Ozarks Transportation Organization

March 21, 2012

Technical Planning Committee Meeting

Ozarks Transportation Organization

Conference Room

205 Park Central East, Suite 212, Springfield, MO

1:30-3:00 PM

Technical Planning Committee Meeting Agenda
March 21, 2012 1:30 p.m.
OTO Offices
Holland Building
205 Park Central East, Suite 212
Springfield, MO

Call to Order ..... 1:30 PM

I. Administration

A. Introductions

B. Approval of the Technical Planning Committee Meeting Agenda
(1 minute/Wiesehan)

TECHNICAL PLANNING COMMITTEE ACTION REQUESTED TO APPROVE THE AGENDA

C. Approval of the January 18, 2012 Meeting Minutes ..... Tab 1
(1 minute/Wiesehan)

TECHNICAL PLANNING COMMITTEE ACTION REQUESTED TO APPROVE THE MEETING MINUTES

D. Public Comment Period for All Agenda Items
(5 minutes/Wiesehan)
Individuals requesting to speak are asked to state their name and organization (if any) they represent before making comments. Individuals and organizations have up to five minutes to address the Technical Planning Committee.

E. Executive Director's Report
(3 minutes/Edwards)
Sara Edwards will provide a review of Ozarks Transportation Organization (OTO) staff activities since the last Technical Planning Committee meeting.

F. Bicycle and Pedestrian Committee Report
(3 minutes/Longpine)
Staff will provide a review of BPAC's current activities.

II. New Business

A. TIGER Summary ..... Tab 2
(10 minutes/Longpine)
Staff will give an overview presentation that was given by MODOT at a recent planning partners meeting that summarized information from the DOT TIGER grants.

INFORMATIONAL ONLY- NO ACTION REQUIRED

B. MoDOT LPA Manual Update
(15 minutes/Holtsclaw)
MoDOT staff will give a presentation of the proposed new LPA Manual updates.
INFORMATIONAL ONLY- NO ACTION REQUIRED

C. FY 2012-2013 Unified Planning Work Program ..... Tab 3
(10 minutes/Edwards)
OTO is requesting the Technical Planning Committee review and make a recommendation for the approval of the FY 2012-2013 Unified Planning Work Program.

TECHNICAL COMMITTEE ACTION REQUESTED TO RECOMMEND APPROVAL OF THE FY 2012-2013 UPWP TO THE BOARD OF DIRECTORS

D. Transit Coordination Plan Update
(10 minutes/Owens)
Staff will give an overview of the Draft Transit Coordination Plan Update.

INFORMATIONAL ONLY- NO ACTION REQUIRED

E. STP-Urban Balance Report December 2011 Update..... Tab 4
(5 minutes/Longpine)
Staff will present the STP-Urban Balance Annual Report and OTO's current obligation of STP-Urban Funds.

NO ACTION REQUIRED – INFORMATIONAL ONLY

F. Administrative Modification Number Two to the FY 2012-2015 TIP ..... Tab 5
(2 minutes/Longpine)
Administration Modification Number Two changes the funding source from state to local for $500,000 of the 160 Bridge over I-44 project.
NO ACTION REQUIRED – INFORMATIONAL ONLY

G. Amendment Number Three to the FY 2012-2015 TIP ..... Tab 6
(3 minutes/Longpine)
This is a request to expand the scope and funding for a potential cost share project at Kansas Expressway and James River Freeway.
TECHNICAL COMMITTEE ACTION REQUESTED TO RECOMMEND APPROVAL OF TIP AMENDMENT NUMBER THREE TO THE BOARD OF DIRECTORS

III. Other Business

A. Technical Planning Committee Member Announcements
(5 minutes/Technical Planning Committee Members)
Members are encouraged to announce transportation events being scheduled that may be of interest to OTO Technical Planning Committee members.

B. Transportation Issues For Technical Planning Committee Member Review
(5 minutes/Technical Planning Committee Members)
Members are encouraged to raise transportation issues or concerns they have for future agenda items or later in-depth discussion by the OTO Technical Planning Committee.

C. Articles For Technical Planning Committee Information ..... Tab 7

IV. Adjournment

Targeted for 2:45 P.M. The next Technical Planning Committee meeting is scheduled for Wednesday, May 16, 2012 at 1:30 P.M. at the OTO Offices, 205 Park Central East, Suite 212.

Attachments and Enclosure:

Pc: Jerry Compton, OTO Chair, Springfield Councilman
Phil Broyles, City of Springfield Mayor's Designee
David Rauch, Senator McCaskill's Office
Dan Wadlington, Senator Blunt's Office
Jered Taylor, Congressman Long's Office
Area News Media

Si usted necesita la ayuda de un traductor del idioma español, por favor comuníquese con la Debbie Parks al teléfono (417) 865-3042, cuando menos 48 horas antes de la junta.

Persons who require special accommodations under the Americans with Disabilities Act or persons who require interpreter services (free of charge) should contact Debbie Parks at (417) 865-3042 at least 24 hours ahead of the meeting.

If you need relay services please call the following numbers: 711 - Nationwide relay service; 1-800-735-2966 - Missouri TTY service; 1-800-735-0135 - Missouri voice carry-over service.

OTO fully complies with Title VI of the Civil Rights Act of 1964 and related statutes and regulations in all programs and activities. For more information or to obtain a Title VI Complaint Form, see www.ozarkstransportation.org or call (417) 865-3042.

TAB 1

MEETING MINUTES

Attached for Technical Committee member review are the minutes from the January 18, 2012 Technical Planning Committee Meeting. Please review these minutes prior to the meeting and note any corrections that need to be made. The Chair will ask during the meeting if any Technical Committee member has any amendments to the attached minutes.

TECHNICAL COMMITTEE ACTION REQUESTED: To make any necessary corrections to the minutes and then approve the minutes for public review.

OZARKS TRANSPORTATION ORGANIZATION
TECHNICAL PLANNING COMMITTEE SPECIAL MEETING MINUTES
January 18, 2012

The Technical Planning Committee of the Ozarks Transportation Organization met at its scheduled time of 1:30 p.m. in the OTO Conference Room.

The following members were present:

Mr. David Brock, City of Republic (Chair)
Mr. Don Clark, Missouri State University
Mr. King Coltrin, City of Strafford
Mr. Travis Cossey, City of Nixa
Ms. Carol Cruise, City Utilities
Ms. Hollie Elliott, Springfield Chamber (a)
Mr. Jonathan Gano, City of Springfield
Mr. Nick Heatherly, City of Willard
Mr. Rick Hess, City of Battlefield
Ms. Jenni Jones, MoDOT
Mr. Kirk Juranas, City of Springfield
Mr. Joel Keller, Greene County (a)
Mr. Larry Martin, City of Ozark
Mr. Frank Miller, MoDOT
Mr. Duffy Mooney, Greene County Highway Dept.
Mr. Bill Robinett, MoDOT
Mr. Ralph Rognstad, City of Springfield
Mr. Andrew Seiler, MoDOT
Mr. Dan Watts, SMCOG
Mr. Terry Whaley, Ozark Greenways
Mr. Todd Wiesehan, Christian County (Chair)

(a) Denotes alternate given voting privileges as a substitute when voting member not present

The following members were not present:

Mr. Mokhtee Ahmad, FTA Representative
Mr. Rick Artman, Greene County Highway Dept.
Mr. David Bishop, R-12 School District
Mr. Randall Brown, City of Willard (a)
Mr. Rick Emling, R-12 School District (a)
Ms. Diane Gallion, City Utilities (a)
Mr. Martin Gugel, City of Springfield
Mr. Jason Haynes, City of Springfield (a)
Mr. David Hutchison, City of Springfield (a)
Mr. Kevin Lambeth, City of Battlefield (a)
Mr. Brad McMahon, FHWA
Mr. Ryan Mooney, Springfield Chamber
Mr. Kent Morris, Greene County Planning Dept.
Mr. Mark Roy, Springfield-Branson Airport (a)
Mr. Mark Schenkelberg, FAA Representative
Mr. Shawn Schroeder, Springfield-Branson Airport
Mr. Dan Smith, Greene County Highway Dept.
Ms. Cheryl Townlian, BNSF
Mr. Garrett Tyson, City of Republic (a)
Mr. Terry Whaley, Ozark Greenways

Others present were: Ms. Debbie Parks, Ms. Sara Edwards, Ms. Natasha Longpine, Mr. Curtis Owens and Mr. Chris Stueve, Ozarks Transportation Organization; Mr. David Rauch, Senator Claire McCaskill's Office; Ms. Stacy Burks, Senator Roy Blunt's Office; Mr. Jered Taylor, Congressman Billy Long's Office.

Mr. Weisehan called the January 18, 2012 Technical Planning Committee meeting to order at 1:34 p.m.

I. Administration

A. Introductions

B. Approval of the Technical Planning Committee Meeting Agenda

A new agenda was passed out with Administrative Modification Number One to the FY 2012-2015 TIP and Amendment Number Two to the FY 2012-2015 TIP.

Ms. Cruise made the motion to approve the agenda as revised. Mr. Robinett seconded and the agenda was carried unanimously.

C. Approval of the November 16, 2011 Meeting Minutes

Ms. Jones stated that on page two of the minutes, under the Executive Directors report in the second paragraph, it should say approved by FHWA and FTA.

Mr. Martin made the motion to approve the corrected minutes. Mr. Hess seconded and the motion was approved unanimously.

D. Public Comment Period for All Agenda Items

None.

E. Executive Director's Report

Ms. Edwards stated that staff had spent a lot of time and energy looking for a new office space and then moving. She offered everyone a chance to tour the new facility after the meeting.

The TEAM Conference will be held in Branson March 14-16, 2012. Federal Highway will be hosting the Certification for Local Agencies during the TEAM Conference. There is a new requirement that every agency involved with administering a federal aid project will now be requested to have a person certified to administer that project. This is the first of several trainings available. There will be 50 seats available for the March conference, but there will be training in the Springfield area during the next year or so. Federal Highway has stated that before Federal funds will be obligated there will have to be someone designated. It does not mean that an agency cannot apply for money; the person just has to be designated before the funds are obligated. The designated person will have to have the Certification. Ms. Longpine will be obtaining the certification for the OTO office, but she will not be able to serve as the designated person for any other agency.

Staff has been serving on the committee to improve the Local Public Agency Manual for MoDOT. The final draft is due in February with a goal of becoming more user friendly. The City of Springfield is heading up a program for aerial photography. The aerial photography flight will take place in February. The Long Range Transportation Plan was approved by the Board of Directors in December. Staff is continuing to work on the Transit Coordination plan.

Mr. Hess requested more information on TEAM Conference.

Ms. Edwards stated the link could be found at www.TEAMConference.org. There has not been a lot of information released on the Conference to date.

F. Bicycle and Pedestrian Committee Report

Ms. Longpine stated that the Bicycle and Pedestrian Advisory Committee met once since November. The Committee is working on the implementation plan for a complete OTO Trail System. That entails looking at all the appropriate segments that need to be included and what easements are necessary to accomplish it. The committee is also looking at the potential cost involved to implement the current system. The first trail for review is Jordan Creek by Smith Park as far south as it goes. The committee will start looking at what other corridors to focus on next in order to eventually have a whole system.

II. New Business

A. OTO In-Kind Match Letters

Ms. Parks stated that the OTO operates off of a reimbursable grant. The OTO is required to have twenty percent match for the Federal funds. The OTO was approved to use In-Kind Match a couple years ago, which allows the use of member attendance at meetings to count as part of the matching funds. Since the program began two years ago, there has been $16,739 in-kind fund used, which equals $83,699 in work program funds.

It has come to staff attention after looking through the files that some in-kind letters are needed for Committee members. Official letters are needed on file for documentation for MoDOT and Federal Highway. There are two letters. The first letter is the Volunteer Hourly Rate. This is the form for elected officials or volunteers who serve on the committee. The Volunteer rate is $18.57. The second letter is for employees of the jurisdictions. It is requested that the employee's hourly rate without benefits be entered, then in the second space, the hourly rate including benefits. OTO is allowed to claim the full amount of compensation for the hourly rate. These forms are confidential.

B. OTO Technical Committee Appointment

Ms. Parks stated that the OTO By-Laws outline which individuals serve on the Technical Planning Committee. The OTO needs to have an Officially Appointed Letter from the Mayor, University President or director of the Local Agency. The letter needs to designate the voting member and the alternative member for the local jurisdiction. There are currently letters for half of the members but due to the high turnover rate, everyone should complete a new letter for the official file. There is a sample letter included in the packet. The letter should contain the name and contact information for the voting member and alternate and have the signature of the approving person on the letter.

C. TIGER Update

Ms. Longpine presented a brief overview of the latest round of TIGER funding. There was over $500 million in projects. There were 36 projects in 32 states. About half were bridge projects, almost a third were transit, and over $150 million went to rural communities. Overall there were 838 applications for the TIGER Program. The projects that were awarded were either projects that have significant costs or other funding sources available or rural communities that needed a little extra boost. There seems to be a big hole for the OTO type area where there are not that many large projects or extra match funds. The spread sheet in the agenda is sorted by what percentage of the total project cost was TIGER funding. Not until the bottom of the list dos the match get closer

to the 80 percent. Most of those projects though are rural and are not required to have a match. Further up the list, there are notes on the side that state where additional funding came from. Not all of these indicate the use of local match. The OTO wanted to provide an overview of the TIGER Grants. There is also an example of two projects that are similar inscale to what the OTO region might consider.

Ms. Edwards stated that Ms. Longpine presented this because it appears that earmarks are gone and this is the new way of applying for Federal funding. It appears to be mostly big projects and rural projects. The OTO region does not qualify for rural funding. The OTO will be playing against large cities like New York City and St. Louis and the size of these projects are huge.

D. Transit Study Update

Ms. Edwards stated that the Transit Consultants were in town during October to hold several public meetings. The Consultants have provided a summary of the meetings. The public seems to like transit, and want quick service, later service, close to where they are located, and they want everything without paying more than a dollar for it. It appears there are impossible expectations, but there are a lot of supporters of transit. That was an expected result. OTO also conducted onboard surveys and a transfer analysis and found where people are traveling and who is using the system. The consultants have gone through Phase One which is the summary of existing conditions of the system and the consultants feel the system is in good shape.

The consultants will be in town January 19 with a meeting of the Steering Committee and will be going over little bit of the regional service. The consultants will have some recommendations on what cities might benefit from commuter services verses those that are on the edge, to those that would not work at all due to population density and commuter patterns. The consultants looked at the census data which shows how many people are coming into Springfield to work and if that is the number of people that would sustain the transit line out there. There will be more information coming in the future months.

E. MoDOT Bolder Five Year Direction Update

Mr. Miller stated that in the packet there is information on MoDOT's Bolder Five Year Direction. The first page is a statewide overview of the Bolder Five Year Plan and how MoDOT is trying to conserve funding for additional projects and the State Transportation System. This is being done through a reduction in personnel, facilities, and equipment. MoDOT is currently in the middle of staff reductions. There are a lot of people affected. The Southwest District is halfway where it needs to be with the staffing levels. Facilities have been shut down and are being consolidated into the facilities that will be kept long term. There are new boundaries for the MoDOT Organization chart. There are now two engineers for the OTO area. Andy Mueller is taking on that role for Greene, Polk, Dallas, and Webster Counties. Beth Shaller is the Area Engineer for Branson, Christian, Barry, Stone, and Taney Counties. These are the key contacts for any issues that may come up, such as property owner issues or maintenance issues. That contact information is included in the packet.

The new Southwest District now has almost a million people at 926,000. The next largest District is Kansas City with 1.2. The Southwest District is more comparable in size to Kansas City than the former District 8. Traffic is closer in volume. The OTO is a

pretty small size within that. The OTO population is about a third of the new Southwest District. With jobs, the OTO is about 40 percent of the District. It is an interesting district with the contrast of rural and a small MPO in Joplin. Joplin is required to have a TIP but not a Congestion Management System. Joplin has the minimal requirements of a MPO.

The agenda also contains Southwest District Transportation Planning Department Organization Chart. This informs who to contact for what tasks. If there is an issue with administering an STP Urban project, the main contact is Chad Zickefoose. His number is 417-895-7638 and email is chadzickefoose@modot.gov. Mr. Zickefoose will be the contact for administering the federal funds projects. He is also the contact for development reviews. Mr. Andrew Seiler will be assisting with the work with OTO, programming projects into the STIP and also the OTO's TIP. Mr. Seiler will be working with needs prioritization and general miscellaneous issues. He is continuing the role of the air quality liaison as well as working with the Clean Air Alliance.

F. FY 2012 Unified Planning Work Program Subcommittee and Project Proposals

Ms. Edwards stated that the UPWP is the Unified Planning Work Program. The OTO has put a new process in place. The budget will run through the Board of Directors but the work program will run through the Technical Committee. Staff wants the TPC's advice on what the program should look like and what types of projects OTO should be doing, for the little room in the budget for the additional items beyond federal requirements. Staff is requesting two items. One is for volunteers to serve on the UPWP Subcommittee, five volunteers should be appropriate. The second item is that staff would like input for ideas and projects, and requests for assistance from jurisdictions to be included in the work program. The fiscal year runs from July 1 to June 30.

Kirk Juranas, Diane Gallion, Joel Keller, Frank Miller and Nick Heatherly volunteered.

Ms. Edwards stated that any projects should be submitted over the next month.

G. Administrative Modification Number One to the FY 2012-2015 TIP

Ms. Longpine stated that the Administrative Modification Number One is on the revised agenda that was given out. It is an administrative modification to the OTO 2012-2015 TIP. MoDOT has requested to add $10,000 to right of way and to take it out of construction. This is a just a change moving funding from one category to another. This does not require approval by the Board per the OTO public participation plan.

H. Amendment Number Two to the FY 2012-2015 TIP

Ms. Longpine stated that this item is Amendment Number Two to the FY 2012-2015 TIP. This is adding a scoping project for the bridges over the James River Freeway on Republic Road.

Mr. Miller stated the project is looking at the bridges on Republic Road on either side of Campbell Avenue. The City is looking at some planning for widening Republic

Road, but those two bridges over the freeway are owned by MoDOT. MoDOT has agreed to help the City of Springfield by doing some engineering on how the bridges can be widened for future improvements.

Ms. Edwards stated that MoDOT owned the bridges but not the roads.

Mr. Miller stated the project was on the Republic Road bridges on either side of Campbell. The bride that goes from First Card over to the Golf Course by Mama Jeans and the other bridge is west of Campbell Avenue.

Mr. Juranas stated that it goes with the City of Springfield's intention to widen Republic Road.

Ms. Edwards asked Mr. Juranas about the sales tax.

Mr. Juranans stated that the City put together a presentation for projects. It was shopped with City Council and Mr. Broyles will present the projects at a couple future meetings. Public Works is getting ready to unfold that and introduce it. Maybe at the next the TPC meeting there will be a presentation. Ms. Edwards stated this is a project for the ASUN continuation.

Ms. Jones stated that the cost banding will needed to be included for the total maintenance cost because it is scoping and the FHWA now wants that estimate. Mr. Juranas stated that would be included for MoDOT.

Mr. Martin made a motion to recommend approval of TIP Amendment Number Two to the Board of Directors with cost banding on the scoping. Mr. Duffy Mooney seconded and the motion was approved unanimously.

III. Other Business

A. Technical Planning Committee Member Announcements

Mr. Juranas stated he started with the City of Springfield on November 1st and would be working with Public Works. He would be working on STP and other funding.

Mr. Heatherly stated the City of Willard is going for a ½ cent Capital Improvement Tax on February 7th with no sunset.

Mr. Whaley stated that Saturday, June 2nd would be the dedication of an Enhancement project, the Wilson Creek Trail in South Springfield. It is also National Trail Day. There will be one more Enhancement project for Ozark Greenways to complete after the Wilson Creek Trail.

Ms. Parks stated that federally funded employees were not required to fill out an in-kind form.

B. Transportation Issues for Technical Planning Committee Member Review

None.

C. Articles For Technical Planning Committee Information

The TPC was asked to review the articles as provided in the back of the agenda.

IV. Adjournment

The January 18, 2012 Technical Planning Committee Meeting was adjourned at 2:10 p.m.

TAB 2

TECHNICAL COMMITTEE AGENDA 3/21/12; ITEM II.A.

TIGER Summary

Ozarks Transportation Organization
(Springfield, MO Area MPO)

AGENDA DESCRIPTION:

Staff will provide an overview of the TIGER program and how awards have been allocated since the program began in 2009. MoDOT presented this overview at a recent statewide planning partners meeting. The summary reviews the distribution of the three prior rounds of funding, and provides an update on the fourth round that was just announced.

TECHNICAL PLANNING COMMITTEE ACTION REQUESTED:

No action required. Informational only.

TIGER Discretionary Grants

TIGER =

- **T**ransportation
- **I**nvestment
- **G**enerating
- **E**conomic
- **R**ecovery

Round 1 – 2009, $1.5 billion
Round 2 – 2010, $600 million
Round 3 – 2011, $511 million
Round 4 – 2012, $500 million

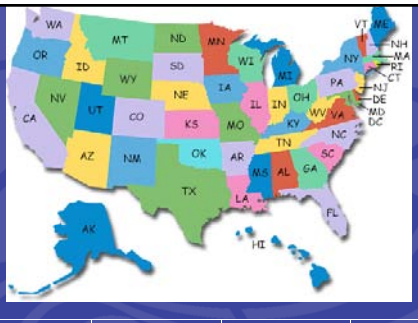
All indications are that this competitive process will continue.

How competitive is it?

First 3 Rounds:

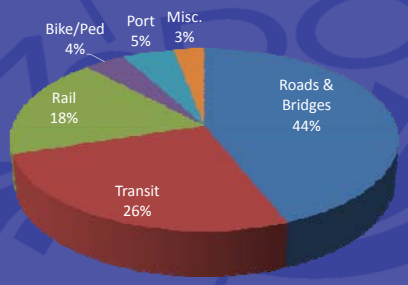
3,200 applications totaling **$90.3** billion

$2.6 billion awarded



California	11	Illinois	8	Pennsylvania	7	Washington	6
New York	5	Texas	5	Ohio	5	Florida	5
Oregon	4	South Carolina	4	Maine	4	West Virginia	4
Massachusetts	4	Minnesota	4	Mississippi	4	MISSOURI	3

Types of Projects



Project Eligibility

Urban Projects:

$12.5-200 million with min. 20 percent non-federal funds as match

Rural Projects:

As small as $1 million and no match requirement

TIGER II & III Summary

Avg. Rural Award	$5.8 million	$7.5 million
Avg. Urban Award	$16.8 million	$13.7 million
Avg. Rural Match	$11.9 million 40 percent	$16.7 million 47 percent
Avg. Urban Match	$36.7 million 60.5 percent	$39.5 million 63.5 percent

Selection Criteria

PRIMARY

a. Long-term Outcomes
- State of Good Repair
- Economic competitiveness
- Livability
- Environmental Sustainability
- Safety

b. Job creation & near-term economic activity

SECONDARY

a. Innovation

b. Partnership

Benefit Cost Analysis

Demonstrate that the benefit justifies the cost.

LONG-TERM OUTCOME	TYPES OF SOCIETAL BENEFITS
Livability	Land Use Changes Accessibility Property Value Increases
Economic Competitiveness	Travel Time Savings Operating Cost Savings
Safety	Prevented Accidents, Injuries, Fatalities
State of Good Repair	Long-Term Replacement Maintenance & Repair Savings Reduced VMT from non closing bridges
Environmental Sustainability	Environmental Benefits from Reduced Emissions

Bottom Line

- Think ahead. Have eligible projects in the pipeline.
- Develop partnerships that can bring money to the table.
- Have a Plan B. What if you get less than you asked for? Can you come up with the rest of the money? Do you have a piece of the project that has independent utility and will still deliver benefits?
- Is NEPA complete or underway?
- Can you meet the obligation deadlines?

Resources

- www.dot.gov/TIGER

- Bob Brendel

Special Assignments Coordinator
573-751-8717
robert.brendel@modot.mo.gov

TAB 3

TECHNICAL PLANNING COMMITTEE AGENDA 03/21/12; ITEM II.C.

FY 2012-2013 Unified Planning Work Program (UPWP)

Ozarks Transportation Organization
(Metropolitan Planning Organization)

AGENDA DESCRIPTION:

OTO is required on an annual basis to prepare a Unified Planning Work Program (UPWP), which includes plans and programs the MPO will undertake during the fiscal year. The UPWP is programmed into the following tasks:

Task 010 – OTO General Administration
Task 020 – OTO Committee Support
Task 030 – General Planning and Plan Implementation (Long Range Plan, Air Quality, Demographics, GIS)
Task 040 – Transportation Improvement Program
Task 050 – Rideshare and Commuter Choice Program
Task 060 – Transit Planning (Route Study, Coordination Plan)
Task 070 – Special Studies and Related Projects

The UPWP contains the proposed budget for FY 2012-2013. The budget is based on the federal funds available and the local 20 percent match. The OTO portion of the budget for FY 2012-2013 is shown below:

Ozarks Transportation Organization	FY 2012	FY 2013
Consolidated FHWA/FTA PL Funds	$645,011.90	$666,439.02
Local Jurisdiction Match Funds	$118,275.97	$128,648.76
In-Kind Match, Direct Cost, Donated	$ 28,977.00	$ 27,961.00
City Utilities Match Funds	$ 14,000.00	
City Of Springfield Aerial Match		$ 10,000.00
Total OTO Revenue	$806,264.87	$833,048.78

The total UPWP budget also includes FTA 5307 Transit Funds going directly to City Utilities in the amount of $96,984. City Utilities is providing the local match in the amount of $24,246.00. The total budget amount for FY 2012-2013 UPWP is $954,278.78.

OTO is utilizing In-Kind Match, Direct Cost, and Donated City Utilities Match Funds. These additional match sources allow OTO to build an operating fund balance.

The UPWP Subcommittee met on February 14th and voted to recommend the Draft FY 2012-2013 UPWP to the Technical Planning Committee.

TECHNICAL PLANNING COMMITTEE ACTION REQUESTED:

That a member of the Technical Planning Committee make a recommendation to the Board of Directors to approve the FY 2012-2013 UPWP.

OZARKS TRANSPORTATION ORGANIZATION

METROPOLITAN PLANNING ORGANIZATION (MPO)

UNIFIED PLANNING WORK PROGRAM

FISCAL YEAR 2012-2013

(July 1, 2012 – June 30, 2013)

Ozarks Transportation Organization

205 Park Central East, Suite 205

Springfield, Missouri 65806

APPROVED BY OTO BOARD OF DIRECTORS:

Amended by OTO Board of Directors:

APPROVED BY ONEDOT:

Amended by ONEDOT:

The preparation of this report was financed in part by Metropolitan Planning Funds from the Federal Transportation Administration and Federal Highway Administration, administered by the Missouri Department of Transportation.

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Introduction

The Unified Planning Work Program (UPWP) is a description of the proposed activities of the Ozarks Transportation Organization during Fiscal Year 2013 (July 2012 - June 2013). The program is prepared annually and serves as a basis for requesting federal planning funds from the U. S. Department of Transportation. All tasks are to be completed by OTO staff unless otherwise identified.

It also serves as a management tool for scheduling, budgeting, and monitoring the planning activities of the participating agencies. This document was prepared by staff from the Ozarks Transportation Organization, OTO (Springfield Area Metropolitan Planning Organization, MPO) with assistance from various agencies, including the Missouri Department of Transportation, the Federal Highway Administration, the Federal Transit Administration, City Utilities Transit Department, Missouri State University Transportation Department and members of the OTO Technical Planning Committee consisting of representatives from each of the nine OTO jurisdictions. Federal funding is received through a Federal Transportation Grant from the Federal Highway Administration and the Federal Transit Administration, known as a Consolidated Planning Grant (CPG).

The implementation of this document is a cooperative process of the OTO, Missouri Department of Transportation, the Federal Highway Administration, the Federal Transit Administration, City Utilities Transit Department, Missouri State University Transportation Department and members of the OTO Technical Planning Committee and Board of Directors.

Ozarks Transportation Organization's Public Participation Plan may be found at:

http://www.ozarkstransportation.org/Documents/PPP12172009.pdf

The planning factors used as a basis for the creation of the UPWP are:

- Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency
- Increase the safety of the transportation system for motorized and non-motorized users
- Increase the security of the transportation system for motorized and non-motorized users
- Increase the accessibility and mobility of people and freight
- Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and state and local planned growth and economic development patterns
- Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight
- Promote efficient system management and operation
- Emphasize the preservation of the existing transportation system

Task 010 - OTO General Administration

Conduct daily administrative activities including accounting, payroll, maintenance of equipment, software and personnel needed for federally required regional transportation planning activities.

Work Elements:

- **Financial Management (July to June).** (Estimated Cost $ 44,315) Preparation of quarterly progress reports, payment requests, payroll, and year end reports to MoDOT. Maintenance of OTO accounts and budget and reporting to Board of Directors. Responsible Agency: OTO

- **Financial Audit (August-October).** (Estimated Cost $4,750) (*Consultant Contract needed*). Conduct an annual and likely single audit of FY 2012 and report to Board of Directors. Responsible Agency: OTO

- **FY 2014 Unified Planning Work Program Preparation (January-June).** (Estimated Cost $ 8,863) Responsible Agency: OTO

- **Travel and Training (July to June).** (Estimated Cost $ 34,112) Travel to meetings both regionally and statewide. Training and development of OTO Staff and OTO members through educational programs that are related to OTO work committees. Responsible Agency: OTO

  Training could include the following:
  - Transportation Research Board (TRB) Conferences
  - Association of MPO Annual Conference
  - Census Bureau Training (New Census & Am. Comm. Survey)
  - ESRI/ArcInfo User's Conference
  - Association for Commuter Transportation Conference
  - Institute for Transportation Engineers Conferences including meetings of the Missouri Valley Section and Ozarks Chapter
  - ITE Web Seminars
  - National American Planning Association Conference
  - Missouri Chapter, American Planning Association Conference and Activities
  - Midwest Transportation Planning Conference
  - Small to Mid-Sized Communities Planning Tools Conference
  - Geographic Information Systems (GIS) Advanced Training (ESRI's ARC Product)
  - Bicycle/Pedestrian Professional Training
  - Provide Other OTO Member Training Sessions, as needed and appropriate
  - Missouri Association of Procurement Professional Training
  - GFOA Institute Training
  - Missouri Public Transit Association Annual Conference
  - Employee Educational Assistance

- **General Administration and Contract Management (July-June).** (Estimated Cost $ 12,564) Coordinate contract negotiations and Memorandum of Understandings. Responsible Agency: OTO

- **Electronic Support for OTO Operations (July-June).** (Estimated Cost $ 21,315) Maintain and update website. Software upgrades and maintenance contracts. Web Hosting and Backup Services. Responsible Agency: OTO

- **Disadvantaged Business Compliance (July-June).** (Estimated Cost $ 3,314) Meet federal and state reporting requirements with regard to DBEs and meet MoDOT established DBE goals. Responsible Agency: OTO

- **Title VI Compliance (July-June).** (Estimated Cost $ 2,315)**.** Accept and process complaint forms and review all projects for Title VI compliance. Meet federal and state reporting requirements. Responsible Agency: OTO

End Product(s) for FY 2013

- Completed quarterly progress reports, payment requests and the end-of-year report provided to MoDOT
- Completion of the 2014 Unified Planning Work Program
- Attendance of OTO Staff and OTO members at the various training programs
- Monthly updates of website
- Financial Reporting to Board of Directors
- Calculate dues and send out statements
- DBE reporting
- Title VI reporting and complaint tracking

Tasks Completed in FY 2012

- Completed quarterly and year end reports to MoDOT (Completed June 2012)
- Completed the FY 2013 UPWP (Completed April 2012)
- Staff attended the following conferences and training (Completed June 2012)
  - FHWA Web Seminars
  - Missouri MPO Annual Meeting
  - Supervisory Communication Skills
  - Leadership Training
  - Mid America GIS Consortium
  - ESRI International users Conference
  - MoDOT Complete Streets training held at the Southwest District office - August 25
  - Photo Shop Training
  - Ozarks Chapter ITE Technical Conference and Lunch Seminars
  - Missouri Public Transit Association Conference
  - Association for Commuter Transportation Conference
  - AMPO National Conference
  - Missouri Chapter American Planning Association Conference
  - Missouri Chamber Transportation Conference
  - National American Planning Association Conference
- Dues calculated and mailed statements for July 2012(Completed February 2012)
- Website maintenance (Completed June 2012)
- Completed DBE reporting (Completed June 2012)
- Title VI Reporting and Tracking

Task 010 – OTO General Administration Funding Sources

Local Match Funds	$26,310	20%
Federal CPG Funds	$105,238	80%
Total Funds	**$ 131,548**	

Task 020 - OTO Committee Support

Support various committees of the OTO and participate in various community committees directly relating to regional transportation planning activities.

Work Elements:

- **OTO Committee Support (July-June).** (Estimated Cost $ 76,624) Conduct and staff all Technical Planning Committee, Bicycle and Pedestrian Advisory Committee, Local Coordinating Board for Transit, and Board of Directors meetings. Respond to individual committee requests. Facilitate and administer any OTO subcommittees formed during the Fiscal Year. Responsible Agency: OTO

- **Community Committee Participation (July-June).** (Estimated Cost $ 13,651) Participate in various community committees directly related to transportation. Responsible Agency: OTO
  Committees include:
  - The Springfield Area Chamber of Commerce Transportation Committee
  - The Southwest Missouri Council of Governments Board and Technical Committee
  - Missouri Public Transit Association
  - MoDOT Blueprint for Safety
  - Ozarks Clean Air Alliance and Clean Air Action Plan Committee
  - Ozark Greenways Technical Committee
  - Ozark Greenways Sustainable Transportation Advocacy Resource Team (STAR Team)
  - SeniorLink Transportation Committee
  - Missouri Safe Routes to School Network
  - Ozark Safe Routes to School Committee
  - Local Safe Routes to School
  - Childhood Obesity Action Group and Healthy Living Alliance
  - Other Committees as needed

- **OTO Policy and Administrative Documents (July-June).** (Estimated Cost $ 5,925) Process Amendments to bylaws, policy documents, and administrative staff support consistent with the OTO growth. Conduct an annual review of the OTO Public Participation Plan and make any needed revisions, consistent with federal guidelines. Responsible Agency: OTO

- **Member Attendance at OTO Meetings (July – June)** (In-kind Services $ 8,000). OTO member jurisdictions time spent at OTO meetings. Responsible Agencies: OTO and member jurisdictions

End Product(s) for FY 2013

- Conduct meetings, prepare agendas and meeting minutes for OTO Committees and Board.
- Attendance of OTO Staff and OTO members at various community committees
- Revisions to By-Laws, Inter-local Agreements and the Public Participation Plan as needed.
- Documented meeting attendance for in-kind reporting
- Staff participation in multiple community committees

Tasks Completed in FY 2012

- Conducted Technical Committee Meetings, Bicycle and Pedestrian Committee Meetings, UPWP Subcommittee Meetings, Local Coordinating Board for Transit Meetings, and Board of Directors meetings.
- Documented meeting attendance for in-kind reporting
- Staff participated in multiple community committees

Task 020 – OTO Committee Support Funding Sources

Local Match Funds	$12,840	12%
In-kind Services	$8,000	8%
Federal CPG Funds	$83,360	80%
Total Funds	**$104,200**	

Task 030 – OTO General Planning and Plan Implementation

This task addresses general planning activities including the OTO Long-Range Transportation Plan (LRTP), approval of the functional classification map, the Congestion Management Process (CMP), the Bicycle and Pedestrian Plan as well as the implementation of related plans, and policies. Currently, the Ozarks Transportation Organization's LRTP and CMP are compliant with the requirements of SAFETEA-LU.

Work Elements:

- **Amendments to the OTO Journey Long-Range Transportation Plan 2030 to 2035 (July- June)** (Estimated Cost $7,570) Process amendments to the Long Range Plan including Major Thoroughfare Plan. Responsible Agency: OTO

- **OTO Travel Demand Model Update (January-June)** (Estimated Cost $165,272) *(Consultant Contract Needed)* Travel Demand Update to reflect new 2010 census data which is expected to be released in December 2012. Likely a multiple-year project. Responsible Agency: OTO

- **Continuation of the Congestion Management Process (July-June).** (Estimated Cost $ 26,286) On-going implementation of selected strategies and coordination of data collection efforts. Responsible Agency: OTO

- **Bicycle and Pedestrian Plan Implementation (July-June).** (Estimated Cost $12,000) The Bicycle and Pedestrian Advisory Committee will continue the coordination and monitoring of the implementation of the OTO Area-Wide Bicycle and Pedestrian Plan. Responsible Agency: OTO

- **Geographic Information Systems (GIS) (July-June).** (Estimated Cost $ 26,286) Continue developing the Geographic Information System (GIS) and work on inputting data into the system that will support the Transportation Planning efforts. Responsible Agency: OTO

- **Air Quality Planning (July-June).** (Estimated Cost $ 10,285) Staff serves on the Ozarks Clean Air Alliance along with Springfield Greene-County Health Department, which is updating the regional Clean Air Action Plan in hopes to preempt designation as a non-attainment area for ozone. Responsible Agency: OTO

- **Demographics and Future Projections (July-June).** (Estimated Cost $ 21,286) Continue to analyze growth and make growth projections for use in transportation decision making by collecting development data and compiling into a demographic report that will be used in travel demand model runs, plan updates and planning assumptions. Responsible Agency: OTO

- **Mapping and Graphics Support for OTO Operations (July-June)** (Estimated Cost $ 11,286) Responsible Agency: OTO

- **Aerial Photography (July-August)** (Estimated Cost $50,000) Cooperatively Purchase Aerial Photography with the City of Springfield, City Utilities and other local jurisdictions. Responsible Agency: OTO

End Product(s) for FY 2013

- Amendments to the Long-Range Transportation Plan
- Implementation of Bicycle and Pedestrian Plan
- Model runs as requested
- Continued monitoring of attainment status
- Demographic Report
- Selection of Enhancement and Safe Route to School Projects
- Travel Demand Model Update Started

Tasks Completed in FY 2012

- Long Range Transportation Plan Update
- Major Thoroughfare Plan amended
- Maintenance of GIS system layers
- Bicycle and Pedestrian Plan Implementation Status Report
- Demographic Report

Task 030 – General Planning and Plan Implementation Funding Sources

Local Match Funds	$56,054	16.97%
City of Springfield Match	$10,000	3.03%
Federal CPG Funds	$264,217	80%
Total Funds	**$ 330,271**	

Task 040 – OTO Transportation Improvement Program

Prepare a four-year program for anticipated transportation improvements and amendments as needed.

Work Elements

- **2013-2016 Transportation Improvement Program (TIP) (July-August).** (Estimated Cost $ 7,285) Complete and Publish the 2013-2016 TIP. Item should be on the July Technical Planning Committee Agenda and the August Board of Directors Agenda. Responsible Agency: OTO

- **2014-2017 Transportation Improvement Program (TIP) (March-June).** (Estimated Cost $ 76,625) Begin Development of the 2014-2016 TIP. Responsible Agency: OTO
  - Conduct the Public Involvement Process for the TIP (March-August).
  - Work with the TIP Subcommittees (June).
  - Complete Draft document

- **TIP Amendments (July-June).** (Estimated Cost $ 10,784) Process all modifications to the FY 2012-2014 and 2013-2017 TIPs including the coordination, advertising, public comment and Board approval and submissions to MoDOT for incorporation in the STIP. Responsible Agency: OTO

- **Annual Listing of Obligated Projects (October-December)** (Estimated Cost $ 3,784). Gather obligation information and develop the Annual Listing of Obligated Projects and publish to website. Responsible Agency: OTO

- **Electronic TIP Maintenance (July- June)** (Estimated Cost $10,000) *(Consultant Contract Needed)* Annual Maintenance of an online searchable database with reporting for TIP projects. Responsible Agency: OTO

End Product(s) for FY 2013

- TIP amendments, as needed.
- Adopted FY 2013-2016 Transportation Improvement Program as approved by the OTO Board and ONEDOT
- Draft of the FY 2014-2017 Transportation Improvement Program
- Annual Listing of Obligated Projects
- Online searchable database of TIP projects

Tasks Completed in FY 2012

- Adopted FY 2012-2014 Transportation Improvement Program as approved by the OTO Board and ONEDOT
- Draft of the FY 2013-2016 Transportation Improvement Program
- Amended the FY 2012-2014 TIP numerous times
- Annual Listing of Obligated Projects

Task 040 - Transportation Improvement Program Funding Sources

Local Match Funds	$21,696 20%
Federal CPG Funds	$ 86,782 80%
Total Funds	**$ 108,478**

Task 050 – OTO Rideshare and Commuter Choice Program

The Congestion Management Process recommends a rideshare program that focuses on employer-based strategies and employer targeting through such national initiatives as Commuter Choice.

Work Elements

- **Ride-Share and Commuter Choice Advertising (July-June).** (City Utilities (CU) Donated Services $3,984)
  OTO will promote and advertise the Rideshare and Commuter Choice Program through utilizing bus wraps on the City Utilities buses. Responsible Agency: OTO

- **Continued deployment of OzarksCommute.com rideshare/commuter choice program through RIDESHARK (July -June).**(Estimated Cost $13,000) *Consultant Contract.* Responsible Agency: OTO
  - Maintain planning database to match riders and drivers in response to requests for shared rides (ongoing). Monthly maintenance of rideshare program ($750/Month)
  - Develop marketing materials for rideshare program.
  - Data Collection and Analysis of quarterly rideshare status. (ongoing)

- **Continued Employer Promotion of rideshare/commuter choice program (July-June).** (Estimated Cost $ 20,019)
  Responsible Agency: OTO
  - Educate employers through working with the Springfield Area Chamber of Commerce .
  - Provide on-site education and technical assistance to employers who agree to participate.
  - Conduct on-site transportation fairs to test marketing materials at targeted employers.
  - Serve as transportation ambassadors to employees.
  - Publicizing the rideshare program. Includes bus wraps, banners, and other marketing material for public events. (ongoing)

End Products for FY 2013

- Continued coordination of rideshare requests.
- Use web-based software to track commuter choices.
- Education program for major employers.
- Purchase of marketing materials for use in association with Commuter Choice program.
- Work with targeted major employers to develop Commuter Choice programs.
- Completion of quarterly and annual rideshare program reports.

Tasks Completed in FY 2012

- Continued coordination of rideshare requests.
- Use web-based software to track commuter choices.
- Purchase of marketing materials for use in association with Commuter Choice program.
- Worked with targeted major employers to develop Commuter Choice programs.
- Completion of quarterly and annual rideshare program reports.
- Advertised and promoted ride-match website

Task 050 - Rideshare and Commuter Choice Program Funding Sources

Local Match Funds	$ 3,417	9.23%
CU Donated Services (Bus Wraps)	$ 3,984	10.77%
Federal CPG Funds	$ 29,602	80%
Total Funds	**$ 37,003**	

Task 060- OTO and City Utilities Transit Planning

Prepare plans to provide efficient and cost-effective transit service for transit users.

Work Elements

- **Operational Planning (July-June).** (Estimated Cost $ 41,656 (CU $35,000, OTO $ 6,656)) Responsible Agencies: OTO and City Utilities
    - OTO Staff shall support operational planning functions including, surveys and analysis of headway and schedules, and development of proposed changes in transit services.
    - Route Analysis
    - City Utilities Transit grant submittal and tracking.
    - City Utilities and OTO development of information for certification reviews.
    - City Utilities Transit collection and analysis of data required for the National Transit Data Base Report. Occasionally OTO Upon the request of CU, staff provides information toward this report, such as the data from the National Transit Database bus survey.
    - City Utilities Transit and OTO will conduct marketing and customer service programs.
    - CU Transit studies about management, operations, capital requirements and economic feasibility.
    - CU Transit participation in Ozarks Transportation Organization committees and related public hearings.
    - CU Transit collection of data required to implement the requirements of the Americans with Disabilities Act and non-discriminatory practices. (FTA Line Item Code 44.24.00)

- **ADA Accessibility (July-June).** (Estimated Cost $ 4,000 (CU $3,000, OTO $ 1,000)) Responsible Agency: OTO and City Utilities
    - OTO Staff to work with City Utilities Transit staff on transportation improvements at bus stops (i.e. bus turnouts).
    - CU Transit retains contract management for ADA projects with OTO staff assistance as requested.
    - OTO Staff and City Utilities Transit staff to work together on efforts to provide curb cuts and sidewalk accessibility at bus stops and shelters around Springfield, on an annual basis. (FTA Line Item Code 44.24.00)

- **Transit Fixed Route and Regional Service Analysis Implementation (July-June)** (Estimated Cost $20,000 (CU $ 10,000, OTO $10,000)) OTO and CU will analyze plan for and possibly implement recommendations of the Transit Fixed Route Regional Service Analysis.

  Responsible Agency: OTO and City Utilities

- **Service Planning (July-June).** (Estimated Cost $ 34,978 (CU $22,023, OTO $ 12,955)) Responsible Agencies: OTO and City Utilities
    - Per the recommendations of the Transit Coordination Plan, use recommended project selection criteria for selection of human service agency transit projects.
    - OTO Staff collection of data from paratransit operations as required.
    - OTO Staffing of the Local Coordinating Board for Transit
    - CU Transit development of route and schedule alternatives to make services more efficient and cost-effective within current hub and spoke system operating within the City of Springfield. (FTA Line Item Code 44.23.01)
    - OTO Staff and City Utilities Transit participation in special transit studies.
    - As part of the TIP process, a competitive selection process will be conducted for selection of 5307, 5310, 5316 (JARC), 5317 (New Freedom) projects.

- **Financial Planning (July-June).** (Estimated Cost $22,000 (CU $22,000) Responsible Agency: City Utilities
    - CU Transit analysis of transit system performance by adopted policies to achieve effective utilization of available resources.
    - CU Transit preparation of long and short-range financial and capital plans.
    - CU Transit will identify possible cost-saving techniques and opportunities.
    - CU Transit, with potential assistance from OTO Staff, will identify potential revenue from non-federal sources to meet future operating deficit and capital costs. (FTA Line Item Code 44.26.84)

- **Competitive Contract Planning (July-June).** (Estimated Cost $9,207 (CU $8,207, OTO $ 1,000)) Responsible Agencies: OTO, City Utilities and Missouri State University
    - CU Transit will study opportunities for transit cost reduction through the use of third-party and private sector providers.
    - Missouri State University will continue to monitor costs of their third-party private sector transit contractor.
    - CU Transit and OTO Staff will study potential coordination of private sector transportation with the existing and potential public sector providers to minimize unserved populace.
    - OTO Staff to maintain a list of operators developed in the transit coordination plan for use by City Utilities (CU) and other transit providers in the development of transit plans.
    - OTO Staff to cooperate with MSU, CU, and their consultants in the evaluation of existing services.

- **Safety, Security and Drug and Alcohol Control Planning (July-June).** (Estimated Cost $ 17,000 (CU $16,000, OTO $ 1,000)) Responsible Agencies: OTO, City Utilities and Missouri State University
    - CU and Missouri State University have adopted policies of drug-free awareness programs to inform their employees on the dangers of drug abuse. (FTA Line Item Code 44.26.82) Funding is intended to assist in the development of a drug and alcohol awareness program in an effort to provide a drug and alcohol-free working environment for the employees at CU, and MSU transit. In particular, special studies addressing critical transportation and related drug and alcohol issues may need to be completed.
    - The OTO, CU and MSU will review existing plans and procedures for maintaining security on existing transit facilities and take steps to mitigate any identified shortcomings.

- **Transit Coordination Plan Implementation (June-July).** (Estimated Cost $ 11,389 (CU $5,000, OTO $ 6,389) Responsible Agencies: OTO, City Utilities and Human Services Transit Providers. Update of the existing Transit Coordination Plan including examination and possible update of the competitive selection process.

End Products for FY 2013

- Transit agency coordination (OTO Staff)
- Project rankings and allocations in the 2014-2016 TIP related to transit, and various new ADA accessible bus shelters and stops. (OTO staff)
- Special Studies. (OTO Staff, CU, and possible consultant services as necessary)
- On Board Bus Surveys as needed (OTO Staff, CU)
- Quarterly reporting to National Transit Database (CU)
- Transit Coordination Plan Implementation of Selected Strategies
- Transit Fixed Route and Regional Service Analysis Implementation

Tasks Completed in FY 2012

- Project rankings and allocations in the 2013-2016 TIP related to transit, and various new ADA accessible bus shelters and stops
- On-Board bus surveys
- Quarterly reporting to National Transit Database
- Operational Planning
- Service Planning
- Financial Planning
- Competitive Contract Planning
- Safety Planning
- Transit Coordination Plan Update

Task 060 Transit Planning Funding Sources

Local Match Funds	$ 7,800	4.87%
CU Match Funds	$ 24,246	15.13%
Total Local Funds	$ 32,046	20%
Federal CPG Funds	$ 31,200	19.47%
FTA 5307 Funds	$ 96,984	60.53%
Total Federal Funds	$ 128,184	80%
Total Task 060 Funds	**$ 160,230**	

Task 070 – OTO and MoDOT Special Studies and Projects

Conduct special transportation studies as requested by the OTO Board of Directors, subject to funding availability. Priority for these studies shall be given to those projects that address recommendations and implementation strategies from the Long-Range Transportation Plan.

Work Elements (July-June)

- **MoDOT Transportation Studies and Data Collection (Direct Cost Services $15,977)** Responsible Agency: MoDOT (Southwest District staff). OTO would work with MoDOT to conduct a Traffic Count Program to provide hourly and daily volumes for use in the Congestion Management Process, Long Range Transportation Plan and Travel Demand Model. Transportation Studies would be conducted to provide accident data for use in the Congestion Management Process. Speed Studies would be conducted to analyze signal progression to meet requirements of Congestion Management Process. Miscellaneous studies to analyze congestion along essential corridors would also be a billable activity under this task.

Source of Eligible MoDOT Match

MoDOT Position	Yearly Salary	Yearly Fringe	Yearly Total	Yearly % Time	OTO Eligible
Senior Traffic Studies Specialist	$52,500	$26,394	$78,894	7.00%	$5,523
Intermediate Traffic Studies Specialist	$49,600	$22,003	$71,603	14.60%	$10,454
					$15,977

Continued Coordination with entities that are implementing Intelligent Transportation Systems. (July-June) (Estimated Cost $ 18,310) Coordination with the Traffic Management Center in Springfield and with City Utilities transit as needed. Responsible Agency: OTO

Studies of Parking, Land Use, and Traffic Circulation. (July-June) (Estimated Cost $16,262) Studies that are requested by member jurisdictions to look at traffic, parking or land use. Responsible Agency: OTO

Other Special Studies in accordance with the Adopted Long-Range Transportation Plan. (July-June) (Estimated Cost $12,000) Studies relating to projects in the Long Range Transportation Plan. Responsible Agency: OTO

Travel Time Runs and Traffic Counts (February-April) (Estimated Cost $20,000). Data collection efforts to support the OTO planning products, signal timing and transportation decision making. This could include equipment, software and or annual maintenance of a system to do 24 hour travel time monitoring *(Consultant Contract Needed)* Responsible Agency: OTO.

End Products for FY 2013

- Preparation of special requests, such as:
  - Memos
  - Public information requests
  - Parking & land use circulation studies
  - Other projects as needed, subject to OTO Staff availability and expertise.
  - Annual traffic counts within the OTO area for MoDOT roadways
  - Annual crash data
  - Speed Studies
  - ITS Coordination

Tasks Completed in FY 2012

- Traffic counts within the OTO area for MoDOT roadways
- Crash Data
- Speed Studies
- ITS Coordination

Task 070- *Special Studies and Related Projects* Funding Sources

Local Match Funds	$ 533	0.65%
MoDOT Direct Costs	$15,977	19.35%
Federal CPG Funds	$ 66,039	80%
Total Funds	**$ 82,549**	

$ 66,572 Actual Costs

$15,977 Value of MoDOT SW District "direct cost" metropolitan planning activity

$ 82,549 Total Value Project (Special studies & projects)

X .80 Federal prorate share

$ 66,039 Federal CPG funds (100% Federal funding of OTO's actual cost Task 070 studies)

Financial Expenditure Summary

		LOCAL					FEDERAL			
		OTO	CU	MoDOT	Aerial Photo Match	In Kind Services	CPG	5307	TOTAL	%
Task	10	$26,310					$105,238		$131,548	13.79%
Task	20	$12,840				$8,000	$83,360		$104,200	10.92%
Task	30	$56,054			$10,000		$264,217		$330,271	34.61%
Task	40	$21,696					$86,782		$108,478	11.37%
Task	50	$3,417				$3,984	$29,602		$37,003	3.88%
Task	60	$7,800	$24,246				$31,200	$96,984	$160,230	16.79%
Task	70	$533		$15,977			$66,039		$82,549	8.65%
OTO TOTAL		**$128,650**	**$24,246**	**$15,977**	**$10,000**	**$11,984**	**$666,438**	**$96,984**	**$954,279**	100%

Remaining CPG Funds Balance available from Prior Years UPWP*	$	617,123.09
FY 2012 Estimated CPG Funds allocation**	$	502,309.00
FY 2013 Estimated CPG Funds allocation***	$	502,309.00
TOTAL Estimated CPG Funds Available for FY 2013 UPWP	$	1,621,741.09
TOTAL CPG Funds Programmed for FY 2013	**$**	**666,439.00**
Remaining Unprogrammed Balance	$	955,302.09

*Previously allocated but unspent CPG Funds through FY 2011

** Based on partial year allocation. MoDOT will not release funds until entire year of transportation bill is funded.

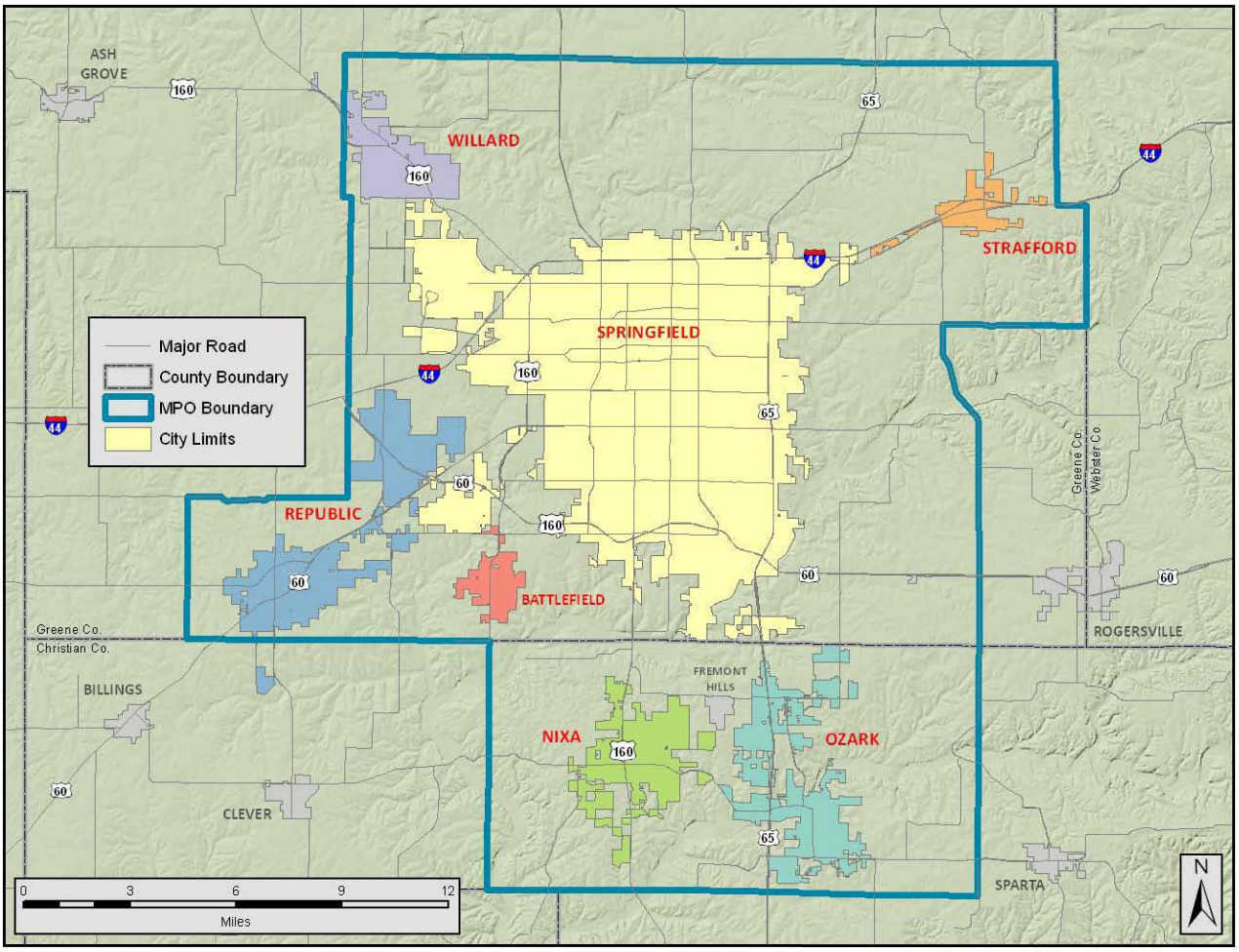
***The TOTAL Estimated CPG Funds Available for FY 2013 UPWP is an estimated figure based on an estimate for the FY 2012 allocation.

It is expected that additional funds will be added to the Remaining Unprogrammed Balance resulting from FY 2012 budget savings.

OTO is electing not to utilize the entire balance of available CPG funding at this time. MoDOT waits one year before dispersing funds thereby reducing the available funds to $452,993. OTO would like to have one year of reserved funding for operations, in order to avoid any reimbursement delays occurring from an expired transportation bill.

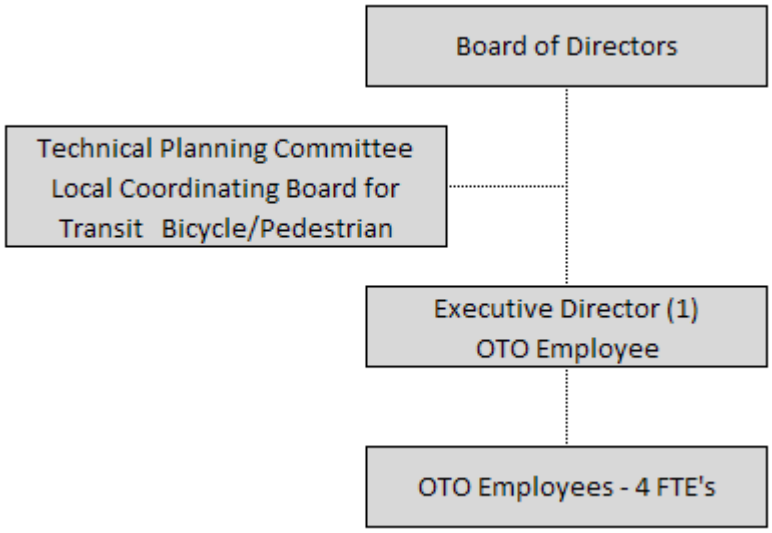
OZARKS TRANSPORTATION ORGANIZATION

BOUNDARY MAP



Ozarks Transportation Organization

Organization Chart



Board and Committee membership composition may be found at:
http://www.ozarkstransportation.org/Documents/OTOBy-Laws10162008.pdf

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APPENDIX A

FY 2013

July 1, 2012- June 30, 2013

Estimated Expenditures

OTO Budget utilizing Consolidated Planning Grant Funds

Cost Category	2012 Budget	2013 Proposed	Difference
Salaries & Fringe	$ 351,012.87	$ 361,000.78	$ 9,987.91
Spfld Contract for Staff and Services	$ -	$ -	$ -
TIP Software	$ 25,000.00	$ 10,000.00	$ (15,000.00)
Rideshare Software/ Materials	$ 20,000.00	$ 15,000.00	$ (5,000.00)
Publications	$ 1,000.00	$ 1,000.00	$ -
Office Supplies/Furniture	$ 37,236.00	$ 16,000.00	$ (21,236.00)
Mapping	$ -	$ 1,500.00	$ 1,500.00
Training	$ 5,800.00	$ -	$ (5,800.00)
Travel	$ 14,501.00	$ -	$ (14,501.00)
Training/Travel/Education		$ 32,000.00	$ 32,000.00
Dues	$ 4,200.00	$ 4,200.00	$ -
Postage	$ 4,000.00	$ 4,000.00	$ -
Telephone/Internet	$ 5,000.00	$ 5,000.00	$ -
Advertising	$ 5,380.00	$ 3,800.00	$ (1,580.00)
Printing	$ 21,000.00	$ 13,000.00	$ (8,000.00)
Food	$ 4,000.00	$ 4,500.00	$ 500.00
Computer Upgrades	$ 4,000.00	$ 4,000.00	$ -
Software	$ 2,000.00	$ 2,000.00	$ -
GIS Licenses	$ 6,000.00	$ 7,000.00	$ 1,000.00
Rent	$ 43,588.00	$ 55,367.00	$ 11,779.00
Mileage	$ 2,000.00	$ 2,000.00	$ -
Copy Machine Lease	$ 3,750.00	$ 4,000.00	$ 250.00
Parking	$ 500.00	$ 1,000.00	$ 500.00
Aerial Photos	$ -	$ 50,000.00	$ 50,000.00
Travel Model Consultant	$ 10,000.00	$ 150,000.00	$ 140,000.00
Liability Insurance	$ 1,400.00	$ 1,400.00	$ -
Legal Fees	$ 4,000.00	$ -	$ (4,000.00)
Consultant Services (formerly legal and accounting)		$ 8,000.00	$ 8,000.00
Payroll Services	$ 2,500.00	$ 2,600.00	$ 100.00
Audit	$ 4,750.00	$ 4,750.00	$ -
Infill Costs	$ 2,000.00	$ -	$ (2,000.00)
Accounting Services	$ 6,000.00	$ -	$ (6,000.00)
Equipment Repair	$ 500.00	$ 500.00	$ -
Workers Comp	$ 1,400.00	$ 1,400.00	$ -
Web Hosting	$ 550.00	$ 550.00	$ -
Data Storage/ Backup	$ 2,000.00	$ 3,600.00	$ 1,600.00
IT Maintenance Contract	$ 10,000.00	$ 12,000.00	$ 2,000.00
Mobile Data Plans	$ 1,620.00	$ 1,620.00	$ -
Fixed Route Transit Analysis	$ 140,000.00	$ -	$ (140,000.00)
Board of Directors Insurance	$ 2,200.00	$ 2,300.00	$ 100.00
Travel Time Runs and Traffic Counts	$ 20,000.00	$ 20,000.00	$ -
Statewide Passenger Rail Study (OTO portion)	$ -	$ -	$ -
Presentation System	$ 5,000.00	$ -	$ (5,000.00)
Moving Expenses	$ 3,400.00	$ -	$ (3,400.00)
Total OTO Expenditures	**$ 777,287.87**	**$ 805,087.78**	$ 27,799.91
In-Kind Match, Direct Cost, Donated			
Member Attendance at Meetings	$ 8,000.00	$ 8,000.00	
Direct Cost - MoDOT Salaries	$ 15,977.00	$ 15,977.00	
Donated Ride Share Advertising	$ 5,000.00	$ 3,984.00	
TOTAL OTO Budget	**$ 806,264.87**	**$ 833,048.78**	
CU Transit Salaries*	$ 113,641.00	$ 121,230.00	
TOTAL EXPENDITURES	**$ 919,905.87**	**$ 954,278.78**	

Notes * Cost includes federal and required 20% matching funds.

Estimated Revenues

Ozarks Transportation Organization	FY 2012	FY 2013
Consolidated FHWA/FTA PL Funds**	$ 645,011.90	$ 666,439.02
Local Jurisdiction Match Funds	$ 118,275.97	$ 128,648.76
In-Kind Match, Direct Cost, Donated	$ 28,977.00	$ 27,961.00
City Utilities Match Funds	$ 14,000.00	$ -
City of Springfield Aerial Photography Match Funds		$ 10,000.00
Total OTO Revenue	**$ 806,264.87**	**$ 833,048.78**
City Utilities Transit Planning		
FTA 5307	$ 90,912.80	$ 96,984.00
City Utilities Local Match	$ 22,728.20	$ 24,246.00
Total CU Revenue	**$ 113,641.00**	**$ 121,230.00**
TOTAL REVENUE	**$ 919,905.87**	**$ 954,278.78**

Notes * Cost includes federal and required 20% matching funds.

*** In the event that In-Kind Match/Direct Cost/Donated is not available, local jurisdictions match funds will be utilized

Anticipated Consultant Useage

TIP Software	$ 25,000.00	$10,000.00
Rideshare Software/ Materials	$ 20,000.00	$15,000.00
Travel Model Consultant	$ 10,000.00	$150,000.00
Audit	$ 4,750.00	$4,750.00
Accounting Services/Legal Services	$ 6,000.00	$8,000.00
Data Storage/ Backup	$ 2,000.00	$3,600.00
IT Maintenance Contract	$ 10,000.00	$12,000.00
Fixed Route Transit Analysis	$ 140,000.00	$0.00
Travel Time Runs and Traffic Counts	$ 20,000.00	$20,000.00
Aerial Photos		$50,000.00
TOTAL	**$ 237,750.00**	$273,350.00

TAB 4

TECHNICAL COMMITTEE AGENDA 03/21/12; ITEM II.E.

STP-Urban Balance December 2011 Report

Ozarks Transportation Organization
(Springfield, MO Area MPO)

AGENDA DESCRIPTION:

Ozarks Transportation Organization is allocated STP-Urban funds each year through MoDOT from the Federal Highway Administration. OTO has elected to sub-allocate these balances among the jurisdictions within the urbanized area. Each of these jurisdiction's allocations are based upon the population within the urbanized area.

MoDOT has enacted a policy of allowing no more than three years of this STP-Urban allocation to accrue due to requirements by FHWA. If a balance greater than 3 years accrues, funds will lapse (be forfeited). OTO's balance is monitored as a whole by MoDOT and OTO staff monitors each jurisdiction's individual balance. When MoDOT calculates the OTO balance, it is based upon obligated funds and not programmed funds, so a project is only subtracted from the balance upon obligation from FHWA. OTO receives reports which reflect the projects that have been obligated. MoDOT's policy does allow for any cost share projects with MoDOT that are programmed in the Statewide Transportation Improvement Program, although not necessarily obligated, to be subtracted from the balance. The next deadline to meet the MoDOT funds lapse policy is September 30, 2012.

Staff has included a report which documents the balance allowed, the balance obligated, and the balance that needs to be obligated by the end of the Federal Fiscal Year in order not to be rescinded by MoDOT. According to staff records, as a whole, OTO has obligated or has programmed in cost shares with MoDOT funding exceeding the minimum amount required to be programmed for FY 2012, therefore, there is not an immediate threat of rescission by MoDOT.

The Obligation Summary Report Balance Sheet (Page 1) indicates the STP-Urban balance for OTO as a whole. OTO has an ending balance of $20,608,112.04 for FY 2012. After the MoDOT cost share projects that appear in the STIP are subtracted, the balance is $9,198,877.24. This is well within the balance allowed to be carried by MoDOT.

In 2009, $3.5 million in STP-U funding was rescinded when SAFETEA-LU expired and then was restored nine months later. The only action that prevents a rescission of federal funding is obligation. The OTO unobligated balance that is subject to rescission is $20,608,112.04.
It is recommended that this funding be obligated as quickly as possible to protect against further rescissions.

The OTO jurisdictions have acted in response to the suggestion that these funds be spent. Several jurisdictions have partnered with MoDOT to spend these funds. OTO commends them for their swift action.

TECHNICAL COMMITTEE ACTION:

No official action requested, however, OTO is requesting each jurisdiction review the report for any inaccuracies or changes in project status and advise staff.

Ozarks Transportation Organization

STP-Urban Obligation Report

December 2011

Ozarks Transportation Organization

STP-Urban Obligation Report

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Obligation Summary Report

December 2011

Balance Sheet

TOTAL APPROPRIATIONS FY2003-FY2012 (See Pg 2)	**$42,776,091.03**
TOTAL OBLIGATIONS FY2003-FY2012 (See Pg 2)	**($22,167,978.99)**
TOTAL UNOBLIGATED BALANCE	**$20,608,112.04**
MoDOT COST SHARES (See Pg 5)	**($11,409,234.80)**
BALANCE AFTER COST SHARES	**$9,198,877.24**
TOTAL BALANCE	**$9,198,877.24**
MAXIMUM BALANCE ALLOWED	**$13,039,582.95**
REMAINING TO BE OBLIGATED BY SEPT 2012	**$0.00**

Total Unobligated Balance

OTO Obligation Limitation (See Pgs 19-20)	$21,962,186.17
Republic Small Urban FY2011-FY2012	$66,175.30
BRM	($1,420,249.43)
TOTAL	**$20,608,112.04**

Obligation Summary Report

December 2011

Appropriations and Obligations

APPROPRIATIONS

TOTAL STP-URBAN (2003-2011) & REPUBLIC SMALL URBAN (2011)	$34,921,881.54
TOTAL STP-URBAN (Projected 2012) & REPUBLIC SMALL URBAN (2012)	$4,346,527.65
TOTAL REMAINING SMALL URBAN (thru 2002)	$3,507,681.84
TOTAL APPROPRIATIONS	**$42,776,091.03**

OBLIGATIONS

Small Urban

N/S Corridor Study	($184,224.00)
Ozark (Third Street)	($132,800.00)
Springfield	($2,502,106.13)
Greene County	($564,027.15)
Campbell/Weaver	($124,524.56)
TOTAL Small Urban Obligations	**($3,507,681.84)**

STP-Urban

Adjustment to Balance	$0.02
Chestnut/National	($20,056.73)
JRF/Glenstone	($946,611.27)
TMC Staff	($112,000.00)
Terminal Access Rd	($1,993,062.73)
Terminal Access Rd	($2,461,290.27)
Glenstone/Primrose	($134,432.60)
Terminal Access Rd	$1,069,858.00
Terminal Access Rd	($508,570.80)
CC	($236,800.00)
Glenstone/Primrose	$22,101.02
Campbell/Weaver	($124,524.56)
17th street/65	($244,800.00)
Scenic Avenue Sidewalks	($74,642.40)
Roadway Prioritization	($14,681.60)
Main Street	($53,822.02)
Gregg/14	($38,133.92)
Scenic Avenue Sidewalks	$18,089.16
Glenstone (I-44 to Valley Water Mill)	($2,700,000.00)
TMC Salaries	($128,800.00)
Chestnut/National	($78,307.24)
Prioritization Study	$349.91
TMC Salaries	($61,600.00)
Kansas/Evergreen	($300,000.00)
Kansas/Evergreen	$19,036.04
National/JRF Interchange	($1,244,617.00)
Northview Rd	($17,386.10)
Glenstone/Primrose	($312,694.65)
13/44	($978,000.00)
CC	($320,000.00)
Master Transportation Plan	($7,243.20)

Traffic Analysis	($6,821.60)
Kansas/Evergreen	$38,753.65
65	($7,570.99)
65	($1,061,000.00)
TMC Salaries	$659.24
TMC Salaries	$859.06
TMC Salaries	($228,000.00)
Rt 160 & Weaver Rd	($2,657,587.76)
Highway M Study	($14,399.22)
Scenic Sidewalks	($7,350.46)
Elm Street Sidewalks	($1,998.24)
Cloverdale Lane Sidewalks	($795.68)
Hwy 14 (Third St), Ozark	($56,192.80)
Rt 160 & Weaver Rd	$328,117.82
Rte FF, Greene Co, pavement improvements	($70,000.00)
James River Freeway & Rte 160 (Campbell Ave)	($1,800,000.00)
ARRA City of Ozark Trans Plan	$7,243.20
Gregg/14	($54,780.00)
Airport Blvd, SPGFD	$0.15
Airport Blvd, SPGFD	($43,205.64)
Airport Blvd, SPGFD	($59,268.28)
Hwy 14 (Third St), Ozark - Streetscape	($72,962.40)
City of Nixa - Northview Rd	($89,798.40)
Rte 65, Greene Co, pedestrian accommodations on Bus 65/Loop 44	($106,000.00)
Rte FF, Greene Co, pavement improvements	$35,578.89
City of Springfield, TMC Salaries	($276,000.00)
Springfield/Greene County Bicycle Destination Plan, Ph. 1	($40,033.84)
Ozark Traffic Study from Jackson to Church on 3rd	$17.39
60/65 Interchange Improvements	($100,000.00)
14/3rd Street Streetscape	($177,500.00)
Northview Rd	$107,184.50
14 and Gregg Intersection Improvements	($264,802.80)
TOTAL STP-Urban Obligations	**($18,660,297.15)**
TOTAL OBLIGATIONS	**($22,167,978.99)**

Obligation Summary Report

December 2011

Ending Balance by Jurisdiction FY 12

FY 2003 - FY 2012

Jurisdiction	Allocations	Obligations	Balance	MoDOT Cost Shares	Balance after Cost Shares
Christian	$2,133,337.12	($320,000.00)	$1,813,337.12	($2,300,000.00)	($486,662.88)
Greene	$8,613,398.14	($5,004,495.54)	$3,608,902.60	($1,900,000.00)	$1,708,902.60
Battlefield	$424,982.69	($116,614.25)	$308,368.44		$308,368.44
Nixa	$1,989,905.43	($648,338.74)	$1,341,566.69		$1,341,566.69
Ozark	$1,659,760.57	($705,391.10)	$954,369.47	($594,344.80)	$360,024.67
Republic (FY11-12 only)	$367,556.53	$0.00	$367,556.53	($106,894.00)	$260,662.53
Springfield	$23,692,835.66	($11,681,233.54)	$12,011,602.12	($6,444,221.00)	$5,567,381.12
Strafford	$67,881.13	$0.00	$67,881.13	($63,775.00)	$4,106.13
Willard	$134,527.92	$0.00	$134,527.92		$134,527.92
North South corridor	$184,224.00	($184,224.00)	$0.00		$0.00
TOTAL	**$39,268,409.19**	**($18,660,297.17)**	**$20,608,112.02**	**($11,409,234.80)**	**$9,198,877.22**

Obligation Summary Report

December 2011

MoDOT Cost Shares

Projects Currently Programmed in the STIP

	Christian	Greene	Ozark	Republic	*Republic Small Urban*	Springfield	Strafford	Total
Chestnut/65	$ -	($1,000,000.00)	$ -	$ -	$ -	($1,323,122.00)	$ -	($2,323,122.00)
14/3rd Street	$ -	$ -	($594,344.80)	$ -	$ -	$ -	$ -	($594,344.80)
Oakwood/60	$ -	$ -	$ -	($106,894.00)	*($66,156.00)*	$ -	$ -	($173,050.00)
125/OO	$ -	$ -	$ -	$ -	$ -	$ -	($63,775.00)	($63,775.00)
CC/65	($2,300,000.00)	$ -	$ -	$ -	$ -	$ -	$ -	($2,300,000.00)
Total with Small Urban	*($2,300,000.00)*	*($1,000,000.00)*	*($594,344.80)*	*($106,894.00)*	*($66,156.00)*	*($1,323,122.00)*	*($63,775.00)*	*($5,454,291.80)*
TOTAL w/o Small Urban	($2,300,000.00)	($1,000,000.00)	($594,344.80)	($106,894.00)	$ -	($1,323,122.00)	($63,775.00)	**($5,388,135.80)**

Approved Cost Shares Not Yet Programmed*

	Christian	Greene	Ozark	Republic	*Republic Small Urban*	Springfield	Strafford	
Battlefield/65	$ -	($500,000.00)	$ -	$ -	$ -	($2,795,436.00)	$ -	($3,295,436.00)
Chestnut RR Overpass	$ -	($400,000.00)	$ -	$ -	$ -	($2,325,663.00)	$ -	($2,725,663.00)
TOTAL	$ -	($900,000.00)	$ -	$ -	$ -	($5,121,099.00)	$ -	**($6,021,099.00)**
GRAND TOTAL w/o Small Urban	**($2,300,000.00)**	**($1,900,000.00)**	**($594,344.80)**	**($106,894.00)**	$ -	**($6,444,221.00)**	**($63,775.00)**	**($11,409,234.80)**

*Will be placed in the STIP once agreements have been approved and signed by jurisdiction

Obligation Summary Report

December 2011

Bridge (BRM) Balance

2004	$210,242.66
2005	$203,613.48
2006	$265,090.64
Adjustment to Balance	($0.43)
2007	$255,748.00
James River Bridge	($780,000.00)
2008	$297,860.03
2009	$299,406.62
2010	$341,753.00
2011	$326,535.00
2012	$0.00
TOTAL	**$1,420,249.00**

Programmed (Farmer Branch)	($1,000,000.00)
TOTAL AVAILABLE	**$420,249.00**
Maximum Balance Allowed	**$979,605.00**
Need to Obligate an Additional	**$0.00**

STP-Urban Balance Based on Current Obligations

December 2011

Christian County

Allocation/Project	Amount	Running Balance
Allocation FY 03/04	**$348,765.17**	**$348,765.17**
Allocation FY 05	**$210,184.62**	**$558,949.79**
Allocation FY 06	**$176,680.04**	**$735,629.84**
Allocation FY 07	**$205,358.34**	**$940,988.18**
Allocation FY 08	**$219,817.75**	**$1,160,805.93**
Allocation FY 09	**$225,611.19**	**$1,386,417.12**
CC	**($320,000.00)**	**$1,066,417.12**
Allocation FY 10	**$263,786.19**	**$1,330,203.31**
Allocation FY 11	**$255,650.30**	**$1,585,853.61**
Projected Allocation FY 12	**$227,483.50**	**$1,813,337.12**
TOTAL AVAILABLE	**$1,813,337.12**	
MoDOT Cost Shares		
CC/65	**($2,300,000.00)**	
Total Available after MoDOT Cost Shares	**($486,662.88)**	
Maximum Balance Allowed	**$682,450.50**	
Need to Obligate an Additional	**$0.00**	

STP-Urban Balance Based on Current Obligations

December 2011

Greene County

Allocation/Project	Amount	Running Balance
Small Urban Remaining Funds	**$344,278.68**	**$344,278.68**
Allocation FY 03 & 04	**$1,399,042.73**	**$1,743,321.41**
Allocation FY 05	**$843,138.29**	**$2,586,459.70**
Transfer from City of Battlefield	**$45,000.00**	**$2,631,459.70**
Allocation FY 06	**$708,737.42**	**$3,340,197.12**
Allocation FY 07	**$823,778.07**	**$4,163,975.19**
Allocation FY 08	**$881,780.76**	**$5,045,755.95**
Transfer from City of Springfield	**$43,450.00**	**$5,089,205.95**
Scenic Avenue Sidewalks	**($74,642.40)**	**$5,014,563.55**
Scenic Avenue Sidewalks	**$18,089.16**	**$5,032,652.71**
JRF/Glenstone	**($500,000.00)**	**$4,532,652.71**
Division Underground Tank Removal	**($64,027.15)**	**$4,468,625.56**
Midfield Terminal Access Road	**($1,000,000.00)**	**$3,468,625.56**
Glenstone (I-44 to Valley Water Mill)	**($1,500,000.00)**	**$1,968,625.56**
Allocation FY 09	**$905,020.70**	**$2,873,646.26**
Transfer from City of Battlefield	**$20,000.00**	**$2,893,646.26**
Allocation FY 10	**$1,058,156.57**	**$3,951,802.84**
Campbell/Weaver	**($124,524.56)**	**$3,827,278.28**
Campbell/Weaver	**($1,328,793.88)**	**$2,498,484.40**
Scenic Avenue Sidewalks	**($7,350.46)**	**$2,491,133.94**
Campbell/Weaver	**$164,058.91**	**$2,655,192.85**
James River Freeway & Rte 160 (Campbell Ave)	**($1,000,000.00)**	**$1,655,192.85**
Allocation FY 11	**$1,025,520.10**	**$2,680,712.95**
Bicycle Destination Plan	**($40,033.84)**	**$2,640,679.11**
Projected Allocation FY 12	**$968,223.49**	**$3,608,902.60**
TOTAL AVAILABLE	**$3,608,902.60**	
MoDOT Cost Shares		
Chestnut/65	**($1,000,000.00)**	
Battlefield/65	**($500,000.00)**	
Chestnut RR Overpass	**($400,000.00)**	
Total Available after MoDOT Cost Shares	**$1,708,902.60**	
Maximum Balance Allowed	**$2,904,670.47**	
Need to Obligate an Additional	**$0.00**	

STP-Urban Balance Based on Current Obligations

December 2011

City of Battlefield

Allocation/Project	Amount	Running Balance
Allocation FY 03 & 04	**$63,402.45**	$63,402.45
Transfer to Greene County	**($45,000.00)**	$18,402.45
Allocation FY 05	**$38,209.72**	$56,612.17
Allocation FY 06	**$32,118.88**	$88,731.05
Allocation FY 07	**$37,332.34**	$126,063.39
Allocation FY 08	**$39,960.94**	$166,024.33
Allocation FY 09	**$41,014.13**	$207,038.46
Transfer to Greene County	**($20,000.00)**	$187,038.46
Allocation FY 10	**$47,954.01**	$234,992.48
Highway M Study	**($14,399.22)**	$220,593.26
Elm Street Sidewalks	**($1,998.24)**	$218,595.02
Cloverdale Lane Sidewalks	**($795.68)**	$217,799.34
Rte FF, Greene Co, pavement improvements	**($70,000.00)**	$147,799.34
Allocation FY 11	**$46,474.98**	$194,274.32
Rte FF, Greene Co, pavement improvements	**$35,578.89**	$229,853.21
Projected Allocation FY 12	**$78,515.24**	$308,368.44
TOTAL AVAILABLE	**$308,368.44**	
Maximum Balance Allowed	**$235,545.71**	
Need to Obligate an Additional	**$72,822.73**	

STP-Urban Balance Based on Current Obligations

December 2011

City of Nixa

Allocation/Project	Amount	Running Balance
Allocation FY 03 & 04	**$315,253.93**	**$315,253.93**
Allocation FY 05	**$189,988.95**	**$505,242.87**
Allocation FY 06	**$159,703.67**	**$664,946.54**
CC Realignment	**($236,800.00)**	**$428,146.54**
Main Street	**($53,822.02)**	**$374,324.52**
Allocation FY 07	**$185,626.40**	**$559,950.93**
Allocation FY 08	**$198,696.47**	**$758,647.39**
Gregg/14	**($38,133.92)**	**$720,513.47**
Allocation FY 09	**$203,933.25**	**$924,446.72**
Northview	**($17,386.10)**	**$907,060.62**
Allocation FY 10	**$238,440.19**	**$1,145,500.81**
Allocation FY 11	**$231,086.04**	**$1,376,586.85**
Northview	**($89,798.40)**	**$1,286,788.45**
Gregg/14	**($54,780.00)**	**$1,232,008.45**
Projected Allocation FY 12	**$267,176.53**	**$1,499,184.99**
Northview	**$107,184.50**	**$1,606,369.49**
Gregg/14	**($264,802.80)**	**$1,341,566.69**
TOTAL AVAILABLE	**$1,341,566.69**	
Maximum Balance Allowed	**$801,529.60**	
Need to Obligate an Additional	**$540,037.08**	

STP-Urban Balance Based on Current Obligations

December 2011

City of Ozark

Allocation/Project	Amount	Running Balance
Allocation FY 03 & 04	**$257,927.98**	**$257,927.98**
Allocation FY 05	**$155,441.25**	**$413,369.23**
Allocation FY 06	**$130,663.07**	**$544,032.30**
Allocation FY 07	**$151,872.00**	**$695,904.29**
Third Street/14	**($132,800.00)**	**$563,104.29**
Allocation FY 08	**$162,565.39**	**$725,669.69**
17th Street Relocation	**($244,800.00)**	**$480,869.69**
Roadway Prioritization	**($14,681.60)**	**$466,188.09**
Allocation FY 09	**$166,849.91**	**$633,038.00**
Roadway Prioritization	**$349.91**	**$633,387.91**
Transportation Plan	**($7,243.20)**	**$626,144.71**
Traffic Analysis	**($6,821.60)**	**$619,323.11**
Allocation FY 10	**$195,082.09**	**$814,405.20**
Hwy 14 (Third St), Ozark	**($56,192.80)**	**$758,212.40**
ARRA City of Ozark Trans Plan	**$7,243.20**	**$765,455.60**
Allocation FY 11	**$189,065.22**	**$954,520.83**
Hwy 14 (Third St), Ozark - Streetscape	**($72,962.40)**	**$881,558.43**
3rd Street Traffic Study	**$17.39**	**$881,575.82**
Projected Allocation FY 12	**$250,293.65**	**$1,131,869.47**
Hwy 14 (Third St), Ozark - Streetscape	**($177,500.00)**	**$954,369.47**
TOTAL AVAILABLE	**$954,369.47**	
MoDOT Cost Shares		
Remaining Third Street	**($594,344.80)**	
Total Available after MoDOT Cost Shares	**$360,024.67**	
Maximum Balance Allowed	**$585,246.28**	
Need to Obligate an Additional	**$0.00**	

STP-Urban Balance Based on Current Obligations

December 2011

City of Republic

Allocation/Project	Amount	Running Balance
Small Urban Balance FY 09	**$198,465.99**	**$198,465.99**
Obligation	**($198,465.00)**	**$0.99**
Small Urban Allocation FY 10	**$33,087.65**	**$33,088.64**
Small Urban Allocation FY 11	**$33,087.65**	**$66,176.29**
STP-Urban Allocation FY 11	**$127,281.36**	**$193,457.65**
Small Urban Allocation FY 12	**$33,087.65**	
Projected STP-Urban Allocation FY 12	**$174,099.87**	**$367,557.52**
TOTAL STP-URBAN AVAILABLE	**$301,381.23**	
TOTAL SMALL URBAN AVAILABLE	**$99,263.94**	
TOTAL AVAILABLE	**$400,645.17**	
MoDOT Cost Shares		
Oakwood/60 (STP-Urban)	**($106,894.00)**	
Oakwood/60 (Small Urban)	**($66,156.00)**	
Total STP-Urban Available after MoDOT Cost Shares	**$194,487.23**	
Total Small Urban Available after MoDOT Cost Shares	**$33,107.94**	
Maximum STP-Urban Balance Allowed	**$522,299.62**	
Maximum Small Urban Balance Allowed	**$99,262.95**	
Need to Obligate an Additional STP-Urban	**$0.00**	
Need to Obligate an Additional Small Urban	**$0.00**	

STP-Urban Balance Based on Current Obligations

December 2011

City of Springfield

Allocation/Project	Amount	Running Balance
Small Urban Balance	**$3,163,403.16**	**$3,163,403.16**
Allocation FY 03/04	**$3,925,754.34**	**$7,089,157.50**
Allocation FY 05	**$2,365,870.41**	**$9,455,027.91**
Allocation FY 06	**$1,988,737.70**	**$11,443,765.61**
Allocation FY 07	**$2,311,545.07**	**$13,755,310.68**
Allocation FY 08	**$2,474,302.31**	**$16,229,612.99**
44/65	**($74,000.00)**	**$16,155,612.99**
Chestnut/National	**($20,056.73)**	**$16,135,556.26**
Chestnut/National	**($948,888.79)**	**$15,186,667.47**
JRF/Glenstone	**($2,103,741.90)**	**$13,082,925.57**
JRF/Glenstone	**($446,611.27)**	**$12,636,314.30**
Midfield Terminal Access Road	**($2,461,290.27)**	**$10,175,024.03**
Glenstone/Primrose	**($134,432.60)**	**$10,040,591.43**
Midfield Terminal Access Road	**$1,069,858.00**	**$11,110,449.43**
Glenstone/Primrose	**$22,101.02**	**$11,132,550.45**
TMC Salaries	**($112,000.00)**	**$11,020,550.45**
Weaver/Campbell	**($124,524.56)**	**$10,896,025.89**
JRF/Glenstone	**($946,611.27)**	**$9,949,414.62**
Midfield Terminal Access Road	**($993,062.73)**	**$8,956,351.89**
Midfield Terminal Access Road	**($508,570.80)**	**$8,447,781.09**
Transfer to Greene County	**($43,450.00)**	**$8,404,331.09**
JRF/Glenstone (small urban credit)	**$1,071,135.83**	**$9,475,466.92**
Glenstone (I-44 to VW Mill)	**($1,200,000.00)**	**$8,275,466.92**
Allocation FY 09	**$2,539,514.24**	**$10,814,981.16**
TMC Salaries	**($128,800.00)**	**$10,686,181.16**
Chestnut/National	**($78,307.24)**	**$10,607,873.92**
TMC Salaries	**($61,600.00)**	**$10,546,273.92**
Kansas/ Evergreen	**($300,000.00)**	**$10,246,273.92**
Kansas/ Evergreen	**$19,036.04**	**$10,265,309.96**
National/JRF	**($1,244,617.00)**	**$9,020,692.96**
13/44	**($978,000.00)**	**$8,042,692.96**
Glenstone/Primrose	**($312,694.65)**	**$7,729,998.31**
Kansas/ Evergreen	**$38,753.65**	**$7,768,751.96**
Allocation FY 10	**$2,969,217.93**	**$10,737,969.89**
65	**($7,570.99)**	**$10,730,398.90**
65	**($1,061,000.00)**	**$9,669,398.90**
TMC Salaries	**$659.24**	**$9,670,058.14**
TMC Salaries	**$859.06**	**$9,670,917.20**
TMC Salaries	**($228,000.00)**	**$9,442,917.20**
Campbell/Weaver	**($1,328,793.88)**	**$8,114,123.32**
Campbell/Weaver	**$164,058.91**	**$8,278,182.23**
JRF/Campbell	**($800,000.00)**	**$7,478,182.23**

STP-Urban Balance Based on Current Obligations

December 2011

City of Springfield

Allocation/Project	Amount	Running Balance
Allocation FY 11	**$2,877,639.06**	**$10,355,821.29**
Midfield Terminal Access Road	**$0.15**	**$10,355,821.44**
Midfield Terminal Access Road	**($43,205.64)**	**$10,312,615.80**
Midfield Terminal Access Road	**($59,268.28)**	**$10,253,347.52**
Glenstone Sidewalks	**($106,000.00)**	**$10,147,347.52**
TMC Salaries	**($276,000.00)**	**$9,871,347.52**
Projected Allocation FY 12	**$2,240,254.60**	**$12,111,602.12**
60/65 Interchange Improvements	**($100,000.00)**	**$12,011,602.12**
TOTAL AVAILABLE	**$12,011,602.12**	
MoDOT Cost Shares		
Chestnut/65	**($1,323,122.00)**	
Battlefield/65	**($2,795,436.00)**	
Chestnut RR Overpass	**($2,325,663.00)**	
Total Available after MoDOT Cost Shares	**$5,567,381.12**	
Maximum Balance Allowed	**$8,632,917.17**	
Need to Obligate an Additional	**$0.00**	

STP-Urban Balance Based on Current Obligations

December 2011

City of Strafford

Allocation/Project		Amount	Running Balance
Allocation FY 11		**$34,761.47**	**$34,761.47**
Projected Allocation FY 12		**$33,119.67**	**$67,881.13**
TOTAL AVAILABLE		**$67,881.13**	
MoDOT Cost Shares			
	125/OO	**($63,775.00)**	
Total Available after MoDOT Cost Shares		**$4,106.13**	
Maximum Balanced Allowed		**$99,204.78**	
Need to Obligate an Additional		**$0.00**	

STP-Urban Balance Based on Current Obligations

December 2011

City of Willard

Allocation/Project	Amount	Running Balance
Allocation FY 11	**$60,254.47**	**$60,254.47**
Projected Allocation FY 12	**$74,273.45**	**$134,527.92**
TOTAL AVAILABLE	**$134,527.92**	
Maximum Balance Allowed	**$222,820.34**	
Need to Obligate an Additional	**$0.00**	

MPO Population Distribution

Jurisdiction	2000 Population in MPO Area	Population in Urbanized Area	% of MPO Population	%of Urbanized Area Population	2010 Population in MPO Area	% of MPO Population
Christian County	**13,488**	**13,488**	**5.24%**	**5.53%**	**16,196**	**5.23%**
Greene County	**54,106**	**54,106**	**21.01%**	**22.17%**	**68,934**	**22.28%**
Battlefield	**2,452**	**2,452**	**0.95%**	**1.00%**	**5,590**	**1.81%**
Nixa	**12,192**	**12,192**	**4.73%**	**5.00%**	**19,022**	**6.15%**
Ozark	**9,975**	**9,975**	**3.87%**	**4.09%**	**17,820**	**5.76%**
Republic	**8,461**	**-**	**3.29%**	**0.00%**	**14,751**	**4.77%**
Springfield	**151,823**	**151,823**	**58.96%**	**62.21%**	**159,498**	**51.54%**
Strafford	**1,834**	**-**	**0.71%**	**0.00%**	**2,358**	**0.76%**
Willard	**3,179**	**-**	**1.23%**	**0.00%**	**5,288**	**1.71%**
Totals	***257,510***	***244,036***	***100.00%***	***100.00%***	**309,457**	***100.00%***

Note: STP-Urban funds distribution based on percentage of 2010 MPO Population.

STP Funding Allocation

Jurisdiction	FY 2003/2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Christian County	$348,765.17	$210,184.62	$176,680.04	$205,358.34	$219,817.75	$225,611.19
Greene County	$1,399,042.73	$843,138.29	$708,737.42	$823,778.07	$881,780.76	$905,020.70
Battlefield	$63,402.45	$38,209.72	$32,118.88	$37,332.34	$39,960.94	$41,014.13
Nixa	$315,253.93	$189,988.95	$159,703.67	$185,626.40	$198,696.47	$203,933.25
Ozark	$257,927.98	$155,441.25	$130,663.07	$151,872.00	$162,565.39	$166,849.91
Republic	$ -	$ -	$ -	$ -	$ -	$ -
Springfield	$3,925,754.34	$2,365,870.41	$1,988,737.70	$2,311,545.07	$2,474,302.31	$2,539,514.24
Strafford	$ -	$ -	$ -	$ -	$ -	$ -
Willard	$ -	$ -	$ -	$ -	$ -	$ -
Special Earmarks	$ -	$ -	$184,224.00	$ -	$ -	$ -
	$6,310,146.59	$3,802,833.24	$3,380,864.78	$3,715,512.23	$3,977,123.62	$4,081,943.43

	FY 2010	FY 2011	Projected FY 2012
Christian County	$263,786.19	$255,650.30	$227,483.50
Greene County	$1,058,156.57	$1,025,520.10	$968,223.49
Battlefield	$47,954.01	$46,474.98	$78,515.24
Nixa	$238,440.19	$231,086.04	$267,176.53
Ozark	$195,082.09	$189,065.22	$250,293.65
Republic	$ -	$127,281.36	$174,099.87
Springfield	$2,969,217.93	$2,877,639.06	$2,240,254.60
Strafford	$ -	$34,761.47	$33,119.67
Willard	$ -	$60,254.47	$74,273.45
Republic Small Urban	$ -	$33,087.65	$33,087.65
	$4,772,637.00	$4,880,820.65	$4,346,527.65

	TOTAL FY 2003-2012
Christian County	$2,133,337.12
Greene County	$8,613,398.14
Battlefield	$424,982.69
Nixa	$1,989,905.43
Ozark	$1,659,760.57
Republic	$301,381.23
Springfield	$23,692,835.66
Strafford	$67,881.13
Willard	$134,527.92
Special Earmarks	$184,224.00
Republic Small Urban	$66,175.30
TOTAL	$39,268,409.19

Note:
FY2003-FY2011 STP-Urban funds distribution based on percentage of 2000 MPO Population.
FY2012 STP-Urban funds distribution based on percentage of 2010 MPO Population.

STP Urban Running Balance

		Allocation		**STP Balance**	**Bridge Balance**	**STP Expenditures**	**Bridge Expenditures**	**TOTAL Balance**
FY 2003	STP	$3,014,341.72			$0.00			**$3,014,341.72**
FY 2004	STP	$3,295,804.87		$6,310,146.59				
	Bridge	$210,242.66			$210,242.66			**$6,520,389.25**
FY 2005	STP	$3,386,706.24		$9,696,852.83				
	Bridge	$203,613.48			$413,856.14			
						$416,127.00		
				$10,112,979.83				**$10,526,835.97**
FY 2006	STP	$3,380,864.78		$13,493,844.61				
	Bridge	$265,090.64			$678,946.78			**$14,172,791.39**
Adjustment to Balance						$0.02		**$14,172,791.41**
FY 2007	STP	$3,715,512.23		$17,209,356.86				
	Bridge	$255,748.00			$934,694.78			
						($20,056.73)		
				17,189,300.13				**$18,123,994.91**
FY 2008	STP	$3,977,123.62		$21,166,423.75				
	Bridge	$297,860.03			$1,232,554.81			**$22,398,978.56**
10/23/07	JRF/GLENSTONE		Springfield			($946,611.27)		$21,452,367.29
10/24/07	TMC STAFF		Springfield			($112,000.00)		$21,340,367.29
11/8/07	TERMINAL ACCESS ROAD		Springfield/Greene			($1,993,062.73)		$19,347,304.56
11/9/07	TERMINAL ACCESS ROAD		Springfield/Greene			($2,461,290.27)		$16,886,014.29
12/21/07	GLENSTONE/PRIMROSE		Springfield			($134,432.60)		$16,751,581.69
1/24/08	TERMINAL ACCESS ROAD		Springfield/Greene			$1,069,858.00		$17,821,439.69
2/15/08	TERMINAL ACCESS ROAD		Springfield/Greene			($508,570.80)		$17,312,868.89
2/22/08	CC		Nixa			($236,800.00)		$17,076,068.89
2/29/08	GLENSTONE/PRIMROSE		Springfield			$22,101.02		$17,098,169.91
3/7/08	CAMPBELL/WEAVER		Springfield/Greene			($124,524.56)		$16,973,645.35
4/18/08	17TH STREET/65		Ozark			($244,800.00)		$16,728,845.35
5/23/08	SCENIC SIDEWALKS		Greene			($74,642.40)		$16,654,202.95
7/1/08	ROADWAY PRIORITIZATION		Ozark			($14,681.60)		$16,639,521.35
8/7/08	MAIN STREET		Nixa			($53,822.02)		$16,585,699.33
8/7/08	GREGG/14		Nixa			($38,133.92)		$16,547,565.41
8/15/08	SCENIC SIDEWALKS		Greene			$18,089.16		$16,565,654.57
9/18/08	GLENSTONE (H)		Greene			($2,700,000.00)		$13,865,654.57
				$12,633,099.76	$1,232,554.81			**$13,865,654.57**
FY 2009	STP	$4,081,943.43		$16,715,043.19				
	Bridge	$299,406.62			$1,531,961.43			**$18,247,004.62**
11/28/2008	TMC SALARIES		Springfield			($128,800.00)		$18,118,204.62
11/28/2008	CHESTNUT AND NATIONAL		Springfield			($78,307.24)		$18,039,897.38
12/10/2008	PRIORITIZATION STUDY		Ozark			$349.91		$18,040,247.29
1/8/2009	LAKE SPRINGFIELD BRIDGE						($780,000.00)	$17,260,247.29
3/13/2009	TMC SALARIES		Springfield			($61,600.00)		$17,198,647.29
3/25/2009	KANSAS/ EVERGREEN		Springfield			($300,000.00)		$16,898,647.29
5/1/2009	KANSAS/ EVERGREEN		Springfield			$19,036.04		$16,917,683.33
6/18/2009	NATIONAL/JRF		Springfield			($1,244,617.00)		$15,673,066.33
7/9/2009	NORTHVIEW ROAD		Nixa			($17,386.10)		$15,655,680.23
7/9/2009	GLENSTONE/PRIMROSE		Springfield			($312,694.65)		$15,342,985.58
8/21/2009	13/44		Springfield			($978,000.00)		$14,364,985.58
9/17/2009	CC STUDY		Christian County			($320,000.00)		$14,044,985.58
9/3/2009	TRAFFIC ANALYSIS		Ozark			($6,821.60)		$14,038,163.98
9/5/2009	KANSAS/ EVERGREEN		Springfield			$38,753.65		$14,076,917.63
9/22/2009	MASTER TRANSPORTATION PLAN		Ozark			($7,243.20)		$14,069,674.43
				$13,317,713.00	$751,961.43			**$14,069,674.43**

STP Urban Running Balance

		Allocation	STP Balance	Bridge Balance	STP Expenditures	Bridge Expenditures	TOTAL Balance
FY 2010	STP	$4,772,637.00	$18,090,350.00				
	Bridge	$341,753.00		$1,093,714.43			**$19,184,064.43**
	65				($7,570.99)		$19,176,493.44
	65				($1,061,000.00)		$18,115,493.44
	TMC SALARIES				$659.24		$18,116,152.68
	TMC SALARIES				$859.06		$18,117,011.74
	TMC SALARIES				($228,000.00)		$17,889,011.74
	160/ WEAVER				($2,657,587.76)		$15,231,423.98
	HIGHWAY M BATTLEFIELD				($14,399.22)		$15,217,024.76
	SCENIC SIDEWALKS				($7,350.46)		$15,209,674.30
	BATTLEFIELD ELM STREET SIDEWALKS				($1,998.24)		$15,207,676.06
	CLOVERDALE LANE SIDEWALKS				($795.68)		$15,206,880.38
	HWY 14 (THIRD ST), OZARK--STREETSCAPE FOR 3RD STREET PROJECT				($56,192.80)		$15,150,687.58
	RT 160 & WEAVER RD, SPGFD-RDWY REALIGNMENT & INTERSECTION IMPROVEMENTS				$328,117.82		$15,478,805.40
	RTE FF, GREENE, PAVEMENT IMPROVEMENTS FROM S/O WEAVER TO END OF ROUTE				($70,000.00)		$15,408,805.40
	RTE 160, GREENE, IMPROVE INTERCHANGE SAFETY & CAPACITY AT JRF & RTE 160				($1,800,000.00)		$13,608,805.40
	ARRA OZARK TRANS PLAN FOR PRELIM SCOPING OF TRANS PROJECTS IN CITY LIMITS				$7,243.20		$13,616,048.60
			$12,522,334.17	$1,093,714.43			**$13,616,048.60**
FY 2011	STP	$4,847,733.00	$17,370,067.17				
	Bridge	$326,535.00		$1,420,249.43			**$18,790,316.60**
	GREENE, PEDESTRIAN ACCOMMODATIONS ON BUS 65/LOOP 44 (GLENSTONE AVE)				($106,000.00)		$18,684,316.60
	AIRPORT BLVD, SPGFD/BRANSON NAT'L AIRPORT, GREENE-CONSTRUCT RDWY				($102,473.77)		$18,581,842.83
	SPRINGFIELD/GREENE COUNTY BICYCLE DESTINATION PLAN - PHASE I				($40,033.84)		$18,541,808.99
	SPRINGFIELD, TMC SALARIES				($276,000.00)		$18,265,808.99
	OZARK-STREETSCAPE FOR 3RD ST INC. JACKSON & CHURCH STREET INTERSECTIONS				($72,962.40)		$18,192,846.59
	NIXA--STREET WIDENING, GRADING & STORM SEWER IMPRMNTS ON NORTHVIEW				($89,798.40)		$18,103,048.19
	ROUTE 14 & GREGG ROAD INTERSECTION IMPROVEMENTS, CITY OF NIXA				($54,780.00)		$18,048,268.19
	CITY OF OZARK TRAFFIC STUDY FROM JACKSON TO CHURCH ON 3RD STREET				$17.39		$18,048,285.58
	RTE FF, GREENE, PAVEMENT IMPRMNTS FROM S/O WEAVER RD TO END OF ROUTE				$35,578.89		$18,083,864.47
			$16,663,615.04	$1,420,249.43			**$18,083,864.47**
FY2012	STP	$2,156,720.00 6mos	$4,313,440.00 Projected 12 mos				
			$20,977,055.04				
	Bridge	$0.00		$1,420,249.43			**$22,397,304.47**
	RTES 60/65, INTERCHANGE IMPROVEMENTS, GREENE COUNTY				($100,000.00)		$22,297,304.47
	OZARK-STREETSCAPE FOR 3RD ST INC. JACKSON & CHURCH STREET INTERSECTIONS				($177,500.00)		$22,119,804.47
	NORTHVIEW, STREET WIDENING, GRADING & STORM SEWER IMPROVEMENTS, NIXA				$107,184.50		$22,226,988.97
	RTE 14 & GREGG ROAD, INTERSECTION IMPROVEMENTS, CITY OF NIXA				($264,802.80)		$21,962,186.17
			$20,541,936.74	$1,420,249.43			**$21,962,186.17**

TOTAL STP-U Balance is **$20,541,936.74** ($21,962,186.17-$1,420,249.43 bridge balance), using FY 2012 Projected 12 Months

Note: STP Urban Suballocations adjusted to add back in the 05 and 07 STP-Expenditures, as the projects are unknown and cannot be subtracted from a single jurisdiction.

Surface Transportation Program (STP)
Springfield Urban Area
September 30, 2011 Report

		Apportionments	Available (OL)
Balance as of September 30, 2009		$11,058,357.67	$13,317,713.00
Fiscal Year 2010 Apportionment (OL percentage = 100.83%)		$4,733,350.00	$4,772,637.00
Restoration of SAFETEA-LU Rescission		$3,517,877.42	$0.00
Fiscal Year 2010 Obligations:			
0602068	RTE 160, GREENE CO, IMPROVE INTERCHANGE SAFETY & CAPACITY AT JAMES RIVER FREEWAY & RTE 160 (CAMPBELL AVE) IN SPRINGFIELD, 0.93 MI	-$1,800,000.00	-$1,800,000.00
0652058	ROUTE 65, GREENE COUNTY, J8P0789	-$7,570.99	-$7,570.99
0652067	ROUTE 65, GREENE COUNTY, J8P0880	-$1,061,000.00	-$1,061,000.00
5905804	CITY OF SPRINGFIELD, TMC	$659.24	$659.24
5905805	CITY OF SPRINGFIELD, TMC	$859.06	$859.06
5905806	CITY OF SPRINGFIELD, TMC	-$228,000.00	-$228,000.00
5907801	RT 160 & WEAVER RD, SPRINGFIELD--RDWY REALIGNMENT & INTERSECTION IMPROVEMENTS	-$2,329,469.94	-$2,329,469.94
5916806	CITY OF BATTLEFIELD, HIGHWAY M CORRIDOR STUDY	-$14,399.22	-$14,399.22
9900824	HWY 14 (THIRD ST), OZARK--STREETSCAPE FOR 3RD STREET PROJECT INCLUDING JACKSON & CHURCH STREET INTERSECTIONS	-$56,192.80	-$56,192.80
9900846	SCENIC AVENUE SIDEWALK EXTENSION	-$7,350.46	-$7,350.46
9900866	CITY OF BATTLEFIELD, ELM STREET SIDEWALKS	-$1,998.24	-$1,998.24
9900867	CITY OF BATTLEFIELD, CLOVERDALE LANE SIDEWALKS	-$795.68	-$795.68
ES08007	ARRA CITY OF OZARK TRANS PLAN FOR PRELIM SCOPING OF TRANSPORTATION PROJECTS IN CITY LIMITS; DESCRIBED IN ATCHMT A&F OF ENG SRVC AGMT	$7,243.20	$7,243.20
S959003	RTE FF, GREENE CO, PAVEMENT IMPROVEMENTS FROM S/O WEAVER RD TO END OF ROUTE, 2.976 MI	-$70,000.00	-$70,000.00
Balance as of September 30, 2010		**$13,741,569.26**	**$12,522,334.17**
Fiscal Year 2011 Apportionment (OL percentage = 96.34%)		$5,031,901.00	$4,847,733.00
Fiscal Year 2011 Obligations:			
0652069	RTE 65, GREENE CO, PEDESTRIAN ACCOMMODATIONS ON BUS 65/LOOP 44 (GLENSTONE AVE), 1.296 MI	-$106,000.00	-$106,000.00
2661009	AIRPORT BLVD, SPGFD/BRANSON NAT'L AIRPORT, GREENE CO--CONSTRUCT RDWY CONNECT TO SERVE MIDFIELD TERM & SPGFD/BRANSON NAT'L AIRPORT	-$102,473.77	-$102,473.77
5900845	SPRINGFIELD/GREENE COUNTY BICYCLE DESTINATION PLAN - PHASE I	-$40,033.84	-$40,033.84
5938801	CITY OF SPRINGFIELD, SALARIES OF ENGINEERS THAT OPERATE AND MANAGE THE TRANPORTATION MANAGEMENT CENTER FOR CITY OF SPRINGFIELD.	-$276,000.00	-$276,000.00
9900824	HWY 14 (THIRD ST), OZARK--STREETSCAPE FOR 3RD STREET PROJECT INCLUDING JACKSON & CHURCH STREET INTERSECTIONS	-$72,962.40	-$72,962.40
9900861	CITY OF NIXA--STREET WIDENING, GRADING AND STORM SEWER IMPROVEMENTS ON NORTHVIEW ROAD.	-$89,798.40	-$89,798.40
9900869	ROUTE 14 & GREGG ROAD INTERSECTION IMPROVEMENTS, CITY OF NIXA.	-$54,780.00	-$54,780.00
ES08006	CITY OF OZARK TRAFFIC STUDY FROM JACKSON TO CHURCH ON 3RD STREET	$17.39	$17.39
S959003	RTE FF, GREENE CO, PAVEMENT IMPROVEMENTS FROM S/O WEAVER RD TO END OF ROUTE, 2.976 MI	$35,578.89	$35,578.89
Balance as of September 30, 2011		**$18,067,018.13**	**$16,663,615.04**

Surface Transportation Program (STP)
Springfield Urban Area
December 31, 2011 Report

		Apportionment	Available (OL)
Balance as of September 30, 2011		$18,067,018.13	$16,663,615.04
Fiscal Year 2012 Apportionment* (OL percentage = 92.4%, Preliminary)		$2,334,113.00	$2,156,720.00
Fiscal Year 2012 Obligations:			
0602065	RTES 60/65, INTERCHANGE IMPROVEMENTS, GREENE COUNTY	-$100,000.00	-$100,000.00
9900824	RTE 14 (THIRD STREET), STREETSCAPE FOR 3RD STREET PROJECT INCLUDING JACKSON AND CHURCH STREET INTERSECTIONS, CITY OF OZARK	-$177,500.00	-$177,500.00
9900861	NORTHVIEW ROAD, STREET WIDENING, GRADING AND STORM SEWER IMPROVEMENTS, CITY OF NIXA	$107,184.50	$107,184.50
9900869	RTE 14 & GREGG ROAD, INTERSECTION IMPROVEMENTS, CITY OF NIXA	-$264,802.80	-$264,802.80
Balance as of December 31, 2011		**$19,966,012.83**	**$18,385,216.74**

* Based on SAFETEA-LU extension thru March 31, 2012.

Highway Bridge Program (BRM)
Springfield Urban Area
September 30, 2011 Report

	Apportionments	Available (OL)
Balance as of September 30, 2009	$845,400.00	$751,961.00
Fiscal Year 2010 Apportionment (OL percentage = 100.83%)	$338,940.00	$341,753.00
Restoration of SAFETEA-LU Rescission	$0.00	$0.00
Fiscal Year 2010 Obligations:		
None	$0.00	$0.00
Balance as of September 30, 2010	**$1,184,340.00**	**$1,093,714.00**
Fiscal Year 2011 Apportionment (OL percentage = 96.34%)	$338,940.00	$326,535.00
Fiscal Year 2011 Obligations:		
None	$0.00	$0.00
Balance as of September 30, 2011	**$1,523,280.00**	**$1,420,249.00**

Highway Bridge Program (BRM)
Springfield Urban Area
December 31, 2011 Report

	Apportionment	Available (OL)
Balance as of September 30, 2011	$1,523,280.00	$1,420,249.00
Fiscal Year 2012 Apportionment* (OL percentage = 92.4%, Preliminary)	$0.00	$0.00
Fiscal Year 2012 Obligations:		
None	$0.00	$0.00
Balance as of December 30, 2011	**$1,523,280.00**	**$1,420,249.00**

* Based on SAFETEA-LU extension thru March 31, 2012.

TAB 5

TECHNICAL COMMITTEE AGENDA 3/21/12; ITEM II.F.

Administrative Modification Number Two to the FY 2012-2015 Transportation Improvement Program

Ozarks Transportation Organization
(Springfield, MO Area MPO)

AGENDA DESCRIPTION:

There is one item included as part of Administrative Modification Number Two to the FY 2012-2015 Transportation Improvement Program.

The City of Springfield will be participating in a cost share improvement project for improvements to the Route 160 Bridge over I-44. The City of Springfield will be providing $500,000 toward construction, reducing MoDOT's share by that amount. The local portion is provided by savings from the City of Springfield 1/8-cent Transportation Sales Tax. The overall project cost remains the same.

TECHNICAL PLANNING COMMITTEE ACTION REQUESTED:

No action required. Informational only.

ORIGINAL

CITY OF SPRINGFIELD			Funding	Fiscal Year 2012	2013	2014	2015	TOTALS
Project Title:	**ROUTE 160 BRIDGE OVER I-44**	ENG	FHWA (I/M)	$ -	$ -	$ -	$ 618,300	$ 618,300
			MoDOT	$ 687,000	$ -	$ -	$ (618,300)	$ 68,700
MoDOT #	**8P2231**		Local	$ -	$ -	$ -	$ -	$ -
TIP #	**SP1105**		Other	$ -	$ -	$ -	$ -	$ -
Description:	Route 160 bridge improvements over I-44.	ROW	FHWA (___)	$ -	$ -	$ -	$ -	$ -
			MoDOT	$ -	$ -	$ -	$ -	$ -
			Local	$ -	$ -	$ -	$ -	$ -
			Other	$ -	$ -	$ -	$ -	$ -
Federal Source Agency	FHWA	CON	FHWA (I/M)	$ -	$ -	$ -	$ 2,610,900	$ 2,610,900
Federal Funding Category	Interstate Maintenance		MoDOT	$ 2,901,000	$ -	$ -	$ (2,610,900)	$ 290,100
MoDOT Funding Category	Taking Care of the System		Local	$ -	$ -	$ -	$ -	$ -
Work or Fund Category	Construction		Other	$ -	$ -	$ -	$ -	$ -
Total Project Cost	$3,828,000							
Source of Local Funds: State transportation revenues. Advance construction with anticipated conversion in FY 2015. Previously programmed funds of $240,000.			**TOTAL**	**$ 3,588,000**	**$ -**	**$ -**	**$ -**	**$ 3,588,000**

PROPOSED

CITY OF SPRINGFIELD			Funding	Fiscal Year 2012	2013	2014	2015	TOTALS
Project Title:	**ROUTE 160 BRIDGE OVER I-44**	ENG	FHWA (I/M)	$ -	$ -	$ -	$ 618,300	$ 618,300
			MoDOT	$ 687,000	$ -	$ -	$ (618,300)	$ 68,700
MoDOT #	**8P2231**		Local	$ -	$ -	$ -	$ -	$ -
TIP #	**SP1105**		Other	$ -	$ -	$ -	$ -	$ -
Description:	Route 160 bridge improvements over I-44.	ROW	FHWA (___)	$ -	$ -	$ -	$ -	$ -
			MoDOT	$ -	$ -	$ -	$ -	$ -
			Local	$ -	$ -	$ -	$ -	$ -
			Other	$ -	$ -	$ -	$ -	$ -
Federal Source Agency	FHWA	CON	FHWA (I/M)	$ -	$ -	$ -	$ 2,401,000	$ 2,401,000
Federal Funding Category	Interstate Maintenance		MoDOT	$ 2,401,000	$ -	$ -	$ (2,401,000)	$ -
MoDOT Funding Category	Taking Care of the System		Local	$ 500,000	$ -	$ -	$ -	$ 500,000
Work or Fund Category	Construction		Other	$ -	$ -	$ -	$ -	$ -
Total Project Cost	$3,828,000							
Source of Local Funds: State transportation revenues and Springfield 1/8-cent Transportation Sales Tax savings. Advance construction with anticipated conversion in FY 2015. Previously programmed funds of $240,000.			**TOTAL**	**$ 3,588,000**	**$ -**	**$ -**	**$ -**	**$ 3,588,000**

FINANCIAL SUMMARY

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YEARLY SUMMARY

FY 2012

PROJECT	FHWA Federal Funding Source										MoDOT	Local	Other	TOTAL
	STP	STP-Urban	NHS	Safety	ITS	I/M	130	Bridge	BRM	BRO				
MO1007											$ 215,000			$ 215,000
MO1105											$ 284,000			$ 284,000
MO1106											$ 27,000			$ 27,000
MO1150											$ 193,000			$ 193,000
MO1203		$ 288,000									$ 680,000	$ 72,000		$ 1,040,000
MO1204											$ 42,000			$ 42,000
MO1206											$ 5,000			$ 5,000
MO1208				$ 4,500							$ 500			$ 5,000
MO1209											$ 15,000			$ 15,000
MO1210								$ 12,000				$ 3,000		$ 15,000
CC1110											$ 10,000			$ 10,000
CC1201				$ 137,700							$ 15,300			$ 153,000
CC1202				$ 9,000							$ 1,000			$ 10,000
CC1203											$ 40,000			$ 40,000
CC1204											$ 1,152,000			$ 1,152,000
CC1205											$ 41,000			$ 41,000
GR0909		$ 320,000										$ 80,000		$ 400,000
GR1010											$ 200,000			$ 200,000
GR1101											$ 1,323,000			$ 1,323,000
GR1105											$ 3,588,000			$ 3,588,000
GR1201											$ 1,615,000			$ 1,615,000
GR1202											$ 1,256,000			$ 1,256,000
GR1203											$ 214,000			$ 214,000
GR1204											$ 63,000			$ 63,000
GR1205											$ 816,000			$ 816,000
GR1206								$ 82,400			$ 20,600			$ 103,000
GR1207											$ 159,000			$ 159,000
GR1208											$ 551,000			$ 551,000
GR1209											$ 376,000			$ 376,000
GR1210											$ 290,000			$ 290,000
GR1212								$ 805,600				$ 201,400		$ 1,007,000
GR1213								$ 160,000				$ 40,000		$ 200,000
NX0601												$ 2,052,469		$ 2,052,469
NX0701		$ 296,000										$ 74,000		$ 370,000
NX0906											$ 10,000	$ 1,746,941		$ 1,756,941
NX1201												$ 24,000		$ 24,000
OK1004								$ 109,600			$ 27,400			$ 137,000
OK1006		$ 901,000									$ 943,000	$ 20,000		$ 1,864,000
OK1101								$ 191,200			$ 47,800			$ 239,000
RP1104			$ 173,050								$ 546,031	$ 221,019		$ 940,100
RP1201											$ 5,000			$ 5,000
RG0901											$ 200,000			$ 200,000
RG1201											$ 30,000			$ 30,000
SP1016		$ 1,461,000									$ 2,226,000	$ 948,000		$ 4,635,000
SP1018								$ 242,400			$ 60,600			$ 303,000
SP1021											$ 70,000			$ 70,000
SP1105											$ 3,088,000	$ 500,000		$ 3,588,000
SP1106											$ 893,000			$ 893,000
SP1107											$ 4,305,000			$ 4,305,000
SP1108											$ 1,081,000			$ 1,081,000
SP1109											$ 140,000			$ 140,000
SP1110											$ 1,571,000			$ 1,571,000

FINANCIAL SUMMARY

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YEARLY SUMMARY

2012 Continued														
SP1112											$ 212,000			$ 212,000
SP1113							$ 40,000				$ 10,000			$ 50,000
SP1120							$ 2,400				$ 600			$ 3,000
SP1202											$ 150,000			$ 150,000
SP1203											$ 113,000			$ 113,000
SP1205											$ 25,000			$ 25,000
SP1206											$ 124,000			$ 124,000
SP1207											$ 222,000			$ 222,000
SP1208		$ 500,000										$ 500,000		$ 1,000,000
SP1209	$ 499,915												$ 124,979	$ 624,894
SP1210											$ 661,000			$ 661,000
SP1211							$ 160,000				$ 40,000			$ 200,000
SP1212							$ 160,000				$ 40,000			$ 200,000
SP1213											$ 100,000			$ 100,000
ST1101											$ 14,000			$ 14,000
ST1201	$ 69,600										$ 56,400			$ 126,000
ST1202	$ 564,088	$ 63,775									$ 141,022	$ 15,944		$ 784,829
ST1203							$ 200,000				$ 50,000			$ 250,000
ST1204							$ 360,000				$ 90,000			$ 450,000
WI1201											$ 55,000			$ 55,000
TOTAL	$ 1,133,603	$ 3,829,775	$ 173,050	$ 151,200	$ -	$ -	$ 922,400	$ 1,603,200	$ -	$ -	$ 30,540,253	$ 6,498,773	$ 124,979	$ 44,977,233

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YEARLY SUMMARY

FY 2013

PROJECT	FHWA Federal Funding Source										MoDOT	Local	Other	TOTAL
	STP	STP-Urban	NHS	Safety	ITS	I/M	130	Bridge	BRM	BRO				
	FHWA Federal Funding Source													
MO1007											$ 221,000			$ 221,000
MO1105											$ 284,000			$ 284,000
MO1106											$ 7,000			$ 7,000
MO1150											$ 196,000			$ 196,000
MO1303		$ 296,800									$ 680,000	$ 74,200		$ 1,051,000
MO1204											$ 37,000			$ 37,000
MO1206											$ 1,000			$ 1,000
MO1307											$ 10,000			$ 10,000
MO1208				$ 466,900							$ 82,100			$ 549,000
MO1209											$ 1,188,000			$ 1,188,000
MO1210								$ 16,000				$ 4,000		$ 20,000
MO1306											$ 20,000			$ 20,000
CC1201				$ 294,300							$ 32,700			$ 327,000
CC1203											$ 432,000			$ 432,000
CC1205											$ 757,000			$ 757,000
CC1301											$ 2,000			$ 2,000
CC1302				$ 508,500							$ 56,500			$ 565,000
GR1104							$ 80,000				$ 20,000			$ 100,000
GR1206								$ 904,800			$ 226,200			$ 1,131,000
NX0801		$ 280,000										$ 1,370,000		$ 1,650,000
NX0803		$ 80,000									$ 1,160,765			$ 1,240,765
NX1301											$ 189,000			$ 189,000
OK1004								$ 1,572,000	$ 1,000,000		$ 643,000			$ 3,215,000
OK1101								$ 1,776,000			$ 444,000			$ 2,220,000
OK1201											$ 235,000			$ 235,000
RG1201											$ 370,000			$ 370,000
SP1018								$ 5,684,000			$ 1,421,000			$ 7,105,000
SP1021											$ 979,000			$ 979,000
SP1107											$ 830,000			$ 830,000
SP1202											$ 1,494,000			$ 1,494,000
SP1203											$ 1,788,000			$ 1,788,000
SP1204											$ 36,050			$ 36,050
SP1205											$ 599,000			$ 599,000
SP1206											$ 606,000			$ 606,000
SP1213											$ 103,000			$ 103,000
SP1301											$ 58,000			$ 58,000
ST1101											$ 1,172,000			$ 1,172,000
ST1201	$ 258,400										$ 83,600			$ 342,000
WI1201											$ 578,000			$ 578,000
WI1301											$ 60,000			$ 60,000
TOTAL	$ 258,400	$ 656,800	$ -	$ 1,269,700	$ -	$ -	$ 80,000	$ 9,952,800	$ 1,000,000	$ -	$ 17,101,915	$ 1,448,200	$ -	$ 31,767,815

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YEARLY SUMMARY

FY 2014

PROJECT	FHWA Federal Funding Source										MoDOT	Local	Other	TOTAL
	STP	STP-Urban	NHS	Safety	ITS	I/M	130	Bridge	BRM	BRO				
MO1007											$ 227,000			$ 227,000
MO1105											$ 284,000			$ 284,000
MO1150											$ 203,000			$ 203,000
MO1403		$ 305,600									$ 680,000	$ 76,400		$ 1,062,000
MO1404											$ 27,000			$ 27,000
MO1206											$ 2,259,000			$ 2,259,000
MO1307											$ 5,000			$ 5,000
MO1210								$ 8,000				$ 2,000		$ 10,000
MO1306											$ 3,398,000			$ 3,398,000
MO1400											$ 35,000			$ 35,000
CC1110		$ 2,300,000									$ 3,943,772	$ 1,657,045		$ 7,900,817
CC1201				$ 1,936,800							$ 215,200			$ 2,152,000
CC1202				$ 276,300							$ 30,700			$ 307,000
CC1203											$ 541,000			$ 541,000
CC1301											$ 175,000			$ 175,000
CC1302				$ 1,012,500							$ 109,500			$ 1,122,000
CC1401				$ 427,500							$ 47,500			$ 475,000
GR1104							$ 40,000				$ 10,000			$ 50,000
NX1402		$ 148,000									$ 37,000			$ 185,000
SP1112											$ 2,021,000			$ 2,021,000
SP1114							$ 80,000				$ 20,000			$ 100,000
SP1115							$ 80,000				$ 20,000			$ 100,000
SP1116							$ 160,000				$ 40,000			$ 200,000
SP1117							$ 160,000				$ 40,000			$ 200,000
SP1118							$ 160,000				$ 40,000			$ 200,000
SP1119							$ 160,000				$ 40,000			$ 200,000
SP1204											$ 407,386			$ 407,386
SP1213											$ 106,000			$ 106,000
SP1301											$ 1,006,000			$ 1,006,000
SP1401											$ 85,000			$ 85,000
SP1402							$ 80,000				$ 20,000			$ 100,000
WI1301											$ 823,000			$ 823,000
TOTAL	$ -	$ 2,753,600	$ -	$ 3,653,100	$ -	$ -	$ 920,000	$ 8,000	$ -	$ -	$ 16,896,058	$ 1,735,445	$ -	$ 25,966,203

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YEARLY SUMMARY

FY 2015

PROJECT	FHWA Federal Funding Source										MoDOT	Local	Other	TOTAL
	STP	STP-Urban	NHS	Safety	ITS	I/M	130	Bridge	BRM	BRO				
MO1007											$ 234,000			$ 234,000
MO1105											$ 284,000			$ 284,000
MO1150											$ 206,000			$ 206,000
MO1503		$ 314,800									$ 680,000	$ 78,700		$ 1,073,500
MO1501											$ 21,000			$ 21,000
MO1307											$ 1,742,000			$ 1,742,000
MO1210								$ 40,000			$ 10,000			$ 50,000
MO1400											$ 2,327,000			$ 2,327,000
CC1110											$ 446,872			$ 446,872
CC1204	$ 921,600										$ (921,600)			$ -
GR1101						$ 1,190,700					$ (1,190,700)			$ -
GR1104							$ 40,000				$ 10,000			$ 50,000
GR1105						$ 3,229,200					$ (3,229,200)			$ -
GR1201						$ 1,292,000					$ (1,292,000)			$ -
GR1202			$ 1,004,800								$ (1,004,800)			$ -
GR1204			$ 50,400								$ (50,400)			$ -
GR1205			$ 652,800								$ (652,800)			$ -
GR1207	$ 127,200										$ (127,200)			$ -
GR1208	$ 440,800										$ (440,800)			$ -
GR1209	$ 300,800										$ (300,800)			$ -
GR1210	$ 232,000										$ (232,000)			$ -
NX0701												$ 4,259,516		$ 4,259,516
NX0906			$ 8,000								$ (8,000)			$ -
NX1501		$ 120,000										$ 30,000		$ 150,000
NX1502		$ 120,000										$ 1,380,000		$ 1,500,000
OK1006		$ 590,200									$ (590,200)			$ -
RP1104			$ 333,545								$ (333,545)			$ -
SP1016			$ 476,000								$ (476,000)			$ -
SP1106	$ 714,400										$ (714,400)			$ -
SP1110			$ 1,256,800								$ (1,256,800)			$ -
SP1204			$ 335,200								$ (335,200)			$ -
SP1207	$ 177,600										$ (177,600)			$ -
SP1210			$ 528,800								$ (528,800)			$ -
SP1401											1,078,000.00			
TOTAL	$ 2,914,400	$ 1,145,000	$ 4,117,545	$ -	$ -	$ 5,711,900	$ 40,000	$ 40,000	$ -	$ -	$ (7,373,173)	$ 5,748,216	$ -	$ 12,343,888

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FINANCIAL CONSTRAINT

	FHWA Federal Funding Source															
	STP	STP-Urban	NHS	ITS	I/M	130	Bridge	BRM	BRO	TOTAL Federal Funds	MoDOT Programmed Funds	Operations and Maintenance	TOTAL	Local	Other	TOTAL
2012 Funds Programmed	$ 1,133,603	$ 3,829,775	$ 173,050	$ -	$ -	$ 922,400	$ 1,603,200	$ -	$ -	$ 7,662,028	$ 30,540,253	$ 6,245,959	$ 44,448,240	$ 6,498,773	$ 124,979	$ 51,071,992
2013 Funds Programmed	$ 258,400	$ 656,800	$ -	$ -	$ -	$ 80,000	$ 9,952,800	$ 1,000,000	$ -	$ 11,948,000	$ 17,101,915	$ 6,439,584	$ 35,489,499	$ 1,448,200	$ -	$ 36,937,699
2014 Funds Programmed	$ -	$ 2,753,600	$ -	$ -	$ -	$ 920,000	$ 8,000	$ -	$ -	$ 3,681,600	$ 16,896,058	$ 6,639,211	$ 27,216,869	$ 1,735,445	$ -	$ 28,952,314
2015 Funds Programmed	$ 2,914,400	$ 1,145,000	$ 4,117,545	$ -	$ 5,711,900	$ 40,000	$ 40,000	$ -	$ -	$ 13,968,845	$ (7,373,173)	$ 6,838,387	$ 13,434,059	$ 5,748,216	$ -	$ 19,182,275
Total	$ 4,306,403	$ 8,385,175	$ 4,290,595	$ -	$ 5,711,900	$ 1,962,400	$ 11,604,000	$ 1,000,000	$ -	$ 37,260,473	$ 57,165,053	$ 26,163,141	$ 120,588,667	$ 15,430,634	$ -	$ 116,962,005

	Prior Year	2012	2013	2014	2015	TOTAL
Available State and Federal Funding	($7,740,000)	$36,574,000	$22,840,000	$20,367,172	$21,930,000	$93,971,172
Available Operations and Maintenance Funding	$0	$ 6,245,959	$ 6,439,584	$ 6,639,211	$ 6,838,387	$26,163,141
Available Suballocated STP-U	$18,072,957	$4,081,943	$4,081,943	$4,081,943	$4,081,943	$34,400,731
Available Suballocated BRM	$1,523,280	$299,406.62	$299,406.62	$299,406.62	$299,406.62	$2,720,906
TOTAL AVAILABLE FUNDING	$11,856,237	$47,201,309	$33,660,934	$31,387,733	$33,149,737	$157,255,950
Programmed State and Federal Funding	$0	$ (44,448,240)	$ (35,489,499)	$ (27,216,869)	$ (13,434,059)	($120,588,667)
TOTAL REMAINING	**$11,856,237**	**$2,753,069**	**($1,828,565)**	**$4,170,864**	**$19,715,678**	**$36,667,283**

Remaining State and Federal Funding	$8,930,821
Remaining Suballocated STP-Urban	$26,015,556
Remaining Suballocated BRM	$1,720,906
TOTAL REMAINING	**$36,667,283**

TAB 6

TECHNICAL COMMITTEE AGENDA 3/21/12; ITEM II.G.

Amendment Number Three to the FY 2012-2015 Transportation Improvement Program

Ozarks Transportation Organization
(Springfield, MO Area MPO)

AGENDA DESCRIPTION:

There is one item included as part of TIP Amendment Number Three to the FY 2012-2015 Transportation Improvement Program.

The City of Springfield has applied for cost share funding to improve the interchange at Kansas Expressway and James River Freeway. Should this application be approved at the March 22, 2012 Cost Share Committee meeting, the TIP will need to be amended to reflect this available funding. The project to construct turn lanes at Kansas Expressway and James River Freeway will be broadened in scope for the interchange improvements, and an additional $4 million in funding will be added to the project, for a total project cost of $5,110,800. If this application is not approved, the TIP will not need to be amended at this time and the request will not be forwarded to the Board of Directors.

TECHNICAL PLANNING COMMITTEE ACTION REQUESTED:

To make a recommendation to the Board of Directors on approving Amendment Number Three to the FY 2012-2015 TIP, if Cost Share funding is approved. If recommended for approval, include the following: That staff prepare a press release pursuant to the MPO's public involvement process so that a 15-day public review period for the list can be conducted and comments received prior to the April 19, 2012 Board of Directors meeting.

ORIGINAL

CITY OF SPRINGFIELD			Funding	Fiscal Year 2012	2013	2014	2015	TOTALS
Project Title:	**KANSAS EXPRESSWAY TURN LANES AT JAMES RIVER FREEWAY**	ENG	FHWA (NHS)	$ -	$ -	$ -	$ -	$ -
			MoDOT	$ -	$ 58,000	$ 86,000	$ -	$ 144,000
MoDOT #	**8P2422**		Local	$ -	$ -	$ -	$ -	$ -
TIP #	**SP1301**		Other	$ -	$ -	$ -	$ -	$ -
Description:	Turn lane improvements on Kansas Expressway (Route 13) at James River Freeway interchange in Springfield.	ROW	FHWA (___)	$ -	$ -	$ -	$ -	$ -
			MoDOT	$ -	$ -	$ -	$ -	$ -
			Local	$ -	$ -	$ -	$ -	$ -
			Other	$ -	$ -	$ -	$ -	$ -
Federal Source Agency	FHWA	CON	FHWA (NHS)	$ -	$ -	$ -	$ -	$ -
Federal Funding Category	National Highway System		MoDOT	$ -	$ -	$ 920,000	$ -	$ 920,000
MoDOT Funding Category	Taking Care of the System		Local	$ -	$ -	$ -	$ -	$ -
Work or Fund Category	Construction		Other	$ -	$ -	$ -	$ -	$ -
Total Project Cost	$1,064,000							
Source of Local Funds: State transportation revenues. Advance construction with anticipated conversion in FY 2017. Total project cost is $1,064,000			**TOTAL**	**$ -**	**$ 58,000**	**$ 1,006,000**	**$ -**	**$ 1,064,000**

PROPOSED

CITY OF SPRINGFIELD			Funding	Fiscal Year 2012	2013	2014	2015	TOTALS
Project Title:	**KANSAS EXPRESSWAY AND JAMES RIVER FREEWAY INTERCHANGE**	ENG	FHWA (NHS)	$ -	$ -	$ -	$ -	$ -
			MoDOT	$ 918,800	$ -	$ -	$ -	$ 918,800
MoDOT #	**8P2422**		Local	$ -	$ -	$ -	$ -	$ -
TIP #	**SP1301**		Other	$ -	$ -	$ -	$ -	$ -
Description:	Interchange improvements at Kansas Expressway (Route 13) and James River Freeway (Route 60)	ROW	FHWA (___)	$ -	$ -	$ -	$ -	$ -
			MoDOT	$ 1,000	$ -	$ -	$ -	$ 1,000
			Local	$ 1,000	$ -	$ -	$ -	$ 1,000
			Other	$ -	$ -	$ -	$ -	$ -
Federal Source Agency	FHWA	CON	FHWA (NHS)	$ -	$ -	$ -	$ -	$ -
Federal Funding Category	National Highway System		MoDOT	$ 1,635,600	$ -	$ -	$ -	$ 1,635,600
MoDOT Funding Category	Cost Share Program		Local	$ 2,554,400	$ -	$ -	$ -	$ 2,554,400
Work or Fund Category	Construction		Other	$ -	$ -	$ -	$ -	$ -
Total Project Cost	$5,110,800							
Source of Local Funds: State transportation revenues (Cost Share Program) and Springfield 1/8-cent sales tax savings. Advance construction with anticipated conversion in FY 2017. Total project cost is $5,110,800			**TOTAL**	**$ 5,110,800**	**$ -**	**$ -**	**$ -**	**$ 5,110,800**

FINANCIAL SUMMARY

- Roadways -

YEARLY SUMMARY

FY 2012

PROJECT	FHWA Federal Funding Source										MoDOT	Local	Other	TOTAL
	STP	STP-Urban	NHS	Safety	ITS	I/M	130	Bridge	BRM	BRO				
MO1007											$ 215,000			$ 215,000
MO1105											$ 284,000			$ 284,000
MO1106											$ 27,000			$ 27,000
MO1150											$ 193,000			$ 193,000
MO1203		$ 288,000									$ 680,000	$ 72,000		$ 1,040,000
MO1204											$ 42,000			$ 42,000
MO1206											$ 5,000			$ 5,000
MO1208				$ 4,500							$ 500			$ 5,000
MO1209											$ 15,000			$ 15,000
MO1210								$ 12,000				$ 3,000		$ 15,000
CC1110											$ 10,000			$ 10,000
CC1201				$ 137,700							$ 15,300			$ 153,000
CC1202				$ 9,000							$ 1,000			$ 10,000
CC1203											$ 40,000			$ 40,000
CC1204											$ 1,152,000			$ 1,152,000
CC1205											$ 41,000			$ 41,000
GR0909		$ 320,000										$ 80,000		$ 400,000
GR1010											$ 200,000			$ 200,000
GR1101											$ 1,323,000			$ 1,323,000
GR1105											$ 3,588,000			$ 3,588,000
GR1201											$ 1,615,000			$ 1,615,000
GR1202											$ 1,256,000			$ 1,256,000
GR1203											$ 214,000			$ 214,000
GR1204											$ 63,000			$ 63,000
GR1205											$ 816,000			$ 816,000
GR1206								$ 82,400			$ 20,600			$ 103,000
GR1207											$ 159,000			$ 159,000
GR1208											$ 551,000			$ 551,000
GR1209											$ 376,000			$ 376,000
GR1210											$ 290,000			$ 290,000
GR1212								$ 805,600				$ 201,400		$ 1,007,000
GR1213								$ 160,000				$ 40,000		$ 200,000
NX0601												$ 2,052,469		$ 2,052,469
NX0701		$ 296,000										$ 74,000		$ 370,000
NX0906											$ 10,000	$ 1,746,941		$ 1,756,941
NX1201												$ 24,000		$ 24,000
OK1004								$ 109,600			$ 27,400			$ 137,000
OK1006		$ 901,000									$ 943,000	$ 20,000		$ 1,864,000
OK1101								$ 191,200			$ 47,800			$ 239,000
RP1104			$ 173,050								$ 546,031	$ 221,019		$ 940,100
RP1201											$ 5,000			$ 5,000
RG0901											$ 200,000			$ 200,000
RG1201											$ 30,000			$ 30,000
SP1016		$ 1,461,000									$ 2,226,000	$ 948,000		$ 4,635,000
SP1018								$ 242,400			$ 60,600			$ 303,000
SP1021											$ 70,000			$ 70,000
SP1105											$ 3,088,000	$ 500,000		$ 3,588,000
SP1106											$ 893,000			$ 893,000
SP1107											$ 4,305,000			$ 4,305,000
SP1108											$ 1,081,000			$ 1,081,000
SP1109											$ 140,000			$ 140,000
SP1110											$ 1,571,000			$ 1,571,000

FINANCIAL SUMMARY

- Roadways -

YEARLY SUMMARY

2012 Continued														
SP1112											$ 212,000			$ 212,000
SP1113							$ 40,000				$ 10,000			$ 50,000
SP1120							$ 2,400				$ 600			$ 3,000
SP1202											$ 150,000			$ 150,000
SP1203											$ 113,000			$ 113,000
SP1205											$ 25,000			$ 25,000
SP1206											$ 124,000			$ 124,000
SP1207											$ 222,000			$ 222,000
SP1208		$ 500,000										$ 500,000		$ 1,000,000
SP1209	$ 499,915												$ 124,979	$ 624,894
SP1210											$ 661,000			$ 661,000
SP1211							$ 160,000				$ 40,000			$ 200,000
SP1212							$ 160,000				$ 40,000			$ 200,000
SP1213											$ 100,000			$ 100,000
SP1301											$ 2,555,400	$ 2,555,400		$ 5,110,800
ST1101											$ 14,000			$ 14,000
ST1201	$ 69,600										$ 56,400			$ 126,000
ST1202	$ 564,088	$ 63,775									$ 141,022	$ 15,944		$ 784,829
ST1203							$ 200,000				$ 50,000			$ 250,000
ST1204							$ 360,000				$ 90,000			$ 450,000
WI1201											$ 55,000			$ 55,000
TOTAL	$ 1,133,603	$ 3,829,775	$ 173,050	$ 151,200	$ -	$ -	$ 922,400	$ 1,603,200	$ -	$ -	$ 33,095,653	$ 9,054,173	$ 124,979	$ 50,088,033

FINANCIAL SUMMARY

- Roadways -

YEARLY SUMMARY

FY 2013

PROJECT	FHWA Federal Funding Source										MoDOT	Local	Other	TOTAL
	STP	STP-Urban	NHS	Safety	ITS	I/M	130	Bridge	BRM	BRO				
	FHWA Federal Funding Source													
MO1007											$ 221,000			$ 221,000
MO1105											$ 284,000			$ 284,000
MO1106											$ 7,000			$ 7,000
MO1150											$ 196,000			$ 196,000
MO1303		$ 296,800									$ 680,000	$ 74,200		$ 1,051,000
MO1204											$ 37,000			$ 37,000
MO1206											$ 1,000			$ 1,000
MO1307											$ 10,000			$ 10,000
MO1208				$ 466,900							$ 82,100			$ 549,000
MO1209											$ 1,188,000			$ 1,188,000
MO1210								$ 16,000				$ 4,000		$ 20,000
MO1306											$ 20,000			$ 20,000
CC1201				$ 294,300							$ 32,700			$ 327,000
CC1203											$ 432,000			$ 432,000
CC1205											$ 757,000			$ 757,000
CC1301											$ 2,000			$ 2,000
CC1302				$ 508,500							$ 56,500			$ 565,000
GR1104							$ 80,000				$ 20,000			$ 100,000
GR1206								$ 904,800			$ 226,200			$ 1,131,000
NX0801		$ 280,000										$ 1,370,000		$ 1,650,000
NX0803		$ 80,000									$ 1,160,765			$ 1,240,765
NX1301											$ 189,000			$ 189,000
OK1004								$ 1,572,000	$ 1,000,000		$ 643,000			$ 3,215,000
OK1101								$ 1,776,000			$ 444,000			$ 2,220,000
OK1201											$ 235,000			$ 235,000
RG1201											$ 370,000			$ 370,000
SP1018								$ 5,684,000			$ 1,421,000			$ 7,105,000
SP1021											$ 979,000			$ 979,000
SP1107											$ 830,000			$ 830,000
SP1202											$ 1,494,000			$ 1,494,000
SP1203											$ 1,788,000			$ 1,788,000
SP1204											$ 36,050			$ 36,050
SP1205											$ 599,000			$ 599,000
SP1206											$ 606,000			$ 606,000
SP1213											$ 103,000			$ 103,000
ST1101											$ 1,172,000			$ 1,172,000
ST1201	$ 258,400										$ 83,600			$ 342,000
WI1201											$ 578,000			$ 578,000
WI1301											$ 60,000			$ 60,000
TOTAL	$ 258,400	$ 656,800	$ -	$ 1,269,700	$ -	$ -	$ 80,000	$ 9,952,800	$ 1,000,000	$ -	$ 17,043,915	$ 1,448,200	$ -	$ 31,709,815

FINANCIAL SUMMARY

- Roadways -

YEARLY SUMMARY

FY 2014

PROJECT	FHWA Federal Funding Source										MoDOT	Local	Other	TOTAL
	STP	STP-Urban	NHS	Safety	ITS	I/M	130	Bridge	BRM	BRO				
MO1007											$ 227,000			$ 227,000
MO1105											$ 284,000			$ 284,000
MO1150											$ 203,000			$ 203,000
MO1403		$ 305,600									$ 680,000	$ 76,400		$ 1,062,000
MO1404											$ 27,000			$ 27,000
MO1206											$ 2,259,000			$ 2,259,000
MO1307											$ 5,000			$ 5,000
MO1210								$ 8,000				$ 2,000		$ 10,000
MO1306											$ 3,398,000			$ 3,398,000
MO1400											$ 35,000			$ 35,000
CC1110		$ 2,300,000									$ 3,943,772	$ 1,657,045		$ 7,900,817
CC1201				$ 1,936,800							$ 215,200			$ 2,152,000
CC1202				$ 276,300							$ 30,700			$ 307,000
CC1203											$ 541,000			$ 541,000
CC1301											$ 175,000			$ 175,000
CC1302				$ 1,012,500							$ 109,500			$ 1,122,000
CC1401				$ 427,500							$ 47,500			$ 475,000
GR1104							$ 40,000				$ 10,000			$ 50,000
NX1402		$ 148,000									$ 37,000			$ 185,000
SP1112											$ 2,021,000			$ 2,021,000
SP1114							$ 80,000				$ 20,000			$ 100,000
SP1115							$ 80,000				$ 20,000			$ 100,000
SP1116							$ 160,000				$ 40,000			$ 200,000
SP1117							$ 160,000				$ 40,000			$ 200,000
SP1118							$ 160,000				$ 40,000			$ 200,000
SP1119							$ 160,000				$ 40,000			$ 200,000
SP1204											$ 407,386			$ 407,386
SP1213											$ 106,000			$ 106,000
SP1401											$ 85,000			$ 85,000
SP1402							$ 80,000				$ 20,000			$ 100,000
WI1301											$ 823,000			$ 823,000
TOTAL	$ -	$ 2,753,600	$ -	$ 3,653,100	$ -	$ -	$ 920,000	$ 8,000	$ -	$ -	$ 15,890,058	$ 1,735,445	$ -	$ 24,960,203

FINANCIAL SUMMARY

- Roadways -

YEARLY SUMMARY

FY 2015

PROJECT	FHWA Federal Funding Source										MoDOT	Local	Other	TOTAL
	STP	STP-Urban	NHS	Safety	ITS	I/M	130	Bridge	BRM	BRO				
MO1007											$ 234,000			$ 234,000
MO1105											$ 284,000			$ 284,000
MO1150											$ 206,000			$ 206,000
MO1503		$ 314,800									$ 680,000	$ 78,700		$ 1,073,500
MO1501											$ 21,000			$ 21,000
MO1307											$ 1,742,000			$ 1,742,000
MO1210								$ 40,000			$ 10,000			$ 50,000
MO1400											$ 2,327,000			$ 2,327,000
CC1110											$ 446,872			$ 446,872
CC1204	$ 921,600										$ (921,600)			$ -
GR1101						$ 1,190,700					$ (1,190,700)			$ -
GR1104							$ 40,000				$ 10,000			$ 50,000
GR1105						$ 3,229,200					$ (3,229,200)			$ -
GR1201						$ 1,292,000					$ (1,292,000)			$ -
GR1202			$ 1,004,800								$ (1,004,800)			$ -
GR1204			$ 50,400								$ (50,400)			$ -
GR1205			$ 652,800								$ (652,800)			$ -
GR1207	$ 127,200										$ (127,200)			$ -
GR1208	$ 440,800										$ (440,800)			$ -
GR1209	$ 300,800										$ (300,800)			$ -
GR1210	$ 232,000										$ (232,000)			$ -
NX0701												$ 4,259,516		$ 4,259,516
NX0906			$ 8,000								$ (8,000)			$ -
NX1501		$ 120,000										$ 30,000		$ 150,000
NX1502		$ 120,000										$ 1,380,000		$ 1,500,000
OK1006		$ 590,200									$ (590,200)			$ -
RP1104			$ 333,545								$ (333,545)			$ -
SP1016			$ 476,000								$ (476,000)			$ -
SP1106	$ 714,400										$ (714,400)			$ -
SP1110			$ 1,256,800								$ (1,256,800)			$ -
SP1204			$ 335,200								$ (335,200)			$ -
SP1207	$ 177,600										$ (177,600)			$ -
SP1210			$ 528,800								$ (528,800)			$ -
SP1401											1,078,000.00			
TOTAL	$ 2,914,400	$ 1,145,000	$ 4,117,545	$ -	$ -	$ 5,711,900	$ 40,000	$ 40,000	$ -	$ -	$ (7,373,173)	$ 5,748,216	$ -	$ 12,343,888

FINANCIAL SUMMARY

- Roadways -

FINANCIAL CONSTRAINT

	FHWA Federal Funding Source															
	STP	STP-Urban	NHS	ITS	I/M	130	Bridge	BRM	BRO	TOTAL Federal Funds	MoDOT Programmed Funds	Operations and Maintenance	TOTAL	Local	Other	TOTAL
2012 Funds Programmed	$ 1,133,603	$ 3,829,775	$ 173,050	$ -	$ -	$ 922,400	$ 1,603,200	$ -	$ -	$ 7,662,028	$ 33,095,653	$ 6,245,959	$ 47,003,640	$ 9,054,173	$ 124,979	$ 56,182,792
2013 Funds Programmed	$ 258,400	$ 656,800	$ -	$ -	$ -	$ 80,000	$ 9,952,800	$ 1,000,000	$ -	$ 11,948,000	$ 17,043,915	$ 6,439,584	$ 35,431,499	$ 1,448,200	$ -	$ 36,879,699
2014 Funds Programmed	$ -	$ 2,753,600	$ -	$ -	$ -	$ 920,000	$ 8,000	$ -	$ -	$ 3,681,600	$ 15,890,058	$ 6,639,211	$ 26,210,869	$ 1,735,445	$ -	$ 27,946,314
2015 Funds Programmed	$ 2,914,400	$ 1,145,000	$ 4,117,545	$ -	$ 5,711,900	$ 40,000	$ 40,000	$ -	$ -	$ 13,968,845	$ (7,373,173)	$ 6,838,387	$ 13,434,059	$ 5,748,216	$ -	$ 19,182,275
Total	$ 4,306,403	$ 8,385,175	$ 4,290,595	$ -	$ 5,711,900	$ 1,962,400	$ 11,604,000	$ 1,000,000	$ -	$ 37,260,473	$ 58,656,453	$ 26,163,141	$ 122,080,067	$ 17,986,034	$ -	$ 121,008,805

	Prior Year	2012	2013	2014	2015	TOTAL
Available State and Federal Funding	($7,740,000)	$36,574,000	$22,840,000	$20,367,172	$21,930,000	$93,971,172
Available Operations and Maintenance Funding	$0	$ 6,245,959	$ 6,439,584	$ 6,639,211	$ 6,838,387	$26,163,141
Available Suballocated STP-U	$18,072,957	$4,081,943	$4,081,943	$4,081,943	$4,081,943	$34,400,731
Available Suballocated BRM	$1,523,280	$299,406.62	$299,406.62	$299,406.62	$299,406.62	$2,720,906
TOTAL AVAILABLE FUNDING	$11,856,237	$47,201,309	$33,660,934	$31,387,733	$33,149,737	$157,255,950
Programmed State and Federal Funding	$0	$ (47,003,640)	$ (35,431,499)	$ (26,210,869)	$ (13,434,059)	($122,080,067)
TOTAL REMAINING	**$11,856,237**	**$197,669**	**($1,770,565)**	**$5,176,864**	**$19,715,678**	**$35,175,883**

Remaining State and Federal Funding	$7,439,421
Remaining Suballocated STP-Urban	$26,015,556
Remaining Suballocated BRM	$1,720,906
TOTAL REMAINING	**$35,175,883**

TAB 7

« Is it time to bring back the Karmann-Ghia?

Giant rock borne on 176-wheel carrier to L.A. museum »

Mar 08, 2012

As gas prices soar, new cars get record gas mileage

By Fred Meier, USA TODAY

Updated 8h 19m ago

CAPTION By Phelan M. Ebenhack, AP

Gas prices may be heading to a record high, but so is the average gas mileage of new vehicles bought in the U.S.

The average mpg for all new vehicles bought by Americans in February was a record 23.7, according to researchers at the University of Michigan Transportation Research Institute.

And that average is based on the more real-world EPA "combined" ratings for mixed city and highway driving -- not

About Chris

Chris Woodyard is a
for USA TODAY wh
aspects of motoring.
the exhaust note of a
the sharp creases o
CTS. Chris strives t
life on a Scion budge
Chris

the much-advertised and often much higher rating for highway-only driving.

It was a second consecutive record mpg month: The revised average for all cars, light trucks, minivans and SUVs bought in January was a then-record 23.5.

Prof. Michael Sivak, head of the Institutes Human Factors Group, reports February average fuel economy was up 5% (1.1 mpg) from two months ago and is 16% higher (3.3 mpg) than in February 2008.

You can go to the Institute's site here for more detail on how they do the calculations and to see the monthly averages going back to 2007.

See photos of: University of Michigan

TAGS: [redacted]

PREVIOUS
« Is it time to bring back the Karmann-Ghia?

NEXT
Giant rock borne on 176-wheel carrier to L.A. museum »

To report corrections and clarifications, contact Standards Editor **Brent Jones**. *For publication consideration in the newspaper, send comments to letters@usatoday.com. Include name, phone number, city and state for verification. To view our corrections, go to corrections.usatoday.com.*

Welcome to the FastLane: The Official Blog of the U.S. Secretary of Transportation

The Official Blog of Ray LaHood, the U.S. Secretary of Transportation

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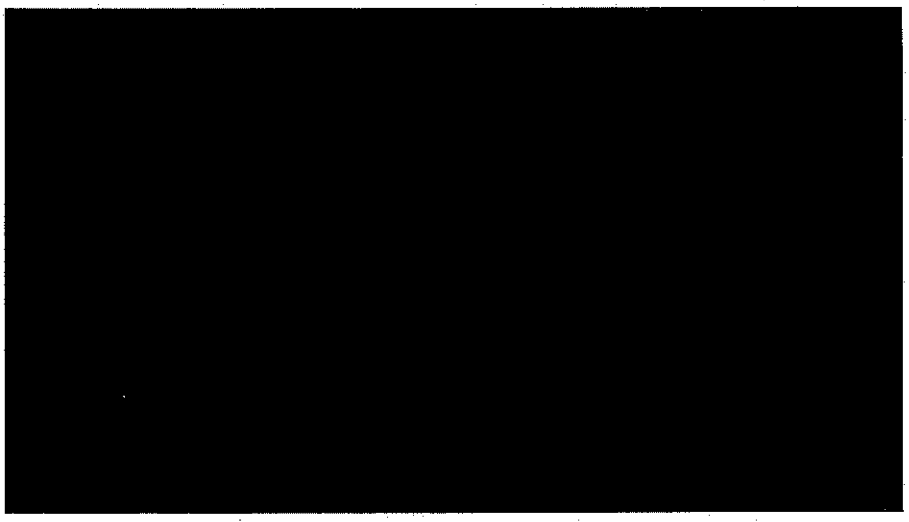
March 07, 2012

TIGER transforming Kansas City's Green Impact Zone

The first three rounds of DOT's TIGER grants have funded high-impact transportation projects in all 50 states, in Puerto Rico, and right here in Washington, DC. Across the country, this competitive program is fostering beneficial and innovative solutions that:

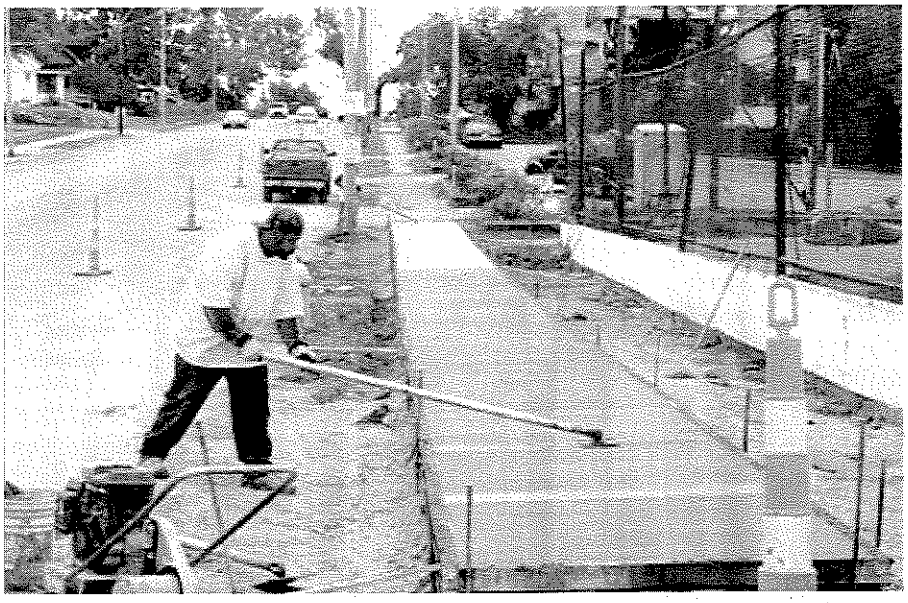
- Contribute to long-term economic competitiveness,
- Upgrade the safety and quality of existing transportation infrastructure and facilities,
- Increase energy efficiency and reduce greenhouse gas emissions, and
- Improve the quality of life in communities through better transportation choices and connections.

And one project that demonstrates all four of these key elements is the Kansas City, Missouri, Green Impact Zone awarded $50 million in 2010 from our initial TIGER grants.



The Green Impact Zone is a 150-block area in urban core of Kansas City that has been devastated over the years by high rates of poverty, unemployment, crime, and high concentrations of vacant and abandoned properties. Local and regional leaders have come together to jump-start the zone's economic recovery by upgrading its infrastructure.

Crews are fixing broken sidewalks, repaving roads, and coordinating traffic signals. In addition, the Green Impact Zone project will provide better access to regional opportunities through expanded transit facilities. Describing the Troost Avenue improvements, which include a new pedestrian bridge separated from vehicle traffic, the Kansas City Star editorial board wrote, "This is a tremendous investment to support redevelopment in Kansas City's urban core."
And we know that redevelopment leads to economic ripples and jobs.



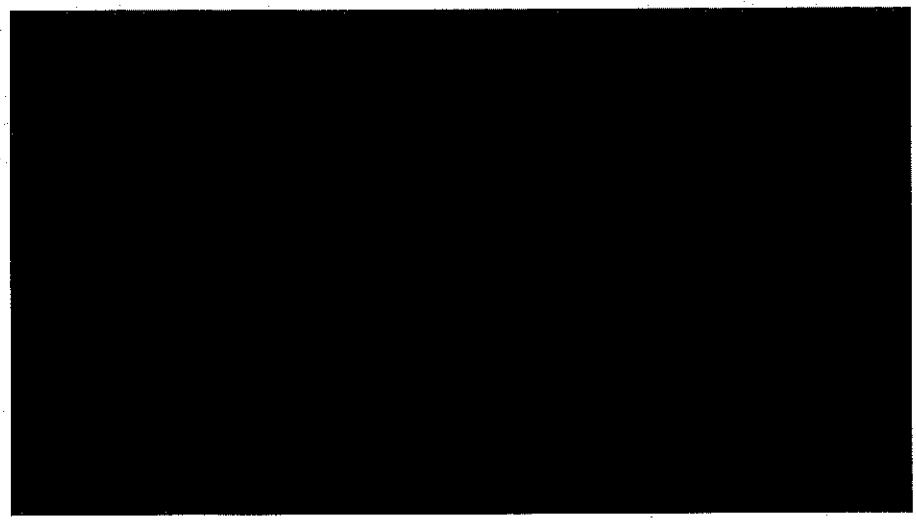
When I first blogged about TIGER, I said that we were committed to tracking the performance of these projects. The Mid-America Regional Council (MARC), a metropolitan planning organization for the bistate Kansas City region, has taken that commitment to heart with its TIGER website. On this terrific site, you can track how and when TIGER funds have been spent, and you can also follow the progress of indivudal sub-projects--right down to whether the sidewalk in a specific block has been repaired or when its repair is scheduled.

TIGER is a wildly popular program that really benefits America's communities, and the MARC team has done a great job of building its website to serve the Kansas City area communities where TIGER projects are planned, underway, or complete. Users of the site can:

- Learn about the TIGER grant
- Track the progress of projects and spending
- View before and after photos
- Learn about events
- Keep updated on bids and proposals

Plus, the MARC TIGER site features a host of good videos that keep people involved in MARC's TIGER work.

Watching the progress of Green Impact Zone solutions unfold in Kansas City demonstrates how profoundly these projects can transform a community, and I think area residents, transportation fans, and livable community advocates will enjoy keeping their eye on the TIGER.

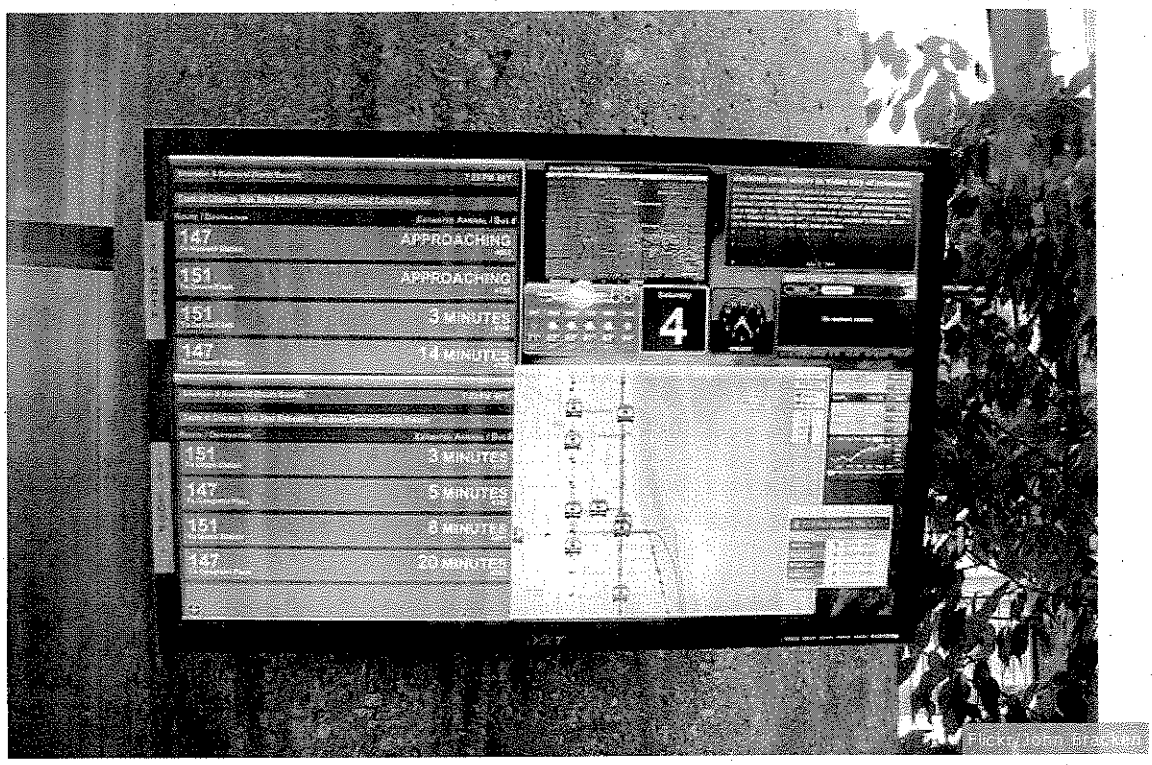


Posted at 04:43 PM | Permalink

the Atlantic CITIES
PLACE MATTERS

Do Real-Time Updates Increase Transit Ridership?

ERIC JAFFE MAR 06, 2012 8 COMMENTS



Late last month Wade Roush of *Xconomy* took a long look at how Google is changing the way people interact with their public transportation systems. The search engine empire now publishes the operating schedules of more than 475 transit agencies around the world through its Google Maps and Google Transit platforms. And though it only displays live updates for four U.S. cities (plus two more in Europe), Google is pushing for more real-time status updates, Roush reports:

> Google's activism in public transit is having widespread ripple effects. Most importantly, the company's services are making it easier for public-transit users to plan their bus or train trips to minimize waits and missed connections. In theory, better experiences for riders translate into higher ridership, greater revenues for transit agencies, and less congestion on streets and highways.

Roush is right to use the word "theory" here. The current research literature doesn't address the question of whether real-time data increases ridership in any definitive way. Some recent studies do suggest that ridership has increased on routes with live status updates, but that work has failed to account for other factors that influence ridership, from gas prices to employment levels. A 2003

survey of systems with real-time information, conducted by the Transportation Research Board [PDF], concluded as much:

> Most agencies reported that there may have been an increase in ridership, but that they were not certain that it was a direct result of the system. At a minimum, real-time bus arrival information systems assist in the maintenance of ridership.

Regular riders of public transportation certainly love real-time updates — wondering when the next bus or train will actually arrive is, after all, the biggest headache of traveling by transit — but it's easy to think of them as a pleasant tool for existing users, as TRB suggests. Something that keeps riders riding, in other words. If the updates turned out to be effective points of attraction to *new* riders, that seems just like icing on the cake.

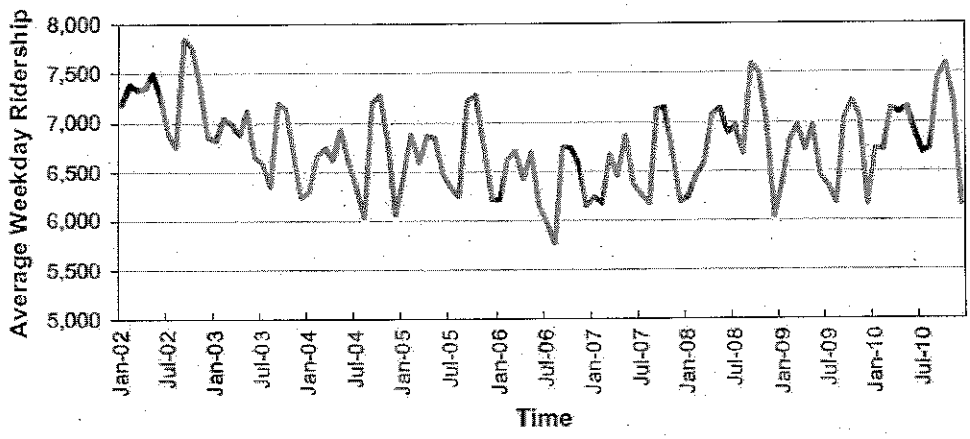
Well you can break out the Betty Crocker, at least in Chicago. New research set for publication in the June issue of *Transportation Research Part C* concludes that the Chicago Transit Authority's Bus Tracker has attracted a significant (if modest) amount of new riders to the city's bus system. The results suggest that real-time transit tools might serve not only to satisfy existing transit riders but also to entice new ones:

> This finding suggests that marketing strategies for real-time information should be targeted not only to transit users but also to transit non-users in order to bring about larger increase in transit ridership. Furthermore, since one major purpose of providing real-time transit information is to increase transit mode share and attract transit non-users, greater effort is needed to promote this system among those transit non-users.

The CTA, which governs transit in Chicago and 40 surrounding suburbs, introduced its Bus Tracker system in August 2006 then rolled it out on certain routes between April 2008 and May 2009. The Bus Tracker uses GPS to locate city buses and present their current location and expected arrival time on various platforms. At first it was accessible only through its website, but over time riders gained the ability to subscribe to email or text message updates for preferred bus stops, and now third-party vendors have created a variety of Bus Tracker apps for smartphones and other mobile devices.

The authors of the new study compared changes in ridership on a particular CTA bus route before and after Bus Tracker was implemented, and also compared ridership levels to other routes in the CTA system that had yet to receive the technology. More importantly, they controlled for other influential ridership factors like unemployment levels, gas prices, weather, transit service attributes, socioeconomic characteristics, and typical monthly fluctuations.

All other factors considered, the Bus Tracker still increased bus ridership significantly, the researchers concluded. Chicago bus routes available through the CTA Bus Tracker had an average of 126 more weekday riders a month than those without the information. Since average weekday ridership before the service ranged from 5,761 to 6,876, Bus Tracker was responsible for an increase of 1.8 to 2.2 percent, depending on the particular route, the researchers report:



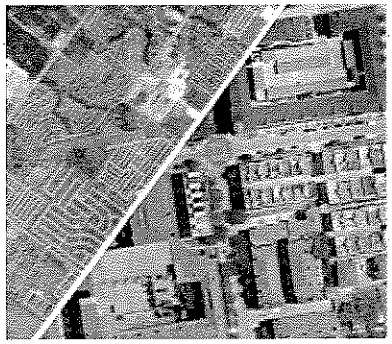
That's certainly a "modest" increase, as the researchers call it, but they also noticed a trend that suggests this attraction rate will rise with time. While they failed to find any obvious connections between the success of Bus Tracker and the geographical location of bus routes throughout the city, they did notice a clear link with the date of implementation. The routes with greater percentage gains in ridership received Bus Tracker technology more recently than those included in early phases of the roll-out program.

What this suggests is that the reach of Bus Tracker grew as the tool gained attention through news, blogs, and social media in the early phases of the roll-out. It's also likely that its success rose as the technology became accessible to a wider range of people through additional platforms like text message and smartphone apps. If that's the case, one can expect the impact of real-time transit updates to increase as both familiarity with the program and mobile technology itself becomes more pervasive. Either way, Google's on it.

Top image by Flickr user John Bracken, via Creative Commons.

Keywords: Chicago, Google Maps, Bus Tracker, Google Transit, Chicago Transit Authority, C.T.A.

Eric Jaffe is a contributing writer to The Atlantic Cities and the author of *The King's Best Highway: The Lost History of the Boston Post Road, the Route That Made America*. He lives in New York. All posts »



URBAN WONK
Why Planners Need to Take Agenda 21 Criticism More Seriously

MoDOT News Release

For more information, contact Cheryl Ball, Administrator of Freight Development, (573) 380-4900 or Sherrie Turley, Waterways Program Manager, (888) 667-6787.

March 05, 2012

Shipping on Missouri River Starts Early This Year

JEFFERSON CITY - When the long haul boat the M/V Mary Lynn headed out from St. Louis recently, she was a full month ahead of schedule pushing cargo barges along the Missouri River.

The shipping season on the Missouri River usually starts in April, but a mild winter and good river conditions allowed the crew to get an early start.

Feb. 28 marked the first day of the 2012 shipping season for the Mary Lynn, which made its way to Hermann and Brunswick, Mo. with shipments of fertilizer and clay. The barges were then filled with Missouri soybeans at Brunswick and sent on to national and international markets.

The Missouri Department of Transportation supports all waterway shipping efforts along the Missouri River. An increase in freight moved on the Missouri River means increased connections to other transportation modes and more economic development opportunities along the river corridor.

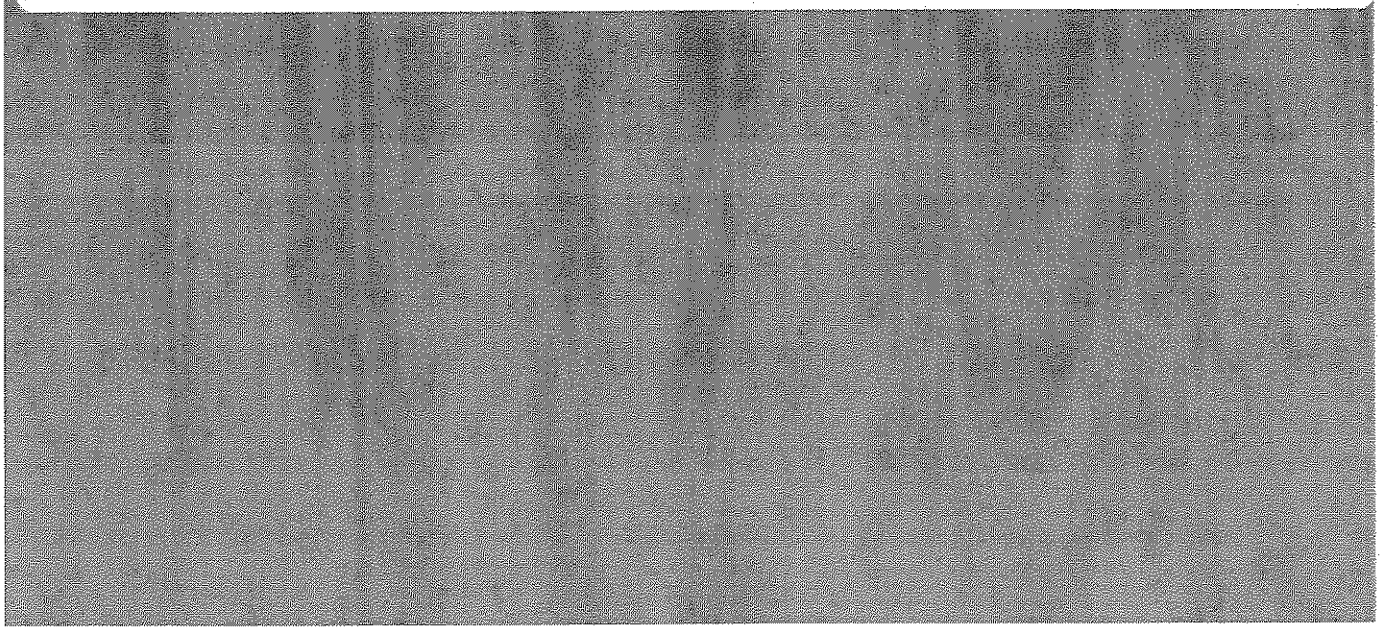
"One barge of freight is comparable to almost 60 tractor trailers," said Cheryl Ball, MoDOT Administrator of Freight Development. "If a company can transport by barge on the river, it can save money, reduce carbon dioxide emissions and relieve traffic congestion on our crowded highways."

AGRIServices, Inc. of Brunswick is the company receiving the fertilizer delivered by the Mary Lynn. One of AGRIServices' distribution managers, Kevin Holcer, says the company uses the Missouri River frequently to transport goods.

"We are excited to see the barge traffic starting early on the Missouri River so we can recharge our warehouse," said Holcer. "The more barges we can bring up the Missouri loaded with fertilizer, the better prepared we are for our customers' needs."

Last year, just over four million tons of goods - the equivalent of about 156,000 truck loads - were shipped on the Missouri River. A recent analysis of the public ports at St. Joseph, Kansas City, and Howard/Cooper County and the private ports at Hermann and Brunswick concluded that over 1.3 million tons of additional cargo could be moved off the interstate highway system with minimal investment at these locations.

"Missouri River navigators, such as those operating the Mary Lynn, can deliver products reliably to their customers and they are becoming an increasingly important component of the transportation system," said Ball. "With the cooperative efforts of the Corps of Engineers, the Coast Guard, river boat navigators and port authorities, MoDOT hopes this avenue for freight transport continues to grow."



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Construction buffs, bridge lovers lining up to tour new span over the Mississippi

BY SUSAN WEICH • sweich@post-dispatch.com > 636-255-7207 | Posted: Saturday, March 3, 2012 12:00 pm

ST. LOUIS • Construction buffs, bridge lovers and the simply curious gathered along the riverbank.

Buffeted by 35 mph gusts of wind, they held onto their borrowed hard hats as they gazed upward at the rising towers of steel and concrete.

Some pulled in close to hear project manager Greg Horn. Others stepped back to snap photographs or to examine a 6-foot tall cylinder of rock pulled from the riverbed.

They had come for a chance to tour the construction site for the new span across the Mississippi River and to see a piece of St. Louis history in the making.

Lloyd Brown, 49, who owns a heating and air-conditioning business in O'Fallon, Mo., was there with his 13-year-old son, Joey Harmann, who hopes to become an architect.

"When my son drives over this bridge 40 years from now, he will always think of us touring the bridge together," he said.

Tours are conducted on the last Friday of the month from February through October and have proven so popular that they are booked through the end of the year with a waiting list. The 90-minute presentations can accommodate up to 25 people. To get on the wait list, call 314-453-1808 or email info@newriverbridge.org. (Virtual tours conducted by the Missouri Department of Transportation are also available.

"It is extremely rare for the downtown area to get a major bridge like this," said MoDOT spokesman Andrew Gates. "The Poplar Street Bridge was the last one and that was back in the '60s."

During a 20-minute slide show at the start of the tour, Horn explained that the bridge is being constructed to move Interstate 70 off the Poplar Street Bridge, one of only two spans in the United States that carries three interstates. (The other is north of Madison, Wis.)

Construction on the new bridge began in 2010, but the towers that will support it have only become visible since late last year from Interstate 70, Horn said. When they are completed in late spring, they will be 400 feet tall, roughly two-thirds the height of the Gateway Arch.

The bridge is scheduled to open in early 2014 and is one of 35 construction projects in the corridor that will fit together like a jigsaw puzzle, Horn said. The main span represents $240 million of the $700 million project, which is being paid for with a combination of state and federal funds.

As Horn spoke, tour-goer Earl Finger jotted down notes and referred to an album filled with photos taken earlier in the project. This was Finger's fourth tour of the bridge.

"Construction is kind of a hobby of mine because I like to know how things are put together and how they work," said Finger, 81, of Brentwood, a retired computer programmer. "This bridge is a completely different type of construction than anything I've seen before."

The bridge will use cables attached to two towers to support the driving surface. A shorter version of this type of span is the Clark Bridge, which crosses the Mississippi at Alton.

Planners included lighting into the design because they anticipate that the bridge will be one of the most photographed structures in the area. Right now the Arch and the Clark Bridge are the most photographed.

Margaret Meyer, 67, of Belleville, attended the tour with 10 members of her walking group. They were taking MetroLink across the Eads Bridge late last year when someone commented on the bridge progress and wondered about a tour.

"It was cold wind walking up here — it was in our faces — but nobody grumbled because everybody was very anxious to see this and everybody learned some very interesting facts and figures," she said.

On the day of the February tour, no workers were on site because of high wind. Horn said high water had caused more than two months of delays in construction, but the project was back on track. Only one minor injury has been reported, he said.

Tour-goers met at a trailer for Massman-Traylor-Alberici, the joint contractors for the project. After Horn's talk, they lined up for hard hats and started on foot down a gravel and dirt path toward an opening in the flood wall. They passed refinery silos emitting a tarry smell and went by a hodgepodge of blue tarp and plywood homes at Hopeville, an encampment for the homeless.

At the levee, they headed back north along the Great Rivers Greenway bike trail past a reconstructed brick pump house that provides a viewing platform for the bridge.

Some stopped to look inside and others headed toward a stack of metal boxes with holes to thread the cables through. They'll be part of the towers.

Bringing up the tail end of the group was Jim Shields, 78, of Des Peres, who was using a walker. Gates stayed with him to make sure he didn't miss out on anything.

"You talk about luck, I had a personal tour," said Shields, a retired dentist.

Shields said his father and grandfather worked for the Katy Railroad, which was right along the river, so he has a great affinity for the Mississippi and the bridges that cross it.

He said several books document the building of the nearby Eads Bridge, but he preferred to see history in action.

"Why would I get a book when MoDOT is out here telling us about how they're doing it now?" he said.

BRIDGE CONSTRUCTION BY THE NUMBERS

- The new Mississippi River bridge will require 132 miles of cable, enough to reach from St. Louis to Columbia, Mo.
- The main span of the bridge will use more than 50,000 cubic yards of concrete, enough to construct 200 miles of sidewalk — from St. Louis to Springfield, Ill., and back. It'll take 6,250 truck loads to haul it all.
- Each foundation contains enough concrete for a 24-mile-long sidewalk and the amount of reinforcing steel used in 645 cars.
- The main span will require more than 8 million pounds of reinforcing steel, equivalent to the weight of 2,716 cars.
- The total weight of the main span is 31 million pounds, about the same as 3,370 elephants.

Source: Missouri Department of Transportation

Welcome to the FastLane: The Official Blog of the U.S. Secretary of Transportation

The Official Blog of Ray LaHood, the U.S. Secretary of Transportation

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March 06, 2012

America's counties do the heavy lifting

In January, President Obama urged us to forge an America built to last. A surprising amount of the heavy lifting we need to make that happen takes place at the county level.

In 49 of our nation's 50 states, counties maintain the roads and bridges that connect us to each other, to our jobs and schools, and to the businesses and services we use each day. Many U.S. counties operate public transit systems. And when Americans need better transportation services—whether that involves roads that are safe and smooth or improved bus frequency—the counties hear about it first.

So, when I met this morning with the legislative conference of the National Association of Counties, we had a lot to talk about.

Americans count on their county governments to build and maintain the arteries that keep people and goods moving safely and effectively. And county governments look to state and federal support to help them do that important job. But, when the nation lacks a long-term transportation plan, our counties can't rely on that support. In fact, with our eighth extension of the Highway Trust Fund set to expire at the end of the month, America's counties are struggling to plan effectively beyond March 31.

That's why the folks I spoke with this morning agree with me--and with President Obama--that we need Congress to pass a good, long-term transportation bill that puts people back to work rebuilding our roadways, railways, runways, and transit systems.

Lassen County, in northern California, provides critical bus service for residents.

In the budget he proposed last month, the President laid out the features a good transportation program needs:

- Fund road and bridge improvements: The President proposed $305 billion to do just that – a 34 percent increase over the previous authorization.
- Simplify the approach to project construction: The President would consolidate 55 highway programs into just five, and five

transit programs into just two. He would also create a rapid response team to help fast-track key projects through the contracting and permitting processes so citizens can see the benefits of the projects they're funding sooner.

- Reward companies that keep jobs right here in America: The President's budget maintains a strong "Buy America" commitment. He also called on us to train a world-class American workforce that's ready and able to perform the tens of thousands of transportation jobs that will be available in the coming years.

These core elements make good sense. And judging from the conversation I had this morning, they are exactly what our nation's counties need: get our roadways into a state of good repair; start projects more quickly; and make sure the jobs these projects create--from manufacturing to construction to operation--go to the men and women looking for work right here at home.

That's the challenge before us, and it's a big one. But our parents and grandparents were up to it, and they passed along to us an infrastructure that gave us access to tremendous opportunities. Now, we have the chance to do the same for future generations of Americans.

And I know we're up to it. Working together, we can put people back to work making a transportation system that's the envy of the world – and an America that's built to last.

Posted at 11:10 AM | Permalink

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Welcome to the Fast Lane: The Official Blog of the U.S. Secretary of Transportation
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MoDOT speeds up response to potholes

BY KEN LEISER • kleiser@post-dispatch.com > 314-340-8215 | Posted: Friday, March 2, 2012 4:30 pm

***Updated** at 4:30 p.m. with more details.*

Missouri transportation officials are saddling up a citizen posse in search of crumbling pavement and potholes.

"Since it's March, it's pothole season," said Ed Hassinger, St. Louis district engineer for the Missouri Department of Transportation.

MoDOT has pledged to boost response times to within 24 hours of a motorist reporting a pothole on weekdays. Repair crews will put down a temporary patch, which must suffice until a permanent fix is made in late spring or summer.

While the mild winter has not left too many potholes in its wake so far, Hassinger said that can change rapidly depending on the weather. Potholes form when water seeps into cracks in the pavement, freezes and then expands when temperatures drop.

The freezing water causes pavement to bulge and crack, MoDOT officials said Friday. When cars hit that pavement, it can cause chunks of the pavement to loosen and pop out.

The state hopes to patch the pothole before it grows into a bigger problem. Before the enhanced patrols, MoDOT sought to prioritize pothole repairs depending on where the pothole was located. MoDOT will now divert more maintenance crews to pothole repairs.

Tire shop owners agree that it is probably a bit too early to write the problem off this year.

"There's no doubt that there's a correlation between a pothole and costing money out of a motorist's pocket," said Aaron Telle, owner of Telle Tire & Auto Service in Richmond Heights and Sunset Hills.

Driving over a pothole can cause wheel damage, knock a car out of alignment and — in the worst cases — damage a car's suspension, Telle said.

Hassinger figures MoDOT spent about $2 million last year in the St. Louis region to patch potholes.

Hassinger is enlisting the public's help in reporting potholes on highways and MoDOT-maintained streets. Motorists can report potholes by calling 1-888 ASK MoDOT (275-6636) or going to www.modot.org/stlouis.

MoDOT officials say the aim of the stepped up repairs is to keep highways smooth and safe.

St. Louis Streets Director Todd Waelterman said pothole reports have picked up over the past week to 10 days.

Motorists who spot a pothole on one of the city's arterial streets have been able to call the city and expect a repair within 48 hours, Waelterman said. In St. Louis, drivers can call the Citizens' Service Bureau at (314) 622-4800 or visit www.stlouis-mo.gov.

Typically, the crews will throw down a temporary patch that would last for a few days. But with the recent warm weather, the city has been able to make longer-lasting repairs, he said.

The Illinois Department of Transportation tries to get to reported potholes within 24 to 48 hours, said District 8 Operations Engineer Joseph Monroe. The response time can be driven by the location and severity of the pothole.

"If it is a high-traffic area and we deem it a hazard, we may respond during off hours," he said. "If it is a run-of-the-mill pothole in a low-speed area, it may be the next day."

Monroe said potholes can occur throughout the year but are most prevalent in late March or early April. Motorists in the Southern Illinois district can report potholes at (618) 346-3100.

NEWS

AASHTO

THE VOICE OF TRANSPORTATION

For Immediate Release
February 22, 2012

Contact: Tony Dorsey, AASHTO
tdorsey@aashto.org (cell) 202-492-2391

Study Finds Older Drivers at 'Greatest Risk'; Funding Needed For Safety Enhancements

WASHINGTON–A report "Keeping Baby Boomers Mobile: Preserving Mobility and Safety for Older Americans" – released today by TRIP, a national non-profit transportation research group based in Washington – highlights the many ways state departments of transportation are actively addressing the needs of older drivers. The report also makes the case for increased funding, research, planning, and implementation of innovative solutions to support older drivers now and into the future.

The number of older Americans and their share of the overall population surged in 2011, as the first of the Baby Boom generation began turning 65. This dramatic growth will continue throughout the decade, with projections indicating that one in every five drivers in America will be age 65 or older by 2025.

"State transportation departments are doing what they can with limited resources," said AASHTO Executive Director John Horsley. "A long-term federal surface transportation reauthorization will give state DOTs the ability to invest in infrastructure projects to enhance safety, decrease traffic congestion, and improve the security and mobility of older Americans – who the study finds make 90% of their trips by private vehicle."

Total traffic fatalities have declined in recent years; however, the study calls attention to the fact that older motorists are involved in a disproportionately high share of deadly crashes. In 2010, there were 5,750 fatalities in crashes involving at least one driver 65 or older. Although drivers 65 and older account for 8% of all miles driven, they comprise 17% of all traffic fatalities.

"The growing ranks of older Americans will far outpace previous generations with their level of ability and activity. Serving their needs will require a transportation system that includes safer roads, safer vehicles, safer drivers, and improved choices," said TRIP Executive Director Will Wilkins. "Congress can help not only older drivers, but all drivers by passing long-term federal surface transportation legislation now."

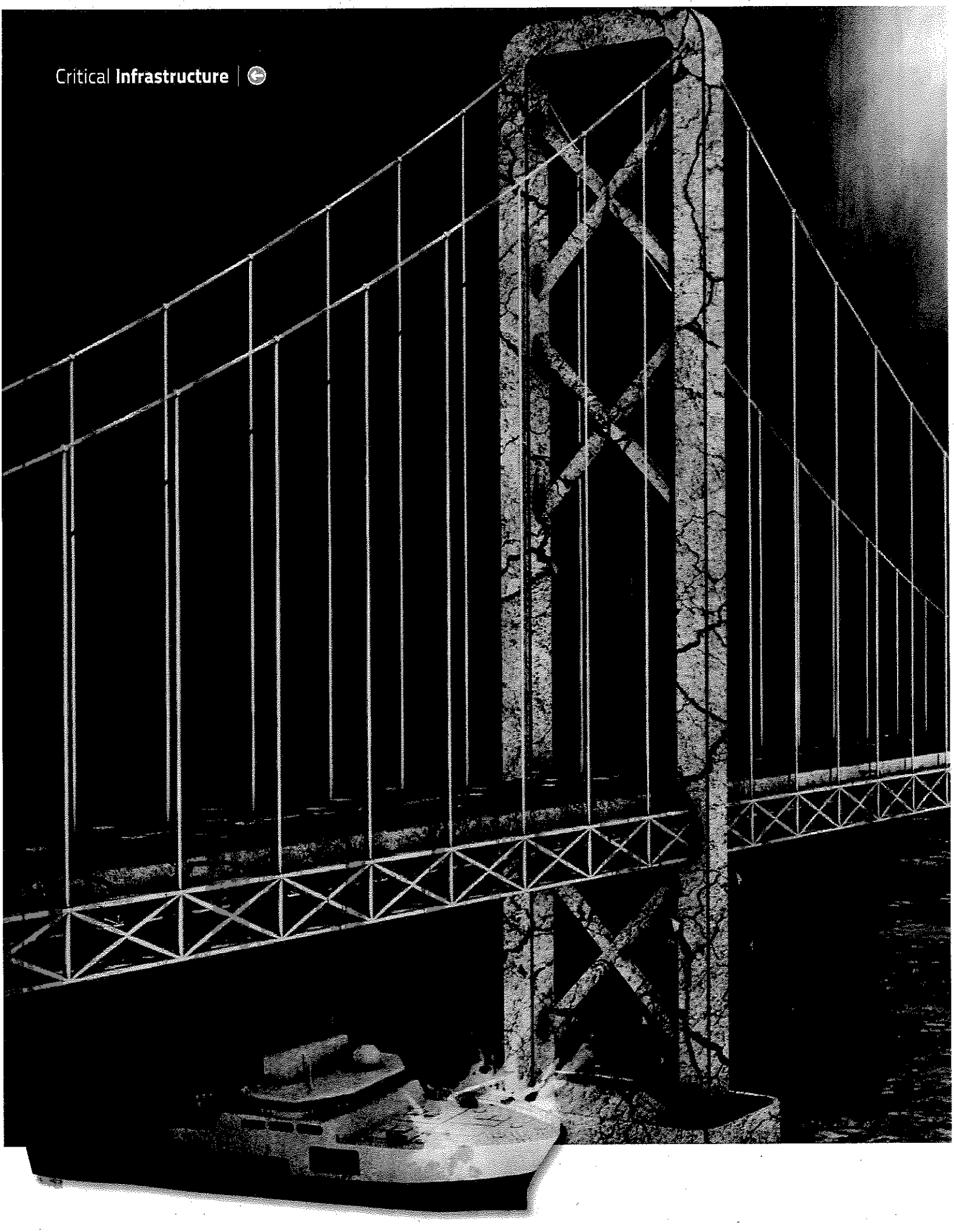
AASHTO's three pronged approach to keeping America's growing population of older drivers mobile and safe:

1. Work for the passage of a long-term surface transportation reauthorization to ensure adequate funds are provided for highway and transit projects to support the safety and mobility of older drivers.
    - Some of the safety enhancements suggested in the study include: installing clearer, brighter, and simpler signage with large lettering; brighter street markings, particularly at intersections; widening or adding left-turn lanes and extending the length of merge or exit lanes; and adding rumble strips.

2. Foster partnerships with a wide range of organizations to promote education and training programs for older drivers as well as evaluating and monitoring "at risk" older motorists through appropriate licensing requirements and sensible laws and regulations that promote the safety and security of the entire traveling public.

3. Promote increasing and improving travel options for older citizens such as adding public transit routes, vehicles, facilities, and stops that are easily accessible and accommodating to older or disabled passengers, as well as expanding non-traditional approaches tailored to the needs of older adults.

-30 -



Dividing opinions

Timothy Compston seeks out the views of operators, industry leaders and systems innovators for an inside track on the latest approaches being deployed to meet the very real safety and security challenges faced by today's road bridges

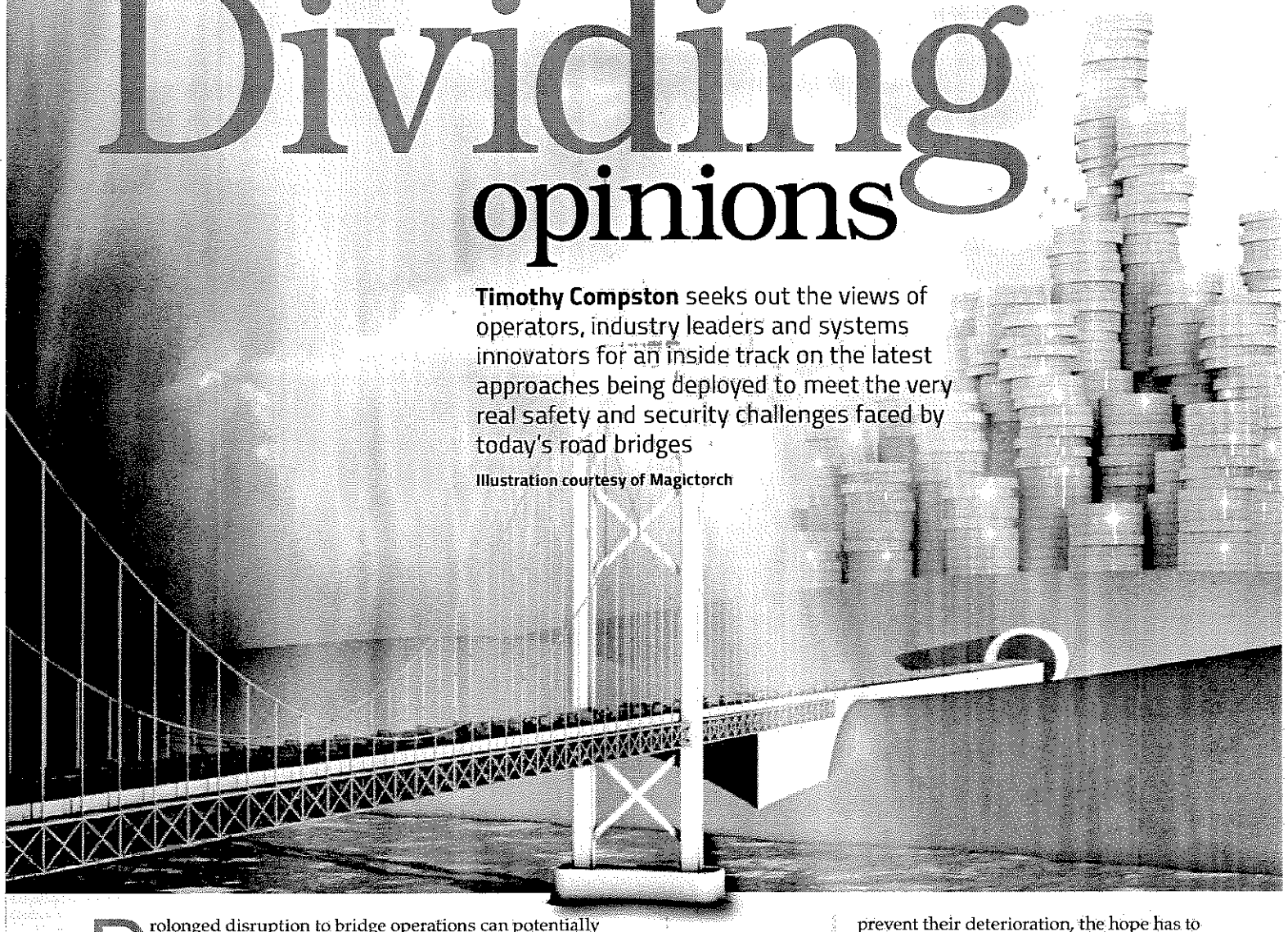


Illustration courtesy of Magictorch

Prolonged disruption to bridge operations can potentially have serious economic and social repercussions, necessitating detours of tens of miles and splitting communities apart. With their overall role in the smooth running of our transportation infrastructure pivotal, it's essential bridges are as resilient as possible: to natural events such as earthquakes and extreme weather; to the threat of terrorist attack; and resilient in design and construction. The I-35W bridge collapse in Minnesota clearly underscores the need for vigilence when it comes to ensuring the integrity of these valuable assets.

While traffic levels continue on an upward trend, we are also challenged by a much tighter fiscal environment in which central government funding for replacement projects such as I-35W remains severely curtailed. And when combined with rising construction costs, the reality is that it's not always practical to replace aging bridges that are nearing the end of their design life. Instead, in the near term, we are likely to see more emphasis being placed on carefully considered remedial measures to manage their health. With a rigorous inspection regime and ingenious repairs to prevent their deterioration, the hope has to be that they can, at the very least, remain viable for a few decades more.

Addressing the funding gap

John Horsley, executive director at the American Association of State Highway and Transportation Officials (AASHTO) is well placed to offer a bigger picture view on the need to keep bridges in a safe and secure condition as well as offer some insight into the practical issues caused by an aging infrastructure in a tougher fiscal climate.

"We are having to contend with a generation of aging bridges coming through simultaneously," the AASHTO man begins. "When they reach 50, 60 or 70 years old, something needs to be done, but it's increasingly difficult to replace structures

A smart view

John Dalinsky heads up the ITS division at Perceptics and believes that although there is still a case for traditional video cameras to be deployed around bridges, the emphasis is moving to smarter, more flexible technologies such as ALPR. "The bottom line is that there isn't the same amount of funding around, so successful providers in this marketplace need to be in a position to demonstrate a strong solutions-based case, highlighting the security, business management and toll collection benefits for bridge operators.

"Bridge operators can, for example, get rid of their tolling booths and move to free-flow tolling with LPR picking up any plates not captured from a transponder. This same technology can also add value by securing the bridge, as the information on vehicles can be fed into a database, and be deployed for wider traffic management decisions such as lane closures and to provide detailed statistics."

Dalinsky highlights questions that need to be considered before a system is selected. "How accurate is it going to be? How are these accuracy levels defined? Is there an open architecture? What can the ALPR system be interfaced with? Are bridge operators going to be limited to using the supplier's back-end product?"

that have reached the end of their useful lives. We are going to have to do triage in terms of which bridges can be saved – and how we can preserve the capacity through aggressive preventative maintenance – because legislatures and the federal government have not found a way to give us the resources necessary in the longer term to add capacity or even replace key facilities."

Against this backdrop, Horsley sees effective asset management as being critical for the health of the USA's bridges and is hopeful of action from Congress: "The Senate has been listening to this message and hopefully the House will take it up so it can be included in the legislation for the next Highway Authorization."

An asset management approach is preferable to a 'worst first' stance, according to Horsley. "If resources are focused only on the worst bridges – and others are left to deteriorate to the point where they have to be totally replaced – invariably states are going to find it difficult to keep up with the financial burden. There has to be more attention paid to intermediate repair and maintenance so bridges last longer."

Given that bridges tend to span spaces such as valleys or rivers that make it difficult to move around in other ways, Horlsey points out that where money is available to build new structures, it is often better to implement a complete road closure to allow rapid reconstruction to take place: "Doing the work intensively rather than through an incremental shutdown is something we are seeing across the country," he says. "Given that traffic volumes are at unprecedented levels, there simply isn't the luxury of shutting down facilities for long periods."

Protection and preservation

Horsley's colleague Kelley Rehm is program manager, Bridges, Structures and Hydraulics at AASHTO, and says that extensive efforts are now being made on the ground: "Better paint coating and joint systems are being adopted and there are several initiatives looking at this," he says. "For our part at AASHTO, we have created a specific technical service program. The mentality is that we have to be smarter about how we are spending money on our bridges. We are certainly getting better at looking at the network of bridges and taking into consideration what maintenance we have done, what we are going to add on, and looking at the total life-cycle cost and we have created new software that helps."

In addition, there has been a big push to use more non-destructive testing and evaluation techniques to add to the more usual visual inspections, especially given the need to extend the life of older structures: "Examples include aerial photography and LIDAR (Light Detection And Ranging) scans. We are really adding to our inspection and testing tool box to keep workers out of traffic and to minimize any disruption."

> "Legislatures and the federal government have not found a way to give us the resources necessary in the longer term to add capacity or even replace key facilities"
>
> **John Horsley, executive director, AASHTO, USA**

Designs on security

Turning to the issue of bridge security, Rehm stresses that much of the advice is focused on monitoring: "Essentially this is the cheapest and easiest way to stop people getting close to your bridge, whether it be done with cameras or other sensors."

In terms of the physical design of bridges to resist any kind of blast, Rehm cites AASHTO's release last year of a key

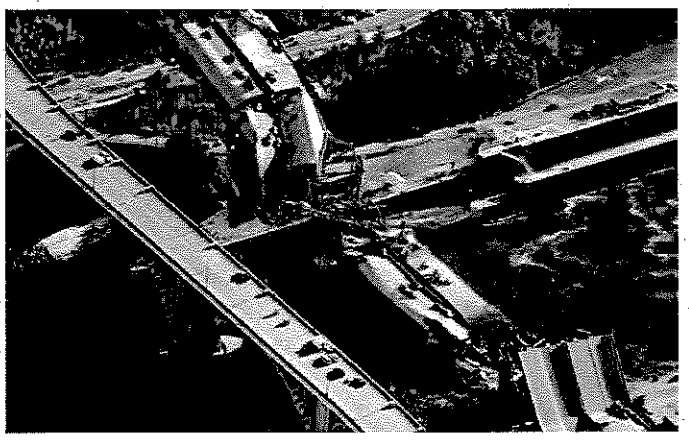
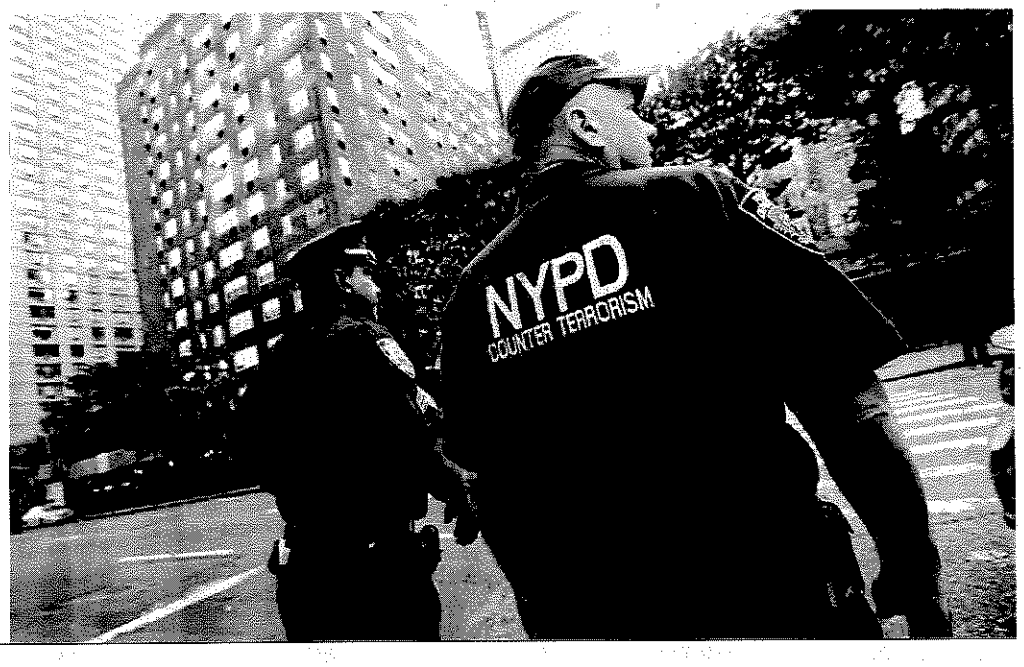


Photo courtesy of Marry Gash/AP/Press Association Images

The scene after the I-35W bridge collapsed over the Mississippi River in 2007

Help is at hand

Bridge safety and security is being assured by some noteworthy advances in technology, finds **Lloyd Fuller**, both to monitor the structural integrity of the infrastructure as well as to guard against acts of terrorism



A member of the NYPD Counter Terrorism division surveys vehicles at a bridge check point on the 10th anniversary of 9/11

With its tens of thousands of miles of roads, tunnels and bridges, the road network is a particularly easy target for terrorists – and they are aware of this vulnerability. Al Qaeda cells in Afghanistan, for instance, are known to have trained operatives in methods to bring down suspension bridges using improvised explosive devices (IEDs), while evidence unearthed following the arrest of one suspect in 2003 revealed that New York's Brooklyn Bridge was on a list of targets.

The iconic crossing across the East River is now one of the most secure in the world, although the relatively simple plan to blowtorch through suspension cables – and officials' admittance that the plot could have succeeded prior to security upgrades – highlight the need for ongoing vigilance.

This is not lost on Associate Professor Eric Williamson from the Cockrell School of Engineering at the University of Texas in Austin, who last year developed the first-ever national guidelines for building and retrofitting bridges so that they're better able to withstand acts of terrorism. "There's a lot of information available as to how blasts can affect structures, but as far as specific guidance that practicing engineers can use to improve a bridge's resistance to an explosion or blast, this is the only thing out there," Williamson says.

> "The general public is probably not aware of the risks associated with bridges, but the good news is that many people are taking a close look at how to improve their safety

Computer simulations and blast-tests on half-scale bridge columns allowed Williamson and his colleagues to analyze how various critical bridge components responded to numerous explosive scenarios. Circular columns, for example, were proved to be significantly more resistant to blasts than square or rectangular versions. "The general public is probably not aware of the risks associated with bridges and other transportation infrastructure, but the good news is that many people are taking a close look at how to improve their safety."

This also includes innovations to prevent attacks from occurring in the first place. The screening of bridge traffic for vehicle-borne IEDs (VBIED) with gamma-ray and high-energy X-ray technologies is a noticeable trend on high-profile installations, particularly post 9/11. And although ALPR systems have found the ITS market a hugely valuable sector generally, they remain an indispensable tool in crime-fighting by flagging-up watchlist vehicles automatically. Facial recognition software is even being utilized to compare images of vehicle drivers with databases of known suspects. And CCTV technologies continue to advance, with artifical intelligence such as motion detection and behavioral analysis being amalgamated to enhance security operations. Imaging systems, too, are becoming smarter, and thermal-based cameras such as those pioneered by FLIR can be networked to create what it refers to as a 'Thermal Fence'.

Such attacks on bridges are thankfully rare, though, with the majority of disasters attributable to engineering faults and/or wear and tear resulting from increasing traffic levels on aging, ailing structures – the perfect storm for a tragedy, demonstrated as recently as the I-35W bridge collapse.

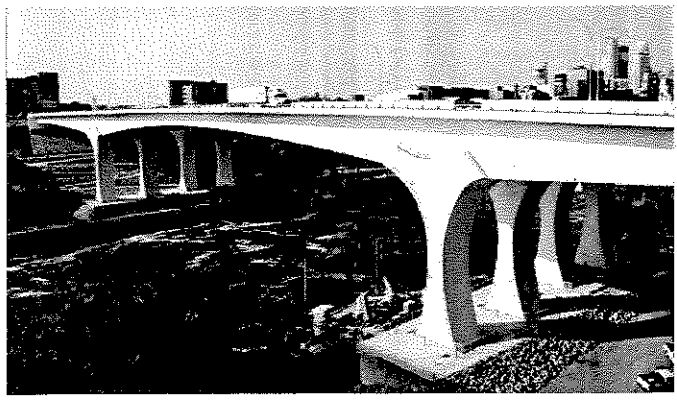
Natural disasters must also be factored into the equation. Here, too, there are

numerous developments to increase seismic strength, including advances in the field of construction materials, such as shape-memory alloys, the thermodynamic and mechanical properties of which are being investigated by researchers at the Georgia Tech State University. These composites essentially 'bounce' back into shape after experiencing heavy loads, such as during an earthquake. Engineers at Maine DOT, meanwhile, recently completed the construction of the world's largest composite bridge – the Knickerbocker Bridge in Boothbay – featuring lightweight beams made of fiber-reinforced polymer in conjunction with concrete and steel. The weight, cost, and durability benefits have generated a huge amount of interest, particularly from cash-strapped DOTs.

There have also been huge steps forward in sensors, which provide early warnings of faults in structural integrity. The new I-35W bridge, completed in September 2008, features 323 such sensors that spit out a constant stream of data regularly analyzed by engineers at the nearby University of Minnesota. They don't eliminate the need for visual inspections but provide an extra layer of security by monitoring corrosion, stress and the movement from bridge traffic.

The Resensys solution is a cost-effective and scalable solution for the real time monitoring of important structural state quantities such as stress, strain, fatigue cracks, vibration, etc

University of Strathclyde researchers, meanwhile, have even developed an intelligent nanotechnology-based paint that detects microscopic movement that – when combined with cheap electrodes – can detect damage at a fraction of the cost of more advanced structural sensors. "Research tends to focus on high-tech options that look to eliminate human control," suggests Dr Mohamed Saafi at the University's Department of Civil Engineering. "Our research shows that by maintaining the human element through something like a smart paint, the costs can be vastly reduced without an impact on effectiveness."



The new I-35W bridge features 10 lanes of traffic, five in each direction, and has a 100-year life expectancy

document entitled *Bridge Security Guidelines*: "We have been working with the FHWA and are developing a workshop that we can take out to teach bridge designers how to incorporate specific measures into the bridges that are at risk," he reveals. "This is focused on new bridges and really deals with the hardening of the concrete, and adding more reinforcement, so in a strong blast the columns remain standing."

Looking at older bridges, where elements may need to be retrofitted, Rehm says that special types of wraps can be put around the columns to strengthen them: "In many ways this is very similar to steps that might be taken to provide additional protection against earthquakes."

> "The mentality is that we have to be smarter about how we are spending money on our bridges"
>
> **Kelly Rehm, manager, bridges, structures and hydraulics, AASHTO, USA**

Seismic shift

How well bridges are able to withstand major seismic events is especially an issue for earthquake-prone California. A case in point is the new eight-mile-long San Francisco-Oakland Bay Bridge, which is scheduled for completion in 2013. Its design reflects many of the lessons learned from earlier incidents in the state, such as the 1989 Loma Prieta earthquake that damaged part of the East Span. Ultimately, the program of work will see the West Span retrofitted, through seismic reinforcement, and the East Span replaced entirely.

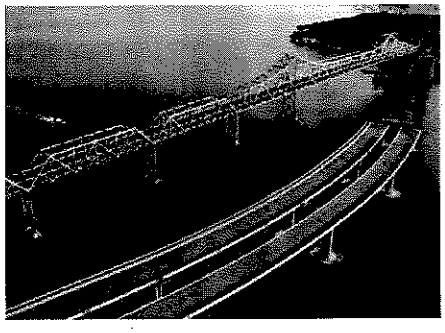
Bart Nay from Caltrans underlines the necessity of ensuring that the Bay Bridge continues to function as a major arterial route: "It handles about 280,000 vehicles every day, ranking it in the top three busiest bridges in the USA and not just an economic engine for the region but the whole state. It

was important as work progressed that we were in a position to limit the amount of time it was taken out of service."

The desire to keep the original structure in place at the same time was a major logistical challenge in upgrading the Bay Bridge seismically: "We had to completely replace whole sections by putting elements of the new bridge in the exact same footprint as existing traffic," Nay reveals.

With the level of work going on, it was obviously vital to have the public on side so Nay and his Caltrans colleagues came up with a number of creative approaches beyond the usual publicity campaigns to capture the attention of drivers: "We actually produced a mobile app with a safety dimension that was essentially a video game that allowed people to actually drive and familiarize themselves with any changes to the bridge layout," Nay says. "To put this into perspective, for our last closure we had 10,000 downloads even before the new alignment was finished."

In terms of seismic technology, the Caltrans man believes that the Bay Bridge exemplifies an almost geometric progression compared with what went before: "A new standard has now been created for bridges in California called 'Lifeline', which was really the first step in determining the design. Not only is there a no-fail or no-collapse criteria after a major earthquake, but the structure needs to be accessible, immediately, to the emergency services and for the post-event rebuilding effort. It's also stipulated they be returned to public service without being replaced."

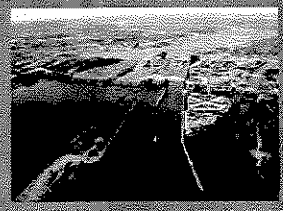


To satisfy more stringent seismic requirements, the new Bay Bridge features a number of critical enhancements. "We pulled together a seismic panel of engineering experts to peer review all of the key design elements," Nay recalls. "Another step forward is the placing of motion sensors – accelerometers – throughout the bridge. These are being integrated so it will be possible to provide detail not only on the strength of any future earthquake event but crucially how specific parts of the bridge have actually reacted to this."

An International perspective

After 50 years, the 1.8-mile International Bridge serving the twin cities of Sault Ste. Marie is still going strong, thanks in no small part to a rigorous maintenance regime.

The only vehicle crossing between Ontario, Canada and Michigan in the USA for some 300 miles, the bridge's traffic management and security surveillance system was last upgraded in any significant way back in 2005. "We currently have a network of cameras operating above and below the main deck so that a fast response can be taken to any incidents, whether that be stranded motorists or suspicious activity," reveals Phil Becker, International



Bridge Administration (IBA) general manager. "We work very closely with the US and Canadian authorities from a traffic, physical asset and border management perspective. Looking after a bridge that also serves as a border crossing means that although our revenue source is traffic, we don't have complete control over this."

What Becker means is that the US Customs and Border Protection and their equivalents in the Canadian Border Services Agency have it in their power to make the crossing experience a positive or a negative one for bridge customers.

The IBA man thus sees a strong partnership with these agencies as a very high priority. "We depend so much on local traffic – about 80% – who, when faced with delays, may simply cut down on their discretionary journeys, whether that be crossing to shop, see a relative or to purchase fuel." For Becker the aim has to be to make sure that when people travel across the International Bridge the process is as expedient and hassle-free as border security will allow.

Picture perfect

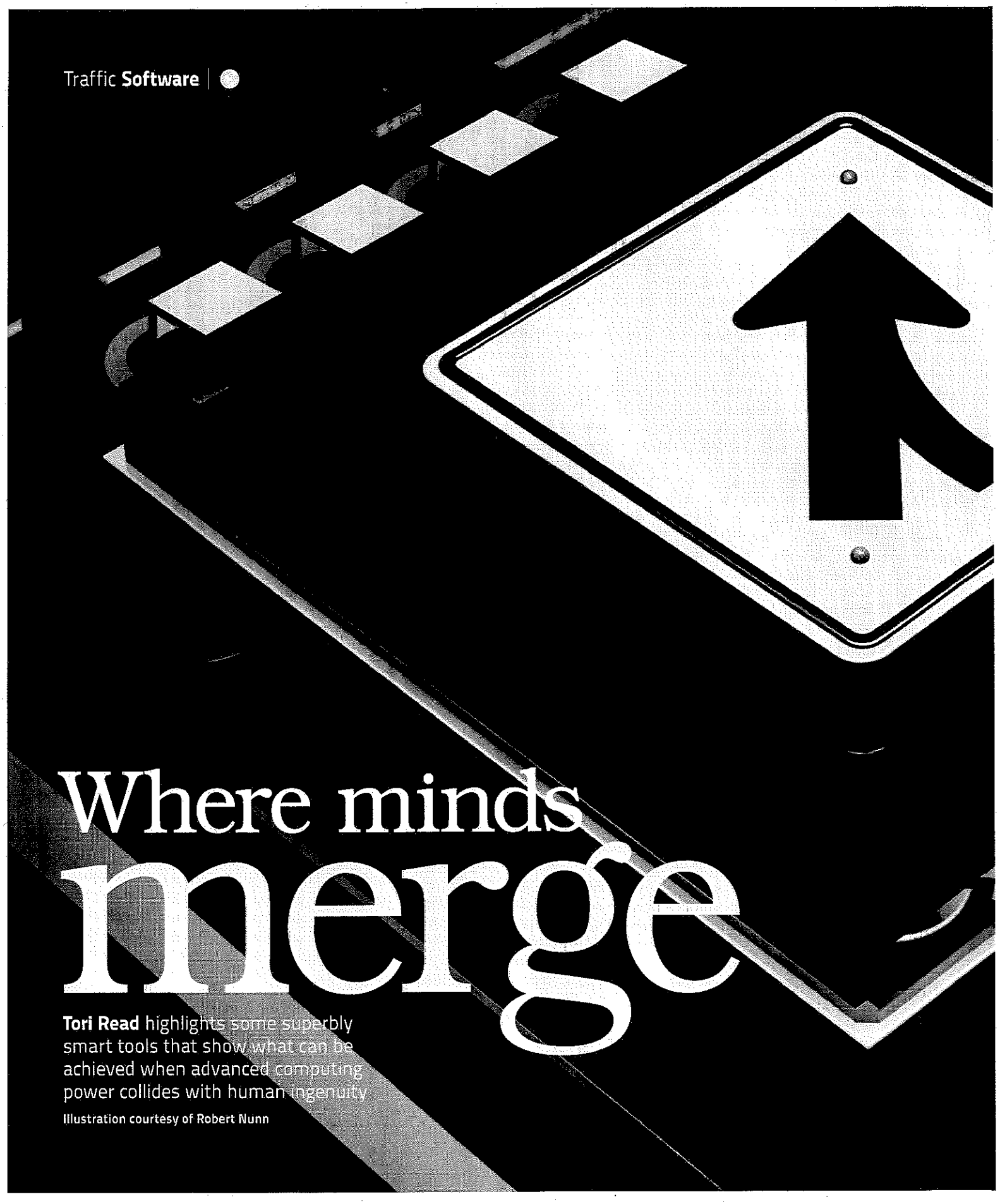
Beyond structural changes, when it comes to the deployment of technology to manage and secure bridges, we are seeing the widespread take-up of ALPR. Kevin Giles is the vice president of engineering at Perceptics, which has systems installed to allow agencies to monitor vehicles crossing bridges on the US-Canadian border. "The greater use of digital cameras now offers much better resolution with a wider view," he says. "The key point is that this leads to fewer vehicles being excluded due to out-of-field reads. The ability to undertake multiple plate reads is also becoming essential, so front and rear plates can be readily correlated and details of commercial vehicles – which may have two or three plates registered in different states – can be captured." Moving forward, Giles sees another key discriminator as being a solution that can read retroreflective and non-retroreflective plates.

> "The Bay Bridge handles about 280,000 vehicles every day, ranking it in the top three busiest bridges in the USA and not just an economic engine for the region but the whole state"
>
> **Bart Nay, California Department of Transportation, USA**

Bridging the gap

Although continued belt tightening will be a feature for some time to come, the good news is our understanding of how bridges should be designed, constructed, maintained and protected has moved on, as has the technology at our disposal. When placed alongside the development of best practice guidance from bodies such as AAHSTO, the hope has to be that there are practical solutions that can be employed on bridges whatever their age, size or budget. ○

(Upper left) **The US$6.3 billion eastern span replacement of the San Francisco-Oakland Bay Bridge it scheduled to open to traffic in 2013**



Where minds merge

Tori Read highlights some superbly smart tools that show what can be achieved when advanced computing power collides with human ingenuity

Illustration courtesy of Robert Nunn

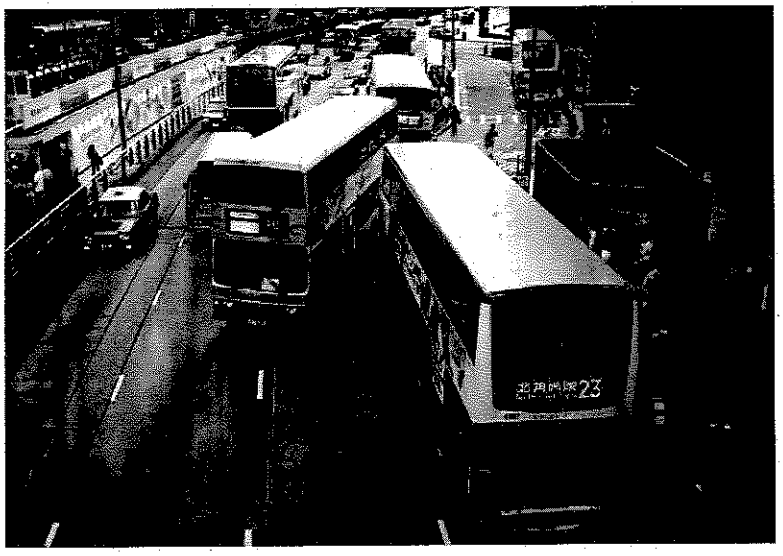
Traffic modeling is used to great effect to answer all of the 'What if?' questions that arise when a new scheme is first proposed. Long gone are the days when this was solely the domain of software 'nerds' – traffic models are widely used today to bridge the gap between the engineer/designer and the layperson. If you need to sell your idea for a traffic management project to people holding the purse strings, what better way to do that than to show them an incredibly detailed simulation – based on real-world data – that demonstrates the benefits of your proposed idea?

And it's not only grand new ideas that benefit from these powerful programs, it's also the very nuts and bolts of traffic engineering. Is it better to build install a set of traffic signals at a location or construct a roundabout? Model both and see what works best.

We've gathered a number of case studies on the following pages to show exactly how computer modeling is having an impact on real roads around the world, stories covering everything from roundabout design in Indiana to the integration of pedestrian and vehicular modeling in Hong Kong.

Admirable solution

Clement Ho, senior transport planner at OveArup and Partners explains how two simulation packages rolled into one helped transform a CBD



Bus-weaving is a problem in Hong Kong

Hong Kong's busy central business district, Admiralty, is in line for an extreme makeover. Now home to new government headquarters, the legislative council, it will have two new metro lines in addition to the two existing metro lines. These infrastructure developments will turn Admiralty into a major transport hub, prompting the need to manage the already heavy congestion and to improve pedestrian access.

As part of the preparation for these new developments, the Transport Department of the Government of the Hong Kong Special Administrative Region commissioned Arup to conduct a large-scale assessment of the potential traffic problems. The proposed layout aims to reduce congestion by encouraging more people to use trains instead of cars, diverting road-based traffic to rail-based public transport.

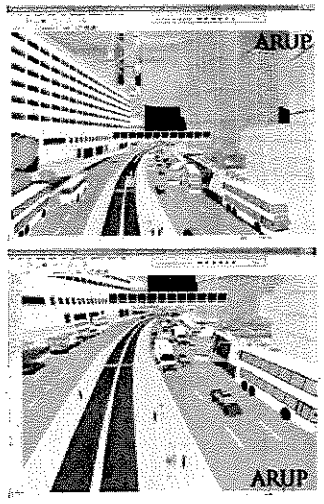
Arup's design includes improved access for those with impaired mobility and has also helped to keep the harbor area next to the new government headquarters as a pedestrian zone, preserving its character and promoting green travel.

The traditional approach for traffic simulation models was to consider vehicles and pedestrians separately, if at all. Models were therefore built independently without taking into account the effects of interaction between the two modes, such as delays incurred by boarding and alighting activities at public transport interchanges.

In contrast, Arup took an integrated approach, using Legion for Aimsun, which combines the Legion pedestrian simulator and the Aimsun microscopic simulator in a single software application, enabling city planners to manage the different and often competing requirements of pedestrians and traffic. The pedestrian model includes richly detailed pedestrian areas containing obstacles, stairs, escalators, and queuing at ticket booths or bus stops.The traffic model represents multi-modal public transport in all its complexity: a mix of public transport services, scheduled and reserved lanes realistically represent Hong Kong's multi-level road structure along with 20 boarding/alighting points for 130 road-based public transport services during peak hour. Together with multiple metro entrances, an area for 'kiss-and-ride' operations, and multi-level mass transit rail (MTR) stations. Pedestrian interaction with buses adds realism to vehicle arrival and departure, providing load-dependent dwell times and platoons of passengers alighting and heading toward the MTR station entries on their intermodal transfer.

> The tool combines the Legion pedestrian simulator and the Aimsun microscopic simulator in a single software application

The project allowed Arup to collaborate closely with TSS-Transport Simulation Systems (the developer of Aimsun)



Legion for Aimsun was used to conduct pedestrian and vehicle modeling

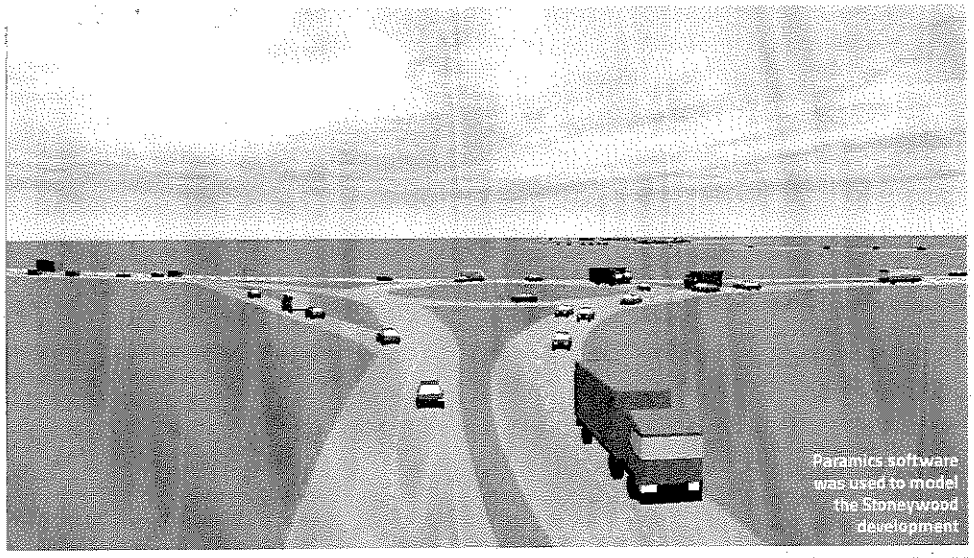
and Legion, enhancing the modeling functionality from a user perspective with robust improvements. These include boarding and alighting interaction between pedestrians and vehicles, vehicles giving way to pedestrians at cautionary crossings, and modeling results in 3D and enhancing output graphics for advanced simulation animation.

Another key advance is that the study was the first to show the way pedestrians and on-street traffic interact at Admiralty in a three-dimensional simulation model. Using simulation outputs and a 3D model of the interchange makes it possible to create much clearer and more accessible presentations of the impact of the proposed mitigation schemes to key government officials.

In the final analysis, the Arup model successfully demonstrated that the proposed traffic improvement schemes could indeed mitigate existing traffic issues and cater for future traffic growth.

Calibrate to communicate

Richard Braidwood outlines how Paramics software greatly enhanced communications on a new housing development project



Paramics software was used to model the Stoneywood development

The far-reaching impacts of traffic modeling are aptly illustrated in this unique case study from Scotland.

In Aberdeen, the masterplanning process for the Dandara Stoneywood Estate housing development was led by multidisciplinary design company OPEN. Transportation Planning Ltd and Braidwood Associates were commissioned to provide transportation services; the latter's role being the development of a microsimulation traffic model.

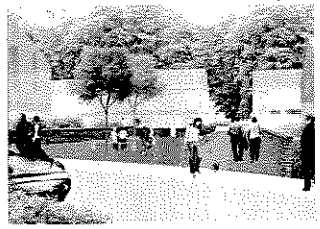
The development site is on the north-west of Aberdeen in close proximity to a number of key transport hubs such as a railway station (1.85km), airport (1.90km), and major national roads infrastructure. The land usage around the development site is a mixture of residential and commercial, although the area is predominantly a business district. This provided some particular challenges in terms of traffic flow.

As part of the project submission, Aberdeen City Council requested the development of a traffic model. The Paramics microsmulation model represents the A947 corridor from the roundabout junction with the A947 Stoneywood Road and the A96 Inverurie Road in the south to the A947 Victoria Street/Farburn Terrace junction in the north.

A traffic data-collection program was commissioned to provide traffic volumes to build the demand matrices, queue length and operational data to assist in the calibration of the model and independent journey time data to provide a measure of the model validation.

Data was collected over the course of two days. This included classified turning count data at 11 junctions, queue length observations at 11 junctions, classified link count at one location, pedestrian crossing demand and stage call record at three locations, and journey time observations on two routes. This was collected between 07.00-10.00hrs and 15.30-18.30hrs on Wednesday January 19 and Thursday January 20, 2011.

> "Assigning the calibrated matrices to the model identified several issues that were not evident in the preliminary base model assignments



Both simulated time periods included a 30-minute shoulder period to ensure representative delay was evident on the network prior to the start of the simulated time period.

The network study area was developed within Paramics using AutoCAD DXF. The trip matrices were developed from survey video counts and include a car and light vehicles matrix and a heavy goods matrix so that the origin and destination of different vehicle types was representative. Finally, vehicle-release profiles were assigned to each origin zone to ensure ebbs and surges in traffic flow were modeled accurately.

Model calibration and validation involved the validation for 78 turns, count movements for each of the modeled six hours, as well as calibration of travel times in both directions of the A947 corridor.

Assigning the calibrated matrices to the model identified several operational issues that were not evident in the preliminary base model assignments.

Comparisons of the hourly turning volumes with the observed data also demonstrated that flows in the first hour of the model periods were higher on these sections than observed and lower during the next two hours, confirming that traffic was being released too quickly through the network.

A series of changes in calibration parameters was applied in four iterative steps until representative queue lengths and congestion levels were achieved.

The use of microsimulation software allowed a number of design alternatives to be analyzed before the optimum solution was identified. "The modeling aided our team to successfully communicate the proposed transportation impact of our development to council officials, identify current infrastructure shortcomings and ensure our proposals have a minimal impact on the local road network around our site," says Gavin Wyley, Dandara Scotland's MD.

The ability to communicate to the lay person is an invaluable tool in any project. In this instance, however, the model allowed Braidwood Associates not only to communicate externally with council officials but also internally, allowing everyone to have a strong understanding of all issues throughout the project.

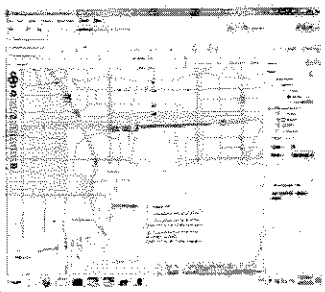
The holy grail of traffic management

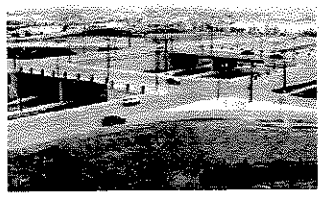
Mygistics' Thomas Bauer on a Canadian case study

The city of Edmonton is testing software that creates predictive traffic modeling to offer real-time solutions to traffic congestion on its busiest road – the Yellowhead Trail.

Yellowhead Trail is the portion of Highway 16 (Yellowhead Highway) within Edmonton, an arterial facility that carries approximately 70,000 vehicles a day into, out of and through the city. As traffic congestion increases on the facility, demand increases, and funding for expansion of infrastructure decreases, so the city must look for innovative solutions. A project to develop an ITS that predicts traffic conditions based on sound modeling methodologies and transfers that information to drivers in real-time is one such example.

This road could represent any number of major arterial roads in other cities facing increased





PTV's Vision suite is used within the Yellowhead Trail ITS Laboratory

congestion. The busiest and most congested area is between 97 and 127 Streets near the city center. "Over the long term, we are planning to build more grade-separated interchanges on Yellowhead Trail," explains Wai Cheung, a City of Edmonton traffic engineer. "But such intentions are expensive and take time for implementation. ITS offers a medium-term solution to traffic problems, and with our pilot project we are showing the world what is possible."

Cheung together with PTV, its affiliates PTV America, Mygistics, SISTeMA and GEVAS as well as Fourth Dimension, created a virtual reality – the Yellowhead Trail ITS Laboratory. The lab consists of simulated traffic conditions using PTV Vision microsimulation software, VISSIM, and a model-based incident response system. It also allows for testing of various conditions and responses prior to deployment in the field.

At its core, the lab features the OPTIMA real-time simulation model, which takes in and processes the real-time traffic volume and speed data from local traffic signals and incorporates several dynamic message signs (DMS) strategically deployed throughout the project area.

The impacts of incidents (e.g. collisions) are predicted in real-time and mitigation detour advice provided for the DMS. Forecast volumes (with a 30-minute horizon) are then transferred to the integrated adaptive traffic signal control system, BALANCE, where new cycle, splits, and offset patterns are computed for the 32 adaptive system intersections. Each traffic signal controller is also continuously optimized through a local adaptive algorithm in one-second intervals.

As a result, drivers observing the prescribed detour routes are rewarded with signal timing plans designed to streamline their travel and minimize delay. "With personalized route mapping based on real-time congestion, we are moving step by step toward the 'holy grail' of traffic management," Cheung concludes.

Wide-area traffic simulation

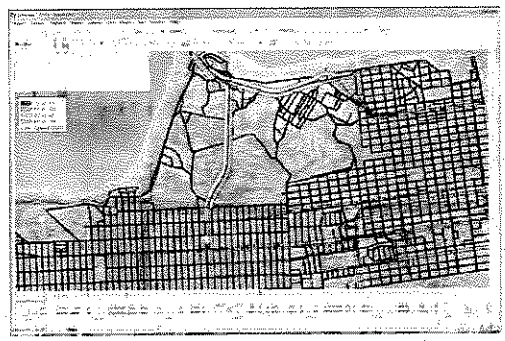
Shane Velan from Inro highlights a number of success stories for his firm's software

Wide-area traffic simulation is becoming a new reality in the transport planning and simulation field. Inro's Dynameq mesoscopic traffic simulation projects are paving the way for traffic simulation on a larger scale, providing evaluation bases for congestion relief strategies, corridor and lane management, construction mitigation, transit design, traffic impact studies, emissions modeling, and more.

The San Francisco County Transportation Authority (SFCTA) has successfully enhanced its original Dynameq corridor model, built for the reconstruction of the approach to the Golden Gate Bridge, adding a parallel bus rapid transit (BRT) corridor. Currently, SFCTA is doubling the study area to include the entire CBD.

Somewhat further afield is a recent project in Shanghai, China. The city's elevated highway system carries 35% of the total distance traveled in the region. The Shanghai City Comprehensive Transportation Planning Institute has built a Dynameq model of 1,047 lane-km and 322 ramps that carry 540,000 vehicles in a typical three-hour morning peak. The model was built over six months in 2011 and calibrated to speed data from over 170 traffic monitoring cameras and travel times from GPS probes. Initial applications include lane restriping to address weaving, which has cut queue density in bottlenecks by half.

Back in North America, the Seattle region has employed several Dynameq models. Across Lake Washington, the City of



San Francisco is reaping the benefits of Dynameq modeling

Bellevue uses the software to supplement regional travel-demand forecasts. The state capital, Olympia, built its first Dynameq model for a Smart Corridor project and has since demonstrated how to improve emissions estimates according to the new MOVES standard using vehicle trajectories from Dynameq. Now Washington State DOT has selected the software to model various scenarios for the reconstruction of the Alaska Way Viaduct. Toll modeling will be an important feature of this study.

Finally, Portland, Oregon is embarking on an implementation plan to use Dynameq as a planning tool to account for queuing effects, dynamic path choice, congestion duration, detailed emissions, and transit operations on a regional scale.

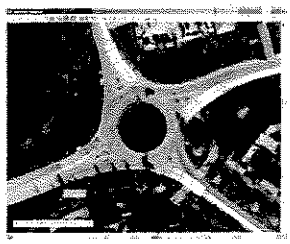
Magic roundabouts

Mike Hutt from TRL reveals how simulation software is giving the roundabout a lease of life in the USA

Although the traffic industry's more vocal discussions continue to surround signals and adaptive control strategies, the UK's TRL has been quietly but rapidly experiencing international growth in the world of unsignalized intersection modeling.

ARCADY, in particular, has seen substantial growth, especially in North America where roundabouts are growing in popularity. Leading the way in the USA is Indiana DOT (INDOT), which plans to construct a number of roundabouts over the next five years in strategic locations. TRL has supplied the state with multiple ARCADY licenses for engineers in each individual district as they need to quickly but reliably analyze whether or not a roundabout would work as soon as certain projects hit their desks.

"In our design process we investigate all intersections for their feasibility," explains John Wright, director of highway design at INDOT. "Last year, we trained 56 engineers on the use of the ARCADY 7.1 software. Indiana currently has more than 150 roundabouts and has 30 more in the design process. ARCADY software has allowed us to become more knowledgeable and accepting of roundabouts and has pushed us forward into this area."



Indiana DOT relies on TRL's ARCADY software

As the software analyzes roundabouts using six key geometries for each leg and is very outcome-orientated, it allows users to analyze the efficiency of a design based on the actual layout of the roundabout, and with the simple calibration factors available can very quickly provide a localized prediction. Those charged with the responsibility of submitting a design need to know how well their proposed layout is going to work. The model utilizes the actual layout and is highly sensitive to any alterations that are made. Whether it's the addition of another lane, a change to approach alignment, or simply altering a tangent to lower entry speed, these can all have a significant effect on capacity.

TRL and roundabouts are intrinsically linked. The company developed the offside priority (or yield-at-entry) rule and has conducted many large research studies into roundabouts, covering capacity, safety and pedestrian facilities. "Although we have a fantastic pedigree in this area, we're not resting on our laurels," suggests Gavin Jackman, head of software. "That's why we've developed an additional Entry Lane Simulation model to derive optimum lane configurations and allow the user to instantly swap the roundabout for a four-way intersection for comparisons. Many of our US customers are required to provide results using alternative analysis methods, so the HCM 2010 Gap Acceptance Roundabout Model is now an option in ARCADY."

Active measures

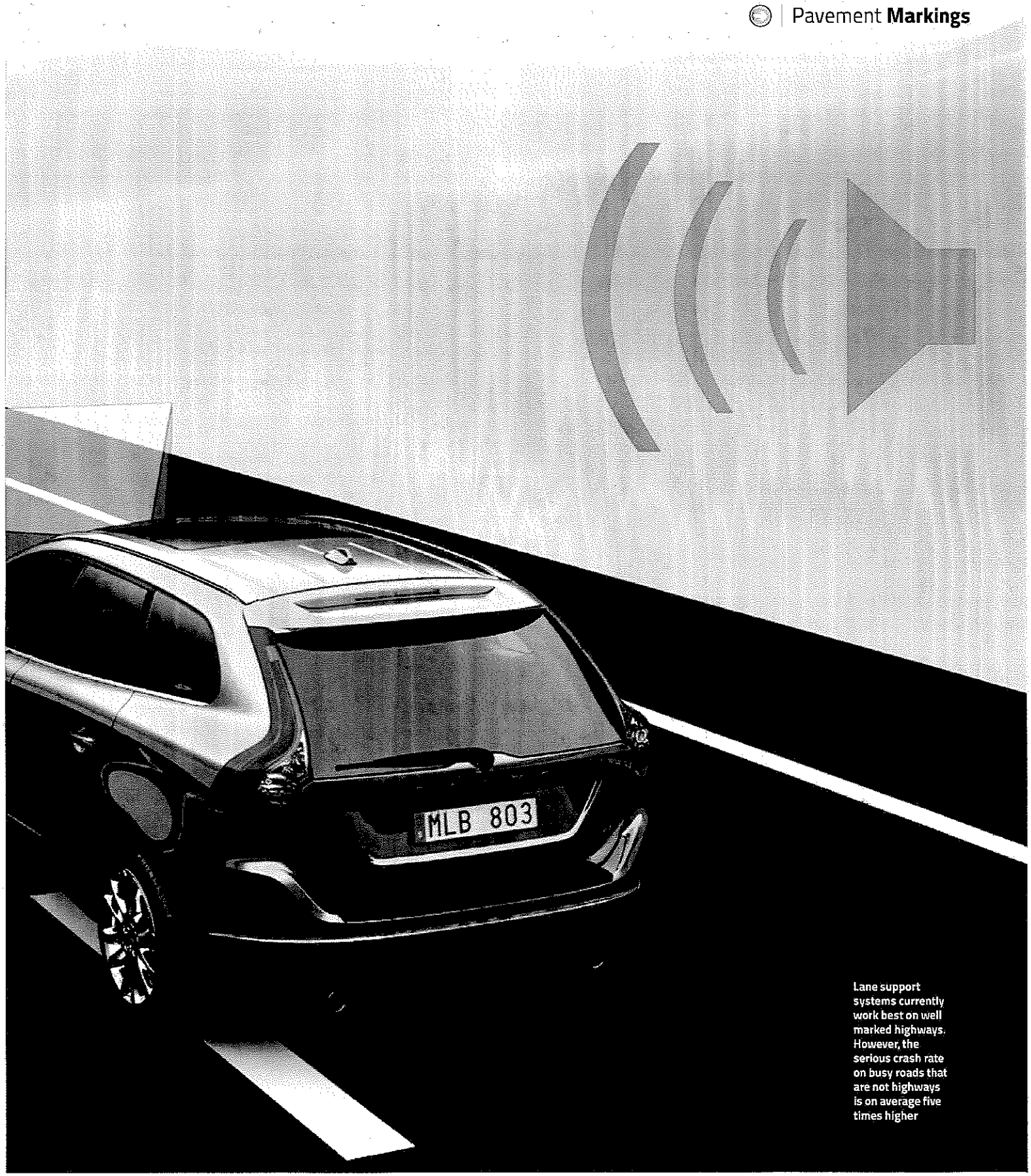
The relationship between road marking quality and the effectiveness of ADAS has gone largely unnoticed and under-researched. But **Timothy Compston** finds steps are now being taken to encourage best practice in such a safety-critical area

Images courtesy of BMW, Ford, RSMA & Volvo

There's a growing recognition of the need to consider the bigger picture when it comes to road safety, and specifically the interaction between the roads infrastructure – in particular road markings and signs – and the vehicles that use them. A major step forward came in June 2011 with the coming together of the two leading European road and car safety organizations, EuroRAP and Euro NCAP. This link-up was specifically to launch the landmark *Roads That Cars Can Read* consultation paper, with a call to the motor industry and highways sector to work together to ensure that technologies now available in new vehicles are able to achieve their potential to save thousands of lives.

The reality according to the report, though, is that the performance of cameras and sensors deployed in vehicles when reading the road ahead and assisting drivers in reacting to potential dangers is being curtailed by faded road markings and obscured signs. Reference is made to a survey of six European countries that underlines the significant variation in marking and signing practice. To move forward, the report recommends that the road and motor industries should collaborate more, assisting drivers with two key technologies – lane support and speed alert. In addition, it was proposed that when it comes to the quality and consistency of roadsigns and markings that the initial joint focus should be on the 10% of Europe's roads that account for the majority of journeys and deaths.

For John Dawson, chairman of the European Road Assessment Programme (EuroRAP), it became apparent with the UN Decade of Action for Road Safety 2011-2020 that something needed to be done to tackle the issue of the quality of roadsigns and markings, and the technology angle – with some manufacturers having problems – simply reinforced the need for attention. Dawson sees the next stage as actually quantifying the problem: "Until we can specify something and make measurements, it is impossible to gauge the extent of the performance gap. We are now working closely with Euro NCAP and the motor



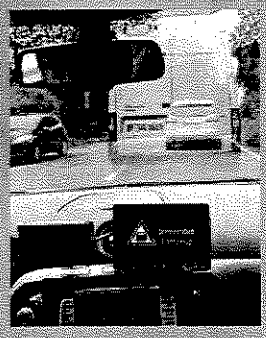
Lane support systems currently work best on well marked highways. However, the serious crash rate on busy roads that are not highways is on average five times higher

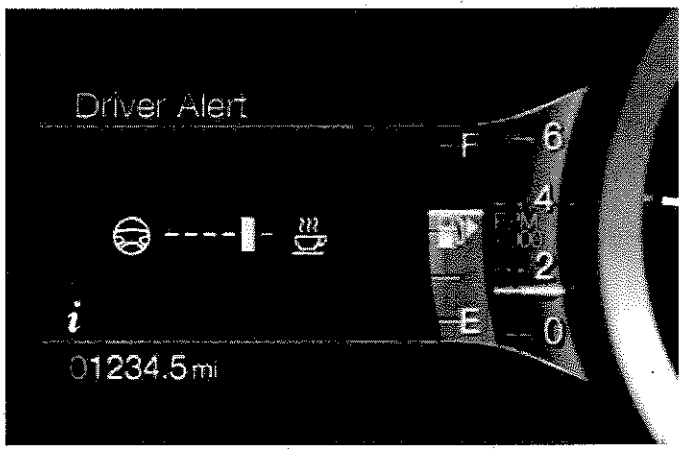
Ford's focus

Ford's safety strategy is to try and the footprint of ADAS is lower – segment vehicles in very large volumes, according to Pim van de Jagt. An example of this is the Ford Focus, which uses class leads the way with the amount of active safety on offer, such as Active City Stop for fully autonomous emergency braking," says the managing director of Ford's Research Centre in Aachen, Germany. "You have to move up to the Mercedes E-Class or the BMW 7 Series to find vehicles with a similar content of active safety technologies."

In terms of lane keeping systems, if markings are of poor quality or completely missing, the reality is other systems may not work, van de Jagt warns. "Generally in Europe we are pretty happy with the standard of markings out there at the moment – other regions cause us much more concern and the same would go for roadside signs."

Considering Ford's lane-related technology in practice, when a vehicle is being driven the system status is directly communicated via the in car display. Green side lines, for example, show it is active and has found the road-required lane markings. Should one be missing, the appropriate line will disappear. In this case the system is designed to still work in concert with directional information. Should the camera be unable to capture both markings it no longer functions and this is immediately brought to the driver's attention.





Ford's Lane Keeping System debuted on the mid-sized Ford Fusion

industry to define what the tolerances should be for two sets of signs and markings. No-one has ever measured the quality of lines and markings to any kind of consistent, coherent, standard."

Dawson feels that the focus, as outlined in the joint consultation paper, should initially be on rural roads: "Two-thirds of deaths are outside the cities and over half are concentrated on 10% of the road network," he says. "We already know where these roads are as a result of our European Safety Atlas, which has mapped crash rates and accident analysis. The reality is that huge sums have been spent developing technology that is revolutionizing the safety of our vehicles but little attention has been given to the quality of basic signing and markings that drivers have to cope with."

Seeing the bigger picture

Euro NCAP's secretary general Michiel van Ratingen is enthusiastic about the benefits that will come from the joint initiative with EuroRAP: "This move certainly makes sense," he states. "Surprisingly, although both of our organizations have been in existence for more than 10 years, it was really only recently – two years ago – under the Decade of Action that we started to meet more regularly.

"EuroRAP was looking to measure the risk on certain roads and going beyond that to see whether there was a roadsign or marking," van Ratingen continues. "For our part, we were coming at things from a different perspective. We had started a process called Euro NCAP Advanced, for which we decided that we would look into these new advanced driver systems – not necessarily to start to rate them, because we were not sure how that would work in practice, but more to sit down with the manufacturer and to see how they developed the system in the first place."

Manufacturers had to supply a dossier and develop some statistical analysis as to how the systems would help in reducing severe and minor injuries. When Euro NCAP discussed with them the systems that use cameras to read speed signs, for example, it became clear that manufacturers were developing them more or less with the infrastructure as a given.

This assumption, van Ratingen says, was challenged by the fact that things are different wherever you go in Europe: "The road network has not been designed with these type of technologies in mind so their efficiency can vary," he explains. "Everything could be fine in Germany, where things are quite highly developed, but when the driver travels elsewhere they may find that the effectiveness of the system drops down to 10 or 20% as the right infrastructure simply isn't available."

Problems that van Ratingen cites for camera-based systems not identifying markings include the use of colors (especially if they are temporary), older markings still being visible under new markings, white on concrete, and night-time issues such as glaring, and when changing

> "Huge sums have been spent developing safety technologies ... but little attention has been given to the quality of signing and markings"
>
> **John Dawson, chairman, EuroRAP, UK**

lanes where the markings are not well enough laid out for the camera to recognize.

The reality, stresses van Ratingen, is that for these kind of systems it is imperative to look beyond the vehicle itself: "This is where the cooperation with EuroRAP will undoubtedly make the most impact if we can bring the two perspectives together, and with the technology in mind help to

Ground force

Martin Lamb from the Transport Research Laboratory in the UK explains how, over the next three years, he and his eight partners will take the road stud to a whole new level of intelligence

The INtelligent Renewable Optical ADvisory System, aka the more palatable INROADS, has been established as part of the European Commission's Seventh Framework Programme (FP7) to develop a raft of smart traffic management tools with LED-based road studs as the basis.

Road studs have undergone something of a radical evolution over the past decade. And based on the depth and variety of expertise within the eight-member INROADS consortium, the trend seems likely to continue. Among the partners are the Austrian Institute of Technology (AIT), Spain's Centro para la Investigacion y Desarrollo en Transporte y Energia (CIDAUT) and Desarrollo de Sistemas Tecnologicos Avanzados (DSTA), the Israel National Roads Company (INRC), the Institute Francais des Sciences et Technologies des Transports, de l'Amenagement des Reseaux (IFSTTAR), Siemens, and energy-harvesting specialist INNOWATTECH.

> "We are also investigating how energy can be generated from the road through piezo-electric and other means

Having kicked off in October 2011, the project will run until September 2014 and is being coordinated from the UK by TRL's Martin Lamb, who believes there is scope to roll features such as active dyamic properties and wireless power transfer (and much more besides) into one product. "The potential to combine applications covering lighting, sensors and renewable energy generation is certainly there," he says. "But due to the limitations of solar photovoltaic technology in the road environment, such as the available panel size and performance degradation resulting from dirt and dust, we are also investigating how energy can be generated from the road through piezo-electric and other means. Another area we are considering is whether the stud can be used across the highway in certain situations, such as to warn of speed limits, potential hazards, and so on."

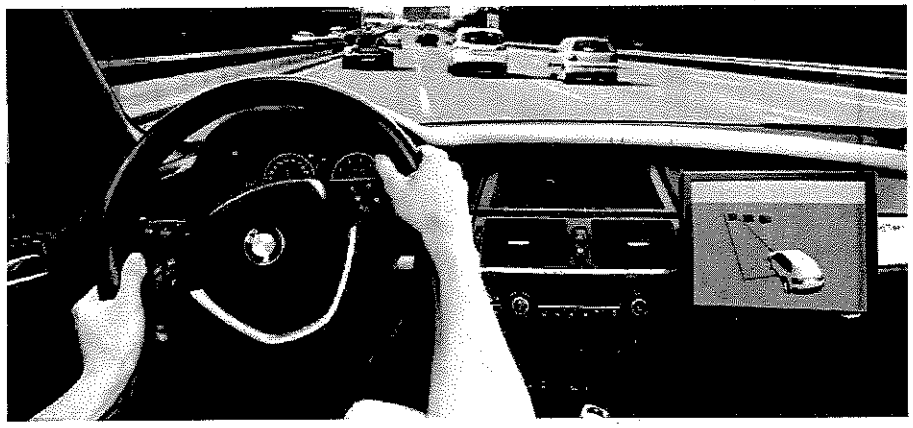
Lamb is definitely of the school of thought that the road stud is an under-utilized tool in traffic management. "With the ongoing switch-off of motorway lighting at non-peak times, there is potential for LED road studs to perform a function based purely on the far greater visibility that they offer," he explains. Beyond that, though, the TRL man suggests there are numerous ways in which LEDs could be used to provide information and driver guidance, although he is cognizant of the balance that needs to be struck between information provision produce some working guidelines or tolerances for the road authorities with a focus on the high-priority roads."

A computing challenge

Toby Breckon, a senior lecturer in computer vision and image processing at the UK's Cranfield University, has been conducting research into the automated recognition of road markings for some time – work that is focused specifically on the automatic extraction of road text markings for secondary integration to vehicle navigation and driver control/display systems.

Results from his studies would indicate that concern on the part of van Ratingen and Dawson is justified – the standard of markings can indeed have a detrimental impact on the effectiveness of recognition technology: "Our findings are that road marking quality has a big difference to performance," he says. "In fact, just looking at our local area trunk roads – which were not dual motorways or dual carriageways – we found that the quality of markings varied significantly to the extent that if the test vehicle went one way out of our rural university campus and compared this to another direction we got quite different results."

He puts the disparity in the area adjacent to Cranfield University down to the fact that their test vehicle was moving between two different counties and, crucially, the markings were not being maintained to the same level. "The majority of our failure cases are sadly due to inferior markings," Breckon continues. "It is a real challenge to identify markings based on their shape characteristics if there is more variability, especially in the fine details. When you're conducting automatic text recognition of speed limits at the



Quality lane markings are key to BMW's research project, Traffic Jam and Queuing Assistant, which deactivates as a result of a lane change

and driver overload. "It's for this reason that one of the nine work packages to be undertaken by IFSTTAR and CIDAUT will focus on human factors," he confirms.

But could a road stud with all the bells and whistles envisaged by the INROADS team have any chance of deployment, given current funding constraints? "If the product isn't useful, the road owners won't want it; and if it isn't affordable they won't buy it," he states. "We want to hear what they would like to see developed, what issues they have, etc. The integration of the components should then lead to the development of a product that is cost-effective either because it is less costly than gantries or lighting columns, or as a result of a safety or operational benefit, for example."

FP7 funding doesn't, however, allow for full commercialization so Lamb hopes INROADS can reach the stage where there is a working intelligent road stud at the end of the project that could then be brought to market by one of the technology partners.

INROADS aims to develop new intelligent lighting applications, tools and methods, integrating LED lighting across the highway

side of the road, for example, certain elements can appear very similar due to poor maintenance, so we have to use a lot of contextual information to overcome this – an 'A' on a road marking, for instance, can look like a '4' in the font typically used in the UK."

To maximize accuracy, the Cranfield team applied several additional analytical layers: "Compared with other work that is out there, we are analyzing a much broader spectrum of symbols on the road, not only reading speed and directional arrows but also navigation information such as road names – the 'M6' for example."

The techniques adopted by Breckon apply a mixture of shape techniques borrowed from traditional work in optical character recognition coupled with a number of innovations: "We need to take things a stage further given the unusual perspective of the on-vehicle camera viewing the road," he adds. "Essentially it is not looking straight down on the text to be captured so we need to correct for that. We also implement a 'neural network' approach so the system can learn from experience.

Breckon reports that they are now able to achieve real-time road marking extraction and symbol sequence recognition with around a 92% success rate per symbol and 85% for symbol sequences such as words and labels.

Accident prevention

Duncan Vernon, the road safety manager at UK-based Royal Society for the Prevention Of Accidents (RoSPA), feels what is important about this debate is that the road clearly communicates to road users how people are expected to behave. "This communication

Brecken's research at Cranfield involved developing a method of automatically recognizing road markings in real-time using a feature-driven approach

with drivers can be achieved by road designers through signage, the layout and shape of the road and of course road markings. So in this context markings are an important tool for road safety," he confirms.

Vernon contends that inadequate markings may even potentially have a greater impact on the technology designed to help drivers than directly on the drivers themselves: "If road markings are wearing out or some old markings have been completely removed, a human driver might still be able to look at the context of that and

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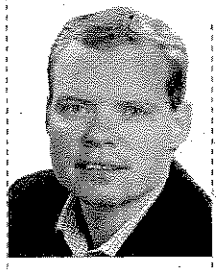
>
> **Toby Brecken, senior lecturer, Cranfield University, UK**



what is important, even though it may be more confusing and complicated than we might like. I would suggest that it would be much more problematic for today's ADAS technologies as at the moment they simply don't have the same capacity to analyze and interpret what we as humans do."

Considering the wider interaction between the driver and technology and the driver and the road, Vernon sees a potential risk: "As this technology is becoming better the role of the driver isn't necessarily being designed out but it is being changed in many respects," he feels. "Now the driver isn't just making their own observations about the road ahead but observing what the in-car technology is doing as well. The danger arises if the human element is too far removed or detached from the decision-making process and driver assistance is based on imperfect data."

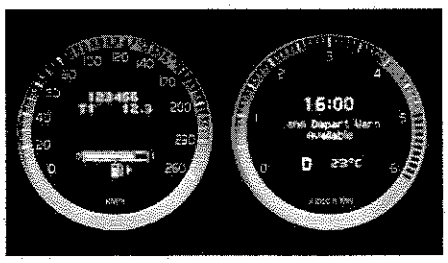
In Vernon's view, if the road markings are not of a high standard from a road safety perspective, this introduces another way that an error can occur, with the vehicle misreading it and feeding the wrong information to the driver.

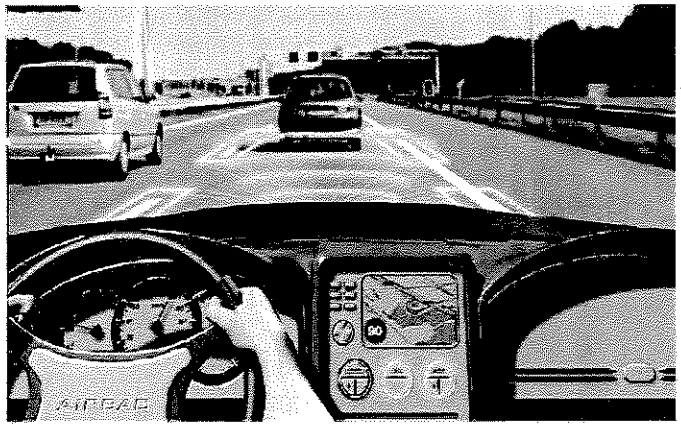
Having said this, the RoSPA safety expert sees practical issues with ensuring that road markings are up to the standards needed by the latest ADAS technologies: "We have to consider what the capacity is out there in order to do this," he suggests. "If you take a large county such as Devon with a lot of rural roads, just monitoring to see which road markings are worn out and need replacing is a task in itself. This is a very difficult demand to put on Local Authorities. For accident prevention, you might expect better-quality road markings to have some impact but to date, the benefits – in my opinion – have not been properly evaluated. This also has to be set against funding needed for other measures such as re-engineering a section of road, adding a sign or removing a dangerous intersection."

Active safety

So what consideration – if any – are car-makers giving to the issue of pavement marking quality as they pursue ADAS systems that might be reliant on a tip-top marking? "We have two functions that I helped to develop that are really using this information – Lane Departure Warning (LDW) and Driver Alert Control (DAC)," reveals automotive safety expert Daniel Levin from Volvo.

A key distinction between DAC and LDW – which both use a camera to monitor the lane markings – is the timescale over which they operate. "For the DAC, this works over several minutes as it is looking for slow, subtle changes in driver behavior whereas the LDW comes in immediately, for example if the driver is distracted by a cell phone ringing and drifts out of lane," Levin explains.





(Left) **Volvo's LDW uses a camera system to recognize lane markings, sounding an alert if the driver strays out of the lane** (Below) **For drivers, Lane Assist can feel like hitting a rumble strip even though no such strip exists**

"When we were developing these solutions, we went all around the world to collect data according to a predefined profile on as wide a range of markings as possible – white, yellow and box dots, weather and lighting conditions, etc. Wherever we sell our cars and whatever country it is, customers naturally expect this technology to work accurately for all types of lane markings. As a rule of thumb, because the camera and the human eye are operating in the same wavelengths, if you can see the lane markings with your own eyes then the camera can usually also see them. When no markings are detectable, such as in snow, we have a standard message for the driver so they're aware that this might be the case," Levin says.

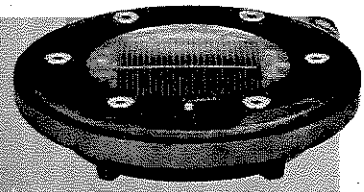
Overall, though, Levin predicts that driver assistance systems will become ever more accurate in the future, as a result of better image quality from the cameras as well as enhanced algorithms for detecting lane markings in the captured images.

This will only lead to more exciting technologies, verging on the autonomous. "We have shown some concepts in previous years and will soon be coming to production with the first generation of driver assistance systems where they can actually help the vehicle stay in lane by steering back automatically," Levin says. "The system pushes quite gently and there is a sensor that detects if the driver is in control of the steering or not, at which point the intervention can be over-ridden."

A joined-up approach

So with the wider spread roll-out of driver assistance technologies gathering pace, it is encouraging to see that there is a realization that to maximize the benefits we need to take a long hard look at our roads infrastructure, ensuring that road markings are actually fit-for-purpose. The joint consultation paper from EuroRAP and EuroNCAP, *Roads That Cars Can Read* certainly pulls no punches and therefore has to be welcomed. Despite the task ahead, it has a clear direction of travel and realistic objectives and given the track record of these institutions a good chance of success. ○

Single cell solution



Road stud specialist Global Solar Vision is launching two new versions of its GSV – GSV 2 Snow Plow and the GSV 4. The former is developed to withstand snow plows on heavily trafficked roads thanks to its anodised aluminium housing that protects the surface of the road stud against plow blades. The GSV 4 has a semi-planar top cover and is tested with a pressure comparable with trucks weighing 60 tonnes to resist heavier traffic loads.

Both models feature Global Solar Vision's worldwide patented solar cell technology. "Our edge is that the GSV cells are not serially switched, as with conventional solar cells," explains the company's Frank Bill. "A big problem with the professional application of this technology is partial shading," he continues. "Leaves, sand, dirt or tire tracks can cover up one or more solar cell segments which results in a zero output that is too low to charge the battery. It's the same on a cloudy day: there is too little light. What will happen is that the battery will be completely discharged within a few days."

Global Solar Vision's technique centers around a single solar cell. "Partial shading is no longer a problem as the efficient converter ensures even small currents are transformed into energy for the battery," Bill says. "So even with low-light conditions the battery will be charged when the weather is overcast or the solar cell is partly covered. Our GSV road studs are designed to maintain light outputs throughout a full annual cycle."

The GSV 4 can be delivered with a wide range of color and intelligence options to the market extracted with media products from Assa. GSV's products are manufactured in the Netherlands.