,381</b>	<b>40%</b>

**ESTIMATED OUTSOURCING EXPENSES AND PURCHASES**

- \$175,000 to outsource but not limited to the following: Other VE studies that are state funded, Value Engineering Training, SAVE International Membership fees, SAVE International Annual Conferences, AASHTO VE Committee Conferences, research or assistance related to Quality Assurance and Quality Control. (FHWA will be notified when QA/QC needs utilizing funds are initiated.) \$9,665 expended less than 6% of budgeted