

**STATE OF OKLAHOMA
DEPARTMENT OF TRANSPORTATION**

PLANNING & RESEARCH DIVISION



FY2006

State Planning and Research (SPR) Program

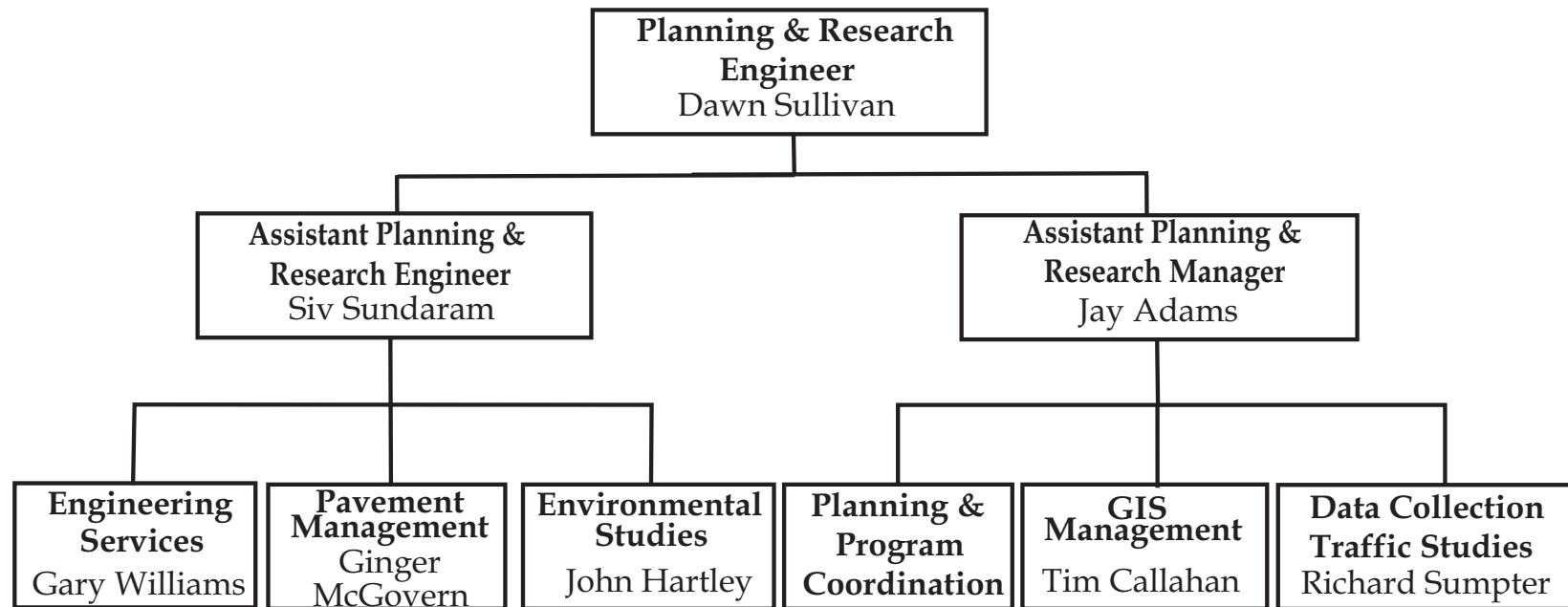
Part 1 - Planning

Part 2 - Research

In Cooperation with the
United States Department of Transportation
Federal Highway Administration

October 1, 2005

Planning & Research Division



OCTOBER 1, 2005

DEPARTMENT OF TRANSPORTATION
Financial Summary Sheet

Work Program Number SPRY 0010(39) PL
Fiscal Year 2006

Program Period October 1, 2005 through September 30, 2006

A. Total Estimated Costs

SPR-Part 1 Planning	\$8,982,389.00
Metropolitan Planning (PL)	<u>1,955,011.00</u>

TOTAL ESTIMATED COSTS	\$10,937,400.00
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B. Available Federal Funds

<u>Source</u>	<u>SPR Unobligated Balance</u>	<u>PL Unobligated Balance</u>
TOTAL AVAILABLE FEDERAL FUNDS	\$9,614,927.00	\$1,955,011.00

C. Proposed Financing

<u>Type</u>	<u>Federal</u>	<u>Ratio</u>	<u>State</u>	<u>Local</u>	<u>Total</u>
SPR	\$8,982,389.00	80%	\$0.00	\$0.00	\$8,982,389.00
PL	\$1,955,011.00	80%	\$0.00	\$543,724.00	<u>\$2,498,735.00</u>
TOTAL PROPOSED FINANCING					<u><u>\$11,481,124.00</u></u>

Work Program Number SPRY 0010(40) RS
Fiscal Year 2006

A. Total Estimated Costs

SPR-Part 2 Research	\$2,439,500.00
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B. Available Federal Funds

<u>Source</u>	<u>Unobligated Balance</u>
TOTAL AVAILABLE FEDERAL FUNDS	\$4,021,680.00

C. Proposed Financing

<u>Type</u>	<u>Federal</u>	<u>Ratio</u>	<u>State</u>	<u>Local</u>	<u>Total</u>
SPR	\$2,439,500.00	80%	\$0.00	\$0.00	\$2,439,500.00
Other FHWA	\$280,000.00				
TOTAL PROPOSED FINANCING					<u><u>\$2,439,500.00</u></u>
TOTAL PART 1 AND PART 2					<u><u>\$11,421,889.00</u></u>

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**FEDERAL FISCAL YEAR 2006
OKLAHOMA PROJECT SPRY - 10(39) PL
Part 1**

	<u>PROGRAM</u>	<u>SPR</u>	<u>STATE</u>	<u>PL</u>	<u>LOCAL</u>	<u>TOTAL</u>
ROAD INVENTORY						
1101	Continuing Inventory Data Studies	628,000.00	\$0.00			628,000.00
1102	Highway Performance Monitoring System	75,000.00	\$0.00			75,000.00
1103	Geographical Information System for Transportation	1,125,000.00	\$0.00			1,125,000.00
	Total Road Inventory	\$1,828,000.00	\$0.00			\$1,828,000.00
MAPPING						
1201	County, General Highway, Incorporated City and other Planning Maps	250,400.00	\$0.00			250,400.00
	Total Mapping	\$250,400.00	\$0.00			\$250,400.00
TRAFFIC						
1301	Coverage Count Program	494,200.00	0.00			494,200.00
1302	Permanent Traffic Count Program	186,100.00	0.00			186,100.00
1304	Purchase of Traffic Counting Equipment	191,500.00	0.00			191,500.00
1305	Vehicle Classification Counting Program	395,500.00	0.00			395,500.00
1306	Weigh in Motion Program	882,400.00	0.00			882,400.00
1308	Traffic Monitoring System	135,000.00	0.00			135,000.00
1309	Traffic Analysis and Projections	135,000.00	0.00			135,000.00
1310	Skid Studies Program	407,700.00	0.00			407,700.00
	Total Traffic	\$2,827,400.00	\$0.00			\$2,827,400.00
1402	Design and Survey Standards (Completed)	0.00	0.00			0.00
1403	Standard Specifications Manual for Highway Construction	200,000.00	0.00			200,000.00
	Total Standards	\$200,000.00	\$0.00			\$200,000.00
ECONOMIC AND FISCAL						
1510	Justification Studies	12,000.00	0.00			12,000.00
1511	Project Reconnaissance Information Development	10,000.00	0.00			10,000.00
	Total Economic and Fiscal	\$22,000.00	\$0.00			\$22,000.00

**FEDERAL FISCAL YEAR 2006
OKLAHOMA PROJECT SPRY - 10(39) PL
Part 1**

	<u>PROGRAM</u>	<u>SPR</u>	<u>STATE</u>	<u>PL</u>	<u>LOCAL</u>	<u>TOTAL</u>
SYSTEMS AND PROGRAMMING						
1601	Federal Aid Systems Coordination	198,000.00	0.00			198,000.00
1603	Highway Needs Study	69,000.00	0.00			69,000.00
1604	Pavement Management Systems	1,690,549.00	0.00			1,690,549.00
Total Systems and Programming		\$1,957,549.00	\$0.00			\$1,957,549.00
URBAN TRANSPORTATION						
1700	General Urban Planning Activities	33,500.00	0.00			33,500.00
1701	OCARTS	16,500.00	0.00	1,091,106.00	330,251.00	1,437,857.00
1702	Tulsa MATS	20,000.00	0.00	730,079.00	177,516.00	927,595.00
1703	Lawton MPO	15,900.00	0.00	120,000.00	32,500.00	168,400.00
1709	Fort Smith Area Study	6,600.00	0.00	13,826.00	3,457.00	23,883.00
1719	STIP	55,000.00	0.00			55,000.00
Total Urban Transportation		\$147,500.00	\$0.00	\$1,955,011.00	\$543,724.00	\$2,646,235.00
LONG RANGE PLANNING/ENVIRONMENTAL STUDIES						
1901	NPDES	160,000.00	0.00			160,000.00
1902	Statewide Long Range Transportation Planning Activities	25,000.00	0.00			25,000.00
1903	Intelligent Transportation Systems Planning (ITS)	104,000.00	0.00			104,000.00
1904	Air Quality Transportation Planning	10,000.00	0.00			10,000.00
1979	Environmental Studies - NEPA Review & Compliance	350,280.00	0.00			350,280.00
1980	Environmental Studies - Affairs & Specialist Studies	1,300,260.00	0.00			1,300,260.00
Total Long Range Planning/Environmental Studies		\$1,949,540.00	\$0.00	\$0.00	\$0.00	\$1,949,540.00
PROJECT TOTALS		\$8,982,389.00	\$0.00	\$1,955,011.00	\$543,724.00	\$11,481,124.00
GRAND TOTALS SPR -10(37)		\$8,982,389.00	\$0.00	\$1,955,011.00	\$543,724.00	\$11,481,124.00

PURPOSE AND SCOPE: To collect, record, and compile data on the physical characteristics for all statewide public roads and streets implementing established road inventory procedures. Catalogue cultural features used to update the Departments official County Highway Maps. Generate detailed maps used to conduct inventory meetings with County Commissioners pertaining to roadway modifications. Maintain current Electronic Data Processing (EDP) files of inventory data and update the Department's Central Data file. Write EDP program definitions necessary to extract needed summary data from the files. Produce and publish various mileage summary tables for the state, federal and public needs. Maintain necessary information for the National Network of Defense, and NHS routes. Develop and maintain Control Section numbers and other unique identification systems for all public roads. Establish AVMT to be used to calculate Annual Accident and Fatality Rates.

ACCOMPLISHMENTS DURING FY 2005 The County Road inventory procedures were continued with six county inventories completed; (Cherokee, Comanche, Cotton, Kingfisher, Pushmataha, and Tulsa) and one (Haskell) in progress. Eight counties were reassessed and coded; (Cleveland, Comanche, Cotton, Delaware, Kingfisher, Marshall, Okmulgee, and Sequoyah) and one (Pushmataha) in progress. All County Action Reports were verified and processed accordingly, along with a special request to rectify Oklahoma County's road maintenance mileage was constructed and processed. Highway construction projects pertaining to the Department's Highway, Graphical Roadway Network (NLF), Reference Point, and Open to Traffic databases were completed. All municipal boundaries were updated into the Highway, and UFC databases. The following annual publications and reports were completed; 2005 Statewide Mileage Table Book, 2004 Oklahoma Statewide Statistics Book, 2005 Certification of County Road Mileage, 2005 Road Inventory Manual, and 2005 HPMS Mileage, and Travel Summary Tables.

PROPOSED ACTIVITIES FOR FY 2006: Continue coding and updating the Department's Central Database files, implement GPS technology into our field inventory data collection and to improve procedures for the rural county inventory operations. Six of the following nine counties are scheduled to be inventoried; Beckham, Carter, Hughes, McClain, Noble, Osage, Payne, Pottawatomie, and Woodward. Seven of the following nine counties are scheduled to be reassessed and coded; Cherokee, Haskell, Hughes, Noble, Osage, Payne, Pottawatomie, Tulsa, and Woodward. Continue monitoring all County Action Reports, and Highway construction projects. Continue collecting HPMS data items. Compile and publish various state and federal reports including the biannual 2006-2007 Control Section Map Book, complete the 2005 Oklahoma Statewide Statistics Book, 2006 Certification of County Road Mileage, and 2006 HPMS Mileage and Travel Summary Tables. Keep abreast of the latest technological advances through attendance of seminars, conferences and workshops.

ESTIMATED TOTAL COST	CONTINUING
Programmed Amount for FY 2005	\$ 536,000 (SPR) -0- (STATE)
Estimated Cost for FY 2005	\$ 590,900 (SPR) -0- (STATE)
Estimated Cost for FY 2006	\$ 628,000 (SPR) - 0 - (STATE)

PURPOSE AND SCOPE: To collect, process and compile data and information as needed to prepare and submit an accurate and timely HPMS submission to the Federal Highway Administration (FHWA) according to the reporting requirements established in the HPMS Field manual, using the FHWA HPMS software.

ACCOMPLISHMENTS DURING 2005: The HPMS submittal was created using adjusted urban/urbanized areas based on the 2000 census and authorized smoothing techniques. Improved the quality of data for turn lanes left and right by utilizing the Videolog system. The process for compiling the HPMS submittal was modified at the request of FHWA to no longer consider simultaneous traffic count factors when compiling data for average daily traffic. Determined what type of surveillance equipment was installed in Oklahoma as a result of the ongoing Intelligent Transportation System implementation. Surveillance data for closed circuit televisions and dynamic message signs were included in this year's HPMS submittal. Oklahoma was also one of the pilot states used to submit native linear referencing system data as a part of the submittal. Submitted an ESRI shapefile along with the standard data submittal which contains segments for all HPMS universe records. This change represents a significant improvement over the previous HPMS LRS data requirements. Conducted an in-depth analysis of HPMS sample adequacy and added an additional 250 samples across the State of Oklahoma. Locations missing required IRI data were also identified and a data collection contract was executed in an effort to include this data in the 2005/2006 HPMS submissions. The HPMS submittal process uses a web based graphical user interface known as the HPMS Console and is very effective in managing the entire life cycle of the HPMS submittal process. The HPMS Console is intranet based and was designed to support the sharing of tasks with the appropriate HPMS data owners and personnel responsible for each of the six different phases of HPMS submittal development. A two day workshop was conducted to provide training on the use of the HPMS Console software. Designed and implemented a comprehensive on-line help system for the HPMS process. The system was created using a standard help authoring tool known as "RoboHelp". The 2004 HPMS data was made available to anyone having access to the OKDOT computer network through the GRIP browser application. All data submitted to the FHWA in the 2004 HPMS submittal was formatted as defined by the HPMS field manual. The 2004 submittal was created using the FHWA supported HPMS software version 6.0 although all data domain and cross-check validation was done in Oracle before inserting the data into Microsoft Access through the HPMS software.

PROPOSED ACTIVITIES FOR 2006: HPMS data collection needs will be addressed by improving the coordination of all current and future data collection efforts within ODOT. Data collection needs will also be addressed by improved communication and data sharing between ODOT and other external entities such as city and county governments, metropolitan planning organizations and the Oklahoma Turnpike Authority. Data collection needs will be addressed by utilizing videolog obtained by the Pavement Management data collection contract. ODOT will work with our local FHWA office to address high priority areas. HPMS 2005 data will be made available to anyone having access to the ODOT computer network by publishing all HPMS 2005 universe and sample data through the Geographical Resource Intranet Portal (GRIP) web browser application. The GIS Management Branch of the Planning and Research Division will conduct HPMS computer based training as provided by the FHWA. The GIS Management Branch will conduct formal in-house training on how to use the HPMS Console to generate, validate and submit a HPMS submittal. The linear referencing system (LRS) component of HPMS will be provided to the FHWA in an ESRI Personal GeoDatabase format. The HPMS 2005 submittal will be delivered to FHWA no later than June 15, 2006. ODOT will keep abreast of the latest technological advances through attendance of seminars, conferences and workshops.

**1102 Highway Performance Monitoring System
(Continued)**

ESTIMATED TOTAL COST

CONTINUING

Programmed Amount for FY 2005

\$ 75,000 (SPR)
- 0 - (STATE)

Estimated Cost for FY 2005

\$ 80,000 (SPR)
- 0 - (STATE)

Estimated Cost for FY 2006

\$ 75,000 (SPR)
- 0 - (STATE)

1103 Geographical Information Management System for Transportation

PURPOSE AND SCOPE: To design, develop, implement and maintain a Geographical Information Management System for Transportation (GIMS-T). The system will support transportation related decision making by producing high quality map products and reports linked to enterprise databases, by providing hardware and software tools used to deliver State-of-the-Art Geographical Information System (GIS) services and providing GIS related technology training to GIMS-T staff. The GIMS-T will support desktop, intranet and internet applications providing access to thematic map displays, imagery, reports, query and analysis tools and extensive attribute information for more than eight significant business layers across the Department. The categories of business information will include Road Characteristic Inventory, Highway Needs Study Report, Construction and Transportation Improvement Programs, Projects under Construction, Crashes and Speed Limits, Pontis Bridge Inventory and Rating Systems, Pavement Management International Roughness Indexes and Structural History, Highway Performance Monitoring System (HPMS), Rail Crossing Inventory, Videolog Inventory and Environmental Information.

ACCOMPLISHMENTS DURING FY 2005: The second year of the Maintenance/Improvements phase of the Geographical Resource Intranet Portal (GRIP) project was completed. ODOT provided two key personnel (project manager and GIS administrator) along with critical GIS products and services supporting the GRIP project. Some key accomplishments include the following:

- Purchased and Configured a laptop that demonstrates all applications built as a result of the GRIP project
- Included High Resolution Color Imagery into the GRIP Browser application
- Completed On-Line Help system for the HPMS Console
- Completed the Automated Map Production System (AMPS) project that automated the creation of Vertical Clearance and Design/Posted Load Limit map products used in routing oversize and overweight trucks by the Department of Public Safety
- Completed Phase I of changing the GRIP Browser application from ACGM format to SVG format
- Completed the Annual Average Daily Traffic Map for the Engineering Services Branch
- Completed the Sufficiency Maps by Division for the Pavement Management Branch
- Completed numerous custom map products for Senior Staff and outside agencies
 - Off system Bridge maps for Tribes
 - Roadware Data Collection Location Maps and GeoWorkspace
 - Updated Load Posted Bridge Maps (Load Posted and Load Posted less than 15 Tons)

PROPOSED ACTIVITIES FOR FY 2006: Renew the 3rd year of the Maintenance/Improvements contract for the Geographical Resource Intranet Portal (GRIP) project. The GIS Management Branch will be conducting a Phase II implementation of ACGM to SVG and conversion to .NET technology for the GRIP browser application. Design and implement a browser application similar to GRIP which will be a public access site. Upgrade to Oracle 10g database and GeoMedia Professional 6.0 along with all other 3rd party software required for this upgrade. Begin a project to design and implement a GIS Environmental Information application using GIS and GPS technologies. The primary focus will be on the application design, system architecture and data availability/needs. All contracts will include training components aimed at providing the fundamental programming/technology concepts essential to ODOT successfully maintaining GIS applications.

**1103Geographical Information Management System for Transportation
(Continued)**

ESTIMATED TOTAL COST

CONTINUING

Programmed Amount for FY 2005

\$ 230,000 (SPR)
- 0 - (STATE)

Estimated Cost for FY 2005

\$ 230,000 (SPR)
- 0 - (STATE)

Estimated Cost for FY 2006

\$1,125,000 (SPR)
- 0 - (STATE)

1201 County, City and other Planning Maps

PURPOSE AND SCOPE: The purpose and scope is to produce county and city maps showing reliable, accurate, legible and current information for roads, drainage features, street names, city limits, boundaries and man made culture. The scope also includes the creation of other special purpose planning maps and graphics.

ACCOMPLISHMENTS DURING FY 2005: Five counties and 50 cities were completed using CADD software. The counties were Alfalfa, Creek, Grady, Rogers and Woods. The Mapping Section continues to review all workflows required to complete a county map with particular emphasis placed on implementing changes that will boost productivity. Several changes have been implemented and the impact of the changes will be measured during the coming year. The Mapping Section has migrated to Microstation V-8 environment that allows linework and imagery to become part of an interactive database.

The following incorporated city maps, listed by county, were drafted using CADD software:

Alfalfa County

Aline	Amorita	Burlington	Byron	Carmon	Cherokee
Goltry	Helena	Jet	Lambert		

Creek County

Bristow	Depew	Drumwright	Kellyville	Kiefer	Lawrence Creek
Lotsee	Mannford	Mounds	Oilton	Sapulpa	Shamrock
Slick					

Grady County

Alex	Amber	Blanchard	Bradley	Chickasha	Minco
Ninnekah	Norge	Rush Springs	Tuttle		

Rogers County

Catoosa	Chelsea	Claremore	Collinsville	Fair Oaks	Foyil
Inola	Oologah	Talala	Valley park	Verdigris	

Woods County

Alva	Avard	Capron	Dacoma	Freedom	Waynoka
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Special graphics were revised for the 2005 Need Study Report, various highway corridor maps, detour maps and other special graphics were produced as needed for the Planning & Research Division and other ODOT personnel.

PROPOSED ACTIVITIES FOR FY 2006: All cartographers will be using the new menu system developed for MicroStation V-8. The Mapping Section will continue to implement changes that should boost productivity and accuracy by using other available outside resources. The Mapping Section will use CADD software to create nine or more county maps chosen from the following available inventories: Choctaw, Coal, Comanche, Craig, Delaware, Garfield, Kingfisher, Lincoln, Marshall, Mayes, Murray, Nowata, Okfuskee, Okmulgee, Pawnee, Pushmataha, Sequoyah, Stephens, Wagoner and Woods. Incorporated city maps within each county will also be drafted. All city and county maps currently in CADD format will be updated as highway system revisions are completed and opened to traffic. All future maps will be enabled for the integration of map features into the Oracle Spatial database from design files. This will facilitate the sharing of map and GIS features between the mapping and GIS development sections.

1201 **County, City and other Planning Maps**
(Continued)

ESTIMATED TOTAL COST	CONTINUING
Programmed Amount for FY 2005	\$ 241,000 (SPR) -0- (STATE)
Estimated Cost for FY 2005	\$ 241,000 (SPR) -0- (STATE)
Estimated Cost for FY 2006	\$ 250,400 (SPR) -0- (STATE)

1301 Coverage Count Program

PURPOSE AND SCOPE: To collect traffic data on state highways, interstates and the National Functional Classified System for establishing average daily traffic volumes. Approximately 3,300 locations are counted on the highway systems and 8,500 on the secondary system that includes the county road coverage and urban city street coverage in cities over 5,000 population. State highway and interstate locations are counted on a two-year cycle along with the county and city system coverage.

Counts collected on the highway system are incorporated into an Annual Average Daily Traffic (AADT) map printed annually for distribution. Counts collected on the county and city system are recorded and retained for office use. Highway traffic maps are published for public distribution.

ACCOMPLISHMENTS DURING FY 2005: All state, county and city systems were counted in the 39 counties scheduled for the 2005 count cycle.

PROPOSED ACTIVITIES FOR FY 2006: Continue to analyze all road systems for areas where coverage is deficient, establish new count stations as needed and delete locations that are no longer of value. Count all state, county and city systems in the 38 counties scheduled for the 2006 count cycle. Attend seminars, conferences and workshops to keep abreast of the latest technological advances. Additionally, the contract with the University of Oklahoma Computer Science Department for development of the Traffic Count Map Web Page for public access, was renewed for a second year.

ESTIMATED TOTAL COST	CONTINUING	
Programmed Amount for FY 2005	\$ 441,000	(SPR)
	- 0 -	(STATE)
Estimated Cost for FY 2005	\$ 478,500	(SPR)
	- 0 -	(STATE)
Estimated Cost for FY 2006	\$ 494,200	(SPR)
	- 0 -	(STATE)

1302 Permanent Traffic Count Program

PURPOSE AND SCOPE: To collect hourly traffic data by lane for traffic monitoring design needs. There are 17 Automatic Traffic Recorder (ATR) locations and 41 Automatic Vehicle Classification (AVC) locations in Oklahoma. The traffic data obtained are the basis for seasonal and axle factor variation as recommended for traffic monitoring in FHWA's Traffic Monitoring Guide. A biennial traffic characteristic report is generated from the data collected at these sites.

ACCOMPLISHMENTS DURING FY 2005: Operational rates for the permanent traffic count / classification stations improved to 98.4% with the conversion of ATR sites to AVC as well as the new construction of additional AVC sites. Construction at new sites for the expanded classification data collection effort in support of the coverage requirements has required more support.

PROPOSED ACTIVITIES FOR FY 2006: Execution of the plan to install more classification capability while filling the gaps in the coverage requirements will continue for FY 2006. Site surveys conducted in FY 2005 have initiated construction schedules for FY 2006 in the installation of classification sites at state line entry points on interstates and selected high volume principle arterial routes, both urban and rural. Additionally, expansion of the scope of vehicle classification will continue with the next phase of ATR to AVC conversion.

ESTIMATED TOTAL COST	CONTINUING	
Programmed Amount for FY 2005	\$ 231,000	(SPR)
	- 0 -	(STATE)
Estimated Cost for FY 2005	\$ 160,200	(SPR)
	- 0 -	(STATE)
Estimated Cost for FY 2006	\$ 186,100	(SPR)
	- 0 -	(STATE)

1304 Purchase of Traffic Counting Equipment

PURPOSE AND SCOPE: To improve the efficiency of the traffic counting operation by systematic replacement of older outdated equipment and stolen or damaged equipment as well as support of increased equipment requirements resulting from expanded operations.

ACCOMPLISHMENTS DURING FY 2005: Several types of equipment were purchased during FY 2005. Purchases included: Forty (40) portable weigh scales, Ten (10) Peek ADR 2000 Classifiers, tools and accessories for maintenance of traffic monitoring stations, road tube clamps and grips, and manufacturer repairs on ADR counter classifiers and RTMS radars as well as repairs and calibration of the Skid System.

PROPOSED ACTIVITIES FOR FY 2006: Purchase of equipment necessary for sustaining current operations as well as requirements in support of expanded operations and additional tasks to include: counter/classifiers and modems to support ATR to AVC site conversion; hardware for solar and wind turbine powered sites as well as batteries; road tube counters, hoses, clamps to support short duration count program; Jamar boards for turning movement projects; manufacturer repair requirements for ADR counter classifiers, RTMS radar units, and the Skid Testing System; and distance measuring instruments, laser range finders, and nylon tape measures for support of road data collection.

ESTIMATED TOTAL COST	CONTINUING	
Programmed Amount for FY 2005	\$ 325,000	(SPR)
	-0-	(STATE)
Estimated Cost for FY 2005	\$ 204,100	(SPR)
	-0-	(STATE)
Estimated Cost for FY 2006	\$ 191,500	(SPR)
	-0-	(STATE)

1305 Vehicle Classification Counting Program

PURPOSE AND SCOPE: To gather vehicle classification data and develop estimates of the composition of traffic on the various Functional Classifications of roadways in the state and to collect complex traffic data required for planning, traffic and design studies. Data gathered and used to facilitate these studies includes machine counts, vehicle classification counts and turning movement studies with pedestrian counts.

ACCOMPLISHMENTS DURING FY 2005: Data gathered will be incorporated into the “2005 Oklahoma Traffic Characteristics Report”. All 2-lane highway classification sites and 2-lane ATR (Automatic Traffic Recorder) locations were classified for 24 hours using Peek ADR-1000 machines. A contract for vehicle classification by lane was executed. The contractor collected vehicle classification data at all of the Oklahoma City Urban as well as all even year Rural classification sites in excess of two lanes.

Data for numerous special studies were collected as follows:

<u>(A) For the Data Collection Branch</u>		<u>(C) For the Traffic Engineering Division</u>	
1	- Turning movements with pedestrian counts	72	- Turning movements with pedestrian counts
31	- (24 hour) Hourly Machine Counts	158	- (24 hour) Hourly Machine Counts
2	- (24 hour) Cumulative Machine Counts	28	- (24 hour) Cumulative Machine Counts
137	- (24 hour) Vehicle Classification Counts	0	- (24 hour) Vehicle Classification Counts
<u>(B) For the Engineering Services Branch</u>		<u>(D) For other Divisions</u>	
16	- Turning movements with pedestrian counts	1	- Turning movements with pedestrian counts
310	- (24 hour) Hourly Machine Counts	0	- (24 hour) Hourly Machine Counts
28	- (24 hour) Cumulative Machine Counts	4	- (24 hour) Cumulative Machine Counts
6	- (24 hour) Vehicle Classification Counts	1	- (24 hour) Vehicle Classification Count
		1	- (24 hour) Vehicle Gap Study

PROPOSED ACTIVITIES FOR FY 2006: Vehicle classification data will continue to be collected by machine from either state forces or by contract. A new contract will be issued for the collection of multi-lane urban and rural four lane classification data. AVC (Automatic Vehicle Classification) and WIM (Weigh-in-Motion) sites will continue to be polled and statewide axle factors computed for traffic monitoring and pavement design needs and special studies data will be collected as requested. Attend seminars, conferences, workshops and set up demonstrations to keep abreast of the latest technological advances.

ESTIMATED TOTAL COST		CONTINUING	
Programmed Amount for FY 2005		\$ 324,000	(SPR)
		- 0 -	(STATE)
Estimated Cost for FY 2005		\$ 339,500	(SPR)
		- 0 -	(STATE)
Estimated Cost for FY 2006		\$ 395,500	(SPR)
		- 0 -	(STATE)

1306 Weigh in Motion Program

PURPOSE AND SCOPE: To collect and conduct preliminary analysis of data describing vehicle characteristics and vehicle weight trends. The Department uses this data as an intricate part of the traffic monitoring system. These data collection systems provide axle weight factors used in design and pavement management studies and to fulfill FHWA requirements for the Strategic Highway Research Program (SHRP) and the Long Term Pavement Performance (LTPP) program. The Department operates 20 permanent weigh-in-motion (WIM) data collection sites located throughout the state.

ACCOMPLISHMENTS DURING FY 2005: The Department initiated the new Traffic Monitoring Systems (TMS) Maintenance Contract. This new contract incorporates maintenance and calibration of the Automatic Vehicle Classifier (AVC) sites as well as the Weigh-in-Motion (WIM) sites. New construction and site renovation are again included in the contract. An additional requirement is the conversion of Automatic Traffic Recorder (ATR) sites to AVC sites. The scope of the work completed during the first year of the contract encompassed:

- 1) Construction of four (4) new AVC sites
- 2) Conversion of eleven (11) ATR sites to AVC sites
- 3) Renovation of five (5) existing sites (4 WIM and 1 AVC)
- 4) Scheduled maintenance and calibration for 20 WIM sites
- 5) On-call repair/services for 20 WIM sites and 41 AVC sites

PROPOSED ACTIVITIES FOR FY 2006: The second year of the contract will continue with the site conversions and new construction as well as a comprehensive calibration schedule for the AVC sites. Over the next two years all the ATR sites will be converted to AVC sites and included in the preventive maintenance, calibration, and on-call services support package provided in the contract. The scope of work to be accomplished in FY 2006 is as follows:

- 1) Construction of two (2) new AVC sites
- 2) Re-activation of one (1) WIM site
- 3) Conversion of nine (9) ATR sites to AVC sites
- 4) Routine maintenance and calibration for 21 WIM sites and 50 AVC sites
- 5) On-call repair/services for 21 WIM sites and 50 AVC sites

ESTIMATED TOTAL COST	CONTINUING	
Programmed Amount for FY 2005	\$868,000	(SPR)
	-0-	(STATE)
Estimated Cost for FY 2005	\$877,800	(SPR)
	-0-	(STATE)
Estimated Cost for FY 2006	\$882,400	(SPR)
	-0-	(STATE)

1308 Traffic Monitoring System

PURPOSE AND SCOPE: The Traffic Monitoring System (TMS) is a comprehensive statewide traffic data gathering, editing and reporting system created to fulfill the requirements of the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 and TEA 21. The purpose of TMS is to computerize traffic estimation and reporting, including data from public and private non - state government entities.

ACCOMPLISHMENTS DURING FY 2005: Annual processing was completed for the traffic year 2003 and the data was checked for accuracy. The annual publication of the AADT map was completed. The implementation of the non-highway count program was completed. The 2003 Oklahoma Traffic Characteristics Report was completed.

PROPOSED ACTIVITIES FOR 2006: Revise and restructure of existing traffic count programs. Revise and streamline process of recording and compiling short term counts. Cross train personnel in daily, monthly and annual data processing. Streamline and simplify the process of editing and reporting data for HPMS and the Traffic Characteristics Report. Continue gathering data and prepare for the production of the Annual Average Daily Traffic Map.

ESTIMATED TOTAL COST:	CONTINUING	
Programmed Amount for FY 2005	\$132,000	(SPR)
	-0-	(State)
Estimated cost for FY 2005	\$122,000	(SPR)
	-0-	(State)
Estimated cost for FY 2006	\$135,000	(SPR)
	-0-	(State)

PURPOSE AND SCOPE: Traffic forecasts provide the basis for geometric and structural design of new highways and improvement of existing highways. The existing or assigned traffic volumes are projected twenty (20) years into the future for design purposes. Also, the factors for determining Design Hourly Volume (DHV) of the Annual Average Daily Traffic (AADT), percent of trucks of the DHV, and the percent of heavy trucks are prepared for each request of design traffic information.

ACCOMPLISHMENTS DURING FY 2005: Design traffic was furnished to the city and county governments and various divisions within ODOT. Information prepared for the larger population areas was based on the comprehensive area and regional transportation studies in those cities. Information for rural communities and small cities was prepared utilizing historical data, such as traffic volumes, vehicle use, population trends, special traffic counts and other related traffic information gathered through special studies. Approximately 72 requests for design traffic were completed. Several consultant traffic analyses were overseen and edited.

PROPOSED ACTIVITIES FOR 2006: Design traffic data will continue to be furnished for cities, counties and to ODOT divisions upon approved requests. Traffic analysis and projections will be completed, as requested for all programmed construction projects. Project Planning Reports and other required special studies will be developed. Keep informed of technological advances through attendance of seminars, conferences and workshops.

ESTIMATED TOTAL COST:	CONTINUING	
Programmed Amount for FY 2005	\$ 132,400	(SPR)
	-0-	(State)
Estimated cost for FY 2005	\$ 122,000	(SPR)
	-0-	(State)
Estimated cost for FY 2006	\$ 135,000	(SPR)
	-0-	(State)

1310 Skid Studies Program

PURPOSE AND SCOPE: To assess the skid resistance for pavement surfaces of Oklahoma's highway system in accordance with the guidelines of the Highway Safety Improvement Program and ASTM standards. The scope of the program includes: scheduled testing of all roadways comprising the National Highway System in a three-year test cycle, annual testing of all interstate highways and Strategic Highway Research Program (SHRP) sites, and special testing conducted as required.

ACCOMPLISHMENTS DURING FY 2005: The Department continued to conduct pavement friction (skid) testing of the 10,600 miles of highway in Divisions 5,6,& 7. Approximately 7% of the roadways had recorded values of less than adequate skid resistance. Testing operations were delayed in the spring due to maintenance problems with the system components requiring extensive repairs. Testing began late in the year in the Division 4 area.

PROPOSED ACTIVITIES FOR FY 2006: The annual test cycle is scheduled for the highways in Divisions 4 & 8 to be tested through to completion by the end of calendar year 2005 (December 31). This encompasses all state, federal and interstate highways totaling approximately 7,400 miles. The maintenance delays experienced in FY 2005 will preclude meeting this target date by approximately four months. Acquisition of a new Pavement Friction Tester is programmed for FY 2006, which should positively impact productivity and the system's operational rate.

ESTIMATED TOTAL COST	CONTINUING	
Programmed Amount for FY 2005	\$130,000	(SPR)
	-0-	(STATE)
Estimated Cost for FY 2005	\$130,200	(SPR)
	-0-	(STATE)
Estimated Cost for FY 2006	\$407,700	(SPR)
	-0-	(STATE)

1403 Standards and Specifications Manual

PURPOSE AND SCOPE: To revise and update the Standards and Specifications Manual according to Department, AASHTO and FHWA design criteria, policies and procedures.

ACCOMPLISHMENTS DURING FY 2005: New Project

PROPOSED ACTIVITIES FOR FY 2006: Complete Phase I of the new manual.

ESTIMATED TOTAL COST	CONTINUING
Programmed Amount for FY 2005	\$ - 0 - (SPR) - 0 - (STATE)
Estimated Cost for FY 2005	\$ - 0 - (SPR) - 0 - (STATE)
Estimated Cost for FY 2006	\$ 200,000 (SPR) - 0 - (STATE)

1510 Justification Studies

PURPOSE AND SCOPE: To study the economic, environmental and other effects of design features such as interchanges, grade separations, bypasses, utility structures, pedestrian structures, etc., for the purpose of determining the economic and engineering feasibility of such proposals.

ACCOMPLISHMENTS DURING FY 2005: Review of consultant studies completed.

PROPOSED ACTIVITIES FOR 2006: Consultant studies will be overseen as needed. Keep informed of technological advances through attendance of seminars, conferences and workshops.

ESTIMATED TOTAL COST:	CONTINUING	
Programmed Amount for FY 2005	\$ 10,000	(SPR)
	-0-	(State)
Estimated cost for FY 2005	\$ 2,000	(SPR)
	-0-	(State)
Estimated cost for FY 2006	\$ 12,000	(SPR)
	-0-	(State)

1511 Project Reconnaissance Information Development

PURPOSE AND SCOPE: To implement the new “18 Month Ahead of Schedule Program” authorized by the Director, the study team has developed a list of Project Reconnaissance Data needed to get these projects underway in a more timely fashion. This includes coordination between multi - disciplinary divisions within ODOT to gather preliminary data for project development.

ACCOMPLISHMENTS DURING FY 2005: With the revised 8 year Construction Work Program process, scoping activities post programming have been incorporated into Project Management work flows. No activities under this item were incurred in FY04. The new Project Reconnaissance is similar to Scoping, so this item is changing accordingly.

PROPOSED ACTIVITIES FOR FY2006: Coordinate with Project Management Division on implementing data collection contracts that provide information necessary to begin the environmental processes for projects on an earlier timeline. Adjust the scoping process to incorporate the 8 Year Construction Work Plan process and any changes that occur in the development of the Environmental Procedures Manual.

ESTIMATED TOTAL COST:	CONTINUING	
Programmed Amount for FY 2005	\$ 5,000	(SPR)
	- 0 -	(STATE)
Estimated cost for FY2005	\$ - 0 -	(SPR)
	- 0 -	(STATE)
Programmed Amount for FY2006	\$ 10,000	(SPR)
	- 0 -	(STATE)

PURPOSE AND SCOPE: Establish and maintain the functional classification system and federal-aid eligibility of the Oklahoma highway system. To maintain all records, correspondence and documentation associated with the functional classification and federal-aid eligibility of roads under local jurisdiction. Provide coordination between local jurisdictions and the Federal Highway Administration (FHWA). Assist cities with a population of 5000 or greater in establishing an official urban area boundary by coordinating efforts between the local jurisdictions and the FHWA. Act as liaison between ODOT and the FHWA in determining the federal-aid eligibility of roads under state jurisdiction. To prepare and submit agenda items and supporting documents pertaining to state highway revisions to the State Transportation Commission. To coordinate any revisions to the United States route numbered system with the American Association of State Highway and Transportation Officials (AASHTO). To organize, maintain and secure all historical documents and maps pertaining to the history of the State Highway and functional classification systems.

ACCOMPLISHMENTS DURING FY 2005: Field meetings were conducted with local county officials, including the Directors of the Association of Regional Councils (OARC), whereby ODOT policies and procedures for rural functional classification revisions under Senate Bill No. 1056 were discussed. Local government requests to revise the functional classification system were processed and submitted to the FHWA. Maps and documents pertaining to the national highway system were prepared and submitted to the FHWA. Functional Classification information was made available to anyone with access to the ODOT computer network through the Geographical Resource Intranet Portal (GRIP). The System Section transferred systems maps and documents to the ODOT geographical information system (GIS) environment. Agenda items and supporting documents used to add and remove roads to the highway system were prepared and submitted to the Transportation Commission. Complied with OAC 730:10-9-8 effective Jan. 1, 2000 and thereby maintained the State Highway Infrastructure Bank. The database of Memorial Roads and Bridges was updated. An Official Memorial Roads and Bridges publication was produced and distributed to Oklahoma senators and congressman. Maps depicting HPMS sample sections in urban and urbanized areas were generated for use in data collection efforts.

PROPOSED ACTIVITIES FOR FY 2006: The systems section will continue to transfer systems maps and documents to the ODOT geographical information system (GIS) environment. Agenda items and supporting documents used to add and remove roads to the highway system will be prepared and submitted to the Transportation Commission. Prepare and submit maps and documents pertaining to the national highway system to the FHWA. The Systems Section will facilitate meetings with local government officials to address revisions to the rural and urban collector systems as set forth under Senate Bill No. 1056. Revisions to the control section system will be made as warranted. Updates will be made to the Memorial Roads and Bridges database and a new publication will be distributed. Requests for revisions to the functional classification system will be processed and submitted to the FHWA. The System Section will transfer all system files to electronic format and make them available on the ODOT intranet. The state highway infrastructure bank will be maintained as specified in OAC 730:10-9-8. Rural and Urban functional classification books will remain updated at all times. Staff will keep informed of latest advances in GIS, Remote Sensing and document management technologies by attending seminars, conferences and workshops.

ESTIMATED TOTAL COST

Programmed Amount for 2005

Estimated Cost for FY 2005

Estimated Cost for FY 2006

CONTINUING

\$ 186,000 (SPR)

- 0 - (STATE)

\$ 186,000 (SPR)

- 0 - (STATE)

\$ 198,000 (SPR)

- 0 - (STATE)

PURPOSE AND SCOPE: To maintain up-to-date software and techniques to estimate the current and future needs of the state highway system. To publish a Needs Study and Sufficiency Report biennially showing the physical and financial needs of the state highway system over a twenty-year period for construction, maintenance, and administration. To identify the Top 25 Priority List of critical projects by Commission District. To maintain a geometric deficiency file of the state highway system. To maintain a maintenance and construction log of highway projects. To develop, maintain, and recommend a list of highway segments for removal from the state highway system and its associated cost.

ACCOMPLISHMENTS DURING FY 2005: Finalized update of highway subsections, system, and inventory for the 2004 Sufficiency file. Compiled and validated field data collected for the 2005 Needs Study and Sufficiency Rating Report. Determined construction and maintenance cost estimates for the 2005 program. Updated factors for statewide traffic, accidents, surface replacement and surface obsolescence in various programs. Updated proposed highway file for future routes. Assembled Top 25 Priority List of critical highways by Commission District. Published and distributed the 2005 Needs Study and Sufficiency Rating Report and the Top 25 Priority List. Began working on the modernization of the software used to compile the needs study data.

PROPOSED ACTIVITIES FOR FY 2006: Update the Sufficiency and Maintenance Manuals. Update the state highway subsections, inventory, and improvement data for the Sufficiency file prior to field collection of pertinent data. Update geometric data contained in the Deficiency file. Complete field revision of the Needs Study and Sufficiency Rating Report. Begin revisions of the Needs Study Report, Volumes 1 & 2. Begin revising highway standards used for planning purposes. Maintain a tracking procedure for the Transportation Improvement Corridors. Review, revise, and publish the State Highway Removal Report. Continue work on modernization of the software used to compile the needs study data.

ESTIMATED TOTAL COST	CONTINUING	
Programmed Amount for FY 2005	\$ 73,500	(SPR)
	-0-	(STATE)
Estimated Cost for FY 2005	\$ 66,773	(SPR)
	-0-	(STATE)
Estimated Cost for FY 2006	\$ 69,000	(SPR)
	-0-	(STATE)

PURPOSE AND SCOPE: To develop and implement the Department's Pavement Management System (PMS); maintain a computer database of pavement distresses and other roadway characteristics used for the analysis of pavement condition and performance and as an aid to pavement design; maintain application software necessary to analyze roadway information for pavement management; and supply data for inclusion in the Highway Performance Monitoring System (HPMS).

ACCOMPLISHMENTS DURING FY 2005: Continued refinement of PMS procedures. Developed and implemented an Intranet Analysis Tool to enable field divisions to analyze their roads based on different budget scenarios. Provided technical support to divisions for statewide video log. Collected Falling Weight Deflectometer (FWD) and Ground Penetrating Radar (GPR) on entire non-toll National Highway System (NHS) in Oklahoma. Incorporated the resulting FWD data into PMS decision matrix. Performed a PMS analysis of the National Highway System. Provided data and support for Pavement Preservation Program (3P) project selection. Completed correlation analysis of Needs Study Years to Next Overlay and pavement management data. Began pavement condition data collection on the following:

- Non-NHS state highway routes in Divisions 1-3 and 5-7
- HPMS sample sections in those divisions
- Non-highway urban principal arterials
- Non-highway urban functionally classified roads

PROPOSED ACTIVITIES FOR FY 2006: Continue refinement of PMS procedures by updating performance curves, treatment costs, and triggers. Incorporate additional relevant data elements into analysis as they become available. Provide technical support for the Intranet Analysis Tool. Begin new round of condition data collection of NHS routes and the non-NHS in Divisions 4 and 8. Collect FWD and GPR on an additional 880 miles of high volume, non-NHS routes. Perform a PMS analysis of the interstate highway system. Provide video log technical support to field divisions. Keep informed of the latest technological advances and practices through seminars, conferences, and workshops.

ESTIMATED TOTAL COST	CONTINUING	
Programmed Amount for FY 2005	\$ 899,900	(SPR)
	-0-	(STATE)
Estimated Cost for FY 2005	\$1,300,000	(SPR)
	-0-	(STATE)
Estimated Cost for FY 2006	\$1,690,549	(SPR)
	-0-	(STATE)

1700 General Urban Transportation Planning Activities

PURPOSE AND SCOPE: This item includes managing staff members in Planning & Program Coordination and the conduct of those general planning and research activities which cannot be ascribed to specific transportation studies contained in the unified planning work programs or the SPR Report. These activities include; a) coordination with appropriate ODOT staff members and Field Divisions, b) coordination with and among local, state, and federal officials, c) dissemination of social and economic data and traffic counts to the public and private sector on request, d) providing technical assistance on planning and research activities/studies at request, e) tracking federal and state legislation and regulations affecting the Department and f) keeping abreast with the latest technological advances and federal regulations in transportation planning, ITS, etc. through seminars, workshops and reading materials.

ACCOMPLISHMENTS DURING FY 2005: Coordination work was continued with appropriate ODOT staff members and Field Divisions. Socioeconomic data and traffic counts were provided, at request, to local and state officials and to citizens. Staff attended various seminars and workshops related to management, transportation planning, homeland security and policies in order to maintain, upgrade and develop needed expertise, proficiency and professionalism. Assistance related to Planning & Program Coordination functions was provided. Coordination with and among local, state and federal officials was continued. Monitored federal and state legislation and regulations affecting the Department

PROPOSED ACTIVITIES FOR FY 2006: Coordination with appropriate ODOT staff members, Field Divisions and local, state and federal officials will be continued. Special attention will be focused on the statewide and urban planning sections in the federal transportation bill, SAFETEA-LU, and its effects on statewide and urban transportation planning. Dissemination of pertinent planning data and information will be accomplished on request. Technical assistance will be provided on request. concerning transportation planning and the SAFETEA-LU legislation. Professional enrichment of Planning & Program Coordination members will be pursued through attendance at workshops, seminars and conferences.

ESTIMATED TOTAL COST	CONTINUING	
Programmed Cost for FY 2005	\$ 33,500	(SPR)
	\$ -0-	(State)
Estimated Cost for FY 2005	\$ 33,500	(SPR)
	\$ -0-	(State)
Estimated Cost for FY 2006	\$ 33,500	(SPR)
	\$ -0-	(State)

1701 Oklahoma City Area Regional Transportation Study (OCARTS)

PURPOSE AND SCOPE: To maintain up-to-date socioeconomic and land use data and a viable Long Range Transportation Plan in compliance with the provisions of existing federal regulations and SAFETEA-LU.

ACCOMPLISHMENTS DURING FY 2005: ACOG developed and published the ITS Architecture Plan for the Oklahoma City area. Continued development and implementation of regional Incident Management system. MPO staff were involved in the ongoing Commercial Vehicle Information Systems and Networks (CVISN) planning process. Continued to work with ODEQ on monitoring CO and Ozone levels, financially assisted in the development of the statewide air quality model, and participated in development of the Early Action Compact State Implementation Plan (SIP). The Clean Air Committee promoted an extensive public education campaign “Let’s Clear the Air” and “Get Your Own Square of Clean Air”. Continued coordinating services with COTPA for transportation of the Elderly and Disabled. Began and completed public involvement, analysis, and publication of the 2030 OCARTS Long Range Transportation Plan and approval by both the Technical and Policy Committees. Updated the 2004-2006 OCARTS Area Transportation Improvement Program (TIP). The FFY 2005-2007 TIP and the FY 2006 UPWP was prepared and approved by FHWA & FTA.. The FY 2006 Agreement was executed. Federal process review was completed for ACOG transportation planning process. ACOG - ODOT certification process completed. Department staff worked closely with ACOG staff in developing the Early Action Compact SIP for meeting the new 8-Hour ozone National Ambient Air Quality Standard and ozone control measures for mobile sources appropriate to the Oklahoma City metropolitan area. Assisted ACOG staff with obtaining new software for updating the OCARTS. Assisted ACOG staff in preparation of the 2030 OCARTS Long-Range Transportation Plan and attended public involvement efforts associated with the 2030 Plan. Participated in the development of MPO, State, and FHWA procedures for use of “In-Kind” funds by MPOs.

PROPOSED ACTIVITIES FOR FY 2006: Finalization and publication of the 2030 OCARTS Long-Range Transportation Plan. Areas of special emphasis in FY 2006: Review of demographic areas in the OCARTS area for assessing high growth areas in the Oklahoma City metropolitan area, continued development and refinement of the transit model for OCARTs. Participate in the COTPA Fixed Guideway study. Continued collection and assessment of socioeconomic data and transportation data. Continue air quality efforts in implementation of the Early Action Compact SIP and implementation of ozone control measures relating to transportation sources. Continue Program Coordination and Local Technical Assistance. Maintain staff training and dissemination of planning documents. Continue management of the planning process and updating of socioeconomic and traffic data for the Oklahoma City area.

ESTIMATED TOTAL COST:	CONTINUING	
Programmed Amount for FY 2005:	\$ 16,500	(SPR)
	\$ -0-	(State)
	\$ 1,060,466	(PL)
	\$ 191,051	(Local)
	\$ 125,000	(In-kind)
Estimated Cost for FY 2005:	\$ 16,500	(SPR)
	\$ -0-	(State)
	\$ 1,060,000	(PL)
	\$ 220,000	(Local)
	\$ 31,433	(In-kind)
Estimated Cost for FY 2006:	\$ 16,500	(SPR)
	\$ -0-	(State)
	\$ 1,091,106	(PL)
	\$ 196,051	(Local)
	\$ 134,200	(in kind)

PURPOSE AND SCOPE: To maintain up-to-date socioeconomic and land use data and a viable Long Range Transportation Plan in compliance with the provisions of existing federal regulations and SAFETEA-LU and all applicable transportation planning regulations and requirements for the Tulsa urbanized area.

ACCOMPLISHMENTS DURING FY2005: Elements of the 2030 Mobility Plan (LRTP) were finalized. A Joint Certification Statement between ODOT and the Indian Nations Council of Governments (INCOG) was signed. Preparation and finalization of the FY 2006 UPWP was completed. The FY 2006 Agreement was executed and authorization to expend federal funds effective July 1, 2005 through June 30, 2006 was granted by FHWA. Public Involvement activities were greatly enhanced during the planning year to more involve the public, particularly, in the LRTP process. Technical support continued to be provided to the Oklahoma Department of Environmental Quality (DEQ) and the Tulsa City-County Health Department to maintain compliance with Federal Clean Air Act provisions and the National Ambient Air Quality Standards (NAAQS) for ozone and particulate matter. Developed an Emergency Action Compact with the Environmental Protection Agency to insure methods are instilled and followed to insure public awareness of the dangers and implications of attainment and non-attainment of the new 8 hour air quality standards in the Tulsa area. Continued support of Ozone Alert and MERIT programs. Conducted many broad based public involvement activities in support of the planning process, air quality and transit programs.

PROPOSED ACTIVITIES DURING FY 2006: Implementation of the FY 2006 UPWP: completion, publication, and distribution of the LRTP for 2030; modeling refinements will be developed and incorporated in the planning process; a scientific public opinion survey will be initiated for the LRTP for 2030; assist several members governments with incorporating the goals and actions of the Destination 2030 in the development of land use plans or comprehensive plans. Transportation Improvement Program: with the cooperation of the member governments, develop and maintain the regional Transportation Improvement Program for FFY 2006-2008. Air Quality Planning and Management: continue to coordinate the Ozone Alert Programs, the Clean Cities Programs and the Commuter Choice Rideshare programs in the regions's efforts to maintain attainment of the air quality standards. INCOG will continue to work with ODEQ and ODOT to implement the Early Action Compact. Congestion Management: support the implementation of the Incident Management Manual, work toward implementing ITS components throughout the region and revive the Congestion Management System Plan as appropriate. Bicycle/Pedestrian System Implementation: continue assisting member governments in the planning, funding and implementation of the Bicycle/Pedestrian Trail system as well as planning, developing and funding on-street bicycle routes. Educate the public on bicycle issues will be explored and engaged where feasible.

ESTIMATED TOTAL COST:	CONTINUING	
Programmed amount for FY2005	\$ 26,000	(SPR)
	\$ -0-	(STATE)
	\$ 710,062	(PL)
	\$ 177,516	(LOCAL)
Estimated cost for FY 2005	\$ 26,000	(SPR)
	\$ -0-	(STATE)
	\$ 730,079	(PL)
	\$ 177,516	(LOCAL)
Estimated cost for FY2006	\$ 20,000	(SPR)
	\$ -0-	(STATE)
	\$ 730,079	(PL)
	\$ 177,516	(LOCAL)

PURPOSE AND SCOPE: To maintain up-to-date socioeconomic and land use data and a viable Long Range Transportation Plan in compliance with the provisions of existing federal regulations and SAFETEA-LU.

ACCOMPLISHMENTS DURING FY 2005: Transportation Planning for the Lawton Metropolitan Area was carried out as described in the Unified Planning Work Program (UPWP) FY 2005. This consisted of: Hiring consultant for air quality campaign, modeling update; conducted ridership survey of two transit routes; began update of Long Range Transportation Plan 2030; prepared a Joint Certification Statement between ODOT and LMPO and completing the FY 2005 UPWP in accordance with TEA-21. The FY 2005 Agreement was executed and authorization to expend federal funds was granted by FHWA. The FY 2006-2008 Transportation Improvement Program (TIP) was compiled, circulated and approved.

PROPOSED ACTIVITIES FOR FY2006. Continue to ensure the continuity of transportation planning, to monitor planning activities in a manner that maintains the LMA eligibility for receipt of federal capital and operating assistance and provides a continuous, cooperative and comprehensive transportation planning process. Collect, maintain and evaluate data related to current socioeconomic, travel and transportation for use in updating LMA model. Implement short-range transportation activities derived from the long-range transportation plan. Adopt the 2030 Long Range Transportation Plan with the latest information on population demographics, job location, travel demand management and publicly generated goals and objectives. Monitor 2005-2007 and 2006-2008 Transportation Improvement Programs (TIP) and develop the 2007-2009 TIP. Develop appropriate safety goals and tools for transportation system. Support the Lawton Metropolitan Area Air Quality Committee (LMAAQC) Program and ensure implementation of projects. Prepare the FY 2007 UPWP, execute the FY 2007 Agreement and ensure an FY 2006 Joint Certification Statement. Develop appropriate safety goals and implement tools for safety and security in the transportation system.

ESTIMATED TOTAL COST:

CONTINUING

Programmed Amount for FY 2005

\$ 15,900 (SPR)
\$ 0 (STATE)
\$148,533 (PL)
\$ 32,500 (LOCAL)

Estimated Cost for FY 2005

\$ 15,900 (SPR)
\$ 0 (STATE)
\$123,295 (PL)
\$ 32,500 (LOCAL)

Estimated Cost for FY 2006

\$ 15,900 (SPR)
\$ 0 (STATE)
\$120,000 (PL)
\$ 32,500 (LOCAL)

PURPOSE AND SCOPE: To maintain up-to-date socioeconomic and land use data and a viable Long Range Transportation Plan in compliance with the provisions of existing federal regulations and SAFETEA-LU, and all applicable transportation planning regulations and requirements for the Fort Smith urbanized area.

ACCOMPLISHMENTS DURING FY 2005: The tasks listed in the FY 2005 UPWP were completed. Continued analysis of the transportation and socioeconomic elements of the Long Range Transportation Plan. Staff continued to collect data on proposed corridors for a controlled-access facility in the Oklahoma portion of the Bi-State metropolitan planning area. General administrative functions and coordination among the local, state, and federal agencies were continued. The FY 2006 Agreement was completed and authorized. The FY 2006 UPWP was prepared and approved. The new MPO was updating its operating and administrative documentation and is adding new members to its membership. Work on updating the 2030 LRTP was finalized. Work on the development of the ITS plan and architecture was continued.

PROPOSED ACTIVITIES FOR FY 2006: The Oklahoma Department of Transportation will continue coordination with the Bi-State Metropolitan Planning Organization and the Arkansas DOT in maintaining the 3-C planning process in the Fort Smith area. Complete the reorganization effort to become fully functional and operational. Finalize the update of the 2030 LRTP. Continue staff education, training and attendance at workshops and seminars. Continue work on the development and implementation of the ITS architecture and plan.

ESTIMATED TOTAL COST	CONTINUING	
Programmed Amount for FY 2005	\$ 6,600	(SPR)
	\$ -0-	(STATE)
	\$ 13,826	(PL)
	\$ 3,457	(LOCAL)
Estimated Cost for FY 2005	\$ 6,600	(SPR)
	\$ -0-	(STATE)
	\$ 13,826	(PL)
	\$ 3,457	(LOCAL)
Estimated Cost for FY 2006	\$ 6,600	(SPR)
	\$ -0-	(STATE)
	\$ 13,826	(PL)
	\$ 3,457	(LOCAL)

1719 Statewide Transportation Improvement Program (STIP)

PURPOSE AND SCOPE: To develop, maintain and amend a financially-constrained federally funded transportation construction program for the State of Oklahoma in compliance with TEA-21 and in cooperation with the Federal Highway Administration (FHWA), Federal Transit Administration (FTA), three Metropolitan Planning Organizations (MPO): ACOG - Association of Central Oklahoma Governments, INCOG - Indian Nations Council of Governments and LMPO - Lawton Metropolitan Planning Organization, Bureau of Indian Affairs (BIA) and tribes.

ACCOMPLISHMENTS DURING FY 2005: Developed the FFY 2005-2007 Statewide Transportation Improvement Program (STIP) for implementation . Maintained the FFY 2005 portion of the STIP through the following amendment process: All Amendments of the FFY 2005 - 2007 STIP and TIPs have been completed in accordance with the *Approved Procedures for Developing and Amending the STIP and TIP*. The Process includes publication of proposed amendment for a minimum of 14 days for review and comment. The public involvement process was completed in accordance with TEA 21 Section 1203 and 1204, regarding publication of project amendments.

The FFY 2005 - 2007 STIP contains an Executive Introduction of the Transportation Commission with Table of Organization; Definition and Explanation of the STIP; Projected Revenues and Expenditures Summary; FFY 2005, 2006, 2007 Construction Work Plan; Introduction and Explanation of MPOs with listing; ACOG TIP; INCOG TIP; LMPO TIP; Indian Reservation Roads Transportation Improvement Program (TIP); Explanation of the STIP process; STIP and TIP Development and Amendment Procedures; Joint Memorandum between FHWA and FTA; Certification; Public Involvement Methods and Processes; and the Federal Lands Projects.

The FFY 2005-2007 STIP was developed in accordance with the *Procedures for Developing and Amending the STIP and TIP* approved by the Department of Transportation, Federal Highway Administration, Federal Transit Administration, ACOG, INCOG and LMPO.

Developed the Public Involvement Methods and Processes to ensure consultation with local officials in non-metropolitan areas for transportation planning programs administered by ODOT as required by federal regulations 23 CFR 450.212 (h), (I). This process is separate and discrete from transportation policy and project development in metropolitan areas of greater than 50,000 population.

PROPOSED ACTIVITIES FOR FY2006. Areas of special emphasis in FY 2006 are: developing the FFY 2006 - 2008 Statewide Transportation Improvement Program for implementation, maintaining the FFY 2006 portion of the STIP through the approved *STIP/TIP Amendment Procedures* and continuing the procedures for consultation with non-metropolitan local officials.

ESTIMATED TOTAL COST:	CONTINUING	
Programmed Amount for FY 2005	\$50,200	(SPR)
	\$0	(STATE)
Estimated Cost for FY 2005	\$50,200	(SPR)
	\$0	(STATE)
Estimated Cost for FY 2006	\$55,000	(SPR)
	\$ 0	(STATE)

1901National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permits

PURPOSE AND SCOPE: The United States Environmental Protection Agency (EPA) has promulgated regulations in 40 CFR 122 requiring DOT's to obtain a permit for their separate stormwater sewer systems. ODOT is required under this regulation to obtain a permit for its stormwater runoff system within the cities of Oklahoma City (OKC), Tulsa, Lawton and Norman city limits. ODOT selected the option to be a co-permittee with the City of Oklahoma City and Tulsa in obtaining an NPDES permit and is required to be permitted under Phase II under the same regulation. ODOT does not have the expertise or staff available to perform the storm sewer outfall water testing required under this work permit, or to develop the Phase II permit and all work to develop and implement a permit to cover ODOT under Phase II.

ACCOMPLISHMENTS DURING FY 2005: Completed annual reports for Oklahoma City and Tulsa for submission to EPA. Completed required stormwater runoff testing. Contracted for assistance in developing a Phase II permit.

PROPOSED ACTIVITIES FOR FY 2006: Develop Phase II permit. Inventory all regulated outfalls of ODOT's separate storm sewer systems within urbanized areas as required by the MS4 permits issued by Department of Environmental Quality. Inventory will identify, locate, and record data for the outfalls. The benefit of this project will help ODOT maintain compliance with the MS4 permit through implementation of the inventory mandated by the permit and included in ODOT's Storm Water Management Plan. It will provide the data required to locate illicit discharges originating within ODOT right of way or being discharged into ODOT right of way. It will also include ODOT facilities within the regulated areas of Oklahoma.

ESTIMATED TOTAL COST	CONTINUING	
Programmed Amount for FY 2005	\$ 160,000	(SPR)
	- 0 -	(STATE)
Estimated Cost for FY 2005	\$ 160,000	(SPR)
	- 0 -	(STATE)
Estimated Cost for FY 2006	\$ 160,000	(SPR)
	- 0 -	(STATE)

PURPOSE AND SCOPE: To update the Statewide Intermodal Transportation Plan (“The Plan”) and other associated statewide planning activities in accordance with the provisions of TEA-21 and its subsequent reauthorization legislation. To conduct and/or participate in the development of plans relating to Transportation Improvement Corridors and other corridors identified in The Plan.

ACCOMPLISHMENTS DURING FY 2005: Began and completed the update process for the 2005 - 2030 Plan in the areas of demographic trends utilizing the 2000 Census data; traffic assignment and identification of Transportation Improvement Corridors, Congressional High Priority Corridors; completed negotiations with a consultant to provide the Intermodal Element of The Plan. Consultant completed the Intermodal Element and provided policy direction for intermodal development in Oklahoma. Other elements of the Plan completed: demographic section; other transportation policies; identification of Freight Operational Improvement Corridors; environmental process section completed; financial options section completed; and The Plan sent to Department staff for review and approval. Public involvement for draft Plan completed.

Worked with the Oklahoma University and Oklahoma State University in updating and/or implementing a new multi modal statewide freight forecasting model. Participated in the steering committee for the Ports-to-Plains Congressional High Priority Corridor, Corridor Management Plan development in cooperation with the states of Texas, New Mexico, and Colorado. Management Plan completed and distributed. Instituted the public participation plan for non-metropolitan area local officials. Worked with Oklahoma Department of Commerce officials in providing data for logistics planning in the State. Completed draft Waterways Transportation Needs Assessment. Completed Congressional applications for National Corridor Planning & Development funds and other high priority funding programs.

PROPOSED ACTIVITIES FOR FY 2006: Submit The Draft Plan for public comment and finalize The Plan. Publish The Plan in paper and compact disc formats, and on the Department’s internet site. Continue to monitor transportation, legislative, and demographic trends relative to The Plan and to SAFETEA-LU. Initiate, participate and/or complete corridor studies on Transportation Improvement Corridors or other corridors in the State. Monitor studies for a statewide freight forecasting model to be conducted by university-based researchers. Work with the Oklahoma Transportation Center to provide logistics planning and data in cooperation with the Oklahoma Department of Commerce. Continue to attend conferences and training courses related to Statewide and Corridor planning and grant applications.

ESTIMATED TOTAL COST	CONTINUING	
Programmed Amount for FY 2005:	\$ 300,000	(SPR)
	\$ -0-	(State)
Estimated Cost for FY 2005:	\$ 300,000	(SPR)
	\$ -0-	(State)
Estimated Cost for FY 2006:	\$ 25,000	(SPR)
	\$ -0-	(State)

1903 Intelligent Transportation Systems Planning

PURPOSE AND SCOPE: Incorporate Intelligent Transportation Systems (ITS) into the transportation planning process in compliance with the provisions of the transportation bill re-authorization, Use an ITS integration strategy by defining roles, responsibilities and shared operational strategies to address key policy and operational issues creating and / or updating the conceptual design for ITS within the planning area. Ensure the interoperability and institutional / technical integration of ITS efforts through compliance with ITS Statewide / Regional Architectures and related ITS standards.

ACCOMPLISHMENTS DURING FY 2005: Secured ITS integration funding for the systems analysis / design and deployment of Oklahoma's Commercial Vehicle Systems and Networks (CVISN) Program plan projects. Continued the use of 511 Traveler Assistance program funding to complete a 511 deployment plan. Assisted Oklahoma City Metropolitan Planning Organizations MPO - ACOG and COTPA. Maintained Oklahoma's CVISN and Statewide Strategic ITS Program plans and architectures.

PROPOSED ACTIVITIES FOR FY2006: Secure ITS integration funding for the systems analysis / design and deployment of Oklahoma's Commercial Vehicle Information Systems and Networks (CVISN) Program plan projects. Maintain the Statewide ITS Plan and architecture, including the CVISN. Assist Oklahoma City and Tulsa areas in maintenance of their regional ITS and architecture. Coordinate ITS and other technology based transportation research contracts and activities.

ESTIMATED TOTAL COST:	CONTINUING	
Programmed Amount for FY 2005	\$ 65,000	(SPR)
	0	(State)
Estimated cost for FY 2005	\$ 80,000	(SPR)
	0	(State)
Estimated Cost for FY 2006	\$ 104,000	(SPR)
	0	(State)

1904 Air Quality Transportation Planning

PURPOSE AND SCOPE: To monitor and participate in air quality transportation planning developments relating to requirements of the Clean Air Act Amendments and SAFETEA-LU. To represent the Department in air quality nonattainment and transportation conformity developments and actions, if necessary. To analyze and comment on air quality nonattainment and transportation regulations and law. To maintain information flow to and from decision-makers regarding air quality/transportation issues, developments, regulations and laws. To develop staff personnel to participate in air quality/transportation planning. To enable the Department to be a progressive participant in reducing the impacts of transportation-related pollution.

ACCOMPLISHMENTS DURING FY 2005: Participation in the air quality/transportation planning activities of the Lawton, Oklahoma City, and Tulsa Metropolitan Planning Organizations (MPO). These activities included participation in the development and implementation of “Early Action Compacts (EAC)” for the Oklahoma City and Tulsa Metropolitan areas. Monitored and approved invoices of funds for the Oklahoma Department of Environmental Quality (ODEQ) to conduct air quality modelling which was critical to development of the EACs. Funds for the EACs came from the SPR funds allocated to the Department and PL funds from both the Oklahoma City and Tulsa MPO. The Department also participated in post-EAC activities such as developing appropriate ozone control measures for mobile sources and participation in the Technical Advisory Committee for development of the EAC State Implementation Plan (SIP).

Other accomplishments: research and development of resource materials on air quality/transportation issues; and review and comment on MPO air quality education programs. Coordinate the planning process for air quality modelling funding and actions between the State’s MPOs, ODOT, and the ODEQ; monitoring air quality court decisions on new ozone and particulate matter regulations and regulatory agency (Environmental Protection Agency - EPA) actions toward implementing new 8-Hour Ozone Standard NAAQS. Attended conferences on air quality planning and regulations.

PROPOSED ACTIVITIES FOR FY 2006: Maintain participation in EACs and the EAC Statewide Implementation Plan. Maintain research and participation in air quality/transportation issues, developments, regulations and laws. Participate in Memorandum of Agreement and other requirements (transportation conformity) of nonattainment status if any area of the State becomes nonattainment. Provide data for air quality modelling efforts. Continue to develop education materials and courses for Department personnel regarding air quality and transportation. Participate in MPO and ODEQ air quality/transportation initiatives, educational programs, and efforts to reduce pollution. Continue staff education through FHWA, EPA, NHI, NTI and other agency courses, seminars, and conferences.

ESTIMATED TOTAL COST	CONTINUING	
Programmed Amount for FY 2005:	\$ 9,900	(SPR)
	\$ -0-	(State)
Estimated Cost for FY 2005:	\$ 9,000	(SPR)
	\$ -0-	(State)
Estimated Cost for FY 2006:	\$ 10,000	(SPR)
	\$ -0-	(State)

1979 Environmental Studies (NEPA Review and Compliance)

PURPOSE AND SCOPE: This item includes all coordination required to complete Environmental Impact Statements (EIS), Environmental Assessments (EA), and Categorical Exclusions (CE) required to obtain federal funding authority for the Department's construction program, including necessary ongoing reevaluation and consultation with FHWA regarding existing environmental clearances. It also includes coordination with the Department's public involvement specialist, Planning and Research Division environmental specialists, Project Management Division, Planning and Research Division Planning & Program Coordination staff, Design Divisions, Field Divisions, the interested public, public officials, FHWA, NEPA contract service providers and other internal and external entities to ensure compliance with NEPA and close adherence to the Department's construction work plan. Major environmental issues considered in project development include historic and archaeological resources, endangered species and other wildlife concerns, wetlands, social and economic impacts, including disproportionate impacts to minorities and low income communities, noise, air quality, water quality, and hazardous materials. The input of appropriate state and federal agencies, Native American tribes, and other appropriate entities is solicited, necessary environmental studies are requested and findings summarized, and a plan for public involvement is formulated and executed when necessary. The preparation of the necessary NEPA review documents is performed in-house or by consultants retained through consultant contracts. All draft NEPA documents are reviewed jointly by in-house coordinators and FHWA and finalized for presentation to the public and other review entities. Following all comments, the final documents are provided to FHWA for execution of appropriate concurrences, FONSI's or ROD's.

ACCOMPLISHMENTS DURING FY2005: The NEPA review process was completed for a total of 290 state and local transportation projects, including 287 projects processed as categorical exclusions and 3 as environmental assessments. Public involvement, including formal meetings and hearings as well as informal citizen/stakeholder meetings, was an important component of 16 completed projects. NEPA review is underway on approximately another 30 projects. Reevaluations and consultation with FHWA regarding existing NEPA clearances have been undertaken for 2 EIS, 16 EAs, and approximately 40 CE projects. On-call contracts for Planning and Research Division environmental services have been established.

PROPOSED ACTIVITIES FOR FY2006: Continue routine NEPA and environmental impact review of federal, state and local transportation projects. Improve mechanisms for early coordination with FHWA and other federal land owning agencies in Oklahoma to streamline NEPA process and document preparation. Development of environmental procedures manual for the ODOT preconstruction process is underway. Participate in workshops, conferences, and meetings to keep abreast of best practices and regulatory changes; where appropriate, assume leadership roles in work-related professional organizations and committees.

ESTIMATED TOTAL COST

CONTINUING

Programmed Amount for FY2005	\$470,000	(SPR)
	\$ -0-	(STATE)
Estimated Cost for FY 2005	\$389,990	(SPR)
	\$ -0-	(STATE)
Estimated Cost for FY 2006	\$350,280	(SPR)
	\$ -0-	(STATE)

1980 Environmental Studies (Environmental Affairs and Special Studies)

PURPOSE AND SCOPE: This includes detailed environmental studies required by the Planning and Research Division to ensure Department compliance with all appropriate state and federal laws and regulations protecting all aspects of the human and natural environment. A principal focus is providing studies and evaluations for NEPA studies. Environmental specialists also provide studies and assessments as needed for long-range planning and corridor studies, mitigation of impacts identified during NEPA review, ongoing coordination with regulatory agencies and Field Divisions to ensure implementation of special environmental measures during project construction, maintenance, and operation, and provide expert interpretations to ODOT and FHWA of proposed and current legislation/laws protecting the environment. As requested, special environmental studies are conducted for other ODOT design, traffic, enhancement, and construction functions. Expertise is maintained in wetland biology, COE regulatory requirements, plant ecology, endangered species policy, archaeology, architectural history, tribal coordination, historic preservation policy, environmental health and hazardous waste issues, noise evaluation and mitigation, social and economic impacts, and NEPA policy and regulation. As needed additional expertise is retained through consultant contracts. Also included in this item is the processing of Section 404 and FEMA permits for some state and local transportation projects, and the review of proposed right-of-way releases and other agency actions for consistency with ODOT environmental clearances.

ACCOMPLISHMENTS DURING 2005: A total of 210 Phase I cultural resources studies were completed in-house through Interagency Agreement with the University of Oklahoma for archaeological studies including consultation with SHPO and appropriate Tribal officials. Additional Phase II NRHP evaluation and mitigation work was completed or is currently in progress for 0 projects. Studies resulted in the identification and assessment of 20 historic structures, 1 potential historic district, and 19 archaeological sites. HABS/HAER documentation was completed on 1 historic bridge and development of MOAs and Section 4(f) has been or is underway for 5 projects. 118 archaeological files searches and other investigations were undertaken for borrow pits and other off-project facilities. The Department is conducting a reevaluation of its 12-year old historic bridge survey. Over 1600 bridges evaluated in the original study have been revisited and documented during this study, and a reassessment of the structures is underway. 160 Projects were reviewed for biological/wetlands impacts, of which 9 required formal wetland assessments, 70 required informal consultations with USFS for endangered species, 1 required formal consultation with USFWS, and 10 required surveys for the American Burying Beetle (ABB). Another 70 projects were evaluated on the basis of available records and data. Programmatic agreements for the ABB and wetland mitigation banking are in development 58 Section 404 and 32 FEMA permits were processed. Initial site assessments and LUST reviews were completed for 207 projects. Preliminary Site Investigations for hazardous wastes were completed for 6 projects. Eleven TMN noise studies were undertaken and numerous citizen noise comments were answered.

PROPOSED ACTIVITIES FOR 2006: Continue to improve and expedite tribal consultation processes through meetings with FHWA and all tribes in Oklahoma, and implement MOAs and Programmatic Agreements with tribes as necessary. Complete first phase of reevaluation of Oklahoma historic bridge survey and initiate 2nd phase documentation of bridges not included in original study. Continue to explore opportunities for establishment of wetland and hardwood tree banks. Continue to improve coordination and consultation with USFWS regarding Endangered/Threatened species. Develop ABB protocol to expedite reviews of projects potentially effecting this species.

ESTIMATED TOTAL COST	CONTINUING	
Programmed Amount for FY2005	\$984,500	(SPR)
	\$ -0-	(STATE)
Estimated Cost for 2005	\$913,100	(SPR)
	\$ -0-	(STATE)
Estimated Cost for 2006	\$1,300,260	(SPR)
	\$ -0-	(STATE)

**FEDERAL FISCAL YEAR 2006
OKLAHOMA PROJECT SPRY - 10(40) RS
Part 2**

	<u>PROGRAM</u>	<u>SPR</u>	<u>STATE</u>	<u>FHWA</u>	<u>TOTAL</u>
2100	Transportation Research Board	110,000.00	\$0.00		110,000.00
2102	Research Library Services	65,000.00	0.00		65,000.00
2115	Long Term Pavement Proformance (LTPP/SHRP)	25,000.00	0.00		25,000.00
2120	Technical Assistance - Special Studies	123,000.00	0.00		123,000.00
2122	I-40 Crosstown Case Study	7,500.00	0.00		7,500.00
2130	General Research Activity	417,000.00	0.00		417,000.00
2700	Experimental Product & Technology Evaluation Program	71,000.00	0.00		71,000.00
	Total General Activities	\$818,500.00	\$0.00	\$0.00	\$818,500.00
2146	The Development of Intelligent Soil Compaction	0.00	0.00		0.00
2156	Roadside Vegetation Management	191,000.00	0.00		191,000.00
2157	Herbicide Research Program	67,000.00	0.00		67,000.00
2158	Resilient Modulus Testing and Density Gradient Analysis / Asphalt Mixes	0.00	0.00		0.00
2160	Oklahoma Transportation Center	500,000.00	0.00		500,000.00
2167	Effect of Suction & Moisture on Resilient Modulus Of Subgrade Soils	75,000.00	0.00		75,000.00
2168	Scale effects of Oedometer Based Predictions of Fill Settlement	0.00	0.00		0.00
2169	Test Methods for Determination of Aggregate Specific Gravity	0.00	0.00		0.00
2172	Evaluation of ODOT's Percent Within Limits (PWL) Construction Specifications	32,000.00	0.00		32,000.00
2177	Determination of Dynamic Modulus Master Curves- Hot Mix Asphalt	50,000.00	0.00		50,000.00
2178	Evaluation of Cold, In-Place Recycling, Rehab. Transverse Cracking, US 412	50,500.00	0.00		50,500.00
2180	National Association of Strand Producers Bond Testing	0.00	0.00		0.00
2181	Resilient Modulus of Asphalt - Correlation with Asphalt Pavement Analyzer Rut	44,000.00	0.00		44,000.00
2182	Task Order Contract for Specified Research Items	65,000.00	0.00		65,000.00
2183	Anti - Litter Campaign Effectiveness	0.00	0.00		0.00
2184	Creation of an ODOT Specification for Patching or Overlay for Bridge Decks	108,500.00	0.00		108,500.00
2185	Engineering Properties of Stabilized Subgrade Soils.....	95,000.00	0.00		93,406.00
2186	Rating Precast Prestressed Concrete Bridges for Shear	83,000.00	0.00		83,000.00
2187	Investigation of Automating Turning Movement Studies Using New Sensor Tec	40,000.00	0.00		40,000.00
2188	Vegetative Rehabilitation of Highway Cut Slopes	200,000.00	0.00		200,000.00
2440	LTAP	20,000.00	0.00	280,000.00	300,000.00
	Total Projects	\$1,621,000.00	\$0.00	\$280,000.00	\$1,899,406.00
	Total SPRY Projects and Studies 10(38) RS	\$2,439,500.00	\$0.00	\$280,000.00	\$2,717,906.00
	Grand Total	\$2,439,500.00	\$0.00	\$280,000.00	\$2,717,906.00

**FEDERAL FISCAL YEAR 2006
OKLAHOMA PROJECT SPRY - 10(40) RS
Part 2**

POOLED FUND PROJECTS

Project Number		Estimated ODOT Total Cost to Project	Estimated Duration of Project (Months)	Annual Budget	Federal Funds	State Funds
TPF-5(072)	Accelerated Loading Pavement Study (NCAT Track)	\$900,000.00	36	\$300,000.00	\$300,000.00	\$0
SPR-4(201)	NCHRP - FY 2005	Continuing	Continuing	\$500,000.00	\$500,000.00	\$0
SPR-2(181)	National Vehicle Detector Test Center	\$0.00	180	\$0.00	\$0.00	\$0
TPF-5(017)	WASHTO-X Videoconferencing Program	\$20,000	24	\$20,000.00	\$20,000.00	\$0
TPF-5(063)	Improving the Quality of Profiler Measurements	\$81,600	48	\$26,000.00	\$26,000.00	\$0
TPF-5(009)	AASHTO Snow and Ice Cooperative Program (SICOP)	Continuing	Continuing	\$4,000.00	\$4,000.00	\$0
TPF-5(009)	AASHTO Snow and Ice Cooperative Program (SICOP)	\$30,000	12	\$30,000.00	\$30,000.00	\$0
TPF-5(046)	Transportation Curriculum Council Training Management & Developme	\$100,000	60	\$20,000.00	\$20,000.00	\$0
TPF-5(051)	Construction of Crack - Free Bridge Decks	\$60,000	36	\$20,000.00	\$20,000.00	\$0
TPF-5(068)	AASHTO - LT Maintenance of Load & Resistance Factor Design Spec.	\$40,000	48	\$20,000.00	\$20,000.00	\$0
TPF-5(066)	Material & Construction Optimization, PCC Pavements	\$100,000	48	\$25,000.00	\$25,000.00	\$0
TPF-5(117)	Performance Properties of Ternary Mixes	\$75,000	60	\$0.00	\$15,000.00	\$0
Total Pooled Fund Studies		\$1,231,600		\$965,000.00	\$980,000.00	\$0

"TPF-5(117)" - New Study-Not approved at SPR Submittal

"TPF-5(072)" - Cost doesn't include previous \$1,401,000

"TPF-5(072)" - May be assigned a new TPF number later

2100 Subscription to TRB

PURPOSE AND SCOPE: This project covers the annual subscription to the Transportation Research Board to pay the cost of the Transportation Information Retrieval Service (TRIS) in providing ODOT with current reports and data from research studies in the highway and transportation fields as gathered from federal, state, university or other sources.

ACCOMPLISHMENTS DURING FY 2005: Continued subscription to TRB and continued use of TRIS database.

PROPOSED ACTIVITIES FOR FY2006: Continue accessing TRIS database for information, receiving reports on studies conducted by the TRB, and utilizing other TRB services.

ESTIMATED TOTAL COST:	CONTINUING	
Programmed Amount for FY 2005	\$ 105,000	(SPR)
	0	(State)
Estimated cost for FY 2005	\$ 105,000	(SPR)
	0	(State)
Estimated Cost for FY 2006	\$ 110,000	(SPR)
	0	(State)

2102 Research Library Services

PURPOSE AND SCOPE: Provide the Oklahoma Department of Transportation (ODOT) and customers with an information clearinghouse. The primary goals of this Technology Transfer Office are to provide a sound, progressive, flexible library available to ODOT personnel statewide and to keep them informed of recent innovations in transportation technology, methodologies and programs as soon as information becomes available. Aligning with this is the goal of providing proficient systematic searches of all resources when needed and knowing where to reference the sought after information. Additional services are aimed at providing ODOT with editing and publishing capabilities to assist the Planning & Research Division in generating and distributing reports and publications.

ACCOMPLISHMENTS DURING FY 2005: Successfully expanded services to Research in Progress (RIP) database information. Software and application capabilities to enhance services and accessibility to library by ODOT personnel have been implemented.

PROPOSED ACTIVITIES FOR FY2006: Continue to provide information, services and Research In Progress (RIP) database administration. Continue to develop software and application capabilities to enhance services and accessibility to Library by ODOT personnel. Examine and devised more effective methods of informing personnel of WASHTO-X video conferences.

ESTIMATED TOTAL COST:	CONTINUING	
Programmed Amount for FY 2005	\$ 56,000	(SPR)
	0	(State)
Estimated cost for FY 2005	\$ 56,000	(SPR)
	0	(State)
Estimated Cost for FY 2006	\$ 65,000	(SPR)
	0	(State)

2115 LTTP/SHRP Long Term Pavement Performance

PURPOSE AND SCOPE: The purpose of this project is to maintain LTTP test sites, markings and current status, report maintenance to Southern Region Contract Office (SRCO), assist SRCO with data gathering as necessary, act as general liaison between SRCO and the Department. Maintain working knowledge related to SHRP product implementation, act as general liaison between FHWA and the Department for product implementation activities.

ACCOMPLISHMENTS DURING FY 2005: Provided traffic control for SRCO at time of tour for gathering data. Provided SRCO information as requested.

PROPOSED ACTIVITIES FOR FY 2006: Continue monitoring active sites in Oklahoma, maintain signing and markings for all active sites, report to SRCO other activities regarding maintenance of sites.

ESTIMATED TOTAL COST:	CONTINUING	
Programmed Amount for FY 2005	\$ 25,000	(SPR)
	0	(State)
Estimated cost for FY 2005	\$ 25,000	(SPR)
	0	(State)
Estimated Cost for FY 2006	\$ 25,000	(SPR)
	0	(State)

2120 Technical Assistance - Special Studies

PURPOSE AND SCOPE: Provide ongoing technical support, or special investigations, to the Department when a full-scale research project is not warranted or when a quick turnaround is required.

ACCOMPLISHMENTS DURING FY 2005: Provided support for the Department with assistance and equipment in: core drilling, traffic control, special investigations, bridge deck testing and other activities when needed. Specific investigations: I-40 crack survey, Sequoyah County; Nova Chip Evaluation; Coring for reactor move; FWD testing on U.S. 177, Noble County.

PROPOSED ACTIVITIES FOR FY2006: Provide support for the Department with assistance and equipment in: core drilling, traffic control, special investigations, bridge deck testing and any other activities when needed.

ESTIMATED TOTAL COST:	CONTINUING	
Programmed Amount for FY 2005	\$ 350,000	(SPR)
	0	(State)
Estimated cost for FY 2005	\$ 350,000	(SPR)
	0	(State)
Estimated Cost for FY 2006	\$ 123,000	(SPR)
	0	(State)

Purpose and Scope: Langston University (the University) has developed the Transportation Center of Excellence to assist government entities and others in the transportation industry in the conduct of research and to provide technical assistance and training services in the resolution of transportation issues. The purpose of this project is to conduct research entitled “Interstate 40 Crosstown: A Case Study”. The construction of the I-40 Crosstown Project will occur in a completely new and relocated location from the existing freeway. One of the results of this construction project will be the relocation of existing businesses and residences along the right-of-way areas of both the existing and the new roadway. The case study will investigate the perceptions of the citizens affected by residential or business relocation of the services provided by Coates Field Services, the representatives of the Department in acquisition and relocation of the owners and/or occupants of these residences and businesses.

Accomplishments During FY 2005: Data Collection and analyses from enhanced surveys and interviews for Phase 2 Complete.

Proposed Activities for FY 2006: Complete the final report for Phase 1, complete the interviews for the commercial relocatees, analysis of the data and complete Phase 2 Report, Begin Phase 3 interviews and data collection when the 12 month period in a new location is completed.

Estimated Total Cost:	\$ 212,000	
Programmed Amount for FY 2005	\$ 82,000	(SPR)
	- 0 -	(STATE)
Estimated Cost for FY 2005	\$ 74,242	(SPR)
	- 0 -	(STATE)
Estimated Cost for FY 2006	\$ 7,500	(SPR)
	- 0 -	(STATE)

2130 General Research Activity

PURPOSE AND SCOPE: This activity covers various research activities which are necessary for the operation of a research section but which cannot be accurately included in other projects. Examples of this type of activity include: attending quality task force meetings, writing work plans for emerging research projects which have not been assigned an item number when the work plan is written, reviewing research reports, meeting with university and private researchers, regarding proposed projects, attending industry seminars, conferences, etc. This project also covers costs of various professional services contracts for research projects which fill needs of the Department , but were not foreseen when the SPR budget was written, and therefore were not included as separate items. This may include special technical assistance on multiple projects, and providing matching funds for leveraging research program funds, such as OCAST/IDEA programs, for research significant to the Department.

ACCOMPLISHMENTS DURING FY 2005: Attended meetings, wrote work plans, reviewed reports, discussed proposed work with researchers and ODOT personnel, as described above.

PROPOSED ACTIVITIES FOR FY 2006: Continue work on general research for ODOT.

ESTIMATED TOTAL COST:	CONTINUING	
Programmed Amount for FY 2005	\$ 211,793	(SPR)
	0	(State)
Estimated cost for FY 2005	\$ 111,000	(SPR)
	0	(State)
Estimated Cost for FY 2006	\$ 417,000	(SPR)
	0	(State)

2146 The Development of Intelligent Soil Compaction

PURPOSE AND SCOPE: The purpose of the project is to develop and implement intelligence into vibratory soil compaction by establishing communication between the compactor and the material being compacted.

ACCOMPLISHMENTS DURING FY 2005: All aspects of this project, including the Final Report have been completed.

PROPOSED ACTIVITIES FOR FY 2006: NA

ESTIMATED TOTAL COST:	\$ 294,141	(SPR)
	0	(State)
 Programmed Amount for FY 2005	 \$ 0	 (SPR)
	0	(State)
 Estimated cost for FY 2005	 \$ 0	 (SPR)
	0	(State)
 Estimated Cost for FY 2006	 \$ 0	 (SPR)
	0	(State)

PURPOSE AND SCOPE: The purpose of this project is to provide ODOT with certified training related to Roadside Vegetation Management (RVM), consultation to ODOT field divisions, and development of manuals of practice for ODOT. This includes the implementation of the Native Vegetation Demonstration Project.

ACCOMPLISHMENTS DURING FY 2005: Conducted annual Certified Pesticide Applicator training for all ODOT field divisions. Maintained Pesticide Applicator training for ODOT applicators. Provided consultation to ODOT field personnel as requested, produced annual Consultation Report. Reviewed and surveyed each ODOT field division's herbicide program and equipment, and produced an annual Equipment Report. Surveyed new RVM equipment and technologies, provided applicable information to ODOT field personnel, and produced annual Equipment Report. Provided as-needed updates to ODOT regarding herbicide/pesticide legislation and new products. Conducted annual RVM Implementation Tour.

PROPOSED ACTIVITIES FOR FY 2006: Continue training, field surveys and consultations as described above. Produce annual Equipment, Consultation and Herbicide Reports. Monitor the Native Vegetation Demonstration Project.

ESTIMATED TOTAL COST:	CONTINUING	
Programmed Amount for FY 2005	\$ 171,000	(SPR)
	0	(State)
	\$ 10,000	(FHWA)
	\$ 2,500	(Private)
Estimated cost for FY 2005	\$ 170,000	(SPR)
	0	(State)
	\$ 10,000	(FHWA)
	\$ 2,500	(Private)
Estimated Cost for FY 2006	\$ 191,000	(SPR)
	0	(State)

PURPOSE AND SCOPE: The purpose of the project is to conduct field investigations which evaluate herbicide products, applications and equipment.

ACCOMPLISHMENTS DURING FY 2005: Evaluated experimental herbicides for control of annual ryegrass, Johnson Grass, Sericea Lespedeza, and broadleaf weeds. Herbicides for each of these applications was evaluated on the target weed on plots at least three different locations. Results of these applications were demonstrated during the annual Implementation Tour of the experimental application plots.

PROPOSED ACTIVITIES FOR FY2006: Continue testing herbicides for the applications listed above. Report on all herbicide applications during annual panel meeting in February 2006. Produce written reports on herbicide applications (one report per application category), with conclusions and recommendations.

ESTIMATED TOTAL COST:	CONTINUING	
Programmed Amount for FY 2005	\$ 70,000	(SPR)
	0	(State)
Estimated cost for FY 2005	\$ 70,000	(SPR)
	0	(State)
Estimated Cost for FY 2006	\$ 67,000	(SPR)
	0	(State)

2158 Resilient Modulus Testing and Density Gradient Analysis of Selected Asphalt Mixes

PURPOSE AND SCOPE: The purpose of this project is to 1) Explore the relationship(s) between resilient modulus and rutting as measured by the Asphalt Pavement Analyzer (APA), and 2) Examine the density distribution in the Hot Mix Asphalt (HMA) specimens, prepared using the Superpave Gyratory Compactor (SGC).

ACCOMPLISHMENTS DURING FY 2005: Completed and published Final Report.

PROPOSED ACTIVITIES FOR FY2006: None

ESTIMATED TOTAL COST:	\$ 101,522	(SPR)
	0	(State)
Programmed Amount for FY 2005	\$ 0	(SPR)
	0	(State)
Estimated cost for FY 2005	\$ 0	(SPR)
	0	(State)
Estimated Cost for FY 2006	\$ 0	(SPR)
	0	(State)

PURPOSE AND SCOPE: The Oklahoma Transportation Center (OTC) is a research organization made up of researchers employed by the University of Oklahoma (OU), Oklahoma State University (OSU), and Langston University (LU). Research personnel in this organization have expertise and experience covering a wide range of transportation-related topics. The purpose of this item is to coordinate and contract research activities covering various topics on behalf of ODOT and to provide matching funds to UTC designated OTC.

ACCOMPLISHMENTS DURING FY 2005: Continue completed research projects and publish Final Reports on the following list of projects. Final reports are expected to be submitted between September 30 and October 31, 2005. 1) Permeability and Resilient Modulus of Aggregate Bases, 2) Protecting Oklahoma's Transportation from Natural and Man-made Hazards, 3) Mechanical Activation of Fly Ash for Concrete, 4) Public Perception of Noise Barriers, 5) Feasibility of Using Continuous for Live Load Steel Bridges, 6) Effect of Anti-Stripping Additives on Performance-Graded Binders, 7) Application of Linear Scheduling Methods to Highway Construction Projects, 8) Experimental Design of Railroad Car Derailment and/or Sabotage, 9) Freight Movement Model Development, 10) Variability in Theoretical Maximum Specific Gravity Determination, Statewide seatbelt Campaign, 11) Prestress Losses in High Performance Concrete and the Estimation of Long-Term Deflections and Camber for Prestressed Concrete Bridges, 12) Degradation Stabilizing Methodology for Selected Drop-Box Culverts, "Smart Dust" Sensor Network for Intelligent Pavement Maintenance.

PROPOSED ACTIVITIES FOR FY2006: Continue support of OTC. A mix of transportation research projects, similar to those listed above, will be completed. Also, the OTC plans to conduct training for ODOT employees on subjects related to the research projects.

ESTIMATED TOTAL COST:	CONTINUING	
Programmed Amount for FY 2005	\$ 150,0000	(SPR)
	0	(State)
Estimated cost for FY 2005	\$ 125,000	(SPR)
	0	(State)
Estimated Cost for FY 2006	\$ 500,000	(SPR)
	0	(State)

2167 Effect of Suction and Moisture on Resilient Modulus of Subgrade Soils in Oklahoma

PURPOSE AND SCOPE: The purpose of this project is to generate data and recommendations which will benefit ODOT in design of pavements on unsaturated subgrades. Subgrade moisture plays an important role in the in-service performance of a pavement. Resilient Modulus (Mr) is an important parameter in pavement design under AASHTO guidelines, which ODOT has implemented.

ACCOMPLISHMENTS DURING FY 2005: All samples have been collected, classified and Resilient Modulus and soil suction tests are being conducted. Analysis of (completed) test data has begun. A supplemental contract increasing funding by \$20,000 to allow for repair of the researcher's MTS equipment was issued in August.

PROPOSED ACTIVITIES FOR FY2006: Complete testing and analysis, produce and publish Final Report.

ESTIMATED TOTAL COST:	\$ 120,242	(SPR)
	0	(State)
 Programmed Amount for FY 2005	 \$ 63,000	 (SPR)
	0	(State)
 Estimated cost for FY 2005	 \$ 52,015	 (SPR)
	0	(State)
 Estimated Cost for FY 2006	 \$ 75,000	 (SPR)
	0	(State)

2168 Scale Effects in Oedometer-Based Predictions of Fill Settlement

PURPOSE AND SCOPE: This project will use both large and small oedometer test procedures to predict settlement behavior of compacted Oklahoma soils in embankments. The project activities include examining scale effects associated with using oedometer samples and examine fabric-induced scale effects in the field. Recommendations regarding laboratory and settlement analysis of compacted fills will be included.

ACCOMPLISHMENTS DURING FY 2005: Designed and constructed a system for obtaining large oedometer specimens. Obtained large oedometer samples and conducted large oedometer tests. Began analysis of large and small oedometer data.

PROPOSED ACTIVITIES FOR FY2006: Completed. Will distribute final report.

ESTIMATED TOTAL COST:	\$ 105,051	
Programmed Amount for FY 2005	\$ 62,411	(SPR)
	0	(State)
Estimated cost for FY 2005	\$ 43,000	(SPR)
	0	(State)
Estimated Cost for FY 2006	\$ 0	(SPR)
	0	(State)

2169 Evaluation of Test Methods for Determination of Aggregate Specific Gravity

PURPOSE AND SCOPE: This project will evaluate the *AggPlus* system and the *SSD Detect* system against the AASHTO - T - 84 and T - 85 specific gravity test methods currently used by ODOT. The procedures will be evaluated for accuracy, precision and ease of use. At the completion of the study, a test method for determining the specific gravity and absorption of ODOT aggregates will be recommended.

ACCOMPLISHMENTS DURING FY 2005: All project work was completed, Final Report was written and published, and the recommendation was made that neither the *AggPlus* or *SSD Detect* appear to have sufficient accuracy for either test to replace T - 84 and/or T-85.

PROPOSED ACTIVITIES FOR FY2006: NA - Completed

ESTIMATED TOTAL COST:	\$138,000	
Programmed Amount for FY 2005	\$ 0	(SPR)
	0	(State)
Estimated cost for FY 2005	\$ 0	(SPR)
	0	(State)
Estimated Cost for FY 2006	\$ 0	(SPR)
	0	(State)

2172 Evaluation of ODOT's Percent Within Limits (PWL) Construction Specifications

PURPOSE AND SCOPE: The Department will implement new "Percent Within Limits" (PWL) specifications on four highway construction projects during FY2005. These projects will consist of two asphalt concrete (AC) and two Portland Cement Concrete (PCC) roadway construction projects. Three researchers, an AC specialist, a PCC specialist, and a statistician will evaluate the application of the PWL specifications during the construction of the projects. The researchers will observe construction operations and Quality Control (QC) testing during construction and review all construction test records. Analysis of this information will be used to determine if there are any deviations from the PWL specifications regarding actual testing during construction. All aspects of the project will be analyzed to determine whether or not use of the PWL specifications resulted in an improvement in quality. The above information will be presented in a Final Report, which will include an evaluation of the PWL specifications and will include recommendations and conclusions.

ACCOMPLISHMENTS DURING FY 2005: Completed observation and data collection on both AC projects and one PCC project. Began an analysis of collected data.

PROPOSED ACTIVITIES FOR FY2006: Complete observation and data collection on PCC projects, analyze data and produce Final Report.

ESTIMATED TOTAL COST:	\$ 75,000	
Programmed Amount for FY 2005	\$ 75,000	(SPR)
	0	(State)
Estimated cost for FY 2005	\$ 43,000	(SPR)
	0	(State)
Estimated Cost for FY 2006	\$ 32,000	(SPR)
	0	(State)

**2177 Determination of Dynamic Modulus Master Curves for
Oklahoma Hot Mix Asphalt (HMA) Mixtures**

PURPOSE AND SCOPE: The currently used “1993 NCHRP HMA Design Guide for Asphalt Mixtures” assigns asphalt mixtures an “A” coefficient based on resilient modulus. The 2002 Design Guide uses the elastic properties of dynamic modulus and Poisson’s Ratio as the materials characterization parameters for asphalt mixtures (ASTM-3496 -7). Detailed analysis is required to arrive at these properties. Time, and other constraints, often make it difficult or impossible to do the detailed analysis.

The purpose of this research project is to develop a procedure where ODOT can approach level one reliability for HMA design using master curves from which the design parameters can be obtained without performing detailed dynamic modulus testing for each mix in a pavement system.

ACCOMPLISHMENTS DURING FY 2005: Mixes were made evaluated and data analyzed.

PROPOSED ACTIVITIES FOR FY2006: Project work is to be completed, Final Report will be written and published.

ESTIMATED TOTAL COST:	\$ 136,767	(SPR)
	0	(State)
 Programmed Amount for FY 2005	 \$ 86,000	 (SPR)
	0	(State)
 Estimated cost for FY 2005	 \$ 86,000	 (SPR)
	0	(State)
 Estimated Cost for FY 2006	 \$ 50,000	 (SPR)
	0	(State)

2178 Evaluation of Cold, In-Place Recycling for Rehabilitation of Transverse Cracking on US412

PURPOSE AND SCOPE: Successful rehabilitation of transverse cracked Hot Mix Asphalt (HMA) pavement has been a challenge for state DOT's. HMA overlays generally permit the return of reflective cracks, despite various crack filling measures. The reflective eventually become as severe as the cracks existing prior to the overlay placement. Cold In-Place Recycling (CIR) has shown to be a cost effective procedure for rehabilitation as reported by other state DOT's, including some from states surrounding Oklahoma.

Two rehabilitation projects on US 412 in Beaver County will be used to evaluate the CIR process, applied with slurry crack injection as a rehabilitation technique for transverse cracking.

ACCOMPLISHMENTS DURING FY 2005: Observed construction operations and obtained samples for lab analysis. Evaluated sample mixtures, specific gravity evaluation. Produced and published Final Report.

PROPOSED ACTIVITIES FOR FY2006: Produced and published Final Report

ESTIMATED TOTAL COST:	\$ 123,377	(SPR)
	0	(State)
 Programmed Amount for FY 2005	 \$ 75,000	 (SPR)
	0	(State)
 Estimated cost for FY 2005	 \$ 73,000	 (SPR)
	0	(State)
 Estimated Cost for FY 2006	 \$ 50,500	 (SPR)
	0	(State)

PURPOSE AND SCOPE: The purpose of this project is to develop a standardized test for strand bond. This work builds upon prior work where several different tests were evaluated on the basis of each test's ability to produce repeatable and reproducible results.

The scope of work will include performing and evaluating two different tests, The North American Strand Producers (NASP) Bond Test and the Moustafa Bond Test. Researchers in Indiana and Arkansas will perform and evaluate the same tests. Work (and funding) in those states will be independent of the work done under this project. Results from all Indiana, Arkansas, and Oklahoma tests will be compared when the "blind tests" have been completed by all three researchers.

ACCOMPLISHMENTS DURING FY 2005: Tests have been performed and comparison is in progress.

PROPOSED ACTIVITIES FOR FY2006: Project completed. Final Report will be distributed.

ESTIMATED TOTAL COST:	\$ 58,000	
Programmed Amount for FY 2005	\$ 58,000	(SPR)
	0	(State)
Estimated cost for FY 2005	\$ 58,000	(SPR)
	0	(State)
Estimated Cost for FY 2006	\$ 0	(SPR)
	0	(State)

2181 . . . Resilient Modulus of Asphalt and its Correlation With Asphalt Pavement Analyzer Rut

PURPOSE AND SCOPE: The purpose of this project is to conduct resilient modulus and Asphalt Pavement Analyzer (APA) rut tests on selected asphalt mixes and cores from completed projects. The investigation will determine if the resilient modulus values can be correlated with the APA rut values. At least three new mixes that are commonly used by ODOT will be used in the study. Field cores from sites that have used either these or similar mixes will be obtained and tested for both APA rut and resilient modulus. A comparison between the two properties of laboratory compacted and field compacted specimens will be made.

ACCOMPLISHMENTS DURING FY 2005: Mix selection has been completed, with possibility of some changes, Resilient Modulus testing, field coring, APA rut testing on some of the projects, are expected to be completed by the end of summer, 2005.

PROPOSED ACTIVITIES FOR FY 2006: Complete testing and analysis, including field testing. Analyze data and write Final Report.

ESTIMATED TOTAL COST:	\$ 103,000	(SPR)
	0	(State)
 Programmed Amount for FY 2005	 \$ 60,000	 (SPR)
	0	(State)
 Estimated cost for FY 2005	 \$ 30,000	 (SPR)
	0	(State)
 Estimated Cost for FY 2006	 \$ 44,000	 (SPR)
	0	(State)

2182 Task Order Contract for Specified Research Items

PURPOSE AND SCOPE: The purpose of this project is to allow ODOT to (quickly) contract to have research done on items specified by the Department. Items specified for research under this project typically are construction, design, or materials problems which require specialized expertise or equipment. This project was previously listed under the title “Evaluation of Concrete Bridge Deck Overlays Using the Bond Test”.

ACCOMPLISHMENTS DURING FY 2005: Currently investigating failures of latex - modified concrete bridge overlays and ODOT PCC mixes using two types of pull - off test equipment and Air Void Analyzer (AVA). Beginning an investigation on testing problems on a pilot project for Percent Within Limits (PWL) specifications.

PROPOSED ACTIVITIES FOR FY 2006: Complete investigations described above and any others specified by ODOT.

ESTIMATED TOTAL COST:	CONTINUOUS	
Programmed Amount for FY 2005	\$ 58,000	(SPR)
	0	(State)
Estimated cost for FY 2005	\$ 50,000	(SPR)
	0	(State)
Estimated Cost for FY 2006	\$ 65,000	(SPR)
	0	(State)

2183 Anti-Litter Campaign Effectiveness

PURPOSE AND SCOPE: This project will evaluate the effectiveness of the Department's Anti-Litter Campaign. The work will include surveying test sites, located in various areas of the state, for litter. Surveys will catalog litter both by type and amount physical count). The sites will be surveyed before and after the Department's Anti-Litter Campaign. The percent reduction of litter will be documented and reported on in a Final Report, which will be given to ODOT. The report will include conclusions and recommendations.

ACCOMPLISHMENTS DURING FY 2005: Project was cancelled.

PROPOSED ACTIVITIES FOR FY 2006: N/A

ESTIMATED TOTAL COST:	No information at this time.		
Programmed Amount for FY 2005	\$	0	(SPR)
		0	(State)
Estimated cost for FY 2005	\$	0	(SPR)
		0	(State)
Estimated cost for FY 2006	\$	0	(SPR)
		0	(State)

2184 Creation of an ODOT Specification for Patching or Overlay of Bridge Decks

PURPOSE AND SCOPE: This project builds upon the work done under a previous research project on patching materials (SPR Item Number 2174, "Patching Materials for PCC Pavements") where commonly used patching materials were evaluated with regard to their performance. This project will consider patching materials identified as demonstrating good performance under the previous project, materials identified by ODOT Maintenance personnel for showing good field performance, and other (new) materials recommended by ODOT personnel. The materials will be tested for chemical, electric and permeability compatibility with existing deck material, drying shrinkage, thermal expansion, creep and modulus of elasticity. Those showing superior will be identified, along with patching procedures which have proven to produce patches with good performance in the field. Information gathered under this project will be used to write a specification (or modify existing specifications) for patching and overlaying bridge decks. A Final Report, with conclusions and recommendations, will be written and submitted to ODOT when the research work is completed.

ACCOMPLISHMENTS DURING FY 2005: Literature review has been completed, specification team (ODOT personnel) has been formed and has met several times. Data collection on bridges with latex modified concrete overlays has begun.

PROPOSED ACTIVITIES FOR FY 2006: Data collection on overlaid bridges will continue, laboratory tests on set time for patch materials, patch temperatures and patch performance, fibers in patches, fatigue performance of decks, patches and overlays will be done. Final Report will be distributed.

ESTIMATED TOTAL COST:	\$ 285,000	
Programmed Amount for FY 2005	\$ 108,000	(SPR)
	0	(State)
Estimated cost for FY 2005	\$ 100,000	(SPR)
	0	(State)
Estimated Cost for FY 2006	\$ 108,500	(SPR)
	0	(State)

**2185 Engineering Properties of Stabilized Subgrade Soils for the Implementation of the
AASHTO 2002 Pavement Design Guide**

PURPOSE AND SCOPE: This project will determine engineering properties of cementitiously stabilized common subgrade soils in Oklahoma for design of roadway pavements in accordance with the AASHTO 2002 Pavement Design Guide (PDG). These properties include resilient modulus, modulus of elasticity, moisture susceptibility and permeability. A computerized database of this information will be developed based on laboratory test results. No such database is currently available, making implementation of the new AASHTO PDG problematic for use in Oklahoma.

The following tasks will be included in this study. Determine moisture - density relationships for common subgrade soils mixed with lime, cement kiln dust, and class C fly ash, using different percentages of each additive. Determine the resilient modulus (Mr) of stabilized specimens, Determine the Modulus of elasticity of specimens already tested for Mr. Determine the moisture susceptibility of stabilized specimens. Conduct suction tests on selective specimens. Develop statistical models based on the laboratory data. Develop a database based on the laboratory tests. Propose modifications to current ODOT specifications for implementation of AASHTO 2002 PDG for cementitiously stabilized subgrade soils.

ACCOMPLISHMENTS DURING FY 2005: NA - New Project

PROPOSED ACTIVITIES FOR FY2006: Perform literature search, select soils and additives, begin laboratory testing.

ESTIMATED TOTAL COST:	\$ 268,605	
Programmed Amount for FY 2005	NA	(SPR)
	0	(State)
Estimated cost for FY 2005	NA	(SPR)
	0	(State)
Estimated Cost for FY 2006	\$ 95,000	(SPR)
	0	(State)

PURPOSE AND SCOPE: This project will investigate shearing capacity of several types of existing precast prestressed concrete beams designed according to the AASHTO Standard Specifications prior to the 1979 Interim.

Oklahoma was one of the earliest states to make the change to the Load and Resistance Factor Design (LRFD) Specification for highway bridge design. However, before the LRFD was applied in design practice, AASHTO Standard Specifications differing in various ways from the LRFD had been applied to the design. Since the AASHTO Standard Specifications have been evolving with time, and many bridges built according to earlier specifications are still in use, there is a need for rating these bridges in accordance with the current AASHTO manual.

Studying shearing capacity is important because shear failure is catastrophic in nature, and concrete has a considerably lower strength in tension than in compression.

This project will focus on the load carrying capacity in shear of Type II beams designed prior to 1979. The ODOT Bridge Division will provide design information on selected bridges to the investigator. Beams in these bridges will be studied using hand calculations. An entire bridge system will be studied using numerical modeling. Laboratory testing will be conducted on a Type II beam. Type III and IV beams will also be analyzed, primarily using hand calculations.

ACCOMPLISHMENTS DURING FY 2005: NA - New Project

PROPOSED ACTIVITIES FOR FY2006: Perform literature search, begin analysis and laboratory testing.

ESTIMATED TOTAL COST:	\$ 183,000.	
Programmed Amount for FY 2005	NA	(SPR)
	0	(State)
Estimated cost for FY 2005	NA	(SPR)
	0	(State)
Estimated Cost for FY 2006	\$ 83,000	(SPR)
	0	(State)

2187 .. Investigation of Automating Turning Movement Studies Using New Sensor Technology

PURPOSE AND SCOPE: To investigate the feasibility and accuracy of automating intersection turning movement studies utilizing a new portable segmented axle sensor technology. This will include the development of software capable of simulating traffic patterns through a stop sign controlled intersection and performing analysis of the vehicle movements..

ACCOMPLISHMENTS DURING FY 2005: NA - new project.

PROPOSED ACTIVITIES FOR FY 2006: The following will be completed during FY2006:

Task 1: Develop a simulation module that produces traffic through a multi-lane intersection. This simulation module will allow for different traffic rates at various times of the day.

Task 2: Develop an algorithm to determine TMC's from the sensor strike time vectors. This algorithm takes into account the sensors, location and the distance from other sensors. The algorithm will be continuously fine tuned to reduce error rates.

Task 3: Using the simulation module, develop a set of simulated "sensor strikes" and use this information to get TMC's.

Task 4: Get the sensor strike times for the chosen intersection, apply the proposed algorithm and compare the results with AADT and field observations. The algorithm will be fine tuned appropriately.

ESTIMATED TOTAL COST:	CONTINUING	
Programmed Amount for FY 2005	\$ 0	(SPR)
	0	(State)
Estimated cost for FY 2005	\$ 0	(SPR)
	0	(State)
Estimated cost for FY 2006	\$ 40,000	(SPR)
	0	(State)

PURPOSE AND SCOPE: The purpose of this project is to develop improved vegetation specifications to be used on relatively steep slopes. Areas of moderate to severe erosion are occurring on highway rights of way in Eastern Oklahoma. Silt resulting from this erosion is filling ditch bottoms causing drainage problems. The answer to these recurring problems is to vegetate the erosive areas so that the soil remains on the slope and out of the drainage system.

This is intended to be a five-year research project during which time, soil amendments, plant species, planting methods, planting dates, planting rates, mulches, mulch rates and application methods which demonstrate the most success will be identified. These will then be incorporated into improved vegetation specifications.

ACCOMPLISHMENTS DURING FY 2005: NA - New Project

PROPOSED ACTIVITIES FOR FY2006: Perform literature search, select experimental plant species, begin classifying soils, develop experimental planting methods, identify test slopes, and plant test species.

ESTIMATED TOTAL COST:	\$ 550,000	
Programmed Amount for FY 2005	NA	(SPR)
	0	(State)
Estimated cost for FY 2005	NA	(SPR)
	0	(State)
Estimated Cost for FY 2006	\$ 200,000	(SPR)
	0	(State)

2440 Local Technical Assistance Program

PURPOSE AND SCOPE: The Local Technical Assistance Program (LTAP) is a training program contracted by Oklahoma State University's Center for Local Government Technology to provide technical maintenance training and assistance to Oklahoma's 77 county's personnel in the areas of road and bridge construction, repair and maintenance and other transportation related issues. This is accomplished by (1) conducting workshops, seminars and other training opportunities; (2) providing on-site technical assistance; (3) maintaining a lending library for publications, videotapes, DVDs and other technology resource documents; (4) providing information on new and existing technology; (5) coordinating with faculty and staff at OSU and ODOT to provide technical expertise and support; and (6) publishing a quarterly newsletter and (7) maintaining a database of rural, local and state transportation officials and other resources in Oklahoma and nationwide.

ACCOMPLISHMENTS DURING FY 2005: The LTAP Program continued its positive interaction with the county personnel with increasing attendance at training sessions throughout the state. The Roads Scholar Program continued to be successful with 16 graduates of the program, through continued enhancement and enlargement of the training program. Eight (8) welding classes were held with 72 county personnel attending. In addition, over a thousand county personnel were trained through attendance at the Roads Scholar and other training programs. Also, four (4) hands on demonstrations with maintenance equipment sponsored and furnished by national companies were successfully held. LTAP offices continued to serve as the American Public Works Association State Chapter office and assisted with the April 2005 regional meeting. Newsletters were published and various literature, tapes, DVD, etc., were distributed.

PROPOSED ACTIVITIES FOR FY2006: Conduct at least five training sessions of the Roads Scholar Programs subjects statewide. Continue to publish and distribute to county commissioners various newsletters, papers technical literature and video materials through the LTAP Library and coordinate with ODOT's Technical Library. Develop and conduct new training courses as requested by the LTAP Advisory Board and counties. Continue to develop hands on training through cooperation efforts with industry.

ESTIMATED TOTAL COST	CONTINUING	
Programmed Amount for FY 2005	\$ 27,000	(SPR)
	\$ -0-	(STATE)
	\$ 280,000	(FHWA)
Estimated Cost for FY 2005	\$ 27,000	(SPR)
	\$ -0-	(STATE)
	\$ 280,000	(FHWA - LTAP)
Estimated Cost for FY 2006	\$ 20,000	(SPR)
	\$ -0-	(STATE)
	\$ 280,000	(FHWA - LTAP - SPR)

PURPOSE AND SCOPE: This project was established to provide ODOT with a means of providing for the (experimental) use, monitoring, evaluation and implementation of products for highway and bridge construction where the products do not meet current ODOT standards and specifications.

ACCOMPLISHMENTS DURING FY 2005: Maintained database of new products where manufacturer provided literature or made a presentation during the last four years. Met with company representatives presenting new products. Provided information on products to applicable ODOT divisions. Evaluated new products as required.

PROPOSED ACTIVITIES FOR FY 2006: Continue maintaining database on products submitted to ODOT. Meet with vendor's representations, circulate product literature and conduct product evaluations as necessary.

ESTIMATED TOTAL COST:	CONTINUING	
Programmed Amount for FY 2005	\$ 71,000	(SPR)
	- 0 -	(STATE)
Estimated cost for FY 2005	\$ 71,000	(SPR)
	- 0 -	(STATE)
Estimated Cost for FY 2006	\$ 71,000	(SPR)
	- 0 -	(STATE)