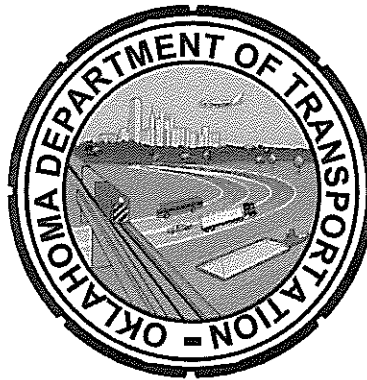


**STATE OF OKLAHOMA
DEPARTMENT OF TRANSPORTATION**

PLANNING & RESEARCH DIVISION



FY2007

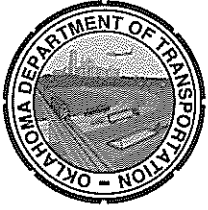
State Planning and Research (SPR) Program

Part 1 - Planning

Part 2 - Research

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

October 1, 2006



OKLAHOMA DEPARTMENT OF TRANSPORTATION

200 N. E. 21st Street

Oklahoma City, OK 73105-3204

September 18, 2006

Mr. Gary Corino
Division Administrator
Federal Highway Administration
300 N. Meridian
Oklahoma City, Oklahoma 73108

Attention: Elizabeth Romero

Dear Mr. Corino:

Enclosed for your review and approval is the Federal Fiscal Year 2007 State Planning and Research (SPR) Program, Part 1 - Planning, SPRY-0010(041)PL, and Part 2 - Research, SPRY-0010(042)RS. Please contact me at 521-2927 should you have any questions or need further information.

Sincerely,

A handwritten signature in black ink, appearing to read "D. Sullivan", is written over a horizontal line.

Dawn R. Sullivan, P.E.
Planning & Research Division Engineer

DRS

Enclosure



U.S. Department
of Transportation
**Federal Highway
Administration**

Oklahoma Division
300 N. Meridian Ave., Suite 105-S
Oklahoma City, OK 73107-6560

September 26, 2006

IN REPLY REFER TO HTO-OK

SPRY-010 (041) PL, FY 2007 SPR (Part I), Planning Program,
SPRY-010 (042) RS, FY 2007 SPR (Part II), Research Program

Mr. Gary M. Ridley, Director
Oklahoma Department of Transportation
Oklahoma City, OK

Attention: Ms. Dawn R. Sullivan, P.E.

Dear Mr. Ridley:

The Federal Highway Administration has reviewed the proposed Fiscal Year 2007 State Planning and Research (SPR) Part I (Planning) and Part II (Research) programs and budgets for the Oklahoma Department of Transportation (ODOT) as submitted by Ms. Dawn R. Sullivan, ODOT Planning Division Engineer, on September 18, 2006. Part I (Planning) also contains the metropolitan planning (PL) program funds that were previously approved as part of the Fiscal Year (FY) 2007 Unified Planning Work Programs (UPWP) and budgets for Tulsa, Oklahoma City and Lawton MPOs, as well as the bi-state Fort Smith MPO work program and budget.

We are encouraged by your efforts to work with us in developing the Oklahoma SPR work program and budget that conforms to the requirements of 23 CFR 420.

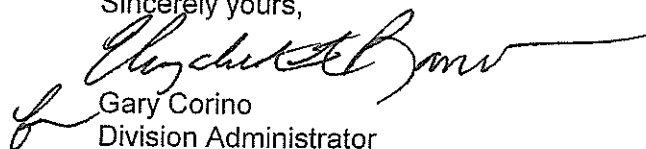
Our review has led to the following observations and comments:

- We commend you for developing a more user-friendly work program document;
- We commend you also for your continued participation in national research initiatives, including contribution to NCHRP and participation in various pooled fund studies;
- We encourage you to continue in your efforts towards the development of a management process and procedures for soliciting research proposals from various ODOT departments, colleges and universities, and other interested parties, as required under 23 CFR 420.209.

The FY 2007 SPR Parts I and II programs and budget are hereby approved as submitted.

Please contact Mr. Isaac N. Akem, Community Planner, at 405-605-6040 extension 324 if you have any questions or comments regarding the FY 2007 SPR work program and budget.

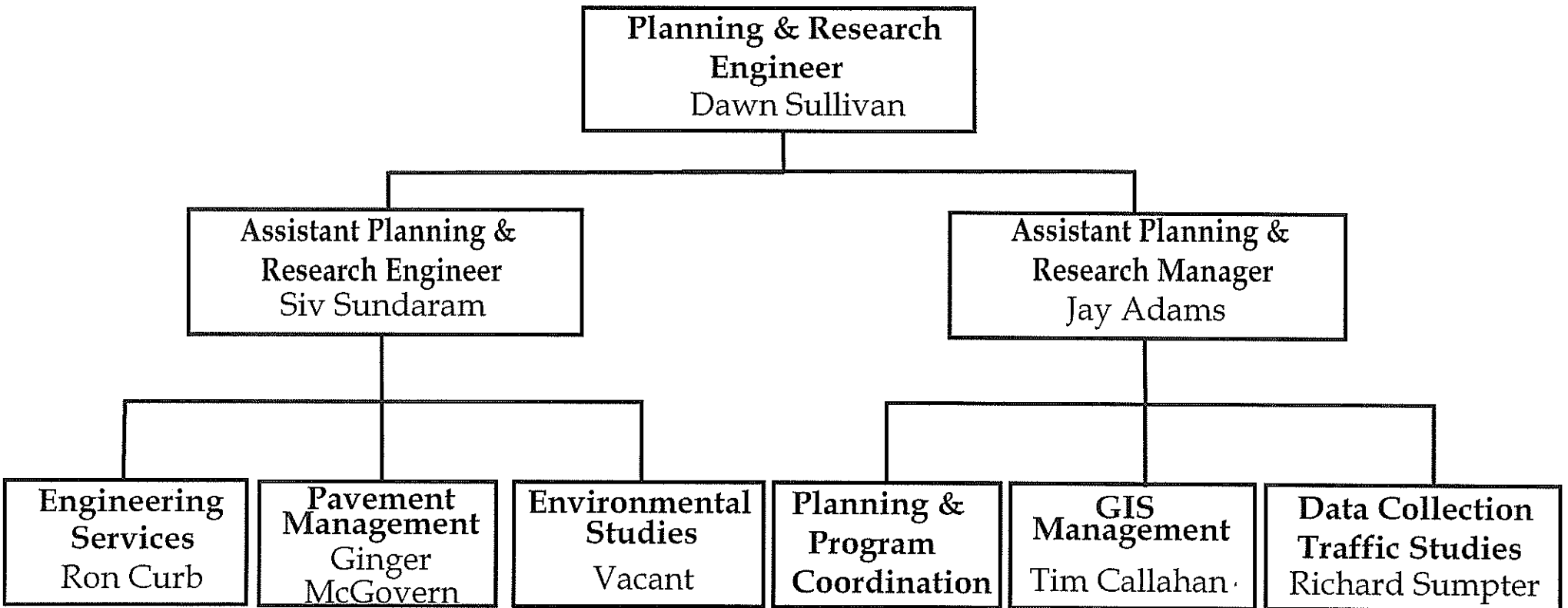
Sincerely yours,


Gary Corino
Division Administrator

2006 SEP 27 PM 2:06



Planning & Research Division



OCTOBER 1, 2006

DEPARTMENT OF TRANSPORTATION
Financial Summary Sheet

Work Program Number SPRY 0010(41) PL, J/P 01946(47)
Fiscal Year 2007

Program Period October 1, 2006 through September 30, 2007

A. Total Estimated Costs

SPR-Part 1 Planning	\$7,898,440.00
Metropolitan Planning (PL)	<u>2,037,388.00</u>

TOTAL ESTIMATED COSTS \$9,935,828.00

B. Available Federal Funds

<u>Source</u>	<u>SPR Unobligated Balance</u>	<u>PL Unobligated Balance</u>
TOTAL AVAILABLE FEDERAL FUNDS	\$7,898,968.00	\$2,037,388.00

C. Proposed Financing

<u>Type</u>	<u>Federal</u>	<u>Ratio</u>	<u>State</u>	<u>Local</u>	<u>Total</u>
SPR	\$7,898,440.00	80%	\$0.00	\$0.00	\$7,898,440.00
PL	\$2,037,388.00	80%	\$0.00	\$559,285.00	<u>\$2,596,673.00</u>
TOTAL PROPOSED FINANCING					<u><u>\$10,495,113.00</u></u>

Work Program Number SPRY 0010(42) RS, J/P 01946(48)
Fiscal Year 2007

A. Total Estimated Costs

SPR-Part 2 Research	\$3,265,000.00
---------------------	----------------

B. Available Federal Funds

<u>Source</u>	<u>SPR Unobligated Balance</u>
TOTAL AVAILABLE FEDERAL FUNDS	\$3,644,362.46

C. Proposed Financing

<u>Type</u>	<u>Federal</u>	<u>Ratio</u>	<u>State</u>	<u>Local</u>	<u>Total</u>
SPR	\$3,265,000.00	80%	\$0.00	\$0.00	\$3,265,000.00
Other FHWA	\$170,000.00				
TOTAL PROPOSED FINANCING					<u><u>\$3,265,000.00</u></u>

TOTAL PART 1 AND PART 2 \$11,163,440.00

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**FEDERAL FISCAL YEAR 2007
OKLAHOMA PROJECT SPRY - 0010(041) PL, JP # 01946(47)
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	\$614,000.00	\$0.00			\$614,000.00
1102	Highway Performance Monitoring System	\$75,000.00	\$0.00			\$75,000.00
1103	Geographical Information Management System for Transportation	\$443,000.00	\$0.00			\$443,000.00
	<i>Total Road Inventory</i>	<u>\$1,132,000.00</u>	<u>\$0.00</u>			<u>\$1,132,000.00</u>
MAPPING						
1201	County, City and other Planning Maps	\$286,000.00	\$0.00			\$286,000.00
	<i>Total Mapping</i>	<u>\$286,000.00</u>	<u>\$0.00</u>			<u>\$286,000.00</u>
TRAFFIC						
1301	Coverage Count Program	\$468,000.00	\$0.00			\$468,000.00
1302	Permanent Traffic Count Program	\$203,400.00	\$0.00			\$203,400.00
1304	Purchase of Traffic Counting Equipment	\$130,430.00	\$0.00			\$130,430.00
1305	Vehicle Classification Counting Program	\$408,000.00	\$0.00			\$408,000.00
1306	Weigh- in- Motion Program	\$845,310.00	\$0.00			\$845,310.00
1308	Traffic Monitoring System	\$120,000.00	\$0.00			\$120,000.00
1309	Traffic Analysis and Projections	\$147,000.00	\$0.00			\$147,000.00
1310	Skid Studies Program	\$143,500.00	\$0.00			\$143,500.00
	<i>Total Traffic</i>	<u>\$2,465,640.00</u>	<u>\$0.00</u>			<u>\$2,465,640.00</u>
MANUAL & SAFETY						
1403	ODOT Manual Update	\$65,000.00	\$0.00			\$65,000.00
1404	Safety Planning	\$20,000.00	\$0.00			\$20,000.00
	<i>Total Manual & Safety</i>	<u>\$85,000.00</u>	<u>\$0.00</u>			<u>\$85,000.00</u>
ECONOMIC AND FISCAL						
1510	Justification Studies	\$6,000.00	\$0.00			\$6,000.00
1511	Project Reconnaissance Information	\$14,000.00	\$0.00			\$14,000.00
	<i>Total Economic and Fiscal</i>	<u>\$20,000.00</u>	<u>\$0.00</u>			<u>\$20,000.00</u>

**FEDERAL FISCAL YEAR 2007
OKLAHOMA PROJECT SPRY - 0010(041) PL, JP #01946(47)
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	\$139,000.00	\$0.00			\$139,000.00
1603	Highway Needs Study	\$73,200.00	\$0.00			\$73,200.00
1604	Pavement Management Systems	\$1,105,300.00	\$0.00			\$1,105,300.00
<i>Total Systems and Programming</i>		\$1,317,500.00	\$0.00			\$1,317,500.00
URBAN TRANSPORTATION						
1700	General Urban Transportation Planning Activities	\$33,500.00	\$0.00			\$33,500.00
1701	Oklahoma City Area Regional Transportation Study (OCARTS)	\$20,000.00	\$0.00	\$1,071,967.00	\$299,731.00	\$1,391,698.00
1702	Tulsa Metropolitan Area Transportation Study	\$26,000.00	\$0.00	\$823,421.00	\$223,054.00	\$1,072,475.00
1703	Lawton Metropolitan Planning Organization (LMPO)	\$15,900.00	\$0.00	\$120,000.00	\$32,500.00	\$168,400.00
1709	Ft. Smith Transportation Study	\$6,600.00	\$0.00	\$22,000.00	\$4,000.00	\$32,600.00
1719	Statewide Transportation Improvement Program (STIP)	\$65,000.00	\$0.00			\$65,000.00
<i>Total Urban Transportation</i>		\$167,000.00	\$0.00	\$2,037,388.00	\$559,285.00	\$2,763,673.00
LONG RANGE PLANNING/ENVIRONMENTAL STUDIES						
1901	Oklahoma Pollutant Discharge Elimination System (OPDES) Municipal Separate Storm Sewer System (MS 4) Permits	\$185,000.00	\$0.00			\$185,000.00
1902	Statewide Long Range Transportation	\$25,000.00	\$0.00			\$25,000.00
1903	Intelligent Transportation Systems Planning	\$6,000.00	\$0.00			\$6,000.00
1904	Air Quality Transportation Planning	\$10,000.00	\$0.00			\$10,000.00
1910	Visualization Techniques	\$6,000.00	\$0.00			\$6,000.00
1979	Environmental Studies (NEPA Compliance)	\$423,300.00	\$0.00			\$423,300.00
1980	Environmental Studies (Environmental Affairs and Specialist Studies)	\$1,770,000.00	\$0.00			\$1,770,000.00
<i>Total Long Range Planning/Environmental Studies</i>		\$2,425,300.00	\$0.00	\$0.00	\$0.00	\$2,425,300.00
PROJECT TOTALS		\$7,898,440.00	\$0.00	\$2,037,388.00	\$559,285.00	\$10,495,113.00
GRAND TOTALS SPRY-0010(041)PL		\$7,898,440.00	\$0.00	\$2,037,388.00	\$559,285.00	\$10,495,113.00

1101

Continuing Inventory Data Studies

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. Established AVMT to be used to calculate Annual Accident and Fatality Rates.

ACCOMPLISHMENTS DURING FY 2006: The County Road inventory procedures were continued with six county inventories completed; (Haskell, Hughes, Noble, Osage, Pottawatomie and Woodward) and one (Payne) in progress. Four counties were reassessed and coded; (Cherokee, Haskell, Pushmataha and Tulsa) and one (Woodward) in progress. All County Action Reports were verified and processed. All Functional Classified inventories were completed in conjunction with county inventories, along with rectifying any significant mileage discrepancies statewide. Highway construction projects pertaining to the Department's Highway, Graphical Roadway Network (NLF), Reference Point, and Open to traffic databases were completed. All 2006 municipal boundaries changes were updated into the Highway, and UFC databases. The following annual publications and reports were completed; 2006 Control Section Map Book, 2005 Oklahoma Statewide Statistics Book, 2006 Certification of County Road Mileage, and 2006 HPMS mileage, and Travel Summary Tables.

PROPOSED ACTIVITIES FOR FY 2007: Continue coding and updating the Department's Central Database files. Incorporate on technology advancements in data collecting to insure the process of efficient information. Continue to improve on all procedural inventory operations. Six of the following nine counties are scheduled to be inventoried; (Beckham, Carter, Garvin, Kay, Logan McClain, Oklahoma, Ottawa and Pontotoc). Five of the following twelve counties are scheduled to be reassessed and coded; (Beckham, Carter, Garvin, Kay, Logan, McClain, Noble, Oklahoma, Osage, Ottawa, Payne and Pottawatomie). Continue monitoring all County Action Reports, and Highway Construction projects. Continue collecting HPMS data items. Assist in identification of traffic count sites statewide using GPS technology. Compile and publish various state and federal reports including the 2007 Statewide Mileage Table Book, 2006 Oklahoma Statewide Statistics Book, 2007 Certification of County Road Mileage, and 2007 HPMS Mileage and Travel Summary Tables. Keep abreast of the latest technological advances through attendance of seminars, conferences and workshops.

ESTIMATED TOTAL COST	Continuing	Fund
Programmed Amount for FY 2006	\$628,000	SPR
	0	STATE
Estimated Cost for FY 2006	\$608,200	SPR
	0	STATE
Estimated Cost for FY 2007	\$614,000	SPR
	0	STATE

Contact Information	
NAME	Tim Callahan
TITLE	Transportation Manager II
PHONE	405-521-2728

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 FY 2006: The HPMS submittal was created using adjusted urban/urbanized areas based on the 2000 census and authorized smoothing techniques. The primary focus of our efforts in 2006 was to improve data quality and include more International Roughness Index (IRI) data than ever before. After IRI data validation, the number of HPMS sections missing IRI data went from 611 to 50. The ITS surveillance data was improved by adding information for item number 38 (Section is under electronic surveillance to collect real time traffic data to monitor traffic flow). Summer help was utilized to review videolog for HPMS sample sections and build a HPMS database populated with At-Grade intersection and left/right turn lane information. This database will be used to generate the 2006 submittal. Oklahoma continues to include native linear reference system (LRS) information as part of its submittal. All LRS data required to perform dynamic segmentation has been included. As a result of a HPMS sample adequacy analysis conducted last year, an additional 250 sample sections have been added. 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. Additional training was conducted to allow data owners to be responsible for their phase of the HPMS submittal process. Continue to review and re-author the online HPMS Console help system. The 2005 HPMS data was made available to anyone having access to the OKDOT computer network through the GRIP Version 2 browser application. The HPMS data was also made available through an Internet web site known as GRIPLite. The web site was opened to Consultants hired to conduct Project Reconnaissance for the '18 Month Ahead' project. All data submitted to the FHWA in the 2005 HPMS submittal was formatted as defined by the HPMS field manual. The 2005 submittal was created using the FHWA supported HPMS software version 6.0.1 although all data domain and crosscheck validation was done in Oracle before inserting the data into Microsoft Access through the HPMS software.

PROPOSED ACTIVITIES FOR FY 2007: HPMS data collection needs will be addressed by improving the coordination of all current and future data collection efforts within OKDOT. Data collection needs will also be addressed by improved communication and data sharing between OKDOT and other external entities such as city and county governments, metropolitan planning organizations, Indian tribes and the Oklahoma Turnpike Authority. Data collection needs will be addressed by utilizing videolog obtained by the Pavement Management data collection contract. OKDOT will work with our local FHWA office to address high priority areas. HPMS 2006 data will be made available to anyone having access to the OKDOT computer network by publishing all HPMS 2006 universe and sample data through the Geographical Resource Intranet Portal (GRIP) Version 3 web browser application. The data will also be made available through the Internet application known as GRIPLite. 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 continuing 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 2006 submittal will be delivered to FHWA no later than June 15, 2007. OKDOT will keep abreast of the latest technological advances to include the most recent HPMS Reassessment through attendance of seminars, conferences, workshops and online meetings. Oklahoma will review and/or comment on the new web based HPMS reporting and validation tools made available by FHWA headquarters. The GIS Management Branch will begin to prepare a plan for addressing the impacts of the HPMS reassessment.

1102 Highway Performance Monitoring System (cont)

ESTIMATED TOTAL COST	Continuing	Fund
Programmed Amount for FY 2006	\$75,000	SPR
	0	STATE
Estimated Cost for FY 2006	\$82,000	SPR
	0	STATE
Estimated Cost for FY 2007	\$75,000	SPR
	0	STATE

Contact Information	
NAME	Tim Callahan
TITLE	Transportation Manager II
PHONE	405-521-2728

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 2006: The third year of the Maintenance/Improvements phase of the Geographical Resource Intranet Portal (GRIP) Version 2 project was completed. A GRIP Version 3 was designed and implemented using consulting services. The new version involved migrating from Oracle 9i to Oracle 10g database. The application server migrated from GeoMedia Web Map Professional Version 5.2 to Version 6.0. The graphic format was changed from Active CGM to Scalable Vector Graphics (SVG). The application was also designed and built using the Microsoft .NET framework. The graphical user interface (GUI) for the new application has been completed re-designed. All functionality provided in the GRIP Version 2 application is also supported in the GRIP Version 3 application. Some additional functionality supported includes the following:

- Enhanced Print Capability
- Access to traditional County and City Maps
- Access to OK House and Senate district web sites
- Opacity for map features
- Enhanced Red Lining Capabilities
- Ability to utilize various screen resolutions

The GRIP Version 3 browser application is database driven. The result of this type of design is that OKDOT is able to perform the majority of administrative functions without the help of a Consultant. The new design will enable OKDOT to take on more responsibility for maintaining the application. The application does not use “base maps” which eliminates the need to constantly generate these types of maps every time a change has been made. The application utilizes a product called ‘Label-Web’ which performs dynamic labeling.

Designed and implemented an Internet application called GRIPLite. The GRIPLite application is running outside the OKDOT firewall and is therefore available to the public. The application is a limited version of the GRIP Version 3 intranet application. The same business layers, thematics and attributes are available to the user as is supported in the GRIP Version 3 application. OKDOT is currently responsible for maintaining this application.

OKDOT provided three key personnel (Project manager, GIS Administrator, GIS Specialist) along with critical GIS products and services supporting the GRIP and GRIPLite projects. Numerous special request maps were also created to support senior staff and engineering decision-making.

1103 Geographical Information Management System for Transportation (cont)

PROPOSED ACTIVITIES FOR FY 2007: Execute a new contract for maintenance of GRIP Version 3, GRIPLite and the Automated Map Production System (AMPS) applications. Work with a consultant to integrate the Department's videolog system into the GRIP Version 3 application. The integration will provide a map interface into the videolog images and our Linear Referencing System (LRS). The user will not be required to know how the images are indexed and/or referenced. By clicking on a point in the map the user will begin viewing videolog at this point on the highway system. Some navigation and printing capabilities will also be supported. Continue to develop the requirements of an Environmental business layer in the GRIP browser application. Emphasis will be placed on building the topology that will be required to perform automated routing across our highway network.

Our primary focus during FY2007 will be training. Conduct certified training addressing the various software products we use to create GIS map products and provide quality GIS services. The training will be comprehensive and designed to be done over several years giving employees the opportunity to build skills through hands-on application development.

ESTIMATED TOTAL COST	Continuing	Fund
Programmed Amount for FY 2006	\$1,125,000	SPR
	0	STATE
Estimated Cost for FY 2006	\$952,000	SPR
	0	STATE
Estimated Cost for FY 2007	\$443,000	SPR
	0	STATE

Contact Information	
NAME	Tim Callahan
TITLE	Transportation Manager II
PHONE	405-521-2728

1201

County, City and other Planning Maps

PURPOSE AND SCOPE: 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. To provide these maps in an improved GIS environment that allows the data to be used for additional mapping purposes. To produce other special purpose maps and graphics for reports and presentations that involve other federally and state coordinated ODOT and/or Planning & Research Division projects.

ACCOMPLISHMENTS DURING FY 2006: Three counties and twenty-eight cities were completely redrafted by computer (CADD) from new inventories: Okmulgee, Pawnee & Wagoner County. Washington County, which was previously listed as completed, had some technical errors that were corrected by redrafting it using the latest CADD software. The Cartographic Design Section continues to address workflows and developments that can increase the efficiency and accuracy of county and city maps. Particular emphasis was placed on boosting productivity, conformity and improving compatibility. The redesign of city mapping process with geo-positioned scalable layouts will make all urban and local details more accessible to other software usage within ODOT and other agencies that use our maps. Additional efforts were made to include other experienced CADD personnel in digitizing our county and city maps. Seven counties are now in various stages of production.

The following incorporated city maps, listed by county, were completely redrafted by computer (CADD):

Okmulgee County

Beggs	Bryant	Dewar	Grayson	Henryetta	Hoffman	Morris
Okmulgee	Schulter	Winchester				

Pawnee County

Blackburn	Cleveland	Hallett	Jennings	Maramec	Pawnee	Ralston
Skedee	Terlton	Quay	Westport			

Wagoner County

Coweta	Okay	Porter	Redbird	Tallahassee	Wagoner
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Special maps were also completed for Top 25 Projects by Division, I-35 detour maps for the internet, highway corridor maps, rest area & weigh station locations and various other special graphics pertaining to bridges, the funding and completion of transportation projects were also produced as needed by the department.

PROPOSED ACTIVITIES FOR FY 2007: Redraft by computer (CADD) ten or more county maps chosen from the following available inventories: Cherokee, *Choctaw*, Cleveland, *Coal*, Cotton, Craig, Delaware, *Garfield*, Haskell, *Lincoln*, Marshall, Mayes, *Murray*, Okfuskee, Osage, Noble, *Nowata*, Pushmataha, Sequoyah, Stephens and *Tulsa* Counties. (Those in *italics* are presently in production.) Incorporated city maps within each county will also be redrafted. All city and county maps, presently in CADD format, shall be updated as highway system revisions are completed and opened to traffic.

Keep employees abreast of technological advances through seminars, conferences and workshops. Schedule additional training for any newer employees or additional staff who are working on existing software while cross-training individuals so that they understand and can duplicate others work. Increase training on for any new programs and techniques for all employees as they become available.

1201 County, City and other Planning Maps (continued)

Integrate additional GIS Development line work from outside data sources into our current mapping system. Utilize triangulated satellite and GPS graphics using GeoGraphics mapping capabilities into the workplace. Cross reference highway data using our Geographical Resource Intranet Portal (GRIP) system and other available internet mapping resources.

ESTIMATED TOTAL COST	Continuing	Fund
Programmed Amount for FY 2006	\$250,400	SPR
	0	STATE
Estimated Cost for FY 2006	\$252,00	SPR
	0	STATE
Estimated Cost for FY 2007	\$286,000	SPR
	0	STATE

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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 2006: All state, county and city systems were counted in the 38 counties scheduled for the 2005 count cycle. 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.

PROPOSED ACTIVITIES FOR FY 2007: 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 39 counties scheduled for the 2007 count cycle. Attend seminars, conferences and workshops to keep abreast of the latest technological advances. The contract with the University of Oklahoma Computer Science Department for development of the Traffic Count Map Web Page for public access, will be renewed for a third year. Additionally, a contract for the collection of short-term traffic counts in Tulsa County will be administered.

ESTIMATED TOTAL COST	Continuing	Fund
Programmed Amount for FY 2006	\$494,200	SPR
	0	STATE
Estimated Cost for FY 2006	\$452,800	SPR
	0	STATE
Estimated Cost for FY 2007	\$468,000	SPR
	0	STATE

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1302

Permanent Traffic Count Program

PURPOSE AND SCOPE: To collect hourly traffic data by lane for traffic monitoring design needs. There are 6 Automatic Traffic Recorder (ATR) locations and 54 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. Utilities are maintained for all permanent sites through accounts with 20 different electric power companies and 13 different telephone companies.

ACCOMPLISHMENTS DURING FY 2006: Operational rates for the permanent traffic count & classification stations have continued to see marked improvement (99.3%). The conversion of ATR sites to AVC sites has continued at an accelerated pace. During FY 2006, eleven (11) more sites have undergone conversion. Telephone service utilities requirements have increased due to the construction of new sites and the expiration of analog cellular service at 12 of the existing sites. Since all sites have now been converted to land line telephone service, costs have increased by 8%. During the year, accounts were opened with three additional telephone service providers. The significant increase in classification capability has enhanced development of updated seasonal and axle factors throughout the state.

PROPOSED ACTIVITIES FOR FY 2007: New construction, site conversion, and site renovation will continue to impact operating costs for the permanent stations in FY 2007. Increased costs in telephone service will be minimally offset by a slight decrease in electric utilities requirements due to a projected conversion of selected sites to solar power. In the process of converting the remaining 6 ATR sites to classification capability, they will also undergo conversion from AC to solar power. Additionally, plans for projected new construction will incorporate installation of solar facilities where feasible. Site surveys will continue to be conducted selecting new site location in support of the Traffic Analyst's plan for enhanced representative samples of roadway sections by functional classification for updating adjustment factors.

ESTIMATED TOTAL COST	Continuing	Fund
Programmed Amount for FY 2006	\$186,100	SPR
	0	STATE
Estimated Cost for FY 2006	\$186,100	SPR
	0	STATE
Estimated Cost for FY 2007	\$203,400	SPR
	0	STATE

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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 2006: Equipment purchases for FY 2006 reflect the expanded scope of the Traffic Monitoring Systems programs. The conversion of ATR sites to AVC and new installs required 20 new ADR-2000 Classifiers, 10 new LPM modems, and batteries and other accessories for conversion of selected sites to solar power; while equipment upgrade for the short duration count sites resulted in the purchase of 20 Peek ADR 1000 Counter / Classifiers, 100 TT-4 (junior counters), and 3 new Turning Movement Boards. Additionally, tools and accessories for support of road tube installation were acquired. Repair of traffic counting equipment and RTMS radar detectors consumed approximately 2% of the total expenditure.

PROPOSED ACTIVITIES FOR FY 2007: Expanded traffic monitoring systems operations will require increased equipment expenditure for FY 2007 due to: (1) projected new construction of sites selected by the Traffic Analyst in support of expanded functional class sample for factor adjustments (2) completion of the program for converting ATR sites to AVC sites, (3) site renovation at selected permanent stations requiring hardware upgrade, (4) road tube replacement supplies and materials in support of the short duration count program, (5) installation of solar power facilities at selected sites to replace current AC power service, (6) equipment requirements associated with collecting and documenting location and site description data for the short duration count stations, (7) required replacement of distance measuring equipment and accessories in support of the road inventory program, and (8) projected requirements for manufacturer repair of data collection equipment.

ESTIMATED TOTAL COST	Continuing	Fund
Programmed Amount for FY 2006	\$191,500	SPR
	0	STATE
Estimated Cost for FY 2006	\$147,300	SPR
	0	STATE
Estimated Cost for FY 2007	\$135,430	SPR
	0	STATE

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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 2006: Data gathered will be incorporated into the "2007 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 new contract was issued with Progressive Engineering Technologies for the collection of multi-lane urban and rural four lane classification data.

Data for numerous special studies were collected as follows:

(A) For the Data Collection Branch

- 1 - Turning movements with pedestrian counts
- 2 - (24 hour) Cumulative Machine Counts
- 136 - (24 hour) Vehicle Classification Counts

(B) For the Engineering Services Branch

- 9 - Turning movements with pedestrian counts
- 143 - (24 hour) Hourly Machine Counts
- 3 - (24 hour) Cumulative Machine Counts
- 12 - (24 hour) Vehicle Classification Counts

(C) For the Traffic Engineering Division

- 49 - Turning movements with pedestrian counts
- 143 - (24 hour) Hourly Machine Counts
- 31 - (24 hour) Cumulative Machine Counts
- 13 - (24 hour) Vehicle Classification Counts

(D) For other Divisions

- 2 - (24 hour) Hourly Machine Counts

PROPOSED ACTIVITIES FOR FY 2007: Vehicle classification data will continue to be collected by machine from either state forces or by contract. 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, and workshops and set up demonstrations to keep abreast of the latest technological advances.

1305 Vehicle Classification Counting Program (continued)

ESTIMATED TOTAL COST	Continuing	Fund
Programmed Amount for FY 2006	\$395,500	SPR
	0	STATE
Estimated Cost for FY 2006	\$341,200	SPR
	0	STATE
Estimated Cost for FY 2007	\$408,000	SPR
	0	STATE

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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 and 54 Automatic Vehicle Classifier (AVC) sites located throughout the state.

ACCOMPLISHMENTS DURING FY 2006: The Department initiated the 2nd year renewal of the Traffic Monitoring Systems (TMS) Maintenance Contract with International Road Dynamics of Saskatoon Canada. The contract incorporates maintenance and calibration of the Automatic Vehicle Classifier (AVC) sites as well as the Weigh-in-Motion (WIM) sites. Continued new construction, site renovation, and the ATR to AVC site conversion, as well as the comprehensive scheduled maintenance and calibration program have had a positive impact on the overall permanent station operational rate over the last year. The scope of the work completed during the second year of the contract encompassed:

- 1) Construction of three (3) new AVC sites and one (1) new WIM site
- 2) Conversion of eleven (11) ATR sites to AVC sites
- 3) Renovation of ten (10) existing sites (6 WIM and 4 AVC)
- 4) Scheduled maintenance and calibration for 18 WIM sites and 48 AVC sites
- 5) On-call repair/services for 20 WIM sites and 48 AVC sites

PROPOSED ACTIVITIES FOR FY 2007: This third year of the contract will complete the ATR to AVC site conversion and support new construction and renovation incorporating installation of solar power facilities at selected sites. As all ATR sites convert to classification capability, additional sites will be programmed for installation at locations selected to round out and enhance the functional class sample of permanent stations for development of updated factor adjustments to be applied to the short duration sites. The scope of work to be accomplished in FY 2006 is as follows:

- 1) Construction of four (4) new AVC sites and one (1) WIM site
- 2) Conversion of six (6) ATR sites to AVC sites
- 3) Renovation of four (4) AVC sites and five (5) WIM sites
- 4) Routine maintenance and calibration for 21 WIM sites and 60 AVC sites
- 5) On-call repair/services for 21 WIM sites and 60 AVC sites

ESTIMATED TOTAL COST	Continuing	Fund
Programmed Amount for FY 2006	\$882,400	SPR
	0	STATE
Estimated Cost for FY 2006	\$834,800	SPR
	0	STATE
Estimated Cost for FY 2007	\$845,310	SPR
	0	STATE

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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 Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). The purpose of TMS is to computerize traffic estimation and reporting, including data from public and private non - state government entities.

ACCOMPLISHMENTS DURING FY 2006: Annual processing was completed for the traffic year 2005 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 2005 Oklahoma Traffic Characteristics Report was completed.

PROPOSED ACTIVITIES FOR FY 2007: 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	Fund
Programmed Amount for FY 2006	\$135,000	SPR
	\$0	STATE
Estimated Cost for FY 2006	\$95,000	SPR
	\$0	STATE
Estimated Cost for FY 2007	\$120,000	SPR
	\$0	STATE

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1309

Traffic Analysis and Projections

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 2006: 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 FY 2007: 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	Fund
Programmed Amount for FY 2006	\$135,000	SPR
	\$0	STATE
Estimated Cost for FY 2006	\$135,000	SPR
	\$0	STATE
Estimated Cost for FY 2007	\$147,000	SPR
	\$0	STATE

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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 2006: The Department executed an expanded schedule during FY 2006, due to the requirement to test the required mileage necessary to bring the program back on schedule. This encompassed the testing of all highways (including interstates) in Division’s 1, 2, 3, 4, & 8. Cumulative miles tested for FY 2006 totaled 15,697. Test results revealed that 8% of the roadways had recorded values of less than adequate skid resistance. By the end of the year the Department had purchased a new Pavement Friction Testing System (Skid Truck and Trailer) from International Cybernetics Corporation. Additionally, an air bearing force plate calibration system was purchased; giving the Department the capability of providing locally conducted field calibration of the system’s force/load transducing.

PROPOSED ACTIVITIES FOR FY 2007: The annual test cycle is planned for the highways in Divisions 5, 6, & 7 and scheduled to be tested through to completion by the end of calendar year 2006 (December 31). This encompasses all state, federal and interstate highways totaling approximately 10,625 miles. This will be the first test cycle for the new Pavement Friction Testing System, a state-of-the-art vehicle with the latest skid electronics technology, which should prove to demonstrate enhanced productivity.

ESTIMATED TOTAL COST	Continuing	Fund
Programmed Amount for FY 2006	\$407,700	SPR
	0	STATE
Estimated Cost for FY 2006	\$351,300	SPR
	0	STATE
Estimated Cost for FY 2007	\$143,500	SPR
	0	STATE

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1403

ODOT Manual Update

PURPOSE AND SCOPE: To revise and update the various Manuals used by ODOT according to Department, AASHTO, FHWA, and other appropriate Agencies' design criteria, policies, and procedures

ACCOMPLISHMENTS DURING FY 2006: Programmed a project for consultant to rewrite and update ODOT's Standard Specifications based on Specifications Committees' recommendations. Led and took part in Specifications Committee reviews.

PROPOSED ACTIVITIES FOR FY 2007: Develop ODOT construction manual as a pilot project partly funded by FHWA. Continue participation in Specifications Committee to review consultant's work.

ESTIMATED TOTAL COST CONTINUING	Amount	Fund	Job Piece No.	Project No.
Programmed Amount for FY 2006	\$200,000	SPR		
	0	STATE		
Estimated Cost for FY 2006	\$215,000	SPR	23659(04)	SPR-0010(049)PL
	0	STATE		
Estimated Cost for FY 2007	\$65,000	SPR		
	0	STATE		

Contact Information	
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1404**Safety Planning**

PURPOSE AND SCOPE: To review Oklahoma's Strategic Highway Safety Plan being prepared by a consultant and incorporate the plan in the development of Oklahoma's Statewide Transportation Improvement Program and Statewide Long Range Transportation Planning Activities.

ACCOMPLISHMENTS DURING FY 2006: None. New Program

PROPOSED ACTIVITIES FOR FY 2007: Review and provide input for the Oklahoma's Strategic Highway Safety Plan being developed by a consultant.

ESTIMATED TOTAL COST	Amount	Fund
Programmed Amount for FY 2006	\$0	SPR
	0	STATE
Estimated Cost for FY 2006	\$0	SPR
	0	STATE
Estimated Cost for FY 2007	\$20,000	SPR
	0	STATE

Contact Information	
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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 2006: Review of consultant studies completed.

PROPOSED ACTIVITIES FOR FY 2007: Consultant studies will be overseen as needed. Keep informed of technological advances through attendance of seminars, conferences and workshops.

ESTIMATED TOTAL COST	CONTINUING	Fund
Programmed Amount for FY 2006	\$12,000	SPR
	\$0	STATE
Estimated Cost for FY 2006	\$2,000	SPR
	\$0	STATE
Estimated Cost for FY 2007	\$6,000	SPR
	\$0	STATE

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1511

Project Reconnaissance Information

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 2006: Adopted the 18 Month Ahead Check list for use in the Load Posted Bridge Program. Coordinated with Project Management on implementing data collection contracts which provided information necessary for the Programmatic NEPA clearance for the Load Posted Bridge Program.

PROPOSED ACTIVITIES FOR FY 2007: Revisit the 18 Month Ahead checklist to refine it based on the experience of the Load Posted Bridge data collection. Work with Project Management to incorporate the list into the scoping process for all projects in the 8 Year Construction Work Plan. Incorporate any resulting changes to the scoping process in the Environmental Procedures Manual.

ESTIMATED TOTAL COST CONTINUING	Continuing	Fund
Programmed Amount for FY 2006	\$10,000	SPR
	0	STATE
Estimated Cost for FY 2006	\$30,500	SPR
	0	STATE
Estimated Cost for FY 2007	\$14,000	SPR
	0	STATE

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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 5,000 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. Prepare and submit agenda items and supporting documents pertaining to state highway revisions to the State Transportation Commission. Coordinate any revisions to the United States route numbered system with the American Association of State Highway and Transportation Officials (AASHTO). Organize, maintain and secure all historical documents and maps pertaining to the history of the State Highway and functional classification systems.

ACCOMPLISHMENTS DURING FY 2006: 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. System section helped the Public Affairs Division on the 50-Year anniversary of the Interstate Highways. The team leader continued to update the division wide training database used to track and better ascertain the training needs and requirements of Planning and Research Division personnel.

PROPOSED ACTIVITIES FOR FY 2007: 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. 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. Transfer all system files to electronic format and make them available on the ODOT's intranet. 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.

1601 Federal-aid Systems Coordination (continued)

ESTIMATED TOTAL COST	Continuing	Fund
Programmed Amount for FY 2006	\$198,000	SPR
	0	STATE
Estimated Cost for FY 2006	\$145,000	SPR
	0	STATE
Estimated Cost for FY 2007	\$139,000	SPR
	0	STATE

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Highway Needs Study

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 2006: 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. Initiated preparation of the 2007 Needs Study and Sufficiency Rating Report, Volumes I & II.

PROPOSED ACTIVITIES FOR FY 2007: 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 I & II. Review, revise, and publish the State Highway

ESTIMATED TOTAL COST	Continuing	Fund
Programmed Amount for FY 2006	\$69,000	SPR
	0	STATE
Estimated Cost for FY 2006	\$69,000	SPR
	0	STATE
Estimated Cost for FY 2007	\$73,200	SPR
		STATE

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Pavement Management Systems

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 2006: Continued refinement of PMS procedures by updating performance curves, treatment costs, and triggers. Incorporate network-level FWD data into analysis. Provided technical support for the Intranet Analysis Tool. Collected FWD and GPR on an additional 350 miles of high volume, non-NHS routes. Performed a PMS analysis of the entire non-toll state highway system and a separate analysis of the interstate highway system only. Provided video log technical support to field divisions. Kept informed of the latest technological advances and practices by attending the Southeast Pavement Management Conference. Provided data and support for Pavement Preservation Program (3P) project selection. Began pavement condition data collection on the following:

- NHS routes in all divisions
- Non-NHS routes in Divisions 4 and 8
- HPMS sample sections in Divisions 4 and 8

PROPOSED ACTIVITIES FOR FY 2007: Incorporate additional relevant data elements into analysis as they become available. Provide technical support for the Intranet Analysis Tool and the video log software. Begin new round of condition data collection of non-NHS routes in Divisions 1, 2, 3, 5, 6, and 7. Perform a PMS analysis of the National Highway System in Oklahoma. Keep informed of the latest technological advances and practices through seminars, conferences, and workshops.

ESTIMATED TOTAL COST	Continuing	Fund
Programmed Amount for FY 2006	\$1,690,549	SPR
	0	STATE
Estimated Cost for FY 2006	\$1,233,400	SPR
	0	STATE
Estimated Cost for FY 2007	\$1,105,300	SPR
		STATE

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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 2006: 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 2007: 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	Fund
Programmed Amount for FY 2006	\$33,500	SPR
	0	STATE
Estimated Cost for FY 2006	\$33,500	SPR
	0	STATE
Estimated Cost for FY 2007	\$33,500	SPR
	0	STATE

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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 2006: MPO is conducting an ongoing Traveler Opinion Survey to gage the public's concerns regarding the existing transportation system in the Oklahoma City metropolitan area. MPO 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 and entered into Early Action Compact State Implementation Plan (SIP) to maintain compliance with Federal Clean Air Act provisions and the National Ambient Air Quality Standards (NAAQS). Entered into an Emergency Action Compact with the Oklahoma Department of Environmental Quality (ODEQ) and the Environmental Protection Agency (EPA) to insure methods were developed to enhance public awareness of the dangers and implications of attainment and non-attainment of the 8-hour air quality standards in the Oklahoma City metropolitan area. The Clean Air Committee promoted an extensive public education campaign "A Let's Clear the Air@" and "A Get Your Own Square of Clean Air@". Continued coordinating services with COTPA for transportation of the Elderly and Disabled. MPO prepared the FY 2007-2010 OCARTS Area Transportation Improvement Program (TIP). The FY 2007 UPWP was prepared and approved by FHWA & FTA. The FY 2007 Agreement was executed. Federal process review was completed for ACOG transportation planning process. ACOG - ODOT certification process completed. 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 2007: Finalization and publication of the 2030 OCARTS Long-Range Transportation Plan. Areas of special emphasis in FY 2007: 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 coordination with collection and assessment of socioeconomic data and transportation data. Continue coordination with 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.

1701 Oklahoma City Area Regional Transportation Study (OCARTS) (cont.)

ESTIMATED TOTAL COST	Continuing	Fund
Programmed Amount for FY 2006	\$16,500	SPR
	0	STATE
	\$1,091,106	PL Funds
	\$196,051	Local
	\$134,200	In-Kind
Estimated Cost for FY 2006	\$18,000	SPR
	0	STATE
	\$1,070,000	PL Funds
	\$221,916	Local
	\$165,253	In-Kind
Estimated Cost for FY 2007	\$20,000	SPR
	0	STATE
	\$1,071,967	PL Funds
	\$149,731	Local
	\$150,000	In-Kind

Contact Information	
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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 new SAFETEA-LU provisions and all applicable transportation planning regulations and requirements for the Tulsa urbanized area.

ACCOMPLISHMENTS DURING FY 2006: The 2030 Mobility Plan (LRTP) was finalized. Preparation and finalization of the FY 2007 UPWP was completed. The FY 2007 Agreement was executed and authorization to expend federal funds effective July 1, 2006 through June 30, 2007 was granted by FHWA. Public Participation activities were greatly enhanced during the planning year to more involve the public, particularly, in the LRTP and air quality processes. 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. An Emergency Action Compact with the Environmental Protection Agency continued to insure methods followed to insure public awareness of the dangers and implications of attainment and non-attainment of the 8-hour air quality standards in the Tulsa area. Continued support of Ozone Alert programs. Conducted many broad based public involvement activities in support of the planning process, air quality and transit programs.

PROPOSED ACTIVITIES FOR FY 2007: Implementation of the FY 2007 UPWP: Implementation of the LRTP for 2030; modeling refinements will continue to be developed and incorporated in the planning process; a scientific public opinion survey will be initiated for the LRTP for 2035; assist several member's 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 2007-2010. Air Quality Planning and Management: continue to coordinate the Ozone Alert Programs, the Clean Cities Programs and the Commuter Choice Rideshare programs in the region's efforts to maintain attainment of the air quality standards. INCOG will continue to work with ODEQ and ODOT to successfully achieve the overall provisions of the Early Action Compact. Congestion Management: support the implementation of the Incident Management Manual, work toward implementing ITS components throughout the region and rewrite 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/trails issues.

1702 Tulsa Metropolitan Area Transportation Study (cont.)

ESTIMATED TOTAL COST	Continuing	Fund
Programmed Amount for FY 2006	\$26,000	SPR
	0	STATE
	\$730,079	PL Funds
	\$177,516	Local Funds
Estimated Cost for FY 2006	\$26,000	SPR
	0	STATE
	\$730,079	PL Funds
	\$177,516	Local Funds
Estimated Cost for FY 2007	\$26,000	SPR
	0	STATE
	\$823,421	PL Funds
	\$223,054	Local Funds

Contact Information	
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1703 Lawton Metropolitan Planning Organization (LMPO)

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 2006: Transportation Planning for the Lawton Metropolitan Area was carried out as described in the Unified Planning Work Program (UPWP) FY 2006. This consisted of: Employed a transportation modeling consultant to update the network and provide demographic projection for the year 2030, prepared draft 2030 LRTP, prepared draft Public Participation Plan, conducted LATS surveys for boarding/deboarding, implemented the third year of the Air Quality education program, and prepared draft of the FFY 2006-2008 and FFY 2007 – 2010 TIP.

PROPOSED ACTIVITIES FOR FY 2007: 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. Undertake transportation planning activities leading to the development and implementation of the short-range (five Year) elements of the 25 Year Long Range Transportation Plan. Develop policies and plans regarding transportation and transportation-related areas such as air quality, reducing congestion and preserving street network capacity. Develop, prioritize and schedule a program of transportation projects. Develop appropriate safety goals and security policies and programs for the transportation system. Support the Lawton Metropolitan Area Air Quality Committee (LMAAQC) Program and public awareness campaign.

ESTIMATED TOTAL COST-	Continuing	Fund
Programmed Amount for FY 2006	\$15,900	SPR
	0	STATE
	\$120,000	PL Funds
	\$32,500	Local
Estimated Cost for FY 2006	\$15,900	SPR
	0	STATE
	\$139,427	PL Funds
	\$32,500	Local
Estimated Cost for FY 2007	\$15,900	SPR
	0	STATE
	\$120,000	PL Funds
	\$32,500	Local

Contact Information	
NAME	Dawn Borelli
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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 2006: The tasks listed in the FY 2006 UPWP were completed. Continued analysis of the transportation and socioeconomic elements of the Long Range Transportation Plan was completed. Staff continued to collect data on proposed corridors for a controlled-access facility into 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 2007 Agreement was completed and authorized; The FY 2007 UPWP was prepared and approved. The MPO was updating its operating and administrative documentation and is adding new members to its membership by revision of its boundaries. Work on updating the 2030 LRTP was finalized. Work on the development of the ITS plan and architecture was continued.

PROPOSED ACTIVITIES FOR FY 2007: 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. Initiate the provisions of the 2035 LRTP. Continue staff education, training and attendance at workshops and seminars. Continue work on the implementation of the ITS plan.

ESTIMATED TOTAL COST	Continuing	Fund
Programmed Amount for FY 2006	\$6,600	SPR
	0	STATE
	\$13,826	PL Funds
	\$3,457	Local
Estimated Cost for FY 2006	\$6,600	SPR
	0	STATE
	\$13,826	PL Funds
	\$3,457	Local
Estimated Cost for FY 2007	\$6,600	SPR
	0	STATE
	\$22,000	PL Funds
	\$4,000	Local

Contact Information	
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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 SAFETEA-LU 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 Tribal Governments.

ACCOMPLISHMENTS DURING FY 2006: Developed the SAFETEA-LU compliant FFY 2007-2010 Statewide Transportation Improvement Program (STIP) for approval and implementation. Attained federal approval for an extension of the FFY 2005 – 2007 STIP due to revision of the 8 Yr Construction Work Plan. Developed the FFY 2006 & 2007 Single Document Amendment – approval of STIP extension was contingent upon development of this document. All additional amendments to the STIP were in accordance with the federally approved Criteria for Amending the Extended STIP.

Prior to STIP extension, all STIP amendments were 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 and SAFETEA-LU, regarding publication of project amendments.

The FFY 2007-2010 STIP contains an Executive Introduction of the Transportation; Explanation of STIP; Balancing Process including Clarification, Projected Revenues and Expenditures Summary as well as SAFETEA-LU Special Projects; FFY 2007-2010 Construction Program Maps with Project List; MPO TIPs; Indian Reservation Roads TIP; Federal Lands Application; Sub-state Organization Map; Tribal Jurisdiction Map; ODOT Certification; STIP/TIP Development and Amendment Procedures and Federal Joint Memorandum of Understanding. 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.

Ongoing Joint Process Review on the STIP Development Process.

PROPOSED ACTIVITIES FOR FY 2007: Areas of special emphasis in FY 2007: Development of the FFY 2008 - 2011 Statewide Transportation Improvement Program for implementation. Maintaining the FFY 2007 portion of the STIP through the approved *STIP/TIP Amendment Procedures*. Continue to comply with the procedures for consultation with non-metropolitan local officials. Continue STIP Development Joint Process Review

ESTIMATED TOTAL COST	Continuing	Fund
Programmed Amount for FY 2006	\$55,000	SPR
	0	STATE
Estimated Cost for FY 2006	\$55,000	SPR
	0	STATE
Estimated Cost for FY 2007	\$65,000	SPR
	0	STATE

1719 Statewide Transportation Improvement Program (STIP) (cont.)

Contact Information	
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1901 Oklahoma Pollutant Discharge Elimination System (OPDES) Municipal Separate Storm Sewer System (MS 4) Permits

PURPOSE AND SCOPE: The United States Environmental Protection Agency (EPA) has promulgated regulations in 40 CFR 122 requiring DOT' to obtain a permit for their separate storm sewer systems. ODOT is required under this regulation to obtain a permit for its storm water runoff system within the boundaries of regulated cities of Oklahoma. ODOT selected the option to be a co-permittee with the City of Oklahoma City and Tulsa in obtaining an OPDES Phase I permit and is required to be permitted under Phase II of the same regulation. ODOT requires assistance to develop and implement the Stormwater Program required under this permit to cover ODOT under Phase II.

ACCOMPLISHMENTS DURING FY 2006: Hired a consultant to develop ODOT 's MS4 Stormwater program within urbanized areas as required by the MS4 permits issued by Department of Environmental Quality. The benefit of this project will help ODOT maintain compliance with the MS4 permit through implementation of program mandates in the permit and included in ODOT's Storm Water Management Plan. .

PROPOSED ACTIVITIES FOR FY 2007: Develop Phase II permit and program. Review and coordinate consultant work.

ESTIMATED TOTAL COST CONTINUING	Amount	Fund
Programmed Amount for FY 2006	\$160,000	SPR
	0	STATE
Estimated Cost for FY 2006	\$155,000	SPR
	0	STATE
Estimated Cost for FY 2007	\$185,000	SPR
	0	STATE

Contact Information	
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Statewide Long Range Transportation

PURPOSE AND SCOPE: To update the Statewide Intermodal Transportation Plan (The Plan@) and other associated statewide planning activities in accordance with the provisions of SAFETEA-LU. 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 2006: The 2005-2030 Statewide Intermodal Transportation Plan was approved by the Oklahoma Transportation Commission, published and distributed. Work continued on the US 81 Transportation Improvement Corridor Study from I-40 to SH 19 in Canadian and Grady Counties.

Worked with the Oklahoma University and Oklahoma State University in updating and/or implementing a new multi modal statewide freight forecasting model. 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 2007: 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	Fund
Programmed Amount for FY 2006	\$25,000	SPR
	0	STATE
Estimated Cost for FY 2006	\$20,000	SPR
	0	STATE
Estimated Cost for FY 2007	\$25,000	SPR
	0	STATE

Contact Information	
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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 2006: Secured ITS integration funding for the systems analysis / design and deployment of Oklahoma’s Commercial Vehicle Information Systems and Networks (CVISN) Program plan projects. Assisted Lawton Area Metropolitan Planning Organizations (MPO) with Federal Transit grant for ITS. Maintained Oklahoma’s CVISN and Statewide Strategic ITS Program plans and architectures. Coordinated ITS and other technology based transportation research contracts and activities.

PROPOSED ACTIVITIES FOR FY 2007: 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 MPOs in maintenance of their regional ITS and architecture. Coordinate ITS and other technology based transportation research contracts and activities.

ESTIMATED TOTAL COST	Continuing	Fund
Programmed Amount for FY 2006	\$104,000	SPR
	\$0	STATE
Estimated Cost for FY 2006	\$70,000	SPR
	\$0	STATE
Estimated Cost for FY 2007	\$6,000	SPR
	\$0	STATE

Contact Information	
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PHONE	405-522-3795

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

ACCOMPLISHMENTS DURING FY 2006: 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. ACOG and INCOG have 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 States, 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 2007: Maintain participation in EACs and the EAC Statewide Implementation Plan. Maintain research and participation in air quality/transportation issues, developments, regulations and laws. Work with both ACOG and INCOG to possibly implement 8 hour ozone flex agreements with ODEQ and EPA to help maintain air quality attainment status if high ozone readings persist through the next fiscal year. Participate in Memorandum of Agreement and other requirements (transportation conformity) of nonattainment status if any area of the State becomes nonattainment through possible 8-hour ozone flex agreements with ODEQ and EPA. 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.

1904 Air Quality Transportation Planning (cont.)

ESTIMATED TOTAL COST	Continuing	Fund
Programmed Amount for FY 2006	\$10,000	SPR
	0	STATE
Estimated Cost for FY 2006	\$9,000	SPR
	0	STATE
Estimated Cost for FY 2007	\$10,000	SPR
	0	STATE

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1910

Visualization Techniques

PURPOSE AND SCOPE: To provide visual aides for the Public Involvement for Statewide Transportation Improvement Plan (STIP) and NEPA Process. Section 6001 of SAFETEA-LU specifically states that the State shall employ visualization techniques to describe plans for the public comment in the development of STIP. In addition, the visualization techniques will be useful in the Public Involvement required under 23 CFR 771.111 for Environmental Impact Procedures, 40 CFR 1500-1508 for implementation of NEPA, 36 CFR 800 for the Section 106 of National Historic Preservation Act, and Section 4(f) of the Department of Transportation Act.

ACCOMPLISHMENTS DURING FY 2006: None. New Program

PROPOSED ACTIVITIES FOR FY 2007: Provide visualization of proposed projects for the STIP. Provide visualization of existing and proposed conditions for presentation to public and other agencies at public and stakeholders meetings for Planning and NEPA purposes.

ESTIMATED TOTAL COST	Amount	Fund
Programmed Amount for FY 2006	\$0	SPR
	0	STATE
Estimated Cost for FY 2006	\$0	SPR
	0	STATE
Estimated Cost for FY 2007	\$6,000	SPR
	0	STATE

Contact Information	
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Environmental Studies (NEPA 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 ODOT’s construction program, including necessary reevaluation and consultation with FHWA regarding existing environmental clearances. It also includes coordination with the Department’s public involvement specialist, Planning & Research environmental specialists, other ODOT Divisions, the interested public, stakeholders, elected officials, FHWA, NEPA service providers, and others as necessary to ensure compliance with NEPA in the development of ODOT’s work plan. Major issues considered in the NEPA process include, historic and archaeological resources, endangered species and other habitat concerns, hazardous materials, wetlands, farmland, noise, air quality, and social and economic impacts, especially any disproportionate impacts to minorities and low income communities. The input of appropriate federal and state agencies, Native American tribes, and other entities is solicited, necessary environmental studies are requested or contracted, plans for public involvement developed when necessary, and findings presented. Preparation of documents is accomplished in-house and by consultants retained for this purpose. 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, final documents are provided to FHWA for execution of appropriate concurrences, FONSI’s and ROD’s.

ACCOMPLISHMENTS DURING FY 2006: The NEPA review process was completed for a total of 193 state and local projects (188 CEs and 5 EA’s). Public meetings have been held on 10 projects, and 4 stakeholder meetings held. In addition a programmatic CE was developed to expedite the replacement of 68 highway bridges in the State’s Load Posted Bridge program and individual “environmental approvals” under this CE have been completed or are underway. At least 8 public meetings are anticipated during FY2006 for this program. Formal NEPA reevaluations have been undertaken on 13 projects, and informal update consultation completed for another 45. Another 70 projects or so are in various stages of environmental review.

PROPOSED ACTIVITIES FOR FY 2007: On-call engineering service contracts have been executed with 6 consultants to provide expedited NEPA review. Continue routine NEPA and environmental review of federal, state, and local transportation projects. Continue to improve communication with FHWA and other federal/state agencies to streamline NEPA process and improve compliance. Undertake training and environmental process reorganization to help ODOT implement new NEPA procedure manual anticipated for completion late FY2006 or early FY2007. Work with FHWA Oklahoma Division to implement assumption of federal NEPA authority embodied in Sections 6004 and 6005 of SAFETEA-LU. 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	Fund
Programmed Amount for FY 2006	\$350,280	SPR
	0	STATE
Estimated Cost for FY 2006	\$342,000	SPR
	0	STATE
Estimated Cost for FY 2007	\$423,300	SPR
	0	STATE

Contact Information	
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1980 Environmental Studies (Environmental Affairs and Specialist Studies)

PURPOSE AND SCOPE: This includes detailed studies required to ensure ODOT compliance with all applicable state and federal laws and regulations protecting all aspects of the human and natural environment. A principal focus is providing studies and reviews to support NEPA documents assembled under Item 1979 and consultation on FHWA's behalf with a variety of state and federal resource protection agencies and Tribes. Environmental specialists also provide assessments and reviews as needed for long-range planning and corridor studies, mitigation of impacts identified during NEPA review, ongoing coordination with regulatory agencies and other ODOT Divisions to ensure implementation of special environmental protection measures during construction, maintenance, and operation, and provide expert interpretations to ODOT and FHWA regarding current and proposed legislation/regulation protecting the environment. As requested, special environmental reviews are undertaken for other ODOT traffic, construction, maintenance, and enhancement activities. In addition to undertaking in-house studies, environmental specialists review, approve, and submit consulted studies to appropriate resource agencies. Expertise is maintained in wetland biology, plant ecology, endangered species protection, Corps permitting requirements, archaeology, architectural history, tribal coordination and cultural anthropology, historic preservation policy, environmental health and hazardous waste issues, noise evaluation and mitigation, social and economic impacts, and general NEPA policy. As needed, additional expertise is retained through consultant contracts.

ACCOMPLISHMENTS DURING 2006: 220 Phase I cultural resources surveys, 2 Phase II archaeological testing projects, 4 MOAs and 4 Section 4(f) evaluations, 1 Phase III archaeological data recovery project and 1 Section 106 historic mitigation were completed in-house thru an Interagency Agreement with the University of Oklahoma for cultural resources studies. This also included 91 off-project file reviews and 2 borrow pit surveys, 13 meetings and MOU/PA negotiations with Tribal officials, 7 of which have been executed, and 2 project specific tribal meetings regarding cultural resources issues. A total of 18 archaeological sites and 37 standing historic buildings have been reviewed and documented. Phase I of the new historic bridge survey has been completed in draft form and will be submitted to SHPO. 151 projects were subjected to initial biological/wetland assessments through an Interagency Agreement with the University of Oklahoma for biological studies, and another 30 consulted biological studies have been reviewed. Informal Section 7 consultation has been completed or is underway for 106 projects and 1 formal consultation is underway. Surveys and evaluations for the American Burying Beetle are completed or underway for 47 projects. Programmatic agreements are being developed for the ABB., informal consultation regarding the LPB program, and wetland banking programs. Initial site assessments and LUST reviews have been completed for over 200 projects, with follow up site investigations on approximately 10. A total of 10 TMN noise studies were undertaken in-house, 3 others done by consultants, and numerous citizen noise inquiries were addressed.

PROPOSED ACTIVITIES FOR 2007: Continue to improve and expedite tribal consultation processes through programmatic agreements with FHWA and tribes. Continue aggressive ABB survey and trap/relocate processes, complete final report on Phase I historic bridges resurvey and initiate Phase II documentation of bridges not included in initial study. Continue to explore possible programmatic ABB consultation/treatment, and MBTA compliance with USFWS. Implement Interagency Cooperative funding agreement with USFWS to retain dedicated reviewers for ODOT projects and expedite review processes. Continue working toward establishment of wetland and hardwood forest banks. 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	Fund
Programmed Amount for FY 2006	\$1,300,260	SPR
	0	STATE
Estimated Cost for FY 2006	\$1,420,000	SPR
	0	STATE
Estimated Cost for FY 2007	\$1,770,000	SPR
	0	STATE

1980

**Environmental Studies (Environmental Affairs
and Specialist Studies) (Cont.)**

Contact Information	
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**FEDERAL FISCAL YEAR 2007
OKLAHOMA PROJECT SPRY -0010(042) RS, JP # 01946(48)**

Part 2

	<u>PROGRAM</u>	<u>SPR</u>	<u>STATE</u>	<u>FHWA</u>	<u>TOTAL</u>
2100	Transportation Research Board	\$15,000.00	\$0.00		\$15,000.00
2102	Research Library Services	\$66,000.00	\$0.00		\$66,000.00
2115	LTPP/SHRP/SHRP II Long Term Pavement Performance	\$30,000.00	\$0.00		\$30,000.00
2120	Technical Assistance - Special Studies	\$115,000.00	\$0.00		\$115,000.00
2122	I-40 Crosstown Case Study	\$0.00	\$0.00		\$0.00
2130	General Research Activity	\$385,000.00	\$0.00		\$385,000.00
2700	Experimental Product & Technology Evaluation Program	\$38,000.00	\$0.00		\$38,000.00
	<i>Total General Activities</i>	\$649,000.00	\$0.00	\$0.00	\$649,000.00
					\$0.00
2156	Roadside Vegetation Management	\$182,000.00	\$0.00		\$182,000.00
2157	Herbicide Research Program	\$75,000.00	\$0.00		\$75,000.00
2160	Oklahoma Transportation Center	\$515,000.00	\$0.00		\$515,000.00
2167	Effect of Suction and Moisture on Resilient Modulus of Subgrade Soils in Oklahoma	\$0.00	\$0.00		\$0.00
2168	Scale Effects in Oedometer-Based Predictions of Fill Settlement	\$0.00	\$0.00		\$0.00
2172	Evaluation of ODOT's Percent Within Limits (PWL) Construction Specifications	\$0.00	\$0.00		\$0.00
2177	Determination of Dynamic Modulus Master Curves for Oklahoma Hot Mix Asphalt (HMA) Mixtures	\$0.00	\$0.00		\$0.00
2178	Evaluation of Cold, In-Place Recycling for Rehabilitation of Transverse Cracking on US 412	\$0.00	\$0.00		\$0.00
2181	Resilient Modulus of Asphalt and its Correlation With Asphalt Pavement Analyzer Rut	\$0.00	\$0.00		\$0.00
2182	Task Order Contract for Specified Research Items	\$68,000.00	\$0.00		\$68,000.00
2184	Creation of an ODOT Specification for Patching or Overlay of Bridge Decks	\$0.00	\$0.00		\$0.00
2185	Engineering Properties of Stabilized Subgrade Soils for the Implementation of the AASHTO 2002 Pavement Design Guide	\$92,000.00	\$0.00		\$92,000.00
2186	Rating Precast Prestressed Concrete Bridges for Shear	\$113,000.00	\$0.00		\$113,000.00
2187	Investigation of Automating Turning Movement Studies Using New Sensor Technology	\$0.00	\$0.00		\$0.00
2188	Vegetative Rehabilitation of Highway Cut Slopes	\$55,000.00	\$0.00		\$55,000.00
2190	A Real-Time Scour Risk Identification and Information Management System	\$147,000.00	\$0.00		\$147,000.00
2191	Degradation of Major Streams in Oklahoma	\$78,000.00	\$0.00		\$78,000.00
2192	Development of Field Correlation and Test Procedure for TransTech Systems' Pavement Quality Indicator (PQI) 301 Non-Nuclear Density Gauge	\$0.00	\$0.00		\$0.00
2193	Degradation Stabilizing Methodology for Selected Broken-Back and Drop Box Culverts in Oklahoma Phase II	\$67,000.00	\$0.00		\$67,000.00
2195	Evaluation and Field Verification of Strength and Structural Improvement of Chemically Stabilized Subgrade Soil	\$150,000.00	\$0.00		\$150,000.00
2196	Stability and Permeability of Proposed Aggregate Bases in Oklahoma	\$75,000.00	\$0.00		\$75,000.00
2197	Longitudinal Joint Density and Permeability in Asphalt Concrete	\$70,000.00	\$0.00		\$70,000.00
2199	Optimizing Concrete Mix Designs to Produce Cost Effective Paving Mixes	\$64,000.00	\$0.00		\$64,000.00
2200	Instrumented Pavement Construction	\$371,000.00	\$0.00		\$371,000.00
2202	GIS Layer for Transportation and Economic Statistics	\$86,000.00	\$0.00		\$86,000.00
2203	Truck Weight Enforcement	\$85,000.00	\$0.00		\$85,000.00
2204	Advanced Voice and Multimedia Communications System for the ODOT ITS Network	\$86,000.00	\$0.00		\$86,000.00
2206	Development of an Improved System for Contract Time Determination - Phase II	\$40,000.00	\$0.00		\$40,000.00
2440	Local Technical Assistance Program	\$197,000.00	\$0.00	\$170,000.00	\$367,000.00
	<i>Total Projects</i>	\$2,616,000.00	\$0.00	\$170,000.00	\$2,786,000.00
	<i>Total SPRY-0010(042) RS</i>	\$3,265,000.00	\$0.00	\$170,000.00	\$3,435,000.00
	<i>Grand Total</i>	\$3,265,000.00	\$0.00	\$170,000.00	\$3,435,000.00

**FEDERAL FISCAL YEAR 2007
POOLED FUND COMMITMENTS**

POOLED FUND PROJECTS

Project Number	J/P Number	Contact	Status		Project From	Period To	Estimated ODOT Total Cost to Project	FFY 2006	FFY 2007
1032	none	Wilson Brewer	Solicitation Posted	NCAT Track	2006	2008	\$900,000.00	\$300,000.00	\$300,000.00
TPF-5(117)	none	Kenny Seward	Cleared by FHWA	Development of Performance Properties of Ternary Mixes	2006	2011	\$75,000.00	\$15,000.00	\$15,000.00
TPF-5(099)	22992(04)	Dawn Sullivan	Cleared by FHWA	Evaluation of Low Cost Safety Improvements	2005	2007	\$90,000.00	\$30,000.00	\$30,000.00
TPF-5(069)	22903(04)	David Girdner	Contract signed	TRB: Core Program Services for a Highway Research, Development, and Technology Program	2007	cont	\$128,250.00	\$106,405.00	\$128,250.00
TPF-5(068)	20708(04)	Bob Rusch	Cleared by FHWA	Long Term Maintenance of LRFD Specs	2003	2006	\$40,000.00	\$10,000.00	\$0.00
TPF-5(066)	21998(04)	Kenny Seward	Cleared by FHWA	Material & Construction Optimization for Prevention of Premature Pavt. Distress in PCCP	2005	2007	\$45,000.00	\$15,000.00	\$15,000.00
TPF-5(063)	20556(04)	Bryan Hurst	Cleared by FHWA	Improving the Quality of Pavement Profiler Measurement	2003	2006	\$81,600.00	\$20,400.00	\$0.00
TPF-5(051)	20558(04)	Bob Rusch	Contract signed	Construction of Crack-Free Concrete Bridge Decks	2003	2005	\$60,000.00		
TPF-5(046)	20559(04)	Steve Sawyer	Contract signed	Transportation Curriculum Coordination Council Training Management & Dev.	2003	2006	\$80,000.00	\$20,000.00	\$0.00
TPF-5(017)	20026(04)	David Girdner	Cleared by FHWA	WASHTO-X Technology Transfer Initiative			\$20,000.00	\$20,000.00	
TPF-5(406)	09030(34)	Dawn Sullivan	Cleared by FHWA	NCHRP FY 2007		cont	\$550,000.00	\$521,246.00	\$550,000.00

2100**Transportation Research Board**

PURPOSE AND SCOPE: In Federal Fiscal Year 2006 (FFY06), this project covered the annual subscription to the Transportation Research Board (TRB) 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. It also covered travel expenses and time for ODOT personnel to attend the annual TRB meeting. Beginning with FFY07, this project will only cover travel expenses and time for ODOT personnel to attend the annual TRB meeting. The TRB subscription costs are now covered under a pooled fund study.

ACCOMPLISHMENTS DURING FY 2006: Continued subscription to TRB and continued use of TRIS database. Attended TRB annual meeting.

PROPOSED ACTIVITIES FOR FY 2007: Attend TRB annual meeting.

ESTIMATED TOTAL COST	Continuing	Fund
Programmed Amount for FY 2006	\$110,000	SPR
	\$0	STATE
Estimated Cost for FY 2006	\$110,000	SPR
	\$0	STATE
Estimated Cost for FY 2007	\$15,000	SPR
	\$0	STATE

Contact Information	
NAME	Dawn Sullivan, P.E.
TITLE	Division Engineer
PHONE	405-521-2927

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 needed 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 2006: Continued service expansion to update national and state database administration and information. Software and application capabilities to enhance services and accessibility to library by ODOT personnel have been implemented. Methods devised to inform personnel of WASHTO-X video conferences.

PROPOSED ACTIVITIES FOR FY 2007: Continue to provide information, services and updates to ODOT, Transportation Information Retrieval Service (TRIS) and Research In Progress (RIP) databases. Continue to develop software and application capabilities to enhance services and accessibility to Library by ODOT personnel. Continue to develop more effective methods of informing personnel of WASHTO-X video conferences.

ESTIMATED TOTAL COST	Continuing	Fund
Programmed Amount for FY 2006	\$65,000	SPR
	\$0	STATE
Estimated Cost for FY 2006	\$55,000	SPR
	\$0	STATE
Estimated Cost for FY 2007	\$66,000	SPR
	\$0	STATE

Contact Information	
NAME	Dave Girdner
TITLE	CADD Specialist
PHONE	405-522-5904

**2115
Performance**

LTPP/SHRP/SHRP II Long Term Pavement

PURPOSE AND SCOPE: The purpose of this project is to maintain LTPP 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. Represent the Department in SHRP II Program.

ACCOMPLISHMENTS DURING FY 2006: Provided traffic control for SRCO at time of tour for gathering data. Assisted in coring operations, core sample gathering and pavement restoration. Provided SRCO information as requested.

PROPOSED ACTIVITIES FOR FY 2007: 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	Fund
Programmed Amount for FY 2006	\$25,000	SPR
	\$0	STATE
Estimated Cost for FY 2006	\$25,000	SPR
	\$0	STATE
Estimated Cost for FY 2007	\$30,000	SPR
	\$0	STATE

Contact Information	
NAME	Bryan K. Hurst
TITLE	Transportation Manager
PHONE	405-522-3794

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 2006: 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 Storm Drain Inspection, Oklahoma County; US-412 Storm Drain Inspection, Woodward County; Nova Chip Evaluation.

PROPOSED ACTIVITIES FOR FY 2007: 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	Fund
Programmed Amount for FY 2006	\$123,000	SPR
	\$0	STATE
Estimated Cost for FY 2006	\$32,000	SPR
	\$0	STATE
Estimated Cost for FY 2007	\$115,000	SPR
	\$0	STATE

	PROGRAM MANAGER	PROJECT MANAGER
NAME	Wilson B. Brewer	Bryan K. Hurst
TITLE	Transportation Manager	Transportation Manager
PHONE	405-522-3207	405-522-3794

2122**I-40 Crosstown Case Study**

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 2006: No work reported.

PROPOSED ACTIVITIES FOR FY 2007: None

ESTIMATED TOTAL COST	CONTINUING	Fund
Programmed Amount for FY 2006	\$7,500	SPR
	\$0	STATE
Estimated Cost for FY 2006	\$0	SPR
	\$0	STATE
Estimated Cost for FY 2007	\$0	SPR
	\$0	STATE

	PROJECT MANAGER
NAME	Staci Beasley
TITLE	Engineering Intern
PHONE	405-521-2515

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 2006: Attended meetings, wrote work plans, reviewed reports, discussed proposed work with researchers and ODOT personnel, as described above. Solicited ideas and prepared proposal for Innovative Bridge Research & Construction Program. Assisted in ongoing research for the IBRC program on I-40 Bridge over I-40 Business Route in Sayre (J/P 20296(05)).

PROPOSED ACTIVITIES FOR FY 2007: Continue work on general research for ODOT.

ESTIMATED TOTAL COST	CONTINUING	Fund
Programmed Amount for FY 2006	\$417,000	SPR
	\$0	STATE
Estimated Cost for FY 2006	\$220,000	SPR
	\$0	STATE
Estimated Cost for FY 2007	\$425,000	SPR
	\$0	STATE

	PROGRAM MANAGER
NAME	Ron F. Curb, P.E., CPM
TITLE	Engineering Manager
PHONE	405-522-3795

2156

Roadside Vegetation Management

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.

ACCOMPLISHMENTS DURING FY 2006: 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. Published Problem Solving Pictorial Guide, Herbicide Program Report, Approved Herb & Adjuvant List (AHAL), and updated RVM Guidelines.

PROPOSED ACTIVITIES FOR FY 2007: Continue training, field surveys and consultations as described above. Produce annual Equipment, Consultation and Herbicide Reports.

ESTIMATED TOTAL COST	\$560,000 (3 Years)	Fund
Programmed Amount for FY 2006	\$191,000	SPR
	\$0	STATE
Estimated Cost for FY 2006	\$167,000	SPR
	\$0	STATE
Estimated Cost for FY 2007	\$182,000	SPR
	\$0	STATE

	PRINCIPAL INVESTIGATOR	PROJECT MANAGER
NAME	Dennis L. Martin, Ph.D.	Bryan K. Hurst
TITLE	Turfgrass Extension Specialist, OSU	Transportation Manager
PHONE	405-744-5419	405-522-3794

2157**Herbicide Research Program**

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

ACCOMPLISHMENTS DURING FY 2006: 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. Completed Water Quality Report and Annual Research Report.

PROPOSED ACTIVITIES FOR FY 2007: Continue testing herbicides for the applications listed above. Report on all herbicide applications during annual panel meeting in February 2007. Produce written reports on herbicide applications (one report per application category), with conclusions and recommendations.

ESTIMATED TOTAL COST	\$215,000	Fund
Programmed Amount for FY 2006	\$67,000	SPR
	\$0	STATE
Estimated Cost for FY 2006	\$65,000	SPR
	\$0	STATE
Estimated Cost for FY 2007	\$75,000	SPR
	\$0	STATE

	PRINCIPAL INVESTIGATOR	PROJECT MANAGER
NAME	Dennis L. Martin, Ph.D.	Bryan K. Hurst
TITLE	Turfgrass Extension Specialist, OSU	Transportation Manager
PHONE	405-744-5419	405-522-3794

2160

Oklahoma Transportation Center

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 2006: Contributed \$500,00 towards UTC matching funds. Participated in board meetings. Took part in project selections for OTC research by coordinating ODOT expert review and rating proposals.

PROPOSED ACTIVITIES FOR FY 2007: 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	Fund
Programmed Amount for FY 2006	\$500,000	SPR
	\$0	STATE
Estimated Cost for FY 2006	\$515,000	SPR
	\$0	STATE
Estimated Cost for FY 2007	\$515,000	SPR
	\$0	STATE

	PRINCIPAL INVESTIGATOR	PROGRAM MANAGER
NAME	Dennis Howard	Dawn Sullivan, P.E.
TITLE	Langston University	Division Engineer
PHONE	405-466-6102	405-521-2927

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 2006: 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 FY 2007: Complete testing and analysis, produce and publish Final Report.

ESTIMATED TOTAL COST	Continuing	Fund
Programmed Amount for FY 2006	\$75,000	SPR
	\$0	STATE
Estimated Cost for FY 2006	\$75,000	SPR
	\$0	STATE
Estimated Cost for FY 2007	\$0	SPR
	\$0	STATE

	PRINCIPAL INVESTIGATOR	PROJECT MANAGER
NAME	Musharraf Zaman, Ph.D	Wilson B. Brewer
TITLE	Associate Dean for Research, OU	Transportation Manager
PHONE	405-325-2626	405-522-3207

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 2006: Contract extended.

PROPOSED ACTIVITIES FOR FY 2007: Distribute final report.

ESTIMATED TOTAL COST	\$122,631	Fund
Programmed Amount for FY 2006	\$17,580	SPR
	\$0	STATE
Estimated Cost for FY 2006	\$12,000	SPR
	\$0	STATE
Estimated Cost for FY 2007	\$0	SPR
	\$0	STATE

	PRINCIPAL INVESTIGATOR	PROJECT MANAGER
NAME	Gerald Miller, Ph.D., P.E.	Wilson B. Brewer
TITLE	Associate Professor, OU	Transportation Manager
PHONE	405-325-4253	405-522-3207

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 FY2006. 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 2006: Executed a no cost time extension agreement. Completed and distributed final report on AC projects. Completed observation, data collection and analysis of remaining PCC projects.

PROPOSED ACTIVITIES FOR FY 2007: Produce Final Report for PCC projects by Sept. 30, 2006.

ESTIMATED TOTAL COST	\$75,000	Fund
Programmed Amount for FY 2006	\$32,000	SPR
	\$0	STATE
Estimated Cost for FY 2006	\$25,000	SPR
	\$0	STATE
Estimated Cost for FY 2007	\$0	SPR
	\$0	STATE

	PRINCIPAL INVESTIGATOR, PCC	PRINCIPAL INVESTIGATOR, AC	PROJECT MANAGER
NAME	Bruce Russell, Ph.D., P.E.	Dr. Steve Cross	Wilson B. Brewer
TITLE	Associate Professor, OSU	Associate Professor, OSU	Transportation Manager
PHONE	405-744-9301	405-744-7200	405-522-3207

**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 makes 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 2006: Data compiled and analyzed.

PROPOSED ACTIVITIES FOR FY 2007: Produce and publish Final Report.

ESTIMATED TOTAL COST	\$140,000	Fund
Programmed Amount for FY 2006	\$42,000	SPR
	\$0	STATE
Estimated Cost for FY 2006	\$25,000	SPR
	\$0	STATE
Estimated Cost for FY 2007	\$0	SPR
	\$0	STATE

	PRINCIPAL INVESTIGATOR	PROJECT MANAGER
NAME	Dr. Steve Cross	Wilson B. Brewer
TITLE	Associate Professor, OSU	Transportation Manager
PHONE	405-744-7200	405-522-3207

2178 Evaluation of Cold, In-Place Recycling for Rehabilitation of Transverse Cracking on US 412

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 2006: Data compiled and analyzed.

PROPOSED ACTIVITIES FOR FY 2007: Produce and publish Final Report.

ESTIMATED TOTAL COST	\$130,000	Fund
Programmed Amount for FY 2006	\$50,000	SPR
	\$0	STATE
Estimated Cost for FY 2006	\$40,000	SPR
	\$0	STATE
Estimated Cost for FY 2007	\$0	SPR
	\$0	STATE

	PRINCIPAL INVESTIGATOR	PROJECT MANAGER
NAME	Dr. Steve Cross	Wilson B. Brewer
TITLE	Associate Professor, OSU	Transportation Manager
PHONE	405-744-7200	405-522-3207

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 2006: Completed all testing and analysis, analyzed data and published a Final Report.

PROPOSED ACTIVITIES FOR FY 2007: None

ESTIMATED TOTAL COST	\$103,000	Fund
Programmed Amount for FY 2006	\$44,000	SPR
	\$0	STATE
Estimated Cost for FY 2006	\$22,000	SPR
	\$0	STATE
Estimated Cost for FY 2007	\$0	SPR
	\$0	STATE

	PRINCIPAL INVESTIGATOR	PROJECT MANAGER
NAME	Musharraf Zaman, Ph.D	Wilson B. Brewer
TITLE	Associate Dean for Research, OU	Transportation Manager
PHONE	405-325-2626	405-522-3207

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 2006: 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 2007: Complete investigations described above and any others as specified by ODOT.

ESTIMATED TOTAL COST	Continuing	Fund
Programmed Amount for FY 2006	\$65,000	SPR
	\$0	STATE
Estimated Cost for FY 2006	\$35,000	SPR
	\$0	STATE
Estimated Cost for FY 2007	\$68,000	SPR
	\$0	STATE

	PRINCIPAL INVESTIGATOR	PROJECT MANAGER
NAME	Steve Trost, Ph.D., P.E.	Ron F. Curb, P.E., CPM
TITLE	Director, Research & Development, Strategic Solutions International, LLC	Engineering Manager
PHONE	405-412-7879	405-522-3795

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 2006: Final Report was distributed.

PROPOSED ACTIVITIES FOR FY 2007: None.

ESTIMATED TOTAL COST	\$285,000	Fund
Programmed Amount for FY 2006	\$100,000	SPR
	\$0	STATE
Estimated Cost for FY 2006	\$96,000	SPR
	\$0	STATE
Estimated Cost for FY 2007	\$0	SPR
	\$0	STATE

	PRINCIPAL INVESTIGATOR	PROJECT MANAGER
NAME	Chris Ramseyer, Ph.D., P.E.	Ron F. Curb, P.E., CPM
TITLE	Associate Professor, O.U.	Engineering Manager
PHONE	405-325-1415	405-522-3795

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 2006: Performed literature search, selected soils and additives, began laboratory testing.

PROPOSED ACTIVITIES FOR FY 2007: Continue laboratory testing. Begin development of database.

ESTIMATED TOTAL COST	\$285,000	Fund
Programmed Amount for FY 2006	\$95,000	SPR
	\$0	STATE
Estimated Cost for FY 2006	\$49,000	SPR
	\$0	STATE
Estimated Cost for FY 2007	\$92,000	SPR
	\$0	STATE

	PRINCIPAL INVESTIGATOR	PROJECT MANAGER
NAME	Musharraf Zaman, Ph.D.	Wilson B. Brewer
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2186 Rating Precast Prestressed Concrete Bridges for Shear

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 plans to design information on selected bridges to the investigator. Beams in these bridges will be studied using hand calculation. 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 calculation.

ACCOMPLISHMENTS DURING FY 2006: Completed literature review. Began analysis of Type II. Began numerical study of Type II. Began lab testing of Type II.

PROPOSED ACTIVITIES FOR FY 2007: Complete analysis of Type II, Type III and Type IV. Complete numerical study of Type II. Complete lab testing of Type II.

ESTIMATED TOTAL COST	\$201,000	Fund
Programmed Amount for FY 2006	\$88,000	SPR
	\$0	STATE
Estimated Cost for FY 2006	\$49,000	SPR
	\$0	STATE
Estimated Cost for FY 2007	\$113,000	SPR
	\$0	STATE

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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 2006: The following will be completed during FY2007:

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.

ACCOMPLISHMENTS DURING FY 2006: Developed the simulation module. Started development of algorithm.

PROPOSED ACTIVITIES FOR FY 2007: No activity planned. Sensor equipment still under development in Florida. Plan to resume research in Oklahoma in FFY2008.

ESTIMATED TOTAL COST	CONTINUING	Fund
Programmed Amount for FY 2006	\$40,000	SPR
	0	STATE
Estimated Cost for FY 2006	\$28,000	SPR
	0	STATE
Estimated Cost for FY 2007	\$0	SPR
	0	STATE

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2188 **Vegetative Rehabilitation of Highway Cut Slopes**

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 2006: Project delayed to Spring 2007 due to severe drought and missed planting season. Eastern Oklahoma test slope locations identified. Literature search performed, experimental plant species selected, collected soil samples and began soil classification.

PROPOSED ACTIVITIES FOR FY 2007: Develop experimental planting methods and begin planting of native seed blends.

ESTIMATED TOTAL COST	\$250,000	Fund
Programmed Amount for FY 2006	\$50,000	SPR
	\$0	STATE
Estimated Cost for FY 2006	\$500	SPR
	\$0	STATE
Estimated Cost for FY 2007	\$55,000	SPR
	\$0	STATE

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2190 **A Real-Time Scour Risk Identification and Information Management System**

PURPOSE AND SCOPE: Develop design requirements and evaluate the effectiveness of a real-time scour risk identification system that can be used as a countermeasure for scour-critical bridges. Identify elevated risk conditions. Document agency responses to the elevated conditions in a real-time GIS database.

ACCOMPLISHMENTS DURING FY 2006: Initial concept / prototype website and database design have been completed. A rapid prototype has been tested for interaction with ODOT personnel. Hydrologic model is 85% complete.

PROPOSED ACTIVITIES FOR FY 2007: Phase I: Complete the setup of the rapid prototype for operation with radar input and flow monitoring of the three scour critical bridges. Complete Hydrologic model. Phase II: Address the refinements and definition of the workflow process for scour inspection at scour critical bridges

ESTIMATED TOTAL COST	\$139,000	Fund
Programmed Amount for FY 2006	\$139,000	SPR
	\$0	STATE
Estimated Cost for FY 2006	\$98,000	SPR
	\$0	STATE
Estimated Cost for FY 2007	\$147,000	SPR
	\$0	STATE

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2191 Degradation of Major Streams in Oklahoma

PURPOSE AND SCOPE: Conduct a research investigation as follows:

- Collect flowline data from the ODOT files on five major streams in Oklahoma
- Locate ODOT bridges on Excel platform to manage the database
- Analyze the available flowline data at all bridges
- Prepare the longitudinal profiles of flowline with time along the five streams
- Identify deficiency in flowline data collection and suggest improvements on the data collection
- Prepare a final report incorporating database analyzed and newly generated information from tasks above

ACCOMPLISHMENTS DURING FY 2006: No activity reported.

PROPOSED ACTIVITIES FOR FY 2007: Collect flowline data. Locate ODOT bridges on Excel platform. Analyze the available flowline data. Prepare the longitudinal profiles. Identify deficiency. Prepare a final report.

ESTIMATED TOTAL COST	\$78,000	Fund
Programmed Amount for FY 2006	\$65,000	SPR
	\$0	STATE
Estimated Cost for FY 2006	\$0	SPR
	\$0	STATE
Estimated Cost for FY 2007	\$78,000	SPR
	\$0	STATE

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**2192 Development of Field Correlation and Test
Procedure for TransTech Systems' Pavement Quality
Indicator (PQI) 301 Non-Nuclear DensityGauge**

PURPOSE AND SCOPE: Develop and correlate a calibration and testing procedure for TransTech Systems' Pavement Quality Indicator (PQI) 301 Non-Nuclear Density Gauge.

ACCOMPLISHMENTS DURING FY 2006: Final report showing calibration and testing procedure.

PROPOSED ACTIVITIES FOR FY 2007: None proposed.

ESTIMATED TOTAL COST	\$20,000	Fund
Programmed Amount for FY 2006	\$20,000	SPR
	\$0	STATE
Estimated Cost for FY 2006	\$0	SPR
	\$0	STATE
Estimated Cost for FY 2007	\$0	SPR
	\$0	STATE

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2193 Degradation Stabilizing Methodology for Selected Broken-Back and Drop Box Culverts in Oklahoma Phase II

PURPOSE AND SCOPE: Develop a methodology to analyze drop box culverts in Oklahoma such that the energy is dissipated within the culverts or just downstream in order to minimize downstream scour.

ACCOMPLISHMENTS DURING FY 2006: New project

PROPOSED ACTIVITIES FOR FY 2007: Obtain and review ODOT's list of broken-back and drop box culverts both existing and proposed. Locate and place each culvert on an ArcGIS managed database platform. Evaluate energy dissipation in existing drop box culverts and determine modifications to minimize scour. Compute the efficiency of energy dissipation data. Prepare a final report.

ESTIMATED TOTAL COST	\$125,000	Fund
Programmed Amount for FY 2006	\$0	SPR
	\$0	STATE
Estimated Cost for FY 2006	\$0	SPR
	\$0	STATE
Estimated Cost for FY 2007	\$67,000	SPR
	\$0	STATE

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2195 Evaluation and Field Verification of Strength and Structural Improvement of Chemically Stabilized Subgrade Soil

PURPOSE AND SCOPE: Develop relationships between chemically stabilized subgrade soil strength and structural numbers and refine input values for soil improvements to be used in the AASHTO pavement design equations.

ACCOMPLISHMENTS DURING FY 2006: New project

PROPOSED ACTIVITIES FOR FY 2007: Review correlations between chemically treated soils and AASHTO structural numbers. Select roadway projects. Collect site soil samples for testing. Collect treated soil samples.

ESTIMATED TOTAL COST	\$225,000	Fund
Programmed Amount for FY 2006	\$0	SPR
	\$0	STATE
Estimated Cost for FY 2006	\$0	SPR
	\$0	STATE
Estimated Cost for FY 2007	\$150,000	SPR
	\$0	STATE

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2196 **Stability and Permeability of Proposed Aggregate Bases in Oklahoma**

PURPOSE AND SCOPE: Assess the permeability of unbound aggregates that are widely used as pavement bases in Oklahoma. Laboratory results will be used to develop statistical models. The models will be available to the pavement designers to facilitate implementation of the new AASHTO 2002 pavement design guide.

ACCOMPLISHMENTS DURING FY 2006: New project

PROPOSED ACTIVITIES FOR FY 2007: Determine the moisture-density relationship for each selected aggregate. Measure the horizontal and vertical coefficients of permeability (k) of unbound aggregate bases. Determine the resilient modulus (Mr) values for each aggregate type. Develop regression correlations between k and Mr values. Select the appropriate gradation(s) that provide(s) a desired aggregate base with adequate permeability and acceptable stability.

ESTIMATED TOTAL COST	\$152,000	Fund
Programmed Amount for FY 2006	\$0	SPR
	\$0	STATE
Estimated Cost for FY 2006	\$0	SPR
	\$0	STATE
Estimated Cost for FY 2007	\$75,000	SPR
	\$0	STATE

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2197 Longitudinal Joint Density and Permeability in Asphalt Concrete

PURPOSE AND SCOPE: Perform field investigation and laboratory analysis of test data to facilitate the development of a test method and/or specification for the control of longitudinal joint density and permeability of asphalt pavements.

ACCOMPLISHMENTS DURING FY 2006: New project

PROPOSED ACTIVITIES FOR FY 2007: Perform literature review. Obtain materials and equipment. Identify pavement locations for testing. Perform field sampling and testing. Perform laboratory testing and data analysis. Complete final report.

ESTIMATED TOTAL COST	\$70,000	Fund
Programmed Amount for FY 2006	\$0	SPR
	\$0	STATE
Estimated Cost for FY 2006	\$0	SPR
	\$0	STATE
Estimated Cost for FY 2007	\$70,000	SPR
	\$0	STATE

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2199 **Optimizing Concrete Mix Designs to Produce Cost Effective Paving Mixes**

PURPOSE AND SCOPE: Determine best methods of manipulating aggregate gradations in order to optimize the designs of concrete mix which are cost effective.

ACCOMPLISHMENTS DURING FY 2006: New project

PROPOSED ACTIVITIES FOR FY 2007: Conduct a survey of current ODOT concrete mix designs and compare with other state DOT designs. Conduct research on various mixes via manipulation of aggregate gradations. Optimize concrete mix designs which are cost effective.

ESTIMATED TOTAL COST	\$64,000	Fund
Programmed Amount for FY 2006	\$0	SPR
	\$0	STATE
Estimated Cost for FY 2006	\$0	SPR
	\$0	STATE
Estimated Cost for FY 2007	\$64,000	SPR
	\$0	STATE

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2200 Instrumented Pavement Construction

PURPOSE AND SCOPE: Conduct instrumented pavement research to collect and analyze mechanistic-empirical pavement design data on I-35 in McClain County, Oklahoma in an accelerated manner. Field Division 3 will construct an 800' flexible pavement test section. The National Center for Asphalt Technology (NCAT) will purchase equipment and install pavement monitoring instrumentation of test section. The University of Oklahoma will conduct monitoring and modeling of the test section over a five year period.

ACCOMPLISHMENTS DURING FY 2006: New project.

PROPOSED ACTIVITIES FOR FY 2007: Construct flexible pavement test section. Purchase, install and calibrate pavement monitoring instrumentation. Collect data and begin setup of modeling algorithms.

ESTIMATED TOTAL COST	\$619,000	Fund
Programmed Amount for FY 2006	\$0	SPR
	\$0	STATE
Estimated Cost for FY 2006	\$0	SPR
	\$0	STATE
Estimated Cost for FY 2007	\$371,000	SPR
	\$0	STATE

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2202 GIS Layer for Transportation and Economic Statistics

PURPOSE AND SCOPE: This research activity will involve obtaining and reviewing the current GIS base map and transportation information from ODOT and converting it to an ArcGIS system. Economic and census information will be obtained from the Oklahoma Department of Commerce, Oklahoma State University and the Census Bureau. In addition, hydrologic information will be gathered from the Oklahoma Water Resources Board. A spatial data overlay related to transportation, population, demographics, hydrologic and other socioeconomic factors will be created for use with the ODOT base map. Transportation related spatial statistics will be generated. Composite maps for long range planning needs will be created. A final report will be prepared and submitted along with the related data in a Geomedia Pro compatible format.

ACCOMPLISHMENTS DURING FY 2006: New project

PROPOSED ACTIVITIES FOR FY 2007: Review ODOT base map. Obtain data. Create spatial data overlay. Generate transportation related spatial statistics. Create composite maps. Prepare final report and transfer data.

ESTIMATED TOTAL COST	\$86,000	Fund
Programmed Amount for FY 2006	\$0	SPR
	\$0	STATE
Estimated Cost for FY 2006	\$0	SPR
	\$0	STATE
Estimated Cost for FY 2007	\$86,000	SPR
	\$0	STATE

	PRINCIPAL INVESTIGATOR	PROJECT MANAGER
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2203 Truck Weight Enforcement

PURPOSE AND SCOPE: Research and recommend the best methods and deployments to enforce Oklahoma's current size and weight limits which would provide the best deterrent to violations and therefore decrease damage to Oklahoma's roads and bridges. Survey other state departments of transportation to determine what may be the least expensive, yet cost effective mix of fixed weigh/inspection stations, mobile enforcement, weigh in motion, virtual enforcement and other technologies to provide optimum monitoring of oversize and/or overweight vehicles. Investigate the feasibility of using Oklahoma's bridges as weigh in motion detectors, linking the violation data collected with a camera system to create a type of virtual enforcement.

ACCOMPLISHMENTS DURING FY 2006: New project

PROPOSED ACTIVITIES FOR FY 2007: Survey other DOTs. Submit "best-mix" recommendations based on the survey data. Research feasibility of using Oklahoma's bridges in virtual enforcement.

ESTIMATED TOTAL COST	\$85,000	Fund
Programmed Amount for FY 2006	\$0	SPR
	\$0	STATE
Estimated Cost for FY 2006	\$0	SPR
	\$0	STATE
Estimated Cost for FY 2007	\$85,000	SPR
	\$0	STATE

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2204 **Advanced Voice and Multimedia Communications System for the ODOT ITS Network**

PURPOSE AND SCOPE: Research and develop a versatile voice, text and video communications capability for the ODOT ITS Network console operators and provide an in-depth study of future extensions of these capabilities for additional media types, as well as central control and routing of voice and other data traffic between emergency responder agencies from both state and local levels.

ACCOMPLISHMENTS DURING FY 2006: New project

PROPOSED ACTIVITIES FOR FY 2007: Evaluate off-the-shelf solutions and determine the applicability of the software for integration into the ITS console. Integrate an off-the-shelf product into the ITS console or adapt voice-over-IP and video software for peer-to-peer and conference calling capabilities. Develop a text based instant messaging capability between consoles that supports peer-to-peer and broadcast messages. Develop an integrated document delivery capability permitting operators to send documents of various types to selected consoles. Integrate, test and deploy the new functionality within the existing ITS console software. Document and provide user instructions for these capabilities. Conduct an extended study and deliver a complete and detailed report for the newly developed communications capabilities.

ESTIMATED TOTAL COST	\$86,000	Fund
Programmed Amount for FY 2006	\$0	SPR
	\$0	STATE
Estimated Cost for FY 2006	\$0	SPR
	\$0	STATE
Estimated Cost for FY 2007	\$86,000	SPR
	\$0	STATE

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2206 Development of an Improved System for Contract Time Determination – Phase II

PURPOSE AND SCOPE: Phase I of this research was funded by the Oklahoma Turnpike Authority and is due to be completed in December of 2006. The tasks are to review the contract time determination procedures currently in use by ODOT and other DOTs, develop modules or templates that represent different types of highway construction projects performed by ODOT contractors, determine the controlling items and their interrelationships for each type of ODOT construction project module/template, estimate reasonable production rates for each controlling items or activities and determine various factors affecting the production rate of each construction activity and to develop a manual system for contract time determination for ODOT highway projects.

Phase II research and development tasks will determine the effectiveness of the ODOT software currently in use, which is Microsoft Project, and use it to calculate project time and develop a computer system for ODOT personnel to use when estimating contract time for highway construction projects. Phase II work will validate the developed computer system with previously completed ODOT highway projects. A user manual will be developed and used to train ODOT personnel in the use of the new system. A final report will be produced to include findings, output and conclusions. The report will include a program flowchart, computer program, program manual, software verification process / results and computer software source codes.

ACCOMPLISHMENTS DURING FY 2006: New project

PROPOSED ACTIVITIES FOR FY 2007: Evaluate current software. Develop computer system. Validate computer system. Develop user manual. Train ODOT personnel. Prepare final report.

ESTIMATED TOTAL COST	\$40,000	Fund	Job No.	Piece	Project No.
Programmed Amount for FY 2006	\$0	SPR	01946(46)		SPRY-10(40)RS
	\$0	STAT E			
Estimated Cost for FY 2006	\$0	SPR	01946(46)		SPRY-10(40)RS
	\$0	STAT E			
Estimated Cost for FY 2007	\$40,000	SPR	01946(48)		SPRY-10(42)RS
	\$0	STAT E			

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2440 Local Technical Assistance Program

PURPOSE AND SCOPE: The Local Technical Assistance Program (LTAP) is a training program contracted through 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 2006: 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 27 graduates of the program, through continued enhancement and enlargement of the training program. Nine (9) welding classes were held with 87 county personnel attending. LTAP has successfully implemented a Welder's Certification Program. In addition, over a thousand county personnel were trained through attendance at the Roads Scholar and other training programs. Also, six (6) hands on demonstrations with maintenance equipment sponsored and furnished by national companies were successfully held. In addition, over 325 personnel attended a fire fighting seminar during the height of the fire fighting season for training. LTAP offices continued to serve as the American Public Works Association State Chapter office and assisted with the April 2006 regional meeting. Newsletters were published and various literature, tapes, DVD, etc., were distributed.

PROPOSED ACTIVITIES FOR FY 2007: Conduct at least ten training sessions of the Roads Scholar Program's 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	Amount	Fund
Programmed Amount for FY 2006	\$160,000	SPR
	0	STATE
	\$140,000	FHWA
Estimated Cost for FY 2006	\$167,000	SPR
	0	STATE
	\$140,000	FHWA
Estimated Cost for FY 2007	\$197,000	SPR
	0	STATE
	\$170,000	FHWA

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2700 Experimental Product and Evaluation Program

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 2006: Maintained database of new products where manufacturer provided literature or made a presentation during the last four years. Met with company representatives who were presenting new products. Provided information on products to applicable ODOT divisions. Evaluated new products as required.

PROPOSED ACTIVITIES FOR FY 2007: 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	Fund
Programmed Amount for FY 2006	\$71,000	SPR
	0	STATE
Estimated Cost for FY 2006	\$3,000	SPR
	0	STATE
Estimated Cost for FY 2007	\$38,000	SPR
		STATE

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