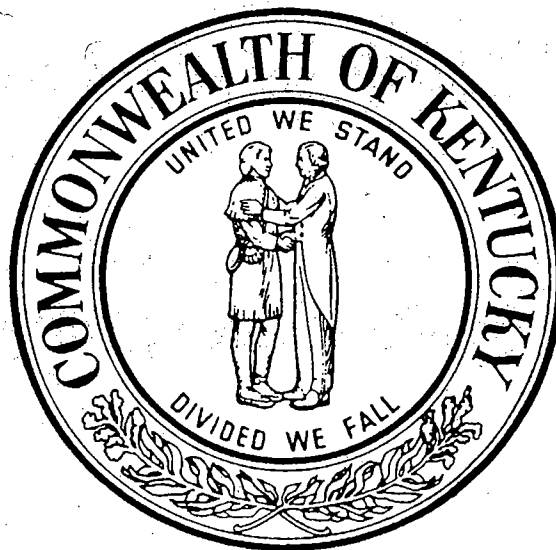


# PLANNING AND RESEARCH PROGRAM

SPR-PL-1-(39)  
JUNE 16, 2003 – JUNE 15, 2004



IN COOPERATION WITH  
U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION

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

**AND**

**UNIVERSITY OF KENTUCKY  
KENTUCKY TRANSPORTATION CENTER**

**WORK PROGRAM AND COST ESTIMATE  
FOR  
PROJECT SPR-PL-1(39)  
June 16, 2003 through June 15, 2004**

**PART I  
PLANNING  
MULTIMODAL PROGRAMS**

**PART II  
RESEARCH AND DEVELOPMENT**

**PART III B  
RESEARCH AND DEVELOPMENT**

**PART IV  
RESEARCH AND DEVELOPMENT**

**PREPARED IN COOPERATION  
WITH  
U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION**

## FOREWARD

This Planning and Research Program SPR-PL-1(39) for the period June 16, 2003 to June 15, 2004 is submitted in compliance with the provisions of Section 307 of Title 23, United States Code, and describes programs and operations for planning activities in the Kentucky Transportation Cabinet (KYTC) and the Kentucky Cooperative Transportation Research Program (KCTRP). This program modifies and updates previous such programs and is specifically intended to reflect the needs of the Kentucky Transportation Cabinet. It is fully expected that products from this program will also have national applications.

The Divisions of Planning and Multimodal Programs are charged with the responsibility for recommending, advising, and assisting the chief administrators of the KYTC in the development of the overall goals, policies, project priorities, and procedures relating to the total transportation program of the Department. Proposed activities for Fiscal Year 2004 are reported in detail by Volume and Chapter in this Work Program.

The KCTRP is concerned with the development and conduct of a comprehensive research program in cooperation with the U.S. Department of Transportation, Federal Highway Administration (FHWA).

In addition to research developed in cooperation with FHWA, the KCTRP may perform other services for the KYTC on a nonparticipating basis. The scope of these services could include activities such as research studies and special investigations of various engineering and operation activities. The Research Program and Implementation Advisory Committee (RPIAC), headed by the State Highway Engineer and coordinated through the Research Coordinator, will give direction to the research program.

KENTUCKY TRANSPORTATION CABINET  
DEPARTMENT OF HIGHWAYS  
FISCAL YEAR 2004  
PLANNING AND RESEARCH WORK PROGRAMS

<u>PROGRAM IDENTITY</u>	<u>FEDERAL</u>	<u>STATE MATCH</u>	<u>LOCAL</u>	<u>TOTAL</u>
<b>PLANNING</b>				
SPR-PR Part I Planning	\$6,147,120	\$1,536,780		\$7,683,900
PL Funded Metropolitan Area Planning	\$1,550,000	\$96,875	\$290,625	\$1,937,500
Other Planning Activities	*\$300,000	*\$900,000		\$1,200,000
<b>Subtotal – Planning</b>	<b>\$7,997,120</b>	<b>\$2,533,655</b>	<b>\$290,625</b>	<b>\$10,821,400</b>
<b>RESEARCH</b>				
SPR-PR Part II Research	\$2,000,000	\$500,000		\$2,500,000
FY 02 Carryover Funds	\$296,000	\$74,000		\$370,000
Part III B Research		\$200,000		\$200,000
TRB Dues	\$105,285			\$105,285
NCHPR Dues	\$606,300			\$606,300
Pooled Funds	\$50,000			\$50,000
<b>Subtotal – Research</b>	<b>\$3,057,585</b>	<b>\$774,000</b>		<b>\$3,831,585</b>
<b>TOTALS – PLANNING &amp; RESEARCH</b>	<b>\$11,054,705</b>	<b>\$3,307,655</b>	<b>\$290,625</b>	<b>\$14,652,985</b>

\*Six Year Highway Plan charged to projects, not FH02.

# **PLANNING AND MULTIMODAL PROGRAMS**

<u>CHAPTER</u>	<u>TITLE</u>	<u>AMOUNT</u>
1	Administrative	\$212,500
2	Personnel Training	\$147,600
3	Equipment Management	\$764,700
4	Traffic Data Collection and Processing	\$1,501,900
5	Strategic Corridor Planning	\$1,142,800
6	Intermodal Statewide Planning	\$577,400
7	Roadway Systems	\$306,500
8	Geographic Information Systems	\$350,800
9	Cartography	\$297,300
10	GPS Processing	\$157,400
11	GPS Collection	\$339,600
12	Highway Information System	\$793,500
13	Special Analyses	\$115,250
14	Air Quality Conformity Analysis Program	\$268,300
15	Metropolitan Planning Organizations	\$248,200
16	Small Urban Areas Studies	\$53,700
17	Bicycle and Pedestrian Transportation Program	\$39,800
18	Traffic Congestion Management System	\$14,050
19	ITS Coordination	\$22,500
20	Traffic Data – Forecasting	\$190,600
21	Statewide Traffic Model	\$139,500
	TOTAL	\$7,683,900

**CHAPTER 1:** Administrative

**RESPONSIBLE UNIT:** Division of Planning  
Administrative Section (Internal Customer Service Team  
and External Customer Service Team)  
Division of Multimodal Programs

**PURPOSE AND SCOPE:** The Administrative Section is comprised of the Internal Customer Service Team and External Customer Service Team. The Internal Customer Service Team recommends, advises, and assists the chief administrators of the Kentucky Transportation Cabinet in the development of the overall goals, policies, project priorities, and procedures relating to the transportation program of the Cabinet. Additionally, it is the function of Internal Customer Service Team to plan, organize, direct, motivate, and control activities to accomplish its goals in accordance with Cabinet and federal transportation policies and procedures. The External Customer Service Team focuses on customers external to the Division for cartographic products, statistical reports, and responses to various kinds of data requests including responding to the Cabinet's web page. The administration of the Work Program also includes full consideration of Title VI and the Civil Rights Act of 1964 and other social, environmental, and economic implications and is in compliance with the Cabinet's approved Affirmative Action Program.

**PROPOSED ACTIVITIES FOR 2003-2004:** Service and respond to all internal and external customer requests in a precise, timely, and customer friendly manner regarding all inquiries for assistance.

**DISTRIBUTION OF ESTIMATED COST FOR 2003-2004**

	<b>PLANNING</b>	<b>MULTIMODAL PROGRAMS</b>	<b>TOTAL</b>
<b>PERSONNEL</b>	\$135,900	\$61,600	\$197,500
<b>OTHER</b>	*\$15,000	\$0	\$15,000
<b>TOTAL</b>	\$150,900	\$61,600	\$212,500

\*Outsourced for completion of the FHWA 536 report.

**CHAPTER 2:** Personnel Training

**RESPONSIBLE UNIT:** Division of Multimodal Programs  
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 development. This is particularly essential to the Cabinet's multimodal/intermodal programs as more and better technical analyses and assistance are required.

**PROPOSED ACTIVITIES FOR 2003-2004:** 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.

**DISTRIBUTION OF ESTIMATED COST FOR 2003-2004**

	<b>PLANNING</b>	<b>DISTRICT OFFICE</b>	<b>MULTIMODAL PROGRAMS</b>	<b>TOTAL</b>
<b>PERSONNEL</b>	<b>\$80,000</b>	<b>\$21,000</b>	<b>\$35,800</b>	<b>\$136,800</b>
<b>OTHER</b>	<b>\$7,700</b>	<b>\$3,000</b>	<b>\$100</b>	<b>\$10,800</b>
<b>TOTAL</b>	<b>\$87,700</b>	<b>\$24,000</b>	<b>\$35,900</b>	<b>\$147,600</b>



**CHAPTER 3:** Equipment Management

**RESPONSIBLE UNIT:** Division of Planning  
Traffic and Equipment Management Activity Center  
Equipment Management Team

**PURPOSE AND SCOPE:** This team focuses on the identification, purchase, repair, placement, and operation of various pieces of traffic data collection equipment statewide with the Districts and within the Division.

**PROPOSED ACTIVITIES FOR 2003-2004:** Collect volume and classification data on fifty interstate index stations and volume data on forty non-index interstate stations.

Collect data at approximately 450 regularly scheduled volume and classification stations to assist District efforts.

Collect, process, and submit quarterly one week of weigh-in-motion (WIM) data at 28 permanent WIM stations.

Collect, process, and submit 48 hours of WIM data at ten portable WIM stations.

Install permanent vehicle sensors at approximately 30 high volume locations.

Maintain 77 Automatic Traffic Recorders (ATR) and install additional stations as necessary.

Investigate new technologies, sensors, data recorders, and communication devices developed for the traffic-counting industry.

Certify, repair, and maintain 600 traffic data recorders.

Inspect, repair, and maintain 400 permanent vehicle sensor locations.

Produce plans and specifications for new and replacement traffic sensor installations for submittal into construction and pavement rehabilitation contracts.

**DISTRIBUTION OF ESTIMATED COST FOR 2003-2004**

	<b>PLANNING</b>	<b>DISTRICT OFFICES</b>	<b>TOTAL</b>
<b>PERSONNEL</b>	<b>\$312,700</b>	<b>\$8,000</b>	<b>\$320,700</b>
<b>OTHER</b>	<b>\$443,000</b>	<b>\$1,000</b>	<b>\$444,000</b>
<b>TOTAL</b>	<b>\$755,700</b>	<b>\$9,000</b>	<b>\$764,700</b>

**CHAPTER 4:**

## Traffic Data Collection and Processing

**RESPONSIBLE UNIT:**

Division of Planning  
Traffic and Equipment Management Activity Center  
Traffic Data Collection and Processing Team

**PURPOSE AND SCOPE:** To assign, process, and provide access to traffic volume and vehicle classification data for highway planning, design, and various other purposes. This involves making a significant number of short duration (usually 48 hours) portable machine counts on the State Highway System and state-maintained local roads. An adequate program of continuous traffic counting stations (ATRs) provides the basis for factoring short-term counts. Vehicle classification data will be assigned, processed, and made available to Cabinet staff for analytical and forecasting purposes. Traffic count station maps for all counties and incorporated areas will be updated with the latest available traffic count and station data.

**PROPOSED ACTIVITIES FOR 2003-2004:** Approximately 6,500 regularly scheduled short-duration portable machine counts will be performed statewide. These counts are one-third of all short duration traffic count stations in the state and are now performed on a three-year cycle.

Vehicle classification data at approximately 800 stations will be collected and processed. This is the beginning of an effort to increase the number of classification stations to 25-30% of all traffic count stations.

Review, assign, process, and distribute data for approximately 400 special count stations that have been requested by outside division organizations.

Download, process, and maintain data from 77 permanent ATR stations. Review operation with Equipment Management Team for proper operation, locations, and coverage for possible new ATR station installations.

Maintain, update, and make available data from more than 18,000 traffic count stations.

Update axle, monthly factors used in adjusting short counts, such as weekly, monthly, and axle correction factors from data collected at ATR and vehicle classification stations.

Update TVS to include any new stations or roadway alignment changes. Correct beginning and ending milepoints to better represent traffic generators.

Detect and adjust past bad volume counts while combining and creating additional stations where necessary.

Use GIS application software to automate the generation of station and count maps and to check the accuracy of milepoints and latitude longitude positions collected by field personnel when performing the count.

**CHAPTER 4:**

Traffic Data Collection and Processing

**RESPONSIBLE UNIT:**

Division of Planning  
 Traffic and Equipment Management Activity Center  
 Traffic Data Collection and Processing Team

**PROPOSED ACTIVITIES FOR 2003-2004 (continued):**

Explore alternative methods for collecting short duration (48 hour) machine counts on local roads as needed to acquire county level VMT estimates.

Update data summaries developed under the research study entitled "Estimation of Equivalent Axleloads,"

Implement recommendations from the Kentucky Transportation Center's "Analysis of Vehicle Classification Data" research study.

Begin the process of converting the existing vehicle classification file from a mainframe to a PC environment

**DISTRIBUTION OF ESTIMATED COST FOR 2003-2004**

	<b>PLANNING</b>	<b>DISTRICT OFFICES</b>	<b>TOTAL</b>
<b>PERSONNEL</b>	<b>\$284,900</b>	<b>\$856,700</b>	<b>\$1,141,600</b>
<b>OTHER</b>	<b>*\$325,000</b>	<b>\$35,300</b>	<b>\$360,300</b>
<b>TOTAL</b>	<b>\$609,900</b>	<b>\$892,000</b>	<b>\$1,501,900</b>

\*Includes \$300,000 outsourced for data collection.

**CHAPTER 5:**

Strategic Corridor Planning

**RESPONSIBLE UNIT:**

Division of Planning  
 Strategic Planning Activity Center  
 Strategic Corridor Planning Team

**PURPOSE AND SCOPE:** To perform the necessary level of planning to develop a conceptual purpose and need statement, identify major environmental issues including environmental justice, initiate consultation with local officials, initiate agency coordination, involve the public early and often for projects listed in the Six Year Highway Plan and Statewide Transportation Plan (Long Range Plan), identify and evaluate alternatives, generate project cost estimates, and oversee outsourced activities. Also included are brief technical project studies, interchange justification studies, and/or other special studies. Also evaluate and research techniques to better inform and involve the public about the project development process.

**PROPOSED ACTIVITIES FOR 2003-2004:** Based on scheduled design starts, projects will be selected from the Six-Year Highway Plan (first priority) and additional projects will be selected from the Long Range Highway Element of the Statewide Transportation Plan (second priority) for analysis to include: develop a conceptual purpose and need statement; establish environmental footprint and identify major environmental issues for each project; coordinate with various agencies and organizations to solicit input and to identify support for and/or opposition to the project; initiate consultation with local officials and other stakeholders, including potential affected minority and low-income populations, as appropriate; participate in a public involvement process to solicit input and identify support and opposition; define project concepts and alternatives and select preferred concepts and/or alternatives, as appropriate; and develop cost estimates for project concepts and alternatives, as appropriate.

**DISTRIBUTION OF ESTIMATED COST FOR 2003-2004**

	<b>PLANNING</b>	<b>DISTRICT OFFICES</b>	<b>TOTAL</b>
<b>PERSONNEL</b>	<b>\$343,600</b>	<b>\$280,700</b>	<b>\$624,300</b>
<b>OTHER</b>	<b>\$512,000</b>	<b>\$6,500</b>	<b>\$518,500</b>
<b>TOTAL</b>	<b>\$855,600</b>	<b>\$287,200</b>	<b>\$1,142,800</b>

\*Includes \$500,000 for intermediate planning activities. An additional \$2,400,000 (non SPR funds) is estimated for resources outside the Kentucky Transportation Cabinet.

**CHAPTER 6:** Intermodal Statewide Planning

**RESPONSIBLE UNIT:** Division of Planning  
Strategic Planning Activity Center  
Intermodal Statewide Planning Team

**PURPOSE AND SCOPE:** To conduct a comprehensive statewide transportation planning process with the Area Development Districts (ADDs) and the Highway District Offices (HDOs). To periodically update a fiscally-balanced, multimodal Statewide Transportation Plan (STP) and provide input to the Six-Year Highway Plan.

This process includes intermodal and statewide transportation planning programs, the Highway Safety Program through the ADDs, support of the Intermodal Advisory Panel (IAP), and support of the Rural Transportation Planning program through the fifteen ADDs. Tasks include identifying and analyzing intermodal facilities, access and systems; identifying needs based on data and local input; recommending strategies to enhance intermodal transportation and the Statewide Transportation Planning process; oversight of waterway transportation; recommending projects for the Six Year Highway Plan and STP; and assisting with other planning activities as needed, such as the Highway Safety Program through the ADDs.

**PROPOSED ACTIVITIES FOR 2003-2004:** Work closely with the ADDs/HDOs to enhance the statewide transportation planning process, including public involvement/coordination with the MPOs. Provide the ADDs with transportation systems information and guidance. Provide direction for special projects. Analyze, identify, and prioritize transportation projects. Provide support for the IAP and ADDs. Obtain input for the intermodal and statewide transportation planning process.

Conduct special studies as needed to analyze riverport issues, freight transportation, and highway access to intermodal facilities. Utilize data to identify needs. Respond to inquiries about proposed transportation projects. Review surplus property/right-of-way proposals and school site locations as related to long-range transportation needs. Make information on intermodal and statewide transportation available for public use.

**DISTRIBUTION OF ESTIMATED COST FOR 2003-2004**

	<b>PLANNING</b>	<b>DISTRICT OFFICES</b>	<b>TOTAL</b>
<b>PERSONNEL</b>	<b>\$253,200</b>	<b>\$260,700</b>	<b>\$513,900</b>
<b>OTHER</b>	<b>*\$55,500</b>	<b>\$8,000</b>	<b>\$63,500</b>
<b>TOTAL</b>	<b>\$308,700</b>	<b>\$268,700</b>	<b>\$577,400</b>

\* This amount includes \$50,000 in outsourced assistance for support of intermodal transportation planning activities, directory, database, and web page. This chapter also includes \$698,600 (not financed with SPR funds) for the annual program with the Area Development Districts.

**CHAPTER 7:**

## Roadway Systems

**RESPONSIBLE UNIT:**

Division of Planning  
Transportation Systems Activity Center  
Roadway Systems Team

**PURPOSE AND SCOPE:** To maintain the official Department of Highways records for the State Primary Road System, National Highway System, Functional Classification System, Designated National Truck Network (NN), Coal Haul Highway System, Forest Highway System, and the Kentucky Scenic Highways and Byways System. To conduct the necessary research and evaluations relative to proposed system changes, prepare official documentation for approval and signature, and notify all necessary personnel of the approved changes. For the Coal Haul System gather and compile source data on the transportation of coal by truck in the Commonwealth of Kentucky.

**PROPOSED ACTIVITIES FOR 2003-2004:** Continue to examine systems change process to respond in a more timely fashion. Update, maintain, and publish for distribution to interested parties and the trucking industry an official listing of truck route descriptions, and a statewide map depicting the NN, send out forms semi-annually to coal companies and truck transporters for reporting the truck transportation of coal, update database and maps from information on returned semi-annual reports, provide ton-mile statistics to Department of Local Government, publish Kentucky's Official Coal Haul System Report, study possible legislative proposals to streamline and stabilize the Coal Haul Road System, provide the Secretary's Office with information for updating the "Extended Weight Coal Haul Road System" by Official Order, review applications requesting designation as a scenic highway or byway for meeting Transportation Cabinet guidelines and make recommendation for designation.

**DISTRIBUTION OF ESTIMATED COST FOR 2003-2004**

	<b>PLANNING</b>	<b>DISTRICT OFFICES</b>	<b>TOTAL</b>
<b>PERSONNEL</b>	<b>\$190,500</b>	<b>\$102,000</b>	<b>\$295,500</b>
<b>OTHER</b>	<b>\$8,000</b>	<b>\$6,000</b>	<b>\$14,000</b>
<b>TOTAL</b>	<b>\$198,500</b>	<b>\$108,000</b>	<b>\$306,500</b>

**CHAPTER 8:**

Geographic Information Systems (GIS)

**RESPONSIBLE UNIT:**Division of Planning  
Transportation Systems Activity Center  
GIS Team

**PURPOSE AND SCOPE:** To meet the needs of the Division, Cabinet, other state agencies, and entities outside state government for accurate GIS based electronic maps. To maintain the transportation layer base map to the highest map standard level and most up-to-date status possible. See that data links to the base map are always complete and accurate.

**PROPOSED ACTIVITIES FOR 2003-2004:** Create a seamless statewide transportation GIS base map using GPS to collect data on all public streets and roads; work with Data Management Activity Center to conflate data to new GIS transportation layer for all public roads, and link new data as required; develop new county maps using ArcInfo® and ArcView® showing all the transportation layers and other pertinent features; and maintain and update the GIS base maps to continually reflect the latest street and road alignments, road attribute data, and other map features.

**DISTRIBUTION OF ESTIMATED COST FOR 2003-2004**

	<b>PLANNING</b>	<b>TOTAL</b>
<b>PERSONNEL</b>	<b>\$240,800</b>	<b>\$240,800</b>
<b>OTHER</b>	<b>*\$110,000</b>	<b>\$110,000</b>
<b>TOTAL</b>	<b>\$350,800</b>	<b>\$350,800</b>

\*Includes \$100,000 for University of Kentucky technical assistance.

**CHAPTER 9:** Cartography

**RESPONSIBLE UNIT:** Division of Planning  
Transportation Systems Activity Center  
Cartography Team

**PURPOSE AND SCOPE:** To meet the needs of the Division, Cabinet, other state agencies, and entities outside state government for general and special purpose maps. This continuing program involves creating, updating, printing, and distributing a wide variety of cartographic projects.

**PROPOSED ACTIVITIES FOR 2003-2004:** Continue development of electronic mapping for all city, county, state, and special-purpose cartographic products; maintain and publish electronic formats of cartographic products on the internet; use the large-format plotter to print city, county, and state maps as needed for distribution through the Division of Planning inter-account service and the Kentucky Geological Survey Map Sales function; update the Official State Highway Map and have necessary printing accomplished; create reports and exhibits for various Division projects and studies; and provide mapping and graphic assistance to other Divisions and Departments on request.

**DISTRIBUTION OF ESTIMATED COST FOR 2003-2004**

	<b>PLANNING</b>	<b>DISTRICT OFFICES</b>	<b>TOTAL</b>
<b>PERSONNEL</b>	<b>\$236,000</b>	<b>\$6,300</b>	<b>\$242,300</b>
<b>OTHER</b>	<b>*\$54,000</b>	<b>\$1,000</b>	<b>\$55,000</b>
<b>TOTAL</b>	<b>\$290,000</b>	<b>\$7,300</b>	<b>\$297,300</b>

\* Includes \$50,000 for the Official State Highway Map printing.



**CHAPTER 10:** Global Positioning System (GPS)

**RESPONSIBLE UNIT:** Division of Planning  
Data Management Activity Center  
GPS Processing Team

**PURPOSE AND SCOPE:** Match GPS centerline data collected and processed with existing Linear Referencing System (county, route, milepoint). Maintain the Cabinet's GIS transportation layer.

**PROPOSED ACTIVITIES FOR 2003-2004:** Match newly acquired centerline data to the existing highway network – includes updating and verifying roadway mileage, highway systems data, and use in maintaining and generating data driven maps. These include County Road Aid Series, functional, truck, state system, and traffic station maps. Make GIS base map changes as necessitated by changes to the highway network.

**DISTRIBUTION OF ESTIMATED COST FOR 2003-2004**

	<b>PLANNING</b>	<b>TOTAL</b>
<b>PERSONNEL</b>	<b>\$139,400</b>	<b>\$139,400</b>
<b>OTHER</b>	<b>\$18,000</b>	<b>\$18,000</b>
<b>TOTAL</b>	<b>\$157,400</b>	<b>\$157,400</b>

**CHAPTER 11:** Global Positioning System (GPS)

**RESPONSIBLE UNIT:** Division of Planning  
Data Management Activity Center  
GPS Collection Team

**PURPOSE AND SCOPE:** Coordinate data collection activities for the statewide GIS transportation layer with Area Development Districts (ADDs). Maintain quality control by coordinating with the ADDs through review of data and training.

**PROPOSED ACTIVITIES FOR 2003-2004:** Collect roadway centerline data using GPS technology for all public roads, statewide. Collect intersection and control point data for verifying all centerline data submitted by ADDs and Central Office. Perform office reviews to verify data meets the required standards and confidence levels established by this Division and in accordance with the National Standard for Spatial Data Accuracy.

**DISTRIBUTION OF ESTIMATED COST FOR 2003-2004**

	<b>PLANNING</b>	<b>DISTRICT OFFICES</b>	<b>TOTAL</b>
<b>PERSONNEL</b>	<b>\$282,100</b>	<b>\$31,500</b>	<b>\$313,600</b>
<b>OTHER</b>	<b>\$18,000</b>	<b>\$8,000</b>	<b>\$26,000</b>
<b>TOTAL</b>	<b>\$300,100</b>	<b>\$39,500</b>	<b>\$339,600</b>

**CHAPTER 12:** Highway Information System

**RESPONSIBLE UNIT:** Division of Planning  
Data Management Activity Center  
Highway Information System Team

**PURPOSE AND SCOPE:** Maintain and operate the HIS database. Use the Highway Performance Monitoring System (HPMS) to establish a baseline for measuring highway system performance and produce the highway data submittal required annually by FHWA. Provide information to the Transportation Cabinet, other governmental agencies, consultants, and private organizations. Continue development and maintenance of the HIS database interface with the (GIS); including maintenance of base map graphics, and link to associated network and data.

**PROPOSED ACTIVITIES FOR 2003-2004:** Work with the Office of Technology and other divisions within the Transportation Cabinet to: upgrade the HIS database to "Highways by EXOR"; consolidate the Cabinet's data maintenance efforts, and enhance the current reference system to identify routes in the Six Year Highway Plan. Make modest enhancement to improve HIS access through the Oracle Web Server until the new version is implemented; assist in the development and maintenance of a Cabinet GIS; maintain base map and database network for state maintained roads; assist the Office of Technology and the Division of Traffic with development of a procedure to provide up-to-date route network, DMI, functional class, NHS, and urban area information to the CRASH database. Utilize HPMS to update Rating Indices, Capacity, and Volume/Service Flow ratio in the HIS database. Use HIS to measure highway system performance and assist with analyses of the Unscheduled Needs List. Convert to new HPMS software, perform changes required by Federal legislation, regulations, policies, and/or guidelines, as needed to the HPMS. Perform field inventories and make updates to the HIS database.

**DISTRIBUTION OF ESTIMATED COST FOR 2003-2004**

	<b>PLANNING</b>	<b>DISTRICT OFFICES</b>	<b>TOTAL</b>
<b>PERSONNEL</b>	<b>\$292,900</b>	<b>\$42,000</b>	<b>\$334,900</b>
<b>OTHER</b>	<b>\$453,600</b>	<b>\$5,000</b>	<b>\$458,600</b>
<b>TOTAL</b>	<b>\$746,500</b>	<b>\$47,000</b>	<b>\$793,500</b>

\* Includes \$413,600 for GPS maintenance.

**CHAPTER 13:**

Special Analysis

**RESPONSIBLE UNIT:**Division of Planning (Special Analysis Team)  
Division of Multimodal Programs

**PURPOSE AND SCOPE:** Numerous requests are made throughout the year for activities and information that may not directly relate to an applicable chapter of the work program. These requests vary from information assimilation requests that may require only hours to complete to technical analyses and reviews and policy review/recommendations, such as early project programming studies and other intermediate programming activities, that may require extensive efforts.

**PROPOSED ACTIVITIES FOR 2003-2004:** It is anticipated that a large volume of special requests will continue to be received and processed by these Divisions.

**DISTRIBUTION OF ESTIMATED COST FOR 2003-2004**

	<b>PLANNING</b>	<b>DISTRICT OFFICE</b>	<b>MULTIMODAL PROGRAMS</b>	<b>TOTAL</b>
<b>PERSONNEL</b>	<b>\$76,900</b>	<b>\$5,500</b>	<b>\$25,800</b>	<b>\$108,200</b>
<b>OTHER</b>	<b>\$5,000</b>	<b>\$2,000</b>	<b>\$50</b>	<b>\$7,050</b>
<b>TOTAL</b>	<b>\$81,900</b>	<b>\$7,500</b>	<b>\$25,850</b>	<b>\$115,250</b>

**Additional PL funds (\$368,000 matched with \$23,000 – 5% Road Fund and \$69,000 – 15% local) will be used by the MPOs for additional training and special projects.**

**CHAPTER 14:**

## Air Quality Conformity Analysis Program

**RESPONSIBLE UNIT:**

Division of Multimodal Programs  
Urban Planning Branch

**PURPOSE AND SCOPE:** Coordinate and perform analyses necessary for Air Quality Conformity Determinations for both rural and some MPO areas to allow for the timely advancement of projects. Coordinate with Division for Air Quality, EPA-Atlanta, FHWA, FTA, MPOs, and KYTC for conformity approvals. Review and comment on the air quality rules, proposed rules, regulations, and guidance that impact transportation. Maintain a working knowledge of EPA's air quality modeling software, as well as, review and comment on model updates. Develop new modeling methods for rural conformity. Establish and maintain conformity consultation processes, which specifies each agency's roles and responsibilities.

**PROPOSED ACTIVITIES FOR 2003-2004:**

- Establish conformity consultation agreements statewide.
- Develop sub-area models from the Statewide Traffic Model for proposed rural nonattainment areas.
- Review and comment on the guidelines for the 8-Hour Ozone Standard, MOBILE Model 6, Air Quality Regulations, and nonattainment designations.
- Run the MOBILE Model for all necessary regional air quality conformity analyses. DMP will be responsible for performing Air Quality Conformity analysis for the 5 nonattainment (or maintenance) areas for the one-hour standard. DMP coordinates with the MPOs, Division of Environmental Analysis, Division for Air Quality, FHWA, FTA, and EPA. DMP will provide traffic model output in the form of vehicle miles of travel (VMT) and speeds for the three maintenance areas (Ashland, Lexington, and Owensboro) that will be used to determine conformity of the MPOs' Transportation Plans and TIPs.
- Bowling Green, Henderson, and Hopkinsville are proposed nonattainment areas for the 8-hour Standard. DMP will coordinate air quality conformity analyses for these new areas, too.
- Review and comment during the preparation of mobile budgets for the State Implementation Plan (SIP) for the updates to the One-Hour Air Quality Standards, 8-Hour Standard Designations and for SIP amendments and budget adjustments.

**CHAPTER 14:**

## Air Quality Conformity Analysis Program

**RESPONSIBLE UNIT:**Division of Multimodal Programs  
Urban Planning Branch**PROPOSED ACTIVITIES FOR 2003-2004 (Continued):**

- Promote and educate the Cabinet, public officials, and general public about air quality, conformity analysis, and federal guidelines.
- DMP staff will continue to monitor and coordinate various CMAQ projects in the nonattainment and maintenance areas. Projects will include ozone awareness programs, traffic management and operation centers, inspection and maintenance programs, and other programmed projects.

**DISTRIBUTION OF ESTIMATED COST FOR 2003-2004**

	<b>MULTIMODAL PROGRAMS</b>	<b>TOTAL</b>
<b>PERSONNEL</b>	<b>\$136,300</b>	<b>\$136,300</b>
<b>OTHER</b>	<b>* \$132,000</b>	<b>\$132,000</b>
<b>TOTAL</b>	<b>\$268,300</b>	<b>\$268,300</b>

\*Includes \$100,000 for Air Quality Models for new NONattainment areas and \$31,000 for KTC Research. Other expenses \$1,000.

**CHAPTER 15:** Metropolitan Planning Organizations  
(Areas over 50,000 Population)

**RESPONSIBLE UNIT:** Division of Multimodal Programs  
Urban Planning Branch

**PURPOSE AND SCOPE:** Provide technical assistance and coordination to the metropolitan planning organizations (MPOs) for developing and maintaining a continuing, cooperative, and comprehensive (3C) transportation planning process. The results are plans or programs consistent with the comprehensively planned development of the urbanized areas (areas over 50,000 population) in accordance with the 1991 Intermodal Surface Transportation and Efficiency Act, and the 1997 Transportation Equity Act For the 21st Century, as amended (Title 23, United States Code, Section 134). This process ensures that KYTC and local transportation projects remain eligible to receive federal funding. The scope of work for the 3C planning process is in accordance with the annual unified work programs, which describe all anticipated urban transportation and transportation related planning activities to be performed with planning assistance provided under Section 5303 of the Federal Transit Administration Act, and under Title 23, U.S.C. 104 (f) and 307 (c).

**PROPOSED ACTIVITIES FOR 2003-2004:**

- The continuing technical assistance and review of MPO activities and documents, plus attendance at technical, policy, and other committee meetings to represent the Cabinet. The Division of Multimodal Programs (DMP) staff will continue to ensure consistency between local and state plans and programs, including MPO and State transportation improvement programs, congestion management plans, the Cabinet's Six-Year Highway Plan, MPO Long Range Transportation Plans, and the Cabinet's Statewide Long Range Plan. The DMP will continue to provide technical assistance for MPO traffic model updates through participation in the Traffic Model Users Group.
- Special traffic assignments and analyses for the design and implementation of various highway and street projects. The DMP maintains traffic models for the Ashland, Bowling Green, and Radcliff-Elizabethtown areas and does analyses for projects in these areas. The Owensboro MPO has traffic modeling software and is assuming some responsibility for performing traffic assignments and analysis of projects. Traffic assignments for the other urbanized areas are done by the local MPOs (with assistance from this Division) but are coordinated through our Division for distribution throughout the Cabinet.
- Census 2000 and FHWA have designated two additional areas as MPOs in Kentucky: Bowling Green and the Radcliff-Elizabethtown-Vine Grove-Fort Knox Area. Additionally, Henderson-Evansville became a TMA area (exceeding 200,000 population). DMP will assist in organizing, coordinating, and educating the new MPO staffs, technical, and policy members.

**CHAPTER 15:** Metropolitan Planning Organizations  
(Areas over 50,000 Population)

**RESPONSIBLE UNIT:** Division of Multimodal Programs  
Urban Planning Branch

**PROPOSED ACTIVITIES FOR 2003-2004 (Continued):**

- DMP staff will continue to coordinate with the Transportation Cabinet's Office of Transportation Delivery on transit and transit planning issues.
- MPOs will continue to provide traffic data for Cabinet projects. The Cabinet will do traffic projections for some projects in MPO areas.
- The MPOs will continue transportation planning activities as outlined in their UWPs. Several special planning efforts are expected to be continued or are new this year including: Louisville's Bridges and Transportation Tomorrow, and Cincinnati's Brent Spence Bridge and the N/S Initiative.
- DMP staff will continue to monitor and coordinate MPO rideshare programs.
- The MPOs will continue transportation planning activities as outlined in their UWPs. Several special planning efforts are expected for the new year such as: major corridor studies in Louisville, Lexington, and Northern Kentucky; traffic management programs and Congestion Management Programs in Evansville-Henderson, Louisville, Lexington, and Northern Kentucky; and various sub-area analyses. Continuing effort will be directed toward the updating or amending long range transportation plans in all MPO areas.
- The Cabinet and the MPOs will continue to expand the use of TransCAD, the new GIS based transportation modeling software program. DMP will continue to support the use of both MINUTP and TransCAD for MPO area transportation modeling.

**DISTRIBUTION OF ESTIMATED COST FOR 2003-2004**

	<b>MULTIMODAL PROGRAMS</b>	<b>TOTAL</b>
<b>PERSONNEL</b>	<b>\$246,200</b>	<b>\$246,200</b>
<b>OTHER</b>	<b>*\$2,000</b>	<b>\$2,000</b>
<b>TOTAL</b>	<b>\$248,200</b>	<b>\$248,200</b>

\*PL funds passed thru to MPOs (\$1,550,000-Federal and \$96,875-Road Fund as well as \$290,625 local funds for the PL Program that does not flow through the Cabinet).



**CHAPTER 16:** Small Urban Areas Studies

**RESPONSIBLE UNIT:** Division of Multimodal Programs  
Urban Planning Branch

**PURPOSE AND SCOPE:** Identify and analyze traffic operational and transportation system deficiencies in small urban areas (5,000 to 50,000 population). The purpose of this analysis is to provide highway administrators with urban transportation needs and information sufficient to determine an urban improvement project priority program. These prioritized projects are used as input to KYTC's Six-Year Plan and Long Range Needs Plan. Coordination with the Cabinet's Divisions of Planning, Traffic, Environmental Analysis, and Design, District Offices, and ADDs is required. The emphasis of this effort will be to provide a timely response to transportation system issues.

**PROPOSED ACTIVITIES FOR 2003-2004:**

- Small Urban Area Transportation Study Updates will be completed by consultant engineering firms for the areas of Madisonville, Maysville, and Mason County. Cabinet staff from the Division of Multimodal Programs provides general oversight and guidance, along with some data input, and serves on advisory committees set up with local representatives for providing input to the studies. State road funds are used to fund the contracts with the consultants.
- New Urban Area Transportation Studies will be initiated for Georgetown and Somerset. The procedure and funding will be the same as above.
- With the availability of updated socioeconomic data and microcomputer modeling techniques, efforts will be directed toward the translation of existing models to TransCAD. The models, in conjunction with other analytical tools, will be utilized to study, at a level of detail dependent on the complexity of the issues, the transportation system impacts of various proposals. Proposals and requests are routinely received from local governments. Project and priority recommendations will be made as appropriate.
- Existing MINUTP models will be converted to TransCAD on an as-needed basis. Procedures will be developed to incorporate GIS data and tools in the model development process. DMP will continue to support both MINUTP and TransCAD models as approved.

**CHAPTER 16:** Small Urban Areas Studies

**RESPONSIBLE UNIT:** Division of Multimodal Programs  
Urban Planning Branch

**DISTRIBUTION OF ESTIMATED COST FOR 2003-2004**

	<b>MULTIMODAL PROGRAMS</b>	<b>TOTAL</b>
<b>PERSONNEL</b>	<b>\$51,700</b>	<b>\$51,700</b>
<b>OTHER</b>	<b>\$2,000</b>	<b>\$2,000</b>
<b>TOTAL</b>	<b>\$53,700</b>	<b>\$53,700</b>

\* An additional \$400,000 of State Road Funds are identified in the Cabinet's Six-Year Highway Plan for Urban Transportation Studies for areas with 5,000-50,000 population.

**CHAPTER 17:****Bicycle & Pedestrian Transportation Program****RESPONSIBLE UNIT:**

Division of Multimodal Programs

**PURPOSE AND SCOPE:** Coordinate with the state bicycle and pedestrian program, develop a statewide bikeway system, work and coordinate with the Kentucky Bicycle & 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. This assistance will be in the form of technical advice, assisting in the development of plans, and coordinating studies.

**PROPOSED ACTIVITIES FOR 2003-2004:**

- To develop procedures for implementing the Pedestrian & Bicycle Travel Policy to be incorporated into the Long Range Plans of the State and MPOs.
- To coordinate the revisions and updates of the statewide bike route system and associated maps.
- Answer requests for bicycle and pedestrian information concerning KYTC's facilities.
- Promote and facilitate the increased use and public education of non-motorized modes of transportation, including developing pedestrian and bicycle facilities. As well as, assist and expand safety programs for using such facilities.
- Review Planning Studies for bicycle and pedestrian facilities.

**DISTRIBUTION OF ESTIMATED COST FOR 2003-2004**

	<b>MULTIMODAL PROGRAMS</b>	<b>TOTAL</b>
<b>PERSONNEL</b>	<b>\$39,700</b>	<b>\$39,700</b>
<b>OTHER</b>	<b>\$100</b>	<b>\$100</b>
<b>TOTAL</b>	<b>\$39,800</b>	<b>\$39,800</b>

